Spatial Planning Matters!

Inspiring Stories and Fundamental Topics

Eds.: Bernd Scholl, Ana Perić, Rolf Signer

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Impressum

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Spatial Planning Matters! Inspiring Stories and Fundamental Topics

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Preface

This book is a result of the series of four research and debate symposia convened by ETH Zurich members with international academics and practitioners in the field of spatial planning. Launched in 2015, the gatherings first aimed at explaining the use of theories and methods in spatial planning education. Soon the initial idea evolved into an example-driven approach directed towards bridging the gap between planning practice and theory. Briefly put, the book revolves around 'inspiring stories' that describe a wide variety of spatial problems as well as the planning mechanisms used to address these; in addition, 'fundamental topics' are provided to facilitate the understanding of certain planning processes illustrated by the practical cases.

There are two main reasons behind choosing this method to introduce spatial planning. Firstly, the spatial planning profession is facing a great crisis. Experts are confronted with a quantum leap in the availability of information and the variety of visualisation and simulation instruments suitable for their analysis. While planners can certainly rely on the new technologies available to support the planning process, it seems to be that the nature of planning processes is being underestimated. Planners are once again facing the problem of having the emphasis placed on the products of planning instead on the planning process itself – a paradigm that has been challenged since the 1960s.

A second motive for creating this book lies in the relationship between planners as experts and interested lay persons. The latter are usually fascinated with the physical interventions in space, whether these are great urban and architectural complexes or astonishing infrastructural projects. However, what seems to be forgotten, again, is the careful planning process that brought the interventions into being despite numerous problems of various kinds, e.g., lack of resources, time constraints, conflicting interests, legal barriers, etc. Therefore, the key question is: How can planners bring this fascinating process and its results to the larger public and create a fuller understanding?

This book intends to answer this question and create interest and curiosity for the field of spatial planning. Using case descriptions of a new park in Milan, storm water protection in Chicago, redevelopment of an industrial brownfield in Attisholz or a better solution for

a traffic project in Antwerp and by throwing light on the topic of planning approaches, special problem-solving methods or reflective leadership, we want to interest readers in the role and importance of spatial planning in securing quality for our daily lives as well as bringing about sustainable living spaces.

In their professional lives, spatial planners are required to communicate in a simple and clear manner if they want their concerns to be understood when faced with a multitude of actors from quite different backgrounds, specialisations, institutions and social levels. Therefore, we have tried to write this book in everyday language, free of jargon and technical terms, in an effort to reach a wide audience outside professional planning circles. The book is also directed towards professionals in related disciplines and to spatially relevant actors and politicians who, in one way or another, are involved in realising spatial plans and are interested in spatial matters of public interest. We would be especially pleased if the challenging and sometimes compelling stories presented in this book raise interest in studying spatial planning or lead to advanced educational or professional development programmes. In particular, we hope the examples will also serve as an incentive to use some of the methods and theories described here. Both are needed for well-founded spatial planning and may even serve as a basis for new ideas.

Nevertheless, reading this book cannot replace the lessons and information contained in the specialised literature on planning. To meet this need, we have included references to informative and enlightening sources as a basis for possible further research in the field of spatial planning.

In conclusion, we are sincerely grateful to all the authors who compiled interesting planning practice examples and key planning topics and have thus genuinely contributed to the quality of this book. We also want to thank them for their active participation and commitment over the last few years. We hope that this collaborative effort and critical exchange of ideas serves to motivate and inspire everyone involved in the field of spatial planning. Finally, we want to thank all those at ETH Zurich who made it possible to publish this book.

Zurich, June 2018

Prof. Dr. Bernd Scholl
Dr. Ana Perić
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How to Read This Book

Rolf Signer

The book has two main parts: one is a collection of actual planning cases, the other, a compilation of spatial planning topics. The planning cases show the variety of issues that a planner may have to confront, while the topics report on some of the conceptual elements that are important in spatial planning.

The book reports first on the real cases, which are the focus of the book. The cases are all related to our living space. All are aimed at improving living conditions by solving pressing spatial problems or by preventing conceivable future ones. This is the core of spatial planning. Some of the cases have been completed, i.e. you can go to the place and see the results, while other projects are still in progress. You can start reading the book anywhere in this first part where something catches your interest. Each case references cases or topics that cover similar instances and provides information on other sources.

While reading the cases, you may notice a certain level of similarity in the planning approaches undertaken. Therefore, the topics section clarifies some of the underlying concepts that support spatial planning practice. Grouped into four sections, the topics follow the path of a spatial planner from the elementary circumstances encountered at the beginning of a planning process, to the ways planners work with other participants in their efforts to define the best possible option and the interaction with the context in which the planning process is embedded up to the planner's proposed plan to achieve a sustainable spatial solution. Each topic contains a reference to cases that illustrate its practical implementation, allowing the reader to switch easily between case and topic and vice versa.

The reader may approach the material in any sequence. It took a certain effort to keep the topics short, but at the end of the book, you will find more information – in case we raised your curiosity. However, this collection of topics is tailored to the cases and is not a substitute for a comprehensive planning textbook. We have also provided a glossary of the basic spatial planning concepts mentioned in the texts for an easier understanding of the book's content.

Introduction

Bernd Scholl, Alessandro Balducci

Planning in an uncertain world

Spatial planning can be traced back to prehistory; since humans began living in settlements, they have had to deal with questions of planning and making decisions of where and how. Over the centuries, land use, settlements, and infrastructures have reflected the essentials of political, economic, technical, and social relationships and even the rise and fall of societies. Throughout the process, experts for the different tasks evolved in various guises, eventually being recognised as the profession of spatial planning at the beginning of the 20th century.

Spatial planners are involved in the organisation and conditions of living spaces and they can take the initiative for improving existing living spaces. Nevertheless, not only experts, administrative authorities and developers, but people also influence the space. In other words, everybody makes plans and decisions about: the place of living, the way to get from one place to another, the place to spend our free time, etc. All of these have an effect on the space itself and on its future development, especially when multiplied by thousands or millions of inhabitants.

However, this also means that spatial developments can be slow to reach a definite form, i.e. the process can extend over many years, decades or even longer. Some important factors are: 1) numerous public and private actors can have an effect on their progress, 2) high costs for investments, operation, and maintenance are usually connected to infrastructures that support the intended development, 3) many proponents of progressive specialised areas of expertise also want to bring in their own knowledge, and 4) too often, politicians and experts do not agree on how to achieve the particular goal in the basic areas of finance, design, location, materials, potential problems and public involvement.

Through examples of clear, detailed projects, this book is intended to contribute to an understanding of spatial planning and to illustrate what spatial planning can produce and why spatial planning is important. We also want to clarify some of the key topics to support

a better understanding of our action-oriented approach to spatial planning, which often starts with challenging problems, but should end with robust solutions.

Planning for and with people

The examples presented in this book were consciously chosen for their broad range and the diverse origins of the planning interventions. Sometimes natural risks and essential logistical problems are the catalyst, sometimes unsolved transport problems and, fairly often, it is the desire to produce liveable spaces and locations for multi-purpose use. Sometimes, planning is needed to deal with problems of social justice when the spatial rights of groups without power are neglected in the planning process. The starting point for many of these cases were critical moments in which the confusion was great enough that time was taken to look for new ways to find solutions. However, this does not mean that spatial planning must always begin with this kind of situation. It can also be that special events, technical innovations or social changes offer completely new or more advantageous opportunities to set the process on a new track toward a successful development. As all these cases tackle complex problem situations, they are far from routine.

In the selection process, one important goal was to choose examples that could demonstrate the largest possible diversity of proven standards and criteria. To accomplish this, we searched for examples in urban areas as well as solutions on a regional scale. However, the goal was always about finding an integrated solution.

The book also features examples of successful spatial planning as well as projects that are still in progress. For some examples, the results are already visible, for others, it may take a few more years until the results are noticeable. Most importantly, the examples show that planning can take many years from the first initiative and planning deliberations through to the final result – and indeed, that decades may have passed since the first initiative. Spatial planners definitely need patience and perseverance, and planning needs continuity.

Planning for complex places

The cases presented in this book also illustrate similar spatial behaviour no matter how much the context is different. More precisely, it seems that planning practice is inspired by conceptual backgrounds that overcomes the narrow borders of concrete planning environments. Therefore, the book also sheds light on some topics that are considered to be elementary when planning for complex places.

Spatial planning is always seen as an interaction between internal and external factors. On the one hand, this includes a planner's standpoint toward the spatial task at hand. Though hardly impartial and neutral, a planner's perspective includes the core common components to be taken into account: problems, goals, methods, and the specific knowledge needed. On the other hand, external circumstances may advance, but also impede the planning process: planning faces different – and often conflicting – opinions, but it also meets common challenges; certain rules and available resources often restrict the planning possibilities, but can also improve and facilitate the planning process; finally, in their daily professional lives planners tackle a number of different traps on the road and the right maxims can help find the right direction.

Furthermore, it is interesting to have a critical insight into a complex and uncertain planning reality and its evolution with a possible realistic transformation expressed in policies, objectives and actions. In doing so, planners may be seen as craftspeople puzzling over possible solutions by combining spaces, places, objects and people. However, planners are not the only participants in the process that may influence the final choice. On the contrary, critical argumentation supports effective decision-making. The sooner the weak points are discovered, the greater is the possibility for their improvement. This ultimately opens up a chance for defining an integrated solution that assembles various options in a way similar to commedia dell'arte.

Today we live in a global society where everybody has the right to be heard, and planners should support this relying on their ethical and technical responsibility while using collaborative skills and knowledge. However, the change in the nature of the planning process does not guarantee the realisation of the planning decision. As spatial planning is a transformative practice aimed at changing the physical reality, it cannot be separated from its implementation.

Therefore, collaborative tools can be fruitful within the context that combines the hierarchical approach of decision-making with the network society. Finally, actions and interventions are an intrinsic part of planning – they are not just a result of planning processes, but a tool to bring people together, build trust, solve problems, change directions and realise ambitions.

Planning in a democratic context

This book appears in a critical moment for western democracies. The danger of manipulating opinions and polarising societies is evident. While success or failure, particularly through wrong decisions, can emerge years or even decades later, due to the reality of long-term deadlines in spatial planning, the dangers and the resulting effects from manipulation are especially serious. Transparency is important to counter this subversive element. Based on our experience and insight, there is no better opportunity to grapple with the best solution than in the conflict of opinions. Our understanding of spatial planning is grounded in democratic principles and institutions that have been generated democratically.

As experts, democracy requires us to probe alternative solutions for difficult tasks. According to our concept, planners manage this best when they are ready right at the beginning to recognise the challenge of competitive ideas for problem-solving and the entire spectrum of solutions. That will then be managed best when enterprising hypotheses are exposed to the entire arsenal of criticism. It is also about being able to use good arguments to eliminate suggestions that are not worth following and ensure that those submitted to the appropriate authorities are genuinely worth pursuing.

It has been said that experts should not overestimate themselves. Their task includes preparing the information or evidence for a decision, however, making a decision in a democratic system is the right of the elected position or, in direct democracies, the voting population. Again, experts should not underestimate their work. To recognise spatial conflicts and problems early, to find solutions using appropriate methods and to present these in decision-ready form to the responsible decision-makers creates important and interesting tasks with great social and professional responsibility. As far-ranging mistakes can be made at the very beginning, it is important to establish support procedures for such tasks as early as possible.

All of this needs time. Many have the opinion that democratic processes are too slow; perhaps slowness itself is considered a problem in our time. But solid legitimacy is a value that is higher than the tempo of a decision-making procedure, as the slowness could protect against mistakes caused by hasty resolutions. And sometimes, the slower the planning process flows, the faster a certain planning decision can be realised.

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Inspiring Stories

Inspiring Planning Stories

Rolf Signer

Several fields of intervention

Many cases presented in this book illustrate an action-oriented approach to spatial planning. Such an approach has at least four fields of intervention: 1) provision of space, such as zoning or securing transport corridors, 2) constructing and maintaining facilities, e.g., parks or pipelines, 3) the adjustment of organisations operating in or with facilities, e.g., households and companies, and 4) interventions to influence the behaviour of actors to keep things on course or focused, something like speed limits on roads. Successful planning in most cases relies on a certain mix of action from these fields of intervention.

Change and choice

The cases deal with the transformation of physical and social reality, with the purpose to solve current spatial problems or to prevent conceivable future ones. In order to do so, planners must first evaluate possible courses of action. They ask what should be done and what could be done. Finally, they have to formulate recommendations for the decision makers. The evaluation of possible actions is one of the most fascinating and challenging tasks, for example: A lot of imaginative power is needed to avoid the trap of anchoring, i.e. focusing too early on one invariable idea.

Uncertainty and surprises

The cases must also confront uncertainty, not only in their own ranks, but among all those involved in the project. And, the unexpected can cause an upheaval in the best of plans. Recommendations to decision makers must always take into account that there are risks that a suggested action may not lead to the desired result. That is why spatial plans need a certain amount of flexibility. However, planners also speak about robustness. This concept means that a plan is strong enough and flexible enough that, whatever happens in the future, the expected results will still stand as a positive outcome and, in particular, not have caused any harm.

The spatial dimension

The spatial dimension in its most obvious form is the size of typical elements in the landscape. Some examples are: an airport runway is typically 4,000 m long; a standard freight train in Europe is up to 750 m, elsewhere, several kilometres long; a modern container ship has a length of 400 m; the marketplace of Krakow is about 4 ha, while a soccer field needs an area of roughly one hectare. The stories in this book, however, happen in spaces much larger than a single building block. They cover areas of a dozen hectares, several hundred hectares, or even more. Therefore, it is easy to understand that practicing planners need special ways to cope with the aspect of magnitude.

Completed projects

The seven cases reported here are all good illustrations of ways to improve living conditions. As the planning processes are complete, the outcome is already known, confirming the methods applied. In fact, you can visit the sites to see what happened.

Here we offer a quick overview of each case.

Vienna (AT), where …
… an engineering project for the Danube had not considered the opportunity for improving living spaces and the excavators were approaching
… politicians and planners took the initiative to introduce a new informal tool for spatial planning and transformed the plan into a multi-purpose project
… the newly created Danube Island, more than 20 km long, which attracts hundreds of thousands of visitors on summer days.

Antwerp (BE), the transformation of a railway site where …
… a heavily polluted 24-ha area in the northern part of the city was abandoned
… a new independent organisation, guided by the city, developed a vision for the area, taking various interests into account which resulted in
… a creative collaboration between inhabitants and stakeholders leading to attractive 18-ha and 6-ha areas for mixed development.

Milan (IT), where a congested and institutionally fragmented part of the urban region was transformed when ...

… a voluntary association of 63 communities had the idea to create a park in this very densely built-up metropolitan area and
… the first director of the park initiated the planting of 11,000 trees changing
… a 'no man's land' into an 800-ha public park.

Budapest (HU), where a former Roma settlement near the centre of town with …

… poor building stock and dilapidated infrastructural networks called for new approaches to redevelopment
… a collaborative process with mutual trust between authorities, developers and local residents was created as a tool against gentrification, and
… wise partnerships led to a 22-ha mixed-use area that satisfies social goals, and provides social infrastructure as well as highly popular public spaces.

Frankfurt am Main (DE), where …

… the riverfront was rather sad and dismal since the destruction of the city centre in World War II
… a concept for a Museum Riverbank and the application for the Olympic Games led to an innovative planning approach achieved over decades, and
… the embankment of the Main River was developed into a central promenade for the city.

Hagenberg, Upper Austria (AT), where an old, but cherished castle was threatened …

… when the owner of the derelict castle planned to demolish it, but
… local citizens were opposed and took action, and the University of Linz was looking for a suitable research facility, all leading to
… a successful combination of bottom-up initiative and educational policy through a remarkable spatial development for Hagenberg.

Swiss Water Stories (CH), where …

… in the middle of the last century, the population was confronted with foaming brooks and large-scale bathing bans
… legislation in water policies played a crucial role for spatial development, and
… despite the great success in waste water management and drinking water supply, water is still the object of a never-ending sequence of decisions and measures.

Projects in progress

We also have nine projects that are still underway. Some of them are about to be implemented, while others require more patience. This is also the field of expectations and surprises: Will the desired results materialise? Will there be unexpected incidents? If so, is the plan good enough to cope with these? Maybe one of these stories will spark enough interest to follow its development.

Ghent (BE) and **Terneuzen** (NL), a canal area between these two countries, where …
… a degraded spatial structure with many environmental problems was the reason for
… an initiative in 1993 to bring together the conflicting parties and to develop a step-by-step goal-oriented, integrated approach to be implemented over
… the next 15 years when the strategic plan will undoubtedly lead to one of the most sustainable and best supported and managed cross-border port areas in Europe.

Chicago (USA), where storm water planning is covered by
… many independent government levels responsible for local water plans, and
… uncertainty in neighbouring communities led to a voluntary council covering 11 counties and 284 communes, whose actions for the future could mean that
… local lakes, marshes, trees and meandering streams could protect and improve surface and groundwater quality, support biodiversity and reduce flooding.

Antwerp (BE) Ring Road, where …
… traffic congestion in the region had become extremely critical
… a weak government project mobilises civil society to develop better solutions
… a 'Pact for the Future' between all stakeholders, including the citizen groups, used a design competition to encourage new possibilities.

Milan (IT) tries to overcome some of the weaknesses of statutory planning, where …
… the institutional framework in the province of Milan with 187 communes was extremely fragmented

… an informal strategic plan, *Città di Città* (City of Cities), was developed
… despite an interruption of several years, the power of its ideas survived in different fields of action, for example, in the 2016 strategic plan of the new metropolitan authority.

Limmat Valley (CH), the western gateway to Zurich, where ...
… a densely used space of national importance was created within the framework of
… an International Doctoral College as a spatial laboratory for action-oriented spatial planning, and
… the newly founded Regional Project Exhibition Limmat Valley Association will help intensify the collaboration across the borders of cantons and communes up until 2025.

Attisholz (CH), Switzerland's largest industrial brownfield was transformed, when ...
… a cellulose factory of more than 100 ha was abandoned,
… the land reserve was recognised as an area of national importance and became the object of a test-planning process
… a globally operating Cleantech company chose the site for a future production centre with 600 workplaces to be in operation in 2019.

TU Vienna (AT), where ...
… a plan to relocate the entire university from its inner-city sites to a new campus on the outskirts of Vienna leading to
… an intensive discussion process, supported by a comparative spatial analysis, and
… the decision to stay on the existing site while modernising and further developing the premises in line with the TU UniverCity 2015 renovation programme aimed at inward development.

Brig (CH), where ...
… the public space of the railway station suffered from typical planning difficulties, such as last-minute changes or too many functions in a limited space and fragmented property, so
… a tailor-made process was established that allowed all actors involved to expand the space for feasible solutions and to move simultaneously rather than consecutively,
… a declaration of intent was signed unanimously by all actors, followed by an international architectural design competition, won by Luigi Snozzi's architectural office.

Stuttgart 21 (DE), where …

… an operational railway station would be replaced by a new underground solution that is less efficient and more expensive

… planning mistakes and the opposition of the population led to controversial debates and enormously increased costs, and,

… according to the latest estimates (beginning 2018), the new station is supposed to go into operation in 2021.

All these cases are, as the French like to say, *affaires à suivre*.

Change needs time and cooperation

The reports on these projects clearly show that spatial planning has a long-term nature. Certainly, one reason is the implementation phase: high costs and complicated technical solutions necessarily extend the period until the project can go into full operation. In contrast, complex planning issues, as described in most of the cases, usually require modifications to a typical planning process or, more often, the creation of innovative planning instruments. This goes hand in hand with a necessary change of the mind-set of the parties involved that may finally lead to the transformation of a certain planning culture. As such a change demands broader socio-political support, it is clear that it cannot happen overnight.

Therefore, the cooperation between planners, stakeholders and those affected by the planning is not a burden, rather, it is a chance to achieve a sustainable solution. Often planning is an interplay between bottom-up measures and top-down procedures. As demonstrated by the cases presented in this book, such an interplay calls for a willingness to take the initiative as well as clever leadership and advanced tools and it certainly benefits from a supportive institutional framework and the right socio-political momentum.

Finished Projects: Have a Look!

Strategy is a system of expedients.

Helmuth Graf von Moltke

Austria

Area: 84,000 km²
Population: 8.8 million
Population density: 105 p/km²
Capital: Vienna

The Danube is over 2,800 km long and is the second longest river in Europe. The City of Vienna has 1.9 million inhabitants. Here, the Danube has an average flow volume of about 1,900 m³/s. The highest was in 1501 with 14,000 m³/s.

A 'New' Danube for Vienna: An Innovative Multi-Purpose Project

Bernd Scholl

Originally, the plan to protect the City of Vienna from the devastating floods of the Danube River was to construct an authorised channel of approximately 21 kilometres. However, the steep embankments secured with large stone blocks would block any access or use of the river by the resident population. Instead, a local recreation area has been created that offers rest and relaxation to hundreds of thousands of people on beautiful summer days, as well as bathing and free-time pleasures of many kinds. The 'new' Danube has also passed all the practical tests as a technical flood protection project. The successful metamorphosis of a purely engineering structure to a multi-purpose project was made possible through a new kind of planning process, born out of a flooding emergency in the 1970s. Called the Vienna Model, it became well known as one of the forerunners of the use of informal processes. Today, the use of such processes for the exploration, clarification and solution of difficult and extremely important spatial planning tasks in Switzerland, and many other countries, has become indispensable.

Figure 1: Old Danube River.

The problem: Vienna's urban area devastated by Danube floodwaters

Over the centuries, Vienna has experienced catastrophic floods again and again. The highest water level ever measured was 14,000 m^3/s in 1501. Where the New Danube and the Danube Island exist today, the first of Vienna's Danube regulation attempts (1868–1875) created a flood area, a broad meadowland that was underwater during the floods.

The flood of 1954 brought about an initiative for better protection, which up to that point could only withstand an average flood level of about 10,000 m^3/s. The planning for a new approach began in 1957 (Fig. 2). After years of discussion, a new Danube River Regulation Plan was developed that included a discharge flume and the creation of an elongated island in the Danube itself with the deposition of the excavated material. This plan, based only on the requirements for flood protection, included a civil engineering structure with steep banks and stone slopes over a normal cross-section of the entire length (21 km) of the island parallel to the river's flow through Vienna's urban area. Any use for other purpose, for example, leisure and recreation, were not considered, in particular, on the dam of the New Danube where a new motorway was planned.

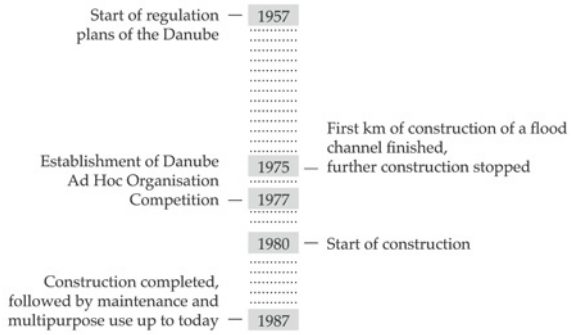


Figure 2: Project timeline.

From a single-function construction to a multi-purpose project

After the first phase was finished in the mid-1970s, the staff of the Building Department of Vienna, as well as the then state governor Hofmann, criticised the one-dimensional plan. However, the plan was already in place. Therefore, the responsible actors from the state and federal governments took the initiative that resulted in the creation of a time-limited organisation under the leadership of Jakob Maurer, Professor for Spatial Planning at ETH Zurich, who, for that time, had already created some unusual process innovations. Jakob Maurer had the strong support of Kurt Freisitzer, a sociology professor at the University of Graz.

The starting point was a competition in 1977, from which several teams were invited to work on further developments that included regular exchanges with an Evaluation Committee. Within three years, it was possible to design the river space and the new Danube Island in such a way that today several hundred thousand visitors can find both peace and quiet, time to recuperate, and other recreational activities, such as bathing, on beautiful summer days.

The former plan of a solid bank dam was replaced with 'soft' areas featuring smooth, gently increasing embankments. The autobahn was relocated behind the dam on the north side and covered using green bridges. Finally, the new Danube Island was connected to the city by the regional railway system and the subway, as well as by the trams and diverse bus lines of the public transport system.

It was already clear that the New Danube, especially the northern bank – because of the attraction of a waterfront – would experience settlement pressure (Fig. 3). The solution was to design the well-connected spaces on the island so that building construction would not be profitable and the area would be exclusively available for leisure and recreational purposes. In order to ensure that the banks of the island would not be allowed to be too high, the island must be able to withstand a planned flooding during periods of exceptionally high water levels.

Figure 3: New Danube Island with the Danube, right and New Danube, left.

Thanks to the new construction, a floodwater of up to 14,000 m^3/s can be discharged risk-free. The floods of 2002 and 2013, which exceeded the 20th century high, were successfully managed. Through different weirs, the level of the Danube flow is higher than that of the New Danube. Consequently, the New Danube will be continually fed by the main Danube, which on its passage around the Danube Island will be filtered and cleaned to achieve a water quality suitable for bathing. Any excess water in the New Danube will be continually diverted over weirs 1 and 2.

A multi-purpose project was realised – within manageable additional costs, so that today, in addition to the Vienna subway and the new central railway station, it can be counted among the most distinguished Viennese urban development projects of the recent past. Moreover, it has developed into the city's most popular recreational area.

Central principles of the planning innovations in the Vienna model

The most distinctive feature of the innovative approach of this model is the introduction of retreat-like meetings of the actors involved in the project; in Vienna, this was called 'coupling' (*Kupplung*). In contrast to the usual method of using expert opinions

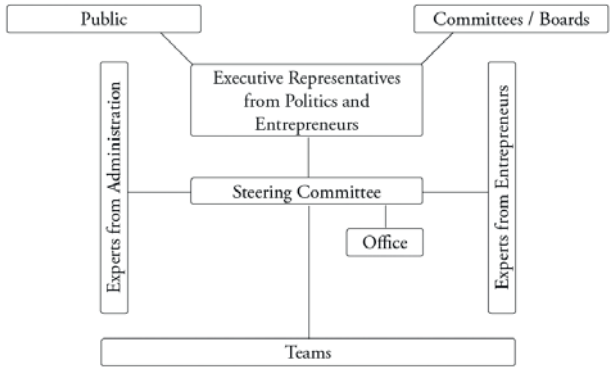


Figure 4: Organisational chart of the Vienna Model.

and counter-opinions in consecutive processes to solve difficult issues, the new approach offers a time-limited platform for the direct and regular exchange of those who draft solutions and those who evaluate them (Fig. 4).

The central component of the Vienna Model is a critical discourse on the questions related to the solutions submitted. Which solutions are appropriate and which are not can only be compared in light of and in comparison to previous suggestions. Thus, they can only be given a relative evaluation and not an absolute one. Previous solutions for reference purposes do not exist for the majority of the difficult tasks of spatial planning. This situation can lead to time-consuming consecutive processes, often with conflicts among the experts, so the new simultaneous processes have the advantage, not only of speed, but of working conflicts out along the way. This approach complements the (still required) legal foundation of formal processes in spatial planning. The collaborative models arising from the Vienna Model, e.g. the test

planning processes conducted in Switzerland, belong to the category of informal processes. The design of such processes can be tailored to each situation; however, this does require extensive knowledge and experience (Fig. 5). Through its use of this far-sighted spatial development, Vienna gained a multifunctional and attractive space for the Danube River.

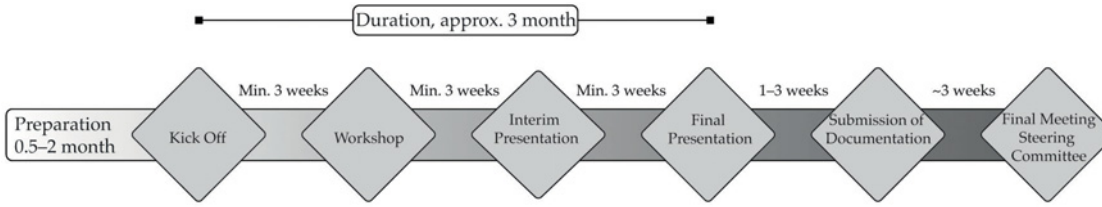


Figure 5: Organisation of a simultaneous process.

Spatial planning matters

At the start, this was a one-dimensional hydro-engineering project. With the support of the approaching excavation team and a pioneering informal spatial planning process in progress, it was possible to provide this unusual recreational area for Vienna's population while ensuring the desired floodwater protection (Fig. 6).

Figure 6: Danube island and its catchment area – recreational zone and commercial centre.

The creation of an ad hoc organisation that experimented with innovative methods in spatial planning was crucial for the success of this project.

Additional information about this case

From the hydro-engineering perspective, the Vienna project is a remarkable example: the total costs for construction, including the Danube dam on the right side, were 500 million euros; 30 million m^3 of earth were moved during the construction period; and a floodwater total of up to 14,000 m^3/s can be discharged risk-free. The proof of the success of such an investment is the historically significant floods of 2002 and 2013. More on the record flooding from 2013 can be found at https://www.wien.gv.at/umwelt/gewaesser/hochwasserschutz/donau/hochwasser-2013.html.

However, the need to integrate various fields, e.g. a flooding issue in relation to spatial development appeared back in the late 1970s. More precisely, the results and findings of the competition from 1977 were thoroughly elaborated in the book: Freisitzer, Kurt, and Jakob Maurer, eds. *Das Wiener Modell. Erfahrungen mit innovativer Stadtplanung. Empirische Befunde aus einem Grossprojekt.* Vienna: Compress, 1985.

The principles of the test planning process, its innovations and the applicable maxims are presented and further developed in several publications:

1. Freisitzer, Kurt, and Jakob Maurer, eds. *Das Wiener Modell. Erfahrungen mit innovativer Stadtplanung. Empirische Befunde aus einem Grossprojekt.* Vienna: Compress, 1985;
2. Scholl, Bernd. *Aktionsplanung. Zur Behandlung komplexer Schwerpunktaufgaben in der Raumplanung.* Zurich: vdf Verlag, 1995;
3. Scholl, Bernd. "Die Methode der Testplanung. Exemplarische Veranschaulichung für die Auswahl und den Einsatz von Methoden in Klärungsprozessen." In *Grundriss der Raumordnung und Raumentwicklung,* 330–345. Hannover: Akademie für Raumforschung und Landesplanung (ARL), 2011;
4. Scholl, Bernd. "Building actor relationships and alliances for complex problem solving in spatial planning: The test planning method." *disP – The Planning Review* 53, no. 1 (2017): 46–56.

These publications have especially enlivened and fertilised the discussion on the informal cooperative process forms of the 1980s and 1990s.

Similar cases in this publication

The following cases illustrate innovative planning approaches in solving water-related spatial problems: 1) The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan, and 2) Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River.

Topics relevant to this case

The innovative procedure for the riverbank development has its roots in the Vienna Model. The relevant topics are:

The innovative procedure for the riverbank development has its roots in the Vienna Model. The relevant topics are: 1) Linking Informal and Formal Responsibility, 2) Spatial Conflicts and Opportunities, 3) Creative Criticism in Spatial Planning, 4) Traps and Maxims, 5) Reflective Leadership, 6) Puzzling: Making Plans Together Works, and 7) Anticipation: Going for Action.

The proof of the pudding is in the eating, not in the cookbook.

Aldous Huxley

Belgium

Area: 31,000 km²
Population: 11.2 million
Population density: 367 p/km²
Capital: Brussels

Antwerp on the River Scheldt in Flanders has 521,000 inhabitants. The new park on a former railway site of the Belgian State Railway covers 24 ha.

Park Spoor-Noord, Antwerp: A Marriage Between Co-Production and Spatial Quality

Jef Van den Broeck, Hardwin De Wever

In 2000, the National Belgian Railway Company abandoned a 24-ha railway site in the northern part of Antwerp. The brownfield was heavily polluted and the railway infrastructure formed a barrier between three surrounding deteriorated residential areas, while the local population had been demanding a park in the area for a long time. However, the real stimulus for the redevelopment came from the Federal Urban Policy and European URBAN II funds, which provided substantial financial incentives for interesting social urban projects. In 2001, a new organisation (an autonomous city enterprise) was established by the city, with juridical and financial independence and the task to develop a vision for the area, taking into account the interests and ambitions of the owner, the citizens, the Federal Government, the EU and the city. In a policy agreement, the new structure, including the planning team, project definition, financial consequences and a strict schedule were laid down, thus forcing the city to take decisions within short periods. The result was the realisation of an attractive 18-ha park and a 6-ha commercial area.

Figure 1: Spoor-Noord in Antwerp, a polluted railway yard.

The process and the project

The first activity of the planning team participating in the redevelopment of the abandoned railway area (Fig. 1) was a creation of the Starting and Discussion Notes with the relevant information, key issues, potential and an inventory of existing visions and concerns. The notes also formulated a proposal concerning the planning process, possible development perspectives, and the timing, scheduled in three phases (Fig. 2).

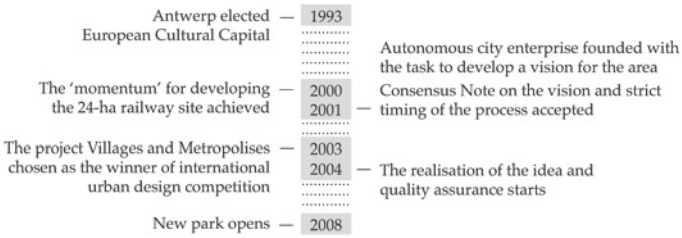


Figure 2: Project timeline.

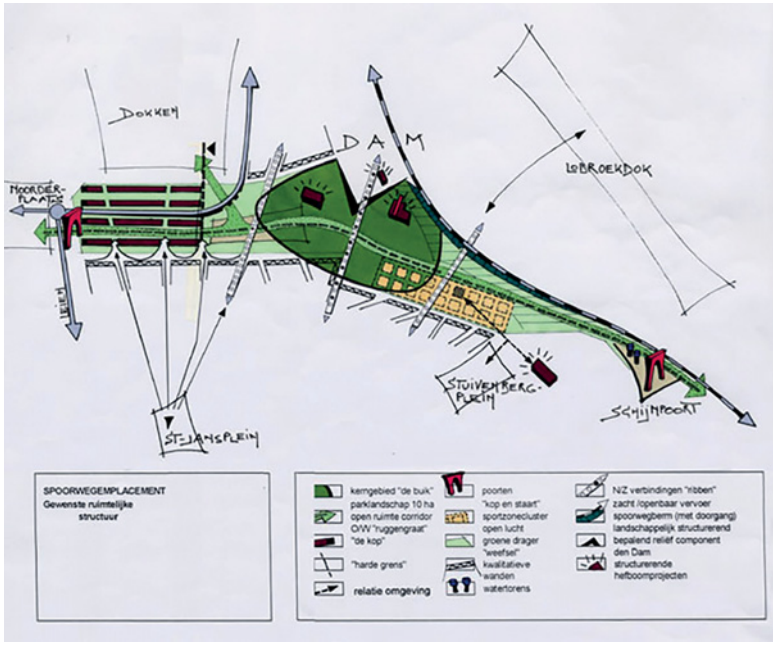


Figure 3: Spatial concept for the area.

In the first phase (2001), the planning team organised Vision Days with different city services, politicians and external experts working together in a vision development team, a financial scenarios development team and a 'research by design' team. The city expressed

its vision for the development and strict timing of the process in a Consensus Note, which was discussed with the neighbourhood and accepted by the Council in October 2001. The city proposed to divide the area into three parts: two areas for commercial development by the railway company (6 ha with 0.3 floor ratio) and an 18-ha park area (Fig. 3). As a condition, the city also required the organisation of an international urban design competition in order to guarantee the spatial and social quality of the development.

During the second phase, the Consensus Note was used as the basis for negotiations with the owner who had high financial expectations. Under pressure of the subsidy deadlines, a Policy Agreement was signed with the owner in December 2001. The content of the Consensus Note was accepted by the parties, with the exception of the proposed floor ratio which was changed to 0.8–1.2 (190,000–200,000 m^2). A legal land-use plan clarifying the functions of the three areas and the floor ratio was defined, and a limited city public company was established as a financial and juridical instrument for the realisation. An intensive Appeal Programme with events on the spot, expositions, newsletter, workshops, and discovery walks in the area was organised during the negotiations to attract people to take 'mental possession of the promised land.'

It was the right 'momentum' for developing the Spoor-Noord Park. Inhabitants had been asking for it since Antwerp was elected European Cultural Capital in 1993. Different Belgian schools for architecture, urbanism and planning designed proposals for the Spoor-Noord area. Inhabitants, however, reacted against a purely commercial development, demanding a park instead for the very dense neighbourhood. Sufficient 'momentum' was finally achieved in 2000. Politicians wanted to oppose the growing influence of the extreme right party in the area. A non-profit Neighbourhood Development organisation with representatives of the city, the universities and the NGOs, worked with the inhabitants to support the park concept. The European Union started with the URBAN II programme providing funds for integrative inclusive projects. And last, but not least, the city administration established a Planning Cell using young capable planners with a clear vision. The common vision of all these parties made it possible to positively steer the negotiations with the owner of the land.

In the third phase, an international urban design competition was organised. The project Villages and Metropolises from the team

Studio 03 with Bernardo Secchi and Paola Vigano as the driving forces was chosen by the jury. The team considered the park to be a:

> Social, free and open space with different dimensions, functions and forms creating specific atmospheres with the potential to grow and change: a billiard sheet with changing functions and activities, for sport and recreation, with buildings, paths for walking and biking, with trees and a garden for the neighbourhood, a park for the city. A transparent intimate partly open, partly closed, ecological and safe space.

The fourth phase was about the realisation of the idea and quality assurance. The winner of the competition received the commission to design a concrete project for the park and to develop a legally required land-use plan, hence guaranteeing the legal certainty for the partners. The city created a very capable mixed project team responsible for the realisation, management and the quality assurance of the project in close cooperation with the design team and the inhabitants. The park was finally opened in 2008 (Fig. 4).

Figure 4: Park Spoor-Noord today.

Outcome, impact and lessons

The park provided local residents with space and facilities for recreation, sport and social and cultural activities. It gives a much-needed boost to the surrounding neighborhoods and reversed the downward spiral of decline and stimulated private investments. Another important outcome of the creation of an innovative authentic space for such a mixed population of local residents and immigrants, poor and rich, inner city and regional inhabitants, is its appeal for a broad population. The initial vision from the city and the quality of the concrete design were fundamental incubators of its appeal. The reuse of existing buildings, first intended for demolition, helped keep the collective memory and the *couleur locale* of the past, but also to create new adaptive future.

Incentives and co-production for quality matter

The Spoor-Noord case shows how to deal with a complex process and project, how to deal with a powerful stakeholder (the railway company) through negotiation, how trading and agreements created a land-position for the city, and a guarantee for both spatial and design quality. It shows how a city can play a fundamental role as the 'director' of the process. The involvement of the population certainly improved the quality of the result: production of local knowledge, expression of clear ambitions, proposals for a concrete programme, discussions and reactions to the documents and design proposals, and personal investments in the property. The use of supra-local funds was not only a motor for the realisation, but also for the quality. Here the role and policies of the Federal Government and the EU were crucial. It shows that working with incentives can be an effective strategy for the implementation of a policy.

Additional information about this case

More information about the project can be found at the website www.ag-vespa.be/projecten/park-spoor-noord, as well as in following publications: De Wever, Hardwin, and Ellen Lamberts, ed. *Antwerp, Spoor Noord: A City Park off the beaten tracks*. Gent: Ludion, 2003; Uytttenhove, Pieter, ed. *Taking Sides, Antwerp's 19th century belt: elements for a culture of the city*. Antwerp: Open Stad, 1993.

Similar cases in this publication

Cases dealing with brownfield regeneration, co-production, planning expertise and socio-spatial quality are: 1) Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre, 2) Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance by Planning, 3) How 'Moving Simultaneously' Opened New Possibilities for Solving a Muddled Situation: The Case of Brig, Switzerland, 4) Local Development and Village Renewal in Hagenberg, Upper Austria, and 5) A Regional Park against Urban Sprawl: The Case of Parco Nord in Milan.

Topics relevant to this case

The following topics relate to the challenging issues of a collaborative planning process: 1) Discourse: A Tool for a Collaborative Planner, 2) Reflective Leadership, 3) Participation for Democracy and Spatial Quality, 4) Linking Informal and Formal Responsibility, and 5) Anticipation: Going for Action.

An accident is the known result of an unknown source.

Voltaire

Italy

Area: 301,000 km²
Population: 60.6 million
Population density: 201 p/km²
Capital: Rome

Milan and five communes, Bresso, Cusano Milanino, Cormano, Cinisello Balsamo and Sesto San Giovanni, worked together to advance the realisation of the park. Milan in Lombardy has 1.4 million inhabitants.

A Regional Park Against Urban Sprawl: The Case of Parco Nord in Milan

Alessandro Balducci

Containing urban sprawl in dynamic urban areas is a typical planning problem that is particularly difficult when many communes are responsible for growth control and there is no effective metropolitan planning authority. Green belts and regional parks are usually meant to contain urban sprawl. They are often the result of strategic visions and particularly of the power to impose such solutions. However, when powers are weak and fragmented, it is much more difficult to contain urban growth and to preserve large areas of 'unbuilt' land dedicated to recreational and ecological purposes. Parco Nord is a success story of a park of almost 800 hectares realised in the northern, most congested and institutionally fragmented part of the Milan's urban region. It was created by assembling the peripheral, abandoned or still unused areas of six communes: Milan, Bresso, Cusano Milanino, Cormano, Cinisello Balsamo and Sesto San Giovanni. The case shows how to combine strategies and tactics, vision and actions, and how important it is sometimes to anticipate actions related to the plans.

Figure 1: The core area of the park before 1983.

Containing growth in a phase of accelerated development

For a long time, the area of Parco Nord in Milan (Fig. 1) was spared Milan's urbanisation, which was particularly aggressive and rapid (Fig. 2).

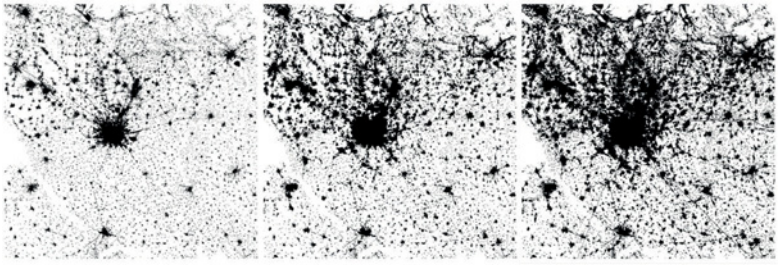


Figure 2: Growth in the Milan's Urban Region.

At the end of the 1950s, there was already a growing awareness of the necessity to establish a metropolitan planning authority to control urban sprawl and to deal with problems of transport, infrastructure, preservation areas, etc. However, the story of its establishment is very intricate (Fig. 3).

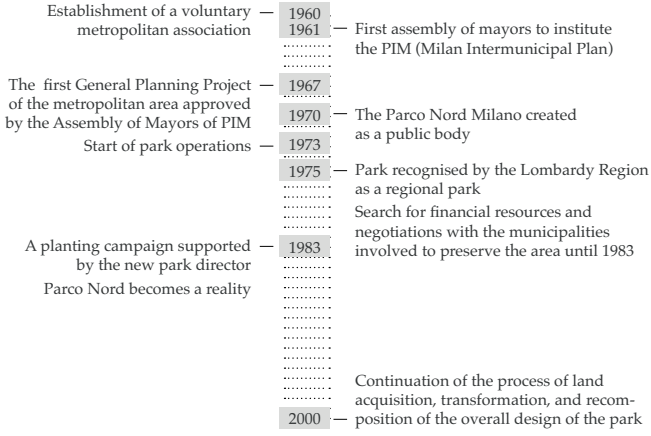


Figure 3: Project timeline.

A pragmatic approach to overcome institutional problems

A voluntary association, made up of 63 communes, including Milan, was set up to establish the preliminary conditions for any future action related to the park's development. It was mainly aimed at

elaborating the objectives and guidelines of the metropolitan plan, PIM: Milan Inter-municipal Plan (*Piano Intercomunale Milanese*). This was followed by the idea of instituting a park in the most congested part of the metropolitan area, as stated in the first planning document approved by the Assembly of Mayors of PIM in 1967. It revolved around defining some limits and providing relief from the continuous process of area urbanisation. The park was soon formally instituted as a public entity with the power to acquire land and to design and develop the project of the park. Nevertheless, the first years of activity were dedicated to dealing with problems of funding, governance and planning with limited results and almost nothing on the ground.

After years of the park's formal existence, a major step forward occurred when one of the planners who had been involved in the preparation of the metropolitan plan (1967), Francesco Borella, accepted the position of the first director of the Parco Nord Milano in 1983. The new planning director faced a very difficult situation: a wide, degraded area on the city's extreme periphery; contamination; abandoned industrial sites; agricultural areas waiting for transformation; a big debt for the acquisition of the first area of 120 hectares (a fifth of the entire area); the scarcity of resources to acquire the land; a detailed plan elaborated in a traditional way, i.e. the proposal by Brunati, Costantino, Selleri and Vercelloni had turned out to be rigid and very costly; the low credibility of the initiative in comparison to the strength of the growth machine; and, the weakness of environmental concerns at that time.

Figure 4: The first initiative of planting 11,000 trees in 1983.

Given the discouraging situation, Borella decided to act strategically, starting with planting trees in the areas that were already owned by the park. With the support of the Forest Regional Agency, in a short period of time, 11,000 small plants were set, giving a sign that the park could become real. The first visible results progressively won the commitment of the various communes and the surrounding communities (Fig. 4). This was the first move to convince the technical staff of the park and its governing body to abandon the traditional approach of working from a general plan of the entire area to be implemented consecutively. Instead, they used all possible opportunities to transform areas available in different communes, here and there, and to invest in detailed designs accordingly, following a flexible framework plan. After Borella's retirement, a new director was appointed, Riccardo Gini, who is continuing with the same approach.

Figure 5: The current state of the core park area.

Even with limited resources, the small but passionate staff of the Park Planning Office has been able to work in various directions towards further park development (Fig. 5). As a result, two million people visit the park each year (Fig. 6). Since 2016, the park has been extended to include a new local park, reaching the remarkable size of 793 hectares (Fig. 7).

Figure 6: Parco Nord with users.
© Parco Nord Archive

Figure 7: The Parco Nord Plan.
The Parco Nord Plan.
© Parco Nord Archive

Pragmatic planning and strategic acting

Parco Nord in Milan is now a reality: a regional park that has changed a 'no man's land' into a great resource for the citizens' well-being. Its dimension and character welcomes any type of use from picnics to feasts, skating and jogging, cycling or just relaxing. It is really a new public space, a kind of a contemporary *piazza* at the scale of the urban region.

It is a fine example of the power of ideas, because without the initial proposal being approved in a boom period for urbanisation and development, it would have been very difficult to protect this great resource. At that time, it was difficult to conceive of a park for two different reasons: 1) the most important socially recognised value was "development" for hosting new housing and industries in an urban region that would add hundreds of thousands of inhabitants in a few years; and 2) it was difficult to foresee a future park in areas that were heavily degraded and criss-crossed by infrastructure. Looking back, it is easy to see how important it was to launch and anticipate this idea in this kind of context.

At the same time, it is an example of the fact that plans are not enough, they need to produce action and not just paper. The initiative of the planner to stimulate the process by starting to plant trees was decisive for winning consensus among local politicians and support from the community. It is also a demonstration of what it means to act strategically: If he had waited to have everything in place, economic resources, staff, detailed projects, governments support, etc., nothing would have happened. The decision to act with a general vision for the future park and use tactical actions where it was possible to advance the realisation of the park was successful. Finally, it is sometimes important for the planner to become an activist, a committed actor who, in spite of uncertainty and a lack of flexibility in other political actors, is still able to exercise leadership, thus leading to a result.

Additional information about this case

Even with limited resources, the strategic approach implemented in the case of the Parco Nord led to significant results and is seen as a tool against urban sprawl. The main activities of the Park Planning Office are:

- Land reclamation and cleaning the areas
- Pedestrian and cycling paths, progressively realising more than 35 km of paths each of a different nature
- Construction of pedestrian and cycling bridges to connect the different parts of the park passing over the infrastructures
- Realisation of woods that reach 101 hectares
- Realisation of meadows over 225 hectares
- Realisation of shrubbery for 6 hectares
- Restoration of an old farmhouse that became the technical office and headquarters of the park
- Development of an original form of surveillance that covers a series of areas, including the gates of the park, children's playground, bowling fields for elders, and kitchen gardens, so that the park can be available to visitors at all times
- Organisation of a voluntary guard association with more than 150 volunteers
- Organisation of events, more than 200 a year

The vicissitudes of the metropolitan planning approach illustrated in the case of the Parco Nord development can be found online at the official web-site of the Parco Nord (www.parconord.milano.it) and as a short presentation on Youtube (https://www.youtube.com/watch?v=XLa9cbnmmUE). In addition, the following paper appeared in *disP*: Balducci, Alessandro. "Policies, Plans and Projects. Governing the city-region of Milan." *disP – The Planning Review* 152, no. 1 (2003): 59–70.

Similar cases in this publication

The cases similar to this one, either in terms of its theme or strategic approach are: 1) Park Spoor-Noord, Antwerp: A Marriage between Co-production and Spatial Quality; 2) The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland, 3) A 'New' Danube for Vienna: An Innovative Multi-purpose Project, and 4) Storm Water Planning in the Chicago Metropolitan Region.

Topics relevant to this case

The following topics relate to the challenging issues of strategic spatial planning: 1) Reflective Leadership, 2) Linking Informal and Formal Responsibility, and 3) Anticipation: Going for Action.

Plans are of little importance, but planning is essential.

Winston Churchill

Hungary

Area: 93,000 km²
Population: 9.8 million
Population density: 105 p/km²
Capital: Budapest

The Hungarian capital on the River Danube has 1.8 million inhabitants. The Corvin 22-ha area belongs to district VIII (Józsefváros), located southeast of the city centre.

Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre

Ana Perić

Brownfield regeneration is considered one of the most complex mechanisms of inward spatial development. The complexity and 'fuzziness' often appear in such processes when a large number of participants are involved. In addition, stakeholders with conflicting interests can make it difficult to establish a joint action that would finally lead to achieving a consensus on a common vision for sustainable development. The former Roma settlement of Corvin (Corvin-Szigony) is an example of how mutual trust and understanding can be built through a collaborative process. The case study describes the process of Corvin's regeneration by clarifying the roles and responsibilities of the interested parties: private developers (Futureal), local community (Grund Association, NGO), local administration, i.e. the district authority, and planning experts (gathered around the Rev8, the 'expert branch' of local government). The planning process is illustrated through the following phases: 1) initial idea for a regeneration on Corvin, 2) organisation and management of the process, 3) negotiation and decision-making procedure, and 4) conflict resolution.

Figure 1: The Corvin slum quarter before the regeneration process started.

Former Roma settlement: Corvin, Budapest

The former Roma settlement of Corvin (Corvin-Szigony) is located near the city centre of Budapest and is part of District VIII, named Jozefvaros (Józsefváros). This 22-ha area is well situated strategically: it is connected to the city's central core, close to two subway stations, and on the route leading to the airport.

Figure 2: Typical inner courtyard in the Corvin area before the planning intervention.

Figure 3: Project timeline.

However, poor building stock, i.e. 1,100 social housing units dating from before World War II, with 800 being unliveable and mainly abandoned, and dilapidated infrastructure networks have made it hard for Corvin to redevelop (Figs. 1, 2). After a long negotiation process that included various stakeholders, Futureal, a private company, bought the site in 2004. After some final changes in the Regulatory District Plan, which allowed construction to begin in 2005, the site was mostly finished in 2016 (Fig. 3).

Planning as a tool against gentrification

In addition to a strong private incentive, the district administration was consistent in its intention to keep the majority of the local inhabitants (⅓ Roma population) at the site or at least in District VIII or surrounding districts. Therefore, due to its development potential and the efforts to avoid gentrification, György Alföldi, Rév8 AgencyDirector, envisioned the Corvin site regeneration as a process aimed "not only at improving the building stock, but also achieving the economic, cultural and social benefits." Such a goal required involving three main stakeholders: 1) Futureal, the largest residential construction developer in Hungary, 2) local community, gathered around the NGO Grund, focused on preserving local values and the Corvin identity, and 3) the district authority with the Rév8 agency.

The role of Rév8 in managing the planning process

In 1997, the district authorities, led by György Molnar, founded Rév8 (Agency for R rehabilitation and Urban Development) for the purpose of "protecting the public values and long-term sustainable development, instead of supporting the short-term financial benefits pursued by private sector." The agency includes an int erdisciplinary team of experts, architects, urban planners, geographers, economists, sociologists, etc., thus covering a wide variety of skills and knowledge necessary for negotiation with different stakeholders.

Rév8 provided a detailed analysis of the social structure of the population, an identification of their needs, and an expert analysis of the building stock conditions of about 2,500 household units. Moreover, local residents were kept informed about new plan proposals through round-table meetings held at Grund, the local NGO, which its founder, Daniel Mann, said, " ... is a very informal form of communication during the planning process for Hungarian standards."

Outcome: Towards an integrative and holistic brownfield regeneration

The innovative nature of the Corvin regeneration process is even more significant for the post-communist context of the Budapest urban development, seen in: 1) the involvement of all the affected stakeholders, 2) the proactive role of urban experts, and 3) the efficient response of the local authorities towards the market demands.

Révs acted also as mediator between the district administration and Futureal, the investor. Namely, the original Regulatory District Plan from 2002 had prescribed the land for residential purposes only, which is not that attractive for a private investor. However, György Molnar highlights that the Budapest city administration "did not understand the need for the redevelopment of the Corvin site," and therefore donated only 15 percent of the total investment (instead of ⅓ as previously agreed). Hence, the district authority was forced to negotiate with the private investor, which in 2005 resulted in a plan modification towards increased mixed-use areas. Although Tibor Tatár, the Futureal Project Manager, saw such a change as "a reward for a very risky investment, not only financially, but also in political terms," the development vision of a socially sustainable regeneration (defined at the beginning of planning process) was not compromised. In fact, the Rév8 convinced the investors that by satisfying social goals and providing social infrastructure, e.g., schools and health centres, open spaces, etc., the urban quality of the area and high standards in designing the public spaces will increase the private profit, too (Fig. 4).

Briefly put, the voices of the less powerful stakeholders were heard. The NGO Grund contributed to protecting the local identity, while the Roma population also had the economic benefits, i.e. due to the strict demands of the district administration, new jobs and skills development were created through employment of the original inhabitants. In addition, the district authority strongly supported them in finding a new home in the neighbouring area. Furthermore, György Molnar places an emphasis on the public-private partnership established through the Corvin regeneration as one of the "most successful examples of long-term cooperation between various sectors." The reason behind the success in reaching a consensus-based solution lies in the expertise of Rév8 multidisciplinary team, which showed significant mediation, facilitation and negotiation skills in addition to its expert knowledge. Hence, György Alföldi proudly claims: "Urban planning was understood as a management process, and not as a pure technical expertise." Finally, a tendency towards consensus-based and polycentric, in terms of different power centres, policy-making experienced through the Corvin regeneration should be understood as a forerunner of institutional transformation, or as György Molnar puts it "the Corvin revitalisation signals institutional reforms towards integrative and holistic brownfield regeneration."

Figure 4: Corvin area after the rehabilitation process (2012).

© Ana Perić

Figure 5: The elevation harmony between the newly built and reconstructed buildings.

© mapio.net

Importance of collaborative brownfield regeneration

To achieve a successful collaboration in a brownfield regeneration process is the most challenging, yet most important step. The engagement of all sectors of society, followed by a strong managerial role of planners, helps improve not only the physical realm (Fig. 5), but also addresses the social and economic needs of the community, ultimately making a difference in the lives of people affected.

Additional information about this case

The Corvin Regeneration Project is a successful example of the 15-year cooperation between various sectors, and is recognised as such not only at the European level, but also at the global scale, being awarded several times. In 2010, the Corvin Promenade Project got the International Commercial Property Award for the best mixed-used development in Europe; in 2014, it was the winner of the ULI (Urban Land Institute) Global Award for Excellence for the responsible use of land; and the project was also given an award in 2014 by the EB OVO civic organisation for its exemplary coordination of the community and the private sphere.

More information on the project can be found at the following websites:

1. The website of the developer, focusing on the current offer of activities in the Corvin area: www.corvinsetany.hu/index.php?fooldal=1;
2. The official website of the Rév8 agency: www.rev8.hu/aktualis-projektek/corvin-setany-program/;
3. The website of the Director of the Rév8 agency, György Alföldi, provides both an historical overview and the current status of the site development: www.alfoldigyorgy.hu/projects/corvin-promenade-project-corvin-setany-projekt-budapest-2000–2015/.

For news on the Corvine Promenade in magazines, see: Karasz, Palko. "A Budapest District Moves on From Its Bleak Past." *New York Times*, June 19, 2014. https://www.nytimes.com/2014/06/20/greathomesanddestinations/in-budapest-corvin-promenade-project-drives-real-estate-sales.html; Krueger, Robert. "13 Winners Honored with ULI Global Awards for Excellence." *Urban Land*, October 22, 2014. https://urbanland.uli.org/planning-design/thirteen-winners-honored-uli-global-awards-excellence/.

For the scientific contributions on the Corvin case, see: Keresztély, Krisztina, and James W. Scott. "Urban Regeneration in the Post-Socialist Context: Budapest and the Search for a Social Dimension." *European Planning Studies* 20, no. 7 (2012): 1111–1134; Perić, Ana. "The role of local governance in the process of brownfield regeneration: European planning practice." *Serbian Architectural Journal* 7, no. 3 (2015): 263–284.

Similar cases in this publication

Cases dealing with the topic of brownfield regeneration, importance of collaboration, and the proactive role of planners in guiding the planning process are: 1) Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance by Planning, 2) Park Spoor-Noord, Antwerp: A Marriage between Co-Production and Spatial Quality, 3) How 'Moving Simultaneously' Opened New Possibilities for Solving a Muddled Situation: The Case of Brig, Switzerland, 4) The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan, and 5) Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning.

Topics relevant to this case

The following topics provide the background for understanding the nature of a collaborative planning approach, as well as the position of planners in the broader decision-making arena: 1) Discourse: A Tool for a Collaborative Planner, 2) Commedia dell'Arte: How Planners Can Act in Naked Reality, 3) Reflective Leadership, 4) Puzzling: Making Plans Together Works, and 5) Participation for Democracy and Spatial Quality.

Courage imagines that the way is shorter.

Johann Wolfgang von Goethe

Germany

Area: 357,000 km²
Population: 82.6 million
Population density: 231 p/km²
Capital: Berlin

Frankfurt on the Main River in the state of Hesse has 735,000 inhabitants. The Main River is with its 525 km the longest right tributary of the Rhine. It has an average flow volume of about 200 m³/s.

Frankfurt: Back to the River!
Making Urban Spaces and Places on the Banks of the Main River

Bernd Scholl

In 1987, Frankfurt inquired about hosting the Olympic Games – under the impression that hosting the Games would put it on the international map and the required cultural and sports facilities would afterwards enhance its image as a place to live. Since then, almost four decades have gone by. The riverfront, which was rather sad and dismal since the destruction of the city centre in the Second World War, has developed into a lively space for exchanges and encounters, recreation, and diverse cultural activities in just two decades. In addition, new residential areas have grown up on what were barren harbour areas and the old slaughterhouse premises on the southern bank of the river. New parks were created and streets were rearranged and installed. The embankment of the Main River has developed into a central promenade and become the stage for Frankfurt's revived river space. All of this was accomplished through the innovative planning and leadership of experts and politicians – without the cost of hosting the Olympic Games.

Figure 1: Frankfurt am Main, 1981.

Frankfurt turned its back on its river

Most cities thank their existence to the proximity to water and so it is with the former Free Imperial City of Frankfurt. The name of the city can be traced back to a Frankish fort on the west bank of the Main River. From the start of settlements and trade routes as far back as 1000 BC, the extremely navigable Main River has provided an important form of transportation. With the onset of industrialisation, the river was divided into channels and later the harbours, power stations and storage areas erected on the northern side of the city have been especially important. Although there was a swimming area called Nizza at the beginning of the 20th century, which, due to a warmer microclimate, had a Mediterranean flair with palms and lemon trees, but since the Second World War, the river has only played a subordinate role in the city's development. The water quality became worse and worse as a result of the paper and potash factories at the river's headwaters and along its tributaries. The 'city' turned its back on its river, and the residents did too (Fig. 1).

Museums on the Main: Starting point to recapture the river space

> The cultural events in a city like Frankfurt am Main have a special effect on the social climate and the atmosphere. Culture and art can sustain human interactions, while the ability of the citizens to identify with their city can promote or disrupt it. In Frankfurt am Main, we have a unique urban design, for example as the cultural-political opportunities offered by the world-famous museums situated on the Main through using their expansions and extensions to connect to a museum landscape that is more than a concentration of different structures and exhibition areas.

This is how the Mayor of the City of Frankfurt, Walter Wallmann, described the Museum Riverbank concept in the brochure produced by the Speerplan offices in 1981. Wallmann made the development of the museum landscape a top priority. In combination with the political head of the Building Department and the Treasurer, Hilmar Hofmann, then head of the Cultural Department, Wallmann promoted expansions and extensions for the museums situated on both sides of the river as well as some new construction. The plans from the Speerplan offices integrated these ideas into the overall urban design concept. From the general plans, it very quickly became clear that the project was not about 'more' or 'less;' it was about recapturing the river space to bring diversity to the city and its residents (Fig. 2).

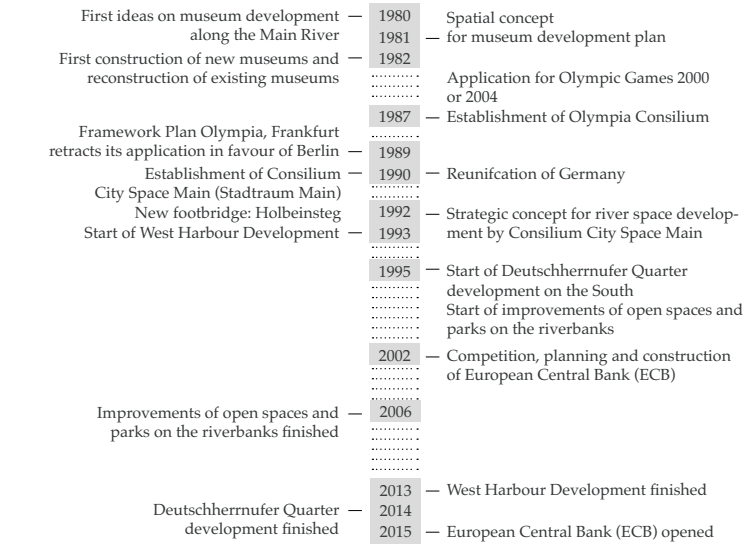


Figure 2: Project timeline.

A strategic step: An application for the Olympic Games 2000 or 2004

In 1987, under the impression that cultural and sports facilities would also enhance the image of Frankfurt as a place to live, the City applied to the German National Olympic Committee to host the Olympic Games. The application supported the intention to stimulate the urban development of Frankfurt by using the application as a catalyst for the solution of urban problems (Fig. 3). Many potential hosts see this as a major benefit. In addition, since the event has a specific date, the applicant takes on time-specific obligations that normally do not exist and thus sets the parameters for time and space.

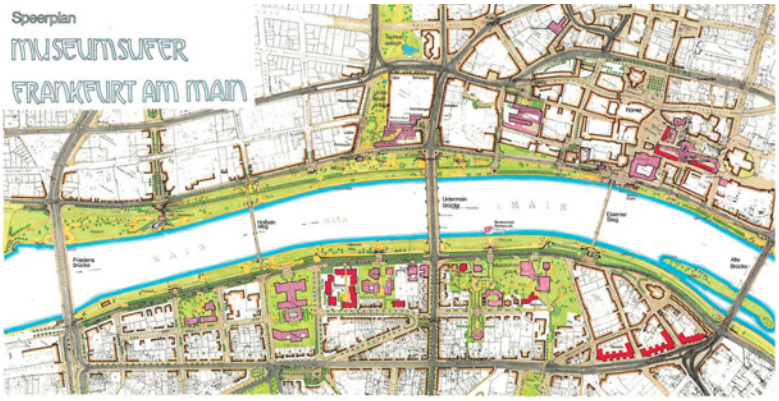


Figure 3: Urban Space Games on the Main River.

In modern times, many of the cities that have hosted the Olympic Games have placed the predominant part of the required Olympic housing arrangements on greenfields. This concept, based on an apparently simple extension of the settlement area, was soundly rejected in Frankfurt. Leading thoughts on the concept focused on a transformation of existing settlement areas that would also support the economical use of land, a scarce and non-renewable resource. Test plans showed that the pursuit of this planning strategy could be realised, especially if the city utilised the potential of the river areas. Consequently, the motto for the Games was 'Urban Space Games on the Main River' (Fig. 4). Because the probability of receiving the contract was limited (by then, there were five national and five international applicants), all the planning effort and, naturally, the planning concept must also be generative, even if the plan was rejected. Therefore, the idea for the Olympic Games on a greenfield was eliminated. From the beginning, the concept of possible reuse was intended: 'The post-use is actually the main use.'

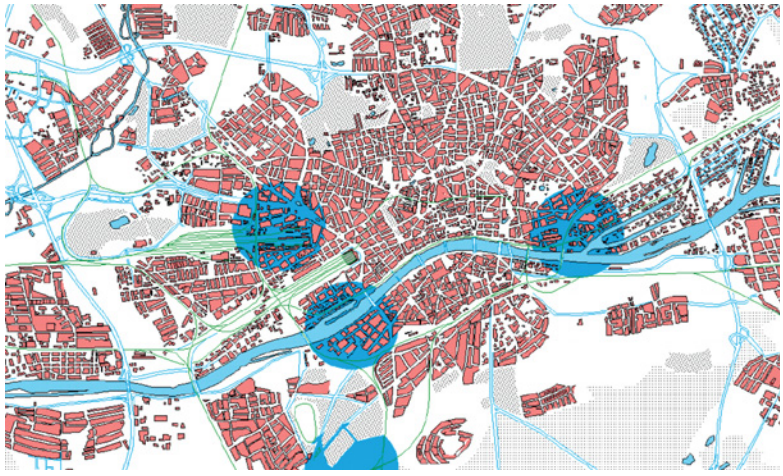


Figure 4: Plan with concept.

Staging the Olympic Games would certainly be a high-point and a one-time special experience, however, it would also be of short duration. That this was a central supposition was demonstrated by the developments before and after the surprising political change in autumn 1989 with the fall of the Berlin Wall and the opening of the Iron Curtain.

All of the German applicant cities withdrew their applications in order to make Berlin the single German candidate for the Olympic Games. As we know, Sydney, Australia was chosen as hosts for the year 2000 and Athens, Greece held the "Golden Games" in 2004.

Frankfurt: Back to the river

After the reunification of Germany, measures were required for a quick realisation of additional apartments for the fast-growing population. It was Martin Wentz, City Councillor, who set the goal for Frankfurt at 4,000 new apartments per year. Apartments on the riverbanks played a central role. Wentz also initiated the Consilium City Space Main (1990–1992), whose working methods had impressed him during the application period (Frankfurt in 1992).

The Chairman of this Consilium City Space Main (*Stadtraum Main*) was taken over by Jakob Maurer, who contributed considerably to the continuity of the leading ideas in the Olympic concept. Moreover, two contemporary discussions, led by Julian Wékel with protagonists of the Main River's spatial development, clearly witnessed the backgrounds and intentions. All these incentives created the current look of the Main River waterfront: the urban oasis of a growing metropolis (Fig. 5).

Figure 5: Frankfurt's riverbanks, 2017.

Spatial planning matters

The basic idea to recapture the river space provided a perfect framework for the elaboration of the application for the Olympic Games. Here the most important planning decision was to assume that the chances to host the games were very small and therefore the planning work should be of value in any case! Establishing a Council for City Space Main was the trigger for the development concept and the overall coordination. When you stroll along the river these days, you might think that all this is just a result of urban design and architecture. In fact, all these changes are built upon the framework conditions set by the innovative planning processes of the early 1990s.

Additional information about this case

For a detailed overview of the Museum Riverbank (*Museumsufer*) concept, see:

1. *Museumsufer Frankfurt am Main*. Frankfurt: Speerplan, 1981;
2. Wallmann, Walter. "Vorwort des Oberbürgermeisters." In *Museumsufer Frankfurt am Main*. Frankfurt: Speerplan, 1981;
3. Magistrat der Stadt Frankfurt a. M. *Dezernat Planung. Entwicklung des Stadtraumes Main. Abschlussbericht des Consiliums 1990–1992*. Frankfurt am Main: Magistrat der Stadt Frankfurt a. M., 1992;
4. Puhan-Schulz, Franziska. "Das Frankfurter Museumsufer und Stadtimagebildungsprozesse." *Schweizerisches Archiv für Volkskunde* 100, (2004): 205–228.

An overview of the Main River bank transformation from the Museum Riverbank (*Museumsufer*) into the City Space Main (*Stadtraum Main*) can be found in interviews with Hilmar Hofmann and Martin Wentz conducted by Julian Wékel. See: Wékel, Julian, ed. *Zeitzeugen: Vom Museumsufer zum Stadtraum Main*. Darmstadt: TU Darmstadt, 2016.

The results of using test plans (test planning process) in transforming the river area were first published in a commemorative for Jakob Maurer, then Professor for Spatial Planning at ETH Zurich, who can be considered a founder of the mentioned approach. See: Scholl, Bernd. "Neuere Erfahrungen mit dem 'Wiener Modell' am Beispiel der Rahmenplanung Olympia Frankfurt." In *Aspekte der Raumplanung in Europa*, eds. Ernst Heer, Bernd Scholl, and Rolf Signer, 231–251. Zurich: vdf Verlag, 1990.

For more on the scientific foundation of the process, see: Scholl, Bernd. *Aktionsplanung. Zur Behandlung komplexer Schwerpunktaufgaben in der Raumplanung*. Zurich: vdf Verlag, 1995.

Similar cases in this publication

The cases illustrating proactive planning processes in water-related areas are: 1) The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan, and 2) A 'New' Danube for Vienna: An Innovative Multi-purpose Project.

Topics relevant to this case

The innovative process for the riverbank development has its roots in the Vienna Model. The relevant topics are: 1) Linking Informal and Formal Responsibility, 2) Spatial Conflicts and Opportunities, 3) Creative Criticism in Spatial Planning, 4) Traps and Maxims, 5) Reflective Leadership, 6) Puzzling: Making Plans Together Works, and 7) Anticipation: Going for Action.

Not a day without a line.

Pliny the Elder

Austria

Area: 84,000 km²
Population: 8.8 million
Population density: 105 p/km²
Capital: Vienna

Hagenberg in Upper Austria has 2,700 inhabitants. Currently, 1,800 persons study at the Campus Hagenberg of the University of Applied Sciences Upper Austria.

Local Development and Village Renewal in Hagenberg, Upper Austria

Andreas Voigt

In the late 1970s, the castle in Hagenberg was in a state of increasing dereliction. In response to the owner's application for a demolition order, at first just a small group of local citizens launched an initiative to preserve the ruined castle. This triggered an intensive awareness-raising process among the local people that resulted in the castle being protected as a listed historical building. There was a subsequent change in political leadership when a member of the citizens' initiative was voted in as the new mayor of the municipality, followed by a further initiative spearheaded by a professor of international standing from the Johannes Kepler University in Linz, who was looking for a suitable location for a research facility in the environs of Linz, the regional capital of Upper Austria. Thereafter, support and funding were forthcoming from the regional government and Hagenberg underwent a remarkable process of spatial development. The highlights involved the successful combination of bottom-up initiatives by bold local citizens with forward-looking views on educational policy.

Figure 1: Hagenberg Castle and its catchment area in 1989.

Derelict castle in Hagenberg: A challenging generator of change

"Each generation of a community is confronted with certain tasks – some momentous, some trivial – which it can either take on or miss the opportunity for." Florian Voigt

The castle in Hagenberg, located 20 km northeast of Upper Austria's capital, Linz, originates from the 12th century and has long been known as a local landmark. Although continuously preserved and extended, it faced a crisis at the end of the 20th century (Fig. 1): namely, the dilapidated castle's increasing decay led to the owner's intention to tear it down. However, the voices of local people were strong enough to change the destiny of this castle and give it a new life. Together with the municipality of Hagenberg, they resolved to "*save what could be saved*" (Fig. 2).

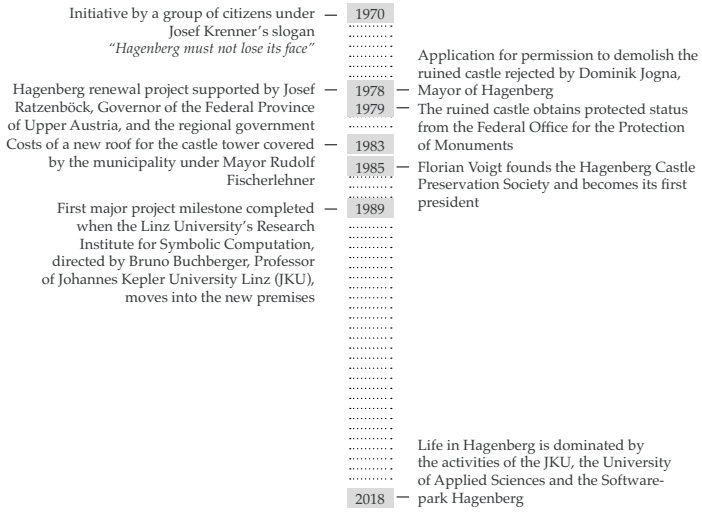


Figure 2: Project timeline.

The strength of the local initiative is clearly seen in three decisions. First, in 1978, the mayor of Hagenberg rejected the application for permission to demolish the ruined castle. Second, this was followed by an agreement that the municipality would cover the costs of a new roof for the castle tower. In doing so, the tower was secured for preservation, thus keeping the local identity and serving as a landmark visible for miles around. Third, the newly founded Hagenberg Castle Preservation Society immediately attracted some 300 members and the municipality leased the castle and surrounding park for a period of 99 years. The primary focus was on preserving the

historic townscape with its ensemble of castle, church and landscaped park in a noteworthy topographical site, and secondly on finding a new use for the ruined castle. As a consequence, the Linz Johannes Kepler University's Research Institute for Symbolic Computation (JKU-RISC) and Hagenberg's municipal offices were relocated into the new premises.

Local initiative: A leading success factor

An essential prerequisite for the success of local development in Hagenberg was, an awareness of the problem by a number of local citicens and theyr favourable constallation as stakeholders who acted strategically in a well-coordinated manner. The original problem, a derelict castle falling into an in-creasing state of decay, was a difficult and awkward starting point. However, this triggered a deeper awareness, initially among a small number of bold key protagonists, that led towards the initiatives that motivated a larger number of local people and subsequently attracted media attention, garnered support from the regional authority and resulted in the castle being given protected status as a listed historical building. Another key underlying element was the mutual trust between the stakeholders, citizens and political decision-makers. This applies both to the former mayor, who rejected the application for permission to completely demolish the ruined castle and listened to the local citizens, and to his successors, who was one of the local citizens who took strategic steps to drive the project forward. In both cases, it was underpinned by direct personal access to members of the regional government who were well disposed towards the project.

The organisation of the conceptual processes and planning activities was initially based on the groundwork done by the Hagenberg Castle Preservation Society and subsequently centred on the municipal local planning team working in close cooperation with the latter. The spatial developments were accompanied by a local development process and village renewal, including the drafting of associated planning instruments (including a design concept for the townscape) and planning and design competitions. Village renewal and local development processes allowed an exploration and systematic explanation of endogenous development potential that created a deeper awareness among the stakeholders involved.

Educational activities: A driver of new local development

A similarly favourable constellation arose from the interest shown in Hagenberg by an internationally respected professor at the Johannes Kepler University in Linz, which encouraged top research institutes from the same university to relocate to Hagenberg or to set up branches there. This subsequently gave rise to further pioneering activities: the establishment of a University of Applied Sciences with a large number of new degree courses, and the opening of a software park (Fig. 3), all of which have continued to drive the town's success story from 1989 to the present. All of the above are also evidence that educational institutions can be drivers of local and regional development. At the same time, the stakeholders recognised that the "moment was ripe" to exploit the synergies between the potential of Hagenberg and its surrounding region, the historic castle ensemble with its landscaped park, extensive recreational opportunities and attractive countryside, spatial proximity to Linz, the capital of Upper Austria, and the interests of external initiators, e.g., academia and top-level research.

Figure 3: Hagenberg Castle, the University of Applied Sciences and the Softwarepark Hagenberg.

Well-coordinated local activities make a difference

Strategic cooperation among the local stakeholders – where necessary in combination with external contributions and assistance – gives rise to planning processes, projects and associated concrete coordinated actions, and ultimately leads to solutions for the problems at hand. All of the above require patience, a sense of proportion and the willingness to engage in a prolonged process of dialogue.

Additional information about this case

Today, three institutions occupy the site of the former castle complex:

1. Johannes Kepler University Linz – Research Institute for Symbolic Computation (JKU-RISC), https://www.risc.jku.at/;
2. University of Applied Sciences Upper Austria, Hagenberg Campus, https://www.fh-ooe.at/en/hagenberg-campus/;
3. JKU Softwarepark Hagenberg, a spin-off of Johannes Kepler University Linz (JKU) and a hub for IT start-ups.

According to data provided by the JKU Softwarepark Hagenberg, the Hagenberg Campus has about 1,150 R&D staff and 1,800 university students and is home to 10 research institutes and 75 companies, www.softwarepark-hagenberg.com/en/.

More information about the initiative can be found in the following contributions:

1. Marktgemeinde Hagenberg, ed. *Hagenberg – Ideen bewegen und verändern [Hagenberg – Movement and Change through Ideas]*. Hagenberg: Marktgemeinde Hagenberg, 2004;
2. Verein Schloss Hagenberg (Hagenberg Castle Preservation Society). *29. Jahresbericht 2014 [29th Annual Report, 2014]*. Hagenberg: Verein Schloss Hagenberg, 2015;
3. Voigt, Florian, and Verein Schloss Hagenberg (The Hagenberg Castle Preservation Society), ed. *Hagenberg von der Ruine zum Zentrum für Wissenschaft, Verwaltung und Kultur [Hagenberg – from Ruin to Scientific, Administrative and Cultural Centre]*. Hagenberg: Verein Schloss Hagenberg, 1994.

Similar cases in this publication

Similar stories on local initiatives and their effect on local development can be found in the following cases: 1) Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning, and 2) A Regional Park against Urban Sprawl: The Case of Parco Nord in Milan.

Topics relevant to this case

The following topics also elaborate on the notion of informal and bottom-up approaches in planning: 1) Participation for Democracy and Spatial Quality, and 2) Linking Informal and Formal Responsibility.

Water is a very good servant, but it is a cruel master.

Charles G. D. Roberts

Switzerland

Area: 41,000 km²
Population: 8.3 million
Population density: 201 p/km²
Capital: Berne

The source of four great European rivers is Switzerland: Rhine, Danube, Rhone and Po. There are 28,000 public fountains and 4,000 sewage plants in Switzerland.

Swiss Water Stories

Rolf Signer

Water is one of the most important resources on earth, but it can also be a big threat. Thus, it should be easy to understand that spatial planning has to take all the many aspects of this highly valuable resource into consideration. Switzerland is a country with an abundance of natural water resources; a glimpse at a topographical map substantiates this: 7% of the country's surface consists of glaciers, rivers or lakes, and there are many, often huge, groundwater flows. Over the last fifty to seventy years, as the Swiss population grew from five million to more than eight million residents, major efforts were necessary to ensure the quality of the water supply and sewage treatment on one hand and provide flood protection on the other. In addition to these aspects and the production of hydroelectric power, the relevance of ecological issues and integrated landscape development has gained more and more importance. This collection of 'water stories' presents some of the problems and solutions encountered in spatial planning in Switzerland and some potential future challenges.

Figure 1: In summer 1966, a sign reminds people that swimming in the River Aare is at one's own risk – due to polluted water.

Workaround: The importance of functional legislation

The Swiss Planning Act only came into effect in 1980. The era of 'nominal' planning started when, according to Swiss terminology, spatial planning was first explicitly addressed in the 1980 law. Nominal planning was limited to acts or laws that specifically used the terms 'space' and 'planning.' In contrast, 'functional' planning laws are about legislation with any effect on space, regardless of whether 'space' or 'planning' is part of the title or not. This kind of law often has a longer history and a more significant influence on spatial development. The Swiss Water Protection Act is one example. It came into effect in 1957, i.e. more than two decades before the Swiss Planning Act. The Swiss population was then around 5.2 million, and the overall water consumption per capita was 410 litres a day. It was the period of the Cold War, and every Swiss household was advised to keep an emergency supply of water, food and other items at home. Aside from these imminent dangers, there were also quite visible threats that bothered the population, such as foaming brooks, proliferating algae, dead fish in the rivers and large-scale bathing bans (Fig. 1).

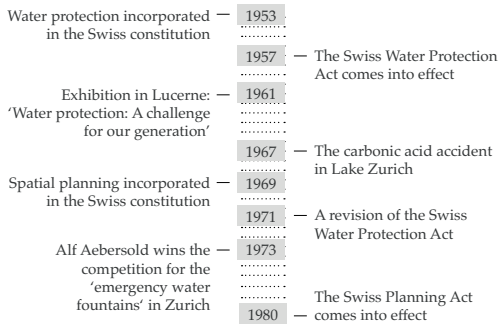


Figure 2: Project timeline.

However, the impact of the new law was disappointing. The *Swiss Historical Lexicon* states: 'The act remained a dead letter. Insufficient economic incentives for the communes to realise sewage plants, the lack of experts and relevant experiences (threshold values) were regarded as reasons.' In sum, the legal framework for water protection was insufficient and sewage water treatment was in many parts of Switzerland close to nonexistent. The situation was further characterised by a widespread lack of awareness of the ecological impact of wastewater from both private households and industry.

In 1971, legislation from the Swiss Federal Assembly revised the Water Protection Act. In the meantime, the population of Switzerland had grown to 6.3 million and the water consumption

per capita was up to 500 litres a day. With this revision, the federal level could now decree unified threshold values for the quality of wastewater discharges. For planners, much more important was the fact that from this moment on building permits could be given only in building zones, or in the perimeter of a sewerage project covering an entire commune (*generelles Kanalisationsprojekt* – GKP) (Fig. 3).

This revision had high relevance for spatial development in Switzerland since, long before the nominal Planning Act came into force in 1980, the principle of the spatial separation of building and non-building zones had been established as a result of a functional act (1971) or a workaround.

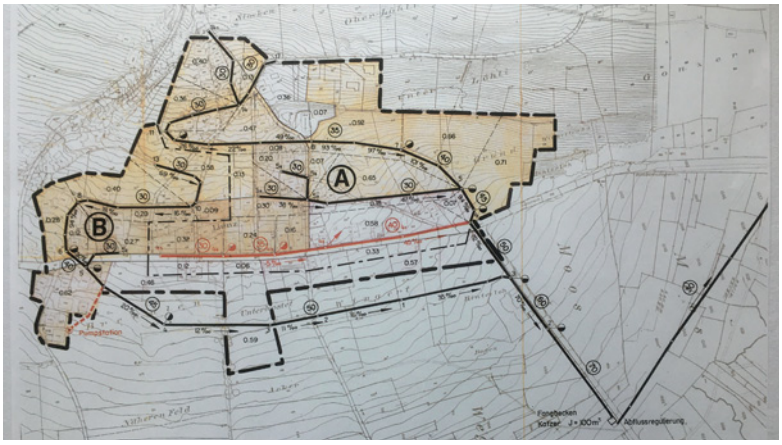


Figure 3: Example of a general canalisation project in this period.

Everyday resilience: Prepare for the unexpected

The fresh water supply of the city of Zurich relies on three factors: spring water coming from a mountainous region some 20 km from Zurich (about 10%), ground water (20%), and lake water (70%). In 1967, due to an accident in a chemical plant, carbonic acid contaminated the Lake of Zurich. In some parts of the city, tap water remained undrinkable for a couple of days. As a short-term emergency measure, the population received water in plastic bags. Fortunately, there was – and still is – an additional source of fresh water, namely, all the small springs in the wooded hills, still fairly untouched, around the city. A separate network distributes the water that feeds public fountains all over the city. Most importantly, this distribution works without an energy supply, since the water simply flows downward. Some years after the accident, the authorities organised a competition for a new set of public fountains, called the 'emergency water fountains' (*Notwasserbrunnen*) (Fig. 4).

The Swiss-English Forum writes about the fountains: 'In case there was a problem with the water from the lake, the emergency water fountains can be opened at the side and extensions with lots of taps can be added to act as source of clean spring water for the public.' According to the city's administration, every citizen could get 15 litres of clean water per day in emergency situations.

Figure 4: Emergency water fountain in the city of Zurich. Above: in normal mode; below: in emergency mode.

Water: The never-ending story

While flood protection and hygiene were the core issues in former times, attention had shifted to ecological issues and integral landscape development, but without neglecting the original reasons. Many watercourses have been straightened, channelled or given a culvert with negative consequences for the natural diversity of flora and fauna. In addition, new challenges are ahead, for example, the consequences of climate change with shrinking glaciers and thawing permafrost soils, increasing numbers of extreme events, e.g., rain and storms, increasing discharge variability of brooks and rivers.

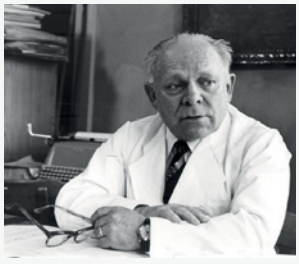
Figure 5: The Rhesi-project along the River Rhine in Eastern Switzerland.
Above: Current situation with straigthened and channeled river close to Kriessern (CH) / Mäder (A); below: visualization of future state.
'Rhesi' is the acronym for *Rhein, Erholung und Sicherheit* (Rhine, Recreation and Security).

There are still purification problems to solve, such as water pollution from agriculture and removing micro-pollutants from wastewater, and now and then, though seldom, we have to take action concerning polluted drinking water.

There are currently two projects in Switzerland that deal with important spaces: one concerns the River Rhone in the southwestern part of the country (3rd Rhone correction), and the other is the River Rhine in the east, which also designates the border between Switzerland, Austria and the principality of Liechtenstein ('Rhesi') (Fig. 5). In these important spaces, a lot of diverging interests have to be considered, such as flood protection, ecological aspects, the many linear infrastructures, e.g., electricity, railroads and highways, aspects of landscape development, recreation and, of course, inward development.

Enthusiasm and exploration: The importance of individual initiative

Otto Jaag (Fig. 6) was director of the EAWAG, the Swiss Federal Institute of Aquatic Science and Technology, between 1952 and 1970. He was also Professor for Hydrobiology and Limnology at ETH Zurich, a subject we had to attend as students of cultural engineering. I remember our first lesson: When Prof. Jaag entered the room, we were afraid that we might not be able to hear him as he was rather small in stature.



But his voice was loud and full of enthusiasm – we heard every word! Once he told us about the difficulties of preventing water pollution. It was the time of foaming brooks, dead fish and bathing bans, and no environmental protection agency yet existed.

His approach was to follow the rivers and brooks to see where the polluted water came from. At that time, it was really astonishing for me that an academic would take the initiative to explore the space and interact with the locality – dressed in boots and equipped with a knapsack and provision.

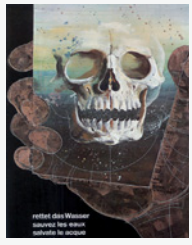


Figure 6: Prof. Dr. Otto Jaag.

Figure 7: In 1961, Otto Jaag organised, with other partners, a meeting in Lucerne entitled: 'Water protection: A challenge for our generation.' The poster for the event was designed by the Swiss artist Hans Erni.

Planning matters

Given the limited space in Switzerland it is – with the maxim of inward development in the background – very challenging to improve landscape and water quality. Spatial planning plays an important role here, since all these problems can only be tackled successfully when seen as a complex interplay. Planners have the ability to deal with this in both the material and organisational aspects. Water is the subject of a never-ending sequence of decisions and measures.

Additional information about this case

Water consumption in Switzerland: The peak delivery of the Swiss public water suppliers was a bit over 500 litres per day and capita in the 1970s. This is the volume used by industry, households and agriculture divided by the number of inhabitants; it's an average value; daily peaks went beyond 800 litres. Since then, this figure has been constantly decreasing, due to deindustrialisation and economic measures in general, to a current value of about 300 litres per day and capita (see: Freiburghaus, Matthias. "Wasserverbrauch." *Aqua & Gas* 3, (2015): 72–79). When I was studying at ETH Zurich in the early 1970s, the need for a domestic water supply per capita was supposed to grow further. However, nowadays with the import of many goods, a lot of 'virtual' water is also imported. For more information on this as well as the current challenges in Switzerland (see: Pascal, Blanc, and Bruno Schädler. *Das Wasser in der Schweiz – ein Überblick [Water of Switzerland – An Overview]*. Berne: Schweizerische Hydrologische Kommission, 2013).

State of affairs of water quality in the 1950s: 'In the 1950s, soaps in detergents and cleaning agents were replaced by synthetic surfactants. Although these substances washed "whiter than white," they were poorly degradable and gave rise to foaming rivers. Long-forgotten photographs from the 1960s illustrate the wretched state of many surface waters. […] Today, federal regulations require 90% of surfactants to be biologically degraded in the first step of wastewater treatment.' (See: Bryner, Andri, and Matthias Nast. *Eawag: past, present and future, 1936–2011*. Dubendorf: Eawag (Swiss Federal Institute of Aquatic Science and Technology), 2011).

Sewage water treatment: In 1965, just a few sewage plants were operating, only processing the wastewater of some 14% of the Swiss population. In 2005, about 800 plants existed, covering 97% of the Swiss population. The replacement value of all plants and the 40,000–50,000 km of public sewers is about 80–100 billion Swiss francs (see: www.bafu.admin.ch).

The carbonic acid (phenol) accident in September 1967 is well documented in the local newspapers (see: e.g., *Neue Zürcher Zeitung* – various editions of the between the 21st and 27th of September 1967; Gujer, Willi. *Siedlungswasserwirtschaft [Urban Water Management]*. Berlin: Springer, 2013).

Public fountains in the city of Zurich: There are currently 400 public fountains fed by spring water, 85 of these are emergency water fountains (see: e.g., www.stadt-zuerich.ch/dib/de/index/wasser-versorgung/wasserverteilung/Notwasserversorgung.html or www.alt-zueri.ch/turicum/brunnen/notwasserbrunnen.html). By the way, Alf Aebersold was the winner of the competition for the emergency fountains. He was a wood carver and teacher at the Zurich School of Design (*Schule für Gestaltung Zurich*) (see: e.g., "Jakobsnotizen: Alfs vierfache Liebe." *Hochparterre: Zeitschrift für Architektur und Design* 6, (1993): 10).

Eawag (*Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz an der ETH* – The Swiss Federal Institute of Aquatic Science and Technology) is a research institute within ETH. It was founded in 1936 as an advisory office for wastewater treatment and potable water supply. Prof. Jaag was its director between 1952 and 1970. As Chair of the Extraparliamentary Commission responsible for the elaboration of a constitutional article on water pollution control, he had already shown a deep commitment to the balancing of interests. The constitutional article was approved in a popular vote on 6 December 1953, with no less than 81.4% in favour, thus the associated Water Pollution Control Act came into effect in

1957. The high level of public support for water protection was largely due to Otto Jaag's promotion of the cause.

His passionate advocacy was not misplaced, as growing consumption of energy and resources after the Second World War had left its mark on natural waters. Environmental protection agencies did not yet exist. In 1960, barely 10% of the population had a connection to a centralised wastewater treatment plant. Jaag saw that the Water Pollution Control Act lacked teeth and pressed for a revision, in particular, for a more active policy on subsidies. A revision (with a new article on subsidies) was passed in 1962, and a new Act in 1971 paved the way for expansion of the sewer network and treatment infrastructure. Today, around 97% of all waste-water in Switzerland is treated at modern plants. The information is taken from: Bryner, Andri, and Matthias Nast. *Eawag: past, present and future, 1936–2011*. Dubendorf: Eawag (Swiss Federal Institute of Aquatic Science and Technology), 2011.

For more about the projects along the River Rhine and the River Rhone, see: www.rhone3.ch and www.rhesi.org.

Similar cases in this publication

Other cases in this book where water is the object of planning are: 1) A 'New' Danube for Vienna: An Innovative Multi-purpose Project, 2) Storm Water Planning in the Chicago Metropolitan Region, 3) Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River, 4) The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland, 5) The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan.

Topics relevant to this case

The case story is conceptually supported by the following topics:1) Planning Approaches or Nothing Comes from Nothing, 2) Spatial Conflicts and Opportunities, 3) Commedia dell'Arte: How Planners Can Act in Naked Reality, 4) Linking Informal and Formal Responsibility, and 5) Anticipation: Going for Action.

Projects in Progress: Stay Tuned!

Beyond each corner new directions lie in wait.

Stanisław Jerzy Lec

Belgium

Area: 31,000 km²
Population: 11.2 million
Population density: 367 p/km²
Capital: Brussels

Ghent on the River Scheldt in Flanders has 260,000 inhabitants. The Ghent-Terneuzen Canal (Zeekanaal) was constructed in the 1820s and today is 32 km long.

The Ghent Canal Area Project: A Step-by-Step Approach Towards an Inclusive Strategic Plan

Jef Van den Broeck

The Ghent Canal Area in Flanders (Belgium) is an important logistic, industrial and, at the same time, residential area, located in the highly urbanised northern part of Belgium between the city of Ghent and Terneuzen (The Netherlands), where the canal flows through a lock into the Scheldt River. The uncoordinated historical development of different human activities had gradually degraded the spatial structure of the area into a chaotic hodgepodge and generated large environmental problems. Therefore, the Province of East Flanders took the initiative to bring together the conflicting parties: the Port Authority and the city, as well as other communes and regional administrations, in order to define the goals and develop a viable planning approach. An intentional 'step-by-step, goal-oriented and integrated approach' resulted in a strategic plan and many interventions for improving the living conditions of inhabitants and a sustainable development of the port facilities. The project started in 1993 and has continued until today guided by the 'port parliament' that gathers together all the stakeholders, including inhabitants and NGOs.

Figure 1: The Ghent Canal Area.

Initiative and process

In the early 1990s, local residents of Ghent were faced with the increasingly negative effects of the surrounding industrial sites (Fig. 1). At the same time, the Port Authority and the economic sector wanted to expand their activities. In 1993, in a conflicted climate, the Governor of the Province of East Flanders and some civil servants took the initiative to address these issues and put them on the political and societal agendas. They started the integrated Ghent Canal Area Process with the financial support of the EU Regional Development Programme and were guided by an external planning team (OMGEVING) and a provincial internal project office through the three main phases (Fig. 2).

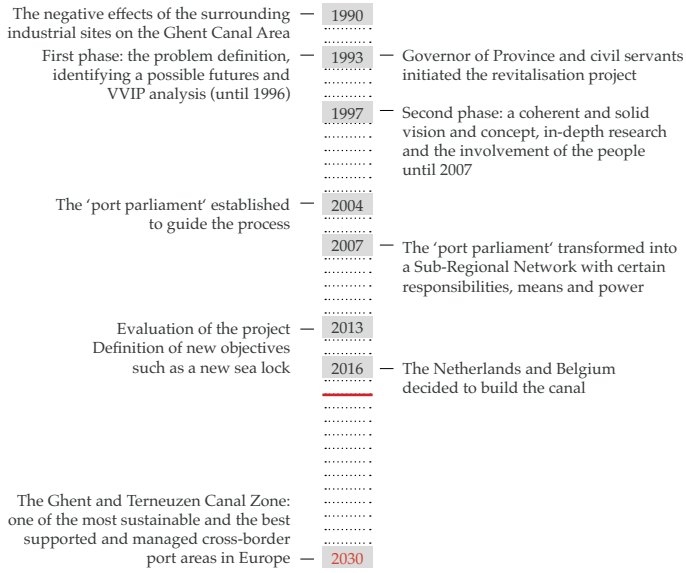


Figure 2: Project timeline.

At the beginning of the project, 1993–1996, key witnesses were interviewed in order to identify concerns, visions, goals and complaints, which then led to the definition of problems and key issues and a set of integrated basic, balanced principles for a possible future. A VVIP analysis revealed the values, visions and interests of the actors as well as the power relationships. During this phase, a certain level of trust was created between the actors by solving some urgent problems that concerned both sides. Financing the planning and management process and the actions was a step-by-step activity that always took the limited resources of the actors into account, including the lack of willingness to pay the costs of the process. Finally, the process had to follow a step-by-step path because of the

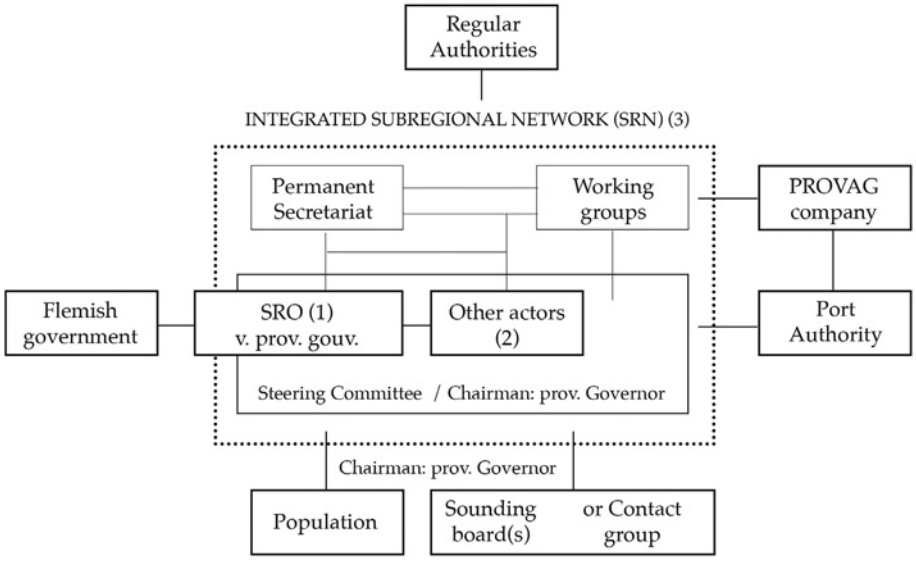
complete and general absence of trust, the restricted means, and the lack of knowledge and planning skills.

During the second phase, 1997–2007, combining the agreement in a vision, action and co-production, the preliminary strategic vision and spatial concept was gradually developed into a coherent and solid vision and concept, fuelled by in-depth research and the involvement of the people. At the same time, several projects that addressed the environmental and living quality of the residential areas were implemented. In addition, some strategically chosen mobility problems were solved.

A fundamental success factor of the process was the creation of a deliberative platform as a complement to the representative bodies. The existing, initially limited, Steering Committee was reformed and enlarged to include the leading politicians and civil servants of the different government levels: local, regional, federal, and the Port Authority. New relevant stakeholders, e.g., NGOs, and newly formed citizen groups, entered into the process. As Mathias De Clercq, Vice-Mayor of the city of Ghent and Chairman of the Board of Directors of the Ghent Port Authority, pointed out: "… throughout the development process, adequate cooperation and consultation structures have been worked out among the citizens and the economic and political stakeholders. The (informal) Steering Committee is now a true 'port parliament,' a body with 90 members, whose proposals can be thoroughly tested and decisions widely supported." This structure remained informal, i.e. without legal status, but earned influence step-by-step: their solid arguments and broadly supported proposals were always legalised by agreements between the actors and by the formal institutions. In 2007, the Steering Committee received a certain status by becoming a Sub-Regional Network with some responsibilities, means and relative power (Fig. 3).

During the third phase, lasting for more than ten years now, the process reached a higher level: the Sub-Regional Network and all the governments involved accepted the *Strategic Development Plan*. This strategic plan includes a long-term vision up to 2030 for the sustainable development of the area, a number of key decisions and an action programme. The implementation of the action programme has been in progress since 2007. In 2013, on the occasion of its 20th anniversary, the project was widely evaluated and new objectives were

defined, such as the realisation of a new sea lock in the Dutch part of the Canal Area. In 2016, the decision to build it was taken by both Belgium and The Netherlands. As the planning team OMGEVING concluded, "a strategic planning process needs regular open and argued decisions during the whole process to prove its reliability."



(1) SRO: sub-regional consultative body
(2): SRN: sub-regional informal network
(3): politicians, officers, authorities, representatives population, interest groups, private actors

Figure 3: The Sub-Regional Network combines a deliberative platform with representative bodies.

Outcome

The Ghent Canal Area Project unfolds as a (broad) programme of approximately eighty projects and double the number of subprojects with different goals, stakeholders and timing. Quality of living in the villages and neighbourhoods increased through the renewal of public space, digital truck locks, the realisation of linking areas for recreation buffering industrial from living areas (Fig. 4), environmental hot line, biking network, etc. Sustainable interventions and projects such as in-depth energy saving and transition, reuse of brownfields, reduction of air pollution, nature protection and many others have created a solid base for sustainable development. Finally, the port could make further improvements by building new docks, new industrial areas and a new sea lock, all of which stimulated economic growth: 12% between 2000 and 2014.

Figure 4: Areas linking villages and industrial areas to create recreational and natural networks.

Collaboration and expertise matter

Changing the inclusive and broad-based Steering Committee into a transparent sub-regional legitimised informal network step-by-step creates widely supported decisions and acts as a permanent platform for deliberation, negotiation and social learning (Fig. 5).

Figure 5: Studying the area and discussing proposals.

Expertise is guaranteed through an organically grown and continuously developing process management structure with short and informal communication lines, permanent knowledge development and content-based argumentation and judgment. In the next fifteen years, further implementation of the strategic plan will undoubtedly lead to the Ghent and Terneuzen Canal Zone as one of the most sustainable as well as the best supported and managed cross-border port areas in Europe, in an optimal cohabitation with its surroundings.

Additional information about this case

The Ghent Canal Zone Project is nationally acknowledged as an example for integrative regional development, and has received several international awards: an ESPO (European Sea Ports Organisation) award on Social Integration of Ports (2016), ISOCARP (International Society of City and Regional Planners) Award for Excellence (2015), and the European Planning Award (2002).

More information on the project can be found at the website (www.gentsekanaalzone.be) and in the following contributions:

1. de Bock, Veerle, Frank de Mulder, and Janine Mejer. "The Ghent Canal Zone, Pretty Impressive Results, Eight Priorities for the 2013–2019 Period. It felt like we were being steamrolled." *Ruimte – Journal of the Flemish Association for Spatial Planning, Special Issue, A View on Spatial Planning in Flanders* (2017);
2. Albrechts, Louis, and Jef Van den Broeck. "From discourse to acts: the case of the ROM-project in Ghent, Belgium." *Town Planning Review* 75, no. 2 (2004): 127–150;
3. de Rynck, Filip, and Joris Voets. "Democracy in Area-based Policy Networks: The Case of Ghent." *American Review of Public Administration* 36, no. 1 (2006): 58–78.

Similar cases in this publication

Cases also focusing on institutional design, collaboration, visioning, leadership and expertise are: 1) Città di Città: A Strategic Plan for the Urban Region of Milan, 2) Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance by Planning, and 3) The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland.

Topics relevant to this case

The following topics describe the nature of inclusive and collaborative planning approaches, elucidating the planners' role as well: 1) Reflective Leadership, 2) Commedia dell'Arte: How Planners Can Act in Naked Reality, 3) Linking Informal and Formal Responsibility, 4) Participation for Democracy and Spatial Quality, 5) Traps and Maxims, 6) Puzzling: Making Plans Together Works, and 7) Anticipation: Going for Action.

Acknowledgment: While writing this article, the author was supported by the team members of two expert offices: OMGEVING, a Belgian office for landscape, architecture and urbanism, and the Project Office of the Ghent Canal Area, part of the Ghent Canal Area Network/ Province of East-Flanders.

An ounce of prevention is worth a pound of cure.

Oxford Dictionary of Proverbs 2015

United States of America

Area: 9.8 million km²
Population: 327.8 million
Population density: 33 p/km²
Capital: Washington, D.C.

The metropolitan area of Chicago, Illinois has 9.6 million inhabitants. About 30,000 cubic yards of debris are annually removed from different watersheds.

Storm Water Planning in the Chicago Metropolitan Region

Charles Hoch, Justin Keller

Plans that improve the predictability of local water flow introduce uncertainty for the neighbouring communities. United States metropolitan areas include many independent governments responsible for local water plans. This fragments flood management effort. The Metropolitan Water Reclamation District of Greater Chicago (MWRD) plans flood channel and detention projects. The Chicago Metropolitan Agency for Planning (CMAP) adopts ecological water management by using conservation strategies sensitive to drainage basin water flow. Most local government water plans adopt conservation practices and physical flood control infrastructure.

Figure 1: An area of high streambank erosion along the bank of Silver Creek.

Place: Storm water in Chicago

A modern metropolis like Chicago relies upon a multitude of pumps, conduits, channels, lakes, dams and containers for water. Interlocking infrastructure systems provide, treat and manage the flow of water through and across the vast expanse of northeastern Illinois at the southwestern edge of Lake Michigan, one of the five Great Lakes of the North American Continent. However, the thousands of plans and decisions that ensure that each pump, pipe and container improve the predictability of local water flow also introduce uncertainty for neighbouring communities. Solving water problems for each locality generates uncertainty and thus requires spatial planning.

Problem: Fragmented planning authority

United States metropolitan areas include many independent governments responsible for local policing and provision of common public goods. When formed, each state subdivided their land into counties and school districts, forming contiguous geographic areas. Counties were then further divided into communes, commonly known as cities, townships, and villages, and special districts for public facilities such as airports and sewers. The proliferation of independent geographically diverse districts, coupled with communes, townships and villages, is greatly increasing the number of overlapping jurisdictional boundaries. The expanding network of municipal and special district boundaries are fragmenting storm water planning.

Planning story from contain to sustain

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) is a large special district responsible for wastewater reclamation and treatment for Cook County. Formed in 1889 as the Sanitary District of Chicago, the District built a large lock and channel system that reversed the flow of polluted water in the Chicago River away from Lake Michigan (the city's source for potable water), sending the water south to the Mississippi River and ultimately the Gulf of Mexico. For more than 50 years, the District has been raising funds to build enormous underground storm water reservoirs. These plans for water management follow established engineering protocols. The plans justify physical improvements to address regional infrastructure difficulties and failures during major storms.

Plan alternatives focus exclusively on flood channel and detention projects at locations where recent flood events have proved most damaging.

The Chicago Metropolitan Agency for Planning (CMAP) is a voluntary council of local governments with regional authority for planning and allocating a portion of federal transportation funds for local projects. Their jurisdiction covers 11 counties in northeastern Illinois and 284 communes, including Chicago. The agency planners work on regional issues, such as water management, but also prepare local plans under contract to communes. The CMAP Regional Water Plan adopted in 2010 presents an ecological approach to water management. The plan uses drainage basins rather than jurisdictional boundaries to analyse water issues and so organise the response. Instead of emphasising local efforts to channel water downstream, the plan proposes conservation strategies embedded in a holistic conception of regional water flow. CMAP storm water plans include inter-jurisdictional drainage basin planning and acquisition of brownfields for integration into a larger green infrastructure plan.

The CMAP planners worked with civic groups formed to focus on watersheds: Silver Creek and Sleepy Hollow Creek (Fig. 1). The Environmental Defenders of McHenry County (EDMC) and the Fox River Ecosystem Partnership (FREP) are both partners in this watershed planning process. The local floodplain adjoins the eastern portion of the watershed planning area adjacent to the Fox River. Reducing the rate of stream flow during storm events reduces the scope and intensity of flood plain overflow. The plan adopted storm water absorption and containment using green infrastructure. Extensive study identified how long-standing ecological water features, such as local lakes, marshes, trees and meandering streams could protect and improve surface and groundwater quality, support biodiversity and reduce flooding. The plan recommends public acquisition or conservation easements to connect open areas that will not only absorb water, but also foster and support ecological integrity. The map represents current and proposed legally protected open space with additional land linking these areas into a connected network. The integrated system improves floodwater storage, protects wetlands, provides habitats in the stream corridor and preserves ecosystem values and functions without relying on expensive conduits and storage facilities.

Outcome: Collaborative incremental sustainability

Most local government water plans adopt a conservation rhetoric and a selection of best policy solution practices, even as jurisdictions rely upon the physical flood control infrastructure put in place over the past century. The public works engineers working for communes, counties and MWRD remain deeply wedded to the rational protocol that justifies physical flood control systems. Adopting ecologically informed sustainable water plans involves many different government and civic agencies and actors. The plurality of interests and actors patch together collaborative coalitions informed by scientific expertise from professional planners. These coalitions may legitimise large engineered flood-control infrastructures following established protocols, but they also may conceive and implement sustainable infrastructure projects that respond to regional water flow interdependence. Current local plans remain modest – given the scope of flood risk. Collaborative local adaptation offers practical hope for future adoption among other agencies across the region as flood risks increase.

Regional local collaboration matters

Watershed planning using collaboration among regional planning experts, local government and civic activists anticipates and prepares for flood uncertainty in urbanised areas. Capturing and conserving rain where it falls reduces the scope and severity of flood events across the region (Fig. 2).

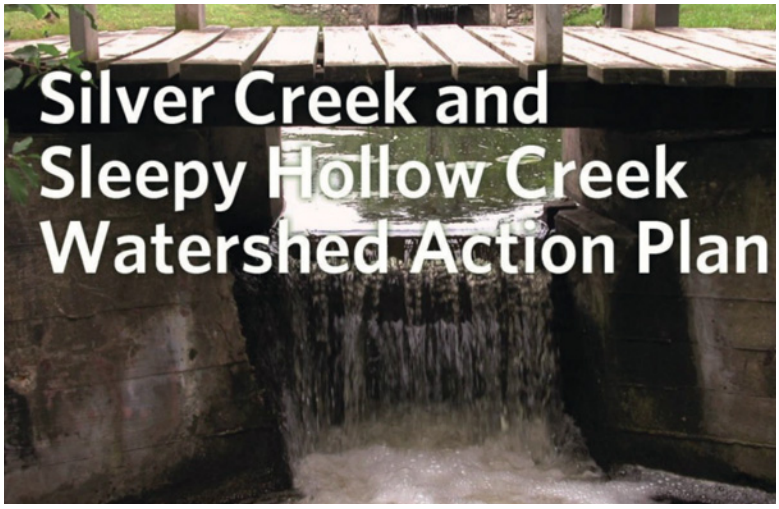


Figure 2: Rain conservation.

Additional information about this case

1. Chicago Metropolitan Agency for Planning (CMAP). The Silver Creek & Silver Creek Watershed Action Plan. Chicago: CMAP, 2011; CMAP Watershed Report Update: www.cmap.illinois.gov/programs/lta/silver-creek-sleepy-hollow-watershed;
2. Keller, Justin and Charles Hoch. Water Planning in the Chicago Region. Chicago: Urban Policy & Planning Department, Urban Data Visualization Lab, 2017;
3. Interactive map at UDVL: arcg.is/2qpV4aG.

Similar cases in this publication

The contributions showing the need for cooperation between different administrative levels in solving complex problems are: 1) Città di Città: A Strategic Plan for the Urban Region of Milan, 2) A Regional Park against Urban Sprawl: The Case of Parco Nord in Milan, and 3) The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland.

Topics relevant to this case

The following topics relate to the challenging issues of a collaborative planning process: 1) Discourse: A Tool for a Collaborative Planner, 2) Reflective Leadership, 3) Participation for Democracy and Spatial Quality, 4) Linking Informal and Formal Responsibility, and 5) Anticipation: Going for Action.

Only a fool thinks the future is secure;
he who laughs on Friday will weep on Sunday.

Jean Racine

Belgium

Area: 31,000 km²
Population: 11.2 million
Population density: 367 p/km²
Capital: Brussels

Antwerp on the River Scheldt in Flanders has 521,000 inhabitants. The Ringland project caps over 15 km of road, creating a new green corridor across the city.

Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning

Jef Van den Broeck

Since the mid-1990s, traffic congestion in the Antwerp region has become extremely critical due to the fact that all local, regional, national and international traffic have to use the Antwerp Ring Road, located in the heart of the urban region. The Flemish government decided to complete the Ring by constructing the fourth tunnel under the Scheldt River, claiming that this was the best solution for the traffic problems. At the beginning of the century (2005), different citizen movements reacted to this decision and pointed to several shortcomings: the project could not solve the mobility issue, nor the health problems caused by the huge levels of pollution, and, at the same time, it would block urban development. Citizens proposed an alternative route outside the city and covering the Ring. With the broad support of the population, the citizen groups were strong enough to stop the approval of the plan by using juridical instruments over a course of more than ten years. Through the energy generated by the citizen groups, the expertise and the strategy of the movement and the work of a facilitator, the conflict was resolved in 2017 by creating the Pact for the Future, which was supported by all the parties involved: the regional and local authorities and the citizen groups.

Figure 1: The Ring Road in Antwerp, showing its inconvenient transport conditions.

Stages of the conflict

In the mid-1990s, the government proposed completing the inner Ring Road, as a part of the Trans-European Transport Network (Fig. 1). This would necessitate another bridge over or a tunnel under the Scheldt River north of the city. In this first stage – and without proper research – the regional traffic department initiated studies to look for a possible location for such a bridge or tunnel and how to finance such a project (Fig. 2a). As a result, a technical and financial organisation was established by the Flemish Region to finalise the project (Fig. 3).

Masterplan 2020 Meccano-Plus

Figure 2: Completion of the Ring a) Masterplan 2020 and an alternative b) Meccano-Plus.

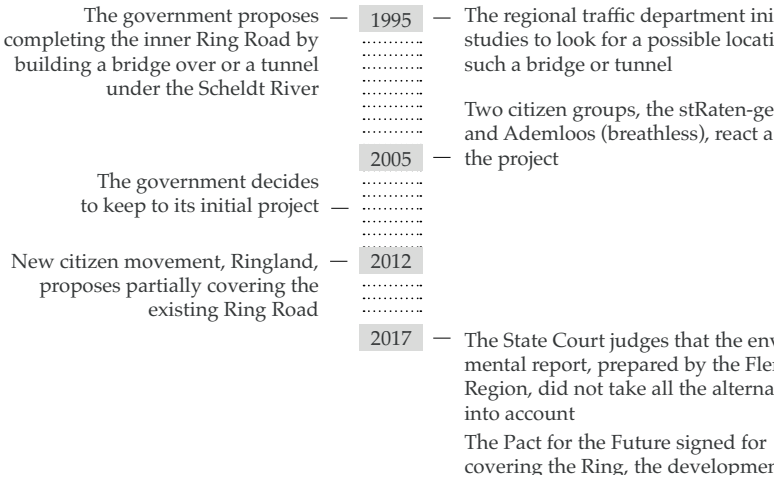


Figure 3: Project timeline.

Between 2005 and 2012, two citizen groups, the stRaten-generaal and Ademloos (breathless), reacted against the project claiming that such a proposal on the chosen location would not solve the problems, and would have negative effects on the urban development of the northern quarters of the city. Acting in a very professional and communicative way, they proposed another traffic model farther away from the city (Fig. 2b). The government, however, decided to keep to its initial project and only accepted some of the improve-

ments, namely, a tunnel instead of a bridge, a result of the referendum, and started the legal procedures. The various citizen groups used all legal possibilities to stop the project and involved the population in the process. The resulting hopeless socio-political situation revealed that the authorities could have not dealt with such complex socio-technical processes.

In 2012, a new citizen movement was born, Ringland, initiated by a planner who proposed partially covering the existing Ring Road, arguing this could create space for nature development, recreation and urban development, improve the health conditions in the surroundings and decrease the traffic congestion (Fig. 4). Soon, the concept became very attractive with the Antwerp groups supporting it loud and clear. The Ringland group is expertise-based, well organised and communication-oriented, supported by crowd funding and endorsed by several universities concerned with the organisation of various events and relevant studies. The Ringland movement is strongly supported by people, experts and academics, by the two existing citizen groups and even by some political parties. The Flemish ruling parties, however, kept to their own plan and only agreed to study the possibility of covering the Ring, thus partially integrating it into their plan.

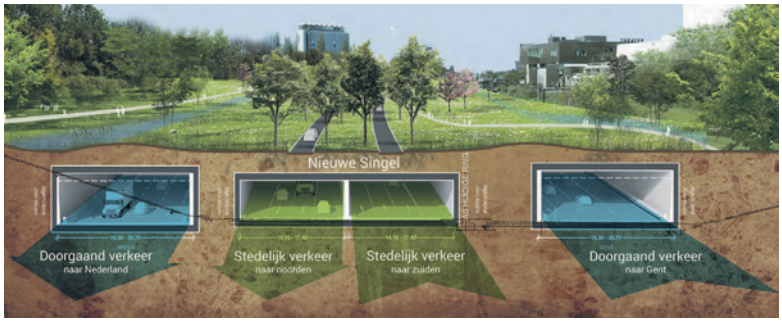


Figure 4: Covering the Ring.
© Het Ring Genootschap vzw (Ringland)

In January 2017, the position of the movement became stronger. Namely, the State Court judged that the environmental report, prepared by the Flemish Region, did not take all the alternatives into account. In addition, a legal referendum was organised. The regional government reacted to this decision by appointing a facilitator with a planning background who should bring all the actors together and look for a solution. He reached a compromise and the Pact for the Future was signed by the authorities and the citizen groups, resulting in the following: covering the Ring, a 50/50 modal shift through the development of the public transport system and an extension of the regional bicycle path network, improving an existing tunnel

in the northern part of the city and its accessibility by constructing a bypass of the Ring. A provisional budget (1.25 billion euro) is reserved for priority projects, which will be selected through a design competition that is currently in progress. An informal mixed advisory body, including politicians, administrations, citizen groups, etc. will be responsible for preparing the decisions concerning the realisation of the Pact.

In contrast to the Ringland case, the voice of the people and civil society in public decisions is, unfortunately, often neglected. Politicians fear that such movements will influence power relationships, and administrations often lack the expertise to manage such collaborations and are often afraid of cooperation. They are not eager to accept the knowledge, energy, and goals of citizens, individually or in groups, or to give them any relative autonomy, responsibility or power. The demand, however, for real involvement by the civil society is growing everywhere and creating an uneasy relationship with authorities who claim not only the primacy of politics, but also that they possess more knowledge and expertise. This case reveals that collaboration on an equal basis can improve the quality of both policies and actions. This evolution will add a new dimension to the planning discipline and should also influence planners' attitude and skills. In the words of L. Huysse: "We do not have to make a choice between representative and deliberative democracy. They can go perfectly together and can strengthen each other in a way that politicians and citizens can be permanently in a constructive dialogue."

Outcome: Research by design

A specific kind of research is going on today in Antwerp. Selected through a design competition, six design teams are studying different parts of the Ring looking for possibilities to cover the Ring and connect the neighbourhoods on both sides. Their work is contractually embedded in a deliberative process with the inhabitants and experts using 'working tables' that deal with different aspects. The teams and 'the tables' have to explore the possibilities of creating a new ecological 'Ring landscape' and facilities for recreation as well as opportunities for urban development and the implementation of a modal shift through a tram, train, bus, or bicycle system. One result should also be the selection of strategic priority projects that fit within the reserved budget.

Integrated knowledge matters

Too often a project is initiated based only upon a conviction that it will solve existing problems, however, without the appropriate knowledge, arguments and critical judgment to support it and without testing it. The result in this case was twenty years of 'muddling through.' The research initiated by the citizens groups to integrate different kinds of knowledge, supported by universities and planners, raised the consciousness of people about the existing problems: the unacceptable levels of pollution by the traffic and the need for a fundamental modal shift focussing on slow transport, e.g., bicycles, trams, etc., and public transport. The research also brought people, artists, planners, academics, and universities together, and opened a deep public discussion about the liveability of the city. The research was used as a way to promote social learning, insight development and communication. Finally, one of the research projects by Ringland *Curieuzeneuzen* (curious noses) received the Award for Scientific Communication from the Royal Flemish Academy.

Additional information about this case

More information on the Ringland project can be found in: Vermeulen, Peter. "Ringland, The Plan/The Plan Continued." *Ruimte, A View on Spatial Planning in Flanders* (2017), as well as at the following websites: https://Ringland.be/about/the-project/; www.Ringland.be/www.overdering.be/; www.toekomstverbond.be/; www.curieuzeneuzen.org/.

For more about the citizen organisations, see: www.stratengeneraal.be/; www.stratengeneraal.wordpress.com/wat-waarom/; www.ademloos.be/.

Similar cases in this publication

The following case is a similar story: Local Development and Village Renewal in Hagenberg, Upper Austria.

Topics relevant to this case

The following topics elaborate the notion of collaboration and participation in the planning process: 1) Discourse: A Tool for a Collaborative Planner, 2) Participation for Democracy and Spatial Quality, 3) Linking Informal and Formal Responsibility, and 4) Planning Approaches or Nothing Comes from Nothing.

Opinions are planted through sharing, thoughts through propagation.

Karl Kraus

Italy

Area: 301,000 km²
Population: 60.6 million
Population density: 201 p/km²
Capital: Rome

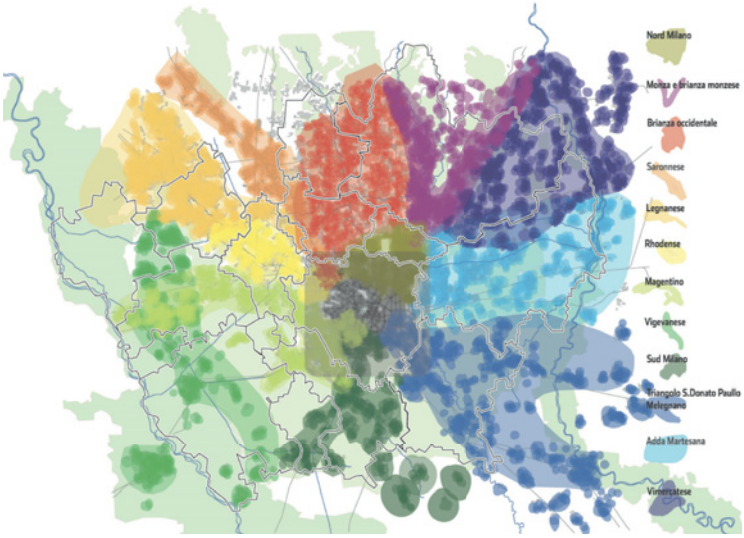
Milan in Lombardy has 1.4 million inhabitants. At the time of the plan, there were 3.8 million people in the Province of Milan with a density of 1,900 persons per km².

Città di Città:
A Strategic Plan for the Urban Region of Milan

Alessandro Balducci

Strategic planning is an emergent form of planning that tries to compensate and support some of the weaknesses of statutory planning. Given its informal character, strategic planning has both strengths and weaknesses; the latter are linked to the fact that to be effective depends upon a number of formal decisions that must be taken, while the strengths are opportunities to freely explore possible futures and to build 1) intellectual (shared information), 2) political (alliances), and 3) social (trust) capital during the planning process. Such capital will last beyond the specific initiative and eventually may really favour change. The case of the strategic plan *Città di Città*, developed by the Province of Milan, is an interesting case of an attempt to define a new strategy for a dynamic, large and complex urban area, producing convergence within an extremely fragmented institutional framework.

Figure 1: The City of Cities (Città di Città): The strategic plan of the Province of Milan.



Construction of a strategic vision

In 2004, the Province of Milan (an intermediate government level between communes and regions) decided to launch a strategic plan as an informal planning instrument to orient the future development of the urban region of Milan. The province at that time consisted of 187 communes, including Milan, and counted about 4 million inhabitants. The task to develop the project was assigned to a member of the provincial government, Daniela Gasparini, a deputy president for the strategic plan (*Assessore al Piano Strategico*). Being a new function, the province lacked a dedicated internal department and as a consequence, Gasparini decided to use a university as the main consultant. Having the Politecnico di Milano as the main consultant – thus entrusting the task of designing the entire process to the Department of Architecture and Planning – finally led to the creation of the strategic plan (Fig. 1).

Based upon existing research, the group of academic planners argued that the most important problems of the urban region were not the construction of new infrastructure and big projects, as the recurrent claim of the business community and some political parties assert, but rather a poor quality of life and the fragmentation of the metropolitan periphery. For this reason, the group proposed a strategy based upon two pillars: the theme of habitability (Fig. 2),

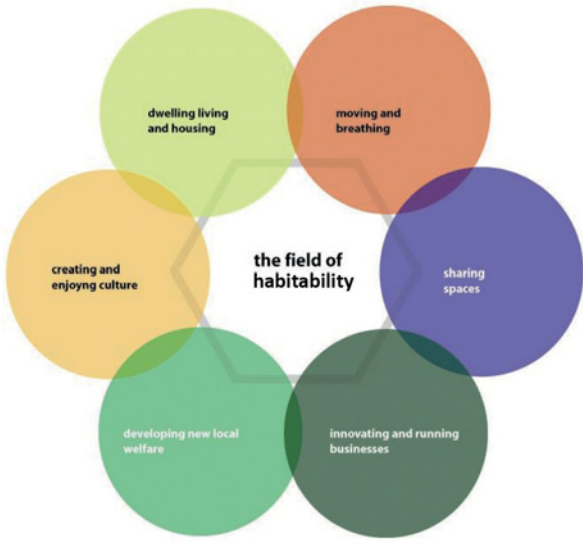


Figure 2: The theme of habitability.

and the concept of a "city of cities" (Fig. 3), both of which were integrated into the proposal of recognising and supporting aggregations of communes that could work together in order to acquire a better quality of life in the urban region.

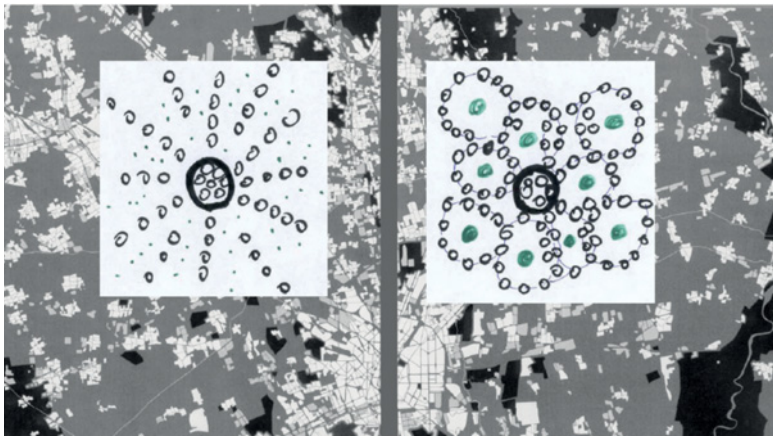


Figure 3: The concept of "city of cities."

The planning process

The planning process was structured as a series of activities aimed at probing and spreading the vision of a "habitable city of cities," anticipating action as soon as possible, and involving stakeholders and citizens (Fig. 4).

Figure 4: Project timeline.

The decision was to start with a kind of White Paper about the situation in the urban region, its problem and trends, and ideas to produce change. The public presentation of the document entitled "City of cities, a strategic project for the Milan urban region" had the role of setting the scene: it used data to demonstrate the progressing divergence between economic prosperity and quality of life and it declared the need to re-conciliate the two dimensions for the benefit of the citizens and the economy.

The next step was the call for projects and good practices. This choice was justified by the awareness that such a strategic change could be successful only if it was able to involve a large number of actors. The call received a huge response from regional society: foundations, universities, associations, individual and joint communes, non-profit organisations and private citizens all participated (Fig. 5). In total, 259 entries on good practices and new projects that covered various facets of habitability and portrayed a rich and lively local community that was keen to enter into a relationship with institutions in order to contribute to the development of relevant public programmes.

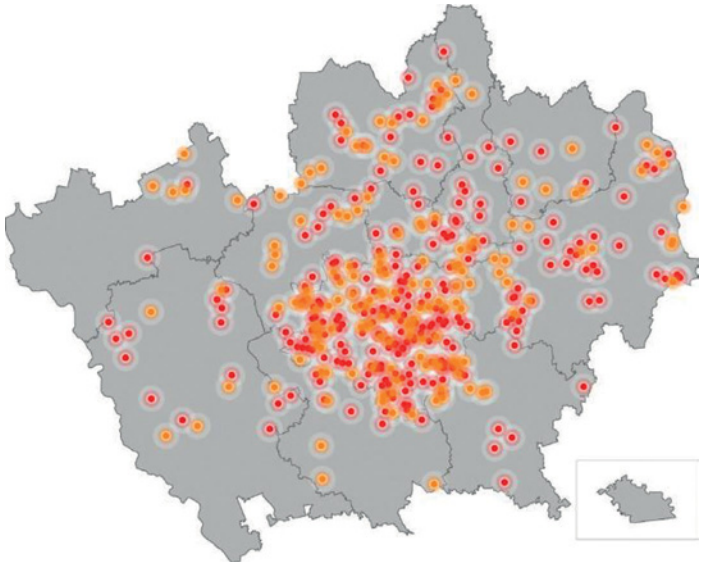


Figure 5: The distribution of proposals within the Province of Milan.

Another initiative was the preparation of the *Atlas of policies and projects for habitability in the Province of Milan*. On the one hand, it was an exercise of self-reflection and reciprocal internal information within the provincial administration, and on the other, an exercise in external communication and information about what the province was already doing in the field of habitability. Out of 52 projects and policies in the atlas, six pilot projects were selected with the aim of anticipating actions designed to intervene in particularly relevant areas of habitability, such as the realization of a peri-urban wooded belt, trying out innovative policies for housing access and a project for upgrading industrial spaces.

An exhibition at the Triennale di Milano, an internationally recognised institution for the promotion of planning, architecture and design, provided information about the changes in the Milan urban region to a wider audience – 10,000 people visited the exhibition – and translated the objectives of the project into a more communicative form. The core of the exhibition was the City of Cities Theatre, a meeting place where a series of initiative sessions were held to construct, both literally and metaphorically, an arena in which people and decision-makers could meet and discuss the future of the urban region (Fig. 6).

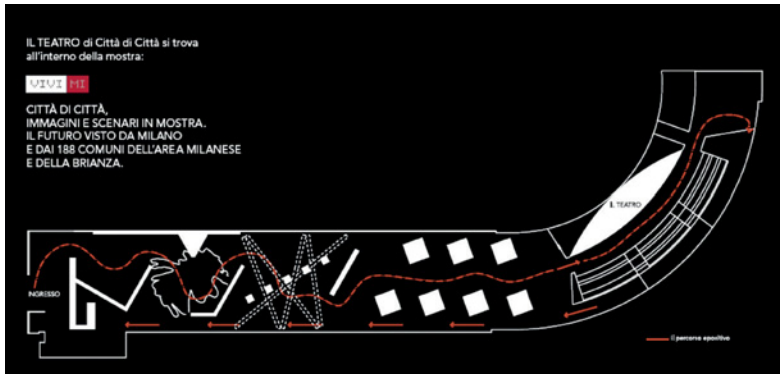


Figure 6: The City of Cities Theatre as the core place at the Triennale di Milano.

The final text "For the habitable city. Scenarios, visions and ideas" was a proper strategic plan, a document in which all the actions initiated in the planning process were presented to illustrate what had been achieved at the different levels and what the project's goals were for the future.

The implementation of the plan was interrupted by the change of government after the election in 2009. Everything seemed lost, but soon it became clear that the intellectual, social and political capital had not disappeared. Ideas had survived in different arenas, e.g. in the policies of the new Milan core city administration elected in 2011 and in the strategic plan of the new metropolitan authority, published in 2016.

Power of strategic planning

The issues of habitability and quality of life became central to planning, while the idea of structuring a strategic planning process looking at the different "cities" that compose the urban region became an institutional choice of the metropolitan plan.

The case is an example of the power of ideas: raising the issue of habitability at the beginning was difficult and strange for the on-going debate about the limits to the development of a business-centred city like Milan. The group of planners was able to establish the idea in the public debate about the future of the city through a number of initiatives, documents and data. The same is true for the concept of a "city of cities" which gave its name to the strategic plan. The idea was based upon geographical observations, cooperative initiatives among communes, and traditional inter-communal relations.

The case is also an example of the role of informal planning initiatives. Strategic planning usually has this informal character with both its advantages and disadvantages. The advantage is that it allows a more open exploration of possible futures for a territory, creating commitment, and involving different actors and people; the disadvantage is its fragility: the absence of any formal administrative act exposes the strategic plan to its possible abandonment.

The case also shows new forms of public participation. Instead of traditional forms of public involvement, e.g., public insight, formal announcements, notices in the newspapers, the competition for projects and good practices has shown its potential for becoming a beneficial planning strategy. Given the great number of proposals presented on the issue of habitability, the planning process was actually based on networking the initiatives and exploiting this energy.

Additional information about this case

More information about the case can be found in the book: Balducci, Alessandro, Valeria Fedeli, and Gabriele Pasqui. *Strategic Planning for Contemporary Urban Regions. City of Cities: A Project for Milan*. Farnham: Ashgate, 2011.

Similar cases in this publication

Cases also focusing on the role of experts from academic society, informal planning procedures, and various forms of collaboration are: 1) Site Planning of the Vienna University of Technology: Restructuring Urban Quarters, 2) The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland, 3) A 'New' Danube for Vienna: An Innovative Multi-purpose Project, 4) Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance by Planning, 5) The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan, and 6) Storm Water Planning in the Chicago Metropolitan Region.

Topics relevant to this case

The following topics describe the nature of a strategic planning approach: 1) Reflective Leadership, 2) Commedia dell'Arte: How Planners Can Act in Naked Reality, 3) Linking Informal and Formal Responsibility, and 4) Participation for Democracy and Spatial Quality.

A rule is only useful to those who can do without it; however, it spoils those who use it and consider themselves wise.

Achim von Arnim

Switzerland

Area: 41,000 km^2
Population: 8.3 million
Population density: 201 p/km^2
Capital: Berne

The Limmat Valley stretches along the Cantons of Aargau and Zurich and houses about 1.7 million people. The Limmat River, from the Lake of Zurich, to the Aare River, is about 35 km long and has an average flow volume of about 100 m^3/s.

The Limmat Valley:
A Spatial Laboratory for Action-Oriented Planning in Switzerland

Bernd Scholl

The case of the Limmat Valley deals with cross-border development in a space of national importance. Cross-border cooperation in small and densely populated countries like Switzerland is gaining more and more importance. It is now a work in progress since a special agency was founded in 2015, the result of a trans-disciplinary research project initiated by ETH Zurich in 2007. The project was part of a Spatial Laboratory for Action-oriented Spatial Planning from 2008 to 2015. Doctoral students of ETH Zurich were able to initiate a collaborative and cross-border planning process with the communities, the regions and the cantons of the Limmat Valley. One highlight was the process of holding an international competition of ideas for the Limmat Valley.

Figure 1: The Limmat Valley: A space of national importance. Aerial view from Dietikon-Spreitenbach towards Baden.

Great diversity within a small space

The Limmat Valley (Fig. 1) is part of the Zurich Metropolitan Region, an area with approximately 1.7 million inhabitants, and serves as the western gateway to Switzerland's economic engine. From a spatial perspective, whatever happens here in the next few years is relevant for all of Switzerland (Fig. 2). The Limmat Valley can justifiably be described as a space of national importance. The spatially relevant problems of urban sprawl, excessive traffic and loss of cultural land exhibited in the valley are examples of the impact of these problems.

Figure 2: Project timeline.

The Limmat Valley has experienced dynamic development in recent decades and it is expected that this growth will continue. As a living space with more than 200,000 people, the Limmat Valley is one of the most densely settled areas in Switzerland. Infrastructures of regional, cantonal, national and European importance are also concentrated here.

Noting that the valley offered many opportunities for pertinent research, the ETH Chair of Spatial Development started an initiative to test new approaches for regional cross-border cooperation as part of the International Doctoral College's Spatial Research Lab – a series of mentored PhD workshops aimed at independent exploration within the framework of individual doctoral theses. The examination of the Limmat Valley by the doctoral students led to a comprehensive assessment of the entire space and to some initial ideas for its long-term development. One significant insight was that the valley needed to achieve a viable long-term perspective for spatial development and the solution needed to be based on a problem-oriented comparison of ideas.

The Limmat Valley Idea Competition: An innovative regional planning approach

After a variety of suggestions, including an international approach and thematic workshops, the communities and the responsible officials of the Limmat Valley and Baden regions, including the Cantons of Zurich and Aargau, and the Federal Office for Spatial Development (ARE), managed to raise approximately 350,000 euros to conduct a joint competition of ideas (Fig. 3). The concept of the competition was presented at the annual meetings 2012 and 2013 of the government representatives of both cantons. This annual conference is called platform Aargau Zurich (PAZ).

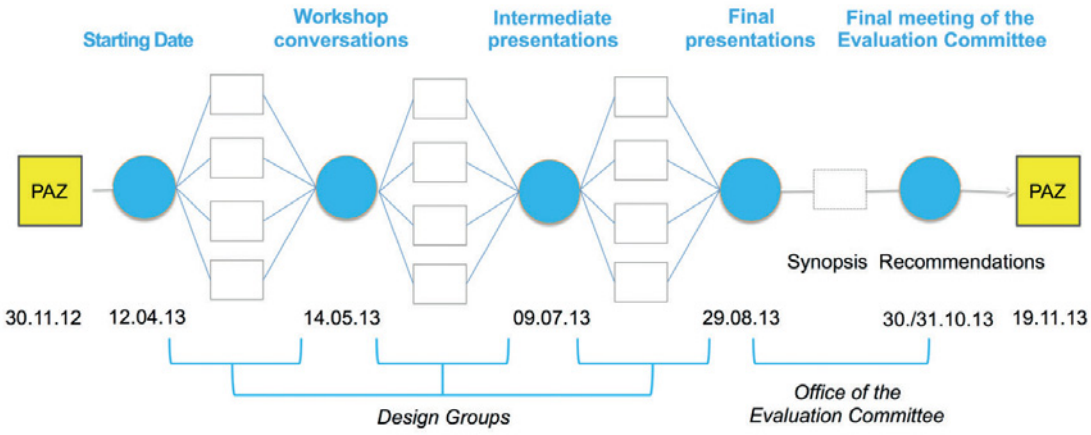


Figure 3: Process of the Idea Competition.

The central goal of the competition was to obtain a concept for the area's spatial development up to the year 2040 in order to establish what kind of spatial strategy should be considered in a long-term perspective for the Limmat Valley. Using the principles of the test planning method, and contributions from four highly respected planning teams, the Evaluation Committee brought the resulting five recommendations to the attention of the stakeholders in the Limmat Valley (Figs. 4, 5, 6&7).

Figure 4: Team AS&P, Frankfurt.

Figure 5: Team ASTOC, Cologne.

Figure 6: Team Metron, Brugg.

Figure 7: KCAP Architects & Planners, Zurich.

Autonomous Limmat Valley – more than an extension of Zurich

In order for the residents of the valley to identify with their living space, some clearly defined physical and manageable sub-regions within the Limmat Valley would be important. In addition, it is very important that the Limmat Valley should not become an end-to-end continuous urban band.

Make better use of the potential of the landscape's qualities

An especially important element for living spaces with a fast-growing population is having easy access to recreational areas. The potential of the valley's landscape – with the Limmat River and green slopes rolling down from the ridge – could provide an essential foundation for settlement development. The open-space qualities of the richly varied and freely accessible river space should be further strengthened and the opportunities for living on the water could be increased in the future (Fig. 8).

Attractive community centres

With a growing population and increasing density in the settlement areas, appealing public buildings and facilities are also of major importance for the location's attractiveness.

In this connection, community centres are especially important as places for meetings and exchanges. The design of the public spaces should be of high quality and the communities should be challenged to promote an active land policy.

Mobility and transport as a major joint task

The Evaluation Committee directed special attention to the traffic and transport situation, as the region is already under stress in this aspect. To ensure that the economically important region of Zurich and its airport remain accessible to the entire nation, it is urgent that the transport carriers in the Limmat Valley are connected to an integrated system. The additional traffic volume must be managed predominantly through this network and through public transportation. A paramount part of this is the implementation of the Limmat Valley Light Railway (*Limmattalbahn*). Fast-track paths for bicycle riders along the Limmat River and railway axis roads, together with local bike-path networks, should encourage less motorised traffic.

Joint orientation framework for development

In order to work out the various tasks in the best possible manner among the actors involved, the Evaluation Committee recommended the development of an orientation framework that can be easily updated for projects of mutual interest and for regular updates of necessary information.

Figure 8: Potential for recreation: The Limmat River.

Regional exhibition Limmat Valley Association: Regionale 2025

After the trans-disciplinary – and cross-border – project ended in 2015, the Cantons of Zurich and Aargau, together with the cities, regional organisations and communities of the valley, founded the Regional Project Exhibition Limmat Valley Association (*Regionale Projektschau Limmattal*) in order to continue and intensify the collaboration across borders over the next ten years (2015–2025).

The goal of the association is to coordinate important activities throughout the entire valley and to benefit from the synergies thus created. It is a work in progress. Over the next ten years, the task is to initiate, support and exhibit trendsetting projects from various sectors in order to strengthen the sustainable development of the Limmat Valley. A joint committee of independent experts and stakeholders of the Limmat Valley selected the first projects at the end of 2017.

Spatial planning matters

Identifying an area of high complexity as having outstanding importance was the first step in a stepwise approach towards a long-term perspective within an academic framework. An informal process followed and now the transition towards a regular institution is on its way. All these efforts have intensified the resulting collaboration.

Additional information about this case

The case of Limmat Valley as a Swiss spatial laboratory has recently been extensively explored. The results are presented in a number of publications:

1. Arnet, Esther, Bruno Hofer, Dietrich Pestalozzi, Bernd Scholl, and Dominik Tiedt. *Zukunft Limmattal. Gedanken der groupe de réflexion über künftige Entwicklungen im Limmattal [Future of the Limmat Valley. Thoughts of the think tank on future development in the Limmattal].* Zurich, 2009;
2. ETH Zurich, IRL. *Perspectives on Spatial Planning and Development in Switzerland. Report of the International Group of Experts*. Berne: Swiss Federal Office of Spatial Planning (ARE), 2008;
3. ETH Zurich, IRL. *Empfehlungen des Begleitgremiums: Langfristperspektiven der Raumentwicklung Limmattal.* Zurich: ETH, IRL, 2013;
4. Scholl, Bernd, ed. *SAPONI, Spaces and Projects of National Importance.* Zurich: vdf Verlag, 2009;
5. Scholl, Bernd. "Zur Bedeutung des Limmattals als Laborraum für die Schweiz." In *Logbuch Forschungslabor Raum [Logbook of the Research Lab: Space]*. Berlin: Jovis, 2012;
6. Scholl, Bernd, Martin Vinzens, and Bernard Staub, eds. *Test planning – A method with a future.* Solothurn: Canton Solothurn, Office for Spatial Planning; Berne: Swiss Federation, Office for Spatial Development (ARE);
7. Scholl, Bernd, and Peter Jonquière. "Zurich: Action-Oriented Spatial Planning for Spaces of National Importance." In *Ten Years of UPATS: Reflections and Results,* eds. Bernd Scholl, Martin Dubbeling, and Ana Perić, 102–113. Zurich: vdf Verlag, 2015;
8. Scholl, Bernd. "Das Limmattal als Gesamtraum verstehen." In *immo!nvest – Das Schweizer Magazin für Standorte und Immobilien,* ed. Bruno Schlegg, 15–16. Dietikon: ImmPULS GmbH – Agentur für Verlag und Event, 2015.

Similar cases in this publication

The following cases show the potential of original planning approaches: 1) The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan, 2) A 'New' Danube for Vienna: An Innovative Multi-purpose Project, 3) Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning, and 4) Città di Città: A Strategic Plan for the Urban Region of Milan.

Topics relevant to this case

The innovative planning procedures that involve a number of various stakeholders through a common vision are conceptually explained in the following topics: 1) Linking Informal and Formal Responsibility, 2) Spatial Conflicts and Opportunities, 3) Creative Criticism in Spatial Planning, 4) Traps and Maxims, 5) Reflective Leadership, and 6) Puzzling: Making Plans Together Works.

Strategy is the science of time and space. I am not really keen about either. We may regain space; but lost time is gone forever.

August Graf Neidhardt von Gneisenau

Switzerland

Area: 41,000 km²
Population: 8.3 million
Population density: 201 p/km²
Capital: Berne

In the communes of Luterbach and Riedholz in the Canton of Solothurn live 5,800 people. The Aare River was the reason for establishing a cellulose factory, which existed between 1881 and 2008.

Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance by Planning

Anita Grams

In Switzerland, two-thirds of brownfield areas are in former industrial zones and most of them are located at rivers and lakesides. Anticipating the increasing population projections for the coming thirty years, the availability of industrial brownfields located in already urbanised areas could come to an end and as a consequence, areas located in the periphery of urban areas are more and more often the object of planning efforts. One of the most interesting examples for spatial planners is the brownfield of Attisholz. In a very short time – compared to other brownfield regeneration projects – the planning process lead from an abandoned industrial brownfield to the establishment of the production site of an internationally active Cleantech Company. The case is a prime example of how a carefully designed test planning process can lead to quick decision-making through an atmosphere of trust.

Figure 1: Industrial brownfield Attisholz (view from the south) near Solothurn, Switzerland.

A brownfield in a river landscape

Starting in the early 1920s, the site of Attisholz was an important site for the woodworking industry in Switzerland. It was a workplace for hundreds of employees and, based on the importance of this industry, the whole area was marked as a "working area with supra-local importance" in the cantonal structural plan. However, in 2008 as part of the difficult economic developments on the global cellulose market, it was decided to abandon Attisholz as a production site (Fig. 1). Consequently, hundreds of employees lost their jobs and from one day to the next, the area became the largest industrial brownfield in Switzerland. This situation was the beginning of a transformation process that started in 2010 and is still going on.

Planning an area of national importance

The cantonal authorities ranked the site as having the highest priority and its development was declared the key project for spatial and economic development with supra-regional importance. Because the area was at that time Switzerland's largest available industrial brownfield with very favourable accessibility, it was even declared a "reserve of national importance." In contrast to brownfield developments in urbanised areas where numerous stakeholders as well as the population may claim various interests, here the future land use was completely undefined. At that moment, all the actors involved had different questions:

- The international company as landowner: What possible development of the existing site is best for limiting the losses in the investments already undertaken?
- The private landowners: How can we attract a high added-value land use?
- The Canton of Solothurn as the regional authority: How can a future development be integrated into the cantonal structural plan in order to guarantee planning security for the landowners and legal certainty for the local authorities?
- The Canton of Solothurn as one of the landowners: How can the highly strategic importance of the site be secured for the economic development of the whole region?
- The two communes where the site is located: What land use with a high added-value is compatible with the existing settlement and infrastructures in their municipal territories?

· The local and cantonal politicians: How can an economic and socio-political disaster be avoided?

All actors shared a common problem: How to find a long-term land use concept that could be accepted by all actors? Compared to other brownfield regeneration projects in Switzerland, the project timeline was very tight: 2008–2017 (Fig. 2).

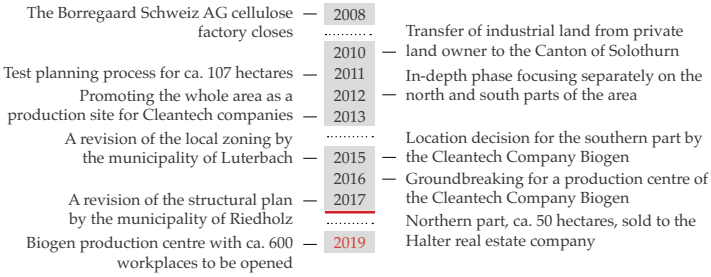


Figure 2: Project timeline.

Planning means taking the initiative at the right moment

It was the Cantonal Planner and Head of the Spatial Planning Department of the Canton of Solothurn who took the first initiative. From the perspective of the landowner and the two cantonal departments (Planning Department and Public Building Department), it soon became clear that particular planning efforts were in order. This led to the mutual decision to initiate and finance a test planning process. In a very short time, an Executive Committee was formed, a Steering Committee with its leader was set up and experts from both the cantonal authorities and independent professional experts were nominated.

By 2011, the synopsis or structure plan resulting from the test planning process could already be presented to the public. From then on, the plan figured as a strong common base (Fig. 3).

Figure 3: The structural plan from the informal planning process.

The concrete structural plan is just one result of the test planning process. Much more important from a current perspective is the jointly developed solution for a common problem that was recognised earlier in the process. The planning process was the vehicle for a common learning process. The carefully designed collaboration process under the leadership of an expert and with the participation of just a few decision makers, led to an ambiance of trust between the public authorities and the landowners (Fig. 4).

Figure 4: A carefully designed planning process leads to an ambiance of trust.

Why spatial planning matters in difficult social and economic situations:

Planning means taking the initiative at the right moment. **The fact that the Canton itself bought a plot of nearly 35 ha made it possible for it to appear in two actor's roles: one, as a landowner, and two, as the local authority. This act of active land policy allowed the Canton to enlarge its influence on the decisions that were taken further on in the process.**

Planning means an investment in clarification processes. **Thanks to the collective learning process experienced by all stakeholders during the same time period, decisions can be taken in a relatively short time. The sequence of actions and decisions allows making adjustments to the planning process when it is needed.**

Planning also means building an atmosphere of trust. **Sometimes a planner has to take over the roles of both moderator and juggler. Through a carefully designed planning process, all actors are encouraged to accept and play their role. An ambiance of trust among decision makers allows fast decision-making when a window of opportunity opens.**

Planning means saving spaces of tolerance

As a result of the test planning process, the joint decision was taken not to separate the large building plots and sell them to the highest bidder (this opportunity arose several times!), but to save it as a whole for the most suitable land use for this reserve of national importance. The conditions of this place were too precious from a national perspective. By taking the common decision not to fragment the area, the scope for suitable land uses was saved. A space of tolerance was kept open for an appropriate land user.

What followed sounds like a fortunate destiny for the end of a planning process. In its worldwide assessment of possible production sites with room for a large expansion, a globally active biotech company took the decision to settle down in the southern part of the area while a nation-wide real estate developer bought the northern area (Fig. 5).

Figure 5: Integrated development of both the northern and southern parts of the area.

Having spatial tolerance on a large building plot while also having planning security and legal certainty was the crucial element for these strategic decisions.

When you read the favourable news about plenty of new jobs these days, you might think that all this is a result of economic promotion. In fact, this development is being built upon the framework conditions set by the preceding planning process.

Additional information about this case

More information on different aspects of the case can be found at the following websites:

1. About the site and planning history: www.attisholz-areal.ch/;
2. About the developer of the northern part: https://www.halter.ch/de/projekte/186;
3. About the final recommendations of the test planning process: https://www.ethz.ch/content/dam/ethz/special-interest/baug/irl/chair-of-spatial-development-dam/documents/projekte/diverses/testplanung-riedholz-luterbach-bericht;
4. About the case showing the test planning process from the perspective of the actors: *Von der grössten Industriebrache der Schweiz zur Reserve von Europäischer Bedeutung durch Planung: Das Beispiel der Testplanung Attisholz 2011–2017* (a film by Mario Theus, Anita Grams and Carmen Baumann, to be released end of 2018 on the website www.masraumplanung.ethz.ch).

More information on case and test planning process in general can be found in the following publications:

1. Grams, Anita. *Playing with density. The compass of inward development as problem-oriented method for densification in small and medium-sized communes.* Zurich: vdf Verlag, 2018 (in press);
2. Scholl, Bernd, Martin Vinzens, and Bernard Staub, eds. *Test planning – A method with a future.* Solothurn: Canton Solothurn, Office for Spatial Planning; Berne: Swiss Federation, Office for Spatial Development (ARE);
3. Scholl, Bernd. "Building actor relationships and alliances for complex problem solving in spatial planning: The test planning method." *disP – The Planning Review* 53, no. 1 (2017): 46–56.

Similar cases in this publication

Cases elucidating the issue of brownfield regeneration and the importance of a structured planning process are: 1) Park Spoor-Noord, Antwerp: A Marriage between Co-Production and Spatial Quality, 2) Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre, and 3) Local Development and Village Renewal in Hagenberg, Upper Austria.

Topics relevant to this case

The following topics illustrate the nature and necessary elements of successful collaboration: 1) Puzzling: Making Plans Together Works, and 2) Participation for Democracy and Spatial Quality.

The mistake lies in the beginning.

Aristotle

Austria

Area: 84,000 km²
Population: 8.8 million
Population density: 105 p/km²
Capital: Vienna

The Austrian capital on the Danube River has 1.9 million inhabitants. Founded in 1815, TU Wien today has about 29,000 students.

Site Planning of the Vienna University of Technology: Restructuring Urban Quarters

Andreas Voigt

The early 2000s saw the launch of a discussion process regarding the future site and development of the Vienna University of Technology (TU Wien). The plan was to relocate the entire university from its current inner-city sites to a brand-new campus on the outskirts of Vienna. An intensive discussion process was launched that analysed the various potential sites, including existing facilities. The process was supported through the use of comparative spatial modelling to evaluate site quality based on a set of key criteria, which culminated in a workshop attended by international guest experts. The staff of TU Wien took an active part in the planning process, which resulted in the decision to stay on the existing site while modernising and further developing the premises in line with the subsequently drafted renovation programme: TU UniverCity 2015. The planning methodology is essentially based on inward urban development supported by a simulation of planning interventions and an interlinking of the initiatives.

Figure 1: TU Wien, view from new TUtheSky (Getreidemarkt/ Grain Market). The former chemistry laboratories have been transformed into a plus-energy office building, including a function room at the top.

TU Wien: Bringing centrality to the city's outskirts

TU Wien was founded in 1815 as the Imperial Polytechnical Institute. In the early 2000s, an intensive debate was triggered by the problems associated with its inner-city location, i.e. the main site on Karlsplatz, and the wider options provided under Austria's new Universities Act, which highlighted the "autonomy of universities." According to Peter Skalicky, Chancellor of TU Wien 1991–2011:

> The problems associated with the various TU Wien sites were already well known: safety risks in the Faculty of Chemistry, the relocation of Mechanical Engineering, the shortage of space in the Faculty of Architecture ... Plenty of plans were drawn up – there was talk of a new Mechanical Engineering building in the 1990s, for example – but only a few were ever realised.

In 2005, a dozen potential sites for the construction of individual faculties, or indeed even a whole new TU campus were in discussion. In the meantime, media reports of a possible relocation had brought yet more potential site providers into the arena. In the same year, the Chancellor and Vice-Chancellors of TU Wien asked members of the Department of Spatial Planning to conduct a site study with the intention of providing an "objective" basis for the discussion in the form of jointly agreed criteria. Peter Skalicky briefly describes the options that arose:

> By 2006, two possible options remained on the table: a complete rebuilding of the entire TU Wien on a new campus at the former Aspern airfield, or densification and optimisation of the existing inner-city sites, including a new Science Centre. In June 2006, the Chancellor and Vice-Chancellors unanimously agreed to continue pursuing the latter option only, a decision that was approved by the University Council. The decisive factors behind the decision were the high level of acceptance for this option among members of the TU, as well as the higher likelihood of it being realised. It was stipulated, however, that the project should deliver the same functionality as a new build would have done.

The ongoing project for the substantial redevelopment of the TU Wien sites was given the title: TU UniverCity 2015.

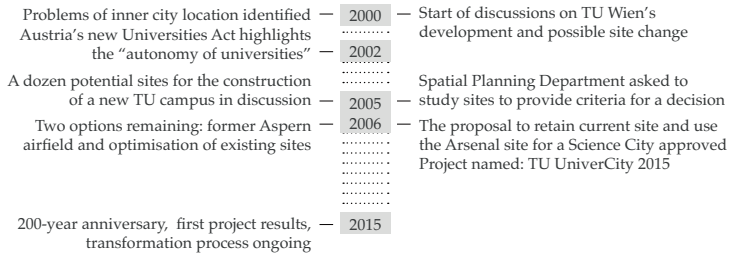


Figure 2: Project timeline.

Towards a city campus

An essential prerequisite for tasking members of TU Wien to conduct the study was the trust placed by the university's executive body in the departmental working group and its professional expertise, as well as its willingness to make a decision on the basis of this expertise combined with a corresponding structured discussion process.

The chosen approach incorporated the following steps and elements:

- **The executive body of the university provided a list of potential sites.**
- **The sites were analysed and evaluated in terms of their suitability for the selected scenarios: relocation of the entire university, relocation of two faculties, and relocation of a single faculty.**
- **The sites were subsequently assigned to the possible scenarios on the basis of the potential space available at each site.**
- **The sites were then evaluated according to the weighed criteria of accessibility (public transport), environment and image, utilities and amenities, potential synergies, opportunities for expansion, availability, inherited waste, land-use designation, open space potential, existing buildings and nearby nuisances.**

The outcome of the site study was a ranking of the sites "from a professional planner's perspective" for each of the different scenarios, based on the criteria agreed upon with the university's executive body (above). Individual sites were ruled out because their spatial configuration was considered unsuitable "for complex, differentiated spatial structures, as would be required for the relocation of an entire faculty."

Figure 3: TU Wien, Main Building.

The existing site at the Karlsplatz (Fig. 3) was also evaluated according to the same criteria; it was found to have "the best score in terms of site quality" and was categorised as being "basically suitable for further development." The preliminary results, the criteria and the weighting system were discussed and incorporated into a revised ranking at a workshop involving external experts, TU Munich, ETH Zurich and TU Graz, the executive body and a representative of the administration of TU Wien, together with the members of the Site Study Working Group. The main outcomes of the workshop were: 1) retention of the main Karlsplatz–Getreidemarkt site together with an implementation of the refurbishment programme, and 2) the development of a Science City site incorporating specific laboratories and laboratory-intensive institutes or departments in close spatial proximity to the university. It was further agreed that the duplication of essential central service facilities, such as libraries, main auditorium, etc., should be avoided. A further site study identified the Arsenal site in the immediate vicinity of Vienna's new Main Rail Station, then at the planning stage, as the site for a Science City (now the Science Centre). This proposal was approved by the executive body of the university.

Supporting inward development is crucial

With this process of renewal, TU Wien is making a significant contribution to the regeneration of the entire urban neighbourhood while at the same time, retaining one of the most central and highly accessible sites in the city, moreover, one that has been upgraded

by the rebuilding and opening of the immediately adjacent Vienna Main Rail Station complex. Through this renewal process, TU Wien is developing into a true "city campus." For example, the diversity of uses is being preserved and the intensity of use increased, public spaces are being attractively designed, and with the energy-plus building on the Getreidemarkt, a contribution is being made to the site's energy supply. The development of universities is directly and closely linked to the spatial development of their respective sites and their host towns and cities. Universities can become drivers of development in urban neighbourhoods, cities and whole regions. It's a challenging task; nevertheless, as Peter Skalicky highlights: *"Nobody said it would be easy … but it will be worth it!"*

Additional information about this case

The general information about the urban transformation process of the TU Wien university campus can be found at the following website: https://www.univercity.at/en/.

More detailed information is provided in the following reports:

1. Hierzegger, Heiner, Thomas, Brus, Thomas, Dillinger, et al. *TU Wien Site Study, Final Report [Standortuntersuchung TU Wien, Endbericht].* Unpublished Report, 2005;
2. Skalicky, Peter. The genesis of the project. Accessed February 3, 2018. https://www.univercity.at/de/das_projekt/projektgenese/;
3. Seidler, Sabine. The decision made by TU Wien to remain at its existing inner-city location is and remains the right one. Accessed February 3, 2018. https://www.univercity.at/en/project/.

Similar cases in this publication

The power of structured discussion and its effect on the success of the planning process is illustrated also in the cases: 1) Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance by Planning, and 2) A 'New' Danube for Vienna: An Innovative Multi-purpose Project.

Topics relevant to this case

The issue of facilitated planning processes is discussed in the following topics: 1) Reflective Leadership, and 2) Linking Informal and Formal Responsibility.

Do your own thing. Your reward will be doing it, your punishment having done it.

Kanenas T. Pota

Switzerland

Area: 41,000 km²
Population: 8.3 million
Population density: 201 p/km²
Capital: Berne

The municipality of Brig in the Canton of Valais has 13,200 inhabitants. In Brig, two railway companies meet: The Swiss Federal Railways (SBB) and the metric Matterhorn-Gotthard-Bahn (MGBahn).

How 'Moving Simultaneously' Opened New Possibilities for Solving a Muddled Situation: The Case of Brig, Switzerland

Markus Nollert

In June 2015, an international jury announced the winner of an architectural competition for the redesign of a public space in Brig, Switzerland. The decision was discussed nationwide and commended for its smooth execution and the quality and feasibility of its entries. What is less known is that four years earlier the actors involved had to draw the curtain over long-conceived dreams and plans without knowing how to proceed. The case shows how a public space at Brig's railway station suffered from three typical issues of planning tasks: 1) a 'last minute' change to the plan by one of the main actors that foiled a development strategy that had been followed for years, 2) too many functions in a limited physical space, and 3) a number of different actors with different interests and, strangely, divided property. The lesson is in what followed: coping with the challenge in a courageous, unconventional and successful manner, i.e. conducting a tailor-made planning process that opened new paths of action, thus creating a sustainable solution.

Figure 1: Station square of Brig.

Big plans scattered and a new beginning

The railway station of Brig (Fig. 1) links the destinations Bern-Lötschberg-Simplon (-Milan) and Lausanne-Geneva, as well as the Matterhorn-Gotthard Bahn (MGBahn). The MGBahn is a regional narrow-gauge line connecting Zermatt with the Rhone Valley, known for the famous Glacier Express, an express train connecting the two major mountain resorts of St. Moritz and Zermatt in the Swiss Alps. While the national railway crosses the river to enter the station, the MGBahn is situated on the Station Square, which also serves as a hub for regional and community bus lines, Park+Ride and as one of the main links between the city of Brig and the community of Naters (Fig. 2).

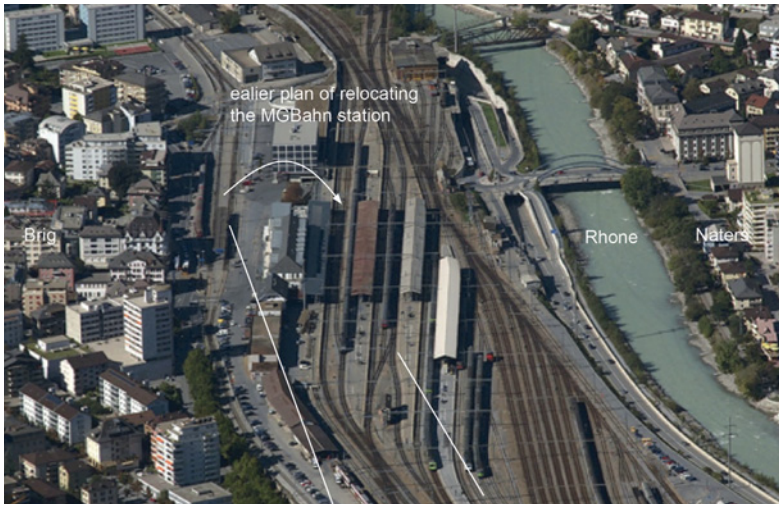


Figure 2: Aerial view of the station area in Brig.

The multiple functions resulted in problems organising traffic on and around the square. For almost 30 years, the plan of transferring the MGBahn station to the SBB station site (Swiss Federal Railways) was followed in order to free significant parts of the square for other uses. After realising the first parts of the concept, SBB cancelled the project in June 2011. This put the actors involved in the plan in a muddle (a state of confusion or disorder).

Initiative and the 'how to'

In the following months, some actors tried to find new solutions, which did not work out very well because they all reduced the 'solution space' to their own property. This situation prompted the

Regional- und Wirtschaftszentrum Oberwallis (RWO) AG, a company responsible for organising all the planning matters of the agglomeration, and the city of Brig to take the initiative and they proposed using the test planning method in order to find integrated solutions for this entirely new situation. After convincing the actors to participate in this clearly innovative planning process, the test planning process on the railway catchment area Brig–Naters started only six months after the surprise decision of the SBB (Fig. 3).

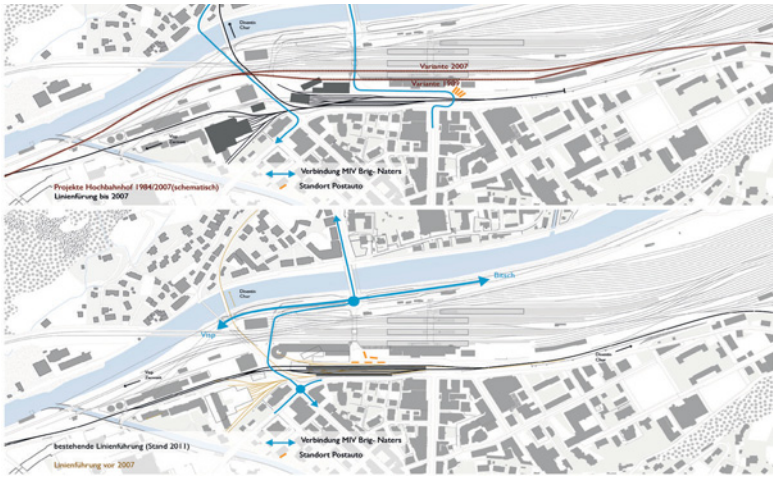


Figure 3: Evolution of the station area. Above: State before 2007 with the two proposed relocations of the MGBahn into the station; below: Situation at the start of the test planning process.

To foster a clear discussion about the square, a 'space allocation plan' was formulated during the task mission, including all the requirements requested by the actors: answers for the possible location and configuration of the train station for the MGBahn, the regional and local busses, parking and Park+Ride, as well as the allocation of 25,000 m^2 of floor space. During the process, the teams systematically tested all possible options for the MGBahn station. The outcome was that the actual position, i.e. on the square, was the best option: for the railway company, because it is visible and close to other means of transport, and for the city of Brig because it can be seen by travellers. One statement about the other idea under discussion, i.e. to move the station under the square, made this point very clear: "You don't bury the Glacier Express." This comprehensive knowledge about other options, including arguments for and against, was extremely helpful in convincing actors and politicians about the best option, not only during the process, but ever since as well. In fact, two of the three planning teams looked into other options only to find more evidence why they might not be a good idea.

Discussions between the teams and responsible actors showed that the tracks on the square could be reduced from today's four to three or even two. This was one of the main findings during the process, which literally opened a space for the comprehensive concept. The process also revealed that the required floor space can be easily realised without building on the square. In fact, one team discovered an entirely new neighbourhood that could be developed by relocating the train line by about 40 m. This had several other advantages for the railway company, too, including being able to build a new bridge over the Saltina River without blocking the existing railway line. Therefore, the findings helped convince the responsible actors to keep the square free of buildings, which is exactly what the original plans had stated.

The biggest shift of perspective was that, contrary to opinions before the process started, the biggest problem was not the MGBahn or the buses, it was car traffic. The contributions of the teams showed that far more cars enter the station area than needed, causing frequent traffic jams and blocking all other traffic participants (Fig. 4).

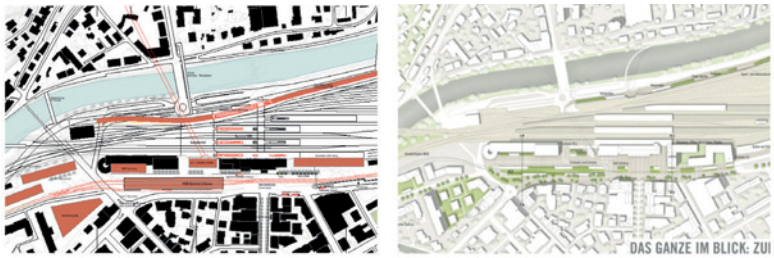


Figure 4: Crucial elements of the proposed development: new station with new western exit, new allocation of postal bus lines, reducing car traffic around the station and a new neighbourhood in the west.

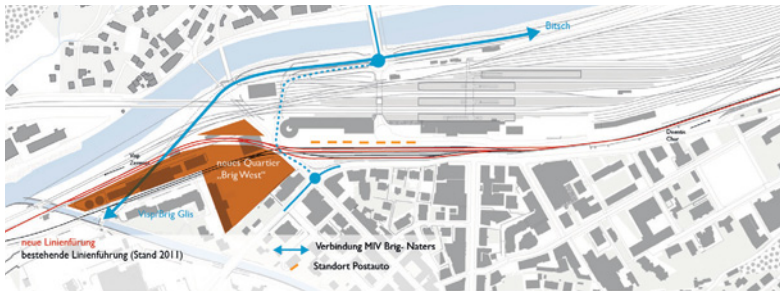


Figure 5: Two of the three concepts of the test planning teams that were crucial to the solution: Team Agps (left) and Team Berchtoldkrass space&options (right).

The recommended solution does not seem to differ much from today's situation: most of the traffic problems can be solved by relocating all the functions in the square a 'bit,' i.e. around 30 m. By doing so, the main conflicts between traffic participants can be resolved without large investments. In addition, the development of the new neighbourhood opens possibilities, so far unnoticed, for the city of Brig to develop its inner city (Fig. 5).

However, the most important outcome of the process was that all the actors involved saw the necessity and the advantage of working and acting together. They agreed unanimously to the proposed direction of development as well as to the foundation of a platform to advance the development strategy and formulate key parameters for further processes.

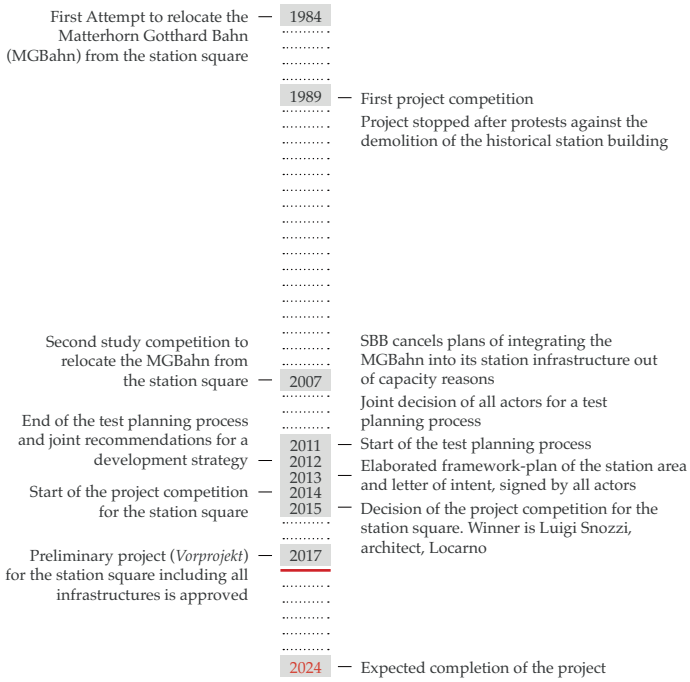


Figure 6: Project timeline.

Results and impact

In the following year, the Platform Development Station Area Brig-Naters refined and consolidated the development strategy in a stepwise process similar to the test planning. Part of this process was several commissions to test and develop certain elements of the concept. These works were accompanied by many discussions and divergences and some agreements had to be re-discussed. The planners involved had to find more arguments as to why some terms could not be fulfilled, which was finally very helpful in fostering ongoing political discussions. And, in December 2013, all actors unanimously signed a declaration of intent, including a detailed master plan.

This declaration of intent was the basis for the ongoing realisation phase, including the following architectural design competition for the Station Square. The competition did not need much preparation because the parameters, e.g., the exact position of the tracks, had already been set in the preceding planning process. With the selection of the project submitted by Luigi Snozzi (Fig. 7), the efforts of all actors and planners involved now have a 'face,' which will hopefully soon be visible on the square itself.

Figure 7: Winning design for the MGBahn station and Station Square.

In planning, involving all the actors really matters

The case of Brig shows how the opportunities for feasible solutions expand when planners manage to bring all the actors involved to the table. The solution agreed upon and pursued since then was only possible because everyone was open to 'moving' simultaneously. Furthermore willingness and trust in one another was fostered, if not actually enabled, by discussing the ongoing work of the planning teams and having the opportunity to criticise it during the process.

Additional information about the case

A comprehensive overview of the milestones, news and background of the planning process in Brig, as well as the current situation, can be found on the website of the RW Oberwallis AG (in German): https://www.rw-oberwallis.ch/projekte/bahnhofplanung-brig-naters/1.

The teams' contributions to the test planning process are published on their websites:

1. Team Agps, Zurich: agps.ch/testplanung_bahnhof_brig;
2. Team Berchtoldkrass space&options, Karlsruhe: www.berchtoldkrass.de/index.php?option=com_content&view=article&id=87:berchtold&catid=3:projekte&Itemid=4;
3. Walliser Architekten, Brig-Glis: www.walliser-architekten.ch/cms/staedtebau.

The follow-up urban design study for the new neighbourhood in Brig is published on the website of agps, Zurich: www.agps.ch/c2_1304_Studien_Brig-Glis. The report of the jury of the architectural design competition for the Station Square can be found at the website of the city of Brig (in German): www.brig-glis.ch/pdfs/20150607_Jurybericht_mit%20Plänen.pdf.

The case of Brig also served as a test for innovative adjustments to the test planning method in order to maximise the exchange of design knowledge between the planning teams, experts and local actors, and to support the process of collective learning. These adjustments were part of the author's PhD dissertation on spatial design: Nollert, Markus. "Spatial Design. Design as a core element in clarification processes of action-oriented planning – using the example of the regional scale (*Raumplanerisches Entwerfen: Entwerfen als Schlüsselelement von Klärungsprozessen der aktionsorientierten Planung – am Beispiel des regionalen Massstabs*)." PhD diss., ETH Zurich, 2013. The case of Brig can be found on pages 287–293.

Similar cases in this publication

Cases also focusing on the role of informal planning processes and various forms of collaboration related to local spatial problems are: 1) Park Spoor-Noord, Antwerp: A Marriage between Co-Production and Spatial Quality, and 2) Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre.

Topics relevant to this case

The nature of innovative procedures for solving complex spatial problems are presented in the following topics: 1) Linking Informal and Formal Responsibility, 2) Spatial Conflicts and Opportunities, 3) Puzzling: Making Plans Together Works, and 4) Anticipation: Going for Action.

We fail more often because we solve the wrong problem than because we get the wrong solution to the right problem.

Russell Ackoff

Germany

Area: 357,000 km²
Population: 82.6 million
Population density: 231 p/km²
Capital: Berlin

Stuttgart on the Neckar River in the state of Baden-Württemberg has 635,000 inhabitants. Stuttgart is a railway node for both long-distance and regional traffic with roughly 250,000 passengers and visitors per day.

Stuttgart 21:
Six Billion Euros for a Three-Minute Time Savings

Walter Schönwandt

Stuttgart 21 (S21) is an infrastructure project for the city of Stuttgart, Germany, comprising two main parts: the inner city urban design project and the railway project for a new organisation of the Stuttgart railway node. The core of the project is the reconstruction of the Stuttgart Main Railway Station. As proposed by the project, the current 17-track ground-level terminus will be transformed into an underground 8-track through station, covering the same area, but 90º rotated. As the access routes will run in tunnels, a large area on the surface becomes available for the development of an urban design project. The second subproject is the construction of a new high-speed railway route between Stuttgart and Ulm as part of the 'Magistrale for Europe,' connecting Paris and Budapest. The new railway station will function only when aligned to the new route, thus providing the room for viable alternatives, e.g., the construction of the new Stuttgart–Ulm route through a modernised, ground-level railway station. However, all other appropriate proposals still lie on the table.

Figure 1: Stuttgart 21 construction site.

Megaproject in the headwinds

Seldom has a construction project in Germany been so heavily and so long debated as Stuttgart 21 (Fig. 1). The project was presented to the public on April 18, 1994, construction began in February 2010, simultaneously with the weekly public protest events known as Monday Demonstrations, while the deadline for finalisation of all the works is foreseen for 2021. Not only the public, but also the politicians were resistant to the proposed project: at the laying of the cornerstone for the new station, three top politicians did not attend – the prime minister, Baden-Württemberg's transport minister, and the mayor of the city of Stuttgart, all the Green Party members. In the meantime, Stuttgart 21, together with the BER airport in Berlin, has become a synonym for bungled German planning (Fig. 2).

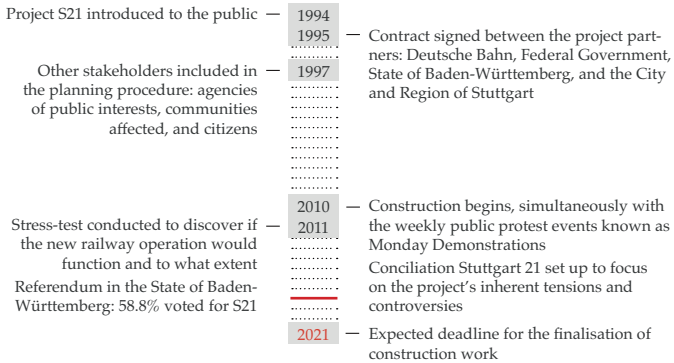


Figure 2: Project timeline.

Two planning mistakes hit the 'nerve' of the project

It is impossible to name the debates and arguments that have taken place related to the Stuttgart 21 project. Against this background, it might seem bold, or even foolhardy, to limit the list to a few planning mistakes, given the thousands of possibilities in such a huge project. However, two of them are noteworthy for two reasons: 1) these two mistakes hit the proverbial 'nerve' of the project and could even bring the entire project into question; and 2) they let the planning methodology show how the systematic testing and checking of the appropriate components of the planning approach (cf. the chapter *Planning Approaches or Nothing Comes from Nothing* in this book) could help to disclose such errors and avoid them in future projects.

Character of the problems and mistakes

‚Problems' and ‚mistakes' are socially constructed, not ‚objectively given.' Hence, it is necessary to disclose at this point what is meant by ‚mistakes.' In the case of S21, two criteria are important: 1) a project costs a lot more tax money than the taxpayers can expect as there are comprehensible and convincing reasons for its realisation; and 2) a project is planned and built in a way that it serves the specific functions that are needed. Following this line of thought, the two mistakes related to S21 are:

1. Since 1994, it has been unclear what problems should actually be solved by the construction of the station. In other words, there are no convincing arguments to support the idea that the project was needed at all.
2. Considering the performance potential offered by the underground station for the operation of integrated synchronised timetables, the new station would actually be worse than the old terminus.

The margin of error could have been considerably reduced for both these points if the planning method included test questions based on the components inherent to the planning approaches (cf. the chapter *Planning Approaches or Nothing Comes from Nothing* in this book) and had undergone a more specific scrutiny at the beginning of planning process, e.g., highlighting the following aspects: 1) What are the exact problems that constructing a new railway station should solve? ‚Problems' can be defined as deficits that currently exist or are expected in future; 2) What explicit or implicit process of assigning values underlies the suggested solutions to the problem? Are the value conflicts, forcibly connected through these processes of setting values, sufficiently reflected and adequately balanced? These two aspects lead to the most common planning errors, which will be elucidated next.

Planning Error A: Goals instead of problems

The beginning phase of the S21 project did not include a broadly applied and detailed discussion of the question: What are the problems that the construction of a new railway station in Stuttgart should solve? It should have been the task of the city planners to organise and lead a discourse as a means of gathering the most important information. Access to the topic of a new railway station in Stuttgart

took place accordingly, but it did not introduce the problems that led to this plan, instead it introduced the goals. This becomes clearer when looking at the chronological sequence of the main steps undertaken during the S21 project.

The S21 project may have strong reasons for the new station, however, there are also serious counterarguments:

Argument	Counterargument
The train from Stuttgart to Munich will be two to three minutes faster.	**This marginal time advantage does not justify the enormous cost of 6,526 billion euros, which may even reach 10 billion euros, as estimated by the German Federal Court of Auditors in 2016.**
Removal of the ground-level station will free the areas for the inner-city development (Fig. 3).	**Stuttgart's inner city already will not tolerate any additional density due to climate conditions.**
Stuttgart and the region will economically profit from the new station on the railway Paris-Budapest route.	**A modernised current railway terminus station would provide this advantage as well and, in fact, would be very much cheaper.**
In future, the Stuttgart airport will be directly connected to the high-speed railway route.	**This will only increase settlement pressure around the airport.**
The new underground railway station is about 30% more efficient than the old railway station.	**The technical analysis shows that the 8-track underground railway station cannot guarantee a smooth operation of a railway with an integral synchronised timetable when this timetable falls out of sequence because of late trains.**

Planning Error B:
A value conflict not carefully considered

Value conflicts often emerge openly in planning, sometimes, however, what is planned can only be read indirectly – which was the case in this point. The new station serves a specific function of the Deutsche Bahn, namely, to make profit. Another function of the company is its social mandate of transport, which, in contrast, will not be supported appropriately or adequately by this underground railway station, due to two main reasons. First, the new station is well suited to the operation of the Deutsche Bahn's 'Cash Cows,' i.e. mainly the high-speed ICE trains. The new station is, however, less suitable for operations with integrated synchronised timetables, where the goal is to serve the State of Baden-Württemberg in the same area with chronologically coordinated mobility offers. Moreover, the underground station does not have enough railway tracks, therefore the timetable would be completely disrupted if trains are late.

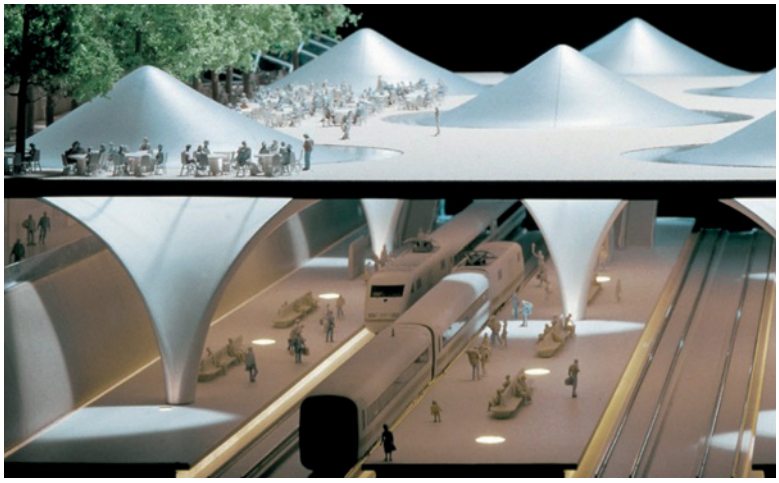


Figure 3: Underground station would open up the space for various activities on the ground-level.

Problem- and value-oriented planning matters

Since 1994, when Stuttgart started its plan to build a new underground railway station with a considerable price tag, opposition has grown, leading to conciliation committees, independent reports and government assessments. Despite all this, however, no one has been able to deliver a credible reason, i.e. one acceptable to a great majority of the citizens, that this new station is necessary. Most importantly: the new station's performance capability will actually be worse than the existing railway station. Among the most relevant reasons for this situation are the planning mistakes discussed here.

Additional information about this case

The list of the S21 disputed points under discussion is long. It covers conflict points from concerns about the destruction of flora and fauna, the threat to medicinal springs, ground water and drinking water, the disadvantages for the urban climate, the deficient protection of the population from harmful emissions, insufficient fire protection for railway station customers, and the technical defects or deficiencies that would hinder railway operations, e.g., in the underground station trains cannot change their travel direction because the required brake tests cannot be conducted based on a 'record track inclination' of 15,143 per thousand (six times above the desired value) without having the train roll away uncontrollably. Most importantly, the result of the constant cost increases has caused a state of insecure financing right up to today.

From the technical and railway operation point of view, several bodies, both private and governmental, conducted independent investigations, however, they had the same results:

1. The new station is less suitable for operations with integrated synchronised timetables, as, according to the stress-test managed in 2011 by the SMA, Zurich engineering office. See: Schlichtung S21. "Präsentation des Stresstests am 29.07 im Stuttgarter Rathaus [Presentation of the stress-test on July 29, at the Stuttgart City Hall]." Accessed September 1, 2017. www.schlichtung-s21.de/stresstest-21.html;
2. In 2013, it was confirmed that, in contrast to the existing station, the underground station does not have enough railway tracks. See: Baden-Württemberg Ministry for Transport and Infrastructure. *Stuttgart 21 – ein geplanter Kapazitätsrückbau? Zugzahlen, Leistungsfähigkeit, Bemessungsgrundlage von Stuttgart 21 [Stuttgart 21 – a planned capacity reduction? Train numbers, efficiency, assessment base of Stuttgart 21]*. Stuttgart: Baden-Württemberg Ministry for Transport and Infrastructure, 2013. Accessed September 1, 2017, https://vm.baden-wuerttemberg.de/fileadmin/redaktion/m-mvi/intern/Dateien/PDF/Stuttgart_21/Leistungsfaehigkeit_S21_Hintergrundpapier_MVI.pdf).

Of special importance, not only from a planning methods point of view, is the topic Conciliation Stuttgart 21. This is about a mediation process held under the direction of the former Federal Minister Dr. Heiner Geissler from October 20 to November 30, 2010. See: Schlichtung S21. "Protokolle und Materialien [Protocol and Materials]." Accessed September 1, 2017. www.schlichtung-s21.de/dokumente.html (user account required). For nine days, the many participants, ministers, executive committees, city mayor, city council, Green Party, the Federation for Nature and the Environment (BUND), and members of the Action Alliance sat at one table to discuss the project in an open dialogue 'at eye level.' These discussions were broadcast live to the entire nation on television and radio and then placed on the Internet so that each individual could (and can) follow and comprehend the process. The Internet page of the Conciliation includes a list of the participants, the verbatim minutes of the respective meetings, speeches, talks and presentations as well as the television recordings of the live broadcasts.

For news on the Stuttgart 21 in magazines, see:

1. Böll, Sven. "Verkehr: Dobrindt treibt der Bahn den Turbokapitalismus aus." *Spiegel Online*, July 26, 2016. www.spiegel.de/wirtschaft/soziales/deutsche-bahn-dobrindt-treibt-der-bahn-den-turbo-kapitalismus-aus-a-1104675.html;
2. Mäckler, Christoph. "Von Haus aus missglückt." *Frankfurter Allgemeine Zeitung*, September 1, 2016. www.faz.net/aktuell/feuilleton/kunst/im-wuergegriff-des-bebauungsplans-14414241.html;
3. Milankovic, Christian. "Gigantisch in jeder Hinsicht." *Stuttgarter Zeitung*, September 14, 2016. www.stuttgarter-zeitung.de/inhalt.grundsteinlegung-fuer-stuttgart-21-gigantisch-in-jeder-hinsicht.f9d2aa79-4d6d-4b1e-9a7f-8e1b047b86d1.html;
4. Soldt, Rüdiger. "Stuttgarts Elbphilharmonie." *Frankfurter Allgemeine Zeitung*, September 24, 2016;
5. *Wirtschafts Woche*. "Dobrindt soll Stuttgart 21 besser kontrollieren." September 15, 2016. www.wiwo.de/politik/deutschland/bundesrechnungshof-dobrindt-soll-stuttgart-21-besser-kontrollieren/14554194.html.

Similar cases in this publication

The following cases illustrate successful examples of the problem- and value-oriented planning approach: 1) A 'New' Danube for Vienna: An Innovative Multi-purpose Project, and 2) Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River.

Topics relevant to this case

The topic Planning Approaches or Nothing Comes from Nothing explains which components need to be taken into account in order to achieve a viable spatial solution. The importance of critical planning approach is explained in the topic Creative Criticism in Spatial Planning.

Fundamental Topics

Fundamental Planning Topics

Ana Perić, Charles Hoch

Uncertainty, interdependence and spatial planning

The uncertainties generated by global urbanisation may share many of the same causes, but the planning responses vary with location. The complex interactions for each place do not follow a predictable pattern. This happens mainly for two reasons. Firstly, different kinds of local actors and agents fragment the authority and effectiveness of spatial plans that might address and remedy this uncertainty. In addition, different planning cultures emerge vying for legitimacy and support. How might we conceive a kind of spatial planning resilient enough to meet these diverse cultural demands? Moreover, how can we still offer a coherent framework for inclusive spatial planning?

The cases briefly described in this book illustrate the diversity of planning cultures at play in Europe and the US. While clever adaptability to local conditions should accompany any local planning effort, the conceptual framework used to interpret the planning for these cases draws on a common set of principles: holistic and inclusive. The first part sets the scene where, in each instance, global and local meet. Part two explores how professionals, together with developers, authorities, clients and citizens craft the future making plans together. The third part describes how planning actors and stakeholders play with each other as they struggle to cope with complexity. The final part focuses on how spatial planning can and should anticipate action and its effects experimenting each step of the journey.

Setting the scene

Spatial planning starts with a careful assessment of the problem situation that combines professional and experiential knowledge. This *planning approach* adopts technical expertise and disciplinary knowledge to help compose plausible accounts of the problem situation. But, complexity requires that the approach also considers the demands and voices of those touched by spatial problems. The combination of expertise and experience helps plan makers and users actively set their intentions for the future that will offer practical responses. Professional expertise without the input of experienced

collaborators cannot anticipate and prepare for unknown level of complexity or uncertainty.

Professional advice can inject expertise into local settings that include conflicting interests, unexpected challenges and changing rules. From experience, planners understand how different values and power relations create *conflicts*, but also how unexpected *opportunities* may emerge as remedies. *Regimes*, e.g. procedures, routines, and conventions, and *budgets*, e.g. time, money, expertise, etc. set limits even as they offer opportunities for innovation and experimentation. Professionals can also learn from one another the art of practical judgement needed to balance expertise and cultural savvy. This includes learning to identify and tap familiar, but often overlooked, *maxims* that people have developed to cope with different kinds of uncertainty. It also means learning to recognise and avoid familiar *traps*. Good spatial planning is not a process to follow, it's a practice that you adapt to changing situations.

Crafting the future

The way of creating various planning options intended to anticipate future change is the focus of this section. Composing spatial plans draws upon the imaginative powers of many different agents and actors. Mapping out provisional responses to complex spatial problems includes technically informed judgements about design dimensions. However, practical concerns about prior routines, new possibilities, budget limits and deadlines cannot be neglected. *Puzzling* these out together – or thinking hard about spatial problems in order to understand them – can yield meaningful options that resolve spatial problems and inspire confidence in meeting joint expectations for the future. Through many iterations, the professional mediates the search for both technical fit and social relevance.

Creative insight does not flow from detached expertise or analytic precision. The intention of critical argumentation is to challenge idealistic, one-dimensional, single-minded or single interest proposals. This can help pave the way for compromise and reconciliation. The strength of the ensuing plan does not arise from purity of purpose, but through feasibility of intention distilled from rounds of *criticism* that combine technical and political reviews. Finally, the good plan provides useful advice for making difficult decisions about complex locations. It is perhaps best described as *commedia dell'arte* – intelligent improvisation for strategic decisions.

Inter-acting with others

Spatial planning takes play seriously. The many institutional rules and political actions that shape urban development influence the nature of planning. Planning for the future is a kind of game. In simple cases game follows familiar rules and conventions. But most spatial planning responds to complex cases where rules do not cohere, interests conflict and misunderstanding is common. This section integrates diverse viewpoints and methods that foster resilient playfulness by imagining what options to take.

Appeals to rational procedure do not work, but efforts to stimulate and inform *discourse* and debate among stakeholders holds promise. Professional work includes not only research, analysis and expert testimony, but also negotiation, mediation and facilitation among sponsors, clients and citizens. Objectivity flows not from detached rationality but engaged deliberations that mix technical and moral judgement. The professional *leads* through strategic *reflection*, active listening and critical comparison. This can reduce unnecessary differences while uncovering shared interests and new possibilites that are tied to stakeholder relationships and experience.

This concept of spatial planning practice remains a work in progress. Old institutional expectations resist such engaged deliberations. But the complexity of emerging spatial problems is inundating conventional planning efforts. A *participatory* planning practice needs to be introduced and promoted. New institutional designs show how even modest changes in institutional incentives can yield better plan results without displacing conventional norms. The goal is clear: a more useful and successful spatial planning 'game.' For the places where experimentation puts spatial planning collaboration to practical use, innovation happens at the intersection of *formal* and *informal* institutional practice.

… and action!

Plans can offer provisional advice for acting in messy situations. They do not predict, but improve successful adaptation in changing situations. Spatial planning cannot and should not offer predictability. Spatial plans cannot help their sponsors, clients and stakeholders escape the consequences of modern complex urbanisation. We cannot escape uncertainty and therefore we must develop ways to better prepare and cope with different conditions and practices that

contribute most seriously to social and public risk. This means that spatial planning anticipates and inspires responsible collaborative action even when knowledge remains incomplete and the consequences are not fully revealed. Spatial plans inform intentions that can and will change in response to shifting conditions and needs. Planning for unexpected change prepares people making adaptability to uncertainty less difficult.

Our urban future

Professional planning cannot by itself make these ambitious hopes a reality. Social, economic and environmental interdependence continues to increase, even as citizens in many places seek to embrace provincial and communal tribalism. Proponents of spatial planning work against the anxiety and fear – they strive to find and build possible common bonds across the many different interacting institutions, technologies and people. People, however, cannot retreat from the vast networks that bind them together without creating enormous suffering, for themselves and for those close to them. Therefore, planning professionals work hard to make this possibility appear less attractive. They devise spatial plans that show how to reconcile local and global differences to make better, if not perfect, places.

Topics:
Setting the Scene

Planning Approaches or Nothing Comes from Nothing

Walter Schönwandt

Planning has usually been conceived as an activity where planners ought to act from a 'value-free', 'neutral', 'unprejudiced' or 'objective' perspective. Nevertheless, since planning processes are deeply embedded into specific planning contexts, impartial and independent positions of planners may be compromised. However, our concern here is how the contexts and not how the planners respond. In other words, the focus here is on planners and their way of thinking. A planning approach, basically defined as the conceptual standpoint of a planner, includes the values, perceptions, knowledge and skills that constitute his/her intellectual and professional outlook. In planning practice, there are numerous understandings of the term 'planning approach;' planning can, for example, be understood as urban design, land-use management, social practice, landscape ecology, traffic management, etc. What is common to all these is that planning is never neutral or an activity that can be taken for granted.

Why are planning approaches important?

The descriptons of planning problems and planning tasks are not value-free or neutral, but, what aspects must be considered to get the core of the addressed issues? The notion of a planning approach seems a reasonable option. Briefly put, planning approaches are basic paradigmatic thought-patterns.[1] Much like eyeglasses or lenses, they determine the way planners view the world.[2] These eyeglasses or lenses influence, consciously or unconsciously, their thinking, their communicative and practical actions, and the logic of their actions.

What constitutes a planning approach?

A planning approach has a core of five components:[3]

a. specific problems (more precisely: the view of the problems);
b. goals;
c. methods, derived from specific

d. discipline-specific knowledge, and a certain
e. trans-disciplinary knowledge, which can be further subdivided into:
   - ontology, i.e. the knowledge of what the world consists of and what operates within it;
   - epistemology, i.e. the knowledge of how and of what we can be aware, and how we acquire knowledge;
   - ethics, i.e. the knowledge of how to treat moral issues correctly when values come into conflict.

These five components only occur in combination and are correspondingly interdependent on one another.[4]

The nature of planning approaches

Each planning approach has a specific content that is only appropriate for working out certain kinds of problems – it is not appropriate for other kinds of problems. It is essential to recognise that the planning approach being used is not based on the 'nature of the matter' and therefore also does not derive from the assumed 'nature of the planning task.' Correspondingly, in planning, one can always choose between various planning approaches and change the approach as well.[5]

Planning, therefore, depends on exploring those approaches with room to manoeuvre that are coupled with different planning approaches, and to use them to solve a problem. Which planning approach the planner selects, however, is mostly determined by his/her profession, i.e. through the body of thought, including the knowledge and beliefs of his/her professional community. However, as each planning approach only has a limited number of problem definitions, goal determinations, and number of solutions, this unavoidably leads to a 'narrowing of the field of vision and action.'[6] As a rule, spatial planners only arrive at their types of (i.e. spatial) solutions; economists mostly at economic solutions; sociologists mostly at sociological solutions, etc., depending on their respective value systems, knowledge, and skills. They often fail to notice or perhaps disregard the perspectives and methods of other disciplines, and the possible perspectives and solutions they could bring. One such narrowing of thought can be observed again and again: for example, some planners begin with certain goals, which then dominate all other considerations in the subsequent process, such as the goal of 'no matter what we do, the project must have financially amortised within five years.' Some begin with a very specific ethical

position that determines all further approaches, for example: 'nature stands above all other considerations, it must be preserved as it is at this time.' Some react preferentially, falling back on the state of knowledge in their own profession and without examining whether another knowledge base would be more suitable. Some spatial planners use the theory of central location or the method of cost-benefit analysis because someone in their profession 'always did it this way,' without considering whether their chosen starting point will solve the problems at hand or not. The list of examples continues unabated.

This may result in the situation that some of the components are overemphasised, i.e. taken as goals, while the importance of others is underestimated or even completely ignored. Keeping this in mind, planning should be understood as a multi- and interdisciplinary activity. Moreover, by taking into account a broader contextual perspective, planners should be able to act in multi-sector environments, too.[7]

Planning approaches matter!

A change in approach almost always affects the underlying understanding of planning as well as the measures suggested by planners. In the framework of a planning process, it is important to include various kinds of tested planning approaches in the deliberations in order to use the solution's scope, which could link to various planning approaches. Furthermore, this would make it easier to understand, moderate and integrate the viewpoints (read: planning approaches) of other participants and parties involved in the planning process. However, the selected approaches should always lead towards fundamental socio-spatial goals, such as: respect and care for natural values, better living conditions, spatial and social justice, spatial efficiency, functionality, quality, and beauty. This highlights the initial premise that planning approaches are never neutral or value-free.

Cases relevant for the topic

The topic about planning approaches and how they work (or not) in planning practice is illustrated in the cases:

1. Stuttgart 21: Six Billion Euros for a Three-Minute Time Savings
2. Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning
3. Swiss Water Stories

Spatial Conflicts and Opportunities

Bernd Scholl, Charles Hoch

Urban environments include spatial conflicts because spatial interactions can disrupt familiar routes, exploit prime locations, waste scarce resources or pollute waterways. Spatial conflicts are often launched into physical visibility because actors have quite different interests in that scarce resource: land. However, most spatial conflicts exist well before they become recognisable because these important actors have different interests in the uses of land. Spatial conflicts may pose a threat to their own plans, making discussions about 'place' difficult. Conflicts can smoulder as people conceal attachments to a location or space that then erupt when others propose changes. Many of these conflicts can be anticipated and even resolved before this point is reached. This is the central task of spatial planning. Spatial planners should not avoid conflicts, but instead learn how to understand the differences that each conflict uncovers. This expertise does not displace or replace public deliberation among residents, rather it informs the active identification of relevant problems and conflicting interpretations as well as plausible choices and opportunities for compromise and innovation.

Meaning and importance of conflicts

Derived from the Latin *conflictus*, meaning collision or fight, spatial conflict denotes the clash of opposing interests for space. Schiller captures the limits of space in his Trilogy about Wallenstein: "with ease by one another dwell the thoughts, and rudely clash the things in space together."[1] Conflicts do not automatically have negative content; where spatial conflicts exist, spatial opportunities for change also exist. Behind the conflicts are often countless unsolved problems, along with their history, making it essential to pay attention to them in order to coordinate spatially relevant activities in a new plan.

Beliefs

Cognitive and political obstacles may frustrate such deliberation. People often possess convictions and biases that discourage active inquiry about a spatial conflict. When confronted with uncertainty and conflict, people may tighten their grip on familiar beliefs even when these contribute to the problem.[2] Many unfortunate historical instances of this, past and present, exist as well as the 'unfortunate' outcomes. Spatial planning attempts to provide ways that can circumvent such situations and bring all the participants to the table to find mutual understanding (but not necessarily agreement) for the others' positions, thus enabling an open discussion and possible solutions from a new direction, as is demonstrated in this book by the cases of Vienna, Antwerp and Milan. Plans provide a framework for assessing the imagined effects of competing political positions tied to specific place-related proposals.

Interests

People, organisations and institutions possess interests that shape how they behave in relation to each other. The possession and use of land, buildings and the infrastructures that bind these together within and among places, includes a multitude of interests. In capitalistic societies, economic interests play a prominent role as legal claims protect and privilege private interests in the control of land. The conflicts between public and private interests mark familiar territory for spatial planning. For instance, the spatial coordination of large infrastructural projects, such as airports, transportation routes, hospitals, schools, and the transformation of existing settlement areas pose conflicts among private and public interests in the ownership of land, its possession and use as well as the many ensuing interactions that occur as people live, work and travel within and between places.[3]

Spatial planning: A tool for coping with conflicts of interest and belief

Unlike forms of planning that impose a singular direction authorised by administrative directives or legislative ruling, spatial planning relies upon information gained from deliberations from the relevant stakeholders responsible for the spatial conflict.

Spatial planning utilises expertise that can identify the problem, including both causal attributes of the spatial relationship as well as the contested interests and beliefs about the meaning, possession and use of the place under consideration. Doing this well requires the mobilisation of two or more collaborative planning teams composed of a facilitator, planning experts, public officials responsible for the living space and, most importantly, those actors whose interests and beliefs ensure inclusion of all the relevant conflicts for the place.

Conflicts and opportunities matter!

Spatial conflicts are indicators for both the opportunities and hazards of future spatial development. When opportunities are grasped, then new prospects can open up through innovative forms of cooperation, for example, in the cases of Vienna and Frankfurt where it led to integrated solutions. Risks and hazards for spatial development mostly emerge when conflicts are recognised too late, ignored, delayed or completely suppressed. Spatial conflicts are thus a never-failing source of tasks to be solved and thereby open opportunities for collaborative learning.

Cases relevant for the topic

The following cases illustrate effective management of spatial conflicts, thus producing new developmental opportunities:

1. How 'Moving Simultaneously' Opened New Possibilities for Solving a Muddled Situation: The Case of Brig, Switzerland
2. A 'New' Danube for Vienna: An Innovative Multi-purpose Project
3. Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River
4. The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland
5. Swiss Water Stories

Sylvia's Mother: About Regimes and Budgets

Rolf Signer

"And the operator says forty cents more, for the next three minutes …" This is a song about love, but also about budgets and regimes.[1] The poor guy in this song of the 1970s enters the phone box with some coins (his budget), whereas the operator reminds him regularly to feed the slots (the regime). Easy to imagine what happens, when the coins do not fit the slots or the money peters out. This is an example of an interplay between budgets and regimes, there are a lot more, in everyday life and concerning spatial development. One of them concerns everyday working life. Companies have certain rules concerning the office hours of their employees – a regime. Employees, on the other hand, are willing to spend some time to commute from their homes to the workplace – this is a budget, which may vary from person to person, but as an overall observation over time it has remained quite constant. So, if a person's travel-time-budget is violated, he or she will change the place to live or work. This has a great impact on spatial development. Besides money and time, other types of budgets concern tools and skills.

Why regimes and budgets?

In an action-oriented planning approach, we can find several modes of intervention.[2] We can distinguish provision of space (such as zoning or securing transport corridors), the construction and maintenance of facilities (such as houses or pipelines), the adjustment of organisations operating in or with facilities (such as households or companies), and last but not least, interventions which try to influence the behaviour[3] of actors in space (such as speed-limits on roads). Successful interventions rely in most of the cases on a certain mix of these modes. In the last mode, regimes and budgets play an important role, because any human activity in time and space can be seen as the use of the budgets within the framework of the regimes.[4]

People move around

People move around, stay at some places, perform activities, and move around again. We may call their paths trajectories (*Flugbahnen*). These trajectories are by no means a product of chance; they have to been seen within a certain framework. The Swedish geographer and Professor at Lund university Torsten Hägerstrand introduced his so-called space-time model in the 1970s.[5]

Hägerstrand's time geography

In this model, each person's life is perceived as a sequence of activities in time and space. "They [the activities] have to be carried out within a given duration, at given times and places, and in conjunction with given groups of other individuals and pieces of equipment. They may have to be lined up in non-permutable sequences."[6] These sequences, however, depend upon certain restraints. According to Hägerstrand, there are capability restraints, coupling restraints and authority restraints. He illustrated this in a most vivid way (see Figures 1 to 4).

Figures 1 to 4 show a simplified map with the traffic system and some locations:

3 residences for persons A, B and C, one meeting point (MP, such as, e.g. a company headquarters, a school, or a restaurant, and a doctor's practice [Doc]).

The straight red lines denote the paths (or trajectories) of the three persons between 4:00 a.m. and 8:00 p.m.

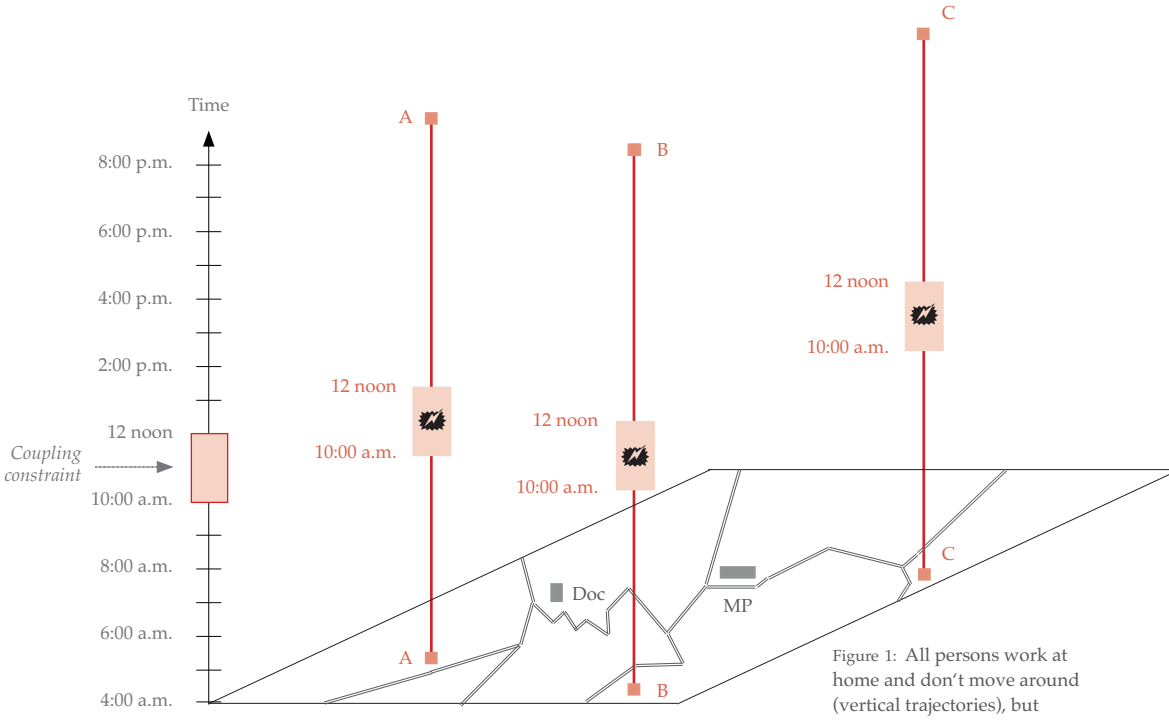


Figure 1: All persons work at home and don't move around (vertical trajectories), but there is a coupling constraint: The persons agreed upon a conference call between 10:00 a.m. and 12 noon. (red area).

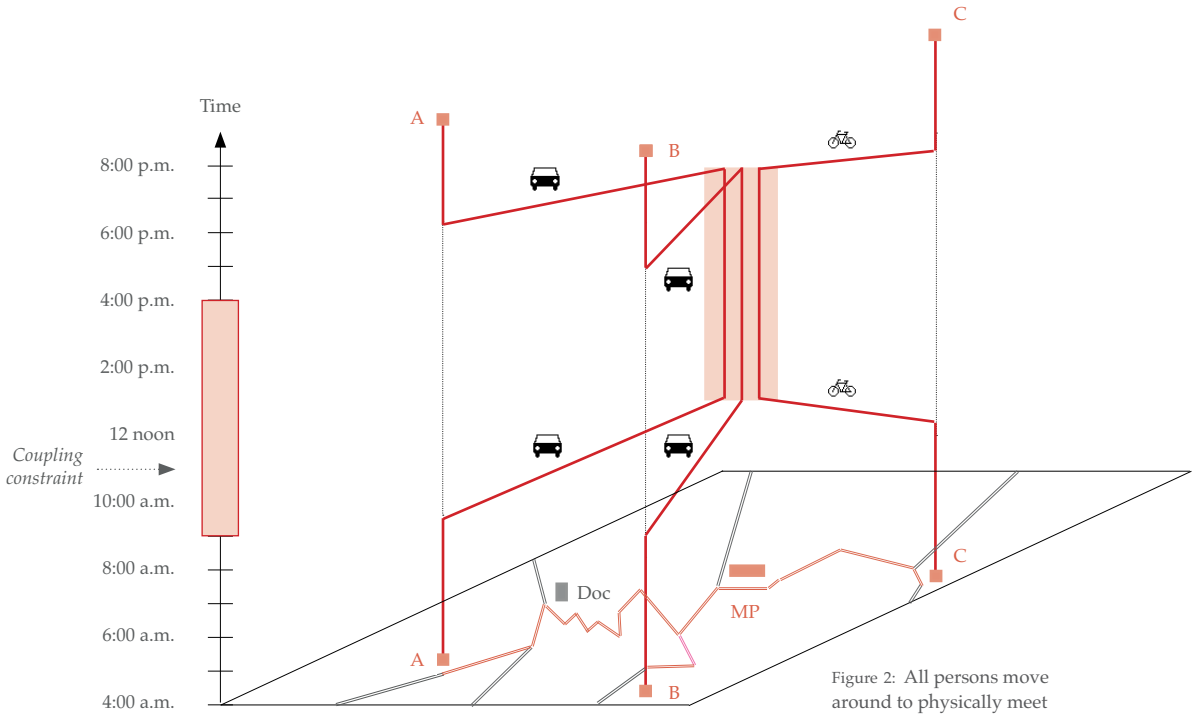


Figure 2: All persons move around to physically meet between 9:00 a.m. and 4:00 p.m., i.e. a coupling constraint. A and B each have a car available, and C has an e-bike, a capability constraint. The people move around on three different paths (straight lines).

Two sides of a coin: Restrictions and possibilities

The other side of the coin called restrictions, however, is the realm of possibilities. Within the framework of restrictions, individuals can perform different sequences of activities in space and time. The realm of possibilities goes beyond the past, present and future facts, it is "that which is not prevented from happening by anything, even if it does not happen."[7]

Repertoire of activities: The possibilities

The sum of all activities a person can carry out is called the repertoire of activities. It is determined by all formal and informal rules of the society (e.g., entrance fees, costs of travelling, judicial or political regulations)[8] to be found in the first type of regime – information (Figures 1 to 4 display some possible patterns of activities in space and time of three different persons).

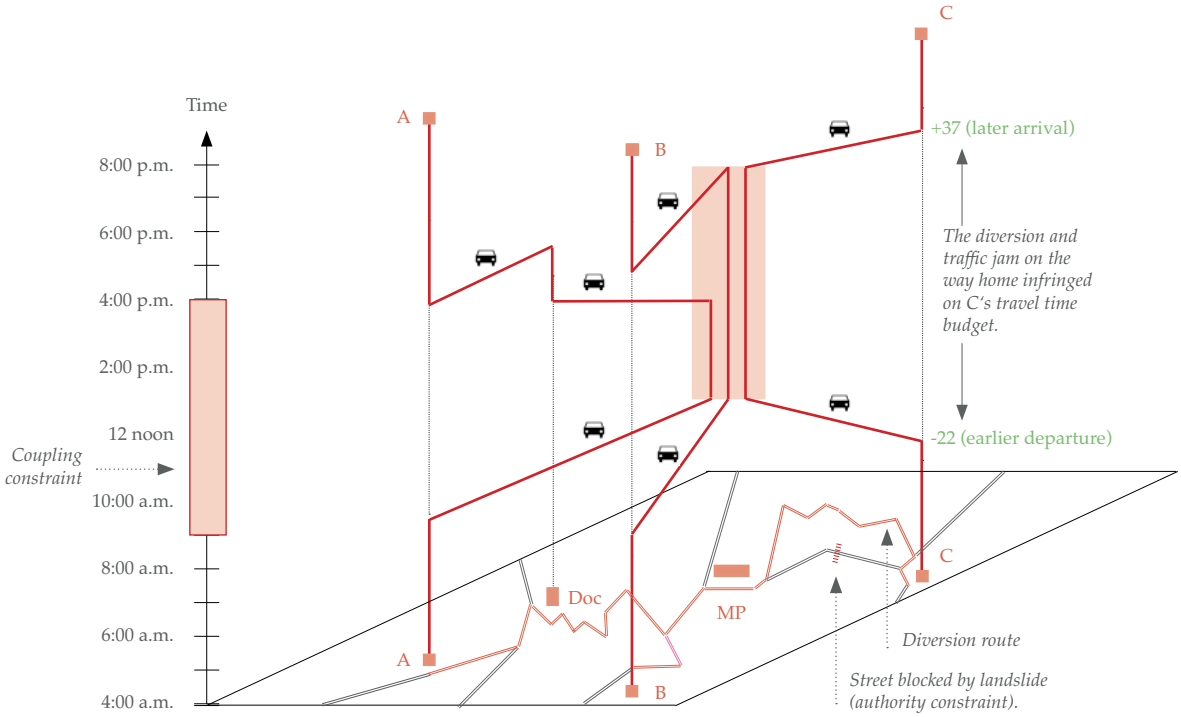


Figure 3: All persons move around to physically meet between 9:00 a.m. and 4:00 p.m. (coupling constraint). Unfortunately, person B has to leave early to see a doctor. Due to a blocked street (authority constraint), C has to rent a car and use a diversion route. The green figures denote the time difference for C compared to the e-bike trip in Fig. 2 (earlier departure and later arrival); his time budget is again disrupted.

Programme of activity: The realised possibilities

The programme of activity is a subset of the above-mentioned repertoire. It is the realised sequence or chronology of the activities of a person. The programme is both spatially and temporarily constrained. Besides natural constraints, such as the seasons or day and night, climate and weather, there are social restrictions which affect the individuals' behaviour, especially the use of time.[9] According to Heidemann, this second regime type is called life circumstances.[10]

Pattern of activity

The above-mentioned sequence of activities follows certain spaces or locations, describing a certain pattern. The kind of activities that can be carried out, depends upon the opportunities a location offers. These opportunities are not evenly distributed, often as a result of spatial planning (e.g., railway stations, post offices, telephone booths, shopping malls). This spatial distribution is a third regime called locations.[11]

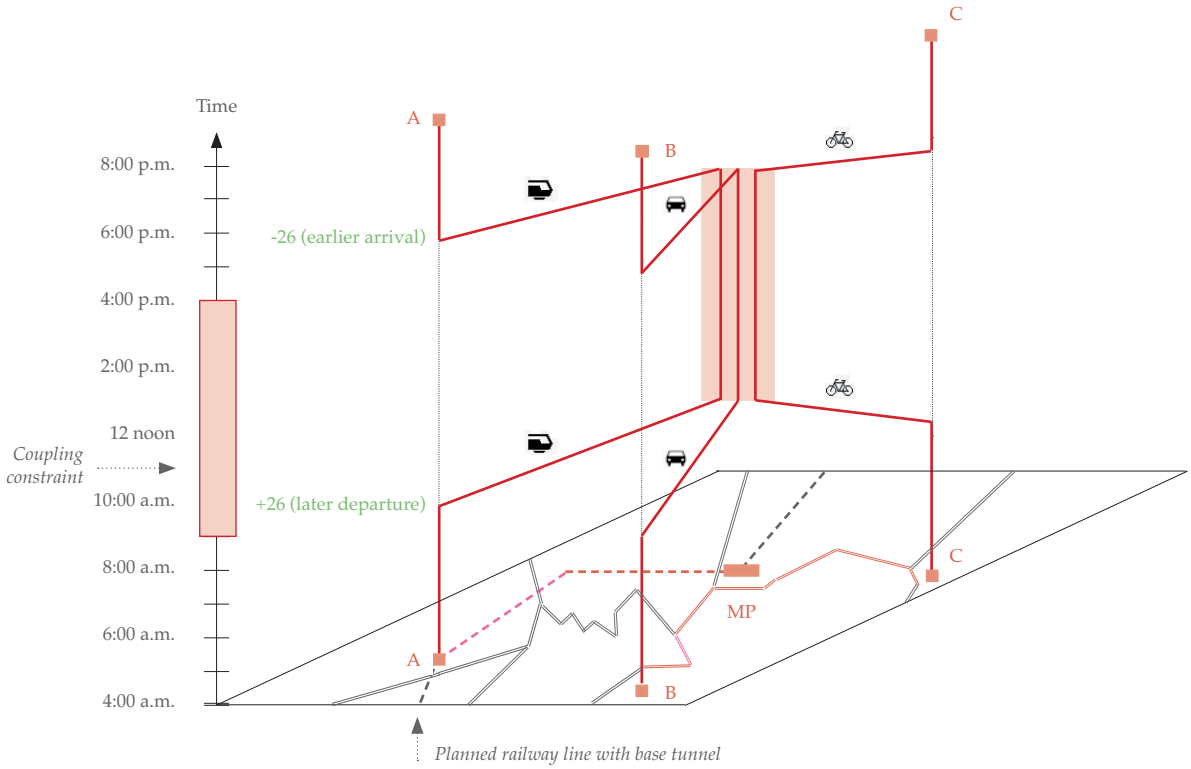


Figure 4: All persons move around to physically meet between 9:00 a.m. and 4:00 p.m. (coupling constraint). This figure shows the path for person A when the new railway link is realised. Again, the green figures denote the time difference for A (later departure and earlier arrival) which relieves the travel time budget of A.

Budgets

The first type of budget concerns time. It is the part of the lifetime a person can spend.[12] "Time is an important factor, as it cannot be reversed, not produced, stored or saved – although 'saving time' is always an important issue for everyone."[13] The second type of budgets is about tools in a large variety such as equipment to perform activities (e.g., pencils, computer, mobile phones, bicycles, cars, trains, etc.). Money also belongs to this type as well as property rights or building permissions,[14] for example. The third type of budget addresses the skills of a person, i.e. knowledge, experience, abilities and the know-how.[15] Through the regime of information, these skills can be changed (without guarantee of success, however), e.g., through instruction, education, indoctrination, drill, etc.

Regimes and budgets matter!

Any human activity in time and space can be seen as the use of the budgets within the framework of the regimes. The pretty old-fashioned example in the introductory text (telephone box, coins!) may serve as an example of an interplay between regimes and budgets, but also of the temporary nature of such phenomena, or, in the words of an action-oriented planner, of the realm of real possibilities. Spatial planning has the task to influence the regimes in order to facilitate certain activities and to prevent others.

Traps and Maxims

Rolf Signer

Sometimes we cannot recover quickly from the mistakes we make. If even some of the concrete for a new road is already poured, it will not be easy to change the route. Choosing to spend all my savings on the new building means I will not have funds later to purchase a garden or extension. Spatial plans help us anticipate and avoid familiar habits of thought and decision-making that create unsuspecting traps which in turn lead to damaging consequences. In this case, the trap is: Owning your own place place makes it seem more valuable than market demand and we dismiss other good offers. The maxim is: Compare the value for similar properties! Avoid this trap. Proverbs provide commonplace examples of maxims developed over the long haul.The trap: I will invest all my savings in this one attractive project! The proverb: Do not put all your eggs in one basket. Recognising the pervasive reality of these kinds of traps is of great importance. Therefore, it is advisable to know some maxims that may avoid these blunders. Professional spatial plans have used their knowledge to develop useful maxims for the location and development of complex collective projects. People need to be able to rely on the results, but what if, despite the 'best' ideas, some of those effects turn out to be negative and irreversible, indivisible, interdependent or uncertain. Maxims provide short quick reminders to keep planners on their toes.

Why traps and maxims?

In an action-oriented planning approach, an important task is to discover the reasons why the results of proposed courses of action may not lead to the the desired result, and possibly to failure. During the development and elaboration of these actions and plans, traps are all around us. We will now present some of these traps and propose some maxims or precautionary measures that can help avoid these pitfalls and improve the action proposals.[1]

The trap: Analyse, analyse, analyse.
The maxim: Problems first!

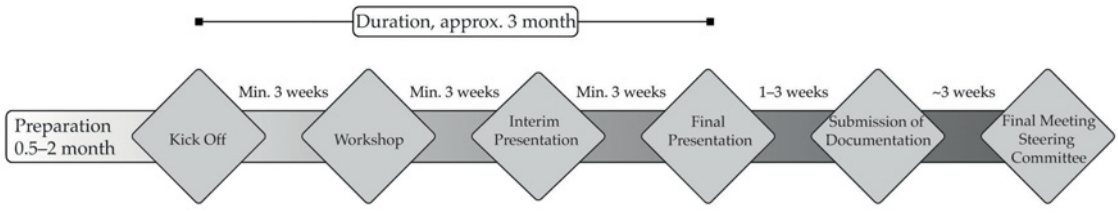
There is no way around it: If you face a problem situation, you need some analysis. You want to know, for example, what kind of people and how many are affected by a given problem and perhaps its solution. However, your resources, usually time and money, are limited. A quick analysis of the situation is enough to give you an overview and allows you to try to solve the problem by yourself. By testing and examining your thoughts, you may find out that your first formulation of the problem has to be revised and your ideas about how to solve it may change, as does the need for information. This leads to a series of trial and error projections until you are satisfied with the proposals. This problem orientation is then the framework for further explanations.[2]

The trap: Hidden gaps.
The maxim: Provide a competition of ideas, work in several cycles and mix codes!

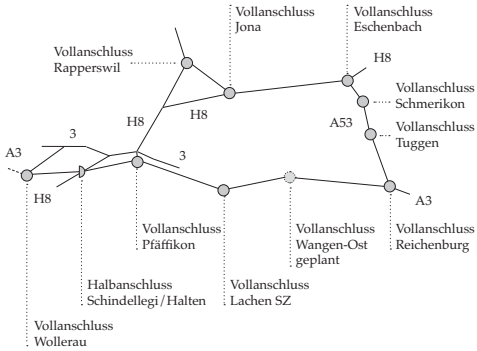
Planners have to elaborate courses of action in order to solve or avoid spatial problems. Since most of the problems in spatial planning are complex, existing physical or societal laws are usually not sufficient, so chances are high that something important could be missed. 'Important' means that a new piece of information has the potential to lead to a different choice of actions.[3] It's easy to stipulate the maxim "Don't forget anything of importance," though it may not be so easy to fulfill it.[4] There are, however, helpful precautionary measures.

- Look for competition opportunities in the planning process. Experts with different perspectives improve the possibility of covering the realm of possible actions, circumstances and effects; avoiding gaps; and detecting misunderstandings and contradictions.

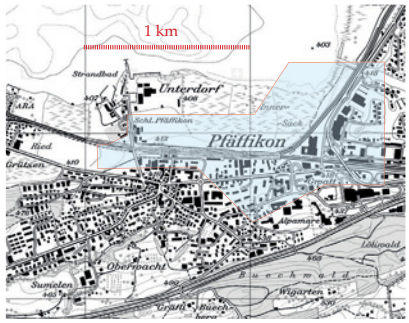
Figure 1: Organisation of a simultaneous process in three cycles. (See Fig. 5 in A 'New' Danube for Vienna)



· Organise the process as a series of three cycles (Fig. 1). Define the resources of the third cycle as a reserve of time and money. Improve your plan step by step, adding accompanying measures (*Flankierende Massnahmen*) or preparing measures to apply in case the results are not useful (*Korrekturdispositiv*), i.e. looking at decisions as a sequence. [5] The three-cycle design is based on the realistic assumption that several approaches with different thematic priorities are needed to arrive at a broader range of possible solutions and to detect gaps and misunderstandings more easily. [6]



A: Observation perimeter



B: Working perimeter

C: Important detail in the working perimeter

Figure 2: A: Principle sketch of the regional road system; B: Working perimeter (blue area); C: Important roundabout in the working perimeter. Examples from the test-planning process, "Testplanung für den Raum Pfäffikon-Ost und Bahnhof."

· Work in different scales (Fig. 2); this allows switching between a more strategic level and the particular details of your proposal.

· Use text, numbers and pictures to elaborate and communicate your ideas and arguments. These cultural techniques have their specific qualities. Present the results in different ways, e.g., maps, principle sketches, organisational charts, graphic schedules overviews, etc. This also helps you to recognise where contradictions appear and where gaps still exist.[7] Figure 3 is a diagrammatic demonstration using three different pictorial course plans of trains in the Gotthard base railway tunnel in Switzerland (opened 2016), and is an example of the operativity of diagrams.

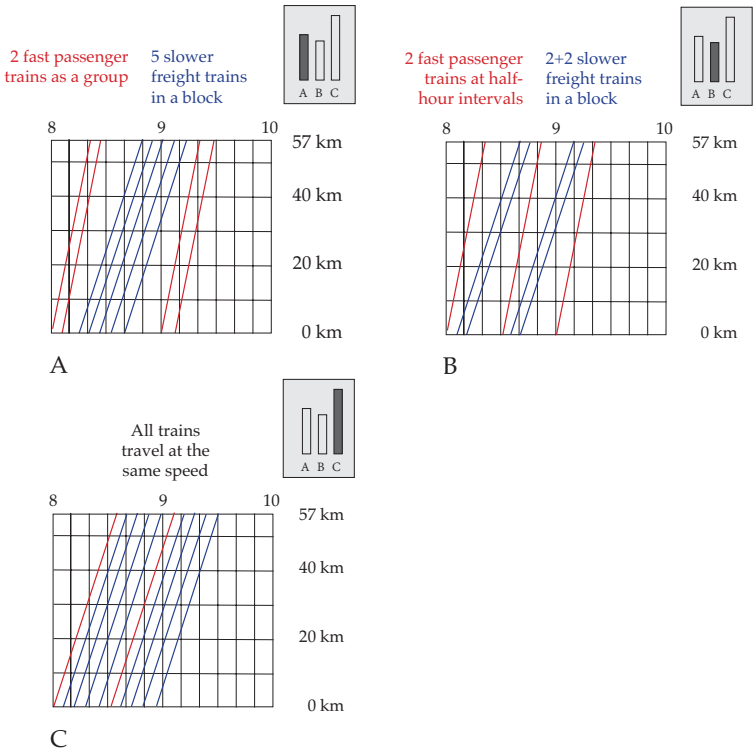


Figure 3: The X-coordinates denote example hours from 8 to 10. The ordinals denote the distance of the tunnel (0 to 57 km). Fast passenger trains are in red, slower freight trains in blue.

Part A shows a group of two fast passenger trains and five slower freight trains in a block passing the tunnel in one direction. The capacity of the tunnel is seven trains an hour (see small bar chart).

In part B two fast passenger trains run at half hour intervals and two freight trains running in the intervening intervals. The capacity drops from seven to six trains per hour and direction.

In part C all of the trains travel at the same speed as the freight trains. Now the capacity is ten trains per hour and direction.

The simultaneity of a diagram allows one to «see» the trains running, and understand the consequence of timetables with different train speeds.

© See Notes 6,7 in the notes chapter

The trap: Spurious accuracy. Consider the maxim of economic investigation![8]

Proposing actions for solving or avoiding problems needs explanations as to why they are appropriate and others are not. One has to explain the expected results of the actions and the risks, among other arguments. This is quite a bit of work, since the results not only depend on the proposed actions, but also on the circumstances, i.e. situational conditions (*Gegebenheiten*) and occurrences (*Begebenheiten*) the actor cannot influence.

It is wise to avoid the impression of certainty and to limit the use of resources such as time, money and brainpower.[9] In addition, it is important to look for robust decisions, i.e. decisions that are not based on the spurious accuracy of the justifying arguments. Good says: "The art of being correct lies in making the weakest possible statements."[10]

The trap: Possibilities with low probabilities are neglected.
The maxim: Possibilities first, probabilities later.

The systematic consideration of circumstances is critical in spatial planning. It is about what might happen, i.e. about possibilities.[11] The trap is to neglect possibilities with a low probability; we tend not to take them into serious consideration, although they might lead to major problems later. That's why dealing with possible circumstances that – regardless of their probability of occurrence – might lead to damaging consequences is one of the most challenging tasks. This is not a pessimistic attitude because it makes it easier to be prepared in case an option fails. The Swiss writer Friedrich Dürrenmatt (1961) goes along with this idea: "If you start out with a story you must think it to its conclusion. (…) A story has been thought to its conclusion when it has taken its worst possible turn." This is part of Dürrenmatt's *21 Points to the Physicists*, and the play *The Physicists* itself is considered a comedy.[12]

Maxims can save the day!

Planners face pitfalls everywhere, but according to Jakob Maurer: "Someone who knows about maxims and doesn't need them is better off than someone who needs them and doesn't know them."[13] Maxims provide precautionary measures to avoid typical traps and help improve your plans – although they cannot guarantee success.

Cases relevant for the topic

Cases illustrating typical planning traps and possible ways of avoiding them are:

1. The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan
2. Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River
3. A 'New' Danube for Vienna: An Innovative Multi-purpose Project

Topics:
Crafting the Future

Puzzling: Making Plans Together Works

Markus Nollert, Anita Grams, Charles Hoch

Do you know that magic moment when, after trying to fit pieces of a puzzle together, you begin to see how each of them combine to form the big picture? At the outset, you have no idea where to start. You try to force pieces to join that do not fit. Sometimes a missing piece distracts you from seeing how two nearby fragments align. Making plans sometimes feels like assembling a puzzle.[1] When viewed from this position, planning taps into the puzzle's complexity to uncover hidden interactions that accompany future actions and their imagined effects. Different stakeholders' goals and assumptions may align themselves as the joint creation and testing of diverse options leads each stakeholder to stretch goals and shift boundaries, and thereby make new puzzles that are conducive to practical solutions.

Planning as puzzling

For some sites, making spatial plans for places can work like tabletop puzzles made to test our spatial wit. Solving a puzzle takes time and concentration. The image printed on the box cover provides visual cues to the bits printed on each piece and are used for comparing, clustering, and fitting pieces in an incremental manner. Sometimes one struggles alone and at other times one welcomes the assistance of others. Completion brings a welcome mix of feelings: a sense of accomplishment, satisfaction and even relief (Fig. 1).

Figure 1: Spatial planners learn to find connections among hidden relationships.

Why is this so? Siuations or locations are composed of many physical objects and layers of spatial relationships laid down by human settlement. Although each of us learn to travel through places and use select objects and relationships, seldom do we stop and consider the entire set of parts and relationships all at once. But sometimes trouble emerges as familiar patterns break down and a site becomes a problem for land owners, commuters, residents and more. The familiar functional order breaks apart into disconnected pieces. Temporary fixes fail. A more encompassing plan needs to be made that will fit the parts together into a working whole.

Planners who 'play' simultaneously across multiple practical domains learn to be good puzzlers. Firstly, identify the stakeholders' interests – hidden or obvious – while sketching challenges and opportunities for a specific place. Next, use these to compose drafts of possible futures that speak to relevant contested alignments among stakeholder interests. Thirdly, organise these displays to offer comparable hypotheses about future situations for the place. The visual tableau enables stakeholders to identify overlaps, dead ends and negotiable conflicts together. Finally, it encourages stakeholders to jointly develop trade-offs, inviting each participant to reconsider their initial plans and intentions (Fig. 2).

Figure 2: Planners create drafts of possible futures to identify stakeholders' interests and intentions.

The puzzling out approach recognises the complexity of planning by anticipating, rather than eliminating, uncertainty through a series of comparisons. Spatial planners design proposals for future changes that stakeholders use to test and revise joint purposes that reflect different assumptions about casual influence. Composing and sharing

imagined interventions and projected effects together enables dynamic puzzle-solving. A final solution emerges after many iterations with careful attention that balances the interplay among diverse political interests and the complex technical demands of the changes proposed for the site.

The puzzling or plan-making process can extend over years or even decades, and is followed by several rounds of clarification.[2] It often takes time for people to envision a new puzzle; to imagine how the contours might fit the place better and thus reconsider prior commitments. Spatial planners should be patient and wait for the right moment to announce the complete plan. Learn when to take the initiative, nudging a shy stakeholder into action or counselling a zealous advocate to hold back.

Puzzling in spatial planning matters!

Puzzling in spatial planning designs relevant options for a place that a given constellation of stakeholders use to compose, compare and select as a coherent plan for the situation at hand. Planners offer the overlay images that make circumstances and interests evident for different test options and so improve local spatial puzzle-solving among clients and sponsors for a specific place. Puzzling in spatial planning includes three dimensions: finding a good solution for a place, on time, and for all the relevant stakeholders. Planners combine these three dimensions to show how circumstances and interests can align to anticipate future changes.

Cases relevant for the topic

Cases that highlight the need for a collaborative planning approach and explain how it works in planning practice are:

1. Attisholz: From Switzerland's Largest Industrial Brownfield to a Reserve of European Relevance through Planning
2. Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre
3. The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan
4. The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland
5. How 'Moving Simultaneously' Opened New Possibilities for Solving a Muddled Situation: The Case of Brig, Switzerland
6. Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River
7. A 'New' Danube for Vienna: An Innovative Multi-purpose Project

Creative Criticism in Spatial Planning

Bernd Scholl, Andreas Voigt

When confronted with singular, difficult spatial planning tasks, it can be that none of the existing solutions are appropriate and therefore cannot be applied. However, the spectrum of possible solutions for spatial problems is often much larger than is assumed. But, when no suitable solution can be found to use as a reference, then a benchmark for possible solutions must be established first. What is a 'suitable' solution and what is not, can only be evaluated in comparison to the suggestions submitted. In the language of science, suggestions for solutions correspond to hypotheses. Just as hypotheses develop into their best form under the crossfire of critical arguments, suitable solutions can also be fine-tuned using criticism. Well-founded objections to the ideas submitted fulfil the task of separating the wheat from the chaff. In planning, this is especially important: an error that surfaces late in the process can cause havoc in the finances, the schedule and the public's trust in the planning agencies. It is also important that the rejection of ideas that are not worth pursuing is qualified through the use of critical arguments and according to available knowledge. Improving ideas that show promise also involves critical argumentation; especially bold or daring suggestions must undergo thorough testing under tough criticism to expose the weak points and, if possible, find ways to strengthen them.

Roots of criticism

The tradition of critical discussion reaches back in time to before Socrates. Thales of Miletus (624/623 BCE) founded this new freedom by encouraging his students to take a critical stance towards him as their master, which "… thus leads to the tradition of bold conjectures and of free criticism, the tradition that created the rational or scientific attitude, and with it our Western civilization, the only civilization which is based upon science (though of course not upon science alone)." [1] Thus, it is not surprising that the definition of the word 'criticism' is rooted in Greek (criticism: κριτική) and its meaning is much like 'separation, divorce, deciding.' The art of forming a judgement or a criticism should contribute the best argument in the battle of wits, which, in the given situation, is the most meaningful way to drive a point home or make an impact.

Everyday experience with criticism

Probably everyone knows from their everyday life how challenging it is to obtain a critical distance from one's own judgements, to see them in the light of new and often critical arguments and, even after a well-considered evaluation, to really change one's approach. It is even more of a challenge to endure outside criticism and then accept the judgement as supportive. Criticism contradicts the deeply rooted human need for confirmation and security. Therefore, criticism must be offered with much empathy and a constructive approach that is oriented to the situation at hand. Hurtful and denigrating criticism should always be avoided. The idea that providing a climate where constructive criticism is not only allowed, but actually encouraged in a diplomatic and empathetic form, is challenging in itself. Hence, the technique must be demonstrated by those with experience in constructive criticism and by the leaders responsible for the process.

Creative criticism

In spatial planning, criticism and critical arguments are applied by posing well-grounded challenges to the proposed solutions in order to eliminate possible errors. Constructive criticism must also pick up the issue of possible uncertainties, risks and, in Dürrenmatt's words, the "worst possible turn." [2] This process should be pursued to the point that an unworkable solution can be identified and then qualified for rejection. People's thought patterns and habits, their culture and their language, all have an impact on their choice of solutions. In addition, constructive criticism is fundamentally important in identifying or distinguishing the extent of possible solutions and any important aspects.

Dialogue of creative ideas and criticism

To find the spectrum of possible solutions, several teams should work simultaneously on the same task, which consists of creating their own approach and then defending it against criticism from independent experts. This principle is recognisable from the sciences in which doctoral candidates must defend their findings; in legal processes where prosecutors and defence attorneys seek a correct verdict; and in competition processes, where the jury plays an important role as the critical challenger to ensure that the best solution receives the award. Through the introduction of informal planning

instruments, such as the test planning process,[3] modern spatial planning has created a complement to the usual formal processes, for instance, by developing platforms for the early and direct exchange of critical arguments.

Value of criticism for transparency!

In democratic states and their institutions, the cooperation in and the transparency of the decisions concerning spatially important solutions is of central importance. Part of this is to take criticism seriously and not gloss over any unwanted comments. It is important to remember that such early input processes are often avoided because of the cost and time expenditures. However, this means that the opportunity for a critical exchange of arguments is lost or is too short to develop the critical issues and points. The latest examples are the BER airport in Berlin, the controversial Stuttgart railway station, [4] and Europe's most important north-south railway connection, the Rhine-Alpine corridor. [5] All these projects show that a critical discussion was not adequately conducted. The result is years, and sometimes decades, of delays of the start of operations and, of course, the rise in project costs.

Cases relevant for the topic

The following cases explain the necessity of critical planning approach to spatial problems:

1. Stuttgart 21: Six Billion Euros for a Three-Minute Time Savings
2. A 'New' Danube for Vienna: An Innovative Multi-purpose Project
3. Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River
4. The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland

Commedia dell'Arte: How Planners Can Act in Naked Reality

Jef Van den Broeck, Charles Hoch

Planning history reveals that many planners, and even society at large, believed in the possibility of fundamentally influencing spatial reality and evolution using a clear centralistic top-down policy based upon blueprints for an intended predictable future. The critique is obvious: such an approach cannot deal with a very complex, never mind an especially chaotic, reality influenced by an avalanche of factors. We learn from the complexity and chaos theories that reality is a complex, but adaptive system. A step-by-step approach towards an ever-changing 'somewhere' framed by common values and combined with strategic actions can change and innovate space and place and create new patterns. The self-organisation of the many actors, possibly channelled and stimulated, is a basic characteristic of such an approach: one that is able to create a 'moving balance' of the system, a temporary order and stability which is a need of people and society. In such 'framed improvisations,' the planner is a participant, a player with specific knowledge, skills and values in this *commedia dell'arte*.[1]

Intelligent improvisation based upon knowledge and skills

Most institutional planning systems use land use plans to control spatial development. They cannot, however, handle the diversity and intensity of complex urbanisation and its environmental impacts. How can planning deal with a complex and even chaotic world? Spatial planning that uses practical experience to test hypotheses about ambiguous causes and purposes can do the job. Reflective improvising combines action and dynamic envisioning in mutual, deliberative dialog. Spatial planners contribute knowledge and insight, envisaging designs that foster such commedia dell'arte.

A practical step-by-step approach, not piecemeal but framed

Social engineering separated facts from values. Rational analysis sliced the world into predictable chunks subject to human control. The objectivity of scientific inquiry justified such separation. But the problems of spatial interdependence generated by reliance on rational systems created unexpected interaction effects. We now know that trying to tame and even domesticate spatial complexity will only displace uncertainty. Tackling complex spatial issues requires that planners understand the interplay between cause and purpose, between facts and values as we test ways to adapt to specific problem situations. It requires courage to take a collective action without certainty, but prudently, in a step-by-step manner. But prudence here does not mean risk-averse, but rather an assessment of risk by judging the balance among competing political purposes in light of causal evidence. This approach takes incremental steps, not fragmented or piecemeal ones. The increments reflect strategic choices tested by a holistic political and technical judgement. This pragmatic approach avoids the illusion of technical certainty or accepting the tragedy of the commons.[2] Three principles guide this active experimental planning.

Practical principles

- A **step-by-step approach** that starts from the facts of each situation. What issues matter? What possibilities for action might we compose? How do these become feasible and relevant over time, given shifting purposes and power relations? What knowledge is available and what kind of research do we need? What is the actual planning context? What dynamics, assets, opportunities and means are there? What about existing power relations and the conflicting interests, ambitions and visions of people?
- A **strategic approach**[3,4] identifies and selects feasible actions for strategic places that work as catalysts at the right momentum for coordinated change. Learning when and where to deploy a plan innovation requires an understanding of the interactions at play for each place and of actions that can turn the tide.
- However, the **actions should be framed** not only by legal norms and rules, but by shared intentions shaped by specific prospects for future change and conceived as a provisional plan. The practical possibilities offer hope, inspiring joint commitment on possibilities and providing direction to interventions.

The 'how' matters!

The spatial planning cases in this book do not plan by rules, rather they improvise using principles. In different cases, these principles are translated into practical methods, demonstrating how approaches to how planning processes are designed and how the values behind them will influence the outcomes. The planners in the 'Vienna Danube' story pioneer a new planning process that yields an innovative design. The tailor-made approach in Brig, Switzerland allowed the plan to move forward simultaneously with all actors. The 'Milan Strategy' makes regional planning ideas politically viable in a provincial context, while the Ghent Canal Area uses inclusive cooperation to tap the practical wisdom of diversity. Spatial plans do not follow an optimal linear script or conform to a logical rational model. Spatial planning responds to each situation using flexible designs that face the facts while anticipating the unexpected. Planners learn the practical skill of improvisation,[5] mirroring commedia dell'arte at its best.

Cases relevant for the topic

The following cases provide the inspiring ideas on how planners can deal with complex spatial problems:

1. Swiss Water Stories
2. Città di Città: A Strategic Plan for the Urban Region of Milan
3. The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan
4. Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre

Topics:
Inter-Acting with Others

Discourse: A Tool for a Collaborative Planner

Charles Hoch, Ana Perić

The transformation of the global planning context from government to governance has challenged the conventional bureaucratic and professional roles for spatial planners. Planners seeking to assure the sustainability, security and integrity of places must include the voices and interests of many different agents and actors for whom the future of these places matters. Instead of trying to regulate and control complex and uncertain change using the rational tools that fuel it, these planners embrace complexity as they actively collaborate with a diverse clientele – communicating, negotiating and mediating among shifting positions and interests. As people learn to plan together democratically, they find common ground through intelligent reconsideration of familiar, but unhelpful beliefs. Planning expertise anticipates and informs practical options needed to take future collective consequences into account. Together with other stakeholders, planners craft workable trusted plans for the ongoing conflicts spinning in the whirlpool of political debate.

Democratic discourse in collaborative planning

Collaborative planning uses democratic discourse to imagine future consequences as a practical guide for action. Democratic collaboration introduces two new terms to planning deliberation processes: 1) inclusive argumentation, i.e. a judgement that considers contributions from interested parties, and 2) participation, i.e. a process in which stakeholders jointly pursue future options. Discourse presumes that speakers tell the truth, mean what they say, speak competently, and offer socially appropriate claims and justifications. These norms pull participants toward authentic discourse and hence generate influence, even as speakers continue to disagree. A discursive argument cannot force consensus but binds the speakers to rely upon agreements tied to the use of these norms. Democratic discourse offers a practical alternative to reliance on informal and formal power relationships fuelled by cultural status, instrumental control, economic exploitation, political corruption and the like (Fig. 1). As planners offer discursive advice about the future, they search for agreement. Agreement may lead to consensus but may yield failure, stalemate or compromise, instead. Therefore, planners

must work hard to carve out institutional spaces for collaboration in the midst of undemocratic forms of power.

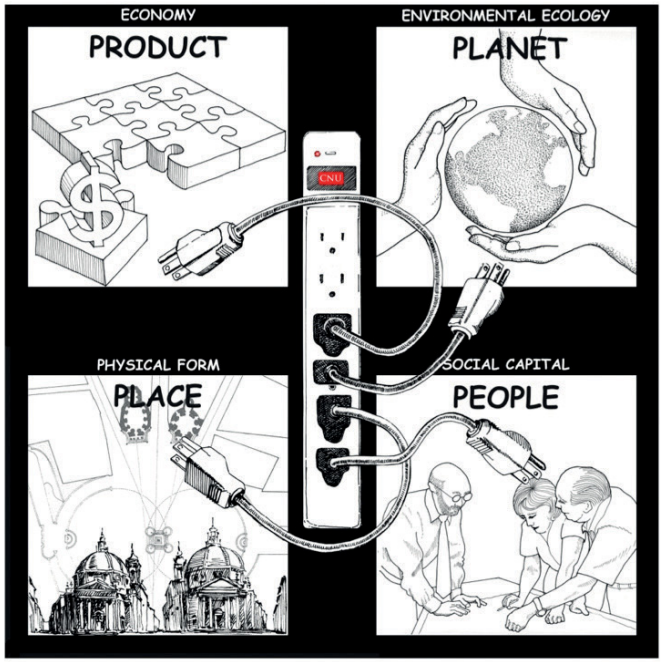


Figure 1: Formal and informal power relationships.

Discourse: The planner's tool?

What should planners do to foster collaborative planning? Firstly, recognise that planning offers advice on comparing future responses to a problem. Such recognition includes identifying and including relevant stakeholders in deliberations. The spatial planner adopts forms of communication that enable even adversarial actors to recognise how interdependence may vary for different problems. Opposition on one issue need not carry over to another. Secondly, composing plan options includes not only technical knowledge about causes, it includes also awareness of institutional and social relationships that influence future spatial development. Professional objectivity flows not from detachment mediated by instrumental methods, but the practical use of a method that responds sensitively and aptly to the interests, needs and views of diverse participating actors. This is not a product of knowledge alone (smart); it requires working experience, to plan for complex problems with others (wisdom).

The spatial planner must establish confidence that the prospects for planning together will offer a fair and fruitful compromise. Earning stakeholders' trust shows how the likely results of following the joint plan respects the purpose of each actor – even if the proposed changes require trade-offs to reach joint agreement.

Discourse in planning matters!

Planning advice in this context emerges as participants use the expert articulation of alternative options to speak to one another as they jointly imagine and conceive plausible future routes, functions, interactions and effects. In order to describe such communicative action,[1] scholars use various terms, such as: dialogue,[2] debate,[3] deliberation,[4] plan-making,[5] actor-consulting,[6] etc. More precisely, they all integrate expert (technical) and experiential knowledge, obtained through practical democratic participation. Spatial planners play an important role as detached intermediaries recognising diverse interests, differentiating these from the positions of the stakeholders, offering needed information, anticipating trouble, imagining options and mobilising sentiments for joint improvement of a place.[7] In other words, the spatial planner uses expertise about the simulated effects of complex causal interactions together with the different purposes, experiences, feelings and interests of the participating stakeholders.

Cases relevant for the topic

These cases elucidate the effects of integrating the planners' technical expertise and collaborative skills:

1. Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre
2. Park Spoor-Noord, Antwerp: A Marriage between Co-production and Spatial Quality
3. Storm Water Planning in the Chicago Metropolitan Region

Reflective Leadership

Alessandro Balducci, Bernd Scholl

In the traditional approach to urban and regional planning, it is the planner who finds technical solutions to strategies and objectives proposed by politicians or decision-makers. In doing so, the planner coordinates many different experts from various departments, as spatial planning is affected and determined by many sectoral policies. Such a definition of the parameters of a planner's action has two main flaws:

1. The sharp division between political and technical spheres is not at all precise – planners may illuminate issues not considered in the political debate; they can propose actions that can open up new prospects on a specific problem; they can slow down or accelerate the treatment of a difficult situation; they can also change the course of events.
2. The task of coordinating others has always proved to be critical. The right to coordinate others, even if it is written in laws and regulations, is something that has to be gained in practice, it is not given. These two arguments raise the issue of how planners can be more effective in performing activities that are mainly based upon managing interactions. It follows that when planners are able to exercise some form of leadership, planning can make an important contribution to both knowledge and process.

Leadership and planning

Leadership, defined as the capacity of "shaping emotions and behaviours to achieve common goals," is not a much-discussed category in planning literature, despite there being extensive evidence that it is often a fundamental component of success stories.[1] However, goals are not always common, and uncertainty about possible technical solutions makes the task even more complex. Planners can play a relevant decisional role here by directing attention to certain aspects of a current spatial problem that can be clarified through previous experience.[2]

As a consequence, various kinds of leadership, presuming different capabilities, are demanded in diverse problematic situations:[3]

- The authoritative use of technical rationality when there is no uncertainty
- The support of a social learning process when the uncertainty is more about solutions and not about goals
- The management of a negotiation process when the issue is to find a point of equilibrium between conflicting objectives
- The organisation of a process of collective reflection aimed at redefining the problem when uncertainty is both about goals and possible solutions

The first task of a planner is therefore to understand the level of uncertainty about goals and solutions in order to propose an appropriate strategy. This is a task which requires wisdom and authoritativeness because it is usually performed in situations of conflict and uncertainty and is bound to condition the entire planning process.

Professional excellence: technical vs. collaborative rationality

With the fact in mind that planning deals with 'wicked problems'[4] that include constitutive ambiguities, leadership in planning is far removed from the image of the charismatic or powerful individual who is able to shape the behaviour of others. More precisely, professional excellence in planning (as well as some other social professions) does not derive from the traditional imperatives of technical rationality that revolve around matching the right technical solution with the right problem categorisation[5]. Certainly, such an approach is applicable to a restricted set of problems, i.e. when there is agreement about goals and no uncertainty about solutions. However, most contemporary planning problems do not correspond to this fortunate situation and cannot be categorised. Most planning problems are substantially unique, they have different degrees of uncertainty, and, in order to be solved, need a strong and deep interaction with other actors and experts, where everybody brings in his/her own biases and frames.

Reflective leadership matters!

In complex situations, the important role is not that of the expert planner who knows many solutions and can correctly analyse the problem, rather it is the planner who is particularly well prepared through his/her experience and tacit knowledge to 'reflect on the course of action',[6] and in doing so, is able to allow the social dialog that develops around a problem to become generative of new solutions. In other words, this is the 'reflective practitioner.'

The capacity of exchanging with others, playing with different problem definitions and frames, and developing a social conversation until the moment when there is convergence on how to define a problem and a possible solution, can be understood as a form of leadership – a 'reflective leadership.' This concept is still strongly related to technical expertise and experience; however, it certainly mobilises wisdom, emotions and values.

Cases relevant for the topic

The following cases illustrate the versatility that contemporary planners need to possess in order to face complex spatial problems:

1. Città di Città: A Strategic Plan for the Urban Region of Milan
2. A Regional Park against Urban Sprawl: The Case of Parco Nord in Milan
3. The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan
4. Park Spoor-Noord, Antwerp: A Marriage between Co-production and Spatial Quality,
5. Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre
6. A 'New' Danube for Vienna: An Innovative Multi-purpose Project
7. Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River
8. The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland
9. Site Planning of the Vienna University of Technology: Restructuring Urban Quarters

Participation for Democracy and Spatial Quality

Charles Hoch, Jef Van den Broeck

Spatial planning in liberal societies too often pays lip service to the public, as private corporate and political elites decide what to build and where. Active participation helps remedy this deficit as deliberations about goals, policies and programmes improve the legitimacy and intelligence of judgements about long-range complex projects. Political conflict often ensues as the powerful resist efforts to institutionalise informal participation within the formal institutions responsible for governing places. People find themselves insufficiently represented in political and market-led arenas dominated by powerful corporate organisations. We believe a participatory deliberative approach for spatial planning and decision-making can complement representative democracy. Such active democratic involvement uses planning and policy-making to enrich civic life and spatial quality.

Deliberative democracy: Changing relations between formal and informal institutions

Political representation in liberal capitalist societies has offered security, inspiring standardised consumer aspirations at the expense of local cultural attachment.[1] The predictable infrastructure systems that dramatically improve commerce also increase the geographic interdependence of people and places. Local consumers not only enjoy cheaper goods, they also face competition for employment from immigrants. The ensuing conflicts over social inequality, cultural identity and spatial complexity cannot be reconciled using conventional spatial planning. They require active participation among those who manage and experience these changes. Practical collaboration focused on social learning and knowledge building can weave the intelligence of scientific inquiry into the fabric of political governance across the scale. Engaged participation connecting formal and informal institutions taps the daily experience of people across a multitude of cultural and social contexts to conceive and solve real problems.[2]

Creative involvement for quality

Participation, as described in this book, mitigates distrust and copes with complexity as people learn to jointly consider problems amenable to collaborative resolution, and compose solutions tested against consequences found acceptable. Combining the knowledge of professionals, officials, activists and citizen stakeholders improves the content and quality of visions, policies, plans, actions and projects.[3] Including the diverse viewpoints and experiences of the stakeholders of a particular place using democratically formed judgements about possible options improves the scope and resilience of future plans.

Integrated deliberation and collective agreements matter!

The different cases in this book show how informal public deliberation encourages participation from those touched by a spatial issue, integrating critical causal judgement with a dialogue on contested purpose and policy. Legal authorities should include deliberation in formal planning and policy-making processes, [4,5] and thereby improve the quality of negotiation and trading over differences in policy and decision-making. Collective agreements[6] would legitimise the outcomes. Institutionalised as an ongoing civic practice, collaborative future-oriented thinking provides a sustainable balance and complementarity between representative and deliberative systems as they cope with territorial uncertainties created by unexpected changes in social complexity, inequality and identity. Engaged practical democracy within formal planning can bridge the legitimacy crisis and raise the quality of decisions.

Cases relevant for the topic

Cases dealing with deliberative participation and institutional design are:

1. The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan
2. Park Spoor-Noord, Antwerp: A Marriage between Co-production and Spatial Quality
3. Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning
4. Brownfield Regeneration in Budapest: From a Slum Area to the New District Centre
5. Local Development and Village Renewal in Hagenberg, Upper Austria.

Linking Informal and Formal Responsibility

Charles Hoch, Bernd Scholl

Spatial planning takes place within the context of specific social, economic and cultural conditions. The professional planner attends to these conditions when preparing plans for a particular space. Initial assessments of the problem not only include judgements about the causes connected to these conditions, but also judgements about the institutional rules and practices available for resolving the problem. Sometimes, formal responsibility may not align with causal complexity and needs to be supplemented with informal planning.

Why informal planning?

Identifying and using informal associations and relationships can generate opportunities for collaboration that expand the scope for plans, while alleviating the risk of free-riding (letting someone else do all the work), finger pointing (blame), creaming (taking undeserved credit), co-opting (defining a problem to fit a familiar solution) or other inadequate planning responses to complex problems. For example, increasing traffic congestion along a popular roadway may have many origins distributed across different adjacent jurisdictions. Local officials for each may be reluctant to admit responsibility for any of the increases in trips. Each is worried that the cost burden of solving the traffic problem will fall exclusively upon their jurisdiction. Spatial planners possess analytical tools they can use to measure and model traffic flows in order to estimate the relative contribution of trips from each jurisdiction. However, providing evidence of contribution does not in itself address how the different officials might use this information to remedy the current congestion and develop plans to anticipate and reduce the risk of future congestion.

Weak points in formal processes

Purposeful spatial planning seeks to advise and persuade people in positions of responsibility and authority on how to coordinate the use, development and care of spaces. Spatial planners therefore need to communicate, coordinate and cooperate with many institutions with different levels and types of responsibility for a space – often

simultaneously. Formal methods and regulations that rely on corporate hierarchies have proven especially weak at obtaining relevant information and coordination across levels of authority. Reliance on formal 'consecutive methods' often generates bottlenecks in its efforts to prepare plans addressing future uncertainty.

Supportive informal processes

Informal democratic processes can sidestep legal procedures and the administrative hierarchy. Participants agree to suspend the use of conventional methods while exploring diverse conceptions of a spatial problem and alternative solutions. Ironically, the suspension of control improves the practical grasp of complex interactions by putting many more options to the test of whether the consequences are robust. These informal results improve the prospects for a plan's acceptance when subjected to a formal review and approval.

A new link: Test planning method

The test planning method used in Germany and Switzerland offers a good example. Formal stakeholders who face a challenging spatial problem form a joint committee that then hires a consultant to compose plans that detail the competing problem-solving ideas. Following tight deadlines and guided by explicit principles, two to four planning teams simultaneously work out their solution to the problem. Each team presents its work to the stakeholders. The stakeholders then compare the different concepts of the problem and potential solutions, offering criticism that improves the adoption and adjustment of the design choices and imagined consequences across the relevant options.

Joint responsibility matters!

Collaborations that link formal and informal responsibility and action require participants to focus more on the problem than on their position and more on the consequences than on the rules. People may guard their authority rather than share it. However, when faced with mounting traffic or flooding problems, even the most stubborn participants may loosen their grip on authority. Temporary and provisional informal interventions, such as the test planning method, offer a low-risk tool they could use, especially if

the conflicts have been reduced and face-saving solutions to potential serious errors have been identified.

Cases relevant for the topic

The following cases illustrate the effective use of innovative planning processes as complementary instruments to formal planning mechanisms:

1. Città di Città: A Strategic Plan for the Urban Region of Milan
2. A Regional Park against Urban Sprawl: The Case of Parco Nord in Milan
3. A 'New' Danube for Vienna: An Innovative Multi-purpose Project
4. Frankfurt: Back to the River! Making Urban Spaces and Places on the banks of the Main River
5. The Limmat Valley: A Spatial Laboratory for Action-oriented Planning in Switzerland
6. The Ghent Canal Area Project: A Step-by-Step Approach towards an Inclusive Strategic Plan
7. Ringland, Antwerp: A Citizen Movement as a Tool for Deliberative and Co-Productive Planning
8. How 'Moving Simultaneously' Opened New Possibilities for Solving a Muddled Situation: The Case of Brig, Switzerland
9. Park Spoor-Noord, Antwerp: A Marriage between Co-production and Spatial Quality
10. Storm Water Planning in the Chicago Metropolitan Region
11. Swiss Water Stories
12. Site Planning of the Vienna University of Technology: Restructuring Urban Quarters

Topics:
... and Action!

Anticipation: Going for Action

Markus Nollert, Walter Schönwandt

Planning is the conceptual anticipation of future actions. While research contents itself with analysing certain fields, planning has to go further – it must formulate recommendations for action with respect to different actors. Therefore, it is important to be aware of various planners' duties and tasks in acting to foster joint decision-making processes. Acting in planning needs creativity, courage, humility and sometimes a bit of ruse and luck because it rarely follows recipes or standard procedures, and mostly deals with complex situations and uncertainty. Finally, a great part of planners' actions aims at bringing people together in order discuss and enable possible and achievable ways into the future.

Actions and process

Most of the time, actions are a result of a planning process. To change reality in a certain direction, stakeholders have to collaborate, which means discussing and negotiating possible options for action. The way a process is organised is therefore crucial for being able to jointly decide on actions and find ways to implement them. Action, in this sense, means that planners have to work on a socio-political level as well as recommend physical changes. However, actions are also an intrinsic part of a process. Sometimes, a process can even start with an action in the field, to build trust and bring people together; to attract a stakeholder; to seduce people into being involved; to open a perspective and a new policy. Balancing, organising and presenting actions and processes is therefore a crucial element for the scope of changing reality.

Framing actions

Every action, even a modest one, is strategic in a way; therefore, actions should always be 'framed.' The scope is not about action, no matter what. Planning should give a meaning to each action towards a shared and strategic direction. In this way, a set of actions forms a network, where every action is related to each other by a frame, a vision or preferably a shared strategy. To develop this network of

actions, a lot of "puzzling" is needed to deal with the uncertainty of the future and the interests of the stakeholders. However, once such a strategic network is established, it also allows future actions to be evaluated and changed without jeopardising the success of the whole endeavour.

Action and complexity

The scope for action in planning is often challenged by complexity. In order to elaborate and recommend suitable actions for current and possible future situations, all the actors involved have to deal with uncertainty. For these tasks, there normally are no proven and tested rules or routines, nor is there a precise definition of what the central problem is. Typically, these tasks are layered, vaguely defined and indirect, and require the involvement of numerous specialist disciplines. In order to produce fewer unwanted and harmful consequences through actions, it is important for all involved actors to try to avoid traps in the perception and treatment of complex tasks, such as: reducing the task to an (apparently) simpler form – to be dealt with using particular predefined methods – or to approach the task with predetermined goals or an already tested solution. Moreover, the parties involved in the planning process should be aware that everyone perceives the world through their own lenses and that there is no objective view – neither on the problem nor on the solution.

Acting together

Actions in planning always have a socio-political character and are not the result of 'pure' technocratic management processes. They deal with people, society, interests, values. This is why the process of creative solution development, discussion and cooperation, is so important for the implementation of actions. This also means that the outcome of a planning process is not predictable. However, these actions, which derive from a process of shared reasoning and open creation and discussion of alternative options and arguments, both in favour of and against them, might have the best chances of implementation.

Why planning matters or what role planners can play?

As in all professions, not every planner is an expert in all facets of the field. Planners may lack knowledge and thus fail to consider the important aspects of a task; they may overlook important stakeholders or fail to involve them, or they may make numerous other mistakes. However, planners might also have the specific knowledge and skills to help open others to new ideas; bring up relevant questions and issues; point out opportunities and find solutions. In addition, planners can benefit from their training in dealing with complexity, integrating knowledge, revealing integrated arguments and utilising their experience when recommending decisions and actions. Planning can matter through initiating, accompanying, organising, supporting and steering joint processes of action-finding, discussion and decision-making as long as planners are aware of 'the relative nature of their own perspective' and act accordingly.

Conclusion

Jef Van den Broeck, Bernd Scholl

In this book, the authors have demonstrated and illustrated the significance of spatial planning firstly by presenting inspiring cases. They want to show that planning matters, and that planning can ultimately improve the living conditions of people with respect to the natural environmental as well as certain socio-political conditions. The authors, both practitioners and academics, consider planning to be a way to transform physical and social reality – sometimes in a fundamental way. The cases point up the fact that such an ambition depends on the willingness of different actors to cooperate, the continuity of the collaborative effort, and the capacity and skills of the people involved. Secondly, to help clarify how the authors' belief in planning as a transformative force is integrated into their approach, the articles about various planning topics present a kind of conceptual background important for understanding the nature of current spatial planning practice.

Socio-spatial change as a goal

What can we learn from the cases presented in this book about the goal of transformation and change? The cases deal with quite diverse aspects and purposes for initiating a planning process, yet all indicate an inspiring socio-spatial transformation. Local liveability and raising local awareness on the importance of solving spatial problems for the benefit of a broader social context are key issues in the cases of Hagenberg (AT) and the two parks: Spoor-Noord in Antwerp (BE) and Parco Nord in Milan (IT).

Clever expert arbitrage in challenging spatial issues is critical in two cases of brownfield regeneration: the redevelopment of a cellulose factory in Attisholz (CH) and the revitalisation of a Roma settlement in Budapest (HU), as well as in the redesign of the railway station area in Brig (CH). Wise expert proposals not only brought about physical change, but also wider social benefits for the local residents.

The Ghent Canal project (BE) shows a step-by-step approach to address major environmental problems and overcome government resistance to the population's requests. Although all parties agreed on the importance and value of the riverfront revitalisation in Frankfurt (DE), the size and complexity demanded innovative instruments and a careful hand in both the planning and implementation phases of the project. The successful metamorphosis of a purely engineering project into a multi-purpose programme for the benefit of the public, while still providing flood control, is documented in the case of the Danube Island in Vienna (AT). Water is always an important topic in today's world and two water stories are described here: one about the need for protecting water as a resource and a public good (CH), and the other about the interactive efforts of public bodies against waste and pollution (US).

A particular call for expert capacity building is illustrated in several cases: the TU Vienna site (AT), the example of Limmat Valley (CH), a Swiss Spatial Laboratory project, and the case of strategic planning for the Milan region (IT). Intelligent activist reaction by the civil society is important in two cases: the ring-highway project in Antwerp (BE) and the Stuttgart 21 (DE) underground railway station.

New ways of involving the public, as well as the combination of a representative and a deliberative democratic approach, i.e. the use of informal bodies as a complement for formal structures, are described in many cases: the *Città di Città*, Milan (IT), Brig (CH), Hagenberg (AT), Ghent Canal (BE), Budapest (HU), Ringland, Antwerp (BE) and the Danube Island in Vienna (AT). In the end, the basic feature that stands out in all of these cases is the concern for the outcome: the use of space as a common good should be based upon social values such as equity, solidarity, shared responsibility, and leadership.

Change: An ambiguous notion?

The cases show the transformation in both the way visions and spatial policies are made and during the steps of their implementation. Sometimes these modifications to the planning process are quite similar. However, the nature of changes caused by a planning transformation can be quite different. From diverse case studies, it becomes obvious that structural changes in the planning field need the right momentum and a common supported movement, i.e. a feeling about what should be done and can be done for the future. The future should be understood as a dynamic notion that cannot

be fixed in one invariable idea or concept. In some cases, the initial ambition and the intended objectives are very clear and more or less concrete; however, in other cases, they remain vague, thus inviting further discussion and a kind of permanent development. A feasible planning process should always keep enough flexibility as a means of dealing with uncertainty and the unexpected. Thus, the idea of planning as making a blueprint for the future vanished a long time ago.

However, real changes do not happen without a supportive context, such as possible resources, favourable laws, global policies, i.e. the planning environment that is often influenced by supra-local spatial and social circumstances. In most cases presented in this book, the vision and the definition of the planning process steps and implementation phases were part of a collaborative process often characterised by a clash of values. Dealing with diverse values and interests is inherent to the nature of planning, as is the capacity to create solutions and possibilities. If interests and values collide in the planning process, spatial change will go always hand in hand with socio-political transformation, as ultimately illustrated in some of the cases.

Beyond planning practice

Looking at different cases, behind some of them we can see a kind of invisible pattern, a pattern in terms of the actors involved, necessary planning steps taken, implementation measures, etc. This is not pure coincidence; rather, it is proof that planning practice has a deeper conceptual foundation. In order for readers to better understand the case studies and make certain generalisations where possible, the book also contains explanations of topics the authors find most relevant. The elaboration of these topics also has another purpose: to provide as much input as possible on the position and role of a planner in the planning process.

Firstly, it is critical for planners to be able to assess their professional expertise, as it is always necessary for planners to situate themselves in the current circumstances. More precisely, planners have to deal with the issues at stake, recognise problems, anticipate possible futures, and make suggestions for possible goals and objectives, etc. Planners today must also deal with the implementation, which has two main components. One is the planner's attitude toward the spatial problem, i.e. a particular *planning approach* that can never

be absolutely objective and value-free. Two, external circumstances may bring in unforeseen spatial problems and *conflicts*, which may raise or lower *opportunities*, resources (*regimes* and *budgets*), and *traps*, which planners must be able to recognise, avoid and overcome.

Secondly, planners' interaction with other stakeholders is of utmost importance for the success of the planning process. This means that planners can mediate the planning process if they see chances or challenges on the horizon that will have to be tackled. In other words, planners should *puzzle*, by:
- recognising a problem and its parts,
- bringing in the right person or group that can help,
- being able to negotiate or mediate between groups or individuals whose areas of expertise or interest may overlap,
- recognising a potential solution or partial solution,
- being confident enough to let people 'run' with their ideas, and
- having the personal skills to build a team out of a group.

In addition planners should also:
- encourage involvement of diverse groups,
- take the initiative in bringing interested parties together,
- strengthen the building of trust and networking,
- strive to mutual benefits, as well as
- stimulate a process that leads to trading or compromise among numerous actors.

Planners should keep in mind they are only one of a number of actors in the process, so they should be able to listen to others and to accept the benefits of *creative criticism*. It is possible for planners to obtain a broader picture and set up a strategic direction for *action in naked reality*, without being too dependent on a fixed option for future development.

Finally, in order to bring about social and institutional changes – and not just physical transformation – planners need to know how to interact within the limitations of a given planning context. This primarily involves the planners' skill of recognising the interests and positions of various stakeholders by relying on the power of *discourse* as a planner's
- skill of recognising the interests and positions of various stakeholders by relying on the power of discourse as the main instrument, and

- ability to assess one's own planning approach when leading the planning process, i.e. to be self-reflective. Both of these are considered highly relevant for the final planning outcome.

In brief, strengthening collaborative rationality at the expense of technical expertise paves the way for *democratic* decision-making. In its essence, democracy in planning implies full recognition of *formal*, legally binding planning instruments implemented within a given institutional framework – without neglecting *informal* planning tools. These tools are seen as a vital deliberative mechanism for the success of contemporary spatial planning. Today, planning needs innovative planning procedures as a supplement to traditional planning approaches.

Towards spatial planning that matters!

The authors have tried to make the point that spatial planning does matter by presenting compelling stories that show that spatial planners have a responsibility, a task and the capacity to solve and create, which is a huge, but possible and valuable challenge. Nevertheless, while in certain less complex situations planners can rely on their own expertise, typically planners are rarely able to realise their actions alone. Therefore, the actions of planners are usually accompanied by ways of convincing stakeholders to cooperate and act together, e.g., to follow a certain direction of development, to identify a starting point, or to define a certain problem. These kinds of planning actions need special skills, know.ledge, experience – and sometimes luck – but, most importantly, they are dependent on a climate of trust.

Notes

Planning Approaches or Nothing Comes from Nothing

1. The topic of planning approaches is a subcomponent of a comprehensive, explicit planning model based on systems theory, which cannot be described in detail here due to a lack of space. See: Walter Schönwandt, *Planung in der Krise?* (Stuttgart: Kohlhammer, 2002), 30; Walter Schönwandt, *Planning in Crisis? Theoretical Orientations for Architecture and Planning* (Aldershot, Hampshire: Ashgate, 2008), 19. This planning model was tested with the help of the German Research Association (*Deutsche Forschungsgemeinschaft* (DFG)) and was judged empirically successful for its efficiency and effectiveness in the processing of planning projects. See: Christoph Hemberger, *Erwerb kognitiver und methodischer Handlungskompetenzen zur Bearbeitung komplexer Planungsprobleme. Entwicklung und Evaluation eines transdisziplinären Trainingsprogramms am Beispiel raumbezogener Aufgaben* (Munich: Herbert Utz, 2014).
2. See: Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962); Mario Bunge, *Finding Philosophy in Social Science* (New Haven, London: Yale University Press, 1996).
3. For details, cf.: Walter Schönwandt, and Andreas Voigt, "Planungsansätze," in *Handwörterbuch der Raumordnung* (Hannover: Akademie für Raumforschung und Landesplanung (ARL), 2005), 769–776.
4. The topic of planning approaches, amongst others, shows that there are many possible ways to introduce a potential plan. A planning project can begin with any of these points. However, an appropriate work process will not only contain all of these points, prepared in a suitable manner, but will also aim to achieve a balanced consideration of all these points, i.e. a 'reflective equilibrium.' Nevertheless, the entire process will almost always turn problematic when one of these points is not considered in the course of planning, i.e. when, at the point of considering all the sub-aspects, one sub-aspect is, for example, not combined with the others to form a coherent concept.
5. Schönwandt, Voigt, "Planungsansätze."
6. Ibid.
7. Here we can also raise an ethical question: how the understanding of different concepts of the state and the market corresponds to different concepts of justice, and thus ultimately determines the social groups the planner advocates for, including, for example, the strong (because they proverbially 'pull the cart'), the weak, or the majority. For more information on social justice, see: e.g., Benjamin Davy, *Essential Injustice: When Legal Institutions Cannot Resolve Environmental and Land Use Disputes* (New York: Springer, 1997), 267.

Spatial Conflicts and Opportunities

1. Friedrich Schiller, *Wallenstein* Trilogy, [1799], 2003. English by Alexander F. Murison (London, New York and Toronto: Longmans, Green and Co., 1931), 263.
2. Gerd Gigerenzer, "Warum wir uns dem Wissen verweigern," *Neue*

Zürcher Zeitung, January 5, 2017, https://www.nzz.ch/feuilleton/willentliche-ignoranz-wissen-gerd-gigerenzer-ld.138068.
3. Bernd Scholl, *Aktionsplanung. Zur Behandlung komplexer Schwerpunktaufgaben in der Raumplanung* (Zurich: vdf Verlag, 1995).

Sylvia's Mother: About Regimes and Budgets

1. "Sylvia's Mother," the first hit song by the American rock band Dr. Hook & the Medicine Show, released in 1972.
2. See: Wolfgang Jung, "Instrumente räumlicher Planung: Systematisierung und Wirkung auf die Regimes und Budgets der Adressaten" (PhD diss., University of Stuttgart, 2008), 239.
3. "Behaviour includes phenomena that can apply to individuals, groups and societies, regardless of whether they arise from, for example, physiological, psychological, social, political or economic causes." (Jakob Maurer, *Grundzüge einer Methodik der Raumplanung I (Schriftenreihe zur Orts-, Regional- und Landesplanung Nr. 14)* (Zurich: Institut für Orts-, Regional- und Landesplanung an der ETH Zurich, 1973).
4. See: Claus Heidemann, *Regional Planning Methodology. The First & Only Annotated Picture Primer on Regional Planning (Discussion Paper No. 16, module R-49)* (Karlsruhe: Institut für Regionalwissenschaft, 1992).
5. Torsten Hägerstrand, "What about people in regional science?" *Papers of the Regional Science Association* 24, (1970): 7–21. This approach is also called "Lund time geographic approach."
6. Ibid., 10.
7. According to the Stoic philosopher Chrysippus, the possible is "that which is not prevented from happening by anything, even if it does not happen." Chronos, however, says "the possible is that which either is orwill be true." Here, the notions of unrealized potentiality and missed opportunities find no room. Chrysippus' ontology is called 'possibilistic' whereas Chronos' ontology is 'actualistic.' Signer, "Reasoning," 57.
8. See: Jung, "Instrumente räumlicher Planung," 248, based on Heidemann, *Regional Planning Methodology*.
9. See: Jung, "Instrumente räumlicher Planung," 247–248; Heidemann, *Regional Planning Methodology*.
10. See: Heidemann, *Regional Planning Methodology*. Remark: Heidemann uses the German term *Lebensumstände* (life circumstances). In spatial planning, it is most relevant to consider important points in time such as election dates, registration and application deadlines, etc. These may open or close the windows of opportunity.
11. See: Jung, "Instrumente räumlicher Planung," 247; Heidemann, *Regional Planning Methodology*.
12. See: Hägerstrand, "What about people in regional science?," 12.
13. See: Jung, "Instrumente räumlicher Planung," 243.
14. Ibid., 244.
15. Ibid., 244.

Traps and Maxims

1. In the 1980s, Schönwandt published the first comprehensive book dealing with traps. Schönwandt, W.; *Denkfallen beim Planen* (Brunswick/Wiesbaden: Friedr. Vieweg & Sohn, 1986).
2. There are many references with regard to the approach 'Problems First:' Walter Schönwandt, *Planning in Crisis? Theoretical Orientations*

for Architecture and Planning; Aldershot, Hampshire: Ashgate, 2008; Roggendorf, W.; B. Scholl; F. Scholles, W. Schönwandt, R. Signer, "Maximen für Auswahl und Einsatz von Methoden," *Grundriss der Raumordnung und Raumentwicklung* (Hannover: Academy for Spatial Research and Planning (ARL), 2011), 364.

3. Let's take a railway company which plans to remodel a tunnel on an important international corridor between, let's say, 2025 and 2030. For a more detailed discussion, see: Signer, "Reasoning." During an observation campaign, experts judged the probability of a heavy landslide to be very high. The corridor thus could be closed for weeks. Given this new information, the company decided to prepone the necessary measures. In August 2017, one of the most important freight corridors in Europe between the harbor of Rotterdam, the Swiss Alps and the harbour of Genoa in Italy has been interrupted for several weeks due to an accident along a construction site for a new alignment close to Rastatt. At the same time, in other parts of the railway network, which could have served as alternative routes, maintenance work was in progress. The result was that hundreds of freight trains per day were cancelled. The unexpected simultaneity of these, let's say, frictions, may lead to an extension of Murphy's Law by the following corollary: "If there are failures in a network, they will occur simultaneously and in the worst possible combination."
4. This maxim is based on the desideratum 'Requirement of Total Evidence' of the German philosopher Rudolf Carnap in his book *The Logical Foundations of Probability*; 1950.
5. Signer, R. "Ein Klärungsprozess für komplexe Schwerpunktaufgaben in der Raumplanung;" *Grundriss der Raumordnung und Raumentwicklung*. (Hannover: Academy for Spatial Research and Planning (ARL), 2011), 317–322.
6. Signer, R. "Reasoning in a Macro Level Spatial Context," in I*ntegrated Spatial and Transport Infrastructure Development*, eds. H.J. Drewello; B. Scholl (Cham: Springer, 2016), 58.
7. Ibid. 58–61.
8. Following this maxim leads to a reduction of effort and expenditure and is often called the *Sparmaxime* in German (efficiency maxim). Franco Modigliani and Kalman J. Cohen formulated this maxim in the early 1960s: "Don't devote resources to estimate particular aspects of the future if, no matter what you find out (with due consideration for what you might conceivably find out), you would not be let to act differently from the way you would act without finding out." Modigliani, F.; K. J. Cohen, *The Role of Anticipation and Plans in Economic Behavior and Their Use in Economic Analysis and Forecasting*; (Chicago: University of Illinois, 1961).
9. Viz. "brainpower," this is what surveyors, for example, have been associated with for a long time, i.e., there is no important measuring campaign without a theoretical prelude, where the quality of the conceivable results of the campaign must satisfy the needs for a specific decision problem – but not more!
10. Good, I. J.; A. J. Mayne, J. M. Smith, eds.:The *Scientist Speculates: An Anthology of Partly-baked Ideas* (New York: Basic, 1962), 212.
11. Here, the question of reality is addressed. For applicability to planning, see Signer, Reasoning, 57.
12. See: Signer, "Reasoning," 58. The first performance of Dürrenmatt's play took place in 1962 in the Schauspielhaus Zurich. Actors were, among others: Therese Giehse, Gustav Knuth and Theo Lingen. See: Friedrich

Dürrenmatt, The Physicists, trans. James Kirkup (Brattleboro, Vermont: Book Press, 1964, originally published in German in 1962).
13. Maurer, J. (1995): *Maximen für Planer (Schriftenreihe zur Orts-, Regional und Landesplanung* Nr. 47. Zurich: Institut für Orts-, Regional- und Landesplanung an der ETH Zurich, 1995); English version: Scholl, HESP

Puzzling: Making Plans Together Works

1. "Puzzle over someone/something:" to think hard about someone or something for a long time and try to understand them (www.macmillandictionary.com/dictionary/british/puzzle-over), accessed on January 7, 2018.
2. Rolf Signer, "Ein Klärungsprozess für komplexe Schwerpunktaufgaben in der Raumplanung," in *Grundriss der Raumordnung und Raumentwicklung* (Hannover: Akademie für Raumforschung und Landesplanung (ARL), 2011), 322–324.

Creative Criticism in Spatial Planning

1. Karl Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* (London: Routledge, 2002), 203.
2. "If you start out with a story you must think it to its conclusion. (…) A story has been thought to its conclusion when it has taken its worst possible turn." See: Friedrich Dürrenmatt, *The Physicists*, trans. James Kirkup (Brattleboro, Vermont: Book Press, 1964, originally published in German in 1962).
3. Bernd Scholl, *Aktionsplanung. Zur Behandlung komplexer Schwerpunktaufgaben in der Raumplanung* (Zurich: vdf Verlag, 1995).
4. The project 'Stuttgart 21,' a reconstruction of the Stuttgart railway station, is elaborated in the chapter *Stuttgart 21: Six Billion Euros for a Three-Minute Time Savings* by Walter Schönwandt in this book.
5. Spatial and infrastructural challenges along the Rhine–Alpine corridor, also known as the corridor Rotterdam–Genoa, has been critically assessed under the scope of the INTERREG project CODE24. The core project findings are presented in the book: Hans-Jörg Drewello, and Bernd Scholl, eds. *Integrated Spatial and Transport Infrastructure Development: The Case of the European North-South Corridor Rotterdam–Genoa* (Cham: Springer International Publishers, 2016).

Commedia dell'Arte: How Planners Can Act in Naked Reality

1. Italian comedy of the 16th to 18th centuries, improvised from standardised situations and stock characters.
2. Charles Hoch, "Neo-Pragmatism," in *The Routledge Handbook of Planning Theory*, eds. Michael Gunder, Ali Madanipour, and Vanessa Watson (New York: Routledge, 2018), 119–123; Charles Hoch, "Pragmatism and Plan-making," in *Encounters in Planning Thought*, ed. Beatrix Haselsberger (New York: Routledge, 2017), 299–304.
3. Stijn Oosterlynck, Jef Van den Broeck, Louis Albrechts, Frank Moulaert, and Ann Verhetsel, eds., *Strategic Spatial Projects, Catalysts for Change* (London: Routledge, 2011).
4. Jef Van den Broeck, "Balancing Strategic and Institutional Planning: The Search for a Pro-Active Planning Instrument," *disP – The Planning Review* 49, no. 3 (2013), 43–47.

5. Jef Van den Broeck, "The Core of the Planning Discipline: New Paradigms, Fields of Knowledge, Capacities, Skills, Maxims and Methods," in *HESP – Higher Education in Spatial Planning: Positions and Reflections*, ed. Bernd Scholl (Zurich: ETH Zurich, 2012), 28.

Discourse: A Tool for a Collaborative Planner

1. A German sociologist and philosopher, Jürgen Habermas is best known for his theory on communicative action. See: Jürgen Habermas, *The Theory of Communicative Action, Volume 1: Action, Reason and the Rationalization of Society* (Boston: Beacon Press, 1984, originally published in German in 1981); Jürgen Habermas, *The Theory of Communicative Action, Volume 2: A Critique of Functionalist Reason* (Boston: Beacon Press, 1987, originally published in German in 1981).
2. Judith E. Innes, "Planning Theory's Emerging Paradigm: Communicative Action and Interactive Practice," *Journal of Planning Education and Research* 14, (1995): 183–185.
3. Patsy Healey, *Collaborative Planning: Shaping Places in Fragmented Societies* (London: Macmillan Press, 1997), 52 ff.
4. John Forester, *The Deliberative Practitioner: Encouraging Participatory Planning Processes* (Cambridge, MA: MIT Press, 1999), 61 ff.
5. Charles Hoch, "Making Plans," in *The Oxford Handbook of Urban Planning*, eds. Rachel Weber, and Randall Crane (NY: Oxford University Press, 2012), 241–242.
6. Gert de Roo, "Actor-Consulting: A Model to Handle Fuzziness in Planning," in *Fuzzy Planning: The Role of Actors in a Fuzzy Governance Environment*, eds. Gert de Roo, and Geoff Porter (London: Ashgate, 2007), 133–136.
7. Deborah Shmueli, Sanda Kaufman, and Connie Ozawa, "Mining Negotiation Theory for Planning Insights," *Journal of Planning Education and Research* 27, (2008): 360–362.

Reflective Leadership

1. Robin Hambleton, *Leading the Inclusive City. Place-based Innovation for a Bounded Planet* (Bristol: Policy Press, 2014), 12.
2. John Forester, "Questioning and Organizing Attention as Planning Strategy: Towards a Critical Theory of Planning," *Administration and Society* 2, (1981): 161–205.
3. Karen Christensen, in a famous essay, discusses exactly this point: if we know that there may be agreement or disagreement about goals and different degrees of uncertainty about technical solutions, we can describe what planning effectiveness is according to the different problematic situations that stem from the combination of these two dimensions. Applying this framework, the kind of performance which is requested from planners in case of agreed goals and known solutions is (A) to act as a programmer; in case of agreed goals and unknown solutions, it is (B) to favour experimentation; in case of known solutions and disagreement about goals, it is (C) to favour bargaining and negotiation; and, finally, in case of disagreement about goals and unknown solutions, it is (D) to favour a re-definition of the problem that can lead to its treatment. See: Karen S. Christensen, "Coping with Uncertainty in Planning," *Journal of the American Planning Association* 1, (1985): 65 ff.
4. Horst Ritter, and Melvin Webber, "Dilemmas in a General Theory

of Planning," *Policy Science* 4, no. 2 (1973): 157 ff.
5. This topic is discussed in a persuasive manner by Donald Schön, who dedicated his work to demonstrate that technical rationality cannot be sufficient to tackle the context of high uncertainty. See: Donald Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983).
6. Ibid., 38.

Participation for Democracy and Spatial Quality

1. Jürgen Habermas, *Die Einbeziehung des Anderen, Studien zur politischen Theorie [The Inclusion of the Other]* (Frankfurt am Main: Suhrkamp, 1996).
2. Karl Popper, *The Open Society and Its Enemies* (New York: Routledge & Kegan Paul Ltd., 1945).
3. Bruno De Meulder, Ali Madanipour, Konrad Miciukiewicz, Frank Moulaert, Jan Schreurs, Ruth Segers, Pieter Van den Broeck, Geoff Vigar, and Ahmed Z. Khan, eds., *The SPINDUS Handbook for Spatial Quality: A Relational Approach* (Brussels: ASP, 2016).
4. Louis Albrechts, and Jef Van den Broeck, "From discourse to acts: the case of the ROM-project in Ghent, Belgium," *Town Planning Review* 75, no. 2 (2004), 127–150.
5. Carolyn M. Hendriks, "Coupling citizens and elites in deliberative systems: The role of institutional design," *European Journal of Political Research* 55, no. 1 (2016), 43–60.
6. Jef Van den Broeck, "Pursuit of a Collective Urban Pact," in *Proceedings of the 31st ISOCARP Congress* (Sydney: ISOCARP, 1995).

Glossary

Action. The most important aim of spatial planning is to investigate, evaluate, and recommend possible courses of action, often called options, in order to solve current → problems or to prevent conceivable ones. This is the reason why this book speaks about action-oriented spatial planning. For more information on action-oriented planning, see: Scholl, Bernd. *Aktionsplanung. Zur Behandlung komplexer Schwerpunktaufgaben in der Raumplanung*. Zurich: vdf Verlag, 1995.

Actors and stakeholders. Actors are people who are generally involved with some kind of formal instrument, e.g., a legislative or regulative framework, and have professional skills and knowledge to bring about spatial change. Usually, they are not directly concerned about the effects of certain planning → decisions. Stakeholders most often have a direct interest, i.e. a stake in a certain spatial → problem, and/or the power to pursue that interest. They are directly affected by the consequences of proposed spatial changes and may or may not have experience or knowledge to protect their interests. For more information, see: e.g., Healey, Patsy. "Re-thinking Key Dimensions of Strategic Spatial Planning: Sustainability and Complexity." In *Fuzzy Planning: The Role of Actors in a Fuzzy Governance Environment*, eds. Gert de Roo, and Geoff Porter, 21–42. Abingdon, Oxon, GBR: Ashgate Publishing Group, 2007.

Brownfields, brownfield regeneration. A brownfield site is land or a facility previously used and/or developed and currently derelict or not fully in use, usually faced with the problems of contamination, social pathology and economic decay. Therefore, a brownfield site is usually not available for immediate use without an intervention, which implies some form of → action contributing to the reuse of brownfields, and covers a wide variety of mechanisms from different domains, such as: financial intervention; physical, chemical or biological remedies; changes in planning policy; decision to change the land ownership; location and marketing programmes, etc. In most cases, interventions are conducted by both the private and the public sector, most often in the form of formal or informal partnerships. For more information, see: e.g., Alker, Sandra, Victoria Joy, Peter Roberts, and Nathan Smith. "The Definition of Brownfield." *Journal of Environmental Planning and Management* 43, no. 1 (2000): 49–69; Dixon, Tim, Mike Raco, Philip Catney, and David. N. Lerner. *Sustainable Brownfield Regeneration: Liveable Places from Problem Spaces*. Chichester, GBR: Wiley, 2008.

Circumstance. An important element in making a → decision is the circumstance, often called the 'state of nature.' Circumstances are situational conditions, i.e. occurrences and events that the → actor cannot influence. Some of these may be evaluated, even if the probability of their occurrence is low, while others remain → surprises. Hence, it has to be taken into account that the chosen → action may not lead to the desired → results and may fail. Therefore, planners have to prepare measures in case the results are not suitable, viewing spatial planning as a → sequence of decisions and actions. For this reason, the provision of → reserves is a good idea. See: e.g., Signer, Rolf. "Ein Klärungsprozess für komplexe Schwerpunktaufgaben in der Raumplanung." In *Grundriss der Raumordnung und Raumentwicklung*, 310–329. Hannover: Akademie für Raumforschung und Landesplanung (ARL), 2011.

Collaboration, collaborative planning. Collaboration in planning means an opportunity to exchange experiences, knowledge, and skills among various → actors and stakeholders, gathered together for the goal around of consensus-building a certain planning → decision. Effective collaboration demands both internal and external conditions. The first include mutual trust among the stakeholders, their open communication, and willingness to accept the opinions of others, while the latter addresses the context, sufficient resources, and a teamwork culture. The key feature of a collaborative planning process is the fact that all the participants (thus even planners!) are truly equal in terms of power and responsibilities – nobody is in charge of decision-making; rather, it should be a collaborative effort. For more information on the essence of collaboration in planning, see the seminal work: Healey, Patsy. Collaborative Planning: Shaping Places in Fragmented Societies. London: Macmillan Press, 1997. The roots of collaborative planning in continental Europe can be found in the "Vienna Model." See: Freisitzer, Kurt, and Jakob Maurer, eds. *Das Wiener Modell. Erfahrungen mit innovativer Stadtplanung. Empirische Befunde aus einem Grossprojekt*. Vienna: Compress, 1985.

Collective agreements. Within the planning field, 'Collective agreements' are defined as negotiated→result-based contracts between participants in a deliberative process concerning the intended future of a specific space and place, and the path to be taken towards the necessary means and engagement of the participants. Structured communication, deliberation, negotiation, trading, argumentation and judgement are essential characteristics to reach such agreements. Such agreements cannot be considered an alternative for existing institutional (legal) instruments but as a strategic complement.

Commedia dell'arte. This is a form of popular comedy developed in Italy in the 18th century. It is also called *commedia improvviso*. In contrast to other forms of comedy, the actors do not follow a fixed text, but a plot outline or narrative track, i.e. they have to improvise. The actors embody certain stereotypes, such as lovers, servants, or clowns and sometimes wear masks. Although there are no fixed texts, these performances take place within an exercisable framework because the actors rely on their own collections of preformed pieces of texts and gestures. Planning processes often display certain similarities to commedia dell'arte in that they follow a plot outline (instead of a rigid programme) while planners use parts of their own sets of skills and knowledge when appropriate. See: e.g, Signer, Rolf. "Argumentieren in der Raumplanung." PhD diss., ETH Zurich, 1994.

Decision. → Actors who are responsible for carrying out → actions make a decision about which course of action to choose, based on the → recommendations of the spatial planners.

Delay time. The time period between a → decision to take an → action and the → result of the action, which may be desirable or undesirable. Delay times in spatial planning affairs are often counted in decades.

Deliberative democracy. A plea for an alternative democracy based upon the inclusive involvement of citizens in decision-making by the institutional creation of a public domain, a platform, where citizens, civil society, social movements and associations can debate, discuss and develop → visions and opinions to fundamentally influence the institutions of representative democracy. Deliberative democracy is a desired context for → participatory planning.

Frame. The coherent set of values, norms and criteria used to evaluate, argue and judge approaches, → visions, goals, policies, programmes and → actions within a planning process and which are accepted by society.

Gentrification. A gentrification process implies the transformation of a place by restructuring low-income neighbourhoods into upper-middle-class areas, not only by renovating the existing stock, but also by constructing new building stock. It encompasses housing, retail and commercial sectors, all of which significantly raise the tax expenditures for the local inhabitants. Therefore, residents without the means to follow the higher fiscal demands are forced to move out. For more information, see: e.g., Shaw, Kate. "Gentrification: What It Is, Why It Is, and What Can Be Done about It." *Geography Compass* 2 (2008): 1697–1728; Zukin, Sharon. *The Cultures of Cities*. Cambridge, MA: Blackwell, 1995.

Greenfields, greenfield development. Greenfields are usually farmland and/or open areas with no prior industrial or commercial activity. Greenfield development includes development on undeveloped parcels of land not surrounded by existing development, or on large parcels of land surrounding partially developed areas or undeveloped areas. Therefore, it is considered to be an unsustainable form of spatial growth and development, in contrast to → brownfield regeneration and → inward development. For more information, see: e.g., Adams, David, and Craig Watkins. *Greenfields, Brownfields & Housing Development.* London: Blackwell, 2002.

Institutional design. Within spatial planning processes, 'Institutional design or architecture' deals with the development of deliberative open platforms for social learning, debate, discussion, envisioning and decision-making, connecting formal and informal institutions in order to build consensus on common issues. Such platforms can give relative autonomy, shared responsibility and power to citizens, civil society groups and movements.

Inward development. Development or redevelopment of land that has been bypassed, remained vacant, and/or is underused as a → result of a continuing spatial development process. In planning practice, inward development usually includes the revitalisation of an area, be it by means of new construction or recycling of the existing building stock. Inward development contrasts with → urban sprawl, where agricultural land is transformed into building zones. In essence, it is considered the main mechanism of sustainable spatial development, and is clearly differentiated from → greenfield development, which aims at expanding the building land supply to previously non-structurally used areas in the outskirts of the communes.

Inward development in Switzerland. Following the revision of the Swiss Federal Spatial Planning Act in 2012, inward settlement development has become an explicit objective for Swiss spatial planning. At the popular vote in 2013, 63% of Swiss voters were in favour of this revision. As a result, the 26 cantons (member states of the Swiss Confederation) had to extensively re-examine their structural plans (*Richtpläne*) within a few years. During this time, increases in the area of building zones were prohibited. The cantonal overview of existing land reserves is of crucial importance for inward development. As a support to cantonal authorities, the Chair of Spatial Planning and Development at ETH Zurich has developed a method called Space^{+} (*Raum*$^{+}$) to explore the existing land reserves. According to recent data (2017), in more than 12 cantons, i.e. 300 communes, there are land reserves for more than one million potential additional inhabitants. For more details, see: Scholl, Bernd, ed. *Schweizweite Abschätzung der Nutzungsreserven 2017*. Zurich: vdf Verlag, 2017.

Key issues. Fundamental, structural and → strategic spatial planning issues that create an essential social-spatial challenge for the future at a specific place and moment. One could define them as issues that people and society strongly care about and are requesting a policy and urgent interventions. A key issue can also be defined as a fundamental and complex → problem for people, i.e. "a situation or condition valuable for people considering this condition as totally unsatisfactory" (cf. "… *ein Zustand, plus oder inklusiv einer menschlichen Bewertung, die diesen Zustand als misslich etikettiert*," in Schönwandt, Walter, Katrin Voermanek, Jürgen Utz, Jens Grunau, and Christoph Hemberger. *Solving Complex Problems: Handbook*. Berlin: Jovis, 2013).

Key witnesses. The use of in-depth interviews of key witnesses within a planning process is an explorative qualitative research method to achieve a quick provisional insight into relevant first-hand information in the planning context, → key issues, challenges, interests, key → actors, power relationships, → problems, ambitions, → visions, and solutions. The result of such an inquiry can be used as a start for a → collaborative planning process. The selection of key witnesses can be based upon their broad or specific knowledge and insight, or their role, responsibilities and engagement in society.

Land-use planning. Land-use planning is a branch of public policy, which encompasses various disciplines seeking to order and regulate the use of land in an efficient way. It includes the disposition of land, resources, facilities, and services with a view to securing the physical, economic, social and environmental efficiency, health, and well-being of urban and rural communities. For more information, see: CEMAT (European Conference of Ministers responsible for Spatial/Regional Planning). *Spatial development glossary*. Strasbourg: Council of Europe, 2007.

Participation, participatory planning. Participatory planning activities are mainly practiced by public authorities at the local level together with the citizens who are thus enabled to play an important part in the planning process. The crucial forms of participation include workshops, public debates, round tables, etc., when civil society can play an active role in decision-making processes and make their own voices heard.

Problem. An undesired current situation (societal or physical, for example) which should be improved by means of → actions. A conceivably undesirable future situation, which should be avoided by means of action. Another most common explanation is: "Problems are difficult unsolved tasks." See Duden.de. Accessed June 22, 2018.

Rationality, communicative. Communicative or collaborative rationality overcomes the dominance of experts' position compared to other → actors and stakeholders, and revolves around the skills essential for negotiation with and mediation among the participants in a planning process. In addition to the expertise of planners as representatives of socially relevant objectives, in → collaborative planning processes, planners assume important roles, namely in: organisation of the planning process that brings together a large number of participants, advocacy of various interests, common action, and an establishment of networks between participants. More precisely, planners are engaged in cooperation, negotiation, building mutual trust, and conflict resolution. Further details on the three conditions of collaborative rationality can be found in: Innes, Judith E., and David E. Booher. *Planning with Complexity: An introduction to collaborative rationality for public policy*. New York: Routledge, 2010.

Rationality, instrumental. Instrumental or technical rationality refers to the planners' technical knowledge and expertise that enables the setting of goals; identifying the necessary → actions towards the achievement of goals; creating the instruments for their implementation; and further monitoring and evaluating the realisation. These steps are ingrained in the rational comprehensive planning model, a dominant planning paradigm in the 1960s. For more information on the features of rational planning, see: e.g., Faludi, Andreas. *Planning Theory*. Oxford: Pergamon, 1973; Klosterman, Richard. "Arguments For and Against Planning." *Town Planning Review* 56, no. 1 (1985): 5–20.

Recommendations. Results of the evaluation of possible courses of → action, which spatial planners give to those carrying out the actions. Included are explanations about possible undesired → results (risks) and ways to overcome them.

Reserve. Due to → circumstances, it is advisable that every plan includes reserves of a certain amount of time, money, and brainpower.

Result. The changes in society and the physical environment that the recommended courses of → actions lead to, which may be desired or undesired.

Sequence of decisions and actions. In spatial planning, there are many imponderables or → circumstances that can lead to undesired → results. Therefore, it is advisable to view planning as a sequence: if a → decision for an → action is taken, it has to be observed, and in case of undesired results and/or → surprises, it should be followed by another decision. See: e.g., Signer, Rolf. "Ein Klärungsprozess für komplexe Schwerpunktaufgaben in der Raumplanung." In *Grundriss der Raumordnung und Raumentwicklung*, 310–329. Hannover: Akademie für Raumforschung und Landesplanung (ARL), 2011; Signer, Rolf. "Reasoning in a Macro Level Spatial Context." In *Integrated Spatial and Transport Infrastructure Development: The Case of the European North-South Corridor Rotterdam–Genoa*, eds. Hans-Jörg Drewello, and Bernd Scholl, 49–64. Cham: Springer International Publishers, 2016.

Shift from government to governance. This term or phrase appeared in the 1980s based on the transformation of global socio-economic and political → circumstances, and actually refers to the diminished role of governmental hierarchy. At the same time, it highlights the growing influence of non-state → actors, mutually interdependent in a → collaborative policy-making process directed towards achieving common interests. For more information on the transformative process from a political perspective, see: e.g., Rhodes, Rod. "The New Governance: Governing without Government." *Political Studies* 44, (1996): 652–667; transformation of the planning context and its effect on the planning process is explained in: Davoudi, Simin, and Ian Strange. *Conceptions of Space and Place in Strategic Spatial Planning*. London: Routledge, 2009.

Social justice. Originating in philosophical discourse, social justice as a concept is widely used today in daily language as well as in social science. In general, social justice is "a state of affairs (either actual or ideal) in which (a) benefits and burdens in society are dispersed in accordance with some allocation principle (or set of principles); (b) procedures, norms, and rules that govern political and other forms of decision making preserve the basic rights, liberties, and entitlements of individuals and groups; and (c) human beings (and perhaps other species) are treated with dignity and respect not only by authorities but also by other relevant social actors, including fellow citizens." The definition is taken from: Jost, John T., and Aaron C. Kay. "Social justice: History, theory, and research." In *Handbook of Social Psychology*, eds. Susan T. Fiske, Daniel T. Gilbert, and Gardner Lindzey, 1122–1164. Hoboken, NJ: Wiley, 2010.

Strategic spatial plan. A strategic plan is certainly not a "blueprint master plan nor a land-use plan;" it is:

- A dynamic and indicative → frame for a coherent policy and → actions containing a → vision, a possible becoming, spatial concepts and policy goals for the development of the city and also a long-term programme making the relatively abstract vision, concepts and goals, more concrete, specific and localised.
- A binding commitment package of short-term interrelated → actions and measures. Obviously, this part is the most tangible for people and, in principle, the subject of hard discussion, deliberation and negotiation. The content of the package should be directly related to the availability of means and as such to the budget of the city or region. A set of → collective policy agreements or arrangements committing and binding the → actors and stakeholders. A policy agreement is perceived as a → result agreement, a binding contract between committing actors (then partners) stipulating responsibilities and the financing of projects. For more information, see: e.g., Van den Broeck, Jef. "Balancing Strategic and Institutional Planning: The Search for a Pro-Active Planning Instrument." *disP – The Planning Review* 49, no. 3 (2013): 43–47.

Strategic spatial planning. The methodology (the approach, the way) or the process of tackling a limited yet interrelated number of complex → key issues, or realising an accepted or acceptable, complex but feasible, existent goal (or developing it) with the available or obtainable means within a specific planning context or environment and within a timeframe, and involving efforts that are acceptable to all the stakeholders. It is a process dealing with "clashing" values, interests and power, and is aimed at a choice and the realisation of a limited number of goals associated with structural social, political and spatial changes. It assumes different forms according to the context, scale, and complexity of the environment. Strategic planning is usually informal, action-oriented, and based upon the construction of a strategic → vision. In this sense, strategic planning is usually addressed to produce change and transformative → actions, thus trying to compensate and support some weaknesses of statutory, → land-use planning.

Surprise. Type of → circumstance that is unexpected and can hardly be foreseen. → Reserves may help to overcome surprises that may have an undesirable impact.

Test planning process. Informal instrument for exploring, clarifying and solving complex tasks, where the solution is usually of strategic importance for the development of the respective space. A test planning process is in many ways similar to the competitions known in architecture: design teams work in concurrence to each other to find the best possible solution for a → problem. But, there are some significant differences: in a test planning process, there is no winner and all the teams are paid for their work. In this way, the teams are motivated and able to really test possible options as well as discard them in the end. Also, test planning uses three rounds of design with intermediate presentations between rounds. Based on this concept, the teams can test and discuss their findings with local → actors and external experts in order to reframe and refine them. For more information, see: Scholl, Bernd. "Die Methode der Testplanung. Exemplarische Veranschaulichung für die Auswahl und den Einsatz von Methoden in Klärungsprozessen." In *Grundriss der Raumordnung und Raumentwicklung*, 330–345. Hannover: Akademie für Raumforschung und Landesplanung (ARL), 2011; Scholl, Bernd, Martin Vinzens, and Bernard Staub, eds. *Test planning – A method with*

a future. Solothurn: Canton Solothurn, Office for Spatial Planning; Berne: Swiss Federation, Office for Spatial Development (ARE).

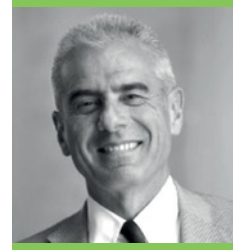
Urban sprawl. Urban sprawl is the process of expansion of cities beyond their boundaries in discontinuous and disorderly patterns. Urban sprawl frequently produces suburbanisation, congestion and car-dependent type of settlements.

Vision, visioning. The search for insight into and the creative prospect of the "could and possibly should be," taking into account not only the complex reality, the unexpected, the uncertainties, the lacking knowledge, the unknown factors, but also the ambitions and capacities of people influencing and determining the social and spatial evolution. A vision can imagine an intended, but uncertain future which can be used as a dynamic coherent → framework for the development of spatial policies, plans and interventions meant to change and innovate the existing reality in a specific direction. It is a thinking and working open-ended trajectory with a divergent character and a value-bound nature. For more information, see: e.g., Van den Broeck, Jef. "The Core of the Planning Discipline: New Paradigms, Fields of Knowledge, Capacities, Skills, Maxims and Methods." In *HESP – Higher Education in Spatial Planning: Positions and Reflections*, ed. Bernd Scholl, 26–43. Zurich: ETH Zurich, 2012.

VVIP analysis. Part of an → actor analysis that looks at their values, → visions, interests and power factors influencing the capacity to plan and act.

About the Authors

Alessandro Balducci



Professor Dr. Alessandro Balducci (1954) holds an MSc in Architecture and a PhD in Urban and Regional Planning. He is Full Professor of Planning and Urban Policies at the Politecnico di Milano. During his academic and professional career, Balducci has served as Deputy Mayor of the City of Milan tasked with Urban Planning, Vice Chancellor of the Politecnico di Milano, Director of the PhD programme in Spatial Planning and Urban Development at the Politecnico di Milano, President of AESOP (Association of European Schools of Planning), founding member of EURA (European Urban Research Association), President of Urba@it, the Italian National Centre for the Promotion of Urban Policies, and Chair of the Italian Society of Urbanists (SIU). He has been Visiting Scholar at the University of California, Berkeley USA (1988), and Visiting Professor at the University of Reims, France (1985), the Tongji University of Shanghai, China (2009), the Aalto University of Helsinki, Finland (2009), the Massachusetts Institute of Technology Boston, USA (2009), and the Academy of Architecture, Mendrisio, Switzerland (2010–2016). Balducci has directed national research projects funded by the Italian Ministry of Education, Universities and Research in the metropolitan areas of Italy and has lead research projects funded by the European Commission and other international organisations. He has practised urban and regional planning in Italy (Milan, Vicenza, Pesaro) and abroad (Shanghai, Xi'an, Dubai). Balducci is the author or editor of 20 books and many articles and essays on urban planning and urban policies. Among recent publications, he has co-edited *Situated Practices of Strategic Planning: An International Perspective* (Routledge, 2017).

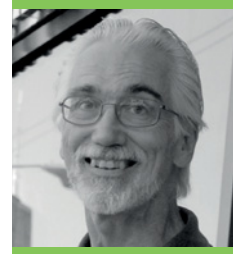
Jef Van den Broeck

During his academic career, Jef Van den Broeck (1940) was Honorary Professor at the KU Leuven, Belgium (1998–2010) and Honorary Lecturer at the Artesis University College in Antwerp (1978–2005), teaching strategic spatial planning and design. Between 1973 and 1998, as CEO of *Studiegroep OMGEVING*, an Antwerp-based planning and design practice, he dealt with strategic spatial planning and design at all spatial scales and policy levels (from local to supranational), in both Europe and developing countries. He is the author of many spatial plans and articles and is involved with various organisations that promote socio-spatial quality.

Anita Grams

Dr. Anita Grams (1970) is Lecturer at the Institute for Spatial and Landscape Development, ETH Zurich, and Coordinator of the ETH MAS (Master of Advanced Studies) programme in Spatial Planning. She was project leader at a number of architectural companies and private planning offices in Switzerland after completing her graduate studies in Architecture from ETH Zurich in 1996. She obtained an MAS degree in Spatial Planning at the same university, and was afterwards appointed as Professor of Architecture and Spatial Planning at the Bern University of Applied Sciences. Her teaching activities range from planning methods and instruments to research in spatial planning to coaching of project teams. Grams' research focus is on the development of innovative planning processes and methods for inward development in small and medium-sized communes, the subject of her 2015 doctoral thesis at ETH Zurich. This publication, titled "Playing with Density," won Special Mention for the Gerd Albers Award bestowed by ISOCARP (International Society of City and Regional Planners). Her latest research interest lies in experimental teaching methods in spatial planning and process-orientated learning as a key skill in handling uncertainty.

Charles Hoch



Professor Dr. Charles Hoch (1948) taught urban planning at the University of Illinois at Chicago for 35 years. Hoch studies how professional planners and others make spatial plans and the kind of work that plans supply. He has taught lecture and workshop courses on the history, theory, organisation, and practice of urban planning. In the last decade, he helped institute an innovative plan making curriculum inspired by a pragmatist conception of practice, where students learn by doing as well as studying. Hoch has played an active role in the intellectual and institutional development of planning education in the United States. He served as an elected representative on the governing board of the American Collegiate Schools of Planning (1991–1997) and chaired the Planning Accreditation Board (2008–2011). His books include *What Planners Do* (Planners Press, 1994) and *The Practice of Local Government Planning* (ICMA, 2000). He has also published research on housing and community development, including *Under One Roof*, edited with George Hemmens and Jana Carp (SUNY Press, 1996) and *New Homeless and Old: Community and the Skid Row Hotel*, authored with Robert Slayton (Temple University Press, 1989). Hoch has published articles on planning theory, practice, and housing in *Environment & Planning C, The Journal of the American Planning Association, The Journal of Planning Education and Research, The Journal of Architectural and Planning Research, Planning Theory, Planning Theory & Practice, Plan Canada, Town Planning Review*, and other social science journals.

Justin Keller

Justin Keller (1980) is a graduate student pursuing a master's degree in Urban Planning at the University of Illinois at Chicago. He studies the influence of the built environment on local ecosystems and public health outcomes, in particular the combined impact of urban sprawl and changing precipitation patterns. Together with Charles Hoch he compiled and assessed water-related plans for northeast Illinois. He currently works with a collaborative team of agencies creating a wetland park to remediate overbank flooding in a small, low-income municipality in Chicago's south suburbs.

Markus Nollert

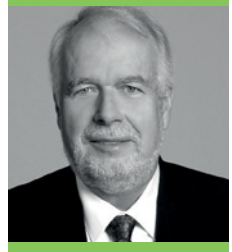
Dr. Markus Nollert (1977) is founder and owner of the *bureau für RAUMENTWICKLUNG* in Zurich, an office specialised in the development of suitable processes for collaborative planning and decision-making in multiple actor networks. He places an emphasis on finding and solving complex problems of spatial development in an interdisciplinary and actor-based environment. Between 2014 and 2016, he designed and moderated the public planning process entitled *Räumliches Leitbild Karlsruhe 2015* (Spatial Concept for Karlsruhe), which resulted in a spatial strategy and was translated into concrete tasks for the next decade. He also works on the interface between conceptual work, political consultation and implementation, and public participation, mainly seen in coordinating various test planning processes, and managing the Nextzuerich.ch public participation platform. Other aspects of Nollert's work include spatial design at the regional and integrated spatial levels: he was commissioned to develop large-scale spatial visions integrating different spatial functions for a long-term strategy in the Limmat Valley near Zurich, in the region around Cologne, and in the central Alpine regions. Since 2009, he has been lecturing in Spatial Design and Planning Argumentation, as well as Strategic Planning Methodology, at the Institute

for Spatial and Landscape Development of the Swiss Federal Institute of Technology (ETH Zurich). In 2017, he was appointed Lecturer at the Spatial Research Lab of the International Doctoral College. Nollert's doctoral thesis in spatial design was published in 2013, while his recent research focuses on design as a knowledge-generating skill in complex situations, the exchange of knowledge between science, research and practice, and the methodology of planning in multilateral actor networks.

Ana Perić

Dr. Ana Perić (1982) is Lecturer and Senior Researcher at the Institute for Spatial and Landscape Development, Swiss Federal Institute of Technology (ETH Zurich). After completing graduate studies in architecture at the Faculty of Architecture, University of Belgrade, she went on to obtain a PhD in Urban Planning, which earned her an award from the Belgrade Chamber of Commerce. In 2016, she was appointed Research Fellow at the same faculty. During her studies, she received a number of grants, including the Swiss Governance Excellence Scholarship. In addition to lecturing on European spatial planning, she is actively engaged as a member of supervising committees in a number of PhD dissertations, MAS (Master of Advanced Studies) and Master's theses at European universities (ETH Zurich, UPC Barcelona, University of Belgrade). Her scientific and professional research focuses on spatial and urban planning, urban research methodology, transnational cooperation, collaboration in the planning process, and brownfield regeneration. Devoted to exploring spatial planning for development, she has participated in several international projects on various topics: from spatial and transport development in European macro-regions to brownfield regeneration initiatives. She is the author of the monograph *Brownfield Regeneration in the Danube Macro-Region: Institutional Dynamics* (LAP, 2014), and co-editor of two books: *Ten Years of UPATs: Reflections and Results* (vdf Verlag, 2015), and *CODE: ATHENS! Railway and City Development in Athens* (ETH/IRL, 2016). Apart from publishing extensively, she also serves on review boards for three international journals and is an active member of several academic and professional organisations. She is the Vice President for Awards, Communication and Marketing of ISOCARP (International Society of City and Regional Planners).

Walter Schönwandt



Professor Dr. Walter Schönwandt (1950) holds MScs in Architecture/Urban Planning and Psychology from the Universities of Stuttgart and Heidelberg, respectively. Between 1979 and 1984, he was Assistant Lecturer at the Institute of Regional Science at Karlsruhe University. He received his PhD in 1984 with a thesis entitled 'Thinking Traps in Planning.' For nine years thereafter he headed the Planning Department of *Umlandverband* (UVF), a regional planning organisation in Frankfurt am Main. His responsibilities included traffic planning, landscape planning, housing, economy and infrastructure, statistics, cartography, and the Information and Planning System (IPS), as well as graphic data processing for the UVF. Between 1993 and 2016, Dr. Schönwandt was Director of the Institute for the Foundations of Planning (IGP) at the Stuttgart University. He was Visiting Scholar at the Oxford Brookes University and Visiting Professor at the Vienna University of Technology and at the Swiss Federal Institute of Technology (ETH Zurich).

Bernd Scholl

Professor Dr. Bernd Scholl (1953) is Full Professor of Spatial Planning and Development at the Institute for Spatial and Landscape Development (IRL) of the Swiss Federal Institute of Technology (ETH Zurich). He was Director of the IRL between 2007 and 2009, and again between 2012 and 2016. His teaching and research focuses on land and spatial management in local and regional development, spatial and infrastructure development, topics of transnational importance, and the development and organisation of innovative planning processes and methods in spatial planning and regional development. Scholl teaches in several master's programmes: Geomatics and Planning, Civil Engineering, Spatial Development and Infrastructure Systems, and in the Master of Advanced Studies programme in Spatial Planning. Since 1987, he has been a partner in a city and regional planning office located in Zurich. He is a full member of the German Academy for Spatial Research and Planning (ARL) and a founding member of the Baukultur Foundation, Berlin. Scholl's latest publications deal with inward development, integrated spatial and infrastructure development in spaces of national importance, and higher education in spatial planning.

Rolf Signer

Dr. Rolf Signer (1948) first studied rural development engineering (*Kulturingenieur*) at the Swiss Federal Institute of Technology (ETH Zurich). Afterwards he completed the post-graduate studies programme in spatial planning and received a doctorate with distinction from the same university. He works as a planning consultant in Switzerland, running a Zurich-based office for city and regional planning, which mainly focuses on projects at the urban and regional scale in Switzerland and abroad. He headed the Swiss National Delegation to the International Society of City and Regional Planners (ISOCARP) (2000–2006). Between 2009 and 2016, he was President of the Zurich Study Society for Planning, Architecture and Mobility (*Zürcher Studiengesellschaft für Bau- und Verkehrsfragen*, ZBV). Until recently, he was also Lecturer in Planning Methodology at ETH Zurich and at the Spatial Research Lab of the International Doctoral College. His latest publications concern clarification processes for complex tasks in spatial planning and the basic aspects of the use of images in spatial planning.

Andreas Voigt

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Hardwin De Wever

Hardwin De Wever (1969) is Executive Director for Urban Programmes and Projects with the semi-public company AG VESPA in Antwerp, Belgium. He is in charge of the management and execution of urban strategic programmes and projects and public space projects, all of them concerning urban renewal; many of these projects have received national and international awards. He trained as an architect (University of Ghent, 1988–1993), and holds master's degrees in Human Settlements (KU Leuven, 1993–1994) and Urban Planning & Design (University of Antwerp, 1996–1998), as well as additional degrees in Urban Management and Consultancy Management (CIGO, University of Hasselt and KU Leuven, 2012). For almost 20 years, De Wever has been an active practitioner and consultant in the field of strategic urban planning, design and management, real estate development and public spaces. Between 2000 and 2008, he was in charge of a successful regeneration project that saw the former Spoor Noord railway yard in Antwerp, Belgium, transformed into a new urban landscaped park for the city. Internationally, he has advised planning departments in Suriname and worked for the UN Habitat Vinh City, Vietnam, as an Associate Expert. His education and practice have given him substantial experience in guiding and designing participatory urban regeneration processes that, he strongly believes, truly contribute to a successful implementation of urban programmes and projects. Currently, De Wever is also engaged as Visiting Professor at the Faculty for Urban Planning and Design Research, University of Antwerp, where he teaches Design Studio Practices.

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