

Action oriented "Project Weeks" to challenge complex planning problems

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Abstract

This paper introduces our teaching methodology to involve practical work into the postgraduate program in spatial planning. As an example, the project week "Urbanism as a Process" in Rostock is used. The students' task was to deal with complex planning problems in the field of urban developments on the interface between architecture and urban planning. They should learn to comprehend architecture and urban planning as a process of understanding existing problems and recognising opportunities for, which creative and suitable solutions have to be designed.

For this particular project work, the planning task was to develop a strategy for the urban restructuring of a harbour area in the city of Rostock in Eastern Germany. The most important objectives were to become acquainted with the elements of an urban planning strategy, consider the important structural and spatial relationships involved, implement evaluation criteria that identify the elements and processes which constitute positive developments and understand the motivations and objectives of the different actors and their areas of influence.

The type of questions posed, the preparation materials developed and the structure of the project week itself enable students to create solutions for complex planning problems in a short span of time. The main elements of the project week are at close proximity to the project area itself, including interaction with the stakeholders on the site, input from external experts and interdisciplinary discussions amongst the students. The involvement of the stakeholder (e.g. planning department, private landlords) provides a further motivation for the students to produce credible results. This framework encourages a close relationship between theoretical knowledge and planning practice.

I. The Role of the Project Week in the Education of Spatial Planning at ETH Zurich

1. Introduction

A key theme in planning education is to enhance the relationship between theory/methodology and practical work. Therefore, in the second year of the postgraduate program, the ETH Zurich introduced so-called "Project-Weeks" as work-based training in inter-professional and multi-disciplinary teams. This paper wants to show an example of how these project weeks are incorporated into the spatial planning curriculum.

The Urban Studies and Landscape Planning Network (former ORL-Institute) at the ETH Zurich offers a part time postgraduate education in spatial planning. Based on their previous academic background (e.g. in architecture, the social or natural sciences, engineering, law, economics), the students are prepared for employment within the area of spatial planning.

The first part of the two-year program covers all professionally relevant academic subjects and focuses on key questions in the field as well as primary areas of expertise. The teaching content is continuously adapted to fit current needs and accommodate new directions and ideas in spatial planning.

In order to accommodate the complex needs and busy lifestyles of the part time students, we customised the schedule of classes in weekly blocks and supplemented each course module with preparatory materials and tasks to be done outside the classroom. In addition, we introduced web-based learning, which included building up a web-based platform for co-operative work. But the biggest challenge remained an old one - combining practice and theory in the context of higher education. For this purpose, project weeks are arranged in the second year of the postgraduate study.

2. Preconditions for the Project Weeks

In addition to gaining knowledge in these substantive fields of planning education (land use planning and regulation, European spatial development policy, urban development, architecture, landscape architecture, landscape and environment, transportation, infrastructure, sustainability, law, spatial and environmental economics, political sciences), the students are expected to strengthen their skills in communication, analysis, strategic planning, synthesis, creativity, leadership, management and coordination through a series of modules:

- “Communication and Moderation” focuses on participatory planning processes and the search for consensus solutions for all actors involved. Exercises have been designed to help students develop clarity in verbal expression, security in their role as moderator and effectiveness in the moderation of conversations.
- “Strategic Choice” presents a set of instruments to solve complex spatial decision problems. The construction of a decision chain allows for the continual working out of possible solutions that can be compared and evaluated. Interventions on different action levels facilitate the development of significant recommendations.
- “Engineering and Project Management” introduces the core methods of systematic problem solving especially useful for complex interdisciplinary problems. We discuss topics such as moderation, negotiation, project organisation, context analysis and knowledge management (SWOT-analysis, stakeholder-analysis).

Students in general, especially those without practical planning experience, should have experience in a studio or workshop course in plan making and problem solving of real world issues. Groups of planners and specialists from varying fields increasingly work together in ad-hoc-organisations to solve complex planning problems. Students should learn how to work effectively as members and leaders of planning teams, and to apply an understanding of interpersonal and group dynamics to assure effective group action. The theoretical knowledge of group processes, as well as mediation and negotiation skills learned in the first-year modules must be grounded with experience in the field.

The second part of the two-year study focuses therefore on practical work and involves an interdisciplinary approach. The concept of action-oriented “Project Weeks” was developed to reinforce a versatile and practical set of planning methods for collaborative decision-making within an intense and compact time framework.

During four one-week sessions the students learn how to collaborate in interdisciplinary teams and how to tackle spatial problems efficiently and effectively under various conditions and in different contexts. The subject can be problem areas or current themes. Examples of past project weeks include the Toni Areal (Re-use of an industrial area in the west of Zurich), Grünau (Upgrade a neighbourhood in the west of Zurich), Monitoring "Airport Zurich" (Spatial development and aircraft noise), Border-Region (Acquiring a Interreg III project) and Metropolitan Governance (Planning of territories and overlapping functional regions).

The academic staff, which is responsible for the conceptual formulation and realisation of the project week can influence to a degree the type of questions posed, the preparation materials developed and the structure of the project week. However, the main elements of the project week are "on site" and specific to the project area itself, including interaction with the stakeholders on the site (e.g. planning department, landlords), input from external experts, and the interdisciplinary discussions amongst the students themselves. The involvement of the stakeholder provides a further motivation for the students to produce credible results. This framework enables the students to create solutions for complex planning problems within a short period of time and encourages a close relationship between theoretical knowledge and planning practice.

3. Concept and design of the Project Week

Because of the relatively short time involved, the students have to be relieved from routine work such as collecting data and obtaining plans and maps etc. Their time must be concentrated on the creative, co-operative and intellectual work in their teams. As a result, important background information is given to them in a folder that is handed out one month in advance:

- Description of the problem
- Program and time schedule for the week
- Information about the region, relevant interviews and newspaper articles
- References to methodology, tools, legal documents, etc.

Typical layout and organisation of a project week (Monday morning to Friday evening):

1. Introduction of the project week task by the academic staff
2. Building of teams by the students
3. Working into the problems: analysis, structuring the problem fields and building the problem focus by the working groups
4. Input from actors, experts and academic staff
5. Working towards decisions: Exploring fields of uncertainty, timing of decisions, building a commitment package for the stakeholder on the planning problem, working towards a final planning product
6. Review and feedback from academic staff
7. Preparing the presentation
8. Final presentation by the working groups, criticism and discussion in a plenary session with the academic staff, experts and actors of the project week
9. Evaluation, final report

Depending on the learning goals, the tasks of the project weeks differ. In some projects the methodology, definition of the problem, approach or the final products are predetermined, in other they are totally undefined.

The project week “Rostock” is a good example to show in detail, how the students and academic staff worked on the task of developing an urban restructuring strategy within the framework and educational objectives of the project week.

II. Urbanism as a Process: The Example Rostock

The project week concept was developed and realised by the Chair of Architecture and Urbanism, ETH Zurich. The team responsible for its preparation and implementation consisted of Nicola Schüller, Sabine Friedrich and Prof. Franz Oswald.

1. The interface between urban concept and planning process

The students` task in the project week was to approach complex planning questions within the realm of urban design and planning and in the context of a concrete site, using the work process as the “interface” to merge the two disciplines. In planning practice, the design of urban concepts and the development of the related planning process are two different lines, which are first connected during the period of implementation of real projects. However, great potential lies in the communication and inter-relation between these two concerns at a much earlier stage. For example, one could adapt the urban concept ad hoc to changing economic and political conditions, or vice versa use the planning process for realising specific architectural and urban qualities by creating a common ground between the important stakeholders.

In general, the aim of the project week is to understand the interrelations between different elements of a development strategy:

- targets for future development
- an urban project
- a planning process for the specific urban project, containing the discussion about quality criteria, resources, use/activities concept, time horizons and relevant stakeholders.

2. Objectives of the Project Week

In the context of the project week, important objectives for the students were as follows:

- to consider the important relationships (economically and spatially),
- to implement evaluation criteria that identify the elements and processes which constitute positive developments,
- and to understand the motivations and objectives of different actors and their sphere of influence.

In turn, the city of Rostock was motivated to play an active part in the project week in order to most benefit from new contributions to the discussion on their future urban development. As an interdisciplinary highly-qualified group, our students could bring objective insights on specific problems and potentials from short-, middle- and long-term perspectives.

3. Restructuring an industrial harbour area in the city of Rostock

Solving complex urban planning problems offers a good opportunity to elaborate a case study in a real urban context. Therefore we chose an area in the hanseatic city of Rostock in the north east of Germany that is in a continuous transformation process and holds enormous development potential.

Since the reunification of Germany in 1989, the city has gone through serious demographic and economic changes that have triggered new demands in spatial development: e.g. the breakdown of the maritime economic sector, the population decline from 254,000 to 197,000 inhabitants and an unemployment rate of 16%. In the past decade, the city of Rostock and business representatives have reacted by making an effort to diversify the economic structure by promoting service industry, high-tech and biotechnology, small and medium sized enterprises, etc.

In official documentation titled “Leading Ideas for a Sustainable Development”, the city government proclaims the direction for the future development of the city and presents the image of the ‘City on the Waterside’. One primary goal for the future economic development is certainly the attraction of qualified manpower and investments. Today, a great amount of fallow or underused land containing areas on the waterfront or close to major infrastructures lies within the city boundaries. Therefore the city possesses enormous development potential.



Figure. 1–2: Location in Germany and planning site

One piece of this potential is Rostock Bramow – the planning site on the western side of the river Unterwarnow. It is mainly a vacant area that covers 190 ha, including 3.8 km of river banks, characterised by a series of brownfield areas. The contradiction between the high location qualities (within walking distance to the city centre, waterfront, existing public and private transport systems, etc.) and its isolation from the rest of the city (a heritage of the socialist period) requires a serious investigation of the area's potential as well as a land use strategy that best supports its future development.

During the last five years, a series of development and zoning plans for certain parts of the site have been developed by the city planning department, setting aside areas for industrial uses combined with recreation and educational facilities. The participation of important stakeholders (e.g. the landowners) was only considered in the last period of the planning process, when the authorities presented them the results for approval.

Even though a few research facilities have settled down in Rostock Bramow during the last years the further development direction of the area remains uncertain. Due to a low demand on the real estate market and lack of investors, remarkable parts of land were sold or rented to diverse firms or set aside, impacting its further development. The resulting spatial distribution of usages, the positioning of buildings and their architectural qualities misrepresent the location qualities. This strongly compromises the development potential Rostock Bramow would have today.

The requirements for the future urban development of Rostock are perhaps less determined by quantitative growth, as through the changing qualitative demands characterising Rostock in the competition with other European cities.

4. Teaching methodology

The project week included advance preparation work. The participants studied the prepared material: plans and analysis of the location, information about the ongoing planning processes, papers about the economic, urban and social situation, interviews with the main stakeholders, etc. In the project week, which is limited to five days, the students worked on the planning site in Rostock, where they were encouraged to develop a planning strategy.

The following issues had to be considered in the strategy:

- Development opportunities for the planning site, taking account of the specific role of this area in the context of the international and regional alignment of the city of Rostock
- Specific location qualities on a municipal and local scale considering a long-term perspective for the planning site and its specific impact on neighbouring areas
- Potentials of the strategy itself to restructure the area (short- and long-term perspective, mode and time schedule to integrate important stakeholders, etc.)

During the project week, the students took on the role of independent, interdisciplinary experts, with the task of elaborating development strategies for Rostock Bramow. Five interdisciplinary groups of participants were formed to work out different strategies. These strategies were meant to be long-term-oriented, or referring to a time horizon of 25 to 30 years. The results of the project week were to be presented as a statement arguing for the future development of Bramow. Therefore the participants' focus was to work out a possible future profile for the planning site

(design qualities, uses, relations) and to elaborate objectives and proceedings for an adequate planning process.

To deal with the high complexity of the problems of fallow areas and especially of Rostock Bramow, the task was divided into three parts:

1. Targets for the future development (assess the strengths and weaknesses of the site for given criteria, discuss the development objectives of the planning department, develop own goals for the future restructuring of the area, etc.)
2. Urban plan for Rostock Bramow (define the future qualities of the area, evaluate the main target qualities for e.g. uses, users, spatial and functional relations, urban design qualities)
3. Plan development process (work out the main elements, time horizons and stakeholders)

Organisationally, the workshop was divided into two parts, both of which concluded with a critique of the students' work and addressed the full program of the three question complexes in order to achieve the aimed amalgamation between urban concept and the planning process. During the workshop, the five groups were coached by local experts (planning department, landscape department, landowners, economic leaders, politicians, etc.), external experts from German universities, and the teaching team from the ETHZ.

Two excursions were organised to acquaint the students with the local and regional context of the site. At the beginning of the project week, the planning site was introduced by the leader of the planning department and the members of the Chair. At midweek, we travelled to Stralsund, a small hanseatic city about 70 km east of Rostock, to look at the planning processes and urban qualities with local experts. During the whole project week, the students were located on the site to be able to recognise and experience its specific and unique conditions and qualities.

For the final presentation of the statement the main stakeholders of the site were invited to give feedback and discuss the students' work and its possible impact on future planning initiatives for Rostock Bramow.

5. Results of the Student Work

5.1 Reflections on Urban Ideas

During the course of the project week, the students had to reflect on the City of Rostock's development objectives for the area and build up their own list of goals for the future of Rostock Bramow. The participants identified the relations to the Baltic Sea-area and the importance of a specific location profile, for example as a centre for education, culture and services, as a main precondition. Therefore the location qualities (waterside, efficient transport system, university, etc.) were analysed.

The students were able to pinpoint and prioritise the main problems of the planning site, its urban situation and the related planning processes pursued by the planning department of Rostock using various methods of the planning practice introduced as part of the spatial planning curriculum. These methods, including the SWOT-method to analyse strengths, weaknesses, opportunities and threats of an area and the PIN-method to look at the positions, interests and needs of the stakeholders, enabled the students to deal with the high complexity of the site and to elaborate results in a quite short span of time.

Fig. 3



Fig. 4

- Legende
- S-Bahnlinie / S-Bahnstation
 - Industriegelände (ÖV)
 - Wasserkante
 - Vernetzung (räumlich, visuell)
 - Übergänge S-Bahn
 - Vernetzungsraum
 - ↔ Anbindung Ostufer
 - Räumliche Struktur
 - Identifikationselemente
 - Vertikales Element
 - Kristallisationspunkte
 - P Aktivitätenverteilung
 - C City Nutzungen
 - E Entwicklung (Emissionsarm)
 - F Freizeit
 - H Handel/Gastronomie
 - K Kulturelle Nutzung
 - P Produktion (Emissionsstrahlig)

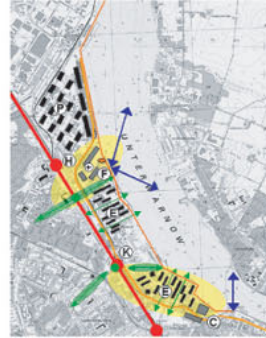
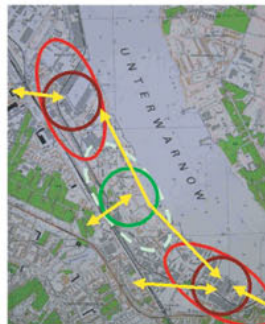


Fig. 5

Klare Strukturen schaffen Identität
 Anerkennung der Bipolarität
 Offene Mitte als gliedernendes
 und verbindendes Element



Fig. 6



Strategie
 Zweite Phase

- Ausdehnen der Nutzungsschwerpunkte in die grünen Freiflächen
- Grünbrachen reduzieren sich
- Ausbau der Verknüpfungen mit Wohnen W
- Verbesserung der internen Erschließung (Wege)

Fig. 7



Figures 3–7 show the urban ideas of the five working groups: 3. A Balcony overlooking the railway and river, 4. Waterfront as Identification Line, 5. The Bi-polarity of Rostock Bramow, 6. Three Crystallization Points, 7. Density and Anti-density

The students made a sensitive reflection on the ongoing problems in their economic, political and social contexts while focusing on potential strengths and opportunities of the site. Every group developed an individual urban idea of how to integrate the isolated area in the city of Rostock and to bring back the area to the waterfront. Important qualities of these concepts were for instance to implement new relations between the planning site and adjacent neighbourhoods, strengthening the waterside areas as a public site, pinpointing key areas for the future development and developing a flexible land use concept.

The projects of the different working groups were based on different design strategies, for example to concentrate all energies on an efficient use of the limited existing economic resources or the orientation of the area on the linear element, the river Unterwarnow. (See Figures 3 to 7)

Important themes in the student work included the following:

- the differentiation of sub-areas with specific spatial and functional qualities to structure the area
- leading urban ideas e.g. the differentiation in high and low building densities or the structuring with green areas
- the establishment of “crystallization points” for the future development in areas with high location qualities and infrastructure potentials
- land use concepts based on the specific location qualities of sub-areas

In summary, the participants formed a long-term vision for the spatial development of the site and focused on integrating the area and its qualities in the city of Rostock. Relating their spatial ideas to the economic situation and context-specific qualities, the groups elaborated urban design strategies and objectives with respect to different time horizons.

5.2 Reflections on the Planning Process

The legal plans made in the years 1999 to 2001 for specific sub-areas of Rostock Bramow were a reaction to a demand from investors at the time. Since then, the land-use pressure has declined continuously and the main projects now involve conversions and intermediate-uses of the existing building structure.

In this context, the students worked out procedures that took into account both the high qualities and the tense economic situation of the area. For the implementation of their individual urban ideas, all groups chose a strategy of “small steps” that enabled the short-term realisation of projects as well as the following of long-term targets. The quality of this strategy lay in its ability to accommodate continual changes in the economic framework and unknown future developments. Therefore, the aim was not another series of fixed plans, but a clear distinction of key long-term goals with early co-operation with important stakeholders. These goals provided an overall direction for the step-by-step realisation of the urban concept but allowed a degree of flexibility for unforeseeable developments and uses.

All working groups sketched out a co-operative planning process, which had to be based on a development concept supported by the owners and the different planning authorities. With these results, the students referred to the weaknesses of past planning processes, (e.g. the failure to integrate the owners early on in the development of urban concepts and the strained relations

among various planning authorities). However, the groups developed individual ideas for realising the co-operative planning process:

- Establishing a common ground with the stakeholders as a starting point for future concepts and projects
- Using different time-frames (short-, middle- and long-term)
- Integrating relevant stakeholders

One focal point in the work of most student groups was the early securing of ground as a precondition to implementing key functions and establishing public spaces, park networks and connections to neighbourhoods and other areas of the city of Rostock. In past years, communal owned plots have been sold without taking into consideration the value of these plots for the overall development of Rostock Bramow. The city officials of Rostock have to decide if they are willing to take the effort in making investigations as pre-investments to strengthen the area, which could be amortised in the long run by the added value on their plots.

Another discussion in most projects was the issue of intermediate-uses. These can be valuable tools for maximizing the potential of an area within a short time-frame without blocking future development. For example, the “Fishing Harbour Holding Company” uses this practice with their unused buildings along the fishing harbour in Rostock Bramow. Using their own staff, they renovated these buildings and leased them to small and medium-sized industries. These intermediate uses prevent unnecessary or hasty demolitions, diversify the use structure, and strengthen the public cognition of the area.

5.3 Discussion of the student work

In the limited time frame of the project week, the students were able to recognize the main spatial and functional problems of the planning site, create an impression about the complex economic and social framework, as well as develop an awareness of the relations between some of the important stakeholders and the impact of these factors on the overall planning process. Based on their analyses, they were able to develop preliminary urban ideas with specific future qualities and consequences for Rostock Bramow. To expand these ideas into sustainable urban concepts (use concept related to the specific economic situation, etc.), however, more time and detailed knowledge about the specific conditions in Rostock would be necessary.

Using the strategy of “small steps based on long-term development objectives”, the working groups acknowledged the tension existing between land owners and representatives of the local economy looking to short-term developments with their short-term gains and the high potential of the location qualities of the site, that can only be taken advantage of with a long-term perspective.

The more or less generalized statements about the urban and architectural qualities of the area as well as the inherent weaknesses of a use concept and co-operative planning process, developed without the ability to work in-depth, are examples for the limitations of a five-day workshop module. It is also not reasonable to expect students to design excellent urban structures without previous knowledge or experience for the practical side of their work. On the other hand, it is also not possible to build up a realisable planning process without knowing the specific needs and positions of the land owners and the planning instruments of a particular place, a common practice today.

All in all, the students were able to handle the multiplicity of uncertainties with their professionalism and the methods they learned in their studies. They used the tight time-frame to get an overall view, to work out important themes related to their specific ideas, to mirror the present planning process and contribute some ideas to the future of Rostock Bramow.

6. Evaluation and Outlook

An evaluation of the project week with a questionnaire filled in by the participants gave us primarily positive feedback. The students' expectations were satisfied for the most part. The preparation materials, organisation, student performance and selected parts of their work convinced the participants and the leadership of the worth of the project week format. Details to enhance were more time to get to know the site and the option to work in groups without being interrupted by presentations.

In our opinion, the tight time-frame of a one-week course is a good exercise for developing a sustainable planning strategy. One is forced to think in a larger scale and distill the most important elements of an idea. This strategy could also be used in the ongoing process, as a starting point to develop an individual proceeding, or chance to rethink current planning procedures, while adding the knowledge and experiences of the stakeholders in Rostock.

Choosing a project week site in a foreign country required the Chair and project week team to provide additional support and resulted in higher expenditures. But the chance for the students to reflect and gain an objective perspective on the planning situation in their home country, to deal with new challenges, etc. was very motivating.

For the preparation of this kind of workshop, it would be easier to co-operate with foreign schools. It is probable that the teaching staffs could profit from their respective inputs and resources and that the students could work together in mixed groups. This kind of exchange would also expose students to different mentalities and ways of thinking, working methods and help them gain access to local knowledge.

Our questions for the following discussion:

- How can various planning schools build up an active co-operation process based on project work?
- Do other schools offer one-week courses in planning or planning-related fields to open an exchange program for a limited group of students (credit points system)?
- Would it be interesting to build up a common summer school for master students with a group of AESOP members?

The didactical concept of the project week "Urbanism as a Process" was successfully realized in two different courses (Zurich West in 2000 and Rostock 2002) and could be useful to open a co-operative process in education between different AESOP schools of planning.