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in co-creative processes

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*Cover photo. Tool 2: A map-based SWOT analysis being
prepared for the area around Borås station*

Process tools
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Working with several different parties in early phases of projects is often an element in the everyday work of planners. However, how can this work itself be planned and which tools can be of use here? Taking the R & D project "Climate-smart and attractive transport nodes" as a starting point, professor Ulf Ranhagen describes a selection of the tools he has long been a driving force in developing.

This article illustrates how five different planning tools can be used to stimulate a way of working that, in collaborations involving agents from different professions, is both analytical and creative. The article's starting point is the practice-oriented research project "Climate-smart and attractive transport nodes". This is linked to the Urban Station Communities knowledge process at Mistra Urban Futures in Gothenburg.

To enhance quality and creativity in social and land use planning at various levels, it is important to mobilise the expertise of all those involved and stimulate their creativity and desire to be co-creative. Working systematically with process tools can achieve this. Said tools can be used for: handling problems and issues; and, developing proposals, environmental impact assessments and implementation strategies. Thus, working with an array of tools (a toolbox) can help invigorate planning processes. It brings out depth-enhancing knowledge, ideas and conclusions that do not so readily emerge with traditional analysis and synthesis methodologies. It is also possible to select a single tool for a specific task, even if it not ideal for developing pedagogics and context in the work in question.

To put these statements under the microscope, this article examines some of the tools that I and my colleagues have used in, for example, the practice-oriented research project "Climate-smart and attractive transport nodes". In brief, this project aims to improve links between stations and towns, largely via capitalising on the so-called "station-proximity effect" at various distances from stations. More details of the background to these tools are given at the end of the article.

I here present a selection of just five process tools taken from a large toolbox. To help enhance the depth of insights and to provide a better base for further planning work in collaborations with various agents in three field study municipalities (Lund, Borås and Uppsala), I and my colleagues have used these tools sequentially.

Tool 1: Weighting of goals and indicators using a polar diagram

From a large number of research reports, we sifted out 25 indicators that are critical in providing the right conditions for sustainable travel with improved links between town and station. We sorted these indicators into four main groups. These were: urban form; urban functions; corridors, networks and links; and, public spaces. Said groups were then used in a polar diagram that, to enable five-step weighting of the indicators, had concentric inner rings. In working groups with participants from various professions, the indicators were weighted for various "distance zones" around the stations (which could be illustrated graphically). This type of tool can be used with other relevant goals and indicators for other planning tasks.

Map-based SWOT analyses (based on selected indicators) for various "distance zones" from stations
SWOT analysis is such a well-known tool that it scarcely needs presentation. However, use has often stopped at simply establishing strengths, weaknesses, opportunities and threats (e.g. for a certain planning site). By defining which elements have geographical relevance, more can be got out of the analysis. This also crystallises which issues are more institutional and thus need to be handled via, for example, changes in judicial and administrative systems. In the project in question, we

Tool 3: Scenario matrix for alternative future images of the area around Borås station.

chose 5 – 6 indicators that, using tool 1, the participants had judged as most important for the various "distance zones" around the stations. Positives were marked with green post-it notes and negatives with red post-it notes. This map-based SWOT analysis gave clearer pictures of: barriers between town and station; and, where there were positives (e.g. mixed urban environment, access to meeting places and good accessibility in respect of areas around the station). From regional to district scale, the tool can be used for all types of planning sites.

Tool 3: Using scenario matrices to develop images of the future

Social and land use planning has long been dominated by forecasting. Thus, the ability to work in a structured and creative way with images of the future is a core issue here. Making greater use of participative backcasting combined with scenario planning makes it possible to break free from the sticking points that can be encountered in trend projection and determination where problems are acute. "Participative" here means that the professional agents taking part in our action-oriented research use the tool creatively to develop their propo-

sals and ideas for tomorrow's, sustainable, urban station communities.

In our research team, we see the scenario matrix as a practical tool for facilitating planning work based on long-term goals. This is because it enables development of diametrically opposed images of the future and thus throws light on a greater breadth of development opportunities.

In a four-field diagram, two relevant factors were set as axes. In this case, these were spatial structure and traffic structure. By allowing the participants to combine the extremes of the axes (e.g. bicycle town – corridor), four distinctly different alternatives could be developed in the matrix. In this way, we encouraged the participants to sketch out thoroughbred options that opened several windows of opportunity. We strive to avoid participants quickly getting bogged down in a compromise solution that is suited solely to present conditions. We are very happy for several scenario matrices to be developed with several axes. Similarly, we feel it is good for options generated in these exercises to be combined in a range of different ways.

Tool 4: Using an effect profile to evaluate alternatives in Borås

Tool 4: Using effect profiles (ranking diagrams) to evaluate images of the future

While we are keen for scenario matrices to open the way for several options (without critical analysis holding back creativity), our evaluation of images of the future entails said images being systematically examined on the basis of goals and indicators. The starting point may be already decided political objectives or key issues that have been developed via structured brainstorming (see also the ideas document "Four large and twenty small steps").

In the project in question, we asked interdisciplinarily composed working groups to evaluate four images of the future using a quick and simple evaluation tool, the effect profile (ranking diagram). The starting point was the 5 – 6 highest rated indicators of the 25 that were assessed in an earlier phase. In the effect profile, the indicators or goals were arranged vertically and the options ranked for each indicator.

We often first seek to find the "best" and the "worst" options for each indicator. Remaining options are then fitted in between these positions in accordance with our assessment. Our assessment is a good basis for fin-

ding conflicts and synergies between different goals/indicators. In turn, this provides input for combining the best elements from each image of the future into a synthesis, a main option. We encourage process participants to carry out evaluations using effect profiles in several steps. Finally, we pick out a good synthesis, one that we can work further with and refine. To add depth to the overall evaluation gained using effect profiles, we can use more precise tools such as polar diagrams or multicriteria analyses (see also the ideas document "Four large and twenty small steps").

Tool 5: Using a design dialogue to further develop selected images of the future

Originally developed by professor Peter Fröst, design dialogue is a tool to involve users of work and care premises in initiatives to draw up concrete design options. The methodology has also been gradually customised for solid urban development. In the R & D project in question, we trialled a symbol library tailored by us for the visualisation of various urban functions, corridors and associations that are usually part of design dialogue processes.

Tool 5: Design dialogue templates have proved very useful in developing corridors that have tangible station proximity in Borås

The starting point for this work was the results of the participants' evaluation of images of the future in the scenario matrices. We allowed the participants to combine images of the future for the 0 – 600 m from the station "distance zone" with selected images of the future for the 600 – 3,000 m "distance zone". In this way, we obtained a first visualisation of development opportunities in a coherent corridor up to around three kilometres from the stations. As it does not require the drawing abilities of architects, this pictorial methodology using various symbols stimulates a creative way of working in collaborations involving several agents (those from civil society included therein) and different professions. Nonetheless, the work involved in creating a symbol library can always be combined with traditional drawing to bring detail to proposals regarding urban form, function location, etc.

What effect does the use of tools have on end results?
In my opinion, the tools described above (and those referred to in this article) are generally usable for co-creative cross-sector planning processes from regional to district level. Each and every one of the tools can be used for general site analysis, proposal development and consequence analysis. They can also be used in a more detailed way than sketched out above. Simple and well-tried tools such as mind mapping, map-based SWOT analysis and structured brainstorming have proven themselves able to help bridge barriers and, for agents from different disciplines or municipal organisations, create shared insight into problems.

In long, complex planning processes, it is often difficult to deduce which specific, physical results come from the use of process tools early in the planning phase. Long-term monitoring is needed to see what impact our work with tools in early phases has in practice. In a general follow-up of our action research in Borås (the "Climate-smart and attractive transport nodes"

project), some of the planners involved (My-Linda Lorentsson, Sebastian Andersson and Bengt Himmelman) stated that co-creative, cross-sector processes using the tools I have presented above contributed to deeper insight into the importance of developing continuous urban corridors longer than 600 m for public transport, pedestrians and cyclists. Up to around 3,000 m was suggested, i.e. corridors that link suburbs with urban centres. They were also more deeply persuaded that the corridors needed to be linked to nodes and places of different importance with mixed-function, denser building and attractive public spaces outside the urban centre. These insights have had a clear impact on overview planning in Borås. Previously, this was focused on developing the area around the station rather than on developing radial, urban corridors.

In Uppsala, using the tools contributed (according to Göran Carlén) to verifying and strengthening already ongoing overview planning. Amongst other things, this planning involves linking four urban nodes to the urban centre and the station. The tools helped crystallise the dense urban corridors between the urban centre, station and urban nodes as places for: the main public transport routes; and, a concentration of urban life, businesses and destinations.

Final reflections

Using the described types of process tools does not require comprehensive computing or programming knowledge. Essentially, use can be manual with pens, drawing paper, maps, post-it notes and various types of symbols. With the emergence of digital tools that are increasingly user-friendly, I believe that the majority of all the steps in the processes can, in the future, be digital. This is despite my judging that there is then a certain risk of losing the feel of doing solid, front-line work on the floor of the planning workshop. Even in the future, a combination of manual and digital is surely the best.

A few pieces of advice: Work flexibly and cyclically, alternating between various steps in the work and various tools. For example, in a first round of overview planning, using various tools to work through all the steps in a process provides input for more in-depth analyses and proposals in a subsequent round of planning. It avoids becoming bogged down in detailed site analyses at a too early stage. Instead, working from a general site analysis may inspire the development of some preliminary images of the future. A first evaluation of these latter provides a basis for in-depth site analysis combined with more detailed images of the future, etc.

I am convinced that a process-oriented methodology using various sorts of tools at an early stage enhances the quality of programmes and plans. In turn, this provides the right conditions for the development of communities that are more robust and human. We must capitalise on the opportunities to work with colleagues and other agents in an inquisitive, eager, experimental and long-term manner with all sorts of process tools. It is important to have fun when shaping and reshaping tomorrow's sustainable cities and communities!

Ulf Ranhagen

Mistra Urban Futures is a research and knowledge centre which locally and globally promotes collaborative approaches and co-production of knowledge supporting a transition towards sustainable urban development. All projects are designed and carried out in collaboration between practice and academics.

The Centre's on-going and finished projects contribute to the vision of sustainable urban development, for fair, green and accessible cities. The vision is translated into the objective: 'Realising Just Cities'.

Mistra Urban Futures has five Local Interaction Platforms, in Gothenburg and Skåne, Sweden; Sheffield-Manchester, UK, Kisumu, Kenya; and Cape Town, South Africa.

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