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Integrating environmental sustainability into strategic spatial planning: the importance of management

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Strategic spatial planning has been suggested as a means for environmental sustainability. However, there are significant challenges with operationalising and integrating policy-driven strategic spatial planning within the standardised and process-oriented management systems of local authorities. This aspect has motivated discussions on how implementation of strategic spatial planning with a focus on environmental sustainability is conditioned by management systems. The empirical case is local planning and management practices in a local authority in Sweden. Interviews with planners, together with planning and policy documents, make up the empirical material. The analysis proposes that the integration of environmental perspectives into strategic spatial planning processes depends on (i) the overall concerns for environmental issues in local policy, and (ii) how administrative management systems can facilitate transformative practice in planning. In conclusion, this article illustrates how environmental sustainability in strategic spatial planning is formed and conditioned through interplay between local policy and administrative management procedures.

Keywords: administrative management; environmental sustainability; local authorities; strategic spatial planning; Sweden

1. Introduction and background

Although the local scale is widely maintained to be an important geographical scale for addressing environmental issues, and there are high expectations placed on local authorities (Baynham and Stevens 2014), conclusions about implementation deficits in practice are reiterated by many authors (e.g. Norell Bergendahl 2016). Different barriers are identified that may explain this situation, including politics, the legal framework, technological issues, economic resources and institutional framing (Malekpour \textit{et al.} 2017). It may be considered a demanding challenge for cities to mobilise capacity to meet the expectations of initiatives for sustainability (Evans \textit{et al.} 2005; Gibbs and Kreuger 2005; Holman and Rydin 2013; Joss 2011; Lawhon and Patel 2013).

Strategic spatial planning has been suggested as an approach for local authorities to address these challenges (e.g. UN Habitat 2009, Albrechts 2010, 2013). It has also

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been emphasised that these visionary and political spatial strategies need to be inte-
grated with the regulatory aspects of the planning system in order to ensure legitimacy,
but also to be effective and have an impact (e.g. UN Habitat 2009). Local authorities
are important anchor tenants or process leaders for such interventions (cf. Persson
2013), but integrating these two aspects of strategic spatial planning and regulatory
systems is a significant challenge. This is especially true since some interpretations of
strategic spatial planning call for transformative practices, which refers to discontinuity
and to the breaking away from established routines (Albrechts 2010, 2013; Feola
2015). Through this article it is discussed how, on one hand, strategic spatial planning,
and on the other hand, administrative environmental management systems interplay.
More concretely, it will be investigated in which ways objectives of strategic spatial
planning for environmental sustainability are made operational through the administra-
tive management systems of the political body of a city located in central south
Sweden (Norrköping). This city can be described as an extreme case because it is the
destination for a train stop along the first part of the planned high-speed rail system in
Sweden. This places high demands for planning capacity on this local authority.

The argument that strategic spatial planning is a key means of achieving transfor-
mations towards environmental sustainability motivates a thorough analysis of some
key elements of strategic spatial planning. Transformative change is maintained to be
distinct from incremental change. Nevertheless, over time, several and continuous
incremental changes may imply that thresholds are passed and, in aggregation, cause
transformations (Feola 2015). This motivates analysis of the continuous path of small
steps of revised routines, standards and expectations (Strambach and Pfitsch 2018) as
factors impacting transformative change. Management is a critical aspect impacting
how such revisions introduced through strategic spatial planning interventions may or
may not be adopted through the organisations and organisational processes of local
authorities. From certain aspects, the logics of management are significantly different
to the logics of strategic spatial planning (Table 1) while simultaneously being crucial
in the operationalisation and implementation of planning strategies. These interdepen-
dencies of strategic spatial planning and administrative environmental management for
sustainability have motivated the integration of these elements for the discussion
of this article. It is assumed that local management systems, in important ways, condi-
tion the interventions of policy strategising, pronounced through strategic spatial plan-
ning. This approach conceives management aspects, relating to the conception of how
local authorities integrate or separate different task fields (Hjelm, Emilsson, and Cherp
2011). This article therefore investigates the conditions for an integrated approach to
environmental issues in planning (cf. Levett 1997; Cockrean 2001; Burström von
Malmborg 2002; Emilsson and Hjelm 2009). The aim of this article is to investigate in
which ways the management system of a local authority conditions the implementation
of strategic spatial planning, integrating environmental objectives.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Strategic spatial planning</th>
<th>Management systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Varying and policy-driven</td>
<td>Standardised</td>
</tr>
<tr>
<td>Activities</td>
<td>Plans and project</td>
<td>Process and loops</td>
</tr>
<tr>
<td>Contexts</td>
<td>Place</td>
<td>Organisation</td>
</tr>
</tbody>
</table>

Table 1. Logics for strategic spatial planning and for management systems.
The article is structured into four sections. The next section presents the theoretical framework for the study, which refers to conceptions of strenuous relationships between strategic spatial planning and management. This is followed by a section describing the empirical case of the city of Norrköping and the methodology through which the research approach is outlined. Thereafter, there is a section presenting and discussing the results of the empirical study. This paves the way for the closing section, in which conclusions and policy implementations are presented.

2. Strategic spatial planning and administrative environmental management

Academic debates focusing on spatial planning and administrative (environmental) management have often been separated into different disciplinary frameworks and academic institutions. The debate on strategic spatial planning is, however, an important invitation to bridge these spheres, which this article aims to do. Strategic spatial planning is a fuzzy concept that has evolved into different schools (Bafarasat 2015) and has been debated in both research and practice since it emerged and was popularised in the 1990s (e.g. Albrechts and Balducci 2013; Hillier 2013; Mäntysalo 2013).

The citation below declares that strategic spatial planning is about transformative social processes; it involves co-production and has relationships to place. We can start by saying that strategic spatial planning is:

... a transformative and integrative public sector-led co-productive socio-spatial process through which visions or frames of reference, justification for coherent actions, and means for implementation are produced that shape, frame and reframe what a place is and what it might become. (Albrechts and Balducci 2013, 18)

The strategic element in strategic (spatial) planning has been a concern amongst planning theorists (e.g. Healey 2007), but also in management literature (Bryson, Edwards, and Van Slyke 2018). From the approach of management research, it has recently been argued that strategic public-sector planning is crucial to manage the complex and unstable world and advance towards more sustainable practice. In order to do so, strategic planning needs to be flexible and dynamic, and simultaneously able to stabilise and fixate to achieve progress and also transformation (Bryson, Edwards, and Van Slyke 2018). These notions of stabilisation, flexibility, complexity, fixity and uncertainty have also been picked up among scholars in planning (cf. Albrechts and Balducci 2013; Hillier 2013; Mäntysalo 2013).

The spatial planning debate has, however, to a large extent been structured around the differences and divides between ‘new’ forms of selective strategic spatial planning initiatives and more ‘traditional’ forms of comprehensive and regulatory land-use planning. However, the concept of such a divide between regulatory land-use planning and strategic spatial planning has begun to be questioned, both in theory and in practice. Spatial planning research in the Nordic context has investigated the ‘strategic turn’ in the countries by, for example, highlighting the democratic tensions that might occur between informal and formal planning (Mäntysalo et al. 2014). There are tensions related to the output efficiency of project-oriented managerial strategic planning practice and input legitimacy guaranteed by bureaucratic hierarchical structures’ ‘traditional’ planning practices (Mäntysalo, Saglie, and Cars 2011). Through the wave of strategic spatial planning, planning through projects has become an important
approach (e.g. Oosterlynck et al. 2011). However, Mäntysalo (2013, 175) summarises that current strategic spatial planning is about:

- both visionary selectiveness and comprehensiveness;
- both action orientation and plan orientation;
- both dynamic and static problem descriptions,
- both coping with uncertainty and fixing of certainties,
- both relational co-production and law-based procedures.

In practice, planning involves negotiations, cooperation, coordination and learning preceding various decisions and agreements (Purkarthofer 2016). In addition, planning is conceived to be about persuasion and inspiration as much as about the formulation of (spatial) visions (Healey 2007). This relates to the internal features of strategic spatial planning to be organised through co-production and coordination. Coordination can be between local authorities and other organisations such as commercial actors, including real estate companies and other entrepreneurs involved in urban development projects. It also demands internal coordination between the local authority departments; for instance, the industrial development department, the environmental department, the social security department and the department for physical planning. This feature of coordination for strategic spatial planning can be contrasted to descriptions of compartmentalisation of sustainability planning (Gibbs, Longhurst, and Braithwaite 1998).

Strategic spatial planning is visionary and integrates different policy agendas, activities and actors (Banai 2013; Tewdwr-Jones, Gallent, and Morphet 2013), which leverages the demand for organisational strategies and hence management procedures. Integrating environmental sustainability into planning is complex; however, experiences from Swedish local authorities show the potential in having a stepwise approach to integration through organisational maturity (Emilsson and Hjelm 2009). This allows for organisational learning.

Strategic spatial planning through plans and projects is in contrast to administrative management systems with a focus on process and loops (Table 1). Furthermore, strategic spatial planning is inherently political and policy-driven, and varies over time and space. Another contrast is the emphasis on the geographical context and spatial dimensions for planning strategies and projects, that is, strategic spatial planning focuses on the re-imagination and creation of places (cf. Healey 2007). Also, a shared framework of strategic spatial planning and management is conceivable. This includes the emphasis on the importance of implementation and evaluation. Indicator systems and frameworks – to a significant extent imported from management models – are set up by local authorities and regions to measure the performance of spatial planning strategies and to monitor urban sustainability (Bourdic, Salat, and Nowacki 2012; AlQahtany, Rezgui, and Haijang 2012; Magee and Scerri 2012).

Erdmenger (1998) distinguishes between three types of environmental management approaches in a local authority context: political, spatial and administrative. Although different perspectives are managed separately, they nevertheless depend on the same management loop and process-oriented approach (Levett 1997). For this article, the discussion focuses on the spatial and administrative perspectives, and how these interplay. To specify the management aspects, the Plan, Do, Check, Act (PDCA) cycle is applied. This is a well-established model for administrative management loops emerging from quality management (Deming 1986). This model is used for administrative
management in general, as well as for quality management, operational health and safety management and environmental management. Norrköping municipality has a steering model based on the PDCA approach (See Norrköping Municipality 2018a) and, in this article, we are interested in uncovering how the environmental perspectives are translated through the steering model from visions to planning practice.

As the environmental perspective is in focus in this article, we will now exemplify the PDCA cycle from an environmental management perspective. In the Plan phase of the PDCA, the organisation maps its baseline level of a certain aspect – in the case of environmental issues, this would be environmental performance (ISO 2015). Mapping and analysing the current practice helps the organisation to understand potential areas for improvement and constitutes a point of departure for setting environmental objectives and action plans. It also helps the organisation to design an appropriate process to support the realisation of the action plans and fulfilment of the objectives. In the Do phase, the management model is implemented, for which the chief task is to integrate the action plans into the daily work of the organisation by applying, for example, instructions and routines. The Check phase focuses on evaluating and auditing the operationalisation of the management system and evaluating the organisation’s environmental performance. In the final phase of the PDCA cycle – the Act phase – the top management decides on what to change in order to achieve further improvements based on the evaluation and follow-up of the performance. Feedback loops derived from learning, during the different phases and at different organisational levels, are inherent features of the PDCA cycle. Having a process approach and ensuring continuity of the process are core elements when applying PDCA. Hence, this model differs significantly from the organisation of projects, which is more limited in scope and time.

Employing a PDCA approach to administrative environmental management (as defined by Erdmenger 1998) involves an analysis of the current situation through information gathering, developing objectives and implementing processes in order to ensure that the environmental objectives are met. Considering environmental management for (strategic) spatial planning (Erdmenger 1998), it is important to acknowledge the role of the local authority not only to be responsible for its internal environmental performance, but also to be a societal actor impacting on the transformative capacity of local space. In addition, the local authority needs to comply with national planning regulations and to monitor through networks with different actors involved and for which the local authority is not in total control of all the resources required.

The theories of administrative management described in this article focus on the relationship between the formulation, operationalisation and implementation of strategic initiatives (cf. Mintzberg 1994) in local authorities. In particular, there is evidence that, even if strategies may be ambitious, actual implementation often differs substantially from formally-agreed objectives. Many strategies (in public organisations) do not articulate the organisation for implementation activities. They may be more about articulating and communicating commitments or principles, or simply rhetoric, than about action (Cherp, Emilsson, and Hjelm 2006). Moreover, when it comes to efforts based on voluntary initiatives, such as administrative environmental management, action does not always follow formal decisions, but instead decisions articulate learning gained from action (Bafarasat 2015). This logic is reflected in the debate on approaches for sustainable development, which are now pictured as such ‘emergent’ strategies, that is, processes for learning, capacity-building, etc. rather than ‘new plans’ (OECD 2001).
To conclude the discussion of this section, this article is an endeavour to understand how the practice and implementation of strategic spatial planning is conditioned and framed through the systems of administrative environmental management of the organisation of local policy. The focus area is strategic spatial planning aiming for environmental sustainability. The point of departure has been that such understanding requires conceiving the elements and logics of respective spatial strategic planning and administrative environmental management and how these interplay. Although it was pointed out above that strategic spatial planning and administrative management share some aspects, the different logics are important and need to be conceived to understand how the organisation of management may be a challenge for strategic spatial development objectives for sustainability to be made operational. Table 1 summarises what is identified as important distinct logics in terms of design, activities and contexts. The features of strategic spatial planning, represented by instabilities, flexibilities and varying contexts, contrast with management, which centres on control, standardisation and repetition. Strategic spatial planning with the project-oriented approach is in strong contrast to the process-oriented and standardised logic of administrative environmental management. Thus, for the empirical case studied through this article, it is recognised in which ways such diverse logics of administrative management and strategic spatial planning are proved, and the tensions these may imply for the implementation of transformative practices for sustainable development.

3. Empirical case, empirical material and method

The empirical case in this article is strategic spatial planning for environmental sustainability in a Swedish local authority. The local authority is the municipality of Norrköping, a medium-sized city with a population of around 130,000 inhabitants. This city is in a unique situation because the major incoming investment for a high-speed railway called the East Link. This has been planned for several years and was formally decided on in 2012. This is the first step for future nationwide railway investments in Sweden. The East Link will start in Stockholm and run through Norrköping. This national investment has triggered a number of large-scale local planning and investment initiatives for Norrköping, which is in stark contrast to the city’s rather slow and stagnant development during the past few decades due to negative impacts of de-industrialisation processes (Hermelin 2018).

Norrköping is located in central-east Sweden, around 150 km south of Stockholm. It is anticipated that the coming high-speed railway will support the accessibility of Norrköping to the wider Stockholm area, which will expand the local labour market and facilitate business relations. These are important factors to make a city more attractive for the location of businesses and for habitation (cf. Willigers and van Wee 2011; Ryder 2012; Arts et al. 2016; Terrin 2015). Based on such assumptions, the local authority believes that the East Link will be a turning point from stagnation to dynamic development (cf. Swedish Transport Administration 2016). Thus, it can be suggested that the city is in a unique situation for local planning and has a window of opportunity to develop strategies leveraging its development towards a sustainable city.

In this article, the term ‘local authority’ is used to refer to the political body and administrative organisation of the local municipality, which comprises the central city of Norrköping and surrounding areas with smaller settlements. Although a local authority is a political body, for which the domains and responsibilities vary between
national settings, these bodies also share important characteristics internationally. One of these characteristics is the generic aspects of constituting bodies with impacts on how initiatives are prioritised, planned, organised and managed. The particularities of the local authorities in Sweden, compared to many other countries, refer to their extensive political sovereignty as well as the substantial scope of their obligations, and hence the resources to fulfil these. This means that local authorities develop large organisations to manage their tasks. To illustrate this, income tax of around 20% is levied by local authorities and around 20% of all employment in Sweden is in the municipal sector (i.e. administration and planning, social care, schools, culture, etc.). It is also important to recognise that the Swedish local authorities, in principle, have a monopoly on land-use planning; that is, the local authority has the right to decide where and when urban development takes place (e.g. Persson 2013).

This article is based on longitudinal empirical research on local planning in Norrköping. Interviews were conducted in 2014 and 2016 (Table 2). These interviews, together with planning and policy documents (Table 3), make up the core of the empirical material. In addition to this, the authors also participated in several seminars which focussed on the development and planning process of the East Link and which provided observational empirical material.

In 2014, Norrköping identified a number of key departments in its organisation for the planning process of the East Link. A coordination group with planners from these departments was organised. This group comprised different competencies, including detailed development planning, infrastructure, industry development and sustainability issues. The members of this group were considered to be key actors for the strategic spatial planning and administrative environmental management in relation to the East Link. The authors have had continuous communication with this group and have also carried out 22 interviews in 2014 and 2016 with individual group members, in order to envision the progression of the planning process (Table 2). Four of the departments involved in the interviews had staffing changes between the two interviews, meaning that different people were interviewed. It was also the case that some people were interviewed both in 2014 and in 2016, although for different functions, due to changes in work duties.

The interviews were open, in-depth and adapted to the informants’ function, expertise and role in planning processes. Nevertheless, they all covered the following themes: (i) organisation and time plan; (ii) policy documents and planning documents;

<table>
<thead>
<tr>
<th>Function of interviewee</th>
<th>Interviewed (year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail Infrastructure Manager, Technical Department</td>
<td>2014, 2016</td>
</tr>
<tr>
<td>Project Manager Inner Harbour, Spatial Planning Department</td>
<td>2014, 2016</td>
</tr>
<tr>
<td>Coordination of zoning plans, Spatial Planning Department</td>
<td>2014, 2016</td>
</tr>
<tr>
<td>Communication Strategist, Next Norrköping</td>
<td>2014</td>
</tr>
<tr>
<td>Project Manager for Commuting Centre, Spatial Planning Department</td>
<td>2014, 2016</td>
</tr>
<tr>
<td>Controller East Link</td>
<td>2014</td>
</tr>
<tr>
<td>Process Manager Mobility Management, Municipal Board Office</td>
<td>2014, 2016</td>
</tr>
<tr>
<td>Development Manager/municipal coordination of East Link activities, Municipal Board Office</td>
<td>2014, 2016</td>
</tr>
<tr>
<td>Process Manager Exploitation, Spatial Planning Department</td>
<td>2016</td>
</tr>
</tbody>
</table>
and (iii) projects (ongoing and future) in relation to the East Link development. These projects were frequently carried out in collaboration; with other municipalities, the regional authority, national partners, consultants and companies.

The documents are divided into three categories: visions, policy documents and planning documents (Table 3). These can be seen as forming a scale from visionary and strategic policies to framework documents and spatial plans or project plans. The first category comprises long-term visionary policy documents such as the Norrköping Vision 2035 and the Joint Climate Vision for Norrköping/Linköping (Linköping is the bordering authority and of a similar population size). The second includes policy documents such as the municipal objectives, municipal budgets, annual reports/financial statements), and operational plans for individual departments, that is, the Municipal Board Office, the Technical Department and the Spatial Planning Department. This second category of documents is an important source for understanding the management system of the local authority, while the third set of documents – spatial planning documents and project documents – contributes material which aids in understanding planning content and how environmental issues are addressed.

The requirement to be selective is most evident for the third category of documents. In addition to general planning documents, such as the joint Comprehensive

<table>
<thead>
<tr>
<th>Type of documents</th>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visions</td>
<td>2016</td>
<td>Norrköping Vision 2035</td>
</tr>
<tr>
<td></td>
<td>2011</td>
<td>Joint Climate Vision for Norrköping/Linköping</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Municipal objectives 2015-2018</td>
</tr>
<tr>
<td></td>
<td>2012, 2013, 2014,</td>
<td>Norrköping municipal budgets</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Operational plan, Municipal Board Office</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>Operational plans, Technical Department</td>
</tr>
<tr>
<td></td>
<td>2012, 2013, 2014,</td>
<td>Operational plans, Spatial Planning Department</td>
</tr>
<tr>
<td></td>
<td>2015, 2016</td>
<td>2015</td>
</tr>
<tr>
<td>Spatial planning documents</td>
<td>2010</td>
<td>Joint Comprehensive Plan Norrköping/Linköping</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Draft of in-depth Comprehensive Plan for Norrköping City</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>PM for development of new commuter centre and other projects related to the East Link</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>Time plan for East Link and project outline</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Collaboration Plan for Mobility Management</td>
</tr>
<tr>
<td></td>
<td>2012</td>
<td>City Development Vision for the Inner Harbour</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>Detailed Development Plan for the Inner Harbour</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>Quality Programme for the Inner Harbour</td>
</tr>
</tbody>
</table>

Table 3. Overview of the studied visions, policy documents and spatial planning documents
Plan for Norrköping/Linköping (2010) and the draft of an in-depth Comprehensive Plan for Norrköping City (2015), this selection includes planning documents related to two particular projects: the Inner Harbour (an area that will be developed into a residential district) and Mobility management. These two projects are used as illustrations of how strategic spatial planning initiatives are connected to environmental management. The two projects were identified by several of the interviewees as key examples of planning for sustainable development.

4. Results and discussion

This article analyses how the management of Norrköping local authority conditions the integration of environmental objectives for strategic spatial planning initiatives. The steering model for Norrköping (as illustrated in Figure 1) is the starting point for this discussion. The management system for Norrköping – the Norrköping Steering Model (Norrköping municipality 2018a) – is an ideal model, politically ratified through the local authority and not an illustration for how management is practised. This model defines the ideal for the ‘machinery’ and management process through which policy and planning are to be made operational.

The steering model for Norrköping is aligned to the logics of management; these being standardisation, loops and organisation (as in the PDCA). To exemplify this with the different building blocks of the Norrköping steering model: The planning preconditions and budget and objectives for the steering model (Figure 1) are part of Plan, where the organisation identifies its current situation and performance and sets its vision and ambitions. The statutory plans along with mission plans, operational

![Figure 1. Steering model for the local authority of Norrköping. Source: Author translation from KS 2013/0558 (2013).](image-url)
plans and operational activities (Figure 1) constitute Do, where the organisation implements its actions towards the vision. The Check phase in the steering model corresponds to the quality reporting and internal management and control along with annual reports, and the Act phase constitutes developing measures and changes based on the results from the follow-up. This means that the Act phase is important for learning from experiences and outcomes in order to further improve the planning and management for the next round of the management loop. Continual improvements are key elements and are based on implementing conclusions reached through learning from the experience of previous outcomes.

It is important to stress that the analysis does not assume that the steering model shows how management is practised at face value, which means that divergent practices not in line with the model will be described. The way in which planning and policy are integrated into this model is through ‘entrances’ from the side and from the top into the management loop. Planning, which is contextualised into the ‘surrounding world’, is shown entering on the left side of the model. Visions (which are associated with policy) are illustrated by a cloud (in the sky) which enters from the top of the model. This means being open to, and integrating, ‘unstable’ policy-driven aims, plans and projects into the ‘stable’ management loop (cf. Table 1).

In order to show more clearly how planning is integrated and moulded through the steering model, the discussion now moves on to describe different activities in Figure 1 and with a focus on those relating to aspects of transformative practices for sustainability. To start with, inputs into the model are shown entering from the side, that is, the surrounding world. This is an elusive aspect that is difficult to define strictly. This is understood to involve guidelines, initiatives and programmes through the national government, which impact on the planning preconditions of the local authority. Moreover, it includes expected societal transformations based on prognoses produced through the local authority (Norrköping Municipality 2018b). In the 2016 planning preconditions, 16 different themes were defined, of which an elderly population, city development, participation and infrastructure are a few (Norrköping Municipality 2018b).

The municipal comprehensive plan constitutes an important local policy and planning document, entering the management loop of the steering model from the side. In accordance with the Swedish Planning and Building Act, it is mandatory for all local authorities in Sweden to have an updated comprehensive plan (Planning and Building Act 2010). The municipal comprehensive plan defines strategic spatial planning issues and provides the overall framework for land-use development. In order to realise the aims of the comprehensive plans, the local authority develops more detailed and legally binding development plans that are required for all urban development projects. During the period in which the research for this article took place, Norrköping was developing a more in-depth comprehensive plan for the city, which would come into effect in June 2017. There are environmental requirements in the national legislation on planning that the local authorities need to take into consideration in their local planning processes and for their plans.

The position of the budget at the top of the management model may be interpreted as a visualisation of how this document is an important trigger point which drives the process through the loop of the steering model. An analysis of the occurring themes in the budget from the focus area of this article on environmental sustainability reveals that it discusses environmental issues to some extent. Environmental issues raised in the budget differ over the years of study. There are, however, a few recurring themes.
Three themes which have been addressed in the five budgets for 2012–2016 include (1) mobility management, (2) increasing the share of organic food for local public services (including child care, schools and elderly care), and (3) sustainable construction. Something that has been mentioned mainly in later years is the coordination of freight transport.

Compared with the position of the budget for the steering model, ‘vision’ is positioned at an even higher level and outside the management loop, being placed in a cloud that leads associations to the sky and which may serve to represent wider and more abstract discourses. The question may be asked, however, why the arrow from the word ‘vision’ is only directed towards objective, statutory plans and not also towards the budget. The recently adopted Vision 2035 for Norrköping is analysed for this study. This is a brief document. The most explicit reference to environmental sustainability is quoted below:

Our long-term efforts to reduce environmental impact and face climate change are successful, and Norrköping is at the frontline of Swedish local authorities when it comes to environmental management. (Vision 2035, author’s translation)

The position in the loop for the steering model of the mission plans and operational plans for different departmental political boards and their administrative departments is a few steps down from the budget. The investigation and interviews for this article show, however, that these steps in the management model are not fully operationalised across the different departments of the local authority. In principle, such plans were only found for the department managing physical spatial planning.

The annual report is the ‘end point’ for the upstream part of the loop and is produced through an auditing process. The outcomes of the annual reports feed into the planning preconditions and budget, and the cycle starts for a new year. Annual reports have very similar formulations for environmental ambitions over the years. Little or no progress in environmental performance is reported.

None of the interviewees, either in 2014 or in 2016, mentioned the local authority’s overall vision or budget documents as guiding their work. The documents that were considered important for their activities were mainly the spatial planning documents, such as the municipal comprehensive plan, detailed development plans and the local traffic strategy. Only two interviewees mentioned the operational plans (which are operationalisations of the steering model) as important documents for their work. The operational plans were seen by one of the interviewees as informal or unofficial documents that were used in different ways by different departments, and as documents that are rarely made public. Another interviewee explained that the operational plans only managed part of the activities and that these plans did not give the full picture of the department’s activities or management.

It is interesting to reflect upon the PDCA loop again, because if there is little focus on the operational plans and if the follow-up (Check) is based on the Do phase (including operational plans that seem to be marginalised), then it is not explained what directs the next feedback loop and what is evaluated and acted upon. This brings us to a discussion of whether management models become non-operational paper tigers, rather than having a relevant impact (Emilsson and Hjelm 2009), and that the steering model, illustrated in Figure 1, only partly reflects the management conditions for spatial strategic planning visions and initiatives. At a more detailed level, there are
also more ‘scattered’ environmental objectives formulated through the analysed planning documents. The absence of the industry development department may reflect that sustainability initiatives are primarily oriented towards the organisation and areas on which the local authority has an impact (such as spatial planning). What is actually managed in these systems and what is followed up? For our case, Norrköping, this is not clear. Consequently, it is also unclear how environmental perspectives, as defined through policy and planning documents, are integrated into the steering model.

Previous research has stressed the importance of coordination and implementation for achieving environmental ambitions (cf. Emilsson and Hjelm 2009). This motivates pointing out that the steering model is not a helpful tool for planning initiatives through cross-departmental organisation comprising a wider range of competencies and perspectives and which has been maintained by different scholars to be particularly important for environmental sustainability (e.g. Cherp, Emilsson, and Hjelm 2006). Nevertheless, such integrative planning interventions are organised, which is one illustration that the steering model is an ideal management model and not a description of operations. The discussion will now move from a general discussion of the steering model to a more detailed analysis of particular planning situations in the context of the coming East Link. Two particular planning interventions will be discussed, which address environmental sustainability. These are organised through collaborations across departmental and organisational borders.

5. Planning and management for the East Link

Planning for the coming high-speed railway, the East Link, is a real challenge for the local authority in Norrköping. This involves many actors and (sometimes conflicting) interests, ambitions and agendas which must be taken into account in the planning process. Therefore, the cross-departmental coordination group was formed (as described earlier). The main function of the coordination group was to share information about progress in the national planning process (primarily the Swedish Transport Administration, the national body responsible for building the railway) and to share information between the different local planning initiatives and projects related to the East Link.

The coordination group had an important function in the early years of the local planning for the East Link, which was from around 2012. However, during the interviews in 2016 it became clear that this group no longer existed. One reason for this, as mentioned by one of the interviewees, was that awareness of the conditions derived from the coming East Link had become well anchored internally in the organisation, which meant that the initial function of the group was no longer needed. This can be described in terms of an achievement of an internal policy learning process (Moodysson, Trippl, and Zukauskaite 2017).

It also seemed that high demands on the local authority to be involved in external collaborations and negotiations with the Swedish Transport Administration, the National Negotiation on Housing and Infrastructure (commissioned by the Swedish national government to enhance the East Link’s impact on regional growth) and other local authorities hosting train stops along the East Link challenged the time allocation for internal collaborations across departments of the local authority. In 2014, there was an emphasis on internal communication and information sharing related to the East Link, while in 2016 the emphasis was instead on external communication and
information sharing. This illustrates how the operational organisation for planning is moving regardless of the stable structure of departments.

Communication of information and ideas is a fundamental condition for how planning evolves. Likewise, management models consider communication to be a highly critical factor. Communication is also an issue discussed by the interviewees, and it was maintained that communication was insufficient, for various reasons, among which time constraints and weak interest in planning issues among the politicians were mentioned. The planners interviewed also experienced a deficit in communication between the local authority and local businesses. One initiative of the local authority for communication was a brand for all local initiatives and projects related to the East Link, called Next: Norrköping. The purpose of this was to market the city and communicate its redevelopment. However, sustainability issues were not included in this brand.

Communication is about sharing ideas and learning. In relation to the sharing of ideas for environmental objectives, one of the interviewees indicated that sustainability issues have become more often addressed and discussed through planning in the last few years. Moreover, one of the spatial planners argued that the new generation of planners had environmental sustainability ‘in their bones’ and that all spatial planning is permeated by environmental values, even if this is not always spoken about. In this way, environmental sustainability is seen as the foundation for spatial planning which becomes ‘sustainable by default’ (Persson 2013).

The strict time plan for planning interventions in preparation for the coming East Link has been conceived as a restriction on communication and collaboration, which, in turn, may restrict learning and integration. There is time pressure throughout the planning process, but also synchronisation issues, since the projects fully or partly depend on each other’s progression. To manage this, a plan was set up with the aim of spreading planning operations over several years and, in this way, easing the stress on staffing and other resources of the local authority.

The overall time plan for preparing for the coming high-speed rail in Norrköping, which was communicated through the abovementioned coordinating group, pointed out a number of different projects, two of which are described in more detail below. These represent very different project logics. One is primarily based in one department for physical planning and which is to plan for a new residential area (the Inner Harbour). The other project is managed from the central strategic department of the local authority and targets the soft space of mobility management. Nevertheless, both projects come under the Norrköping steering model, as the spatial planning committee’s translation of the overall municipal vision, objectives and statutory plans into political mission plans for the spatial planning forms the basis for all operational spatial planning in Norrköping, including the Inner Harbour.

6. The Inner Harbour city district

The Inner Harbour is a city district in Norrköping that will be converted from an industrial harbour area into a waterfront residential city district. The planning process for the Inner Harbour had a tight time schedule and was positioned early in the overall time plan in the East Link process, as a vanguard for a number of different urban planning projects. The Inner Harbour has been promoted as a flagship project for developing city districts in proximity to the future railway station for the coming East Link.
The planning of the Inner Harbour grew from a city district vision in which sustainability had a central role. This city district was planned to be a residential area for around 2,000 people, and for which sustainable housing became a core issue. The planners developed a model for public–private collaboration, which was to be driven by joint processes integrating planners and developers. The model defined core values across the partners. These were: urban, multifaceted, ground-breaking and responsible. The involved companies integrated these values into their development projects. Furthermore, each developer was given an assignment of choosing one particular target to promote environmental sustainability, in which they were supposed to exceed the minimum required standards. In this way, the collaboration between the developers was staged in a manner which encouraged competition related to environmental performance. This shows the dependency of the local authority in relation to private actors for the implementation of environmental objectives. It also illustrates how physical planning is influenced by strategic spatial planning through features of negotiation and coordination. The organisation of this planning also highlights the varying and non-standardised logics of spatial planning.

This means that planning for the Inner Harbour city district required the coordination of a range of private and public actors, and that the physical planning department became the anchor tenant for mobilising other organisations in particular directions, that is, to include environmental objectives. This means striving for transformative practice among other organisations (i.e. the developers) for environmental sustainability. The accomplishments of the Inner Harbour should be considered from the positioning of this planning project at the core of physical land-use planning, which offers efficient ‘tools’ for planners through regulations and established routines. Thus, the intersection of increased attractiveness of Norrköping for developers as an effect of the coming East Link, powerful planning tools of local authorities for physical planning, and the motivations of included partners to achieve environmental objectives allowed the implementation of an integrated approach to planning for the Inner Harbour.

7. Mobility management project

Norrköping has been involved for several years with Mobility management in order to achieve a more sustainable travel pattern among employees and citizens. The initiating phase for this endeavour was formed within the context of a nationally-funded project and was converted some years ago into a permanent activity for local strategic planning. Compared with the example of planning for the Inner Harbour, as discussed above, the planning tools for Mobility management were not as efficient. The funding was primarily external and for fixed-time projects. Sustainable personal transport is one of 21 explicit objectives for Norrköping’s budget, but this is formulated to target the employees of the local authority. Nevertheless, initiatives in this area have also included campaigning towards the local population more generally to motivate individuals to change their behaviour. Mobility management in Norrköping has addressed this issue in various ways, for example by arranging car-free days in the city, encouraging cycling instead of car driving, etc.

The planner at the local authority responsible for coordinating initiatives for Mobility management was also involved in developing traffic strategies, parking norms and other planning processes through which sustainable mobility was addressed. The coordination of Mobility management was organizationally-located centrally, at the
department for the Municipal Political Board. Despite its strategic organisational position, mobility management was perceived as being weakly implemented throughout the different departments of the local authority. One of the interviewees stated that mobility management as a project did not have a very high status in the municipal organisation, and it was therefore not highly prioritised internally. Weak planning tools, along with ambivalent norms towards personal transport by private cars among local politicians, as well as officials at different planning departments, could be seen to undermine the possible substantial impacts of this local planning endeavour. It is also an example of how strategic spatial planning is being operationalised through projects which the politically ratified steering model for Norrköping is not very efficient in terms of integration and operationalisation.

8. Conclusions and policy implications
The aim of this article has been to explore how the operation and impact of strategic spatial planning is conditioned by the operation of administrative environmental management of local authorities. Through this approach it has been possible to identify factors explaining why environmental sustainability is, in general, rather sparsely implemented for Norrköping, although the coming East Link, in combination with a strong emphasis on the environment in current policy guidelines, may be considered to offer a significant window of opportunity for strategic spatial planning supporting transformative practices for sustainability (cf. Albrechts 2010, 2013).

The results of this investigation into how the management system of a local authority conditions the implementation of strategic spatial planning integrating environmental objectives can be summarised into three main conclusions, accompanied by some reflections on policy implications:

First, and what may be seen a naïve statement, is the condition that local authorities are policy-driven organisations. Thus, although the overall discourse for sustainable development formalised and promoted through international and national political bodies and other stakeholders is strong, it is necessary to conceive how such objectives are translated and integrated into the local policy steering documents. It is not reasonable to expect strong integration of environmental sustainability if such objectives are not prioritised in the local policy debate and made explicitly visible in general local guidelines. The situation in Norrköping, where environmental objectives are not promoted with any notable emphasis through political steering documents, means that these aspects are not strong incoming claims either ‘from the side’ or ‘from above’ in the steering model for Norrköping (Figure 1). Thus, the management approach envisioning the standardisation of processes points to the importance of setting this standard. This means appreciating the role of the overall political ambitions (i.e. the Plan phase in the PDCA cycle) for strategic planning.

Second, assuming that strategic spatial planning requires policy integration, there is a demand for resources, including time for politicians and planners to be involved and to communicate across fields of expertise and departments of the local authority organisation. This could be coordinated through the administrative management system. However, having an integrated approach requires maturity and organisational learning (Emilsson and Hjelm 2009). A lack of time is a barrier to this, which is evidenced by, for instance, the devolution of the coordinating group for the East Link planning process. Thus, resources for learning need to be mobilised to ensure that environmental
sustainability initiatives are relevant and have clear objectives. Administrative management needs to balance comprehensive systems with space for ‘bottom up’ initiatives for inventing ways to integrate environmental sustainability objectives into spatial planning (i.e. the Do phase in the PDCA cycle). This is illustrated by the Inner Harbour, which exemplifies that transformative practices are feasible while being primarily hosted and led from one particular department of the local authority, making it manageable and not an excessively demanding comprehensive steering and control system.

Third, planning objectives need to be supported by well-organised management and this requires efficient interplay between organisational maturity, institutional capacity and compatibility with professional cultures (Hjelm, Emilsson, and Cherp 2011). The weak implementation of Mobility management seems to be related to an absence, as well as a lack of interplay, of these factors. In contrast to the conditions for the Inner Harbour, the management context for Mobility management in Norrköping represents a fragmented situation which is also undermined through weak normative support. Thus, management checklists with factors required to pursue projects would help to avoid failed sustainability projects (i.e. related to the Do phase in the PDCA cycle).

To conclude, it is hoped that this discussion has illustrated how strategic spatial planning is formed through the interplay of policy and the administrative management procedures for the local authority. The endeavour of strategic spatial planning to leverage environmental sustainability requires forwarding policy and planning preconditions addressing environmental objectives. It also asks for efficient integration of such objectives into the administrative management processes. The discussion has also illustrated a complex relationship between the logics of management and planning, more generally. On one hand, implementation of planning demands management. On the other hand, the logics of management are not well equipped to integrate the logics of planning to be in a state of constant change.

Disclosure statement
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