Planning competitions as tools towards sustainable community development

A critical case study

Tiina Merikoski
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Planning cities and communities is a complex task, which requires knowledge from and interaction between the multiple disciplines involved. In the recent decades, the task has become even more complicated and demanding due to the challenges posed by the environmental and climate changes. A lot is yet to be solved in order to fully understand sustainability of communities, and new solutions and innovations are needed. Planning competition is a specific tool which can be used in exploring transformative solutions and creating knowledge for sustainable community development. In this thesis, the instrumentality of these competitions as a tool for planning and in generating solutions to promote sustainable community development is investigated. The thesis is framed by case studies of two planning competitions: the Ylläs competition for a new resort community, and the Sibbesborg competition for sustainable community development. With the help of the case study data it is examined how appropriately the competition entries responded to the tasks and goals described in the competition briefs. A key observation is that the tool itself, the planning competition, creates restrictions to what can be solved with it. Within the competition practices, intrinsic mismatches were found. Further examination suggests that planning competitions are dominated by the traditions of the architectural profession, and thus, effective multidisciplinary collaboration becomes crippled. Other professionals may not be familiar with visual tools as methods of knowledge production. Therefore, they are at risk of receiving a secondary role in a collaborative and multidisciplinary design team and, consequently, competitions do not produce holistic solutions for sustainable communities as expected. The results of this study include suggestions on how competition practices need to be reformed in order to better respond to the demand of transdisciplinary knowledge production. Moreover, the results imply that similar difficulties may be experienced beyond competitions; within the practice of urban planning.

Keywords Planning competition, sustainable community, design tool, knowledge production, multidisciplinary collaboration, transdisciplinarity

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Helsinki, 24 April 2020
Tiina Merikoski
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<tr>
<td>ACE</td>
<td>Architect's Council of Europe</td>
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<tr>
<td>AR</td>
<td>Action research</td>
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<tr>
<td>BREEAM</td>
<td>Building Research Establishment Environmental Assessment Method</td>
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<td>IPCC</td>
<td>the Intergovernmental Panel on Climate Change</td>
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<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
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<td>MFA</td>
<td>Museum of Finnish Architecture</td>
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<td>RMOW</td>
<td>Resort Municipality of Whistler</td>
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<td>SAFA</td>
<td>the Finnish Association of Architects</td>
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This doctoral dissertation consists of a summary and the following articles which are referred to in the text by their numerals


Author’s Contribution

**Publication 1:** The intrinsic mismatches within architectural competitions: case Sibbesborg

The author was the main responsible for developing the arguments in the article. The author wrote the article with contributions by Susa Eräranta. Eräranta was the other key researcher in the Sibbesborg project, and thus, the empirical material has been collected together by the author and Eräranta.

**Publication 2:** Sights beyond illusions – Towards commensurable competition proposals

The author is the sole author of the article.

**Publication 3:** Reading the image – Endorsing co-creation in planning competitions?

The author is the sole author of the article.
1. Introduction

1.1 Planning environment in the 21st century

“We cannot solve our problems with the same thinking we used when we created them”

Albert Einstein

Planning cities and communities is a domain that deals with complicated combinations of demands related to, for instance, the political, economic, social and ecological aims (e.g. Rittel & Webber, 1973; Healey, 2010; Friedmann, 2005; Steinø, 2004, p. 74). Planning requires interaction between the experts of the various disciplines involved in the related processes as well as exchange of the knowledge they create (Fedeli, 2013; Urban Task Force, 1999). In addition, planning is always connected to the people, and thus needs to interact with the end users of the place in question and to consider the knowledge they produce and share (Staffans, 2004; Gehl, 2010; Fedeli, 2013). In fact, a key aim of planning and urban design is to create livable cities, and to improve the social and environmental wellbeing of the people (Jacobs, 1993; Jacobs & Appleyard, 1987; Healey, 2010; Gehl, 2010).

Planning concerns the environment, the use of land, and the related human activities, such as urban design, building and construction, transportation, and agriculture, which all create changes in natural ecosystems and effect on their ability to renew. Some of the impacts can be seen directly in the environment but some may be indirect and found in landscapes that are considered intact and protected (e.g. Foley et al., 2005; Barnosky et al., 2012). At the same time people depend on nature and on the wellbeing of natural ecosystems in many ways. Ecosystem services, such as pure water, clean air, natural resources, and land available for agriculture and housing, are necessary for the wellbeing of humans, and as such, essential parts of the planet’s life support system1.

Scientific evidence suggests that global environmental changes may lead towards a tipping point after which the planetary scale life support system may essentially change in an unpredictable way (Rockström et al., 2009; Barnosky et al., 2012; Steffen et al., 2015). Solutions and policies responding to these

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1 The environmental and climatic system that has enabled the wellbeing and development of the humankind so far.
changes are sought after in order to limit the global temperature rise to 2° C and, thus, to mitigate the potential scale and pace of the systemic changes. In terms of planning and urban design, it means finding solutions and creating practices which aim to provide good quality living environment where the natural ecosystems and human needs are balanced and provide for each other. In search of these solutions, a specific design instrument, planning competition, can be used. In this thesis, the instrumentality of these competitions in generating solutions to promote sustainable community development is investigated.

Planning as a practice includes a future vision, and ideas on how to advance towards it (Steinø, 2004, p. 75). It is placed in between knowledge and action, operating with both (Campbell, 2012). Decisions made in early phases of the process have far-reaching impacts on the resilience of the town or community, on its ability to adopt sustainable solutions and new technology in the future, and on the incentives encouraging more sustainable ways of living. After all, planning solutions may slow down or even prevent taking the necessary steps along the path towards a holistically sustainable community. The built environment, and the infrastructure it contains are slow to change. Wrong decisions and implementations may take years, decades or even centuries to fix. Moreover, planning is not only a technical procedure in which knowledge of different fields of expertise is combined in order to make decisions and plans. It contains a political aspect which makes planning even more complex and filled with uncertainties (Friedmann, 2005; Kanninen, Bäcklund & Mäntysalo, 2013; Fedeli, 2013; also, Rittel & Webber, 1973). However, in this thesis, planning is discussed and viewed specifically from the perspective of an architect or urban designer with a background in a school of architecture.

Literature and research on systemic and holistic approaches to sustainability argue that contemporary planning practices have been created during a time when a different worldview prevailed (e.g. Steffen, Crutzen & McNeill, 2007; also, Rittel & Webber, 1973); i.e. in the Industrial Age (also, Walker & Salt, 2006; McDonough & Braungart, 2002; Banathy, 1996). Moreover, the imperatives of the past hold back creativity in planning and prevent innovations for sustainability from emerging or, as McDonough and Braungart (2002, p. 62) have put it: the solutions work “...within the same system that caused the problem in the first place”, and “instead of presenting an inspiring and exciting vision of change, conventional environmental approaches focus on what not to do” (ibid., p. 66). A proactive and effective shift towards sustainable communities is not only a responsibility of the policy- and decision-makers but to a great extent a design challenge.

In conclusion, the planning environment, as understood in this thesis, includes:

1) Multidisciplinary collaboration and knowledge production (see Sections 1.2, 1.4, 2.4, 3.3 and 4.2);

For instance, in the Paris Agreement, which was accomplished in the 2015 Paris Climate Conference among 195 nations, the aim is to hold “the increase in the global average temperature to well below 2° C above pre-industrial levels and [to pursue] efforts to limit the temperature increase to 1.5° C above pre-industrial levels” (UN, 2016, p. 2; also, IPCC, 2018).
2) Applying design thinking and tools (see Sections 2.3, 2.5 and 2.6);
3) Dynamic and continuous processes, and constant change (e.g. Rittel & Webber, 1973; Banathy, 1996; Friedmann, 2005);
4) Complexity of the task created by a multitude of aims and interests, many of which may be conflicting (e.g. Rittel & Webber, 1973; Friedmann, 2005; also, Campbell, 2012); and
5) A growing demand for public and stakeholder participation and engagement (e.g. Friedmann, 2005; Jacobs & Appleyard, 1987).

1.2 Cultures of knowledge production

“The translation of the future material building into a current abstract design is necessarily partial, creative and professionally demanding.
Such translations are what architects have learned to do and are paid to do.”
Kristian Kreiner (2017, p. 45)

Before entering any further into the investigation of a specific planning tool, such as the planning competition, which is the focal point of this study, the cultural conception of knowledge production needs to be elaborated.

Through history, science can be seen developing in a linear way, in a same way as progress and development (Ramadier, 2004) of societies and technologies: new knowledge has been developed by building upon existing data and understanding. This has meant that scientific disciplines have developed separately; mainly remaining interested in questions, positions and systems relevant to the specific domain and its viewpoints (ibid.; Knorr Cetina, 2007). Moreover, during the past few decades, the amount of information and knowledge that is available and being generated has been growing at an unprecedented pace. These decades mark a shift from the Industrial Age to the Age of Information or the Knowledge Society in which knowledge has become one of the productive forces creating wealth and value (Knorr Cetina, 2007, p. 361). Along with this development, in order to access, organise and understand the growing amounts of information, and to transform it into knowledge, new domains, or epistemic cultures, have emerged (Knorr Cetina, 2007; Ramadier, 2004). As an example, planning together with urban design are disciplines that have both emerged from the epistemic culture of architecture (Steinø, 2004). Due to this development, the creation of knowledge has become even more scattered, but at the same time, the interests of knowledge have turned out more complex and, in many ways, shared.

An epistemic culture refers not only to the knowledge interests or outcomes of a certain domain. It includes the processes of knowledge production as well as the “sets of practices, arrangements and mechanisms” (Knorr Cetina, 2007, p. 363) which are used within a particular professional domain to manage
information and to create knowledge. Not only the content of a text, a symbol, or an image is relevant, but also how these are used, including the meanings connected with this use (Knorr Cetina, 2007, p. 364) as well as beliefs which may be associated to the creation and understanding of knowledge in an indirect way (ibid., p. 370).

Furthermore, a *culture of knowledge production* encompasses a specific set of practices and tools, and the environments with which information is assessed, and turned into knowledge, within a certain epistemic culture (Knorr Cetina, 2007, p. 364). For instance, within the *epistemic culture* of architectural knowledge, image-making can be seen as one *culture of knowledge production* (see more in the next Sections 1.2.1 and 1.2.2; also, Section 1.4 and Fig. 1). Moreover, while the epistemic cultures of planning, urban design and architecture may have different theoretical realms, the practical setting and the environment for which knowledge is created – i.e. the cities and communities – are in many ways shared (Steinø, 2004).

### 1.2.1 Architectural knowledge production

Design is “*what architects do every day*” (Groat & Wang, 2002, p. 101). Client’s aims, budgets and other contextual conditions and guidelines are mixed with the architect’s vision and creativity, and finally “translated into graphic representations that increase in detail” until becoming “*the guiding images used to construct the actual project*” (ibid.; also, Kreiner, 2017). That being so, visual material plays a key role in architectural design and knowledge creation (e.g. Andersson, Bloxham Zettersten & Rönn, 2013, p. 11).

Architects use also many other methods and means to produce knowledge, but the image is the most important and used in many phases of design and planning processes – and for many reasons. In essence, the design is illustrated via visual material, and the image gives form to an abstract idea (Rapoport, 2015; Kreiner, 2017). In addition, a key aim posed on the imagery is that it should communicate the relevant knowledge as well as architectural quality by itself (Andersson, Bloxham Zettersten & Rönn, 2013).

According to Richens (2011, p. 93) the common roles for imagery in architecture can be seen as being (1) to originate, (2) to test, (3) to persuade, (4) to instruct, (5) to promote, (6) to explain, and (7) to record. As Tähtinen (2013, p. 25) has noted, architects are professional image-makers, even though for them the “*image is not an ‘end’ in itself*”. Eventually, even if other tools can be used for creating a design, such as model-making or a narrative, in the modern society no design or plan will be realised and built without a certain set of representative images. In Finland, the Land use and Building Act gives specifications to what is needed in order to a design project to proceed in practice.

In order for the image to play its role in a credible way, it is presumed that the knowledge relevant to an architectural project (such as a planning competition) can be embedded in visual material; drawings, blueprints, illustrations and diagrams (Andersson, Bloxham Zettersten & Rönn, 2013; Lipstadt, 2009; also, Kazemian & Rönn, 2009). Moreover, the image is appreciated in a deep and
meaningful way among the architects. It provides “an emotional home” (Knorr Cetina, 2007, p. 317) for the professional identity of an architect, and architects form an “intimate relationship” (ibid.) with the image as it allows them to learn, experiment, observe and create understanding (ibid.). The image is seen as “a transparent means of representation devoid of interpretation” (Tähtinen, 2013, p. 24) meaning that it could communicate its content to an audience in a disinterested way (Lipstadt, 2009; Andersson, Bloxham Zettersten & Rönn, 2013; also, Kazemian & Rönn, 2009).

In particular, the linear modes of architectural imagery such as blueprints and construction drawings representing a building project or urban area are seen as objective, and as describing ‘the state of the matters’ (Lehtonen, 1994, p. 40). However, these represent professional imagery that can be hard to read for those who are not familiar with architectural and construction images. The projections of the design may be demanding to conceptualise and they contain visual as well as written coding that is difficult to encrypt without the professional background (see, for instance, Tähtinen, 2013; Merikoski, 2018; Merikoski, Eräranta & Staffans, 2012).

On the other hand, visualisations and 3D renderings mimicking the real environment are less technical and, in that sense, easier to read for a layman. This kind of imagery is mainly used in promoting the design, and to seduce and convince the audience or a client (see, for instance, Rapoport, 2015). As such, these images are problematic in a way that is very complicated: they are constructed images that have been explicitly created in order to entice, persuade or even manipulate the viewer (Pallasmaa, 2011). While creating the image, architects make decisions about, for instance, what to portray and what to leave out, as well as what methods and style of visualisation to use (Merikoski, 2018; also, Grubbauer, 2008; Lehtonen, 1994; more also in next Section 1.2.2).

Finally, it should be noted that architectural blueprints and visual tools of knowledge production are but one form of knowledge production among many others. In terms of planning, for instance, practitioners and experts beyond architecture may struggle to read, understand and work with architectural imagery, as their background, education and professional practices support different traditions and cultures in information use and knowledge production.

1.2.2 A construction called image

In recent decades, the role of the image in media as well as in people’s private lives, has been growing fast. New practices for creating, sharing and exploiting visual material have evolved hand in hand with new technologies and digital tools. For instance, images have changed how the world is experienced, and how these experiences are communicated back to the world. Boundaries between the real and the imagined are blurred, and it seems that the images are creating their own reality instead of documenting it as it is. (Pallasmaa, 2011) In fact, the image is hardly ever even meant to depict reality but to construct one (Grubbauer, 2008, p. 107), and the reality it seems to represent does not exist (Nyman, 2008). The dialogue between the two, the real and the suggested, exists
within all images and this tension is a key part of the power of the image (Pallasmaa, 2011; Leach, 1999).

Moreover, the image contains an ability to “open up a direct channel to the human mind and emotion” (Pallasmaa, 2011, p. 21). This channel can be used with a variety of motivations: images can be aimed to dictate and manipulate, or to liberate the mind and feed imagination (Pallasmaa, 2011, p. 21). Architects are professionals in design and planning but they are also trained to tell visual stories and create illusions exploiting the image, aiming to convince and seduce their audience. The process of image-making is connected to what is included in the image - and what is not - and it all begins with the future viewer and an agenda in mind. (Rapoport, 2015; Grubbauer, 2008, p. 108). The images in architectural knowledge production are not only something that carry the knowledge as required by a design task, but they also translate, transform and distort it (Latour, 2005, p. 39). In the hands of a skillful image-maker, the architectural image is not “passive or inert” (Georg, 2015, p. 328) and, thus, can hardly be called ‘disinterested’.

Furthermore, the subjects of the image - the audience - do not, necessarily, understand these intrinsic features of the image in the same way as the architects who have constructed them. Interpreting an image is at least as complex as the image itself (see, for instance, Kazemian & Rönn, 2009), and the final understanding of the image is a combination of what is embedded in the image and the capacity of the viewer to read and decrypt the messages it contains (Grubbauer, 2008, p. 110; Evans & Hall, 1999; also, Svensson, 2009). Moreover, the ways in which the image may affect on the mind of an assessor is in many ways subconscious (e.g. Pallasmaa, 2011; Evans & Hall, 1999). For instance, it is not only the professional and learned technical knowledge that architects use in assessing architectural quality from the imagery, but also tacit knowledge, assumptions and emotions (Kazemian & Rönn, 2009; Svensson, 2009; see also Section 1.4).

1.3 Planning competitions

“Architectural competition means the procedure of a Design Contest evaluating the ideas of architects, landscape architects and urbanists in a formalised procedure on a defined program and defined criteria, anonymously weighted by an independent Jury.”

Architect’s Council of Europe (2014, p. 9)

Architectural competition is an instrument by which possible futures are investigated and knowledge for an architectural project is created by design (Andersson, Bloxham Zettersten & Rönn, 2013, p. 10; see, also, Steinø, 2004, p. 75). It is a competitive procedure in which design professionals, mainly architects, take part by exploring the given task, creating knowledge and a design accordingly, and formulating it into a proposal in compliance with the guidelines given in a competition brief. In these competitions, visual methods
of knowledge production – such as blueprints, illustrations, 3D renderings and other graphic material – are widely applied, in order to illustrate the key idea of the design (see, also, Sections 1.2 and 1.4), and to transmit it to the jury assessing the proposals (e.g. Rönn, 2009).

Moreover, the practice of architectural competitions is based on four presumptions. Firstly, it is presumed that future can be investigated by architectural design, and, secondly, that the knowledge created for the design can be communicated using visual material. In addition, it is presumed that the quality of the design can be read and judged from these visual materials. The fourth presumption is that competitions generate innovation and good quality designs. (Andersson, Bloxham Zettersten & Rönn, 2013, p. 11; Lipstadt, 2009, p. 12-13; Kazemian & Rönn, 2009, p. 177, 180; Svensson, 2009; Strebel & Silberberger, 2017a; Theodorou & Katsakou, 2018.)

A specific form of an architectural competition is planning competition in which a particular place, a site or a city, is under examination instead of a single building. In these competitions, the task may concern new development such as a future housing area, or, for example, an urban renewal area. Planning competitions are also used in investigating solutions and creating knowledge for urban planning and land use responding to the known challenges of environmental and climate changes (e.g. Fedeli, 2013, p. 43; see also Section 1.1, and, e.g. Gibbons et al, 1994, p. 14-15). Planning competitions are often discussed in the same context as building design competitions, both being referred to as ‘architectural competitions’ (e.g. Strebel & Silberberger, 2017a; Menon & Vanderburgh, 2014; Andersson, Bloxham Zettersten & Rönn, 2013). In a similar way, ‘housing competitions’ may be used in reference to architectural competitions targeted to find solutions and designs for housing (e.g. Katsakou, 2013).

Architectural competitions have a long tradition in Finland, the first competition being held in 1876 for the design of the building of the Bank of Finland (SAFA, 2015; MFA, 2019). Less than twenty years later, the first proper planning competition was held in 1899 for the Töölö district in Helsinki (ibid.). Since these first competitions, the practice of design competitions has gained a solid status in Finland for both public actors such as municipalities as well as private developers in finding solutions to building designs and site developments, or to acquire professional services for these projects. The General Council of the Finnish Association of Architects SAFA plays a key role within the practice of competitions by approving the general competition rules3, by developing the competition format, and by distributing information on competitions. In addition, it is common that SAFA is invited as a partner in organising a competition4. In 2018, 20 competitions were held, of which 4 can

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3 The SAFA competition rules include criteria, for instance, for legal protection, and can be applied to any architectural competition held in Finland (SAFA, 2008). It should be noted that the competition brief including specific guidelines for a particular competition is not the same as these general rules.

4 In open competitions, in which SAFA is consulted, a contract is made between SAFA and the competition organiser. In invited competitions, the contract includes the invited competitors in addition to SAFA and the organiser (SAFA, 2008).
be considered as planning competitions; competitions, in which the task concerns an area or site beyond a single building. (SAFA, 2020)

Furthermore, it is not only in Finland that the competition can be seen as “a device that is embedded in society” (Strebel & Silberberger, 2017b, p. 2). It is an instrument used worldwide as a means to explore and respond to the “continuous transformation of the built environment” (ibid.).

1.3.1 Formulating a competition

A planning competition is often an “early step in [a] large, long-term investment project” (Kreiner, 2017, p. 45). In Finland, a common competition process begins with formulating the aims, guidelines and rules for the competition as well as the specifications for the task and creating a competition brief based on those prerequisites. The competition brief includes also background material, evaluation criteria, and instructions for creating the entries (i.e. ‘the required documents’). After announcing the competition, a time period for preparing the proposals begins. This period varies typically from a couple of months to a year (SAFA, 2019; Urban Task Force, 1999).

Once the competition organiser has received the entries, they are assessed, evaluated and judged by a jury board. The jury consists of independent members which represent the stakeholders, the competition organiser and the professional expertise needed in assessing the designs. The evaluation process is closed, and a final evaluation report stating the justifications for choices is published only at the same time as the winners are announced.

Within this general course of a competition process, there are a few variations. A competition can be an ideas competition or a project competition. In a project competition, the aim is to award one of the prize-winners with a commission whereas in an ideas competition the objective is “to find a broad solution which could serve as a basis for further decisions” (SAFA, 2008, p. 2). Furthermore, competitions can be organised as ‘open’ or ‘invited’. In an open competition, all eligible teams can take part. Eligibility can be defined in the brief, and a license to practice architecture may, for instance, be a requirement. For an invited competition, the competition organiser chooses the participants and invites them to take part (SAFA, 2008).

A competition can also be arranged in two or three phases. This is typical for invited competitions as well as for, for instance, dialogue-based models of competitions (see, e.g. Kreiner, 2010). In addition, competitive interviews can be seen as a form of a competition. This form can be used when acquiring professional services for a planning project. It means that a selected panel interviews a number of teams and nominates one team with the commission (Urban Task Force, 1999). All these forms of competitions can be combined in different ways.

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5 ‘Project competition’ is used by the Architect’s Council of Europe while the Finnish Association of Architects SAFA speaks of a ‘design competition’.
Furthermore, in the traditional formats of architectural competitions, the proposals are submitted anonymously in the form of boards or digital PDF submissions. In the competition brief, guidelines for submission material are provided. With these guidelines it is aimed to ensure that the design proposal would include and transmit the essential knowledge required by the task. In addition, the aim is to mitigate the challenge of representational differences between the varying proposals (Merikoski, 2018).

1.3.2 Motivations for organising a competition and participating in one

The competition as a design and planning instrument is grounded on the principles of an open, transparent and democratic procedure, non-discrimination of potential participants and provision of equal information for the competitors (SAFA, 2019; ACE, 2019; Strebel & Silberberger, 2017b, p. 3; also, Rönn, 2009; and Urban Task Force, 1999). In addition to these principles, the practice of competing in architecture and planning is widely associated with finding the best solutions, and producing innovative and good quality outcomes (Andersson, Bloxham Zettersten & Rönn, 2013; ACE, 2019; SAFA, 2019; Strebel & Silberberger, 2017b; Kazemian & Rönn, 2009; Urban Task Force, 1999).

Competitions are seen as a well-established channel for architects to gain commissions (see, for instance, Strebel & Silberberger, 2017b; Katsakou, 2013; Kreiner, 2010). Since the entries are submitted anonymously, young practitioners and newly founded firms are seen to have equal opportunities to succeed alongside with the established ones (e.g. Strebel & Silberberger, 2017b; Katsakou, 2013; Lehtonen, 1994). Many of today’s prominent architectural firms have, in fact, their foundation in winning a competition (e.g. Katsakou, 2013). In addition, for architects, a competition provides a design task similar to a commission, but which offers more room for artistic endeavors and creativity (Lipstadt, 2009, p. 13). Winning a competition implies “having the most original conceptualization of the design task” (Kreiner, 2017, p. 45). Both architectural praxis as well as architectural education employ competitions in learning (SAFA, 2019; Andersson, Bloxham Zettersten & Rönn, 2013, p. 10; also, Rönn, 2011; Lehtonen, 1994), and as sources of inspiration. Furthermore, as tools of knowledge production, competitions allow new ideas and theories to be developed, tested and proposed (SAFA, 2019; also, Fedeli, 2013).

For municipalities and other public actors, a competition has become a possible and sometimes even mandatory instrument in public procurement processes (e.g. ACE, 2014; Andersson, Bloxham Zettersten & Rönn, 2013; Strebel & Silberberger, 2017b; Katsakou, 2013, p. 37). As such, it has been used in acquiring not only design and planning proposals and ideas but also professional services for the task at hand. Competitions are also known as a

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6 Experimental competition formats exist which, for instance, allow dialogue between the competitors and the client, i.e. the organiser (see, for instance, Kreiner, 2010). Among other things, it means discussion over the design proposals and thus surpassing the tradition of anonymous submissions. Also, for example, in Belgium, where no specific rules for architectural competitions are applied, an oral presentation of the design is commonly required which means, of course, that the proposals are not anonymous (Menon & Vanderburgh, 2014).
means to draw public attention to a project, and as an attempt to foster public debate (e.g. Sudjic, 2006, p. 55; Fedeli, 2013, p. 42; also, Merikoski, Eräranta & Staffans, 2012).

In terms of the organiser, a competition is considered a cost-effective way to produce ideas since several design teams are harnessed to investigate the task at the same time (Urban Task Force, 1999; also, Kreiner, 2010; Strebel & Silberberger, 2017b; Merikoski, Eräranta & Staffans, 2012). The more participants and proposals, the higher the variety of solutions produced (Kreiner, 2017, p. 45-46; ACE, 2019, p. 4; Strebel & Silberberger, 2017b). Yet organising a competition requires resources from the organising party, fiscal as well as human, which both may be scarce, for instance, for a small or middle-sized municipality. In Finland, SAFA is often invited as a partner in a competition process, and to provide their expertise in assistance. Also, a competition may be formulated into a project for which additional funding may be applied for, for instance, from other partners with an interest for the development or from a funding program (see, for instance, Merikoski, Eräranta & Staffans, 2012).

On the other hand, competitions can be seen to waste resources, for a lot of effort and resources are put into creating the design proposals by the participating teams (e.g. Kreiner, 2010; 2017; Katsakou, 2013). Most of the ideas are not further developed or applied in practice since typically the project is commissioned to only one of the design teams. In an open competition, the participants are not rewarded for their efforts unless the proposal receives an award. Thus, most of the work in competitions is carried out at the participants’ expense (e.g. Kreiner, 2010). However, SAFA (2019) promotes competitions as “inexpensive educational processes”.

For many of the aforementioned reasons, it is not easy to place a competition and its results under critical examination. With all the efforts put into a competition process, a winner must be announced. The winning proposal needs to be ‘the best’, and it has to provide answers to all of the aims and meet the requirements stated in the brief (e.g. Andersson, Bloxham Zettersten & Rönn, 2013, p. 8). That said, the possibility for the jury to nominate honourable mentions can be seen as a “radical character of the competition” (Strebel & Silberberger, 2017a, p. 3). Honorable mentions allow the organiser to acquire ideas from an entry performing less well in terms of the overall evaluation. At least in theory, it provides the opportunity for a competitor to challenge the competition aims, and propose a design presenting a different or even contradicting solution (e.g. Menon & Vanderburgh, 2014, p. 4). Nonetheless, the winner should reflect the success of the competition – even if the competition had been initiated with certain intended effects in mind, and the results had turned out different (Kreiner, 2017, p. 45; also, Menon & Vanderburgh, 2014).
1.4 Knowledge production in planning competitions

In competitions, the entries are created using the rules and practices which belong to the tradition of architectural knowledge production. It means that the whole competition process including rules, guidelines, required documents, evaluation criteria, and the judgement process are all framed by the aforementioned premise that knowledge can be created, communicated and read from visual material (e.g. Andersson, Bloxham Zettersten & Rönn, 2013). With the material, the competing teams aim to communicate how they have imagined solving the design problem, but also to win the competition.

In a planning competition, knowledge is created and communicated in different ways: (1) within the design team taking part in the competition and creating a proposal, (2) between the proposal and its assessors, and (3) among the assessors. The first, (1) knowledge creation within the design team, is perhaps the most eminent. However, in a typical competition in which the proposals are submitted anonymously, the organiser or the jury has no control over how the team is assembled, or how they will organise themselves in terms of design tasks or responsibilities. In the brief, recommendations can be given or even a requirement concerning the compilation of the team, but other than that is beyond the reach. Since competitions belong to the architectural tradition of knowledge production, and as such, information concerning upcoming competitions is targeted to architects, the architect or architectural firm takes charge and leads the forming of the team (e.g. Fedeli, 2013; see also SAFA, 2019). Furthermore, for many other professions, ‘a competition’ is an unfamiliar formula, and taking part in them is not included in their cultures of knowledge production.

After the proposal has been submitted, (2) the design has to communicate, by itself, how the team has proposed to solve the given task. The design proposal is assessed using the criteria specified in the competition brief (Kazemian & Rönn, 2009, p. 177; 179). The dialogue happens between the proposal and the members of the jury (Evans & Hall, 1999), who ‘interrogate’ the design by asking questions to which the design should ‘provide answers’ (Rönn, 2011, p. 113). The assessors read the design, create knowledge by doing so (ibid.; Evans & Hall, 1999), and thus, the knowledge that is created has a relation to who the reviewer is (Evans & Hall, 1999). Visual rhetoric is strong in the architectural representation and planning competition is no exception. Within the submitted competition material, the imagined future environment is visualised in a way that is deliberative and meant to seduce the viewer, in this case, the competition jury.

The third (3) way knowledge is produced is among the assessors, them being mainly the jury members. At best, all can learn from each other and complement each other’s expertise. It means not only laymen can learn from professionals, but also the professional members of the jury may learn from the laymen jurors, for instance, on local conditions and interests that may affect on choosing the winner.

However, architects are typically well represented in the jury and organising committees (Andersson, Bloxham Zettersten & Rönn, 2013, p. 11; also, Menon
Introduction

Competition rules in Finland require that at least one third of the jury members are professionals with a degree in a field relevant to the assessment of the proposals (SAFA, 2008). This rule suggests that in a planning competition aiming to envision future sustainable communities, other professionals should also be included in the jury, in addition to architects. Nonetheless, quite typically the required professional members of the jury are indeed architects, whereas the remaining members of the jury include representatives of the organiser, the municipality, and other decision makers – many of whom are lay to architecture or the other professional disciplines (e.g. Strebel & Silberberger, 2017b) needed to assess the proposals. Typically, other professionals are only called in for their insights and advice, and to provide a brief evaluation on the proposals according to their expertise. In the end, the jury might not hold any members representing the other professional fields which would be necessary for effective evaluation. In addition, even if architects represent a minority in the jury board, their position as experts becomes enhanced when the other members of the jury lack the necessary expertise in architectural evaluation (Rönn, 2011, p. 101; 109). It means, that the power on deciding on the winner is handed over to external professionals, while the representatives of the organising committee will be the ones proceeding with the project after the competition is resolved (Strebel & Silberberger, 2017b; also, Svensson, 2009).

Figure 1. The planning competition as a tool for knowledge creation belongs to the tradition of the epistemic culture of architecture. Image modified from Article III

‘Planning competitions’ can be understood as a culture of knowledge production – in a same way as ‘image-making’ (Fig. 1). It is a culture rooted in the architectural tradition of knowledge production and includes many processes
and a variety of tools and practices aiming to solve a given task. Furthermore, in competitions, different uses of the image are applied simultaneously (Richens, 2011; see also Sections 1.2.1 and 1.2.2). First, the design is originated by the imagery. In addition, the design is tested within the planning context defined by the competition. Then, the visuals aim to persuade, as well as promote an idea.

Finally, an important role of the imagery in competition proposals is to explain the design to the jury and other evaluators and viewers. According to Svensson (2012, p. 97), the “representations [...] are used as an instrument of visual rhetoric to mediate the competitor’s visions and ideas.” In creating this imagery, architects apply both, the manipulative features of image making (i.e. ‘images of control’) as well as those feeding the imagination and arousing senses (i.e. ‘images of emancipation’) (Pallasmaa, 2011, p. 21). Furthermore, as discussed above in Section 1.2.2, architects as jury members use intuition, tacit knowledge and emotions in addition to their professional knowledge in assessing the proposals. In the end, they might not be able to reason how they have arrived at the final selection of the winning proposal (Kazemian & Rönn, 2009; Svensson, 2009). The winner is identified by an ‘experience of quality’ (Rönn, 2011; also, Kazemian & Rönn, 2009), and the proposals’ architectural quality is prioritised at the expense of its technical design and performance (Rönn, 2011, p. 113). Among other things, it means undermining the proposals that do not meet the standards of quality of architectural representation.

1.5 Competition studies

“Architectural competition stimulates the production of innovative proposals for technical and aesthetic solutions for design problems.”

Adamczyk et al. (2004, p. 2)

Having a well-established status within the architectural and urban planning praxis, the competition as a practice, a process and a design tool has, of course, inspired research from several viewpoints. For instance, Kazemian & Rönn (2009) have investigated the Finnish architectural competitions in order to understand the peer-reviewed nature of the judgement process and the selection of the best proposal. Moreover, evaluating architectural quality and assessing jury processes seem to be at the core of attention within the competition studies (e.g. Strebel & Silberberger, 2017c), and has been widely discussed by scholars especially in Finland and other Nordic countries (for example, Svensson, 2009; 2012; 2013; Rönn, 2011; 2018; Östman, 2012).

Competitions have also been discussed as platforms for experimentation, innovation and knowledge production within contemporary planning processes (e.g. Theodorou & Katsakou, 2018; Fedeli, 2013). For example, Fedeli (2013) has examined the competition as a design tool placed outside the limits of statutory planning, and as a platform for “trading” of different points of views,
ideas, visions and even forms of power (ibid., p. 41, 45). She also discusses the many roles a competition may have in urban development, such as promoting public debate (ibid., p. 42).

On the other hand, Kreiner (2010; 2018), and Kreiner, Jacobsen and Jensen (2011) have discussed experimentations on the modes of competitions in Denmark, more specifically a form of competition introducing a set of dialogues to the process. These dialogues are meant to produce higher quality design responding better to the client’s needs and aims and are held among the client – i.e. the competition organiser – and the participants. Findings of these studies include the observation that adding dialogues to the process changes the dynamics of the competition (Kreiner, 2010, p. 441). The dialogue may allow the design team to learn from the client’s needs, and to react and adapt according to the given feedback. Also, the client and the jury learn over the process and via the dialogues. However, this means that the assessment criteria are not fully developed until the final evaluation stage and may result as contradictory to the dialogues held during the process (Kreiner, Jacobsen & Jensen, 2011). Thus, it seems that the dialogue procedure fails in the intention to clarify the process in order to promote logical and rational choosing of the winner (Kreiner, 2010). Moreover, the interest for dialogue-based competition forms may indicate a shift towards highlighting creativity and design task itself instead of the fairness and efficiency (Kreiner, 2010, p. 449) even if, at first, it would seem to emerge from the intention of enhancing interaction.

In architectural praxis (see also Section 1.3), competitions have gained a reputation of being “uncomplicatedly good things”, and they are “understood as an expression of a disinterested commitment to quality” (Sudjic, 2006, p. 55). It seems to have become a characteristic feature of competitions that they “generate exceptional designs” (Lipstadt, 2009, p. 12), and that competitions act as “a creative force” (Sudjic, 2006, p. 56). This positive stance towards competitions is seen in the research on competitions as well, and many scholars associate competitions with producing innovative and high-quality solutions to design problems (e.g. Adamcyk, Chupin, Bilodeau & Cormier, 2004; Strebel & Silberberger, 2017b). It almost seems that the process or formula of the competition would be sufficient in itself to produce these good quality outcomes.

However, critical approaches questioning the objectivity of the tool exist (e.g. Lipstadt, 1989; 2009; Nasar, 1999; Sudjic, 2006). It has been noted that the ‘beliefs’ in the ‘goodness’ of the competition seem to have made them resistant to ‘reasonable questioning’, and thus, prevent effective and critical examination (Lipstadt, 2009; Sudjic, 2006). Furthermore, Lipstadt (2009, p. 14) claims that the lines of reasoning behind the positive attitude towards competitions appear “to make good scientific sense” as they are grounded in the ‘common’ sense.

The critical discussion on the ‘unquestionable goodness’ of the practice of architectural competitions was largely initiated by the architectural critic and academic Deyan Sudjic. He has (Sudjic, 2006, p. 55), for instance, compared competitions to “motherhood or apple pie issues” - concepts that no one can dispute. He admits that many buildings shaping the 20th century architecture
are products of competitions (ibid.) - but at the same time he reminds us that “for every successful competition, there is another that ends in embarrassment or worse” (ibid., p. 58).

Finally, it seems that only little attention has been paid to the instrumental features of which the competitions are compiled of, meaning, for instance, the aims, guidelines and required documents. Strebel & Silberberger (2017c, p. 87-89) have noted how common it is for the competition briefs to provide highly detailed specifications for the design task (also, Kreiner, 2010), and, at the same time, to list only a few, nonspecific and general criteria for judging. Nonetheless, the focus of their study is on how the perception of the designs evolves during the jury process. In addition, Menon & Vanderburgh (2014) have examined the different elements that a competition is composed of, including the brief and its content. They, too, discuss the highly detailed specifications given in the brief, as a consequence of the complexity and difficulty of the task, as well as “the paradoxical brief” by which they mean a competition brief including several conflicting requirements (ibid., p. 10-11). However, the perspective of their study is within a wider scope as they propose a model which indicates that each of the elements and participants in a competition can be in competition with any of the other elements. They question the whole notion of the ‘competition’ by asking who or what can be considered as the winner.

1.6 Research gap and questions

An overview on competition studies and relevant literature reveals that considering the long tradition of applying competitions, comprehensive research on them seems to cover only certain areas of competition practicalities. The need to study competition processes beyond evaluation and jury assessment has been noted as well as the demand for developing the competition format, guidelines and practices (e.g. Östman, 2012).

There is also a need for further research focusing on the emergent theme of programming planning competitions that specifically aim to explore solutions for sustainable communities. The need for exploring transformative and effective solutions towards a more sustainable urban development means that the aims and tasks in competitions have become even more complex and challenging than before. Even with a simpler task, a competition may be initiated with certain effects in mind, but the results can turn out different (Kreiner 2017, p. 45). This dilemma has not been much discussed in the literature.

Consequently, in this thesis, the instrumentality of planning competitions is explored: how competitions perform in respect to generating solutions to promote sustainable community development? Previous research has been insufficient as regards whether competitions provide a viable tool for planning of sustainable communities and whether they actually produce such ideas and good quality designs and plans that are asked for, and if not, what the reasons could be for their failure.
Thus, the key research questions of this thesis are:

- **(RQ1)** In the case competitions, did the proposals respond effectively to the task given, and **(RQ2)** if not, why?

In order to answer these questions, two case competitions including all related material such as competition briefs, proposals and jury assessments have been studied and analysed (see more in Chapter 2). Also, two sub-questions were posed to the research materials:

- How did the proposals to the case competitions perform in terms of the given guidelines and assignment; and,
- Did novel and transformative ideas or solutions emerge?

### 1.7 Dissertation structure

The thesis is compiled of an introductory synopsis and three publications. In **Article I**, the first key findings of the research were published (Fig. 2). Three mismatches were identified based on the examination of material gathered in the Sibbesborg case competition. Based on these findings and on the Ylläs competition material, an exploration of the use of images as tools of knowledge production was made in **Article II**. Finally, **Article III** further examines knowledge production in planning competitions.

![Figure 2](image.png)

**Figure 2.** The articles included in the thesis in relation to each other and to the research questions.

In this first chapter of the synopsis, an introduction to the topic and a literature review concerning relevant areas of study have been given. Also, the research gap and the research questions have been described. Next in the second chapter, the overall research process is elaborated along with the materials that have been available and the methods that have been used. The chapter begins by elaborating the approaches this research has taken in terms of complex problem solving. Furthermore, the case competitions that the thesis is built upon are
described, namely the Ylläs competition and the Sibbesborg competition. In Section 2.6, a method that was developed in order to mitigate the challenges of incommensurability of competition entries is recounted.

In the third chapter, the research questions are answered, and the findings of the thesis are outlined. To conclude, in Chapter 4, the relevance of this study is discussed by considering its implications to practice as well as to competition studies. Also, recommendations for further explorations are made.
2. Research process, data and methods

In this chapter, the scientific approach of the thesis is discussed, the data and methods are introduced, and the research process is described. In addition, the case competitions are elaborated: the main parts of the empirical research were accomplished within two research projects:

- MATKA Sustainable Tourism Destinations - Land use, architecture and energy (2009-2011)
- Sibbesborg Competition for Sustainable Community Development (2010-2012)

MATKA was an interdisciplinary research project in which sustainable solutions for Nordic tourism destinations were studied, while the Sibbesborg Competition project aimed to investigate future sustainable communities explicitly by organising a competition. In these projects, pragmatist action research methods were applied which are further elaborated in Section 2.5.

In the end, both of these projects included an architectural competition both of which can be regarded as planning competitions. These competitions were held in 2010 and 2011. Both competitions sought after innovative proposals for sustainable community development as well as design teams with which to continue developing the particular sites. The overall processes of these competitions are illustrated in the following Sections 2.1 and 2.2.

Although in the briefs of both of these competitions, high aims for sustainability and solutions responding to the known challenges of climate and environmental change were called for, the key difference between them was that the Sibbesborg competition was holistically framed by - and even born from - the idea of investigating a future sustainable community. In the competition, a ‘long-term vision’ and a ‘path towards a new sustainable town’ were sought after (Sipoo municipality, 2011). The organisers hoped that as a result, a ‘living lab’ or a model for developing and testing sustainable solutions would be produced (ibid.; Merikoski, Eräranta & Staffans, 2012). The Ylläs competition, too, noted the aims for sustainability but the competition was framed and initiated by a much shorter-term interest of creating a new resort community, as well as the aims stated in the local master plan that had recently been approved by the municipal council.

In order to explore the key questions of this thesis, I have studied and analysed the competition entries as well as other competition material such as the briefs
(see Section 2.7). Material and data were collected and produced already within and during the competition processes, for instance, by participating in, and contributing to the formulation of these competitions, as well as by observing jury evaluation. The documentation and the analyses of the competition processes, along with stakeholder interviews and the competition entries, form a major part of the data of the thesis (see also Merikoski & Staffans, 2013; and, Merikoski, Eräranta & Staffans, 2012). Answers to the research questions have also been sought by reviewing existing research and literature (see Chapter 1). Specifically, the contemporary research on architectural competitions has been reviewed (Section 1.5).

Further examination of the material and the competition processes has been conducted after the conclusion of these projects by combining the results of the literature review and the material collected from the competitions, and by explicitly comparing the competition documents with the design proposals and their assessment.

2.1 Ylläsjärvi competition for a new resort community

MATKA project was a collaborative research endeavour with several partners: Aalto University Departments of Architecture and Energy Technology, and Finnish Forest Research Institute (Metla) as research institutes; and Kolari municipality (the planning authority), Laatumaa (the landowner), Fortum Power & Heat (energy systems), Lapland Hotels (business operator), and Lemminkäinen Talo Oy (holiday house constructor and developer) representing the stakeholders and the value chain for the development. The project was framed by a site allocated for new development in close proximity to an existing destination village, Äkäslompolo, and the Ylläsjärvi Ski Resort on the northern slopes of the Ylläsjärvi fell. Ylläsjärvi is a tourism destination located in Kolari municipality in the western part of Finnish Lapland (Fig. 3).
Figure 3. Ylläs fell is part of the third largest national park in Finland, Pallas-Ylläs National Park, being the most southern fell of the park (718 m a.s.l.). Fells in the area create a unique mountainous and Nordic landscape, and Ylläs is appreciated for its far-reaching scenery and extraordinary nature. As in many destinations in Northern Scandinavia, tourism in Ylläs is based on the purity of nature and outdoor activities. Image: Tiina Merikoski

Figure 4. The new development could be seen as creating a fourth centre to Ylläs by strengthening the Ylläs Ski Resort area; the existing three being Äkäslompolo village, Ylläsjärvi village and Sport Resort Ylläs by the southern slopes. Source: Kolari municipality (2010); image modified from Ylläs II Master Plan

At the time of the project, a master plan (Ylläs II Master Plan, Fig. 4) for the Ylläs area, including the case study site, had recently been approved by the municipality, with ratification pending. The case study site was a roughly 1,000 ha site for which the master plan allocated a dense new village centre in connection to the existing ski centre, and an altogether 334 ha holiday housing
and accommodation area. For hotel, tourism businesses and services the master
plan allowed up to 284,000 sqm of new development, and for holiday housing
approximately 50,000 sqm. These figures in the master plan outlined the aims
for future development and growth for the site. Other directions were set by the
topographical, ecological and micro-climatic conditions of the site.

Sustainability was noted as one of the key aims for the development. The
Kolari municipality, the state as the landowner, and the business operator of the
Ylläs Ski Resort all recognised the possibly conflicting aims of developing a new
tourism resort on a prestigious natural site. Thus, in the research project,
planning documents, policy papers and other relevant agreements, plans and
reports were studied and analysed in terms of sustainability, in order to find
possible existing guidelines or policies for development.

As part of the development process of the case study site, an architectural
competition was held for the site in 2010. Since the competition schedule
complied with the timeframe of the MATKA project, the researchers, I as one of
them, had an opportunity to participate and follow through the entire
competition process. The research interests of the Department of Architecture
in terms of the competition were, first, to enhance understanding in integrating
the requirements of sustainability in planning; and, second, to investigate the
assessment and comparison of the competition entries. The aims of the
competition were to collect a variety of planning proposals for the site, and to
find solutions for a new tourism resort that would promote sustainable solutions
(Kilpailuohjelma, 2010). The competition was held as an invited competition,
and five design teams were invited to participate.

The competition brief included all the relevant, existing planning documents.
To complement these documents and material, the researchers\(^8\) created design
principles for sustainability (Table 1) which aimed to facilitate the design task
and to set a minimum standard in terms of sustainability. These guidelines were
a combination of what was found important in terms of local conditions and
stakeholder aims, and what was generally considered as features of a
sustainable community at the time\(^9\).

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\(^{8}\) The design principles were formulated by the research team at the Department of Architecture but all
researchers taking part in the project contributed to their creation.

\(^{9}\) For these principles, existing sets of guidelines and criteria were explored, such as the checklists in
Leed and BREEAM certifications, and the criteria included in the Whistler 2020 vision (RMOW, 2007).
Table 1. Sustainability themes in Ylläs competition. Each theme included 5-6 general aims framing the planning of a sustainable resort community in Ylläs. In addition, for each theme, a written description was given on how to consider the general aims in the planning proposals (not shown in the Table). Original material is only in Finnish and I have translated it for the purposes of this thesis. Source: MATKA project (2010); see, also, Staffans & Merikoski (2013)

<table>
<thead>
<tr>
<th>SUSTAINABILITY THEME</th>
<th>GENERAL AIMS FOR YLLÄS RESORT DEVELOPMENT</th>
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</thead>
<tbody>
<tr>
<td><strong>Planning:</strong></td>
<td>A shared vision of the future of the area will be created</td>
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<tr>
<td>Land use, regional structure and planning process</td>
<td>Planning aims to improve the balance of the regional structure</td>
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<td></td>
<td>Regional life cycle assessment will act as a guideline for planning</td>
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<td></td>
<td>The requirements set by the fjell landscape will serve as basis for construction</td>
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<td></td>
<td>Multidisciplinary knowledge will be applied in all phases of planning processes</td>
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<tr>
<td></td>
<td>Communicative planning will be applied on all levels</td>
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<tr>
<td><strong>Transportation and network:</strong></td>
<td>Transportation network will be planned holistically and carefully</td>
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<tr>
<td>Accessibility, modes of transport and routes</td>
<td>The needs of all user profiles and modes of transport will serve as basis</td>
</tr>
<tr>
<td></td>
<td>Nature is accessible both physically and visually</td>
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<td></td>
<td>Sustainable and light modes of transport are attractive</td>
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<td></td>
<td>Services are centralised and accessible by foot</td>
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<td><strong>Ecological sustainability:</strong></td>
<td>Biodiversity and nature’s ability to renew are safeguarded</td>
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<td>Nature and landscape, energy and waste management</td>
<td>Landscape, nature and microclimatic conditions serve as frames for planning</td>
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<td></td>
<td>Energy production is sustainable and primarily local</td>
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<td></td>
<td>Construction is done in an energy- and material-efficient way</td>
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<td></td>
<td>Waste is managed locally</td>
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<td><strong>Economic sustainability:</strong></td>
<td>Competitive advantage will be gained with sustainable building and construction</td>
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<tr>
<td>Operational environment and services, growth</td>
<td>Ylläs will become an attractive destination year-round</td>
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<td></td>
<td>Investments in building and infrastructure are operated in smart and effective way</td>
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<tr>
<td></td>
<td>The operational prerequisites for different businesses are safeguarded</td>
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<td></td>
<td>The qualitative and quantitative aims are balanced</td>
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<td><strong>Social sustainability:</strong></td>
<td>The wellbeing of the community is part of the strength of the destination</td>
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<tr>
<td>Housing, community, local culture</td>
<td>Sustainable alternatives for housing are considered appealing</td>
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<td></td>
<td>The traveller profiles are identified, and their needs are responded to</td>
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<td>The villages will be vibrant year-round</td>
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<td>Diverse cultural activities are provided</td>
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<td></td>
<td>Networks for collaboration, cooperation and engagement function effectively</td>
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<td><strong>Architecture and living environment:</strong></td>
<td>The life cycle of buildings is sustainable</td>
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<tr>
<td>Quality living environment and in construction</td>
<td>Design, construction and maintenance of buildings is high quality</td>
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<td>The aim is to become a forerunner in energy efficient building and construction</td>
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<td>Architecture provides eco-friendly solutions</td>
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<td></td>
<td>Architecture creates and promotes local identity</td>
</tr>
<tr>
<td></td>
<td>Guidance will be available for sustainable building and construction</td>
</tr>
</tbody>
</table>

In early autumn 2010, all five invited teams submitted their proposals to the competition. The researchers then analysed the entries in accordance to the given guidelines of sustainability, and I was responsible specifically in assessing the land use and planning. Moreover, it was considered how these principles were articulated and prioritized in the proposals, and how they had been translated into planning solutions. The results were handed over to the jury members for them to use in assistance to their judgement. The researchers had no role in the formal jury board, but the knowledge gained from the researchers’ assessment informed the jury evaluation, and enhanced understanding in integrating sustainability in planning.

In regard to the aim of exploring effective comparison of the proposals, a layering method was developed. The method allowed comparing key features of the designs on top of each other while alleviating the effects of visual rhetoric (see Section 2.6). The challenge of the incommensurability of the proposals was not at the core of the MATKA project, and the investigation of the proposals with
the layering method marked only the beginning for a further exploration on architectural knowledge production based on image-making (see for instance Merikoski, 2018; and Articles II and III).

After the competition was resolved, planning of the site continued with the winning team. Based on the winning entry, a Resort Master Plan\textsuperscript{10} for the site was finalised in December 2011.

2.2 Sibbesborg Competition for Sustainable Community Development

The Sibbesborg competition project was initiated in 2011 by the Sipoo municipality, and Aalto University\textsuperscript{11} was invited as a partner in the project. The aim of the project was to hold a planning competition in order to explore the development of a 26-km\textsuperscript{2} site next to the Helsinki capital region (Fig. 5). In essence, the task set for the competition was to envision a new town of 70,000 up to 100,000 residents far into the future which marked the starting point and the scope for the competition - and the motivation to launch the project in the first place. This frame for development was initially based on Sipoo municipality’s strategy for growth that had been created in an attempt to respond to the overall development targets for the Helsinki region.

![Figure 5. The Location of the competition site of Sibbesborg competition. Image: Article I](image)

\textsuperscript{10} Resort Master Plans or Tourism Master Plans have been used in Finland as a planning instrument beyond statutory planning setting directions for future development and, for instance, for creation of legitimate master plans. The key feature of these comprehensive plans for tourism destinations is that the plan includes the business operators’ perspective and, thus, may also include, for instance, investment assessments. (Staffans & Merikoski, 2013)

\textsuperscript{11} The core team at Aalto University consisted of two researchers (I as one of them) and a research manager.
Another goal of the competition project was to develop and introduce new competition practices in response to the demanding and complex design task that the competition would tackle. Open and communicative methods would be applied whenever possible, and thus the project was meant to bend the boundaries of a traditional architectural competition. The final form and guidelines of the competition were not defined at the beginning of the project, and therefore the project was divided into two phases: the planning phase, and the competition phase. The objectives for the planning phase were (1) to form common understanding of the aims for the competition site considering the challenging frame for the task; (2) to outline the competition process and form; and (3), to compile the competition brief as well as the evaluation criteria in a transparent and interactive way (Merikoski, Eräranta & Staffans, 2012).

In March 2011, an international, open competition was launched, and the competition phase of the project began. Briefly stated, the task of the competition was twofold, the first part (Task 1) focusing on creating a future vision of the new sustainable town, and the second (Task 2) on the process with which to achieve that vision (Sipoo municipality, 2011, p. 33). However, these two assignments were filled with additional, detailed requirements which overlapped in many parts. In terms of creating a vision (Task 1), the task was “to design ... a plan, which will function as the basis for future development and local master plans, and which...

- ...will comprise an overall vision for the future city of 70,000 to 100,000 inhabitants supplemented by detailed localised solutions, and fulfilling local and global objectives of sustainability
- ...defines what the role and character of Sibbesborg will be in the future, as the metropolis expands towards the east
- ...determines what the centre of Sibbesborg will be like and where it will be situated
- ...defines the development solutions at local master plan level and the sustainable principles for the development of Sibbesborg
- ...will have an urban structure and cityscape well suited to the location, and based on local conditions and values
- ...will be based on high-quality innovative solutions and urban planning
- ...will ensure the development of Sibbesborg into a unique, pleasant small town, that functions as a part of the overall metropolitan area
- ...will be based on high-quality pedestrian, cycle and public transport facilities
- ...is technically and financially viable” (Sipoo municipality, 2011, p. 33)
On the other hand, the task (Task 2) was to envision a sustainable path towards implementation and to “produce a description of a multidisciplinary, self-regulating area development process” for which several issues were to be considered (Sipoo municipality, 2011, p. 33):

- A sustainable, flexible and interactive process of implementation
- The preliminary steps and the subsequent intermediate stages
- The sequence of implementation and target schedule
- The operators and organisations participating in the process
- The relationship to other regional development processes
- The changing regional role of the area as the process progresses
- The means of interaction with local residents and other operators within the local community
- The means of interaction with local residents and other operators within the local community

At the end of 2009, the population of Sipoo municipality was less than 18,000 (Sipoo municipality, 2011, p. 25). The aim to develop the competition area into a town of up to 100,000 residents meant enormous growth prospects\(^\text{12}\). In addition, the competition site was located in the Sipoonlahti bay area which is known for its fragile and pristine natural environment. The area also has a history in farming and the residents appreciated its traditional cultural landscapes. For these reasons, the competition was charged with high, ambitious aims for sustainability. Five key themes (Table 2) of uniqueness were formulated in order to reflect those elements of sustainability that were seen the most important for reaching towards this vision. These thematic aims were emphasised in the competition brief and, by doing so, participants were encouraged to form multidisciplinary planning teams. Also, one professional for each theme was recruited to set criteria for these themes and to assess the competition entries accordingly.

\(^\text{12}\) The scale and difficulty of this challenge was highly debated, and much discussed during the competition project, for instance, in the workshops held for formulating the competition and its brief (see more in Merikoski, Eräranta & Staffans, 2012). Since it yet became one of the main guidelines and aims in the competition, it has not been further discussed in this thesis.
Table 2. The five themes of sustainability. Each theme was divided into 2-6 subcategories which were further split into criteria or notions of emphasis (not shown in the Table). Source: Sipoo municipality (2011)

<table>
<thead>
<tr>
<th>SUSTAINABILITY THEME</th>
<th>SUBCATEGORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique methods of organising transport</td>
<td>National and regional connections</td>
</tr>
<tr>
<td></td>
<td>Internal transport arrangements</td>
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<td></td>
<td>The impact of traffic arrangements on the surroundings</td>
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<td></td>
<td>A sense of community and a quality of life</td>
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<td></td>
<td>Aesthetics and comfort</td>
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<td></td>
<td>A rejuvenating, healthy and safe environment</td>
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<td></td>
<td>Functionality and smoothly-running daily operations</td>
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<td></td>
<td>Culture and tradition in the planning process</td>
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<tr>
<td>Unique ways of living and unique lifestyles</td>
<td>Preservation of valuable natural and landscape features</td>
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<tr>
<td></td>
<td>Safeguarding of ecosystem services</td>
</tr>
<tr>
<td>Unique environment and landscape</td>
<td>An energy-efficient city</td>
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<td></td>
<td>A low carbon footprint</td>
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<td></td>
<td>Ecological water resources management</td>
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<td></td>
<td>Eco-efficient recycling of materials and waste management</td>
</tr>
<tr>
<td>Unique forms of eco- and energy efficiency</td>
<td>Creation of prerequisites and concepts for the generation of employment and services</td>
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<tr>
<td></td>
<td>Accessible, high-quality basic and local services</td>
</tr>
<tr>
<td></td>
<td>Support for private enterprise, telecommuting and working from home</td>
</tr>
<tr>
<td></td>
<td>Innovative concepts for local and virtual services</td>
</tr>
<tr>
<td></td>
<td>Development of economic business in the sustainability, welfare and health services and tourism sectors</td>
</tr>
<tr>
<td></td>
<td>Application for innovations and new technologies</td>
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</tbody>
</table>

In an attempt to accommodate the challenging design task, and to provide as much information as possible in terms of the five themes, the competition brief along with documents and material turned out extensive (Sipoo municipality, 2011; Merikoski, Eräranta & Staffans, 2012; see, also, Strebel & Silberberger, 2017b, p. 5; and Strebel & Silberberger, 2017c, p. 87-89).

Altogether 30 entries were received by the end of the competition time. Great effort was made on their assessment. A common practice regarding the use of professional experts in competitions is to ask for their written statements on selected proposals in the very final stages of evaluation. In this competition, however, the five experts who were involved already in the first phases of the process by creating thematic guidelines and evaluation criteria, assessed all entries accordingly to inform the jury board. Also, two international jurors took part in evaluation and in a two-day evaluation seminar which was held for final decision making (Merikoski, Eräranta & Staffans, 2012; Sipoo municipality, 2012).

The competition was resolved in November 2011, and the winners were announced in January 2012. Development of the site was then proceeded with the winning team.

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13 One of the entries was disqualified since it had been composed in Finnish although only English was allowed by the competition rules (Sipoo municipality, 2011, p. 9).
2.3 Design thinking in solving planning problems

With ‘design’ one commonly refers to the deliberative process of formulating, originating and creating an object such as a device or an instrument, or, as in architecture, a building. Moreover, it means to create a representation of something to be constructed by others (Schön, 1983, p. 78). ‘Planning’, as discussed earlier in Section 1.1, is used to describe the future-oriented and strategic (e.g. Steinø, 2004) task of exploring larger scale systems, such as urban, natural or social environments. However, in this dissertation ‘design’ is also understood as a process and a way of thinking, which is used in order ‘to do planning’. Thus, planning of communities and cities is perceived as a complex and ‘wicked’ design task (Rittel & Webber, 1973; also, van Aken, 2004; Healey, 2010) in which design thinking and multidisciplinary co-creation of knowledge are applied. Similarly, planning research includes areas of interest that can be placed within the design sciences (Needham, 2000; van Aken, 2004), and competition studies is seen to reach across architectural research and planning research (Fig. 6).

![Diagram](https://via.placeholder.com/150)

**Figure 6.** Placing competition studies within design sciences.

Design sciences can be understood as a research paradigm seeking to solve problems and aiming to produce knowledge for specific disciplines, such as engineering and planning (van Aken, 2004, p. 224). The aim of all research is to create knowledge and understanding (ibid., 2004), but according to van Aken (2004, p. 220), “understanding a problem is only halfway to solving it”. While gaining understanding on a complex problem, knowledge for developing and testing of solutions is generated (ibid., 2004; Rittel & Webber, 1973). Likewise, Rittel and Webber (1973, p. 157) have discussed the paradigm change which emerged already in the 1960’s when it was recognised that instead of being

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14 For a range of definitions and understandings for ‘design’, see Banathy, 1996, p. 11-13.
interested in what a system is ‘made of’, it should be asked what it ‘does’ – and moreover, what it ‘should do’. Van Aken (2004, p. 225) elaborates the matter by distinguishing design sciences from explanatory sciences, such as physics, and formal sciences such as mathematics and philosophy. While the aim in explanatory sciences is to describe and explain a phenomenon, and in formal sciences it is to develop internally logical propositions, the paradigm of design sciences is used to create “knowledge to be used in designing solutions to problems” (ibid., 2004, p. 224-225). This does not mean, however, that the research process would be linear, or that knowledge for the solution would not be generated already while gaining understanding of the problem (e.g. Schön, 1983). Moreover, in order to understand and describe a complex and wicked problem, knowledge provided by the variety of possible solutions has to be applied (Rittel & Webber, 1973, p. 161).

![Figure 7](image)

**Figure 7.** The design process as illustrated by the Design Council (2019; 2015; i.e. the Double diamond -model) describes four varying stages of a design process. First, (1) the given challenge is explored from a variety of perspectives. Then, the information is converged and (2) defined into knowledge (also, Koponen, Hildén & Vapaasalo, 2016). The knowledge is (3) developed further by creating a multitude of alternative solutions from which a selection of the prominent ones is tested (4) in order to develop the outcome. This process is not linear, but essentially iterative and the phases may be combined in different ways depending on the situation (e.g. Schön, 1983) and the challenge at hand. (Banathy, 1996.) Methods within the process should respond to the particular design situation (Banathy, 1996) and are ‘explored, shaped and built’ for each case and context. Source: Design Council, 2019; 2015; image modified from Design Council, 2019.

A design process (Fig. 7) shifts between diverging and converging in order to either explore and produce many alternatives and enhance understanding on the design context, or to define and discover, for instance, ‘the right answer’ (Faludi, 1973) among many possibilities – which then can be further developed and tested in action. This frame is useful not only for practitioners but also for researchers exploring their research problems within design sciences. The first phase illustrated in Figure 7, ‘discover’, aims to enhance understanding on the challenge at hand by examining the problem from many different perspectives and from the points of view of all actors and stakeholders it might concern. For ‘defining’, the insights from the discovery phase are converged and delineated in order to effectively inform the problem solving. ‘Developing’ means to
produce and co-design many alternative solutions and answers with a range of stakeholders. Finally, the most prominent solutions are tested and improved for ‘delivering’ a solution. (Design Council, 2019; 2015) The process is not linear, but nonlinear, dynamic and iterative (Banathy, 1996), and the phases may be applied in a variety of ways depending on the needs of the actual task at hand (Design Council, 2019). Moreover, the solutions that are generated and tested inform the original challenge and produce knowledge for further understanding (e.g. Rittel & Webber, 1973). More often than not, the process is complex and unpredictable, meaning that the ‘moves’ and choices made by the designer generate consequences that were not intended and, thus, the process becomes reflective (Schön, 1983, p. 79).

2.4 Collaboration in complex problem solving

In addition to design thinking, the complex nature of a planning problem requires expertise of several different scientific and professional disciplines and their effective collaborative efforts. Many studies concerning knowledge production in multidisciplinary environments have examined the distinctive features of disciplinary, multidisciplinary, interdisciplinary and transdisciplinary approaches (e.g. Ramadier, 2004; Gibbons et al., 1994). Considering the context of this thesis and its findings, it is useful to make some notions based on these distinctions.

A disciplinary approach is applied and practiced when the object of interest has no relevant or intended relation to another (scientific) discipline and when the aim is to produce knowledge to be used primarily in internal developments and advances of a specific domain (Ramadier, 2004; Gibbons et al., 1994). It can be seen as the traditional approach to scientific knowledge production (Gibbons et al., 1994).

In a multidisciplinary approach, the knowledge provided by the different disciplines is seen as complementary in creating understanding or solving a problem (Ramadier, 2004, p. 433). Moreover, with interdisciplinarity the aim is to construct something that is common to all, a synthesis (ibid.). In addition, it entails transferring tools or practices meaning that the participating disciplines apply a model, a tool of knowledge production, or a set of rules common to the other epistemic cultures involved (ibid.). Hence, it may result in a greater learning experience or even in adoption of new practices. Both, multidisciplinarity and interdisciplinarity, are seen to avoid paradoxes and, as such, would not serve as the best approaches when the aim is to find solutions to problems including contradictions and complexities (ibid.).

However, transdisciplinarity is considered useful by many (e.g. Ramadier, 2004; Gibbons et al., 1994; Deprés et al., 2011; Doucet & Janssens, 2011) in complex problem solving. It simultaneously applies multidisciplinarity as well as interdisciplinarity (Ramadier, 2004, p. 433; Fig. 8) and “is based on a controlled conflict generated by paradoxes” (ibid.). In addition, as Ramadier (2004, p. 438) has noted, transdisciplinarity encourages to unify the methodologies “in order to identify […] the […] points that do not pertain to the
same level of reality.” The aim is to seek between the lines and within the margins, and to look across the disciplinary boundaries (Ramadier, 2004; Déprès et al., 2011). The solution will “be beyond that of any single contributing discipline” (Gibbons et al., 1994, p. 13).

Gibbons et al. (1994, p. 13) place transdisciplinary knowledge production in the context of application and “in a framework of action” (see also Section 2.5). Transdisciplinary problem solving can be seen as evolving and sustained development, not something that is first created and only then applied (Gibbons et al., 1994, p. 13; see also previous Section 2.3). Also, within the solution both empirical and theoretical elements are combined, and while it does contribute to existing knowledge, the advances are not necessarily to any disciplinary knowledge per se (ibid.) but something completely new may emerge. Furthermore, an interesting feature that is seen as characteristic of transdisciplinarity is the way learning and disseminating of the created knowledge happens: it is not primarily through academia or via scientific journals, but the original participants take the knowledge with them and use it in solving new problems, within new teams, and in new contexts (ibid.).

In the MATKA project, as a research project involving multiple disciplinary approaches to sustainable tourism resort development, efforts were placed in mutual learning and interdisciplinary production of knowledge. The aim was, primarily, to create outcomes combining the disciplinary forms of knowledge produced in the project, and to communicate those outcomes to the partners of the project and the stakeholders of the Ylläs area in a viable way. Research in the Sibbesborg project, on the other hand, can be placed within the planning domain with a perspective of an architect and urban planner, and as such, did not involve other research domains. However, the researchers facilitated the co-creative efforts made during the formulation of the competition and observed the assessment and evaluation of the competition proposals which was done by a group representing multiple professional disciplines.

Furthermore, in this thesis, the terms ‘multidisciplinary collaboration’ and ‘multidisciplinary co-creation’ are being used more often than
‘transdisciplinarity’ in order to emphasize, firstly, the need to include multiple disciplines in problem solving, and, secondly, the efforts to co-create knowledge instead of merely producing complementary material – which, in the light of what has been discussed in this section, is essential to tackling complex design problems. Moreover, as will be discussed in the following Chapters 3 and 4, the outcomes of this dissertation demonstrate critically that not enough attention is given to the lack of transdisciplinary practices in planning competitions dealing which essentially complex problems. As Ramadier (2004, p. 438) has noted, the transdisciplinary efforts in knowledge co-production may generate cultural problems as the researchers – or practitioners – have to “step back from the methods and points of view advocated by their own discipline” (see also Section 1.2), making an effective transdisciplinary process itself complex and challenging.

2.5 Pragmatic action research

The research in this thesis is based on the planning research tradition of critical pragmatism (e.g. Forester, 1993; 1999; Mäntysalo, 2007). Critical pragmatism has inspired the research not only by being an analytical and pragmatic approach, but also since it “…directs and frames attention to, and even encourages critical questioning of both outcomes and processes…” (Forester, 2013, p. 18-19), and values learning, re-examining and adjusting the practical actions taken. Innovation for planning practices can only be developed through testing, reflection, and adaptation (Straatemeier et al., 2010; Schön, 1983; Forester, 1999). In addition, as Forester continues, critical pragmatism “…wrestles with a variety of process designs to promote rather than restrict […] invention and problem-solving, and […] works to explore possibilities rather than to presume impossibility” (Forester, 2013, p. 19).

Action research (AR), within critical pragmatism, is a collaborative and self-reflective process (Fig. 9) which aims to improve, for instance, the current practices of those who participate in them as well as their understanding on these practices (Kemmis & McTaggart, 1988, p. 5). Substantively prescribed objectives are not formulated, and the aims are given in terms of process criteria, e.g. participation and effective inclusion (Altrichter et al., 2002). According to Saija (2014, p. 193), AR “is not a methodological choice, but an ethical and epistemological one”. By making this choice, the aim is not only to collect knowledge, or gain understanding on a phenomenon (van Aken, 2004), but to generate a collective learning process between the researchers and the other actors (Saija, 2014, p. 187) and to intentionally promote change within a field of knowledge that deals inherently with change, such as planning (Saija, 2014, p. 192; van Aken, 2004). Also, Greenwood and Levin (2007) emphasise that AR is not “a theory” or “a method” as such (also, Greenwood, 2007).
Figure 9. AR is by definition a multidisciplinary, multi-method and contextual process in which knowledge is co-produced, and then tested and evaluated among academics and non-academics (Greenwood & Levin, 2007; Saija, 2014). Staffans, Kahila-Tani and Kyttä (2020) have discussed the importance of placing diverging participation and converging collaboration in the appropriate phases within the process (see also, Faludi, 1973). In an AR process, the participating actors can and should vary according to whether the aim is to diverge knowledge production, or to converge and define specific pieces of knowledge for testing or as outcomes. Image: modified from Design Council (2019); see, also, Staffans et al. (2020); and Saija (2014).

Greenwood (2007) also gives participation in AR an inseparable position. The decision to choose AR as the approach to a research process implies that the task at hand is complex and requires multidisciplinary participation and a variety of stakeholders to take part. Thus, AR is based on a dialogical relationship between all the participants, and knowledge is meant to be produced in collaboration. (Greenwood, 2007; Greenwood & Levin, 2007). In order to support this dialogue and multidisciplinary knowledge production, an appropriate set of methods and work forms are chosen (Greenwood & Levin, 2007). Moreover, AR is a strategy and does not offer a specific ‘set of techniques’ (Greenwood, 2007, p. 133). Every case is unique, and the combination of methods are chosen, or developed, according to the needs of a particular situation (Greenwood, 2007; Banathy, 1996).

As a strategy, in line with design sciences (see Section 2.3) and critical pragmatism, AR was the logical choice as a basis for both, MATKA and Sibbesborg, projects. In the MATKA project, stakeholders and local actors played a key role in providing insights, ideas and local knowledge. The project had already engaged all significant stakeholders for the development of the site as partners (see Section 2.1). However, in order to understand the stakeholders’ respective interests and aims, to gain local knowledge on the site and the tourism operations, and to ensure the involvement of all significant actors, an actor survey as well as a visitor survey were conducted. After these surveys, a shared vision that would give directions to the development of the site was generated in collaborative workshops (see Merikoski, 2010; Staffans & Merikoski, 2013; Tyrväinen et al., 2014). Throughout the project collaborative and participatory events such as workshops and seminars were hosted, in which knowledge was generated, assessed and tested. In addition, altogether 11 local actors such as decision-makers, planners, residents, and representatives of the...
tourism businesses and other local operators, were interviewed – some of them more than once.

The material provided by the MATKA project for this thesis includes the actor and visitor surveys; material produced in workshops and other collaborative events (including those among the research group); interviews and their transcripts; all competition material including the competition brief, five entries and their official evaluation; and my personal documentation and notes throughout the project. In addition, the layering method that was developed in the project (see next Section 2.6), provided knowledge and material for this thesis.

The Sibbesborg project was launched expressing only the general aims of, firstly, to arrange a planning competition, and, secondly, to formulate it in a participatory and transparent way. The project was therefore divided into two phases. It began with a planning phase; a flexible and iterative process that was constantly evaluated and adjusted by the organising team. During this phase, the researchers worked proactively together with the competition organisers as advisers and experts, and as members of the organising team. The concrete objectives of this phase were to formulate the competition trajectory and to create the competition brief accordingly.

In order to comply with the aim of applying participatory and transparent methods, the researchers hosted workshops which brought together experts and professionals representing a variety of fields related to urban and sustainable planning, and to the practice of architectural competitions. These events were meant to serve as platforms for co-creation, and also to reflect the open and transparent mindset in formulating the competition. The results from the workshops were summarised into a shared vision for the future town of Sibbesborg, and from this vision the five themes of sustainability were derived (see Table 2 in Section 2.2). In addition, the course of the competition and the brief for it were based on the results of the workshops.

During the competition and the evaluation of the proposals (i.e. the competition phase), the researchers observed, documented and analysed the process. At this point, the empirical research shifted towards participant observation which meant that the researchers no longer proactively took part in the process or contributed to the discussion over the entries. Instead, we followed, observed and documented the evaluation process. This shift was done due to the traditional form of architectural competitions in which the jury evaluation is a closed process. We, as researchers, did not belong to the jury and any chances of influencing on the assessment or decision-making were this way eliminated. However, the researchers were allowed to follow all meetings.

15 Altogether three workshops were held in which 21 experts participated. The topics of these events responded to the overall questions regarding the vision of a future sustainable town of Sibbesborg, and the formulation of the competition. The participants consisted of experts from the fields of land use and planning; urban design and architecture; urban studies and urban geography; housing and living area design; urban ecology; eco and energy efficiency; mobility and transportation; environmental psychology; user-centered design; building and construction; project management and development; architectural competition practices; globalisation and urban economics; sustainable urban development; and real estate business (see Merikoski, Eräranta & Staffans, 2012). All workshops were broadcasted live via the internet and an online platform for questions and comments from the wider audience was facilitated.
related to the evaluation process (altogether five different occasions), and the
two-day judgement seminar. Only for the meeting in which the final decision on
the winners was made, we were not allowed to stay in.

Finally, as a result of the research project, the competition process was
analysed (see Merikoski, Eräranta & Staffans, 2012). The material that has been
available for this thesis includes documentation of the planning phase (video
recordings of the three expert workshops, drafts of the competition program,
and my personal notes and minutes of meetings); the competition brief with the
attached documents; all (30) competition entries; my personal notes on jury
meetings; video recordings of the launching event and the prize ceremony; and
a total of 11 interviews of key members of the organising team, including the five
experts that were invited to support the jury work.

2.6 Layering method

In planning competitions, rooted in the tradition of architectural knowledge
production, a competition entry is mainly represented in a visual form (see
Sections 1.2, 1.3 and 1.4). The required documents named in the brief confirm
the prerequisite of producing a certain set of visual material. Guidelines for this
imagery are given in the brief, which aim (1) to ensure that it transmits the
knowledge essential for evaluation, and (2) to mitigate the challenge of
representational differences between the varying proposals (Article II;
Merikoski, 2018; also, Merikoski, Eräranta & Staffans, 2012, p. 38). However,
each competition entry aims to convince the audience, i.e. jury board, and to
’sell’ their solution (e.g. Pallasmaa, 2011). Thus, the proposals look very
different and are difficult to compare against each other. Even if, for instance, a
town plan in each entry is presented in the same scale, the perception of the idea
and solution is different depending on the chosen visual style and tools (Fig. 10).
The comparison is further challenged by the submission form. Boards, prints,
or PDFs can only be compared side by side and not on top of each other.

This question of incommensurability was raised when the proposals to the
Ylläs competition were received. It became clear that the imagery the teams had
created made the designs hard to compare, especially for those jury members
not familiar with reading images. Would it help if the designs could be more
effectively weighed against each other?
Within the project, I developed a tool to mitigate this challenge, which was then tested in the Ylläs competition: essential information and knowledge were redrawn as vector images, bypassing the visual rhetoric created by skilful and vivid visualisations, and thus clarified and made easier to compare. These images were then layered on top of each other in order to get a clear and ‘undisturbed’ understanding on the key differences between them (Fig. 11). In addition, the method allowed that the relevant features of the site, such as topography, nature, trails and existing built environment which already were available as digital files, could be studied more effectively together with the proposed designs (Merikoski, 2010; 2018). It should be noted, that the aim of the method was not to become a tool for judging the entries nor assessing the quality of the design proposals. It was developed to assist in comparison, and to provoke discussion over the disinterestedness of the image (Merikoski, 2018).
By redrawing the key features of the design proposals as separate vector images, it was possible to compare solutions against each other. This way, for instance, the proposed land use and road network could be examined without the visual rhetoric included in the original design, and in that sense, an ‘undisturbed’ understanding of the differences was gained. In addition, the amount of the personal interpretations affecting the assessment was lessened. In the image above, the land use of the proposals is compared using the layering method. Clockwise from top left: ‘Kuura’ & ‘Kudelma’; ‘Kuura’ & ‘Luppo’; ‘Kuura’ & ‘Ylys’; and ‘Kuura’ & ‘Noitarumpu’. Image: Merikoski (2010)

The layers were drawn from the PDF files of the entries using VectorWorks. However, any vector-based software could have been used, such as AutoCAD or Adobe Illustrator. Redrawing the layers in the case of the Ylläs competition was easy enough since there were only five entries. In a competition receiving tens or hundreds of proposals, applying the method would become at least very arduous or perhaps even unrealistic considering the time and resources available for the assessment (Merikoski, 2018).

This question of the incommensurability of the imagery presented in competition entries was initiated within the MATKA project and led to developing and testing the layering method. Nonetheless, it was not a question at the core of the project and thus it marked the beginning for deeper exploration on architectural knowledge production based on image-making (Article II; Merikoski, 2018) finally framing the key arguments of this thesis.

The findings from testing the method and the implications to competition studies are further discussed in Section 3.1 and Chapter 4 as well as in Article II.
2.7 Case analysis

A key part of this thesis is the analysis of the planning proposals. The performance of the entries to the case competitions was assessed together with the tasks, aims and guidelines as they were stated in the competition briefs.

In the Ylläs competition, this analysis was included in the MATKA project as the researchers had produced the guidelines for sustainability. The five entries were assessed in terms of how the design teams had interpreted, included and prioritised these guidelines. Moreover, it was considered how the given guidelines had been translated into planning solutions. (See Staffans & Merikoski, 2013). These results were handed over to the jury members for them to use in their assessment. The researchers had no role in the formal jury, but the knowledge gained from the researchers’ assessment informed the jury evaluation, and enhanced understanding in integrating sustainability in planning. Later, the material was available for this thesis.

In the Sibbesborg competition, the critical analysis of the competition material was conducted after the competition was resolved. The analysis included studying the brief, the entries, and the material related to the assessment and evaluation of the entries. The analysis aimed, first, to understand how the different elements of the competition brief – aims, guidelines, assignment, requirements – corresponded with each other, and with the design proposals. The second aim was to assess the novelty and transformativeness of the proposed designs by revisiting the entries, the evaluation minutes (i.e. Sipoo municipality, 2012), the transcripts of the interviews, and the notes and documentation of the evaluation process.

The analyses of the performance of the competition entries in both of the case competitions involved the researcher’s interpretation in many places. Analysing the proposals as a researcher is similar to the evaluation conducted by a jury member. This means, among other things, that interpreting a proposal positively confirms its potential, while a negative view lessens its credibility (Merikoski, Eräranta & Staffans, 2012, p. 60). To diminish the role of personal interpretation and intuition, explicit evidence from the text and imagery was sought after in order to find out if and how the proposal had responded to a specific aim or task. Also, the written and visual material were measured against each other, whether a piece of information or knowledge was exhibited in either the text or the imagery.

In the MATKA case, the analysis beyond the competition proposals included assessing past decision-making and planning processes and reflecting them against the statutory planning documents and status of the site at the time. The aim was to learn and understand whether past decisions promoting sustainability were seen in the current planning documents, to identify possible bottlenecks, and to make recommendations for developing planning practices based on these insights (Staffans & Merikoski, 2013). In addition, the layering method described in the previous section, was developed and tested within the project as an attempt to create knowledge that could be used in developing prevailing competition practices.
In a similar way, the research in the Sibbesborg competition project aimed to test and develop a new model for planning competitions. Moreover, the formulation of this new model was not based on a comprehensive analysis of the current practices but on a collaborative process involving the organising team, invited professionals and stakeholders. However, later, for the purposes of this thesis, an examination of the competition practices and a literature review on the competition studies was conducted (see Chapter 1).

2.8 A sustainable community?

According to the conventional view, sustainable development is a combination of three domains: economic, ecological, and social-cultural sustainability. However, in urban and land use planning the domain-specific imperatives are easily emphasised at the cost of others. Proposing solutions to a single sector such as energy, building or agriculture can be relatively easy (Turner, 2008) but finding holistic, effective and transformative solutions is much more complicated. Consensus can be hard to find (e.g. Rittel & Webber, 1973), and even when found it rarely represents the best or most innovative outcome in terms of holistically sustainable development. Moreover, ecological sustainability is easily left second to economic and political imperatives (see, for instance, McDonough & Braungart, 2002; also discussed in Merikoski, Eräranta & Staffans, 2012).

In response in this thesis, I have been inspired by holistic views and translations of sustainable development one of which is the planetary boundaries framework (Steffen et al., 2015; Rockström et al., 2009). The planetary boundaries framework proposes that a safe operating space for human development can be defined by identifying the key Earth System processes – together with threshold and control variables for each process (Steffen et al., 2015; Rockström et al., 2009). Processes identified by Steffen et al. (2015) include climate change, ocean acidification, global cycles of nutrients, loss of biodiversity, global freshwater use and land-system changes.

In the light of these studies and considering the many other complex challenges the local and global communities are faced with, a sustainable community can be seen as a highly demanding design task (see before Sections 2.3 and 2.4). To address the task, holistic understanding of the design context (e.g. Banathy, 1996); i.e. natural systems and processes, and the built environment, livelihoods and human welfare as part of these ecosystems; is a necessity (e.g. Foley et al., 2005). Thus, the challenge is necessarily multidisciplinary and includes how the knowledge produced by many professionals and experts representing a variety of domains is, first, created, second, transmitted and communicated to others, and third, adopted into a co-created result (Article III; see also Section 2.4 and Chapters 3 and 4).

I have formed a personal understanding on sustainable community as a design challenge in the aforementioned manner, but in this thesis, however, the task of sustainable community was delineated as described in the case competition briefs. In the Sibbesborg competition, it primarily means the five themes of
sustainability elaborated in Section 2.2, and the evaluation criteria accordingly. Likewise, concerning the Ylläs competition, the guidelines for a sustainable resort community have been outlined in Section 2.1.
3. Findings

The commonly accepted advantages of the competition practice have been discussed in general in Section 1.3 ‘Planning competitions’. The findings of this dissertation gave explicit support to two of these benefits. First, by harnessing several experts to explore the design challenge at the same time (see, for instance Kreiner, 2010, p. 443), a competition gives a preview of what to expect of the teams as well as from the solutions before the actual commission (Article I). Also, during the process, questions may rise to clarify the forthcoming challenge and project (interviews, 2012).

In addition, a planning competition, as a process, operates as a platform for learning and knowledge creation. The organisers, competing individuals and teams, the jury as well as the professionals invited to assist in evaluation all learn not only about the competition process but more so of the substance of the competition via dialogue between the different actors (Merikoski, Eräranta & Staffans, 2012). This dialogue and learning happens (1) within design teams (Andersson, Bloxham Zettersten & Rönn, 2013); (2) between the proposals and their audience, e.g. the jury and others who assess the designs (Rönn, 2011; Andersson, Bloxham Zettersten & Rönn, 2013, p. 11); and (3) among the evaluators with different roles, namely between the experts and the jury members, and within the jury (Merikoski, Eräranta & Staffans, 2012). In addition, indirect dialogue can be seen happening between the organisers and the audience of the competition (e.g. the public) via, for instance, media. These instances of learning also reflect the points in which knowledge is produced during a competition process. (Article III; also discussed in Sections 1.4 and 3.3)

However, the findings of this thesis revealed that although these competitions resulted in some well and professionally crafted proposals, they did not effectively respond to the tasks given in the briefs. In the following sections, these findings, which also provide answers to the research questions, are further elaborated.

3.1 How did the proposals perform?

RQ1: In the case competitions, did the proposals respond effectively to the task given?

In order to answer to the key research question of this thesis, two sub-questions were posed to the competition materials:
Findings

- How did the proposals to the case competitions perform in terms of the given guidelines and assignment; and,
- Did novel and transformative ideas or solutions emerge?

In general, the organisers of these two case competitions were content with the results. Overall, the proposed designs were considered good and textbook-like, and in both cases, planning of the competition site proceeded with the winning team. Additional benefits of the competition projects were, for instance, the aforementioned learning, the value for the organisers in drawing media attention, and strengthening the organiser’s networks of expertise and resources (e.g. Merikoski, Eräranta & Staffans, 2012). However, the more detailed study conducted for this dissertation revealed that the success of a competition project as a whole is not the same as the success of the individual design proposals (Articles I, II, and III; see also Menon & Vanderburgh, 2014).

Due to the high aims stated in the competition briefs and the efforts placed in crafting the guidelines and including additional expertise in assessing the proposals in both of the two case competitions, high expectations had been placed on the performance of the entries (Articles I and III). Yet, the analyses of competition materials revealed that the proposals did not effectively respond to the key aims stated in the competition briefs, and transformative, innovative or novel ideas did not emerge (Article I; Staffans & Merikoski, 2013; Merikoski, Eräranta & Staffans, 2012). Strong statements for sustainability had been anticipated especially from the international teams participating in the Sibbesborg competition, showcasing the most recent knowledge and expertise within the theme of sustainable communities (Merikoski, Eräranta & Staffans, 2012, p. 64; also, Sipoo municipality, 2012, p. 19; and interviews, 2012). However, the proposals added very little to the discussion on how a sustainable town in the future would be different from the present-day urban environment. For instance, the imagery of the awarded entries included little information beyond the structural composition of the proposed new town. It seemed that the proposals mainly consisted elements which the jury could easily comprehend and agree upon (Article I, p. 59).

In the evaluation minutes of the Sibbesborg competition, it was noted that only some entries showed good understanding on urban eco-efficiency, and only few had considered the idea of ecosystem services (Sipoo municipality, 2012, p.19); both being concepts that at the time of the competition represented contemporary translations of sustainability. Moreover, the experts criticised the fact that too many participants had been “satisfied with common slogans of sustainability, and to present nice diagrams without sufficient and credible links to the proposed land use plan or urban design solutions” (ibid., p. 18). In addition, none of the proposals considered the social acceptance of densely built urban villages which were at the core of the structural solution of many entries, nor did they elaborate if and how these villages would differ from the existing structural model of Finnish suburbs (ibid., p. 19).
Furthermore, the best performing proposal according to the expert evaluation in the Sibbesborg competition, ‘Sibblings’ (Fig. 12), which was awarded with the third prize in the competition, was considered as not having as high visual quality as the first and second prize winners (interviews, 2012). It did not ‘appear as fine as the others’, and its architecture was regarded ‘conservative’ (Article III). Nonetheless, the jury appreciated its urban structure, albeit noting that it was not very innovative. The proposal was considered ‘realistic’, and one that would suit Sipoo well (Sipoo municipality, 2012, p. 23). Another proposal, ‘City Game’ (Fig. 13) was considered interesting in terms of theoretical ideas of the future society but lacked also in its visual performance and did not follow precisely the conventional line of representing an architectural project. In the evaluation minutes (Sipoo municipality, 2012, p. 29) it was noted that “the presentation [of the proposal] is very confusing”. However, the proposal was among the most stimulating ones, tackling future policy making and promoting co-creation and collective action. It proposed an iterative development process and provided “a set of objectives, strategies and tools to inform the city-making” (City Game, 2011; Article III).

Figure 12. The overall plan (1:15,000) as envisioned in the winner of the third prize, ‘Sibblings’. The proposal performed best in the expert evaluation but was not considered ‘as fine as’ those receiving the first and second prizes. The jury regarded the overall structural plan ‘realistic’, but lacking innovation. (Interviews, 2012; Sipoo municipality, 2012, p. 23) Image: Liidea Ltd and Arkkitehti Oy Rajaniemi, courtesy of Aalto University
Finally, as found out in the critical analysis of the design proposals in the Sibbesborg competition, none of the teams had imagined the design context they would face in the future (Article I). The proposed solutions, thus, reflected the current society and “promoted realistic, conservative and known responses to the challenges of sustainability” (Article III, p. 135) as well as traditional technologies, for instance, in transportation. Among others, McDonough and Braungart (2002) have argued that the conventional paradigm of sustainable development is based on the thinking created during the Age of Industrialisation (see also Walker & Salt, 2006; Banathy, 1996). Contemporary knowledge on environmental changes, and their possible and largely unknown effects on the human livelihoods, demand for rethinking common practices and solutions: perfectioning the existing might not be the best way to allocate efforts and resources (McDonough & Braungart, 2002, p. 181; see also Thackara, 2005). Decades ahead, different societal, environmental and value structures are likely to prevail, and, for instance, new technologies have become applicable. Imagining the future design context is essential for investigating and innovating future solutions effectively (Article III). Moreover, a proposal presenting “a conservative vision” (Steino, 2004, p. 75) can be seen as aiming to maintain a prevailing system while “a radical vision” would seek transformation.

In a similar way, the proposals to the Ylläs competition presented a variety of well-formulated design proposals that were in line with the Ylläs II Master Plan. In general, the proposals were seen as having potential, but not fully developed. The jury evaluation stated that especially transportation solutions had not been
given enough consideration (Arvostelupöytäkirja, 2010). In only one entry, ‘Luppo’, a strong stand for ecological sustainability was taken by proposing much less construction than the Master Plan allowed (Fig. 14). Moreover, the proposal left the most vulnerable nature untouched which in terms of business operations was the most valuable part of the site (Merikoski & Junkkonen, 2012; Merikoski, 2018), and, hence, it did not meet the developers’ aims. The winning entry, ‘Kuura’, was considered as the best compromise in terms of all guidelines and aims (Fig. 15). (**Article II**; see also Merikoski & Junkkonen, 2012).

**Figure 14.** The overall plan illustrated in 1:6,000 in the proposal ‘Luppo’. The proposal was most radical of all five entries since it left much of the site undeveloped, including the the most vulnerable area on which the new dense centre was situated in the Master Plan. Thus, it did not effectively meet the aims indicated by the Master Plan and was considered unrealistic (interviews, 2010) and was not awarded (Arvostelupöytäkirja, 2010). Image: Arkkitehtitoimisto JKMM Oy, Arkkitehtitoimisto Harris & Kjisik Oy, and LOCI Maisema-arkkitehdit Oy, courtesy of Aalto University

**Figure 15.** The new resort community as imagined in the winning proposal, ‘Kuura’. Image: Eriksson Architects Ltd., courtesy of Aalto University
The reasons behind the proposals’ failure to deliver ambitious, innovative and novel solutions in these competitions are likely to be manifold including the design teams balancing between different interests - such as their own will to win and the organiser’s concealed expectations concerning the site development (Merikoski & Junkkonen, 2012; also, Menon & Vanderburgh, 2014). Also, the teams may have feared that a bold, futuristic proposal would be judged ‘unrealistic’ and thus not get awarded (Merikoski & Junkkonen, 2012). (Articles I, II and III)

All these paths of hypothesis could not be explored within this thesis, and thus questions do remain. However, two key explanations shedding light on the problem have been identified. The first is the intrinsic mismatches identified within the competition trajectory that seem to prevent effective outcomes and innovation. The critical analysis of the competition documents revealed three mismatches that may play a key role in the failure of the design proposals. Mismatches were found (MM1) within the design assignment; (MM2) in what can be solved within a single competition; and (MM3) between the aims and task, and the required documents. These are further elaborated in the next section as well as in Article I.

The second is that in these competitions only tools of knowledge production familiar to architects were applied although the tasks would have required a transdisciplinary approach. The results suggest that planning competitions based solely on the architectural tradition in knowledge production are not effective in the search for novel and holistic designs for future sustainable communities. Architectural imagery and other visual tools of knowledge creation fail to enclose and communicate the necessary interdisciplinary knowledge in a credible way to the jury, the other professionals or the wider audience. 

Moreover, the layering method applied in the Ylläs competition highlighted how the imagery dominates over text when competition proposals are assessed. The visual material required of the proposals is constructed with an aim to convince and to entice their audience, and it is hard to compare the imageries between the design proposals (Article II). These visual effects powering the images were stripped away from the proposals by redrawing only those elements that were under inspection. Thus, the illusion created by the visual rhetoric within the material became insignificant (Article II). Interestingly, even the professional architects in the Ylläs competition jury understood how they were led by the imagery and the chosen visual performance. For instance, at first, one of the entries was perceived as being widespread in terms of the proposed land use, but the layering method revealed that it was actually not much different from another proposal that had been considered proposing more compact use of the land area. This also highlights the visual material’s dominance over the written: even if the metrics for actual land reservations would be provided and are comparable as such, the visual impression leads the discussion until shown otherwise. (Article II; Staffans & Merikoski, 2013; Merikoski, 2018)
Even if guidelines for representation (i.e. required documents) are given in the brief (for instance, the scale of a plan), the perception and illusion are different depending on the chosen visual style and tools. Despite specifications concerning the imagery, in competitions, architects are given creative freedom similar to that of an artist (Lipstadt, 2009, p. 13) in terms of both exploring ideas and representing the chosen solutions. Consequently, the jury may become infatuated by the showy 3D renderings and the chosen visualisation techniques. (Article II)

Furthermore, many of the other fields of expertise involved in and necessary for planning sustainable communities are not familiar with the visual methods of knowledge production. They find it hard to read or even understand architectural imagery, as their professional practices support different traditions of creating and using knowledge (Articles I, II and III). This is further discussed in Section 3.3 'A multidisciplinary task dealt with a single method?' as well as in Articles II and III.

3.2 The intrinsic mismatches

RQ2: Why did the proposals fail to respond effectively to the tasks given?

A detailed examination of the Sibbesborg competition materials presented in Article I, suggested that three mismatches play a role in the shortcomings of the proposals. These mismatches cannot be clearly positioned nor valued in comparison to each other.

MM1: Mismatches within the design task

One of the mismatches can be seen within the given design assignment: both a long-term vision and a detailed, practical town plan were asked for in the Sibbesborg competition (see Section 2.2). There were foggy relationships between the vision and the details, the global and the local, the large and the small. On the one hand, innovation and originality were called for, and on the other, viability of implementation. Despite all the efforts placed in formulating the Sibbesborg competition, it appears as if the form of the competition had not been decided: was it an ideas competition or a project competition? The competition incorporated elements from both competition forms, and in the end, it was not clear which one it was. Future envisioning would fit within the concept of an ideas competition, while practical town plans are sought after with a project competition. This distinction affects how the brief and all the competition documents are compiled, and what exactly is required of the proposals. (Article I)

Furthermore, by asking for a practical town plan the competitors were disconnected from the future and rooted to what would be realistic to implement within the prevailing planning context. As already discussed above, the societal, cultural, political, technological, environmental and economic conditions are very difficult to imagine without providing any hints on how the
gap between now and then should be approached (Article I). It is easier to interpret the prevailing spatial imaginaries than to invent new ones.\footnote{Granqvist, Sarjamo and Mäntysalo (2019) have discussed the concept of spatial imaginaries as selective ‘mental maps’ “which give sense, enable and legitimise collective spatial practices” (ibid., p. 741). Spatial imaginaries carry contemporary concepts for spatial planning, and they are promoted via visual representations and descriptive narratives and are materialised through planning politics and practices (ibid.).}

Figure 16. An overall visualisation of the new town of Sibbesborg and the planning principles for it (see also Fig. 17) in the winning proposal, ‘Nourish’. The core idea of a twin-centered town was appreciated by the jury. However, many elements noted in the proposal concerning, for instance, ecosystem services were “not fully integrated into the plan” (Sipoo municipality, 2012, p. 25).

Image: WSP Finland Ltd., courtesy of Aalto University

In consequence, all awarded designs proposed ideas and schemes that were based on known and prevailing concepts, practices and technologies (Articles I and III). For instance, the ten planning principles proposed by the winning proposal (Figures 16 and 17) did not add anything new to the current discussion on sustainable communities. Some of the principles, such as ‘nearly zero energy’ buildings seemed almost to underestimate the seriousness of high-level, ambitious and urgently needed solutions towards sustainable communities: why not claim that all buildings need to be or become zero energy buildings within a certain timeframe – or even energy producing? Also, the notion of ‘zero-carbon lifestyle’ remained vague: how does the proposed new town support this claim? However, many of the guidelines given in the competition brief consisted ambiguous and vague aims, such as ‘sense of community’ (see above Chapter 2, e.g. Table 2; also, Table 1 in terms of Ylläs competition), and, thus, the proposals can be seen responding to those at the same level of
accuracy. A conflict arises: how to provide more exact guidelines without setting restrictions or limitations to developing solutions? (E.g. interviews, 2012; and Merikoski, Eräranta & Staffans, 2012; see also Section 3.1)

<table>
<thead>
<tr>
<th>THE 10 PLANNING PRINCIPLES</th>
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<tbody>
<tr>
<td>1  Sibbesborg lies at the crossroads of the Greater Helsinki urban area, the vast agricultural and nature areas of the northeast and the archipelago and integrates the strengths of all these into the city fabric.</td>
</tr>
<tr>
<td>2  A chain of dense villages along the east and west sides of the river form a basic services network, easily reachable from every home.</td>
</tr>
<tr>
<td>3  Local food is the easiest and most cost-effective nourishment and is visible in every phase of the Sibbesborgian's life cycle.</td>
</tr>
<tr>
<td>4  A zero-carbon lifestyle is the easiest and most cost-effective way of life thanks to high density enabling a diversity of public and private services.</td>
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<tr>
<td>5  All buildings are nearly zero energy and use wood as a material, restricting building height to eight floors.</td>
</tr>
<tr>
<td>6  The riverside of Sipoonjoki and Sipoonlahti is open to public and forms an urban central park. Eriksnäs peninsula and the vast forests of Hitit form urban lungs.</td>
</tr>
<tr>
<td>7  Sibbesborg is linked to Helsinki by a metro line. The two stops along this line form the twin city centre of Sibbe and Borg. Links to Nikkilä, Kihilähti and Porvoo function by bus. Links to archipelago function by water bus.</td>
</tr>
<tr>
<td>8  Sibbe and Borg form a uniform new center cradling the Sibbesborg archiological site. Both sides have their own distinct character.</td>
</tr>
<tr>
<td>9  Söderkulla forms the old town, its character based on locality and a balanced mix of old and new.</td>
</tr>
<tr>
<td>10 Eriksnäs leisure center forms a center of seasonal services, acting as gateway to the archipelago.</td>
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Figure 17. The ten planning principles of the winning proposal ‘Nourish’ (see also Fig. 16).

The Ylläs competition was more rational in this sense. High and ambitious aims had been set in terms of sustainable development and the site as a future tourism resort, but the concept of project competition met with the organisers’ aims to actually begin developing the site, and no long-term vision was asked for. However, the Ylläs competition was in a way subjugated to the existing Master Plan – the task operated at the same level of planning, and hence, major decisions concerning the future of the site had already been made (Staffans & Merikoski, 2013). Thus, for instance, fitting the amount of development in full allowed by the Master Plan, in a way that it proposed, was not only implicitly expected of the proposals but also a difficult task. Consequently, a proposal suggesting far less development than allowed by the Master Plan – as a statement towards a more sustainable development – was considered unrealistic (see earlier Fig. 14). The relation of the competition to the actual planning process plays an important role when considering its effectiveness (Staffans & Merikoski, 2013).
MM2: Mismatch in what can be solved with a single competition

Another mismatch – which applies to both of the case studies but was more evident in the Sibbesborg competition – concerns the aims and the task in relation to what can be solved with a single competition, within the schedule it allows. Several highly ambitious aims combined with an assignment that tried to find answers to all of them conflicts with what is realistic to solve in a competition.

In the Sibbesborg competition, it is difficult to pinpoint what exactly was the most important aim: was it the future vision, development path, practical planning solutions, the sustainability objectives or finding the right partners? Moreover, in order to address the various aims of the competition, the brief and the background material ended up being overwhelming (see also Strebel & Silberberger, 2017b, p. 5; Strebel & Silberberger, 2017c, p. 87-89; and Menon & Vanderburgh, 2014). However, in a single design proposal, created within a limited period of time and resources, everything cannot be solved effectively. Already the task of envisioning a sustainable new town for 70,000-100,000 inhabitants projected far into the future is massive.

The complexity of the task and the uncertainties related to an open competition (e.g. how many proposals will be received) seem to prompt overloading a competition with high expectations and an aim to solve everything. Nonetheless, this way, an impossible task is being posed, and this impossibility is seen in the mediocre performance of the proposals (Article I; Strebel & Silberberger, 2017b, p. 24; 133). Also, a larger amount of entries had been expected for the Sibbesborg competition, and the wide scope and exhaustiveness of the competition task was considered as being a reason for many to end up not taking part (Merikoski, Eräranta & Staffans, 2012, p. 28).

MM3: Mismatch between the aims and task, and required documents

Finally, the sets of required documents (Table 3), those by which the design and its content are communicated to the jury, did not effectively support the given tasks. This mismatch appeared in the analysis in several ways, and a couple of them are highlighted here. First, the task in the Sibbesborg competition included “a description of a multidisciplinary, self-regulating area development process” which should cover: (1) “a sustainable, flexible and interactive process of implementation”; (2) “the preliminary steps and the subsequent intermediate stages”; (3) “the sequence of implementation and target schedule”; (4) “the operators and organisations participating in the process”; (5) “the relationship to other regional development processes”; (6) “the changing regional role of the area as the process progresses”; and (7) “the means of interaction with local residents and other operators within the local community” (Sipoo municipality, 2011, p. 33). All this was meant to be described in a written document with the length of maximum two pages.
Table 3. The required documents in the Sibbesborg and Ylläs competitions were in line with the prevailing practices in planning competitions (Sipoo municipality, 2011; Kilpailuohjelma, 2010). Visual material dominated over other forms of knowledge production.

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<thead>
<tr>
<th>THE SIBBESBORG COMPETITION FOR SUSTAINABLE COMMUNITY DEVELOPMENT</th>
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<tbody>
<tr>
<td>Required content</td>
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<tr>
<td>Overall plan</td>
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<tr>
<td>Relationship of the competition area to the region</td>
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<td>Detailed partial plan of the center</td>
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<td>Supplementing material for the detailed plan</td>
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<td>Supplementing material for the detailed plan</td>
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<tr>
<td>Content of the submission</td>
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<tr>
<td>Implementation process</td>
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<tr>
<td>Thematic material (see Table 2 in Section 2.2)</td>
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<tr>
<th>THE YLLÄS COMPETITION FOR A NEW SUSTAINABLE RESORT COMMUNITY</th>
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<tr>
<td>Required content</td>
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<tr>
<td>Overall plan</td>
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<tr>
<td>Detailed plans</td>
</tr>
<tr>
<td>Detailed partial plan of the center</td>
</tr>
<tr>
<td>Content of the submission</td>
</tr>
</tbody>
</table>

Furthermore, both competitions aimed also to find partners with which to continue planning and developing the site. The Sibbesborg competition was an open competition in which entries were submitted anonymously. Finding the best partners among unknown competitors is not an easy task, and it is filled with risks (Strebel & Silberberger, 2017b, p. 4). From the material alone, it should be discovered how the design teams would suite for future collaboration and help to solve the problem at hand (Sudjic, 2006, p. 65). In order to gain understanding concerning the team and its way of thinking and working, it needs to be considered what exactly is needed in order to assess it from the entry: how the team’s capacity to fulfil the task can be evaluated, how to assess their thinking in tackling the challenge, and how to measure their suitability for future collaboration? An invitational competition, such as the Ylläs competition, provides better tools for finding future partners since the competition organiser may choose a selection of potential partners (Strebel & Silberberger, 2017b, p. 1) and get familiar with their previous work before making the final decision.

Finally, and in terms of this thesis, most interestingly, the task demanding effective multidisciplinary co-creation was not given support by the required set of documents. Planning a sustainable community calls for a combined effort of
different fields of expertise, yet in the Sibbesborg competition as well as in the Ylläs competition, the set of required documents followed the tradition of architectural competitions with emphasis on visual material. This implies, that the tools of architectural knowledge production dominate the creation of the design proposals as well as how the knowledge is being communicated. Practitioners of other professions find it difficult to read and understand architectural imagery, as their background and professional practices support different traditions of information use and knowledge production (Articles I, II and III). This finding is further discussed in the next section and in Articles II and III.

3.3 A multidisciplinary task dealt with a single method?

The concluding finding of this thesis is that by supporting only visual tools of knowledge production, effective multidisciplinary collaboration is obstructed in planning competitions. It was discovered from the findings in Article I and further explored in Articles II and III. The claim is derived from the third mismatch (MM3) in which the form of the proposals, based on the document requirements in the brief, seemed, first, to be ineffective in responding to the particular design tasks, and, second, to prefer architectural knowledge production at the expense of other modes for creating and depicting knowledge.

In the Sibbesborg competition, the task was explicitly multidisciplinary, which was emphasised by the five themes of sustainability (see Table 2 in Section 2.2) Furthermore, the entrants were encouraged to form multidisciplinary teams in different ways. First, the formulation of the competition and its brief was done in a collaborative and inclusive way, inviting several experts and many stakeholders to take part. In addition, five professionals were involved in creating specific evaluation criteria and in assessment of the proposals, aiming to assist the jury work and enhance the understanding of the knowledge content of the designs. Finally, in the brief it was explicitly recommended that the teams would include expertise in several fields such as land use, habitation, transport, community management, ecology and landscape design, development of services and business operations as well as area development processes (Sipoo municipality, 2011, p. 6). However, architecture was the only field of expertise that was required of the entry in order to have it accepted. Also, the aim of multidisciplinarity did not reach all the way through: only one profession’s tools of knowledge production were introduced effectively (Article III). Although written material was also asked for, it maintained a secondary, ‘descriptive’ role with the intention only to clarify the content of the visual material (Andersson, Bloxham Zettersten & Rönn, 2013, p. 10).

In the Ylläs competition, additional expertise beyond the invited architectural firms was not asked for. Furthermore, the competition was called ‘architectural competition’ although the task was to imagine a resort community instead of a single building. Nonetheless, complex challenges that would set directions for future tourism operations, and thus would be something to consider in
designing a new sustainable resort community, were noted in the brief: climate change; globalisation; terrorism; digitalisation; aging populations; and different lifestyles and individuality (Kilpailuohjelma, 2010, p. 12). In addition, the brief noted that, in the future, Ylläs would aim to become a forerunner in aesthetics, ethics and ecology in tourism (ibid. p. 12). Moreover, the following themes were mentioned as aims: landscape and environmental values; quality in building and construction; memorable experiences; accessibility; safety; and eco-efficiency (ibid. p. 12). In order to consider all these aims and challenges, the task would certainly require expertise beyond architecture and urban planning.

Both of the competitions received submissions anonymously. Since the Ylläs competition was an invited competition, authors behind all of the five proposals were announced together with the awards. The Sibbesborg competition, on the other hand, was an open competition, and what the fields were that were included in the design teams, is known only of those eight proposals that were awarded.

Most of the expertise within these altogether 13 teams was in architecture (Figures 18 and 19). However, several teams did include experts from various fields, and some teams noted many of them as ‘authors’ instead of ‘assistants’. The teams behind the entries in the Ylläs competition were dominated by architects, yet many relevant fields were presented, such as, energy, transportation and landscape planning (Fig. 18). The competition succeeded in this sense, since multidisciplinarity of the teams had not been explicitly encouraged.
Findings

Figure 18. The Ylläs competition succeeded in enticing multidisciplinary teams even though it had not been explicitly encouraged. All teams included expertise from at least three fields additional to architecture. Many of them were, however, noted as ‘assistants’ instead of ‘authors’. It can be expected that ‘authors’ are the main contributors within the team.

The teams that were awarded with the first and second prize in the Sibbesborg competition presented most diverse teams in terms of multidisciplinarity (Fig. 19). The winning team included expertise in architecture, traffic engineering, social sciences, landscape architecture, political sciences, engineering\(^\text{17}\) and land use planning, while the team winning the second prize held expertise in architecture, engineering\(^\text{18}\) and transport planning (Sipoo municipality, 2012). Also, in the Ylläs competition, it was the winning team that included most diverse expertise. However, only architects and landscape architects were noted as ‘authors’. In another team, which did not receive an award, the team of ‘authors’ consisted of five different fields: architecture, landscape architecture, transportation, energy and tourism.

\(^\text{17}\) The field of engineering was not specified (Sipoo municipality, 2012, p. 50).

\(^\text{18}\) The field of engineering was not specified (Sipoo municipality, 2012, p. 50).
It would be tempting to argue that the multidisciplinarity of the teams was a key factor in the result of their proposals receiving awards. However, no simple or direct line between the multidisciplinarity of the design team and the success of the proposal can be drawn. For instance, each participant’s contribution to the design is not known, and, as discussed earlier, the winning proposals in both competitions represented carefully and well created compromises – but not presenting the most innovative solutions. For instance, in terms of expert evaluations, the winning proposal in Sibbesborg was not among the best ones. Also, concerning the Sibbesborg competition, the compilations of many of the teams behind the entries remain unknown due to their anonymity. However, the notion elaborates the complexity of the task at hand. (Article III)
The first seven categories from left are the same in the Ylida and the Sibbesborg competitions. In the Ylida competition, expertise in visualisation as well as in real estate was also found within the teams. In the Sibbesborg competition, an additional field of expertise was 'Social sciences'. For this assessment, whether a team member was noted as an 'author' or an 'assistant' has been designated as it may indicate the significance of their individual contribution and thus the weight of the corresponding field of expertise in the design.

All categories include many fields and professional titles. 'Architecture' includes titles such as, architects (M.Sc.), students of architecture, construction architects, and construction draughtsmen. 'Landscape architecture' includes all fields dealing with landscape architecture, such as landscape architecture, landscape design, landscape planning, and horticulture. 'Urban planning' includes land use, area development, city and town planning as well as researchers in these fields. None of the team members in this category hold a degree in architecture. In the Ylida competition, 'Engineering' includes experts in energy systems. In Sibbesborg competition, this category consists of engineers without definitions on their specific area of expertise. Also, concerning the Ylida competition, expertise in tourism development is included in the 'Service & business development'.

In order to categorise the team members, the information in the 'name envelopes' have been used (Arrival/Departure, 2020, and Sipo municipality, 2017). The specific professional expertise of some of the team members has been checked using sources such as, LinkedIn. Interpretation in this sense has been used and none of the persons have been, for instance, interviewed. Thus, the particular role of the team members and their specific contribution within the teams remain unknown.
Figure 19. The expertise within the teams behind the entries in the Sibbesborg competition is known of all together eight entries. The winning team presented the most diverse team: architects, landscape architects, land use planner, traffic engineers, and social scientists. In the competition brief, multidisciplinary teams had been encouraged in many ways. First, the emphasis placed on the five themes of sustainability and their evaluation motivated the teams to include expertise accordingly: Landscape; Environment; Transportation; Employment and services; Living and lifestyles; and Eco- and energy-efficiency. Also in the brief, the organisers explicitly prompted the formation of multidisciplinary teams: land use, habitation, transport, community management, ecology and landscape design, development of services and business operations as well as area development processes were mentioned as fields of expertise that would be useful in solving the task (Sipoo municipality, 2011, p. 6). Yet most of the known teams consisted mainly of architects, and even the prize-winners lacked many of these domains.
4. Discussion and conclusions

In this final chapter, the theoretical as well as practical implications of the thesis are elaborated. Also, the reliability and validity of the study and its implications are discussed. Finally, recommendations for further research are made.

4.1 Implications to competition studies

The research and its results contribute to the existing scope of competition studies in several ways. While most of the research within the field is interested in the jury process and judgment of the entries, this dissertation tackles a question that should be asked even before organising a competition: does the competition as a design instrument produce the results that are sought after? Considering the effort and resources – that of both, the organiser’s as well as the competitors’ – that a competition process consumes, expectations on the results can be high. In order not to become considered a wasteful process, the results should turn out effective.

Moreover, this thesis provides insights to the studies in jury processes as well. Implications of this study show that more attention should be paid, firstly, to the composing of the jury in terms of multidisciplinary expertise, and, secondly, to the tools by which their assessment work could be supported; including consideration on what exactly is the material the entries should include. The layering method tested in the Ylläs competition, could provide inspiration to these explorations.

The thesis also feeds into the competition studies concerning new forms of design contests and may encourage experimentation in terms of formulating a competition and promoting transdisciplinary knowledge production. The Sibbesborg case competition showed how difficult it can be to break the conventional practices of the architectural competition, at least in Finland. Despite the high aims and the competition organiser’s curiosity towards creating a new form of competition for sustainable community development, the established rules were hard to break (Merikoski, Eräranta & Staffans, 2012). Indeed, as Kreiner (2017, p. 45) has noted, the ways in which a competition is organised impacts on its real and observable results.

Furthermore, the findings of this thesis give support to the critical lines of competition studies questioning the ‘goodness’ of the instrument by showing that the final and concrete outcomes of the case competitions were not necessarily perceived as the most innovative or best in terms of expert evaluations. Even if the competition may succeed as a process, it does not mean
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that the outcomes on which the future of the site in question should be based, represent the best answers to the given questions (Merikoski, Eräranta & Staffans, 2012; also, Menon & Vanderburgh, 2014). In both cases, Ylläs and Sibbesborg, the planning of the site was proceeded with the winning teams. In Sibbesborg, guidelines for development were made and a partial master plan has been created, although, at the time of writing this, not yet finalised. The competition project also resulted in activity, for instance, in social media (Facebook) which has continued as a platform for sharing information concerning the development. On the contrary, however, in Ylläs, the Resort Master Plan based on the winning proposal has not, so far, been taken forward as such. This may indicate many things, one of them being that, in the end, the plan did not meet the given aims effectively.

Finally, and perhaps most importantly, this thesis adds to the niche of competition studies in which the instrumental features of an architectural competition are under critical examination. For example, Menon and Vanderburgh (2014) have considered all the elements a competition is composed of, and following Latour’s (e.g. Latour, 2005) actor-network theory, argue that both, the human and non-human actors may be in competition with each other, within a single competition process. It means, among other things, that the brief and the rules may be competing with each other (Menon & Vanderburgh, 2014), and only after resolving the competition it can be found out which has won. Menon and Vanderburgh have created a model by which a particular competition process may be assessed in order to understand what exactly the competing elements within the process were, and who or what actually won the competition.

This thesis continues this discussion and has likewise identified how complicated it seems to be to, for instance, compile a brief, and decide on what material should be included in order to actually help the competitors to create an effective solution to the task. Providing too much material and information results in an exhaustive brief that is impossible to grasp (Merikoski, Eräranta & Staffans, 2012; Menon & Vanderburgh, 2014; Strebel & Silberberger, 2017a). The Sibbesborg case competition brief can easily be called ‘paradoxical’ following Menon and Vanderburgh’s (2014) notion. Moreover, it has been claimed that ambiguous briefs and non-precisely formulated design tasks result in wasted efforts, since the participants will misunderstand the task. A voluminous brief providing loads of information and details, even if created with good intentions and aiming to alleviate ambiguity, leads easily to prioritising of what of the material is studied and applied in the design, and what is left out (Kreiner, 2017, p. 46; Menon & Vanderburgh, 2014, p. 10-11). In a similar way, how the participants resolve the possible conflicts in a brief has a bearing on the outcomes (Menon & Vanderburgh, 2014, p. 4). Furthermore, Menon and Vanderburgh (2014, p. 18) argue that multiple contradictions are, indeed, inherent to an architectural competition including those within the brief and those between the modes of representation, which have been in the spotlight in my studies, too. The findings of this thesis give support to this argument, and further elaborate it, although the culture and practice of
architectural competitions is different in Finland than in the study context of Belgium in Menon and Vanderburgh’s research.

4.2 Knowledge created with many methods, but made into a single design?

“Multiple methods are needed to capture multiple types of knowledge.”
Popa & Guillermin (2015, p. 2)

The concluding finding of this thesis indicates that the long tradition of competitions in architecture and the premise of heavily basing related practices on the methods of architectural knowledge production, exclude all other forms of expertise from effectively being engaged, whether it is in evaluating the proposals or in the design processes themselves. However, planning of sustainable communities and designing transformative solutions is a task that requires combined effort from different fields of expertise. Already twenty years ago, in a policy paper exploring urban planning in the UK, the need to engage multiple disciplines in a design team participating in a planning competition was highlighted (Urban Task Force, 1999; Fig. 20).

![INTEGRATED DESIGN TEAM](Image)

*Figure 20.* In planning, the input of several epistemic domains is needed in order to create an integrated masterplan (Urban Task Force, 1999, p. 46). Image modified from Andrew Wright Associations illustration in Urban Task Force (1999)

Nonetheless, planning competitions are still dominated by the methods and traditions of the architectural field of practice, and thus effective, multidisciplinary collaboration becomes crippled. Competitions, such as the cases in this thesis, belong to the culture of architectural knowledge production as a tool and way of work (Fig. 21). This means that the tradition in architectural knowledge production dictates how the proposals are created and how the knowledge embedded in the designs is communicated. Other professionals
taking part may not be familiar with visual tools as methods of knowledge production (Merikoski, Eräranta & Staffans, 2012; Svensson, 2012; Tähtinen, 2013; Pallasmaa, 2011; Article II). Thus, their input is at risk of not being effectively embedded into the designs, and the results are presented in a detached way, each discipline for themselves. Also, in some cases, imagery has been ‘forced’ as the right tool for knowledge production in the design teams: working with, for instance, text has not been considered to contribute equally in the design process (Tähtinen, 2013, p. 65). Efforts made by means of knowledge production “outside the dominant form” (Gibbons et al., 1994, p. 10) are placed and referenced against it. Consequently, the knowledge produced by non-architects is at risk of receiving a secondary role within the team, and, furthermore, is not effectively incorporated in the design, nor easily read from it.

Figure 21. Planning competitions, such as the case competitions of this thesis, are situated within the silo of the culture of architectural knowledge production while they are expected to provide answers to highly complex design tasks and problems. Other cultures of knowledge production should be considered and effectively engaged in order to ensure collaboratively and transdisciplinary created proposals.

The image as a tool of knowledge production should be seen as only one among many. Moreover, it should be considered, what the relationships between the different modes of creating and transmitting knowledge are (e.g. Andersson, Bloxham Zettersten & Rönn, 2013). As discussed earlier in this thesis (see Sections 1.2.1 and 1.2.2), visual material is connected with emotions and imagination, transmitting experience while, for instance, text “is intellectual in character, appealing to reason” (Andersson, Bloxham Zettersten & Rönn,
2013, p. 10). In the case competitions, text as well as diagrams remained secondary and descriptive in their role, and as being part of the “other background material” (Sipoo municipality, 2012, p. 18). Moreover, the non-architect experts taking part in the assessment of the Sibbesborg competition proposals felt forced to focus only on the written material and considered the imagery merely as ‘a nice addition’ (Merikoski, Eräranta & Staffans, 2012, p. 39). One of the interviewees in the Sibbesborg case noted: “A vision can be something else than a clear picture. It can be a vision of a process, of a lifestyle or anything. Something immaterial, that cannot be given an architectural form” (interviews, 2012, translated for the thesis). These results concerning the challenges that the team of experts assessing the entries encountered, imply that similar difficulties may have been experienced within the design teams while generating the knowledge for the proposals. It may, also, indicate complications in knowledge creation beyond the realm of competitions, within the practice of urban planning.

Planning of sustainable communities and designing transformative solutions represent tasks that require the combined effort of different fields of expertise (see Sections 1.1, 2.3 and 2.4). If it is accepted that the production of knowledge for planning and designing a sustainable community needs to be essentially both multidisciplinary as well as collaborative, then also the designs need to be created in such a manner (Fig. 22), using multiple methods of knowledge creation (Popa & Guillermin, 2015). Moreover, the final design has to be communicated in a way that is accessible to all, not only to one of the participating domains. The cultures of knowledge production vary among the fields, and the findings of this thesis suggest that essential to a successful co-creation process is effective combination of field-specific tools of knowledge production and even adaptation and transfer of these tools across disciplinary

Figure 22. Knowledge created by multiple methods situated within several epistemic cultures are brought together, and in a collaborative and transdisciplinary way packaged into a co-created outcome, such as a planning proposal to competition.
boundaries (Ramadier, 2004). One challenge seems to be, following Popa and Guillermin (2015, p. 3), “to identify ways of combining methods across disciplinary fields and types of expertise that facilitate the building up of knowledge.”

Moreover, as this research has shown, the image as a tool in knowledge creation is not simple and without limitations. Yet, the shift towards the Age of Big Data and the Knowledge Society has meant that the world has become more visual than it has ever been before (Koponen, Hildén & Vapaasalo, 2016; Grubbauer, 2008, p. 108; Pallasmaa, 2011). Raw data is organised, categorised and turned into information. Information then becomes knowledge when it is assessed and contextualised (Koponen, Hildén & Vapaasalo, 2016, p. 11). Information design offers tools and means to disseminate knowledge and make it accessible and usable (Koponen, Hildén & Vapaasalo, p. 12). At its best, the image can make us see and understand something not expected, or found in the data in the first place, for instance, as figures or graphs in text or table (ibid., p. 18). Within a team consisting of several knowledge cultures, the architects, as professionals in image-making, could strengthen their role in working in dialogue with those who are not familiar with visual tools of knowledge creation or information design, in order to enhance understanding on what the knowledge at hand means to a specific design challenge, and finally, in order to incorporate that knowledge and understanding effectively into the design proposal.

4.3 Reforming the competition practices

Finally, the outcomes of this study imply that competition practices need to be reformed in order to better respond to the new demands, such as (1) better consideration of the client’s, i.e. competition organiser’s, aims and expectations, (2) the growing complexity of the planning processes and the built environment, and (3) the need to promote multidisciplinary collaboration (Strebel & Silberberger, 2017b, p. 2; Articles I, II & III).

First, in order to better accommodate the competition organiser’s needs, and to find answers accordingly, the competition has to be formulated based on the case-specific aims. First, it needs to be considered what can be solved with a competition in the first place, and, then, clarified, what exactly is sought after with the particular competition. Also, the form of the competition has to be given careful consideration: what can be achieved by which means, and whether there is a need to refrain from including some of the aims if the chosen form does not support achieving them. For instance, in case the key aim is to find future partners, the competition should be formulated in a way that it enables testing the partnership already during the competition process. In addition, a competition should reflect the aims and the planning phase of the ongoing development process of the site in question, in order to produce effective results. (Merikoski, Eräranta & Staffans, 2012; Staffans & Merikoski, 2013)

The quality and effectiveness of the competition reflects the quality of the competition brief (Urban Task Force, 1999). It needs to be internally logical,
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without inherent contradictions; consist of a reasonable amount of background material; and the task itself needs to be carefully formulated. Competition briefs need to be explicit about the objectives, the task, and the evaluation criteria (ACE, 2014; Urban Task Force, 1999). Overloading the brief and task with several ambitious and complex aims only results in confusion and misunderstanding, as discussed earlier. High expectations and aims of the organiser easily lead to a highly detailed competition brief but at the same time, an unrealistic design task is constructed (Kreiner, Jacobsen & Jensen, 2011, p. 161; Merikoski, Eräranta & Staffans, 2012).

Secondly, in the case competitions, it seemed that space for new thinking in terms of sustainable communities was not sufficiently promoted. One of the experts participating in the Sibbesborg case competition process noted that the competition was more of a traditional planning exercise instead of genuinely making an effort to incorporate the values of the different themes of sustainability (Sipoo municipality, 2012, p. 20). Moreover, the competition seemed to have been “positioned more as a design [competition] than as a system design competition” (ibid., emphasis added). Thus, the evidence from the case competitions of this thesis also implies that the design challenge of a holistically sustainable community has not yet been fully understood (see, e.g. Section 2.8; also, Déprés et al., 2011). Until we understand what exactly the challenge in sustainable communities is, that we aim to solve (see also, Rittel & Webber, 1973, on problem definition), the competition cannot produce effective planning solutions that would shift the development towards holistically sustainable communities. Only by investigating the sustainable community as a design challenge, better understanding on how the task itself should be formulated can be achieved. Moreover, the process of solving complex and wicked problems in which design thinking is applied and several actors and participants involved can be used to gain understanding on the task and how to formulate it (see Sections 2.3 and 2.4).

Furthermore, the design task of sustainable community cannot be mastered using only images (Tähtinen, 2013, p. 26). Thus, revising the set of required documents is a way to seek concrete and practical ways to promote the third need, the need of supporting multidisciplinary collaboration. Competition entries are created using the rules and practices of the tradition of architectural knowledge production, and consequently, effective co-creation and transdisciplinarity is inherently prevented. The documents, which are required from the competing teams as their submission include a set of plans, drawings and illustrations along with a text with a descriptive role. This set of documents has become a prevailing norm in competitions for what is needed in order to produce a design solution and to communicate the proposal. Menon and Vanderburgh (2014) found that even if in a competition a detailed plan of the design task had not been required or even expected in a case competition they had studied, all proposals presented one. It is how architects represent their idea and provide the knowledge they have created (also, Kreiner, 2017; and, Groat & Wang, 2002, p. 101). Rethinking the set of required documents
demands a shift of mindset in which the insights of all the participating cultures of knowledge production are included.

Furthermore, new digital and computerised tools have been introduced in order to collect and manage data, and for knowledge creation and image-making. A new generation of designers and architects make use of these tools in several and creative ways, “surpassing that which can be seen as only mimicking of the traditional practice of drawing by hand” (Article II, p. 29).

Meanwhile, it seems that in architectural competitions these new possibilities have not been sufficiently utilised nor explored: the requested documents still resemble what architects have been producing before these tools existed. Considering how the image has only been further empowered by the modern technologies, and new practices in generating and using visual material have emerged, the need to reconsider the role of the visual forms in architectural knowledge production and representation has become critical (e.g. Pérez-Gómez, 2005; Pallasmaa, 2011; Tähtinen, 2013).

Competitions could be explored and further developed as spaces for innovation, experimentation and transdisciplinary knowledge production. Westley et al. (2011) have discussed the emerging pathways for transformation towards sustainable development. They argue that setting conditions for sustainable development is more efficient than setting rules (ibid., p. 769). They also emphasise learning, exploration and experimentation (ibid.). It seems that the competition as a planning instrument could be developed towards a platform serving these aims. Moreover, learning from Westley et al. (ibid.), first, only basic procedural norms would be needed, and, second, the focus should be on providing a process encouraging thinking towards the desired direction, instead of formulating detailed competition rules. According to them (ibid., p. 770-771), ‘systemic experiments’ should focus on diverging of options and ideas, and “innovation occurs most readily in contexts where experimentation and exploration are encouraged.” Also, Rittel and Webber (1973, p. 161) have already decades ago noted how ‘the questions’ asked and ‘answers’ to them are interconnected. In other words, solutions presented by the competition proposals provide knowledge for understanding the question asked in the first place (see, also, Section 2.3). Thus, the competition should allow sufficient space for creativity, innovation and experimentation without setting too many limitations to the generation of the ‘answers’. Furthermore, the findings of this thesis are in line with the concerns and results found in recent studies on actual, on-going land use planning processes, especially concerning multidisciplinary expert and stakeholder collaboration and the need for shifting from more evidence-based planning towards knowledge-informed planning (e.g. Staffans et al., 2020; Kahila-Tani, Kyttä & Geertman, 2019; see, also, Campbell, 2012). Thus, competitions could provide a channel and platform for experimenting and testing new models of transdisciplinary knowledge production before applying them in planning practice. This could be seen as an additional value in organising a planning competition.

The task in planning competitions tackling 21st century challenges is complex and multifaceted requiring expertise from many different fields of studies, and
the operational environment around architectural knowledge production has changed in a way that it no longer justifies all of the familiar practices. Although efforts have been made to adjust competition practices according to some new demands, a reluctance remains to change many of the key elements. As Helene Lipstadt (2009, p. 12) has pointed out, competitions have always been changing “in their composition but not in their structure.”

4.4 Reliability and validity

The empirical work of this thesis is based on and framed by two case competitions. Even if, as such, it does not provide quantitative evidence, the value of the study is in the concrete and context-dependent knowledge it provides (Flyvbjerg, 2006; Kemmis & McTaggart, 1988). A specific case study, compared to a random sample, reveals more information since many actors related to the case are activated (Flyvbjerg, 2006, p. 229). Moreover, for this kind of research, which aims to create understanding as well as knowledge for problem-solution, case investigation is essential, and, thus, it cannot be given demands of generalisation similar to that of quantitative studies.

Furthermore, action research is necessarily multidisciplinary, contextual and holistic (Greenwood & Levin, 2007, p. 53). Those participating in the process “play a key role in acquiring new knowledge, negotiating its meaning and testing its validity in action” (ibid.). This way, the knowledge produced by the research is tested already during the process of its creation. Research conducted this way can be considered more effective, and even to meet the scientific standards better than, for instance, investigations based merely on literature reviews and databases, and performed by researchers who are external to the situation and context under examination. (ibid.; also, Kemmis & McTaggart, 1988)

The analyses done within the thesis, mainly the critical assessment of the proposals, involved interpretation in a similar way as the jury evaluation. Explicit evidence or a piece of knowledge had to be identified within the text or the imagery in order to mitigate the amount of personal interpretation. Experts assessing the entries in the Sibbesborg case competition also discussed the matter of interpretation, and many were unsure of how much of it could be used. However, from the point of view of this dissertation, I have found encouragement in Flyvberg’s (2006, p. 236) notion: “the most advanced form of understanding is achieved when researchers place themselves within the context being studied.” By investigating the two case competitions and finding support to the outcomes in other contemporary studies on architectural competitions (e.g. Menon & Vanderburgh, 2014), understanding of the competition practice in a wider scope has been enhanced. The findings of this thesis seem to reflect structural and cultural elements of the competition practice which are not case-specific.

In addition to the basic and elementary forms of design and planning competitions described in Section 1.3, new modes have been developed and tested in different contexts and locations (see e.g. Kreiner, Jacobsen & Jensen,
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Kreiner (2010), for instance, has observed and discussed the so-called dialogue-based competitions held in Denmark. Kreiner’s notions on this competition format are interesting and experimenting with different and novel forms is highly valuable for the development of competition practices. However, this dissertation is based on two competitions which both followed traditional lines of an architectural competition process, one being invited and the other one open. Thus, the results and implications of this thesis are not directly applicable to these other, experimental forms of architectural and planning competitions.

In terms of the literature review and the theoretical background of the thesis, a great deal of studies, research and literature exist. Not all can be considered within a single thesis, but a comprehensive overview has been conducted in order to create a solid understanding on the previous research in the field of competition studies. In addition to some of the most known and well-grounded references, I have aimed to note also many which represent more recently developed views. Also, the Nordic view on competition studies has been emphasised.

4.5 Recommendations for further research

In this dissertation, the conventions of the practice of architectural competitions have been reviewed, yet much remains to be further examined. For instance, tools and methods to encourage and support effective multidisciplinary collaboration and transdisciplinarity is an area of study that is not only under-researched but also in an urgent need of attention. Moreover, despite having such a great role in architectural knowledge production, it seems that the conventions related to the use, meaning and potential of the image as a tool of knowledge production have not been sufficiently challenged in architectural research (e.g. Tähtinen, 2013; Pérez-Gómez, 2005; Pallasmaa, 2011). In terms of conventional planning competitions, a question is raised whether we are asking the participants to illustrate a dynamic process filled with uncertainties (e.g. Rittel & Webber, 1973; also, Friedmann, 2005) with a static image.

Finally, the thesis raises a broader question beyond the competition practice: does an architectural project, such as a competition, provide a sufficiently effective tool for investigating sustainable communities and conducting scenario-based and future oriented planning? It seems clear to me that long-term and holistic planning of our living environment cannot be steered and done by detailed blueprints. However, design thinking, and the planning skills of architects are, for sure, needed in the holistic approach to planning cities and communities, and as part of transdisciplinary knowledge creation.
References


Planning cities and communities is a complex task, which requires knowledge from and interaction between the multiple disciplines involved. In the recent decades, the task has become even more complicated and demanding due to the challenges posed by the environmental and climate changes. A lot is yet to be solved in order to fully understand sustainability of communities, and new solutions and innovations are needed. In this thesis, the instrumentality of planning competitions in generating solutions to promote sustainable community development is investigated. With the help of case study data from two competitions it is examined how the competition entries responded to the tasks and aims described in the competition briefs. A key observation is that the tool itself, the planning competition, creates restrictions to what can be solved with it. Moreover, planning competitions are dominated by the traditions of the architectural profession, and thus, effective multidisciplinary collaboration becomes crippled. Other professionals may not be familiar with visual tools as methods of knowledge production and, thus, are at risk of receiving a secondary role in a collaborative and multidisciplinary design team. The results include suggestions on how competition practices need to be reformed in order to better respond to the demand of transdisciplinary knowledge production. Moreover, the results imply that similar difficulties may be experienced beyond competitions; within the practice of urban planning.