

Université de Montréal

**Design as a Strategic Tool for Sustainability in Northern and Arctic Contexts**  
Case Study of the *Arctic Design* Concept in Finland

par

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Ce mémoire intitulé:

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Case Study of the Arctic Design Concept in Finland*

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## ABSTRACT

Globally, design is increasingly being perceived as a strategic tool for community development, well-being and innovation, both in theory and in practice. In the last few years, Finland has brought this notion to its northernmost regions through their emerging *Arctic Design* concept. While the concept has gained a lot of momentum, it remains, at this time, mostly Finnish-bound. Through a case study methodology, this thesis examines the ideas and visions underlying the concept of *Arctic Design*, and assesses its relevance for other northern regions, and in particular the province of Quebec, Canada. The data was collected through semi-directed interviews, conducted in northern Finland with leading actors involved in the concept's strategic development. The theoretical framework employed draws on the perspectives of strategic design, sustainable design, and Nordicity (Hamelin, 1975). This study shows that design professionals are increasingly acting as key members within transdisciplinary projects and strategic areas, in order to address complex issues related to policy-making and broader societal change. This, in turn, opens up new avenues for both design practice and research in the topic of "northern design". In particular, these findings suggest that design could play new roles in addressing northern and Arctic issues, by acknowledging local specificities (i.e. climates, socio-political frameworks, cultures) and allow the development of place-based solutions. By doing so, the province of Quebec could better use design as a catalyst of transitions towards sustainable futures among all its communities.

### **Keywords**

Strategic Design; *Arctic Design*; Sustainable Design; Nordicity; Finnish design; Quebec



## RÉSUMÉ

À l'échelle mondiale, le design est perçu de plus en plus comme un outil stratégique pour le développement communautaire, le bien-être et l'innovation, tant au plan pratique que théorique. Au cours des dernières années, la Finlande a décidé d'introduire cette notion dans ses régions les plus septentrionales en développant le concept d'*Arctic Design*. Bien que le concept se soit beaucoup développé, il demeure, pour le moment, essentiellement limité à la Finlande. À l'aide d'une méthodologie d'étude de cas, ce mémoire examine les idées et les visions qui sous-tendent ce concept et évalue sa pertinence pour les autres régions nordiques, en particulier la province de Québec. Les données de cette étude sont constituées d'entrevues semi-dirigées, menés dans le Nord de la Finlande avec les principaux acteurs impliqués dans le développement stratégique du concept. Le cadre théorique utilisé ici s'inspire des perspectives du design stratégique, du design durable et de la Nordicité (Hamelin, 1975). Cette étude démontre que les professionnels en design peuvent occuper un rôle clé au sein de projets transdisciplinaires et de secteurs stratégiques, afin d'aborder des enjeux complexes concernant l'élaboration de politiques et des changements sociétaux plus profonds. Ceci ouvre de nouvelles avenues en design pour la pratique et la recherche en « design nordique ». Plus spécifiquement, ces résultats suggèrent que le design peut jouer un nouveau rôle dans la résolution des enjeux nordiques et Arctiques, en reconnaissant les spécificités locales (climats, contextes sociopolitiques et culturels) et permettre le développement de solutions adaptées au milieu. Ce faisant, le contexte québécois pourrait mieux utiliser le design comme catalyseur de changements vers un avenir durable pour l'ensemble de ses communautés.

### Mots-clés

Design Stratégique; *Arctic Design*; Design Durable; Nordicité; Design Finlandais; Québec





## TABLE OF CONTENTS

Acknowledgments	V
Abstract	VII
Résumé	IX
Table of Contents	XI
List of Images	XV
List of Figures	XVII
List of Abbreviations	XIX
<b>INTRODUCTION</b>	<b>1</b>
<b>1.0 DESIGN: FROM IMAGES TO VISIONS</b>	<b>5</b>
1.1 Designing for Sustainability	6
1.2 Design Orders	7
1.2.1 First & Second Order: Built and Designed Environment	9
1.2.2 Third Order: Action	9
1.2.2.1 Design Thinking	10
1.2.2.2 Service Design	11
1.2.3 Fourth Order: Thought	13
1.2.3.1 Wicked Problems	14
1.2.3.2 Strategic Design	16
1.2.4 Fifth Order: Vision	18
1.2.4.1 Design for Social Innovation	19
1.2.4.2 Transition Design	19
<b>2.0 CONTEXT OF INTERVENTION: NORTHERN ENVIRONMENTS</b>	<b>21</b>
2.1 The Northern Context	21
2.1.1 Nordicity As a topic	21
2.1.1.1 Normative Nordicity	23
2.1.1.1.1 Winterity	26
2.1.1.2 Subjective Nordicity	27
2.1.1.3 Nordicity As a Vision	28
2.1.1.4 Arcticness	29
2.1.1.5 'Total' Nordicity	30
2.2 Designing in a Northern Context	32
2.2.1 The Problem: Northern vs Southern Paradigm	36

2.2.2 Initiatives & Content: Rethinking Cities for Winter	38
2.2.3 Case Study: The Emergence of the ‘Arctic Design’ (AD) Concept in Finland	40
2.2.3.1 The Context of Design in Finland	41
2.2.3.2 Design in Finland Today	42
<b>3.0 RESEARCH PROBLEM AND METHODOLOGY</b>	<b>45</b>
3.1 Research Questions	45
3.2 Research Objectives	46
3.3 Research Methodology	47
3.3.1 Introduction to the Methodology	47
3.3.2 Method: The Case Study	48
3.3.3 Data Collection: Semi-Directed Interviews	49
3.3.4 Selecting the Participants: The Experts of <i>Arctic Design</i>	51
3.3.5 The Participants	52
3.3.6 Interview Questions	55
3.3.7 Codification	57
<b>4.0 ANALYZING THE ARCTIC DESIGN (AD) CONCEPT</b>	<b>59</b>
4.1 Actors	59
4.2 Timeline	60
4.3 General Definitions	61
4.3.1 Design	62
4.3.2. <i>Arctic Design</i>	63
4.4 Northerness	64
4.4.1 Northern and Arctic Characteristics	64
4.4.2 Winterness: Winter As an Advantage	65
4.4.3 Deep Roots in Finnish Culture	69
4.4.3.1 Means to Survive	71
4.4.3.2 Design Legacy	73
4.4.3.3 Design Education	73
4.4.4 Indigeneity	74
4.5 Designing for ‘Demanding Situations’	75
4.6 Sustainability	78
4.7 Methods	78
4.7.1 Methods for the Marginal	80
4.7.2 Collaborative Approaches	81
4.8 Areas of Interventions (Design Orders)	81
4.8.1 Working at the Strategic Level	82
4.8.1.1 Logistics and Planning	83
4.8.1.2 Holistic Views	84

4.8.1.3 Long-term Vision	85
4.8.2 A Need for Service Design	86
4.9 Motivations and Incentives	87
4.9.1 Supporting Local Culture	87
4.9.2 Arctic Development	88
4.9.3 Branding Opportunity	91
4.9.3.1 Visibility	91
4.9.3.2 High-quality	91
4.9.3.3 Arctic Tourism in Lapland	92
4.9.3.4 Arctic Design Capital	93
4.9.3.5 Finnish Design Expertise	94
4.9.4 A New Perspective	95
4.9.5 Incentive	95
4.10 Outcomes	96
4.10.1 Arctic Design Week (ADW)	96
4.10.2 National Arctic Strategy	97
4.10.3 Multi-sector Research Centres	98
4.10.4 <i>Arctic Design</i> Cluster	100
4.11 Challenges	101
4.11.1 Restricted by the Term	101
4.11.2 More Action Needed	102
4.12 Ambitions (What's Next?)	103
<b>5.0 GENERAL DISCUSSION ON ARCTIC DESIGN</b>	<b>105</b>
5.1 Designing in a Contemporary World	106
5.1.1 The Arctic as a Design Project	107
5.1.1.1 Action	109
5.1.1.2 Thought	110
5.1.1.3 Vision	111
5.1.2 Top-down & Bottom-up Activities of AD	112
5.2 Form Follows Location	114
5.2.1 Northern Environments	114
5.2.2 Northern Culture	115
5.2.3 Hamelin's Vision of a Different North	116
5.3 AD beyond Arctic regions	118
5.3.1 Opportunities for the Province of Quebec?	119
5.3.1.1 Taking on Quebec's Nordicity	119
5.3.1.2 Empowerment in Indigenous Communities	120
5.3.1.3 Northern Development	122
5.3.1.4 Valuing Design's Role in Society	124

5.4 Summary: <i>Arctic Design</i> , Revealing a New Paradigm for Design in Northern Contexts	126
5.5 Limitations and Difficulties of the Research	128
<b>CONCLUSION</b>	<b>131</b>
Bibliography	135
Annexes	147

## LIST OF IMAGES

<b>Image 1:</b> Signs warn pedestrians that ice might fall from building infrastructures in Montreal	34
<b>Image 2:</b> <i>Canada Post</i> community mailboxes in winter.	35
<b>Image 3:</b> Cycling and pedestrian paths in Rovaniemi.	66
<b>Image 4:</b> An elderly woman using her kicksled in Rovaniemi.	67
<b>Image 5:</b> Snow and ice as a material.	69
<b>Image 6:</b> "Jaansaro" ice block bowl by Tapio Wirkkala.	70
<b>Image 7:</b> Close-up of a hand-crafted weights used in traditional Finnish fishing nets.	72



## LIST OF FIGURES

<b>Figure 1:</b>	The evolution and growing complexity within design Fields	8
<b>Figure 2:</b>	Adaptation of the <i>Design Ladder</i> for the public sector	17
<b>Figure 3:</b>	Zones nordiques du Canada (in English: Northern Zones of Canada)	24
<b>Figure 4:</b>	Major regions of the Northern world in Hamelin	25
<b>Figure 5:</b>	Canada's many North's	26
<b>Figure 6:</b>	What is Nordicity? Conceptual map	31
<b>Figure 7:</b>	Hierarchy of AD themes	58
<b>Figure 8:</b>	General timeline of the AD concept	60
<b>Figure 9:</b>	Focus areas of the AD concept: <i>action, thought, vision</i>	109





## LIST OF ABBREVIATIONS

<b>AD</b>	Arctic Design
<b>ADL</b>	Arctic Design Lab
<b>ADW</b>	Arctic Design Week
<b>DESIS</b>	Design for Social Innovation and Sustainability
<b>DC</b>	Design Council (UK)
<b>DDC</b>	Danish Design Council
<b>HDL</b>	Helsinki Design Lab
<b>ICSID</b>	International Council of Design
<b>LAHDEC</b>	Lahti Regional Development Agency
<b>MDD</b>	Montreal Design Declaration
<b>SDGQ</b>	Société des designers graphiques du Québec
<b>SHQ</b>	Société d'habitation du Québec
<b>SITRA</b>	Finnish Innovation Fund
<b>UN</b>	United Nations
<b>UNESCO</b>	United Nations Education, Scientific and Cultural Organization
<b>WCED</b>	World Commission on Environment and Development
<b>WCE</b>	Winter City Edmonton
<b>WDO</b>	World Design Organization
<b>WWCAM</b>	World Winter City Association for Mayors



## INTRODUCTION

This research project is based on the idea that design matters profoundly in society. In fact, it can be argued that most of what surrounds us today is the result of some kind of human design: the outcome of the decisions and choices of human beings (Heskett, 2005). Many agree that design underlies the human environment, its shape and detail, and that its process should be used to ensure the well-being and viability of communities and environments (Nelson & Stolterman, 2012; Heskett, 2005). Consequently, most problems faced today can be seen as 'design problems'. Designers, and more specifically industrial designers, are professionals that develop 'products' and 'systems of products', through empathic and user-centred approaches (De Coninck, 2009); they are initiators of change within and of society. In a context of sustainability, the need for designers to be sensitive to the particular needs and emerging aspirations of communities is crucial, as is the need to develop solutions through holistic and systemic methods (De Coninck, 2009). These changes are ongoing, as the understanding of what 'products' can be is evolving, going way beyond the traditional design fields like graphic design or architectural design. The 'design ways' are progressively being used to create new technologies, organizations, processes, systems, environments and visions (Nelson & Stolterman, 2012). The growing trends regarding *design thinking*, *service design* and *strategic design* demonstrate this shift, where design is increasingly being valued as a strategic tool for sustainability and well-being amongst society, and that its methods can be applied to various sectors (Design Council, 2013).

More recently, Finland has been bringing this perspective into the area of northern development. Indeed, their *Arctic Design* (AD) concept, created in 2012, is gaining momentum in the country, notably through its integration into *Finland's Strategy for the Arctic Region 2013* (Finland, 2013a), as well as into their national design strategies (*Design Finland*) (Finland, 2013b). AD aims at favouring design methods that acknowledge the specificities of the Arctic regions, such as: extreme climates, fragile and changing environments, remoteness, co-existing indigenous and

mainstream cultures, or aging populations (Jokela & Tahkokallio, 2014). This approach aims to contribute to the development of sustainable and viable products, services and environments that meet the needs and desires of Northern communities (Tahkokallio, 2012). AD proposes to see design as a powerful tool for the sustainability and well-being in northern regions, winter cities and communities, by the means of its sensitive, iterative and creative methods. Through its *strategic design* angle, the concept distinguishes itself from previous approaches on the topic of 'northern design'.

The growing interest regarding northern and Arctic regions, both on a local and global scale, is undeniable. It ranges from political motivations to environmental concerns, demonstrated by, amongst other things, the creation of the *Arctic Council*<sup>1</sup>, new land claims<sup>2</sup>, identifying new economic opportunities as a result of melting sea ice sheets (Tol, 2009), as well as a growing awareness on global warming and its impacts on wildlife and local inhabitants (UNESCO, 2009). These issues were depicted as a triggering element for the creation of AD, calling for deeper reflections on the role of design in the future of these regions (Tahkokallio, 2012). The North is therefore on the radar of various political, economic and environmental organizations, as well as many research institutions. Like other Northern nations, Finland is no exception, and neither is the Canadian province of Quebec. In fact, Quebec, is the territory where the 'North' goes 'South' the most (Chartier, 2004). It is, in other words, the area in the Northern Hemisphere where cold temperatures reach the most southern latitudes. Thus, communities living in Quebec, even in the southernmost regions, experience various levels of northernness. The province proves itself to be an exceptional area to test the extent of this concept and to assess the need for other Northern nations to adopt similar strategies to those of Finland. Design could play a more active role in improving the well-being of Northern communities and tackling complex issues in these contexts (such as health care, education, poverty

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<sup>1</sup> International organization founded in 1996, in Ottawa, Canada.  
(see: [www.Arctic-council.org](http://www.Arctic-council.org))

<sup>2</sup> Russia pins its national flag at the bottom of the Arctic sea (Chivers, 2007)

or climate change) as it does in Finland, which requires much more than new products and infrastructure. What role and responsibility can design have in developing new action plans and solutions regarding northern issues? The case of AD seems to give insights on that matter.

This research paper is a case study focusing on the newly developed concept *Arctic Design* (AD) in Finland. The main objective of this research is to elucidate the genesis of the emerging concept and identify its main structuring elements, such as: actors, motivations, challenges or ways of doing. In the light of these understandings, the research will explore the possibility of ‘transferring’ the ideas developed in Finland to the province of Quebec and discuss the favourable conditions and potential obstacles of doing so. The data in this research is collected through interviews conducted with AD experts in Finland, allowing an in-depth analysis of the participants experiences and visions. The results will contribute to a deeper comprehension of: the *Arctic Design* concept, design in Finland, the ability of *strategic design* in tackling complex problems, as well as discussing the potential role of design regarding northern contexts. The data will then be examined and compared through existing theories in literature.

First, a review of literature will establish a general and objective portrait of the overarching concepts outlining this research. These frameworks will further be used to fuel discussion and content, and will constitute the first and second chapters of the study. The first chapter sheds light on one of the elements that contributed to the emergence of AD. It portrays the general shift within design fields, where the focus has moved from designing *things*, to *envisioning* new sustainable futures. Based on several schools of thought and concepts, the chapter will help place in context the strategic and visionary ideas brought forward through the case study analysis. Moreover, the second chapter introduces the context of intervention of this research: northernness. This section describes Hamelin’s concept of ‘Nordicity’ and its different categories of meaning, proposing a potential framework for the general topic of ‘northern design’. Additionally, it will review what has previously been said in

literature regarding 'designing in northern contexts'. Emerging from this theme, the chapter will finally introduce the selected case study of this research, *Arctic Design*, and briefly explain the circumstances of its development.

The third chapter addresses the methodological framework used in this case study research. The section will present the guiding theory and methods used during field work and data collection, as well as the actors who took part in the study. Moreover, it will introduce the research questions and objectives, as well as the basics of: case study research methods, semi-directed interviews, and the principal coding and analysis methods used by the researcher. Lastly, it will display the themes emerging from the data analysis and their hierarchy.

Resulting from the extensive analysis and organization of themes and trends emerging from the participants' discourse, the fourth chapter presents a carefully selected portion of the collected information. These different areas allow the comprehensive description of the AD concept, as well as the identification of its main structuring elements.

The final and fifth chapter compares the collected data with the previously presented literature, enabling discussions on convergences between the themes. It explores the possibility of 'transferring' the innovative ideas developed in Finland to the province of Quebec by discussing, on the basis of Finland's experience, the favourable conditions and potential obstacles to a possible implantation. In parallel, this discussion will also seek to determine the current state of research on the relationship between design and 'Nordicity' and the different avenues that could be explored in the future. The study ends with the conclusion, where the guiding questions of this research try to be answered. Limits of this study and opportunities for future inquiries are also discussed.

## 1.0 DESIGN: FROM IMAGES TO VISIONS

This chapter will go over the notions that establish the conceptual framework of this research. It will assist discussions emerging from the data gathered during the fieldwork and help place the selected case study in context. The following sections will seek to demonstrate evolution of focus areas in design theory and practice, allowing the reader to have a general sense of the growing complexity within the field.

In the eyes of the general public or individuals working in other fields, understandings regarding the design practice is usually variable and occasionally simplistic (Heskett, 2005). Perhaps this ambiguity relates to the outcome of design being what structures most of the surrounding environments, 'things' people own, and how they use and experience them. In fact, it is most likely that everything one interacts with today (products, services, infrastructures, systems) is the outcome of some kind of 'human design': the outcome of the decisions and choices of human beings (Heskett, 2005). Design concerns everyone, yet the importance of doing it well is often misunderstood and undervalued. Because design is regularly used in common language to define 'stylish' or 'fashionable' objects, it is not a surprise that the general population thinks it is just that: aesthetics and style (Milot, 2017; Heskett, 2005). While not insignificant to the general design practice, these details represent only small portions of an 'underlying totality', which shouldn't be mistaken for the whole (Heskett, 2005). This 'whole' is what the present section will seek to establish: the wide spectrum of design focus areas, which have largely evolved from the 'industrial' era.

Nonetheless, various efforts have been made to try to define the practice of design over the years. Today, 'sciences of design' are still building frameworks that are increasingly placing the field (its practitioners & their actions) within a larger dynamic system and demonstrating that the contemporary role of designers is much more than makers of nice 'things' (Irwin et al., 2015; Brown, & Martin, 2015; Papanek, 1985). Indeed, design theory is a very dynamic field, where concepts and ideas are

frequently developed and challenged. By no means does this research try to represent all the trends that occurred within design research and theory, but it will try to represent the evolution of ideas perceived as relevant to the subject in study, as well as demonstrating the general shift in focus within the discipline. This holistic view of the evolution of the design practice will be essential to place the case study of this research in context.

### **1.1 Designing for Sustainability**

The idea of 'sustainability' in this research will be based on the most common definition of sustainable development, pulled from the famous 1987 Brundtland Report of the World Commission on Environment and Development (WCED): development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987: p. 43). This definition added an explicitly human-centred focus, to a discourse that previously revolved around environmental concerns (Ceschin & Gaziulusoy, 2016). The report popularized the term 'sustainable development', which resulted in principles being shaped and used in various contexts and by different industries, supporting different interests and angles. The term covers three interconnected areas: environmental stewardship, social equity and justice, and economic issues (Walker, 2007). As defining sustainability can be a debate in itself (Walker, 2007), this research will focus on the general idea emerging from this definition: that one aims to create better futures for all, while taking into consideration the socio-political, environmental and economic impacts of a given project. Indeed, studies today have demonstrated that the aim for sustainability is as non-static, dynamic system of elements, which requires planning to be done through process-based, multi-scale and systemic approaches (Ceschin & Gaziulusoy, 2016; Hjorth & Bagheri, 2006; Faber et al., 2005).

The link between design and sustainability, whether it is from an environmental or social perspective, has been made for many decades now, and goes back to pioneers like Buckminster Fuller (1969) or frequently referenced Victor Papanek (1971), with



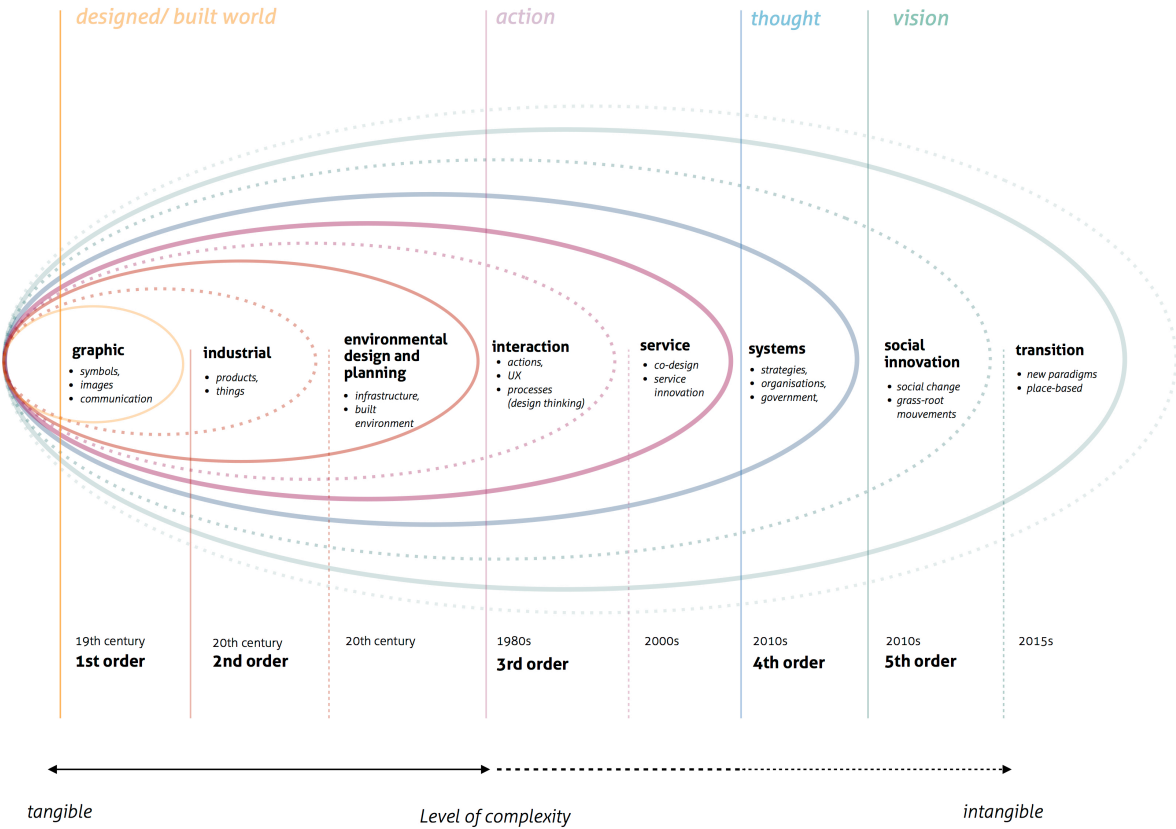
his famous book from 1971 *Design for the Real World: Human Ecology and Social Change* (Ceschin & Gaziulusoy, 2016). Among other things, Papanek proposes the idea of a 'social designer', where "designers must contribute to real human and social needs" (Papanek, 1985, p. 39). By bringing forward the environmental impacts of the Industrial Revolution model and the role of design in encouraging consumption, the author calls for designers to take charge of their 'creative responsible abilities' (Papanek, 1985). This basic notion, one that suggests designers have a role to play in creating sustainable, viable futures, will be an underlying theme in this research. The following points will seek to demonstrate (in a general sense) the evolving quest of design theorists and practitioners to find the best area of intervention for designers to positively contribute to the well-being of communities.

## **1.2 Design Orders**

There has been an undeniable shift in the focus areas of design in the last few decades, one that expresses the growing desire for designers to take a more important role in shaping tomorrow's world. Aspiring to express these perceived changes, Buchanan, a user interaction designer, proposed four orders of design (symbols, things, actions, and thoughts) in his article *Design research and the new learning* (2001). Many have proposed alternative and complementary ways of interpreting the evolution of design fields throughout the years (Manzini, 2016; Irwin et al., 2015; Tonkinwise, 2014; Hill, 2012; Cross, 2011; 2001; Buchanan, 2001; 1998). Nonetheless, the author's organization of 'design orders' is seen as a straightforward way to explain this general evolution, and the growing acknowledgment of complexity within design disciplines. The orders allow a visual representation of these different disciplines and their respective areas of interventions, from more traditional design fields like *graphic* and *industrial design*, to now well-established ones like *interaction* and *service design*, as well as developing fields like *strategic design*, *design for social innovation* and most recently *transition design*. Moving from *symbols* and *things*, designers have turned to *action*, *thought* and *vision*. To include the most recent notions (i.e., *design for social innovation* and *transition design*), a fifth order (*vision*)

was added by the researcher to reflect this new paradigm (see section 1.2.4). All orders will be covered in the following sections, however, more importance will be given to orders 3, 4 and 5, as they are the most relevant to this research project.

The following image (figure 1) aims to represent the general evolution of focuses within design disciplines and their corresponding areas of intervention (designed/ built world, action, thought, and vision). The reader should interpret this illustration as multiple layers that have built upon each other overtime. These new layers are therefore inherently connected to the previous ones, and can be given a different level of importance depending on the context of a project and the nature of the problem



**Figure 1:** The Evolution and growing complexity within design fields. Based on theories and Ideas from: Manzini, 2016; Irwin et al., 2015; Tonkinwise, 2014; Hill, 2012; Cross, 2011; 2001; Buchanan, 2001; 1998; and inspired from a figure by Tomoki Hirano, 2016. (Figure by author, 2018). See annex A for a larger image.

being addressed. Moreover, the evolution of design disciplines throughout time has not been so 'clean' and sequential. This figure specifically represents the general progression of design field focuses towards less 'tangible' areas.

### **1.2.1 First & Second Order: Built and Designed Environment**

The first design order 'symbols' (represented in figure 1 with the term *graphic*) relates to disciplines such as *graphic design*, *visual communication* and *communication design*; fields that emerged from a "concern for visual *symbols*, the communication of information in words and images" (Buchanan, 2001, p. 10). Originating from print-based mediums as well as graphical representations, the graphic order evolved through the introduction of various tools like photography, film, television, sound, motion and digital expression (Buchanan, 2001). This order concerns the general idea of 'communication' design and now takes form through a combination of mediums. The second order, 'things' (represented in figure 1 by the term *industrial*) covers the fields of *industrial* or *product design*, which had an attention "for tangible, physical artifacts—for material *things*" (Buchanan, 2001, pp. 10-11). Because Buchanan doesn't specifically mention other 'tangible' design-related fields, like *urban design* or *architecture*, they are included in the general notion of 'designed and built world' for the purpose of this research. They are also considered to be part of the '2<sup>nd</sup> order' for that matter. Indeed, the focus on aesthetics, form, and 'tangibility' are what combines these orders, which represent an important part of design in the 20<sup>th</sup> century (Buchanan, 2001).

### **1.2.2 Third Order: Action**

This order's attention is on 'action', emerging mostly in the 1980s, as some designers started to focus primarily on the interactions products have with their environment (Moggridge & Atkinson, 2007). Although it can be argued that industrial designers have focused on the use and functionality of their products for a long time (i.e. the *form follows function* reference), the era of digitalization set the ground for new areas to be explored by designers. This coincides with the emergence of so-called

*interaction design*<sup>3</sup>, which is today a mature and distinct discipline in itself. Designing interactions brought a new perspective into what ‘products’ could be, by focusing on “how human beings relate to other human beings through the mediating influence of products” (Buchanan, 2001, p. 11). Although often thought of as a strictly digital field, interactions have largely changed the way designers and design theorists perceive the general interaction between human beings and products. One should not see a focus on ‘action’ as a rejection of material *things*, as in many cases, these two areas go hand in hand:

*“With the move away from visual symbols and things as the focus of attention, designers and design theorists have tried to understand products from the inside—not physically inside, but inside the experience of the human beings that make and use them in situated social and cultural environments.”* (Buchanan, 2001, p. 11)

Since then, so called ‘products’ can now refer to experiences, activities or services. Indeed, *service design* can now be considered as a discipline in itself, having developed methodologies and approaches that are specific to improve existing or to create new services (see section 1.2.2.2). With the desire to facilitate the transfer of design methodologies to solve problems in other, more complex areas, like public services or strategic business development, synthesizing the essence of the designer’s process of product development into ‘design thinking’ can be seen as an attempt to accelerate this process.

### *1.2.2.1 Design Thinking*

Even though the roots of development in ‘design thinking’ go back to the 70s (McKim, 1973; Simon, 1969) and have had various understandings<sup>4</sup> (see Johansson-Sköldberg

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<sup>3</sup> The concept of *interaction design* is said to have been introduced by Bill Moggridge, the cofounder of design thinking consultancy company IDEO, and Bill Verplank, in the 1980s. The focus on interactions also has strong links to human-computer interaction interests in the same time (Soegaard & Dam, 2012).

<sup>4</sup> There is a distinction to be made between Design Thinking and Designerly Thinking, clearly developed in Ulla Johansson-Sköldberg et al.’s essay *Design thinking: Past, present and*

et al., 2013), this section will be mostly focused on the approach developed by Tim Brown, CEO of IDEO, or design researcher Nigel Cross (Cross, 2011; 2001; Brown & Katz, 2009). The growing interest for the approach among, notably, the management and business fields (Johansson-Sköldberg et al., 2013), design thinking consultancy has made the concept a common ‘buzz’ word outside of the design fields, though not all practitioners or design theorists adhere to this universalization of the practice (Johansson-Sköldberg et al., 2013; Hill, 2012). In this research, design thinking is understood in its broader sense: the general ‘process of designing’, or, tools and methods developed through the professional practice of design. By isolating this process, design thinking has facilitated the idea that its process could be applied to various types of problems and settings, and not strictly products, with the objective of creating products, services and experiences based on human-centred approaches (Brown & Katz, 2009). In opposition to the most common mechanisms amongst organizations, which make problem-solving a rigid, hierarchical and linear process (Alvarez & De Coninck, 2016), design thinking is an iterative process with the aim of stimulating innovation, economic competitiveness as well as a better life quality by the means of a human-centred approach (World Design Organization<sup>5</sup> (WDO), 2017; Brown & Katz, 2009). Indeed, the processes are based on the designer’s ability to use logic, creativity, intuition and systemic reasoning to solve complex problems by creating innovative solutions for clients (Brown & Katz, 2009). Brown described design thinking as:

*“an approach to innovation that is powerful, effective, and broadly accessible, that can be integrated into all aspects of business and society, and that individuals and teams can use to generate breakthrough ideas that are implemented and that therefore have an impact”.* (Brown & Katz, 2009, p.3)

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*possible futures* (2013). This article distinguishes the two distinct movements within theories of design processes: ones from design management and ones from design theorists.

<sup>5</sup> Formerly known as the International Council of Industrial Design (ICSID).

While design thinking consultancy continues to gain momentum, some argue that these ‘normalized’ approaches to design have failed to achieve the visions and potential the professional field has to offer, notably regarding complex social problems (Hill, 2012), this will be further developed in section 1.2.3.3.

### *1.2.2.2 Service Design*

As designers started to focus on the interactions of products with their environments and users, developing services became an important focus amongst practitioners. Indeed, the field of service design has largely progressed since the mid-nineties, and is now a fairly common practice in Europe (Miettinen & Valtonen, 2013; Moritz, 2005; Morelli, 2002), but can still be considered as an emerging design practice today<sup>6</sup>. Brigit Mager, founder of the international *Service Design Network* defines the discipline as a field that focuses on service innovation through user-centred practices:

*“[service design] aims to ensure that service interfaces are useful, usable and desirable from the client’s point of view and effective, efficient and distinct from the supplier’s point of view. Service designers visualize, formulate, and choreograph solutions to problems that do not necessarily exist today; they observe and interpret requirements and behavioural patterns and transform them into possible future services.”*  
(Mager, 2008)

At its core, the field emerged as a response to designers’ desire to respond to the increasing complexity of social, environmental and economic problems (Kuzmina et al., 2012; Mulgan & Albury, 2003). Developing an interest in interactions between humans, objects and environments have indeed helped designers develop new activities and methodologies typical to *service design*. Emerging from the *industrial design* practice, *service design* uses the same basic processes as designers would to develop a product, and focuses primarily on collaborative approaches (participatory

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<sup>6</sup> The first Service Design Conference in Canada was in December 2016 at the Rotman School of Management at the University of Toronto in partnership with the *Service Design Network Canada* (see [www.service-design-network.org](http://www.service-design-network.org)).

design, co-design) as well as empathic and user-centred methods (Stickdorn et al., 2018). For service designers, these means are seen as the key to generate solutions that focus on the end user and framing the right problems to start with; they are techniques that allow collaboration with various actors and human involvement, optimal with the objective of developing services in public sectors from the user's perspective (Kuzmina et al., 2013). Service designers use tools like *service blueprints*, *customer journey maps*, and *personas*, which help the practitioners map out various *touchpoints* and interactions. They also develop prototyping laboratories that allow designers to simulate these environments of interaction (Vuontisjarvi, 2016). *Service Design* places itself towards the median of design orders, by developing concrete solutions through a holistic and complex perspective on the environment that these solutions connect and interact with. This field's attention to these 'interactions' progresses into the fourth order.

### **1.2.3 Fourth Order: Thought**

The fourth order refers to the ideas and *thoughts* that organizes the systems or environments that influence life in many ways. Buchanan refers to these systems as "the totality of all that is contained, has been contained, and may yet be contained within it" (Buchanan, 2001, p. 12). The growing focus on systems within the design fields has coincided with the general development of the systems approach (Nelson & Stolterman, 2012; Donnadieu & Karksy, 2002; Bonami et al., 1996). Buchanan states that the main difference with the fourth order (thought), is that the focus is on 'human systems, the integration of information, physical artifacts, interactions in the environments of living, working, playing and learning' (Buchanan 2001, p. 12), and no longer on a system of 'things'. This idea reflects the second generation of systems thinking, where it is understood that it is impossible for human beings to completely see or experience a system, but rather they only experience one path amongst its totality (Nelson & Stolterman, 2012; Buchanan, 2011; Meadows, 2009; Le Moigne, 1990). Nonetheless, both man-made and natural systems and environments have strong effects over individuals' lives. This focus on environments and systems is

strongly related to the "interaction" focus of the previous order, since the systems and environments are where these interactions happen (Buchanan, 2001).

Additionally, this trend coincides with the growing understanding of the complexity of problems designers and planners seek to solve. As put forward by Rittel & Webber (1973) in their essay: "planning problems are wicked problems", aspiring to solve contemporary complex problems demands methodologies that work in a holistic and systemic perspective, and in a pluridisciplinary manner (Walker et al., 2004; Nelson & Stolterman, 2012). To do so, design must be seen as much more than just problem-solving, style and aesthetics (De Coninck, 2009); it should aim to reach the order of thought, where it can interact with values, well-being, ethics, social responsibility, decision-making; areas in which complex problems (*wicked problems*, Rittel & Webber, 1973) are deeply rooted. Thus, contemporary designers must acknowledge not only their relationship with the subject but their relationship with the world (De Coninck, 2009; Levy, 1988). The development of system thinking in design has had important impacts on 'design thinking' and design research in general (Nelson & Stolterman, 2012). This transformation in the way initial problems are perceived has resulted in the development of new approaches that seek to resolve them. This led to the emergence of fields like *strategic design*, which aims to bring design methods to levels where strategic decisions are taken, and where a holistic and system vision is fundamental (see 1.2.3.3). Thus, in this order, design professionals are focusing on placing design in the context of strategic planning, integrated in the earliest stages of the product development process, impacting decisions and directions of the project (Buchanan, 1998).

#### *1.2.3.1 Wicked Problems*

The concept of 'wicked problems', although developed in the mid-seventies, is of much relevance in the two last two design orders discussed in this chapter. Rittel and Webber suggest that 'wicked' problems are inherently different from ones that scientists or engineers deal with on a regular basis; they are seen to specifically concern those of social and policy planning (Rittel & Webber, 1973). Solving them is



different than an equation awaiting to be solved with the ‘right’ answer; they require completely different approaches. The authors advance that the resolution of wicked problems, in other words social problems (i.e. poverty or climate change), are never entirely achieved. Rather, their resolution requires iterative processes that will progress over time. The difficulty in identifying the root causes of these problems, which are triggered by a combination of elements, is what makes them so complex<sup>7</sup>. The authors mention the ineffectiveness of traditionally linear problem identification and solving methods when applied to wicked problems:

*“One cannot understand the problem without knowing about its context, one cannot meaningfully search for information without the orientation of solution concept; one cannot first understand, then solve” (Rittel & Webber, 1973, p. 139)*

The ineptitude of these traditional ways of doing is where design methods bring a new angle; the growing interest for design processes to be brought to organizational and strategic levels (Design Council, 2013), where decisions towards complex social problems are taken and where bigger impact can be achieved demonstrate this acknowledgement. Designers are traditionally trained to approach a problem in a Cartesian manner, which encourages them to isolate a given subject from its environment to better analyze it; a presumed subject (or problem) that is given and ordered (De Coninck, 2009). Considering it is the dominant epistemological posture, it is not a surprise that it has made its way into the creative and design fields (De Coninck, 2009). Today, it is said that “a systemic and holistic vision helps the designer think about the complexity of the reality” (Alvarez & De Coninck, 2016, p. 2) and thus better understand the context of its subject. There are parallels to be made with the ideas advanced by Rittel and Webber (1973). As follows, in addition to the usability and technological dimensions of a ‘product’, the designer must consider present and future contextual aspects, such as the social, environmental, political and economic

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<sup>7</sup> There are ten distinct characteristics to wicked problems. For details see (Rittel & Webber, 1973, pp. 136–144) for the list and complete descriptions.

background (De Coninck, 2009) to have a global understanding of the subjects' environment, its elements and their interactions.

These general shifts witnessed in the design fields coincide with a change of focus amongst international communities, as some problems require international attention: pollution, climate change, the exponential growth of the world's population, aging communities and poverty (UNESCO, 2013). As previously mentioned, these processes are said to be part of the 'second generation' of systems approaches, where the 'image' of the problem and solution gradually emerge, through periods of argumentation and critical judgment, very much like a design process (Le Moigne, 1990). One of the main emerging practices incorporating this systemic and holistic perspective into design has been *strategic design*.

#### 1.2.3.2 Strategic Design

Simply put, *strategic design* is about bringing design methods and processes to strategic levels, where decision-making happens (Helsinki Design Lab, 2013). The methods used are commonly referred to the now mainstream *designing thinking* approaches (Cross, 2011; Brown & Katz, 2009), but applied to a higher level of intervention. To work in this area, a holistic and systemic view is essential, and characterizes the approach. Strategic design methods can be applied within a business (Calabretta et al., 2016; Nixon, 2016) or on larger scales, such as in policy making (DC, 2013; Hill, 2012;). The Danish Design Council's (DDC) *Design Ladder* is commonly used to represent this idea, illustrating the required steps to reach those higher 'strategic levels' (decision-making and vision) of design use (DDC, 2016)<sup>8</sup>.

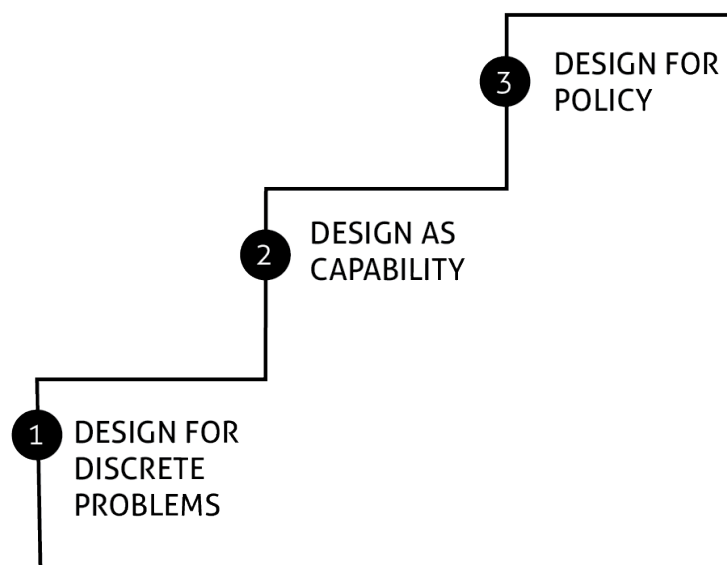
Nonetheless, the focus of *strategic design* (similarly to the *design thinking* approach) has predominantly been aimed towards the business and management sectors, and

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<sup>8</sup> When working at the strategic level in a business, the designer's tasks involve working within the management team and to help rethink or improve the business at its core; in this area, "the key focus is on the design process in relation to the company's business visions and its desired business areas and future role in the value chain" (DDC, 2016).

some argue this has been a very narrow approach (Hill, 2012). Another version of the *Design Ladder* was recently published as part of the *Design for Public Good* report (DC, 2013), which illustrates how design can have higher impact on societal change when used at strategic and policy-making levels (see figure 2). They promote the use of design thinking as a tool for policymakers and designers as facilitators to help make ‘traditional policymaking’ overcome structural problems (DC, 2013).

In a similar manner, Dan Hill proposes a slightly different, more disruptive take on strategic design, which he thinks is necessary to have more impact than what has been currently been achieved through the general ‘design thinking’ movements (Hill, 2012).



**Figure 2 :** Adaptation of the *Design Ladder for the public sector* in the ‘Design for Public Good’ report (DC, 2013).

Indeed, the author states that design has been “stating on the sidelines of core questions, rarely addressing more fundamental structural problems” (Hill, 2012, p. 32). He defines strategic design as a field that seeks to reframe these design problems:

*“[Strategic design] is focused on the systemic redesign of cultures of decision-making at the individual and institutional levels, and particularly as applied to what we can think of as the primary problems of the 21<sup>st</sup> century – healthcare, education, social services, the broader notion of the welfare state, climate change, sustainability and resilience, steady state economic development, fiscal policy, income equality and poverty, social mobility and equality, immigration and diversity, democratic representation and so on”* (Hill, 2012, p. 13).

Moreover, Hill adds that design thinking “[...] not only misrepresents the value of professional design but misleads on the promise of everyday design” (Hill, 2012, p. 113). Although he agrees that everyone does some kind of design, to some extent, the practice of ‘professional design’ is something different. Applying this professional expertise to “strategy, policy, governance and culture” is at the core of strategic design and an essential part of it (Hill, 2012, p. 115). Hill’s discourse is seen in this research as a demonstration that the theories within the design fields are moving towards new horizons, and his vision can be seen to illustrate the shift that required this section to add on a 5<sup>th</sup> order, referring to the most recent paradigm within design theories: *vision*.

#### **1.2.4 Fifth Order: Vision**

Although Buchanan’s design orders do not include a 5<sup>th</sup> one, it was seen as necessary to include these most recent developments in design theories, which move even further into complex and intangible areas. Indeed, the fifth order ‘visions’ refers to a new paradigm emerging in the mid-2010’s: *transition design*<sup>9</sup>. Transition design acknowledges the fact that there is a growing need for “societal transitions to more sustainable futures” and sees design as an important player to make these changes occur (Irwin et al., 2015, p. 1; Tonkinwise, 2014). The field emerges as a continuum of *service design* as well as *design for social innovation* practices, referring to

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<sup>9</sup> In the same years, other similar concepts demonstrate the emergence of this focus areas, such as the *disruptive design* method, which seek similar outcomes (see Leyla Acaroglu, [disruptdesign.co](http://disruptdesign.co)).

transitions led by design. They are set in the perspective of a change of paradigm rather than keeping a *status quo*, and is based on equity and quality of life (Irwin et al., 2015). Transition design is based on these three main areas of focus, each characterized by the moment in which the most impact will occur, and where the focus relies: (1) now: *service design*; (2) near future: *design for social innovation*; (3) visionary and speculative thinking: *transition design*. By simultaneously working on these three levels, the approach commits to gradually change a system over time, with “multiple, iterative interventions” (Irwin et al., 2015, p. 6).

As described in a previous section (1.1.2.2), *service design* aims to develop and improve services as a response to complex contemporary problems, by fostering collaborative processes between users, stakeholders and designers (Kuure & Miettinen, 2017). *Service design* allows the development of concrete solutions, focusing on the everyday needs and desires of communities to develop innovative solutions that focus on user experiences. As service design is a mature discipline, this allows steps to be taken within the existing and prevailing economic paradigm (Irwin et al., 2015).

#### 1.2.4.1 *Design for Social Innovation*

*Design for social innovation* is a developing discipline that aspires to nourish and support community and individual movements through the design practice, thus, participating in social change which can emerge from them (Manzini, 2015; 2014). In the perspective of *transition design*, designing for social innovation is a process that challenges existing socio-economic and political paradigms through collaborative (co-design), transdisciplinary and multiparty design processes. These means act as facilitators to empower communities to take action in various fields, profit various stakeholders (Irwin et al., 2015). By focusing on existing grassroots movements, the practice seeks to accelerate the process of social change.

#### 1.2.4.2 *Transition Design*

*Transition design* is an emerging discipline which suggests that new ‘future-orientated’ visions are essential to transition into more sustainable futures; it proposes to rethink

lifestyles completely through eco-systemic perspectives (Irwin et al., 2015; Tonkinwise, 2015; 2014). The concept is founded on the “understanding of the interconnectedness and interdependency of social, economic, political and natural systems” and works within “radically new socio-economic & political paradigms” (Irwin et al., 2015, p. 8). Furthermore, the approach focuses on the ‘everyday life’ as a priority area of intervention, in the perspective of sustainable futures and improvement of life quality (Irwin et al. 2015). Indeed, the approach favours a “cosmopolitan localism” (Irwin et al., 2015; Manzini, 2009; 2012), which is a way of life that is specific to a place and region; solutions are developed based on this local, socially and ecologically specific context, as well as an openness towards the world, through sensitivity, information and technological exchanges. By doing so, it opposes itself to a ‘one-size-fits-all’ model, to develop place-based solutions. Other characteristics of the approach include: Living Systems theory, ‘futuring’, indigenous wisdom, needs, worldviews, and more (see Irwin et al., 2015). *Transition design* defies current paradigms by proposing new ones, with the aim of achieving fundamental, positive changes within society and in the environment.

## 2.0 CONTEXT OF INTERVENTION: NORTHERN ENVIRONMENTS

This second chapter will define the context of this research through, predominantly, Louis-Edmond Hamelin's concept of *Nordicity* (in French: *Nordicité*, Hamelin, 1975) and its main constituents. Hamelin's vision is seen as a powerful paradigm to be explored in depth from the perspective of design. Furthermore, it will go over the broad topic of 'northern design' and assess the current state of its development in literature, and finally, present the case study of this research.

### 2.1 The Northern Context <sup>10</sup>

The idea of 'North' can have variable interpretations and understandings, depending on the geographical location and cultural background of individuals. The intention of this section is to give a holistic picture of what characterizes northern regions, how these elements relate to each other, from seasonal winter climates to socio-political dynamics. As the research wants to address the relationship between design and Nordicity, all elements contained in this topic must be considered. Louis-Edmond Hamelin's concept 'Nordicity' is used in this research to help define and organize these various subjects and thus, give a conceptual framework for the general topic of design in northern environments. The ideas brought forward below will be further referenced in the case study analysis.

#### 2.1.1 Nordicity As a Topic

In the 1970s, Louis-Edmond Hamelin <sup>11</sup>, a Canadian linguist and geographer, developed a concept known as 'Nordicity' (in French *Nordicité*), which changed our

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<sup>10</sup> The following section takes sections from the article *The Concept of Nordicity: New perspectives for the design fields* (see: Beaulé & De Coninck, 2017).

<sup>11</sup> Hamelin has been a pioneer in developing and expanding conversations about the North in the French-speaking province of Quebec. His legacy today is of institutional, linguistic and conceptual matter (Hamelin et al., 2014). He did not simply create the first Francophone northern studies institute in Canada (*Centre des Études Nordiques*) at Université Laval but has

understandings of the North and winter on many levels. Today, he is mainly recognized for his lifetime work revolving around the French word *nordique*; a word that was (previously) strictly used to refer to Northern Europe or Scandinavia (Hamelin et al., 2014; Hamelin, 2012). His work succeeded to develop broader, more complex and inclusive views on the North and all its elements. It is this vision, through its many facets, that is here argued to be a tool to further develop a contemporary understanding of 'northern design'. From imaginary to measurable, the 'many Norths' of Hamelin, are still very relevant today. Nordicity, "the state, degree, awareness and representation of cold territoriality in the Northern Hemisphere" (Chartier, 2010), is a complex phenomenon that touches most inhabitants of the Northern Hemisphere, from designers, decision makers to 'ordinary' people. However, when delving into the subject, one quickly realizes that speaking about it is not that easy. How should the subject be approached from a design point of view today? Other fields have been developing their respective interpretations of what these 'northern qualities' represent from their point of view, for example in: anthropology and geography, economics and political science, literature and various art fields, gastronomy, as well as in architecture and urban planning<sup>12</sup>, to name a few. These developments complement each other, like pieces to a dynamic puzzle, they add more layers to the complex and perpetually changing system embodied by the term 'nordicity'. Still, these pieces should not be mistaken for the underlying totality; thus, a holistic and inclusive perspective is necessary to see the big picture.

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also had major conceptual contributions to northern studies that have now gone well beyond geography.

<sup>12</sup> A few examples in the province of Quebec; there seems to be a growing interest in the link between design and nordicity: Northern studies in natural and social sciences: *Centre des Études Nordiques* (CEN), created in 1961, [www.cen.ulaval.ca](http://www.cen.ulaval.ca); Event: *Sommet mondial de la nordicité* (SHQ, 1999); Cultural studies on the North, winter and the Arctic : *Chaire de recherche sur l'Imaginaire du Nord de l'hiver et de l'Arctique* (Université du Québec à Montréal), since 2003; Research-creation lab on design in northern environments: N360 ([n360.uqam.ca](http://n360.uqam.ca)), since the early 2000s; Research project (CRSH founded) : *Living in northern Quebec* (in French *Habiter le Nord Québécois*), 2015-2020. Event: *Nordicité2016: Design & Sustainability in a northern context* (Montreal, 2016); Northern culture and food (magazine issue): *Caribou Mag 'nordicité'* (fall 2016).



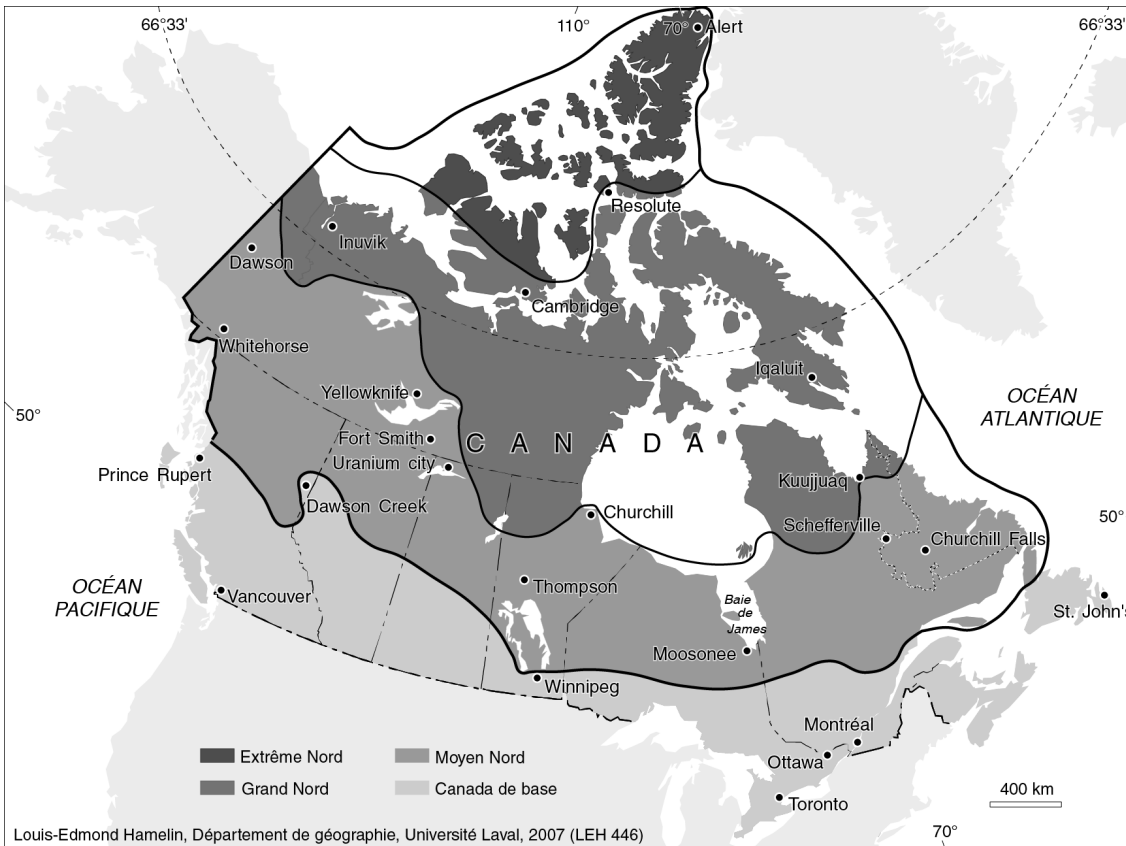
In design, this perspective still seems to be at an embryonic stage in literature and not fully explored in practice. With growing international attention on northern and Arctic areas, whether they be driven by economic interests or social and environmental concerns, there are many reasons why the design fields should be taking part in these conversations. This specific issue will be addressed further on. The following section will expose the structuring elements of Hamelin's concept of 'Nordicity'. For ease of understanding, the researcher has organized ideas into the following categories: *normative* nordicity; *subjective* nordicity; nordicity as a *vision* and *total* nordicity<sup>13</sup>.

#### 2.1.1.1 Normative Njordicity

'Normative' nordicity refers to the 'measurable' and 'tangible' qualities of cold areas in the Northern Hemisphere. This area is Hamelin's most famous conceptual contribution, as it brought a new way of delimiting cold regions in the Northern Hemisphere, it is often referred to as the "Nordicity index" (in French: *indice de Njordicité*). To determine an area's level of nordicity, the "polar value" can be assessed with the combination of ten factors (both natural and human) such as: latitude, annual temperatures (summer and winter), types of ice, precipitation (snow and rain), the amount of vegetation, terrestrial accessibility (land or air), economic activities and population (Hamelin, 1975). The results divide the Canadian North into four different categories: the Near North (also called Base Canada), Middle North, Far North and Extreme North (see figure 3) (Hamelin, 1975). On an international scale, the Nordicity index, once mapped out, depicts an oval shape that is "less perfect" compared to the Arctic Circle, which is drawn at the 66<sup>th</sup> parallel north, but closer to the reality (see figure 4). In fact, latitudes don't tell us much about what happens in reality; "the variable nature of [this] index accommodates the complexity of the territory" (Chartier, 2010, p. 34).

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<sup>13</sup> These categories are proposed by the researcher as a way to help understand the different areas that constitute Hamelin's concept in a holistic manner.

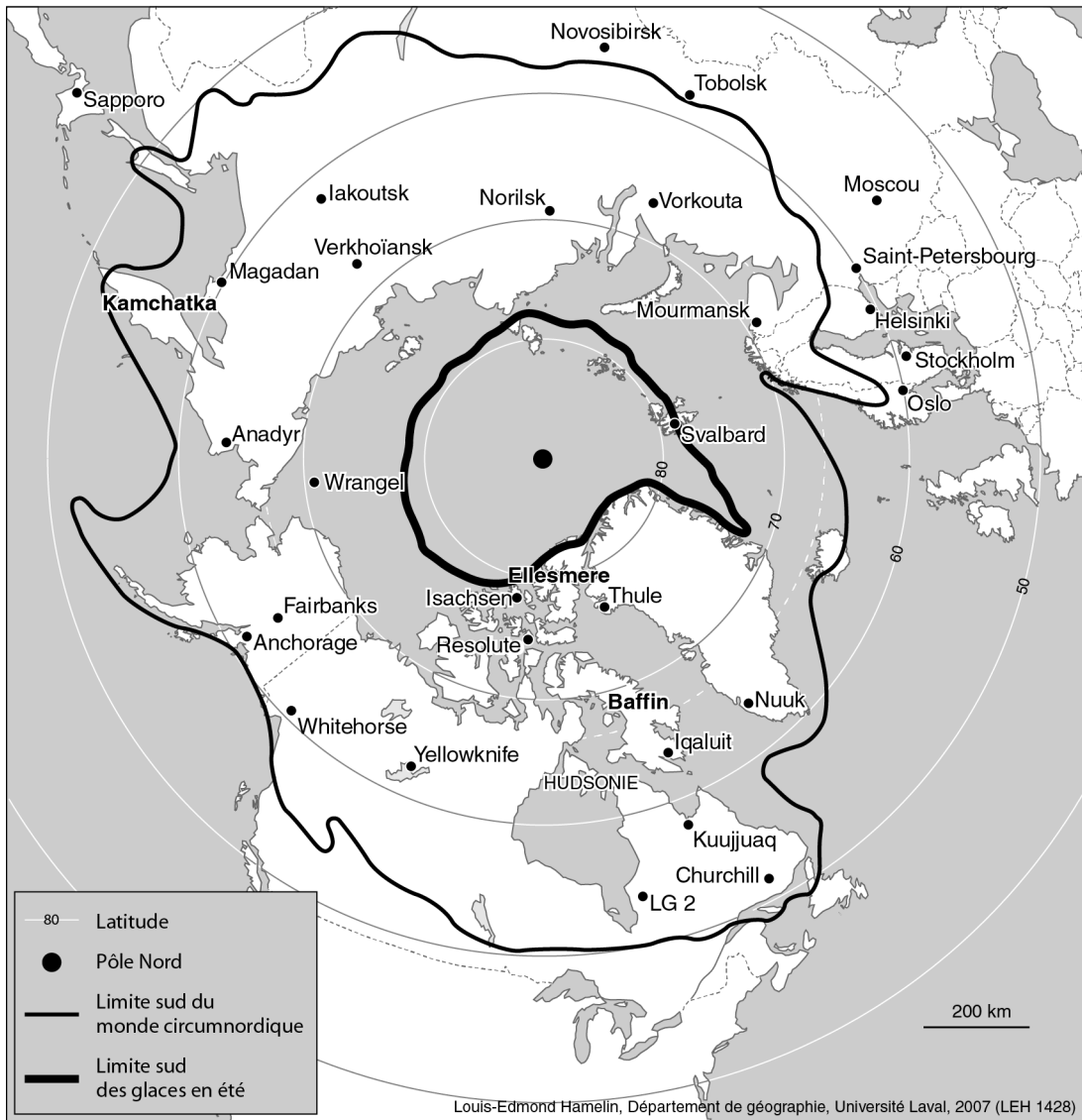


Source : Hamelin, Louis-Edmond (1994) Moyen Nord: Notion et zone mondiale. *Saguenayensia*, Vol. 36, n° 4, oct.-déc. 1994, pp. 54-59.

**Figure 3:** *Zones Nordiques du Canada* (in English: Northern Zones of Canada), Hamelin, 1994. Courtesy Of Université Laval Archives, Fonds Louis-Edmond Hamelin.

More recently, a Toronto-based architecture group, Lateral Office, published a book *Many Norths: Spatial practice in a Polar Territory* (Sheppard & White, 2017) that collects and illustrates years of data, compiled during projects in northern settings. Their contribution adds to the idea brought forward here that understanding the northern context is a complex task and that reduction and generalization can have an impact on the adequacy of design or planning projects. Contexts can be extremely variable from one circumpolar nation to another. Indeed, “considerable differences exist with respect to geography, climate, national histories, aboriginal cultures, infrastructures and connectivity, among many other traits” (Sheppard & White, 2017, p. 4). Below is a map that organizes some of the elements that can have large

impacts on special practice (like urban design and architecture) of the multiplicity of Norths. The authors intentionally depicted these lines in a dynamic way, representing the superimposing and intertwining nature of these factors, such as the north extent of road lines, tree line, permafrost line, and inhabitation line, in Canada (Sheppard & White, 2017) (see figure 5).



**Figure 4:** Major regions of the Northern world, Hamelin, 2002. Courtesy of Université Laval Archives, Fonds Louis-Edmond Hamelin.

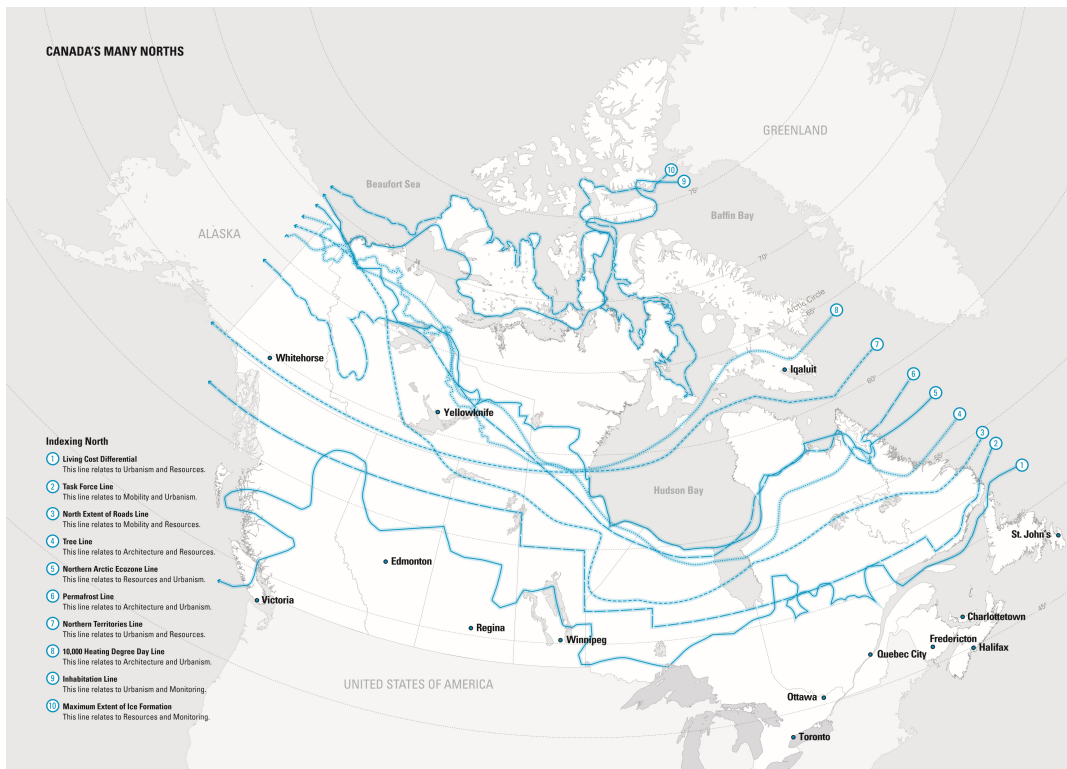


Figure 5: *Canada's Many North's*, Sheppard & white, 2017. Courtesy of Lateral Office. See annexe B for a larger image.

#### 2.1.1.1.1 Winterity

Furthermore, some areas have 'arctic-like' climates, but only temporarily; this is the case for many winter cities across the globe. Hamelin called this phenomenon 'winterity' (in French: *hivernité*), also described as 'seasonal nordicity'. Daniel Chartier, head of the literature research chair on the *Imaginary of the North, Winter and the Arctic*, who has largely contributed to the cultural dimension of Nordicity, develops on the way this 'winteriness' affects everyday life and goes beyond its physical components:

*“The first gesture is to no longer consider this season as a single physical phenomenon: through its social, cultural, athletic and psychological practices, the adaptations which it causes, the behaviours, discourses, representations and policies that result from it, 'winter' touches several*

*disciplines and must be observed from a pluridisciplinary perspective”.*  
(loose translation<sup>14</sup>, Hamelin et al., 2014, p. 13)

Chartier’s idea that nordicity and winterity have a strong connection to the cultures that interact with their elements will be developed in the next section (2.1.1.2). Even though it lasts a few months a year, winterity is what most people living in these cold areas of the globe experience, in cities like Montreal, for example, where temperatures can swing from -40 degrees Celsius in the coldest months, to +40 degrees Celsius in the summer. Such bipolar climates can indeed make it a big challenge for designers to create solutions in such variable contexts. For Hamelin, the notion of winter occurs in regions south of what he considers the ‘real North’ (Hamelin, 2002). Ultimately, the ‘normative’ dimension refers to all the environmental characteristics that are somewhat measurable.

#### *2.1.1.2 Subjective Nordicity*

Intrinsically tied to the previous section, what is characterized as ‘subjective nordicity’ is what relates to the human capacity to imagine and perceive Northern and winter phenomena, which manifests itself through various forms, such as: cultural practices, arts and crafts, literature, and design. Some draw back to human real experience, others entirely from the imagination (see Chartier, 2010; 2007).

*“The imaginary of North, in the Western world of the imagination, refers to a series of figures, colours, elements and characteristics conveyed by narratives, novels, poems, films, paintings and advertising which—from the myth of Thule to contemporary representations in popular culture—have forged a rich, complex network of symbolic meanings”.* (Chartier, 2010, p. 27)

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<sup>14</sup> Original citation in French : *“Le premier geste consiste à ne plus considérer cette saison comme un seul phénomène physique: par ses pratiques - sociales, culturelles, sportives, psychologiques-, les adaptations qu’il occasionne, les comportements, discours, représentations et politiques qui en sont issus, l’hiver touche à plusieurs disciplines et il doit être observé par un regard pluridisciplinaire”.*

As stated by Hamelin in an interview, “the North is not only in latitudes, but mostly in attitudes” (Fortier, 2012), meaning discussions about the North should not be reduced to a strictly geographical or magnetic sense, but include a cultural or human perspective as well. In fact, the term “Nordicity” symbolizes today one of the main components of *Québécois* identity (Chartier, 2011). On the other hand, the “imaginary North” can cause many problems in planning and designing, as design problems are always contextual. Differences in the culture, for example, need to be carefully understood, not imagined, to avoid creating culturally inappropriate solutions.

### *2.1.1.3 Nordicity as a vision*

This area is not usually explicit when referring to Hamelin’s concept of Nordicity, as it, for the most part, invokes his personal vision and values, underlying most of his ideas and what he has published in his career. In the era of sustainability, these values are what makes Hamelin’s vision relevant for the fields of design today. For example, as northern development is an important part of political discussions in Quebec, Hamelin wonders if “Southerners”, will be able to pursue their ‘ways of doing’ to the vastness of the North, i.e. seeing the region as a pool of resources for the South. In fact, he suggests that one of the North’s problems *is* the South itself (Hamelin et al., 2014).

Through most of Hamelin’s work, there is an important focus on Indigenous communities and cultures in the region (Hamelin, 2012; 2002). He suggests that the inherent cultural differences between Northern (mostly indigenous) and Southern (mostly mainstream) communities, like the cultural connection to the land and environment, must be acknowledged to develop a different type of relationship in the future (Hamelin et al., 2014; Hamelin, 2005). He states, “there is no Quebec without the North; there is no Quebec without a kind of combined operations made by native and non-native peoples” (Hamelin, 2005, p. 17). In Canada, like many other Northern nations, there is a long history of colonization, impacts that are still very visible today (Janzer & Weinstein, 2014; Kovach, 2010). In Quebec, indigenous communities

represent the majority of Northern inhabitants<sup>15</sup>, acknowledging the social-political context and cultural differences is crucial in any design or planning project. Even though Hamelin's contributions are mainly of geographical matter, his vision is based on many fundamental values such as inclusiveness, sustainability, and awareness, and calls for innovation and action (Hamelin, 2012; 2002). Could design be a tool to operationalize his vision?

#### 2.1.1.4 Arcticness

Although the concept of Nordicity is an alternative way of defining northern regions, which usually focuses strictly on latitudes, the notion of 'Arctic' is still relevant because of its common use in language, as well as its political significance. The Arctic area is delimited by the Arctic circle at the 66°33'46.9" parallel north; this latitude delimits the areas in which, once a year, the sun does not rise during winter, and does not set during the summer. Even if the term is regularly used, it is seen as a simplistic way of defining a region, community or culture in the Northern Hemisphere. As demonstrated previously, 'levels of northerness' do not play out in a uniformed circle (see figure 4). Indeed, international Arctic regions and their societies are quite diverse. The Arctic regions have gained, in recent years, a large amount of attention, mostly relating to witnessed changes within its environments and the impacts of global warming; this international focus reveals itself through the international environmental, socio-political concerns and economic interests ignited by these changes (UNESCO, 2009). Recently, Ingrid A. Medby discussed the topic of 'Arcticness' in the short text *Arcticness and change* (2017). The author doesn't refer to Hamelin's concept of Nordicity, but the way in which the topic is described in the opening essay has similarities to the Canadian geographer's ambition to define northern qualities. In this case, Medby attempts to describe the Arctic's qualities (the what, who, where) and why the topic remains important today:

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<sup>15</sup> The Nunavik region, Northern Quebec, is home to 90% Indigenous inhabitants (Government of Canada, 2012).

*“In relations between the Arctic and non-Arctic, the claim to Arcticness potentially becomes a political one; indeed, it may decide who falls on either side of Arctic and the prefixed ‘non-’. In turn, Arcticness becomes a question of who holds rights, who holds responsibilities, and who holds ‘true’ knowledge of a space in rapid flux” (Medby, 2017, p. 5)*

Furthermore, the author advances that Arcticness is often used as a branding element, a way for a region to characterize and distinguish itself, mostly in the eyes of outsiders and their understanding of what it means and states the growing trend of rebranding northern areas as ‘Arctic’. She states that this enthusiasm is not intended to those living in the Arctic, but rather, for outside spectators, like tourists, visitors, investors or politicians:

*“Arcticness does not only matter for political decisions and resource extraction; it seems to have become exotic, interesting – it sells. With northern lights tours and midnight sun cruises, Arcticness is increasingly commodified. With ‘Arctic’ labels on anything from bottled drinks to cleaning companies, it has become a brand so ubiquitous that it is now simply part of the everyday.” (Medby, 2017, p. 6)*

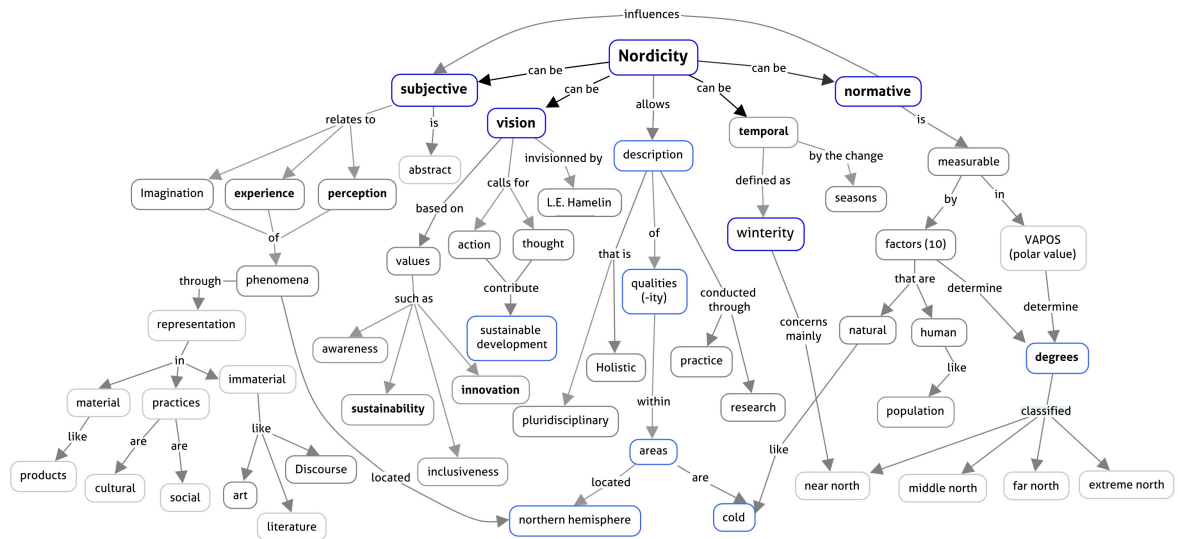
Although not developed by Hamelin himself, this notion will be relevant to place the case study in context and will be further referenced in the discussion.

#### 2.1.1.5 “Total” Nordicity

Hamelin’s vision of the North has transcended the boundaries of geography and is today a recurrent subject in many fields and in the public place. The word *Nordicité* is one of the rare ‘elastic’ words that manages to make its way into scientific language as well as in everyday discussions (Hamelin et al., 2014); this demonstrates the spectrum of subjects that fit under its conceptual umbrella. ‘Total’ nordicity, or as referred to in English by Hamelin as ‘comprehensive’ nordicity embodies the “thinking systems, knowledges, vocabularies, intercultural know-how, arts and humanities sensibilities, expressions of opinions, applications in territorial, political and economic fields; in short, [...] the state of a Northern country” (loose translation,



Hamelin, 2002, p. 6). The following conceptual map<sup>16</sup> seeks not only to visually communicate the web of concepts that are part of this northern dimension, but also how they are inherently connected (see figure 6). It is this holistic and global perspective of nordicity that is here argued to have the most opportunities of success in the design fields.



**Figure 6:** What is Nordicity? (Conceptual map, by author, 2018). See annex C for a larger image.

Under these circumstances, the mono-disciplinary approach doesn't allow to produce enough relevant and necessary knowledge to fully understand the subject in its environment; thus, a pluridisciplinary approach (rightfully integrating sciences, traditions of knowledge, cultures, imagination, and languages) is appropriate to allow optimal comprehension of an object or subject in itself or in its relations (Hamelin et al., 2014). Chartier has a similar view on the subject:

*“The North, a living world interlinking natural and human characteristics, organized series of intellectual acts, bearing, within a circumscribed territory, reference to systems of thought, knowledge, vocabularies, intercultural grammars, representations in art and*

<sup>16</sup> The conceptual map is used as a tool to visually represent complex systems, the interrelationships existing amongst the elements and subsystems.

*literature, the expression of opinions, economic, political and territorial applications as well as ways of being* ". (Chartier, 2010, p. 36)

The concept of Nordicity opens a door to a broad, inclusive, multidisciplinary and multi-level view of northern regions and its ecosystems. For the field of design, this concept can help develop projects that better reflect the context and, thus, contribute to develop innovative projects that are culturally and environmentally appropriate. Such approaches strive towards the sustainable development of northern territories, winter cities and communities. Nordicity must be seen as a dynamic system, which evolves from the fact that it exists and that exists because it evolves. A holistic and complex vision of Nordicity, in a perspective of sustainability, is therefore essential, even crucial.

Although this section has only skimmed over the vast subject of what is Nordicity; its richness and complexity are the reasons why, decades later, researchers are still developing its definition and significance in their respective disciplines. What is the right way to approach this concept for design field? And what could be the potential outcomes?

## **2.2 Designing in a Northern Context<sup>17</sup>**

In today's context of globalization, many northern cities and territories are strongly influenced by the dominant culture regardless of their specific context (Pressman, 1999). Some of these particularities involve: extreme climates, vast territories, low population density and cohabitation of indigenous and non-indigenous peoples. As only a minor percentage of the world's population lives in *cold* areas of the globe (Chartier, 2016), the *northern paradigm* seems to be condemned to a constant fight against the overpowering *southern* paradigm (see section 2.2.1). Indeed, immediate

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<sup>17</sup> The following section takes sections from the article "The Concept of Nordicity: New perspectives for the design fields" (see: Beaulé & De Coninck, 2018).

access to products, ideas and trends from across the globe can have significant impacts on the way our objects, homes and environments are conceived, which ones we desire and how they interact with their environments. Referring to the history of the American continent, and more specifically the conquest of the 'New world' by the Europeans, the question of 'life and survival' during the harsh winters was an important preoccupation for the First Nations and settlers, whether it be for food, garments, mobility or housing (Mann, 2005). This section is not addressing the discovery of a new phenomenon (at least from a climatic perspective), but rather, points out how, curiously, these northern realities don't seem to systematically be part of the design criteria of a project. Correspondingly, to some, the topic of 'northern design' or 'winter-centred design' can seem obvious; to others, it is appealing and even innovative.

In the Canadian province of Quebec<sup>17</sup>, the harsh winter climates are an undeniable reality, even in its most southern areas. This phenomenon is easily observable in cities like Montreal<sup>18</sup>(Quebec, Canada), which has winters comparable to those in Siberia, and where products, services, infrastructures, and even strategies don't always reflect the northern character of the region. For instance, the city's paddling pools are only open for two and a half months a year, which leave these spaces unused over 80% of the year (Chartier, 2016; Ville de Montréal, 2017). In 1980, Rogers and Hanson stated something similar in their book *The Winter City Book: a Survival Guide for the Frost Belt* when speaking of high city towers that aren't designed with winter in mind, mentioning "architects probably designed those buildings in [21°C] offices, and presented in the models to their clients with those miniature trees in full plastic "bloom" (Rogers & Hanson, 1980, p. 52). Canadian cities do also provide examples of some efficient services designed for winter use, like their effective snow-

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<sup>18</sup> The province of Quebec holds about 23% of Canada's population (2016) (Statistics Quebec, 2016) and is 1,667 Million km<sup>2</sup> (being about 5x the size of Finland).

removal service systems, underground metro systems or popular winter festivals<sup>19</sup>, but it is not always the case.

In a similar way, the ‘Southerner’s vision is often the one leading northern development projects in the province, causing a lot of concerns and tensions with local inhabitants, which are mostly indigenous, or with environmentalists. Whether it be for the development of new winter sport products, pedestrian safety on icy sidewalks<sup>20</sup>, managing ‘slush’, to rethinking large northern development projects,



**Image 1:** Signs warn pedestrians that ice might fall from building infrastructures in Montreal. (photo by author, 2015)

<sup>19</sup> For example, winter festivals in Quebec: *Carnaval de Quebec* in Quebec City ([carnival.qc.ca](http://carnival.qc.ca)); *Igloo-fest* in Montreal ([igloofest.ca](http://igloofest.ca)); *Luminothérapie* in Montreal ([quartierdesspectacles.com](http://quartierdesspectacles.com)) or citizen initiatives like the *Tempo-fest* in Chibougamau, as well as a winter carnival dating as far back to 1887 in Montreal (“Château de glace”, 1887), to name a few.

<sup>20</sup> In the elderly population, slippery sidewalks can have large impacts on their quality of life and independence after accidents (broken hips or wrists); these risks are higher during the winter season (Public Health Canada, 2014).



healthcare or education in remote areas, various issues suggest that the northern context should be better acknowledged and further developed in various fields, and particularly in design. A simple example are *Canada Post's* community mail boxes (which are distributed all over the country), and their recently publicized “freezing locks” issues. Indeed, once the cold weather sets in, the locks are most likely to freeze and make it impossible to access the individual boxes (see image 2). People are forced to use hammers and tools to reach their mail (CBC news, 2016). Undoubtedly, one



**Image 2:** Canada Post community mailboxes in winter. (Photo by author, Edmonton, 2018). “the lock design on new boxes is susceptible to freezing when the cold weather sets” (CBC news, 2016).

would think that in a country like Canada, where ‘northernness’ and ‘winteriness’ are often portrayed as an intrinsic cultural trait, Canadian design (in all forms) should naturally be functional during the cold season. In addition to causing inconveniences for Canadian citizens, the problem means hundreds of thousands of locks will need to be changed across the nation (CBC news, 2016) leading to large expenses. This is a simple and obvious example of bad ‘northern design’, but it goes to show that these criteria are often omitted in the most basic products. Such examples are all around us and well distributed amongst designers, planners and decision makers. It is essential for projects to take the local context into account, meaning there is the necessity of a global understanding of northern specificities such as its climate, environment, cultures and the political, economic and social frameworks.

### **2.2.1 The Problem: Northern vs Southern Paradigm**

For most designers and planners in Quebec, the ‘real North’ is mostly imaginary, as they have, for most part, not visited these regions (they are not easily accessible). This sets the table for many presumptions and prejudices. In this way “the North’s voice is not its own” (loose translation, Hamelin et al., 2014). Indeed, this division between the North and the South, partly due to the lack of infrastructures, also contributes to a lack of dialogue between the Northern and Southern populations of the province, and may explain the lack of effective intercultural exchanges between the indigenous and non-indigenous population. Northern regions are often imagined as *Terra Incognita*, areas that don’t belong to anyone, and are therefore waiting to be explored and exploited; but these lands are usually someone’s ‘home’. As of today, the northern part of Quebec is too often seen (from a Southerner's perspective) as a pool of resources to exploit for the benefit of the South (Hamelin et al., 2014).

In Canada, the ‘northern vs southern paradigm’ imagery manifests itself in different ways. Canada’s Southern neighbours (the US, and more specifically states such as Florida and California), like for many other countries around the world, have a large influence on the local mainstream culture. This can be observed, for example, in the lifestyles, movies, fashion and trends that take up most of the room on television

screen and in shops (Flaherty & Manning, 1993). This overwhelming idealistic and 'Californian' lifestyle can also impact the way designers conceive their own projects; it becomes a frame of reference that is presumed to be the 'norm'. Inevitably, what occurs is that 'winter' then becomes an abnormality or is even seen as a calamity. Projects are conceived at best for the spring and summer, and fingers are crossed so that it will be 'somewhat' efficient during the winter. Why would a northern city like Calgary, Canada, have a skyline that is almost identical to Houston, Texas (US), even though they have completely different climates? (Bartczak et al., 2008; Rogers & Hansen, 1980).

Furthermore, it is also possible to have conflicting paradigms within the same country. Indeed, the southern part of Quebec is where most of its population lives, and where the culture is very much mainstream. As a result, the South has an overpowering position towards its own 'North' and, therefore, on its local inhabitants, most of which are indigenous (Statistics Canada, 2012). Having intrinsically different values, the misunderstandings between indigenous and mainstream cultures can have devastating consequences. Indeed, Northern Quebec is, still today, mostly designed and exploited by and for the "South" (Hamelin et al., 2014), and local contextual elements can be neglected during the project development. This results in infrastructures and services that aren't suited for local needs and most often don't meet the needs and aspirations of local inhabitants. For example, in Nunavik, which is the homeland of the Inuit of Quebec, housing units, although suited for the harsh climates (Quebec, 2001), do not generally consider the local way of living (i.e. gathering and hunting) during their conception (Evans, 2013). This problem was approached by Montreal-based environmental design teacher Patrick Evans<sup>21</sup> in his project *Cuisine Nordique* (in English: Northern Kitchen). The teacher's students were asked to work on rethinking kitchens that were in line with Inuit way of life (more than half of the population still hunts for their food). The

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<sup>21</sup> Patrick Evans is head of a research-creation laboratory at Université du Québec à Montréal (UQÀM) that focuses on design in northern environments (see students work at: [www.n360.uqam.ca](http://www.n360.uqam.ca)).

student proposals suggested adaptations for seasonal change and extreme climates, made kitchens a central part of the home, had specific access to the outdoors, room for regular family gatherings and food preparation, etc. (Evans, 2013).

Considering the cultural specificities of a context is essential, and fortunately, there seems to be a growing interest on the cultural aspects of designing in northern environments in recent years, particularly in the academic world. This is reflected in the rising number of practice-based research labs focusing on northern design, material culture and the value of traditional and indigenous know-how, such as: *Arctic Design School* in Yekaterinburg (Industrial design, Russia), *N360 lab* in Montreal (Environmental design, Canada), the *Collectif Tapiskwan (Art Atikamekw)* project (Industrial design, Canada) and *Living in Northern Quebec* (architecture and urban planning, Canada)<sup>22</sup>. Although there is a noticeable development in cultural sensitivity, the topic of ‘northern design’ has still mainly revolved around more ‘traditional’ design and planning fields.

### **2.2.2 Initiatives & Content: Rethinking Cities For Winter**

Using design as a way to improve the everyday life of Northern inhabitants has been a topic of interest for a few decades already, but almost strictly within the Canadian and Nordic urban planning and architectural fields<sup>23</sup>, most of which revolves around the ‘winter cities’ topic. The subject has been around for a few decades already, with first books on the subject such as: *The Winter City Book: a Survival Guide for the Frost Belt*, published in the 1980s (Rogers & Hanson, 1980). Furthermore, the *Winter Cities Institute* has been an active player since the 1980’s, promoting the use of winter-centred design (mostly in architecture and urban design) to create safe and livable cities all year round, as well as new economical spin-offs (Winter Cities Institute, 2017). This ‘designing for winter climates’ movement seems to have been mostly

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<sup>22</sup> See: (ШКОЛА СЕВЕРНОГО ДИЗАЙНА. АРКТИКА ВНУТРИ [School of Arctic Design], 2017); N360 lab (n360.uqam.ca); *Collectif Tapiskwan (Art Atikamekw)* (tapiskwan.com); *Living in Northern Quebec* (habiterlenordquebecois.org).

<sup>23</sup> To name a few, see: Pressman, 2004; 1995; Collymore, 1994; Mänty & Pressman, 1988; Rogers & Hanson, 1980; Culjat & Erskine, 1988.



peaked during the mid 80s and 90s, with important contributions by, among others, Norman Pressman, who is also one of the founders of the *Winter City Institute*. The author published many books on the subject of climate-sensitive urban planning (see: *Northern Cityscape: Linking Design to Climate*, Mänty & Pressman, 1988; *Cities Designed for Winter*, Pressman, 1995). These approaches were seen as innovative when they were developed, but somewhat outdated nowadays, mainly because of the impacts of climate change and temperature fluctuation (Chapman, 2014). Since then, there have been a few city-led strategic initiatives, mostly regarding developing new strategies for inclusive, livable and sustainable winter cities. One organization that emerged from this era is still active today, the *World Winter City Association for Mayors* (WWCAM), established in Sapporo (Japan) in 1982 (WWCAM, 2016). The platform allows winter cities from around the world to discuss and share strategies to improve their municipalities through the motto “seeing winter as an asset” (WWCAM, 2016).

Moreover, in 2012, the Canadian city of Edmonton established a new city department devoted to this subject, *Winter City Edmonton* (WCE), through which they developed their *winter-city strategies*, and now available *winter city guidelines*<sup>24</sup> (WCE, 2012). These developments were made after conducting a large-scale survey conducted amongst their community to identify what citizens dreamed of having during the cold season. Amongst other things, the city has hosted in 2015 and 2017 the *Winter-City Shake-up*, an event that attempts to bring together various city leaders and planners through the topic of winter city design ([wintercitiesconference.com](http://wintercitiesconference.com)). The topic of ‘winter design’, as put forward until now, focuses on planning cities with various elements in mind: cold wind corridors, snow accumulation, sun exposure, pedestrian safety and activities that take advantage of the season’s particularities (Rogers & Hanson, 1980; Mänty & Pressman, 1988; WCE, 2012; WWCAM, 2016).

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<sup>24</sup> The winter city guidelines are available online, and it is highly recommended by the city of Edmonton that new developments consider these suggestions to make the city more enjoyable during the winter. For more details, see available documents on the winter-city Edmonton website ([wintercityedmonton.ca](http://wintercityedmonton.ca)).

Similarly, from perspective design and planning, the province of Quebec has held the *Sommet Mondial sur la Nordicité* [International Nordicity Summit]<sup>25</sup>, organized with Louis-Edmond Hamelin and the *Société d'habitation du Québec* (SHQ) in 1999, where international speakers came to speak about housing and planning in northern environments, as well as living with seasonal winter climates (SHQ, 1999). Today, *Lateral Office*, an architecture firm based in Ontario, brings the focus to more 'extreme' northern contexts, through various projects developed in their firm, with their book *Many Norths: Spatial Practice in a Polar Territory* (Sheppard & White, 2017), as mentioned in section 2.1.1.1.

### **2.2.3 Case Study: The Emergence Of The 'Arctic Design' Concept In Finland**

In the last few years, Finland has been leading and initiating international reflections about the role of design in Arctic regions with their concept of *Arctic Design* (AD). Nordic countries have been popular references for their good 'northern design' practices, seen as the reflection of their long cultural traditions and their understandings of the relationship between the environment and human ways of life (Legault, 2013; Pressman, 2004). What distinguishes Finland regarding development on the topic of 'northern design', is its attempt to bring the conversation beyond material outcomes: into the development of strategies and action plans that contribute to the well-being of their Arctic communities. The AD concept can be understood as "actions aimed at increasing well-being and competitiveness in the northern and Arctic areas. [It] combines art, science, and design for solving the particular problems of remote places and sparsely populated areas" (Jokela & Tahkokallio, 2016, p. 121). Moreover, it focuses on the use of emerging design methods (like *service* and *strategic design*) for the benefits of the Circumpolar North (Tahkokallio, 2012); this is specifically where it distinguishes its approach. The concept was developed in 2012 in the city of Rovaniemi, the capital of Finnish

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<sup>25</sup> The International Nordicity Summit of 1999 (SHQ, 1999), alongside the more recent *Nordicité2016: Design and Sustainability in a Northern Context* international conference in Montréal (Seidman, 2016) remain the two core events led by design or planning perspectives, which focused on the subject of 'northern design' in the province of Quebec.

Lapland, and mostly envisioned by Finnish strategic designer Päivi Tahkokallio, although many actors have (and still are) participating in its development. The concept was selected as a case study for this research, as it seems to establish a new framework for work in the field of 'northern design', by working in a transdisciplinary, multi-sector and multi-level (top-down and bottom-up) manner (Lapland, 2015). Most remarkably, the concept was integrated (in 2013) into Finland's Strategy for the Arctic Region (Finland, 2013a), as well as in the country's National Design Policies (*Design Finland*) (Finland, 2013b); it has since expanded into a multitude of projects.

### 2.2.3.1 *The context of design in Finland*

Since the 1950s, Finland is renowned for its design worldwide. In fact, the Finns have managed to use design as a way to affirm their distinct identity<sup>26</sup>, as well as a fundamental element in the country's post-WW2 rebuilding efforts (Korvenmaa, 2014). Despite the critical economic situation of the country at the time, Finland managed to develop now world-renowned products through companies like: Artek, Iitala and Arabia (Korvenmaa, 2014). Many of these products are still in production today. Numerous famous Finnish designers and design companies emerged from this 'golden era', such as product designer Tapio Wirkkala, Architect Alvar Aalto or textile design company Marimekko (Nokia Design, 2014). Although Finnish design has evolved since those times, the field still plays an important role in structuring their society, and is based on egalitarian values, as in other Nordic nations (Murphy, 2015). The basic idea is that 'good design' should be accessible to all; everyone should have the right to use beautiful and functional products and services. Even if design is no longer simply about these materials 'things', these democratic standards are still very apparent today.

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<sup>26</sup> Finland was under the reign of Sweden and Russia for a long time (they have been independent since 1917). The Finns have managed to use design as a way to express their uniqueness over the last half-century. This was stated at the beginning of the Design Exhibition in Helsinki, Finland, where the following quote was referenced to demonstrate the Finnish desire to be recognized as a distinct nation: "*Swedes we are not / no longer, Russians we do not want to become, let us therefore be Finns*" Adolf Ivar Arwidsson, 1800s. This state of mind seems to resonate through Finnish design today.

### 2.2.3.2 Design in Finland today

Before diving into the study of the AD concept, it is essential to understand the general context of Finnish design today, as it has much evolved since the period mentioned above. Finland is one of the few countries to have national design policies. They have their own *National Council for Design* (Taike.fi) and helped produce the *Design for public good* report through the Design Council (WDC, 2017; Design Council, 2013). In fact, design is taking more and more room in innovation strategies within the country. In 2008, design was integrated into the definition of innovation in the National Innovation Strategy, which now focuses on user-driven innovation (DC, 2013). Furthermore, when Helsinki became a *World Design Capital* in 2012, this enabled the development of a wider range for the use of design, through policies and strategies (DC, 2013). Nowadays, Finland is one of the leaders in terms of emerging design methods, like *strategic* and *service design*. An active organization on the matter is *SITRA* (Finnish Innovation Fund)<sup>27</sup>, which promotes design through the *Design Forum Finland* (designforum.fi). Amongst other things, SITRA promoted *strategic design* as a tool to solve contemporary problems: “when confronting new challenges, we must be able to design our own uniquely effective answers” (SITRA, 2017). The organization is also behind the *Helsinki Design Lab* (HDL)<sup>28</sup> which is one of the main references in terms of strategic design today through the various resources they have made accessible through their website (helsinki.designlab.org). Aligned to the definition of *strategic design* offered in chapter 1 (see section 1.2.3.3), HDL sees strategic design as:

*“[applying] some of the principles of traditional design to “big picture” systemic challenges like health care, education, and climate change. It redefines how problems are approached, identifies opportunities for action, and helps deliver more complete and resilient solutions. Strategic design is about crafting decision-making”* (HDL, 2013).

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<sup>27</sup> The Finnish Innovation Fund was founded in 1967 (DC, 2013).

<sup>28</sup> HDL was an initiative by *SITRA*, the Finnish Innovation Fund. It was active until 2013.

HDL seeks to move design away from strictly 'cultural affairs', aiming to have more and more designers move from creative studios to elementary positions within institutions, businesses and governments, as design works best when it fits into the organization's structure. Being an emerging practice, the organization sought to create new opportunities for designers with a strategic attitude and to refine the skill set of designers so they are equipped to work on the challenges of today's globalized and complex world (HDL, 2013). The complexity of today's problems need many new ways of being tackled. *Strategic design* is advocated to be a new tool for the government, in Finland and abroad, to help leaders see the architecture of problems. In an interview, Dan Hill, who has been involved in both SITRA and HDL in Finland, mentions that the design strategies developed through SITRA "on the face of it, [...] may just look like another building project, but [they are] actually trying to send ripples of systemic change through Finnish society and business" (SITRA, 2012).

The idea that the focus of design is progressively moving further from the world of 'products' (Buchanan, 2001; Brown & Martin, 2015) seems to demonstrate itself clearly with the case of Finland. Rather than focusing on the built environment and tangible areas (like most of what has been done previously), it changes the focus to a more global and systemic perspective. As mentioned previously, the *Arctic Design* concept distinguishes itself from previously developed 'northern design' initiatives and movements (as discussed in section 2.2.2) by placing itself at the end of the spectrum (orders 4 & 5 – see figure 1, chapter 1). AD acts as an embodiment of this shift, now being applied to northern and Arctic contexts. Finland seems to be leading the way on this matter.



### 3.0 RESEARCH PROBLEM AND METHODOLOGY

#### 3.1 Research Questions

The literature review allowed, on one part, to address the changes witnessed within design fields, where practitioners, as well as theorists, have gradually been shifting their focus beyond the material world. It then allowed to determine what this research implies when speaking about the general northern context and its elements and the general issues regarding designing in these settings, and finally, to address how nordicity has been previously approached in the design fields, where the focus on more 'traditional' design and planning practices (like urban planning or architecture) was observed.

The *Arctic Design* concept proposes a clear change in the way design should be used and value in the strategies for northern development and sustainable winter cities. While the concept has gained a lot of momentum, it is still conceptually ambiguous to most, which might explain why it remains, at this time, a mostly 'Finnish-bound' concept. Perhaps this is also due to the ambiguousness around the term: 'Arctic Design', which can have various interpretations depending on one's cultural background, general knowledge and profession. This can result in a superficial and reductionist understanding of what it strives to convey; which could be particularly unfortunate for northern regions outside of Finland, and outside of the Arctic region, who could most likely benefit from the new paradigm proposed through the concept.

Because of its singularity, the AD concept was selected as the unique case study of this research. The methodology will be developed in the following section. The questions guiding this research seek to further our understandings on the subject, in the perspective of transferability and inspiration:

- What is the Finnish concept of *Arctic Design*?

Underlying question:

- How and to what extent is the Finnish *Arctic Design* concept transferable to other northern regions, including those outside the circumpolar zone, like the province of Quebec?

Although the questions are specific to the AD concept, they allow us to delve into understanding this particular case from Finland, with the objective of expanding the findings to other northern regions and the general field of design. As the province of Quebec shares many similarities with Finland, bound through their northern qualities, the two nations have many common issues: extreme climates, sparsely populated areas, cohabitation of indigenous and non-indigenous communities, changing environments and aging populations. There are many reasons to think that the ideas brought forward by the Finns in their concept could well apply to the Canadian context.

### **3.2 Research Objectives**

In accordance with the research questions, the main objectives of this research will be to:

- 1) Identify and understand:
  - a. The main structuring elements of the concept *Arctic Design*;
  - b. the reasons and motives that pushed Finland to create this concept;
  - c. the difficulties encountered.
- 2) Explore the possibility of "transferring" these ideas developed in Finland to Quebec, and potentially other northern regions located outside of the Arctic Circle.



- 3) Assess the interest and/ or necessity for the province of Quebec to take on this concept and develop similar strategies.
- 4) Determine the current state of research on the relationship between design and Nordicity.

### **3.3 Research Methodology**

#### ***3.3.1 Introduction to the Methodology***

Choosing the Finnish concept *Arctic Design* as the case study in this research was not arbitrary. As mentioned previously, the subject of northern and winter design has been covered by many before but has mostly restricted itself to the fields of urban design and architecture. *Arctic Design* has demonstrated a more ambitious take on the 'northern design' topic and conveys the same changes that are witnessed in the design fields today, as advanced in Chapter 1. This in-depth study allows to further the understandings of the changing role of design in regard to contemporary northern issues.

The concept was selected as the single case study for this research because of its singularity, as well as its ambition to start international discussions about the role of design in the sustainable development of Arctic regions. The main objective behind this research is to understand what the Finnish concept of *Arctic Design* is really about and to establish the relevance for other northern regions to join the conversation and take action. The researcher will investigate the concept in all its complexity, in the perspective of determining new paradigms that enable the development of innovative and sustainable products, services, environments and strategies that are suited to their northern environments and their inhabitants. Through inductive and qualitative methodologies, this research conceptualizes the case study by analyzing the emerging facts from the collected data. This approach allows the researcher to develop a general theory that can then be understood in a broader sense (Johansson, 2003). Qualitative research "often makes knowledge claims based primarily on

constructivist perspectives (i.e., the multiple meanings of individual experiences, meanings socially and historically constructed, with an intent of developing a theory or pattern)” (Creswell, 2003, p. 18). The emerging data was collected through a series of semi-directed interviews and opened-ended questions, conducted with experts on the subject, which is typical for this type of inquiry (Creswell, 2003). A total of eight experts were interviewed. Next, the organization and analysis of the participants' arguments and perceptions enabled a precise assertion of the AD concept as it was at the time of the field work study. Finally, the data is compared with literature, as a way to propose a conceptual framework of the *Arctic Design* concept, summarizing the research results. These results allow the researcher to discuss the favourable conditions for its transferability to other northern regions, like the province of Quebec.

### **3.3.2 Method: The Case Study**

The case study research strategy is a method where the researcher undertakes an exhaustive investigation that involves studying “an event, a program, an activity or more than one individual” (Creswell, 2007, p. 78). Various data collection methods can be used by the researcher to gather information over a continuous period of time. Case study research as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 1984). This method is also preferable when a research revolves around “how” and “why” questions being asked about a contemporary set of events over which the investigator has little or no control (Yin, 1984). The objective of this type of study is to develop a thorough description and investigation of a particular case.

Moreover, there are different types of case studies, which are determined by the size of the bounded system or by the intent of the case analysis (Creswell, 2007). This project is an *intrinsic case study*, as it focuses on the specificity of the selected case and its unusual or unique situation (Creswell, 2007). Intrinsic case studies require analytic procedures that focus on a “detailed description of the case, set within its

context or surroundings” (Creswell, 2007, p. 74) as they try to grasp the singularity of the research subject. The objective is, not to conclude with a generalization of the case (like *instrumental case studies*) but, rather, to provide an exhaustive interpretation and understanding of the specific case. The case study method was selected for its capability of working on “questions [that] deal with operational links needing to be traced over time, rather than mere frequencies or incidence” (Yin, 1984, p. 6), “it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result” (Schramm, 1971 *in* Yin, 1984, p. 12). This approach was chosen, since it gives importance to contextual conditions, which are considered to be intimately related to the subject of study and crucial in this research. Why were these actors motivated to create and develop such a concept and how did it play out? How does it relate to contemporary design fields and Nordicity?

### **3.3.3 Data Collection: Semi-Directed Interviews**

As with most case studies, this research project combines data collected through multiple sources of information. These types of sources are common as part of qualitative research methods. Choosing appropriate data collection methods comes down to assessing the best way to answer the research question. This project’s data will consist of public documents, observations and semi-directed interviews. Furthermore, theory, based on what was elaborated in Chapters 1 and 2, will play an important role in this research, as it will help understand what concepts and ideas have shaped the development of the AD concept and help conceptualize the idea. The previously developed concepts will help frame the chosen perspective of this research project and also act as references to compare data collected on the case study. Theory and research are strongly related, as described by Fortin (2010):

*“Research and theory are intimately connected, since research seeks to develop and verify the theory. A theory can be used to describe concepts, to explain relationships between concepts, or to predict the effects of one variable on others. It determines the variables relevant to the explanation of a phenomenon and suggests the nature of the relationships between variables. Since any research question includes one or more concepts, research is implicitly or explicitly linked to the*

*theoretical or conceptual foundations that guide the research process. The research question also implies a certain degree of abstraction or theory, since it requires observations and explanations.”* (loose translation from French – Fortin, 2010, p.130)

In order to collect information and knowledge that was divided amongst experts, interactive data methods were chosen as the main approach. This data is collected through interactions between the researcher and the subject of study, and where the researcher does not know the answers beforehand (Van der Maren, 1995). Hence, to truly grasp the essence of the case study and the complexity of its bounded system, semi-directed interviews were identified as the main method to be used for data collection.

Semi-directed interviews seek to make sense of the participant’s experience in relation to a phenomenon. They seek to reveal and explicit the other’s universe, with the purpose of understanding it. This method also structures and organizes the researcher’s thoughts and deepens the reflection on certain thematics (Savoie-Zajc, 2009):

*“The semi-directed interview consists of a verbal interaction animated in a flexible way by the researcher. They will be guided by the unique content of the exchange in order to approach, in a way resembling that of conversation, the general themes that he wishes to explore with the participants in the research. Through this interaction, a rich understanding of the phenomenon under study will be constructed in conjunction with the interviewee.”* (loose translation - Savoie-Zajc, 2009, p. 340)

The interview questions were developed in a way to allow the interviewee to carry out rich descriptions of their experience: open-ended, short, neutral and relevant. The researcher must also pay considerable attention to avoid questions that convey her opinion or judgment. Hence, the participant is brought to explain his different thoughts, opinions and feelings towards the given subject (Savoie-Zajc, 2009). In this research, the same interview guide was used for each meeting. These questions were

used as guides for the discussions, but further questions were added spontaneously when needed, to get further details on topics brought to light by the subject<sup>29</sup>.

#### **3.3.4 Selecting the Participants: The Experts of Arctic Design**

The *Arctic Design* concept is still fairly young. There is not a vast amount of literature on the concept yet, as it was developed in 2012. Thus, the perspective of this research could have taken various stances. The first published book on the subject demonstrates exactly how broad the subject could be (Tahkokallio, 2012), and seemed to first do what its title communicates: *Open the discussion* on the subject. On the other hand, although the concept does not seem to confine itself towards an exclusive viewpoint or definition, many elements suggest that this concept was mostly developed through a *strategic design* perspective. This is not surprising as it has mainly been envisioned from the perspective of a strategic designer, Päivi Tahkokallio. While the researcher had hypotheses on the subject, the data collection was conducted in a way that avoids tinting the interviewees discourse with these presumptions; this can be further observed in the broad characteristics of the questions (see section 3.3.6). The idea that *Arctic Design* does not primarily focus on *things* (built environment) but mostly on *action, thought* and *vision*, was hinted at by a few elements, like most of its activities occurring at strategic and decision-making levels (Finland, 2013a; Finland, 2013b; Tahkokallio & Miettinen, 2013). Moreover, the AD experts suggested by Tahkokallio for the interviews also suggested the ‘strategic DNA’ of the concept, as all potential experts had some kind of decision-making position (see section 3.3.5).

Firstly, the researcher interviewed Päivi Tahkokallio, a strategic design specialist and vice-president of the Finnish Association of designers (ORNAMO); who is considered by many as the “mother” of the concept and therefore the main expert interviewed in this research project. She helped guide the identification of nine potential actors to interview, all involved with the concept’s development at some point. The participants were selected according to their functions, their experiences and their

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<sup>29</sup> See annex H ethical certificate from Université de Montréal (CPER-16-049-D).

relevance towards the object of study. As for the size of the research sample, the researcher interviewed seven additional experts during the research field trip, totaling to eight participants. These stakeholders, experts in their respective fields, helped give diverse perspectives on the subject and identify the large spectrum covered by the concept. Their participation was considered once they accepted to take part in the research project, following the reception of an invitation letter and consent form.

Furthermore, meeting with the AD experts has enriched this research. As it is an emergent concept and in constant evolution, interviewing the people behind its creation, or closely involved in its development, adds more depth to its understanding and will contribute to its expansion by allowing a clearer synthesis of the core ideas behind it. The intent behind these inquiries will be to recall the history of the concept and identify its main structuring elements (context of development, values, ways of doing, overarching concepts, incentives and obstacles). Indeed, this data will allow a detailed description of the case studied with details on the history of the case, the chronology of events and settings (Creswell, 2007). The descriptive details emerging from these various data sources are usually constructed with “relatively uncontested data” (Stake, 1995 *in* Creswell, 2007). This data is then used to understand the complexity of the case and its context. Finally, the discussion will resolve itself in final interpretative phase of the research. The meaning and understandings emerging from the case study analysis will be developed in Chapters 4 and 5. These interviews were conducted in the fall of 2016, in Rovaniemi, Finland.

### ***3.3.5 The Participants***

All participants agreed to have their names disclosed in this research paper. For reading purposes, they were each assigned a code, referencing either their professional background or position; the most relevant one was chosen to help the reader place statements in context. As this research involves interviewing experts, each individual interviewed has a specific stand regarding the AD concept. Hence, giving a brief overview of who these individuals are and why they were selected to

be part of this research is significantly important<sup>30</sup>.

- 1) Päivi Tahkokallio, Strategic design & design thinker, CEO at Tahkokallio +, vice-president of the Finnish association of designers (ORNAMO)

Code: Strategic designer

The strategic designer is perceived as the main leader and creator of the *Arctic Design* concept and was the editor of the first published book on the subject (see: *Arctic Design: Opening the Discussion*, Tahkokallio, 2012). Trained as a design historian, she worked as a design critic, teaching and developing collaborative projects between various European universities. Most of her work related to social design and inclusive design and has worked for many years in design within the public sector. The designer's strategic and holistic visions have shaped the concept as it is known today.

- 2) Timo Rautajoki, President and CEO of Lapland chamber of Commerce

Code: Chamber of commerce

The president of the chamber of Commerce has been working with Arctic Design Week (ADW) almost from its beginning and participated in getting *Arctic Design* included in the Finnish Arctic Strategy (Finland, 2013a). His educational background is in history and political history. Before holding this position, he worked for a few decades in the areas of Barents Euroarctic cooperation and the development of the European Arctic business and economic development.

- 3) Esko Lotvonen, Rovaniemi city mayor

Code: Mayor

The mayor has mostly been involved with the AD concept through the ADW. Initially trained as an economist, the city mayor has been working in the development of activities in Lapland for the last 35 years. He worked at the state office of Lapland and

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<sup>30</sup> Note: an interview with the *Rovaniemi Regional Development Agency* as well as the *Sámi Educational Institute* (Inari) was not possible at the time of the field trip.

the Regional Council of Lapland as a County governor and has accumulated a large amount of experience developing and implementing EU programs on both regional and international levels.

- 4) Timo Jokela, Dean of the Faculty of Art and Design, University of Lapland  
Code: Dean

The faculty Dean has been working in the fields of 'Arctic Arts and design' for a long time, describing it as being at the core of his personal practice. He has participated in the development of the *Arctic Design* concept through his position at the University of Lapland, and has collaborated in publishing, with the Regional Development Agency, the AD book (Tahkokallio, 2012). He is also at the head of *the Arctic Sustainable Art and Design* Network (ASAD).

- 5) Julius Oförsagd, Industrial designer, Arctic Design Week Coordinator  
Code: ADW coordinator

The ADW coordinator is trained as an industrial and service designer. He started coordinating the University of Lapland's part of the ADW, and eventually moved on to coordinating the business part, by working for the Rovaniemi Development Agency. Alongside the strategic designer and others, he was part of the first edition of the 'ADW' edition management team. He has also been developing his personal creative start-up company.

- 6) Kristian Keinänen, President of ORNAMO, Finnish design association  
Code: Design Association

The president of the Finnish design association (ORNAMO) is trained as an industrial designer and has many years of experience working as an entrepreneur in the industry, on small and large-scale levels. He is also the Head of Development at the Lahti Regional Development Agency (LADEC). Since the city of Lahti is often perceived as an 'Arctic city' (although it is more southern), its expertise has brought



it to collaborate with the Regional Development Agency in many ways and in the *Arctic Design* field.

7) Satu Miettinen, Service design professor, University of Lapland

Code: Service Designer

The service designer, and professor at the University of Lapland, is one of the experts on the subject of AD in the Faculty of Art and Design. She is head of the *Arctic Design Lab*, which is part of the *Design for Sustainable Innovation and Sustainability* (DESIS) international network. Her work revolves around art and practice-based research, mostly with remote and marginal communities. Furthermore, she participated in integrating the concept into the National Design Strategies, along with the strategic designer (Finland, 2013b).

8) Tarja Outila, City Architect (Rovaniemi)

Code: City Architect

The city architect has an important role to play in the city's development strategies, especially those relating to AD. Although she is a specialist on the topic of 'winter design', she started working with the studied concept (AD) in her position in the city. She works in an AD subcommittee of the *World Winter City Association for Mayors* (WWCAM).

### **3.3.6 Interview Questions**

The exploratory nature of this research meant that the interview questions were intentionally developed in a way to allow participants to shed light on the structuring elements of AD, without pushing them into a predefined direction. It was then easier for the researcher to see if all these professionals had the same understanding and views on the subject. Open-ended questions were used to allow interviewees to explain their own perception. Thus, during the analysis, it will be possible to see if understandings of the concept vary between participants. The following questions

were used as a basic guide through the conversation. The general questions for semi-directed interviews were planned as such:

- How would you describe your professional background? And how long have you had this position?
- What would be your views and/or definition of design in general?
- How would you characterize or define *Arctic Design*?
- Can you tell me more about how *Arctic design* is perceived from your institution's perspective? Can you tell me a bit about the role you had with the development of *Arctic Design* (or still have)?
- Has *Arctic Design* influenced the way you work? If so, how?
- Are there differences in the use of design (general) in Lapland compared to the rest of Finland? If yes, how so?
- What kind of elements need to be thought of when developing a project specific to an Arctic Region? Do you have an example?
- The government of Finland has included *Arctic Design* in its "*Finland strategies for Arctic Development*" since 2013, did you know about it? if so, what changes have you noticed since then (locally or nationally)?
- What have been the benefits (+) for the people of adopting *Arctic Design*? For the industries? For general knowledge? For the field of design? For outreach and influence? Can you give me specific examples?
- Would you change anything in the way *Arctic Design* has been used so far? (-)
- What would need to be improved?
- What would be the future of *Arctic Design* from your perspective?
- Would you like to add anything else?

### 3.3.7 Codification

Case study data analysis revolves around the exhaustive investigation of data through the description of the emerging themes, and making sense out of it; these analysis' are then developed in a detailed report (Creswell, 2007; 2003), which will appear in Chapter 4. Before analyzing the bulk of the raw data, it must first be prepared and organized in order to “move deeper and deeper into understanding the data, representing the data, and making an interpretation of the larger meaning of the data” (Creswell, 2003). Prior to examination, the researcher transcribed all taped interviews. The interviews were then integrated into a software (Atlas.ti) to facilitate codification and analysis. To get a *general sense* of the information collected, the researcher read all verbatim reports and proceeded to make a first list of categories and themes emerging from the data and labelling them with a *code* based on the type of information gathered (Creswell, 2003). Selected content was divided by distinctive ideas or themes addressed by the interviewee; the names are usually chosen from words used by participants (Creswell, 2003). This is the “process of organizing the material into ‘chunks’ before bringing meaning to those ‘chunks’ (Rossman & Rallis, 1998, p. 171 *in* Creswell, 2003). These were combined with the topics listed beforehand by the researcher and clustered into similar topics (Creswell, 2003; Tesch, 1990). After testing and adjusting this initial grid with the codification of one full interview, a preliminary grid was developed and used on the totality of the data<sup>31</sup>. After a few iterative phases of analysis, the most relevant data was organized as illustrated on the following page, where the final structure of underlying themes (main categories) and sub-themes (subcategories and specific categories) are depicted. These themes reflect the various views of the interviewees and will be reinforced with various quotations in the next chapter.

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<sup>31</sup> To see preliminary grid and hierarchy of themes, see annexes E & F.

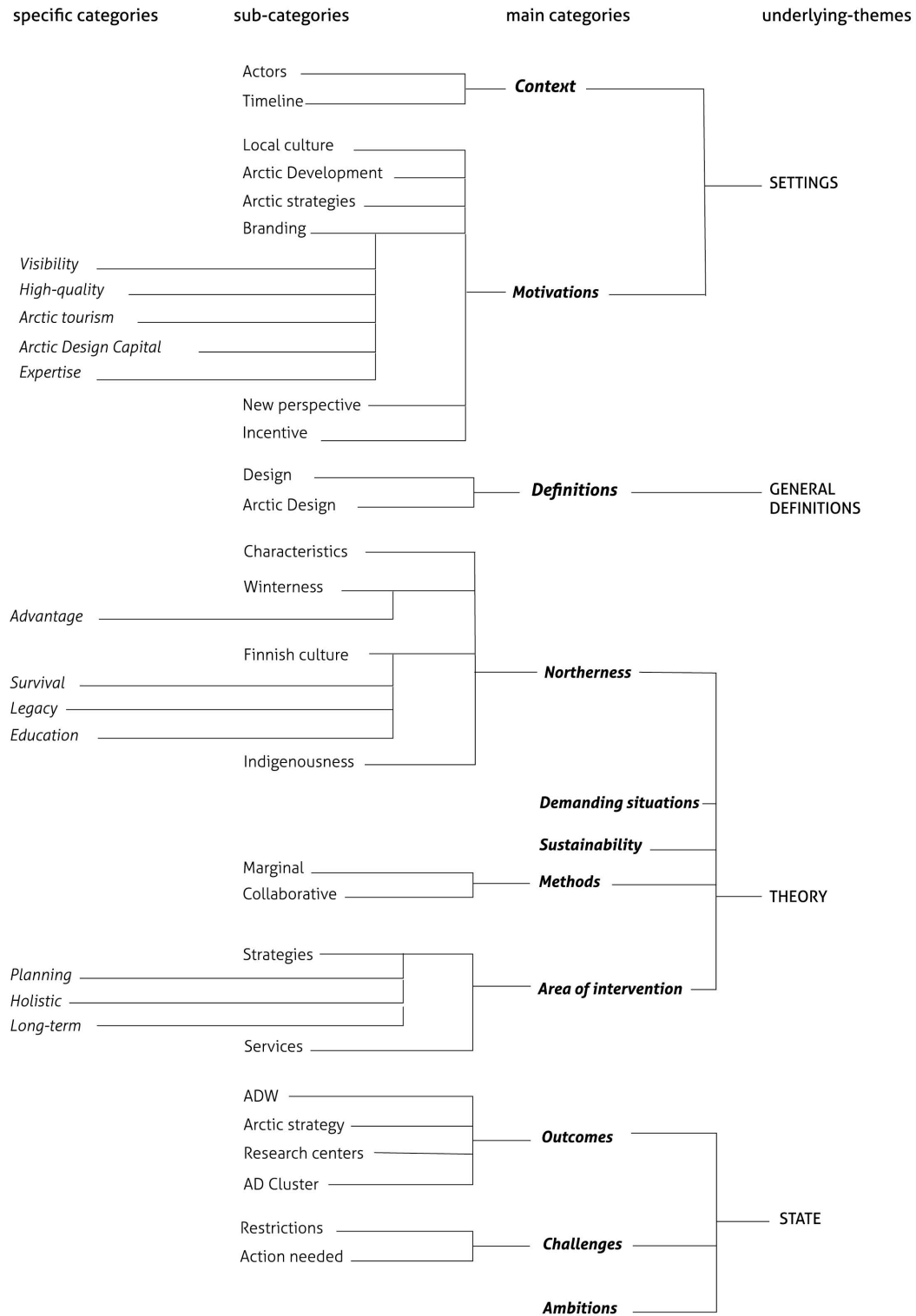


Figure 7: Hierarchy of AD themes. (Figure by author, 2018)

## 4.0 ANALYZING THE *ARCTIC DESIGN* (AD) CONCEPT

In order to extend our understanding of the emerging concept *Arctic Design* (AD) and respond to one of the main objectives of this research, the following section will seek to describe, in an organized manner, the main themes emerging from the interviews, presenting the concept's structuring elements, motivations behind its development and difficulties encountered during the process. Indeed, the participants' discourses will shed light on the circumstantial elements that led to the creation of this concept in Finland, through their personal and professional experiences, and help shape a holistic view of AD.

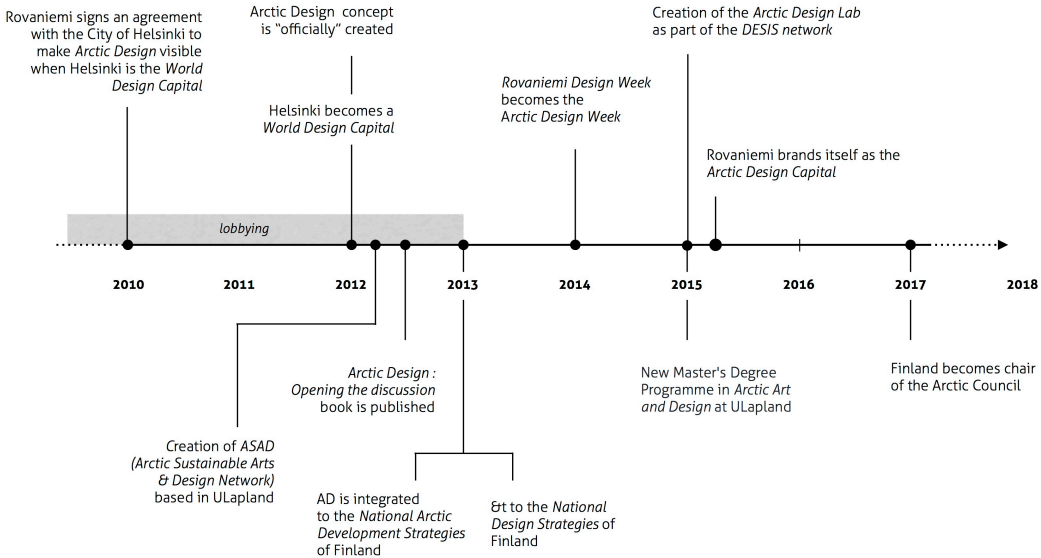
### 4.1 Actors

The main actors involved in the concept's development were already identified and interviewed as part of the research field trip. Nonetheless, these interviews gave insights on who was involved and why, their motivations, visions, personal and professional paths, and how they collectively participated in shaping this concept. The strategic designer, who also helped identify the important people to interview, seemed to be the strongest link between all the different actors and organizations. Sometimes referred to as the 'mother of *Arctic Design*', she definitely has had an important role to play in its development and in seizing opportunities. This observation was also confirmed by other participants. Amongst other things, her experience in working with the public sector, developing networks and programs within the European union, her move from Southern Finland to Lapland in 2008, and her work in strategic design and design thinking consultancy, all had a role to play in shaping the vision behind the concept. Furthermore, the University of Lapland and the city of Rovaniemi are seen as main players, and have been supporting the development of this concept since the beginning, driven by the interests of their own institutions. The *Arctic Design Week* is also an important actor, by allowing students, professionals, decisions makers, businesses and citizens to come together to reflect, learn, connect and act on the subject. Finally, the interviewees mentioned

collaborations with the chamber of commerce of Lapland, the Lapland regional development agency, Finnish association of design (ORNAMO), various Nordic networks, Finnish Ministries (education, trade), and other important Finnish design cities (like Lahti or Helsinki).

### 4.2 Timeline

In order to illustrate the evolution of the AD concept, a general timeline was constructed of the significant events that led to the creation or evolution of the AD concept (see figure 8). It was composed with information gathered during the interviews or public documents and articles<sup>32</sup>. Several specific events contributed to the creation of AD in 2012. During the interviews, the experts gave insights into why the concept was developed at that specific moment, and in that manner.



**Figure 8:** General timeline of the AD concept. (Figure by author, 2018). See annex G for a larger image.

<sup>32</sup> information confirmed elsewhere: ASAD network creation (UARctic, 2016); Helsinki becomes a WDC (wdo.org); Arctic Design Week name change (University of Lapland, 2013).

**2010** — The first time the strategic designer used the term ‘Arctic Design’ was in 2010, while writing funding for a research program with the Regional Development Agency. Knowing Helsinki was placing a bid for *Helsinki World Design Capital 2012*<sup>33</sup>, she thought this was an opportunity to add a northern angle to this project, and managed to have the city of Rovaniemi sign an agreement with the city of Helsinki, to give visibility to AD if they won the bid, which they did.

**2012** — The University of Lapland creates a new international Network, *Arctic Sustainable Arts and Design*<sup>34</sup> network (ASAD), which focuses on developing academic collaborations between creative universities across the circumpolar regions and also strengthening this new angle that will be used to define the faculty’s position. These changes were also triggered by the city of Rovaniemi’s intentions of changing the University’s profile. These events, along with the publication of the book *Arctic Design: Opening the discussion* (Tahkokallio, 2012), make 2012 the year where AD really took off.

**2013** — After more lobbying, the concept is integrated into the National Plan for Arctic Development (Finland, 2013a) and in the National design strategies (Finland, 2013b). Both the service designer and strategic designer were part of writing these policies, with the ministry of trade and the ministry of education. Making Rovaniemi the leader in this matter was logical and strategic, as locating the AD hub within the Arctic region was seen as crucial, even though not all actors involved were located in the Arctic.

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<sup>33</sup> Every two years, the World Design Organization (WDO) nominates cities as *World Design Capital*, to recognize cities that use design to drive economic, social, cultural and environmental development. The objective behind the title is to promote and support such initiatives (see: [wdo.org](http://wdo.org)).

<sup>34</sup> ASAD is a Thematic Network of the University of the Arctic (UArctic), an international academic network which is also based in Rovaniemi (see: [asadnetwork.org](http://asadnetwork.org)).

**2014** — The annual *Rovaniemi Design Week* becomes the *Arctic Design Week*.

**2015** — The University of Lapland launches a new Master's program in Arctic Art and Design, as well as a new research laboratory Arctic Design Lab<sup>35</sup>, which is the northernmost design laboratory of the Design for Social Innovation and Sustainability (DESIS)<sup>36</sup> network. The same year, the city of Rovaniemi brands itself as the *Arctic Design Capital*.

**2017** — Finland becomes chair of the *Arctic Council*; they will keep this position until 2019.

### **4.3 General definitions**

#### **4.3.1 Design**

Before getting into the topic of *Arctic Design*, participants were asked to express their personal and general view on the general practice of 'design'. Defining design as a *tool* to improve environments and a way to contribute to improving quality of life for all was recurrent amongst design professionals (i.e. Finnish design association president, strategic designer and ADW coordinator), but also with the city mayor:

*"[...] design helps to make a more livable world I would say; if you look at the 'big picture'. [...] Be it physical or digital surroundings. Design helps the users understand and use their surroundings [...]"* (design association)

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<sup>35</sup> The Arctic Design Lab focuses on pluralistic and multicultural art and design with northern regions, with the objective of developing innovative solutions that meet the needs of northern services and reflect the specificities of the Arctic environment and communities (see: [desisnetwork.org/courses/finland-rovaniemi-Arctic-design-lab/](https://desisnetwork.org/courses/finland-rovaniemi-Arctic-design-lab/)).

<sup>36</sup> The DESIS network is a no-profit and cultural association that seeks to promote design for social innovation amongst higher education institutions. They see social innovation as means to achieve sustainable change, and design as a way to facilitate these processes (see: [desisnetwork.org](https://desisnetwork.org)).



*"I see design as a tool to create welfare [...] a tool to ensure, in any environment (whether it's a local environment or whether it's a country or whether it's global) [...] equal opportunities. [Design] is very much a tool to create or to the support developing world, in which the values I have are shared".* (strategic designer)

*"[...] design is the tool that makes things feel better, and how things work."*

(ADW coordinator)

*"Well, actually, design is a very strong issue. A powerful working tool."*

(mayor)

Similarly, three other participants (city architect, service designer and ADW coordinator) describe design as a means to solve problems by creating new and more innovative solutions; supporting that designers and creative people can add value to these problem-solving processes by facilitating solution development through processes that focus on creativity, user experience, and understanding:

*"[...] creative people can add value to things [...] you can actually do many things with your capability to think in a different way. [...] I want to create something new, I want to solve problems. That's actually the basic idea. [...] it's about solving problems."* (city architect)

*"Design is about empathy, understanding, and using this proactively to create better solutions."* (service designer)

*"[...] design for me is user experience or customer experience; It's the feeling [...]."* (ADW coordinator)

#### **4.3.2 Arctic Design (AD)**

When asked to describe their vision of the AD concept, in contrast to the field of design in general, two different types of definitions and views emerged from the experts' conversation. The first type of discourse conveys that 'Arctic' design is not a new concept; it is, rather, intrinsic to Finnish ways of

doing, ways of being and traditions and will be developed in section 4.4 on *northernness*. The second type relates to the new concept developed in the recent years and will constitute the rest of this chapter (sections 4.5 to 4.12).

## 4.4 Northernness

### 4.4.1 Northern and Arctic Characteristics

Amongst these interviewed experts, the general definition of AD still has distinctions in its interpretation and demonstrates that the concept is still well alive and taking shape. At its core, it seems the concept is not about specific geographical locations (i.e. restricted to the Arctic Circle), rather, it is more about similar problems and circumstances that are shared within the northern and Arctic areas. The design association president mentions that many Finnish cities see themselves as 'Arctic-like', because they are concerned with many common characteristics (Nordicity):

*"Many cities in Finland see themselves as kind-of Arctic region cities, even though they are not above the Arctic Circle."* (design association)

Similarly, others add that the AD concept is indeed not restricted to the Arctic Circle, it concerns anyone living in similar climatic conditions, including mountainous areas and low population density areas. There is acknowledgment of differences within global northern areas, like the seasonal darkness when in higher latitudes, yet the binding element between all these locations is snow and ice:

*"[northern and Arctic regions] are very often connected by: long distances and sparsely populated areas, cool climate, of course, aging populations, indigenous cultures and multiculturalism [...]"* (dean)

*"We are in the Arctic area, we have the snow, we have the cold, we have the darkness, but in the summer time we have a lot of light. So, it's a year-round basis that we have to take into account when we design. Whether it be in the city, industrial design products or services."* (mayor)

*"[...] to be used into different parts of the Arctic, also in those areas where they have snow and cold, like mountainous areas. It doesn't have to be Arctic in that sense, of course, the lighting isn't the same year-round, there are differences also, but snow, ice, and cold combines us." (mayor)*

#### **4.4.2 Winterness: Winter as An Advantage**

When asked to elaborate on examples of *Arctic design*, or outcomes, many participants referred to the way Finnish cities use winter to their advantage in planning projects. Indeed, seeing winter as an opportunity rather than an obstacle was persistent in the experts' discourses:

*"[...] any city in Finland would be an example of a well-run winter city, because we run winter very well." (city architect)*

*"[...] the winter is not a problem for us, it is an asset." (mayor)*

When asked about examples of how Finnish cities used winter well, a few examples were mentioned during the interviews, most of which relate to mobility, which can be largely affected by snow, ice and the cold, if systems aren't designed for it.

For example<sup>37</sup>, it was observed that the city of Rovaniemi has a system of paths all around the city that are exclusive to cyclists and pedestrians. During the winter, instead of removing the snow from the paths and adding salt, they flatten the snow and add dips and sand to allow better traction on some trails (see image 3). Additionally, the snow acts as a cushion if a commuter was to fall, making the surface softer than the cement that covers these paths during the warmer months. This system demonstrates an initiative that promotes active-transport and good use of the winter climate, whether it be for cycling, carrying your heavy grocery load on a

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<sup>37</sup> This information was gathered through the interviews, but also through observations.



**Image 3:** Cycling and pedestrian paths in Rovaniemi. They use flattened snow in which they add dips and sand to make safer and functional paths for citizens. (Picture by author, 2014).

sledge, or simply walking. The city focuses on making these paths as practical as possible during the whole year. This system also works well in Rovaniemi, because the temperature rarely goes above freezing degrees during the winter. Additionally, the mayor mentioned that the reason behind not using salt, other than on big roads, is mainly because of the environmental impacts of the practice.





**Image 4:** An elderly woman using her kick sled in Rovaniemi. (Picture by author, 2016).

Furthermore, other examples relating to the importance of efficient transport systems during winter were mentioned. For example, making sure the airport can function smoothly during the winter is essential, and requires a lot of designing:

*“When these conditions (winter, ice conditions) happen in central Europe, what happens is that the airports close down. [...] Lapland often has -35 to 40 degrees in the winter time. Never has an airport been closed because of that. Because we know how to run the airport. [...] generally speaking, yes, they are design issues as well.”* (strategic designer)

The kicksled was referred to by a few participants as a good example of northern design. Going back to traditions that are more than 100 years old in Finland, this active means of transport is still very popular in Rovaniemi. The stability of its structure, makes it possible for elderly people to use it as a way to get around the city, as well as of a way of staying physically active (see image 4). The strategic designer thinks that this is an example of how smart design thinking can allow older citizens

to be more independent (for example, independently going shopping). Allowing this, it comes down to a combination of small decisions, like the choice not to sand the pavement (which is done in most cities in Southern Finland). To allow kick sleds to be used, the pavement must have bare snow (without sand), and this is possible because of the cold weather in Lapland<sup>38</sup>:

*“When you understand the conditions, when you want to create a good life for citizens, including old people, these are the decisions you make and they are design decisions in a way [...] this would be of a very long existing solution in Finland, but it is still visible in Lapland because of the winter temperature.”* (strategic designer)

Finally, to facilitate transport during the winter and make it safe, the city architect mentioned the use of spikes on car tires, as well as mandatory winter driving classes for every Finn in order to get a license.

Other examples mentioned by participants, such as the Dean and the ADW coordinator, were about using snow and ice as a material, which can be used for events, or tourist attractions (like Ice Hotels), or used to shine light on to or through structures (see image 5). Additionally, the mayor explained how they use the frozen river as a way to divert traffic during the winter, which is the high-tourist season in Rovaniemi.

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<sup>38</sup> For example, this would not work ‘as is’ in Southern Quebec, where weather is cold during the winter, but there are more fluctuations, nor would it in the southern parts of Finland. Ideas must be developed with the local context in mind.



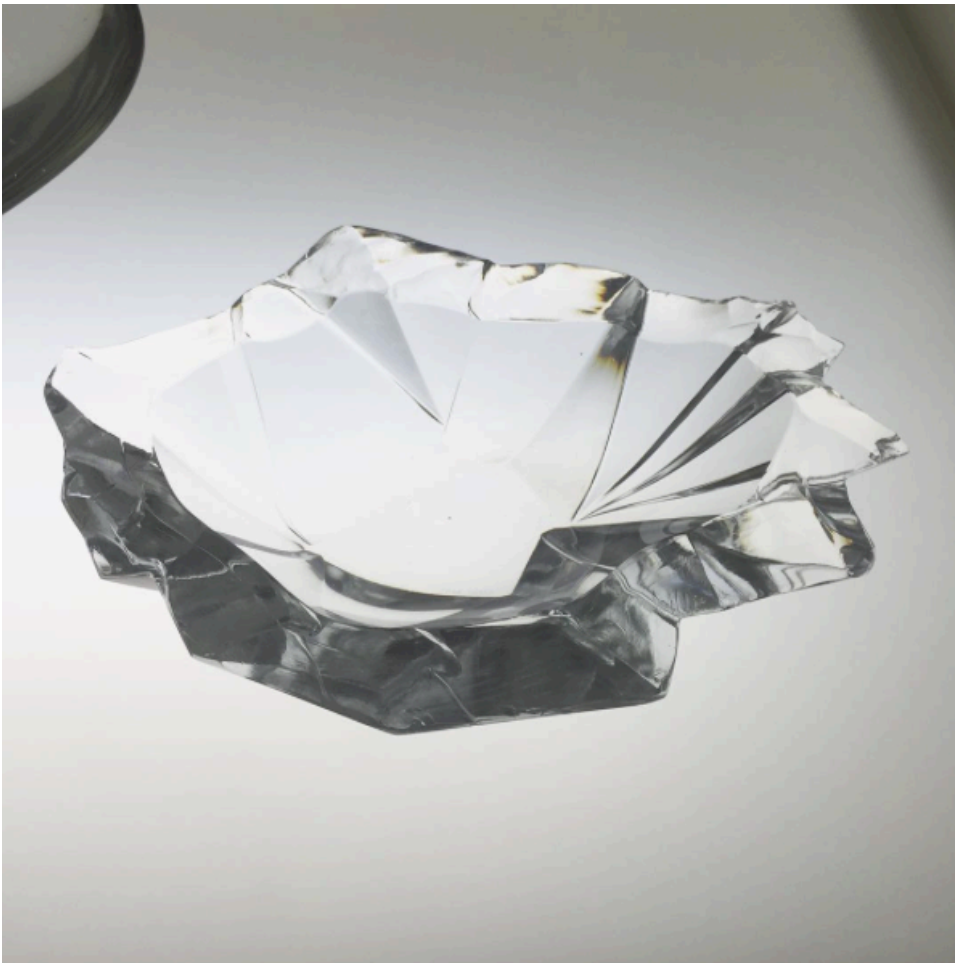
**Image 5:** Snow and Ice as a Material. Arctic Design Week (2014) outdoor fashion show, in Rovaniemi. Ice structures are used to make large lighting structures, and snow is used to build the whole runway, and as a wall to project images. (Picture by author, 2014).

#### ***4.4.3 Deep Roots in Finnish Culture***

To some participants, the idea of ‘Arctic’ design is not new at all, in fact, it has always been part of Finnish culture. The oldest Northern cultures, communities that have been living and surviving in the cold regions of the Northern Hemisphere with very few resources and challenging environments are intrinsically tied to their territories. Finnish culture is referred to as being one of them. This idea came up frequently in the interviews, as participants made references to old Finnish traditions. Although the participants talk about these aspects as being “Arctic design”, they seem to relate more to the general subject of northern design and Nordicity, and more specifically

*subjective* nordicity. Indeed, AD was on many occasions referred to as being part of their own identity, a way of being. This was particular to the participants who grew up in Northern Finland. For the chamber of commerce's president, *Arctic Design* is part of his soul:

*"[...] maybe it's not the most orthodox definition, but it's in all that we are doing here... I am Arctic design! ...my soul, it's coming from here."*  
(chamber of commerce)



**Image 6:** "Jaansaro" ice block bowl by Tapio Wirkkala for Iittala, Finland, 1955. Picture: by author, Helsinki Design Museum, 2016).

Furthermore, this relationship to northern environments can also be observed through the work of some famous Finnish designers, like most of the work of industrial designer Tapio Wirkkala, who is renowned for his glasswork and legacy to Finnish design (see image 6).



#### 4.4.3.1 Means to Survive

Many interviewees have put forward that Finnish culture has deep connections with the values put forward by the AD concept, such as: innovative, efficient and sustainable solutions, that function with local Northern societies and reflect their ways of life. For example, the service design professor explains how many Finnish historical practices were developed with very few resources; people developed ways to make ends meet and save energy:

*“In Finnish culture, we have many of these traditional sayings that encourage people to save resources. We have a saying that, roughly translated, means something like ‘close the door’, because you have to work so much for getting energy and warmth.”* (service designer)

Similarly, the city architect adds that Finnish culture is about enjoying winter although the climate can be quite hostile and even life-threatening. Due to harsh winter climates, food is rare, there is a greater energy demand, and most of the supplies need to be collected during the summer or autumn. As another example, she adds that in old Sámi<sup>39</sup> traditions, the elderly would choose to walk up the hill of a mountain to die, this way leaving more food and resources for the children to survive:

*“It's actually a very profound way the people lived in the old days. Society is more important than the person. [...]”* (city architect)

Furthermore, the architect adds that before the 1950s, Finland was a very poor, agricultural country, and people needed to work hard for food and money. Industries and wealth was built quite rapidly after the Second World War. To her, Finnish people have always had the means to survive in these harsh climates, it has simply continued into modern society. The design association furthers this idea by adding that design is embedded in Finnish DNA:

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<sup>39</sup> The sámi are the indigenous peoples living in Finnish Lapland, but also in Sweden, Norway and Russia.

*“This is the basis for Arctic design. We have always had means for surviving, we have had ideas on what to do, since we live in a very harsh climate. Since winter lasts six months, you have to cope, you have to be very innovative.” (city architect)*

*“Design has been in the DNA of Finnish society all the way from the 17th century. It was common for people to design their own surroundings and to build it. Design has been following as a way of living, all the way to our current day.” (design association)*



**Image 7:** Close-up of a hand-crafted weight used in traditional Finnish fishing nets. The weight is made with numerous hand-rolled pieces of birch bark, carefully attached together. (Picture courtesy of Tarja Outila).

#### 4.4.3.2 Design Legacy

Since the 1950s, Finland has managed to get international recognition for their high-quality design. This legacy is mentioned many times during the interviews. The mayor references the quality of architecture, furniture, and interior design of his office (and building), that was designed by internationally known Finnish architect Alvar Aalto. In his perspective, it is a constant reminder that Finns need to work to maintain the same high-quality standards of the past. The city architect has a comparable statement:

*"[...] we are also constructing new buildings and residences and we pay a lot of attention to the architectural quality. This is one of the reasons why design is important to us. Because we are and we want to be more of a design centre."* (mayor)

*"And I want to tell everybody that architecture in Rovaniemi is actually very 'high-quality' architecture, and we don't necessarily remember that we have a very rich history."* (city architect)

#### 4.4.3.3 Design Education

The methodology put forward by the *Arctic Design* advocates have been consistent about saying that its base is rooted in the way Finnish designers are trained. They are very similar ideologically and methodologically. Indeed, the city architect goes on to add that she has been doing 'Arctic Design' for ages, as it is part of how architects are trained to work; it is what you are required to do when developing a project for a client: understand the needs, problems, context, and budget, and develop solutions that meet these principles:

*"I think I've been doing this for ages. If designers have found it now, okay, but for me it's no big deal. I have done it because we've been educated to do so."* (city architect)

In the same way, the design association president communicates that design is in the same boat; 'Arctic Design' isn't a totally 'new' concept as it is fundamentally connected to how designers are educated in Finland:

*"[...] the Finnish field of design is quite small, and we have a certain way of educating our designers in Finland. I would say that we are from the same tree. We use the same tools."* (design association).

#### **4.4.4 Indigeneity**

The broad topic of Northern and Arctic indigenous cultures, ways of life, and contemporary issues were discussed during most interviews. The subject was intentionally not part of the questions brought forward by the researcher, as an attempt to let the experts identify the important elements relating to the AD concept. The subject was addressed by five participants; however, it was not a principal theme amongst interviewees.

The idea that indigenous peoples have valuable knowledge, and that it should be utilized in Arctic businesses was mentioned a few times. It seems that AD is still at the phase of developing a way to approach indigenous knowledge, and instigate collaborations between indigenous and non-indigenous businesses. The strategic designer, ADW coordinator and president of the chamber of commerce have similar statements:

*"One of the working groups is stewardship, which will tackle issues like transferring indigenous knowledge into businesses in the Arctic, businesses of indigenous themselves, but also how other businesses could use indigenous knowledge in running their business."* (strategic designer)

*"[...] they really have one kind of Arctic knowhow. They have the culture, they know how their mothers and fathers have survived in the Arctic. And think that we should use that know how more, also in design."* (ADW coordinator)

*"[...] also, what is very important: the Sámi people. How they fit in this. We must respect them and their traditions. [...] there should be more cooperation with the surrounding society. I think there is such a problem with international business."* (chamber of commerce)

Furthermore, recognizing the importance of developing the indigenous angle when talking about AD was clear when discussing with the Dean, who thinks having a cultural sensitivity is essential when doing Arts and Design, especially in the North. He also mentions how the University has been collaborating with indigenous institutions in Scandinavia and Russia, but not yet in Canada:

*"[...] it is also important to bring this cultural sensitivity and these indigenous questions in art and design. [...] Arctic design and arts has been a concept that frames to discuss about that. [...] we have had quite a lot of collaboration with the Sámi University College handy craft design in Norway and an Art and Culture institution [...] in Russia. Not so much with Canada, but I see that is quite important."* (dean)

#### **4.5 Designing For 'Demanding Situations'**

Experts explain on multiple occasions that *Arctic Design* is about a process and methods that allow the development of solutions that are well adapted to local specificities, in a broader sense. This way of thinking does not apply uniquely to the Arctic and northern regions. Described by the design association president as a being a 'field' itself, AD has evolved since its creation, and is moving towards this broader approach. Several interviewees have stated on multiple occasions that AD was not bound to northern areas per se, but areas concerned by 'demanding surroundings'; challenging areas that could benefit from taking-on the same approach used to solve problems in demanding Arctic areas:

*"The Arctic Design field, in the beginning, of course, concentrated on solutions for Arctic surroundings, cold climates with special needs for example, from a perspective of durability, usability, material technology. The thinking has evolved since the beginning (2010-2012), into the process which enables designers to give solutions to demanding surroundings, not only in the Arctic, but in, for example, hot climates, or*

*otherwise demanding climates. The process is the same.” (design association)*

The idea that *Arctic Design* is mostly about designing for ‘extreme’, ‘marginal’ (other terms used by some interviewees) and ‘demanding’ situations has been most prevalent in the discourse of professionals who work in the design fields (service designer, design association, strategic designer):

*“[...] there’s another level where Arctic is the reference to extreme conditions. And you could apply Arctic Design methods and approach to any conditions, any environment where conditions are harsh or extreme in whatever way.” (strategic designer)*

The service designer, who has a lot of experience in projects with marginal communities mentions that there are indeed very similar circumstances:

*“[...] design for complexities, designing in the margin, sometimes in the ‘extreme remote’, creating strategies on how to survive these extreme situations.” (service designer)*

To explain this facet, similar examples were given in three interviews: designing in warm and hot climates, or desert areas. Perhaps these are ‘go-to’ examples because of their intrinsically opposite nature to cold, winter, and Arctic climates, demonstrating the spectrum of potentially concerned contexts. For example, designing in the Arab Emirates, or in Namibia would require the same basic processes. As in most northern regions, it requires working with specificities such as: remote communities, long distances, low resources access, etc.:

*“You could apply Arctic design to, let’s say, life in South Africa, with the extreme conditions, which are totally different from the North of Europe, in the Arctic, but they are extreme: the political situation, the poverty vs well-being issues.” (strategic designer)*

Designing in these demanding situations requires a profound understanding of local climates, environments, cultures, social, and political contexts, in order to develop solutions that will last over time. Such complex contexts are seen as potential areas for AD methods to be used:

*“The basic thing is, of course, making the Arctic cities and surroundings more livable, but also from the point of view of providing solutions for demanding surroundings. Maybe even tackling global large-scale problems, [...] like war areas and so on. [...] There is a huge potential, not only in the Arctic surroundings.”* (design association)

*“[...] I’ve been also working with women communities or youth communities, which are not indigenous but are marginal, like unemployed or encountering some difficulties.”* (service designer)

By referring to the specific location of the Arctic, the AD concept is inevitably placing itself in the margin and this seems to be one of its distinctive characteristics. The contrasting setting of “marginal design” was mentioned by two participants (dean / service designer) as the more homogenous, large population base or pool of users, are often located in metropolitan areas:

*“The Arctic is a geographical position, and because of [that], it kind-of locates you in the margin. [...] it’s a long distance from the mainstream. [...] Because the trends are going very strongly in opposite directions; [they] are forcing people into the centres and into big cities. Whereas we are in here in the margin.”* (service designer)

*“[...] if you compare [working in the Arctic] to working on a project in Paris, New York or in different centres, you might not need to be involved with this. Because of the common large audience [...]”* (dean)

## 4.6 Sustainability

The theme of sustainability is recurrent in the discourse of most participants. The AD concept seems to be rooted in the understanding that projects need to be developed to contribute to the well-being of society, environmental impacts and contribute to economic prosperity and general sustainability in the Arctic region:

*"[...] and from the beginning it was very much related to the sustainable development of the Arctic, already. And that's how it all got started."*  
(strategic designer)

*"[...] the Arctic is so valuable for everybody here, we have to know how to design it. [...] it's something we mustn't over-design [...]"* (city architect).

Furthermore, comments by both the service designer and design association president suggest that *Arctic Design* should result by nature in sustainable outcomes:

*"[...] If you are discussing the Arctic, you always encounter the idea of sustainability. I think that the Arctic condition [...] is automatically very sustainable."* (service designer).

*"[...] It's kind-of a high-quality design process, compared to short term products and service development. It leads to better outcomes, both in ecological, economical and sociological perspectives. And in the end, leads to better financial outcomes for the clients, the corporations, or organizations, in the municipal sector utilizing it."* (design association)

## 4.7 Methods

How does one "do" *Arctic Design*? Although questions were not pointed in this direction, many interviewees evoked various elements that related to how AD is played out in the 'real world'. These details strengthened the idea that AD is mostly



about a process, a way of seeing, understanding and doing, rather than tangible outcomes representing design “from the Arctic”. In short, as described by the Finnish design association president, the methods used in AD are discussed as being deeply rooted in the way designers are trained in Finland, and in the Finnish design culture. When asked to elaborate on these ways of doing, the designer mentioned how through user-centred and empathic methodologies, more innovative solutions can be achieved:

*“As in any kind of design, we pretty much use the same design-thinking-based methods. [...] The methods in design thinking as a whole are, of course, based on user involvement, the involvement of the value chain representatives of the design process, and hacks (expert users taking advantage in modifying their surroundings to better match their needs).”*  
(design association)

The idea that AD is more about a way of doing than tangible objects is also brought forward by the city mayor, who talks about *Arctic Design* as a ‘tool’ that could be used on an international level.

*“[...] I hope it will be a good and acceptable tool, globally.”* (mayor)

Furthermore, the designer adds that companies have naturally had to take into account the ‘Arctic’ perspective when working with their clients and apply it to their processes before the term ‘Arctic design’ existed; for the simple reason that the Finnish climate and context required this attention. He follows by adding that in his point of view, *Arctic Design* is a way to consolidate Finnish design expertise, regarding both northern characteristics and design processes:

*“The thing we are doing at the moment is kind-of building the discourse and combining the expertise that has been existing into usable processes, products and packaging, so that it’s more comprehensive and easier to use and easier to talk about. It’s mainly about existing capability that is utilized in a more effective way.”* (design association)

#### **4.7.1 Methods for the Marginal**

With her years of experience of working with marginal communities, the service design professor gives insights on why these situations need methods that allow the development of solutions that are suited to local needs. For example, there are ways to develop solutions for multi million companies, but the same approaches will not necessarily work in, let's say, small, remote communities:

*"[...] in a village where you have 9 people, you have to take their individual personalities more and more into consideration. You can't go past that, you can't be indifferent. You have to create empathy in that setting [...] you have to customize more, and make more personal outlines. [...] the trend is that you try to make a modular system [...] that is good for all the possible contexts. That's how you save money, but that doesn't always work."* (service designer)

#### **4.7.2 Collaborative Approaches**

Furthermore, a recurring element amongst interviewees was the mention of collaborative, transdisciplinary and multiparty processes; whether it was explicitly stated or not. This element was mostly present when giving examples of current initiatives and outcomes resulting of various *Arctic Design* activities.

For the Finnish design association president, collaboration is at the core of the design practice today. Discussing these processes, he adds that the information gathered during these collaborative sessions, which occur at the beginning of a process, allow designers to combine the knowledge they have collected into a brief. This information is used to make sure proposed solutions serve the needs of the concerned company or organization in the best way possible:

*"If we are designing a product for demanding use, we try to combine all the people and organizations or companies that are somehow related to*

*the product or service, or doing something that is related to the product or service.” (design association)*

Moreover, he adds that collaboration is part of Finland’s design strategies but also as a country, to develop more international networks. *Arctic Design* is seen as a potential common area where international Arctic communities, which have many similarities, could come together and exchange on these matters:

*“Finland has been very open to collaboration, all the way from the beginning if you look at the design field. And it’s a clear part of our strategy to become more globally networked or so. And I see, for example, the Arctic regions, in the western world, as a very good region for cooperation, we can relate to each other more easily, than for example, to the Chinese business field.” (design association)*

Similarly, the city architect explains how collaboration is part of her working methods when working on large scale projects that involve many parties. Designers are seen as an essential part of these working groups, and as described in the following citation, allow larger, multi-party projects to use “Designerly” ways of working, such as iterative processes. Her comments also imply that these new ways of doing can take time to implement to larger groups:

*“What has been the most interesting thing there is that it took a year for the people that were involved in the project [...] to realize how to design together. We are designing, we are making plans, we make this proposal, we study it and then we make another proposal. So, it’s a development that is an ongoing process.” (city architect)*

#### **4.8 Areas of intervention (Design Orders)**

The idea that *Arctic Design* had much more to do with contemporary and ‘intangible’ design fields (like strategic design) than more ‘traditional’ design approaches (like designing products) was evident throughout most of the interviewees’ discourse.

During the questioning, the participants were intentionally asked broad, open-ended questions to avoid tinting their answers with presumptions. This was mostly explicit in the strategic designer's and the design association's discourse.

When asked about the fields of design which are the most concerned by AD, the strategic designer states that AD does not restrain itself to a specific design field. However, she mentions the noticeable shift happening in design, where designers are no longer focusing strictly on product development, but service design and designing at the strategic level; a shift that is significantly evident in Finland:

*"It covers all fields where design can be applied. And of course, now, it's much more than design of products. [...] today's world is very different. It is much more about services in the global context [...] And then, of course, strategic design is another level which is now more and more in the focus."* (strategic designer)

*"[...] at the basic level, it is strategic design we are doing. We are not only at the "styling end" of product design, usually when we are talking about Arctic design."* (design association)

Similarly, the city architect states that design it is not about designing 'artifacts' anymore; conveying that we are in another era today:

*"[...] we don't design any artifacts, I think that's old-fashioned design."* (city architect)

#### **4.8.1 Working at the Strategic Level**

The idea that AD places itself on the strategic, organizational and visionary end of the design orders (see figure 1, Chapter 1) is clear; it emerges from the interview in various ways. The strategic designer's vision, who is also considered as the main individual behind the AD concept, gives detail on how this concept places itself within the design fields, and in this case, in the systemic, organizational 'order'. In her

perspective, strategic design does not differ much from designing products, and uses the same basic values as design in Finland, like Scandinavian design:

*"[...] the Scandinavian design idea [...] was based very much on product design [...] in the context of creating well-being for people." (strategic designer)*

She explains that the main differences are in the area of intervention. In strategic design, design methods are brought to different levels and layers of activities, where strategies are created. Even though AD can be used in other levels (like product or service development), there is another "level". The expert believes this is the area where the biggest impact can be achieved:

*"There is nothing wrong about implementing Arctic design into product development or service development, but there is this third level. And I believe this impact would be the biggest in the strategic level. But all levels are equally important." (strategic designer)*

#### *4.8.1.1 Logistics and Planning*

Even though the city mayor and president of the chamber of commerce have different professional backgrounds than the other interviewees, their discourse also reflected the idea that design could be used in a more systemic level. This idea is communicated through their perception that AD can be used for planning, logistics, and general societal development:

*"One part of Arctic Design should be how we reconstruct or develop Arctic societies, Arctic cities, and Arctic villages." (chamber of commerce)*

*"And of course, in our city planning we will take more and more notice of Arctic Design. How we plan our traffic, how we manage our logistics, and roads, how we design the houses." (mayor)*

Furthermore, the Dean of the Faculty of Art and Design mentioned various projects currently being developed at the University, which seem to be closely tied to his thoughts on *Arctic Design*. Amongst other things, he mentioned many times the need for collaborative platforms, where different Lappish actors can work together and develop their region in a sustainable manner, like the tourism industry. The expert gives the example of the northern light tourism industry in Lapland, and the conflicting situations that might occur if two businesses negatively impact one another (e.g. lights on a new skiing slope reducing the visibility of northern lights in the sky). These types of settings need to be designed in a way that accommodates all parties:

*"[...] we have a situation where we have one company who is running their business looking at the northern lights. And what happens is that another company in the same area wants to build a skiing slope for night activities. [...] So, a lot of this kind of planning. If we want to make these things run together"* (dean).

Such approaches seem to aim to integrate design into other fields, which is seen as essential if the objective is to use design for developing sustainable cities and regions.

*"[...] if we really want to use Arctic Design as a tool to develop the city, then we should be able to integrate design in all activities, in different fields."* (strategic designer)

#### *4.8.1.2 Holistic Views*

The holistic and systemic approaches are present in many interviews and communicates the same idea of systemic and global perspectives used with this concept:

*"[...] in harsh winter conditions, you have to manage winter in all levels and layers of the complex system."* (strategic designer)

*"Strategic design always looks at the systemic level in a company or society we are designing for; taking into account the broader perspective"*

*in the organizations or businesses utilizing the outcome of the design process.” (design association)*

#### *4.8.1.3 Long-term Vision*

The long-term vision of the interviewed experts involved in the *Arctic Design* concept’s creation was evoked in most interviews. For the service designer, it is still too early to say if the concept of AD will last overtime, comparing it to older and broader concepts like social design, which have been developed over a few decades.

*“I think that it still has to show the impact. I think it’s still very early phases of Arctic Design. And the next few years will tell us if it was some kind-of fad, or if it’s something permanent.” (service designer)*

Similarly, when discussing the outcomes of the *Arctic Design* concept so far, the strategic designer indicates that the actual results will only really be measurable in the long-term (ex. 20-30-50 years), because structural change doesn’t happen ‘overnight’. Nonetheless, she underlines the advancements accomplished so far, notably in the city of Rovaniemi, which has made significant progress since the creation of the concept:

*“[...] strategically, Rovaniemi is more advanced with Arctic Design than it was five years ago.” (strategic designer)*

Furthermore, the design association president suggests the same idea when speaking about the importance of building upon history and traditions, pointing out that renewing design in Finland is essential for sustaining ‘Finnish design excellence’. In his perspective, it is the future generation of designers, the ones who will be most active in about 20 years, who can potentially create the next ‘Golden Age’ of Finnish design. *Arctic Design* seems to be a concept that conveys this new direction in design, where the focus is on design as problem solving in a broader perspective, and designing for the everyday life:

*“The next golden age of Finnish design will probably be approaching in ten to twenty years’ time when current young generations of designers will be in their most active work. The Finnish design field and the brands are still relying on the previous golden age during the fifties. [...] but we need renewing ourselves in the field to be able to utilize design as a leading capability, to promote ourselves as problem solvers as we have been kind-of describing ourselves in the strategy we have.”*  
(design association)

#### **4.8.2 A Need for Service Design**

Alongside strategic design, the potentials for service design in the Arctic and northern regions was mentioned by all participants. For instance, the service design professor mentions that for communities living in remote regions, and for those who seek to earn a living from their crafts, developing services around these activities is crucial:

*“If you want to figure out means to survive, especially here in the margin, you have to figure out how to earn income, because crafts are always so laborious, it has very low productivity, so you have to figure out ways how to profit more from the crafts process.”* (service designer).

Moreover, the city mayor believes that service development is an area that requires solutions that reflect local needs and context. In that sense, he mentions that services are the area where Finnish Arctic areas can really distinguish themselves, and demonstrate their expertise:

*“[...] when you're talking about service design, so how do we design snow safaris, in the cold and snowy conditions. That wouldn't work in Helsinki area because you need to have so much snow, darkness, they don't have so many tourists. So, in that sense, [Arctic Design] is mostly different in service.”* (mayor)



## 4.9 Motivations & Incentives

Multiple elements contributed to setting the circumstances in which the AD concept would be developed. Amongst them are the external and personal motivations that led individuals and organizations to invest themselves in these matters. Additionally, incentives were seen as one or many triggering elements that led these individuals to take action, and more specifically, to the creation of the concept in 2012.

### 4.9.1 Supporting Local Culture

One motivation behind the creation of *Arctic Design* seems to be the growing interconnectivity of our world. With international companies, tourism and people easily travelling all over the globe, it makes ideas and cultural exchanges common. However, this can also result in the development of concepts that are not suited for the local contexts and cultures. As mentioned previously, the AD concept seems to place itself as an opposition to the 'mainstream'; it proposes a new way of valuing localism. The idea of designing for 'demanding situations' also relates to this phenomenon. It seems to be a response to the globalization of design, and proposes to focus on local cultures and contexts to develop solutions that meet their needs.

The city architect was very clear about this, and it seemed to be one of her personal motivations. From her perspective, the idea of 'one size fits all' is a big mistake, even within winter cities. Even though northern cities and territories have similarities, due to their comparable climates; cultural differences and other specificities must not be neglected. In this sense, standardizing winter design guidelines can be inadequate. Amongst other things, she states that it is important to understand the cultural relation to the winter climate and Arctic issues, what is wanted and not wanted by local communities:

*"It's important to try to understand the cultural relation to the winter climate or Arctic issues, and then how much we're capable of tolerating [...] and what you don't want."* (city architect)

An example that came back during a few interviews was the way Canadian cities ‘do’ winter compared to Finnish cities. Having travelled to a few Canadian cities during winter, two interviewees mentioned the similar climates, but different ways of living with it. The perception of Canadian winter cities seemed to be that they live winter indoors. And in that sense, the cultural relationship nations have with winter can be very different, and not suitable to be applied everywhere:

*“But nowadays people have become more international, they are quite the same all over the world, people have the same ideas and experiences. So, you easily lose these traditional ways and then you start to avoid winter and it's not so natural anymore.”* (city architect)

*“There is a big difference between Canada and Finland. Because in Canada you try to hide from the winter. You go underground. [...] Half of the year we have snow... so we cannot hide. We try to enjoy the winter.”* (mayor)

The architect adds that to make sure designers develop projects that are relevant to their culture, they should get inspired by their cultural heritage and traditions, and develop new contemporary solutions from them. As a reminder, she keeps a framed plan of the city of Rovaniemi on her office wall, demonstrating how the city of Rovaniemi has evolved over the decades:

*“We always want to go on, get modern society, get new, innovations; we want to get something better, not to go backwards. But what is the winter and Arctic way of making something better? This is where the designers have a lot to do.”* (city architect)

#### **4.9.2 Arctic Development**

The international and political context of the Arctic is an undeniable motivation behind the AD concept. This aspect was recurring in most discussions, and was often stated as a reminder of the urge to develop new methods in approaching these matters:

*"[...] that is a problem in Finland also, where there has been a boom in the Arctic. There are great expectations about business and everything, [...] because of the oil prices and raw material prices [...]"* (chamber of commerce)

*"And of course, the common interests in utilizing the Arctic region, the opening sea routes is a current issue. We should be able to design processes that make it possible to use Arctic resources in ecologically and sociologically sustainable ways, as they are going to be utilized anyways. We are kind of in the hurry to develop processes for that."* (design association)

Contextual elements are very important in the creation of the *Arctic Design* concept, and so are the various actors who are shaping it along the way: their personal values, professions and motivations. The idea that design needs to start joining the conversation on Arctic development and take a more important role in these processes was mentioned by interviewees:

*"[...] I moved to the North at the same time when discourse on 'Arctic', in many fields (political, economic), got stronger. And the way I think about design and possibilities design has, it was natural to try to think design could be involved in this. Because design was not part of the discourse at the time."* (strategic designer)

Similarly, the coordinator of the ADW mentions how little designers are involved in international Arctic discussions. An important moment that triggered his motivation was his attendance at the Arctic Circle conference (Reykjavik in 2014)<sup>40</sup>. During the event, he noticed that most discussions revolved around talking about how bad the situation is getting (for example: melting ice due to climate change) and identifying problems; no one was proposing solutions or talking about how they could potentially try to solve these problems. Amongst the people present, there was only about two or three designers total. He adds that for him, *Arctic Design* is one solution:

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<sup>40</sup> The largest conference on Arctic issues which focuses mostly on Arctic politics, science and research, and gathering around 2000 people (Arcticcircle.org).

*“I think that with Arctic design, we have the tools to solve these problems. [...] That was like some kind of waken up call for me. Everyone is talking, talking and talking, but who is doing?” (ADW coordinator)*

In addition, the strategic designer discusses her personal motivations and ambitions with the concept, and these ideas point in the same direction. Her ambition would be to integrate *Arctic Design* into the way the *Arctic Council* functions, and make design thinking and design methods an important part of the international group. The design association president also adds that the Arctic is an interesting testing ground in this matter, because of the general common grounds between Arctic states. As the Arctic is generally a very political, or science-based subject it seems to be an interesting testing ground for design, in the perspective of involving the field into uncommon areas, instead of bringing design only towards the end of a project:

*“[...] Arctic Design as a method in the work of the Arctic Council [...] I would very much like to see Arctic Design as a tool used in environments where strategies are created. In a way, you could say that it doesn’t differ much from design being used in product design. It’s just that you bring design to different levels and layers of activities.” (strategic designer)*

*“The possibility to share knowledge, and the possibility to try out the new processes in common pilots and so forth. That’s a huge opportunity.” (design association)*

To her, the concept of *Arctic Design* applies to the whole Arctic region, and should be applied to other Arctic states over time. The concept should be exported to Russia, Canada, Alaska, United States of America, and other Scandinavian countries, to really instigate positive change:

*“To really make an impact, that would need to happen.” (strategic designer)*

In her perspective, the first step would be to manage to embed AD into all levels, from companies using it for product development, to public sector processes, and into

larger institutions by using strategic and systemic thinking. These personal motivations, portrayed as ambitious projects and visions, seem to be fueling the actions and progress of this concept.

### **4.9.3 Branding Opportunity**

#### *4.9.3.1 Visibility*

Giving visibility to local designers based in Lapland and giving them a common, distinguishing identity through *Arctic Design*, is seen as a way to create more opportunities for them. This was another motivation brought forward by two experts:

*“Local businesses and local designers those who are working in the field of creative industry it gives this kind of common brand. Visibility is this kind of impact.”* (dean)

*“I think that’s ‘why’ Arctic design is so valuable. [...] it has a huge potential to give value for design work in the North. Because we are a design community, which is in the very marginal position, but this kind of idea [...] can give additional value, and it can give us a face and a brand to us, and recognition. Recognition of expertise in design in these kinds of extreme places and locations.”* (service designer)

#### *4.9.3.2 High-quality*

In many ways, elements discussed came back to this idea. First, relating to the general Finnish design expertise, and how they should find ways to export this expertise internationally (AD could be one way). Secondly, continue to develop a reputation of high-quality or even luxurious, yet sustainable tourism industry (discussed below); this aspect also relates to elements discussed previously, about how design in the Arctic, because of its challenging environments, has always by nature been functional, efficient and sustainable.

#### 4.9.3.3 Arctic Tourism in Lapland

The Lapland president of the chamber of commerce mentions how the tourism industry in Lapland is important for the local economy, and within Finland's economy as well. Because the Arctic region of Finland is 'less extreme' compared to other Arctic regions of the globe<sup>41</sup> and more accessible (one can drive there), it makes it easier for them to develop this industry.

The city of Rovaniemi, being the capital of the region, has an important role in the development of the industry. *Arctic Design* is seen as a way to ensure that Lapland sustains the high-quality experience it seeks to deliver to visiting tourists. Some participants mention that working and living in the Arctic areas requires a different way of designing, because of their marginal position. By using *Arctic Design* in industries, they can find new ways to stand out, add value to their businesses and place themselves in a "luxury" market, since competing with cheap products is not possible, as mentioned by the city mayor:

*"We cannot be in the same markets as China, India or other countries. So, what we have to have is a strong part of design in the products, also in the city planning, industrial design and also service design. So, this is the big part of the value added. And we can put to the prices of our businesses."* (mayor)

As well as emphasizing on the importance of the tourism industry in Lapland, making sure that it is done in a sustainable manner is crucial, and discussed on many occasions during the interviews. It seems that most participants see AD as a way to ensure projects are socially, ecologically and economically viable in the Arctic. The city architect mentions the growing international interest of the city of Rovaniemi, which results in an increased number of visitors, particularly from Asia:

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<sup>41</sup> This can be observed on figure 2 (Chapter 2), in Hamelin's map 'Major regions of the Northern World' (2002).

*"[...] Rovaniemi is very 'at the top' at the moment. Everybody knows Rovaniemi. And [...] growth can also result in conflicts, [...] we are trying to find a new way of growing in the Arctic Circle. We try to solve problems that resulted from growth and then we want to add value to the Arctic atmosphere [...]" (city architect)*

Similarly, the strategic designer mentions the design efforts that are put into developing the tourism industry in Finland, bearing in mind the Arctic conditions of Lapland, especially the environmental impacts of mass tourism. The region has a growing awareness towards the consequences of mass tourism, and question what type of industry they want to develop in their region. She adds that design is seen as a tool to help develop solutions that contribute to a sustainable tourism industry:

*"So, with design, we try to develop products, services, concepts that would take these conditions into account and develop and we aim at, companies here aim at developing a sustainable tourism industry."*  
(strategic designer)

#### *4.9.3.4 Arctic Design Capital*

Additionally, Rovaniemi's *Design Capital* claim is seen as a similar strategy; a way for the city to attempt establishing itself as the 'Arctic Design Capital' of the world, in 2015. This statement was described by the mayor as a new goal in the city's tourism strategies. Indeed, Rovaniemi is internationally known as the 'official town of Santa Claus', a place where tourists can visit the popular Santa Claus Village, which is described by the mayor as the result of an ambition to develop tourism in the Lapland area. A similar opportunity seems to have been identified with AD; it is perceived as a way for Rovaniemi to distinguish itself from other Arctic cities, which was also mentioned by the strategic designer and the city mayor:

*"Actually, today we have two trademarks: Santa Claus, and the new one is Arctic Design Capital. Under these trademarks we are developing businesses and other activities."* (mayor)

*"[...] behind that, of course, is the ambition to become one of the best-known, most influential Arctic cities in the Arctic Region as well."*  
(strategic designer)

#### *4.9.3.5 Finnish Design Expertise*

The idea that AD could be a way for Finnish design to share their expertise with international communities was also brought up in the interviews, and it seems to be one of the motivating factors, on various levels. Some experts feel that Finnish designers are good at doing what they do and that they need to find new ways of demonstrating this within the business industries and on an international level. The AD concept is seen as an opportunity to put Finland on the map for their innovative approaches towards problem solving, design processes, but also regarding "snow-how":

*"I believe that Finland will be a key player in designing services and products for the world in the future, but it takes a lot of work for us to make corporations understand what our capability is. So, branding ourselves also is an issue."* (design association)

Similarly, the ADW coordinator advances that one of the objectives behind the annual event he is in charge of organizing, is to develop more opportunities for designers to demonstrate their value to businesses and industries. This value could also be demonstrated through various *Arctic Design* 'success stories', where industries could hear about companies that have benefited from involving design in their business in the Arctic:

*"But most of the problem is that [the businesses and industries] are not using design. [...] also, what we need is more design companies that are offering design services. [And] [...] we need the international cooperation. We need stories from all over the Arctic. And that is not very clear yet."* (ADW coordinator)



#### **4.9.4 A New Perspective**

The strategic designer has noticed a growing interest in *Arctic Design* since its creation. The concept seems to spark curiosity amongst many design professionals, and not only in Arctic regions but also in metropolitan regions; *Arctic Design* is seen as a new way of looking at structural changes in the contemporary world:

*"[...] actually, I can see this happening in the Finnish design discussion, design professionals who are not based in the Arctic, [...] they are very interested in Arctic Design, because it brings a new angle to the design discussion. And we are living in a time where [...] the structural changes in the world are so big, [...] they don't go unnoticed, [...] digitalization, climate change, the aging of population. It seems that many feel Arctic design can bring additional value in solving wicked problems."* (strategic designer)

#### **4.9.5 Incentive**

The element that seemed to have pushed the creation of the AD concept, as we know today is Helsinki's desire to become a World Design Capital in 2012. Already working on developing the idea of *Arctic Design* in Rovaniemi in 2010, the strategic designer thought this would be an interesting perspective to add into the discussion in Southern Finland:

*"Helsinki applied for the World Design Capital for 2012 [...] I decided to suggest the mayor of Rovaniemi for the city of Rovaniemi to somehow be connected to this work that would be done in Helsinki, if they win the bid."* (strategic designer)

An agreement was made with the city of Helsinki. However, the program developed around *Arctic Design* remained independent from the WDC Helsinki program, which was an agreement between the cities of Helsinki, Espoo, Vantaa, Kauniainen and Lahti, and the World Design Organization WDO<sup>42</sup>. When Helsinki got the WDC in 2012, it helped establish the AD concept as it is known today.

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<sup>42</sup> In 2012, the name of the organization was still *International Council of Societies of Industrial Design* (ICSID).

## 4.10 Outcomes

Since its creation, the *Arctic Design* concept has been in constant evolution and already has resulted in different outcomes, from national strategies, new networks to annual happenings. The following points will go over the various outcomes brought forward during the interviews.

### 4.10.1 Arctic Design Week (ADW)

The *Arctic Design Week* has been an ongoing event for about 10 years in Rovaniemi. Originally named the 'Rovaniemi Design Week', it changed its name for the 2014 edition, taking part in the city's initiatives to become the 'headquarters' of *Arctic Design*. The event has been growing each year and aims to offer a platform for designers and the industry to connect. The current coordinator of the happening mentions that ADW has enabled new areas of cooperation between existing networks, businesses, the University of Lapland, and designers. Additionally, it has been hosting various workshops to help start-ups in the Arctic area. He adds that these workshops are in the same line as the popular start-up event called 'Slush', which happens every year in Helsinki. The ADW is trying to develop a similar approach, but for designers up North, and create more opportunities for creative industries and the new generation of designers:

*"[...] during the Arctic Design Week, there have been these workshops. I think that's great. I don't know if you have heard of this start-up movement in Helsinki, it's called "Slush" they are organizing all these start-up company networks. [...] Arctic Design Week is doing the same. It's the start for something good and something new, and it's for younger people. That's the future."* (ADW coordinator)

The strategic designer also talks about the Arctic Design Week as an important outcome since the beginning of the *Arctic Design* 'movement', especially when asked about the outcomes for the people living in the Rovaniemi area. She mentions that the event allows 'ordinary people' to talk and learn about Arctic design. To her, this is a way for the citizens to start demanding it as well, but that it's a slow process. She also adds that citizens might not always notice the outcomes of *Arctic Design*. If they end

up having better products or services because businesses and the public sector use design to reach better results, citizens will see the outcomes, but might not make the link to these initiatives; because good design sometimes goes unnoticed:

*"[...] the people see the outcome, they might not realize this is because of Arctic Design, and they don't have to, they don't need to. But they get better services and get better products. Because businesses do their work better, and public actors do their work better through design." (strategic designer)*

#### **4.10.2 National Arctic Strategy**

One of the most notable outcomes of the work around AD is the integration of the concept in the National strategies for Arctic Development in 2013. This achievement was made possible through strategic thinking, individuals who saw an intervention at the highest level (governmental) as essential to have the most impact. As an outcome, the participants were mostly coherent in their discourse, as argued by the design association, strategic designer and mayor. Incorporating the AD concept into the Finnish Arctic strategies mainly acts a backbone, an argument to enable more projects to arise from it:

*"[...] this strategical thinking makes it possible to talk about this and promote it in a better way than if we wouldn't have this in the strategy. Not only Arctic Design but also the capabilities of the field of technology in Finland as a whole." (design association)*

*"[...] when we are writing some funding applications [...] we always remind these funding parties what we are doing is already 'there' [...] In that way, it's important." (design association)*

*"[...] the National Arctic Strategy, it gives you the backbone to do things. After you manage to do that, then any actor, in any level, in any field, can start doing things in practice and always refer to this strategy." (strategic designer)*

The mayor adds that the state's role is not to develop the concept, that job relies on them. However, by endorsing the concept, they allow more opportunities for the individuals or organizations that wish to do so:

*"[...] we wanted the concept to be accepted nationally. And of course, it's up to us to develop it, so didn't expect so much from the state that they could start to finance this kind of thing. It's just notified that this is a concept that's important for us, and that's the concept that's important for the whole of Finland, when talking about the development of the Arctic areas."* (mayor)

Finally, the mayor adds that the Finnish chairmanship of the *Arctic Council*, could be an opportunity to bring the subject up:

*"[...] the next two years we are chairing the Arctic Council, so we hope we can through our Lapland Arctic Host Committee work show in different events what is Arctic design? It is for us the possibility to bring it up."* (mayor)

#### **4.10.3 Multi-Sector Research Centres**

Even though integrating the concept into the Arctic strategy plan was seen mostly as a foundation for *Arctic Design* to have more 'weight', there have been some concrete results, like the creation of the *Arctic Knowledge Center* at the University of Lapland. The institution has been very active in developing *Arctic Design* on various levels, as mentioned in Chapter 1. The centre was still under development at the time of the interviews, nonetheless, it was mentioned as an important outcome by participants:

*"[The Arctic Knowledge Centre] is something that was imbedded in the Arctic Strategy of Finland in 2013. Now we are in 2016, and this centre is becoming a reality. So yes, things happen because of [the National Arctic Strategy plan]." (strategic designer)*

The Dean of the Faculty of Art and Design, who is closely involved with the project gave more insight into what it was about. The centre seeks to create an infrastructure

for *Arctic Design*, an environment where research and education can come together, which would include mobile laboratories that work specifically in Arctic and northern situations. This type of laboratory seems to try to find new ways of developing transdisciplinary projects, creating an environment where various disciplines and sectors can come together in a space that is designed for collaboration, and where design is an essential element.

Similarly, the Dean mentions yet another project he is coordinating at the University of Lapland, called *Arctic Smartness Excellence*, which seeks to collaborate with different disciplines; he is in charge of the *Arctic Design* topic:

*"[...] it's a collaboration between Lapland University, University of applied sciences, geological Research Center, nature researches Research Center, Digipolis (which is this research centre for heavy industry located in Kemi), and then an organization that is called Smart rural businesses or something like that. It's a multidisciplinary project. But Arctic design is my topic." (dean)*

As an example of the type of work he is doing in this project is working with small rural businesses with nature-based ecosystem projects, or on circular economy projects, that connect with mining companies and bigger industries. The underlying objective behind these projects seems to be to create opportunities for design, art, and other creative industries to have opportunities to collaborate with industries:

*"[...] the key point of this Arctic design is that it's a lot of collaboration with the small-scale industries, creative industries, which includes design and applied arts and this visual Applied Art; how they collaborate with these small-scale industries. Tourism, handicraft, media, food production, all kind of things not just with design." (dean)*

#### **4.10.4 Arctic Design Cluster**

The *Arctic Design* cluster is another project in which the Dean is closely involved, and in which design is seen as a tool to be used in multidisciplinary and multi-sector areas (see Annex D). The project is here considered as an outcome, yet it is still very much in development and also identifies challenges and ambitions of the actors involved with AD. The *Arctic Design* cluster, at the time of discussion, involved about 40 companies, most of which are small designers, media and creative industries. The cluster is seen as a way to get these companies to work together and make them more accessible and valuable for businesses. Even though the AD cluster is seen to have a lot of potential, the current challenge is to get larger companies involved, as they are the ones who will have more impact. The dean mentions that the need is to have these big companies use the offered services and designers, and acknowledge the added value of design and creative industries in their enterprises:

*"[...] If we promote these Arctic designers, even if we get them to the big exhibitions to New York or Montreal, or whatever, nothing happens if we don't get these big companies to understand what is the use of design or how art and design knowledge can support their businesses."* (dean)

The 'cluster' concept inherently uses eco-systemic thinking. By having various industries, businesses and designers working together, the dean sees this as opportunities to develop new innovative solutions through *circular economy*<sup>43</sup> principles. For example, getting mining companies, which produce a lot of waste material, to see the potential for designers to think about solutions to improve their processes and create new opportunities:

*"Mining steel, they produce a lot of this kind of waste material... which is now a very political situation to get them used. If they learn to use these designers and we're able to teach them this kind of sensitive knowledge, [...] there might be some kind of future for that."* (dean)

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<sup>43</sup> Circular economy is an alternative model aiming to "redefine products and services to design waste out, while minimizing negative impacts" (Ellen Macarthur foundation, 2017) or the principle of "waste equals food" (McDonough & Braungart, 2002).

## 4.11 Challenges

### 4.11.1 Restricted by the Term

As the Arctic refers to a specific geographic location, the thought that this might be restricting the diffusion and use of the concept outside of the Arctic region, was brought forward by the service design professor. Even though the concept is described as having a broader spectrum than this, like for demanding situations, there is a certain challenge regarding the restrictive nature of the term. Because of this, the service designer, states the it is unlikely to be used in places like Namibia. On the other hand, the concept is still very young, so only time will tell if it will continue to develop:

*“I have a kind of gut feeling that service design will outlive Arctic design, but I hope that Arctic design will become a strong tradition, but it’s the kind of concept that is bound to be in the marginal. I think that, if you call it something like ‘extreme design’ it would take it out of this marginal position. But it’s tied with geography [...] no one who is a designer in Namibia is going to utilize Arctic Design.”* (service designer)

In the same fashion, the ADW coordinator mentions the challenges involved making AD a yearly topic, not just a seasonal one, because the ADW happens during one of the coldest months of the year (February), and because of the Arctic’s intrinsic relationship to winter climates. Once again, the concept’s name seems to make it difficult for people to talk about AD all year round:

*“[...] let’s do the ‘Arctic Design year’; that we talk about Arctic Design all over the year. If you are thinking about events, seminars, fashion shows during the year [...] not one design week in February... then we are waiting a year... and then the next.”* (ADW coordinator)

#### **4.11.2 More Action Needed**

An element that came up during many interviews, is the need for more actions to be taken. The concept has had many outcomes so far, but very few concrete results, which can make it easier to show the potential benefits of using the approach. The ADW coordinator mentions this as the main challenge in his perspective, by stating that actions need to be focused on developing international cooperation, sharing success stories and inciting others to start 'doing' *Arctic Design* and collaboratively develop the international recognition of *Arctic Design* excellence. He mentions that cooperation could result in partnerships with other countries, design centres and companies:

*"[...] Because we need the real stuff. Now it's more talking than action."*  
(ADW coordinator)

Moreover, he adds that these are crucial steps to take, particularly since the city of Rovaniemi established itself as the *Arctic Design Capital* in 2015. There must be investment in this area, because Rovaniemi is currently lacking such a design scene:

*"[...] Because Rovaniemi wants to be the capital of Arctic design. [...] We don't even have industrial design companies, or offices in Rovaniemi. And we are talking about design, but the reality about it, about how many design companies we have, or about how we are developing the Arctic Area, really using design. Or how Rovaniemi is developing the services or products using design. It's none."* (ADW coordinator)

Stating that Rovaniemi is the *Arctic Design Capital* was also seen as a, perhaps, rushed position to take for a few designers interviewed. The strategic designer has a similar opinion, in which she feels that designating an Arctic Design Capital is problematic, in the sense that what qualifies a city to deserve this title is ambiguous:

*"[Arctic Design Capital] ...a very bold statement. [...] in this context, Arctic Design Capital, what does it mean? I don't think anybody knows what it really means. Because for the time being, it's more an ambition, more an idea, backed up, with some practical actions that have taken*



*place, during a number of years [...] the challenge is, how do you compare your city? [...] what states and makes a capital?" (strategic designer)*

#### **4.12 Ambitions (What's Next?)**

To most participants, it was too early to demonstrate the impacts and results of initiatives, strategies and projects developed since the creation of the AD concept. When questioned about their aspirations regarding the future of this concept, a few participants revealed the ambitious vision behind this concept.

For the strategic designer, there have been many remarkable outcomes since the creation of the concept, but they are just small steps compared to what really seeks to be achieved in the future:

*"Because now, 8 years later, 6 years later from the year of Helsinki world design capital, a lot of things have happened already. The University has taken it up, the city has taken it up. It's part of all the National Design Strategy; it's part of the National Arctic Strategy; and still, of course, we have still just taken the baby steps." (strategic designer)*

Indeed, the ambitions described by the strategic designer demonstrate that she has a clear vision of where she would like to bring the AD concept. The expert shared her aspirations with the researcher, as a way to "put it down on paper". In sum, her goal would be to manage to integrate design methods into the functions of the *Arctic Council*. Because Finland will be chairing the committee for two years(2017-2019) she sees this as an opportunity to reach strategic levels and have a maximum impact:

*"My ambition would be to bring Arctic Design as a method to the work of Arctic Council; bring design thinking into processes where Arctic Council plans actions for the 8 Arctic countries, or plans focus areas [...] whether it's international law, or climate change [...]." (strategic designer)*

For the service designer, the future of AD depends on the new, young generation of designers, who will have the most impact in developing it. Because the concept is so young, these people will have an important role to play in order to define what it will really be about:

*“I think now it’s the era you have pioneers that are doing Arctic Design and who define what it is. It’s not an old concept I think, it’s a very new concept, and I think that people who work around that have an important role, because they are shaping it.” (service designer)*

## 5.0 GENERAL DISCUSSION ON ARCTIC DESIGN

When the researcher initially engaged with the AD concept in 2014, during the first edition of the *Arctic Design Week* (ADW), the concept was broadly understood as a way to start conversations on the general topic of design in northern and Arctic environments. The subject seemed sparsely covered in the province of Quebec, so it was an appealing topic to delve into. In the first published book on the subject *Arctic Design: Opening the discussion* (Tahkokallio, 2012), the diversity of the covered subjects conveyed an attempt to avoid confining and restricting its definition. The contributions touched subjects ranging from the growing international interests in Arctic development, the potential for *service design* in these regions, using snow and ice as a material, or Arctic indigenous knowledge and crafts. Asking if “there is such a thing?” on the back cover of the book demonstrates that the ‘discussion’ was just starting at that point; it suggests that individuals have the freedom to interpret the topic in their own way. It made sense to leave such a broad subject some flexibility, especially since it was the first publication on the topic, but it can also make intentions and visions behind its creation harder to grasp.

The concept has taken off since then, and this research sought to make sense of what has been developed so far, as well as identifying the main ideas behind its elaboration. By organizing and analyzing the main elements emerging from the experts’ discourse, the researcher identified what seem to be the most prevailing ideas behind AD, in order to see if other northern regions, like the province of Quebec, should get inspired by what is proposed in Finland. The study was able to reveal the concept’s two main components: (1) witnessed changes in the design field, demonstrated through design-led actions taken in Finland to address more complex social problems, now reaching its northernmost region; (2) the importance of understanding local contexts (peoples, cultures, environments, socio-political frameworks) when designing in challenging and marginal situations, which are abundant in northern and Arctic contexts. The following chapter will seek to synopsise these elements and compare them to what was previously presented in literature.

## 5.1 Designing in a Contemporary World

A relevant description of design in this research would be, as described by Herbert (1978) that “everyone designs who devises courses of action aimed at changing existing situations into preferred ones”. Although this definition is a few decades old, broad, and even quite ambiguous, it goes to the essence of what this research perceives design to be; its wide-ranging description allows it to apply to the whole spectrum of design fields and the new areas designers are developing interest for. Indeed, the author advances that engineering, architecture, business, education, law, and medicine, are all fundamentally concerned with the process of ‘design’ (Herbert, 1978), all shaping the world in their own way. Indeed, many other fields and sectors shape the surrounding environments, products, services, and the systems with which people interact on a daily basis. In fact, design is what structures most of the things that surround individuals, the way they use and experience them. Most of today’s environment is the outcome of some kind of human design; the outcome of decisions and choices of human beings (Heskett, 2005), making most problems faced today ‘design problems’. The added value of design resides in its opposing stance towards the most prevalent thought processes in organizations that make problem-solving a rigid, hierarchical and linear process (Alvarez & De Coninck, 2016). The ‘design approach’ aims to stimulate innovation, economic competitiveness and a better quality of life, through a human-centred approach and iterative process (WDO, 2017; Brown & Katz, 2009).

Today, these means are being used to enable social innovation and contribute to sustainable futures, by going beyond *product* design, or rather, challenge our understanding of what a ‘product’ can be today (De Coninck, 2009). This being said, in a context of sustainability, designers, being professionals that develop ‘products’ and ‘systems of products’, are initiators of change within, and of, society. Being sensitive to the particular needs and emerging aspirations of communities is crucial, and even more so through approaches that are systemic and global (De Coninck, 2009). In the same way, what AD proposes is a new role for design methods to be used at a larger scale in northern regions. Design can play an active role in improving

the well-being of Northern inhabitants and tackling more complex issues (like healthcare, education, poverty, climate change), which demand much more than new products and infrastructure. Today's complex problems show the evident need for a change in the way we develop and approach projects as designers, but also as citizens, professors or decision makers. Studying the *Arctic Design* concept in Finland has allowed to demonstrate that, indeed, the role of designers is significantly changing; the Fins are world leaders regarding design-led changes in their society, now using the methods in various sectors.

### **5.1.1 The Arctic as a Design Project**

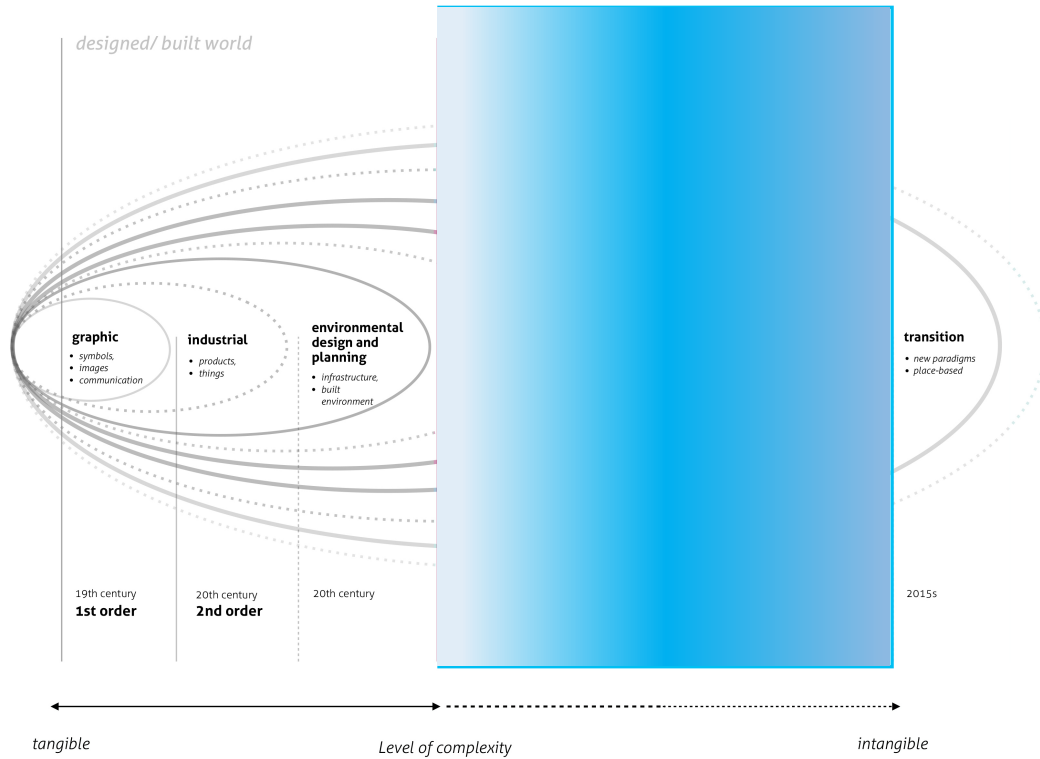
When the research started, the decision to look at the emerging concept from a *strategic design* perspective was not definite. The researcher had doubts that it would have an importance in the concept's description, but the predominance of this angle was confirmed through the collected data, as revealed in Chapter 4. Throughout the interviewees' discourse, it was evident that AD was not merely about designing new infrastructures or products that take into account their northern environment and climate, which has been the focus of most discussions about 'northern design' in the past (see section 2.2.2). In fact, many experts stated that doing so was part of their DNA, that "doing winter well" is an intrinsic part of Finnish culture. The information confirmed that AD is much more about contemporary design fields, like *service design*, *strategic design* or *transition design* (orders 3, 4 & 5, as discussed in Chapter 1), rather than focusing on the built environment (order 1 & 2). Some examples mentioned by the interviewees did indeed relate to orders 1 & 2 (built and designed world). The kicksled or the material exploration of snow and ice were brought up by a few participants, but the examples mostly relate to general examples of "good northern design" rather than AD itself. When specifically talking about the recently developed concept (AD), various examples were mentioned: events, transdisciplinary research projects and labs, new programs and policies. Although these examples wouldn't be seen by most as typical "design projects", they are here perceived to embody the first steps of a larger project that might only have significant impact in a few decades. What the AD advocates propose is a more disruptive, ambitious approach to northern issues; one that values the use of design at strategic and decision-making levels by

embedding a user-centred, empathic and iterative approach to problem-solving, through systemic thinking, multiparty and multi-sector projects. It is this innovative approach and vision that brought the researcher to attempt placing it in context, both from the perspective of the design practice and within the general topic of 'northern design'. By doing so, this research depicts the comprehensive connections between design and Nordicity.

In essence, AD proposes a new paradigm when speaking about the North, proposing an ecosystem-based standpoint, where the Arctic region is seen as a design project in itself. Based on contemporary design methods like *design thinking*, *service design* and *strategic design*, AD advocates seek to involve countries, organizations, governments, businesses, and communities to work together, share knowledge and develop projects that aim for sustainable and viable environments in their regions and the well-being of their communities. What characterizes this emerging concept is undeniably the new perspective it proposes, regarding the strategic role design can have regarding sustainability in the North.

As demonstrated in the previous chapter, the concept's strategic angle was revealed in many ways in the interviewees' discourse. It is perceived as the most powerful perspective within AD's conceptual framework. *Strategic design* is mainly about using 'traditional design methods' and applying them to the 'big picture', as an attempt to address complex and wicked problems (Hill, 2012; HDL, 2013). This vision seems to be at the core of the AD approach, which uses this holistic lens regarding the specific contexts and issues of northern and Arctic regions. Relating to figure 1 (Chapter 1), the concept's core seems to be mostly in the 4<sup>th</sup> order (*thought*) and carrying over in the 3<sup>rd</sup> (*action*) and 5<sup>th</sup> (*vision*) order (see figure 9). The focus of AD is therefore on designing interactions, systems, organizations and envisioning sustainable futures within northern and Arctic environments. In a way, AD confirms the ideas advanced in Chapter 1 (see figure 1), that designers are progressively exploring new areas, not restricting themselves to material *things*. The information gathered through this

study demonstrates this shift is now happening within the topic of ‘design in northern environments’.



**Figure 9:** Focus areas of the AD concept: thought, action and vision. Based on theories and ideas from: Manzini, 2016; Irwin et al., 2015; Tonkinwise, 2014; Hill, 2012; Cross, 2011; 2001; Buchanan, 2001; 1998; and inspired from a figure by Tomoki Hirano, 2016. (Figure by Author, 2018)

#### 5.1.1.1 Action

The focus on the area of ‘action’ reflects itself in various places and is an essential part of the process-put forward by the concept. Indeed, the focus on interactions between users and objects or users and their environment, using design processes (design thinking) in new contexts, putting forward user-centered, collaborative (co-design), and participatory processes. This was confirmed by many of the experts interviewed. The areas of *interaction design* (interactive digital products, services, or systems) and *service design* are now mature disciplines in Finland. These approaches, and more specifically their ‘design way’ of problem-solving, are increasingly being used by

cities and organizations to improve the everyday life of their inhabitants<sup>44</sup>. When acknowledging the general state of design in the country, and the importance it has had throughout their nation's history (Korvenmaa, 2014), it seems natural that these methods are now being applied to the North of the country, where contemporary issues are often amplified (i.e. remoteness, impacts of climate change, aging of population and levels of economic activity). This order is an essential part of AD, as it is where the basic design methods proposed by the concept are rooted. These are also the most mature and widespread processes used today.

#### 5.1.1.2 Thought

As portrayed in section 4.8, the concept's strategic angle is confirmed in many ways, such as striving and achieving to integrate the concept into the National Arctic Development Strategy plan (Finland, 2013a), as well as in the National Design strategies of Finland (Finland, 2013b), giving a backbone to strategic thinkers and designers to further develop this idea and its methods. Likewise, this angle was portrayed in the aim to integrate design methods into various working groups, through various projects at the University of Lapland, the City of Rovaniemi, the Regional Development Agency, the AD cluster and international organizations (like the WWCAM or the *Arctic Council*). These multiparty and multi-sector development strategies depict a clear systemic approach. The motivations behind these actions seem to be driven by the desire to have design play a greater role in northern development, areas that are typically driven by economic interests and scientific research, social and environmental disciplines. As Rovaniemi is Finland's hub for northern research, AD advocates seem to want to take advantage of the expertise the region already has regarding the subject (with the Arctic research centre for example) and make design an essential and binding discipline amongst these different fields.

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<sup>44</sup> Many examples of design-driven initiatives held in Helsinki are available on this website: [www.muotoilutarinat.fi](http://www.muotoilutarinat.fi)



### 5.1.1.3 Vision

The notions that constitute the fifth order were not explicitly mentioned by participants, but many elements tend to point in this direction. The approaches put forward by Finland correspond to the *transitional design* approach, which proposes to design the daily way of life as the place of priority intervention in a perspective of a sustainable future and the improvement of the quality of life (see section 1.2.4). The approach demonstrates the need for a "cosmopolitan localism" (Irwin et al., 2015; Manzini, 2012; 2009), a way of life that is specific to a place and a region in which solutions are developed according to a local context (socially and ecologically specific), while having an openness to the world through its sensitivity, exchange of information and technology. The participants discourse regarding 'demanding situations' and working in the 'margin' is seen as a main characteristic of AD because of its intrinsically marginal position. Designing in the Arctic requires a different approach in design, where the 'one size fits all' or 'wall-to-wall' approaches are not suitable.

*Transitional design* relies on two complementary approaches: (1) *Service Design*, which is used to develop and improve services to meet contemporary complex issues, by fostering a collaborative process between users, stakeholders and designers (Kuure & Miettinen, 2017); and (2) *Design for Social Innovation*, which seeks to nurture and support community and individual movements through the practice of design, and thereby contribute to the social changes that can emerge (Manzini, 2016). Although not explicitly mentioned by participants, this transition is undoubtedly already under way in Finland, in terms of education, practice and research in design. For instance: the various institutional and organizational changes, the integration of the *Arctic Design* approach into the National development plan for the Arctic as well as in National Design Strategies in 2013 (Finland, 2013a; Finland, 2013b), just to name a few. Still, the University's *Arctic Design Lab* (ADL), which is part of the international Design for Social Innovation and Sustainability (DESIS) network since 2015 focuses on these two previously mentioned approaches (*service Design* and *Design for Social innovation*). This shows the interest of AD advocates in using design

to contribute to social innovation through community-based projects and grassroots movements as a way to achieve medium-term impacts (Manzini, 2016; ADL, 2015). The importance of *service design* methods in these transitions are proposed by most as a way to work in the 'now' and develop concrete solutions with measurable outcomes. This also makes sense since the *industrial design* program at the University of Lapland has a strong penchant towards the field, and has a leading new type of prototyping lab (SINCO) for testing and developing ideas specifically for services and experiences (Rontti et al., 2012). In a long-term perspective, AD seems to be striving to envision and design unknown futures; this was particularly evident when the strategic designer mentioned (when questioned about the impacts of AD since its development) that many will only be perceivable in perhaps 20, 30, or 50 years. This requires a different, speculative mindset, where actions are developed in a long-term perspective. This coincides with what is advanced through *transition design*, which calls designers to think of changes that can be made in a system to allow, in the long-term, gradual changes towards sustainability (Irwin et al., 2015; Tonkinwise, 2014).

### **5.1.2 Top-down & Bottom-up Activities of AD**

Additionally, the diversity of the information gathered during the interviews with AD experts confirmed that, still today, even for the individuals closely involved with the concept's evolution, its understanding is quite diverse and sometimes ambiguous, predominantly for people who aren't trained as designers. Nonetheless, design was advanced by all as a powerful tool for the sustainable development of Finland's Arctic regions, and an expertise worth sharing with other nations. As mentioned previously, this is not a surprise considering Finland promotes design and culture as catalysts for innovation processes, public service development and a strategic way to approach complex social problems (Finland, 2013b; HDL, 2013; Tahkokallio & Miettinen, 2013). This study demonstrated that AD aims to develop sensitivity to the specific context of the Arctic (its peoples, environments, politics) in many sectors, in both top-down and bottom-up ways. As the AD concept's development emerges from strategic thinking and working in these 'higher' levels of decision making, there the 'top-down' approach is seen as more important than its opposite, by focusing on making changes

within larger institutions and organizations. However, the 'bottom-up' initiatives, ones taken up by individuals, are expected to gain more and more importance as the concept develops overtime, and as new generations of designers and professionals grow within these new frameworks. All in all, here are a few examples on both ends:

#### Top-down

- Working to develop AD with the city of Rovaniemi, the chamber of commerce, the Regional Development Council, and finding new ways to integrate design into their working methods.
- Working (and achieving) to include AD in national strategic plans (National Arctic Strategy plan & National Design strategies).
- Aspiring to integrate design processes into the international *Arctic Council* organization during Finland's chairmanship.
- Sharing and developing knowledge on Arctic Sustainable Arts and Design through a newly developed network (ASAD)
- Working on various transdisciplinary and multi-sector research projects, where AD holds an important role (i.e. AD cluster and Arctic Smartness Excellence)

#### Bottom-up

- Getting local designers, citizens, businesses and students to explore the subject through the ADW event, as well as developing hands-on skills to help local industries use design in their businesses.
- Creating a new generation of designers that are trained to be sensitive to these issues and who have developed skills to work in marginal contexts, through new programs such as the Masters in Sustainable Arctic Arts & Design or the *Arctic Design Lab* at the University of Lapland.
- Focusing on participative and collaborative approaches in design that allow concerned users to have a voice and empowering communities to imagine and create their own futures.

The focus being on the ‘top-down’ approaches is most likely because of the *strategic design* focus of the concept, and the area in which AD seemed to have the most potential. Nonetheless, the ‘bottom-up’ initiatives will most likely keep developing, as more designers and professionals will take on this approach through their own practice. This imbalance was also brought forward by participants, when speaking about the need for more ‘actions’ to be taken, and that more concrete projects will need to be developed to see the real impacts of the concept.

## **5.2 Form Follows Location**

One of the core ideas behind the AD concept is that designers need to be more sensitive to the settings in which they will be developing a project. As mentioned previously, beyond trying to have more businesses, industries and organizations use design in their daily activities, AD aims to bring awareness to the particularities of the Arctic regions. It also embodies a different approach to designing for a general mass of population. The design fields, because of their user-centred, empathic and collaborative processes, are seen as a powerful tool to enable the development of solutions that meet the desires and needs of local communities, caring for the environmental impacts of projects and resulting in economic competitiveness. In this research, importance was given to portraying the complexity of the ‘northern context’ (see Chapter 2) in order to further our understanding of what is part of the conversation on ‘northern design’, but also help place the AD concept in context, and see how it relates to this complex system of elements.

### **5.2.1 Northern Environments**

What was previously identified as ‘normative’ nordicity (see Chapter 1), refers mostly to the measurable and the tangible elements within northern environments; the ‘real’ things that impact Northerners’ ways of life, culture and level of northerness. Indeed, as described previously, Hamelin’s concept, and more specifically his ‘Nordicity index’ allow for a better representation of the realities of northern regions, and most

importantly, of how many factors can influence the conditions of a northern region, not just the latitude. In design and planning, the consideration of these elements is essential. Such elements include the local climate (snow, wind, ice, vegetation), economic development, remoteness (i.e. if the place accessible by land), high cost of life, culture (indigenous, mainstream), socio-political context (Shepard & White, 2017; Hamelin, 1975). 'Good design' should naturally reflect these contexts, but also values and cultures in which they reside. Normative nordicity is seen to be the distinctive characteristic of AD concept, setting it aside from other more general approaches in design (like social design, strategic design), due to its specific environment. The Arctic's 'extreme' character acts as a new lens that forces one to acknowledge the specific context of the region in Finland, but also internationally. Some participants mentioned that these common characteristics permit exchanges and collaborations between different states and cultures around the world that deal with similar conditions and issues.

### ***5.2.2 Northern Culture***

Northern cultures are fundamentally connected to their environments and to the elements that characterize these areas. Indeed, subjective nordicity refers to the underlying relationship and experience of humans with the elements mentioned above. Although they are sometimes imaginary, design is seen to be mostly concerned with the 'real' properties of these areas and how they have shaped the Northern cultures and ways of life throughout time (previously referred to as subjective nordicity). The interviewees were discussing the fact that northerness is, and has always been, an important part of Finnish culture, and how this was represented in various aspects of their culture: from objects they use, traditions, sayings, architecture, and their relationship to the cold. Even if this was described as a typical 'Finnish' trait, it was said to be even more true in Finnish Lapland, and within the Sámi culture, indigenous communities living in this part of Finland. Because these cultures have been on these lands for such a long time, the link to their environment is very strong. Their cultures have an intrinsic relationship to their "northerness", which makes sense since material culture and ways of life were shaped by the

resources available on the land and a need for functional solutions that allowed them to survive in the harsh climates. AD seeks to keep that connection with the land. This was also discussed by participants in Chapter 4. By focusing on local northern contexts, cultures, and environments, solutions should logically reflect these realities. This relationship to winter and “northernness” was undeniable for the interviewees. AD was not seen as a concept that aimed to bring a new awareness on the subject in Lapland since they seemed to believe this is a given in the area. Rather, it is seen as a way of bringing awareness to the Arctic’s different context at strategic and organizational levels; areas that are often driven by a more mainstream model. For example, several participants mentioned that Lapland needs to work towards developing a tourism industry that is sustainable for the region, and the same goes for business models. The city mayor and president of the chamber of commerce mentioned how Lapland cannot compete with ‘cheap’ products, most likely because of the high costs of production due to their remote location. In this way, most of this discourse relates to the subjective. In this way, “northernness” should reflect itself in all facets of life in the region, in material culture, art, design, but also in social structures and organizational models.

### ***5.2.3 Hamelin’s Vision of a Different North***

When comparing AD with Hamelin’s concept, the area in which Nordicity seems the most interesting, both in this research but also from a strategic design perspective, is his vision of a different take on the North, through a more holistic and sensitive understanding of its constituents. First, Hamelin asks individuals, researchers, and decision makers to see Quebec as one, North and South, yet acknowledging the multitude of differences within the territory and the non-homogeneity of its cultures (Hamelin, 2012). Hamelin asks to abolish single sector and monodisciplinary approaches to problem-solving, encourages cultural sensitivity and rethinks the way northern regions are developed, and the general relationships between indigenous and non-indigenous communities (Hamelin, 2012). The researcher identified many similar connections between the AD vision and the ones brought forward through Hamelin’s body of work. Generally speaking, the Finnish approach is comparable by

imagining a different way of approaching northern development; pointing out that the North needs to have its own voice. What AD adds to the conversation is that it is a solution-based concept, proposing new ways of doing that focus on acknowledging the different contexts in the Far North, about proposing solutions, ways of working to achieve these new futures and engage in international collaboration.

From a conceptual point of view, 'normative' and 'subjective' nordicity allow an in-depth description of AD's theoretical framework and identify the wide-ranging nature of the 'northern design' topic. It also allows a better identification of different angles that could further be developed in future research and practice. Indubitably, northern features and cultural nordicity are a fundamental part of what distinguishes AD from other existing concepts. Additionally, the concept of Nordicity, considering its four categories of meaning (see Chapter 2), shows itself as a great conceptual framework to understand the complexity of the northern context, its different elements and how they interact. In fact, in the era of sustainable development, it is proving to be a potentially very powerful perspective, since it not only allows a new type of diagnosis of major phenomena in northern regions (healthcare, remoteness, education, food security, mobility, etc.), but also to develop new solutions, know-how, and practices, and ultimately to implant new avenues of innovation. The problem and solutions are closely tied: "one cannot understand the problem without knowing about its context, one cannot meaningfully search for information without the orientation of solution concept; one cannot first understand, then solve" (Rittel & Webber, 1973, p. 139), which requires innovative methodologies. A design project is first and foremost about creating new possibilities rather than adjusting to a *status quo*.

Moreover, prejudice and assumptions related to winterity and nordicity must be identified and addressed. Would integrating the concept of Nordicity into design processes allow the discovery of new possibilities and innovative solutions? Could embedding this perspective into all levels of design (tangible and intangible outcomes) promote the well-being and prosperity of Northern communities? How is

it relevant to consider Nordicity and all its epiphenomena, such as: winterity, ice, snow, tundra, low population density, indigenous peoples and cultures? Nordicity should systematically be part of the criteria in the design process, in strategic thinking, and therefore, in the epistemology of design, but also in the philosophical and ethical concepts of sustainable design. Can design be used as a tool to operationalize Hamelin's vision, and take action?

At the academic level, the new and ever-growing interest in this concept also opens new avenues for research and teaching through inter- and transdisciplinary approaches, as well as exchanges and collaborations between faculties, universities, and all other organizations (i.e. companies, research centres, and institutes) located in northern territories. Perhaps Hamelin's vision can help bring conversations and collaborations initiated by *Arctic Design* beyond the 66<sup>th</sup> parallel borders, like the province of Quebec, in the same way Hamelin's legacy has expanded discussions about the North, winter and the Arctic.

### 5.3 AD Beyond Arctic Regions

The Arctic region, which is delimited by the Arctic Circle, has strong political significance, but remains a dated and simplistic way of characterizing the Far North (Hamelin, 1975). This is particularly true in the field of design, which is fundamentally connected to culture and everyday life. In the Arctic regions, the connexion between one's environment and the way they live is evident within indigenous communities, where culture is inextricably interwoven into various facets of daily activities (Eliot, 2010) and where ingenuity and expertise have allowed many other settlers to acclimate the extreme winters throughout history (Delâge, 1992)<sup>45</sup>. However, this "snow-how" does not restrict itself to the Arctic region, in fact, as

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<sup>45</sup> In Canada, many common objects or customs relating to winter draw back to the people that were living on these lands long before the settlers arrived, for example: snowshoes, kayaks, canoes, parkas, moccasins, wigwams, and even maple syrup.



mentioned in Chapter 2, the province of Quebec is highly concerned with Nordicity. Although the Arctic Circle does not touch the province's borders, these 'Arctic' characteristics are reflected through its extreme climates, sparsely populated areas (many of which are only accessible by plane, unlike Finland), the cohabitation of indigenous and non-indigenous communities and a large interest for economic development in these regions (Quebec, 2009; Hamelin 2002). Even the southernmost, most populated areas, experience these extreme phenomena, but seasonally. Because of the similarities of the Canadian and Finnish context regarding their northern regions, there are definitely opportunities for exchange, like for many other regions outside of the Arctic Circle. In the collected data, it was evident that none of the participants felt that *Arctic Design* should be restricted to the Arctic Circle. In fact, there is a strong desire to share this approach amongst, of course, other Arctic and northern regions, but also with general marginal and demanding contexts. Nonetheless, because of the restrictive nature of the term, regions concerned with various levels of northerness won't systematically feel concerned. The desire to share this concept beyond the Arctic region was clear in the participants discourse, but also in the international stance Rovaniemi is taking with the concept, and the ambitions of integrating it into the working methods of the *Arctic Council*.

### ***5.3.1 Opportunities for the Province of Quebec?***

One underlying objective of this research was to better understand the AD concept in order to see if the province of Quebec could find inspiration in what Finland is putting forward through their ideas and visions. In many ways, the researcher concludes that the concept can inspire the province on various levels. The following points depict the most relevant areas identified through this study.

#### ***5.3.1.1 Taking on Quebec's Nordicity***

Northerness has been described by many as a significant part of French-Canadian culture for a long time, perceived as a distinctive trait that differentiated the settlers in North America from their European ancestors (Chartier, 2010). Today, northerness is an important part of the nation's identity (Chartier, 2010). For

Hamelin, when individuals deny this aspect of their culture, mostly relating to people living in the southern parts of the province, they are denying a part of their own Quebecer identity (Hamelin et al. 2014). The northern context is often misunderstood or omitted from the design criteria in design processes, which isn't explicitly stated, but obvious when looking at the environments and systems that currently shape the region (see section 2.2). It may, in fact, be due to designers being influenced by the mainstream (Southern) culture, but it is also very likely because subjects are rarely approached in a global and systemic way. This results in projects (products, services, infrastructures, etc.) that are contextually inappropriate, sometimes neglecting the cultural values or climate particularities of the area, or that tackle the wrong problem. This can have serious consequences. Could Nordicity be a vector to further be explored from the fields of design, as a way to develop the province's distinct character (beyond new snowmobiles)? Quebec has an extensive creative scene, hosting the only UNESCO city of design in Canada (Montreal), and, numerous design schools. Could the sensitivity to these local characteristics brought forward through *Arctic Design* methods allow Quebec to develop new innovative solutions that reflect these realities? This could apply to the northern qualities of the nation (microclimates, remoteness, thinking with four seasons in mind), but the context-specific principles of AD could also apply to many other areas, like the changing demographics of a metropolitan neighbourhood. Indeed, looking at environments during winter sheds light on problems that would otherwise easily go unnoticed. Winter makes many issues more extreme, like homelessness, accessibility, active transports, food production or energy consumption; making badly designed environments more apparent.

#### *5.3.1.2 Empowerment in Indigenous Communities*

In the current context of globalization, cities and northern territories are greatly influenced by the dominant culture, despite their specific context (extreme climates, vast territory, low population density, cohabitation of indigenous and non-indigenous cultures, etc.). Given that Northerners are demographically located in the margin, we are entitled to think that the "paradigm of the North" will be continually

a minority against the "paradigm of the South" (Beaulé & De Coninck, 2017). When the cultural and contextual specificities of these communities are not taken into account, the services offered to them are too often inadequate for their realities and needs. More specifically, in Quebec, the majority of services offered in Inuit and First Nation communities are still part of a colonialist system and are designed by the mainstream (Janzer & Weinstein, 2014; Kovach, 2010); this contributes to the suffering of identity experienced by indigenous communities and the different social issues that arise from it today (Kaine et al., 2010). This assertion prevails even more strongly when travelling north of the 55th parallel, in Nunavik, for example, where 90% of the population is Indigenous (Government of Canada, 2012). Although this tends to evolve, too often thought of and developed according to values and a vision of the South, the various social services offered to these Northern communities have been developed without considering the culture, values and specific needs of the local population, like healthcare services (St-Arnaud & Bélanger, 2005). The socio-economic realities of these regions are often fundamentally different from those of the populations living in the South (Hamelin, 2002). In addition, the practice of design and creative processes are seen as ways to generate new possibilities, and also to enable marginalized communities to express their worldview and see themselves as actors of personal and community development<sup>46</sup> (Kaine et al., 2010). Could methods proposed by the Finns, where focusing on the users and their involvement in the creation process enable the development of sustainable futures for these communities?

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<sup>46</sup> The Tapiskwan collective ([tapiskwan.com](http://tapiskwan.com)) is an indigenous non-for-profit organization that can be seen as inspiring design-led initiative in the province of Quebec. The project was developed in 2013, emerging from a partnership between the Atikamekw Nation Council and Université de Montréal's design school. The project uses art, design and entrepreneurship as a way for the Nation's youth, elders, artists, as well as professional designers to collaborate through intensive workshops. The workshop's main purpose is to contribute to individual and community empowerment. These happenings bring the participants to develop practical skills, confidence, and to reappropriate their nation's visual and material culture into contemporary products.

When speaking about northern design in Canada, one cannot ignore the indigenous peoples sharing this land and the various issues relating to their self-determination and well-being. The topic of indigeneity has not come to be central in the case study of this research, although acknowledged occasionally during the interviews, the way to approach the subject does not seem to be yet defined. The researcher argues that, in the Canadian context, this angle would require important and essential reflections. In many ways, methods advanced by the Finns could potentially be beneficial for various northern issues relating to well-being in indigenous communities across the country. This is enabled through processes that focus on local contexts and cultures in the development of solutions in marginal situations. In fact, the practice of design and creative processes are seen as ways to generate new possibilities, and also to enable marginalized communities to express their worldview and see themselves as actors of personal and community development (Kaine et al., 2010).

#### *5.3.1.3 Northern Development*

Like most Northern and Arctic regions around the world, Quebec's 'North' is of interest for many development projects, highlighted by the *Plan Nord* northern development launched in 2011. The project's aim is to "promote the potential for mining, energy, tourism, and social and cultural development in Quebec, north of the 49th degree of latitude" (Quebec, 2009). The topic of northern development raises many ethical questions, and generates many concerns for the environmental, social, cultural and political consequences of such ventures, and as to who will benefit from their economic spinoffs. These regions, often imagined as uncharted territory, a place where resides an extensive pool of natural resources (minerals, gas, petrol) waiting to be exploited, or, a *terra incognita*, a collective imaginary that needs to be protected and conserved (Rodon & Therrien, 2017; Hamelin, 2012;). Though these pieces of 'virgin land' are most often home to many communities and peoples. These misconceptions can be blamed on various things, like the vastness of the territory and the lack of infrastructures, making rare the opportunities of contact between the overpowering mainstream cultures in the South and predominant indigenous cultures in the North (Hamelin et al., 2014; Hamelin, 2012). As developed in Chapter

2, acknowledging the segregation between the northern and southern regions in Canada is essential to understand the value of local community involvement and collaboration in various economic and social development projects to come. A place-based approach could help to successfully assess the needs and aspirations of Northern communities and contribute to resilience and community well-being (Manzini, 2016; 2011).

Moreover, the North is also of interest for various research institutions, who study the environmental impacts of climate change as well as the life conditions of the people living in these remote regions. Most often, these research show problems regarding the North, but do not propose solutions. This was mentioned by one participant during the research, who mentioned this as being one of his motivations in developing AD, as a way to make design part of the conversation and one of the leading fields regarding northern issues. For example, Université Laval, in Quebec city, which can be seen as the equivalent of University of Lapland in terms of northern research, inaugurated a new research institute *Northern Institute of Quebec* [Institut Nordique du Québec], at the end of 2016, which aims to group the core research fields in terms of sustainable development of northern regions (INQ, 2017). The five main axes of this new institution are: (1) society and cultures; (2) health; (3) environment and ecosystems; (4) infrastructures and technology; and (5) natural resources. While design relates to these axes on various levels, unlike Finland, design in Quebec is still far from being valued or even acknowledged as a potentially interesting field for the matter. Educationally speaking, as depicted at multiple stages in this research, Lapland is going beyond analysis and description, operationalization and taking the lead through design-led actions that enable common ground where various fields, sectors and actors can come together and try to solve complex issues collaboratively. These initiatives range from new academic programs (both research and practice-based), the creation of innovative laboratories and networks, throughout which design and creative practices have a central and binding role. In this sense, what is witnessed at University of Lapland is radically different from the way northern development is approached in the province and is quite remarkable.

When discussing northern issues in Quebec, Hamelin recalls the importance of taking the necessary time to think about how to develop a project, stating this part is as important as the urge to develop concrete solutions (Hamelin, 2012). In fact, by stating so, he praises the capacity professional designers have in “[distinguishing] the initial phase of notional creativity from the later phase of concrete achievements” (loose translation - Hamelin, 2012, p. 1). Could the author be hinting the potential of these fields in addressing northern problems in new innovative ways?

#### *5.3.1.4 Valuing design’s role in society*

Could the AD concept be applied ‘as is’ in Quebec? The researcher believes the current state of design in the province would make it difficult. As Finland has put so much importance on art, architecture, and design through its history, it is now a world leader concerning the use of design in strategic development; design is part of its DNA (Lindroos, 2015). In Quebec, design is still very much used in its more traditional forms, which makes it more difficult to convince other parties of the value of adding design to any project development in a strategic perspective to allow developing user-driven and innovative solutions on another scale. In the fall of 2017, the president of the province’s graphic design association (SDGQ) published an open letter stating very similar conclusions that demonstrate one of the main challenges for the fields of design (not just graphic design) in the province. He expresses his concern towards the general perceived value of design and investments in the field within the province. The letter was written in response to the backlash regarding *CBC/Radio-Canada*<sup>47</sup> investing in hiring a local design professional to create a unique typeface for the state company. The letter argues that these gestures should be perceived as investments and not expenses:

*“It is unfortunate to see that in Quebec, every time a private company or a public institution announces an investment in design, it is almost*

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<sup>47</sup> Canadian broadcasting company

*automatically decried as an abusive or reckless expenditure, or even an irresponsible gesture, by its directors. How many times have we heard opinion leaders denounce the amount invested in the development of a visual identity system (shamefully reduced to its logo) as if it were money thrown from the windows at the detriment of the common good. We rebel against this reductive thinking about design.”* (loose translation - Giguère, 2017)

Giguère continues to explain how design and creativity can be a powerful tool for development, and that many countries are now using it in the highest levels of their political, industrial and economic strategies; the author mentions Finland as being part of one of those leading nations, alongside the UK, Denmark, South Korea and Singapore (Giguère, 2017). Indeed, he advances that design ways of “thinking” and processes should be an essential part of all public and private organizations, embedded in their strategic and economic development. He speaks of design as a ‘natural resource’ from which we should strive. As in Finland, design was seen as a way to develop post-war modern culture in Montreal, where its legacy in the city’s everyday life is evident, notably through the heritage brought by *Expo 67* and the Olympic games of 1976 (Giguère, 2017). This letter highlights issues that are seen as the main challenge regarding the transfer of the *Arctic Design* concept to Quebec. How can design manage to be valued in a comparable way but regarding community and societal development?

Moreover, the Montreal Design Declaration (MDD), as part of the *World Design Summit*, held in the city in fall 2017, which is based on the idea that “all people deserve to live in a well-designed world” (MDD, 2017), communicates the desire for design to be seen as a powerful tool for improving well-being on a local, national, and international level; the event having the support of the United Nations (UN). However, the MDD was signed almost entirely by design-related institutions, like the event, which seems to foster the conversation amongst people that already think alike. This demonstrates the ongoing challenge of getting design into sectors that currently don’t use it, or don’t quite understand it. This issue was also discussed many times by interviewees in Lapland, who see the AD concept as a bridge between

industries and the design sectors. In response, they are attempting to create more platforms and common grounds, where these different fields and sectors can come and work together through design, like at the ADW, new laboratories and research projects that go beyond the academic world. Perhaps this would be an avenue to explore in Quebec.

#### **5.4 Summary: *Arctic Design*: Revealing a New Paradigm for Design in Northern Contexts**

This research has allowed an in-depth investigation of the Finnish concept *Arctic Design*, allowing reflections on changes in design fields, northerness and a glimpse of what Finnish design culture is about. AD is above all a 'way of conceiving', a global vision and new perspective that allows designers, researchers, individuals and decision makers to work collaboratively towards sustainable solutions in northern and Arctic regions, through design-led actions. Design is seen as a tool for the sustainability and well-being of communities in northern regions, winter cities and communities. As envisioned by Hamelin with his Nordicity concept (1975), the North is not one homogenous thing, but rather, a very complex system of elements that shape people's lives. This holistic perspective is essential for designers and planners working in these contexts, and makes the strategic angle of AD notably relevant. Hamelin's vision calls for actions, and solutions (Hamelin, 2012). Embedded in creative processes and design methods and taking action, the AD concept seems to propose such a thing. Because design is a practice that focuses on understanding users, and has a growing focus on co-design and participatory processes, the field could be a way to tackling problems, focusing on *problem-solving* rather than *problem-setting*. Design is not argued to be THE magical solution, but is seen to have great potential towards innovation and should, nonetheless, systematically be part of discussions and established as a leading field in most levels of society.



In sum, this research concludes that *Arctic Design*:

- Is a concept developed predominantly through a *strategic design* lens. It brings design methods to strategic levels, working on more complex social problems, where larger impacts can be achieved and where designers play a significant role in transdisciplinary and multi-sector projects.
- Challenges current paradigms and seeks to enable *transitions* towards societal change and sustainable futures.
- Is consistent with the general values and methods used in design in Finland.
- Aims for sustainability and well-being in Northern and Arctic communities.
- Brings awareness to the specificities of northern environments and cultures (remoteness, extreme climates, cohabitation of indigenous and non-indigenous).
- Is designing in the *margin*: acknowledging the specificities of Arctic regions and using design processes that allow the development of place-based solutions.
- Focus on user-centered, empathic, co-design and participative approaches which are advanced through *service design* methods.

Following the case study analysis, and general summary described above, the researcher organized different avenues that could be potentially interesting and thought-provoking in the Quebec context. These ideas are presented in the form of recommendations, ways in which the concept could inspire actions and reflections concerning (1) design education (2) decision makers, and (3) designers in the province. Most of the ideas could also apply to many northern regions and contexts, demonstrating that there are many areas in which AD could inspire other nations to act in a similar manner.

(1) Design Education

- Address the need for future 'northern' designers (designers that live in remote northern and/or indigenous communities); the need to develop design schools accessible to youth in remote settings, contributing to bringing the practice beyond metropolitan areas.
- Have a better understanding of our colonial history and the North in general, through education, to avoid prejudice and assumptions when developing projects in these settings.
- Train new generations of designers to work in strategic levels, and beyond business and to work in multi-sectorial contexts, be leaders and facilitators.
- Focus on creating new generations of social designers.

(2) Decision makers

- Value design as a tool for sustainable development and use it at the earliest stages of 'product' development, and see design as being more than just a styling tool.
- Invest in design in both public and private services.
- Work on developing a national design strategy.

(3) Designers (practice & research)

- Be socially responsible. Take the lead, and first, do 'good'.
- Think about issues outside of the metropolitan areas.
- Be sensitive to the dominant influence of Western thought and seek to develop projects in a post-colonial way.
- Be sensitive, listen and observe.
- Create new markets and 'products', where the focus resides in quality, reliability and viability, and where communities can express their worldview and participate in creating their own future.

## 5.5 Limits and Difficulties of the Research

Case study research has had some concerns from investigators, often perceived as a less desirable method compared to experiments or surveys. The concerns come from the believed lack of accuracy in this type of research due to the ambiguous information and the biased views of the researcher, and how it will impact the research conclusions and outcomes (Yin, 1984). This type of skepticism is common when debating over qualitative and quantitative methods and, too often, the bias can also make its way into the making of surveys and experiments. Indeed, this type of data collection methods and analysis demand rigour. A researchers would choose “the case study method because [he] deliberately wanted to cover contextual conditions, believing that they might be highly pertinent to your phenomenon of study” (Yin, 2003, p. 13 *in* Creswell, 2007). Moreover, because of the size and small time frame in which the fieldwork was conducted, this research does not presume to cover all aspects of the studied subject. Nonetheless, the study was able to meet with almost all experts involved in the strategic development of the concept and get a thorough understanding of its constituents and the underlying visions guiding their actions. Furthermore, the amount of data collected was sufficient to identify more areas of interest and future actions that could take place as well as seeing how Quebec could get inspired from ideas developed in Finland. Finally, the exploratory nature of this research resulted in identifying more areas and subjects that could be further pursued in research, education and practice.



## CONCLUSION

First, the context of this research demonstrated how design is increasingly being perceived as a strategic tool for community development, well-being and innovation, both in theory and in practice. Finland, being a world leader in this matter, has brought this notion to its northernmost regions through their *Arctic Design* concept. The main question guiding this research revolved around understanding “what is *Arctic Design*?”, in order to isolate the basic ideas emerging from this concept and identify the context that sets the ground for its development. Then, the research considered the transferability of these ideas to regions outside of the Arctic, like the province of Quebec. This case study aimed to understand the ideas and visions underlying this concept in order to assess the potential for the province to get inspired from the Finnish design-led strategies, and apply this vision to various aspects regarding its northern character. The research problem of this study is therefore mostly a conceptual matter.

The theoretical relevance of this research has demonstrated to be quite powerful, revealing new avenues for both design practice and research. This area also reflects the most prominent results emerging from this research, which are the conceptual framework for the fields of ‘northern design’, established via the investigation of the AD concept. In fact, both the theoretical lens used in this research (more specifically Hamelin’s Nordicity concept) and the case study of this research (*Arctic Design* concept from Finland) could enrich each other and allow both ideas to expand their current limits. More specifically, looking at an emerging concept (AD) through the lens of a mature one (Nordicity), and vice-versa, could enable interesting exchanges. A few ideas are described here:

*Lapland (AD) → Quebec (Nordicity): means*

First, from the design practice perspective, the case study (AD) has allowed to bring discussions on ‘northern design’ to areas that had not yet been achieved. Through its holistic and strategic vision, AD has managed to open the door to a new paradigm.

The ideas brought forward through the concept, like acknowledging local contexts, giving the North a voice, advancing transdisciplinary approaches in research and practice resonate with what Hamelin has put forward through the bulk of his work. Finland's endeavours to value a 'design' approach to public services and policy development distinguish themselves by approaches that are centred on culture, ways of life, the aspirations of local communities and their environment as a catalyst of social innovation and change. Because of the marginal position of most northern regions around the globe, AD presents itself as a lens that brings one to focus on local systems, sensitive to cultures, socio-political contexts, and environments to work towards innovative solution development. *Arctic Design* is seen to propose means to operationalize the Hamelin's ideas and take action through design-led activities. Will *La Belle Province* jump in, or miss this opportunity?

*Quebec (Nordicity) → Lapland (AD): a conceptual framework*

Correspondingly, Hamelin's vision can be beneficial for the emerging concept of AD. As AD is such a young concept, the conceptual framework and theoretical basis will most likely vastly develop in the near future, as it is still at its early stages of development, although it has already grown since its creation in 2012. Nordicity is now a mature concept and shares many similarities with AD, like its holistic perspective. It is seen as a powerful lens for the fields of design, by allowing designers to have a new perspective on this appealing subject that would profit from further reflection, and result in many opportunities for innovation. Hamelin also proposes different mindsets for understanding the complexity of the region and putting words on less tangible characteristics of the subject, like the cultural aspect. He also approached the topic of indigeneity from the opposing point of view (non-indigenous) in an extensive way; a topic that could be specifically interesting to pursue in other research, as the ways to address these issues were seemingly lacking in the collected data. Nonetheless, from a design perspective, the link between design and indigenous context should also be reflected upon in a more extensive way in Quebec, as part of a multicultural approach and way of thinking, beyond a colonialist one.

The case study method was seen as adequate to allow an in-depth understanding of the AD concept in Finland, which was seen to be very much related to various contextual elements in Finland. Through a more personal and experiential way, the majority of experts involved with the concept's strategic development were encountered, allowing the researcher to confidently portray the state of the concept at the moment of the interviews. Furthermore, the research was restricted by time, and more specifically the impossibility to conduct a thorough comparison with the Quebec design context (which could have been the subject of an entire research in itself). This avenue could be further explored.

The results of this research have been the eye-opening process of discovering the fascinating subject of 'northern design', and explore the new areas in which it can be transported. The subject is seen as a rich topic to be further developed through design research and practice. The fieldwork also allowed encounters with notably visionary and passionate individuals that truly believe in using design to create more viable and sustainable northern regions, cities and communities. These are definitely exciting times for design in this perspective, and it will be interesting to see the extent to which Finland will manage to spread the AD approach in various working groups and projects linked to northernness (perhaps even in the *Arctic Council*). Additionally, younger generations of designers have a growing interest in the social impacts of design on well-being, which is promising for the future of this field and its impact on society. The practice can be expected to take a more important role in the development of Northern communities and societies in the future. The research also demonstrated the ongoing challenge of getting design into sectors that currently don't use it, or don't quite understand it. AD is seen as a bridge between industries and the design sectors, aiming to create more platforms and common ground where these different fields and sectors (public and private sectors, academia) can come and work together. Finally, because of the exploratory nature of this research, many areas could inspire further inquiries through design education, decision-making and both design research and practice.





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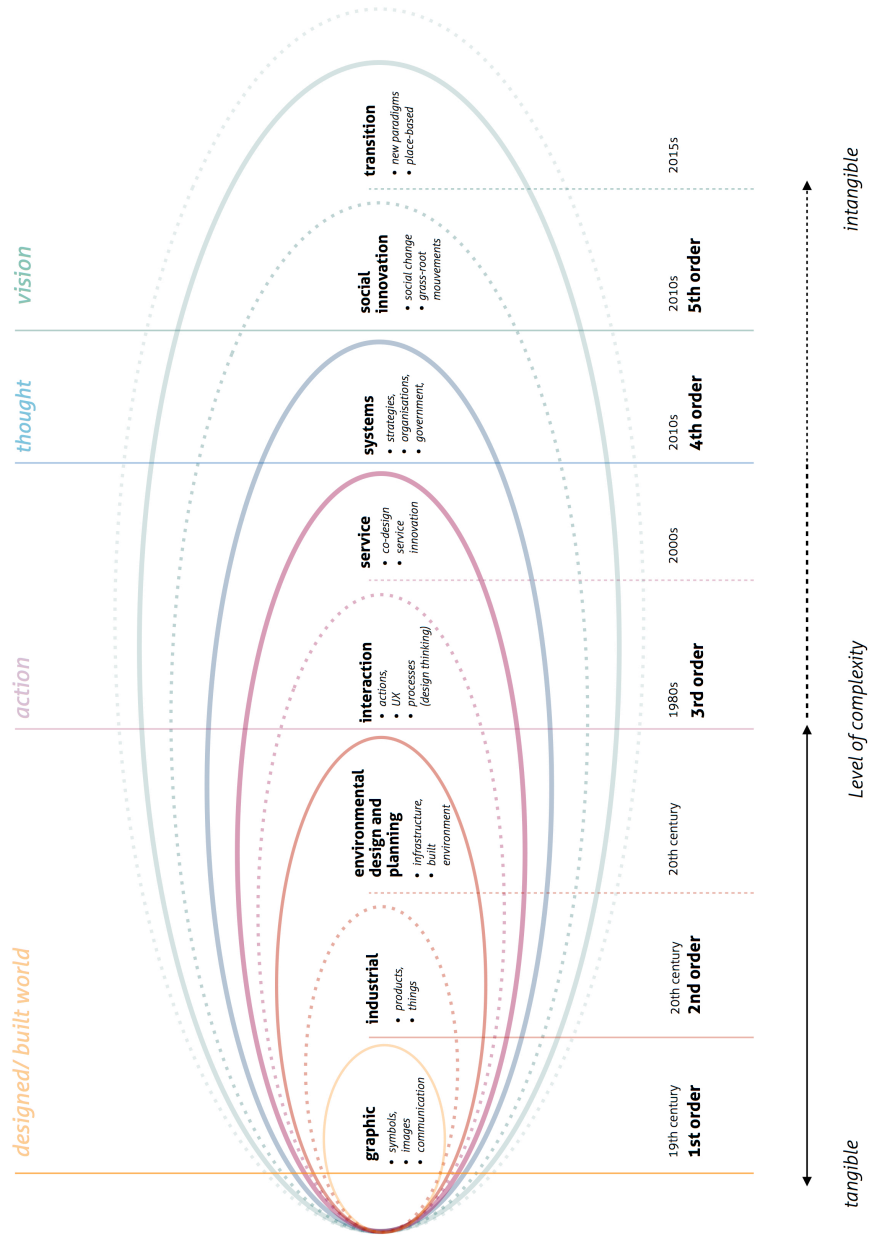
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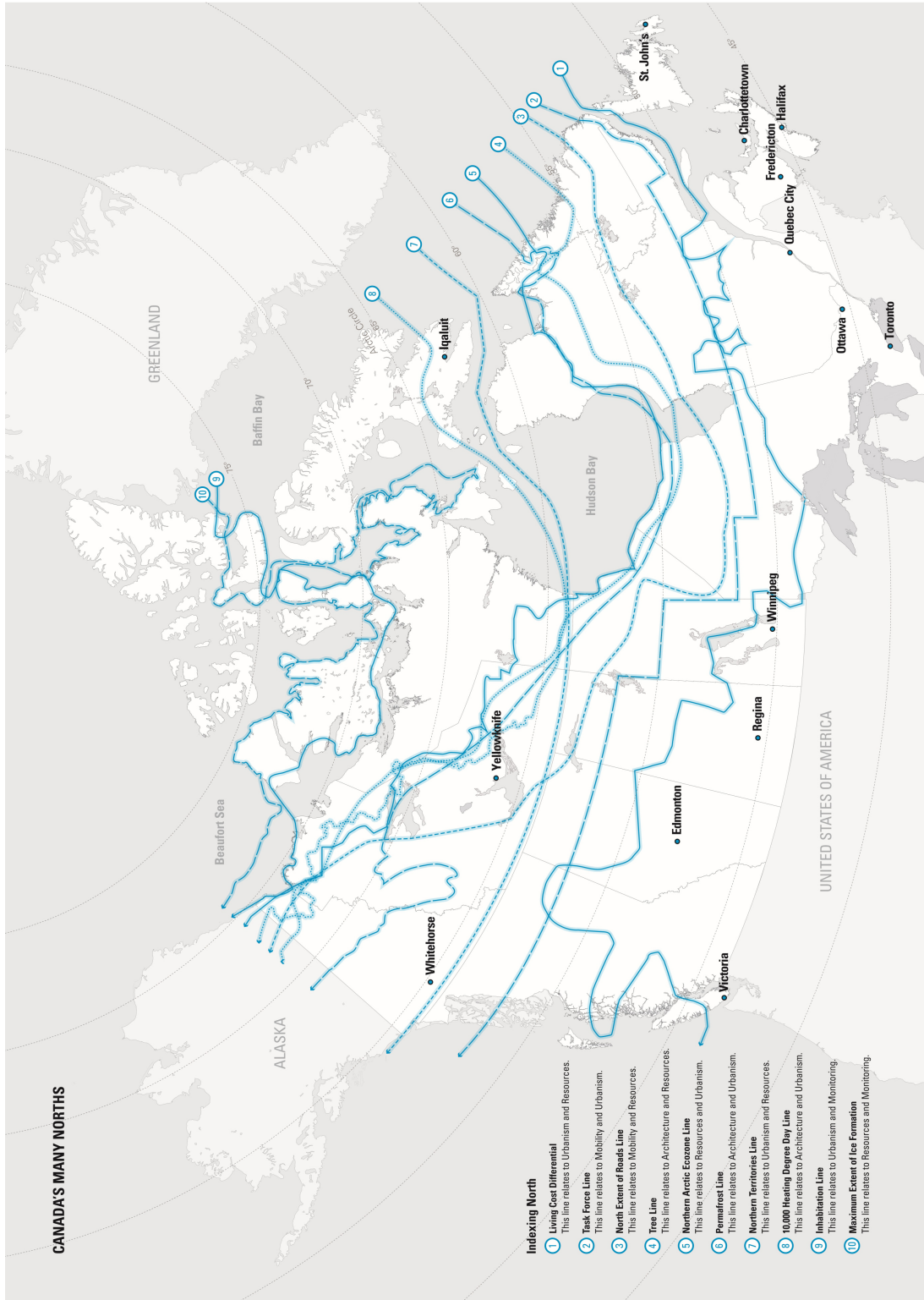


# ANNEXES

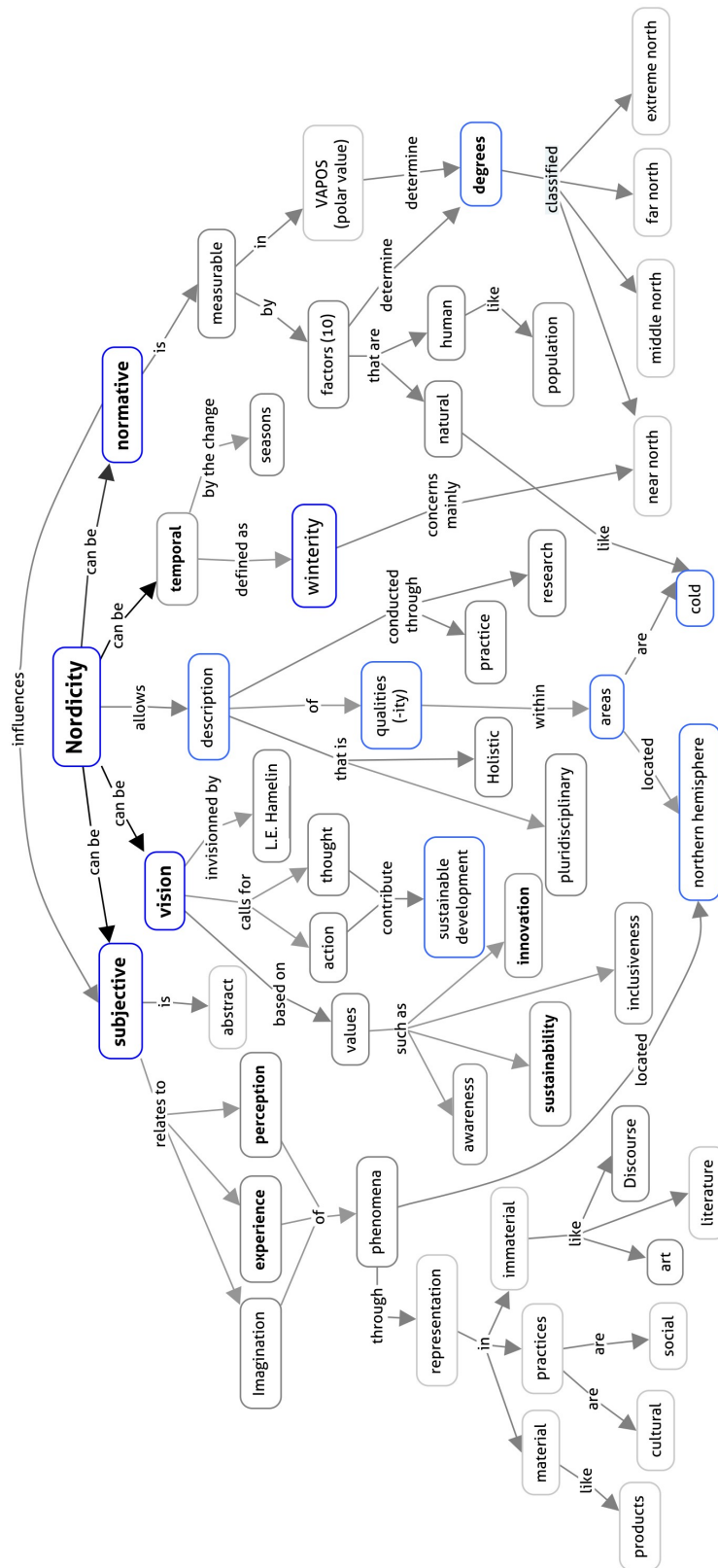
**Annex A:** The Evolution and growing complexity within design fields focus areas. Based on theories and Ideas from: Manzini, 2016; Irwin Et Al., 2015; Tonkinwise, 2014; Hill, 2012; Cross, 2011; 2001; Buchanan, 2001; 1998; and inspired from a figure by Tomoki Hirano, 2016. (Figure by author, 2018).



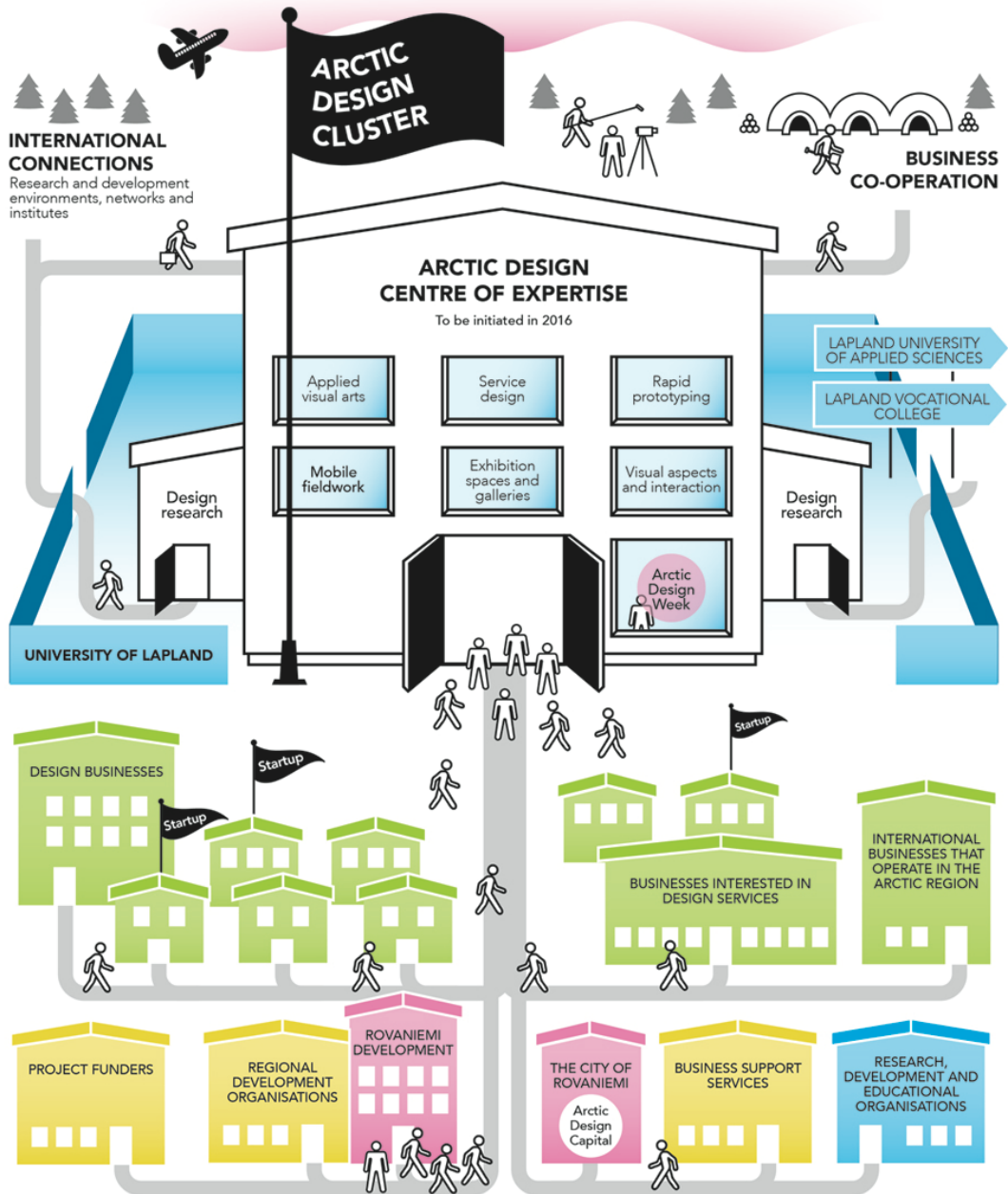
Annex B: Canada's Many North's, Sheppard & white, 2017. Courtesy of Lateral Office.



Annex C: What is Nordicity? (Conceptual map, by author, 2018).

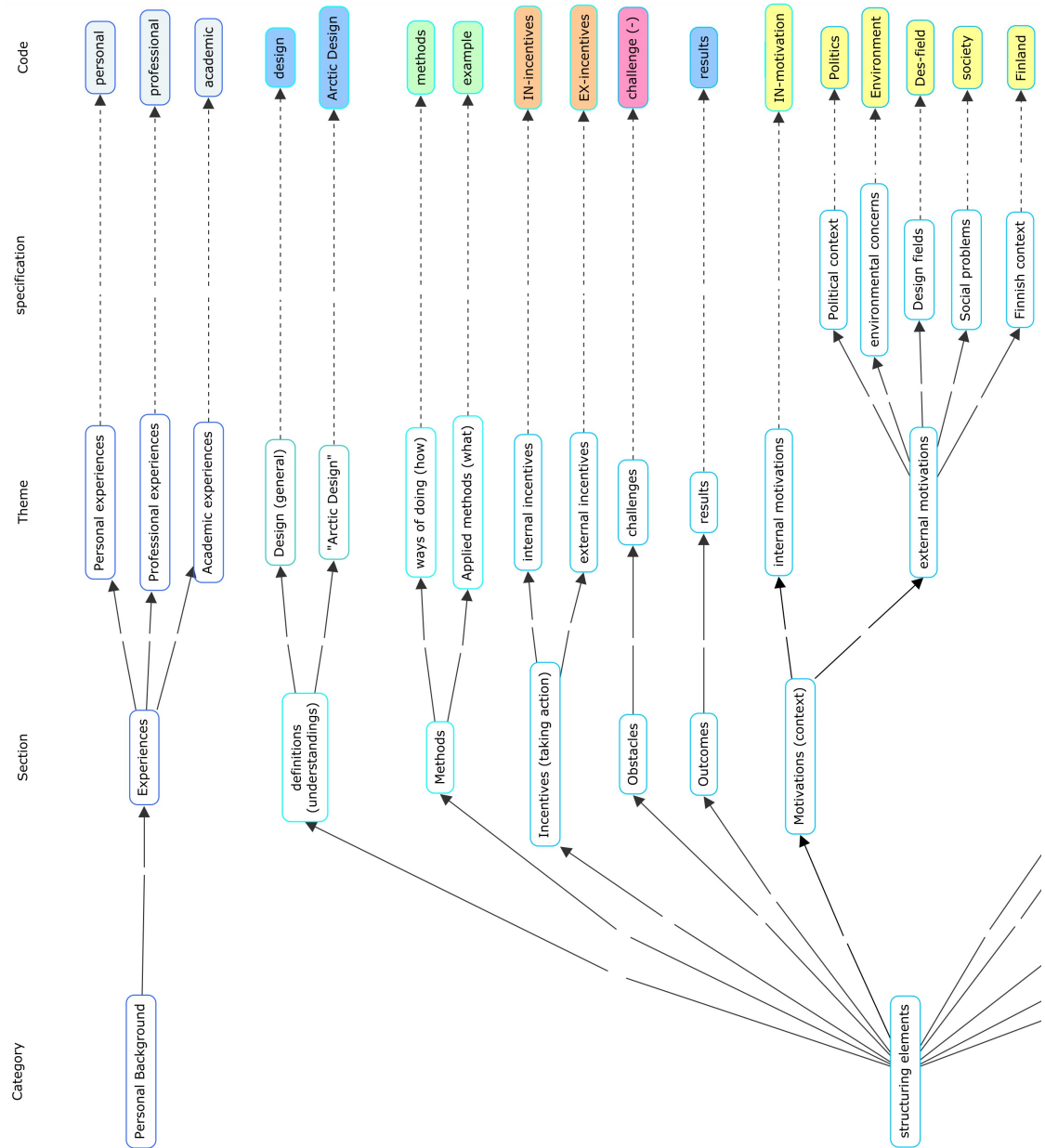


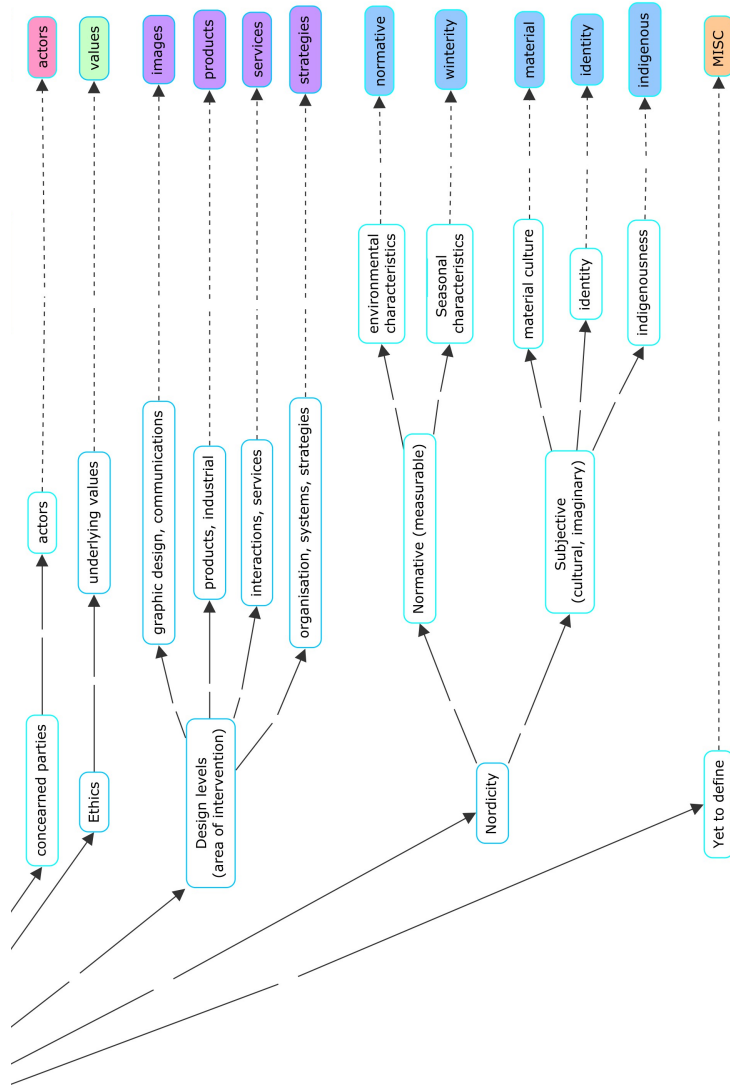
Annex D: Arctic Design cluster (by Lapland, 2015)





Annex E: AD preliminary theme hierarchy (by author, 2017)





Annex F: AD preliminary coding grid (by author, 2017)

Category (Catégories)	Section (Rubriques)	(thèmes) Thèmes	specification	Examples/ descriptions	Code
<b>GRILLE D'ANALYSE MÉMOIRE</b>					
Personal background	Experiences	personal experiences	n/a	"My 50th birthday. Yeah, it was in 2008. I turned 50 during the spring and it was the few months before that. I gave a serious thought on what would I love to do the rest of my life."	personal
		professional experiences	n/a	"I used to work as a critic for a few years before I went to work at the University of Art and Design, in Helsinki, now Aalto University"	professional
		academic experiences	n/a	"I was trained as a design historian, that was a long time ago, already, in Helsinki (University of Helsinki)."	academic
Structuring elements	Definitions (understandings)	Design	n/a	"I see design as a tool to create wealth fare. I see design as a tool to ensure, in any environment (whether it's a local environment or whether it's a country or whether it's global), design is a tool to ensure "Equal opportunities. Well, for me, design is very much a tool to create or to support developing world, in which values I have are shared"	Design
		Arctic Design	n/a	"Of course we need to define what it really is, but Arctic Design is about service design. It should be everywhere"	Arctic Design
		ways of doing (how)	n/a	"Yes but it's not a laboratory, it's a set of laboratories. Some are already existing, some will be developed and all are further developed in the faculty. So all these laboratories will be part of the knowledge " center, the Arctic Design Knowledge center. But what I think is the most important in the knowledge center is to activate collaboration between different party's in Arctic Design and to support businesses in this environment as well. Lean about Arctic Design and to be able to promote Arctic Design".	methods
Methods	Applied methods (and outcomes)	Applied methods (and outcomes)	n/a	"There is a company called Test World, in Inari, North of Lapland, which runs testing winter conditions testing for car industry and tire industry. So, they wouldn't exist unless they were very good at knowing the impact of climate change or knowing the conditions of climate. So that is one example."	example

Incentives (take action)	Internal incentives	add	IN-incentive
	External incentives	add	EX-incentive
Obstacles encountered	Obstacles	n/a	Challenge
Ethics	Underlying values	Equality, sustainability	Values
outcomes	results	n/a	results
Design levels (areas of intervention)	Graphic design, communications Products, industrial design	n/a n/a	images products
	Interactions, services	n/a	services
	Organisations, strategies, policies	n/a	strategies
Nordicity	Normative (measurable)	environmental characteristics seasonal characteristics	normative winterity
	Subjective (cultural, imaginary)	material culture	material
		identity indigenusness	identity indigenous
Motivations (context)	Internal motivations External motivations	n/a politics	IN- motivation Politics
		Environmental concerns	Environment

"It was the second year the design week had been organized and we heard the news from Helsinki, the capital of Finland, that Helsinki has applied for the World Design Capital for 2012, and since I had spent most of my career in Helsinki I knew a lot of people there, and decided to suggest the mayor of Rovaniemi for the city of Rovaniemi to somehow be connected to this work that would be done in Helsinki, if they win the bid."

"Problem is that cooperation is happening here, these gentlemen are living in Helsinki. So Helsinki wants to take over everything at this moment. It should be here"

"I think it has started new cooperation, it has started cooperation between different networks. Between businesses, the university and designers."

"So with design we try to develop products, services, concepts that would take these conditions into account and develop and we aim at, companies here aim at developing a sustainable tourism industry."

"And then in a narrow sense, what we would need to make happen in Lapland for example is that Arctic Design would need to be imbedded, not only in the narrow sense, but in companies and in their product development but also imbedded in public sector processes and strategic thinking of systems and larger institutions."

"But when you're talking about service design, so how do we design snow safaris, in the cold and snowy conditions. That wouldn't work in Helsinki area because you need to have so much snow, darkness, they don't have so much tourists. So in that sense, design is mostly different in service."

"A kikkled, yes. Exactly. That is something that has been used in Finland for at least 100 years. And it still works perfectly in the winter time. It was first designed for winter time use. But what has happened, and in a way, its probably one of the best transportation means in wintertime, in Finland still."

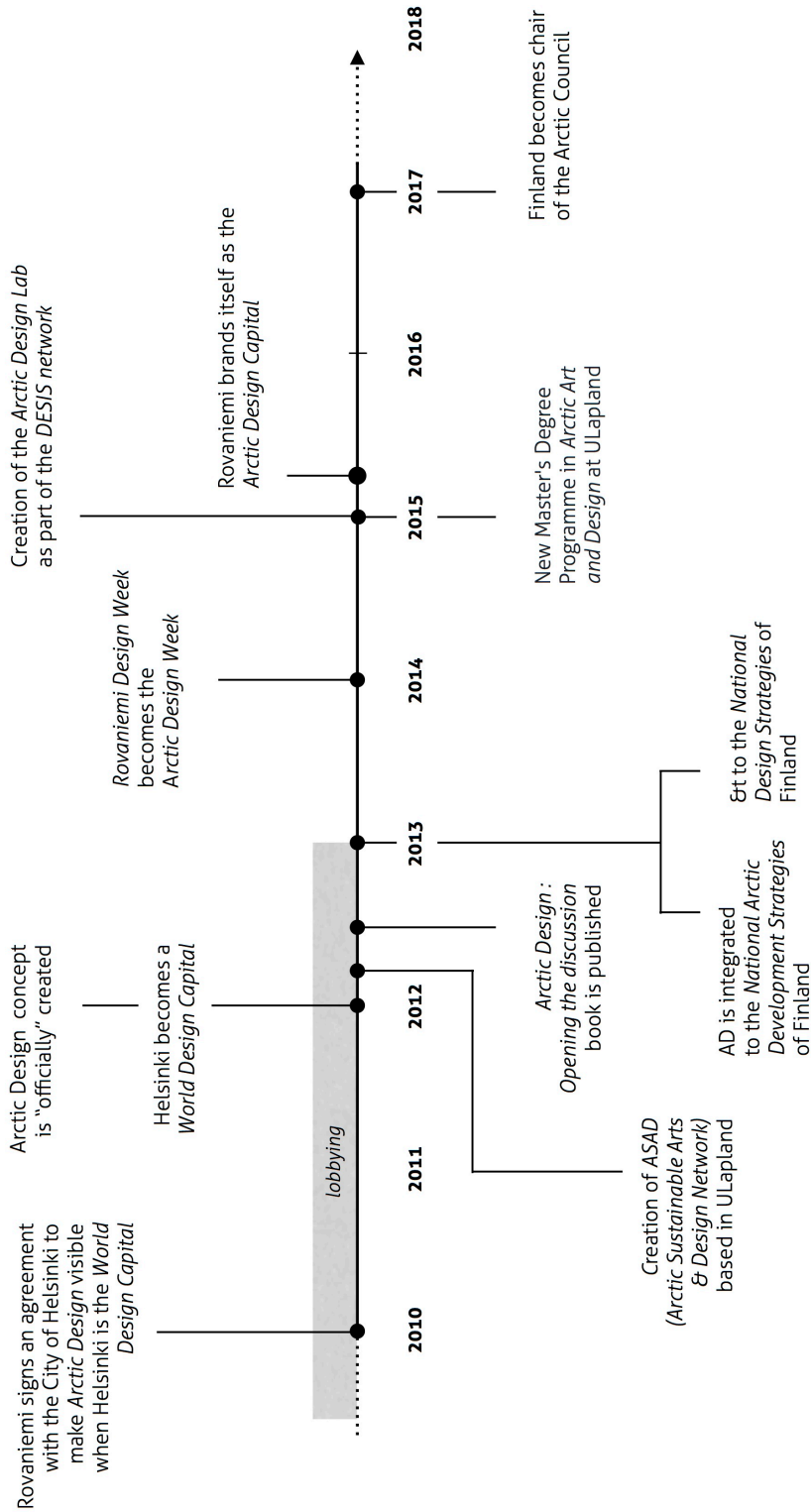
identity  
indigenusness  
n/a  
politics

Internal motivations  
External motivations

Environmental concerns

DPS field	Design fields			
Society	Social problems			<p>"More paying attention to changes in the world, more attention to the wicked problems of the world, because they are all underlined that much in the arctic."</p>
Finland	Finnish context			<p>"Yes that is also a problem in Finland also, Where in the Arctic has been a boom. The are great expectations about business and everything. But because of the oil prices and raw material prices and everything, Finland is in deep recession. 9 years after 2008. (...) Finland still goes down very deep. So this is the result."</p>
MISC	n/a	n/a	n/a	<p>uncoded content (but important)</p>
actors	actors	actors	actors	<p>This started already in 2010, and we here, together, with the Rovaniemi Development agency, I started to create a funding application, because we realized that if we were going to do a 1 year program we needed a lot of funding, so 2010, we wrote a funding application to a research program."</p>
Yet to define	Misc	Misc	Concerned parties	

**Annex G:** General timeline of the AD concept. (Figure by author, 2018).



**Annex H: Ethical certificat from Université de Montréal (CPER-16-049-D)**



**Comité plurifacultaire d'éthique de la recherche**

15 juin 2016

Madame Caoimhe Isha Beaulé  
Candidate à la maîtrise  
Design et complexité - Faculté d'aménagement

**OBJET: Approbation éthique**

---

Mme Caoimhe Isha Beaulé,

Le *Comité plurifacultaire d'éthique de la recherche (CPER)* a étudié le projet de recherche intitulé « Le concept d'Arctic Design: une opportunité de développement durable et viable pour les régions circumnordiques » et a délivré le certificat d'éthique demandé suite à la satisfaction des exigences précédemment émises.

Notez qu'il y apparaît une mention relative à un suivi annuel et que le certificat comporte une date de fin de validité. En effet, afin de répondre aux exigences éthiques en vigueur au Canada et à l'Université de Montréal, nous devons exercer un suivi annuel auprès des chercheurs et étudiants-chercheurs.

De manière à rendre ce processus le plus simple possible et afin d'en tirer pour tous le plus grand profit, nous avons élaboré un court questionnaire qui vous permettra à la fois de satisfaire aux exigences du suivi et de nous faire part de vos commentaires et de vos besoins en matière d'éthique en cours de recherche. Ce questionnaire de suivi devra être rempli annuellement jusqu'à la fin du projet et pourra nous être retourné par courriel. La validité de l'approbation éthique est conditionnelle à ce suivi. Sur réception du dernier rapport de suivi en fin de projet, votre dossier sera clos.

Il est entendu que cela ne modifie en rien l'obligation pour le chercheur, tel qu'indiqué sur le certificat d'éthique, de signaler au CPER tout incident grave dès qu'il survient ou de lui faire part de tout changement anticipé au protocole de recherche.

Nous vous prions d'agréer, Madame, l'expression de nos sentiments les meilleurs,

Jean Pouparé, Président  
*Comité plurifacultaire d'éthique de la recherche (CPER)*  
Université de Montréal

JP/RS/rs

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Pierre de Coninck, professeur titulaire, Design et complexité, Faculté d'aménagement  
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