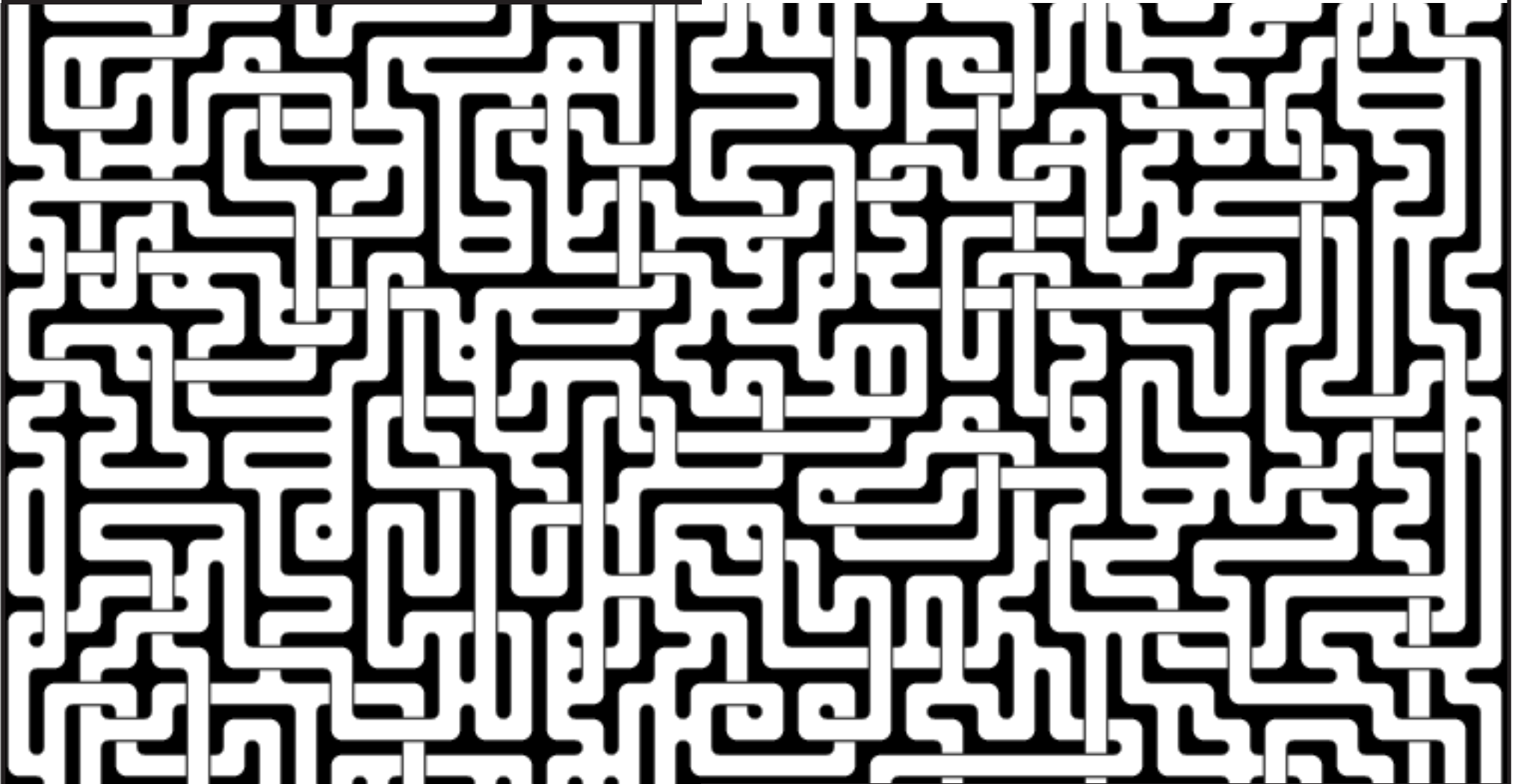


LOST IN TRANSPORTATION

LOOKING FOR A NEW FRONTIER



AALBORG UNIVERSITY, DENMARK

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Title:

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Synopsis

With increased public affluence the mode of transport relies more and more on the independent choice, the private car. A great amount of land is used for transport infrastructure to ensure adequate carrying capacity and safety. The consequence of this development is physical and social exclusion. Similarly large volume traffic flows have a damaging effect on the environment. This is becoming clearer and clearer without any foreseen changes. It is like we are on a type of 'Schizophrenic path' where almost everyone realises the trouble, but without any success in taking measures to get out of the rut.

This project concerns these matters and has scope on Icelandic context particularly on the controversy arising from a national roadway running through an urban centre, using Akureyri as a case study. Akureyri is the fourth largest urban area in Iceland. National road traffic isolated the town centre and the harbour from each other. Recently a town plan has been drafted that intends to renew the town centre by changing the character of the arterial road and reconnect the centre and the shore. The various viewpoints of 'through users' and 'local users' and the two independent street dimensions, 'link status' and 'place status' create tension between the professional disciplines and authorities involved in transport and land-use planning.

The chosen approach is influenced by the institutional analysis using mobility as a theoretical framework. The report's attempt is to identify the way transport practice is framed in Icelandic context and recommend better practice where land-use and transport planning can be integrated.

Preface

This report is the Master thesis in the Master programme Urban Planning and Management at Aalborg University in the period from 2nd February to 30th June 2009.

The report deals with the contrast between land-use and transportation, particularly how traffic issues have become a manipulating factor in the every day life of citizens in the Western world. The report's scope is on arterial street which runs through the city centre. The report title crossed my mind when I was driving on a highway - where else. Suddenly the Kinks song 'Lost and found' came in the radio.

'Lost in transportation – looking for a new frontier' captures, in my personal opinion, the concept: "We are lost in this situation but desperately looking for a new frontier, some solutions which could end in a 'schizophrenic path'". I cannot promise such a solution but at least this report attempts to analyse the problem in the Icelandic context and gives advice towards better practice.

Pictures, images, graphs and maps, referred to hereafter as figures in the report, are referenced by the Chicago style, as are the tables. Figures without reference are created by the author.

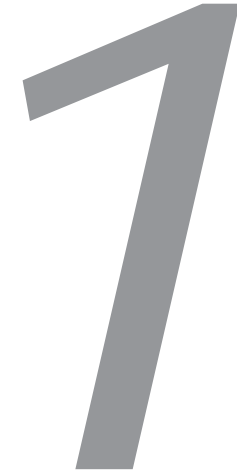
In relation to the project several persons participated in interviews. On this background, I would like to thank Árni Ólafsson, Erna B. Hreinsdóttir, Hafdís Hafliðadóttir and Þorsteinn Hermansson who accepted to take part in this project as interviewees. My colleges at Alta Consulting were very helpful. It was quite useful to have an access to people who had been involved in planning projects concerning interactions between national roads and city centre, among others the Akureyri case. A special thanks goes to my supervisor, Tim Richardson, who inspired me with this subject and guided me to fruitful information and writings.

Hrafnkell Á. Proppé

Table of Contents

1 Introduction	7	5 Vision Akureyri – Renewal of the town centre	39
1.1 Content of the report	7	5.1 Introduction of the case arena	40
1.2 Icelandic perspective	9	5.1.1 Akureyri – the capital town of North Iceland	40
1.3 The problem formulation	11	5.1.2 Local strategies	41
2 Methodological approach	13	5.2 An open assembly and international competition	41
2.1 Report structure	13	5.2.1 The process and outcome	41
2.2 Research approach	14	5.2.2 Conclusion	43
2.2.1 Institutional analysis	14	5.3 The municipal plan of Akureyri 2005 – 2018	43
2.2.2 Case study	15	5.3.1 The process	43
2.2.3 Data collection	15	5.3.2 Conclusion	44
2.2.4 Literature studies	15	5.4 The city centre planning proposal	45
2.2.5 Document studies	16	5.4.1 The planning process	45
2.5.6 Qualitative interviews	16	5.4.2 The review of the proposal	46
3 Conceptual framing	19	5.4.3 Conclusion	47
3.1 Mobility	19	5.5 Conclusions	48
3.1.1 Diverse mobility	20	6 Analysis of interviews	51
3.1.2 Mobility systems	21	6.1 The interview process	51
3.1.3 The consequences of mobility	22	6.2 The interviewees profile	53
3.1.3 Response to the consequences	23	6.3 Interview analysis	53
3.2 Transport planning	25	6.4 conclusion	55
3.2.1 Conventional approach	25	7 Findings and recommendations	57
3.2.2 Alternative approach	26	7.1 Main findings	57
4 Transport and land-use in Iceland	29	7.2 Recommendations	58
4.1 Transportation affairs	29	8 Conclusions	63
4.1.1 A brief historical review	29	9 Outlook	67
4.1.2 The today situation	31	10 Reference	69
4.2 Different disciplines	32	Appendix 1	75
4.2.1 The land-use planning system	32		
4.2.2 The transport planning sector	33		
4.2.3 National policies	34		
4.3 Critic on the governmental system	36		
4.4 Conclusions	37		

Introduction



This thesis, *Lost in Transportation – Looking for a New Frontier*, discusses the controversy arising from a national roadway running through an urban centre. The various viewpoints of 'through users' and 'local users' and the two independent street dimensions, 'link status' and 'place status' create tension between the professional groups and authorities involved in transport and land-use planning. This chapter attempts to cast light on this problem and place in it the context of research detailed in this report. At the end of the chapter research questions are stated.

1.1 Content of the report

The flow of people and goods has been important to mankind for many centuries. 'All roads lead to Rome' is a saying that has survived from the time of the Roman Empire and emphasises how important good access to the control centre of the empire was. The same is still true today. Increased transport technology has made the world a smaller place, in real terms, since the days of the Romans, despite the discovery of many new lands in the late middle ages. The massive global economic growth of the last few decades has, to a great extent, gone hand in hand with an increased flow of goods and people around the world, whether this be by air, sea or over land. The modern trend in land transportation has been to clear away obstacles, bridge fjords and tunnel through mountains and in this way to join areas together into working regions where people and goods can be moved on a daily basis from A to B. The main change in road function from Roman times is that in those days roads were

important mainly for administrative communication, and the transport of certain luxury goods to Rome. Today, on the other hand, general consumer goods and labour are transported between areas and in some cases almost identical goods are transported from A to B as B to A.

With increased public affluence and technological advances the mode of transport used has become an independent choice of the traveller. The private car has become the main choice of more affluent societies. A great amount of land is used for transport infrastructure to ensure adequate carrying capacity and safety. In some states of the USA today almost half of the land is covered by transport infrastructure. This in turn leads to diffusion of urban areas over even larger areas which call for even larger road traffic infrastructures (New Jersey DOT & Pennsylvania DOT 2008). Large road traffic infrastructures parti-

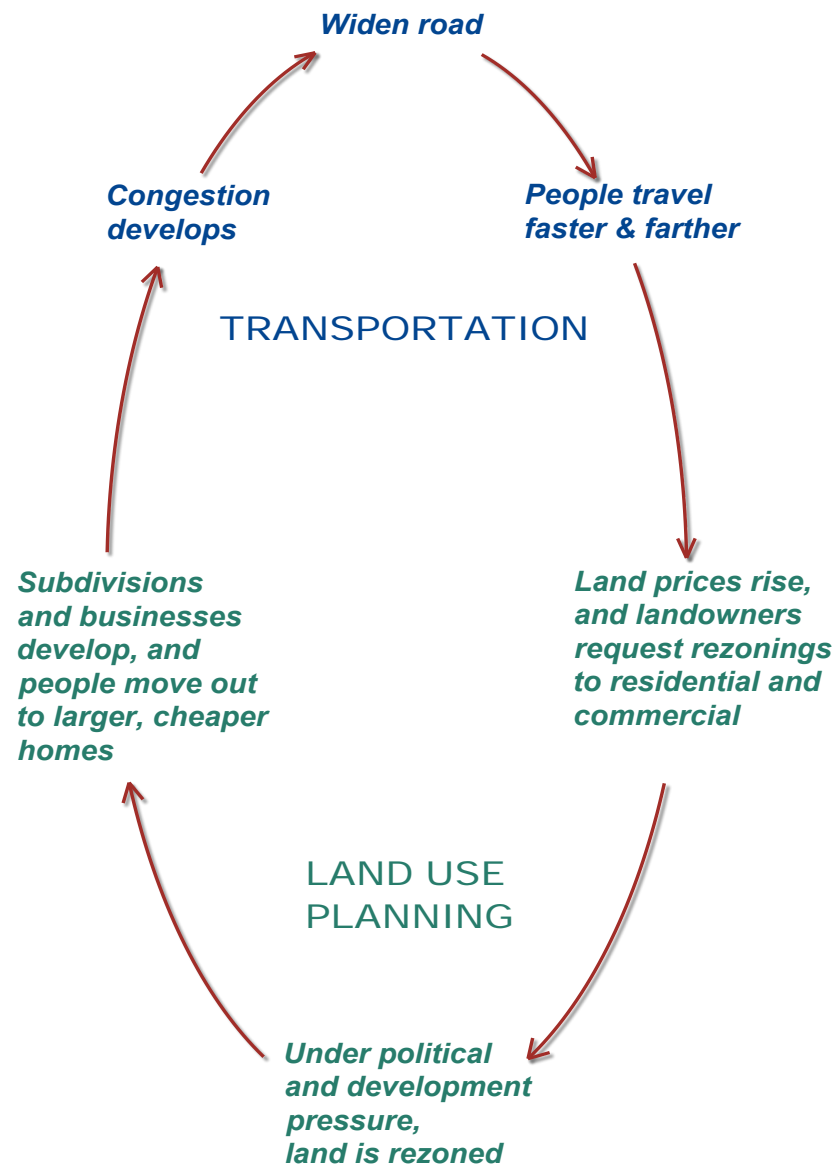


Figure 1. The vicious transportation and land-use circle. Adopted from New Jersey DOT & Pennsylvania DOT (2008, 1)

tion land into specific areas and cause difficulty for people and wildlife to cross between them. Despite a large increase in the carrying capacity of road traffic infrastructure and the increase in the number of journeys made by private cars, research shows that travel time has remained stable for the last three decades, or at around one hour per day (Lyons and Urry 2005). Therefore, people travel further to work than before, meaning that people and services are also more dispersed than before. This also means that those who cannot travel by private car, for whatever reason, have poorer services than those who can (Tolley and Turton 1995).

The consequences of these developments are physical and social exclusion. Similarly large volume traffic flows have a damaging effect on the environment; they increase greenhouse gas emissions as well as spoiling air quality (Banister 2008). These effects have been obvious for some time, for example, it is around 20 years since the traffic policy 'New Realism' was introduced in Great Britain. This policy was concerned with reversing negative effects of road traffic development and breaking the vicious cycle, described above, by increasing taxes on car owners, improving public transport and providing a better environment 'for those who travel on foot' (Vigar et al 2000). Several factors caused reluctance to accept the policy. Large parts of the electorate, nicknamed "Mondeo man" were radically against extra taxes on private cars and put pressure politicians (Barry and Paterson 2003). Also, the integration of transport and land-use planning had not been successful and research indicates there was friction between different levels of administration, both local and national, in addition to communication difficulties between professional groups in the transport and land-use domains (Brömmelstroet and Bertolini 2008).

Despite statements of intent from governments, promising to create a better quality of life in urban areas and reduce the environmental problems inherent

in modern transport systems, little has been achieved. Transportation planning, which is mainly concerned with 'predict and provide' philosophy, appears to live a life of its own and to be incredibly resilient to change. Banister (2008) states that we are on a type of 'Schizophrenic path' where almost everyone realises we are in trouble, but there is no success in taking measures to get out of the rut.

1.2 Icelandic perspective

Transportation affairs in Iceland face the same problems as described above. Certain aspects of transportation in Iceland are though different from the norm in other countries. Iceland is an island and all international transport is conducted by plane or ship. The country is large but with a small population. The population density is among the lowest known, 3,1 people per km². Industrialisation and urbanisation both began only at the start of the 20th century and the transport system is designed exclusively for road traffic.

The main period of Icelandic urbanisation took place after the Second World War when functionalist categorisation of street systems was considered the most suitable solution in town planning. Urban sprawl is therefore a characteristic of almost all urban areas. There are, however, a few older towns that have the spatial organisation and appearance of European towns, to a certain extent, with a clearly defined central district and some areas of dense inhabitation.

In certain ways the Roman saying, cited above, can be transferred to present day Iceland. It could be said that all roads lead to Reykjavík, as Iceland is an island and the capital area is the hub of the country, however this is rather too great a simplification. Despite the importance of the capital area, the primary function of the national road system is to connect the towns and villages of the country. The main route, thus, encircles the island and, therefore, all

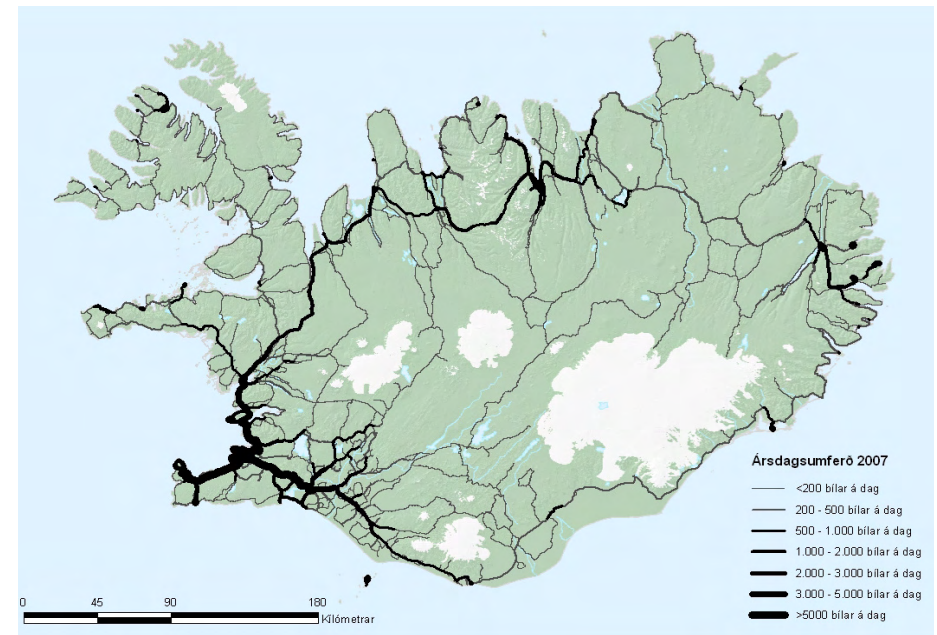


Figure 2. The traffic volume in Iceland 2007.

This map illustrates the traffic volume on national roads in Iceland; the thinnest lines show less traffic than 200 vehicles per day but the boldest signifies more than 5,000 vehicles per day. Reykjavík is in the south west corner – where the traffic volume is highest (ICERA 2009).



Figure 3. Older part of Reykjavík with dense residential areas and big workplaces. On the bottom of the picture is newly constructed national road; overpass crossroads and 1,7 km of two separated lanes, three caraway each. There are 11 overpasses crossroads in the Reykjavík area - in Copenhagen there is a one (Reykjavík 2009).

urban areas connected to this national ring road have through traffic. This is an important factor of the transport system at the national level. The governing precedent of urban planning in Iceland gives national road traffic absolute precedence and requires isolation from local road traffic, as far as possible, to prevent traffic congestion and ensure road safety.

Akureyri is the fourth largest urban area in the country, often called the Capital of the North because of its size and function as a counter-balance to Reykjavík. Akureyri has an old and beautiful central district which, in days past, developed out from the harbour area. The town grew rapidly during the last century and the urban area and various business enterprises have spread far from the old town centre and harbour. The national ring road passes through Akureyri and lies along side the old harbour area, as it has from its beginnings as an important national route. Geographical factors make a bypass impossible. A great increase in the volume of road traffic has meant that the town centre and the harbour area have become completely isolated from each other. Recently, a town plan has been drafted that intends to renew the town centre. The planning proposal is now complete and aims to revolutionise the scope and nature of the ring road, which will change from an isolated road to a town centre street with slow traffic and mixed use.

The Icelandic Road Administration ICERA has ruled against the approval of the planning proposal and believes it opposes national interests; it will cause traffic congestion on the national road and threaten traffic safety. The Akureyri case, therefore, crystallises the opposing views of the professional domains. At present, there is little to indicate that an agreement will be reached. Disagreements also exist between the official policies of both national and local authorities.

1.3 The problem formulation

Spatial planning, broadly speaking, concerns the formulation of policies considered most ideal for society in general. In recent years, the fabric of society has become more complex and, as a result, there are differing views as to which policy objectives are most desirable. The work of planners, therefore, involves mediation and the reconciliation of dissimilar groups around certain decisions for the good of the whole community. The communicative planning approach has gained a foothold in western societies and it this planning approach which is the most popular in the West at this time (Brömmelstroet and Bertolini 2008). This approach has evolved greatly in the past few decades and possesses the planning tools to tackle complex scenarios. This, however, is not true for transportation planning where there has not been any deviation from the conventional approach. There are no examples of Icelandic arterial roads planned and designed in non compliance with the conventional approach in recent years.

The isolation of Iceland means that the influence of good precedents from abroad are often slower to have an effect than in countries where there is more direct contact across borders. On the other hand, Iceland has a small population and the professional classes and administrative system are in close contact and this presents the opportunity to effect swift policy changes or system modifications. An example of a successful system modification is the geothermalization of home heating. Despite the lack of foreign precedent, it was possible to replace coal and oil as primary heating sources, in just a few decades, by harnessing geothermal energy. This, however, would not have happened so quickly had the geothermalization of Reykjavík, in the mid 20th century, not been so successful and the benefits as obvious as they proved to be (Ragnarsson 2001). The precedent was then set for the rest of the country. Several examples exist of unsuccessful system modification. Amalgamation of the municipalities is one such example. This process has taken much longer

than anticipated; the negotiating process has often been difficult and the gains for residents unclear. One of the prerequisites for rapid system change is the creation of successful precedents where benefits are clearly visible. This is an important factor to consider when planning arterial roads in a city centre.

The renewal of the city centre in Akureyri is a very interesting case, which assumes, among other things, basic changes to arterial street character. This could, have great importance as an Icelandic precedent or at least help evaluate the obstacles that block progress and protect unchanging methodology.

The situation described above leads to the following research question:

How can spatial planning integrate national transport policy and city centre land-use in Iceland?

In order to answer the problem formulation/research question, I have developed three sub- questions:

1. *Which parties are responsible for city centres and national roadways?*
2. *What obstacles hinder the integration of roles?*

The first two sub-questions are needed to layout the situation in Iceland. The integration can only been successful if the relevant stakeholders are involved in the process. It is therefore an important first step to identify who are the main actors. By identifying the obstacles, estimate its nature and evaluate its relevance, possibilities are given for detecting potential examples.

3. *How have such obstacles been overcome elsewhere?*

The third sub-question will be the foundation for the recommendation which lead to the research question answer. 'Potential' comparative studies are needful to apply useful knowledge which could help to integrate official transport and land-use policies.

Methodological approach

This chapter outlines the methodological approach answering the questions raised in chapter 1. The chosen approach is influenced by the institutional analysis in an attempt to identify the way transport practice is framed. Further elaboration on the conceptualise foundation of mobility theories and transport practise will be presented in chapter 3.



2.1 Report structure

As figure 4 illustrates the report is divided into three parts which contain the different phases of the project process.

In part I the main elements of the report are introduced. The main topic is acknowledged, underpinned and finally delimited by the problem formulation and research questions. Then the methodical approaches used to answer the research questions are explained. The first part also features the theoretical concepts and practices which frame the research. The concept of mobility is introduced, and presents how understanding of sociologic and sustainability have affected mobility and different approaches in transport planning are presented.

Part II contains the case study, starting with a broad registration on the trans-

port sector in Iceland. It then focuses on understanding the different view-points in the planning and decision process of the renewal of Akureyri's city centre, particularly regarding the design of the arterial street. Furthermore, this part includes an interpretative analysis in which the more general land-use and transport planning are studied in relation to the concepts presented in part I, and to the statements from four interviewees. This part contains both theoretical and practical approach, and is based on literature studies as well as qualitative interviews.

Part III concludes and summarises the report. It presents the suggested changes of how land-use and transport planning can be integrated in Iceland. Furthermore, the problem definition is attempted to be answered here, and the main conclusions of the project are presented. Finally, this part presents

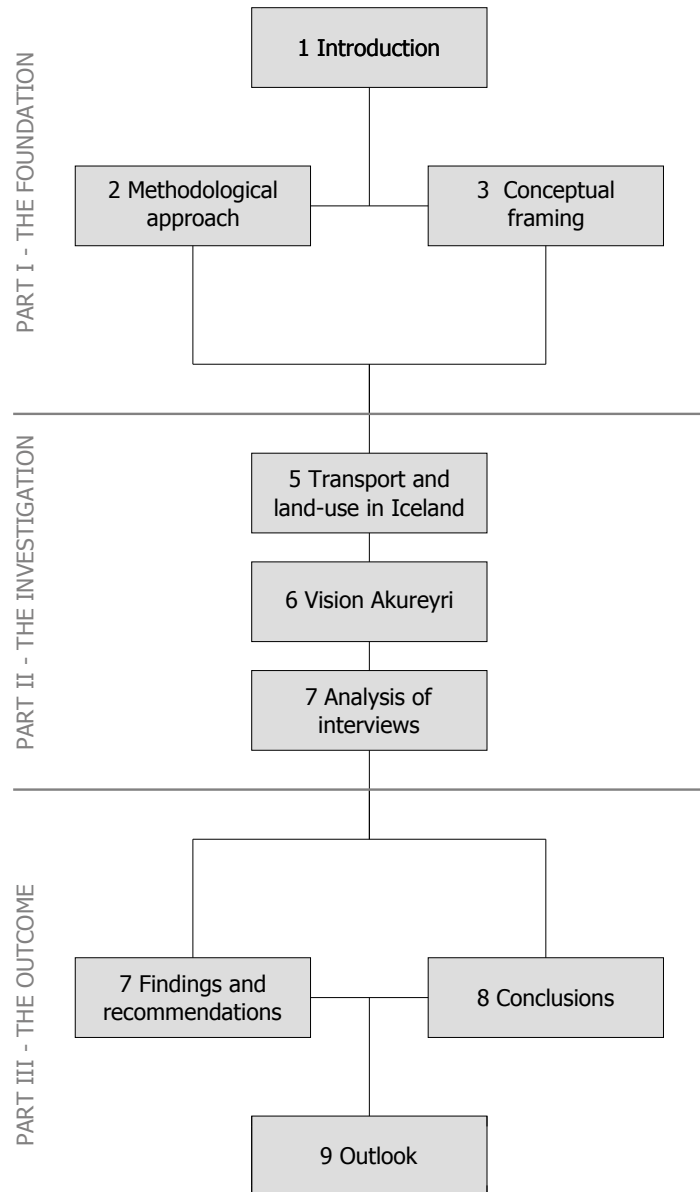


Figure 4. Diagram of the report structure.

new research areas and ideas with which the project could be expanded.

2.2 Research approach

The project is a case study, influenced by the institutional analysis approach. This chapter explains how the research question will be answered by the institutional analysis approach in the case study and the data collection methods.

2.2.1 Institutional analysis

Institutional analysis is a branch of the social sciences, which examine institutions, structures and mechanisms of order and cooperation. Particularly, how institutions rule the behaviour and action of individuals and disciplines in the society. Institutional analysis approaches appear in the 1980's in different forms in a number of disciplines (Vigar et al 2000). It deals with the effects of institutions on society by examining how individuals and groups construct institutions and how institutions function in practice.

The institutional analysis approach this project is based on is a variant of 'sociological institutionalism'. It offers a way of looking at complex policy matters by examining the daily practice of stakeholders in a specific policy area (Healey 1997). The institutional analysis has three main tools; identification of stakeholders, policy discourse and policy arenas.

Stakeholders are all those who effect development in the community and those who will be affected. Stakeholders can be government agencies, land owners and private developers, community and other interest groups, NGO's and citizens.

Policy discourses are not just limited within the language used in policy de-

bates. It also refers to cultures, practices and the 'frames of reference' of those who are involved in policy debates. Hajer (1995) argues that discourse has real power when it becomes structured and institutionalised. That happens, when discourse is commonly adopted by a broad cross-section of those in power and begins to structure the perception of the problem and the solutions mobilised by policy committees. If dominant discourse exists, it must be discredited for new one to emerge in its place (Hajer 1995).

Policy arenas in this project are first and foremost national and local administrative systems but it also refers to more open arenas, containing the public and professionals, where it is suitable.

2.2.2 Case study

The project deals with mobility, transport practice and spatial planning. These concepts are complex matters, a production of a social interaction and cultural estimation. In such a complex situation a case study is a preferable method to expound both the phenomenon and its nexus (Yin 2003). Studying a specific case gives the opportunity to examine how theoretical concepts and professional practices correlate with the real world. The theories must be suitable for the chosen case. So it must be foreseen that the case study is based on a theoretical framework that holds detailed study in terms of scientific results (Yin 2003). Therefore it is important to select a case that is relevant to the problem in question.

Case study is an important form of social science inquiry. Over the past years, case studies have been one of the most used methods of conducting research for practice oriented fields such as public policy, -administration and urban planning. As a strategy, it covers design, data collection techniques and analysis. One of case studies strengths is to enable researches to address "how"

and 'why' questions concerning real events, using diverse empirical tools, e.g. direct observations, interviews and document reviews (Yin 2003). The method is appropriate when the researcher wants to define topics broadly, to cover complex conditions and rely on multiple sources of evidence (Yin 2003) Case studies have been associated with process and outcome evaluation.

This case concerning arterial streets in Akureyri's town centre, is what Flyvbjerg (1998) terms an extreme case. This type of case will in many situations give more information about a certain matter because more actors and more basic mechanisms are activated, than with a representative case. The extreme case is well suited for making statements and generally clarifies the situation. From an understanding and reaction point of view the use of an extreme case helps to describe which underlying mechanisms cause which problems and the consequences it can have.

2.2.3 Data collection

According to (Yin 2003) evidence for case studies can be collected from six sources: documentation, archival records, interviews, direct observation, participant observation and physical artefacts.

An important principle of data collection is the collection of evidence from multiple sources (data triangulation) allowing the investigator to address a broader range of issues, which makes the case study more convincing and accurate. Evidence in this case study is collected by literature studies, document analysis, qualitative interviews and professional paradigms.

2.2.4 Literature studies

The main conceptual tools in this project derive from literature, where conceptual work by other scholars relates it to the problem field. Literature also plays a vital role in our work to investigate professional paradigms which has been

implemented elsewhere.

The key concept is mobility and particularly sustainable mobility. In order to found a better understanding on that field academic articles written by various scholars were consulted e.g. John Urry, David Bannister and Stephen Marshall.

Two practical researches were examined: 'Transport – a vision for the future' by Tight et al. and 'Transport planning and metropolitan governance' by Vigar et al; both published in the UK in the year 2000, supported by the Rees Jeffreys Road Fund.

Practice examples were mainly sought by studying three projects reports of: 'Arterial Streets for People' by the project ARTISTS (Arterial Streets Towards Sustainability). 'Towards Sustainable Urban Transport Policies' by the project SMILE (Sustainable Mobility Initiatives for Local Environment). And finally TRANSPLUS (Transport Planning, Land Use and Sustainability). Those projects are all based on various experience around Europe and are founded by the European Commission.

Brömmelstroet and Bertolini (2008) provide 'potential' comparable studies on collaboration between land-use and transport planners in Greater Region of Amsterdam.

All these literatures will be examined with the aim of how it might suit Icelandic situation.

2.2.5 Document studies

Document studies have been a great part of the analysis in this project, especially national and local white papers, strategies, reports, laws and planning

proposals. It also contains relevant papers connected directly to the case. It helps to register the case by identify the stakeholders, discourses and policy arenas. Written material provides a good research base as it is easy to gain an overview of the different knowledge claims and statements presented within it.

Official white papers, which will be analysed are:

- *The Icelandic National Transport Policy 2007 - 2018*
- *The Icelandic Road Act 80/2007*
- *Policy declaration of the national government*
- *Akureyri's Municipality Plan 2005 – 2018*

Case documents that will be analysed are:

- *Conclusions from participation meeting with general public and stakeholders.*
- *Vision-Akureyri competition specifications.*
- *Traffic analysis report for Akureyri.*
- *The planning proposal for Akureyri's city centre.*

2.2.6 Qualitative interviews

The qualitative method is used for personal interviews with selected interviewees and makes it possible to gain insight in particular viewpoints in relation to the planning of arterial streets. Furthermore, it is possible to analyse and interpret these viewpoints from the theories concerning mobility.

The interviews are standardised and semi-structured where the focus is to obtain insight into the perspectives of the interviewees, and their reflections on the new planning proposals for the Akureyri town centre as well as their own position within it. This way makes it easier to steer the interview in the selected direction. A rough sketch of the interview guide is presented later in

this chapter.

All the interviews took place by personal contact between researcher and interviewees. This method of interviewing includes a high willingness of answering, especially in relation to more personal questions. It also gives the possibility for further elaboration if the interviewees do not have the same understanding of the questions. Furthermore, it is possible to examine certain topics more intensively, although with a risk of the interview not resulting in the desired data collection. This can cause difficulties during analysis, interpretation, and comparison with other interview data. Since the aim is not a quantitative comparison of values this risk is not considered as a problem for the research.

The interviewees

The interviewees are selected because they were included in the process of revival of Akureyri town centre and thus have professional knowledge of transport design. The interviewees are stated in table 1.

Interview guide

In order to keep at least a minimum of structure during the interviews a an interview guide was designed, covering the main areas of interest in relation to the respondents' perspective on the matter (see Appendix 1). Although they are loosely formulated the interviews all have similar characteristics; starts with a few warming-up questions where the main topic is addressed and the respondents experience, in broader context, are layouted.

After the introductive part the main body follows, including topics such as arterial streets, the case approach and the planning proposal. The respondents' own background naturally shapes most of this part as it gives an opportunity to identify different perspectives on their own reflection regarding the work of the planning proposal for Akureyri's city centre.

Interviewee	Profession	Position
Árni Ólafsson	Architect	Private consultant
Erna B. Hreinsdóttir	Engineer	Public servant
Hafðís Hafliðadóttir	Architect	Private consultant
Þorsteinn Hermansson	Engineer	Public servant

Table 1. The interviewees

In the end of the interview there is a small outlook session where the questions are orientated towards the main research question, possible consensus between different professional viewpoints in transport and land-use planning and if the experience from the Akureyri case could promote such a development.

Having semi-structured interviews provides a good opportunity for the interviewees to elaborate on topics which they themselves consider important, without interrupting and controlling the flow of speech but still ensuring that necessary topics are covered. The interviews were recorded to ease the analysis.

Conceptual framing

This chapter presents the notion of mobility, which is advocated for this project. The concept of mobility is stressing how movement structures social life but also how the representation of mobility is struggled for in discursive power battles.

The chapter also presents different approaches to transport planning and why I consider it necessary to expand the frames set up by the traditional rationalistic perspective. This paradigm is associated with several problems, and the solutions that are usually advocated to solve traffic problems are criticised for having the latent effect of facilitating growth in traffic. The ontological foundations of this approach can also be criticised for resting on an insufficient foundation, which neglects the social aspect of life.



3.1 Mobility

In this chapter a sociological mobility understanding is presented, one of the theoretical foundations of the thesis approach in relation to transport planning. Mobility does not just include getting from A to B but involves a lot more complex reasoning behind movement as will be clarified in this chapter.

Different forms of mobility are introduced and related to each other, with the main attention directed towards dominant auto mobility. People's behavioural patterns while moving is the subject matter and it is shown what powerful position in our life certain mobility systems have reached and which rationalities lie behind them.

This report approaches the transport discussion in a different manner than the one traditionally used and attempt to identify how other perspective can help

to understand the social through mobility. It is also useful to cover a new trend in mobility researches that helps to estimate how the future development is likely to be.

Spatial planning deals with developments in societies. Thus the social approach in mobility enables planners to do more than just predict the future transport demands and therefore, strives for better understanding of the transport behaviour causing these demands. Social patterns that give reasons to movement of different sorts are reflected in mobility. Therefore society and mobility have mutual influence relations, thus an understanding of society means an understanding of mobility, at least partly.

Cresswell (2006) stresses the importance of the ways motilities have been

given meaning within contexts of social and cultural power. Cresswell (2006, 2) claims: *"The movement of people (or things) all over the world and at all scales are, after all, full of meaning. They are also products of and producers of power."* Meaning; power and movement are social phenomena, which roughly sum up the connections and complexity of mobility and are crucial to understand for those who wish to achieve a different approach in transport policies and planning. This approach can serve as a base for development of mobility systems rather than transport systems, which differ planners holistic understanding. It is therefore not only about a good design and layout for roads, streets and railways to facilitate transport. The influences from the location of work in relation to home do also matters. Technical developments such as virtual travel, phone communication, TV and the Internet gives the opportunity to travel everywhere one want.

To predict everything, which further emphasises the importance of understanding the underlying causes forming the mobility patterns is impossible. Particularly when it comes to influence behaviour and introduce preventive measures for traffic growth (Lyons and Urry 2006). The common tools in transport planning, presented in the next chapter, are not addressing the understanding of 'why and how' but seek simply to identify and explain the fact that people move in increasing numbers. Mobility demands are thus taken for granted and are not supported with investigation of why people do want to move from one place to another.

3.1.1 Diverse mobility

There is a long tradition for urban planners to see mobility as the main component for urban development; Ebenezer Howard's clusters of Garden Cities were linked together with railway accessibility. Le Corbusier's, Contemporary City was based on a visionary transport system, superhighways, railways and airport at its heart and finally Frank Lloyd Wright's, Broadacre City was based

on the ubiquity of the automobile. Due to the modernisms approach in the latter half of the 21. Century, transport became a key element of the urban development and was classified as a technical matter (Marshall 2001).

There are a variety of reasons for people to demand mobility and therefore diverse forms of mobility exist (Urry 2007). Most often it deals with movement of people and goods. Common examples could be travel to work, school, holiday, leisure offers, friends and family or any other destination, which are all interesting or necessary for some reason. Moving, migration and even escaping from one country to another are becoming more and more common forms of travel today. Students travel to other countries or cities to study, and the field of tourism is an increasing economic factor usually involving a lot of movement. The mobility of goods and money does of course happen for instrumentality of people. People give meaning to all mobility whereas it is their own movement between destinations or transportation to fulfil supply and demands.

Whereas mobility is caused by people the purpose changes as society develops. Heinze (2000) points out that half of all driven person-kilometres at the year 1994 in Germany, were in leisure and holiday traffic. According to the Escape theory (Heinze 2000), people seek for leisure mobility as a compensation for declining urban quality and use their mobility opportunities to get away from their everyday surroundings to experience something completely different.

Lyons and Urry (2005) point out that the time people do accept to spend on move seems to be unchanged the past three decades according to investigations in the UK. The average travel time per person has remained at around one hour per day. Improvement in mobility systems supporting particularly one mobility mode have the affect that journey speed increases which means that people travel further now than before.

This outcome is in accordance with what is explained by the law of constant travel time based on Hupkes' work (Tolley and Turton 1995). He shows that the number of trips and the travel time of people by year hardly changes but the distances they overcome increase (see figure 5).

3.1.2. Mobility systems

Mobility systems represent subjective materialises and structures such as income, access to specific mobility forms, or social status. All these structures and materialises reflect the power they inhabit or to what they empower the person who has access to them. Here the interrelation of power, meaning and movement becomes clear and altogether structures how people act in their life.

People make use of systems constantly during their life. It helps to structure and empower the individual subject and thus enables an organised and controllable life (Urry 2007). Currently auto-mobility is one of the most powerful mobility systems, next to the pedestrian, bicycle, rail system or aero-mobility. These systems have different 'routes' in history; in the past for example walking was looked down upon, and was considered the means of transport for just thieves and strangers. Later it became a habit for the rich and through transformations has become to be the pedestrian system we know today (Urry 2007). The rationales behind walking can be quite diverse. People walk because they have no other possible means of transportation, because it is free of charge, due to flexibility on shorter routes, to promenade, to be sportive or to experience the environment. The senses are crucial in this mobility system and the subject shares a closer relationship with the surroundings. In the car system travel takes place at a much higher speed, and people are therefore not able to sense the same amount of the surroundings details. Larger signs are required for people to read them at higher speed, and the scale in general becomes bigger when infrastructure is planned for the car system. The differ-

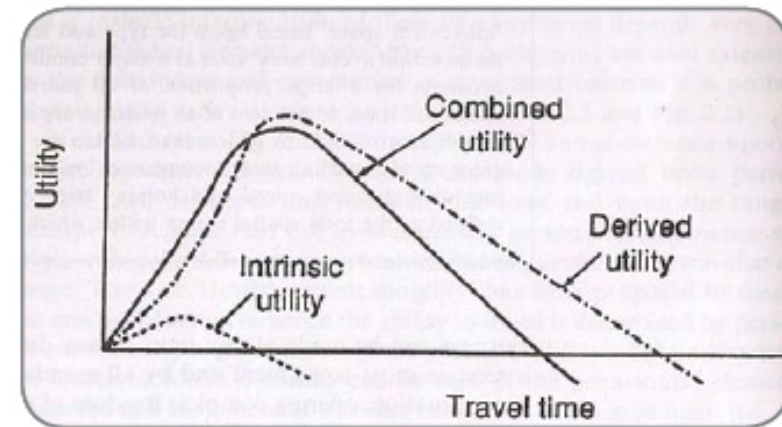


Figure 5. Utility of travel time (Hupkes 1982 in Tolley and Turton 1995, 16).

ence in scale limits the incentive for pedestrian activity at such infrastructure (Gehl 2001).

The bicycle system as another mobile form is quite differently accepted in society. In some countries such as the Netherlands that system is qualitatively high developed and many other countries orient by this success example. People are able to change their means of mobility easily and see the positive effect in the bicycle use, a sign for an integrated system in the Netherlands. Cycling is environmentally friendly and feasible means of transportation with a good amount of speed to reach destinations in a little amount of time over shorter distances. This is dependent on a physical infrastructure system, which allows this form of mobility in a reasonable safe way.

The first higher-speed means of transportation was the train system. Suddenly, people started to experience the surroundings differently through a train window, providing a panorama like view. Distant destinations could be reached, but the system was much less flexible as mass transportation and as such time



Figure 6. An extreme example of one of the consequences of blindly following a 'predict and provide' paradigm (Transfuture 2009)

scheduling became an important task for this transportation system, clock time became more and more dominant (Urry 2007). The train system has a lower status today because other means of transportation, planes and especially private cars, refine trains on speed, comfort, individuality, status potential. The aero-mobility can be considered a symbolic issue for our modern world, for globalisation and the mobile development such as speed, transit, freedom, excitement, change and many other aspects. These issues depend on a person's viewpoint and position regarding access to mobility. This is not only crucial for this form of mobility but for all mobility systems. However, the aero-mobility presents a strong example of an elite mobile development that entails exclusion and selection through different travel classes, control or selection after nationalities (Cresswell 2006).

3.1.3 The consequences of mobility

There is no doubt that car use is the dominant mobility system, both for movement of people and goods. As was pointed out in section 3.1.1 people do spend similar time on move nowadays as three decades ago. That means that the travelled distance has increased rapidly, for example 46% in a two decades period in the UK (Tight et al 2000). This means that the spatial range of access to people, goods, opportunities and service has increased.

Mobility is strongly linked to economy and journey time judged as wasted time in economic terms. Shortage of journey time is usually one of the main arguments for expensive mobility improvements. In this context, "*... the net benefit can be increased if journey times are reduced while maintaining the level of access. This can be achieved either by moving the opportunities closer to the people or by moving the people quicker to the opportunities*" (Lyons and Urry 2005, 258).

Mobility has social and environmental consequences and does affect people today as well as it will affect the next generation. The quality of local existence

gets reduced where larger and more 'centralised' substitutes come in. The dependence of car use usually causes disappearance of local shops and all kind of amenities (Lyons and Urry 2005).

Those who are below average income and cannot afford a car-based mobility will not have the same mobility opportunities as others. Their spatial range of access may be framed by mobility afforded by walking, cycling and/or public transport. And they might suffer from mobility-related social exclusion (Lyons and Urry 2005; Jensen and Richardson 2007).

The car mobility system does also contribute to physical exclusion. The car system strives for huge land use, which causes an impassable corridor for people and animals travelling on foot, inside urban areas as well as in open landscape (Banister 2008). Mobility congestions have been solved by taking more land under road space to allow free car mobility at all times of day. This approach is one of the main reasons for unattractive urban areas and minimises activities and usage in city centres (Thight et al 2000).

Since the 70's critics of environmental pollution produced by motorised traffic have entered the debate and later on global warming have provided an increasing pressure against the car society. The car system is sustained though, and the crucial point is not the car itself but the system of institutions and industries behind the car. It is this powerful system that is important to understand to provide suggestions on how to alter the sustained dominance of the car society (Urry 2007).

Irrespective of the car society, car mobility is strongly linked to declining public health. There is no doubt that car mobility increases CO² and other greenhouse gasses. Another type of air pollution affecting urban areas strongly is airborne particles, which are directly linked to the amount of car mobility. This

pollution damages health and causes many health problems as bronchitis, leukaemia and lung disease (Banister 2008).

3.1.3 Response to the consequences

Where the consequences of the dominant, car-use supporting mobility system, are social and physical exclusions as plus retrogressions of the natural and built environment, many planning researchers have encouraged radical changes in mobility. One branch, 'sustainable mobility' has particularly sought to solve social and environmental problems.

Marshall (2001, 133) says that "... *the evidence of a transport problem is clear. Added to this, the extent of the problem is growing, as can be shown with reference to historic trends in mobility*". This evidence has been apparent for some years and affected a new vision in transport policy in the UK in 1989, the so-called 'new realism'. This vision was set ahead to the so-called 'predict and provide' approach. It was not a simple policy alternative and did offer an extensive menu for policy tools, which could help to reduce the traffic (Vigar et al 2000). The policy shift was meant to focus away from large-scale road building as a response to rising traffic levels (Bulkeley and Rayner 2003).

There have been some technical solutions extracting environmental problems and concerning the support of green travel and 'cleaner' cars but there still is a contained growth in car use (Marshall 2001). The conversion of this policy did not affect mobility systems in the UK as much as it was desired and in the end of the 1990's a couple of researches was done to enlighten the obstacles (Vigar et al 2000, Tight et al 2000).

Better transport and therefore a higher level of mobility has been linked to economic growth for more than half a century. There consequently is a strong support for a high level of mobility (Banister 2007). Marshall (2001) argues

that practices are becoming more sensitive to sustainability. The continued momentum towards transport growth is supported by desire for economic growth. A major shift in mobility practices depends therefore on the possibility to decouple transport growth from economic growth.

In Marshall's (2001) opinion it is urgent to do some radical changes towards sustainability. These changes will not be solved by technical solutions. This is a matter of changing social behaviour and supporting more independent clusters in a more human-scale, which would reduce travels of goods from all parts of the world. If not, *"the city of the future will turn out to be Venice"* (Marshall 2001, 146). Hull (2005) points out that the implementations of new mobility approach suffer from *"lack of integration, divergent agendas and lack of 'fit' between different disciplinary and administrative policy areas, such as land use planning, transportation planning and sustainability"* (Hull 2005, 318-319). Banister (2008) claims transport planning being on *"schizophrenic paths, when it is clear that action is needed but no effective action is taken to remedy the situation"* (Banister 2008, 74). There is a need for paradigm shift in transport planning and implement what have been named 'sustainable mobility' (Banister 2007) or 'sustainable transport' (Marshall 2001, Hull 2005)

Sustainable mobility offers an alternative paradigm for those who investigate the complexity of cities and want to link land use and transport (Banister 2007). This approach is set for enlarging the scope of discourses and empowering the stakeholders. The goal is to create dense independent cities which are in personal scale promoting *"both high-quality accessibility and high-quality environment"* (Banister 2008, 74) Sustainable mobility should be implemented in the transport planning process by emphasising the paradigm that travel cannot be handled as a valued activity or time reliability. The main concerns are to balance the physical and the social dimensions.

In Banister (2008) opinion, 'sustainable mobility' is not a descriptive theory; it is a rational approach supported by theoretical evidence and is supposed to be impetus for social reconstructions. This paradigm is moving towards a planning system, which is objective-based that strives for implementations of policy interventions supporting all stakeholders. Banister (2008) claims, that this can happen by combining following four elements and involve public participation:

- Reducing the need of travel – substitution,
- Transport policy measures – modal shift,
- Land-use policy measures – distance reduction,
- Technological innovation – efficiency increase.

This combination is suggested to be through four factors:

Making the best use of technology in transport modes as well as in the information and transport system itself. Behavioural changes are also needed with ecological focus and acceptance for speed limits.

Regulation and pricing means, by higher fuel prices and road user charging, which reflect the external costs of transport in the actual costs.

Integration of land-use, transport planning and regulation, supporting shorter travel distances by improving levels of proximity.

Clearly targeted social pressure using personal message, raising awareness, demonstration, persuasion and individual marketing.

3.2 Transport planning

This chapter presents different approaches to transport planning and discusses why it is necessary to expand the frames set up by the traditional rationalistic perspective. This paradigm is associated with several problems, and the solutions, which are usually advocated to solve traffic problems are criticised for having the latent effect of facilitating growth in traffic. The conventional approach is supported by the standpoint that higher mobility is the driving force for economic growth as discussed in chapter 3.1. The ontological foundations of this approach can also be criticized for resting on an insufficient foundation neglecting the social aspect of life. Then an alternative approach that is presented as a desirable option for future transport planning is based on the concepts of sustainable mobility and sustainable transport, which were introduced in section 3.1.3.

3.2.1 Conventional approach

As argued in chapter 1 the traditional transport planning approach, the 'predict and provide' is in many ways inadequate to cope with many of the mobility problems in transport planning. It can even act as a constraint for a more environmental and social sustainable development (New Jersey DOT & Pennsylvania DOT 2008).

Chapter 3.1 discussed that the traditional way of thinking about and practicing mobility planning and research has been within a rationalistic approach, dominated by technical and neo-classical rationalities (Oldrup 2000). Within this paradigm mobility is mainly regarded as physical movement, which can also be seen by fact that this approach often is referred to as transport planning and research. This report define the notion of mobility in a positivistic sense; as a physical movement between the points A and B.

The conventional approach focuses mainly on finding solutions to social problems such as obtaining as high mobility as possible, reduction of risks related to the adverse effects of transport including pollution, health, noise, etc (Banister 2008). The conventional approach combined with a positivistic science standpoint is also the foundation of many transport planning tools such as demand forecasting, modelling, and cost-benefit analysis. These tools are created to predict the future traffic development and evaluate the socio economic impacts of alternative solutions for coping with the predicted traffic problems. An example could be how the expected amount of traffic is calculated in a forecast model, based on various factors; for example the economical development, demographics, and available infrastructure, etc (Næss 2005).

The 'predict and provide' approaches ultimate solution to forecasted and actual traffic congestions is to extend the capacity of the traffic system, mainly roads. The ground behind this solution is to increase the traffic flow and reduce the emission per travelled kilometre. Then it is assumed that better capacity will not stimulate the total traffic volume. The presumption of predicting the future traffic demand and providing the transport system expansions has earned the paradigm its nickname (Goodwin 2004; Owens 1995). These kinds of transport models are accused of being unable to reflect traffic reducing means and means that generate or stimulate traffic (Marshall 2001; Banister 2008).

Predictions within transport planning are generally highly inaccurate (Flyvbjerg et al 2005), but are usually treated as evidence to justify extension of the transport system. For example predicted forecasts from 1989 a gigantic increase in traffic volume in the UK for the coming years. The planning policy, based on these forecasts, was mainly focusing on providing sufficient road capacity to the predicted traffic volume (Terry 2004). Because of the effect

from stimulated traffic; overestimates in forecast are accused for becoming self-fulfilling prophecies.

The main reasons why demand forecasts dominate transport planning despite their inaccuracy is the involvement of a scientific objectivity to the decision making process, which enables professionals to avoid people without the required technical knowledge from being participants in the process. It requires access to relevant information of assumptions and data stored in the forecasting models to be able to judge the reliability of the produced results. This information is often not available or so complicated that it is nearly impossible for other disciplines to question the reliability of the calculated results (Mackett 1998). The conventional approach has a dominant status despite its inaccuracy and critique. It can be explained by what Hajer (1995, 272) calls a black box. *"[A] black box contains that which no longer needs to be reconsidered, those things whose contents have become a matter of indifference. The more elements one can place in black boxes – modes of thought, habits, forces, and objects – the broader the construction one can raise. This is perhaps one of the most fundamental discursive mechanisms".*

The above critique shows that the conventional approach to transport planning is highly challenged. The next section discusses an alternative approach based on sustainable mobility.

3.2.2 Alternative approach

As mentioned in section 3.1.3 a new transport vision was developed in the UK in the end of the 1990's, the 'new realism'. It was not a simple policy alternative but did offer an extensive menu for policy tools which could help to reduce the traffic. This menu includes among other things (Vigar et al 2000, 11):

- "traffic calming;

- enhanced provision for cycling and pedestrianisation; ...
- a greater emphasises on relationships with the land-use planning system as a means of tackling transport demand through focusing attentions on the spatial relationship of populations, economic activity and services; and
- much more limited route construction, e.g. to link residential and industrial areas or contribute to regeneration objectives."

Priority has also been given to more sustainable transport modes in the European Union white paper 'Towards a thematic strategy on the urban environment' from 2004. There a vision for sustainable urban transport was proposed (SMILE 2004).

Barriers or bottlenecks

There has been a wide gap between the aspiration and implementation, even though governmental transport policies, which was set to end the 'predict and provide' era, exist. Evidence points out that the implementations suffers from weak local governance creating conflicts between national objectives and local strategies, lack of interdisciplinary, and demand driven focus (Vigar et al 2000, Tight et al 2000, Bulkeley and Rayner 2003, and Hull 2005 cited in Brömmelstoet and Bertolini 2008).

Brömmelstoet and Bertolini (2008) conclude that lack of common language between the transport and land-use planners is the main reason for the implementation gap. The disciplines have developed separate visions focusing on either land-use or transport matters. Plans affected from these context are often suboptimal and even conflicting. Therefore it is urgent to define, and overcome, the barriers which separate transport and land-use planners

The key is knowledge, both 'tacit' and 'explicit'. According to Brömmelstoet

and Bertolini (2008) the main barrier between the two disciplines is referred to difference types of knowledge, different educational backgrounds and the prevailing epistemological that frames each discipline viewpoints.

Transport planners do usually have engineering background and base their work mainly on quantitative information and general theories. On the other hand, land-use planners do often have 'soft science' background and base their work on qualitative information and communicative processes.

Marshall (2001) illustrated the contrast between the conventional and sustainability-oriented approaches as is shown in table 2. According to Marshall (2001) and Banister (2008) it is urgent that the conventional transport approach shifts to the sustainability-oriented approach to reduce the negative impacts from transportation; social and physical exclusion and environmental effects.

Conventional approach	Sustainability-oriented approaches
Transport planning and traffic engineering specialism	More holistic, involving urban planning and environmental disciplines as well as transport professionals
'Traffic oriented' – and especially car oriented	'People oriented' – whether towards people in (or on) a vehicle or on foot
Concern for large-scale movements, often ignoring local trips (e.g. within zones)	Concern for local movements, and small scale accessibility
Concern for motorised transport, especially road transport, often ignoring bicycles and pedestrians (e.g. in traffic surveys)	Concern for all modes, often arranged in a 'hierarchy', with pedestrians and cyclists at the top and car users at the bottom
Focus on the street as a movement artery	Wider concern for the street as a public space, used for activities and purposes other than movement.
Evaluation focused on economic criteria	Evaluation takes greater account of environmental and social criteria
Evaluation directed at road user costs and benefits (e.g. time saved by drivers or their passengers)	Evaluation acknowledge non-user costs and benefits (e.g. pedestrians, residents relieved of traffic, road users benefiting from rail improvements)
Concern for transport and trip making in isolation	Concern for transport in context of overall accessibility and trip making in context of wider activities and purposes
'Predict and provide' – capacity provision based on forecast demand	Demand management – attempt to moderate demand for travel
Design based on traffic efficiency and facilitating the flow of traffic	Design based on traffic calming, slowing traffic where necessary
Segregation of pedestrians and vehicles (use of walkways, underpasses, barriers to prevent pedestrians crossing the road)	Integration of pedestrian and vehicular space where appropriate (traffic calming, shared surfaces, woonerven etc)

Table 2. Contrasting approaches to transport planning. Adapted from Marshall (2001, 139).

Transport and land-use in Iceland

4

This chapter contains a brief review of transportation and land-use planning affairs in the Icelandic context. The purpose is to set the stage for further investigation, by establishing an understanding of the development of these two domains in Iceland, and estimate if it is different from what is described in the previous chapter. The chapter also contains a document analysis of the national policies, regarding the subject.

4.1 Transportation affairs

This chapter describes the transportation affairs in Iceland. It starts with a brief historical review of how transportation has developed. Then it presents the disciplines this project deals with; transport and land-use.

4.1.1 A brief historical review

The settlement of Iceland started in the 9th century and was balanced in the 10th century. Till the late 19th century the population fluctuated between 30. – 70.000 inhabitants, in line with natural conditions. The country was geographically separated and the settlement was scattered along the shore and into the country where the land was lowest. The inhabitants were however always mobile and it was common for families to move from one quarter of the land to another (Júlíusson et al 1989).

The urbanisation and the industrial revolution were belated and only started in the late 19th century, when the movement from farms to the coastal towns started, and the population started to increase (see figure 7). In the first half of the 20th century the town and city development was in harmony with the European tradition; dense residential areas where houses were set closely to all streets. The towns and countryside were connected by arterial roads, which usually ran through the town centres and were integral parts of the urban areas (Valsson 2002). The urbanisation stimulated the first transportation revolution, which lasted from 1880 – 1930. Icelanders acquired steam ships that sailed around the island with cargo and people. Seaborne transport played the same role in the industrialisation of Iceland as railroads for most other European countries (Jónsson 2003).

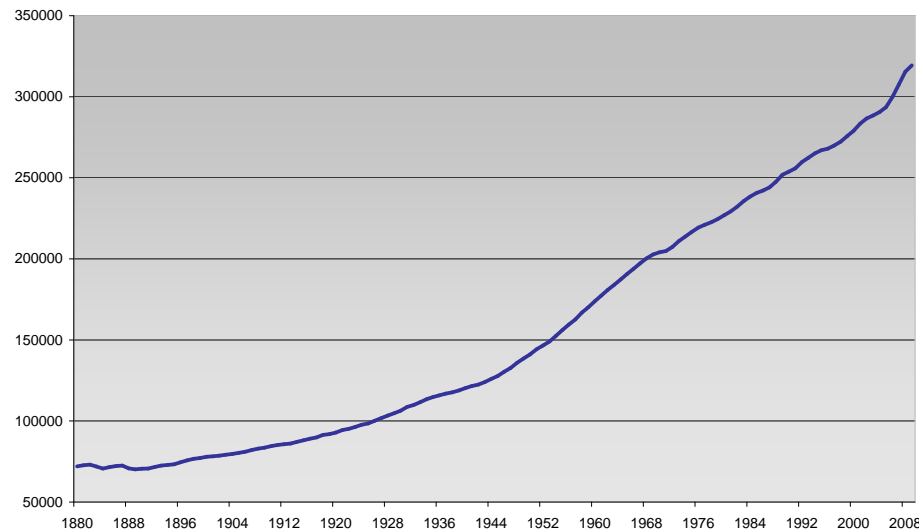


Figure 7. The Icelandic population started to increase in the end of 19th century after been fluctuating between 30. – 70.000 inhabitants since the settlement (Statistics Iceland).

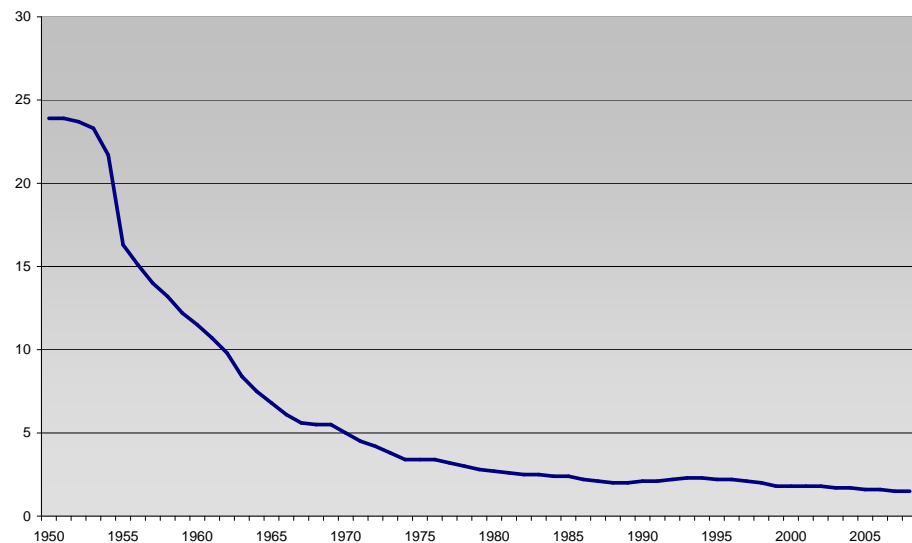


Figure 8. The ownership of private cars has increased dramatically in the wake of more affluence in the society (Statistics Iceland).

The second transport revolution started around 1930 – and is still going on. In the 1930's the Icelandic government started to invest heavily in infrastructural projects. The road system quintupled between 1930 and 1960 and several other improvements were made. The main emphasis was to connect most of the biggest towns with a road around the country. The final obstacle was overcome in 1974 and since then, until this day the main emphasis has been on improving the efficiency of the national ring road. A big jump in the national economy after 1940 made private cars affordable for the average person. At first the main shift was that the transport of people moved from sea- to car transport (Jónsson 2003). Finally in the year 2004 seaborne transport was stopped after it had declined steadily for a decade (Ministry of Communications 2005).

The trend in Icelandic transport is comparable to Great Britain, as described in section 3.1.3, although the traffic system is much simpler. As a result, the automobile has become the favoured form of transport, as figure 8 illustrates. Driven kilometres, freight and people, has also increased dramatically or by 53% in a 15 years period, between 1991 and 2005, from 1.800 million to 2.750 million kilometres per year. At the same time the population increased by 15%. Driven kilometres pr. inhabitant have therefore increased by 33% in the years 1991 – 2005 or from 7.035 km to 9367 km (Statistic Iceland).

4.1.2 The today situation

Road accidents haven't increased in proportion with the traffic because roads have improved, and the vehicles are safer. From this the ICERA recommends road improvements, and argues for more action to standardize the Icelandic road system, addressing road safety and road efficient by shortening the journey time. These actions also have other aspects or consequences which will

be addressed here.

Economical

Since the seaborne transport was disbanded, the maintenance cost of the road system has increased dramatically (Ministry of Communications 2005). More trucks on the roads have also contributed to higher safety standards and more expensive implementation on road construction.

Spatial

Many coastal towns have faced reduced population and retrogression, because they were not located close to the main transportation system. These towns have faced loss of young people, and a decline of real estate prices (Jónsson 2003). In other towns and cities, districts are excluded by road infrastructures, fulfilling the needs of the 'through user' at the price of 'local users'.

This is discussed in one of the eight points which highlight the most important subjects, that road studies supported by the ICERA should include; road studies related to environment and society should contribute more consensus between residents and the road and its traffic.

Environmental

Emission of CO₂ from transportation has grown rapidly in the last decades and it is responsible for 30% of total greenhouse gas emissions in Iceland. If this development continues Iceland will not be close to fulfil its obligation (Icelandic Nature Conservation Association 2008).

Transportation also has a strong impact on airborne pollution in urban areas. Results of airborne particle pollution studies in Reykjavík suggest that over 60% of the ambient air particulate pollution in winter time is traffic related (Skúladóttir et al 2003). Noise and airborne pollution also affects many towns where the ring road, the main trucking lane, runs through. The ICERA sug-

gested solution is to create bypasses wherever it is possible. (Ministry of Communications 2005).

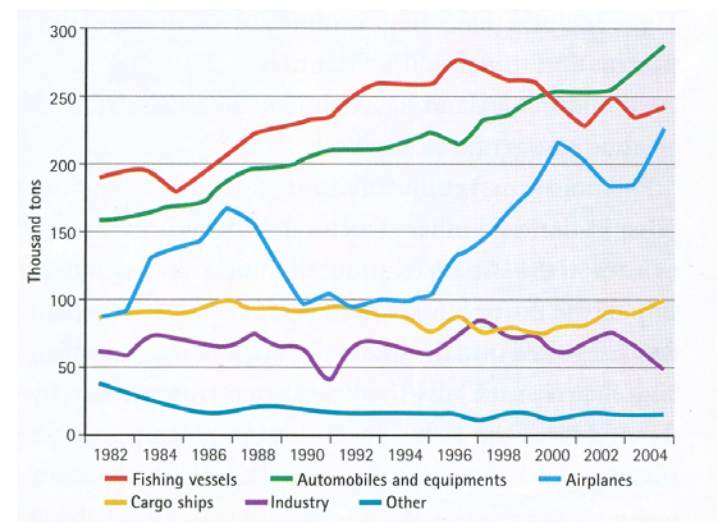


Figure 9. Consumption of petroleum products in Iceland 1982 - 2004 (Ministry for the Environment 2006, 14).

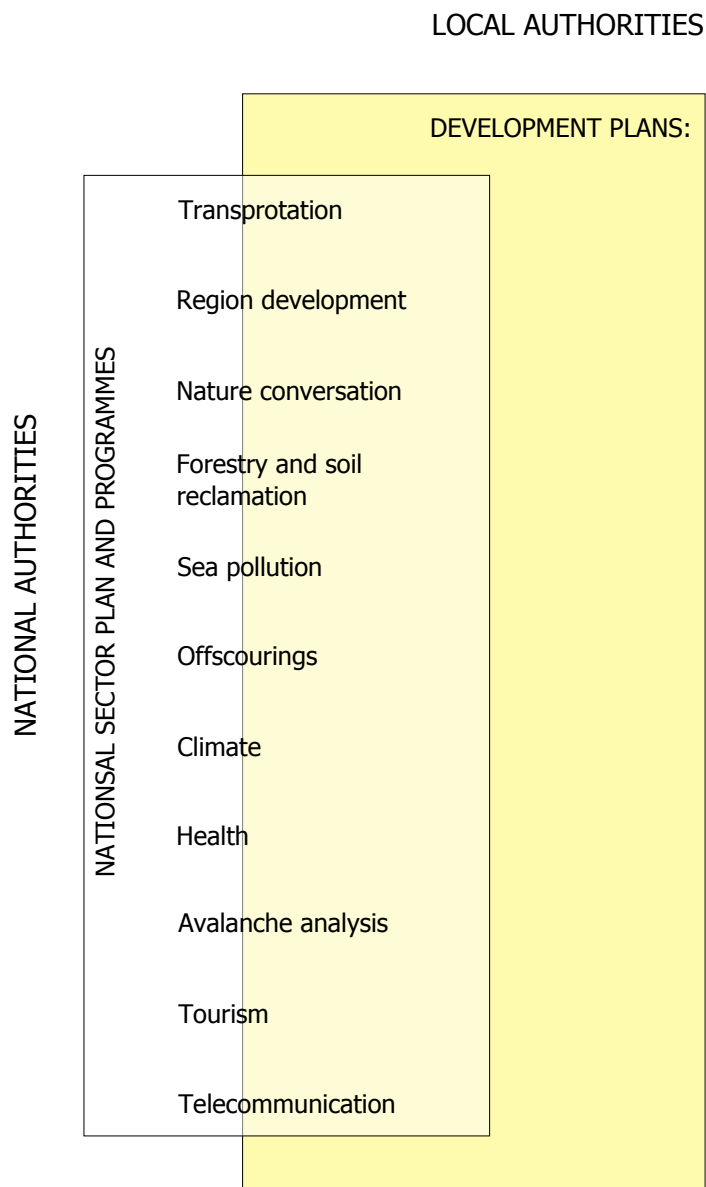


Figure 10. The two levels official land-use and transport policies. There is no holistic national planning policy, only sector plans and programmes. The local authorities are meant to integrate these policies and programmes in their development plans.

4.2 Different disciplines

This chapter contains brief overview of the two administration systems and the disciplines background. Then national policies are reviewed.

There are two levels of official policies regarding land-use plans and transportation plans, state level and municipality level as is illustrated in figure 10. There is no holistic national plan which integrates different sector plans and programs and ensures all sectors are aiming at the same direction. The integration is supposed to happen in the development plans which the localities are responsible for. In some cases the sector plans can be misguiding the local authorities as there are i.e. incongruities in the transportation plan and the policy toward sustainable development. The National Planning Agency is supposed to ensure there is a congruity between plans but do not have a direct approach to the planning process where the planning authority is in the hand of the municipalities (Althingi 1999).

4.2.1 The land-use planning system

The Ministry for the Environment has supreme control over land-use planning in Iceland, and receives assistance from the national Planning Agency. The cornerstone in the Icelandic planning system, is through local authorities whereas there is no national planning level. The municipalities are fully responsible for all planning, and many of them have very low populations and do not have good capacity to handle complicated tasks (Althingi 1999). The history of local government dates back to the tenth century or soon after the settlement of Iceland. One of the characteristic of the local government in Iceland is how many the municipalities are, in comparison to the population. There is a legal claim for a minimum population of 50 citizens in each municipality. In the beginning of 1990 the population numbered 253.785, and there were a total of 204 local governments in Iceland. At that time the minister of local

government launched a major initiative towards municipal amalgamation. It is a non-statutory process that one might say is still ongoing and the number of municipalities has since 1990 decreased considerably or from 204 to 78 in 2008 (Statistics Iceland).

There are three kinds of development plans which have legislation in the Icelandic planning system and they are linked in a hierarchy (Althingi 1999). These development plans are:

Regional plan: A development plan covering more than one municipality. The role of a regional plan is to co-ordinate policies regarding land use, transportation and service systems, environmental matters and the development of settlement in the region during a period of not less than 12 years. The municipalities can decide if they want to make a Regional plan or not and how many of them from the region.

Municipal plan: A development plan for a specific municipality expressing the local authority's policy regarding land use, transportation and service systems, environmental matters and the development of settlement in the municipality during a period of not less than 12 years. If a municipality is included in a Regional plan then the Municipal plan must be in a harmony with it. All municipalities must have a municipal plan which covers the urban and the rural areas.

Local plan: A development plan for specific areas within a municipality, based on the municipal plan and containing further provisions on its implementation. Local planning provisions apply equally to urban areas and to rural areas. Local plans must be in harmony with the Municipal plan.

Spatial planning is a young profession and there are very few professional planners in Iceland, or 24 (Ministry of Industry 2008). The planning discipline

is ruled by people with architectural and engineering education. The Icelandic National Planning Agency displays regularly a list of those who have the legal rights to do planning work. In August 2008 there were 137 agents on that list, most of them or 62% architects, 27% engineers and only 11% planners. The Planning Agency also displays a list of all the municipalities planning officers. This list shows that there is retroversion of the other professions where engineers are in majority or 72% of all planning directors and architects 14% as the planners (The National Planning Agency 2008).

4.2.2 The transport planning sector

The governance of the transport sector is centralised under the Minister of Communication. The Icelandic Road Administration (ICERA) is mandated by law to supervise road construction, services and maintenance in accordance with the current transportation strategy agreed in the parliament. ICERA also advises the Minister of Communication when transport strategies are made.

According to the Road Act the Icelandic road system is categorised into national roads, municipal roads, public paths and private roads, where the national and municipal roads make up a coherent and continuous road system that connects the country's urban and rural areas. ICERA manages the national roads which are divided in three categories, primary roads, primary highland roads and secondary roads. Primary roads are a part of the basic transport system and connect the country's urban areas with population of 100 residents or more. Arterial streets as Glerárgata in Akureyri are a national primary road (Althingi 2007a).

There was an amendment on the Road Act in the end of the year 2007. This amendment clarified ICERA's role in the planning process. A specific section the Act of roads addresses the issue of land-use, particularly the planning process and obligated road zones. This section states among other things,

that ICERA does recommendation's of all arterial roads for development plans. Local governments may propose amendments but are under no circumstances allowed to depart from ICERA's recommendations regarding road safety. The Act also dose address minimum distances for any constructions, including? buildings, from the roads. Commonly there should be a minimum distance of 30 meters from the road centreline, to the next construction. The ICERA can authorise shorter distances if there are specific occasions. The Act does not discriminate between urban and rural roads (Althingi 2007a).

After the amendment The ICERA published the guidance 'Road and planning' for local authorities and planners. This guidance is supposed to clarify the consult process when planning concerns national roads (ICERA 2007). Table 3 contains the ideal consulting process described in the guidance.

1. A national road is defined on the area
2. The local authorities ask for a consult meeting with the ICERA where first ideas are discussed and stakeholders have the opportunity to present their standpoints.
3. Stakeholders agree upon a consult arrangement during the planning process, i.e. regular reviews.
4. The ICERA standpoints are based upon road standards and other road design standards, with an aim upon road safety and efficiency. The ICERA must also follow the frame of time and cost that is illustrated in the national transportation strategy.
5. A formal ICERA review starts with a formal request from the local authorities. It must contain all proposal documents; delineation, reports and so on.
6. It is preferable if ICERA's reference is clear before the proposal is published for public comments.

Table 3. The ICERA ideal planning process (ICERA 2007, 10).

ICERA dose not have holistic road standards in Iceland, but several road types are illustrated on their webpage as guidance for designers. These road types do not differ between urban and rural surroundings. The difference between the types is based on the traffic volume per day and the amount of carriage-ways. There is a big gap in the traffic volume for the main road types. There are six or seven types for traffic volumes of 100 – 6.000 car per day, then it jumps to 25.000 cars per day. The traffic speed limit is not a variable in these road types guidelines (ICERA 2009). The ICERA have a long tradition of taking notice of the Norwegian road standard. There are many more variations of road types there, but the speed limit is never under 50-60 km/h at minimum. Both the ICERA road types and the Norwegian road standards, mostly concern rural roads and do not take into account that it is possible to have slow mixed urban traffic on national roads

Road design is mostly in the hands of ICERA and the biggest engineering firms, and the actual work is done by engineers and technicians. Almost every all the employees in the transport division are engineers. There are though a few examples of landscape architects, geographers and planners.

4.2.3 National policies

There is no national planning policy in Iceland. There are a few sector policies of which one is transportation policy, which is in the hand of the Ministry of Communication in collaboration with the ICERA. The parliament does then discuss it and finally approves. Then the national transport policy obtains statutory validity which affects the ICERA measures. Current transportation policy was approved at 2007 and is valid until the year 2018.

The Icelandic National Transportation Policy 2007 – 2018

There are five main objects for transportation development in the paper: Higher mobility, Feasible construction and maintenance, Environmental and

sustainable transport, Transport safety, and Positive spatial development.

All these categories are supported with arguments and proposals for further studies and enquiries which are feasible. Safety is stressed in every category as the most important issues in better transportation. This is the first time that spatial development is addressed in the transportation policy, hereafter better connection between urban areas (more than 100 residents) will have weight, as the profitability, in the decision process for road constructions (Althingi 2007b).

The main strategy á of the national transportation policy is to shorten the journey time, reduce logistics cost for the economy and reduce travelling costs for the public. This will have positively influence life for people all over the country. These objectives are supported with a diagram, illustrating both total driven kilometres and economic growth, which are in almost parallel line the last decade.

Policy declaration of the national government

After the parliamentary election in 2007, a new government of the Independence Party and the Social Democratic Alliance was formed. The government set its policy declaration which contained the main measures in key affairs this government wanted to work upon (PMO 2007).

The policy statement consists of fifteen main objectives, some sort of fusion of both parties platforms. One can say these objects reflect what the parties had set as priorities before the election, mainly concerning ideas which usually have a broad acceptance in the society. One of the objectives dose particularly concern transportation, harmonised residence and employment. It is in parallel with the national transportation policy where the key for better future is seen as everyone in Iceland having comparable living standards. Which means,

equal access to education, work and service. The government highlights what actions are necessary to fulfil this development. *"Improved transport facilities are a key to achieving demographic balance and reducing transport costs. Shorter distances between urban centres and safer roads create potential for larger and more viable areas to live and work in."* (PMO 2007, 4-5). This policy declaration hardly mentions any other possibilities in transportation than car use, and seems to trust in technical findings to solve the environmental issues that ensue car traffic.

This government did collapse in January 2009, after the whole Icelandic financial system collapsed in October 2008. Parliamentary election in 2009 revealed a political shift which could be interpreted as a rejection of the neo classical capitalism which had been the prevailing strategy in Iceland the last decades. The newly established government of the Social Democratic Alliance and the Left-Green Movement expressed a different point of view towards transportation in their coalition platform. *"A plan for sustainable transportation will be prepared, in co-operation with local authorities, aimed at reducing the need for private automobiles. Such a strategy will materially boost public transportation throughout Iceland and make it easier for people to travel by foot or bicycle. Public transportation will become a natural part of transportation plans."* (PMO 2009). This new viewpoint has not been put in to an action yet, but it gives a certain promise for a new emphasis in transportation affairs.

4.3 Critic on the governmental system

In the wake of the economic meltdown critics on the Icelandic governmental system became much more notably. Iceland gained full sovereignty from Denmark in the Second World War while the Danish crown was captive. 26 years earlier the land gained internal self-rule. The independence movement, which had been prominent in the end of 19th century and the beginning of the 20th, was driven on a romantic viewpoint referred on efflorescence in the permanent settlement before the country's dependency on Norway in the 13th century (Proppé 2003).

In the beginning of 20th century Iceland was one of the poorest countries in Europe, and at that stage all infrastructures, both physical and administrative were very primitive (Valsson 2003). The ebullience for improvement on living standards and the ambition to manifest the nation's capacity to stand on its own, have in a way blinked the view of the Icelandic citizens. Those few who suffer from scepticism were usually scotch by citations to transparent international measurements regarding living standards, happiness and corruption (Wade 2009).

The consequences of this blinked view are now evident. Not only has the whole finance system collapsed resulting in the indentation of public service; but also is the infrastructure system in the capital area over dimensioned, and international commitment infringed on i.e. environmental issues.

The British economic Robert Wade has done several studies on Iceland, before and during the economic collapse. In Wade's (2009) opinion one of the main reasons for the situation can be related to governmental corruption, which flourishes in the closeness. "Iceland's small size means that nepotism, patron-client obligations, and cronyism (friends of friends) are constant dangers in

civil service recruitment and promotion. In political science terminology, the danger is that the bureaucracy functions in a "neopatrimonial" way." (Wade 2009, 25). In this system ministers operate as 'small kings' adding their companions in the administration system, with or without professional experience, at least it does not count as cronyism. Many of the highest public servants remain in the system even on a permanent secretary level. The result is that the whole governmental system suffers from mistrust between political parties were "an intensely inward orientation of each ministry and a lack of cooperation between ministries assigned to different parties in the governing coalition" (Wade 2009, 26).

Wade's appraisal focuses on the economic part of Icelandic governance, it is though most likely that the same 'neopatrimonial' way affects other sectors, especially these that are related with power as land-use and transportation certainly are.

It is a harsh criticism on the Icelanders but reasonable considering the crash the nation is facing. The claim for a special national assembly, to develop a new constitution of the state which would displace the existing one, shows that a big part of the nation does not suffer from the 'ostrich syndrome' and scouts Wades appraisal. At least now there is the opportunity to do radical changes and remedy cancer in the governmental system.

4.4 Conclusions

Belated industrial revolution caused that construction of transport system did not start until in the 19th century when the car appeared the market as the future transport solution. Therefore, we never had railways in Iceland. At first people and businesses used ships for logistics and transportation. The car became the predominate transportation option in the latter part of the 20th century by better road facilities and general car ownership

The spread settlement of the whole country and the urban sprawl, support the predomination of cars in the transport system. This development has environmental impacts, noise and air pollution in the urban areas as well as the country is among those which have the highest GHG emission from transportation.

The land-use plan system is based upon policies from local authorities. The transportation system is on the other side, centralised and based upon national authorities. The legal amendment seems to support the transportation affairs in the planning process. The planning profession is rather weak whereas the discipline contain few professional planners.

The transport discipline does have engineering educational background. The educational background of the land-use planning discipline is more diverse but most of those who deal with planning matters are engineers and architects, urban planners are in minority.

National policies are not common in Iceland and there is no national planning policy. The national transport policy is one of the few examples to the contrary, and the current one is mostly aimed at road safety and efficiency transport system to achieve higher live standards across the country. There is evidence

for changes in transportation emphasis in the new national government coalition platform, addressing sustainable transport as the key for the future.

Sheltered by young democracy and the 'ostrich syndrome', mistrust and nepotism in politics have infected the governmental system and caused a lack of cooperation between ministries, agencies and public servants.

Vision Akureyri – Renewal of the town centre

5

This chapter contains the case context and identification of key stakeholders and policy discourses. The process of renewal of the city centre has lasted nearly five years and is now in the final phase. The process can be divided into three parts as figure 11 illustrates. The three gray frames represent the main milestones in the first part, which starts with entrepreneurship and ends with international competition. The pink frame represents the first step in the formal planning process, revision of the municipal plan. Then the four yellow frames represent the local planning process which starts with a creation of a broad interdisciplinary planning team and ends with the ICERA's (Icelandic Road Agency) review. These parts will be discussed in more detail later in this chapter which starts with a brief overview of the case arena, Akureyri.

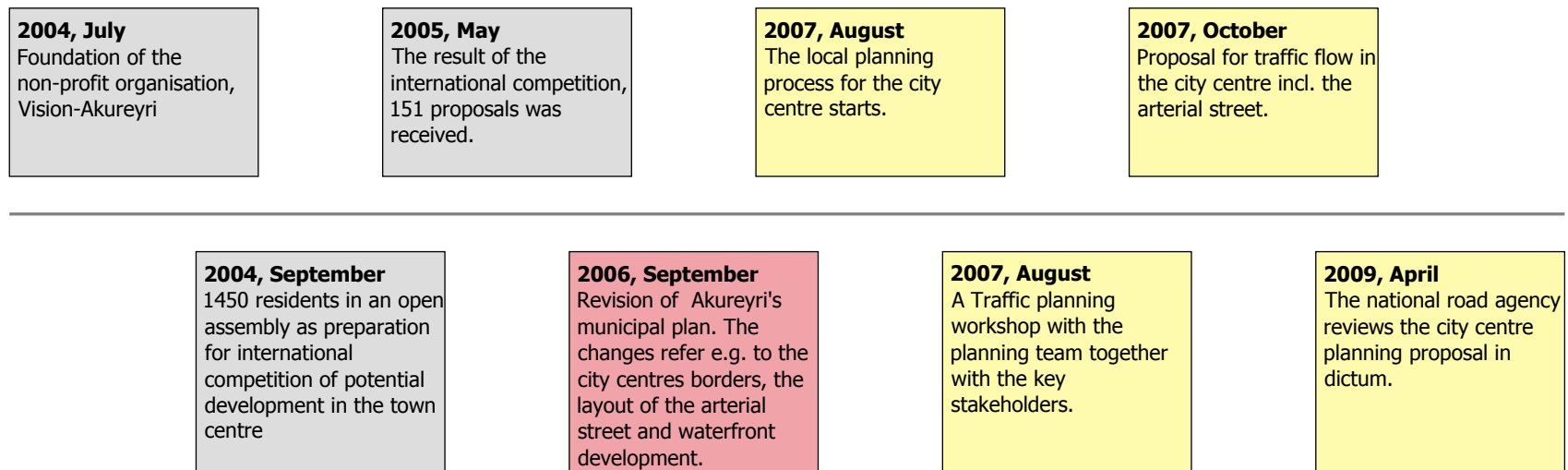


Figure 11. The case timeline.

5.1 Introduction of the case arena

This chapter describe the case arena, Akureyri, and puts transportation and land-use in context to the case.

5.1.1 Akureyri – the capital town of North Iceland

Akureyri is the centre of culture, education and leisure activities in North Iceland. With a population of about 17.200, the town is by far the largest in Iceland, outside the Reykjavík capital area. Urbanisation started in Akureyri, along the bank of Eyjafjörður, in the 19th century as Danish merchants built their shops and storehouses there. The town developed fast during the 20th century; depending upon agriculture related industry, fishing operations and commerce. There are obvious examples of Danish influence on the town and it had occupied a strong position among Icelandic towns for its fertile and lush vegetation (Akureyri 2006).



Figure 12. Map of Northern Iceland, Akureyri is underlined with red. (Samsýn)

Akureyri developed on a traditional thoroughfare. The national ring road mentioned in section 4.1.1. runs through the town as an arterial street and has expanded with the growing population and increased road traffic.

Akureyri has always been one of the largest towns in Iceland and a strong counter weight to the capital city, Reykjavík. In the beginning of 20th century it was the second largest, after Reykjavík which had nearly five times more inhabitants. Today Akureyri is the fourth largest town in Iceland and Reykjavík is now nearly seven times larger than Akureyri. The three largest towns are all in the Reykjavík capital area which has grown extremely in the last decades (Statistic Iceland). Akureyri's counter weight to the Reykjavík capital has therefore toned down. Nevertheless, Akureyri is still the only town outside the Reykjavík capital area which has the possibility to offer vibrant city life; university, theatre, culture, retail and night life.

Extensive coastal land reclamation during the 20th century, the construction of Highway 1 and the relocation of port facilities, have diminished the significance of the town centre and it has become distanced from its waterfront. Therefore, the town centre has witnessed a decline in prosperity, as the town has expanded and commerce and services have relocated to its periphery. This development has further undermined the commercial viability of the town centre by creating competing destinations for shopping and business. The result is that the town centre area as it now stands, is under-utilised and no longer fulfils the needs of the community it serves (Vision-Akureyri 2004).

A traffic study on the arterial street, Glerárgata, showed that little more than 10.000 cars drive the street per day, and the rush hour embraces 10% of the daily traffic (Línuhönnun 2007).

5.1.2 Local strategies

The local authorities have set an objective to reduce car traffic. In the current municipality plan the aim is to enlarge the group using public transport and pedestrians. The municipality plan places emphasis on mixed land-use and better conditions for pedestrians as well as improvements in the public transport system to slow down increases in car traffic (Akureyri 2006).

Concerning public transport, the local authorities in Akureyri have run a bus company for several years to serve the residents. In the late 80'ies the usage of the public transport started to decrease. As a response to the above mention objective and lift up the usage of public transport, the local authorities decided to give the bus fare free for all residents in Akureyri. As shown in figure 13, the number of passengers has increased dramatically since then (Akureyri 2009).

5.2 An open assembly and international competition

5.2.1 The process and outcome

After long observation of the town centre development the Vision-Akureyri was established in 2004 as a non-profit initiative by a consortium of 12 private companies under the stewardship of Ragnar Sverrisson, chairman of the Akureyri Retailer Association. The primary objective of Vision-Akureyri was to achieve the revitalisation of the town centre to ensure its continued role as the primary centre of commerce, culture, education, services and tourism outside of the Reykjavik area (Vision-Akureyri 2004).

The organisers of Vision Akureyri conduce towards an international planning competition and considered it important that the premises for the competition be compatible with the attitudes of residents, so as to ensure that the outcome of the competition would meet with the approval of townspeople. An Open Assembly was held in the Akureyri Athletic in September 2004. Attendance was

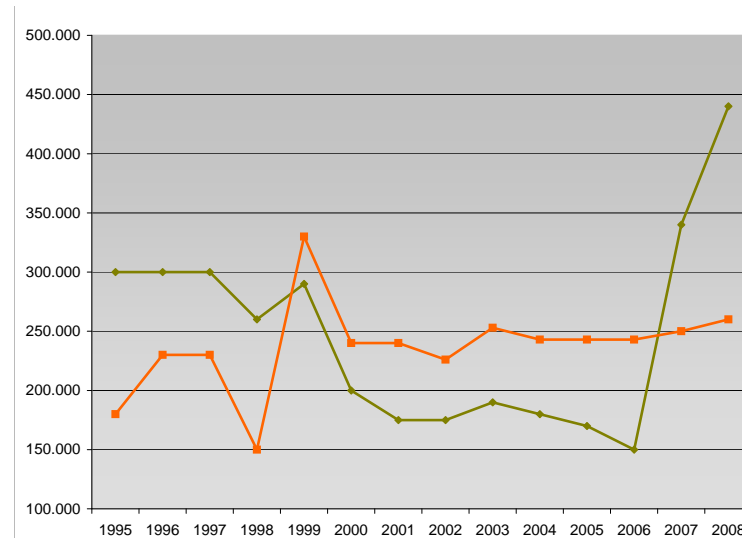


Figure 13. The green line shows number of passengers, the orange driven kilometers. Adopt from (Akureyri 2009)



Figure 14. Akureyri; the arterial road separate the old harbour and the city centre. The construction of the cultural house has not started. (Geirsson 2004).



Figure 15. The first prize proposal for renewed city center (Akureyri 2006, 36)



Figure 16. Recovered connections to the harbour was evaluated as one of the main strength of the proposal (Akureyri 2009)

excellent or 1450 residents from Akureyri and its hinterlands. Before, In preparation for the assembly there had been effort to ensure as good a participation as possible. The primary aspects of the publicity work were advertisements in printed media – chiefly those limited to the region, but also including national publications – advertisements on the television station Aksjón, a promotional brochure that was distributed to every home in Akureyri, and the project's website, which transmitted news on the progress of the project and provided interested parties with a forum for sending in comments. In addition, letters were sent to a selected group of stakeholders, as well as to nearby municipalities and government institutions in the region.

It became clear at the Assembly that Akureyri residents deeply regret how much the town centre has declined in recent years. The number of retail stores has dropped, and central Akureyri is generally considered rather shadowy, windy, and unattractive. The predominant opinion was that this trend could be reversed by increasing the number of residential buildings in the town centre, establishing a grocery store there, and making the area greener, more sheltered, and more colourful. With this accomplished, services and social life would flourish, and empty stores and service buildings soon be occupied again. The assembly did also express a wish for a better link between town centre and the proposed Cultural Centre by the waterfront, on the other side of the arterial street, Glerárgata (Vision-Akureyri 2004).

Following a public consultation exercise which was unprecedented in scale and involvement, an international design competition was held in 2005. The competition was conducted in cooperation with the Association of Icelandic Architects. The competition attracted 151 entries from around the world. The first prize proposal, from Graeme Massie Architects from Edinburgh, was one of the few proposals that strived for radical changes of traffic arrangements in Glerárgata. The proposal involved a recovered connection with the sea-

shore and by creating a sea inlet and changes in the character of the arterial street, Glerárgata and develops building blocs on both side of the street (Vision-Akureyri 2005).

Graeme Massie Architects were subsequently invited to develop their proposals for the core town centre area on behalf of the municipality of Akureyri. First the municipal plan was reviewed in harmony with the winning proposal. The process of revision of the municipal plan is presented in chapter 5.3 and the local plan process in chapter 5.4.

5.2.2 Conclusion

The key stakeholders in the open assembly and the international competition are local entrepreneurs, most private retailers, and local authorities. Professional consultants, local, national and international as well as the public, also play a big role in this process.

The open assembly is used systematically to gather information on the town centre situation and possibilities. The main outcome is that the town centre is



Figure 17. Expansion of the city centre. The red line mark the newly defined border in the municipal plan, blue is the former one (Akureyri 2006, 36).

in declining phase but have great potential by development around the arterial street, Glerárgata and connection to the seashore.

5.3 The municipal plan of Akureyri 2005 – 2018

The ideas of extension of the town centre towards the shore required revision of the municipal plan. This chapter presents this process, transportation matters stressed particularly, and the main stakeholders, and policy discourses and arenas.

5.3.1 The process

The review of the municipal plan took place in the latter half of the year 2005 under direction of the planning director in the city of Akureyri and Árni Ólafsson architect in Teiknistofa Gylfa Guðjónssonar. Gathered information from the open assembly was used in the planning process. A specific chapter which covered the town centre was conducted by Atla consultants in cooperation with a steering group from the Vision-Akureyri project. The aim of a specific town



Figure 18. Traffic per day, estimated from countings in April 2007 (Línuhönnun 2007, 2)

centre chapter was to expand the definition of the town centre, and develop a planning brief which would frame a new local plan based on the winning prize proposal.

According to the planning act it is an obligation to ask appropriate stakeholders for their reference. The ICERA did not add in any reference in the review process and the national authorities did legitimatise the new municipal plan. (Akureyri 2006)

The reviewed vision is that the city centre will become a hub for daily life and culture in Akureyri and the whole of Northern Iceland. The townscape is supposed to be attractive and stimulate vibrant settings for residents and visitors with direct connection to the seashore.

There are four objectives drawn up for the city centre; attractive environment, mixed land-use, good connectivity to other districts and nature, and appealing streetscape. The arterial street, Glerárgata is particularly stressed in the latter two objectives (Akureyri 2006).

Good connectivity to other districts and nature

There should be improvements on the connection, physical and visual, between the city centre and the seashore. There shall be good crossing at the arterial street, Glerárgata for people on foot.

People shall be able to choose the transport mode they prefer for travelling to and within the city centre. The arterial street, Glerárgata, shall be a direct connection for car traffic to and through the city centre. It is assumed that the street layout will change, but the design must allow good car traffic flow. There shall be save connection between the city centre and the waterfront for people on foot. The local authority will contribute quality design in the local plan process in consult with the national road agency.

Appealing streetscape

The city centre streetscape has an important role in creating attractive urban spaces, that improve the quality of the town centre environment to stimulate residents and visitors. The character of the arterial street, Glerárgata, will be changed so it serves both 'local users' and 'through users' or people on foot as well as car traffic. The changes consist of different street layouts, e.g. fewer carriageways, different surface materials, planting of trees and different lightning. Development of building blocks on both side of the arterial street, Glerárgata, is also presumed.

The speed limit inside the town centre boundaries is suggested to be 30 km/h. The arterial street, Glerárgata, has multiple roles. It is a principal traffic artery and through-route it also connecting the residential areas in north and south from the city centre. Besides it have an important role as city Centre Street and its character will have decisive impact upon the connection between the city centre and the cultural centre by the waterfront and the seashore. The redesign process should account for ensure traffic safety and efficiency as well as the traffic should be slowed down.

5.3.2 Conclusion

The main stakeholders in this phase are the local authorities together with diverse consultants, architects and land-use planners. The national authorities did legitimise the new municipal plan which contains clear vision on changes on and around the arterial street, Glerárgata.

The revision expanded the border of the city centre which now contains a part of the arterial street, Glerárgata. It also emphasis changes in the role of the national road, from being a car use street to be mixed use street. Then development along the waterfront was confirmed.

5.4 The city centre planning proposal

After the local election in May 2006 the local authorities decided to move forward with the proposals for the renewal of the town centre. The project approach was international, multidisciplinary and professional. The project team included:

- Alta consulting inc. from Iceland: Project manager, planning consultant, editors of local plan proposal.
- Graeme Massie Architects from Scotland: Design team leader, principal architect
- Kanon Architects from Iceland: Technical Assessor, review the proposal design at milestones.
- Línuhönnun engineers from Iceland: Traffic engineering, design.
- Alan Baxter & Associates from the UK: traffic engineering design and advice.

The project organisations chart is illustrated in figure 19.

5.4.1 The planning process

The planning process was divided in four parts which can be summarised as follows:

1. Option Appraisal, for connection between the Harbour and Hafnarstraeti, current main street in the town centre.
2. Traffic Study
3. Planning Proposal
4. Public Realm Strategy

Hereafter follows a further description of the traffic study, the process and which stakeholder was involved.

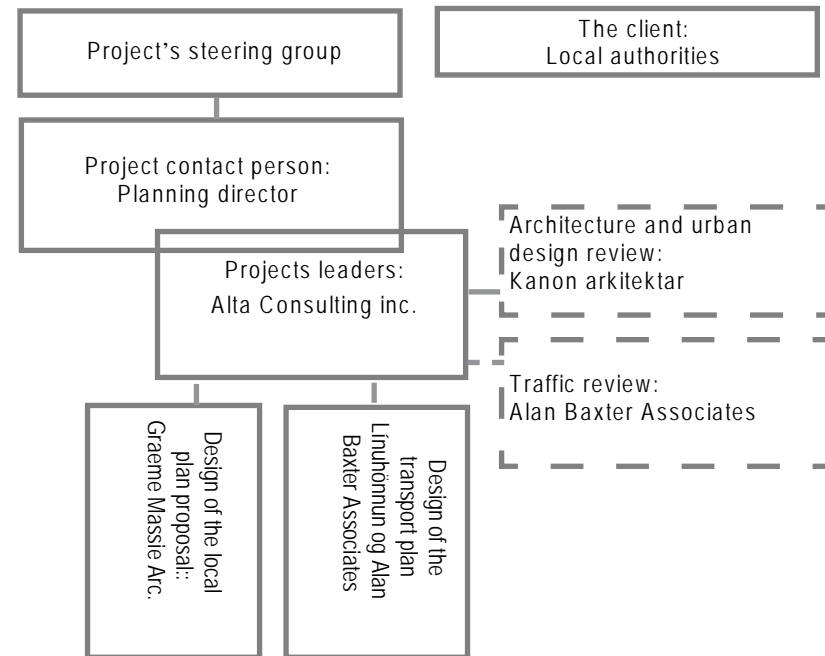


Figure 19. The project organisation showing a interdisciplinary approach in the city centre planning process.

The open assembly, first prize proposal in the competition and the revision of the municipal plan did strongly underpin that good connection, both for pedestrians and vehicles, to the outlying areas of the town, and to further afield was considered as a key issue for a successful renewal of the town centre. Similarly, movement within the centre itself was supposed to be easy, with adequate car parking spaces available. However, to strengthen the identity of the town centre and make it a good environment for people, balance between car and pedestrian was needed to be ensured. To achieve this, a full understanding of vehicular movements and the potential for improvements was necessary. In this respect, the appointment of both Línuhönnun engineers and Alan Baxter & Associates was to be critical to the development of a successful town centre.

The traffic brief from the principal architects defines the main tasks for the traffic plan. As pointed out there; “The principal purpose of the traffic study is to ascertain and develop an appropriate solution for the management of traffic and pedestrians, within the renewed town centre of Akureyri. Key aspect is the transformation of Glerárgata, for the town centre to be coherently connected to the harbour area, the barrier that is currently Glerárgata must be removed. The Glerárgata must be transformed to a street which feels like an integral piece of the town fabric. The approach to the transformation of Glerárgata should focus on the opportunity to reduce the width of carriageway from 2 lanes each direction to 1 lane each direction plus on-street parking, and to reduce the speed of traffic, so making it an easier street to cross for pedestrians” (GMA 2007).

Traffic proposal

As a starting point in solving this complicated problem workshop was held in early stage of the planning process, where the project team and representatives from ICERA and local authorities met to discuss the traffic situation and solution. The following analysis was made in the workshop:

- Connection required between seafront and town centre
- Broad assessment of movement within town centre
- Public transport ideas
- Broad locations for car parking availability
- Glerárgata – broad advice relating to function, traffic capacity and character
- Approach to design for flexibility

The outcome was presented to the ICERA and the local authorities before Línúhönnun engineers and Alan Baxters did followed them up with the paper, traffic proposal for Akureyri’s town centre. Evidence from the traffic analysis point out that ‘through users’ was only a small part of the traffic volume. In

order to strengthen the identity of the town centre and create a good environment for ‘local users’ it was considered feasible to lower the traffic speed on Glerárgata down to 30 km/h, reduce the carriageways to two lanes and locate cars to park along the street. It was also recommended that the street would have different surface where it runs through the city centre. This implementation is supposed to increase the time it would take to drive through the town centre on rush hour from 52 seconds to 98 seconds. Given that the traffic volume would increase 3% per year the street would come to the end of its efficient limits on the year 2018. (Línúhönnun 2007)

The traffic proposal was then used as a base for the planning proposal development.

5.4.2 The review of the proposal

The steering group approved upon a draft of the town centre planning proposal in February 2009. Review of authorities and stakeholder did follow. The amendment of the Road Act 2007 did certify ICERA as authority’s stakeholders and sharpen its role in the planning process, if the planning proposal did affect national roads.

The local authorities did send the whole planning proposal supported by the traffic proposal, to ICERA for a review in February 2009. ICERA’s ‘workgroup for valuation of road safety’, did send their review to the local authorities in the end of April. The workgroup consist of three traffic engineers on the ICERA’s design department, one from a working station Akureyri. The workgroup have doubts of the methods, Línúhönnun and Alan Baxters used in their traffic analysis and forecast.

To simplify, the workgroup strongly advice the ICERA to reject the planning proposal and specify several reasons:

- The arterial street Glerárgata is the only viable option for traffic thorough Akureyri.
- National interest must be guarded when national roads are changed.
- The speed limit is now 50 km/h and should not be lowered whereas it does not comport the ICERA ideology on road design.
- There is not nearly enough space to increase the road width to four carriageways in the future as the traffic proposal suggests.
- Glerárgata is important primary road and therefore it not possible to allow mixed usage where the street would be accommodated all anticipated users.
- Whereas the proposal does not ensure enough safety for pedestrians and cyclist crossing Glerárgata, buildings on the waterfront should not be allowed.
- The ICERA experience on stoned surfaced national roads is not good.

There is an enormous gap between the vision and the suggestion from multi-discipline planning team and the ICERA workgroup. The local authorities do obviously not agree upon the ICERA estimation and therefore it is predictable that there will be a disagreement between administration levels, local and national authorities. The planning committee and the steering group will send their critique on ICERA review to the National Planning Agency which will in the end make a verdict based on current Acts and regulation (ICERA 2009b).

5.4.3 Conclusion

The key stakeholders in this phase are international and multidisciplinary planning team (architects, land-use planners and traffic engineers), local authorities and traffic engineers at the ICERA. The base of the proposal is traffic study which was presented to the ICERA at the early stage.



Figure 20. An overview of the Akureyri's city centre. The arterial road causes a barrier between the centre and the old harbour. A mass of valuable space is used as parking lots. The construction of the cultural house were in progress when the picture was taken, but it is now completed (Ólafsson 2007).

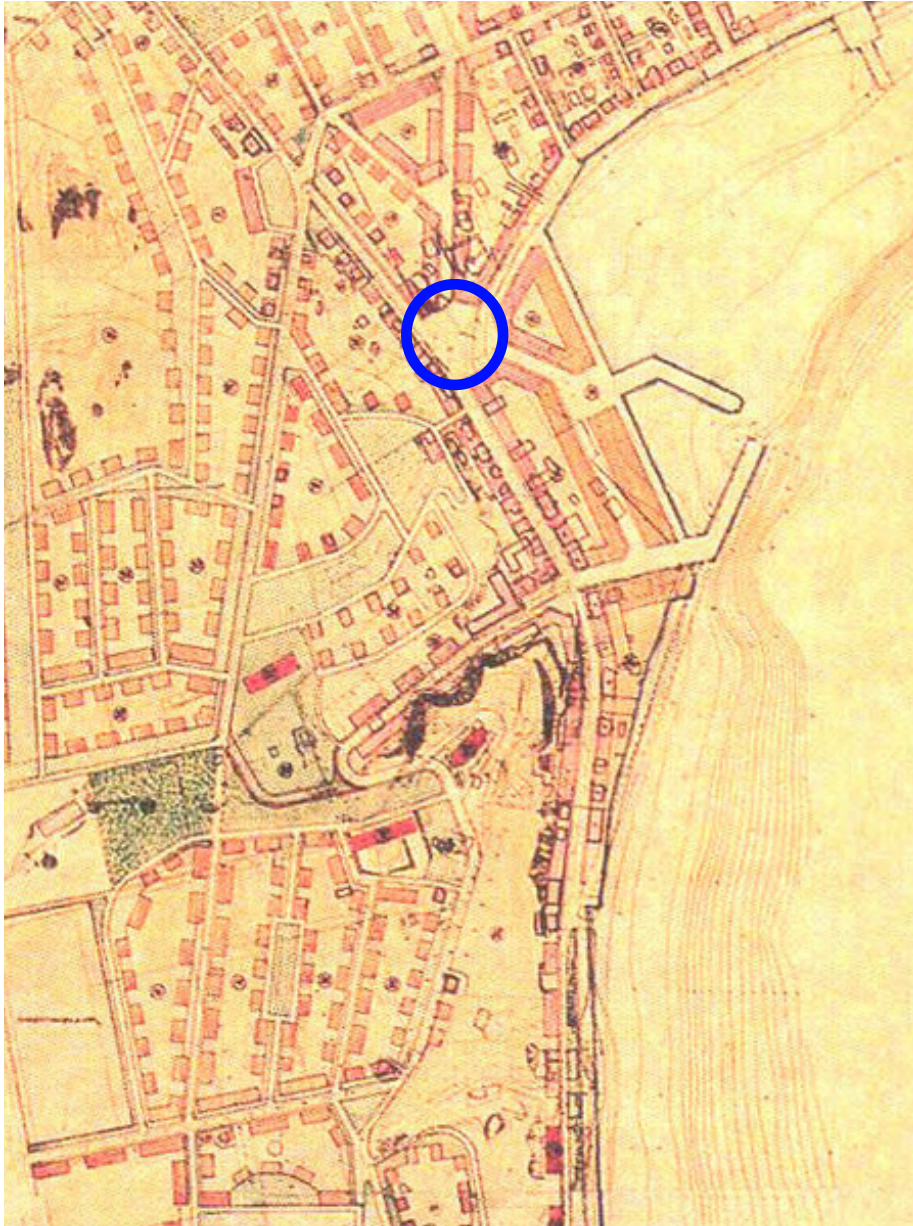


Figure 21. The first land use plan map of Akureyi is from 1927. The blue circle is around the city hall square (Samúelsson 1927).

The proposal is based on the vision in the municipal plan and do work out the arterial street character and the development along it from both sides. It presumes mixed usage where cyclist, pedestrians and cars are equal where flow of car traffic is slowed down by lower speed limit and reduce street width.

The ICERA did reject the proposal in the formal review process and it is unsure that national authorities will legitimate the planning proposal for the renewal of the town centre.

5.5 Conclusions

There is a huge gap in the carried out vision of ICERA and the local authorities for the arterial street, Glerárgata. The local authorities emphasize that the street is a part of the city centre and as such it needs to have a mixed usage for local and through users. The ICERA emphasizes that Glerárgata is first and foremost national road for through users and should be isolated from the local users.

The ICERA challenge the methods used in the traffic analysis and presume more increasing of the car traffic volume. ICERA do not take into account other operation that the local authorities have made to reduce local car traffic as free public transports and better conditions for cyclist and pedestrians.

In the nearest future it will emerge if it is possible for the local authorities and the ICERA to achieve mediation regarding the layout and the character of the arterial street, Glárárgata. If not it, the National Planning Agency will decree upon the case. Such a decree would be based on law and regulation concerning land-use plans and transportation. Evidence points out that amendment of the Road Act do strengthen the ICERA position.

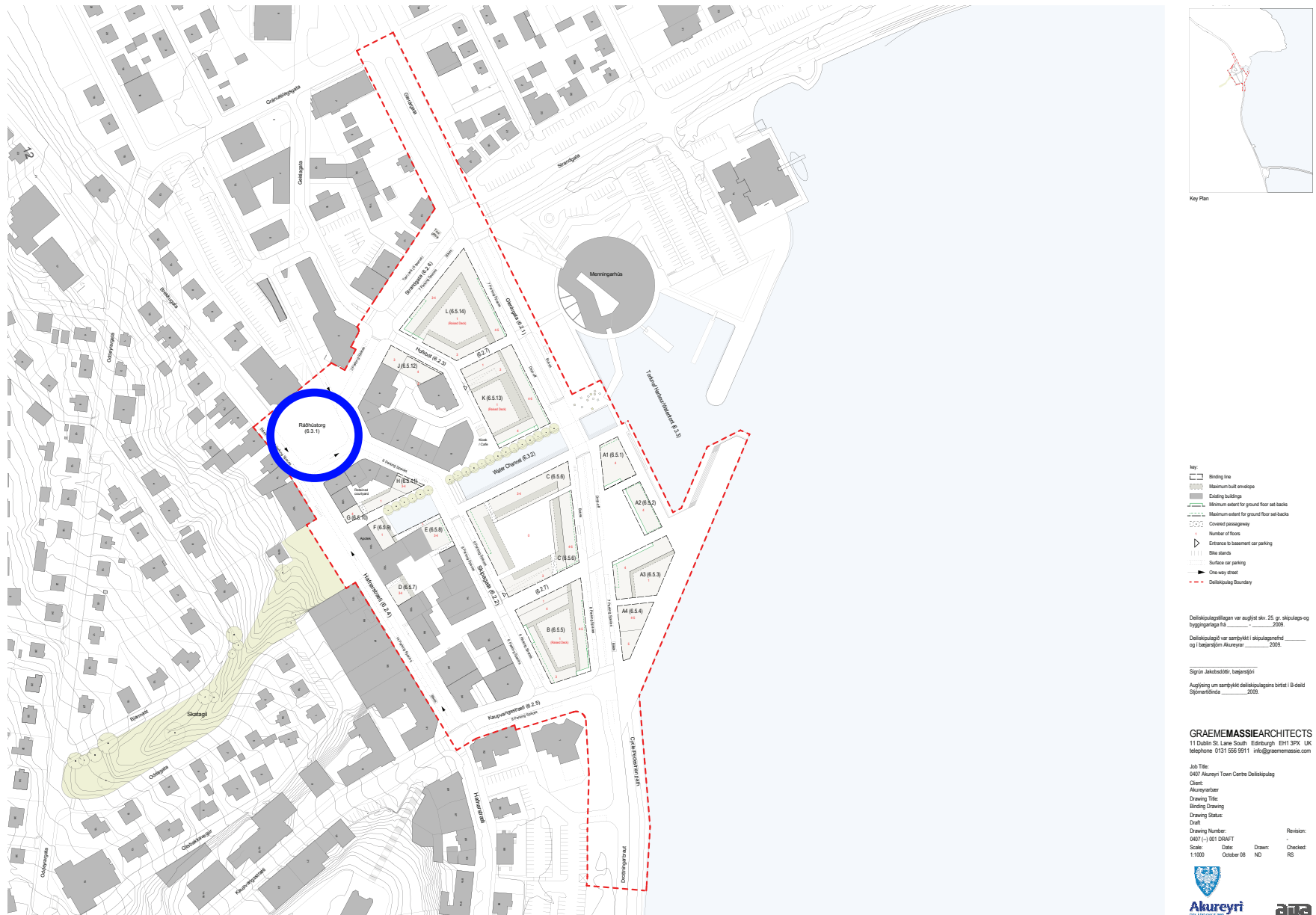


Figure 22. The city centre planning proposal. The blue circle is around the town hall square. Comparison with the old plan shows how landfill has expanded the city centre area to east (Akureyri 2009).

6 Analysis of interviews



This chapter expresses the main outcome of the qualitative interviews. The assumption of the interviews was dual. Firstly, to gain a better understanding of the professions viewpoints and roles. Secondly, to perceive interviewees' replies on the case matter and estimate what distinguished the professions understanding and objects.

6.1 The interview process

The named individuals were chosen because their experience on land-use and transport planning projects, it was also taken into account if they worked on the Akureyri case in any way. The interviewees were contacted by telephone, given brief details of the project and then they established their readiness to be interviewed.

The interviews were conducted in semi-structured format as described in section 2.3.3. Three interviews were conducted face to face at the interviewees' offices and one over the telephone due to the long distance between interviewer and interviewee. To begin with, the purpose of the interview was repeated and their approval confirmed. Next, it was explained how long the interviews were likely to take. The interviewees then had a brief revision on the Akureyri's planning process before the formal interviews started. The interview guide

was followed, question by question, with proper discussion. All interviews were recorded using a small cassette tape recorder. During the interview, the interviewer took hand-written notes. Full transcription and translation of interviews is not regarded necessary but the interviewees were promised to confirm cited quotation which would be used direct in the report.

Whereas the interviewees were only four, there was no need for complex data management in the analytical process. The main object of the data processing was to seek areas of similarities and differences amongst the interviewees and detect a collective vision. After each interview, minutes were made containing the answer to each question as well as the core of the discussion. From these minutes key words and concepts were detected and used as a foundation for the analysis process.

Árni Ólafsson

Age: 53 years

Gender: Male

Education: Architect from Tekniska Högskola in Göteborg.

Career: 1980 – 1989, a consultant architect.
1989 – 2000, a planning director in Akureyri municipality.
From 2000, partner in the architectural and planning consultants firm and has specialised in urban planning projects.

Connection to the case: Resident in Akureyri.
Member of the jury in the international competition, Vision-Akureyri.
Project leader in the process of revision of the Akureyri's municipal plan.

Erna B. Hreinsdóttir

Age: 42 years

Gender: Female

Education: BSc in civil engineering.

Career: 1990 – 2002, a civil engineer at Hafnarfjörður municipality, pop. 25.000
From 2003, Project leader at the Icelandic Road Administration, traffic design division.

Connection to the case: Member of the ICERA's workgroup for valuation of road safety and as such reviewed the proposal

Hafdís Hafliðadóttir

Age: 55 years

Gender: Female

Education: Master of Architecture 1986 - Aarhus School of Architecture, Denmark; Postgraduate in Urban Design 1995 - Washington University, St. Louis, MO, USA; Public Administration 2003, University of Iceland

Career: 1986 – 1988, a freelance consultant Aarhus and Reykjavik.
1988 – 1993, 1995 - 1999, Reykjavik City Planning Office
1999 - 2003, a planning director in Hafnarfjörður municipality.
2003 – 2005, a planning specialist National Planning Agency
From 2005 a head of the planning division in the National Planning Agency and substitute for the National planning director.

Connection to the case: No direct connection to the case.

Þorsteinn Hermannsson

Age: 32 years

Gender: Male

Education: BSc in civil engineering from University of Iceland.
MSc in transportation engineering from the University of Washington in Seattle

Career: From 2005, consultant at Mannvit engineering, in the environmental and transportation division.

Connection to the case: Reviewed the proposal for property developer

6.2 The interviewees profile

In order to inform the reader, following profiles of the interviewees are presented. All interviewees are Icelanders, and have professional experience in transport planning or land-use planning. There is a gender equality as well as equal division of public servants and private consultants, but they have different professional experience. The interview profiles on page 52 are presented in alphabetic order.

6.3 Interview analysis

This analysis follows the order of the interview guide (Appendix 1) and is based on the key words and concepts from each interviewee. The purpose is to highlight the similarities and differences in their responses and estimate if they shared a mutual vision. The similarities and differences are distinguished by italic letter. To sharpen the conclusion quotes from the interview are used where it is appropriate. These quotes are not cited to the individual interviewees, whereas the purpose is just to illustrate the discussion, not to connect certain comments to the respondents. The quotes are in italic with quotation mark.

Main principles

All respondents shared the vision of safety but had a different approach to these subjects: isolated traffic or slow mixed traffic. Two of the respondents mentioned bypass as the optimal way for conjunction of national roads and urban areas arguing *"town centres will always suffer from national through traffic"*.

Three of the interviewees shared similar opinion on what were the main principles for arterial roads which cross town centres; the road should be integrated

in the town centre activity as one of the town centre streets. The other saw the main principle as fast isolated vehicle traffic flow.

Subject matters

All respondents did agree upon connection between economic growth and traffic volume but disagreed on what came first *"the chicken or the egg"*.

The respondents did not agree upon the optimal usage of traffic forecasts. One regarded forecasts as a platform for road development for the next twenty years while another saw them as a warning of what could happen if no radical actions were taken stating that *"traffic forecasts should be a waking call for authorities and stimulate them to seek new solutions to reduce the traffic flow."* Two respondents mentioned that a broader view was necessary and we should discuss this as the society's needs for mobility rather than transportation and then different scenarios could be ranged as a base for decision making. One stated that *"we have examples all around the world which show that this does not have a negative impact on the economy. This is about ensuring enough mobility for the society without spending money and land in all these traffic structures"*.

Only one respondent thought that the responsibility of national roads in urban areas should be transferred to local authorities, given that certain road standards had to be obtained. Others mistrust the local authorities whereas they do not have enough professional capacity to resist political pressure. All of them were sure consensus could be gained, although one distinguished himself by seeing the solutions to consist in planners and local authorities accepting the transport engineers approach. The others were sure that the conventional approach to transport planning must be developed and name good examples of

cooperation for new approach in Sweden and even cities in the USA.

Participations in the transport planning approach

All the respondents have doubts of involving the public directly to the street design, though on different grounds. Some thought it should be done in the planning process where the vision and certain principles would be set. Other said that the best way to approach the public opinion was by attitude survey as are done regularly. One thought that the public would always slow down radical shifts, stating *"The public always votes against radical changes that affects them directly, it's called nimbyism"*.

Toward the question if there were to homogenous views of the transport domain regarding transport planning and how it could be improved one interviewee stood out by stating that there were too many viewpoints in the transport planning process as *"various traffic structure show"*. Other agreed upon better cooperation between professional domains. One noted that younger generations would solve the cooperation problems whereas *"the younger transport engineers do accept the multiple usage of the street and want to stretch out the view on the traffic problems towards the question of mobility"*. The respondents differed on the reason for the communication problem, one blamed the planners being frightened of transport engineers and suspending their approach till the last minute and stating that *"planners do not have professional knowledge on traffic source and traffic flow"*. Other saw the intransigence of the engineers and their tendency towards for huge and optimal solutions as the main problem.

The case approach

The respondents estimate the open assemble in the beginning of the process to be the main strength of the Akureyri process, one mentioned that *"the politicians were pretty convinced on the public will"*. They were also convinced that

the ICERA should have been involved better in the whole planning process. One the other hand some questioned why the ICERA emphasis did not appear stronger in the early stage.

Three of the respondents stated that the case approach could only be improved if ICERA would discount its claims.

The proposal

There was strong incongruity between the respondents of the prominence of the planning proposal. Three of them approved of the main outcome, that the traffic would flow slowly through the town centre integrated with other activities. Those were also convinced that the national role of the arterial street, Glerárgata would not suffer too much. They were also sure that planned development would improve the town centre and *"the centre and the seashore will be connected again and therefore the urban quality of the whole town would heighten"*.

On the other hand there was the completely different opinion that the town centre would suffer from the heavy vehicle traffic and the safety of those on foot would be at risk. Those of that opinion also concluded that the national interests would suffer and traffic congestion on Glerárgata would be predictable if the proposal would be implemented. *"People of the town Húsavík [next town on the ring road, east of Akureyri] should not be punished when driving through Akureyri"*.

Improvements

For the general improvements in the transport planning approach one participant claimed that the optimal approach would be if planners and local authorities followed the ICERA's guidance. The other three supported more interdisciplinary approach, based on more conversations between the domains where

both parties must respect and understand each other's viewpoint. One stated that *"the ICERA and local authorities are contingent on each other, it isn't the question who rules the other, both could whereas all ICERA practises must be on approved plans which relies upon the municipalities"*

6.4 conclusion

There is a big gap between the respondent's aspects, especially when it comes to implementation on arterial streets in the town centre. All the respondents do agree that transport solutions should be safe for all users but disagree on how this safety should be ensured. The essence of the disagreement is in a different view on how mobility should be solved and if there is a possibility to tune down the domination of car traffic. They all do support cooperation but under different key signatures. There is not a clear distinction between professionals and that gives ground for optimism on the possibility of consensus in the near future. In some ways the struggle seems to be on which party should rule the other, the national agency ICERA or the local authorities.

Findings and recommendations



In this chapter the main findings of part two are formulated as a base for recommendations. These recommendations are supported with 'potential' comparative studies where similar problems have been solved and it is estimated if there could be informative precedents for Icelandic reality.

7.1 Main findings

The main findings in the study illustrated in part two confirm that there is a problem in urban development along national roads. Transportation has been a prevailing factor in urban development in the latter half of 20th century. As the traffic has boosted, disputes on land use have evolved, and unfortunately rather heightened than been solved successfully. These conflicts consist mainly of three components:

1. *Lack of holistic national planning policy.*
2. *Unclear definition of roles between administrative bodies.*
3. *Lack of collaboration between disciplines.*

Lack of holistic national planning policy.

The review of the administration system in chapter 4 revealed that there is no

holistic national plan which integrates different sector plans and programs and ensures that all sectors are aiming at the same direction. This lack of holistic view appears in the mismatch in objectives in the Road Act and the Planning Act. The main objective in the Road Act is to contribute fast transport around the country. In the Road Act transport is obviously seen as vehicle traffic. The main objective in the Planning Act is to contribute sustainable future development by rational land-use. This mismatch has contributed amendments to priorities national roads in land-use plans.

Effects of this are evident in the ICERA's review on the Akureyri case as described in chapter 5.4. Whereas there is no holistic national policy contributing the main principles for future development, struggle between sectors appears more easily. Instead of the aim to gain some acceptable consensus there is a

contest of which sector should be in a ruling position.

Unclear definition of roles between administrative bodies.

As illustrated in chapter 4, local authorities are responsible for the formal land-use planning process. Local authorities have therefore the obligation to layout a holistic strategy for development inside their borders. On the other hand, national authorities are responsible for national transportation. This position contributes conflicts when it comes to integrating land-use and transport strategy.

Chapter 5 illustrated the conflict in the Akureyri case as a huge gap in the carried out vision of ICERA and the local authorities for the arterial street, Glerárgata. The local authorities' emphasis that the street is a part of the city centre and as such it needs to have mixed usage for local and through users. The ICERA emphasis that Glerárgata is first and foremost a national road for through users and should be isolated as possible from the local users, especially pedestrians and cyclists.

The conflict in the Akureyri case is not a unique incident, as a newly verdict from the Icelandic national Audit Office shows. The verdict underlined the lack of collaboration between administration levels when it comes to land-use plans and transport plans. A bill of new planning Acts, which among others would sharpen the role of the authorities, has been discussed for almost three years in the parliament. This bill involves a national plan which would displace the sector plans and programs. Municipal plans are supposed to be in harmony with the national plan; that is the barrier, it has not taken effect whereas there is a resistance from the municipalities because of their fears to be disempowered.

Lack of collaboration between disciplines

The process for land-use and transport plan making are done by different professional disciplines. As illustrated in chapter 4 the disciplines have different educational background. The interviews in chapter 6 show differences in the disciplines standpoints but also give promise for possible approximation.

In the Akureyri case this different background and isolation are illustrated. The transport engineers at ICERA question the traffic analysis which was used as a base for the planning process. The ICERA's engineers also isolate car traffic as the only possibility in future transportation while the local authorities' planners aim at reducing traffic i.e. by contributing public transportation and better conditions for cyclist and pedestrians.

The interviewed professionals witness the lack of collaboration which appears in isolated working process. Those interviewed evidence the unwillingness to involve transport engineers in the planning process until in the final phase. The Akureyri case on the other hand shows that principles, which appear from traffic engineers in the review, did not appear in the early phase, not when emphasis was set in the revision of the municipal plan, nor in the traffic workshop in the early stage in the local planning process. One could conclude that individual transport engineers in the ICERA do approach the planner's standpoints.

Evidence shows that some (younger) engineers do share a similar vision with the land-use planners. The traffic brief for the Akureyri case from Línuhönnun engineering are an example of approximated standpoints

7.2 Recommendations

The pattern of barriers in the Icelandic reality is mostly comparable to barriers around Europe. What differs is the lack of national planning policy where it is a

long tradition of national and even transnational plans around Europe.

The following recommendations are rested on various examples around Europe. For 'potential' comparable studies I have relied on instructions and case studies from researchers, governments and NGO's.

National planning policy

First and foremost it is necessary to institute a national land-use plan which will coherent different sector plans in a holistic strategy, which aims in the same direction. If the aim is that future development should move towards sustainability, as the main objective in the Planning Act requests, an alternative approach in transportation and land-use is needed.

Bannister (2008) points out that a paradigm shift should be from defining mobility towards accessibility. The mobility has the tendency to be a drift for growth in transportation. Means to reduce traffic will therefore be difficult to achieve the end. By focusing on accessibility the aim is to insure interplay between residents and relevant activities. This mental shift will not take place over night it is a long term subject.

The European Union supports several projects regarding integration of land-use and transport. TRANSPLUS (Transport Planning, Land Use and Sustainability) was one of these projects. It was completed in 2003 with a final report, which captures several barriers and suggestions. Among the suggestions are issues which could be useful for national policy integrated land-use and transport. The key issues suite well with Banister's focus on accessibility, or sustainability as described in section 3.1.3, and should be as follows (TRANSPLUS 2003, 3):

i) to reduce the need to travel while maintaining spatial integration

and access to services and opportunities;

ii) to reduce car dependency and motorised individual transport;

iii) to reduce the development of greenfield land;

iv) to reduce disparities in the costs of living, travelling and providing public services, without hampering the growth of urban and regional economies;

v) to reduce indirect costs which may hamper transactions in a number of city market places (e.g. by facilitating the accessibility to a wider range of employment options on the local labour market; by improving accessibility to local retail services for a wider range of customers; by promoting new transport markets etc.).

Clear division of role between national and local authorities

Tight et al (2000) examines how the British transport policy 'new realism' could be applied successfully. One of their main conclusions was that "if necessary policies are to be implemented there is a need for strong central Government leadership and local authority empowerment." (Tight et al 2000, 72). A rational national policy can therefore only be the first step but will not complete the journey.

There is a risk that national policy is not implemented through levels of administration as another research on British transport policy pointed out. Vigar et al (2000) examines transport planning and metropolitan governance in the UK. They aimed to find out why national transport policy, which was meant to end the 'predict and provide' era, was not implemented successfully. One of their conclusions concerns the empowerment of local authorities. "If it is serious about devolution, then it deeds to give local authorities greater flexibility than in current, highly centralised, world of transport planning, particularly in the delivery of finance and the bidding process. These processes currently incur a large setoff transaction costs compared with the amounts of funding involved,

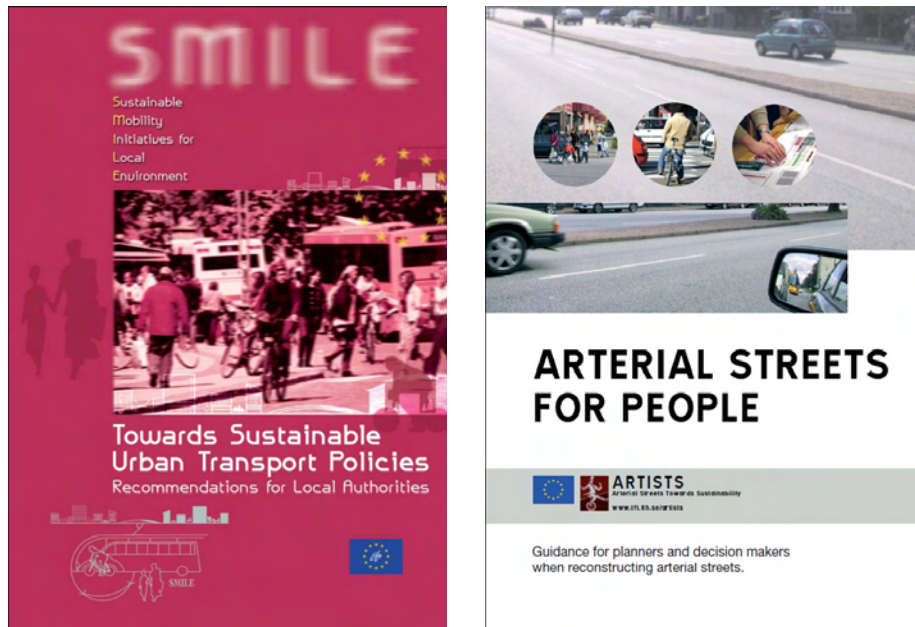


Figure 23. Two examples of guidance's for local authorities (SMILE 2006; ARTISTS 2004).

which have a reduced a great deal" (Vigar et. al 2000, 59).

Both these studies suggest empowering the local authorities in the UK to support the national policy. The expectation is that giving localities more flexibility is likely to lead to more diversity in local transportation, whereas local authorities are better connected to the inhabitants which have to be involved in the implementation process. This is in a good correspondence to the EU administration policy which emphasis empowered authority at local levels.

One can say that the principle of subsidiarity, which is defined in Article 5 of the Treaty of Maastricht from 1992, gives the tone for localisation. The principle is intended to ensure that decisions are taken as closely as possible to the citizens. It includes that actions should only be taken at EU level if the possibilities

are not available at national, regional or local level. Regions and municipalities are the settings around the individuals' every day life. It should also be the scene to collaboration and for common decision-making, concerning local development, social services and other interests; including transportation.

As pointed out in chapter 4, many local authorities in Iceland are extremely small. The sparsely population and geographical context can be seen as an obstacle for municipality amalgamation. To strengthen the local authorities it is necessary to rethink the idea of amalgamation and estimate if there are other approaches which suits better to the Icelandic reality. More obligated collaboration on regional level, or a formal collaboration forum between administration levels, could be useful for some areas to avoid unequal development among populated and sparse areas.

A great deal of good guidance, supporting localities in developing sustainable transport, is available. As an example I point out two projects which are both funded by the European Commission; SMILE and ARTISTS.

SMILE stands for Sustainable Mobility Initiatives for Local Environment. It is a European program which aims to support localities on their way to sustainable transport by presenting good practices and innovative approaches on a permanent basis. SMILE has published recommendations for local authorities, 'Towards Sustainable Urban Transport Policies'. These guidelines are based on real practises around Europe and includes a broad scale advise from policy making to implementations. The project also runs a webpage containing database with 170 successful and replicable practices (<http://www.smile-europe.org/frame22.html>.)

ARTISTS (Arterial Streets towards Sustainability) is a programme with elaborate holistic analysis of problems and approaches for improving the environment and living conditions on and along arterial streets in European cities. The

project published a conventional guidance covering design and management of arterial streets as a result of research investigations from a range of streets around Europe. This guidance 'Arterial Streets for People' considers the physical design of streets and introduces a comprehensive programme of public participation.

Both these programmes contain useful guidance which Icelandic municipalities could gain from if they had proper authority and capacity.

Effective collaboration between land-use and transport disciplines

Central policies and strong, independent local authorities are the key aspect for desired changes. Those authorities are responsible for policy making process and have therefore the authority to change directions. The administration units are not isolated, professionals as public servants, private consultants and researchers do have direct and indirect affects on public authorities, by direct consultants and official discussion. Lack of collaboration between land-use and transport disciplines will therefore tone down the process of integration of different viewpoints.

Brömmelstroet and Bertolini (2008) developed a step wise approach named 'mediated planning support', MPS, as a new participatory development approach for land-use and transport planning. The approach is based on a meaningful dialogue between the disciplines. They developed a framework based on academic foundations which have citation to various planning and transport researchers. Their challenge is to "*shift the focus from developing innovative explicit information to incorporating the tacit elements of knowledge, the context specifics for the LUT planning process and the user requirements.*" (Brömmelstroet and Bertolini 2008, 253). The MPS framework was applied in an integrated land-use and transport strategy process in the Greater Region of Amsterdam. The outcome of the process was that the disciplines managed to share a concept of problem statement. The planners and modelers managed to develop alternatives to get diverging options to solve the land-use and

transport problems and shared 'feelings' for the dynamics of relations between the two concepts. The participants estimate that one of the primary gains of the process was an increased and shared awareness of the reasoning behind land-use and transport relation and choices. They also noted "*that the process perfected existing ideas and concepts, enriched their evidence-base and created a common language to address these issues. The transport planners emphasized that they now have useful process framework and guidelines, which might allow them to be involved in earlier phases of the planning process.*" (Brömmelstroet and Bertolini 2008, 257).

Brömmelstroet and Bertolini (2008) pointed out that good situation in Amsterdam makes it easier to adapt new approaches. The Greater Region of Amsterdam has, unlike other regions, autonomy discretion regarding transport matters. Planners, both land-use and transport, in Amsterdam are also relatively highly educated as Healey (2007) has pointed out. It is therefore not wise to transfer the MPS framework directly on Icelandic reality. Not only because the local authorities in Iceland do not have discretion regarding transport matters, the land-use planning profession is also weak as was pointed out in chapter 4.

Nevertheless, this framework could be interesting as a future goal for land-use and transport planners in Iceland as a collaboration forum. The interview analysis in chapter 6 showed that there is not a clear distinguish between professionals. Some (younger) engineers do share similar vision with the land-use planners. Clearer national policy could expedite the process for better consensus between the disciplines.

Conclusions

This chapter contains the conclusions of the problem formulation presented in chapter 1. The aim is to provide an answer to the research questions and its sub questions.



At the beginning of this thesis certain indicators of the problems associated with the conventional approach to transportation were highlighted. The focus was set on urbanity and traffic structures, particularly in the most valuable part of each urban area, the centre.

In a country with as few inhabitants as Iceland, it could be assumed that clashes between transportation and land-use planning sectors would be rare, however, according to one planner that I author consulted, traffic issues seem to weigh heavily on residents whether they live in a town of 4000, on an isolated island, or in a city of many millions, connected to other such cities by extensive national road systems. This planner based his opinion on personal experience after taking part in public forums in several countries. It is clear, at any rate, that disputes over traffic infrastructure have been prominent in

Iceland and that the viewpoints of two groups have mainly been in opposition; those who wish to solve the problem by constructing greater infrastructure and those who wish to adopt radical policies to reduce traffic.

There is much to indicate that Icelanders are behind many other countries when it comes to finding new methods of integrating land-use and transport. The example of Akureyri clearly shows that there are clashes of opinion when it comes to the integration of national transport and urban land-use development. The objective of this thesis is to answer the research question introduced in chapter one.

How can spatial planning integrate national transport policy and city centre land-use in Iceland?

Finding the answer to this question involved a case study of Akueryri and also particular study of three sub-questions.

The research described in part two and chapter seven has enabled me to draw the following conclusions in answer to the sub-questions.

1. Which parties are responsible for town centres and national roadways?

Responsibility lies at two administrative levels; the national government on the one hand and local authorities on the other. The ICERA deals with road affairs for national authorities, The status of this body, compared to local planning authorities, has recently been strengthened by law amendment.

2. What obstacles hinder the integration of roles?

The case study reveals that these obstacles can be classified in to three groups:

1. Lack of holistic national planning policy.
2. Unclear definition of roles between administrative bodies.
3. Lack of collaboration between disciplines.

Evidence also points out the governmental system suffer from mistrust and nepotism which causes a lack of cooperation between ministries, agencies and public servants.

3 How have such obstacles been overcome elsewhere?

'Potential' comparative studies have shown that the problems discerned in Iceland, excepting lack of national planning policy land-use planning, are of the same type tackled in Europe during the last decade, The solution there has been found in strong central policy and the empowerment of local authorities, in addition to increasing flexibility, to solve transport matters at the local level. The last decade has also seen the development of a set of ideas and tools to help local authorities both at planning and implementation levels.

Increased collaboration between professional disciplines is also extremely important. Brömmelstroet and Bertolini (2008) have developed a framework for mediated planning support based on academic foundations. This approach has proved useful in structuring discussions and deliberation between the disciplines.

From the discussion above it is clear that spatial planning does possess the resources to integrate national transport policy and city centre land-use in Iceland.

Outlook

This chapter will look at how the findings of this research could be further developed. During the research process I have identified a number of interesting issues which could be included in the methodological and theoretical framework as well as the analysis of a future study.



At the end of a project it is easy to see how the research could have been improved and what additional studies could the foundations of the conclusions drawn. Therefore it is appropriate to suggest areas of interest to consider in the development of future research.

A broader perspective, more thoroughly addressing power relations in institutional arenas would no doubt strengthen the foundations of this research. This would enable the drafting of proposals for necessary improvements which take institutional barriers, delaying implementation, into greater consideration. It would be interesting, in this context, to conduct more in-depth interviews with a larger and more diverse group of people than was the case in this study. This group could include, for example, national and local politicians, public servants in both national and local domains and academics. A successful study of this type would provide a useful base on which to build a realistic evaluation of the current status of potential for and barriers against preferable integration of land-use, transportation and sustainability.

The small population of Iceland and close social ties can also hinder this type of research. It is a national custom to group people as for or against, and it quickly rumoured which person is in which group; this causes far too many people to become passive. This proved to be in case in the run-up to the economic collapse in Iceland, similarly, disputes concerning the utilisation or protection of natural resources may be cited. Despite a certain rise in national awareness of this problem, this element of the Icelandic psyche is still very close to the surface and I was aware of this in the few interviews I took. The fact that I was personally connected to the firm dealing with the planning process in Akureyri proved, sometimes, to be a hindrance.

An interdisciplinary research team would be one way around this obstacle. A small population also presents the opportunity to effect rapid and thorough system change, providing that a general consensus on procedure has been reached.

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10

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Appendix

1

The interview guided

Introduction

1. What is your experience in transport planning, and particularly your approach to the Akureyri case?
2. What do you see as main principles for arterial streets in town centres?

Main body

Subject matters / focus areas

3. In your opinion, is there an interrelation between economic growth and traffic volume?
4. How do you estimate traffic forecasts – is it possible to reduce traffic by official actions so it does not live up to the forecasts?
5. How do you think local strategies, aimed to reduce traffic, should impact traffic forecasts for arterial streets?
6. The ICERA do have all maintenance on arterial streets; do you think this responsibility should be transfer to the local governments?
7. Do you think it is possible to gain consensus between local authorities and the ICERA regarding land use and arterial streets?

Professional approach

8. Who do you see as most preferable actors in transport planning?
9. In your consideration, is it desirable to have the transport planning process more interdisciplinary?
10. What is your opinion on public participation in the road design?
11. What do you think of the statement: "The alternative approach in transport planning, which gaze on increase the car mobility, strives automatically for more car traffic and therefore on more roads and streets."

The planning process

12. What do you see as the main strength of the design process in Akureyri?
13. What do you see as the main weakness of the design process in Akureyri?
14. How do you think it could be improved?

The proposal

15. What is your opinion on constrict the car traffic on Glerárgata in the planning proposal?
16. How do you think Glerárgata will live up to its role as city centre street?
17. How do you think Glerárgata will live up to its role as national road?
18. Do you think that Glerárgata will strengthen or weaken the city centre?

Outlook

19. Do you think it is urgent to change the approach for planning and designing arterial streets?
 20. How do you think it is best to transform the experience from Akureyri on other similar projects in Iceland?
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