

Building and Urban Development in Norway

– a selection of current issues

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This publication has been prepared in connection with the 48th IFHP World Congress in Oslo 2004. Its purpose is to provide a general impression of the planning and building situation in Norway, and describe some of the important challenges facing us in the first years of the 21st century. In it, we present descriptions and analysis of issues

confronting local and central authorities, property developers and the building industry, as well as the planning community and the public in general.

The challenges facing Norwegian planning and housing policies have changed over the last few years. One of our most important challenges involves finding good, innovative approaches to improve cooperation at the local level, be it between various levels of government or between private and public partners. Another is in the realm of housing consumption. Norway has gradually developed a very high standard of housing. At present Norwegians (together with Icelanders) are the world's largest consumers of housing in terms of area per person. This represents one aspect of the growing environmental challenge that we currently face on the local, national and global levels. Quality has now become more important to us than quantity. Im-

proving existing housing areas and the urban structure is, for instance, more urgent than new building.

The selected topics and presentations are meant to provide a reasonably representative overview of the fields of planning and housing in Norway a few years into the new millennium. We have chosen to emphasise the variety and complexity of these issues. The authors have been selected from leading circles in their respective fields, and present here their personal views on the issues. As always there are more questions than answers, and there is a need for ongoing refinement of the instruments of analysis and implementation. The tools that we choose and the results that we produce will profoundly influence the daily lives of a large part of our increasingly urban population. The ever-increasing possibilities of new technology, especially within communications, and the shift of resources that this requires will in itself change the everyday life of a large proportion of the population.

Instead of trying to cover the whole of this vast field, we have selected specific topics and questions that we feel will be of international interest – and that seem to be generally acknowledged as key issues within planning and building. There is a continual need to exchange ideas and experiences across national boundaries. It is our hope that this publication will serve as a brief introduction to “the state-of-the-art” of some of the topics currently under discussion in Norway, and dealt with during the congress.

Erna Solberg
*Minister of Local Government
and Regional Development*

Introduction

Norway is a modern welfare state. The Norwegian economy is generally characterised as a mixed economy – a market economy with a clear component of state influence. Since the 1970s, the off-shore oil industry has played a dominant role in the Norwegian economy. The politico-administrative system in Norway has three levels; national, regional and municipal. The Norwegian Planning and Building Act institutes a two-tier planning system of county plans and municipal master plans under the control of the elected county and municipal councils, respectively.





Norway and Norwegian Society



Geography and climate

Norway stretches farther north than any other European country except Russia. It is long and narrow, extending almost 1 750 km from north to south. If it were possible to swing Norway 180° by its most southerly point, it would reach all the way to the Mediterranean. The area covered by Norway

is roughly the same as that of Great Britain, Italy or Japan.

Large areas of Norway consist of forest and mountains. All along the western coast deep fjords, surrounded by mountains and glaciers, penetrate into the heart of the country.

Given Norway's extreme northern position, its mainland climate is surprisingly mild. This is due to the Gulf Stream, which brings relatively warm and moist air to coastal areas and ensures ice-free harbours even in winter. The coastal climate is one of mild winters, cool summers and heavy precipitation year-round, while inland areas are drier with colder winters and warmer summers.

The political system

In formal terms, Norway is a constitutional monarchy with a parliamentary democratic system of governance.

Both democratic governance and the monarchy were established in the Constitution of 1814, still in effect today. Parliamentaryism was introduced in 1884. The King has little real political power, but fills an important symbolic function as the Head of State and official representative of Norwegian society and industry.

State power is formally distributed between three institutions: the Storting (the legislative power), the Government (the executive power) and the courts (the judicial power). In some circles, the public administration, which was designed to serve the needs of the political bodies, is viewed as a fourth state power, as it now takes independent action and can exert influence on the shaping of policies. There is also a geographical distribution of political power into state, county and municipal levels.

Norway is not a member of the European Union (EU), but participates in the EU common market as a signatory to the European Economic Area (EEA) Agreement between the countries of the EU and the European Free Trade Association (EFTA).

Population

Pr. 1 January 2004, Norway has a population of 4 577 500, with an annual growth rate of 0.6 %. As in many other European countries, Norway is currently undergoing a period of low birth rate following a long period of strong population growth. The growth in population reached up to 1 % immediately following WWII, but began to decline in the 1970s and continued to fall throughout the 1980s. Since 1995, the population has begun to rise once more, although this is as much due to net immigration as to net births.

In 1769, Norway's first complete census showed 700 000 inhabitants. The first million was reached in 1822, the next in 1890, the third in 1942, and the fourth in 1975. In October 2000, the population of Norway exceeded 4.5 million, with calculations indicating that it will exceed five million in around 2030.

Migration

During the late 1800s and early 1900s there was widespread emigration from Norway, particularly to the USA. This emigration reached a peak starting in the mid-1860s, when over two-thirds of the natural population growth, or some 10–15 % of the population, left the country. Emigration remained high until WWI, and did not come to a halt until the economic crisis of the 1930s.

Since the close of the 1960s, Norway has experienced substantial net immigration, representing some 1 % of the population in the 1970s and the early 1980s. Since the birth rate among ethnic Norwegians has declined, the overall percentage of population growth caused by immigration has risen significantly, reaching 35–40 %.

In the 1960s, immigrants arrived in ever-increasing numbers from Southern Europe, Asia, Africa and South America, with most settling in and around Oslo. In 1975, Norway

Facts about Norway

Head of State:	His Majesty King Harald V of Norway
Head of Government:	Prime Minister Kjell Magne Bondevik
Area:	323 758 km ² (including Svalbard and Jan Mayen) 385 155 km ²
Population (2004):	4 577 500
Population per km ² :	14.1
Capital city:	Oslo
Language:	Norwegian (Bokmål and Nynorsk) (In some districts, Sámi is also an official language)
State Church:	Church of Norway (Evangelical Lutheran)
GDP (mill. USD, 2003):	149 149
GDP (per capita USD) :	32 900
Currency:	1 Krone = 100 øre
Constitution Day:	17 May
Annual population growth (1995–2003):	0.6 %
Average life expectancy (2003):	79

implemented an official ban on immigration that remains in effect today. The ban does not apply to specified refugee groups and asylum seekers. There are annual entry quotas for these groups, which primarily come from the former Yugoslavia, Pakistan, Vietnam, Iran and Turkey. A certain amount of leeway is also granted for family reunification purposes.

Language

Norway's official language is Norwegian, a northern Germanic language closely related to Danish and Swedish.

Norway's geography and settlement patterns have given rise to a myriad of local and regional spoken dialects that continue to enjoy a strong position within society today. There are two official written versions of Norwegian, *Bokmål* ("Book Norwegian") and *Nynorsk* ("New Norwegian"). *Bokmål* is used by the majority of the population. It has been developed from written Danish adapted to the phonology of the general dialect spoken in eastern Norway. *Nynorsk* was devised by linguist Ivar Aasen in the 1850s, and is based on a compilation of various western Norwegian dialects.

At present, some 20 000 individuals in Norway have the Sámi language as their mother tongue. Sámi is a member of the Finno-Ugric branch of languages, and its roots in Norway may extend as far back as Norwegian. North Sámi has been established as an official language on a par with Norwegian in some districts of Northern Norway.

Living conditions

Norway is a welfare state and one of the richest countries in the world. In 2004, for the fourth consecutive year, Norway was ranked at the top of the UNDP Human Development Index over national living conditions.

The average life expectancy in Norway is 79 years. The population in general exhibits very good health and the infant mortality rate is extremely low. Literacy is virtually 100 % and nearly all members of the population have completed upper secondary schooling. There is no extreme poverty to be found in Norway, and the relative poverty level is low compared to other OECD countries.

The GDP per capita is high and wealth is relatively equally distributed among the population. There is a large degree of gender equality at all levels of society. In keeping with its welfare orientation, Norway has implemented a universal, public health service. Financed by taxation and a national insurance scheme, this service is applicable to all citizens and residents, and provides a host of social benefits.

Both public and private consumption have increased enormously since 1900, and the wealth of the last few decades is primarily due to the discovery and exploitation of sub-sea oil and natural gas deposits in the North Sea. Under the mounting pressure of modernisation and urbanisation, the stable, traditional settlement patterns of the past have been replaced by a trend towards greater mobility, in which people more frequently move and change jobs.

Economic life

The high level of material wealth in Norway is partly due to an abundance of natural resources, and partly due to Norway's inclu-

sion in the industrialisation of Western Europe, as a result of its close proximity to the major markets. Since the 1970s, the off-shore oil industry has played a dominant role in the Norwegian economy.

The Norwegian economy is generally characterised as a mixed economy – a capitalist market economy with a clear component of state influence. As in the rest of Western Europe, the expansion of most industry in Norway has largely been governed by private property rights and the private sector. Nevertheless, some industrial activities are owned or run by the state. Norway is classified as a mixture of market and planned economy due to this combination of state ownership and the regulation of the private sector.

State administration takes the form of taxation, duties and subsidies. It is also evident in licensing schemes and the regulation of elements such as the working environment, accounting procedures, pollution and products. During the 1990s, state ownership of industry became more focused on purely financial investments.

The industrial sector is mainly under private ownership, but the state is the major owner of some of Norway's largest corporations, such as Statoil and Norsk Hydro. Statoil (the Norwegian state-owned oil company) occupies a dominant position in Norway's sub-sea oil industry, as well as in the petro-chemical, oil refining and oil marketing industries. Agriculture and fisheries are in private hands, apart from the approximately ten per cent of productive forestry land owned by the state.

Within banking, state banks have been established for the most important industries (agriculture, fisheries, heavy industry), for the municipalities, for regional development, for housing and for education. The state has been a significant owner of hydropower stations and electricity plants. Although the state has a monopoly on railways and the postal service, the state-owned companies that have been established have been granted freer rein, which in turn implies that they are increasingly exposed to competitive forces.

State involvement in Norwegian industry is gradually declining in keeping with the deregulation and privatisation processes taking place throughout the industrialised world.

The City of Oslo



Oslo is the capital of the Kingdom of Norway, and a pleasant city with over 500 000 inhabitants. Together with the suburban municipalities in the county of Akershus, the greater Oslo region has about one million inhabitants, or nearly one quarter of all the people living in Norway.

The city features a mix of old and new architecture, parks, hills, museums, monuments, lakes, woodlands areas and the fjord. It is a vibrant city, excellent for shopping, cultural and outdoor recreational activities, with a wide range of good restaurants and a lively nightlife.

Facts about Oslo

Area:	454 km ² (the built-up area is 148 km ²)
Highest point:	Kirkeberget, 629 metres (2 064 feet) above sea level
Largest lake:	Maridalsvatnet, 3.91 km ²
Population (2004):	521 900
Population per km ² (built-up area):	3 526
Annual population growth (1995–2003):	0.9 %

The history of Oslo

Oslo is the oldest of the Scandinavian capitals, and its history dates back to 1 000 years ago, when the first settlements were built at the inlet of the Oslo Fjord. The site was chosen for its natural harbour and its central location in relation to greater parts of East Norway.

After the Great Fire that destroyed the city in 1624, the Danish King Christian IV decided to rebuild the city in brick and stone, re-christening it *Christiania*. In the 17th and 18th centuries the town's development was primarily based on domestic and foreign trade, with timber playing an important role.

The population grew steadily, particularly after 1814 when the town once again became Norway's capital and the nation entered into union with Sweden. Christiania experienced a strong financial and political upswing.

Towards the end of the 19th century the industrial revolution brought even greater growth, especially in the eastern portion of the town and northwards along the banks of the Akerselva river.

In 1924, when the city celebrated the 300 year anniversary of the granting of its charter, it was decided to restore the name of Oslo. In 1948 Oslo and neighbouring Aker were joined together into a single municipality.

In the year 2000 Oslo celebrated the 1 000 year anniversary of its original founding.

System of government

Since 1986 Oslo has had a parliamentary system of local government. The City Council elects a City Government (an executive body) which answers to the City Council. The City Council consists of 59 members and is chaired by the Mayor.

The City Government consists of a variable number of members, or commissioners. The City Government runs the municipal administration, submits proposals to the City Council and carries out the decisions taken by the City Council.

Since 1988 Oslo has been divided into 25 districts, each consisting of a district council and a district administration under the direction of a district director. The main task of the districts is to administer and maintain social and primary health care services, including measures targeted especially for children and young people. The municipality employs a staff of approximately 43 000, representing 33 000 man-years.

In addition to the districts there are a number of agencies and enterprises involved in running the municipality and providing services. Municipal limited companies such as Oslo Energi Holding (power supplies) and Oslo Sporveier (public transportation) are engaged in tasks of a more commercial nature.



Public Administration in Norway

The Norwegian politico-administrative system has three levels; national, regional and municipal. Norway is a unitary nation, and the decision-making authority at the county and municipal levels is derived from the national level. The national level is responsible for defining the policy objectives, delegating the authority and financing most of the tasks that are to be implemented at county and municipal levels. Nevertheless, each level has its own set of political as well as administrative institutions.

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By Marit Helgesen

There are currently major debates taking place in three different areas of Norwegian public administration policy. These are: the changes being planned and implemented at the county level and the discussions as to whether the county level should continue to exist, the discussion regarding the optimal number and size of municipalities, and the governance of local government in the relationship between national and local government.

National institutions

The institutions at the national level primarily consist of two different types. The first is the government ministry. Ministries are specialised, sector-based institutions, and their most important task is to prepare the framework within which political decisions may be taken. Ministries have administrative responsibilities as well, and serve as the primary agencies for implementing these same political decisions. Norway has 17 ministries, plus the Office of the Prime Minister. Each ministry is headed by a political official, the minister, with the exception of the Ministry of Foreign Affairs, which has two ministers.

The second type of institution comprises

the national government agencies, which are subject-specific, independent institutions working within a given sector, for example the health-care or agricultural sector. Agencies at this level include the various directorates, audit institutions as well as the state enterprises. These institutions are all organised under the auspices of the appropriate sector ministry, and each has been delegated certain decision-making responsibilities. The state enterprises differ somewhat from the other government agencies at this level in that they are independent legal entities, they have management boards and are held financially accountable for their own revenues. State enterprises have mostly been established in the spheres of communications and health.

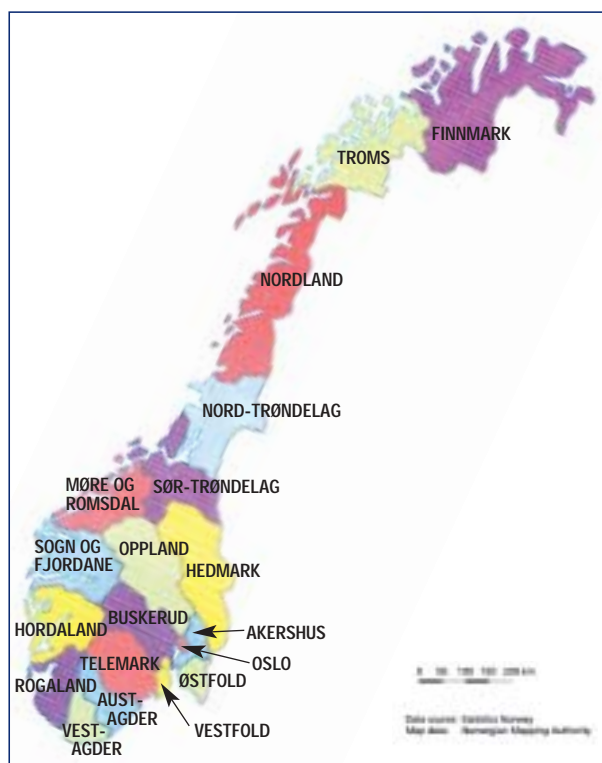
County institutions

Norway is divided into 19 counties. The administrative institutions at the county level are also of two types. One of these – the county administration – is under the political control of the County Council. The main tasks of the county administration include secondary education, dentistry, family protection, preventive health care measures and health promotion, rehabilitation for alcohol and drug abusers, regional communications and trans-

port, adaptation for commercial activities, cultural activities and museums, and planning. The county administrations used to be responsible for hospitals, health care and child care institutions. Hospitals and health care were transferred to the five regional state health care enterprises that were established in 2002. Child care institutions became the responsibility of a newly established Directorate for Child Care at national level. At the same time, the County Council and its administration were to assume responsibility for enhancing economic and cultural development at the regional and local levels. The process of determining which administrative level will be responsible for which tasks has not yet been completed. As a result, the role of the county level in Norwegian local government is now subject to debate. This is also the case in our neighbouring countries, most clearly in Denmark, where a commission has proposed to abolish the institutions at county level.

The second type of institution at the county level is the Office of the County Governor. The County Governor is appointed to serve as the state's representative at the local level, and the office hosts a variety of functions. Its main tasks include control, audit activities, standardisation and instruction activities in relation to municipal implementation of national policies in the areas of environmental and agricultural affairs. With regard to the spheres of physical planning, education, social policy and health, the County Governor's office acts in a monitoring function vis-à-vis the municipalities and in a reporting function vis-à-vis the national level. This applies with regard to planning, budgeting and accounting in most of the major policy areas. In this respect the office has an important role to play in terms of Norway's overall community planning.

The County Governor's office is further responsible for monitoring and auditing local activities of health care institutions and state-run day-care facilities. The office is also responsible for ensuring coordination and cooperation between the municipalities within the county as well as between the various levels of the administrative system. Finally, the County Governor's office is the receiving instance for appeals filed in connection with municipal decisions regarding individuals. In this respect, the office fills a



The map shows the county divisions in Norway as of 1 January 2004. Norway has a total of 19 counties.

central function as regards the legal protection of individual rights.

Currently, a national experiment is underway to determine the benefits and disadvantages in merging the county administration and County Governor's office to facilitate closer coordination between their various activities. However, the trial project is limited to only a few counties.

In our neighbouring countries, the establishment of larger regions has been actively discussed and various processes have been set in motion. Regions that cross-cut traditional county delineations in and between countries have been established. In Norway, on the other hand, the establishment as well as the discussion of regions as a basis for cooperation between counties has lagged somewhat behind. Processes are only very slowly initiated from the bottom up in Norwegian municipalities and counties. Norwegian counties are gearing themselves more towards EU regions because such regions are coming to represent an important platform for both administration and collective action. However, for Norwegian counties to cooperate with each other in major areas such as transportation, it will be necessary to grant certain exemptions from statutory provisions.

Municipal institutions

Norway has 433 local governments and municipal administrations each headed by a chief administrative officer (CAO) to whom the local government delegates authority. Municipalities vary in the size of their populations and areas; Oslo, with a population of more than 500 000, is Norway's largest municipality, while Utsira, with only 224 inhabitants, is the smallest. Approximately one-third of Norway's municipalities have a population of 3 000 or less, and the average is about 10 000. Municipalities in both Sweden and Denmark have larger populations, and their geography may thus be better suited for establishing bigger entities for local government than Norway. Nevertheless, these countries think differently from Norwegian authorities when it comes to size of population in municipalities: In 1995 Sweden had 286 municipalities with an average population of 30 900, while Denmark had 275 municipalities with an average of 19 100. In Denmark the abovementioned commission has now suggested that municipalities should have an average population of about 30 000 inhabitants.

The great variation in size naturally entails that Norwegian municipalities have widely differing administrative capabilities. Increasingly, Norwegian municipalities are being asked to act in a generalist capacity. This implies that municipalities are to provide their inhabitants with a de-facto opportunity to influence municipal decisions. Municipalities also have comprehensive responsibilities with regard to efficient delivery of adequate quality services. Welfare tasks that are the responsibility of the local government level include schools, health care, and care and social services. Health care encompasses both somatic and psychiatric care, while care services comprise all types of help offered to individuals, for example the disabled or the elderly, in their homes or in institutions.

The generalist function also implies that local governments are responsible for ensuring legal protection of the individual. Appeals regarding decisions need to be dealt with by staff members other than those responsible for the original decision. This means that municipalities need staffs of a certain magnitude within a number of spe-

cialised service delivery areas, which is especially difficult for the smallest municipalities to maintain. Furthermore, local governments are charged with responsibility for promoting community development. Community development includes among other things industrial development, a municipal master plan, and last but not least, local environmental protection efforts.

Is small beautiful?

Research shows that municipalities with small populations provide good services but that efficiency is low. The argument for this maintains that small municipalities tend to invest more, produce more of each service per capita, and provide greater coverage than larger ones. The question has been raised whether the governments in the smallest municipalities have either the ability or the willingness to respond to the urgent need for more extensive cooperation and coordination across the professional, sectoral and municipal boundaries. In addition small municipalities may not be able to respond properly to the legal rights needs of their citizens.

To deal with the above problems, a discussion has been started regarding how to encourage municipalities to cooperate or, if possible, merge on a voluntary basis. In 1995, a national government decision was taken that stipulates that mergers must be voluntary. Municipalities are therefore encouraged to cooperate with neighbouring municipalities on various tasks, and projects leading both to mergers and to expanded cooperation have been initiated. The present Minister of Local Government and Regional Development argues that increasing the size of municipal populations is one of the measures that will help to solve some of the problems, and holds the view that the number of municipalities ought to be decreased by 100.

There are a large number of task areas that are already subject to collaboration between local governments, with waste disposal being one of the most common. Collaboration is also frequent in the agricultural and environmental spheres, as well as in planning within these two task areas. Collaboration within health and care services, on the other hand, is much more difficult as a result of the population's interest in provision

of services close at hand. Examples may be found, however, of municipalities collaborating on employing personnel such as a psychologist or a psychiatric nurse. These services are only to a minor degree exposed to competitive tendering.

Internal organisation of municipal administrations

The 1992 Local Government Act introduced innovations with respect to both the relationship between central and local government and the internal organisation of municipal authorities. The act provided municipalities with a broad framework for organising their activities. It introduced a kind of management by objectives in which the government ministries establish the overall policy objectives, while the municipalities are free to organise and implement those measures they believe will provide most effective means of reaching these objectives.

Accordingly, the sector-specific municipal administrations were transformed into a variety of organisational forms. Four primary forms have prevailed. In the district organisation model, geographical areas are given either administrative or both political and administrative authority over certain tasks, most often welfare tasks. District organisations are to a great extent implemented to organise the municipal care for the elderly and this model is often found in combination with other models. A second model is the functional model, which is the traditional sectors revisited. A third model is the target group model in which services delivered to certain groups of clients or users, such as children or the elderly, are grouped together. The last model is called flat structure and performance units. In this model the hierarchical structure of municipalities is reduced and the service-providing entities are charged with administrative and professional responsibility for service provision. This last model is considered especially useful by administrators in small municipalities, as it is presumed to facilitate communication between the services and municipal management. The model is also intended to dissolve the monopoly of welfare professions on municipal welfare service delivery and open these services to a greater degree of administrative

management. The model is now in use in an increasing number of municipalities, including larger ones as well.

As indicated above, municipal activity is closely supervised and regulated by the Office of the County Governor, but regulation also takes place in the direct relationship between the state and the individual municipalities. Municipal revenues come from local taxes, economic transfers, fees, user payment and targeted financing of certain defined areas of the welfare state. The level of local taxes is regulated by the state, as municipalities are allowed to vary taxes at an interval where the ceiling is 12.20 percent. The economic transfers are general grants designed to reduce the economic differences among municipalities. The state also uses earmarked transfers to ensure that certain welfare areas are prioritised at the municipal level. At the moment, financing for psychiatry has been earmarked, and there are plans to earmark transfers for child care in the near future. A regulating measure that is being used more frequently is for the state to decide, in the form of legislation, that individuals have a right to specific welfare services of a specific quality at the municipal level. This measure highlights the role of the municipalities as highly integrated implementing bodies for state policy because the ability to adapt policies to local circumstances is diminished.

Conclusion

This article has briefly outlined the three-level structure of and the ongoing debates within the politico-administrative system in Norway. The first major debate revolves around the various problems associated with whether the middle level, the counties, are to exist in the future. In all likelihood, the counties will not prevail in their current form. The second debate involves the number and size of municipalities in Norway. Most probably, the number of municipalities will be reduced and the number of inhabitants will be increased during the years to come. The final debate concerns strengthened state governance of local government, demonstrated among other things in the increase in earmarked transfers and the increased use of legislation to stipulate the individual's rights to services at the municipal level.



Between Master and Synopsis

– A Short Tale of Norwegian Planning

In 1998, a Planning Commission was established with a mandate to review and propose amendments to the present Planning and Building Act of 1985. Asserting that the Norwegian planning system in general worked well, the Terms of Reference requested the Commission to “find out if the Act, through amendments, can be made a better tool to serve important public interests”. The Commission submitted its report in May 2003. The Commission’s conclusions are used here to illustrate the aspirations of the Norwegian planning system and the subsequent approaches to improving planning as a means of serving the public interest.

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By Terje Kleven

The ambitions

The Commission based its suggestions for amendments to the present Act on a set of core underlying values. Planning should:

- promote *sustainable development* by ensuring a long-term perspective on physical, environmental, economic, social and cultural development;
- be *democratic* and under local political supervision and control;
- promote *comprehensiveness*, and enhance coordination and cooperation between all authorities involved;
- take care of and *balance* local, regional, national and international interests;
- be goal-oriented, predictable and binding.

Planning should – at the same time – be efficient and as simple as possible. The underlying values entail a parallel thrust for comprehensiveness and effectiveness. It seems somewhat paradoxical that these extremely high – even on the verge of being heroic – ambitions for achieving cohesiveness and coordination under democratic control emerge in a situation perhaps better characterised by a temporary cry for more market.

The planning system

The Planning and Building Act (PBA) of 1985 institutes a two-tier planning system of county plans and municipal master plans under the control of the elected county and municipal councils, respectively. It is a two-tier system in the sense that counties and municipalities are independent entities. County councils cannot instruct municipal counties and county plans only have status as “guidelines” for municipal plans.

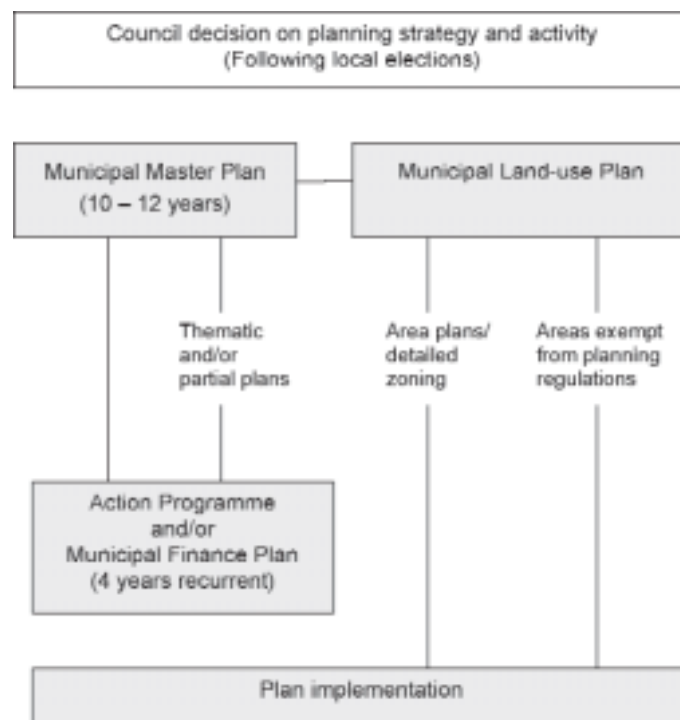
A County Plan/Municipal Master Plan is a long-term, comprehensive development plan for the territory under the jurisdiction of the respective council. The plan shall cover all aspects of local development with a view to coordinating physical, economic, social and cultural activities within the area. The development plan with a time horizon of 10–12 years shall also have a short-term integrated action programme that details plan implementation, normally for a 4-year period. Although there are no formal links between the two legislative provisions, the action programmes instituted in the PBA have in practice been replaced by the statutory four-year municipal finance plan laid down in the Local Government Act.

A municipal master plan shall have a separate and binding land-use plan for the total area under council jurisdiction. The land-use plan is the basis for preparation of local development (zoning) plans that will detail land-use, regulations and legal rights needed for plan implementation. In addition to the general planning instructions, the PBA also contains provisions for statutory Environmental Impact Assessment for large development projects, most often preceding detailed land-use planning. This practice may, however, be changed as a response to calls from developers for simplification. The figure shows the main principles of the municipal planning system summarised by the Planning Commission.

Disappointments and shortcomings

The above may give the impression that there is *one* Norwegian system. This is, however, far from the actual truth. As is the case with provisions for financial planning in the Local Government Act, a multitude of laws and central government regulations impose more or less statutory planning requirements on local government. These obligations relate to specific sectors or functions that may span from primary health care and social services to water supply and adult education. More than 40 different situations have been identified that may require a plan from the local authority; many of these are conditional for financial support. The lack of coordination is particularly evident between spatial planning and financial planning. The experience is that the comprehensive outlook of the municipal master plan is poorly, if at all, linked to the clearly budget-oriented finance plan. A central feature, therefore, of the proposal from the Planning Commission is a deep concern for the lack of coordination between the PBA and the wide range of sector plans, and a subsequent quest to make the PBA the superior planning mechanism.

The values stated by the Commission may be regarded as a reflection of flaws and shortcomings in the present planning system that should be corrected. But beyond this, they are also a sign of far-reaching planning ambitions. What motivates these higher ambitions? The answer to this question is to be found in the constant change that has taken place in the role and substantive focus of compulsory



The Municipal Planning System as proposed by the Planning Commission (2003)

planning from the time it was first introduced. The *instrumental* role of Norwegian planning has evolved continuously over 40 years; its substance has expanded quite dramatically to include new issues, concerns and challenges. The expansion of content, the increasing complexity of cross-cutting issues, and the proliferation of competing plans and procedures has led to situations of deep frustration at the local level. However, this has never had any severe repercussions for the central government, i.e. the Ministry of Environment, and its belief in planning as a tool for coordination, cooperation and conflict resolution. This indicates that planning is also a forceful *symbol* of ambitions to govern.

What brought ambitions to the present level?

There are many factors that have contributed to the rising level of planning ambitions. The continuous expansion of planning issues has already been cited as one such set of causes. The main objective for local planning has shifted from an initial prime role of preparing the ground for physical development to one of providing welfare services. Another important factor is the shift in the perception and



range of environmental problems. Ideas about public participation and a rapidly growing population of civil society organisations and organised interests have made planning less straightforward, and more prone to conflict and local dynamics. The wave of political and administrative decentralisation and the apparent abandonment of central management-by-rules seem to have left planning as the final bastion from which the central government can influence local priorities.

Focus and substance – increasing ambitions and ambiguity

Local planning was made compulsory by the introduction of the Building Act of 1965. Before that time planning was synonymous with typical town planning in the larger cities and built-up areas around them although the city of Oslo presented its first master plan as early as in the 1920s. The large national reconstruction programmes after the end of WWII, as well as a massive rural-urban migration, had demonstrated the need to strengthen planning for industrial development, housing and physical infrastructure. The planning part of the Building Act was a response to these needs. The Act introduced the master plan concept (“Generalplan”) as the overall tool to put local authorities in a better position to cope with the mounting problems of expansion and physical development. For the first time local authorities were instructed to prepare Master Plans and more detailed Local Development Plans (“Reguleringsplan”) that detailed land use and gave zoning regulations. The burning planning issue of the 1970s was how to make local authorities adopt the new planning tools and produce their first Master Plan. It would take at least 25 years for all of them to overcome this hurdle.

During this “inaugural phase” of Norwegian planning, environmental problems attracted increasing public attention. However, the messages of books such as *The Silent Spring* and *Limits to Growth* rarely entered the planning agenda. What really became a critical environmental issue in local master plans was the issue of protecting cultivated and arable land. In some areas, conflicts between the municipal and agricultural authorities brought land-use planning to a

standstill. Until the mid-1980s, environmental concerns in local planning were synonymous with protection of farmland and provision of infrastructure for the treatment of municipal sewage and waste. Municipal planning was primarily involved in issues relating to land-use and physical infrastructure. Norway was still in the era of post-war reconstruction.

During the late 1970s the central government voiced growing concerns about the slow progress of local planning. Very few local authorities outside the larger urban conurbations managed to prepare master plans at the pace and with the quality sought by the central planning authorities. Local planning was a bonanza for a rapidly growing group of planning consultants of highly varying professional quality.

Another reason for taking steps to boost planning was the obvious need to rationalise and simplify planning regulations that were spread over a great multitude of laws and regulations. Besides, there was a need to expand the scope of planning to meet the next – confluent – flow of tasks that was left to local authorities to solve: environmental management and the establishment of the “welfare municipality”. From the early 1980s, local authorities were gradually made responsible for the provision of a broad range of social and welfare services. The 1980s also saw the birth, rise and the first signs of the fall of local (municipal) environmental management. In the course of a decade or so, the scope of local planning was dramatically expanded from physical master planning to wide-range synoptic planning. The Planning and Building Act of 1985 was the answer to this call to arms.

From master planning to synoptic planning

In the Planning and Building Act of 1985, the scope of compulsory local planning was very broadly defined to encompass all development efforts – physical, financial, social and cultural – within the territorial jurisdiction of the municipal council. Later on aesthetics were also added.

The consequence was that focus was shifted away from land-use planning toward much greater emphasis on planning for the production of social and welfare services. The “soft sectors” entered local planning – and

led to a mushrooming of new planning initiatives on behalf of the national agencies and authorities politically and administratively in charge of these sectors. Plan initiatives were taken to support and promote specific sectors and policy areas, either as tokens of political priorities or as preconditions for earmarked development grants.

Environmental concerns grew in the aftermath of the Brundtland Commission. During the 1980s a massive campaign with substantial central government funding was launched to enhance environmental management and planning at the local level in Norway. The concept of land-use was broadened to denote the management of *natural resources* within the municipal territory. All local authorities were offered full salary allocations for environmental officer positions. A new municipal administration was built up and Local Environmental Management Programmes were prepared with the somewhat vaguely formulated intention to integrate them into the Municipal Master Plan. However, a majority of this planning soon developed into another sector planning effort.

Another typical feature of the Planning and Building Act of 1985 is the full adoption of the principles of public participation. A new chapter on "Consultation, Publication and Information" was included in line with the ideas of democratisation of public planning that had grown out of the planning debate of the 1970s. Rules were introduced for obligatory consultation between public agencies at different administrative levels with the objective of uncovering conflicts of interests. Procedures and principles for public participation in the planning process, as well as legislation designed to protect the specific interests of children, were introduced. Guidelines and "best practice" illustrations were issued to safeguard the interests of the public and particular interests groups such as the elderly and the physically disabled.

During the 1980s the framework of local planning gradually developed into a wide-scope system of comprehensive, synoptic planning inviting cooperation and coordination. A broad range of public and private interests were to be heard. The planning system was accused of being ineffective and time-consuming. Preparations and revisions of master plans and successive development plans take considerable time when there are

several government agencies in a position to block local planning decisions if they can claim that their specific interests have not been duly preserved. This criticism has been most strongly voiced by developers and entrepreneurs in the urban areas. The pursuit of simplification, streamlining and greater effectiveness of the planning system – especially the implementing, "executive" part of it – became evident, leading to a subsequent call to expand public-private partnership.

During the 1990s the issue of *governance* entered the planning agenda with full force. The very noticeable impact has been that most development plans are now prepared by private developers, putting local planning authorities under heavy pressure to keep ahead of the market and the rising tide of private planning initiatives throughout the urban areas.

Back to the Master Plan?

The shift of focus from issues of land-use and physical infrastructure in the 1970s to all-embracing comprehensiveness, as suggested by the latest Planning Commission, may be interpreted as part of a continuous process, both of changing needs and of escalating ambitions. Planning focus has shifted in keeping with the devolution of new tasks to local authorities. However, the development of planning from the fairly simple and straightforward land-use Master Plan of the 70s to the values propounded by the Planning Commission at the beginning of the new millennium also reflect the expansion of planning as a symbol of the quest for coordination and effectiveness – organisation and orderliness – in public affairs. This is a true paradox in an era dominated by the strong belief in market solutions.

Although not still formally implemented, the goals of the Planning Commission reflect broadly-held normative values among planners, administrators and even politicians as to how planning should function. However, research shows that practice is quite different. The tendency is that the comprehensiveness and coordination sought for tend to remain mostly on paper, while the more instrumental, near-term needs to manage municipal finances and land-use tend to be the "real things" that concern local authorities most. A sign that the instrumental needs are still the number one priority? A return to the Master?

An aerial photograph of a city, likely Oslo, Norway, showing a large body of water (the fjord) and a bridge crossing it. The city is built on a hillside, and the water is a deep blue. The sky is overcast.

Planning for Urban Change

Although the first towns in Norway emerged a thousand years ago, the country was urbanised relatively late in the game. Only the capital city of Oslo can truly be classified as a major city in international terms, while most other urban centres are comparatively small. Post-war urban growth in Norway was land-intensive, resulting in extensive urban spread. Today, however, urban development is increasingly taking place through consolidation within and transformation of former industrial districts, harbour areas, etc. At the same time, new forms of cooperation and partnership between the public authorities and private development interests have become more and more common.





Oslo's Development – the Fifth Layer

Urban development in Norway in recent decades must be seen in relation to the political, economic and technological changes that have taken place since the 1970s. Before then, the planning of city environments had been an integral part of Norway's planned economy. Norwegian social democracy had produced a set of institutions, regulations and practices within which city planning was to take place. These institutions have gradually broken down as the planned economy has given way to market forces and new political practices.

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By Karl Otto Ellefsen

While Norway's flourishing economy may appear dazzling, the wealth and prosperity now on display have not been around for long. Visitors can see this for themselves in the structure of Norwegian cities, especially the capital. While Copenhagen and Stockholm testify to past imperial greatness, with their monumental structures and dramatic street designs, Oslo is a smaller-scale city with a fragmented layout and few monumental buildings. Until the mid-1900s, Norway was not only on the outskirts of Europe, but poor as well. The Norwegian welfare state was planned and constructed after the Second World War. Not until the mid-1970s did the oil economy begin to dominate Norwegian society. Since then Norway has become one of the richest countries in the world.

Almost all of the earliest Norwegian towns are coastal towns. The first ones sprouted up in connection with the fishery exports that followed the establishment of medieval trade routes. Fisheries and a substantial shipping industry caused a string of cities to materialise along the coast in the 1700s and 1800s. Nonetheless, rapid growth associated with widespread industrialisation came late to Norway. Not until the end of the 1800s did

industrial growth, based on cheap hydro-power, lead to the rise of a variety of new industrial centres. Inland cities with railroad junctions as well as established coastal cities such as Stavanger, Bergen and Trondheim all experienced a burst of industrial-based growth. During this period Oslo, then named Christiania, became Norway's most important industrial city as well as its capital.

Although Oslo's size, economic power and cultural influence are unrivalled within Norway, it is also a typical Norwegian city. The various historic and socio-material¹ layers that make up Oslo are found in many Norwegian cities. These layers reflect the evolution of the city planning and political ideals that have influenced urban development all over Norway, and that have a frame of reference in the rest of Europe.

The structure of Oslo can be seen in five different historical layers:

- 1) Old Oslo, or medieval elements that stem from the city's founding about 1 000 years ago. They can be seen in the street layout as well as the ruins of monasteries and churches in the district of *Gamlebyen* on Oslo's east side.
- 2) Christiania, built by Danish King Christian IV within an orderly grid of streets under

the walls of Akershus Fortress in 1624, after the old city had been destroyed by fire. The westward expansion of the city, including the arrangement of the Palace and the other national institutions around *Karl Johan's Gate* in the 1800s, extended this Baroque concept. The 20th-century City Hall, with its surrounding streets and open spaces, also fits into this pattern.

- 3) The third layer is that of the industrial era, when shipping and manufacturing enterprises began to line Oslo's harbours and riverbanks. The compact city was extended to accommodate middle class housing in the west and working class housing in the east. Oslo's general plan of 1930 reflected the planning profession's strong desire to control growth while consolidating the city into a "gesamtkunstverk," a unified mosaic supported by ring roads and radial arteries. Single-family houses were becoming popular. To the west and the east alike, they fanned out from the rail lines until Oslo had completely filled in what chief city planning officer Harald Hals called "its natural body" as outlined by the fjords and hills.
- 4) The period from 1945 to the 1980s is associated in Norwegian urban history with the expansion of the Norwegian welfare state. Oslo's physical structure was affected first and foremost by the concentric, relatively diffuse growth of this period. The period also saw extensions of the subway net, the incorporation of modern planning ideals in state-controlled and state-subsidised housing programmes, and the development of sprawling manufacturing and transport areas. Political ambitions went beyond the regulation of physical surroundings; all aspects of community planning were to be controlled. The resulting system was based – as in most European countries – on social democracy and comprehensive strategies linked to national economic goals. But the social vision behind it included a world of architectural and aesthetic ideals as well. Impressive results could be achieved in urban development because the public sector was either the organ of policy implementation or the builder of record.
- 5) Oslo's fifth socio-material layer has been laid down by the modern Norwegian oil economy. The system for central planning

has come to an end. As new forces and theoretical assumptions come to the fore, new ways of regulating urban development have been devised. This new Oslo has much in common with other European metropolitan areas, both in terms of its physical characteristics and the challenges it poses to city planners.

The new urban geography

In the past two decades a new urban geography has emerged. The Oslo region can no longer be understood as simply the area within commuting distance of the city centre, or even as an urban core surrounded by concentric rings of lower and lower density. Functionally, the region is far more complex than before. Architecturally distinct areas now run the gamut from traditional cities and towns to new and revitalised business areas, regional attractions, regional cross-roads and pristine natural surroundings. For this urban system to function, mobility is an absolute prerequisite.

The city as nature and network

The new urban geography has given rise to new ways of understanding cities. In the post-modern conception of the 1980s, city architecture was seen as an autonomous field to be interpreted and regulated independent of

The city as nature: Mapping a new Oslo. (Illustration: Institute of Urbanism, AHO, Arkitekturtriennalen Oslo, 2000)





Urban development by new urban nodes: Proposal for a new city at the abandoned airport of Fornebu, Oslo (Illustration: Institute of Urbanism, AHO, 1998)

other forces. The focus now is more on functional content than form. When today's metropolis is seen as "nature," the implication is that it is basically a cultural landscape that includes various landscape-impediments as well as sizable, contiguous natural areas. The landscape holds the city together, so that the city itself can be perceived and cultivated as a landscape or even as a comprehensive ecological system – a system best described in the vocabulary of natural science. This concept of a natural city is used both practically and symbolically in urban development projects. By the same token, information technology has ended the notion of a hierarchical urban system dominated by the central core. Now a metropolitan area is conceived as a network of more or less equally respected nodes, each of which has a functional profile and architectural style of its own.

Urbanity as category and goal

Traditionally, Norwegian planning has been marked by a strong anti-urban perspective. Today, however, it is more politically and professionally acceptable to regard the urban ideal as something worth striving for. The idea of urbanity is associated with an intensity of economic and cultural activity, as well as a certain density of population and functionality. It is also associated with a diversity of cultural, social and utilitarian structures

and communal forums. The city makes room for everyone, including "the stranger."

The positive view of city life is related to historic changes in how people lead their lives. "Lifestyles" have always come and gone. What is changing now, by contrast, is our "way of life" – that is, the basic pattern of human interaction. In Norwegian cities, the changes have made themselves felt in the past decade in the form of immigration and ethnicity, in rising numbers of sophisticated young inhabitants, and, not least, in a new set of residential preferences. Prosperous, middle-aged residents in particular have made their preferences known: "I want to live in a centrally located apartment," they say. "I want to sell the lawnmower, take it easy, eat breakfast at the corner café, travel more, go to my two vacation cottages more often and spend more time with my current companion." The extensive construction of new central-city homes in recent years is a direct result of this attitude shift.

The ideas behind physical transformation

The changes in how people live can be seen in the physical transformation of cities. Often the transformation is merely "iconographic" – the result, that is, of a new symbolic language expressed through such things as restaurant and café menus, commercial inventories, store designs and the colours and styles of front doors, curtains, post boxes and street and park furnishings. In Norwegian cities, old neighbourhoods dominated by wooden structures were the first to be gentrified and fitted out with the new iconography. In general the process of gentrification, in which affluent people gradually take over a city's central residential districts, has not been carried through to completion in Norway. Even in Oslo's Grünerløkka district, the most talked-about example of Norwegian gentrification, the iconography is emblematic of the city's old working-class culture as well as the ethnic-based aesthetic that appeared in the 1970s and the urban youth culture of today.

At the same time, an extensive structural transformation is under way in which city neighbourhoods are being built up or brought back to life. This is happening on a large scale for the first time since Norway's old cities of wood burned to the ground and



industrialism waltzed through the decaying outskirts of many cities. The renovation of Aker Brygge, an old wharf area in Oslo, was the first of these transformational projects in Norway. Such projects tend to recycle old industrial or shipping areas close to the regional transport network. Their design and construction rely on similar economic, organisational and technical models, and the project initiators tend to favour a large percentage of high-status residential units and a general profile reflecting big-city culture. Large transformational projects represent the state-of-the-art in Norwegian city development today. That goes for the forces driving the development as well as the public agencies that regulate it and the architects who give it form.

The city as “gesamtkunstverk” vs. social portrait

The post-modern layer in the history of Norwegian urban development is characterised by an interest in renewing the diversity, structure and typology of the traditional European city. Interest in the structure of urban spaces stemmed from a desire to develop public areas for social and communal interaction. Instead of choosing universal solutions, planners sought contextual, place-specific designs. Architecture was discussed



The 1980s and the first plan for Bjørvika's development: The clearest example of post-modern urban planning in Norway. (Illustration: Oslo byplankontor, et. al.)

as form, more or less in isolation from its social relevance or broader impact. At its best, this approach led to worthy reconstructions; at its worst, it resulted in eclectic collections of historical architecture lacking in authenticity and devoid of significance.

In Norway, as elsewhere, the current debate about city planning ideals can be understood by separating the arguments into two poles. At one end are the ideas and practices of “New Urbanism.” This school of thought views city architecture as a stable tradition – like a language that changes very little even as the culture evolves. On the other end is “New Pragmatism,” also called “The Second Modernism.” It takes the opposite view – namely, that social and cultural change is the basis of new architecture. New forms, in this view, are the result of a society deploying new technologies, new means of production and new modes of cultural expression while assigning new and complex programmes to its structures. Form is thus something one finds and legitimises by investigation.

The logic of the real estate market

Reactions in the property market often call the public's attention to incremental changes in the way public and private actors divide responsibility. Real estate is considered an



Project for the development of Tjuvholmen at the central waterfront in Oslo: City planning through professional property development following the logic of "real estate". (Illustration: Snøhetta/Linstow, 2003)

essentially secure investment in the larger Norwegian cities, and more so in Oslo than elsewhere. It is one of the few businesses outside of the oil industry that attracts substantial sums of capital. In the past decade, the driving force behind much Norwegian property development has been investment capital that is managed through publicly traded companies and often tied to large-scale contracting activity. The Norwegian property market is likely entering a period of increased international ownership. Companies owned by the Norwegian state or municipalities – and there are many of these – are instructed to behave according to the same economic goals that apply to private actors. The logic of the property developer thus drives public-sector decision-making as well.

In any case, property development is now conducted in a highly professional way. It has become a sophisticated business in Norway, in line with the European and, perhaps especially, the American model. The business is goal-oriented, quality-controlled and anchored on secure legal and economic grounds. The marketing skills brought to bear are also of the highest professional standards, and real estate developers have become major consumers of media, public relations and marketing services. They are well aware of the relationship between generating media coverage and influencing the political agenda.

The property developer's logic is not problematic in itself, but public authorities and professional planners are ill equipped to satisfy its inherent demands. Investors are pushing for additional construction in Oslo even though the area available for development vastly exceeds the demand for new office and residential space. In other words public officials must create a strategy for prioritising the areas and the types of projects to be developed while maintaining a purposeful approach to public investments.

From ideal to strategy

City planners in the Nordic countries have traditionally tried to follow synoptic ideals that emphasise comprehensive planning and a controlling role for public agencies. Planning institutions were developed specifically to carry out that type of planning, and they have not let themselves be redirected without resistance. But the fact is that in Oslo and the rest of the country, comprehensive planning is no longer considered desirable or even possible. Instead, cities attempt to create strategies and contingency plans to intervene more or less spontaneously in developments as required. Incremental decision-making and conflict-resolution are both the rule and the ideal now in Scandinavia as elsewhere.

The project, in other words, has become more important than the plan. A privately initiated urban project is seen more as a resource than a problem. By shrugging off the conservationist elements of a fixed plan, an innovative project can have a dynamic, renewing effect on a city. It might even gain a status that makes it invulnerable to logic or rational argumentation. Once popular passions are aroused, a project may become "an event" whose unfolding is not constrained by normal rules.

The development of a new opera house in Oslo's Bjørvika district is an illustrative example. It was far from obvious that the proposal for a monstrously expensive opera building to be constructed around 2005 (rather than a century earlier) would stir passions and become a national symbol long before the first shovelful of earth was turned. In Oslo's architectural community, petitions were circulated to demand thorough planning for the whole of Bjørvika before the holding



Unsullied vision in a chaotic urban plan: The opera house shines white on the structural plan for development of the Bjørvika district. (Illustration: Oslo byplan-kontor, et. al.)

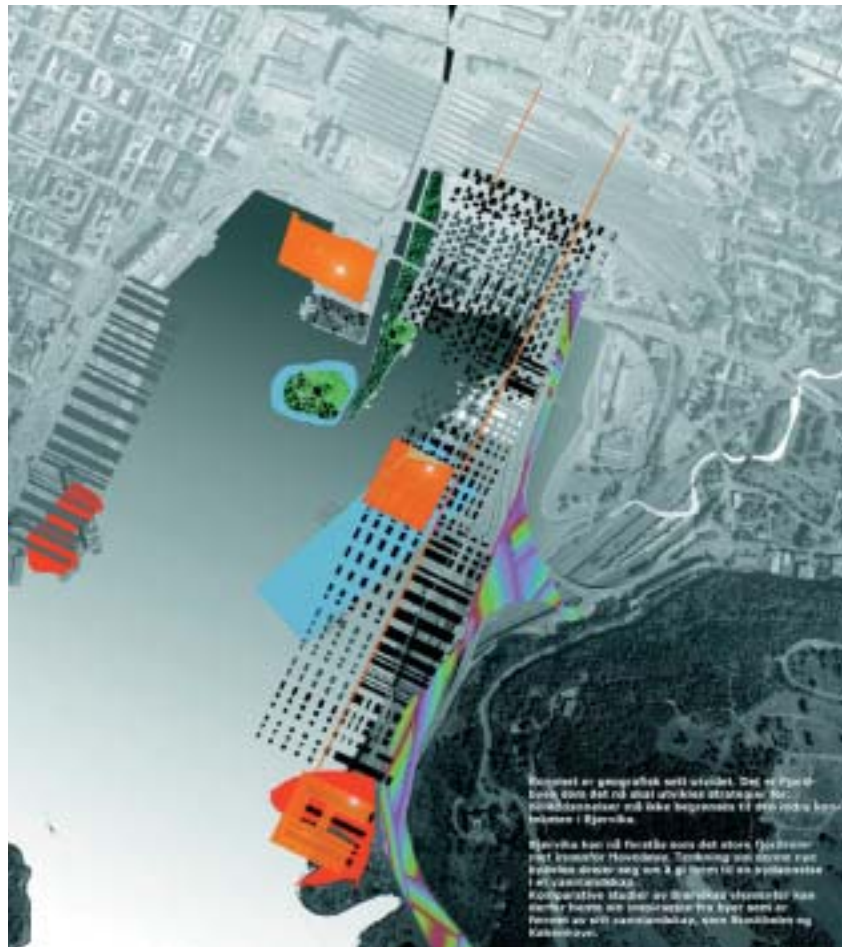
of an architectural competition for the opera house itself. Instead, the winning opera-house model now stands as an inviolate, shimmering vision inserted into an otherwise chaotic Bjørvika plan. The project, or event, had set the premises for its own realisation. The opera house may seem like a special case, but it accurately shows how large urban areas today are often planned and developed by way of a few symbolic, stand-alone structures that are expected on their own to generate additional development activities whose nature is not defined in advance.

The term “sustainability” contains the seeds of a comprehensive approach to urban development. Since the mid-1980s, sustainability has been prioritised highly and now dominates public-sector dialogue as a symbolic ideal. As a policy goal, it has been effective in some ways and is consistent with the strategies and ideals that prevail in most other European countries. But weaknesses with regard to achieving sustainable development are also clear, as evidenced by a lack of coordination among regional development policies. Uncoordinated policies have resulted in a land-use pattern that is transport-intensive and expensive to maintain. Nor is there much connection between the political rhetoric often heard in support of collective transit systems and the actual investment of funds, which tend to support private car usage to the detriment of collective transit.

The relationship of expertise to policy

Until the 1980s, professional planners and politicians customarily shared responsibility in an agreed-upon fashion. In the period since then, the role of political leadership in city planning processes has declined. At the same time, urban development has never been more important in the public debate, and politicians are quick to take sides on concrete solutions that traditionally would have been the purview of professionals. It is a way for elected officials to show their political engagement and clout.

The ideal in city planning, as in other areas of public management, involves professional bodies that work quietly in accord with an approved political agenda and supply background material to the decision-makers. The role of city planner is most easily filled



when the planning process rests on legal authority and its conclusions are binding. That is why preservation of cultural monuments in Norway has been relatively effective.

Since the public sector rarely undertakes construction projects on its own, city planners have little opportunity to serve as their own project developers. They have long dabbled as negotiators and as players in the process, but they have lacked the political support necessary to enter binding agreements associated with project execution.

No one can re-establish a technocratic model for the interplay of professional planning and policymaking, and few would propose doing so. But today's division of responsibility is unworkable. New institutional systems are needed so that society's interests in urban development can be managed better and more openly. Politicians must be asked to assume the strategic responsibility. City planners must be asked to develop and carry forth their professional expertise.

Activity-generating points and an open urban structure – an alternative approach to planning of the Fjord City area. (Illustration: Institute of Urbanism, AHO, 2002)

Notes:

1 The term “socio-material layers” is taken from Dag Østerberg's *Architecture and Sociology in Oslo* (Pax, Oslo 1998), which describes Oslo not as a city but as a comprehensive blend of socio-material elements. The term is used in this article to capture the relationship between form and content.



Oslo: The Fjord City!

The construction of the Fjord City area is underway! A new national opera house has begun to rise in Oslo's Bjørvika district and will be finished in 2007, with its opening performance in 2008. Oslo's former western railway station is being transformed into the new Nobel Peace Center, due to open in 2005. And preliminary work has begun on a tunnel to replace the surface motorway that now bisects Bjørvika – a transportation project that will give Oslo many new options for development.

Architect **Stein Kolstø** is Head of Office, Oslo Waterfront Planning Office, Municipal Planning and Building Authority.

By Stein Kolstø

An opening to the fjord

Oslo is situated beautifully at the inner reach of the Oslo Fjord, but commercial and transport-related use of the waterfront areas have long separated the city from its fjord. In recent decades Oslo residents have sought solutions to this problem. Today, the authori-

ties are taking important steps to alter the physical landscape even as they continue to plan. The barrier to the sea is to be removed so the city once again can enjoy its beautiful fjord and related natural treasures.

The number of privately-owned cars skyrocketed in the decades after WWII, and an extensive motorway system was constructed along the Oslo waterfront to help channel the traffic. By the middle of the 1970s, the city had been more or less cut off from the fjord



Fjord City: For several decades it has been hard to reach Oslo's central waterfront, but now the area is to be opened up, giving the city room to grow. The waterfront is centrally located, narrow in shape, and to a large degree undeveloped. (Photo: Fotonor AS)



by a triple barrier of railways, motorway and cargo ship terminals. But the fundamental debate over Oslo's future access to the fjord did not emerge until 1978, when the final vessel built by *Aker Mekaniske Verksted* sailed away from the dock at what is now the *Aker Brygge* complex.

In 1982 an idea competition was held. Titled "The city and the fjord: Oslo looks to the year 2000", the competition generated enthusiasm among Oslo residents and laid the conceptual groundwork both for developing *Aker Brygge* and for placing the E-18 motorway in what is today's *Festningstunnelen*, or Fortress Tunnel, under Oslo City Hall and Akershus Fortress. Financed by road tolls, the tunnel opened in 1990 and was the catalyst for a variety of environmental and urban improvements. These included a City Hall pedestrian plaza served by trolleys, a rehabilitated historic square known as *Christiania Torg*, a new street pattern and street design around City Hall, and a renovated waterfront area for sailing ships, antique boats, outdoor restaurants and recreational activities in the lee of Akershus Fortress.

Strategy for the Fjord City area

The Oslo City Council passed a resolution in 2000 declaring that the basis for additional waterfront planning would be "the Fjord City strategy". The thrust of the strategy was that Oslo's container ship terminals were to be moved out of town to a new regional port, and that the central port areas thus freed were to be redeveloped for residential, business and recreational use. Passenger ship traffic as well as wet- and dry-bulk cargo

ship traffic would remain in Oslo.

The Oslo Port Authority has produced what it calls its "Revised strategic plan for the Port of Oslo, 2003-2011". This plan envisages a temporary container terminal on the *Sjursøya* peninsula, south of Oslo's central district, to be situated there until the regional solution is implemented. By diverting Oslo's cargo traffic there, city officials are freeing central port areas for development at an early stage.

As a follow-up to its Fjord City resolution, the municipality established the Oslo Waterfront Planning Office in 2002. This office conducts comprehensive planning for the Fjord City area, participates in local and international networks devoted to waterfront development, conducts information campaigns, and provides professional support on

Oslo of the future: the Fjord City is to be integrated with existing city districts and accessible to all. Plans call for variation in building styles and functions. (Illustration: Oslo Waterfront Planning Office)



Part of the Fjord City: *Aker Brygge* is a former shipbuilding wharf. In the period between 1984 and 1991, a new, centrally located neighbourhood was constructed there with offices, stores, cultural institutions, restaurants and residences with a floor space totalling 180 000 m². (Photo: Oslo Waterfront Planning Office)



Historic city park: Oslo's Medieval Park opened in 2000 for a celebration marking the 1 000th anniversary of the city's founding. The park is extremely popular, and is used by Oslo residents for recreation, music festivals and medieval fairs. (Photo: Oslo Waterfront Planning Office)

specific issues within the Fjord City area. Its Internet site is www.fjordbyen.com.

Unique aspects of the Oslo waterfront

Oslo's waterfront is special in several ways. The city is situated in the midst of beautiful natural surroundings: woods and hills to the north, and to the south the Oslo Fjord with

its attractive beaches, islands and rocky islets. The waterfront area consists in large measure of open spaces; there are few valuable buildings to place limitations on future use and development.

A major portion of the area designated as the Fjord City is in the immediate vicinity of the capital's central district. These areas are seen as part of the nation's shared urban estate, and they encircle one of Norway's most important national symbols: Akershus Fortress. The oldest parts of this fortress date back to 1299. Other portions of the Fjord City adjoin existing residential zones as well as large parks and natural areas, as at *Ekebergåsen*.

Goals for the Fjord City area

The Fjord City area is composed of many distinct parcels whose value, both to the public and to the property owners, is significant. It is inevitable that the various parties involved will have conflicting goals and intentions.

The most important planning goals associated with the Fjord City area are as follows:

1. A new image for Norway's capital looking out on the fjord
2. Contiguous development
3. Access for all

Bjørsvika is the largest single area within the Fjord City, covering 70 hectares. Some 950 000 m² of floor space for 4-5 000 apartments, businesses and cultural institutions have been approved. Large open spaces will connect adjacent areas of the city to Bjørsvika and the fjord. The development concept is dependent on the construction of a tunnel to divert motorway traffic that has cut through the area since 1972; the removal of port activities to new facilities further south is also required. The architectural firm Snøhetta won the design competition for the opera house. (Illustration: Via Nova/Plan- og bygningssetaten)



4. Environmentally sensitive urban development
5. Environment-friendly transport
6. Preservation of nature
7. City spaces for human meetings and activities
8. Around-the-clock activity
9. Culture and identity
10. Knowledge and expertise
11. Public participation
12. Phased implementation

Comprehensive planning of the Fjord City area

The term “comprehensive planning” can be interpreted in many ways, and there is no single, generally applied definition. Each planning exercise must stipulate its own level of comprehensiveness. The Fjord City office has done this by examining the Fjord City area’s geography, goals and challenges, and delineating four professional areas of focus: content, accessibility, quality and mobilisation.

The Fjord City area’s “content” has to do with land use and the programming of areas and functions; with staged implementation and the relationship to the market and demand; and with the character and content of the new areas in relation to the existing city. “Accessibility” has to do with the design continuity of physical urban structures and their accessibility from neighbouring areas; with unimpeded access to the water’s edge; and with environment-friendly access to the development areas for all types of vehicles and pedestrians. “Quality” refers to the planning tools used in achieving goals relating to sustainable development, environmental standards and aesthetics, as well as in safeguarding all the special activities and experiences that emerge where the city meets the fjord. Consideration is needed to ensure a high aesthetic level precisely here, where the water surface plays with the city of Oslo. “Mobilisation” refers to efforts to build public awareness and support, such as information campaigns, collaborative processes and temporary cultural or recreational activities that draw people to a site in the early implementation phases.

These four areas of focus are to form the departure point for a comprehensive Fjord City programme, which will provide an underlying framework for land use, activity levels and



Fjord living: In 2002 the Oslo Port Authority held a conceptual competition for *Tjuvholmen*, located beyond *Aker Brygge*. The competition received a great deal of media attention. In the end, the Oslo City Council named *Utsyn* (“View”) proposed by Norwegian architect Niels Torp, as the winning concept. It calls for some 150 000 m² of floor space dedicated primarily to residences, approximately 1 200 apartments. The plan also includes a new, 9-decare public park with swimming area. (Illustration: Niels Torp architects)

transport service while setting quality and procedural standards for further development of the Fjord City area. A first draft of this programme may be completed by the summer of 2005. The draft will pass through an extensive series of consultative processes before it is submitted for political approval.

Detailed planning and implementation of the Fjord City programme

In Norway, municipal master plans set the basic framework for development. Local development plans, by contrast, specify detailed guidelines for land-use, building sizes and any dispensations that may be granted. Follow-up programmes pertaining to design, environmental considerations, cultural aspects and other issues may be appended to these local development plans. It is the city’s Planning and Building Authority that makes sure such detailed plans conform to the municipal master plan, as well as to juridical, functional and aesthetic requirements. Once approved at the political level, detailed local development plans provide the legal framework in which construction may take place.

Decisions about project execution will often be up to the property owner or manager. If the building project in question is a



Culture downtown: In 2002 the Directorate of Public Construction and Property held an international architectural competition for Oslo's former west-side railway station, *Vestbanen*. The winning design – which shows about 125 000 m² of new floor space devoted primarily to cultural uses (library, cinema, gallery) – was submitted by the Dutch architecture firm OMA in cooperation with Norway's Space Group. Additional plans call for 200 to 300 residences as well as office space and a hotel. Under construction independently is the new Nobel Peace Center, a museum and exhibition hall presenting Nobel Peace Prize Laureates and more. The center is due to open in June 2005. (Illustration: Office of Metropolitan Architecture/Space Group/Statsbygg)

private initiative, the property owner's assessment of market demand will weigh heavily in the decision on whether to proceed. If the proposed project is public (such as a transportation facility), it must be included in the budget of the responsible public agency before receiving a go-ahead for construction.

Successful project implementation is often dependent on well-functioning, predictable collaboration between private investors and public authorities as well as creative and flexible relations among the public agencies involved.

Crucial factors

In a large-scale urban transformation such as the Oslo Fjord City, it may be hard to achieve all the goals identified at the outset. Achieving them requires that all public and private parties maintain their focus, that public agencies perform all of their duties, that market swings do not produce undesirable consequences, and that planners manage to set the bar high enough to meet the needs of the future.

Without proper focus, important aspects of a comprehensive solution may fall through the cracks or be weakened by decisions based on expedience or too great a willingness to compromise. Only continual debate and information-sharing will keep the goals and

qualities of the Fjord City programme – and by extension the future of Oslo as a whole – from being diminished. The time scale for planning and developing the Fjord City area is at least 50 years.

Well-planned execution should be able to prevent development areas from lying fallow for long periods as a result of downturns in the property market or other factors. Temporarily abandoned areas – having shed their original function but not yet been redeveloped – can quickly become unsafe, with negative effects on neighbouring areas.

Planners involved with the Fjord City project must be broad-minded and far-sighted. The work they do is for the benefit of future generations. If the authorities set their sights too low in the early phases, the resulting qualities and standards may not comply with future norms.

It is vital to provide adequate resources for broad-based cooperative processes and public participation in the early phases of planning and development. Unfortunately, the more usual pattern is for information centres and publicity campaigns to begin only when the selling phase starts. If a long-term investment such as the Fjord City is to achieve positive results, it must be solidly rooted in the public consciousness.

The Fjord City of the future

The Fjord City is divided into 13 areas defined by their ownership type, geography, neighbourhood, current usage and other factors. The total area amounts to 225 hectares and extends approximately 10 km from *Frognerkilen* in the west to *Ormsund* in the east. It consists in large measure of landfill and industrial piers with asphalt or concrete surfaces.

Within a few years, construction will take place in at least three areas within Fjord City: *Bjørsvika*, *Pipervika* and *Sjursøya*.

Bjørsvika

In addition to the new opera house, plans call for the construction of a temporary pedestrian bridge over the E-18 motorway in anticipation of a more permanent rearrangement of traffic. Construction of the large,

expensive and technically advanced *Bjørsvika* tunnel, which will divert the motorway under *Bjørsvika*, will begin in earnest in 2005. This tunnel – an exciting infrastructure project in itself – is the lynchpin for *Bjørsvika*'s extensive urban development plans. In an environment-friendly manner, the tunnel will connect the existing Fortress Tunnel in the west to the Ekeberg Tunnel in the east, and thus complete the main roadway network through central Oslo. Construction of office buildings and businesses will begin in the area nearest the railroad tracks when the local development plan is confirmed and building permits are issued.

Pipervika

At *Tjuvholmen* beyond *Aker Brygge*, on the west side of *Pipervika* (Oslo's small central bay), construction is expected to start in 2005, with completion in the period 2011 to 2017. The areas around the former western railway station (*Vestbanen*) will be sold after the local development plan is approved by the City Council; construction could begin in 2006. On the opposite side of *Pipervika*, it is hoped that the Oslo Port Authority will begin in 2004 to enhance *Akershusstranda* with new ground surfacing, furnishings and lighting so that parts of the area can be opened in time for a centennial celebration in 2005 marking the peaceful dissolution of the union between Norway and Sweden. Construction of a new restaurant atop a pier called *Tingvallautstikkeren*, which juts out from *Aker Brygge*, can begin as soon as the City Council approves the plan.

Sjursøya

The construction of a new, temporary container terminal on the peninsula of *Sjursøya* will dominate Oslo's southern harbour area from 2004 to 2008. A new access road to the facility will be built from E18. At the *Kneppeskjær* pier, new berthing and storage facilities will be built to help make port activities more efficient.



Continuity, accessibility and variation: One feature of the Fjord City area will be a continuous promenade along the waterfront. The existing city and the "new city" are to be integrated. The long, narrow Fjord City is to offer a variety of experiences while changing character from one area to the next. (Illustration: Oslo Waterfront Planning Office)



Projects and ideas: A variety of projects and ideas have been illustrated for the Fjord City area. This "collage" shows them together, totalling about 2.5 million m² in new floor space. Half of it is devoted to residential use and half to business use. That converts to about 12 000 residences for 25 000 to 30 000 people and enough business and office space for 40 000 to 50 000 jobs. The drawing also shows about 100 000 m² for cultural uses ranging from opera to cinemas, museums and galleries. (Illustration: Oslo Waterfront Planning Office)



Undetermined: In these areas, the nature of further development has not yet been determined. Further planning of the Fjord City area will focus on these areas. (Illustration: Oslo Waterfront Planning Office)



Road Tolls in Norway: A Transport Policy Instrument

Norway has a well-established road toll tradition. A large number of small and large-scale road projects have been funded in this manner over the years. The establishment of toll rings in urban areas comprises a more recent form of toll financing, and has been used to finance investments in both new roads and public transport.

Kjell Werner Johansen is an economist working at the Institute of Transport Economics (TØI) in Oslo.

By Kjell Werner Johansen

The inhabitants of Norway live and work in a country with an extended, rugged coastline that is characterised by countless islands, fjords and straits. Each of these straits has first been traversed by boat, and later, as the motoring age took over, by car ferry, bridge and more recently by subsea tunnel as well. With the advent of the car ferry, it became a matter of course to charge the users, albeit using subsidised ticket prices. As car ownership and car traffic rose, new fixed strait crossings were planned. A number of projects were carried out with funding from the state and local tolls. Such projects were often based on local initiatives. The first toll-financed bridge opened in 1929.

Later, joint stock companies were set up with local stakeholders to finance the investments with state grants combined with loans. These were to be paid back from the toll revenues for a pre-established period of time. Local initiatives of this type have to be approved by the *Storting* (Norway's national assembly). After the loan has been repaid, the tolls are discontinued. A number of small and large-scale projects have been funded this way over the years. More recently, toll financing has been introduced on new interurban motorways as well. These motorways are financed using a combination of state grants and toll revenues for a pre-established period.

The toll rings in urban areas comprise the third form of toll financing. These are used to finance investment packages involving road and public transport infrastructure.

Until the first urban toll ring opened in 1986, overall toll revenues represented 4–5 per cent of all road infrastructure investments. In 2002, tolls financed up to NOK 3.2 billion, or 35 per cent, of the total road investments. This increase is due both to the opening of several large, regional, toll-financed roads as subsea tunnels, and to the launching of a number of urban toll rings. As shown in Figure 1, there are currently 39 toll projects operating in Norway.

Urban toll rings

Norwegian rationing restrictions on car imports were eased in 1960, and the ensuing growth in car ownership and use in the largest cities quickly outpaced the improvements in road capacity. Combined with rapid growth in population and activity in the largest urban areas, this led to increasing congestion problems.

The two largest cities, Oslo and Bergen, both have geographical limits on urban growth. Bergen is confined between the sea and mountains, and Oslo is located between the fjord and politically-fixed borders separating the building zone from the surrounding forest area. From the 1960s, both of these

urban regions have grown along corridors. The space for urban roads has been limited, and efforts have been made to construct new roads underground. These investments were expected to exceed the foreseeable available state funding. A toll ring opened in Bergen in 1986. The Oslo toll ring was opened in 1990 at the end of a long process involving various alternative plans for both the construction and the financing of new road capacity in the region.

Other cities facing needs for extra funding followed suit. Tromsø implemented a local fuel tax (NOK 0.5/litre) in 1989. This was feasible due to the large area of the municipality, covering 2 520 km² with a total population of 56 000 mostly living in the urban area. Trondheim approved a programme for the period from 1991 and up to 2006, when it probably will be closed down. Kristiansand opened one toll station in 1997 and a ring with 5 stations in 2000. In the Stavanger/Sandnes area a toll ring was opened in 2001, while one was opened in the small city of Namsos in 2003. The most recent toll ring opened on 1 February 2004 in Tønsberg.

Common to all the urban toll schemes in Norway is that they are designed to finance specific packages of infrastructure improvements. Some proportion of the revenues may be earmarked for public transport and the toll



Road toll projects in Norway 2004. (Source: Norvegfinans as)

Dark labels: Urban project
Light labels: Autopass
Shaded labels: Non-autopass

schemes have been implemented for a pre-established period of time.

The first operational period in Bergen was completed in 2001. The scheme was extended with a new programme that prolongs the toll ring until 2011. The “Oslo package 1” will be completed in 2007 and it is not yet known what will happen after that. However the “Oslo package 2” is already under implementation. This package consists of earmarked

Table 1. Some key figures for Norwegian urban toll rings

City	Population in urban area	Toll revenues 2002 NOK million/year	Toll crossing/day	Fee NOK/passenger car ¹	Period
Bergen	206 000	156	75 000	0-7.5-15	1986-2011
Oslo	774 000	1 058	250 000	11.5-20	1990-2007
Tromsø	49 000				1989-2003
Trondheim	140 000	168		0-9-15	1991-2006
Kristiansand	61 000	95	50 000	0-10	2000-
Stavanger	162 000	70	146 000	0-2.5-10 ²	2001-2009
Namsos	12 000			6.5-13	2003-
Tønsberg	43 000		50 000	7.5-15	2004-2019

Noter:

1 Interval for cars <3 500 kg low: with max rebate, high single passing, seasonal passes are available in Oslo, 0 indicates free periods at nighttime.
2 Fee varies with time of day/week from free at nights and weekends, NOK 5 in daytime to NOK 10 during rush hours.



Toll station at trunk E16
Sollihøgda (Source: Harald Aas,
Samferdsel)

public transport investments and is being financed through an extra charge in the toll ring and an extra fee on public transport fares in the area. These sources of revenue are matched by funding from the state and local authorities. Road projects for an “Oslo package 3” are already rolling off the drawing table, and potential financing plans have been incorporated into the political agenda on the local level. No decision has been taken as to whether the toll ring will actually be closed down in 2007, or whether it will be prolonged or replaced with another form of user fees.

Most tolls are now based on electronic collection systems with an electronic transponder in each car. On 1 February 2004, the Autopass national system was launched. This system incorporates most tolls and several car ferries. This will help to reduce the direct cost of collection and will enhance user convenience. Manual and coin-based payment will still be available.

As indicated, the purpose of the tolls is to

finance new infrastructure, and in urban areas they are part of a broader package incorporating other components such as public transport investments and land-use development plans. Examples of integration with land-use plans are the Bus Metro in Kristiansand and land use along the railway corridor in Stavanger. Local long-term planning for land-use development in connection with traffic-generating activities will be directed towards the public transport corridors and nodes.

Impacts on traffic

The private car is a very efficient mode of transport – at the individual level. One consequence of this is that sensitivity to price is low; the benefit of continuing to use a car despite the introduction of toll fees is greater than the increased cost. In economic terms, the price elasticity is low.

Experience from various types of econo-

metric analysis in Norway indicates a price elasticity ranging from -0.4 to -0.1 in urban areas. This means that a 10 per cent price increase in private car use leads to a reduction in traffic of somewhere between 1–4 per cent. Figures from the toll ring in Oslo indicated a 3–5 per cent traffic reduction, while Bergen showed a 6–7 per cent reduction in the volume of traffic crossing the toll ring after the first year of operation. In Trondheim, where time-differentiated fees are used, a 10 per cent reduction in the tolling period was almost completely offset by increases during the uncharged periods.

For rural toll schemes, demand seems to be more elastic; a price elasticity in the range of -2.0 to -0.3 has been reported. At the same time, these projects are characterised by less traffic, higher fees and relatively greater collection costs. On trunk roads and interurban motorways there is evidence of a price elasticity of around -0.5.

Perspectives for the future

Transport economists have argued in favour of road pricing for decades. In brief, road pricing requires road users to cover the marginal costs they are imposing on society. In this context, “society” comprises the road owner and the environment as well as other road users, who are subjected to increased travel times due to congestion. Thus this principle implies that the price should vary by time and place.

The legislation for road pricing is in place from the *Storting*, but it is up to the local authorities to implement it. However this legislation does not make it possible to introduce road pricing in combination with the toll rings, as financing schemes are regulated in other legislation. Since the need for financing packages in the largest urban areas seems to be more or less permanent, it appears to be impossible to combine them with the current legislation for road pricing.

If the local authorities decide to pursue road pricing in combination with financing schemes, it is likely that this will need to be approved at the national level.

Researchers have pointed out that the toll rings to some extent already contain elements of road pricing; they differentiate fees by place and, in some Norwegian cases, also

by time. With further adjustments of the price structure to incorporate fees differentiated with respect to time, the toll rings can function as simple road-pricing schemes and serve the double purpose of enhancing efficiency and generating funding. At present there is a marginal majority in the Oslo City Council in favour of introducing time-differentiated fees from 2007. On the other hand there are private initiatives for financing and building new suburban motorways in Oslo with link tolls on the new road links alone. As the traffic volume is relatively high, assessments indicate that this will be possible without state grants and with relatively low fees (NOK 10–20 on each link).

Table 1 shows that less than 50 per cent of the total toll financing in 2002 (NOK 3.2 billion) came from the urban toll rings. The rest, NOK 1.6 billion, came from tolls on rural roads, trunk roads and interurban motorways. From an economic point of view it could be argued that tolling on rural roads is inefficient. With low traffic volumes the collection cost is not insignificant. In combination with relatively high fees for some of these tolls, the overall economic efficiency may be low. This is due to the fact that some of these projects were designed to benefit a larger proportion of road users, but many do not use the roads because of the high charges.

On the other hand collection costs are likely to decline as a result of the introduction of new technology. This will favour the urban schemes, where there will be efficiency gains from reduced traffic and the initially relatively low collection costs.

Public acceptance of the toll rings is a key issue. Surveys of the attitudes among the population in the Oslo area have been conducted annually since the toll ring opened. From an acceptance level of 30 per cent with an overall positive attitude before the opening, the acceptance level increased to around 45 per cent after five years of operation and has varied around this percentage since then. Full public acceptance is not likely, but as there are many different interests involved, Norway's experience indicates that political acceptance may be achieved through compromise and flexibility with respect to the utilisation of the revenues generated within broader investment packages.



A Holistic Method of Evaluating Sustainability

This article presents a holistic method for evaluating sustainability. Primarily developed for buildings and urban development, it can also be applied to other products – as well as for evaluating sustainability in a broad sense. It is not an abstract model but a concrete tool for planning and design as well as evaluation and comparison of projects. In contrast to existing assessment tools, it operationalises the concept of sustainability in its full sense. The method has been developed by Chris Butters in NABU, Norwegian Architects for Sustainable Development. Sustainability is evaluated and presented in the form of a *value map*.

Chris Butters is an architect working at NABU (Norwegian Architects for Sustainable Development) in Oslo.

By Chris Butters

In the past decade we have seen a variety of tools for evaluating buildings and other products in an environmental perspective. Many are theoretical and still too unsystematic or complicated to be useful in practice. Most are *environmental* assessment tools, which cover only limited parts of the concept of *sustainability*.

Benchmarking and sustainability

Sustainability cannot be precisely defined – nor is this necessary, since sustainable development refers to a dynamic process from one state towards another. All buildings, towns or societies evolve, for better or worse, through time. Our horizons – both our ambition levels and our technical possibilities – will also change. Broadly defined, we can say that sustainability means positive social and economic development on a long-term basis within the framework of the carrying capacity of the earth's ecosystems.

If human settlements are to fulfil the goal of sustainability, then we need tools to set targets, plan, design, and evaluate. We also

need such tools as a scientific basis for comparing different projects, and for evaluating how they develop over time.

Benchmarking, the setting of defined quantitative goals, is already common in some fields, for example space requirements, energy norms, permissible emission levels, etc. Some people still understand sustainability as a question of *technology*, related to pollution, wastes, energy and the like. But these are only the eco-technical or *material* aspects. There is now universal acceptance that sustainability has three components: *ecological*, *economic* and *social*. And all three are essential; rather like a three-legged stool; if one leg is missing, the whole thing will fall over.

Existing systems

There are already a number of tools for evaluating the environmental profile of buildings, as well as other products. Do we need another? As noted, the main weakness of these systems is that they are *environmental* assessment tools that do not address *sustainability* in its full sense.

BREEAM, Norway's Ecoprofile and Arup's SPear are amongst the systems that use a

graphic presentation inspired by circular “wind rose” diagrams. This was probably first applied to buildings for assessment of indoor climate, as in the Swedish Örebro-model. The wind rose visualisation is attractive, but has been transposed to the field of buildings in a rather unthinking fashion. The selection of parameters is often unsystematic. Important factors are left out, and different kinds of parameters are sometimes jumbled together. Wind roses show frequency of wind according to the compass points, but when one uses points rather than segments to demarcate values, then the area covered becomes visually misleading.

The manner of visualisation is also basically counter-intuitive. Almost without exception, these tools show the degree of *negative* environmental effect. Their “goal” is the zero-point in the middle of the circle; in other words, the worse the building, the bigger the star it gets. But we read the size of a star intuitively as denoting *positive* quality. (And we must present the positive, not the negative image.) So the picture must be structured in the opposite way.

The highest value in these systems is often a rather vaguely defined “excellent”, which does not always correspond to the very best practice that already exists. Why set an upper goal of 50 kilowatt hours per m² when zero energy buildings already exist? Users do not get a true picture of what the goal is, or what is already possible. Though we cannot define sustainability precisely, it is beyond doubt not a matter of improving today’s systems by 10 or 20 per cent, but of big changes. The horizon we are aiming for is a long way off, and this horizon must be *communicated* graphically.

The Value Map

Although sustainability is an imperfect concept, it provides a common basis for holistic, cross-sectoral understanding. The Value Map visualises the goal that *all* architecture, city building and other production should fulfil the three conditions of sustainability. *Ecology* refers to environment and resources, *economy* encompasses financial and institutional factors, whilst *society* encompasses cultural, human and community aspects.

In contrast to the systems described above, the Value Map has the following characteristics:

- the circle is divided into three equal parts, one each for the three basic components of sustainability;
- the value scale is outwards, so that best result corresponds to biggest star;
- segments, rather than “compass points”, are used to depict values, giving visually correct geometrical weighting;
- the selection of parameters is, though provisional, systematic;
- the values are scaled so that the outer rim, corresponding to a “horizon” of full sustainability, is clearly shown to be far off.

Each of the three main areas of sustainability is here defined by eight parameters. It is stressed that these parameters are provisional, and that they both can and should vary to some extent depending on project scale. In a full assessment most will also need a more detailed breakdown – for example the various types of energy supply and consumption.

For each of the 24 parameters, benchmarks can be defined in detail. Many exist already. Assessment can be done both in a



Oikos: The world as our common house. (Photo: CB)





detailed way and in a simplified form.

A relative weighting of the various factors, which some ecoprofile tools try to do, should *not* be attempted. Weighting is a hopeless project; it will always be relative, with priorities that will quite rightly vary from one project to another. On the other hand, it seems principally important that the three areas of ecology, economy and society should be given equal weight visually.

The method shows the user the relative effect of different choices. Even without an exact value, one will clearly be far better than another. Exact scores will often matter less than the process that the user goes through to arrive at decisions.

The value scale

The scale is from 0 to 5. Value 0 means extremely poor standard, value 1 is poor, and value 2 corresponds to “normal practice” or quality expected in new projects today – for example latest building requirements. Value 3 shows a result well above today’s practice, and value 4 extremely advanced solutions. The outer ring, value 5, corresponds to what we at the present time can envisage as more or less “fully sustainable” – for example a near-zero energy building. Very few projects in today’s world will touch this outer perimeter at more than one or two points.

Applications

The Value Map can be applied at many *levels*, from a product to a building, a housing area

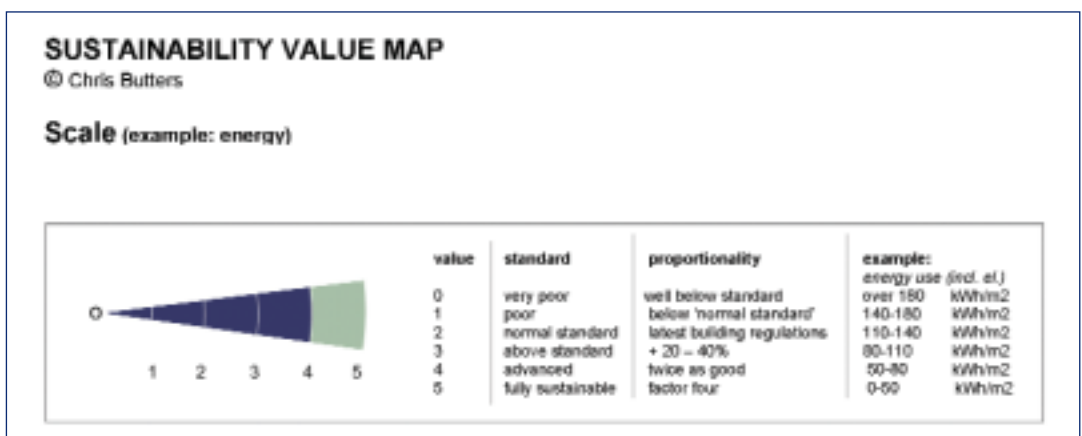
or an entire region. It can also be used in relation to *time*, to assess how the sustainability of a building or community develops from year to year. And it can be used to make *comparative* studies between projects.

In its *simplified* form, it provides a checklist and framework for designers, and for discussion amongst participants in a planning process. In its *detailed* form, ideally, it gives a complete qualitative and quantitative picture of the condition of a project or community.

If we build a house that requires zero energy but is both expensive (economics) and awful to live in (society), is such a product of any interest at all? Our goal is an optimum of all requirements, not maximisation of one or two. The Value Map visualises these connections; it shows whether a high score in one area is only at the expense of satisfactory scores in others. Quality must be assessed in relation to *all three areas*.

Architects, engineers, developers – all have a tendency to view the world in a static fashion: Our job ends when our product is delivered. Seen in a sustainable perspective, this is not enough. We have to work with life cycle assessment – the dynamic reality which is the life of a building, a town, a community. Maintenance, renewal and decay are part of that reality. A successful district may go into serious decline after some years. People use buildings in unexpected ways. A house built to zero energy standard may have a high energy use from day one if the users misunderstand or misuse the systems.

In other words, sustainability is not something that can be *delivered*. Nor can it be evaluated once and for all. It is a *condition* that must be evaluated over time.



Quantities and qualities

Research in this field is often coloured by sectoral interests. There is no getting away from the fact that this favours technical research with visible cost-benefit value. Research is increasingly funded or co-funded by market interests – for example an energy company or a manufacturer of materials. So there is little incentive in the system to think in wholes. What is called interdisciplinary research is often little more than cooperation between three or four kinds of *engineers*. Yet cross-disciplinary and cross-sectoral integration is recognised as being the very key to achieving sustainability.

Material factors can be quantified; this may be why researchers tend to confine their work on sustainability to the few factors, such as energy, water and wastes, which can be measured in a fairly objective way. The performance of a technical system can be calculated (even so, this does not mean that it will perform that way in practice, as noted above, since there is a troublesome little variable called people which always has the final say). It is obvious, on the other hand, that social parameters are not quantifiable but largely qualitative. This does not mean that they cannot be assessed.

Qualitative factors also have to be designed at the drawing board stage; this both can and must be done, but the results are to a far larger degree dependent on users' perceptions. Assessment must be post-occupancy, using sociological methods. The following are examples of typical issues related to quantities and qualities.

Energy

Energy is a typical *ecological* parameter. The value scale shown here for energy use in housing already contains simplifications. We must distinguish between detached houses, row houses and apartment blocks; different climatic zones must be correlated; assessment of energy use per m² has its limitations. Embodied energy also has to be taken into account.

Energy saving can be achieved by technical changes, improved information, or simply lifestyle preference. Energy is a complex issue –

it is a *sociotechnical*, not a technical field. A Danish case illustrates this. A large urban project aimed to reduce energy consumption by 25 per cent through technical upgrading. The project was delayed for various reasons. When it ultimately started, it turned out that energy consumption had already fallen by nearly 20 per cent – without any building measures – simply because of the *information* about energy which had been given to the residents in connection with the project proposal – *before* the technical work began!

Management

Economic sustainability denotes a system that is robust, diverse, adaptable, and well enough organised to provide long-term welfare; it must therefore also be based on environmentally sound production and consumption. The word *economics* comes from the Greek *oikos*, meaning house, and *nomos* meaning management or housekeeping. Economics thus has a much wider meaning than just the financial system. It encompasses all the structures, services and processes with which we manage society – of which *the money system* is just one part.

Sustainable economics must be understood in this sense. Flows of information, user participation and institutional mechanisms are key part of this. The *economic* parameters in the Value Map are the processes by which we manage the relationship between people, and between society and the environment.

Security

Security is a typical societal, qualitative issue. To a degree it can also be assessed quantitatively – for example neighbourhood statistics on criminality – but it is largely subjective. Like many of the other societal parameters it thus requires post-occupancy surveys.

Such factors have to be considered at the design stage, and of course they can be. Planners have experience of how different housing layouts affect criminality, for example. We can design for security with building form, street lighting, alarm systems, etc. But the users may still have a different, lived perception of the security of the area. An area

What is sustainable urban development?

Sustainable urban development is largely a question of transformation processes within existing cities – a process of improving a messy and very imperfect reality. More than the individual pieces of urban fabric, it is the overall spatial and infrastructural conditions that are most important, and these are even more difficult to change. Cities must also be viewed together with their regional hinterland.

Sustainable urban development needs eco-technology, institutions and people. It requires a long-term vision and a community dynamic. There are now large-scale projects in Scandinavia and Europe. The City of Oslo Urban Ecology programme is a good example of a sustainability framework.

Some initiatives focus on specific aspects such as transports, wastes, etc, including well-known EU and international networks such as ICLEI and CEMR. But the intentions are as yet not often supported by large-scale political or financial commitment.

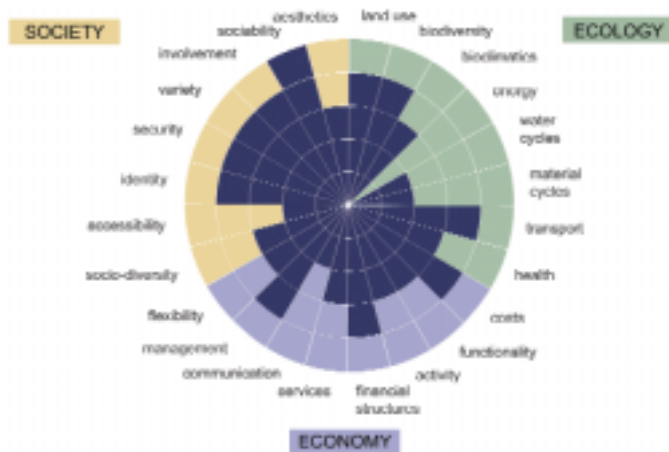
Mixed use, low ecological footprint and a healthy environment comprise the keywords. The best projects address social qualities as much as ecological ones and, in the spirit of Agenda 21, build heavily on user participation.

(See colour brochure on Urban Ecology by the Oslo Ports Authority / NABU, distributed free at IFHP-2004)

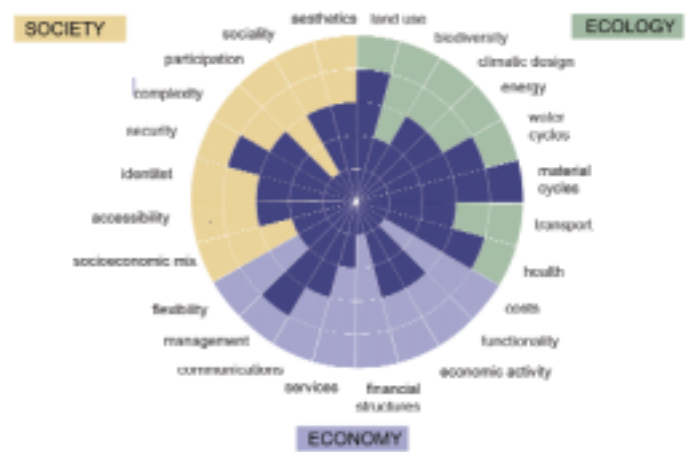
Chris Butters: "Sustainability Value Map" Four examples. Note



Nordic cluster housing – Oksval 3, Nesodden: excellent social qualities, car-free, low costs, integrated into nature, moderate space use and footprint. Poor energy and resource efficiency (old standards). Excellent planning from the 1970s. (Rosland architects. Photo CB)



Pilestredet Park urban ecology project, Oslo: generally good eco-technology, especially materials recycling. But extremely dense, no user participation, and sky-high costs. Old surgical block converted to apartments. (Thon AS. Photo: Stein Stoknes)



can also change, become run-down and criminalised. Again we are reminded how sustainability is not something that can be delivered once and for all, but must be assessed continually, in dialogue with the real users, and with *time* as the sternest judge.

Sustainability and architecture

NABU's work is based on a broad understanding of sustainability; not just ecological design but a holistic field – thus encompassing the *whole* of architecture and planning. This is reflected in the policy document produced for our parent organisation, the National Association of Norwegian Architects, where we describe sustainability as a cornerstone for the profession.

It is important to note that sustainable design combines well-established knowledge and new factors – and integrates solutions in new ways. Much of the *ecological* knowledge is new, but the *social* qualities achieved in Nordic housing, have been widely recognised for several decades.

The Value Map provides some sorely needed clarity in understanding sustainability. The concept had its roots in the environmental failures of our societies, and ecology is still the area that needs particular improvement in design; however, environment is only one aspect of sustainable development. Quite simply, sustainability is about *quality*: social, aesthetic, technical, economic, and environmental.

Energy and resource-conscious architecture is *ecological*, but is not *sustainable* if it is non-

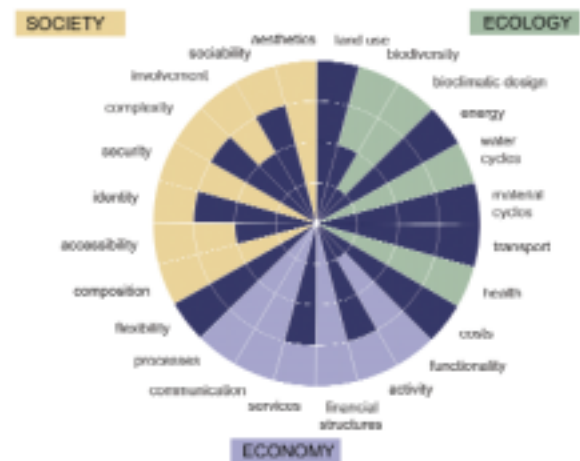
e: these are illustrations only and not based on full evaluations



Sustainable district Südstadt, Tübingen, Germany: low energy building, car-free areas, public transport, high biodiversity, user participation processes, reasonable costs: No special theme - integrated solutions. Excellent in most aspects. Apartments in massive timber. (Eble Architects. Photo: CB)



Typical slum – Cape Town: Use of land, private cars and energy are all near zero (they can't afford any!). 100 per cent recycled materials. Totally flexible, the whole thing can be moved in an hour. Extremely low cost. On the other hand empowerment, sanitation, health and security are a disaster. Very "sustainable" – in one sense – these are some of the planet's most resource-saving people. (Photo: CB)



functional, ugly or just too expensive. On the other hand, architecture that is *beautiful* cannot be designated *sustainable* for that reason alone. There is no reason today why a building or urban plan cannot be both beautiful and reasonably costed – *as well as* ecological.

Conclusion

The Value Map has already been tested in Norway and other countries, and now needs further development, including the parameters and benchmarks as well as a software program.

Technical and other specialists need to recognise the interdependence of quantities and qualities, of objective and subjective values. We must shift our focus from envi-

ronmental assessment to sustainability – from eco-technology to the whole picture. And if sustainable development is our goal then we need integrated design processes and evaluation tools. Our methodology must render explicit the fundamental links between ecology, economy and society.

The design and assessment method described here has a broad range of applications. It can be applied in both simple and detailed form. It is important that the "horizon" clearly shows a high level of ambition corresponding roughly to what we can conceive of today as "fully sustainable". Above all, the Value Map visualises sustainability for the first time in a comprehensive manner.



Regional Development and Regional Planning

Norway is a relatively large country with relatively few people. The de-population of the outlying areas as well as the lack of viable, or sustainable, regional economies in all parts of the country have comprised important regional issues. In recent years, however, the focus of regional policies has changed somewhat from the outlying districts to larger regions, and from supporting enterprises in peripheral areas to building society in more general terms. This new focus has given enhanced impetus to regional development planning at the county level.





Regional Development and Policy in Norway

Throughout the entire post-war period, regional development has been a focal point of Norwegian political activity. The focus of regional policy in Norway is changing. In 2005, the Government will present a white paper on regional development. The question is, which changes will be proposed?

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By Steinar Johansen

Regional issues in Norway

While some of the regional issues given focus in Norway are similar to those found in many other countries – and especially within the European Union – problems in other areas may differ quite substantially. One of Norway's key issues is achieving viable, or sustainable, regional economies in all parts of the country. This is linked to regional growth and industrial development, and is analogous to regional issues in the rest of Europe. Norway's other primary regional problem is associated with settlement patterns. As it is a relatively large country with few inhabitants, the depopulation of the outlying areas has comprised a fundamental regional issue that Norway does not share with other European countries, except perhaps with Sweden and Finland. In other EU countries, for instance, the most important regional issues outside of regional growth have involved factors that could be referred to as "poverty problems" (industrial decline, high unemployment rates and low incomes, or major differences in these indicators across the country). Compared to the situation found in these other countries, it is very difficult to claim such poverty problems in Norway.

Regional differences

In terms of population settlement patterns, Norway can be divided into five types of regions along a core-periphery dimension, from main city regions to the countryside.¹ Each region consists of municipalities, which are further categorised according to number of inhabitants in the major centre within commuting distance from each municipality (the first row of the table). A *type of region* is the aggregate of all regions within the same category, irrespective of their location.

The table illustrates some properties of the different types of regions. Main city regions comprise only ten per cent of the municipalities, but have 38 per cent of the population and 44 per cent of the national employment. There are only four² main city regions in the country. The other extreme, called the countryside, comprises one-third of the municipalities, but only seven per cent of the population and five per cent of the employment. Together with the fact that the population densities vary from almost 300 to only two people per square kilometre, this illustrates that the core-periphery dimension of Norway is a question of people as well as distance.

In Table 2, the national share of employment in each sector (the column to the far right) equals 100. The employment share within private services in city regions, for

example, is 89 per cent of the national share of employment in private services (or 45.3 per cent of total employment in city regions). These figures are referred to as localisation indexes, and they illustrate some important differences in industrial structures along a core-periphery dimension. There are several obvious features. Employment shares within the primary sectors increase with periphery (from 59 to 368 per cent of the national average moving from left to right in the table). In secondary sectors, the employment share is below average only in main city regions, and is higher in the three middle regions than in the countryside. Employment shares within private services are above average only in main city regions, and they decrease moving more and more towards the periphery (from left to right). Central government services show a similar pattern, while local government services show opposite patterns to private and central government services.

Regional policies

The regional problems, as defined above, also come to light as major regional policy issues.

In the government white papers on regional development and policy that are submitted every four years, economic sustainability and the preservation of settlement patterns in all regions are defined as the major goals.

Whether the policy measures designed for achieving these goals are sufficient or not is a matter of opinion, as is how to interpret “sustainable regional economies” and “the preservation of settlement patterns”; these matters are all subject to vigorous debate within the Government, the *Storting*, by the media and among the public at large. Nonetheless, there is a general, underlying understanding among Norwegians that these aims are important.

Changing focus of regional policies

The manner in which regional policy is understood and the target areas on which it is focused have changed during the post-war period. It is fruitful to divide this period into separate phases, keeping in mind that as its regional policies have evolved, Norway was emerging as one of the world's richest countries. Although there are several ways of des-

Table 1: Types of regions along a core-periphery scale. Some characteristics

	Main city regions	City regions	Village regions	Small village regions	Countryside	Total
No. of inhabitants in major centre within commuting distance	More than 50 000	15 000 to 50 000	5 000 to 15 000	2 000 to 5 000	Less than 2 000	
No. of inhabitants	38 %	41 %	7 %	7 %	7 %	4 524 066
No. of employed	44 %	37 %	7 %	7 %	5 %	2 077 373
Inhabitants per km ²	273	29	9	5	2	15
No. of municipalities	10 %	33 %	11 %	14 %	33 %	434

Source: NOU 2004:2

Table 2: Employment by main sector and type of region. Index: Norway = 100

	Main city regions	City regions	Village regions	Small village regions	Countryside	Norway (%)
Primary	59	83	158	193	368	4.5
Secondary including Construction	76	119	118	124	108	21.1
Private Services	122	89	76	74	57	45.3
Central Government Services	119	95	90	67	30	9.7
Local Government Services	74	111	129	131	165	19.4
Type of region (%)	44.0	37.3	6.6	6.8	5.3	2.08 mill

Source: NOU 2004:2



ignating the regional policy phases of the post-war period, Official Norwegian Reports 2004:2 emphasises the following:

Reconstruction and modernisation (ca 1945 to 1960): During this phase, it was necessary to rebuild parts of Norway. The Nazis had burnt down large parts of Northern Norway, and the capital stock, especially the infrastructure, had to be reconstructed and improved throughout the country. An active state with central planning institutions helped to industrialise the country, indicating that the policy focus was more on production and economic growth than on welfare and income distribution. The policies involved many sectors – including roads, railroads, airports, energy, research and education – and were applied nationwide. Policies were top-down and centrally controlled, but with a focus on the periphery (especially on rebuilding Northern Norway, with its own Northern Norway plan), both to ensure resource allocation throughout the country and to reduce pressures on the central areas.

Welfare policies and living conditions (ca 1960 to 1975) entered the spotlight during the second phase. The municipalities were assigned responsibility for provision of welfare services countrywide, and this sector expanded as a result of extensive, centrally controlled welfare reforms, especially during the 1970s. Peripheral policy became an explicit field of regional policy, with its own means and measures, and it is during this phase that the relatively commonly accepted aims for regional (and peripheral) policies evolved.

Changing trends (ca 1975 to 1990). After the international oil crisis, economic growth declined in many Western countries, including Norway. This initiated a process of de-industrialisation, which in turn led to a need for a new direction in economic (and regional) policies. The effects of the international crisis affected Norway only moderately due to active central government budget deficits as well as the new, evolving petroleum sector. Restructuring of the manufacturing sector was postponed, and the welfare sector continued to expand. New measures were introduced in regional policy. These were directed towards labour support (regionally differentiated labour taxes) and knowledge development instead of the traditional means of capital support and infrastructure

development. Regional policies became, in other words, increasingly focused. During the 1980s, municipalities and counties were given greater responsibility for developing new industries, and institutions of higher education and research were developed as regional centres of knowledge. This differed greatly from the preceding periods, when the state-controlled industrial policies were dominant. In other words, bottom-up, or endogenously based, development strategies were emerging. Urban regions became more active and also became incorporated into regional policies.

Restructuring and change (after 1990): During the final period, the focal points of regional policies changed in many respects. They became more “unified” in the sense that the focus shifted from the periphery to the regions. They also became “larger”, in the sense that the focus changed from supporting enterprises in the outlying areas to building society at a more general level. However, subsidies aimed at enterprises in the outlying districts (differentiated labour taxes) automatically increased as a result of rising wage rates. Theories of endogenous growth finally broke through and became the main basis for supporting regions, through measures directed towards enhancing networking and education. Regions became increasingly competitive among themselves, and the main city regions become an integral part of regional Norway.

Moving towards a new framework in regional policies

Although the post-war period has brought several shifts in the aims and measures of regional policy, the rhetorical phrases of “sustainable regional development” (production and growth focus) and “preservation of settlement patterns” via a national system of standards for welfare policies (distributive focus), remain more or less intact.

In recent years, there has been an increasing focus on the impacts of redistribution through sector policies on regional development in the broadest sense. Framework conditions are important because they influence regional development, and sector policies comprise an important aspect of these conditions. Regional or peripheral policies in the



De-population of the outlying areas has been an important regional issue in Norway. From Western Norway. (Photo: Samfoto)

narrow sense manifest themselves as part of sector policies through their specific measures. Production, industrial development, education and, ultimately, demographics and living conditions, all take place within regions. In this sense, all sector policies influence the regions and, hence, regional development. Regional policies can therefore be thought of, in a broader sense, as the sum of all sector policies together. The questions are, therefore: what are the impacts of all these policies on regional development, which policies are important and which are not so important?

In 2001, the Norwegian Government appointed a special commission to look into these questions, using the rhetorical regional and peripheral policy aims as their point of departure (NOU 2004:2). The commission found that:

- All sector policies, including macroeconomic policies, are important for, and have an impact on, regional development.
- The measures within the narrow regional policies are quantitatively small, compared to other measures with sector policy aims.
- The public resources allocated to measures based on individual rights have increased substantially over time, and comprise approximately half the Government budget.
- Sector policy aims, and the manner by

which these are efficiently met, have been targeted for greater focus, while cross-sector aims (such as regional and peripheral development) are considered inefficient and often in conflict with sector policy aims, and are therefore given less attention.

- The narrow regional policy (support to enterprises in the outlying districts, including the differentiated labour tax), the government financing and decentralised structure of the local public sector (the municipalities) and agricultural policy (due to the localisation of the agricultural sector, see Table 2), are the most important sector policies in the peripheries. However, they are expensive.

The commission's report will be used by another official commission that is presently working on establishing a framework for future peripheral policies in Norway. In the spring of 2005, the Government will submit a new white paper on regional development that will present the new peripheral and regional policies of Norway. It is not yet clear what the precise focus of these policies will be, but it seems likely that there will be changes in the aims, measures and rhetorical phrases utilised. The question is how radical the changes will be. One thing is a given: these efforts will result in propositions that are sure to spark off debate on this issue.

Notes:

1 NOU (Norwegian Official Reports) 2004:2: (In Norwegian only) *Effekter og effektivitet. Effekter av statlig innsats for regional utvikling og distriktpolitiske mål*

2 The municipalities around, and including, Oslo, Stavanger, Bergen and Trondheim



Regional Dynamics and Olympic Rhetoric:

The Lillehammer Winter Games Ten Years On

Lillehammer hosted the Olympic Winter Games in 1994. The event evolved into a spectacular popular festival and was a huge success. But what were the ramifications for the town itself and the region as a whole? Was the experience beneficial for Lillehammer and did it lead to increased employment? Or did it ruin the urban environment without enhancing growth in employment?

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By Tor Selstad

Regions in crisis

The 1970s were a good decade for Norwegian planning. The physically-oriented planning system was enlarged with a steady stream of new types of plans, and it appeared that the economic planning sector had succeeded in generating stable economic development with positive regional distribution. A strong Norwegian trend towards counter-urbanisation brought prosperity to small towns as well as large. Small towns such as Lillehammer benefited from this in particular.

The 1980s brought an abrupt end to this contented picture. The decade was initiated with industrial decline, starting in the cities and reaching industrial communities in the districts somewhat later. When growth did resume in the mid-1980s, it proved to be limited almost entirely to the large urban centres and the small towns located in their hinterlands. The counter-urbanisation of the 1970s had been transformed into a strong urbanisation trend.

One of the places that was hardest hit was Lillehammer. The town had developed into a relatively significant industrial district, and the effects were dramatic when the town's largest industrial concern, *Mesna Karton*, was forced to close its doors. Nor was the situa-

tion any better in the other inland centres. Both Hamar and Gjøvik experienced corresponding declines in industrial employment. However, there were bright spots at the national level, not least in the emergence of the petroleum industry. Unfortunately, the benefits of this were limited to the coastal areas, especially along the western coast. Inland Norway, it would seem, was stuck in the shadow of the oil world.

A commission was appointed by the Government to seek ways to solve the crisis in the inland areas, but these efforts did not result in anything more tangible than the demand for compensation. And although compensation was granted, it was minimal. It became clear that regional policy had to be based on each region's *individual development*, preferably with a certain degree of state support. Descriptions of regional afflictions would no longer be rewarded; it was time for the regions and local communities themselves to show some initiative. The approach in Lillehammer was to achieve growth by organising a mega-event, the 1992 Olympic Winter Games (OWG 92).

Olympic Winter Games – a wild idea!

The idea of hosting the Winter Games was originally the brainchild of an imported hotel

owner, Wolfgang Müller, from Germany. Several of his friends in the commercial sector also found it worth pursuing, and together they presented what they themselves called their "wild idea" to the political authorities. A working group was established, headed by the director of the town bank. This group concluded that there would be positive growth potential in the wake of OWG 92, especially in the travel and tourism industry. Thus, it was maintained from the very outset that the primary objective of hosting the Winter Games was not to organise a sports extravaganza, but to promote regional development.

OWG 92 became a controversial topic in local political circles, and there were popular factions for and against. Stated somewhat simplistically, those in favour argued that the economic gains would be substantial and the environmental problems could be dealt with. Those against claimed that there would be extensive damage done to the local environment and that there was a risk that the town would be ruined. The impact on employment, however, would be negligible. The municipality tried to consolidate the details in an alternative general plan designed to prepare a potential OWG 92. But the battle in the public opinion raged on.

After the first round, the town was saved by the bell, so to speak: The International Olympic Committee (IOC) decided to award OWG 92 to Albertville in France. But Lillehammer did not give up. The town council reviewed the situation – and decided to apply again for the Winter Games in 1994. And this time the town would not only submit an application, it would also initiate the first investments to show that it was serious. Thus, in 1986 construction started on an indoor skating rink and an alpine centre. Public interest in the matter, however, waned markedly. Most people interpreted the IOC decision as confirmation that it was unrealistic for little Lillehammer to host such an event, and considered the new application to be a waste of time. So the shock was great in the autumn of 1988 when it was announced that Lillehammer was indeed chosen to host the 1994 Olympic Winter Games (OWG 94). All active planning had long since ceased, and all preparations had been put on hold while awaiting the final decision.



Wreaking havoc?

The 1994 Olympic Winter Games turned into a huge international festival. Despite its modest size, Lillehammer managed to accommodate the spectator masses, and the event itself was a stunning success. But what happened to the urban environment and the landscapes surrounding the area? Did these also manage to absorb the heavy investment and survive unscathed?

The retrospective view is that development activities prior to the Games by and large gave adequate consideration to the environment – both the urban environment and the natural environment outside it. This represents not least a great achievement for the planning sector. When Lillehammer was awarded OWG 94 the town was poorly prepared. No updated environmental impact assessment had been conducted. As a result, it looked as though there would be conflicts with environmentalists, who organised themselves in their own committee: the *Environment-friendly Olympics Project*.

For a while there was talk of adopting special exclusionary legal provisions for Lillehammer that would place the town under state administration. Fortunately, the Ministry of the Environment – which is also concerned

The Olympic Winter Games in Lillehammer in 1994 evolved into a spectacular festival and were a huge success. But was the experience beneficial for the town itself and the region as a whole? The picture shows the Opening Ceremony at Balbergbakken Ski Jumping Arena in Lillehammer. (Photo: Samfoto)



The "Vikingskipet" in Hamar was used for the speed-skating competitions during the Olympic Winter Games. This large indoor skating rink got its name from its resemblance to an upside-down Viking ship. (Photo: Samfoto)

with planning activities – chose to utilise existing planning legislation. Thus, Lillehammer and the other host municipalities were forced to revise their plans themselves, with the assistance of the county authorities. The results were very positive. Despite the many differences of opinion between organisers, sports associations and local authorities, it was possible to reach agreement on expedient locations and designs for all the arenas within very short time.

The arenas in Lillehammer were clustered together in an Olympic Park, with the Ski Jumping Arena serving as a positive symbol facility. The two ice rinks are viewed by many as problematic due to their size, and many further believe that the freestyle facility diverges too much from the surrounding natural landscape. The roads in this recreational landscape also appear to be somewhat overdimensioned. Otherwise, however, OWG 94 had a positive impact on the Lillehammer's physical development. Central urban spaces were upgraded, as was the road network connecting the town to Oslo. A state-of-the-art purification facility provided far better treatment of drainage into Lake Mjøsa, Norway's largest lake.

The overall excellent results were a triumph for the Norwegian planning system. Something akin to a Norwegian championship in planning was carried out in the course of approximately two years. Outside interests were not allowed to overtake urban development, but were on the contrary reined in by professional analysis, debate and political decision-making. On the whole, the state,

country and municipal planning levels interacted constructively, demonstrating the inherent advantages of a planning system divided into different levels. Environmental considerations were incorporated into the planning of the physical surroundings, illustrating that full environmental impact assessments are not absolutely necessary provided that these elements are sufficiently included in the ordinary planning activity.

One crucial component underlying the success of the undertaking is that the environmentalists began early on to exert unrelenting pressure on the Lillehammer Olympic Organisation (LOOC) and the municipalities. In Hamar, the situation bordered on hostile when it became clear that the new ice rinks would encroach on a nature park for migratory birds. After a bitter dispute, LOOC and the Hamar municipal authorities reversed their decision. This marked a turning point for the entire national Olympic cause. From that juncture, the environmentalist project group was incorporated into LOOC. Even IOC President, Juan Antonio Samaranch, noticed the active Norwegian environmentalists and commended their efforts in an unscheduled meeting. This also represented a turning point for the Olympic Movement, which has subsequently imposed more stringent environmental requirements on applicants. Moreover, the Norwegian project members are now being used as consultants in international Olympic endeavours.

So did the Games wreak havoc on the town? Indeed not. Even the environmentalists, who had voiced such strong criticism at the outset, had to admit that it all went very well. Thor Heyerdahl Jr. even stated: "Never has Lillehammer and its neighbouring villages been better equipped or more beautifully laid out."

Growth in employment

The next question is whether the dire predictions for environmental degradation did not come true because the economic and societal consequences were so small. Was the environment spared because there was little population growth and stagnation returned to the city after the athletes went home?

In 1980, Lillehammer municipality had just over 22 000 inhabitants. In 2003, this

number had increased by 3 000 (see Table 1). This represents a growth rate of 14 per cent, which is twice what the municipality itself calculated in its estimates from 1986. Not many other municipalities in Norway can match this figure. At the regional level, the growth rate is somewhat lower. There has been a respectable increase in the neighbour municipality of Øyer, with a parallel decline in Gausdal, the other neighbouring municipality. In total, this leaves a population increase of “only” nine per cent in the Lillehammer region. Given that population growth was at a standstill the first five years of the 1980s, this increase must have taken place starting in 1986 and onwards.

The population development is founded on a parallel growth in employment. The Lillehammer region must presumably have felt the effect of the Olympics immediately after it was decided to apply the second time around, with the large-scale construction of the Hafjell alpine facility and the ice rink. From 1988, when Lillehammer was actually awarded the Olympics, the region was fortunate enough to experience a rise in employment while the rest of the country headed into a deep economic slump. In 1994, Norway had not yet really recovered, whereas Lillehammer had experienced net employment growth each year. From 1990 to 1996, the Lillehammer region acquired approximately 1 000 new jobs, corresponding to 6.2 per cent (see Table 2). This was roughly on a par with overall growth in Norway, but it should be kept in mind that the national growth profile was extremely centralising. Up to 2000, the region acquired an additional 770 new jobs. OWG 94 bridged the economic downswing, and the region was still able to reap significant benefits from the upswing when it finally came. The Lillehammer region fared substantially better than its neighbours, Hamar and Gjøvik, with whom it is natural to compare.

If we examine this growth in more detail, it is distributed across both rising and declining industries. On the minus side we find primary industry and the industrial segment; post and telecoms, which were undergoing restructuring; banking and insurance; and construction. It is no surprise that the construction industry needed a downward adjustment after such an intensive period of development.

On the plus side – the industries that generated the net growth in the region – we find

Table 1: Population growth in the municipalities in the Olympic region.

	Lillehammer	Øyer	Gausdal	The region
1980	21 877	4 421	6 679	34 957
1990	22 782	4 521	6 492	35 785
2000	24 724	4 859	6 186	37 769
2003	24 946	4 891	6 189	38 029
Change 1980–2003	3 069	470	-490	3 072

(Source: Statistics Norway, Municipal population statistics)

Table 2: Relative growth in employment in the three Olympic urban regions.

Region	1990–1996	1996–2000	1990–2000
Lillehammer	6.2	4.6	11.7
Hamar	-0.1	2.6	2.5
Gjøvik	2.2	1.8	4.2
Norway	6.5	4.4	13.1

(Source: Statistics Norway, Employment statistics)

the various service industries that are part of a regional dynamic that OWG 94 would be expected to create: Hotel and restaurants, sports and entertainment. But we also note growth in the cultural sector, in media, libraries and interest organisations. At the very top, we find the basic production of public services, with health and social services and administration, closely followed by distributive trade.

It is not my purpose here to prove something for which there is no basis in research, i.e. to define which developments are due to the Olympics and which would have taken place on their own. No one can provide exact answers to these questions. Nonetheless, it is inarguably true that, in the 15 years since 1985, the Lillehammer region has experienced considerable growth in overall employment, cautiously estimated at some 2 500 new jobs, as well as overall population growth by some 3 000 new inhabitants. Even if we only claim that half of this can be attributed to the sports extravaganza, the local organisers have achieved everything they set out to do – and more.



Regional Plan for Long-term Urban Development in the Stavanger Region

A comprehensive county spatial plan for long-term urban development in the Jæren region was approved in 2000. The plan presents an overall solution for land-use and transport demands in the Stavanger area. The region's 10 municipalities have approximately 250 000 inhabitants, while the urban area alone has 200 000 inhabitants. The greater Stavanger area is currently the third largest city region in Norway, and its annual population growth rate has been 1–1.5 per cent in recent decades.

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By Per Frøyland Pallesen

Background

For the last 40 years, the Stavanger area of Southwest Norway – known as the Jæren region – has been a very dynamic region in terms of industrial expansion and population growth. Since 1965, there has been an acknowledged need for a regional plan across the borders of eight municipalities. A structure plan was produced in 1970 based on the Planning Act of 1965. This comprised a volunteer effort, however, and the plan was not vested with any formal power. As a consequence, its impact on municipal plans was limited.

A new attempt to establish a regional structure plan was carried out in 1980s, but it was not possible to achieve common approval for an overriding plan for the development of the region. The traditional attitude of the municipalities has been that they (alone) should have the right and responsibility of drawing up their municipal master plans. Consequently, they did not want the county to interfere by setting up a binding regional plan.

A 1993 amendment to the Planning and Building Act assigned a more clearly-defined role to the county council in the preparation of county plans for specific areas, especially when there is an obvious need to find solutions across municipal borders. The municipalities in the Stavanger area had already established a tradition of cooperation with the Rogaland County Council and the regional state authorities in the production of transportation plans. The first of these plans was approved in 1991 and a revised plan was implemented in 1998. During this process, a common understanding emerged of the need to employ a holistic approach in which land use and transportation systems were coordinated. Based on an agreement with the municipalities, the Rogaland County Council decided in 1998 to produce a county plan for the region. Two additional municipalities were included at their own request. This plan was approved in October 2000.

The Jæren region is one of Norway's most important agricultural districts, and it has many nationally and internationally important protected areas, especially wetland areas and a wide range of cultural heritage sites (dating from the Stone Age to the Viking

Era). At the same time, the city lacks areas for outdoor recreation in proximity to residential development.

Each of the municipalities has consistently found it difficult to gain acceptance for green field development in its municipal master plans. When new development does occur, the localisation of important functions has thus not been anchored in a coordinated plan. The growth rate for motorised transport has been high (3–5 per cent per year), and the city districts are experiencing increased traffic congestion. The market share for public transportation is low (ca. 7 per cent).

Main focus of the plan

A primary aim is to ensure development of towns and cities in a manner that decreases the need for private cars. To prevent urban sprawl, this needs to be achieved through increased residential and employment density. The town and city centres must be strengthened; new development must be concentrated within linear structures independent of municipal boundaries.

City transformation and infill-development must be strongly supported for several reasons:

- To protect valuable areas against new development.
- To increase the ability of small households to reside in apartments instead of single-family homes (in compliance with demographic changes).
- To give emphasis to the development of housing in the main city centre, the various sub-centres in the city, and town centres surrounding the city. Residential development should primarily occur through new and improved uses of poorly utilised land and existing structures within the building zone. This will in turn help to improve the framework for environment-friendly modes of transport.
- To contribute to an aesthetic and environmental upgrading of city areas.

A continuous green belt has been defined for the entire city region. No residential area should be more than 500 metres walking distance from a green belt, and residents are to be able to reach outdoor recreation areas



Several alternative directions for development were presented at the start of the planning process.

without using motorised transport (minimum 3 km length of hiking/cycling paths). The green structure consists of forests, waterways, mountains, and substantial agricultural areas. The agricultural areas are to be developed in cooperation with the farmers, and will contain tracks for hiking, places to rest/eat, and other recreational facilities. This is a win-win strategy that both strengthens agricultural interests and enhances the ability of city residents to enjoy outdoor leisure activities.

The plan also establishes long-term boundaries for agricultural zones. This strengthens the protection of farmland, and creates a predictable framework for municipal land-use planning and farmers' long-term investments.

The plan includes guidelines for localisation of larger enterprises (with many workplaces or enterprises which provide services for the public), which presuppose localisation in commercial centres or along public transportation corridors.



Promoting public transport, cycling and walking

Long-term planning is combined with short-term action programmes, to be revised every four years. The action programme financing is based on allocations from national, regional, and local authorities, as well as a highway road-toll fee. The programme has an environmental profile in which at least 50 per cent of the budget is utilised for purposes other than roads, e.g. public transportation, infrastructure for non-motorised transport, tracks for hiking, noise reduction measures, etc.

The public transportation network has been restructured according to the plan. There are now fewer routes but higher frequencies. An independent public transport company has been established to manage the public transportation system on behalf of the County Council. There has been submission of tenders in three independent packages. The new system has been operative since 1 January 2003, and is now run by two bus companies. The public transportation network now corresponds with the axes for development.

The plan aims to establish a combined train and light-rail system along the north-south city axis and the cross-axis in the direction of the airport. The first step in this regard involves building a second track for the Stavanger-Sandnes railway, and building bus lanes along the main highways for public transport ("bus-axis").

What practical conclusions can be drawn?

Four years after the plan approval, the following practical conclusions can be drawn:

A long-term timeframe (in this case 40 years) is crucial for this kind of plan, as it takes time to properly elucidate the issues that are essential to establishing long-term land-use goals and planning for the associated infrastructure.

The political and administrative organisation of the planning process is an important condition for success. The following factors should be emphasised:

The planning process has been overseen by a political steering group headed by the

County Council Chairman. Delegates include politicians from the local government (mayors, leaders from the opposition parties) and politicians from the regional government (all major political parties). The political steering group has given the planning process authority and legitimacy, both internally vis-à-vis the various administrative elements, and externally vis-à-vis the media, business community, etc.

The planning process has been carried out based on the principle of consensus, avoiding the need for further reconciliation. When disagreements have occurred, alternatives have been prepared. These alternatives have been utilised both during hearings and in the decision-making process, where the County Council has the final decision – subject to the approval of the central government.

A project group comprised of high-level civil servants with relevant expertise was responsible for devising the strategy for the planning process and the concrete contents of the plan. This group served as the dominant expert forum in the process, and also ensured that all participants delivered their contributions on time throughout the various phases.

In the final phases of the process, after the hearings but before the final resolution, it became necessary to choose alternatives and form compromises to develop a unified proposal for resolution. In this phase, the cooperation between the County Council and the Office of the County Governor (the chief executive of the county representing central government) was extremely important. An agreement was reached that balanced development interests with the need for protection of valuable resources. This proposal was approved in the County Council and presented to the key government ministries (the Ministry of the Environment, the Ministry of Agriculture, and the Ministry of Transport and Communications). The final decision was taken by the Government.

From the very outset, there were clear signals from the Ministry of the Environment and the Ministry of Agriculture that the municipalities of Stavanger and Sandnes would probably not receive approval for their respective municipal master plans – containing new and controversial areas for development – without a county spatial plan that emphasised effective spatial development. This played a critical role in the starting phases as well as continued participation in the process.

Follow-up actions

A monitoring system has been established to evaluate the manner in which the plan is implemented. When approving the plan, the Government underscored the need for a reporting system to document how the municipalities enforce and follow up the plan. The first year for reporting was 2002. A GIS system for this has now been developed. The report goes to the relevant city councils, the County Council, the Ministry of the Environment, and the Ministry of Local Government and Regional Development.

The report provides information on the following issues:

- Spatial land use according to development categories in revised municipal master plans.
- Total number of dwellings by category.
- Density in residential areas.
- Distance from dwellings to public transportation or centres.
- Regional infrastructure in the municipal master plans.
- Enforcement of localisation guidelines.
- Implementation and boundaries for centre development.
- Development of parking policies.
- Details regarding green structure establishment and management.
- Long-term boundaries for high priority agricultural land.
- Planning for energy consumption and distribution.

The reporting is intended to provide an assessable evaluation of the degree of compliance with the plan's goals and guidelines in regard to environmental protection, land-use, and transportation. This system will then become the foundation for further revisions of the plan.

Challenges to implementation

To ensure a long-term implementation of the plan, certain conditions must be fulfilled:

The national government must be a reli-



Axis for development - main road with bus lane - direction west out of Stavanger. (Photo: Torbjørn Rathe)

able partner for investment in, and operation of, the public transportation system (particularly the railway development).

The county government must retain its legitimacy and powers as a planning authority and strengthen its functions as a developer, especially in regard to operation of the public transportation system.

The municipalities must remain loyal to the county plan and be willing to follow it up (this has gone well, so far).

The national government must develop optional provisions for regional regulation of parking, allowing the introduction of parking fees in shopping centres outside the centre structure as well as in town centres. This will make it possible to develop an overall regional parking policy that affords the town centres the same competitive conditions as external commercial establishments.

Incentives must be developed to promote the utilisation of non-motorised transport and public transportation.

Higher road tolls should be considered as a source of income to support the financing of public transportation.

A photograph of a modern, minimalist interior space, likely a lounge or meeting area. The room features a large window on the left side, providing a view of a wooded area. In the foreground, there is a small, round, white table with a few items on it, surrounded by several modern, light-colored chairs with swivel bases. The ceiling is white with visible structural elements, and the walls are a neutral color. The overall atmosphere is clean and bright.

Housing for All?

The average housing standard in Norway is high. It is better than that of most other countries, and may well be the highest in Scandinavia. In terms of living space per inhabitant, Norway tops the global list. However, 95 per cent of Norway's housing sector is governed by the market, and the fact remains that some segments of the population do not have the benefit of comfortable, secure housing. Particularly young people, households with low-income and other marginalized groups experience difficulties in securing access to the housing market. Moreover, too few dwellings and housing areas are accessible to persons with disabilities.





Housing Policy Challenges in a Country with High Housing Standards and a Market-governed Housing Supply

The average housing standard in Norway is high; it is better than in most other countries and may well be the highest in Scandinavia. Nonetheless, certain issues remain to be dealt with: there are still some households without access to comfortable, secure housing; energy consumption in the housing sector is far too high; and there are too few dwellings and housing areas that are accessible to disabled persons.

Thorbjørn Hansen is an architect and researcher working at the Norwegian Building Research Institute in Oslo. He has spent many years working on housing policy in general and especially on policy measures directed towards disadvantaged groups.

By Thorbjørn Hansen

In Report to the Storting No. 23 (2003-2004) on housing policy, the Norwegian Government states that housing issues will mainly be dealt with by laying the framework for a smoothly functioning housing market. But the question remains: will this work? And to what extent?

Housing market and housing conditions

The Norwegian housing market is still strongly influenced by the development that took place after the end of the WWII (81 per cent of today's housing stock was built after 1945), and especially by the major development period extending from 1955 to 1985. The ideals of this period have determined the type and manner of development, as well as the organisation of ownership and management, and the financing and distribution of housing. From the mid-eighties there was a period of considerable investments in renovation and renewal.

Development has been carried out by the private sector. Public initiatives in relation

to housebuilding were focused on acquiring and making accessible land for development, offering reasonable loans within the quota framework to everyone who wished to build a home, and providing certain groups with subsidies and support for housing costs via the Norwegian State Housing Bank. The building and distribution of housing, however, was relatively strictly regulated, both through statutory provisions and through the terms and conditions of loans set by the Norwegian State Housing Bank.

In the cities, the cooperative building associations played a dominant role in development alongside a few large-scale contractors and manufacturers of pre-fabricated housing. The municipalities built little themselves, concentrating instead on close ties with the cooperative building associations. In the major towns, large housing estates were established using the same patterns and methods as Norway's neighbouring countries as well as many other Northern European countries.

In smaller cities, towns and villages, the common practice for those in need of housing was to have individual, single-family

housing built, often doing some of the construction work themselves. Later, this high degree of personal participation was replaced by groups of professional developers.

Virtually no dwellings were built as rental housing other than as a separate flat in the basement of a detached house. This would be rented out during periods when it was suitable and necessary for the renter. Tenants usually comprised young people working their way up to becoming first-time buyers or builders of their own homes, and to some degree elderly people who were no longer able or willing to own their own homes.

The effects of this post-war development are clearly manifested in present-day statistics over the composition of the housing stock, the types of buildings, land areas and living space and ownership forms.

Norway has a large number of detached houses, a majority of which are of "normal" size and standard, although some are quite large and well-appointed. Norway has become a country of owner-occupiers. Only 25 per cent of the housing units are rented, for the most part for shorter periods by individuals pursuing educations or moving. Professional rental of temporary housing is not particularly widespread, and is limited to the larger urban areas. Nor are there many dwellings organised within a public or non-commercial sector. Public housing rentals comprise only four per cent of all dwellings.

Restructuring and enhancing market adaptation

The relatively strict regulation of housing construction and the housing market that characterised the post-war development was not eased until the first half of the 1980s, which was also when the financial market was deregulated. Of particular importance was the elimination of price regulations for sale of flats in housing cooperatives as well as for sale of plots. Since the middle of the 1980s there has been little regulation of the Norwegian housing market, and it is probably one of the least regulated markets in Europe.

One of the ramifications of the deregulation was a much larger fluctuation in house

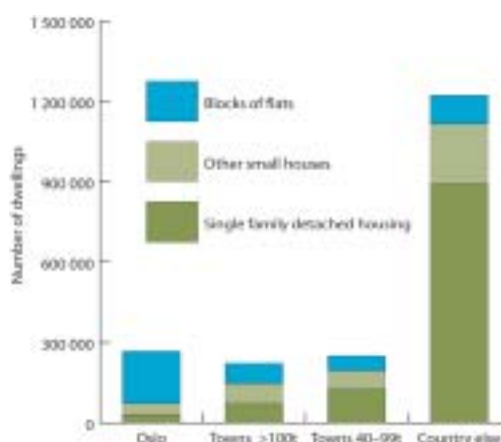


Figure 1. Dwellings in Norway by place and type of building. (Source: Statistics Norway, Population and Housing Census 2001). Norway is a "single family home" country. More than half of all dwellings are detached homes. Even in relatively large urban areas, detached dwellings are the dominant type of housing. Oslo is the only place in the country in which multi-dwelling buildings are the most prominent building form.

prices. Prices increased considerably during the 1980s, reached a peak in 1988, after which they declined significantly until 1992–93. Since 1996, house prices have again risen strongly, at a much higher rate than the overall price index. However, this has varied greatly between different parts of the country as well as between different market segments.

Since the 1980s, subsidies in the housing sector have become more restricted and are increasingly targeted towards those with the greatest difficulty in gaining access to the housing market. The tax advantage of owner-ship has also been curtailed somewhat, although it remains significant. The larger and more valuable the property, the more this advantage increases.

Public housing policy has become more closely linked to social policy, and was a key component of several major social reforms and initiatives during the 1990s. One reason for this is that the reforms have focused on

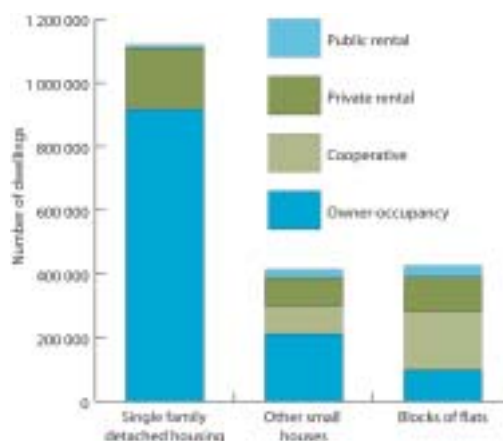


Figure 2. Norwegian dwellings by type of building and tenure status. Absolute figures. (Source: Statistics Norway, Population and Housing Census 2001). Norway is an "ownership" country. A total of 97 per cent of the population owns the dwelling in which it resides, either in private or as part of a cooperative group.



Figure 3. Dwellings in Norway by type of building and utility floor space. Absolute figures. (Source: Statistics Norway, Population and Housing Census 2001). Norwegian dwellings are spacious, with an average utility floor space of 117 m². The average utility floor space has risen steadily since 1950. The many large detached dwellings have caused this average value to rise, and it has increased both per dwelling and per person in the detached dwelling sector.

reducing the number of inhabitants in institutions to enable the largest possible part of the population to live at home and have their needs covered by home-based services.”

The challenges

The Norwegian system has enabled a vast majority of the population to enjoy good, secure living conditions. It has also served to adequately maintain the housing stock while requiring only small public transfers. The country's dynamic economy, relatively low unemployment and plethora of welfare schemes clearly comprise the framework that makes it possible for the system to function. Another crucial element is the high priority given to housing consumption by Norwegian households, the members of which invest a great deal of effort in maintaining and enhancing their homes.

The system favours those who are able to manage their affairs well. Becoming a young owner-occupier and being in a position to fulfil the resulting financial obligations yields high returns, at the same time providing comfortable living conditions. Housing represents the most important investment for Norwegian households. Purchasing a good home often necessitates two incomes. Getting married

early – and preferably staying married – confers great advantages in the Norwegian housing system.

Although the majority appear to be able to adapt and thrive within this system, it can cause difficulty for those who either prefer a different lifestyle or who are not in possession of the resources and personal qualities it requires.

Housing for the young and disadvantaged

Although there are some young people who experience difficulties getting established, most of those who find it difficult to obtain housing in Norway belong to groups suffering from substance abuse and psychiatric problems, groups with a weak position on the labour market, and groups with minimal and variable income and little capital. They live in and are dependent on rental housing. Contracts are usually short-term, which leads to insecure housing provision. A 2003 census showed that there were approximately 5 000 homeless people throughout Norway. It is also difficult to persuade the municipal authorities to find homes for refugees and asylum-seekers granted settlement permits by the Norwegian authorities.

On an international scale, the numbers of homeless and households with inadequate housing conditions are relatively small. Even so, they represent a considerable challenge. Nevertheless, helping a small number of households should not present a problem for a wealthy country like Norway.

The municipal authorities are responsible for assisting those who are unable to cope alone on the housing market. In formal terms, this responsibility is somewhat limited. According to the Social Welfare Act, they are obligated to provide shelter at night for persons unable to provide this for themselves, as well as ensuring that facilities exist for persons in need of specially adapted dwellings.

The central government has established a variety of schemes that can be utilised at municipal level. The Norwegian State Housing Bank distributes this funding to the local authorities. In addition, the municipalities have some rental housing available, provide welfare benefits for housing purposes, and in

some cases offer supplemental schemes for housing support. The local authorities may also lay down guidelines for what kinds of buildings are to be constructed and where, thus encouraging the development of more affordable and appropriate housing for marginalised groups as well.

In practical terms, the municipalities have demonstrated relatively little willingness to implement an active, cohesive housing and development policy, particularly with regard to marginal groups within society.

Owning vs. renting – a greater public rental sector?

A key issue here is the municipal rental sector, although this is very limited. Roughly half the available dwellings in this sector are reserved for the elderly and persons with disabilities. The other half comprises what is referred to as social housing, and is intended for persons who for various reasons are outside the scope of the private market. It is very difficult to obtain access to these dwellings. In order to qualify, an individual must either be a homeless person or be in imminent danger of becoming one, with very low income and capital. Surveys of housing problems for marginal groups indicate that more municipal rental housing is sorely needed.

A committee appointed to review Norwegian housing policy recently also recommended a larger non-commercial rental sector. This has not yet been fully embraced by the local authorities, and would in any case require substantial government funding. At present, this sector operates primarily within housing for students and young people.

The present Government argues that increased availability of municipal and non-commercial rental housing represents the wrong strategy. Instead, the Government maintains that home purchase is the best alternative, also for those who have a weak position on the housing market. Rental housing is a poverty trap, it is claimed. In Norway, it is ownership of one's home that forms the cornerstone of prosperity and sound living conditions. Thus the Government has chosen a strategy that creates a framework for a smoothly-functioning housing market in which everyone will be capable of buying his or her own home. In my

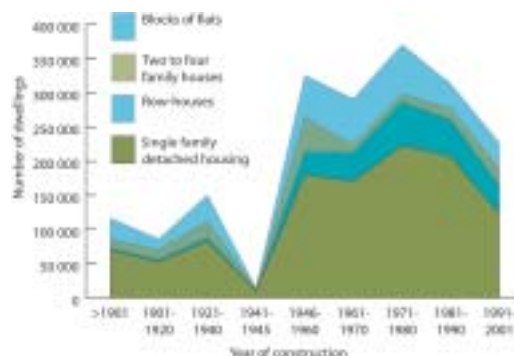


Figure 4. Dwellings in Norway by type of building and year of construction. Absolute figures. (Source: Statistics Norway, Population and Housing Census 2001). The present-day housing stock reflects the development after 1945. Detached dwellings have dominated development for the entire period, but several of the buildings defined today as detached dwellings were originally built as semi-detached houses with two dwellings. This applies especially to buildings constructed in the 1950s.

opinion, this is an illusion. The people who are qualified for municipal housing today are nowhere near being able to purchase a home, and most of them will not be ready for many years. Moreover, the Government's strategy underestimates the risk of some people having problems in servicing a loan, and the ensuing need for rental housing as an alternative.

Initiatives are in place to help the weakest group, the homeless, but others groups are left to grapple with the vagaries of an unpredictable and unkind market. The Norwegian rental market is not designed for permanent tenants. It is characterised by individuals who, for a short period and somewhat randomly, rent out an extra dwelling or, more often, a basement flat or bed-sit in their own home. This means that the renter chooses the tenant as a neighbour, and determines the rent based on the same considerations. Both access to temporary housing and the price one must pay are thus dependent on one's standing as a tenant. It is virtually impossible to obtain secure, long-term tenure, and consequently those seeking rentals are denied stable living conditions.

Sustainable housing

A second major issue involves the number of dwellings and housing areas based on the concept of universal design, while a third concerns the development of a more environ-

The Norwegian State Housing Bank

The Norwegian State Housing Bank was established in 1946. The task of rebuilding Finnmark played a key role in its inception, but the Housing Bank became – and continues today to serve as – the government's main housing policy instrument. The Housing Bank granted loans for the construction of housing, including the purchase and preparation of plots, as well as various forms of subsidies and support for residents. Mortgages are granted to individuals and companies alike, private as well as public. The size of the mortgages varied, but in general it did not exceed 80 per cent of the costs. Lending terms were advantageous, with low interest rates and repayment in instalments over a long period. Projects had to be approved by the Housing Bank, which laid down detailed guidelines containing both maximum and minimum requirements regarding size and quality. Adjustments were made over time, and the system came gradually to concentrate its efforts on support to individual, prioritised residents, in terms of loans, subsidies and ongoing housing support. Mortgages are still awarded, but the terms do not deviate much from the regular market terms.



Figure 5. Houses constructed from type blueprints from the Norwegian State Housing Bank in 1970. Living space 95 m². Four rooms and a kitchen.

mental and sustainable housing sector. These issues pose great challenges vis-à-vis the planning and regulation of new construction and renovation of housing and housing areas, as well as the need to introduce changes in living habits. The large stock of single-family housing in Norway implies certain advantages in terms of universal design. Many of these can be made accessible for persons with disabilities relatively easily. In terms of sustainability, however, they are catastrophically unsuccessful as a result of their size and shape as well as their dispersed locations. More concentrated housing forms are more resource-friendly, but are often difficult to adapt to the needs of persons with disabilities.

A more sustainable housing sector means that each individual must consume less space, both in terms of land-area and floor-space. A longstanding trend of steadily increasing living space per person must be reversed. Other, alternative and less resource-intensive qualities must be promoted. At present, no realistic strategy for achieving this exists. The Government's proposal regarding additional tax deductions for home ownership has the opposite effect. The proposal to allow the municipalities to introduce a property tax may reduce the tax advantages, but all proposals to increase housing taxation are met with massive resistance among the populace.

Private or public development?

As previously mentioned, Norway's housing stock was built over a 30-year period starting in the mid-1950s.

One conclusion drawn from the post-war development is that new construction is still important. New construction is often disparaged in certain contexts on the grounds that it only comprises one per cent increase in the housing stock. It is argued that new construction is inefficient as an instrument for achieving acute, short-term objectives. Building affordable housing for those on the margins of the housing market today is by and large a symbolic act. New construction, however, is essential to what will be available in the housing market in the longer term. At today's rates, the changes will be somewhat less comprehensive than what took place after 1945; in thirty years' time, however, one-third of the stock will consist of housing built after 2000. In the larger urban areas, this figure may be considerably higher. Both new development and large-scale renovation represent a great opportunity as well as a considerable challenge.

Much of the post-war development was in accordance with strict, centralised planning. Both the planning methodology and the results have been highly criticised, not least with regard to the large satellite towns. The policy today is one of turning the housing-market



completely over to private developers. The question is whether this is likely to succeed if one of the goals is to promote qualities like sustainability and Universal Design that do not carry immediate appeal on the market? How will it be possible to safeguard these qualities?

Determining the qualities needed will

require very systematic, careful efforts to study alternative models, to produce propaganda in favour of such alternatives and to devise and launch economic incentives. Private investors are not to be trusted as driving forces in this task; indeed, they should rather be seen as opponents.

Figure 6. Working together in the housing cooperative. Oslo May, 1981. (Source: *De tusen hjem. A history of the Norwegian State Housing Bank. 1946–1996*, p. 375).

Cooperative building associations

Cooperative building associations became widespread after 1945. Each cooperative association built housing for its own members. The cooperative assumed the mortgage obligations from the Norwegian State Housing Bank and distributed this as part of the rent to be paid. Residents were partial owners of the housing properties, and had the right to use the dwelling for which they had paid a deposit. The deposits formed the capital that was needed in excess of the joint mortgage. The right to a dwelling could be transferred to another member, who then also paid a deposit. It was not legal to demand more in payment than the selling owner had paid, although there was some latitude for minor adjustments.

There was one cooperative building association in each municipality, and each of these entered into cooperation with its municipality. The cooperatives were given plots for a reasonable price or for long-term rental, and they were also granted affordable loans from the Norwegian State Housing Bank. The municipalities had the right to utilise a portion of the dwellings, normally 25 per cent, as housing for persons and households for whom the municipality was responsible. The model established in Oslo in 1936 was very successful, and played a major role in the creation of a large number of affordable dwellings with modest but dependable standards in Norwegian urban areas.



Housing for Young People

– New Concepts and Perspectives

Young people seeking housing represent a complex group with widely differing life situations. Although there is broad agreement that it is difficult for this group to break into the housing market, planners and builders remain surprisingly conventional in their approach to providing suitable housing.

Ulla Hahn and Anne Marit Vagstein are both architects who work at the Norwegian State Housing Bank.

By Ulla Hahn and Anne Marit Vagstein

This article looks at several residential concepts that the Norwegian State Housing Bank has helped to develop for young people. With their emphasis on small size, affordability and design innovation, these concepts can improve the prospects of young people in the housing market.

Types of housing sought by young people

The range of young people seeking housing varies widely, from upper secondary school students to men and women well over 30. Many are not looking for a permanent place to live, and are likely to occupy a string of temporary dwellings. As a result of today's greater variety of lifestyles, evolving relationship patterns and increased mobility, young people are in need of a variety of different solutions on the housing market.

Young people looking for work or education are often drawn to cities and suburban areas. Big cities offer the greatest choice in housing – as well as the highest prices. The number of young people moving to the smaller cities and towns is also on the rise, but the availability of rental properties and inexpensive starter homes in such places is often low.

When the occupants are young and likely to move on after a short period, what qualities do they need in a place to live? Which architectural configurations and styles appeal to them? Can a one-room flat, for example, meet the needs of today's single person? Or has this solution gained sway as a result of the current market situation?

Small-scale housing requires careful planning

A conventional one-room or studio flat is a suitable solution when the rental period is limited – provided the unit is laid out in a way that feels spacious. A small living area may be made quite functional and flexible if it is divided into well-integrated, practical zones for sleeping, food preparation and personal hygiene. High ceilings, large windows and windows situated to allow light in from different sides can provide a sense of expansiveness even when floor space is relatively limited. Some complexes designed for young people feature corner windows or windows extending all the way up to the ceiling, which clearly serve to give rooms the appearance of being larger and less confined than the surface area would indicate. When living in small quarters, it is also important to be able to store clothes and other possessions

out of sight. A good closet and an external, weather-proof storage area are basic necessities. In a one-room flat, every detail matters, so thorough planning is called for.

The external environment

Internal room layout and the relationship to the immediate surroundings are equally important in residential planning. Together they determine the overall quality of a residence. For young people in particular, the ability to meet and maintain social contact with others is a major consideration. In evaluating any proposed housing project, the State Housing Bank looks closely at how it fits into the surrounding area. When projects are assessed with a view to the existing social and physical environment, they are less likely to result in homogenous blocks of minimum-standard housing. A functional and pleasing external area can sometimes justify a somewhat simpler interior design.

The Norwegian State Housing Bank promotes new concepts

Conventionality is a surprisingly strong force in the housing market. Dynamic *unconventionality* in terms of physical solutions should be seen as a positive quality in itself, because it opens unexpected vistas for future development. Assigning multiple uses to the same space, for instance, can create a compact living environment that can enhance the attractiveness of an entire area.

Economic assistance such as start-up loans and rental allowances are designed to help young people enter the housing market.¹ But in addition to financial schemes, it is also necessary to incorporate new concepts for housing for young people into municipal planning and local housing projects. Some of the different methods used to initiate new thinking follow below.

Nedre Ullevål housing collective in Oslo

If reasonably priced rental housing is the target, ways must be found to reduce construction time and cost. Through its “Young Living” programme,² the municipality of Oslo



Nedre Ullevål housing collective in Oslo. The ground-floor space is shared by five people, whose bedrooms are all located on the second floor. (Photo: Espen Grønli)

has supported – usually through building renovations – many housing collectives for the youngest groups seeking housing. The project at Nedre Ullevål was unique in that it involved an architectural competition and new construction. The commission went to the architectural firm of Askim og Lantto MNAL/AS because of its creative proposal to use modular building elements. The plan called for prefabricating entire sections of building and mounting them on a poured concrete base.

The property in question was a park-like enclosure with large, old trees. Three three-storey buildings were to be grouped there, each housing a collective of six or seven people. To some people, modular construction may seem at odds with the ideals of variation, quality of life and sensitivity to surroundings. But in this case the architects made an art of modularity.

The ground floor of each building is common area, with an all-purpose room oriented toward the other buildings. While the common areas are neutral in character, the lighting, colour schemes and materials give the interiors a youthful, robust but simultane-



The Nesodden housing complex extends the volume of the neighbouring houses along a roofed gallery with adjacent storage rooms. The airy gallery creates a semi-private exterior space on the street side, while a protected terrace on the roof of the storage units gives the residents an outdoor meeting place. (Photo: Code arkitektur as)



ously homey feel. The large kitchen counter and dining table are made of durable, easy-to-clean materials.

The ground-floor space is shared by five people, whose bedrooms are all located on the second floor. At 11 m² each, the bedrooms are small, but they have large windows that exaggerate the sense of space and provide outdoor contact. The five residents share two bathrooms on the second floor. The top floor contains a self-sufficient two-room flat big enough for a couple or a single parent with child.

The three buildings comprise an architectural “family” in dialogue with each other and their environment. Each building’s protruding volumes, withdrawn balconies and overall sense of verticality produce a dynamism that is rarely seen in inexpensive housing projects. The Nedre Ullevål collective proves that there is no reason for inexpensive residential structures to be of low quality.

The Nesodden housing complex

In an area of established multiplex homes on the peninsula of Nesodden, half an hour by boat from Oslo, a structure containing 12 flats for young people was built in 2003. The project’s interesting shape and its relationship

to the landscape combine to make it a prime example of how the Norwegian State Housing Bank’s fixed-price competitions can stimulate innovation in both architecture and lifestyle.³ The architecture firm behind the winning proposal was Code arkitektur AS.

Introducing housing for young people into an established residential zone was a challenge. The lot was an open area abutting an attractive wood, to which the neighbours were accustomed to easy access. How best to maintain that access was an underlying part of the competition.

The winning project extends the volume of the neighbouring houses along a roofed gallery with adjacent storage rooms corresponding to a bend in the road. A passageway under the structure maintains the pre-existing path to the nature area, while the use of vertical panelling evokes the neighbouring buildings. But this is a radical addition to the neighbourhood. The building’s interior floor plan and functions are exposed in the external forms. The airy gallery creates a semi-private exterior space on the street side, while a protected terrace on the roof of the storage units gives the residents an outdoor meeting place.

The residential units, totalling 43 m² each, are well organised. All have an enclosed entrance hall, a large, well-lit living room, a



small bedroom and a bathroom. Large window panes, west-facing French balconies and sliding doors into the sleeping area create a sense of spaciousness. Window placement is varied from unit to unit, so each resident has a unique flat receiving a different sort of light.

This residential concept is inherently flexible. Two flats can be joined into a single four-room unit by making an opening between adjacent hallways. Two of the flats are designed to accommodate disabled persons. Thus, the building will be able to satisfy many different needs over time.

Workshop about youth residences in Hokksund

In the small city of Hokksund in Buskerud County, about an hour's drive west of Oslo, brainstorming workshops were applied. Last fall, officials set in motion a cooperative process to create high-quality housing for young people. Municipal representatives, architects and young residents all took part in a workshop on planning and sustainable building focused on three potential building lots. Participants evaluated new buildings as well as the possibility of converting nearby shops and offices for residential use.

The Norwegian State Housing Bank seeks to support local authorities in visionary or unorthodox housing pursuits, for example by helping to organise workshop sessions and draw upon relevant expertise⁴.

Future prospects

The Housing Bank's role in housing policy has evolved from provision of technical and economic support to serving more as a guide and cooperative partner in the development of various projects.

Planning and development officials in Oslo, for example, have taken the initiative to solve problems associated with rising prices and shrinking living areas. In conjunction with other municipal agencies and the Norwegian State Housing Bank, they have launched a project called "Living well in the city," which they hope will help to identify fundamental qualities of good living space and how these can be safeguarded. By raising awareness of what makes a good place to live, such cooperative projects can help prevent the emergence of one-dimensional living patterns that serve no one – least of all young people who are "only" passing through.

Notes:

- 1 Rental allowances, or *bostøtte*, are given to low-income households; they are administered by the Norwegian State Housing Bank and the municipalities. The housing bank and private banks cooperate on providing start-up loans, which are designed specially for first-time homebuyers.
- 2 Young Living, or *Ungbo*, is Oslo's official housing programme for people between 17 and 23 years of age. Inexpensive and safe temporary housing units are available to all who have lived in Oslo for the past two years, lack a suitable dwelling and are legal residents of Norway.
- 3 These fixed-price competitions challenge participants to design the highest-quality residences for a pre-defined price. Results show that the focus on quality leads to more innovative ways of cutting costs.
- 4 The Housing Bank's mandate to strengthen housing quality enables it to undertake activities that the housing market would not initiate on its own. Improved living conditions, accessibility and sustainable use of resources are its main concerns, with municipalities its main target group.



Curbing Homelessness in Norway

The housing standard in Norway is uniformly high, and the number of homeless people is low compared with most countries in the world. Nonetheless, there is need for a strategic public effort to combat and prevent homelessness.

Gunnar Sveri works at the Norwegian State Housing Bank. He is currently engaged in "Project Homeless".

By Gunnar Sveri

In 1997 the Norwegian Building Research Institute conducted a census of homeless people in Norway. The total number of homeless was put at 6 200. A new census is under way and will be published in 2004. There is considerable interest in how the situation has developed since 1997.

The 1997 results showed that Norway as a whole had 1.4 homeless people per 1 000 inhabitants, but the variation from municipality to municipality was significant. Some municipalities reported no homelessness at all, while Oslo had an estimated 5.22 homeless people per 1 000 inhabitants. In terms of averages, the results were as follows:

Municipalities of more than 40 000 inhabitants:	3.1 per 1 000
Municipalities with 10 000-39 000 inhabitants:	0.63 per 1 000
Municipalities with fewer than 10 000 inhabitants:	0.36 per 1 000

Statistics regarding the homeless

Of the total homeless surveyed, 76 per cent were men and 24 per cent women. A large majority of the homeless were under 40 years of age. Almost 90 per cent were under 50. The proportion of homeless women was greatest for the youngest age group, which may indicate that the number of homeless women is on the rise.

Eighty-two per cent of Norway's homeless were born in this country. Four per cent were from the rest of Europe and North America, while 13 per cent were described as representing non-Western cultures.

At the time of the survey, 37 per cent of the homeless were staying in treatment centres, prisons, jails or related forms of temporary shelter. Twenty-five per cent were staying temporarily with acquaintances. Nine per cent found different places to sleep from night to night. Nineteen per cent stayed in hospices or camp-site cabins. Five per cent were on the streets. The means of shelter for the remaining five per cent were not given.

According to the survey, 61 per cent of those without a permanent home had a problem with drugs or alcohol, while 24 per cent suffered from mental illness. Nine per cent did not suffer from mental problems, were not substance abusers and had not been in a treatment institution. Of these, 55 per cent were born in a non-Nordic country. Several other surveys have shown that some immigrants experience homelessness for a period after arriving in Norway.

Project Homeless

Report No. 50 (1998-99) to the Storting (Norway's national assembly) on equitable distribution cast light on the problems of the homeless in Norway and proposed various measures vis-à-vis this group. This led to "Project Homeless", a collaborative effort by

the Ministry of Social Affairs, the Ministry of Local Government and Regional Development and the Norwegian State Housing Bank.

Project Homeless was launched in 2001 and will be concluded in 2004. The object has been to develop methods and models for countering homelessness. The project has already shown positive results, with formerly homeless people having established themselves in flats or houses with follow-up residential support.

The 1997 census over the homeless included an assessment of relevant housing and follow-up needs from which the following conclusions were drawn:

- One-third of the homeless will be able to live successfully in a home of their own.
- One-third will need a home with professional follow-up.
- One-third will need treatment or other forms of comprehensive professional support.

Initially, the project targeted homeless people in need of professional follow-up care. Measures were aimed at the weakest groups, who had no place to stay and had been living beyond the reach of the ordinary public support mechanisms. The target group was later re-defined as homeless people requiring assistance, but in practice the test measures have been directed at those with the fewest resources.

Where the neediest members of society are concerned, homelessness can be portrayed as part of a vicious circle in which the individual is caught in a loop of unsatisfactory living arrangements with no follow-up, treatment institutions or incarceration, and outright homelessness. One of the goals of Project Homeless is to design national methods and models to break this vicious circle.

Participants in the project

The Norwegian State Housing Bank is responsible for the project and administers it from within its organisation. Nationally, a contact group has been set up with representatives from the Ministry of Local Government and Regional Development, the Ministry of Social Affairs and the Directorate for Health and Social Affairs.

Oslo, Bergen, Trondheim, Stavanger,



Kristiansand, Drammen and Tromsø all take part in the project at the municipal level. These cities account for 25 per cent of the country's total population but 70 per cent of its homeless. Several non-governmental organisations (e.g. the Salvation Army and other church-related services) participate in measures in the project cities. Each city has a local steering committee with representatives from municipal administration, health and social services, housing services and the regional offices of the Norwegian State Housing Bank.

The message on this old apartment house in central Oslo is simple: Everyone needs housing! (Photo: Torstein Ihle)



Altogether within Project Homeless, 30 subprojects have been set up to serve 310 residents. The dwellings used are for the most part normal flats, some of which are situated together while others are located within ordinary residential districts. There are also some housing collectives with shared living areas, including kitchens and bathrooms.

Special teams offer the professional support needed. Most of them are based within the residences they serve, though some have responsibility for visiting additional sites.

In addition to helping administer these efforts, the municipalities have drawn up their own strategies for combating homelessness. These encompass preventative measures as well as models for enabling the homeless to establish a home.

Attitude toward the homeless

Project Homeless has led to greater acceptance of the view that even homeless people suffering from alcohol and drug problems or mental illness are entitled to social services and a place to live. The participating municipalities have been able to proceed on the shared assumption that everyone, even those of the fringes of society, has a right to a home.

Raising the competence level

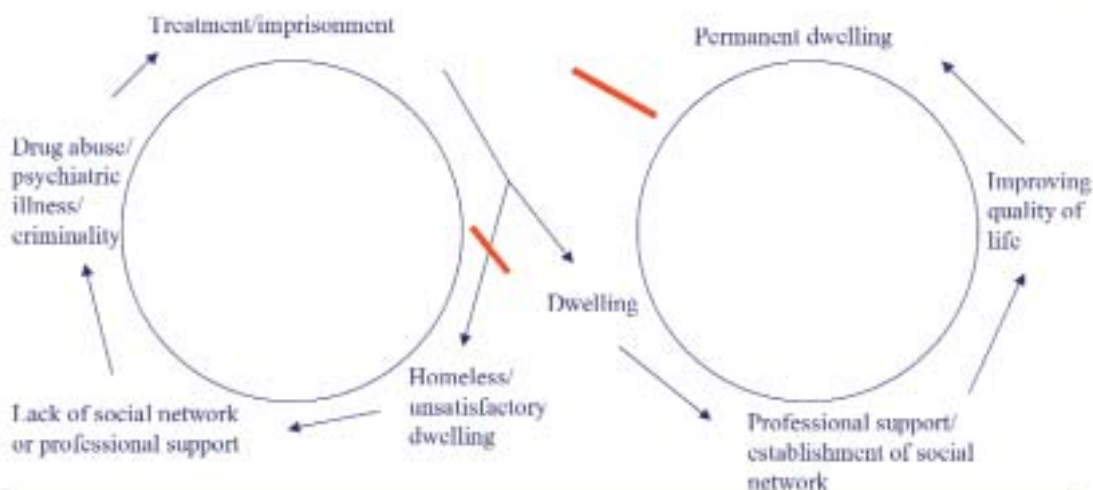
Project Homeless has also established a new, college-level educational programme combining housing and social services. The programme is open to health- and social-sector employees of participating municipalities as well as members of non-governmental organisations and the Norwegian State Housing Bank. Within Norway, this is a pioneering educational programme, and the first 46 students have recently completed their exams.

Shorter training programmes are also being developed to heighten housing-related expertise among employees associated with the project. In addition, course modules that combine housing and social-service topics are being prepared for use in existing academic programmes.

Collaboration with NGOs

A goal from the start has been to engage non-governmental organisations in the project. A complication emerged with regard to Norway's competitive-procurement rules for public bodies, but temporary dispensation

The goal is to break a vicious circle



(Source: The Norwegian State Housing Bank)

was obtained to permit NGOs to provide social and health services. Project administrators continue to address the issue through collaborative models.

Project results

The target group members associated with the project are all contending with problems in addition to homelessness, and some have not had their own homes in a long time. So if the purpose of the project was to ensure problem-free implementation of all measures, the administrators should probably have chosen a different target group.

Nonetheless, most of the people served by the project have remained in their new living quarters. Experience in the final year of the project suggests strongly that a home combined with systematic professional support improves the quality of life for previously homeless people.

Neighbours often mount protests when plans are announced to house homeless people nearby. However, once the new residents move in, the complaints generally die down. People who were previously homeless cause no more trouble to their neighbours than do other aspects of neighbourhood life.

Regular, private flats with a living room, kitchen and bath/WC function significantly better than residential collectives with shared facilities. Likewise, when multiple flats for the homeless are situated together, the occu-

pants should be allowed to choose the degree to which they wish to socialise with one another.

The expertise of professional follow-up workers is important to achieving success, as is a consistent approach from one worker to the next. So, too, is the composition of new households. If several high-strung people live together, their overall affect as a group can be more aggressive.

Strategy against homelessness, 2005–2007

In a recent white paper on housing policy (Report No. 23, 2003–2004), the Government proposes a strategy for combating homelessness in the period 2005 to 2007. The Government's goal is ambitious, and will require a major effort from state, municipal and non-governmental agencies. The white paper will be debated by the *Storting* in the autumn of 2004. The proposed strategy builds upon Project Homeless, and recommends the Norwegian State Housing Bank as the state institution assigned to coordinate Norway's continuing effort to help the homeless.

The white paper takes inspiration from a vision of "good, safe housing for all." The mission it lays out is "to provide housing in the market for people of difficult circumstances." The following general goals and performance targets are proposed:

General goals	Performance targets
Help prevent people from becoming homeless.	Number of eviction petitions to be reduced by 50 per cent, and evictions by 30 per cent.
	No one shall have to seek temporary housing upon release from jail or prison.
	No one shall have to seek temporary housing after release from a treatment institution.
Contribute to good quality in overnight shelters.	No one shall be offered overnight shelter that does not meet agreed quality standards.
Help ensure homeless people rapid offers of permanent housing.	No one shall stay more than three months in temporary housing.



Planning Based on Universal Design

The concept of universal design refers to the design of buildings, physical surroundings and products in such a way that they can be used by all people, to as great an extent as possible, without the need for adaptation and special design. Although certain limitations will always exist in relation to technology and expertise, buildings and outdoor areas that are open to public use shall be designed to be accessible to all. Municipal planning must be inclusive.

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By Einar Lund

Policy in relation to people with disabilities

Until well after the WWII, the lives of most Norwegians with disabilities were characterised by some degree of material and social poverty. For the most part, initiatives to help

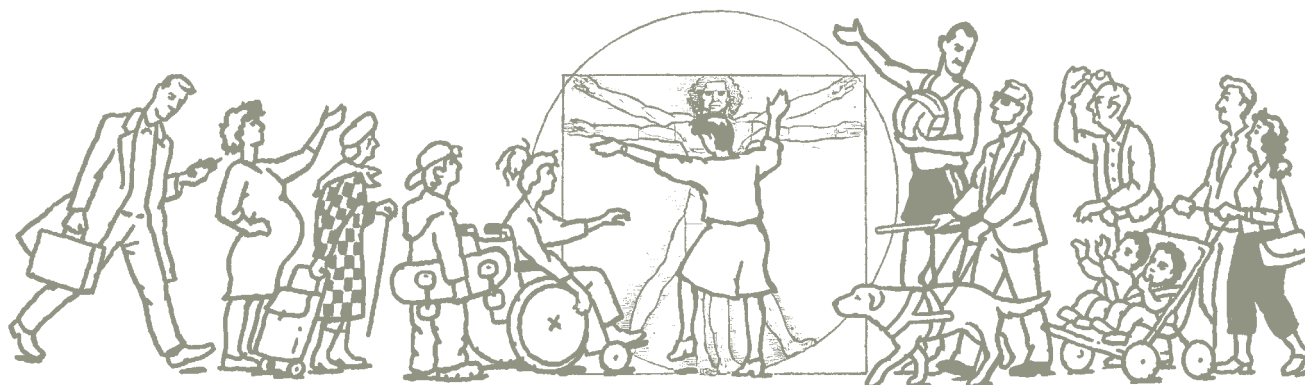
the disabled were couched in a help-oriented, social-policy perspective.

However, after 1970, government policy became increasingly based on equality and human rights-based perspectives. Increasing attention has been focused on disabling factors, i.e. the discrepancy between the ability of the individual and the demands of society with regard to those functional abilities that are vital in order to establish and maintain independence and a social life. Accessibility to buildings was stipulated as a requirement in the Building Act of 1976, and in 1985 the Norwegian State Housing Bank introduced a life-span perspective into its loan financing schemes.

Estimates today indicate that 15–20 per cent of the Norwegian population can be defined as permanently disabled in one of three main categories: the mobility impaired, the orientation impaired (sight, hearing, etc.) and the environmentally impaired (asthma, allergies, etc.). Moreover, 70 per cent of the population will experience some form of functional impairment during the course of their lives. Everyone, from an increasing elderly population to families with children and other population groups will benefit in their own way from good solutions regarding accessibility to services, enhanced readability, and easily negotiable physical surroundings.



Universal design solution: Single-level mixer tap.
(Photo: Svein Magne Fredriksen)



Community planning and user participation

The Ministry of the Environment has actively sought to promote greater understanding of the role of persons with disabilities in planning processes, as well as of the role of the planning sector in dismantling disabling barriers. Among other things, training activities have been implemented to facilitate the integration of user participation perspectives for disabled persons into local development planning processes.

In a circular addressed to the planning authorities at municipal and regional level, the Ministry of the Environment describes how the municipal master plan, as a whole and in terms of its parts and appurtenant provisions, can be constructively utilised to enhance accessibility. The regional authorities can cite this circular when raising objections to a municipal plan that they feel does not satisfy accessibility requirements. The matter will then be submitted to the ministry for resolution.

An evaluation of the various initiatives launched to enhance participation revealed that disabled people as a group continue to display a low degree of user participation in community planning, but that there has been improvement. The establishment of local councils for persons with disabilities is important in this context. Close to 60 per cent of all municipalities have now established such councils, and the councils have increased their focus on planning tasks as a result of information or direct training activi-

ties initiated by the Ministry of the Environment. In 2004, the *Storting* asked the Government to approve a bill making it a statutory requirement for all municipalities to establish a local council for persons with disabilities. The evaluation also showed that more than 50 per cent of the municipalities had formulated objectives promoting the interests of persons with disabilities in the broad community planning aspects of the municipal master plan, and there were indications that this percentage was steadily rising.

New planning legislation

The relationship to various interest groups and principles of user participation were discussed in an official committee that submitted recommendations for amendments to the Planning and Building Act in 2003. The Committee establishes that the design of physical surroundings has a significant impact on the life quality of persons with disabilities. Accessibility and mobility are affected not only by details to specifically accommodate the needs of disabled people, but also by decisions pertaining to land use, location and local pollution. According to the Committee, accessibility is more about equality within a human rights and anti-discrimination perspective than about administrative and economic concerns. The Committee states that the municipal master plan is a key instrument in efforts to achieve national objectives relating to full participation and equality, and goes on to point out that this

There is no such thing as an average person. The ideal man is oversimplified as a basis for planning. (Illustration: Trond Bredesen, Illustratøren)



Temporary rib-mesh ramp. An unaesthetic building tradition. Other architectural or terrain-based measures could have provided a better, permanent solution. Good planning from the outset would have minimised the need for several steps up to the entrance. (Photo: Einar Lund)



implies equal rights to housing and employment and the opportunity for all to lead an active life as a full member of society. The committee's recommendation proposes to strengthen the rules for planning processes and user participation, and specifically charges the municipalities with responsibility

for ensuring the active participation of groups with special needs.

Universal design – a strategy and a way of thinking

The Programme of Action for Universal Design was launched in 2002, and builds further on the principles and instruments from the Community Planning and User Participation Programme. The purpose of the programme is to foster greater understanding of the principles of universal design at different levels of the government administration as well as in various sectors. It is essential that the planning authorities also utilise this as an opportunity to invite as well as urge the sectors to take part in municipal and county-municipal planning.

It is a government objective that the prin-



Snowy winter – dry or slippery.

A pedestrian avenue that is possible to negotiate winter and summer alike for many different types of pedestrians. An environment-friendly snow-melting system (surplus heat), pavement with traffic zones, while retaining the pleasant aspects of a winter climate. The somewhat less aesthetic impression given by the signs and advertisements on buildings and pavements indicate the challenge inherent in creating a unified whole through planning, approval procedures and maintenance administration. (Photo: Svein Magne Fredriksen)



ciple of universal design shall form the basis of development and procurement activities. This principle shall be incorporated into all activities relating to the ordering and purchase of goods and services. This implies that considerations pertaining to all user groups must be integrated into solutions in so far as this is technically and practically possible. Although existing conditions, technology and expertise will pose certain limitations, buildings and outdoor areas that are open to public use must be designed to be accessible to all. This objective will be realised with the help of the dissemination of information, competence building, research activities and development efforts.

With regard to urban development, impor-

tance is attached to accessibility as part of the objective to achieve adequate living conditions in relation to good city spaces and green areas, good health and investment in functional public transport systems. A special programme under the National Transport Plan has been launched to improve accessibility along the entire travel chain from home to work to recreation.

Universal design strategy has become a political priority, and will comprise a key area in the years to come. There is great potential here for enhancing creativity and expertise within the planning sector as well as for all parties whose activities are somehow related to the planning process. It is at the local level that we see the results.

"Green" street in Trysil. Good choice of materials, clear traffic zones and use of contrasting colours. (Photo: Svein Magne Fredriksen)

New Public-Private Partnerships

Starting in the late 1970s, the balance between planning and the market in Norway has shifted towards the latter. A portion of the Government's authority – both at the central and the local level – has been decentralised to quasi governmental institutions or to the market. Furthermore, new forms of public management and complex public-private partnerships, characterised by the participation of many autonomous agents, have been introduced in an increasing number of sectors.





Urban Transformation

– An Arena for Partnership and New Models of Cooperation

Urban transformation is part of Norway's strategy for sustainable urban development. A different, more effective use of poorly utilised or "grey" areas in urban centres can generate more close-knit, varied and environmentally friendly cities and towns. The benefits include reduced urban sprawl, improved and more environment-friendly transport and energy use, and urban growth that enhances innovation and cultural exchange. The planning and execution of urban transformation processes is complicated, and is dependent on close cooperation between private actors and the public authorities. In Norway, urban transformation is one of the most important arenas for developing new models for "partnerships" between the public and private sectors.

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By Erik Plahte

The vast potential of transformation

In recent years, Norway has experienced a rising demand for housing located in central urban areas. Much of this housing is being built in urban transformation areas, for instance in former industrial and harbour areas. In Stavanger, Norway's "oil capital", the development potential of such areas is estimated to be 2 million m² (15 000 dwellings and 15 000 offices), which is enough to cover more than 40 years of development in relation to expected market demand. The development potential of urban transformation areas is substantial in other larger urban centres in Norway as well, including the capital city of Oslo. Unlike previous trends, which have stimulated urban sprawl, these new market trends are serving to reinforce both national and municipal policies for environment-friendly urban development.

Private property owners and developers

have demonstrated considerable interest in urban transformation. Many urban municipalities are finding it a great challenge to lay the framework for and process extensive private development initiatives. Changes in market preferences as well as in the value ratio between housing and commercial land give rise to a need for changes in planning. Harbour areas that were designated for commercial purposes in recently approved land use plans are now desirable for housing. The use of waterfront areas in urban centres is thus subject to rapid change, and there is some question as to what the long-term ramifications of this will be for the urban municipalities. The landowners – whose ownership and rights are often legally complex – and developers are seeking flexible plans, efficient planning processes and realistic perspectives for implementation. As planning authorities, the municipalities must work both to meet these needs and to safeguard considerations relating to urban development, public interests, municipal finances and state interests.

Within this multifaceted scenario, Norway



has devised and gained experience in working with new planning and partnership models. These models are based on municipal actors who establish a suitable framework for urban transformation processes, with primarily private actors carrying out their planning and implementation. A close dialogue with the commercial sector has been established at an early stage, aimed at achieving a common understanding of the needs and potential of urban centres, and at negotiating solutions as to how to implement and finance urban transformation.

Financial realism necessitates new planning models

Financing is one of the main problems in relation to implementation of high-quality urban transformation. Norwegian urban municipalities have an overall weak economic situation, and growth through population increase generally costs more than the income generated through tax revenues and financial transfers from the state. Government allocations for national highways and expansion of public transport networks are a critical factor for many transformation areas. Frequently, allocations are insufficient to satisfy the fundamental needs of urban transformation projects. Private landowners and developers are thus forced to contribute financially to the establishment of common goods and necessary infrastructure if development projects are to take place at all. Private financing may be needed in connection

with green structures, major road networks, public transport stations/stops, pedestrian walkways and bicycle paths, water and sewage networks, and in some cases contributions to schools and day-care institutions as well as housing for disadvantaged groups.

Norway has no legislation to ensure that costs for common goods will be covered in large-scale development projects. Local development plans may be submitted as private proposals, and private developers are responsible for undertaking and funding the planning activities. These plans are based on specific, private projects. Planning for urban transformation projects is thus closely linked to negotiations and the application of civil law agreements, for instance development contracts. The urban municipalities' most important negotiating cards are its authority to approve a local development plan, its administrative authority in connection with the stipulated infrastructure requirements (requirements regarding infrastructure that must be established before development can begin) in approved plans, and as the landowner of municipal property. The Norwegian planning and partnership models for urban transformation projects must be viewed in this context.

Shared understanding of long-term feasibility and challenges of urban transformation

Privately-initiated urban transformation often takes place by means of specific project

Urban Sjøfront in Stavanger is a complex urban transformation project along the city's waterfront. The municipality of Stavanger cooperates with local developers and the business community in the redevelopment of the former harbour and industrial district. (Illustration: Helen & Hard AS)



Strandkanten in the northern city of Tromsø is an important element in the municipal development plans. The goal is a transformation of this central waterfront area from mainly industrial use into a new residential neighbourhood. (Illustration: Strandkanten AS)

proposals or project concepts. These proposals will vary in the degree to which they can be transformed into constructive, easily implemented solutions for urban development. To enhance the initial dialogue with the commercial sector, several urban municipalities have introduced underlying processes to generate a shared understanding of the challenges, feasibility of and desired direction for urban development and transformation. Important actors include landowners and industry, other public authorities and the general public. Common to these processes is that the urban municipality takes the initiative in cooperation with landowners, developers and other representatives of the commercial sector, and that the public at large and other participants are incorporated through open debate.

Tools used in these processes include the design of future scenarios, project competitions, area analyses, planning workshops with broad-based participation and wide-ranging urban development conferences. These processes comprise an integral part of urban municipal efforts to devise underlying strategies for urban transformation.

Parallel planning and negotiation processes

Transformation areas differ widely with regard to ownership status and user interests. Conditions relating to ownership and rights are often especially complicated where such areas are concerned. Larger-scale, older industrial areas may be somewhat simpler to deal with, as there may be fewer owners. However, the need to view planning, financing and implementation in an overall perspective applies equally to all transformation areas, regardless of how complex the individual ownership situation may be.

Thus, various forms of public-private partnership have been devised for urban transformation activities. These include civil law-based negotiating processes for how to resolve financial challenges. In practical terms, this is done by conducting public planning processes under the provisions of the Planning and Building Act while conducting civil law-based negotiation and contracting processes either at the same time or with some overlap.

The negotiations encompass both public and private parties. When conducting parallel planning and contracting processes, it can be difficult to ensure that the public sector has the influence to which it is entitled in accordance with the Planning and Building Act. Openness, information and a genuine ability to influence outcomes all comprise important tools in this context. Many urban municipalities have achieved success with such parallel planning and contract negotiations by employing organisational solutions that feature a clear division of responsibility between planning and contract processes.

Flexible, legally-binding plans

Urban transformation in a changing market makes it imperative to have legally-binding plans that clarify key frameworks, but that also provide the flexibility needed for implementation. On the one hand, the plans must establish necessary guidelines for building heights and plot utilisation, road systems and parking, urban spaces and green structures. On the other, a certain degree of flexibility is needed, for example in relation to the distri-

bution between building for housing and commercial use, which will in turn have implications for other needs such as parking, urban spaces and outdoor areas.

In Norway, the most relevant plans comprise the municipal sub-plans and the local development plan. A number of urban municipalities also use planning programmes that are not legally binding or defined in the Planning and Building Act. The formal regulation of these takes place via planning requirements (requirements relating to local development plans or building development plans) laid down in the land-use portion of the municipal master plan. The planning programmes have proven to be effective tools for the subsequent planning and implementation processes.

Amending approved land-use plans is often a time-consuming task. Experience from various transformation projects indicates that flexible, legally-binding plans facilitate efficient implementation without this in any way impacting on quality. The plans must define main structures and provide guidelines for implementation of infrastructure measures laid down in the plan's stipulated infrastructure requirement provisions. Implementation agreements are often based on the requirements established in such provisions.

Organisation in transformation areas with many landowners and users

Transformation areas with more complex ownership and rights structures are difficult to develop without a cohesive overall plan, or without some manner of organising owners and rightsholders. Established tenants, such as companies that do not advocate changes, may also complicate the situation. In practise, a few owners can put a halt to transformation processes. Generally speaking, Norwegian municipalities are relatively unwilling to use coercive measures such as expropriation to realise such processes.

Various instruments have been elaborated to achieve better organisation of owners and rightsholders. In areas where this has been most successful, the path taken has often entailed the establishment of limited companies or other forms of contractual cooperation, partly based on the willingness of owners. Generating constructive cooperation

between owners and users is one of the greatest challenges in urban transformation areas. The urban municipalities often play a crucial role in initiating cooperation and organisation in the private sphere.

Coordinating state interests

The state plays a significant role in urban transformation through central sector interests that have the right to raise objections to plans, through government infrastructure policy, through localisation of government buildings and through management of government land. If the plans conform to national policy, it is presumed that state activities will support the urban municipality's strategies for urban development. However, the state's interests are safeguarded through many different institutions and administrative units, each with varying degrees of insight into urban development issues. The urban municipalities have requested better coordination of state interests, and government organisations have been included as part of the public-private partnership in many transformation areas.

Conclusion

In Norway, planning of urban transformation is governed by the need to find solutions that enhance urban qualities and at the same time remain financially feasible. New and closer forms of cooperation have emerged between the urban municipalities and the commercial sector in response to the call for financial realism, the many and conflicting considerations that must be taken into account, and the wide-ranging participation of private actors in planning and implementation activities. There is every reason to believe that this trend towards partnership will continue. The urban municipalities have a key role to play in these processes, as both the commercial sector and the public at large will be in need of expertise and follow-up. The ability to create an efficient framework for urban transformation will comprise an essential component of each urban municipality's competitiveness in the years to come.



Akerselva Environmental Park and Akerselva Innovation Park: Urban Transformation by Chance and Governance

This article is concerned with the use of governance in industrial transformation processes in Oslo. First we will look at the Akerselva *Environmental* Park project, where the techniques of managing complex networks were used in a semi-intended way, and where the result – more by chance than by deliberate governance – was a very successful industrial project. This is then compared to the Akerselva *Innovation* Park project taking place fifteen years later, where the issue is whether it is possible to create a new industrial cluster – in this case within the field of art, design, architecture and information technology (ICT) – largely by employing governance techniques.

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By **Knut Halvorsen**

Geographical and historical context

The Akerselva River Basin is the functional part of the Akerselva River. It stretches 10 km from the north of Oslo and Lake Maridalsvannet, running through the centre of Oslo and into the Oslo Fjord to the south. In modern history, the area had its peak as a centre of manufacture in the 1960s. Then it began to decline, driven both by the attempt of national industrial and regional policy to hamper growth in Oslo, and by changes in the global market economy. The past twenty years have seen strong growth in new areas, such as the ICT and media industries, which have risen from the “ashes” of earlier industrial revolutions.

The Akerselva Environmental Park Project

As in many other places, the balance between planning and the market in Norway began to

shift towards deregulation in the late 1970s. Since that time, new forms of public management and market forces were introduced in an increasing number of sectors. By the mid-1980s the Oslo city renewal project had ground to a halt, due to financial problems as well as a general lack of political support for large-scale planning projects. The industrial transformation described above and the ensuing transition towards a burgeoning service sector were rapidly taking place, and many were concerned that traditional factory buildings and the most important monuments of the industrial revolution in Norway would vanish and be replaced by glass and steel “yuppie” buildings housing lawyers, consultants and PR personnel.

By the mid-1980s, the environmental movement had gained full momentum in Norway. The Brundtland Commission delivered its report on sustainable economic growth in 1986. The Minister of the Environment in Gro Harlem Brundtland’s Government, Mrs. Sissel Rønbeck, was effectively lobbied into creating an urban sustainable project. Although the idea was not originally

hers, she soon pursued it with all her political clout and prestige, as well as with funding from the central government. In November 1986, the Akerselva Environmental Park project was launched.

It was clear from the start that the project needed to be formally and administratively based in the planning system of the City of Oslo. In keeping with Norwegian planning legislation, the municipality has the right (in most cases) to regulate physical planning. The project was therefore organised around high-level decision-makers in the City of Oslo and people in similar positions at the Ministry of the Environment and the Directorate of Cultural Heritage. There were no private actors or interest groups in the steering committee, but the main coordinator was Ola Bettum, from the *InBy* consultancy firm. Bettum had been working in the Ministry of the Environment when the project was developed, and belonged to the network of public (and semi-public/private) planners. Mr. Bettum's neutral position made him the pivotal governance actor in the project. This key team of actors constituted an efficient group that managed to identify common goals, make decisions and attract a flow of resources to the project as it developed.

The Akerselva Environmental Park project was carried out from 1987 to 1990. However, the project *evaluation* did not take place until about ten years later, and was carried out through most of 1998 and the first half of 1999. The evaluation was divided in two main parts: an analysis of the transformation process of the past, and a study of the planning process.

The physical and functional transformation was conducted by analysing planning maps and databanks describing buildings and infrastructure and changes over time in the defined area. This part was conducted by Professor Karl Otto Ellefsen and Aasne Haug from the Oslo School of Architecture. The analysis of the institutional process was structured as a qualitative study by the author of this article. I was at the time a researcher at the Norwegian Institute of Urban and Regional Research (NIBR). The main sources of information were planning documents, reports, maps, government memos and, most significantly, interviews of the main actors involved in the process.

What were our findings? As a starting



point, the aims were mostly “green”. That is, they were focused on environmental and recreational values, learning about and preservation of historical heritage, etc. The key documents did not contain a single word about stimulating or restructuring industrial development. In our conclusions it was thus necessary to differentiate between the *intended* and the *unintended* results. The most important intended results included the following:

The Akerselva Environmental Park did not only have positive environmental effects, it generated a strong industrial transformation process, where now high tech firms and restaurants thrive in the old, but renovated factories. The picture shows one of the many waterfalls of the Akerselva River. (Photo: Samfoto)



Research, education, work and play within architecture, culture, ICT and the arts are now the driving force of industrial regeneration in Oslo, as in the plant of the former Vulkan iron foundry. (Photo: Scanpix)

- The actors managed to handle a dynamic project in the sense that it was possible to refine the aims and increase the level of cooperation as the project developed.
- The formal legal and democratic procedures were respected; that is, a plan was produced, with the proper political processing afterwards.
- The project generated broad consensus and awareness – in both the public and the private sectors – of the natural, historical and cultural values of the Akerselva River Basin.
- The area has been transformed into a green corridor and a popular park area.

It is important to note that many of the effects did not emerge during the formal project period. Some are becoming evident as time passes and as public and private investments in the area add to the total picture.

The most interesting outcomes were nev-

ertheless the *unintended* results. The park had an unusually positive impact on industrial regeneration in this part of Oslo. In fact, the industrial transformation that has taken place over the last 15 years is remarkable. The Akerselva Environmental Park has not only improved the quality of life in the area and the neighbouring urban settlements, it has also successfully tapped into an urban trend by creating a foundation for combining work and play. It stimulated the location factors for the new service industries. According to the interactive model of innovation, proximity brings down transaction costs, which again makes it easier to have face-to-face meetings. This is another prerequisite for trust building and transfer of tacit knowledge. In a short time, and without any deliberate public planning, the area has developed several *industrial clusters*. It has turned into an *industrial milieu* in the classical sense. There seems now to be a critical mass of

firms, which generates further growth and attracts other firms.

The Akerselva Innovation Park Project

Half a year after the evaluation was published, a group of consultants and urban activists asked if I could join them for a meeting. I had by then changed positions and was working as manager of the newly established *Oslo Teknopol IKS*, a company created by the City of Oslo and Akershus County to stimulate knowledge-based industrial development in the Oslo region. I was also teaching innovation theory and governance at the Norwegian School of Management (BI), and had thus both practical and theoretical interests in the topic.

The consultants wanted to create a project they had called “Akerselva Innovation Park”. Their main idea was to bring together all the “good forces” in the area to create a media lab in the plant of the former Vulkan iron foundry. The Oslo School of Architecture (AHO), the new Oslo National College of the Arts (KHiO) had recently been relocated to the area. The National Technological Institute (TI) was already located here, and a new Centre for Design and Architecture was planned (opening in fall 2004). In the middle of all this was the old factory – the Vulkan facility – at the time owned by the Norwegian state (Statsbygg), who had no clear strategy for the property. And around this were all kinds of SMEs, theatres, artists and a population enjoying the lively, renovated Oslo neighbourhood of Grünerløkka.

It was agreed to utilise a project organisation similar to the one used in the Akerselva Environmental Park project, but this time with a steering group consisting of top management in the institutions mentioned above. The consultants’ role would be similar to that previously described for Mr. Bettum. The necessary financing was raised through Innovation Norway and “in kind” (time resources) from top management among the partners, all laid down in specific contracts.

An interesting development during the project was that the original aim of creating a media lab with a physical address at Vulkan was changed during the pilot project phases. Instead, it was agreed to establish an institutionalised network as a means of creat-

ing a cluster of research, education and innovation within the arts, architecture, design, and advanced ICT. The SME structure was already established, and the idea was that a more deliberate interplay with the R&D community would stimulate the transformation process even further.

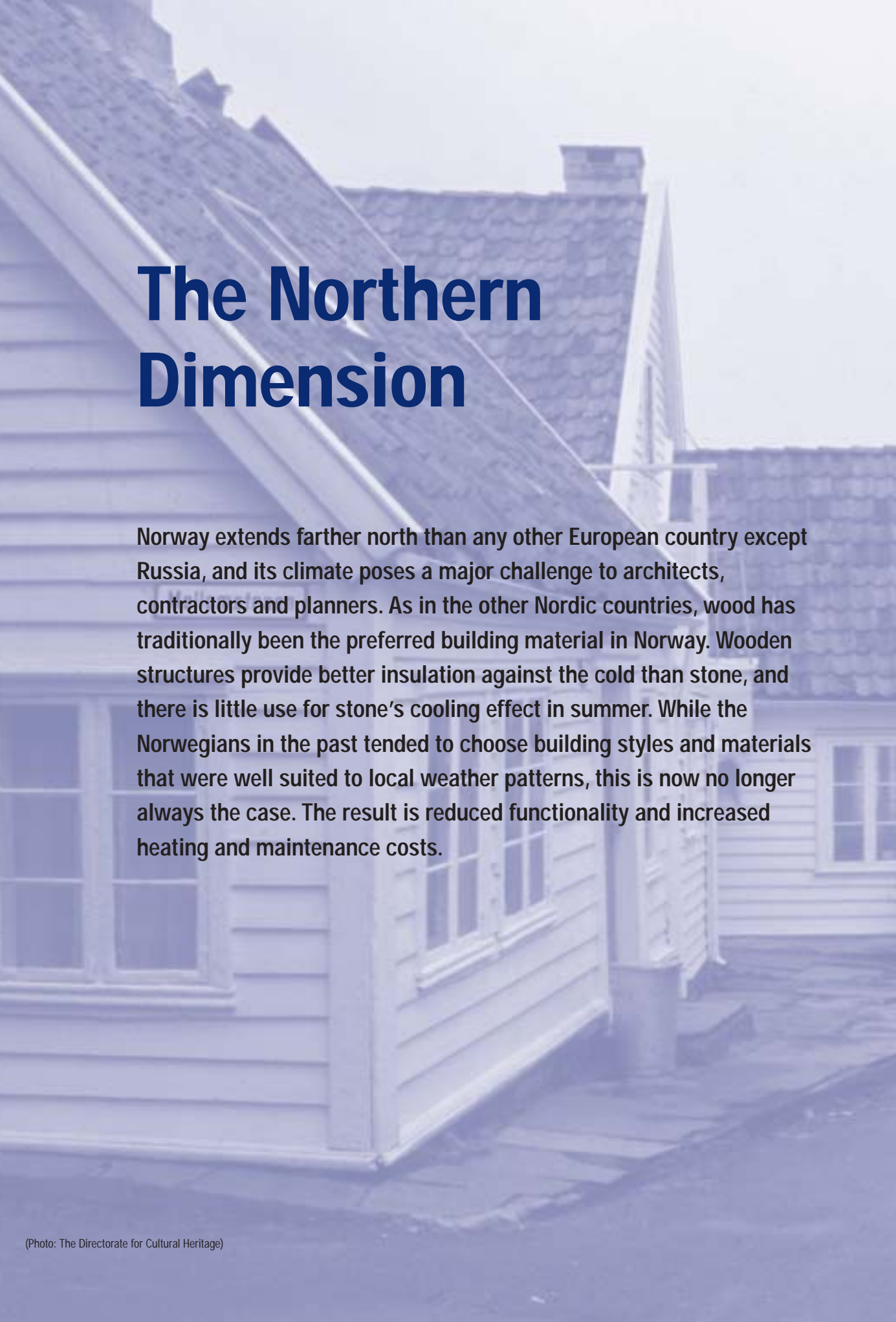
This change of aim opened the door for more partners, and it soon became clear that the University of Oslo was interested. Their InterMedia institute had previously established strong links to the R&D communities in the Akerselva area.

The main reason for the emergence of a new objective was that the institutions involved had already invested heavily in new laboratories and equipment, and the need for a common lab was not high on their list. This is of course an important governance lesson: Always work with the true aims of the key players. In short, the new concept was that each institution should focus on its strongest side. The project can now be considered a “virtual” lab since the area within which these institutions are located is relatively small (like a campus). Investments in common infrastructure to complete a powerful broadband network will further safeguard the internal ties and information flow. An incubator could also be a part of the cooperation at some stage, and this would give a physical dimension to the network.

The change of aims was frustrating to the consultants, who also began to disagree among themselves. When the pilot study was completed it was therefore decided to conduct the next stage without consultants.

As of April 2004, the project had reached its final stages. It has been agreed that the *Akerselva Innovation* association will be established on June 1, with the members of the Steering Committee as its members. This will institutionalise the cooperation with the stakeholders involved.

It is too early to measure the effects of the project. An evaluation should be conducted in perhaps ten years. However, even at this stage it is clear that the governance techniques used to develop common strategies and aims for important institutions in Oslo worked well, and that important conditions for further industrial transformation towards a creative knowledge economy in Oslo have been strengthened.



The Northern Dimension

Norway extends farther north than any other European country except Russia, and its climate poses a major challenge to architects, contractors and planners. As in the other Nordic countries, wood has traditionally been the preferred building material in Norway. Wooden structures provide better insulation against the cold than stone, and there is little use for stone's cooling effect in summer. While the Norwegians in the past tended to choose building styles and materials that were well suited to local weather patterns, this is now no longer always the case. The result is reduced functionality and increased heating and maintenance costs.





Wooden Towns – a Nordic Tradition

Travellers often remark on the prevalence of wooden buildings in Norway. Most Norwegian towns – especially the smaller ones – are dominated by houses and other buildings made of wood. This age-old preference in construction materials gives Norway and other Nordic countries a special responsibility for conserving their many distinctive wooden towns and villages.

Hogne Langset and Gisle Erlien are both architects working in the Norwegian Directorate for Cultural Heritage.

By Hogne Langset and Gisle Erlien

Earlier in history, wooden towns and villages were common in all areas of the world with access to timber, but, with the exception of the Nordic countries, they have become a rare phenomenon. This article does not try to explain the disappearance elsewhere, but discusses instead why they still exist in this part of the world – and in Norway in particular – and what makes wood construction so special in the first place, including special features of the Norwegian towns.

Why did wooden architecture become so dominant?

One thing that wooden towns have in common is their proximity to rich forests. For many centuries, Norwegian timber exports to northern and central Europe were as important to the national economy as oil is today. Across the Nordic countries, wood was the cheapest and most easily accessible building material.

Until the 1900s, Norway had few real cities. Most were small and closely linked to their surrounding community. There was a relatively undifferentiated social hierarchy compared to many other countries, which in turn gave little basis for specialised professions. Only the church and the most prosperous citizenry could voluntarily consider high-

status building styles involving stone and masonry, which required expert craftsmen. Wood-building techniques, however, were common knowledge and required no specialised labour. So as long as people were permitted to use wood, almost everyone did.

The climate of the Nordic countries also played a role in this bias: wooden structures provided better insulation against the cold than stone, and there was little use for stone's cooling effect in summer. Moreover, wooden structures in the North were not exposed to the same weather extremes as similar structures farther south, and thus required less maintenance.

Background for urban growth

The earliest Norwegian cities emerged about 1 000 years ago. Historians recognise eight medieval towns and a number of trading centres within the boundaries that define modern Norway. The country's four largest cities – Oslo, Bergen, Trondheim and Stavanger – were all founded in the Middle Ages.

Increasing trade with Europe from the 1500s onwards stimulated urban growth along the coasts and throughout southern Norway. Fredrikstad (1567) and Kristiansand (1641) were established by royal decrees as towns with trading privileges. Trading centres



The waterfront facade of the *Bryggen* Wharf in Bergen. These buildings were erected to replace those lost in the fire of 1702. The wharf area is protected under the UNESCO World Heritage Convention. (Photo: The Directorate for Cultural Heritage)

such as Risør, Mandal, Flekkefjord and others were the result of more informal processes. The growth of the established towns and some of their remote ports was reinforced by public policy in the 1600s, when the king confined trade privileges to towns. This action cemented the role of town merchants as middlemen between Norwegian suppliers of raw materials and European tradesmen or ship captains. It also guaranteed that the towns would face no real trade competition.

Beginning in the late 1700s, the state gradually liberalised such trade policies. It also founded new cities to stimulate social development. One example is the royal decree that established Tromsø in 1794. The creation of a system of primary municipalities in 1837 added a burgeoning democratic element and continued the drive toward urban development. In the late 1800s, the growth of towns turned explosive as a result of industrialisation and technological leaps in production and transport.

Until the 1800s there was no significant growth in Norway's inland towns. The mining settlements of Røros and Kongsberg are exceptions; both were founded as production sites in the 1600s and grew through the 1700s (Røros is on UNESCO's World Heritage List). The King and government sought to establish

some inland towns in the 1800s (Lillehammer in 1827, others followed) as a means of stimulating distribution of agricultural produce.

How the cities were formed

Most Norwegian towns are shaped organically to follow coastlines and other features of the terrain. A typical town was constructed and organised in accordance with the predominant building pattern and building technique of the surrounding area. The main difference was that the buildings were closer together.

As towns grew, building customs increasingly took on the character of Norway's trading partners – primarily Denmark, Germany, the Netherlands and Britain. Trading towns imported European architectural styles based in stone and masonry and transferred them to wood. This gave Norwegian towns a unique character that later spread to the countryside. European impulses also affected the very organisation of town life.

The fully developed medieval Norwegian town, elements of which survive in Bergen, consisted of rows of buildings constructed closely together and rising up from the beach or wharf. *Streter*, or streets, ran perpendicular



to the building rows. Narrow alleys alongside the building rows linked the streets and provided access to the water. Such towns were densely packed, which in turn meant great danger of fire. Not surprisingly, fires have swept through most of them repeatedly.

Eventually, from the 1600s onward, fires and other problems prompted the King's administration to impose new building patterns – with broad, straight streets, clear axes and segregation of conflicting activities. When Oslo burned in 1624, King Christian IV ordered that it be relocated behind Akershus Fortress and rebuilt as a brick town divided into square blocks. However, the restrictions limiting building to brickwork proved difficult to impose. Trondheim provides another example of modern 17th-century planning, though many tiny lanes and alleys of medieval origin still run within the large blocks laid out in 1681. In other old cities, such as Bergen, officials did no more than establish broad passages to serve as fire breaks. Such gaps, usually running upward

from the water, are still visible in Bergen, Trondheim and Tromsø.

Seen from abroad, Norwegian architectural developments have generally lagged behind those of central and southern Europe. To the extent international styles were adopted, they were often toned down and modified to reflect local taste and traditions. Norway has a few towns whose layout reflects the Renaissance and Baroque periods, but style of layout and building constructions are more influenced by the Empire style and historicism. It is also interesting to observe how the stone and brick architecture of central and southern Europe has been adapted to Norwegian wood-construction techniques – and how, in particular, coloured or textured stone has served as a model for painting on wood.

Planned features such as broad streets were not proof against the spread of flames, and the newer towns caught fire too. On numerous occasions the state tried to force brick construction on the populace, but to



The *Bryggen* Wharf in Bergen seen from behind. Here, the row structure characteristic of building patterns from the Middle Ages is clearly visible. (Photo: The Directorate for Cultural Heritage)



Houses on *Dronningens* street in Trondheim. These were built after the fire of 1842, but before brick construction requirements were introduced in 1845. Today, these buildings comprise part of an extremely popular neighbourhood close to the town centre. (Photo: The Directorate for Cultural Heritage)

little effect. Rapid re-building was given greatest priority and new wooden structures were erected to replace the old.

From development and stagnation through demolition to renewal

During the rapid urban growth of the 1800s, Norwegian development reflected what was happening in the rest of Europe, incorporating the new ideas about regulating the physical elements of a city. Norway was one of the first countries to implement general building legislation for towns, which was adopted in 1845 and set new standards for planned urban development. Initially there was not enough political support at the national level to mandate brick construction in all town centres, but some larger towns imposed such requirements locally – usually after a larger-scale local fire. Not until 1905, after a 1904 fire devastated most of the town of Ålesund, did the Norwegian government introduce a general requirement stipulating masonry construction in town centres. Clusters of wooden buildings remained wherever development and urban renewal arrived at a slower pace, and wherever the fires did not reach. Today, small “islands” of wood construction can still be found amidst the brick-and-plaster-dominated inner core of Oslo. Wooden buildings also cover large contiguous areas of Bergen, Trondheim and Stavanger, and continue to dominate outright the downtown sections of many small towns and villages.

Urban development from about 1930 onward followed a logic that was largely incompatible with wood construction. Areas featuring wooden buildings began to be considered less attractive – even inferior in terms of living standard – and many were torn down completely. Not until the 1970s did people begin to react against this policy. Gradually, communities began once again to appreciate the values inherent in their traditional wooden structures. Community activism led to the rehabilitation and gentrification of these parts of town. Many areas came to enjoy protective status and are seen today as valuable, centrally located residential districts.

In recent years researchers have developed wood-based building technologies that provide a much higher level of fire safety. Their work has led to the design and construction of vast wood-supported structures such as the terminal building at Oslo’s Gardermoen airport and the sports halls built for the 1994 Winter Olympic Games in Lillehammer. Three- and four-storey apartment buildings made entirely of wood have been erected in Norway and Finland. And in 2004, a group of architects is working on designs to rebuild the cluster of wooden buildings that was recently lost to fire in the heart of Trondheim. There is much debate about the future appearance of this area, and the discussion tends to revolve around the use of wood as a key architectural element.



Climate-appropriate Construction

Norway is a land of harsh weather. It has a long, stormy coast and cold, dark winters that bring a great deal of snow to many parts of the country. The climate poses a major challenge to Norwegian building designers and contractors. Traditionally, Norwegians tended to choose building styles and materials that were well suited to local weather patterns. Today we see many examples of the opposite. The result is reduced functionality and increased heating and maintenance costs.



Climate-appropriate housing in Hammerfest, in the northernmost reaches of Norway. (Photo: Norwegian State Housing Bank)

Lene Edvardsen is an architect at the Norwegian State Housing Bank's regional office in Hammerfest.

By Lene Edvardsen

Climatic conditions vary depending on location and type of landscape, so in a country of Norway's size and geographical contrasts, it is not surprising to find a wide range of climate and weather patterns. Building traditions of the past often reflected the local climate, and thus construction styles have differed widely from place to place.

Housing design that factors in climatic considerations

The term "climate-appropriate" can be used broadly to describe structures that are planned and constructed to accommodate weather-related factors such as heavy precipitation, snow loads, snow removal, wind, sun and temperature extremes.



Norway's climate poses great challenges to the inhabitants and the building industry alike. Due to extreme snowfall, the only way to access the front door to this home was by carving out a tunnel. This picture was taken in Tromsø, the "capital" of Northern Norway. (Photo: Scanpix)



Large amounts of snow put great strain on roofs and other supporting structures. From Hammerfest. (Photo: Norwegian State Housing Bank)



In adapting building practices to suit the local climate, there are three main goals: first, to reduce wear and tear on buildings; second, to reduce energy loss; and third, to improve the functionality of buildings and outdoor areas.

To ensure climate-appropriate construction, the following issues must be given consideration in the planning phase, and the

relevant measures must be implemented individually or in combination with one another:

- Siting of buildings.
- Juxtaposition of buildings in relation to one another, the topography and vegetation.
- Orientation.
- Design and arrangement of building volumes.



Road maintenance during the winter is a tall order in a harsh climate such as that of Hammerfest. (Photo: The Norwegian State Housing Bank)



Snow blowing every which way in Hammerfest. This is what one must contend with when living in a northern climate. (Photo: The Norwegian State Housing Bank)

- Organisation of activities in and around buildings.
- Arrangement of building parts and structures.
- Management, operation and maintenance.

At the most basic level, all construction is a way of dealing with the elements. Measures to ensure that structures will be adapted to their local environment may be incorporated at many levels, from municipal master plans through building codes, to individual building designs and construction details.

Before a planning process is set in motion, it is important to gain an overview of the proposed building site's weather and climatic conditions. In Norway, the standard inspection and analysis procedures carried out in connection with new constructions should include documentation of the following climatic characteristics:

- Prevailing wind, precipitation and temperature conditions in the area.
- The site's location in relation to the sun from morning to night.
- The ability of terrain, vegetation and nearby buildings to block cold winds and air currents.
- Wind direction, strength and frequency in combination with sun, precipitation and temperature.

Good building and environmental solutions will often require model-based analysis. Computer simulation is the latest and perhaps most effective way to perform a realistic analysis. In addition, detailed drawings should be prepared to show how buildings and surrounding areas as proposed will look and function in each season of the year. When planning, the less that is left to chance, the better.

International network

The Norwegian State Housing Bank's regional office in Hammerfest is preparing an Internet-based forum on climate-appropriate construction. The Housing Bank's northernmost office is accustomed to extreme weather, and has launched this initiative to spread information and know-how about building for the elements. The new website (www.proklima.no) will provide users with an opportunity to read articles, ask questions and make contacts within a network devoted to climate studies and research into climate-appropriate construction.



Institutions

In addition to the government ministries and institutions of higher education, Norway has a number of other private and public institutions that are specifically concerned with research, planning and housing construction.

Innovation Norway/ Innovasjon Norge

As of 1 January 2004, the new, state-owned Innovation Norway has replaced the following four organisations: the Norwegian Tourist Board, the Norwegian Trade Council, the Norwegian Industrial and Regional Development Fund (SND) and the Government Consultative Office for Inventors (SVO). Innovation Norway promotes nationwide industrial development that will be beneficial for both the business economy and Norway's national economy, and seeks to enable different districts and regions to more fully exploit their potential through innovation, internationalisation and promotion. The enterprise's core group of clients are Norwegian companies, predominantly SMEs.

The new state-owned enterprise employs more than 700 people. Innovation Norway has offices in all the Norwegian counties and in more than 30 countries worldwide. The head office is situated in Oslo.

For more information:
<http://www.ntr.no>

The Norwegian State Housing Bank/ Husbanken

The Norwegian State Housing Bank was established by statutory provision in 1946 and is the government's main instrument for implementing national housing policy.

The Housing Bank has participated in financing approximately 50 per cent of existing homes in Norway. The Bank is administered under the auspices of the Ministry of Local Government and Regional Development. The Ministry in turn reports to the *Storting*, which takes decisions regarding interest rates and determines the Bank's annual budget, including loans, grants and housing allowances. In 2003 the Housing Bank's budget comprised NOK 14 billion in loans and NOK 5.6 billion in grants, subsidies and housing allowances for construction, renovation and low-cost housing.

The Bank's primary goal is to ensure that all people live in satisfactory homes in good housing environments. The Bank is responsible for procuring housing for the homeless as well as for refugees and other individuals in need, and also administers measures to reduce housing expenses for certain vulnerable groups. The Norwegian State Housing Bank offers loans and grants to stimulate construction of adequate, affordable housing, the development of satisfactory housing environments and the renovation and improvement of dwellings. The Bank provides advice and professional assistance, and is actively involved in public activities related to housing and housing policy.

The Housing Bank has offices in Oslo, Arendal, Bergen, Trondheim, Bodø and Hammerfest.

For more information:
<http://www.husbanken.no>

The Directorate for Cultural Heritage/ *Riksantikvaren*

The Directorate for Cultural Heritage is responsible for the practical implementation of the objectives laid down by the *Storting* and the Ministry of the Environment. The Directorate's task is to facilitate sound and efficient management throughout the country and to ensure that monuments and sites everywhere are given equitable treatment as far as possible.

The Directorate for Cultural Heritage is responsible for ensuring that a representative selection of monuments and sites is preserved for present and future generations. The selection of monuments and sites must provide an overview of historical developments, the way of life and the range of works of art and craftsmanship of each period. The Directorate is also responsible for ensuring that cultural heritage considerations are taken into account in all planning processes, and that the interests of cultural heritage are safeguarded at all levels in the same way as the interests of society as a whole.

The Directorate for Cultural Heritage is involved in environmental management, and answers to the Department for Nature Conservation and Cultural Heritage at the Ministry of the Environment. The Directorate collaborates with other directorates in the environmental sector wherever appropriate.

For more information:
<http://www.riksantikvaren.no>

The Research Council of Norway/ *Norges forskningsråd*

The Research Council of Norway plays a vital role in developing and implementing the country's national research strategy. It acts as a government adviser, identifying present and future needs for knowledge and research. It further acts as a funding agency for independent research programmes and projects, strategic programmes at research insti-

tutes and Norwegian participation in international research programmes, as well as a coordinator, initiating networks and promoting co-operation between R&D institutions, ministries, business and industry, public agencies and enterprises, other sources of funding, and users of research.

The Executive Board of the Research Council of Norway is responsible for the Council's policy at the national level. The Council encompasses three research divisions and two administrative divisions. Three research boards, one for each research division, advise and report to the Executive Board.

Approximately one third of Norway's public sector research investment is channelled through the Research Council. The remainder is transferred directly from the ministries to the relevant research institutions. In 2001, Norway spent a total of NOK 24.5 billion on R&D, of which public sector allocations accounted for roughly NOK 12 billion. The 2004 budget for the Research Council of Norway amounted to NOK 4.6 billion.

For more information:
<http://www.forskningssradet.no>

The Directorate of Public Construction and Property/ *Statsbygg*

Statsbygg acts on behalf of the Norwegian Government as manager and advisor in construction and property affairs. Statsbygg offers governmental organisations premises suited to their needs, either in new or existing buildings. Statsbygg is an administrative body, responsible to the Ministry of Labour and Government Administration. Statsbygg operates in accordance with standard business principles, except in situations where achievement of Government objectives takes precedence.

Statsbygg manages some 2.2 million m² of floor space in Norway and abroad. Its property portfolio consists of office buildings, schools, accommodation and specialised buildings throughout the country, as well as national embassies and resi-



dences outside Norway. Statsbygg is responsible for organising, planning and completing building projects within set frameworks for budgets, time limits and quality. The buildings must meet quality requirements pertaining to architecture, functionality and environmental concerns. Statsbygg's total annual building budget is approximately NOK 2.3 billion. A new task for Statsbygg in the future will be to develop vacated Government premises for alternative public or commercial utilisation. These activities will be directed towards creating attractive areas that emphasise local interests, the efficient use of resources and sound environmental solutions.

Statsbygg as an organisation consists of the head office in Oslo and five regional offices.

For more information:

<http://www.statsbygg.no>

The Norwegian Federation of Cooperative Housing Associations/ NBBL

Founded in 1946, the Norwegian Federation of Cooperative Housing Associations is a national membership association representing over 90 cooperative housing associations, encompassing 660 000 individual members and 250 000 housing units in close to 4 500 affiliated housing cooperatives. Cooperative housing associations vary in size, ranging anywhere from 100 individual members and upward to 190 000. An average Norwegian housing cooperative consists of approximately 50 homes.

These associations, their members, the affiliated housing co-operatives and NBBL together make up the Norwegian Cooperative Housing Movement, which is the fourth largest membership movement in the country.

Represented in all urban areas, housing cooperative homes hold a significant share of the housing market in cities. In Oslo, this share is close to 40 per cent, while the national average is 15 per cent. The Norwegian Cooperative Housing Movement works to offer members the opportunity to

live comfortably in a sustainable living environment.

For more information:

<http://boligsamvirket.no/boligsamvirket.no>

The Norwegian Institute for Urban and Regional Research/ NIBR

The Norwegian Institute for Urban and Regional Research (NIBR) is an interdisciplinary social science centre for urban and regional research. The Institute is charged with a national responsibility to conduct environmental research, and works internationally on urban and regional research from an environmental and developmental perspective. Within an urban and regional research framework, NIBR studies and reports on the following sectors: public administration, governance and democracy; welfare, health and living conditions; planning, land use and urban development; regional development, business environments and demography; and environmental and development issues.

NIBR's scientific staff has sixty-five researchers working within the following social sciences and planning disciplines: sociology, political science, economy, demography, anthropology, geography, architecture, engineering and land-use planning. Many staff members have completed doctorate degrees and several are formally qualified for employment at associate professor level.

NIBR is a foundation. Most of its revenues are derived from national and international commissions. A smaller amount is granted as an annual basic allocation from the Research Council of Norway and goes to the development of strategic programmes and competence-building. The Institute's annual turnover is about NOK 60 million.

For more information:

<http://www.nibr.no>

The Norwegian Building Research Institute/ Byggforsk

The Norwegian Building Research Institute (NBI) is the leading national centre of technical and sociological research and development relating to buildings and the built environment. NBI functions as an independent, national centre for research and development of relevance to building and civil engineering, including the management and use of buildings and works. In addition the institute monitors corresponding research and development in other countries, cooperates with other institutes and organisations to achieve the efficient utilisation of overall research resources, and works to make its own research results as well as those of others known and implemented.

The head office in Oslo has five departments, and one research department is also located in Trondheim on the campus of the Norwegian University of Science and Technology.

For more information:
<http://www.byggforsk.no>

NOVA

NOVA – Norwegian Social Research – is a national research institute under the auspices of the Norwegian Ministry of Education and Research. The board of directors is appointed by the Ministry of Education and Research. NOVA's basic funding is provided over the national budget allocated by the Norwegian *Storting*. The aim of the institute is to develop knowledge and understanding of social conditions and processes of change. Activities focus on issues relating to life-cycle events, level of living conditions and aspects of life quality as well as on programmes and services provided by the welfare system.

NOVA was founded in 1996, and incorporates the following research institutions: the Institute of Applied Social Research, the Norwegian Institute of Child Welfare Research, the Norwegian Youth Research

Centre, and the Norwegian Institute of Gerontology.

For more information:
<http://www.nova.no>

The Institute of Transport Economics/ Transportøkonomisk institutt

The Institute of Transport Economics is a national institution for transport research and development. The institute was established in 1958, first as a government secretariat and subsequently (from 1963) as a separate research institution under the auspices of the Royal Norwegian Council for Scientific and Industrial Research (NTNF, now part of the Research Council of Norway). In 1986 the institute became a private, independent research foundation. The institute receives its annual basic funding from the Research Council of Norway.

The institute carries out applied research on issues relating to transport and promotes the utilisation of research results by advising the authorities, the transport industry and the public at large. Its sphere of activity includes most of the current major issues in road, rail, sea and air transport. The institute is also involved in international cooperation within the transport sector. Special emphasis is placed on the practical application of research results, and most of the studies and projects performed by the institute are commissioned.

In Norway, most of the clients are central government bodies and local authorities, with some commissions from the private sector. Major clients include the Ministry of Transport and Communications, the Public Roads Administration and the Research Council of Norway. In recent years a number of transport studies have been carried out in Africa and Asia for the Norwegian Agency for Development Cooperation (NORAD). The institute also conducts research for public authorities in other countries and for international organisations.

For more information:
<http://www.toi.no>



The Fjord City: Oslo City Hall and the Pleasure Harbour.
(Photo: Carsten Berg Høgenhoff, Brødr. Fossum AS)

