The Well-Being of the Metropolis

"SUCCESSFUL REGIONS OF THE FUTURE INSPIRE PEOPLE TO TACKLE WICKED PROBLEMS TOGETHER."

DEMOS
HELSINKI

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"PEOPLE ARE THE BACKBONE OF THE ECONOMY AND WEALTH RESTS ON MUTUAL RELATIONS BETWEEN CITIZENS."

"SUSTAINABLE INNOVATION PROVIDES THE FOUNDATION FOR FUTURE BUSINESS; IT IS NOT JUST PART OF ETHICAL RESPONSIBILITY!"

"FOR WELL-EDUCATED AND WELL-FED WESTERNERS, QUALITY OF LIFE IS MORE IMPORTANT THAN STANDARD OF LIVING."

Contents

SUSTAINABLE WELL-BEING
SUSTAINABLE INNOVATION
PARTNERSHIP
+ DESIGN-THINKING
────────────────────────
METROPOLITAN
COMPETITIVENESS 2.0

Preface

The Helsinki Metropolitan Area is home to just under one and a half million inhabitants and 34 per cent of Finland's gross domestic product originates from there. The area accounts for about 40 per cent of the country's research and development spending. Over one third of employment is located in the metropolitan region, which is also defined by being the engine of the country's economic growth and its only internationally significant conurbation. The importance of the metropolis was also identified in a new government programme, which specifically discusses metropolitan policy. The global economy is changing and international competition is becoming more intense. That is why the metropolis must be capable of renewing itself and making better use of its resources.

Based on these premises, the City of Espoo decided in 2009 to commission a study from Professor Antti Hautamäki of the University of Jyväskylä to look into the competitiveness of the metropolitan region. Its objective was to produce an impartial examination of the region's competitiveness and to generate proposals for enhancing its vitality. The central themes were: future visions of its municipalities, the competitiveness of its centres of innovation, new concepts in the service sector, emerging dimensions of municipal democracy and sustainable spatial structure.

In the Helsinki context, the concept of metropolis or metropolitan region has no legal status or official significance. The research defines it as a functional geographical area, not as an administrative structure. The core of the metropolis as defined for the purposes of this study is the already established notion of Finland's capital city region consisting of the cities of Helsinki, Espoo, Vantaa and Kauniainen. This is linked to a ring of ten surrounding towns and municipalities including Hyvinkää, Järvenpää, Kerava, Kirkkonummi, Mäntsälä, Nurmijärvi, Pornainen, Sipoo, Tuusula and Vihti. We can think of the whole of the Uusimaa region as constituting a wider metropolis. Functionally it is linked to even more distant areas, for example the towns of Hämeenlinna and Lahti. The metropolis in this sense is a constantly changing organism.

The City of Espoo, which commissioned and funded the project, encouraged bold critique and fresh departures. This is why we have rethought such basic conventions as competitiveness, well-being, partnership, civil society and service provision. The result is a challenging future vision of a vibrant metropolis.

The final product also departs somewhat from usual practice: we are producing a publication which invites the reader to rethink the basic principles of competitiveness and of the role of municipalities in enhancing it.

The topics, such as competitiveness, sustainable development, well-being and active civil society, are not only interesting for the Helsinki region. All metropolises face similar challenges. Our solutions and recommendations are general, although we refer to local conditions. The translation of the text is a good opportunity to communicate to an international audience our rethinking of well-being in metropolitan areas.

The steering group for the project included Corporate Group Management Director Helena Elkala, Economic Development Director Kari Ruoho, Research Director Teuvo Savikko and Organisation Development Director Markku Takala from the City of Espoo. It has been presented to the Helsinki Metropolitan Area Advisory Board (composed of municipal representatives), to the City Board and the City Council of Espoo and their officers, and to the Government-appointed Committee for Metropolitan Policy as well as to several other forums. The interim report from the research, Elinvoimainen Metropoli (A Different Kind of Metropolis), an analysis of the new foundations of competitiveness and its significance to the metropolitan region, was presented at a seminar in June 2010. The feedback from these has been incorporated into the final report.

The lead researcher and rapporteur for the project was Professor Antti Hautamäki. The project's main contributing partner was the think tank Demos Helsinki. Taking part in the research and writing from Demos Helsinki were: Olli Alanen, Tuuli Kaskinen, Outi Kuittinen, Tommi Laitio, Roope Mokka, Aleksi Neuvonen, Satu Onnela, Mikko Rissanen and Simo Vassinen, as well as research coordinator Kaisa Oksanen of the University of Jyväskylä and research associate Ville Viljanen of the University of Tampere. The text was edited by Riku Siivonen. I would like to thank everyone who participated for their deep commitment and enthusiasm. I would like to give special thanks to WIT Language Services for their excellent and rapid translation of the text.

Jyväskylä February 2011

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1. Working Together for Sustainable Well-Being in the Metropolis

Most of the world's population now live in the same place, the Global Metropolis. The greatest opportunity for success in metropolitan regions lies in their ability to realise the potential of their inhabitants. This simple fact is often lost in discussions about recipes for and measures of success. The reason is simple too: any recipes and measures will quickly go out of date. Whether the focus is competitiveness or well-being, people and their circumstances are constantly changing.

We present an alternative framework for thinking about these issues. We want to explore how human potential, which is every region's primary resource, could be developed and utilised in a sustainable way. How can we create regional vitality without eroding the foundations of tomorrow's success?

We will explore these questions via an interesting vehicle, the Helsinki Metropolitan Area. The Helsinki area is a prime example of a 21st century metropolis in the making. It is attractive but plagued with the same complex problems as the other cities of the world.

We start our journey by asking what The Metropolis really is: How has this entirely new global phenomenon come about and what does this do to the concepts of cities and competitiveness? In the second chapter we also look at the different rankings between cities, looking at what they aim to measure and, most importantly, what they leave out.

In chapter three, we move on to a megatrend analysis. This is carried out to contrast the current measures of competitiveness and quality of life with future forces that are set to impact on urban areas. In chapter four, we approach the main question of the study from the point of view of innovation. Now we only need to ask the questions: What are the next steps and who should carry them out?

In chapter five, we propose an active role for the state. The public sector's new role is to guide both citizens and companies to tackle globally shared – and wicked – problems. The role of the state, or the municipality in many cases, is to identify and unlock hidden resources, essentially in people's time and interest. In the sixth chapter we look at how the practices of design and craftsmanship can be employed to enable human-centred development of the metropolis. Chapter seven walks us through the practical steps towards sustainable well-being.

2. Competitiveness in the Age of the Metropolis

The world has changed into a unified playing field for metropolitan centres. The players come to the game with different strengths, but the rules and the challenges are the same for all. That is why regional competitiveness is what is now measured so often. This has certainly made it possible to explain the mutual dependencies that exist between metropolises, but not how well-being is created. The themes and the figures covered by these metrics are not the only things that are important from the point of view of well-being or of long-term vitality. Well-being is not just born of increased productivity, nor do innovations arise without well-being. Measures of competitiveness do not give us a picture of the tools we have to meet tomorrow's challenges. When we talk of competitiveness here, we are talking about cultivating the innovation ecosystem. Sustainable well-being can only be built on sustainable innovation which will not come through conventional ways of thinking about competitiveness.

Who should help the beggars?
HEADLINE IN THE HELSINGIN UUTISET NEWSPAPER

This was the question posed by Helsingin Uutiset in its headline of 4th August 2010. It's a good question. Since 2008, Helsinki's metropolitan area has seen the arrival of a few hundred beggars each summer. They come from Eastern Europe, particularly Romania. Some of them travel through Europe's metropolitan centres, coming to Helsinki from time to time. Some come only once, but many return and live here for longer stretches of time.

Beggars moving from one centre to another is not a Romanian or a Finnish phenomenon. It is a metropolitan phenomenon, a vivid example of how the metropolitan age shapes life. A sight familiar in many other metropolitan centres surprised Finland's capital-city region. We are not used to thinking of ourselves as part of the global metropolitan fabric.

The headline calls for responsibility. Reflecting on it tells us a lot about the new age of the metropolis. The well-being of the beggars is barely a question for rural Romania. Neither is it the responsibility of the Helsinki Metropolitan Area nor its individual municipalities. This is a question for the entire metropolitan region or, at the very least, it is a shared problem. The beggar phenomenon is part of everyday life in Europe's metropolitan centres.

Metropolitan areas all over the world – that is, the Metropolis as a global phenomenon – are seeking solutions to it. This is why the solutions are also partly shared ones. The headline alerts us to an age when the international and the global no longer describe relationships between different regions and their inhabitants. We are living through a phase of globalisation which brings to the fore metropolitan centres linked to each other in different ways. The Helsinki region's circumstances, but also the solutions it develops, can then spread around the world as part of the broader metropolitan fabric. And already, we have a piece of Bucharest, of Beijing or Bangkok, and of Stockholm right here.

That is why the problem of helping Romanian beggars is the same as the core question of this study: How should metropolitan regions that are so knitted together be governed even in the absence of clear mechanisms for doing so?

The success of the solutions undertaken here and elsewhere will depend on the capacity of metropolitan areas to transfer the solutions, not just the problems. The ability to resolve the wicked problems facing metropolitan areas is what gives a region a competitive edge.

2.1 What does metropolitanisation mean?

THE METROPOLIS - THE CORE OF THE WORLD MAP IN THE TWENTY-FIRST CENTURY

Metropolitanisation is one of the major phenomena of the start of the twenty-first century, a megatrend. This new phase of globalisation pushes people into city regions linking them into the same organism, the Global Metropolis.

This is why our image of the world is changing. Previously, maps and national borders determined who governed where and who owned which natural resources. Now, ever more of us live in cities. That is why the dynamic of worldwide interactions is better reflected in the metaphor of the biological cell than in the old political boundaries. States are receding into the background as new economic-cultural nuclei – metropolises – take centre stage. Instead of borders, the emphasis here is on connection, porosity, flow and exchange between centres. Skills have become the greatest determinant of economic success.

Globalisation has been described as a unifying force. This force is channelled into local communities and into metropolises. Metropolises are one and the same phenomenon all around the world. They carry, as it were, the same technological-cultural DNA. Metropolises may all look slightly different, but everywhere very similar things are taking place.

What have emerged are nodes of global connections which have appeared as characteristic of the twenty-first century. The consumer offer of the world's

cities has become homogenised. Urban strategies start to copy one another; several seek to transform themselves, like Bilbao, from industrial to cultural centres. They all seek to attract the talent of the creative classes with almost identical promises of a unique urban culture. In addition, a new research field has emerged: competitiveness measurements of urban regions.

We often think that globalisation is what produces metropolises and their transformations. But the homogenising force is, counter-intuitively, people. Peter Ache, Professor of Metropolitan Planning at Helsinki's Aalto University, has said, "The metropolis is an experience that is composed of people's choices and dreams." This means that metropolises are moved and shaped by people's ideas of the good life: how and where they imagine they might live, spend their leisure time and work. Metropolitan development raises the individual to the status of consumer. Metropolitanisation means that cities are not so much understood as units of government. Instead, they are the horizons of people's possibilities, experiential environments and the results of choices.

This gives globalisation a human dimension. It is not some self-directing shift. The concrete aspirations and preferences of the inhabitants of metropolitan areas are what make globalisation what it is. In a good sense, people's choices and desires become concrete in new innovations and different cultural services; in a negative sense, those choices and desires can be seen as growing energy and resource consumption.

A metropolis has to be part of a league. Becoming a metropolis is not about specialising or about directing urban development. Metropolitanisation in an urban region only takes off with the fulfilment of a number or quantitative preconditions. For instance, only a sufficient density of learning and consumer power enables regions to link up with other metropolises and, through this linkage, to become metropolises themselves. For instance, in the classification of the Globalization and World Cities Research Network, Helsinki is grouped under Beta. Ahead of it are around fifty more significant metropolises. In the same category as the Helsinki Metropolitan Area are Bangalore, Berlin, Boston, Dallas, Geneva, Hamburg, Cairo, Kuwait, Copenhagen, Luxembourg, Oslo and Riyadh.

Metropolitanisation breaks down national preoccupations about centre and periphery. Nation-states have traditionally strived to guide development in their regions and to balance out differences between urban centres and rural hinterlands. Metropolises alter this conventional model of regional policy making.

Metropolises do not compete with regional centres but with other metropolitan centres. They are also ever more frequently involved in shaping state futures. Researcher Dan Steinbock's comprehensive analysis of the Helsinki Metropolitan Area's competitiveness illustrates the point that Finnish competitiveness is much the same thing as that of the Helsinki Metropolitan Area. This is a result of the concentration of economic activity, people and skills.

However, metropolitan centres are not just national "engines" which generate wealth that radiates out towards the periphery, living in symbiosis with the rest of the country whose role is to produce natural resources, labour and leisure opportunities. In addition to this conventional role, the metropolis is now its own autonomous category, linked to other metropolitan centres. This linkage with other metropolitan regions brings its own new challenges which need to be managed. Metropolises share the challenges of, for instance, their emphasis on the service sector, experiments in business policy, the search for novel sources of growth and unconventional residential areas – although these are not so evident in our own metropolis.

Metropolitans live in Metropolises. This is because metropolitan areas shape their residents' lifestyle and behaviour. The horizon of possibilities for a metropolitan is made up of a network whose complexity is of a higher and richer order than that of someone living in a smaller urban centre. These opportunities are manifestly visible where the metropolitan individual lives – even though they might be realised in some other metropolis. Opportunities are opened up in the stories and examples of similar people in other metropolitan centres, and this horizon includes prospects for up-skilling, work and leisure, and consumption habits. They mould our thinking so that we see our life trajectories in relation to those of other metropolitans more than to those from our region of birth. The people in this group make choices based on other metropolises, not on towns and cities within their own country.

Not everyone who inhabits metropolitan regions is a metropolitan however. Some people think of their future in very local terms, framed as part of their current place of residence and work. For many inhabitants of the Helsinki Metropolitan Area the relevant terrain remains Finland. And not everyone even has the language skills to be able to move from one metropolis to another. But metropolitans in the city and their ways of thinking are what give rise to metropolitan conditions.

Metropolitanisation, in other words, separates the city region from the regional development of the nation-state and connects it to global exchange and linkages. One of the central reasons for this is the internationalisation of the labour market. As elsewhere in the world, in Finland, immigrants concentrate in the largest conurbations. The proportion of overseas nationals in Helsinki is about 7.2 per cent, whereas the figure across the country is 2.9 per cent. Of the labour force, about 3 per cent are foreign nationals or foreign-born, most of them in the capital-city area. Data on flows of labour, however, date quickly, so one should not get too embroiled in these figures. Although immigration from abroad has been on the increase, settling here long-term on the basis of work remains quite rare. Finns also increasingly seek out work abroad. According to the register of migrations, thousands of Finns – notably the highly educated – go abroad every year.

In the Helsinki Region too people are getting ready for the internationalisation of labour. New ways of working have been tried and several pilot projects launched. Internationalisation can be seen, for example, in the provision of public services across borders and the birth of international service-sector businesses. The third sector comes to the fore through the creation of various types of social networks and in services concentrating on integration (for instance, immigrant associations and international leisure-based networks such as Jolly Dragon or Otaniemi International Network).

Metropolises share the same wicked problems. If metropolitanisation draws urban strategies closer to one another, metropolitan centres also share problems:

consumption of energy and natural resources, ageing populations, integrating ethnic minorities and the other challenges of multiculturalism, traffic congestion and high housing costs, lifestyle diseases and global health risks and the demand to constantly upgrade learning. These "wicked problems", as international research has dubbed them, are familiar to everyone. They are characterised by the fact that they cannot even be clearly outlined. Thus there are also no correct answers to them. The solutions that have been implemented may for their part change the nature of the problems.

The most wicked problems from the point of view of a metropolitan area tend to have three features: they are universal; they demand constant responsiveness; and they are systemic. Firstly then, the problems are universal. They face people in Finland, in China, in Africa, in Brazil and in Silicon Valley. At root, they have the same complex drivers, even though the problems take on

local shape and though people try to fix them with local remedies. Secondly, good solutions are always in demand: the most wicked problems demand solutions all over the world. Thirdly, they will not be solved by isolated interventions, "targeted remedies" such as legislation, taxation, technology, raising citizens' income levels or investing in education and training. Instead of isolated solutions there is a need for holistic or systemic-solution models which impact on several different, mutually related factors simultaneously. Here each individual actor can solve a problem in their own way, but the solution is there for everyone to use.

In order to tackle problems, metropolitan regions require new ways of doing politics. Resolving these wicked problems demands lasting commitment and belief in the ability to find solutions together. This gives rise to a new role for metropolitan public governance, now functioning as a partner to bolster the confidence needed by people who could become involved in creating a new solution or a new model of action. To achieve this, one tool available to the public sector is to enlist business to help people and communities search for solutions. Towns and cities are already taking part in orchestrating workplaces and knowledge clusters, using the conventional methods of innovation and business policy. This is no longer enough: metropolitan regions have to learn to nudge things along and to secure the commitment of short-term oriented companies so that they help to solve wicked problems.

At the same time, metropolitanisation offers new opportunities to tackle these problems. A solution discovered elsewhere is often transferable or at least capable of being adapted. In this way, new technologies, management practices, research results and different kinds of social innovation spread, develop and become mainstreamed much faster than was previously the case. In particular, the continuing development and the sharp fall in the price of information technology brings rapidly urbanising areas (most of which are situated in developing countries) into new prominence. No longer is simple technical-scientific know-how and wealth the explanation for the origin of useful innovations.

This is the kind of metropolitan world we belong to, and at first glance it does look like a world of intense competition. We are accustomed to demonstrating the success of regions in this contest with measurements of competitiveness. However, in order to explain success, we should first of all appreciate what it is that gives rise to this competitiveness and why it is considered so important.

2.2 What do measures of competitiveness leave out?

"Helsinki ranked the world's sixth best city to live"
THE ECONOMIST, FEBRUARY 2011

"Finland continues to rank among the most competitive economies"
HELSINGIN SANOMAT, 9 SEPTEMBER 2010

Metropolises are talked about as, above all, mutually competing centres. This view of the international links between metropolitan regions has been strengthened by the various ranked comparisons of metropolitan competitiveness that have become ubiquitous over the past ten years. These comparisons are not the sole property of the research community: they have become part of typical twenty-first-century discourse. This language of metropolitan sport now reaches out of academic debate and into the news and dinner-table talk. Results are broadcast with all the excitement of a jousting tournament taking place between cities and states, where some succeed while others fail.

When in 2010 the news magazine Newsweek identified Finland as the world's best country to live in, practically every media outlet in the country broadcast the news. Just to look at the news is to see how these ranking lists massage our feelings of self-esteem. In explaining the results, Helsinki Metropolitan Area's success comes across as part of a traditional continuum of national sources of pride: low levels of corruption, the education and skills of its young people, Sibelius and the Olympic cult. As in sports, it can be easy as well as thrilling to keep up with the league tables. Talking about the results does not, however, make us any the wiser about the real criteria of success. In a fast-paced media world, they can easily get lost. What is the field in which we actually won the medals?

Competitiveness belongs to a family of concepts which has pictured post-war economic developments and deepening global integration. At its heart are the concepts of productivity and economic growth. Competitiveness was related

to the idea that all countries, regions and businesses compete within a certain "league" defined within the global economy, where winning is determined through productivity. Thinking about competitiveness in this way belongs to the modern era where the optimisation of production and material growth combine as optimism and belief in constant progress. The strength of this belief in progress is illustrated already by the very attempt to assess levels of competitiveness and to base decision making on objective and comparable information about the state of regions and cities.

However, it is hard even to count the contests in which we take part. Metropolitan competitiveness is measured by many research institutes, including: international organisations such as the EU and the UN as well as media outlets from The Economist to Monocle. Some of these contests are enduring, some are one-off measurements. It is also often the case that we compete under different banners: as Helsinki, Southern Finland, Finland or even as part of the EU. It is difficult to keep track of the rise and fall of individual metropolises within the various leagues.

The colourfully named competitiveness measures and indices – such as the European Competitiveness Index, the Global Cities Index, the Global Liveability Report or the Urban Audit Perception Survey – are assumed to be talking about the same thing. On closer inspection, however, it turns out that competitiveness is not a straightforward matter. The researchers carrying out these rankings have not been able to provide a unified definition of competitiveness.

In the absence of such a unified definition, urban competitiveness refers very broadly to different levels of success across society. The measurements used are the creations of the measurers: they combine urban and regional features which have appeared significant to the researchers. As there is naturally an effort to produce robust and comprehensive measures, these bring together a large number of indicators that give information about cities and regions under the one concept of competitiveness.

Since the middle of the first decade of this century, Finland's ranking in international assessments of competitiveness has fallen from the very top to being among a solid group of leaders. The World Economic Forum (WEF) now ranks Finland as number seven, while at the beginning of the decade we were considered the world's most competitive country.

What do WEF's observations actually tell us? How do they relate to other findings? Weren't we supposed to be the world's best country?

A closer inspection of, for instance, WEF's research tells us what it considers competitiveness to be. WEF defines competitiveness as those structures, policies and practices that determine a country's productivity. These determinants are examined via twelve sectors or pillars of competitiveness:

1. Institutions
2. Infrastructure
3. Macroeconomic environment
4. Health and primary education
5. Higher education and training
6. Goods market efficiency
7. Labour market efficiency
8. Financial market development
9. Technological readiness
10. Market size
11. Business sophistication
12. Innovation

In practice, organisations such as WEF measure competitiveness with the help of a huge range of smaller indicators. WEF has well over a hundred such measures, grouped under each of the pillars listed above. Partly, the indicators are statistical; partly, they rely on expert assessments. They range from interest rates to the size of companies' research and development capacities, and from the relative size of the highly qualified population to the sophistication of technical and economic clusters.

The list of indicators of competitiveness is numbing. What it shows quite clearly is that, currently, global competitiveness discourse is concerned above all with economic competitiveness. However, economic competitiveness only reflects the current state of a national economy. With regard to future challenges, it offers only partial answers.

Besides, in the face of such an overwhelming list of factors, the contours and the capacities of one's own actions become blurred. As so many of the indicators used for rankings are the result of broad historical trajectories, they lie beyond our influence. That we have an ageing population is the result of the whole of the previous century's birth and population rates. Some of the factors under investigation are actually beyond anyone's influence. The location of a country or city, whether central or marginal, must be accepted as a given. Transport

connections can have only limited impact. As we look to Europe, we still see the Baltic Sea before us.

HOW WILL HELSINKI COPE AND WITH WHAT MEANS?
Merimaa and Ståhl have compared the Helsinki Metropolitan Area's success across a number of competitiveness rankings. According to them:

THE REGION'S STRENGTHS ARE:
- the quality of education
- the high number of highly educated residents
- technological level
- well-developed information society
- high investment in research and development
- number of patents
- cultural services

ITS WEAKNESSES ARE:
- long internal distances
- peripheral location
- low numbers of foreigners
- ageing population
- one-sided economy
- small market size
- problems with economic incentives
- substantial unemployment

The basic assumptions behind competitiveness measurements thus need to be updated. The current approach is too narrow. In tomorrow's open network economy, for instance, the number of patents filed from a region does not reflect true innovation capacity. Or where innovativeness is being assessed as a proportion of gross national product, the resulting measure is simply a snapshot of the economy and of the foci of public investment at that moment. When we look at competitiveness rankings, we see economic factors given great weight, both directly and indirectly.

Secondly, quality of life, for example, is considered a significant factor for competitiveness, but the tools to assess it are few and far between. Thus it too has been measured with various statistical indicators, quantifying multiculturalism, amenities, safety and culture. The safety of cities has been extrapolated from numbers of crimes, and living standards from gross domestic product. People have barely been touched on.

In such measurements, culture is reduced to the amount of public support enjoyed by different cultural institutions. The European Union's Urban Audit, for instance, assesses numbers of visits to concerts, museums and libraries. Using these criteria, it is difficult to name any city as more or less cultural-

ly active than any other. This observation is further supported by statistical comparisons and research by Helsinki Urban Facts. Statistics are incapable of grasping quality, variety or unpredictability. Culture, as assessed in competitiveness rankings, is only what mainstream professionals recognise.

In a metropolitan area that is multicultural and encompasses different lifestyles, this is problematic. A variety of everyday realities is hidden underneath quantitative figures. What gets lost includes cultural wealth, variety, surprise and capacity for renewal. Concentrating on forms of culture aimed primarily at the mainstream population gives an incomplete picture of how the various population groups in a metropolis experience its cultural offer. A fuller appreciation of the specifics of the cultural offer, and consumer preference in relation to it, demands a more complex approach.

This critical perspective on measuring culture illustrates the point that competitiveness rankings do not always reflect what they were intended to reflect. The bulk of indicators supposedly included to demonstrate culture, innovation or quality of life are actually reducible to economics.

Competitiveness rankings cannot give a picture of inequalities within a region either. When we speak of a region's competitiveness, we are creating the illusion of an economically and culturally undifferentiated metropolis. Such undifferentiated metropolises do not exist in reality. The Helsinki Metropolitan Area is also already segregated spatially. Well-being and social problems are concentrated into different towns and neighbourhoods, even here. Illegal drugs, crime and poverty are everyday problems in only some parts of the metropolis.

Preventing neighbourhoods from acquiring undesirable profiles is a specific problem for developing a metropolitan region. The concentration of deprivation leads directly to social problems that nevertheless become apparent well beyond the immediate environment in which they emerge. The problems experienced on public housing estates and in the suburbs reach into the metropolitan centres, and vice versa. And the problems caused by segregation influence the image that is projected to the outside world.

Despite all this, ways of incorporating the problems associated with segregation and social polarisation into discourses about competitiveness have not yet been found. These now concentrate on whole metropolitan areas. And yet it is clear that the phenomena bubbling beneath the observable surface have an impact on the totality. Division and inequality weaken the capacity of the metropolis to create a society where everyone can make a contribution to resolving our most

wicked problems. If we fail to resolve these problems, future well-being in the metropolis will suffer, not just at the extremes but across the board.

Above all, competitiveness rankings fail to take account of metropolitan capacities to take on the coming challenges. This is rooted in the familiar way of examining competitiveness as the dominant feature of a city or region: as something through which local stakeholders can enhance their wealth. The question of the direction in which competitiveness or vitality could develop cannot be adequately clarified in this way. Rather, future challenges require us to understand the capacity for renewal and adaptation. These are complex, cultural phenomena that are difficult to capture comprehensively.

In the absence of qualitative evaluations, competitiveness rankings are fated to remain static. Research based in the most broadly commensurate features cannot provide in-depth knowledge of how the unseen resources of a city or region might develop. Similarly, we still lack knowledge of how people in the metropolis experience their lives. In the face of everyday problems, many find this toying with economic competitiveness obscene.

The debate about competitiveness must now be augmented with enlightened views on worldwide processes of change and an assessment of how well metropolitan centres are equipped to cope. What will competitiveness, wealth and well-being be made up of in the future? We can already safely say that they emerge from things that the metropolis itself can influence.

WHAT COMPETITIVENESS RANKINGS LEAVE OUT
- the renewal capacity of municipal organisations
- the agreeability of life
- the fossil fuel dependence of trade and industry
- children's freedom to move in their home environment
- people's social skills
- well-being at work, school and day-care
- the availability of non-mainstream health and training services
- spatial divisions and segregation
- the growth of social and economic inequality, polarisation
- the ease of finding friends
- companies' capacities for staff development
- people's chances of participating in social decision making
- the ease of organising cultural events
- the sense of being able to influence one's own life

2.3 Why do we need innovations?

So what should we measure? What is the precious thing which demands our attention? In order to find the answer, it is worth examining competitiveness more thoroughly, as a social phenomenon. What is the relationship of competitiveness to other societal goals, such as well-being, sustainability, vitality and our capacity for self-renewal?

Innovations have become an ever more significant factor in explaining success. This has not always been the case. We have become accustomed to looking at competitiveness from the point of view of economics, where it is defined as the high and growing level of current and future citizens' welfare. However, Paul Krugman, Nobel Prize winner in economics, holds productivity to be the only factor of competitiveness. Thus competitiveness becomes realised through the growth of productivity, and through that as rising living standards. In this economic frame, well-being appears as a straightforward consequence of productivity and competitiveness. Well-being is above all identified with material consumption. The thinking is as follows:

PRODUCTIVITY
↓
COMPETITIVENESS
↓
WELL-BEING

In Krugman's framework, businesses thus compete on productivity, on which basis they create wealth and well-being for the state and its regions. In this model, productivity increases when new technology is developed, or existing technology is adapted to novel forms of production. But because new technologies and adaptations are generally innovations, the result is a chain-like causal effect, where innovations precede productivity:

INNOVATIONS
↓
TECHNOLOGIES
↓
PRODUCTIVITY
↓
COMPETITIVENESS
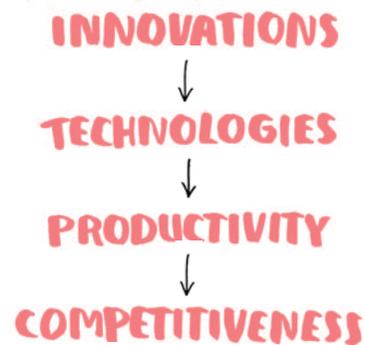
The newest research tells us that innovations are the central route to business or regional competitiveness. For this reason there has been much interest in recent decades in identifying the factors that aid the birth and adoption of innovations.

A Schumpeterian, "newest" growth theory has gained a foothold among researchers. This emphasises the importance of innovation in advancing technological development and bringing about growth. The idea is that resources are built up from the inside. This contrasts with the idea of competition over already existing resources in the same market. Through innovation that creates this kind of self-generating growth, a firm can always, for an instant, "flee competition".

So-called "evolutionary economics" highlights the growth of an economy from one state of balance to another and its evolution over the long term. Schumpeter draws attention to how capitalism "creates and destroys" structures. Capitalism has an in-built drive towards technological revolutions and innovations. Capitalism's basic agents are pioneer firms and their innovative leaders. With the help of innovation, they acquire added value compared to firms where innovation does not take place. This is possible because other businesses cannot adopt a pioneer's innovations very quickly. Learning is always slow and often innovations are protected with patents.

There are two ways to respond to the challenge. For Schumpeter, firms can respond to the challenge of competition either by adapting or through being creative. Adapting is based on routines formed previously, on inertia, consistent expectations and efficiency in the short term. Creativity on the other hand is built on unsure visions, on sniffing out new opportunities.

Creative enterprises react to competition by investing in research and development. Productivity is enhanced through innovation and technology. Creativity is precisely what drives economic evolution.

Even more important than competition in the growth of productivity is structural change: as a result of competition, the labour force and other production factors shift from inefficient enterprises to efficient ones. Those firms that renew themselves, that invest in development, attract resources to themselves: investors, clients, talented workers and contractors. This process – where innovative firms become stronger and inefficient ones fade away – can be glossed by the concept of "creative destruction".

Schumpeterian growth theory can be encapsulated in a triangle where competition and innovation lead to structural change, and through that to productivity growth. The growth of productivity improves a firm's competitiveness and increases the material welfare of a city or region.

COMPETITION ←→ **INNOVATION**

STRUCTURAL CHANGE

PRODUCTIVITY

WELL-BEING ←→ **COMPETITIVENESS**
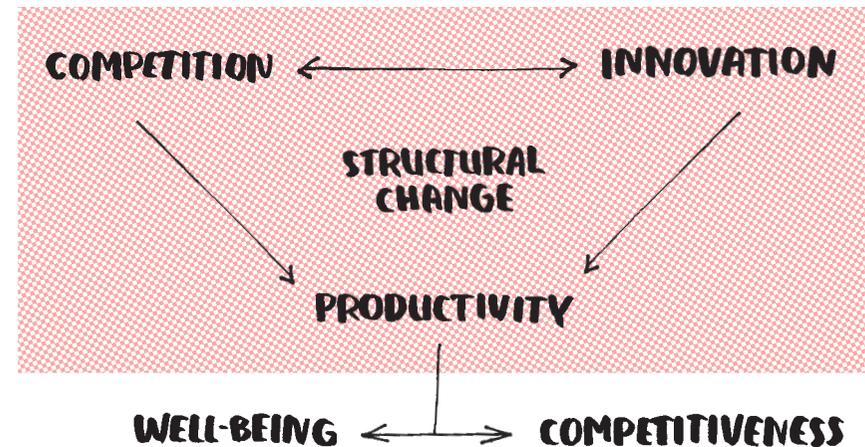
THE THREE PILLARS OF THE SCHUMPETERIAN GROWTH THEORY.
SOURCE: MALIRANTA AND YLÄ-ANTTILA, 2007B.

1. Creative accumulation, which leads to productivity growth inside firms, primarily through more efficient use of technology.

2. Creative destruction, which leads to the rise of productivity at the level of the industrial sector as more efficient firms grow at the expense of less efficient ones, and where production factors such as labour are put to more efficient use.

The strategy of creative accumulation – that is, making current practices even more efficient – often feels like the safer way to develop a business. Genuine innovations that really take the economy forward arise, however, only through the process of creative destruction. Many sources have, therefore, recently begun to highlight creative destruction together with innovation. As global markets grow, the benefits of adapting and accumulating may, however, be short-lived given how many would-be challengers there are.

A dynamic metropolitan region nurtures innovation and creative destruction. Under conditions of competition, firms seek to find competitive advantage through innovation. Innovations raise productivity, but they also cause creative destruction as some firms either do not want to, or cannot, regenerate and keep up with the other firms' productivity. The businesses in the front line take risks and make progress through experimentation. When the business environment is dynamic, weak firms disappear from the market with production factors flowing into the most productive ones. In this process of creative destruction, the structure of the entrepreneurial environment is changed and renewed. As an overall result, productivity increases in the long term and produces wealth.

There are different leagues of regional competitiveness. The researcher Ronald L. Martin, for example, in a report written for the European Commission, classifies regions into three categories based on their factors of competitiveness:

1. Regions as sites of export specialisation which have low average incomes, compete on wages and favourable locations, and specialise in exports.

2. Regions as sources of increasing returns which have high population density and where industry accumulates. Competitive factors are a skilled labour force, inter-firm specialisation and division of labour, the effects of large markets and an ample number of suppliers.

3. Regions as hubs of knowledge where there is high population density and a high standard of living. They are internationally networked centres of R&D with a vibrant urban culture. Production is not based on specialised industrial sectors but rather on crossing sectoral boundaries, a localised innovative environment and on learning.

The Helsinki Metropolitan Area is clearly a hub of knowledge. This is apparent from its pool of labour, the breadth of its entrepreneurial ecosystem and its skills base. It is also evident in the policy objectives it sets for business development, as well as in the targets of its competitiveness strategy. What this means is that, as a region, Helsinki does not compete, say, with India's Bangalore, the free trade zone of Manaus in Brazil or Romania's Cluj-Napoca (known for its capacity to pull in ICT investment and for its coders). Some firms in the Helsinki Metropolitan Area do transfer activities to these places, but this has more to do with the developmental trajectory of certain sectors than it does with Helsinki's competitiveness. The places listed above, at least as they stand, are unlikely to provide relevant exemplars for how the Helsinki Region's competitiveness should be developed further. We simply do not have the resources in terms of natural assets, location or population, to compete on similar social strengths.

If we think of it as belonging to a series of hubs in the knowledge-based global economy, the Helsinki Metropolitan Area is nevertheless facing a great challenge. The best-known examples of such hubs are stronger than the Helsinki region in terms of resources, population numbers as well as location.

We are therefore in a situation where the tightening of global competition means that firms' innovation activities are a fundamental factor in their survival. At the same time, a region's capacity to support the innovation activities of its firms has become a central issue in competitiveness.

The active agents of the Metropolis constitute an "innovation ecosystem". This concept is a way of understanding a metropolitan region's ability to nurture new innovation and strengthen competitiveness. An innovation ecosystem is above all a localised network of actors, one where new ideas are born and which produces the organisations to put them into practice. These are, for instance, firms that commercialise innovations. The creativity and dynamism of world-class innovation ecosystems are strengthened and sustained by the following factors:

- world-class universities and research institutions
- substantial funding for new firms and research ventures
- a sufficient pool of skilled workers
- a symbiotic combination of large and established businesses and new, small, innovative firms
- the specialisation of firms as well as their collaboration
- service sector businesses specialised in local firms' needs
- a sufficient market area for new and innovative products
- global networking with other centres of innovation
- "shared fate" – that is, that the region's players see their success to be part of the entire region's success

These factors are necessary, but not in themselves sufficient, to explain the success and capacity for renewal of innovation ecosystems. Above all, they are enlivened and renewed through a strong business culture that encourages risk taking and creativity. Another notable feature is the constant movement of people and ideas, churn or recycling. People move easily from one enterprise to another, from research institutes into business and back again. Informal networks work efficiently as conduits of information and ideas.

THE INNOVATION ECOSYSTEM
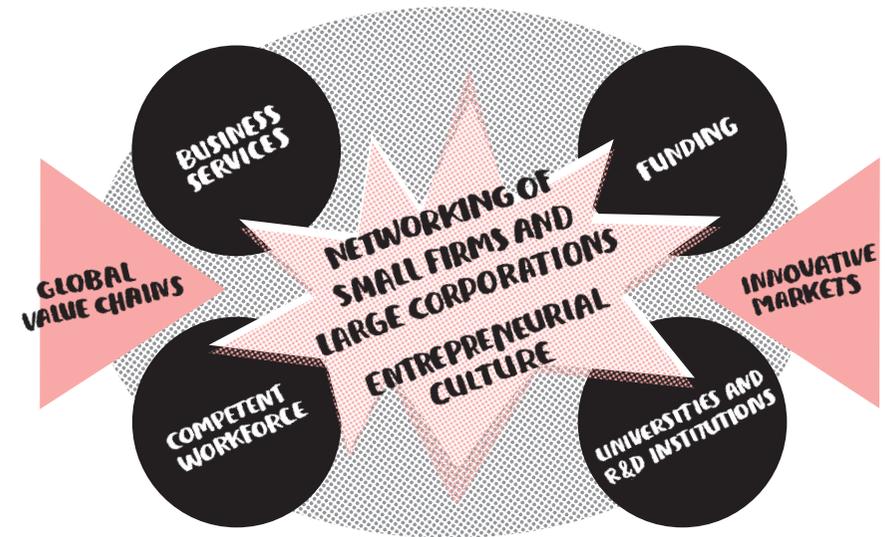
SOURCE: HAUTAMÄKI 2010

The innovation ecosystem has two interconnected characteristics. It offers the services and partnerships entailed in developing successful innovation activities. On the other hand it offers a rich community of skilled people who can create new ideas and build from them practical solutions. In both, the community is based on networks and its ultimate aim is to enhance well-being.

Innovation hubs are always specialised in a particular kind of know-how. The quality of local ecosystems largely determines where firms locate their activities. Larger hubs are often multi-sectoral and smaller ones more clearly specialised. The relevant point is that innovation hubs pioneer a particular type of production of a certain sector's development. They generate peak areas, the "leading edge", where next-generation products are developed, directing the entire sector. They also create new markets where established firms no longer compete.

Innovation hubs are the likely winners in the global economy. For example, patents and refereed academic articles will tend to concentrate in them. Innova-

tion hubs and the firms that operate in them can best renew their output and develop new kinds of products and services. They have the ability to combine local know-how with added value from global cooperation.

Sustaining the Helsinki Metropolitan Area as an innovation hub requires a new kind of specialisation, and as a core concept for this we suggest "sustainable well-being". After all, the region's pressing question is: With what resources can we remain a vibrant innovation hub? How can we compensate for our weaknesses as a metropolis – our small population and distant location from central metropolitan regions? What should we specialise in to have success of any kind? In what areas is the competition simply too tough?

It is not a sufficient response to point out business successes and to focus on these alone. An innovation ecosystem oriented towards sustainable well-being does not build simply on businesses that produce innovations or even on cooperation between universities and business. The metropolis needs different kinds of innovation from what businesses need, and innovation is also born elsewhere. In such an ecosystem, people's informal communities and the public sector have a significant position in developing new solutions and putting them into practice. Through the concept of sustainable well-being we can combine central approaches to people's quality of life, economic wealth and the planet's ecological constraints. We describe this structure in more detail in Chapters 4 and 5. It is at the same time an answer to the question: How is it possible to develop sustainable well-being and competitiveness simultaneously?

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3. Five Trends in Search of an Owner

There are five significant transformations happening across the world which all metropolises and their populations will have to face. A competitive metropolitan area must find its own ways of responding to these. But the challenges will not be resolved with the current toolkit of solutions and today's silo-based division of labour. The challenges are not "owned" by anyone: there are no experts or institutions to soften the blow from the shake-up.

1. Scarce resources

Economic growth so far has been based on a significant growth in the consumption of natural resources, notably oil. The approach of "peak oil" will substantially alter the way we create wealth in the decades to come. Population growth and new divisions of economic wealth will also alter the spatial locations of available labour and consumption. The shape of the transformation, with all its mutual interdependencies, is not easy to predict.

ENERGY DEMAND 1910 – 2050
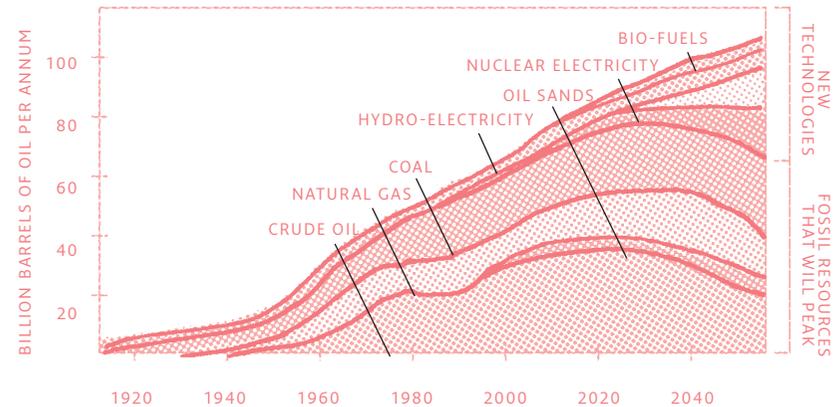
SOURCE: LYNN ORR, "CHANGING THE WORLD'S ENERGY SYSTEMS".

Natural resources are actually shared. The combined effects of the expanding global economy and population growth increase international demand for raw materials, leading to an accelerating rate of depletion of the world's resources per inhabitant. The global food shortages experienced in 2007 and 2008 brought shrinking shared resources to the attention of people everywhere. Alongside rises in prices of energy and food, an appreciation has emerged of the fact that our global resource base is shared. Once the news media across the world give due attention to growth in China and India, it will help concretise the coming shortages of food, energy and water.

The past thirty years have already seen efforts to build up global structures to regulate the consumption of natural resources. The Kyoto Protocol of 1997 is the most binding of these. In it many industrial nations commit to reducing carbon dioxide emissions and supporting poorer countries in adapting to climate change. Alongside international frameworks, recent years have also witnessed the emergence of market-based activity in this area. The USA and China in particular intend to create functioning green markets which give rise to more efficient solutions to the problems than an international regulative framework with all its difficulties.

Peak oil is the point at which the production of oil reaches its maximum. Britain's Peak Oil Taskforce predicts that this maximum will be reached during this decade. This raises the threat of a serious downturn. In addition to competition for fossil

fuels, an international conflict is growing over farmland and the space suitable for human habitation, and over inexpensive food production generally. The supply of clean water is expected to suffer in regions where billions of people live as the result of climate change, over-exploitation of ground-water reserves and the extensive manipulation of watersheds. Although there is potential for technological solutions, their use has turned out to be problematic in practice. Thus far, it has been cheaper to find a new source of oil or some other natural resource and to use old cultivars instead of seeking new technological solutions that would replace the need for raw materials. There is also scarcity of those metals and minerals that are used, for example, in batteries, solar panels and many high-tech components. We may be looking at a future where wars are fought over metals.

How have we talked about this in Finland? A recent realisation for many Finns has been that in spite of a persistent contrary view (both inside and outside the country), our society is built on just as precarious an ecological foundation as other advanced economies. The reality is in fact very different from our reputation. According to the wwf's Living Planet Index, Finns use two and a half times more natural resources than is sustainable. If previously the debate was about how industry consumes natural resources, now there is also concern about what products we as consumers purchase and use. In countries such as Finland, the question is not only about the sufficient supply of natural resources (water, energy etc.) for national needs; the focus on controlling access to them has shifted to a focus on their sustainable use.

The prices of energy and resources have not had much impact on the Finnish purse so far. At most, the monthly electricity bill is up there with the cost of a couple of beers, and rises in fuel prices are generally considered a temporary phenomenon.

So, while climate change is prominently debated in Finland, it is not seen as something that might destabilise economic structures. The cost to Finns of lowering emissions is, however, something of concern to industry (notably heavy industry), which readily compares its circumstances to those in other countries. The fear here is that Finland will find itself in an unfavourable situation, while others can exploit this as free riders. Whatever the views, the issues are seen for now as technical problems rather than as phenomena stemming from lifestyles that may involve large-scale social transformations.

What future should a metropolis prepare for? As the future brings ever greater scarcities, the short-sighted plans of businesses, municipalities and states will have to be rethought. Externalities have not affected prices so far. This has led in turn to poor investments. We have been building a society that will not be able to cope – in its current form – with the challenges ahead.

What is now high-level politics will gradually become part of everyday economic or household management for us all. Cities around the world, metropolises foremost among them, are already developing more ecological solutions and creating new service strategies. New enterprises concentrated in the environmental sector are developing and entering the markets at the same time as citizens are taking more notice of their own role as choice-makers and consumers.

The significance of resources for geopolitics will grow in the years to come. In future, the terms "productive" and "efficient" will have different meanings from those they have now. The question is not merely one of limiting emissions but also of energy security and access. The debate is also influenced by the desire of developing countries to secure some of the benefits that have already been acquired by areas that have already industrialised, and by the pollution they have caused in the process. With the introduction of compensation schemes to curtail the overuse of natural resources, or when polluting rights are sold from one country to another, the flow of money involved will be enough to alter the structure of global trade.

Currently, towns and cities are not only consumers of non-renewables but are also carbon dioxide producers. The concentration of the population and utilities such as energy, waste services and water can be ecologically planned. Metropolises may even become self-sufficient in energy, and produce food by bringing all left-over spaces – yards, roofs and balconies – under cultivation. We can move towards organic cities that are better adapted to the natural ecosystems that surround them.

2. Changing population

Almost everywhere in the world, people are living longer. In the West, the proportion of elderly people will increase dramatically in the coming decades. Different pressures will affect developing countries where this age pyramid tends to be inverted due to large numbers of children and young people. In an open world economy, these two population challenges also impinge on Finland. There are ever more reasons for people to be mobile and for there to be fewer barriers. Besides differences in the standard of living, people move because of new employment opportunities, curiosity and personal relationships.

DEPENDENCY RATIO IN FINLAND 1910 – 2050
Children and pensioners per 100 economically active persons
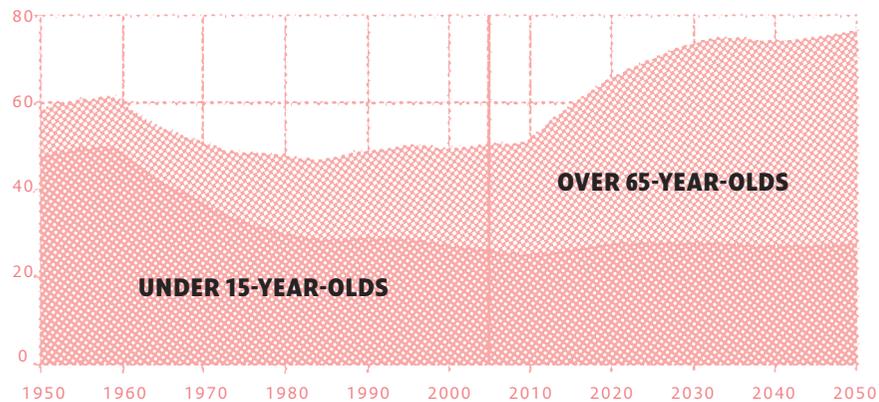
SOURCE: STATISTICS FINLAND

Metropolises are still continuing to grow. In the first decades of the third millennium, the world faces a dual population challenge. The growing population in developing countries is accelerating global mobility rates to a new level. At the same time, the whole industrialised world – including China – has an older population than at any time in human history.

Large-scale population movements usually involve an element of seeking something better, generally following a path to find work, training or love. Choosing where to live is one of the few methods of influencing one's own room for

manoeuvre. People who arrive in a metropolis with a constant flow of in-migration (migration from overseas and elsewhere in the country) tend to share a propensity for optimism about the future, a belief in the individual's chances of success.

Population structure is something that is hard to direct, and even if it can be, the process is slow. The ageing of the Finnish population cannot be changed now. By contrast, and somewhat surprisingly, birth rates in both Sweden and in Finland have recently taken an upswing – thanks to high and evenly spread levels of well-being. However, such trends are slow to affect society. For example, the current increase in the birth rate will only have an impact on economic activity in about 25 years.

Over the last 15 years, Finnish society has also been changed by the concentration of economic growth and in-migration to the largest conurbations. People are moving into five growth centres: the Helsinki, Jyväskylä, Tampere, Turku and Oulu regions. A significant proportion of new jobs in the private sector have emerged in the growth centres, while elsewhere, work in traditional sectors has disappeared. With current population trends as they are, many of Finland's rural and small industrial communities will find it difficult to transform themselves into vibrant economies.

How have we talked about this in Finland? The economic challenges of an ageing population are currently a serious topic of debate in Finnish politics. To fund pensions, public services and income redistribution, tomorrow's working population will be expected to work hard and efficiently, and in part, upward economic trends will be needed. The ageing population is therefore a challenge for Finland's welfare system.

This concern is what has increased the need for higher levels of employment-based immigration from overseas. Some Finns feel that what we need are more hard-working, skilled workers to move here. Yet compared to other European countries, the foreign-born population is an exceptionally small proportion of the overall total. Despite a debate about jobs-based immigration that has gone on now for a good decade, nobody has so far developed an effective strategy for bringing more overseas labour to Finland. The main draw for people to come to Finland from abroad remains their family or spouse. And yet, even the low levels of cultural diversity that are emerging have already brought about a counter-reaction. Fear and prejudice against foreigners have developed much along much the same lines as in other countries in Western Europe.

What must the future metropolis prepare itself for? It is clear that in practical terms, demographic factors and their development define competitiveness and its regional differences. In this respect also, the metropolitan area is competing in global population markets with many other regional hubs. That is to say, competitiveness, previously considered as a societal feature that responds to large public investment and the development of infrastructure, is actually more dependent on a region's population and on human capital.

Population growth in Finland's capital city region is largely going to rest on the shoulders of immigrants, and they will settle for the most part in the environs of Helsinki. Employment-based immigration is necessary to the survival of business in the area, as well as to the survival of public services. It comes with the immigration of entire families and relatives. Often immigrant families have several children which improves birth rates in the metropolis and adds to dynamism in the long run.

We are used to the way society has developed, primarily in the wake of the economically active population of Finnish origin. In future, both pensioners and immigrants will turn into new political and other interest groups. To begin with, these are likely to be single-issue movements. They will certainly bring new topics into public debate.

Maintaining social cohesion, whether at neighbourhood or wider levels, is challenging. Ever more clearly, there is a tendency towards concentrations of immigrants or older people in certain suburbs or housing areas. Tools to avoid this tendency are in great demand, since a municipality's future financial health will crucially depend on its tax-paying, economically active population. Since in-migration into the Helsinki region does not follow administrative boundaries, this creates a challenge for the entire region which benefits from the inward movement of migrants.

Demographic change has a significant impact on housing needs. New forms of living aimed at the older generation are rapidly being developed around the world. Meanwhile the housing preferences of various immigrant groups coming to Finland are unlikely to match housing ideals developed here over the last few years. Internal migration within Finland brings more and more people into urban areas whose ideal preference would be a rural mode of living. All in all, the design and planning of neighbourhoods, housing developments and dwelling units has to move towards a greater diversity than we are used to.

A report on how the capital-city region's population and service needs are expected to develop, drawn up for The Helsinki Metropolitan Area Advisory Board

(Pääkaupunkiseudun väestö- ja palvelutarveselvitys 2015 ja 2050), estimates that the region's population will grow by over 100 000 by the year 2025. Even though the increase in the older population is one of the central transformations, the capital city region will also see a rise in the working population because of in-migration. The region's demographic structure is likely to remain noticeably healthy compared to the rest of the country. The only demographic group with significant impact on public service needs is the school-age population, and this is expected to grow in the coming 15 years.

Despite this, the pressure on developing the system of public services is considerable. The metropolitan area should be able to respond to the needs of the young and highly skilled, the elderly and immigrants. And still it should strive to be attractive – in the area of diversity as well – to other demographic groups. It will not be possible to please everybody at the same time. Different kinds of user groups must be involved in developing services.

3. The global economy

At first, faster global production and distribution networks brought with them dramatic reductions in the marginal cost of producing goods. Now we are living in the second phase of the globalisation of the economy. Global markets are no longer a phenomenon that can be controlled by conventional industrial powers or geopolitical blocs. In the near future, developing countries will simply have more potential – both in terms of labour and unmet needs. It is no longer a question of the wealthy sector of the world's population enjoying goods produced in places with low production costs, but of a complicated network of production and consumption. Maintaining trust within this network is a prerequisite for being competitive. This second phase of globalisation is characterised by unprecedented relations of mutual dependency between regionally functioning units such as metropolitan areas. The first responses to economic globalisation were economic unions such as the EU and NAFTA. Now the responses are more about seeking control through metropolitan policy.

THE SHIFTING GEOPOLITICAL BALANCE

SOURCE: IMF

The field is filling up with players. In the future, both production and demand will move away from industrialised nations as conventionally understood. Ever freer flows of information will break down the division of labour we are used to, and some developing countries and regions may jump quickly from production-based to a more autonomous innovation and consumption-based economic system. A good example of this is the rapid development of South Korea from a producer of copied goods to a leading developer of information and communication technology (ICT). Changes in the division of labour and the increased emphasis on human capital and the skills base will increase people's mobility as they seek the work and lifestyle they desire.

Centralisation weakens possibilities for the smaller actors in international markets. Even between large firms, competition is fierce, and the winner often takes all. Also, the financial sector is constantly drawing in new actors, creating even more unpredictability. The importance of transnational corporations in the global economy has grown significantly.

Global interdependencies are becoming more diverse. Trade between countries and metropolises has begun to be approached through qualitative criteria: the green economy, the service economy, the knowledge-based economy and the creative economy. Behind this is the insight that long-term well-being, or even economic success, cannot be achieved simply by freeing up the structures of economic and competitive activity. This is something that has been striking over the last few years of global recession. Historical analysis shows that protectionism has grown as the economy has become weakened. It is possible that the current crisis in the global economy will lead to the emergence of new kinds of protectionist practices. Even "deglobalisation" is invoked as something to aim for. There will probably be no return to the age of the nation-state, but the place-based dimensions of life will be strengthened.

Over the last few years, there has been much talk of the staggering increase in weight carried by the newly industrialised countries – for instance, China, India and Brazil – in the global economy. Yet this kind of approach obscures; it does not give a clear picture of the process of metropolitanisation nor of parallel development trajectories. In China, for all its amazing economic growth, there are still more people living in absolute poverty than in any other country. And even so, its metropolitan regions are more attractive – that is, more competitive.

How have we talked about this in Finland? The global economy has been viewed as a racetrack where Finland's strengths evaporate as the Chinese thunder past. Certainly it is true that the majority of Finland's strengths have lost their value through globalisation.

The Finnish economic model was built primarily on exports and on technology-based industries: it was not consumer-driven. Productivity growth in Finland could be largely explained by its cheap but skilled workforce, particularly its inexpensive engineering know-how. The Finnish knowledge economy has been elevated by international comparison, but it has not brought with it a well-developed service economy. The formation of internationally significant domestic consumer markets has not meant the arrival of new export items, as it has for example in Sweden.

In Finland, the rise of Asia is also seen as a threat since it brings with it an inflation in the economic value of skills and, at the same time, reduces Finland's head start over developing regions. In other ways too, our economic dependency on international fluctuations is experienced as such a threat that the ideals of self-sufficiency and localism have resurfaced.

What must the future metropolis prepare itself for? The contest is no longer run in just one league. We must come up with our own way, our own league. In the emerging new world economy, the emphasis will be on people's skills – whether we are talking about the skill to use technology or the skills of social networking. As we look for new markets on a global scale, all communities, including the most impoverished groups, must be harnessed to the work of development. The cycles connecting research, experimentation and everyday life are getting shorter, but this also emphasises the role of the user.

We know that current levels of natural resource consumption and emissions-intensive production cannot last long. It is likely that competition between different states and regions will be intensified, particularly given the uneven spread of natural resources. This may bring with it new kinds of alliances and forms of regional self-sufficiency. Natural-resource colonialism is already a reality and there are good grounds to expect it to spread. Competition for skills will also intensify.

In the age of the network economy, cooperation is becoming more important. It will be pointless for organisations working in the same region to see each other as competitors. This will further emphasise the importance of trust between different social groups. This is a fundamental premise of competitiveness.

Only the regions with the cheapest costs will be able to produce value through technology and industry. These will serve sustainable resource use and/or be commoditised, becoming something one buys as necessary. Technology is indeed an efficient tool but it creates no added value in itself. It must be adapted to the service of production, of goods and of services.

4. Technological planetarism

The twentieth century was the century of technology. Industrial production methods and mass-produced consumer goods spread across the world. In the beginning, the system pivoted around production, enabling the making, transporting, storing and selling of goods anywhere in the world. Then came the internet and a whole universe of new services. This has extended the system to consumers and created the foundations for a new kind of global economy. Nowadays, technological, globally shared systems direct social structures on every continent. The experience of belonging to a global culture is very everyday and concrete. A prerequisite of success, in international but also in national markets, is ever broader knowledge of the system and the capacity to make use of the opportunities it offers. The social media is growing in importance as much in the realm of personal relationships as in sustaining business.

INTERNET USAGE BY CONTINENT AND CHANGE IN PER CENT
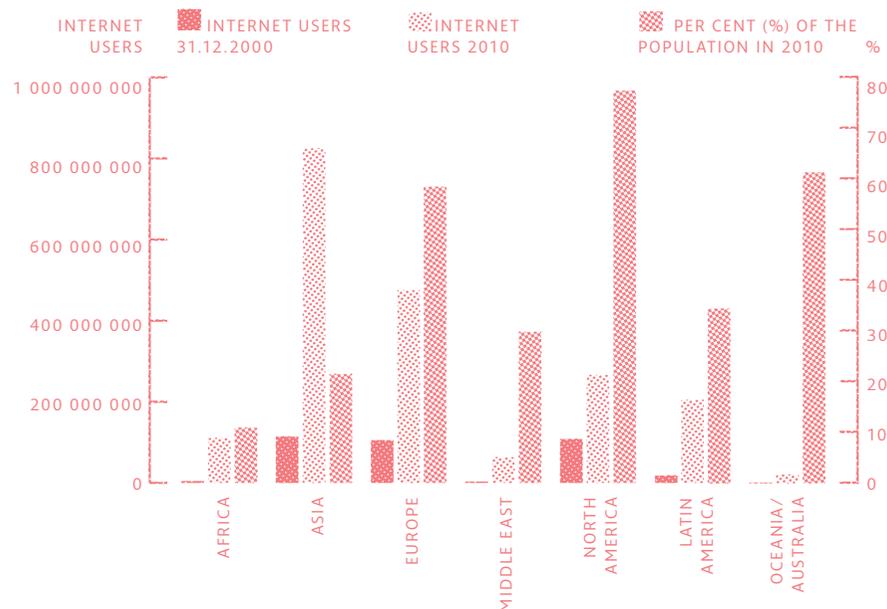
SOURCE: INTERNET WORLD STATS

Science and technology are global cultures. Technology has become a cultural phenomenon, having broken away from its origins as a purely productive force and become a part of people's everyday existence. In this way, it has become cheaper. Even in developing countries, people employ relatively developed and networked consumer electronics and information technologies. Technological development made possible transnational corporations and the global economy. Now that a large part of humanity is using technology, a new phase of globalisation is before us: the age of technological planetarism and the metropolis.

The spread of technology is accelerating, and this applies particularly to ICT. Broadband connections, fibre-optic cables and communications satellites make the planet a "tuned in" or interconnected information system. The costs of plugging into the network are going down and more and more people are joining it. Four billion mobile or cell phones have been sold across the world, and another few billion users will join this crowd of users in the near future.

The language of technology is spoken on all continents, and this facilitates the exchange of information and enhances the possibility of moving from country to country in search of work. In the 2010s, the internet will significantly change South America and Africa. Previously unseen economic actors will increase their wealth and gain access to ever more complex technology. The production of ICTs will decrease in what were traditionally industrialised countries, and there will also be a shift in where technology is exploited. The newest technologies are increasingly being developed for growing markets that were previously considered too poor. This means that the principles underpinning development are often quite different from those at play in developed markets based on affluence and purchasing power.

Technological planetarism is driven both by material factors – the spread of the internet and other technological systems – and ideational factors: an ever greater mass of people see themselves as citizens of the world who do what they do as part of, and for the benefit of, humanity as a whole. The new generation, the digital natives, have a new kind of experience of how the world is structured and how it works.

Open source thinking and the "wisdom of crowds", such as the kind that underpins Wikipedia, motivate people to participate in collaborative development ventures and open sharing with all who are interested, irrespective of institutional or national boundaries. This also sets learning free, making it possible everywhere.

A significant development trend is cloud computing where programmes and databases are accessible via the web. The user needs nothing but an apparatus for

accessing the network, what is currently the internet. Cloud computing and global networks give rise to "cloud communities" or global groupings who share and use pooled information. Such development trends will radically alter the prerequisites for doing business and for collective civic activities.

How have we talked about this in Finland? The steady rate of development of ICT and the competition for markets has, since the 1990s, shaken up Finland's consumer offer, business and industrial policy, labour markets and its national economy. Finns have been developing a radically new collective identity as global pioneers, based on know-how in high tech. In innovation and technology-intense economic sectors and in services, more than half of all workplaces and the knowledge-base is located specifically in the metropolitan area. The role of pioneer is always a lonely and challenging one: while there is a sense that there is little to learn from elsewhere, others will be quick to catch up. Hence confusion and concern often follows research reports on how Finland has lost its status as a front-runner in the knowledge-economy stakes.

Technology in Finland has been in the hands of the universities, research institutes and companies. Currently a gradual transformation is underway. Forms of user-centred social media have touched practically the entire population. The focus is thus on the users of this media, on their ways of resolving problems with the tools provided by technology, and on developing new ways to exploit technology as communities. A shift is taking place from a culture of expertise to a culture of users.

What must the future metropolis prepare itself for? Networked information technology has expanded our understanding of what it means to participate and to work together. Besides tools that enable the transfer of information, there are new social affordances to support collaboration irrespective of time and space constraints. Through these, technology has become entwined in the social life of its individual users. The social media moulds social relations based on geographical proximity. This leads to new, more extended and differently structured networks of social relations.

We have begun to see the scope of problem solving at a global level, and its success, not least in stopping the spread of viruses responsible for pandemics. Recognising the relevant pathogens and developing medical interventions has taken place across the global scientific community in a decentralised and largely uncoordi-

nated process. The speed of this process is also based on the fact that the original home of the internet was precisely the international scientific community.

Harvard professor Yochai Benkler has demonstrated that the penetration of information technology allows people to participate in determining value. Shared source code, the world of the wiki and products generated through open peer production, make it possible for anyone to familiarise themselves with increasingly specialist fields. Benkler observes that commons-based peer production is not different simply because of its production model and its "efficiency"; it alters both production and consumption in a deeper sense. People become producers of content, meaning that their preferences and experiences become relevant to production: they "democratise" it. In peer production, the producer is also the consumer. Activity is often voluntary and based on shared goals. The emphasis is on networking and the final products are often put at everybody's disposal for free. Older models of production and management are put to the test by an extremely competitive alternative as peer production challenges the paradigms of both planned economies and open markets. Technological development is taking us towards new business models and legislative frameworks, and even towards new economic structures based on cooperative production.

On the one hand, technological development is being increasingly concentrated in centres of expertise set up for the purpose, but on the other, it is spreading to the poorest corners of the world on the back of rapid population growth. In the latter case, technological solutions progress according to local markets and how suitable they are for local households. Researchers are using the term "disruptive" innovation or technology, to capture the change this brings about in the markets: the beneficiaries of this innovation chain are the "bottom of the pyramid", that portion of the world's population that lives on less than two dollars a day – the "next 5 billion" as it were.

When electronics are inexpensive and everything else can be made ever more cheaply, the metropolises of the developing world will become sources of new, even unexpected, innovation. Technological planetarism will put relations between people at the heart of metropolitan competitiveness. The important thing will no longer be to develop new technology alone, nor that we should have the best possible technology at our disposal. What would be more important would be for Finnish people to participate in the communities of producers and developers of new innovations, going beyond conventional chains of production.

5. The age of community-oriented individuals

Education levels in Finland are rising, particularly in the metropolitan area. This makes people ever more independent. In Finland this kind of individualisation has often been feared, partly unnecessarily. Even independent people want to collaborate with others even if they do not depend on older forms of cooperation. In addition, at an institutional level, there seems to be a deficit of the kinds of services and efficient channels that could facilitate the things people feel are important. There is a need for updating, particularly when it comes to the ways in which we can advance equality between people and create bonds between new types of communities.

RISE IN EDUCATIONAL LEVELS
Proportion of 25–34-year-olds holding upper secondary or tertiary level qualifications 1975–2005

UPPER SECONDARY OR TERTIARY

NO POST-COMPREHENSIVE/ LOWER SECONDARY QUALIFICATIONS

Year	Upper secondary or tertiary	No post-comprehensive/lower secondary
1975	50	50
1980	62	38
1985	73	27
1990	80	20
1995	82	18
2000	83	17
2005	85	15

% OF 25–43 YEAR-OLDS

SOURCE: STATISTICS FINLAND

Individualisation does not destroy; it creates new communities. The individual thinks as follows: I am me, a unique individual. Nobody experiences or understands the world just as I do. It is difficult for others to make decisions on my behalf: I know best. My own knowledge may not be enough for me to always know how I should act, but I still want to be consulted.

People today have a deep understanding of themselves as autonomous actors. Liberalism has grown from a social-policy ideology into an everyday way of being: people can only be moved on the basis of voluntarism. It is important to us who we are – our identity matters.

The main reason for our individualism is our cumulative educational experience. In 1975, one half of young Finnish people had pursued education beyond upper secondary level. The equivalent figure today is 85 per cent. Almost a half have received tertiary qualifications (university or equivalent vocational level). This translates into about twenty years of education. The radical lengthening of this period of preparing for life inevitably constrains top-down government.

In the midst of all this individualism, it may be difficult to recall that our identity originates and changes as part of cooperation and relations with other people. This is precisely what makes us who we are, the person we know best. Individualism and community are not opposites then, but are forces that support and even accelerate one another.

Our behaviour is motivated ever more strongly by our peers, that is, by seeing what other people like us are doing. A doctor's certificate or a good advertisement are no longer enough in themselves to persuade us as to the kind of treatment we want or the product we buy – we ask friends and turn to the internet. We are meaningful people precisely by being members of a community. Of course, this is not the traditional community into which one is born or which forces us into certain family networks. The experience of belonging is ever more powerfully oriented towards other groups and people. Belonging is directed via new types of mechanisms, often through positive examples rather than negative sanctions such as shaming.

Britain's former foreign secretary David Miliband has captured this process well. According to him, people have been reaching for the same goals throughout history, regardless of their political leanings: things such as freedom and happiness. All that changes is how we think we can achieve these aims, and our view of who should be making it happen.

After the Second World War, the idea of basic needs was born, along with a view of how to share responsibility for meeting them. The typical person's thoughts

were about what "I need". The institutional form this thinking took was the welfare state. In the 1980s, we began to think of ourselves more as individual agents with unique desires and instincts. The typical person thought, "I want", and the consumer society was born. By the 2000s, talk had turned to the new communication tools, the internet and new production models which high-lighted people's skills. The typical person thought "I can". However, the 2010s, according to Miliband, will be the age of co-creators and players. The people of our age will be thinking "we can".

How have we talked about this in Finland? In Finland, over the last decade, almost all socially engaged people have been concerned about the public's loss of faith in politics. More accurately, they do not trust political parties or their ability to affect the development of society. Despite this, election turnout remains relatively high. The main worry is the future: What will happen when voters consider political decision making to be ever less meaningful?

At the same time, the trust people have in central social institutions – the army, the police, the judiciary, public education – remains high. Finland is a society is built on trust. Our economy's competitiveness and our well-being have been based on equality, on a strong welfare-state project, and a historical accident: our region has not had the time, over the short period since it became wealthy, for significant hierarchies to develop.

Another story that Finns tell about themselves is that people enjoy high levels of trust in each other. But as much as it is a myth, it is also grounded in research which shows that in fact it is a part of everyday life, supported by public insti-tutions. A citizen in today's Finland does not need much social capital in order to enter into collaboration with other people and institutions. In recent years, this aspect has been emphasised in research as one of our most significant strengths. Yet for this reason too, there is much at stake here. Should lack of confidence spread from politics to other parts of the social system, we will have lost our most important asset.

Historically, along with public institutions, Finland has had a strong culture of local associations and mutual collaboration. There is in fact no adequate English-language translation for the Finnish word talkoot, a word in routine use meaning "a gathering for the purpose of mutual help". The significance of this tradition of mutual help and volunteering is often played down in everyday talk, and yet a considerable number of Finns are still active in various associa-tions. The practice of talkoot is still important for dealing with less spectacular,

but nevertheless important, social functions: everything from volunteer-run army canteens or wildlife inventories to organising structured activities such as clubs or sports for children. Although we are adept at describing the impor-tance and the reliability of professionally led and top-down activities, we lack the vocabulary to talk about similar things going on in their shadow, under the rubric of talkoot or voluntary activity.

The society of individuals causes all kinds of confusion. Finns' negative attitude towards individualism has strengthened the sense that the culture of volun-teering is breaking down. The rise of consumerism and of the consumer as a social actor has been shown to have a corrosive effect on the community, seen in turn as the basis of politics, responsibility and collaboration. In the political field, the responses to heightened individualism suggest that decision makers have not understood the extent to which individualism is based on people's experience of their peer community. The idea has persisted that people can be managed by offering them personal rewards for behaving in the desired way and sanctions against behaving in undesirable ones. In justifying their own positions, politicians also invoke individual benefits and rights; very seldom do we hear talk of collective aims or goods.

The Finnish media still sees society and its structures of belonging through the lenses of work, politics and public institutions. People's everyday experiences, however, lie elsewhere. Most of us attend more to the communities and per-sonal relationships that we establish and sustain in our spare time. These are hard to discuss in the same language as politics and work.

What must the future metropolis prepare itself for? The metropolitan area can run with what the society of the individual has to offer both by learning to identify the communities within it and by concentrating on bringing them together, supporting them and guiding them.

In addition to a broad, liberal middle class made up of people who consume to maximise personal gain, there are always new groupings appearing on the scene. The lifestyles of traditional and novel population groups are diverging as well as shaping each other. Contemporary institutions do not necessarily have established links with institutions such as the family, work or associations. Communities are born more in the sphere leisure time.

Indicators of equality, and ways to achieve it, are undergoing significant change. The risk of marginalisation is growing and affecting new groups in Finland, not merely the conventionally recognised group of single, unemployed men. Some people are already in need of considerably more social capital in order to enable them to realise their potential or even to become part of mainstream society and collective political decision making.

The impact of central institutions such as the family and the workplace is diminishing. The proportion of people living alone has risen to 41 per cent of households. About half of Helsinki's households are home to just one person. The shift towards temporary contracts and the effect of the ageing population are leading to a loss of the continuity that used to be offered through communities of work. Pensioners are a significant portion of those left outside communities of work, with about 1.2 million people expected to take retirement between 2007 and 2025. The largest natural losses of personnel will be in health and social services.

We are in a paradoxical situation. Finland's institutions have managed to create unprecedented wealth and well-being along with the informal and institutional structures that support them, yet in the future these institutions will find it hard to sustain, let alone augment them. The task of sustaining or raising competitiveness levels is constantly moving further away from its former institutional basis. This happens despite the fact that it is precisely these strong public institutions that created this society of equals in the first place.

Today the role of institutions is less directly associated with economic competitiveness; rather, it is about supporting well-being. A particular challenge will be to understand the active nature of well-being as it is experienced; it is not something one can simply provide or protect. In the age of the individual, the good life is something one has to create for oneself.

The last time that cooperation between people was seen as a social force, we were witnessing the forward march of the labour movement. Now we cannot expect the rise of a similar new political force. Conflicts of interest are not as clear cut. The core of a networked economy is made up of the depth of interpersonal relationships, genuine co-creation and friendships. People's experiences of participating in their communities will alter society in decades to come, but the change will not necessarily be channelled via conventional politics.

The communities in the metropolitan area are global. This can also be a strength. The region can become the centre of an internationally significant community of co-creators, or at least, an important node in its network. To identify com-

munities like this, particularly when they arise through virtual communications, is not easy. On the other hand, they carry great potential. The people of the metropolitan area come together using tools that were formerly the property of giant corporations and that produced unprecedented change, namely global markets. What can people do with the same tools?

The greatest question for the metropolitan area is how to generate a new democratic system, one where people feel "they can". At this point and in this place, such a thing does not exist, and people have no experience of democracy in a world of individualised communities. Simply imposing a copy of the national model of democracy onto the metropolitan area seems like a step in the wrong direction.

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4. Sustainable Well-Being and Sustainable Innovation

All economic and social activity tends to be justified on the basis that it increases well-being. However, such arguments tend to assume a one-sided definition of well-being in terms of economic success and rising wealth. Although our gross national product has increased, the gap between high and low incomes has widened, people's emotional health has deteriorated and the state of the environment has worsened. The implication is that the way we define well-being must be revised. Sustainable well-being refers to a kind of welfare that is underpinned by a sustainable economy, quality of life and happiness, and a balanced relationship with nature. This is compatible with the principles of sustainable development. Sustainable well-being requires radical changes in the operations of both businesses and public governance. What is needed are totally novel types of innovation, in products and services as much as in operation models and in organisations. Innovation cannot be based on the idea that it merely enhances productivity. It must create well-being and for this it needs to be sustainable innovation.

4.1 The three cornerstones of sustainable innovation

For almost a decade, we imagined that *a new Nokia* would be born which would secure our future success.

That hope has now turned out to have been in vain. The metaphor of the "new Nokia" still lives on in our conversations and receives our attention – not to mention a substantial portion of public resources. But it is useful to deconstruct the metaphor. The belief perpetuates a myth according to which our welfare is based on an international corporation at the pinnacle of a high-technology industry. This picture is deficient in three different ways: it assumes that Finland will be saved by an export product; it assumes that the "new Nokia" will come about the same way as the old one did; and most damaging of all, that the wealth generated by the "new Nokia" will make us competitive in a way that is sustainable.

The origins of the myth are clear enough. The source of our well-being was our growing wealth. Nokia is a pearl in the market economy that was actually created in the planned economy – the product of technical training and clearly specified research and development commitments. And so we think that by going on as we were we will protect and enhance our well-being, shielding ourselves against any possible risks looming in the future or against any unavoidable but unforeseeable crisis. The moral of the story is that this can be done by investigating the market value of different technologies. Then we simply choose the fields where we want to nurture specialist, high-level expertise and direct the bulk of our research and development investment there. In this way, it is assumed, we can create a market leader – whether we are talking about biotech, nanotechnology, environmental know-how or educational exports generally.

However, Nokia is also an excellent example of how well-being arises from within a networked environment. Research carried out for Finland's business sector unpacked the elements that compose Nokia's smart phone and worked out how much of its value was created in different countries. When the phone was sold on the domestic market, Finland had created about half of its added value. Even when sold abroad, 35 per cent of the phone's added value was generated inside Finland. Other European countries only accounted for five per cent, the USA twelve per cent, Japan under seven per cent and the rest of Asia below five per cent of added value.

Global companies operate in a value network, a global phenomenon linked specifically to metropolitan centres. The centres of gravity which determine how value is created in the world's metropolises may change, so that the value of a Nokia phone can end up being created elsewhere, even if Nokia's headquarters remain in Finland. In addition, the ability of one product (a mobile phone) and one company (Nokia) to produce substantial added value in the consumer market is ultimately accidental. History has seen many examples of valuable products being commoditised. Perhaps rather than valuing mobile phones produced by Nokia, people will come to prefer simpler, more entertainment-oriented devices and be willing to pay more for them. Perhaps nobody will be prepared to pay for small handsets providing only voice messages and radio. If this happens, the value of the research and development capacity currently situated in Finland will crash. The Nokia myth thus obscures the real sources of both competitive advantage and well-being.

The Nokia myth and other similar phenomena are known in futures research as black boxes. These can be thought of as answers to future problems, but ones that actually sidestep the original question. Such answers cannot help solve the problem or convert a negative into a positive situation. A black box is likely to generate solutions that have no subject and no real activity, an event without a cause in fact. What results is a new technique or technology; perhaps an attitude change; perhaps the younger generation will solve the problem; engineers may solve it; our top talent will solve it; a "new Nokia" will emerge…

A black box can be opened with the help of knowledge. This is why we have come up with the concept of sustainable well-being. We suggest that the Helsinki Metropolitan Area's vitality is based on it. Through the concept we seek to respond to the question: How might well-being be supported so that it will continue to rise in the future? Sustainable well-being is based on the concept of sustainable development which has three dimensions: economic sustainability, social sustainability and environmental sustainability. By linking the competitiveness of the metropolis to sustainable well-being, it is possible to help create a good life for its inhabitants and enhance the region's attractiveness.

Sustainability demands a broad understanding of our future. For a region to be sustainable, it must develop on the basis of the available research on future development trends. Secondly, the basis of development has to be a thoroughly researched and precise concept of what makes up well-being.

So what are the components of well-being? Until recently well-being was understood in Finland as standard of living, in other words, as the material resources at an individual's disposal. It is, however, no longer possible to develop a welfare state on this basis. Rather it appears that in the fast-paced global economy, the issue is not so much the maximisation of income levels but sustainability. A second central issue is how the ever more diverse metropolis can strengthen communities to create well-being. This comes in addition to people's need for more stable family relationships and friendships. Thirdly, the overuse of natural resources and the changes in our climate, brought about by the drive for constant growth, force us to examine all the components of well-being from the perspective of environmental sustainability.

So what has turned around our understanding of how competitiveness and well-being are related? Suddenly, competitiveness is dependent on well-being, and, at the same time, well-being is dependent on competitiveness. Why is the symbiosis of these two elements so crucial in the Helsinki Metropolitan Area?

Sustainable well-being is a justified approach in the Helsinki Metropolitan Area for four reasons:

1. The competitive advantage of the metropolitan area is built firmly on its high levels of learning; that is, on its people. Their well-being and their quality of life are the most important elements of our competitiveness, the foundations of the region's attractiveness. Sustainable well-being is a human-centred approach, and builds on the same tradition that sparsely populated Finland has built on in the past.

2. Competitive advantage that is based on specific technological know-how is ever more short-term. In a world of open information, new goods and innovations are born in metropolises on all continents. By contrast, there will always be demand for solutions to the most wicked problems, even from the point of view of the business economy.

3. Human-centredness and an orientation towards finding solutions are strong elements of the Finnish social tradition. Finland's previous successes have always been based on our ability as a society to approach and resolve problems together, and so to develop the well-being of the entire population. Now this tradition should be taken further and turned into models of action and services.

4. In a knowledge-based, wealthy society, people's motivation to work, be entrepreneurial and collaborate is an increasingly important issue. Material survival does not underpin moti-

vation: the personal rewards of acting are ever more important. These can be made available to people by concentrating on resolving wicked problems and developing society's overall well-being.

If we want to increase the competitiveness of the metropolitan area with the help of sustainable well-being, we have to understand its core components. It comprises three basic elements: quality of life (happiness, good human relationships, the richness of life), a sustainable economy (wealth) and the planet's ecological parameters (sustainable development).

QUALITY OF LIFE
(HAPPINESS)

SUSTAINABLE
WELL-BEING

SUSTAINABLE
HOUSEKEEPING\
ECONOMY
(WEALTH)

BALANCED
RELATIONSHIP
WITH NATURE
(SUSTAINABLE
DEVELOPMENT)
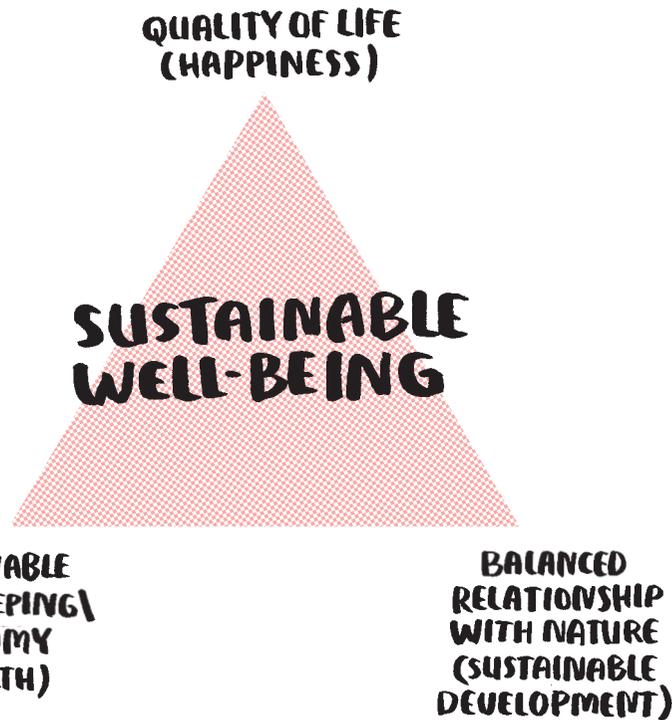
THE COMPONENTS OF THE SUSTAINABLE WELL-BEING MODEL

4.1.1 Quality of life

Money is no longer so important. In 1974 the economist Richard Easterlin came up with the proof of the paradox which bears his name. His research shows that beyond a certain point, people's experience of well-being does not increase with wealth. Rather, well-being appears to be related to other factors.

Thirty years later, a committee chaired by Nobel Prize winner Joseph Stiglitz produced very similar results. The group was trying to develop measures for assessing the development and well-being of economies. Stiglitz's committee likewise concluded that it is a mistake to concentrate so much on material standards of living. The fundamentals of well-being also include health, education, one's ability to act and to affect decision making (at work and in politics), social relationships, the current and future state of the environment and sense of security.

Partly, this is a question of a qualitative social shift – for instance, in the increase in levels of education and wealth. However, our values have changed at the same time as is apparent at work and throughout society. Research on happiness emphasises the significance of time, social relationships and pleasurable activities, so that for well-educated and well-fed Westerners, quality of life has overtaken standard of living.

In Finland, the core of well-being has been best studied by Erik Allardt who, as early as 1976, had already separated out its components. Allardt makes a distinction between well-being (objective welfare) and happiness (subjective experience). Through this simple distinction, Allardt gives individual experience the significance it deserves. In combining welfare and happiness with the concepts of standard of living and quality of life, Allardt generates the following matrix:

	WELFARE (OBJECTIVE WELFARE)	HAPPINESS (SUBJECTIVE EXPERIENCE OF WELL-BEING)
STANDARD OF LIVING	Satisfying needs in terms of material resources	Subjective experiences of one's material and external conditions
QUALITY OF LIFE	Satisfying needs in relation to other people, society and nature	Subjective experiences of one's relations to other people, society and nature

CONCEPTS OF WELFARE/WELL-BEING, SOURCE: ALLARDT 1976, P.33

CASE:

Mummon Kammari or 'Granny's Front Room': Everyday Skills for Caring for Older People

MUMMON KAMMARI IS A NETWORK OF OVER 1000 VOLUNTEERS IN PIRKANMAA.

This volunteer-run centre for coordinating and delivering help gets requests from 3,000 older people or their relatives each year. Kammari is an important reference group for its volunteers who are mostly aged around 60.

Many of those they help are pleased just to chat, play a board game or read together. In addition to visiting homes, volunteers can be found for working in institutions and in sheltered or service housing and day-centres (palvelutalo), as well as in Kammari's Kyläpaikka, its own venue for visitors of all ages.

There are a couple of hundred men involved, mostly as "caretakers" in the Talkkari Pikkarainen scheme, who help with odd jobs around the house. One active 74-year old recounts that once he had realised how work-orientated his life had become, he began to yearn for a sociable and genuinely caring retirement, "dancing with old ladies, hanging curtains and joining the procession at badly attended funerals". He has noticed that although the friendships he forms with those he helps are a positive thing, volunteers do tend to have trouble finding a balance that avoids getting too attached. However, the advantages of participation are obvious.

"Many older people are helpless in the face of bureaucracy. Working with Kammari is a way to supplement public services. We also have more time and the capacity to listen. And since most of us are old-age pensioners ourselves, the group of volunteers is important to us too", explains the "caretaker".

In Allardt's view, the objectively measurable standard of living across society is only one of the foundations of well-being, another being the subjective experience of one's conditions and immediate environment. Each element of the structure is needed or the structure will collapse. On this basis, Allardt presents his classic model of the needs that underpin well-being.

- **Standard of living** (having): income, living conditions, employment, education, health
- **Social relationships** (loving): neighbourhood ties, family, friends
- **Opportunities for self-realisation** (being): political resources, positive view of the self, interesting hobbies and leisure

The philosopher Martha Nussbaum, Professor of Law and Ethics at the University of Chicago, observed in her recent article, 'Who is the Happy Warrior?' that Allardt's work was visionary; he understood the active character of well-being. Instead of measuring static levels of pleasure or satisfaction, he used verbs, "doing-words", to describe states of happiness: having, loving and being. Nussbaum develops her idea of well-being in a not dissimilar way: it attaches to the quality of a person's existence and their ability to participate in shaping the environment in which they live. What becomes important, among other things, are opportunities to realise one's goals and values, to use one's capacities and to participate.

Quality of life is closely connected with employment. Howard Gardner, Professor of Cognition and Education at Harvard University, has carried out research into quality of life and well-being from the point of view of work. Gardner defines good work with three "e" words: excellent, engaging and ethical. Excellent quality, engaging activities and ethical living are also the starting points of a sustainable life. This kind of sustainable well-being makes possible the utilisation of actually available resources and what he calls multiple intelligence, something that cannot be measured by standard psychometric instruments.

For the sociologist Richard Sennett, quality of life is based on something slightly different: the pleasure of achievement and having craftsman-like skills. Sennett emphasises the individual's need to be able to do something really well – another reason to invest in lifelong learning. The goals here have less to do with top performance than they do with good work.

A broad-based notion of well-being also includes an appreciation of the value of culture as something that makes us happy. This can already be seen in the increased consumption of culture. Quality of life and well-being are something that people look for through self-realisation, experiences, art and the spiritual life. And so the economic importance of culture has grown, and the preconditions for producing, distributing, marketing and selling cultural services have diversified.

Allardt's three categories – having, loving and being – are thus best examined in the light of the shifts being encountered across the world and in Finland. The description of the components of well-being cannot be set in stone: rather, their content changes according to each era's challenges. We should aim for quality of life in a way that is appropriate to our times as well as being sustainable.

4.1.2 The appropriate use of natural resources

Sustainable well-being has a second element, a balanced relationship with nature. The greatest challenge of our era is to cope with climate change and with the problems arising from the resource crisis.

All prosperous societies have built up their wealth on structures that demand cheap and abundant energy and other natural resources. These same structures also sustain well-being. Cheap energy is deeply enmeshed in our everyday life: above all, in how we live, eat and travel. This means that the resource crisis threatens our well-being.

The future metropolis must prepare for peak oil. It must consider productivity and efficiency from the perspective of sustainable energy consumption and limiting emissions. Sustainable well-being requires increasingly innovative solutions and ever more collaboration across sectors, not least because of ecological constraints. The change that is needed must therefore be both systematic and systemic. It will require substantial public investment – presumably as substantial as was required to produce welfare in the industrial age.

Natural capital is diverse. Based on the work of Gretchen Daily, Professor of Environmental Science at Stanford University, biosphere and ecosystem "services" are divided into four classes:

1. Provisioning services: goods obtained from marine resources, timber and agricultural production.

2. Supporting services: ones necessary for the provision of other ecosystem services such as the production of oxygen and soil formation.

3. Cultural services: non-material benefits such as aesthetic beauty, cultural, intellectual and spiritual inspiration.

4. Regulating services: regulation of ecosystem process, for example, air-quality maintenance, climate regulation and water regulation.

To manage the elements of natural capital, it is essential to follow certain rules. The use of renewables, such as timber and fish, must not endanger their natural regenerative capacities. In relation to non-renewable resources such as oil, the key principle is to invest part of the profits into a shift towards renewable energy. Rules or constraints like these are indispensable for preventing the destruction of natural capital and the impoverishment of future generations.

In the economics of sustainable development, it is understood that natural capital and industrial capital cannot simply be exchanged or substituted for one another. They complement each other and both are necessary in production. For example, fishing equipment is useless without fish stocks. With critical elements of natural capital such as water, no form of industrial capital can actually replace natural capital, which means that developments in economic activity must aim to preserve natural capital.

The combined effects of regulation and increased demand have already given rise to considerable investment in renewable energy, for example. The worldwide recession gave rise to economic recovery measures in several countries – notably South Korea, China, France, Germany and the United States – based on so-called green economics. The green economy combines the conventional objectives of securing economic welfare with, for instance, energy-efficient new services, renewable energy production and social justice.

Natural resource use is not just a question of technology and politics. Because the problem is systemic, solving it entails fighting on many fronts. Lifestyle choices and social movements that have grown up around them are also significant. Social phenomena associated with low-carbon and resource-efficient lifestyles are already taking root around the world, for example, as alternative consumer models. Ways of thinking such as degrowth, the slow movement and downshifting are spreading. In Finland, discussion has focused on moderating consumption and of the "new normal", terms that point to a more discerning, value-driven consumption where ecological and ethical perspectives take priority.

EXAMPLE: TRANSITION MANAGEMENT
In the Netherlands, elections do not disrupt desired development

Different types of environmental and energy policies in the Netherlands tended to run aground repeatedly on the same problems. Corporations lobbied so hard that the policies were constantly watered down. For a long time however, politicians considered policy programmes the only way to keep those companies on board that were not incorporating environmental considerations into their business operations on their own initiative.

Collaboration between researchers and decision makers gave rise to a new approach, one that tries to remove obstacles to structural transformation. This model is known as Transition Management. It is one effort to respond to the cyclical nature of politics and the time horizons this creates. Repeated elections do not encourage the emergence of long-term solutions. At the same time, inflexible social structures hamper efforts to react quickly to today's complicated challenges.

The approach is designed to incentivise an area's stakeholders to create solutions together which address the requirements of sustainable well-being. Social organisations and associations, businesses and the public sector are all important parts of the model, but planning and implementation starts with the grassroots. The model is based on open dialogue and critical problem formulation. The idea is to consider the possible and desirable alternatives with the stakeholders and to come to a collective decision about how these will be realised. In the process of realising new solutions, new stakeholder groups are identified as important and drawn into the framework.

The central plank of the model, besides a broad repertoire of participatory activities and innovations, is setting long-term goals. In this programme, they were set 30 years in the future. The model starts with the creation of a shared and ambitious vision. Other elements that are highlighted include constant learning.

The Transition Management model has been adapted, for example, to guide the transformation of transport and energy systems so that they become sustainable in an all-encompassing sense. Dissatisfaction in the ministry responsible for energy with how things were being run was a central motive for adopting the model. Energy production seemed inca-

pable of responding to future challenges, but this model helps to establish less polluting production systems which also strengthen economic growth.

The public sector's central role is to support productive interaction between stakeholders and to incentivise local actors to take a greater role in building sustainable well-being. Since actual implementation and planning occur largely outside conventional political institutions, problems of short-termism associated with elections cease to be obstacles to long-term programmes. These trials in the Netherlands are only just beginning. However, the model suggests how the metropolis might effect structural change towards sustainability by drawing the region's central actors into the process of transformation.

4.1.3 Sustainable housekeeping

Sustainable housekeeping, which is another way of talking about running a sustainable economy, is not about cutting back the state or public services. It points rather to a new way of thinking geared towards creating resilient prosperity. It is the third element of sustainable well-being alongside quality of life and the appropriate use of natural resources. To appreciate this new conception of wealth, we must rethink some other concepts, notably productivity and efficiency. It is important to understand wealth as something with a dual nature. Wealth is the capacity to build what might be called "sticky" regions, places where wealth stays put. Wealth is also the capacity for renewal: that is, for innovation. Wealth cannot then simply refer to how much growth or prosperity there is in a particular region, but to an ongoing ability to generate wealth.

In a fast-moving world, wealth is based simultaneously on both renewal capacity and the ability to establish lasting local economic structures. Once again, the outcome is a network connecting the public sector, business and people, where the needs of these groups are in large measure shared and mutually enriching. Public resources must be approached as an asset, something to be invested for the future, and there are already good examples of where this has happened.

Stuttgart has managed to create resilient wealth. The area, aiming to be the centre of Europe, is part of the world's wealthiest region, home to Mercedes Benz. It ranks repeatedly at the top of quality-of-life and competitiveness indices.

One reason often given is the city-led programme called Open Source Stuttgart, which has made the region a star in the firmament of open source programming. It has managed to link up open source programming skills with local enterprises, many of which form part of Mercedes Benz's value chain. An exam-

ple of the variety within the network are the wooden components of the cars which form a special part of the product's "character". The fully automated machinery that produces these is run on open source code. The region attracts all the world's most significant companies in the field whenever it hosts events on open source.

Why does the city of Stuttgart support the use of open source code and want the region's companies to use it? Because if one uses licensed, closed source programs, their development takes place anywhere from Mumbai to Seattle or São Paolo. Any added value remains in those metropolitan areas. Stuttgart develops programming openly, so the added value accrues from applying programs, systems integration, user support and other similar and locally delivered services. The added value thus stays in the "heart of Europe", helping through sustainable housekeeping to maintain wealth in the region.

In Basel, competitiveness is pursued through investing in saving energy. The metropolitan area does well in quality-of-life rankings and is financially competitive. It was the first Central European city to proclaim itself a "2000 watt society". According to scientists in Basel a sustainable lifestyle would allow an individual a continuous consumption level of 2000 watts which is about average in the developing world and about a tenth of current European consumption. The Basel programme aims to drop energy consumption to a tenth while increasing prosperity sixfold. After Basel, numerous Swiss and German towns and cities have copied the programme's goals and methods.

Behind the scientists' findings is research on natural resources and justice, but considering it together with competitiveness policies led to its adoption as a regional planning concept. From the point of view of competitiveness, it is not sensible to spend money on energy. A large proportion of the money used on energy could be channelled into healthcare, sports, education and technology. For this same reason, Spain reduced the speed limit on motorways. The fuel burned up on its roads began to make too large a dent in national finances while the added value of fuel tends to concentrate at the other end of the production chain. Money invested in energy savings are thus a particularly wise investment in sustainable housekeeping terms. It generates new skills in the region, stimulates entrepreneurialism and raises property prices in a way that is sustainable.

Sustainable housekeeping requires partnerships or the bringing together of economic and other sectors of society. Accruing sustained wealth depends on the

different actors' abilities to create local well-being through value chains and skills. Companies must also be encouraged to invest in long-term success: in product development and in research. A company on a firm footing will both prepare for future markets and utilise various resources in a sustainable way, and the best will know how to link up global know-how with locally generated wealth.

The economic liberal Milton Friedman popularised the idea that the only social role of a company is to maximise profits for its owners. There is no room for this idea in a sustainable economy or in sustainable housekeeping. Even the advantage to local owners is not sufficient to guarantee social advantage, particularly if the success of companies does not trickle beyond their walls as anything but tax revenue. The role of a company should not, however, be examined from the narrow perspective of social responsibility. The entire sustainable well-being of society is also a prerequisite for the welfare of a company. The reasons lie partly in the motivation of its employees: we spend a good part of our best years at work. More than just production plants, workplaces are part of our human story and our identity. Many are more willing to give their best if their employer is watching over a shared future.

Sustainable housekeeping is cheapest in equal societies. The social policy aspect of a sustainable economy concerns its income distribution. In the long run, it is most beneficial to a society for wealth to be justly distributed. When everyone receives their share, it offers an incentive for everyone to act. Economic equality can in fact be considered one of the correlates of a successful society. Numerous research findings show that equal societies function better and people who live in them are more satisfied with life than those where equality is never realised.

British epidemiologists Kate Pickett and Richard Wilkinson, in their high-profile book *The Spirit Level*, show that the most harmonious societies have the most equal income distribution. Disparities in wealth go hand-in-hand with, for example, health and mental health problems, illegal drug use, poor educational attainment and crime. Inequality, regardless of gross national product, appears to explain these problems better than economic recession or even poverty. Only through the equal distribution of wealth does economic success lead to widespread well-being. The task of solving social problems in unequal societies eats up too much money.

Sustainable housekeeping is, in the end, a very concrete concept. Rather than living hand-to-mouth, we must use resources while taking into account their regenerative potential – their future use. Prosperity must be more evenly spread, but at the same time it must be organised so that the emphasis will shift away from material growth, allowing the economy to evolve via other mechanisms of growth. Investment for the future must be designed to promote, in particular, energy-efficient or material-efficient lifestyles, products and processes.

4.2 Sustainable innovation

Our view is that the best route towards realising the three dimensions of well-being outlined above is sustainable innovation. A prerequisite for future well-being in the metropolitan area is the harnessing of innovation to the goal of sustainable well-being. We must move from productivity-oriented development activities towards sustainable innovation. By this we mean innovation based on foundations that are robust economically, ethically, socially and in terms of natural resource use. It combines developing sustainable well-being with various interactive ways of making use of dispersed learning and skills. Sustainable innovation gives new and successful products and services a deeper meaning: they must assist customers and citizens to manage their lifestyles to live happier lives and to act in ways that support sustainable development.

In today's world, sustainable well-being cannot emerge without innovation, but this raises the question: What are the specific goals of innovation? As we have demonstrated in Chapter 2, innovation is a mechanism for enhancing performance – productivity and economic growth. This has been the justification for focusing on innovation both in business and in public administration.

Now innovation must meet challenges of a new order. It must resolve some of the burning issues facing humanity, problems in the areas of, for example, health, poverty, learning and child rearing, the environment and urbanisation. The motives and goals of innovation are thus broadly connected with efforts to enhance well-being. This also changes how innovation happens.

The old view sees innovation too narrowly. In economics innovation has been seen as a specific component of total productivity, needed to explain economic growth alongside labour and productivity. Talk of innovation sidesteps issues related to environmental impacts or well-being. Growth theories have traditionally concentrated on industrial investment, in areas such as communications or road infrastructure. More recently, there has been more emphasis on the significance of skilled labour and human capital. These types of capital – industrial investment and education – have been seen as central to innovation in companies. Innovation activities have thus been nurtured particularly through investments in research and development, and in training. Social and environmental capital have been largely considered external to innovation activity and developing competitiveness.

At the same time, it has been conventional to assume that losses of a particular type of capital can be compensated for elsewhere. Degrading natural capital was not a concern so long as there were benefits on the industrial capital side. Nature has been replaced by synthetic products – wood by plastics, for example. And yet, limits on natural resources make the endless production of manufactured goods an impossibility. It is necessary to return to ways of using nature's own regenerative capacity.

Somewhat newer innovation theories have emphasised the user and the user's role in product development. New products and services, trials and product improvement emerge ever more through involving people in participative processes. Developing successful products is no longer based so much on getting a technical edge as on usability, ease and inventive adaptation. Yet even this remains a narrow view.

The concept of sustainable innovation goes beyond these old notions. Innovation theories tend to describe social reproduction only very partially, leaving either natural capital or people out of the equation. Still the main focus remains the same: society must be able to reproduce.

The need to reproduce has not disappeared. The newest conceptions of well-being and resource scarcity in fact emphasise our need for renewal. We can no longer look to technical advances for solutions. The important thing for the future metropolis is to harness innovation activity to the goal of sustainable well-being. We must move from development activity that aims for productivity growth towards sustainable innovation. This is an interactive process where the different elements of capital are used in a balanced way for the purpose of developing innovations that support human progress. The concept seeks to combine innovation theories, bringing them together with long-term questions of welfare, and to fit production methods to our knowledge of the limits of natural resources.

Sustainable well-being is but one element in the model of sustainable innovation. The others are:

1. **Participative innovation:** personnel, customers, users and citizens collaborate; developing and respecting people's know-how; innovation democracy.
2. **Continuous innovation:** capacity to regenerate and to break through boundaries; ability to sustain permanent creative renewal.
3. **Global innovation:** innovate through global cooperation with the best ideas and learning from around the world.
4. **Innovative management:** motivate and stimulate personnel in companies, organisations and throughout society; develop new management models suitable for decentralised processes.

To begin with, we must produce that which we consume. The core of sustainable innovation is a future-oriented way of utilising available resources. Reaching the goal will require a multifaceted understanding of our own resources and strengths as well as our dependencies. The objective of sustainable development is to make use of the best learning and the newest know-how and information for the purpose of tackling society's core problems.

To encourage sustained prosperity, the metropolitan area's business activities should, above all, support human and social development and well-being. In economic terms, the development of the economy and of innovations must improve methods of resource use – of forms of capital – to achieve jointly agreed, sustainable well-being goals. Rather than quantitative growth, we must strive towards the sustained regeneration of resources.

Like other types of economic activity, sustainable innovation is based on making use of four resources or types of capital – industrial, human, social and natural – in the most suitable way.

- **Industrial capital** is the totality of human-made buildings, equipment and production processes. Often it is referred to as investment.
- **Human capital** consists of education and learning, skills and knowledge. Here people are an organic means of production.

- **Social capital** represents cultural and institutional norms and practices, and also the cooperation and human networks they generate.
- **Natural capital** is constituted by all natural resources and forces.

Regeneration refers to two processes: developing resources and replacing or substituting for their loss. It means using resources so that they will still be available in the future. A simple example is forestry where, as Finns are aware, felling trees is always followed by ensuring new growth. The most challenging issue is the use of non-renewable resources such as minerals and oil. The replacement of industrial capital is a core competence in business, but even this is not adequately managed. When economic crises hit, capital can be destroyed and dispersed in arbitrary ways. This further underlines the importance of approaching economic development via sustainable well-being.

Human capital is renewed through lifelong education. Regeneration also encompasses the labour and nurture required to produce the next generation. This also needs resources. Human capital can equally be destroyed through incompetent management and employee burnout. Developing ways to enhance welfare at work has become recognised as an aspect of innovation policy in Finland. The researcher Hannele Seeck suggests that managing employee well-being is the latest phase of innovation management. According to Seeck, maintaining employee well-being and avoiding over-tiredness at work are prerequisites for creativity and innovativeness.

INDUSTRIAL CAPITAL — HUMAN CAPITAL — SOCIAL CAPITAL — NATURAL CAPITAL

+

SUSTAINABLE INNOVATION

SUSTAINABLE WELL-BEING
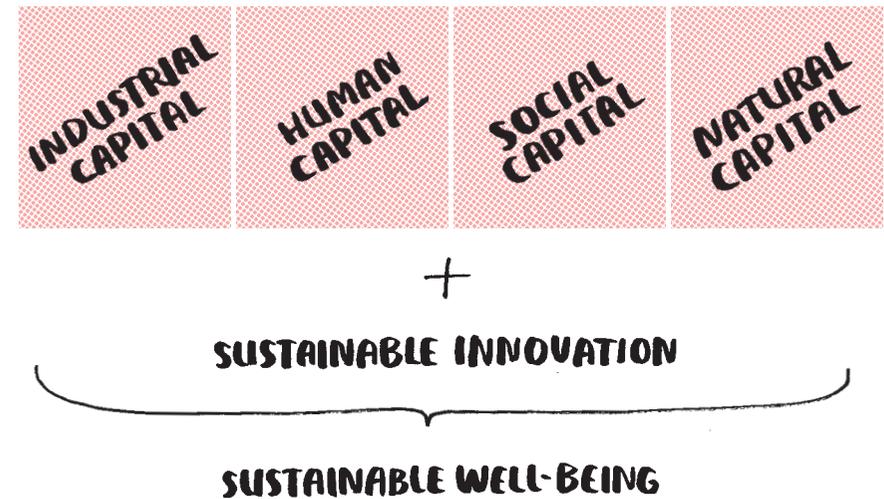
SOURCE: HAUTAMÄKI 2010

Sustainable innovation provides the foundation for future business; it is not just part of ethical responsibility. If that were the case, it would never be put into practice. But the tasks that sustainable innovation is geared towards – the wicked problems – have global significance. The need among other things to progress sustainable development, improve healthcare and create new schools is universal, which means that the potential demand for sustainable innovation in these fields is massive. Companies that choose this route will have great opportunities. It is by this rationale that ethical principles also become central to the logic of business.

Sustainable innovations are not only ideas put forward in businesses. In the old technical-economic framework, innovations were treated as inventions based on research that were then exploited by adapting and marketing them. People were consumers and customers and had no role in the innovation process. The starting point for sustainable innovation is to support meaningful aspirations, which makes social innovation an important part of the process. Good legislation, improving the population's health, education, environmental protection and strengthening civil society (through participation and voluntary activities) are all desirable objectives here. In a human-centred process both the developer

and the user benefit from innovating in their own lives – not by selling but by using the innovation. Human-centred innovations, designed to help in everyday life, potentially increase well-being far more than purely commercial solutions.

The participatory principle in sustainable innovation does not refer only to user-centredness but to human-centredness. Certainly a user-centred approach is an improvement on the production-driven one that characterised the industrial age. Industry sought to standardise products in order to ensure even quality and reliability. The birth of global markets expanded the scope for variety to respond to diverse needs. Customer choice increased which forced companies to enlist customers in product development. It was no longer sufficient for a car, a computer or a mobile phone to work. Rather, the product had to reflect its user by being reliable, easy to use or specialist – for instance, mobile phones designed for older people. Consulting the user became a central element in the innovation process.

However, a human being is an indivisible entity. Reducing people to drivers, users of mobile phones or of social welfare and health services leads to partial solutions. Human-centred innovation demands that goods and services are approached through the meaning they have in people's lives. Products and services must help people to realise their own life plans and dreams.

The new well-being state may soon have a partner in a developing country. Sustainable innovation is after all based on cooperation and the international economy is not just a setting for mutual competition. Just as important is to recognise that resources do not respect borders: that is, one must recognise the links between metropolitan centres. Prahalad and Krishnan illustrate this phenomenon through the equation R=G, where resources (R) are global (G). In the age of international networks, resources are not something one has to own. The necessary know-how can easily be acquired from outside one's own organisation, from anywhere in the world. Only very few organisations are in a position to assume that the best learning exists within their own walls. The most important know-how concerns creating the partnerships that support the current goal.

In sustainable innovation, attention focuses on the wicked problems that affect all metropolises. When that happens the social resources of the entire world are at our disposal. People everywhere are looking for solutions to similar problems and good ones already exist. Cooperation between metropolises will give more people access to this rich resource, so that, whether we are talking about a low-carbon technology or a way of organising cooperation between a hospital and associations of patients' relatives, it can quickly spread across the world.

For example, the scarcity of clean water is clearly a wicked problem to which answers are being sought everywhere. An all-encompassing way to manage water resources is important, one where the various uses of water are seen as both connected and also as part of the broader environmental context, for example land use patterns.

Sustainable innovations have a significant role in the availability and quality of water. To date, they have concerned, for instance, the storage, distribution, pricing, use and reuse of water. The overall, shared goal is to develop sustainable models for water use.

Innovations can be technical or systemic. Industry invests in technologies that reduce water consumption and the creation of waste water. Households reduce both water consumption by employing water-saving WCs and shower units. The sustainability of agricultural water consumption is being improved with methods for "smart" watering, and water availability is being increased through better waste-water treatment and methods of reuse. Different certification systems and eco-labels aim to oversee and reduce the pressure put on ecosystems and to incentivise the use of technologies for limiting water use.

Regeneration is for everybody. Producing innovations to promote sustainable well-being is one metropolitan challenge. The second comes from the need to regenerate, to renew the processes and structures that make up the metropolis so that the metropolitan area can quickly adapt to changes and grasp new opportunities. For this we need change management and to adopt a mentality that is positive towards the future. It may seem like a lot to expect, and indeed this kind of mindset is not possible unless ordinary people's participation in shaping the world is considerably increased.

From the point of view of innovation activity, the idea is to strengthen people's rights to be a part of the way society develops, and so of the renewal process of democracy. In an innovation democracy, products, services and processes are developed in partnership between citizens, companies and public administration. The crucial demand is for broad civic participation in the production of social innovations.

To sum up, we can observe the following: sustainable innovation means innovation where the long-term effects on people, society, the economy and the environment of the innovation process and its products are considered. It is a long-term activity for developing metropolitan well-being.

Sustainable innovation thus involves cooperation where solutions are sought and found for people to better realise their goals. The central problems we are facing – concerning climate change, clean food, new energy forms, health, ageing, poverty, education and well-being – demand that all actors participate and work together.

Challenges of this scale cannot be resolved simply with national or municipal interventions. The problems are not only global, they are shared across metropolises. But global networking opens up an entire global pool of knowledge and know-how to support local innovation activity. It is likely that the solutions to the most challenging problems will be born out of global innovation networks made up of learning and know-how from across the world. In the age of the networked economy, regional and institutional innovation capacity depends on the ability to build partnerships that generate progress in finding solutions to the problem at hand in the best possible way.

4.3 Making use of all capital

A competitiveness strategy for a metropolitan area can be derived from the analysis above. It builds on the following theories and concepts:

- Newest Schumpeterian growth theory
- Innovation ecosystems theory
- Innovation clusters and global networks
- Sustainable well-being and sustainable innovation
- Open or peer production and the networked information society

Competitiveness in the metropolitan area refers to the level of current and future citizens' sustainable well-being.

This does not yet tell us how competitiveness is created. The leading feature promoting competitiveness in a metropolitan area becomes its capacity to sustain and support innovation. To recap, these are the characteristics, processes and aims of sustainable innovation:

- Principles: sustainable well-being, participative, ongoing and global innovation, and innovative management.

- Central to the innovation process is the utilisation of all forms of capital in ways that ensure their regeneration. They must be available in the future.
- The aim is to produce innovations that promote sustainable well-being and good life locally, nationally and throughout the globe.

Here we come to a decisive question: from the point of view of sustainable innovation, what constitutes the capital of the metropolitan area? In comparisons of internationally successful hubs of innovation, quite often the emphasis is on the creative class, its human capital (learning) and its economic capital (investment opportunities). The rationale for this is that creative and skilled individuals create new business with substantial risk capital. This is the so-called "Silicon Valley model". This model of competitiveness (skilled population + risk capital = new companies) works – with certain caveats – in the Helsinki Metropolitan Area. This is a feature that can and must be strengthened.

This way of thinking is also reflected in the definitions used by Finland's Ministry of Employment and the Economy, where regional competitiveness refers to all the features of a region that make it an attractive and progressive environment to locate economic activity and draw in labour. Competitiveness is particularly enhanced by a strong skills base, good conditions for entrepreneurship and networking, well-functioning support systems for innovation and finance, as well as in relation to the labour market and infrastructure, plus a comfortable living environment. Culture, a good education system, security and good local services are also increasingly significant for regional competitiveness.

We wish to go further still. From the point of view of sustainable innovation, *all of a region's resources impact on competitiveness*. We are thinking particularly of:

- Public resources (municipalities, their capital and personnel, and other aspects of public administration)
- Companies' resources (businesses and their capital and personnel)
- Citizens' resources (citizens and their networks)

Partnership thinking that draws on all available resources leads to a very different metropolitan policy from what we are used to. The idea is to think of the metropolis as a community with a shared pool of resources. It is composed of citizens, public institutions such as municipalities and businesses. For the region to succeed, we need a variety of arrangements for ensuring that resourc-

es serve the development of the entire region. One of the most important pre-
requisites for metropolitanisation is to build networks of cooperation.

EXAMPLE: DESIGN CAPITAL 2012
– the chance to open up the city

The naming of Helsinki, Espoo, Lahti, Kauniainen and Vantaa as World Design Capital 2012
is an excellent opportunity to start developing genuine cooperation, and to encourage uses
of public space that are creative and enhance well-being. The theme year has three parts:
open city, global responsibility and roots for new growth. The last of these encompasses the
growth of social and cultural capital as well as economic capital.

The Open City theme is a chance for a variety of actors and stakeholders to help make
everyone's life easier by tackling problems together. At its best, the year will be a cata-
lyst for sustainable practices and a platform for encouraging experimentation – and not
a celebration of past achievements. The theme of Open City is grounded in ensuring
open cooperation in all development. The design capital programme is divided into six
elements: urban planning, architecture, interior design, communication design, indus-
trial design and sustainable design. The thread of open design thinking runs through it,
meaning that users and other participants are involved in designing a product or service.
And when design is understood as process, it includes things such as services for immi-
grants or school meals. When school meals are planned and designed by school pupils,
catering staff, nutritional therapists and spatial planners in cooperation, they are realisa-
tions of open design.

An open city must also be a proactive facilitator: in addition to citizens being encouraged
to organise collective events, the city could be creating networked platforms for booking
facilities. Applications for any necessary permits could be made through the same portal.
An open city must open as easily as possible.

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5. The Metropolitan Partnership Model

5.1 The responsive metropolis

Sustainable well-being will not be realised with the development tools being used in the public sector today. A radical shift in thinking is needed, away from a mindset that treats people as passive recipients of existing services. A new, responsive metropolis is one that can capture all available resources and make them work together. We already have many strengths; we now need to harness them along with people's skills and enthusiasm – a form of implicit prosperity that we can cultivate. This prosperity will form the basis for social trust and will have a significant impact on both our well-being and the cost of various socially necessary functions. This is an important breakthrough, especially for municipalities.

New structures will not be created by partnership thinking alone. There is a need for concrete action, changes in ways of doing as well as in ways of thinking. The new urban model must be one that listens to residents and businesses, and engages with them in what it does and how it develops new ideas. This is what we mean by a responsive metropolis.

We shall illustrate the challenge with a concrete example, one that unfortunately tells us more about the problem than its solution. Nevertheless, it contains many possible keys with which we might open up new analytical routes and move the metropolitan public sector towards responsiveness.

In one metropolitan municipality, skateboarders had two parks for their use. One, a concrete slab of less than one hundred square metres, was located in the middle of an industrial estate, at the back of a storage yard used by the municipal roads department. The park had been built by the skateboarders themselves. Through their association, which had run for ten or so years with a membership of around two hundred, they had secured hundreds of euros each year from municipal funds for young people. This had been used for materials for mini-ramps built on the site in the usual voluntary way, through talkoot (joint voluntary work; see Chapter 3, Section 5).

The municipality had another park, run by its sports and leisure department, next to a car park belonging to an ice rink. This had a larger ramp, commissioned by the authority and assembled by its employees, but there could have been room for considerably more ramps.

Local skateboarders felt the municipal ramp was in very poor condition and they suggested that their association might erect another ramp, recently left unused by a neighbouring municipal authority. The municipality refused on the basis that it would be unclear where responsibility for each ramp lay.

Eventually the municipality decided to repair their ramp, but unfortunately the plywood was incorrectly installed so it quickly wore out. This only confirmed the skateboarders' misgivings about the municipality. Soon many ceased using the municipal park altogether and skateboarded in their own park or in neighbouring municipalities.

Sometime later, the municipal department responsible for real estate announced that it was selling the land the skateboard association had been using. And so the municipal funds allocated to support young people's activities were left unspent that year as there seemed little point in building on a site that they would soon have to abandon.

This is an example of how difficult it can be for both the municipality and service users (in this case, the skateboarders and their association) to realise a shared goal. Presumably everybody agreed that good local leisure facilities are something worth striving for, but at the same time, the municipality's actions were internally contradictory: it gave funding to a community whose other resources – the members' expertise and willingness to volunteer – it approached with caution. The different municipal departments – youth work, real estate and sports – cancelled out each other's efforts.

The result is a loss of confidence in the public sector and the political process. To the skateboarders, it appears that their hobby is of no interest to the municipality, which still operates on a top-down basis. The skateboarders have put effort into their association and invested their skills in creating the park. For them, the municipality remains bureaucratic and unsupportive.

Finnish municipalities are generally poor at identifying residents' needs and motivations. Consequently, they also fail to combine their own resources with the community's many strengths – their skills, community spirit, enthusi-

asm and private property. At worst, what happens is that everyone focuses on their own patch: the municipality produces its own solutions, while citizens, associations and businesses create their own based on their narrow interests. Know-how and innovation are not shared and people do not learn from each other. Ultimately, instead of one good solution, we get several mediocre ones.

It is not that the quality of skateboarding facilities is the key factor for anybody's well-being; promoting skateboarding is not a municipal core function. Facilities for it will not determine a municipality's attractiveness nor is it a prerequisite for business vitality. This, however, is not the point. There is a principle at play here: quality of life can come from many things that a municipality disregards but which residents value, and which therefore have public value. It is obvious that a local authority alone can not identify all such things, so it must listen to service users. For many young people, skateboarding matters.

The idea of a responsive metropolis points towards a new way of thinking about how society works. A report for Demos UK by Tom Bentley and James Wilsdon, The Adaptive State, argues that developing the public sector has to begin with creating new sources of public value. This refers to the positive outcomes that people actively create: what they value in a practical, active sense. A good public sector recognises public value and nurtures it; it helps people to develop their own capacities even more.

CONVENTIONAL AND RESPONSIVE SERVICE MODELS

CONVENTIONAL MUNICIPAL MODEL OF SERVICE

↓

MUNICIPAL EXPERTS' VIEW OF SERVICE USER NEEDS

↓

SERVICES DESIGNED BY MUNICIPALITIES ALONE

↓

THE INDIVIDUAL IS AN OBJECT. SERVICES MAY OR MAY NOT MEET SERVICE USERS' NEEDS

RESPONSIVE MUNICIPAL MODEL OF SERVICE

↓

MUNICIPAL OFFICE + THE SERVICE USERS' REAL EXPERTISE OF NEEDS

↓

SERVICES DESIGNED BY MUNICIPALITIES + INDIVIDUALS TO BE USER-CENTRED

↓

THE INDIVIDUAL IS A SUBJECT. SERVICES CREATE ADDED VALUE FOR THE COMMUNITY

Such principles are, however, not easy to practise because public services were originally set up to counter negatives, not to nurture and produce positives. And recent decades have clearly demonstrated that the public sector is weak when it works on its own. Well-being and competitiveness can be produced to the extent that metropolitan municipalities are responsive and adapt themselves to their environment.

This road is not easy. People have become used to having services delivered to them from on high, and for good reason. In Finnish everyday speech, the idea of society has two main meanings that reflect our somewhat ambivalent attitude towards it. Most of us appreciate that society is us. Its well-being, vitality and competitiveness depend on people's active participation and what they do. On the other hand, most of us are also quick to invoke society's responsibility for resolving difficult problems or centralising collective resources. This too has its justifications. Municipal and state authorities do collect taxes, placing them into a shared pot; how this is sensibly used for the general welfare becomes a matter for representative institutions to decide.

For historical reasons, the ruler-ruled relationship is an in-built feature of all Western societies. People have had little ability to shape their own, let alone society's future. The state, whether democratic or autocratic, has had far superior capacities to mould everyday life and future trajectories. Often it has done its job well. As a result of the triumph of twentieth-century liberal democratic and free-market-economy ideals, "society" in many countries was able to follow a path where a citizen's future was always better than the past.

State and municipal administrative systems and structures are the outcome of historical trajectories. In the past, economic resources in the public realm were considerable compared to resources elsewhere. In contrast to a generally poorly educated general population, municipal officers were much better qualified. The public sector planned and delivered services and other benefits that the citizenry often accepted happily, with humility even. The top-down model was a simple and efficient way of tackling problems.

Today the "ruler" (the democratically accountable public sector) has less power compared to other stakeholders than it used to. It is ever harder to direct society through political decision making, not to mention convince the population that collective needs are being addressed sensibly and efficiently. In the current situation, resources – economic as well as human – are scattered throughout

society. Neither the municipality nor the state, nor any other body are clearly dominant in any field.

The structure of Finnish society is also being shaken by powerful forces: the diversification of the population and its needs. There are several reasons for this: higher levels of prosperity and education, increased longevity, explosive growth of consumer choice, immigration and opening up of information flows.

The changes do not only affect the public sector. Shoshana Zuboff and James Maxmin's book, *The Support Economy*, suggests that generally speaking people have changed more than the organisations they have learned to trust as they go about their everyday routines. The result is a chasm between individuals and organisations which is apparent in constant dissatisfaction, disappointment and anger. People feel that organisations that deliver services – both public and private – are ultimately not for their benefit. This has a corrosive effect on how society works.

In Finland, the public sector and municipalities in particular, are facing enormous economic challenges. Solutions are sought for increasing the productivity of public services: management practices are developed, organisation sizes are optimised, services are put out to tender and information technology is further exploited. None of these is a panacea, however, with which to ensure a solid base for future municipal budgets. It may well be that the answers are being looked for in the wrong places.

The gearbox of the public sector is seizing up: we should be driving faster but even the power we have now is not enough. Challenges will come from all directions in the next few years. It will be progressively more difficult to reach everyone via public services; there will be gaps. And as ever more people are dissatisfied with the quality of at least some public services, competing models are gradually emerging in the private and the voluntary sectors.

As Finnish quality of life is shaped increasingly by non-material goods, the demand for new solutions and services will continue to grow. The time will soon be long gone when publicly produced shared services were sufficient to satisfy the demands of the entire population. From the user's perspective, the old system of service delivery is thus not adequate to today's needs, however good the quality of services may be.

We are in the habit of describing the public sector and its services as a machine, something that can be made to run more efficiently, its components altered and its performance enhanced. The key features of a good machine are economy of use and versatility.

The machine metaphor is problematic. It makes us think of society in a narrow sense as the public realm. We focus on the machine and its products, while leaving out what is around it – society in the broader sense. Despite this, we talk constantly about social goals such as well-being, equality and competitiveness. They all refer to complex phenomena whose workings cannot be encompassed by any machine or social domain alone. They are the products of interaction between different factors and agents, deploying and experimenting with different kinds of resources at different times. The contribution of the public sector is only a part of this systemic construction.

This much is obvious to anyone who has contemplated society. But despite this, we have a tendency to draw on the machine metaphor. A mechanical model is simple: its control system is unambiguous and operating the whole does not require that one constantly interprets changes in the surrounding environment. But what would happen if we contemplated society as an organic whole?

The biological model takes the system as its focus. This has many autonomous elements which all pull in their own direction but nevertheless interact to create various outcomes. What matters is how the components or "actors" adapt to each other's ever-changing activities. All the actors have goals that guide what they do. Some goals, well-being for example, are shared by more than one actor, A prerequisite of success is to be responsive to what others are doing; it is necessary to understand others and to adjust one's own activities to ensure interaction will lead to the goal.

LET'S EXPLAIN IN SIMPLE TERMS:

• People's health depends among other things on individual choices, heredity, health risks encountered at work and during leisure time, epidemics and the availability of care. The public sector can try to minimise health risks through legislation, invest in inoculations against epidemics and educate the public. Yet people's behaviour will still be affected by seeing what others do, by poor information and by the persistence of old habits. People's choices tend to be affected by increased prosperity, higher levels of education, commercial health services and the availability of information. New barriers to a healthy life may emerge, but so may new resources for securing it. A responsive system of public healthcare is constantly looking for ways to make use of these.

• **People's level of education** is equally an outcome of many factors: individual propensity to learn, openness of information, availability of formal education, what is required for securing a livelihood, time available for leisure, and opportunities provided through paid work. The public sector can deliver education as well as libraries and services such as the internet that give access to information. Study and learning at work can be financially supported. And still the support and expectations of family and friends, plus the attractiveness of competing ways of spending time, are equally significant factors in shaping education levels. A responsive education system seeks to make use of these new resources too.

It is apparent that in Finland, municipalities and the state think that they are doing just this: approaching social goals within a framework of social diversity while pointing towards collective achievement. Yet their actions seem to change more slowly than the rest of the system. Ultimately action is often guided by whatever the existing public service system is able and willing to do. The starting point, in other words, is the organisation and its structure; the apparatus not the system as a whole.

The responsive metropolis knows how to strengthen its well-being and competitiveness by drawing together resources from individuals, communities, associations and companies. The precondition is that these agents are known and there are opportunities for dialogue between them. At the same time, municipalities must be able to shape their own structures and procedures according to how other actors' capacities and motives change. Courage is needed to try out novel and untested methods if old ways no longer produce the desired results.

The foundation of the responsive public sector and partnership model are people, their motivations and their resources. In addition to having more competencies than ever before, they also have something else that we have overlooked – hidden wealth.

5.2 Hidden wealth

People are the backbone of the economy. *The hidden wealth of nations*, according to David Halpern in his book of that title, rests on the character of its citizens and their relationships with one another. It creates the foundations for social trust which has a significant impact on both well-being and on the costs of various social activities. Trust is what the economy and well-being grow out of. According to Halpern, the central function of the modern state is to identify and nurture its citizens' various forms of capital, even if they are currently invisible.

According to this view, the spread of mistrust is perhaps the most significant threat to society. Our capacity to act together speeds up information exchange and increases our hidden capital. Under conditions of rapid change, society's capacity to cope with challenges depends on such hidden resources: how ready people are to assist each other and how well knowledge is used and channelled. Regarding the future of the metropolis, the question is how the public sphere could support these activities based on citizens' relationships that take place outside the money economy. Halpern calls this "the economy of regard".

His view of the economy of regard emphasises above all the relationship between a giver and a receiver. According to Halpern, this economic form if translated into money terms would be far more significant than gross domestic product. The economy of regard is therefore the cornerstone of our economy and the "real" economy merely its consequence, made possible by it.

Halpern's conceptualisation of the state also extends to municipal authorities. The work of the conventional public sphere no longer generates the necessary well-being and the relevance of traditional political institutions has fallen significantly. The task ahead for the public sector is to reawaken citizens' sense of political engagement and develop opportunities for participation.

The internet guru Clay Shirky has also considered elements of hidden wealth in his *Cognitive Surplus: Creativity and Generosity in a Connected Age*. Increasing leisure time, together with better skills, has produced a cognitive surplus. Channelling this in the best possible way will bring, according to Shirky's conceptualisation, possibly world-altering change. In the metropolitan area, this change could be seen, for instance, in the ways older people's skills could be utilised after retirement.

Take as an example, the free encyclopaedia, Wikipedia. According to Shirky, the whole project, including all its entries, discussions and different languages, has

CASE:

Zonta Women: Champions of Integration

THE INTERNATIONAL WOMEN'S ORGANISATION ZONTA, TOGETHER WITH UNIFEM, HAS BEEN PROVIDING IMMIGRANT WOMEN WITH FREE AND FLEXIBLE FINNISH AND SWEDISH LESSONS SINCE 2007.

From its beginnings in Vantaa, these language courses have spread to 25 locations with 80 study groups. About 250 teachers have already taught 350 students who come from all over the world. Most of those teaching are retired teachers. Above all, Zonta interests middle-aged women, often with executive or professional status, who want to "give something back". News about their language courses travels by word of mouth, in immigration offices and health centres.

Zonta is one expression of the public value economy. The capital that is of value to individuals and society is not limited to the kind embodied in financial funds. This kind of work changes our view of society and helps us make use of hidden resources.

Women involved in Zonta consider it particularly important to be able to give mothers at home the chance to learn everyday language and local customs. Illiterate and at home with children, an immigrant mother will not easily integrate into Finnish society or learn the language. They may also have difficulties in committing to long-term "official" language courses. Children are welcome on Zonta courses.

Municipalities have made premises available for Zonta's use but otherwise courses are run using the women's own resources. A Zonta volunteer with a background in research and 20 year's experience here is frustrated by how many multicultural centres have been closed down and how many immigrants find the cost of day care too much.

"Cooperation across sectors is poor. We are highly competent in our work with volunteers but you can't just leave this to unpaid workers. We want to demonstrate that the model works and to integrate it into the public sector".

used up about 100 million hours of our collective free time. This is actually very little: in Finland with its 5.3 million inhabitants, people watch 35 times that amount of television. We know that the next twenty years will see teachers retiring at a rate of over a thousand each year. How will they spend their time?

5.3 Metropolitan strengths

Our strengths are underexploited. The shift towards a responsive and partnership-based society is possible so long as we can make the best use of our three core strengths: our expansive know-how, our deep trust and our innate sense of equality. These strengths have developed in Finnish society as the result of decisions and social investments made in the past, but we have not known how to make the best use of them.

5.3.1 Expansive know-how

The Helsinki Metropolitan Area's pool of know-how is expansive. That is to say, it is a horizontally spread capacity for knowledge and skills, one which neither excludes world-class excellence nor concentrates narrowly on it. Finland does well in international comparisons of knowledge and skills, the metropolitan region having its densest knowledge base. In addition to having high levels of learning, the knowledge base is spread widely: the highly skilled are only a slightly smaller group than the less skilled. As many as 85 per cent of Finns have upper secondary level qualifications and this is why we talk of our know-how as expansive. It facilitates both specialisation and systemic transformations that touch the whole population.

The metropolitan region has not fallen for the meritocracy trap, that is concentrating purely on finding and perfecting top talent in whatever field appears useful. The problem with a meritocracy is specifically its narrowing influence. It is not possible to involve everybody while pursuing excellence in this way, and this gives rise to populist movements and ultimately, civil unrest.

Good politics is difficult if one only concentrates on the very top. The strengths of the metropolis certainly are political issues, but they are also opportunities to grasp wicked problems. Expansive know-how creates solid foundations for sustainable innovation which does not rest simply on the top talent. It is cru-

cial that different people are allowed to contribute according to their abilities. Expansive know-how can even be considered a greater resource than world-class excellence, as long as we make the best use of it. In terms of the social innovation ecosystem, Finnish learning and skills are on a very firm foundation.

5.3.2 Innate sense of equality

An innate sense of equality is a cultural asset; one that the metropolitan area can make good use of. Its strengths can be seen both in our social structure and in our broadly accepted values. The Helsinki Region is one of the most socially equal metropolitan areas, judged both by social mobility and income criteria. Beyond that, there is a deeper and culturally embedded value placed on equality. Most Finns consider equality a desirable state which also explains why concern for the key public support structures of social equality are a policy preoccupation right across the political spectrum. Achieving equality is, however, expected to become less and less of an institutional concern. Furthermore, research shows that only the elderly and relatively less educated sections of the population still see economic growth, and channelling it to fund public services, as overwhelmingly important.

An innate sense of equality is a good basis for a new type of leisure. A generation of those who are accustomed to and believe in equality is about to retire. Their leisure time is expanding, but at the same time there is growing interest among young people in leisure – at the expense of work time. Shifting towards a model of sustainable well-being is a way of connecting up this resource in free time and equality to wicked problems. Striving for equality, deep equality, is apparent in every aspect of our everyday lives, and so the dynamism of the metropolitan area will deepen as everyone is able to realise their potential.

Deeply experienced equality supports the shift towards sustainable innovation because it helps people grasp unexpected novelties and engages large groups of people in innovation. Accidents and surprises tend not to happen among top experts, and education is also too slow a tool for the purposes of identifying emergent needs and responding to them. Finland's deep equality then makes tackling wicked social problems relatively inexpensive and gives the Helsinki Region a relative advantage in economic terms compared to more unequal metropolitan centres.

5.3.3 Deep trust

Finns' levels of trust are a statistical oddity. We trust other people even though our ties to them are weak. The usual explanation for this is the even spread of social capital – we do not need much of it to live a good life or make progress in our career, for example. The background to this is the tradition of broad participation in organisations, voluntary activities and communities. There are no signs in Finland of this tradition becoming weaker, though the focus of many associations is shifting towards leisure.

Trust makes it possible to work with people one does not know personally. Not everything has to be arranged through an institution since the metropolitan region too is characterised by a relatively strong culture of trust. Trust can be deep because, like know-how and learning, it is widely dispersed. There is ample social capital and, unlike in more hierarchical countries, it does not create a barrier to entering new groups. We do not simply have trust in the family, institutions or companies as is the case elsewhere, but rather enjoy trust in general. This is why we have identified what we call "deep trust" as the third strength specific to the Helsinki Metropolitan Area. It is not stored away in institutional structures; it is in active use.

The metropolitan area would benefit from a shift to sustainable innovation since deep trust facilitates more open-ended behaviour and constitutes a framework for action based "only" on trust. The protection and deepening of trust are certainly challenges, demanding of institutions that they update themselves and pay attention to interpersonal relationships.

5.4 Putting our prosperity and strengths to intensive use

Municipalities and the state must be reconstructed. They must become partners in nurturing hidden wealth, as part of a newly developing metropolitan partnership model. The basic challenge for this model is to create the environment in which resources in companies, among citizens and in the public sphere are put to good use to create genuine synergies. Competitiveness will be built on the basis of what we call a PPP partnership equation:

$$METROPOLIS = P + P + P$$

The Metropolis = people + public resources + private resources

Everybody's resources will be unlocked by attending to education, and also by encouraging cooperation between individuals and groups by providing the tools to collaborate on shared projects. Everyone has something to give society. People's resources may be different but, for the most part, citizens are active, globalised, competent, aware and connected through various networks. We do not claim of course that these are measures of human worth, and we consider it the duty of society as a whole to look after those in danger of being marginalised. Indeed, people do best with services that take into account differences and personal circumstances.

Cooperation among groups of peers, social networking and the new methods people have for shaping their own lives are an enormous resource for society and the economy as a whole. A healthy, active, competent citizen interested in learning is a great innovator at work as much as at home. This leads to an emphasis on well-being as a condition for innovation. It is particularly important to strengthen welfare at work, an idea also highlighted in the new paradigm of management aimed explicitly at improving well-being in the workplace. Finally the idea of developing well-being at work has been incorporated into innovation policy with the transfer of the Workplace Development Programme (Tykes) from what used to be the Ministry of Labour (now Business and Employment) to the Finnish Funding Agency for Technology and Innovation (Tekes) in 2008.

Public resources (tax revenue, property, services, clear official frameworks and so on) are a significant source of well-being when they are deployed as investments for the future. Public administrations sustain this public good – that is,

shared assets and public space as a resource available to everyone. When they work in partnership with citizens and businesses, public administrations are also capable of achieving much more with their resources using public capital to stimulate other types of capital.

A partnership model is not about accelerating privatisation or outsourcing, although these may be important tools for innovating and finding new solutions. Public administrations and municipalities must find their own ways of working and a new place in society. They are still central to creating the shared environment – for example, through spatial planning – and to facilitating engagement – for example, through providing education. Municipalities are building a shared resource and creating public value to serve all members of society.

For companies, the partnership model, with its sub-contracting and strategic alliances, is already familiar. Partnership in research, product development and innovation activities is, however, relatively new. These areas have been considered by companies to be strategically so important, that there has not been the courage or even the will to open up these processes. The paradigm of open innovation has altered this, as ever more companies develop new products and services in collaboration with clients, business partners and even competitors. Companies find their resources can be multiplied through cooperation, strategic alliances, collaborative innovation, user-centred development and intensifying formal and informal networking.

In the PPP partnership model, companies are also the partners of public administrations. Public procurement in Finland amounts to about 22.5 billion euros a year. Services from companies are most frequently used in technical areas but are also increasingly commonly in the social and healthcare sectors (as private day nurseries, care centres, doctors' surgeries etc.). Here partnership also means shared commitment to developing the service. It is possible to generate innovation through procurement of services by requiring input from service providers into developing and renewing their offer.

On the other hand, the way the legislation governing external procurement is currently understood makes it difficult for local companies and products to be given preference in public purchasing. This prevents authorities from using local demand as a lever for supporting local economic activity and sustainable innovation. Changing the direction of innovation policy is made difficult also by the absence of measurable criteria of sustainability that would be as clear

cut as price. And so price persists as an easy justification for municipal decision making and budgeting.

In principle, a municipality can, however, set up its tendering processes so that qualitatively questionable candidates are discarded in favour of ones that demonstrate "holistic quality" or "overall benefits" as competitive alternatives. These might be, for example, tenders that help create robust wealth or local partnerships. What matters is not simply legislation but political will and the consideration of longer-term impacts.

Partnership can be facilitated by other means too. Companies can sponsor public cultural events or institutions, or commit to community development.

5.4.1 Why would people want to be partners?

But what do metropolitan people need a responsive public administration for? The answer is their well-being. More and more of us consider it important to have opportunities to shape the services we use and the world around us. Emphasising people's own role is described by the word empowerment. Empowered people and communities are ones that actively look for and develop different ways to work and participate.

The philosophers Amartya Sen and Martha Nussbaum have highlighted how people's skills and capacity to act are the foundations of well-being and human rights. To realise these rights, it is necessary to build a culture of rewarding action by both individuals and communities. Where skills and competencies are supported, so is sustainable innovation which itself depends on people's ability to participate in shaping the solutions to the problems they face.

Empowered people can and want to use their resources for progressing collective well-being. Indeed, one of the central paradoxes we face is that a small but constantly growing portion of Finns are deprived of social goods and are being marginalised. This change threatens to corrode the very foundation of our society's competitiveness: the trust people have in each other and in institutions. The significance of trust increases as the networked economy and society enter into the core of everyday life. To stop polarisation we must build new bridges to link individuals and communities.

Examples of these might be tools to bring people into planning and service development processes and other public endeavours. Recent decades have seen a growth in participatory and consultative processes, and in Finland as elsewhere they are often legal requirements. These forms of participation are still

taking shape in the context of public decision making procedures partly inherited from a monarchical state. On the other hand, cumbersome consultative processes are not the only way to bring people into planning.

Society also has more fine-tuned opportunities for encouraging participation and supporting people's role as social agents. In the partnership model, well-being is transferred from person to person with the state and business facilitating this. According to the model, the public sector's responsibility is to demonstrate the challenges to well-being and to create confidence in the belief that these long-term issues are shared. The result is more of a guiding relationship as regards business and residents, where the public sphere's role is to steer business towards tackling the most wicked problems: that is, to engage it in sustainable innovation. Sustainable innovation and a responsible lifestyle should be encouraged visibly and openly. The key is to understand that the power to make the partnership model work rests in people and communities.

The model of a responsive public sector is open to criticism, of course. Sustainable well-being is, at least in principle, something that can be realised in many ways. Already we are seeing different countries start from very different premises regarding how best to support well-being.

In this sense we may well ask: Why do public services matter? Should not a prosperous and well-educated population know how to resolve its own problems? Would it not be better to bolster people's incomes and leave service provision for the market to deliver, in particular given that people's preferences and needs are getting ever more impossible to satisfy?

Perhaps the answer to this question is "No", after all. The most important resources of Finland and the Helsinki Metropolitan Area are based in knowledge, trust and equality. Our starting point in this small country and in this rather modest-sized metropolitan region is that all citizens are engaged in developing society. This means we must consider how best we can reach all these people. What are the issues shared by everyone? What tools do we have to bring people together even as they face such varied challenges? How can we get citizens to feel that there are shared issues that democratically governed municipalities and the state are able to manage?

In brief: how do we get people to feel both that they are part of society and yet able to shape its future?

Well-functioning public services are an excellent answer. Through them, basic needs such as care, education and health become shared concerns. They produce shared experiences and bring diverse groups together. Their free or low-cost availability affects almost everybody's life, and they allow people to focus on the same central concerns.

Public services are the most powerful vehicle for long-term social development. This is a conviction that Finns across society hold very dear. Research clearly shows the broad-based support enjoyed by municipal services.

In the conventional welfare model of industrial society, services are thought of as something that a municipality or state produces and which the citizen or customer consumes. Services are thus delivered to a customer who, from the point of view of the production system, has only secondary importance.

This kind of productivist model starts from the assumption that customers' needs are uniform and unchanging. A service provider trusts their own conception of how a service is used and its effects. But if the goal is genuine well-being, this belief is often unwarranted. To understand the average user and average impact is not the same thing as having insight into the actual impact of a service on individual well-being.

Public services and functions can be much more than they are now. They can draw people into society and genuinely empower people and communities.

CASE:

VETOA ja VOIMAA, Drive and Strength: Everyday Democracy in Mellunkylä

IN MELLUNKYLÄ, A NEIGHBOURHOOD OF 36,000 BY THE METRO TRACKS IN EASTERN HELSINKI, PEOPLE ARE LISTENING TO EACH OTHER MORE THAN THEY USED TO.

Residential and business communities, public sector officers, local councillors and other representatives of common interests have found a way to promote their mutual dialogue.

The result is the award-winning Vetoa ja Voimaa (Drive and Strength) for Mellunkylä scheme. Last year, this cross-sector community project gathered together eight area-based forums where hundreds of locals tackled current themes: health services, the situation of immigrants' children, loneliness and infill construction. Besides suggestions for improvements, the interlocutors also expressed their thanks for earlier achievements.

The forums promote ongoing involvement in decision-making at neighbourhood level. The possibility of installing information screens at the metro station to advertise local events was investigated in summer 2010.

The area's community-driven projects have included, among other things, a local traffic map, and the annual Kontu festival, where older people, families with small children, skinheads, Somalis and Roma have enjoyed a summer's day in the same place. Kontula is also preparing its own pre-elections to anticipate the 2011 parliamentary elections. Allotment gardens asked for by residents will be provided in the next few years.

5.4.2 Participation in producing public services

It is possible to see public services differently, to appreciate that at the core of a responsive public sector is a service model built on positive interaction between service user and service provider. In other words, services are barely worth talking about unless we think about how they really affect the people they are supposed to serve, and for how long. As an example, a visit to a health-service provider is worthless if afterwards the patient fails to take the prescribed medication or change to a healthier lifestyle. Going to school is pointless if students cannot adapt what they learn beyond a test situation or develop better ways of learning new things.

The approach to services that looks beyond the delivered service itself, to factors that prevent and enhance individual well-being, gives rise to what is known as co-production. Of the necessary factors to consider, the most central are the various communities to which service users belong and that shape their motives. The service user is not simply an individual in a momentary encounter with a service-delivery professional, but someone with a life trajectory where well-being is affected by each service decision. This is why it is important to offer users a chance to mould the service and to bring out their motives and resources.

The Helsinki Metropolitan Area already offers numerous examples of co-production: schools and teachers that skilfully link up teaching and their pupils' extra-curricular life; social work that allows those who are marginalised or at risk of being marginalised to find points of contact that help them help themselves; and care of the elderly where staff work excellently together with family and other networks. As yet, such an approach is by no means applied across the board; it should be strengthened to allow the best ideas from below to be implemented.

5.4.3 Open innovation – the Linuxes of the public service world

Could Kela, Finland's social insurance institution, "pull off a Linux"? The internationally most significant success story of Finnish open innovation is the Linux operating system initiated by Linus Torvalds. Its success is entirely based on open innovation, on allowing anyone access to the source code and the ability to actively develop the system.

As innovation has become an ever more crucial factor of economic development, companies are realising that the birth and improvement of an innovation do not respect organisational boundaries. This leads to the idea of open innova-

tions. Barriers that prevent them should be removed and partnerships should be encouraged.

Open innovation is already part of many successful companies' repertoire because this way they can make use of ideas born outside their own organisation. For example, the huge popularity of Apple's iPhone is due in part to it being a product of open innovation. Although Apple's innovation process is largely closed, its outputs – new products – are open to anyone to develop further through applications and adaptations. The products are merely platforms. This is how Apple harnesses users to the development process.

All of Apple's products are part of a wider innovation ecosystem which builds on immaterial content – music, films and programmes. Other big companies are also moving away from closed to open innovation systems, making use of networks. This implies not just investing in conventional research and development activities, or luring top talent, but creating networks of co-creators that bring together both the so-called competition and the user community.

Open innovation makes use of know-how and user experience beyond the organisation itself. In the apt words of innovation researcher and university professor Erik von Hippel, this is about "democratising innovation". The approach can be extended to the public sphere and public services. Future public services should be developed by their user groups and delivery agents interactively. Such a process should encourage experimentation and people should be given the opportunity to be pioneers of social reform.

It is in this sense that public sector organisations have much to learn from the private sector's way of producing and developing ideas. The public sphere should overtake the private because it is specifically clients, users and citizens who give rise to social innovations.

In the context of social goods particularly, it matters to people where services are provided and by whom. "Client relationships" are typically long-term and based on mutual trust. It is difficult to learn if the teacher keeps changing; it is upsetting to visit the doctor when on each visit, one meets a different person. In developing such services, local context and human contact are important ingredients.

But how should we combine working innovations produced at the grassroots level into a real advance that will change the entire system? The public sector needs an open innovation system where ideas accumulate and become system-altering reforms. The role of the public sphere in this situation becomes that of encouraging people and communities to innovate, to establish a solid base for

such activity and to draw together the best ideas and integrate them into existing arrangements.

A good example is the network service Innokylä, or innovation village. It is an innovation community open to all, aimed at tackling the future challenges of Finland's heath and social services. The internet service portal (www.innokyla.fi) was opened in September 2010. A number of events are being planned with the aim of building up a varied and broad-ranging innovation environment for the health and social sector by 2013.

With the success of this programme, innovations across the social and health-care sectors would become available to everyone across the country within a few years. Innokylä is on Facebook, Twitter and other social media. Mostly it is virtual, but not everything happens online. A range of events offer people the possibility to meet and network with other professionals in their field, with representatives from the voluntary sector and patient groups, researchers, public authorities and local people.

The education system could become one example of open innovation in the public sphere. Wilsdon and Bentley's The Adaptive State includes a thought experiment: What if schools worked like the "platforms" we know from open source computing? These could consist of several schools where each one could experiment with a specialism that they would provide to the rest of the platform. Successes and also teachers could be moved around, resulting in a dynamic, constantly developing whole. Systemic change would originate with specific schools, teachers, pupils and parents.

A Finnish example of a systemic-level innovation that began at the grassroots is SMS or text messaging. To begin with it was just a small concept which Matti Makkonen, an engineering graduate with experience of the communications sector, dreamt up in a pizzeria in Copenhagen.

Now the text message has been scaled up and has brought about a transformation at the systemic level. A remarkable number of applications using it have been developed. Two decades later, a process that began with throwing out ideas between friends is still being developed for more and more uses, while Makkonen has been given awards, for example by The Economist magazine.

"I think it is important that Finland has the space for the kind of grassroots development that doesn't immediately make you think of it as the 'next Nokia'," Makkonen has said.

5.4.4 The Social Innovation Ecosystem

Innovation strategies have, unfortunately, always tended to be state-led. We feel this is the wrong model. The most important innovations of the 2000s – both socially and economically – have been social innovations. This implies that the concept of the innovation ecosystem must be expanded. The central factor to be considered is the capacity that individuals, communities and companies can bring to progressing new – larger or smaller – ways of solving social challenges.

The social innovation ecosystem is composed of all the agents and processes that have bearing on the development of a community. Municipalities and public organisations with responsibility for health and social welfare, including the national insurance system and government itself, have an important role in this. The public sector invests much less in innovation activities than service companies, where investments are around two or three per cent of turnover. The budget of Finland's Ministry of Social Affairs and Health, for instance, is about 14 billion euros. If even only one per cent of this were used for innovation activities, it would still amount to a staggering 140 million euros.

One of the most significant producers of social innovation is the third or voluntary sector. This includes numerous organisations in the social and health sectors as well as in culture and sport. These organisations are continuously developing new ways of working and they are agile in responding to changes in needs. Partly organisations work in the commercial sector and produce services for municipalities, among others, to buy, but they are also part of what we can call civil society more broadly. The third sector complements the services provided by the public sector, but importantly it has a pioneering role, having insight into new demands and providing rapid responses to them. It should be noted that in Finland, the care of older people as we now know it was originally developed by voluntary organisations.

Informal networking among the citizenry, however, is perhaps the most remarkable phenomenon in the innovation economy. Indeed, the kind of spontaneous civic behaviour that creates communities is not strictly speaking part of the third sector. More accurately, it should be thought of as the first sector, the foundation of social life in general.

The shared innovativeness of service users produces more flexible and more appropriate solutions for the problems people face. When we first confront

CASE:

Sofia Service Home: Not a German Car Factory After All

SERVICE HOME SOFIA IS A SHELTERED-HOUSING CENTRE WHERE QUALITY IS MEASURED BY SOCIAL CRITERIA.

The aim is to spread ideas and care practices elsewhere.

Sofia is located in Helsinki's Laajasalo suburb and run according to the principles of Steiner pedagogy. Some of its housing units are owned by the residents themselves, some are provided by the Lotta Svärd Foundation to support Finnish women, and some are paid for by the City of Helsinki. Sofia's trustee Janne Lemettinen describes it as a social enterprise whose aim is to provide high-quality and reasonably priced services to its residents.

Sofia seeks to be like a home not an institution, and to keep its residents active. In addition, its principles incorporate an expansive notion of medical care. Sofia makes use of traditional treatments, massage and natural remedies, for example. Staffing levels fulfil the requirements of Finland's legislation concerning outsourcing, and operating costs are kept at levels acceptable to the City. Care outcomes are good. For instance, prescriptions of sleeping pills are well below average for older people's homes.

Janne Lemettinen describes the quality indicators used in assessing care for older people as often unsuccessful. "Measurements of efficiency are based on a model developed for German car factories. They do not lead to people-centred work with the elderly". Sofia employs an ISO-standard-compatible benchmarking system, Wege Für Kvalität, developed in Germany and designed to direct operations by social criteria.

Now Sofia is launching a project through TEKES/The Finnish Funding Agency for Technology and Innovation whose aim is to develop further the benchmarking system and generate a model for caring for older people in Finland. "The work of a social enterprise has to be something you can scale up", Lemettinen believes.

change, there are not yet the markets or the products to manage it directly. The problem and its solution should emerge together.

Producing innovations that further well-being is a particularly difficult challenge for companies. With only slight overstatement, business thinking today could be summarised as the drive to maximise shareholder value by producing ever cheaper goods for an ever more discerning market. Companies have not had to consider externalities such as their carbon footprint or their impact on consumers. Legislation has been used to guide production so that externalities are incorporated through energy taxes or recycling requirements, for example.

Following the law is enough, but a company can even increase its bottom line this way; it can "do well by doing good". Everyone is a winner when sustainable innovation is at its best. It can lead to products for which there is growing demand domestically and around the world. If companies are able to produce goods that enhance the efficient use of energy or materials, or develop better medicines or services that support better lifestyles, they will never worry about sufficient demand. Solutions that enhance sustainable well-being are of interest everywhere.

Sustainable innovation is about finding the solutions through which the metropolitan region can foster world-class know-how and well-being oriented business. The open economy discussed in the previous chapter is an important starting point. Another way to accelerate this kind of development would be to adopt design thinking, incorporating human-centred solutions and constant trial and experimentation.

5.5 The great community and municipal transformation

A responsive municipal structure for the metropolitan area will not be easy to establish as traditional organisational structures will have to be reassessed. The fundamental roles that in the welfare-state model are a municipality's core raison d'être are by nature divided by sector. There is much internationally recognised know-how in these fields, not least in the much-discussed Finnish education system. We have, in other words, been able to create a system which has been able to respond relatively well to social challenges so far – at least if

one examines the question through the lens of competitiveness rankings or satisfaction levels.

Paradoxically, it is the strongest sectors that may be a barrier to finding solutions to the systemic problems of the 2010s. Attention must be given to interaction between sectors as innovations tend to be born at the interface where sectors or domains of activity meet.

This implies a need to organise through networks, but there are obstacles both in sectoral boundaries within municipalities and the silos that keep public, private and civic efforts separate. A total reorganisation of conventional municipal administration should follow. But this requires unprecedented political will since the responsive metropolis naturally implies that municipal officers are highly motivated and, at least in the early stages, that they are willing to alter their professional view of themselves.

Companies, citizens and municipalities should be brought together to work in concert and to solve different problems together. It is not merely a question of getting authorities to work more closely together or establishing a regional framework. More important still is the opening up of the municipal organisation to cooperation with totally new partners. This kind of reform process, involving the whole of society's key stakeholders and actors, will require various trial runs. These will include failed experiments and they will require that all those involved are able to learn from both success and failure. Subsequently, it will be necessary to develop methods for disseminating the best of the responsive municipal model throughout the metropolitan region and across sectors.

Is it even possible to change municipal structures? The answer will be determined by whether or not it will be possible to build the metropolitan area's success on the foundations of sustainable well-being. If municipal service providers are not brought into the process of building sustainable well-being, municipal authorities will have a significantly narrower set of tools at their disposal. Public investments and regulation can certainly guide development up to a point, but when it comes to services they are not at the interface with society, and so progress will be slow.

The metropolis could be a great community. In the 1920s, John Dewey, who has been characterised as the national philosopher of the United States, said that public life in the big city cannot work on the same principles as life in a

traditional local community, and that public debate is therefore deficient. The world is too complicated for a lay person to grasp it. Despite this, Dewey argued that decision making was too important to be left to experts alone. The dispersed society (or public) could be reconfigured as a "great society", or community, through associating with others.

For Dewey, communication and interactivity were fundamental to social life, and the ideal public was constituted by its effective communication. This makes communication the key to the challenges of metropolitan governance and an oversized public. Shared objectives should be clearly communicated, with administrative structures – municipalities, regional alliances and the state – ultimately there to help solve people's shared problems. Certainly they can begin to develop and implement many solutions by themselves with tax revenues collected from the populace. But if people do not understand where these solutions are taking them and what their own role is, these solutions will not be successful in the long term. The great community is born when everyone understands the shared challenges and has a sense of shaping how we can confront them.

The public administration of the metropolis must be able to demonstrate why it makes sense for individuals, communities and companies to nurture the collective good. It must be able to show what the challenges surrounding well-being are, and to establish trust in the idea that these challenges are everybody's concern.

Our vision for metropolitan well-being differs from the ideal of the Big Society currently associated with Britain's prime minister, David Cameron. Like the Big Society, our vision is based on the understanding that well-being is born in interactions between people, not individuals and public services. Where we differ is in the idea of the right size for the state. Big or small, states are just a tool for well-being. In other words, our idea of sustainable well-being recognises that what is required now is not the downscaling of the state, but an investment in civic society.

The modern tool to implement this kind of approach is design thinking, which will be elaborated in the final chapters.

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6. Design Thinking at Metropolitan Level

Design thinking is a practical methodology for pursuing sustainable innovation. When we adapt the kinds of design skills that have evolved from craft traditions to resolving problems elsewhere – as in public services – we can call it strategic planning or design thinking. This approach highlights what is emerging rather than what exists. A design thinker tries several options and assesses outcomes frequently. Design thinkers do not aim for the perfect solution but for one that works well. They seek to understand people's multifarious behaviours as part of the world of structured institutions. Applying design thinking in the context of sustainable well-being means applying it to the collective good. This makes design thinking a balancing act on a three-legged stool. The three supports are identifying the relevant communities, linking collective aims to wicked problems, and creating prototypes.

Sustainable innovation and the partnership model can be constructed with the help of design thinking. Sustainable well-being is maintained through the harmonious use of capital, that is, sustainable housekeeping or economic activity. Because conditions are undergoing constant change, we require innovation, but innovation in its present form is not sustainable. How could we get sustainable innovation to work, how could the partnership model we have outlined be implemented in practice?

Let us look to the material world for an example. We can look at how the legacy of craftsmanship has shaped the way tasks have evolved. For centuries, manual craft skills have made it possible to produce artefacts of unparalleled quality that work to this day. How, for example, did makers of musical instruments produce such quality products? Presumably they started from the user's requirements, but in carrying out the work, which they would have done with

great care, craftsmen of all kinds would have stopped to judge whether they were going in the right direction. How did the material they were working feel in the hand? How should one deal with knots in the wood? Nothing could be forced, the craftsmen felt their way through the whole process.

The traditional virtues of craftsmanship were marginalised with the rise of quality industrial production, yet they still have contemporary significance. Fortunately these virtues and the rich tradition of skills that goes with them have been nurtured among design professionals. Conceptually these seek to combine the human scale and the system scale. On the one hand a designer following this tradition is looking holistically at the user and the context of use, and on the other, at the life cycle of the product itself.

A craftsman, in other words, seeks to understand situations and uses in all their multi-sensory forms. This puts the emphasis on the product's significance for the user: how is it embedded in everyday routines and how does it shape them? This approach, which is both human-centred and systemic, can be adapted to wider questions such as the task of building up well-being at the metropolitan level.

Richard Sennett, who has invoked the craftsman's abilities in his research on work today, sees craftsmanship as a constant rhythmic interplay between doing and results. As a consequence of this iterative quality of craft work as opposed to factory work, a craftsman is able to take responsibility for the result themselves.

Such insights into design work can be applied to broader processes, including public interventions. These can be campaigns, social innovations, school menus or urban planning. Such applications are known as design thinking. In the context of developing the metropolis, design thinking means planning the kinds of public interventions where instead of focusing on a perfect outcome – optimisation at the institutional level – one focuses on their overall impact on people's lives.

Current planning seeks to accelerate its route straight from data gathering and problem setting to end solution. Design thinking, by contrast, approaches problems through their "architectures", "systemic character" or "ecosystem". It explores new possibilities and tries out new prototypes and models that can be compared and improved. In other words, design thinking is about intuition, experimentation and, above all, about outcomes.

6.1 Perfect institution or better life?

Metropolitan competitiveness depends on quality of life that will last into the future. Quality of life is not the same thing as the structures that produce it. Nobel Prize winner Amartya Sen has explored this distinction in some detail. In 2009, he published *The Idea of Justice*, in which he distinguishes between two fundamentally different ways of understanding society that have characterised social philosophy and political history. Society and its organisation can be approached either via "transcendental institutionalism" or by a "realisation-focused comparison"; that is, a practical approach.

Transcendental institutionalism conceives of society as something whose quality can be assessed through features of its institutions. The inquiry is aimed at identifying the nature of "the just", in searching for perfection. Sen demonstrates that, from the practical view of developing society, transcendental institutionalism is of little use. It does not make sense to argue over ideals when we are always destined to choose between options which are not ideal. Sen illustrates the point with an example. Let us assume that we are to judge who is the better artist, Salvador Dali or Pablo Picasso. Knowing that Leonardo da Vinci's *Mona Lisa* is the perfect painting – or the best we know of – will not help us decide between these two.

The same applies when we consider society. We are tempted to compare our options with an ideal solution. We often seek to define what a perfect institution would be and are only circuitously interested in what the resulting society would be like. On both the left and the right of the political spectrum, many thinkers cling to transcendental institutionalism, and ask what have become routine questions. This may sound familiar: Should such and such a task be performed by the public or by the private sector? What, ideally speaking, should the level of taxation be?

What then is to be done? Questions about tax and the ideal arrangement of state and market solutions have preoccupied people in various circumstances throughout the twentieth century. The arguments have barely changed. This makes no sense since there can be no unhistorical or context-free way of answering such questions.

The correct answer to the question about taxation levels must be that it depends on how we want our lives to be. Let us examine that issue rather than fixating on the level of taxation. According to Sen, we can therefore continue as we are and compare results. His approach foregrounds what can be created, not what exists.

6.2 Design thinking compares outcomes

Design thinking is a way of concretising non-technical goals and problems, in other words an approach where people are an essential part of the system. This helps us get to the root of the problems. It can be achieved by adopting a holistic perspective and by thinking rhythmically, alternating the focus between the broader system and the individual. If boys are not learning in classrooms, does it make sense to teach them there? If nobody uses a shelter for alcoholics, might it be in the wrong place? If a nuclear bomb can kill millions, is it a technology worth pursuing? What is crucial is that in this rhythm, a single individual designs and implements, and responsibility is not handed over to "public debate" that takes place elsewhere.

This is why we see design thinking as meeting the demands of sustainable innovation. So far, design thinking has largely been harnessed to emphasise the meaningfulness of products, but now it must be linked up more clearly with social progress. This requires that designers get a clearer picture of society's problems and aims, as well as a better understanding of people and what motivates them. This connection can be created by linking up design thinking to wicked problems and by opening up new resources this way.

Design thinking can therefore produce solutions that not only create well-being in themselves but can be scaled up, commoditised and transferred elsewhere. The resilience of wicked problems guarantees that other metropolitan regions will also be looking for these solutions. Those solutions that emerge will create robust prosperity in the metropolitan area.

6.3 Design thinking enhances democracy

Democracy means that everyone is involved in leading their community, each according to their needs and abilities. Shaping the future does not have to be done through political representation, it can be a less mediated process. Democracy is a project that concerns people's individual and historically changing capabilities and needs. Therefore, as a process it is never-ending, and as an institution it is always incomplete. It is realised in different ways at different times. That is why it is worth asking the question: Is the society we live in the same as it was at the beginning of the last century? Have people's abilities and needs changed from when representative democracy was established as the highest form of collective decision making?

Of course our capabilities and needs have changed. This is precisely why design thinking is worth adopting as a tool to achieve a more human-centred, that is, a more democratic society. Above all, design thinking should be understood as a model for thinking about how to enhance people's shared decision making and capacity for action. Human-centredness and systems thinking are habits that should spread beyond designers. They will be of use particularly in those occupations that deal with people – a substantial proportion of public sector employees.

We the citizens can increase our capacity to shape the world only once we are capable of remembering, having the time, skill and energy to take part in decisions that impact on other people's lives. Developing democracy requires that we examine all human decision making, not only that which affects the state. So, for example, it is important that decision making is transparent. We want to know what impact our choices are having. Carbon footprint meters, for example, are a primitive prototype of this approach. Being able to see and understand causal links – in this case your choice of food, housing and mode of travel, and their greenhouse gas emissions – also develops democratic processes. This is because in liberal societies, people want to follow their values in making decisions.

In order for design thinking to become a tool of sustainable innovation, the conventional political process must be opened up to completely different decision-making processes. The British political strategy expert Nick Mabey even notes that without knowing what decisions need to be made, one does not know what one is proposing. A resident with an idea to improve life in the municipality will easily find themselves in an impossible situation, never knowing what deci-

sions would have to be taken to implement their solution. At the same time, even the elected representatives who participate in the workings of the self-governing structure of the municipality have only limited influence. So, to the extent that the current system makes desired political transformation difficult, there is no point in accusing politicians of lacking political will.

We must break through this impasse. We suggest that design thinking should be applied to creating a Nordic model of metropolitan development. Similar thinking lay behind the unparalleled competitiveness created in the welfare-state model. What we are looking at now is an anti-bureaucratic upgrading of the Nordic welfare state to adapt it to the metropolitan age.

Collaboration between the planner and the user has been a key part of the Nordic approach to developing the public sector. At least until the 1980s, efforts were made to combine varying, even contradictory concerns, and in this way to use resources optimally for everyone's benefit. The internationally renowned North Karelia project was in fact a textbook example of design thinking. (Launched in 1972 to help reduce coronary heart disease in the North Karelia region of Eastern Finland, this was a comprehensive intervention that made use of community organisations and encouraged lifestyle changes.)

As a framework, design thinking departs from both meritocracy and from a class-based social structure. It is therefore suitable for a dynamic and heterogeneous metropolis interested in sustainable well-being where constant updating of skills is required. The meritocratic route to competitiveness is concerned with finding and fostering the very best talent. This is very problematic for regional progress.

This was demonstrated by one of the world's most successful social innovators, the British writer Sir Michael Young, who drew a picture of a meritocratic society in his satirical book, The Rise of the Meritocracy. In the name of equality of opportunity, people's social standing and their access to resources is increasingly explained by invoking individual talent. According to Young, meritocracy leads to a situation where decisions that serve even the majority of voters cannot be implemented. Instead, we get populism and civil unrest. Historic examples of this include the rise of racism in periods of recession and the decades it has taken for the USA to start reforming the world's most expensive healthcare arrangements.

There are already clear signs in the Helsinki Metropolitan Area that a segment of the population is experiencing a strong sense of exclusion, something recognisable as a characteristic of larger metropolitan centres. This is why we need

to find tools to help us identify needs and hidden resources. At issue are not simply the structures of participation, but people's real capacity as complete individuals to contribute to the common good.

TYPES OF SOCIETY CLASSIFIED ACCORDING TO RESOURCES AND WELL-BEING
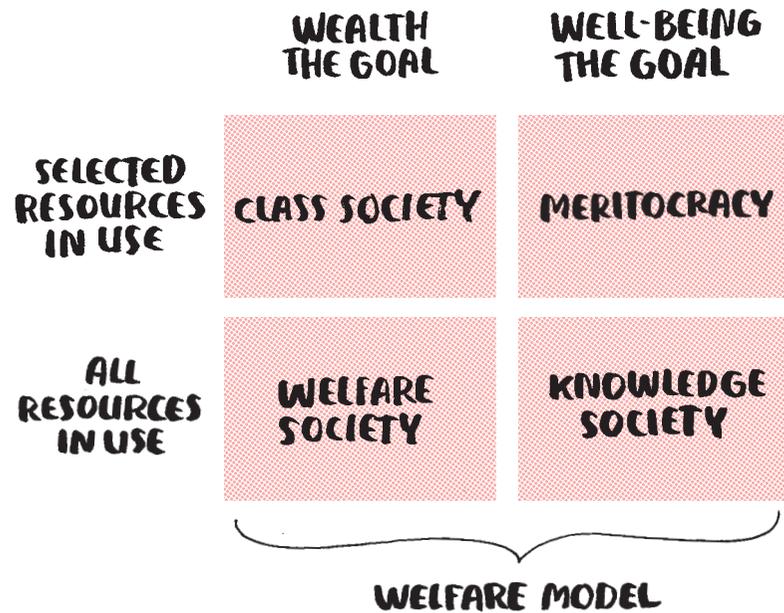
6.4 The three legs of design thinking

Design thinking is a practical tool for planning any processes that involve people. It can be applied to a broad range of social interventions through its three constituent parts. It is not a linear process but a constant back-and-forth movement between all three, carefully balancing them all so as not to collapse. The three legs of the stool are:
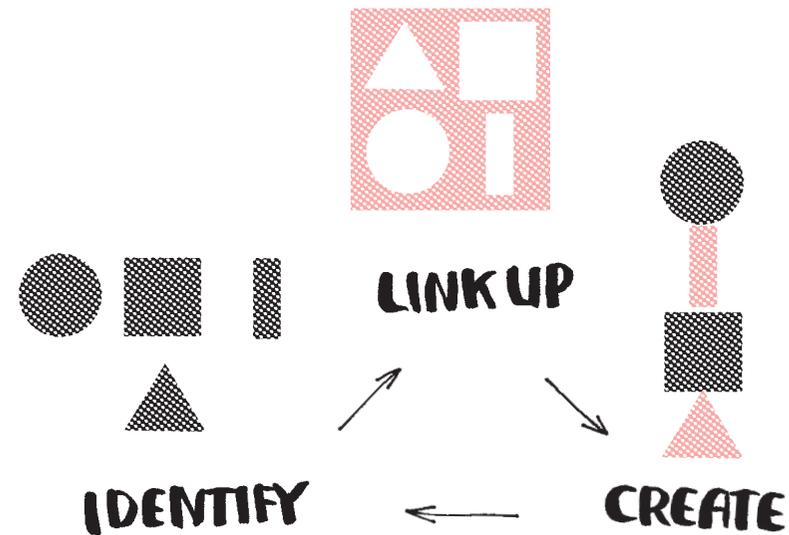
1. Identify: To identify communities and generate the wider community
2. Link up: To connect the communities with the most wicked problems
3. Create: Ongoing creation of prototypes

6.4.1 Identify the communities

The good life is not given, it has to be lived. We live our lives like those around us with whom we identify. By implication, society cannot create sustainable well-being unless its members agree to the aims and participate in the process. It may sound obvious, but one cannot assume automatic results from efforts to advance social goals.

Multidisciplinary behavioural research shows convincingly that we behave much as we assume those around us behave – at least those whom we take to resemble ourselves in their experience and values. Experimental economics, neuropsychology, anthropology and even ethology, the study of animal behaviour, demonstrate much the same thing.

We alter our behaviour according to who we see as our primary reference group, that is, according to how we identify ourselves. For good reason, this insight has pushed groups and communities to the heart of design thinking. It is of primary importance to understand which criteria we relate to others around us and what communities of peers we belong or aspire to.

Sustainable well-being is realised precisely where such peer-group relationships operate and are formed. This means that in addition to learning to recognise communities of peers we must combine them into a larger community to support shared goals. What is needed, to invoke Dewey (Chapter 5, above), is the "great society" with its cohesive sense of purpose. Thus virtues within the community can only begin to be developed once one understands what moves people. How are interests, desires and goods understood? How do people understand the fulfilment of these?

This is a radical perspective. Industrial society and its public services were intended to satisfy average needs. These were measured according to an ideal of a standard human. In a homogeneous class society, this measure may have been serviceable for a time. By contrast, in industrial design and design thinking derived from it, since at least the 1960s, the search has been on for ways to satisfy the needs of a more heterogeneous society.

Designers have therefore become interpreters who negotiate between users and producers. Ethnography has become a popular method for generating the synthesis in practice. In a similar way, the public sector must seek to make sense, document and interpret the situations that produce communities in as inclusive a way as possible.

Communities are not the same kinds of grouping as social classes or market segments. Communities of peers do not so much carry attributes as see themselves as having shared functional features. Alcoholics do not yet constitute a community of peers as such, unlike members of Alcoholics Anonymous (AA), whose shared understanding of their individual condition has made them seek out the organisation. Instead of concentrating on attributes associated with class or market seg-

ments, communities of peers should be approached as having context-dependent goals which themselves direct the emergence and activities of the group.

Understanding a community's culture is a prerequisite for seeking to alter its behaviour. If, for example, we wish to prevent social polarisation and segregation, it is necessary to understand what life is like for poor or otherwise excluded groups. There is a strongly held belief, inherited from the industrial age, that income distribution will prevent social exclusion by itself. Yet it is evident that social marginalisation and exclusion have continued, and that even a lifetime of receiving benefits may do nothing to change this.

If exclusion is known to pass from one generation to the next, even in countries with more equal income distribution, this is presumably a cultural phenomenon, at least partly. To remove this kind of cultural "negative capital" or "debt" we must make it easier to appreciate the positives of a community and build on these. What moves these people and why? How could they join new communities? How could people in danger of being excluded be given the chance for more meaningful shared activity?

Identifying communities of peers involves asking the right questions. At what point in a life trajectory does exclusion happen? What experiences do excluded people share? What other communities and groups act as gatekeepers, preventing or enabling change? How might excluded people be brought into contact with meaningful daily routines and human relationships – for example, work, school or other activities that bring people together and generate positive feedback?

Design thinking means resolving problems together with gatekeeper communities – all those whose actions can impact on others' decisions. What matters is who can make change happen, not who must decide or implement a campaign. For instance, in relation to energy conservation, gatekeepers include the communities of peers who influence energy-use choices: the editors of lifestyle magazines, cafeteria managers who select lunch menus, DIY (ironmonger) shops, builders' merchants and parents' associations.

Finland has in fact been a pioneer of identifying communities in this way. The North Karelia project was based on identifying gatekeeper organisations and activating them. In parallel with broad media campaigns, the project was extended to workplace cafeterias where habits were formed and altered. Identifying a community can be a very practical matter.

To recognise a community of peers is not the same as creating an ideal citizen or ideal community. The Roma beggars who have come to Helsinki in recent years

have demonstrated to the Finnish public that we can no longer conceive of society as the result of supposedly consensual preferences about what rational ideal citizens are like. Rather, we must also understand the beggars as a community of peers and as a part of a wider metropolitan system. This group exists in this place thanks to metropolitan developments, and as the metropolitan area, we are partly responsible for it.

The future will catapult ever more people into the Helsinki Metropolitan Area. There will be both proximate neighbours and arrivals who have taken unexpected global routes. The familiar pattern will accelerate: neighbouring regions (for example, Estonia and Russia) along with unpredictably emerging regions of origin (formerly, for example, Viet Nam, Somalia and Thailand) will become part of tomorrow's immigration statistics in Finland. Living out increasingly individualised and widely diverging life trajectories, the Finnish population is being thrown together with the results of the pressures towards mobility that enhance cultural mixing. As a result, not much is left of that old stereotypically Finnish ideal.

The radical diversification of the metropolis is not the only reason that the significance of communities has become so timely. The character of contemporary social problems and aspirations increases diversity. More and more social problems arise from our lifestyle, but in a liberal political context, lifestyle is seen as a private matter.

In addition to the segregation discussed earlier, there are two illuminating examples of how lifestyle operates through society: health promotion and environmental protection. They were long thought of as "healing the sick" and as "controlling local pollution". Now these, along with a whole spectrum of social goals, have become dependent on lifestyle.
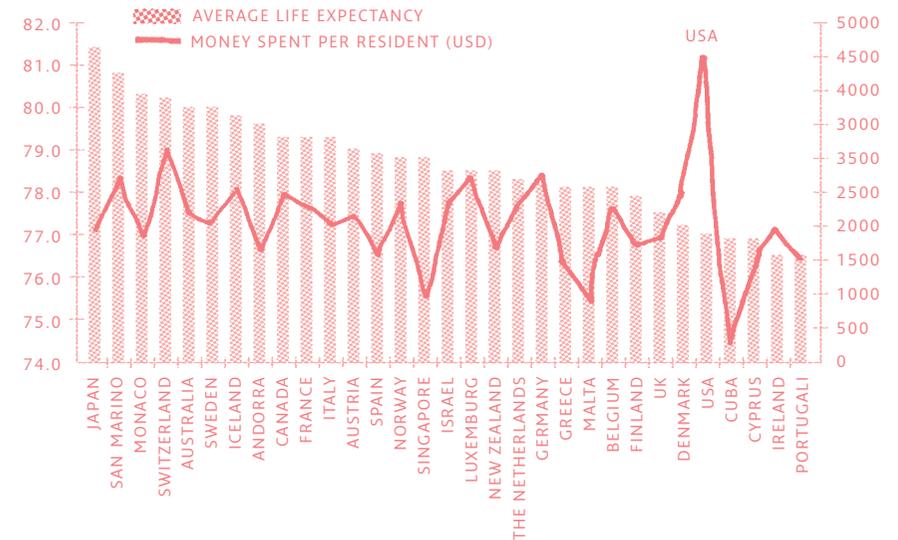
SOURCE: THE UC ATLAS OF GLOBAL INEQUALITY

Local environmental protection has been replaced by an understanding of a crisis over resources. We have become aware that emissions are connected with consuming as well as with producing. We even know that the largest sources of climate emissions are housing, food and mobility. That is to say, the problem of pollution has become a problem of lifestyle.

Contemporary liberal societies have found it surprisingly difficult to intervene in consumption. The wealthier people are, the less enthusiastic about regulation they become; and the more information is available to them, the more limited are the impacts of public campaigns on their lifestyle. The power of the peer community comes to the fore as people try out new things based on what they see those around them doing.

Research conducted in an American neighbourhood offers a good example. Four types of signs were attached to people's front doors. The first asked the resident to save energy to save the environment, the second to do so in the name of future generations and the third pointed out that saving energy was saving money. The fourth sign read that the neighbours were already saving energy. The last message was the only one that had any impact on energy consumption. Variations of the test have demonstrated that people are guided by peer pressure. Besides having values (environment, future generations) and seek-

ing benefit (money), our behaviour is strongly shaped by social norms, mutual comparison and pressure from other people.

Lifestyle-related illnesses – or unhealthy lifestyles – threaten health in prosperous countries more than all other diseases combined. This is even visible at the macro level: the money spent on healthcare in different countries does not appear to correlate with life expectancy. Health is affected by the way we live, not by institutions.

6.4.2 Connect the communities with the wicked problems

Finding solutions to social problems, such as reaching shared goals, we are faced with the same obstacles. These problems cannot be solved with a single technical invention or economic intervention; they require managing change through a range of technical, economic and psychological tools. This makes politics appear messy and contradictory to most of us. Politics does not help engage communities with wicked problems but concentrates instead on anticipating the impacts of isolated actions.

Any political decision contains so many compromises that a citizen will find it hard to understand what they are supposed to achieve. No wonder then that communities do not genuinely engage with the decisions. Contemporary politics leads to an inescapable conclusion: even those individuals who believe a decision would further their interests are only committing to it because of this personal gain or out of habit. They often only go along with it until something better comes along.

Nevertheless, at the same time, people seek ever more meaning for their actions, both at work and in their leisure time. Would it not be logical to suggest this in the context of social problems and solutions? The significance of the social grows out of simple processes, as people recognise their shared interests and how their own actions impact on them – in other words, how their own lives are enmeshed with others.

This is the second leg of the design-thinking stool: connecting communities with wicked problems. In practice it means revealing the real reasons behind problems. We must ask: Could we grasp an even greater reason behind the problem we are tackling? Or, can we create shared resources that everyone can use and so dissolve the very source of the problem?

The method is tried and tested when it comes to tackling complicated problems. In philosophy it is called the Socratic method; in engineering it would be called

systems thinking. It is about admitting that it is more important to find a good question than a perfect answer. For example, the method behind this current research has been systemic. We have asked: What are all the factors that influence the conditions of competitiveness? How have these factors changed and how might they change in the future?

We therefore suggest that the metropolitan area's design thinking draw on the concepts of wicked problems and the commons. The idea of wicked problems can operate as a practical tool. They can be a test of how the issue we are dealing with connects with the social structure and the broader megatrends shaping society. How, in other words, should wicked problems be tackled. Jonathan Rosenhead of the London School of Economics has suggested the following methods for approaching complex problems of social planning.

- Combine alternative perspectives; avoid being locked into a single mode of interaction with the problem-solving group.
- Create opportunities for all stakeholders to collaborate in defining the problem through participation and transparency.
- Produce a graphic (visual) representation of the problem space to facilitate the systematic, group-based search for a solution space.
- Concentrate on possibilities rather than probabilities.

Collaboration can be facilitated through legal measures. All scientific knowledge could be declared free of charge and free to use. The creation of this kind of shared commons is not usually a problem; managing it on the other hand requires skill. Who will make sure the commons is not over-grazed?

The management of the commons has been studied by the recent Nobel Prize winner Elinor Ostrom. According to her, local populations need to work in partnership with an administration that understands the nature of collaboration and that knows how to accept constant feedback. There is no universal institutional structure for the management of the commons according to Ostrom, just as, according Amartya Sen, there can be none to reach a group's shared aim. Ostrom has demonstrated that resources under shared management – such as fish stocks, the atmosphere, scientific knowledge, Wikipedia or game animals – are just as productive as those in private ownership. Their cultivation, however, requires local structures that react to changing situations.

CASE:

Fillarikanava: Driving Our Common Benefit

FILLARIKANAVA IS AN APP SUPERIMPOSED ON A DIGITAL MAP WHICH ALLOWS CYCLISTS TO GIVE REAL-TIME FEEDBACK ABOUT THEIR RIDE STRAIGHT TO MUNICIPAL OFFICERS.

You can tell them if there's a bad pot hole in the cycle lane, if a route is counter-intuitive or a crossing feels unsafe.

Fillarikanava (www.fillarikanava.fi) is a good example of how you can recognize a community of practice and give it the tools to see itself as one. Fillarikanava creates a large public by offering itself and perhaps total strangers an opportunity to advance their common cause. It creates awareness of the external impact of what people do.

Above all, it gives cyclists the chance to advance an agenda they believe in. To create a community, you offer it a tool to further its practical needs. In this case the aim is to further a mode of transport that uses extremely little energy. It is thus a case of solving a wicked problem in practice.

From a design thinking perspective, different forms of shared capital are an interesting way to approach the management of the commons. Can we use legislation to, for example, create an instrument like Finland's "everyman's right"? (This is a Finnish convention enshrined in law that gives anyone access to and the right to gather berries etc. from all privately owned land except yard areas). How else would we free up some hidden resource, make use of it and exploit the wisdom of crowds?

It is worth applying design thinking to wicked problems for two reasons. Firstly, it adds meaning to work and leisure. It links them up to a greater story and the shared good. We get to see our age and its problems eye-to-eye. Secondly, it creates advantage out of things that initially appear as wicked problems, like ageing and climate change.

Connecting up with wicked problems will not happen through the language of the industrial society, but through the metaphors of the new generation. The public sector and other organisations have previously been seen as machines, hierarchies, flow charts and information flows. The new generation's metaphors tend to be biological, chemical and physical. They attend to the life-cycle, the ecosystem, rhizomes, DNA, networks, swarms and super-organisms. These metaphors are a way to conceptualise complex causal relationships. In addition, they help us to see that things are open to multiple influences. Solutions are, above all, about cultural change achieved through action at many levels: laws, campaigns, grassroots and voluntary activity, consumer groups – locally and as interpreted by communities of peers. Solutions are also ecosystems: they have a life-cycle, they are rhizomatic, they function like swarms and divide and recombine like super-organisms. Or they live in simple symbiosis.

Strategic design and innovations specialist Darrell Reah uses the metaphor of architecture.
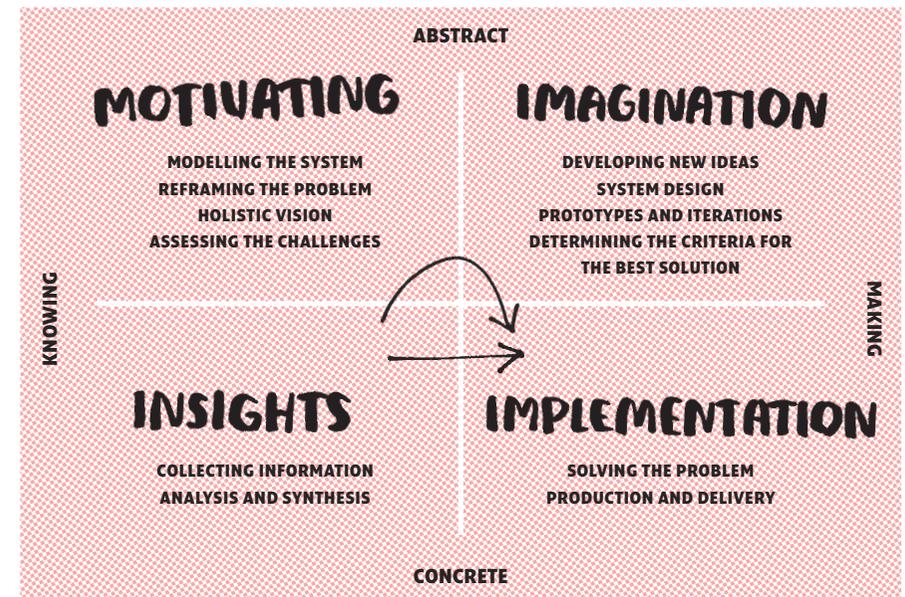
DESIGN THINKING AIMS TO UNDERSTAND THE ARCHITECTURE OF BOTH THE PROBLEM AND ITS SOLUTION. SOURCE: DARREL RHEA

The same birth of new-generation scientific metaphors is apparent also in how people are conceptualised. People have long been thought of as straightforwardly rational beings who react to incentives – as homo economicus. Contemporary thinking however conceptualises people as more diversely composed, directed not only by self-interest, which is complex in itself, but by perceptions and conceptions of the self and others. To grasp these multi-sensory feelings and meanings, design employs the concept of the prototype.

6.4.3 Create prototypes

How then should we go forward? How can we achieve the comparisons Sen calls for? We can create prototypes. These must be understood in a broad sense, as anything from a product's or service's life-cycle analysis, a cardboard mock-up, a dramatised vignette of a use situation, manuscripts, diaries, visualisations with maps, or long-term trials that encompass an entire neighbourhood. In fact a prototype can be anything that gives us information about how people experience the change they are undergoing and how they are able to operate in the new situation.

The influential international design and innovation consultancy IDEO sees prototypes as learning tools which can be used at any stage of the design process. Their function is to explore, develop, communicate and implement concepts. Learning tools are necessary for implementation.

We have comprehensive scientific understandings of many challenging phenomena but solutions seem hard to find. For example, the instabilities of the financial system or the mechanisms of climate change have long been pondered by some of the most expert people in the world. The amount of information and understanding we have about these issues is mind-boggling, but despite this, our practices have not changed as they should.

Impact studies with prototypes should be carried out in as many ways as possible, not simply with preconceived measures nor only in relation to the original objectives. Otherwise we are wasting both good and bad externalities. In other words, we are shifting detriments and costs for others to carry, but also perhaps failing to notice possible positive outcomes. Only after the trial is over can we know everything that has been created.

Prototypes help give us some idea of emergent properties. These are systemic features that add up to more than the sum of their parts, and that could not be predicted, however much is known. Emergence gives rise to ever new features at new, higher levels of complexity than their constituent parts. Biology is pervaded by emergence, so is society. This is how isolated transactions become markets, or neurons in our brains become consciousness. In a complex system like society, almost all actions that touch more than one person have emergent effects.

Prototypes force the system forward. They suggest in which direction society ought to be going at any one time. Prototypes activate different agents because they can uncover new aspects of a phenomenon. This is how prototypes develop solutions for the next level or scale. Experiments can reveal new causal relationships, and these can provide insights that can help solve the problem

At the level of government, creating prototypes should be thought of as a constant practice because, for the most part, administration is concerned with complex human systems. Without trials, it is particularly difficult to predict where people's activities together with some new initiative (road, school, practice, tax) might lead. Design thinkers are constantly interested in what people ultimately engage with and how they use tools. This is therefore an iterative process where, from many prototypes, the best one, as defined by the users, is taken further. This will be the one that best realises the given objectives. *Prototypes are, ultimately, creative ways of making things easy to grasp.*

Although not everyone is interested in climate science, the relationship between actions and emissions must be made comprehensible precisely through constant prototypes. This should be in addition to using ever better measures, visualisations, cost comparisons and conventional political instruments. In this way, trials direct politics to concentrate on objectives and not on principled decisions that appeal to the perfect institution. The starting point of politics is then a series of practical observations. Society changes; there are no unchanging principles, and this is why we must be constantly alert to what actually works.

Prototypes will drive politicians to new knowledge and bring out the bureaucrats. Prototypes connect planners to what they are planning. Design-thinkers are not in an ivory tower while the workers are out there implementing their schemes. There is no headquarters, just a single community of peers aiming at a shared goal.

Breaking down the walls of the silos of planning and design is crucial; otherwise there will be no feedback and the results will not be observed over the long term. We will not get to the emergent properties of the change, since feedback for the designer is difficult to generate from raw "data". Instead, loop by loop, practical knowledge will keep development going.

Services in particular are difficult to produce successfully without prototypes. A good example of this is the development work that goes into successful restaurants. First one restaurant is developed, becomes a hit, and then it can be launched as a new concept in new locations. Another example is Paltamo municipality's employment project, where in parallel an extensive study is being carried out of how the project is working.

Prototypes can therefore have a strong communicative significance. They signal a new direction. If we are honest, we will admit that we do not know which method leads to the best outcome, so let us try several. Prototypes are not simulations but concrete experiments. They are also one way of enlisting many people in the task of planning to reach a broader social goal. But that is also why it is important that people understand they are building something new. Communication can otherwise turn people against trials. Negative news that fills the newspaper, about the failures of recycling schemes for example, are a good example of this. People become frustrated and stop sorting their waste, not realising that they are part of developing a new system whose proper functioning requires that many people participate. It feels like some trick played by the administration with no purpose. This is the difference between prototypes and campaigns: prototypes promise that if one method does not work, we will improve on it or borrow one that has been shown to work elsewhere.

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7. Ten Steps to Sustainable Well-Being

To sum up, we wish to present a ten-point action plan, drawing on our key findings and ideas. They pick up on the aims of sustainable well-being, the partnership model, innovation and design thinking. At the end of each step is a recommendation for how a municipality can grasp the challenge.

1. Better housekeeping through a peer-based open economy

Wikipedia is one of the most interesting international innovations of the early 2000s. A group of computer enthusiasts set up an encyclopaedia where users could upload information. Today Wikipedia has 16 million articles and is one of the world's top-ten most visited internet sites. Wikipedia has become not just the world's biggest encyclopaedia, research suggests that it contains fewer errors than the Encyclopaedia Britannica. Furthermore, Wikipedia is self-correcting: its users notice mistakes and update its information continuously.

Citizens' collective activities have gained a totally new significance as voluntary input has been channelled into products that compete with those made by companies. Only 15 years ago, publishing houses were investing heavily in encyclopaedias, commissioning the best researchers, getting the contents checked and paying dozens of editors. Now this business has all but disappeared. Volunteers, people interested in the world, are doing the same job without pay, offering their services to everyone for free. Money is no longer changing hands, but an ever higher quality and more accurate source of information is at the disposal of ever more people.

The birth of the Wikipedia model has created a new paradigm of production: cooperative creation, also known as peer production. Here the forces of production are not limited to machinery and paid labour, but encompass people's enthusiasm, interest, and desire to build up shared capital.

Cooperation is not, of course, a completely new thing. Finland certainly hasa strong history of collaboration through the talkoot tradition, something that the once-impoverished nation drew on to build schools and community facilities. Cooperation of various kinds is today part of this same tradition. Children's sports activities rely on active parents, the scouts are based on older children taking responsibility for younger ones, and most women in their fifties and sixties are caring for parents or grandchildren on a weekly basis. Apartment buildings still organise work parties to do seasonal maintenance in shared back yards, and most house removals involve help from family and friends.

Networks of peers give thousands of people help and advice on everything from restaurant and hotel tips to difficult health problems. The value that people add to the national economy through this voluntary effort is not visible in the national accounts, even though there is no way an economy could succeed without it.

Perhaps the most relevant focus then is not the economy as we have learned to think of it, but the ways people and communities add value to the wider household economy. (Translator's note: The Finnish word for economy is talous, derived from the word talo or house. Through this the Finnish language neatly captures this sense of economy as managing a household. But it also connects the domestic scale to the national economy by adding the word kansa – nation – to create the national household kansantalous.)

These ideas are also evident in David Halpern's idea of the economy of regard. This is the social value economy, something beyond market relations and property rights, in voluntary cooperation among people. Its core component is the commons, a shared good available to everyone. The possibility to participate in peer production and to contribute to the shared commons is improved with each advance in information technology and as communications infrastructure becomes more efficient as well as inexpensive.

How does this strengthen public services? The public sector across the West is struggling with the same dilemma: expenditure should be cut rather than increased and yet users' demands keep growing. Similarly in Finland, citizens are looking for ever better and more comprehensive services.

At the same time, there is a move to define official duties and responsibilities more precisely. Tightly drawn professional profiles put limits on what is possible. For example, children's nurseries do not allow parents and grandparents to contribute, even though at times, such as on outings, extra pairs of hands and eyes would be more than welcome.

The third sector and business have so far been the most avid exploiters of open peer production. However, the social value economy and peer production have great potential for the public sector, particularly in well-being services. Peer and support groups help citizens and organise practical assistance. But for the public sector to be able to rely on people's participation, many practices must be changed.

Having analysed peer production, many researchers have concluded that a totally new type of production model is emerging, with the following features:

1. Decentralisation
2. Collaboration
3. Non-proprietary commons
4. Sharing
5. Voluntarism

These characterisations do not, at first sight, appear to fit contemporary public institutions. This means there is a need for reorganisation, for a new kind of leadership to adapt our well-being services and other shared responsibilities to an age of open peer production.

What is the significance of this social value economy to competitiveness and success? The social value economy operates "below" or "alongside" the market economy, creating a kind of parallel economy. These economies interact with each other.

**THE SOCIAL VALUE ECONOMY – THE NATIONAL HOUSEHOLD
– CAN BE ENCAPSULATED AS FOLLOWS:**
• Peer production creates significant economic and social value.
• Peer production changes the nature of companies and market conditions (relations with consumers).
• Peer production opens up new opportunities for business activity for companies.

CASE:

The City's Time Bank: A Community Machine for Sharing Time

THERE'S A NEW FRIDGE TO BE CARRIED IN FROM THE CAR, A DOG THAT NEEDS WALKING IN THE MIDDLE OF THE DAY AND A BIT OF WORK TO DO ON MY CONVERSATIONAL FRENCH.

These and many other problems can be solved with the help of the City's Time Bank. The service-exchange network that started out in Helsinki's Kumpula neighbourhood now has around 100 users. Time banks now operate across the world. In Great Britain they have government support and involve about 50,000 users. The basic idea of all of them is the same: members of a local community exchange time-consuming services with one another, usually with the help of the internet. For an hour's work on something you have the skills for, you can get someone else's hour in return.

The idea for Kumpula's time exchange came from women on maternity leave. It's a good example of the kinds of resources that lie in people who are not in a day job. The time bank is a way of extending the volunteer ethos of sports and hobby-based groups into the home. Some simply call it helping out neighbours. Today's urban resident, however, may need new tools to be confident of making use of others' willingness to help, as the time-bankers have noticed. Giving and receiving help has become more everyday.

"It's easier to ask your neighbour for the smallest favour when you can say that they'll get their hour's worth of work in return," say the exchangers.

The model could also be applied to the public sector. What if the City was able, for example, to provide space for evening use with the help of the time bank and, in return, find volunteers to help the local old people's home with outdoor activities?

According to Yochai Benkler, Professor of Entrepreneurial Legal Studies at Harvard University, the key point is that peer production is shaping market conditions and how society operates. Customers can take an active role, creating and improving products themselves. Peer production brings about new innovations which companies must follow and adapt to if they are to succeed. An example is that of IBM's turnover; about two billion dollars comes from products and services based on the Linux platform.

HOW IS DESIGN THINKING REALISED IN PEER PRODUCTION?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
Communities are formed around shared interests. Responsive public services assist people in finding and establishing open communities and commons.	Peer discussion helps translate large and difficult issues into familiar language. The municipality supports gatekeepers who know how to turn shared problems into ones that are relevant from the point of view of the peer community.	Personal motivation and peer support enhance experimentation and the exchange of experiences. The task of the public sector is to transfer successful experiments to other groups.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

Through peer production, municipalities can improve the quality of their services and tackle the kinds of human situations where conventional solutions appear not to work. The prerequisite for this is that municipalities find professionals who can identify potential groups of open or peer communities, to nudge their activity along and to open up its models of practice to suit cooperative peer working. The municipality should identify gatekeepers or those who are able to activate stakeholders in the private as well as the third sector. They have a key role in initiating peer production. Models of success should be closely examined, perhaps as research foci in their own right, in order for small-scale solutions to be refined and up-scaled.

2. A new model of entrepreneurship: social enterprise

Our service structure has room for new forms of entrepreneurship. Social enterprise pioneer Jonathan Bland claims that social enterprises combine the ethos of the public or collective sphere with the dynamic entrepreneurship of the private sector. Social enterprise is in fact an exemplar of design thinking. Social entrepreneurs address social challenges through business activity. Often they are oriented towards a community for whom they provide services and whose expertise they draw on to develop their activity. They tend to be open to experimenting with new ways of doing things.

The motive behind social enterprise is to resolve a problem facing an identifiable community, and this is often connected to the recognition of a wider social problem. The motive may equally concern tackling a global challenge through a local community. An example of this is Divine Chocolate in Britain. The Ghanaian Kuapa Kokoo co-operative procures raw cocoa at fair trade prices – just as in fair trade generally – but it also owns almost a half of the chocolate bar company. As shareholders, the cocoa farmers receive dividends on their shares in Divine Chocolate, generated from Britain's 4.5 billion euro chocolate market. An additional two per cent of Divine's profits are channelled into businesses and cooperatives run by the farmers themselves.

The unique selling point of social enterprises is their knowledge of their consumers and their needs. They are able to produce bespoke goods and services that customers feel comfortable with and consider their own. Many social enterprises include customers among their management, and customer-centredness and participation enhance trust and commitment.

Social enterprises build on the quality and meaningfulness of the work. They are often made up of motivated staff whose know-how is exploited to the full. Social enterprises are skilled both at empowering their staff to work in new ways and at making use of grassroots capacities. In social enterprises, staff participate in management or are actually owners themselves. Staff enjoy working for a company where they can work to the best of their ability and have a genuine role in developing the company. High levels of motivation lead to good services that customers appreciate: well-being becomes a virtuous circle.

This kind of customer-focused and staff-centred approach is part of Greenwich Leisure Limited's (GLL) business model. During the recession of the early 1990s, budget cuts meant the threat of closure for three sports centres. Facing possible redundancy, staff formed a company to which leisure services were contracted out. As a result of the new arrangements and good leadership, the municipality avoided both the closures and the redundancies. Today GLL is a successful company with 70 sports centres around London. Over 80 per cent of its funding is from paying customers; the remainder comes from the municipality. Customers who pay full entry subsidise entry for less well-off users. Staff can own a portion of the company. The management of GLL at the highest level includes representatives of customers, municipal representatives and staff.

Social enterprises are flexible and innovative because they focus on solving problems and have an open institutional culture. Because their activities are seen as part of a broader challenge, and because they want to approach it in unconventional ways, they are naturally drawn to experimentation; they are experiments in themselves. Since the organisation has been set up to answer a particular challenge, it is quick to change itself to better achieve this aim. Organisational structures in social enterprises are often experimental, as for instance in GLL.

Jonathan Bland's view is that in Finland specifically, social enterprises could have a larger role in:

- reforming public services
- improving employment prospects for young people
- responding to social and environmental challenges, e.g. homelessness and renewable energy development
- regional economic revitalisation and development
- increasing entrepreneurship: value-based enterprise may be of interest to a new generation of entrepreneurs
- expanding activity in the arts, culture and leisure

TYPICAL FEATURES OF SOCIAL ENTERPRISES

- **A clearly defined social mission**. The social goals are clearly laid out in the company's articles and their impact should be measurable.
- **Operating in the market**. The bulk of turnover comes from business activity.
- **Profit** is used primarily to achieve social aims, either by reinvesting it back into the company, into the relevant reference group it serves, or into solving the problem it was set up to address.
- **Transparent juridical form and organisational structure** which protect the company's social aims.

HOW IS DESIGN THINKING REALISED IN SOCIAL ENTERPRISES?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
A social entrepreneur's business idea starts from identifying the needs of a particular group. Often the initiator is from the third sector, in which case they will have the strong backing of a community, and often access to its knowledge and work input. This enhances productivity.	The motive is a solution to a wicked problem. For the activity to be lasting, it needs the committed participation of the user or reference group from the start.	Social enterprises tend towards experimentation both because of their problem-solving efforts and because their business must function profitably. Developing new models of operation is a more natural element of employees' daily experience than it is in the public sector. Social enterprises generate new models of practice that can be transferred over to the public sector

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

Municipalities can give social enterprises a greater role in service provision. This way they can capture the extra activity generated by the commitment and enthusiasm of a user community. Workers in some UK public sector organisations have the right to ask for a review into whether the service it offers might be better run as a social enterprise owned by its workers. Such a model could also be tried in the metropolitan area. Benchmarking for municipal tendering processes should also be improved to ensure that the most innovative solutions can be progressed. This way, the strengths of the social enterprise model can be made part of service production.

3. The open economy or human-centred business networks

The people of the Helsinki Metropolitan Area are even better educated than other Finns in general. This does not, however, guarantee that the right kind of know-how will find its way to the pressing challenges of any given time. Institutional educational structures have been developed to nurture essential general knowledge and abilities, but when it comes to responding quickly to changes in skills requirements, they sometimes falter. Another challenge is to ensure that learning spreads: from academia into companies, from one company to another, from users to business. In this process, networks and personal contacts become particularly important. At the same time, working life has changed: work and the broader process of value creation associated with it do not take place only in the workplace but everywhere that people meet and interact. The task often becomes bringing together the actors needed to address a particular theme.

One solution to this is interactive problem solving through human-centred business networks, that is, an open economic policy whose central principles are:

1. Partnership and collaboration
2. Experimentation and learning
3. Constant search for the new
4. Selecting top projects

Partnership also works in economic policy. At the start of the 1990s, economic policy was constructed around the cluster model proposed by the strategy theorist Michael Porter. Globalisation has, however, dissolved national clusters, and transnational value networks have taken their place. This significantly alters the tools available for economic policy. Where economic and business policy is open, development work can focus on activities that enhance value, such as the production and transfer of information, building networks, internationalisation and the development of supply chains. These value-producing activities are strengthened through collaboration involving actors in the public, private and third sectors.

When we talk of openness in human-centred business policy, this also refers to the experimental nature of the development process. The aims include varia-

tion and heterogeneity as likely sources of new business activity. Often economic policy benefits companies that are strong, the aim being to pick out winners. Only seldom, however, do they become real successes which suggests a need to foster variation and to learn from it.

Innovation is based on seeking novelty. New business activity is born out of the combination of varied skills. A key issue in generating new business is, therefore, finding the necessary knowledge and skills. Search networks are needed to solve this problem at local as well as global scale. Through these, it is possible to find solutions for experimentation and transformation.

This searching, experimentation and transformation process touches both institutions and companies, and other organisations. Activating search networks can lead to radical but step-by-step transformation. Incremental change requires that the weaknesses of the business or public sector organisation are eliminated bit by bit, through openly searching for better ways of doing things and experimenting. The whole process should unfold through partnership.

Informal deep networks may sound rather abstract, but they are in fact a practical tool. Alongside conventional knowledge networks, there is a need for alternative models where problems are solved in informally produced networks. These may be all the deeper for their informality, incorporating know-how across a broad spectrum. In such networks, variety fosters productive interaction at the interface of different "camps" of learning and knowledge. Across the world, new models in this vein include Social Innovation Camp, Foo Camp, BarCamp and the Mobile Monday platform. What unites them all is the way experts in different fields such as teachers, architects, designers, coders, marketing people and authorities develop short sessions to address some particular acute, often also wicked, problem. By expanding the notion of camp thinking, it is possible to reach functioning experiments that break through conventional silo thinking.

Deep networks built on trust and peer networking have been shown to nurture creativity. They are also places where innovative models of activity arise that can be adapted and exported across the wider community. Often these deep

networks are at least partly an element of people's leisure time. In New York, so-called meet-up culture is an important part of this new way of doing things and is acknowledged in the public sector as well. People from different specialist groups, interested in new kinds of networking possibilities, meet each other over breakfast or at evening events where social challenges are discussed and tackled. An example is Hello Health, a new healthcare network that has built up a flexible, cost-efficient and pleasant medical experience. Meet-up events addressing all kinds of issues take place every week. The phenomenon is driven by the awareness that technical innovations and social challenges so rarely come together, so that interesting and important technological developments fail to become goods or services of benefit to users.

Identifying the potential of deep networks is one clear way of generating cross-sectoral collaboration in public administration. This requires that the public sector is open-minded. Immigration officials, library staff and the police could get together in intensive problem-solving camps and find totally new ways of approaching everyday social problems. An atmosphere of open acceptance will make it possible to try out new ideas. Prototypes created through deep networks might, for example, give rise to a system for making dentist appointments through a process that is more efficient than a narrowly specified brief given to a single consultancy.

Foo camps are an example of this new operating environment and are the idea of Tim O'Reilly, media expert and champion of open source. Foo Camp ("Friends of O'Reilly") started off as a joke, but it developed into a stable concept which has been adapted dozens of times around the world. O'Reilly invited his friends around, with other interested people gradually joining the group to talk about new technologies. His aim was to create a better understanding of how one might make use of technology when the know-how of a large group is brought together. Foo Camps have been organised, for example, in an old apple orchard with the idea that the programme is not set in advance; rather, it is dreamt up on the spot. The meetings have been compared to the early days of Silicon Valley, a time when people's activities were not rooted in business plans or marketing campaigns but in the genuine joy of collective thinking and problem solving.

Open and human-centred businesses would benefit from both these models. This could happen through inviting a working group of peers to resolve current issues a process of creating from scratch without a sense of an already decided final aim or outcome.

Economic and business policy is not an independent silo; it is more of an umbrella under which many policy areas fit, including education, cultural policy and transport policy. For this reason, this kind of collaboration that crosses sectoral boundaries is of great benefit to the economic life of a metropolitan region. This is why the challenge of openness has to be taken seriously.

Creative service economy activities should be strengthened as part of improving overall economic structure. By setting peer production in motion and exploiting the benefits of camp-like working through deep networks, we can strengthen interaction between actors and increase the self-renewal capacity of business. Directing current educational resources to build up flexible networks as necessary at any given time, would answer many challenges. The deep networks we have described tell a story of how human-centred business networks could work in practice.

HOW IS DESIGN THINKING REALISED IN POLICIES TO SUPPORT HUMAN-CENTRED BUSINESS NETWORKS?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
Knowledge networks draw people together based on motivations and interests rather than status or institutional role. Linking public sector actors into networks facilitates the open development of services through a broad skills base.	Policies for open, human-centred business networks and new paradigms of cooperative effort offer entrepreneurs and professionals from various fields opportunities to make use of their skills to address wicked problems. Public sector actors can offer a wide range of experience with different solution models.	The starting point for policies to support human-centred business networks is to share good ideas and gather together knowledge across skills sectors and to develop these into experiments. Municipalities can start to put their own activities out to tender, openly inside the local authority or as local consortia together with other actors.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?
Municipalities should actively persuade their workers to join the forums, networks and competitions that underpin open source skills and cooperative effort. In this way, these networks are given new weight and municipal activity benefits from new ideas and skills. The municipalities of the metropolitan region could get together to organise their own social innovation camp.

4. Public open source data – commercial use allowed

All over the world the public sector produces vast amounts of interesting, useful and commercially valuable data. The USA and Canada have decided that this data should be utilised to the full, and so data is openly available for anyone to use and commercialise. For example in Washington DC you can check the safest route home from a bar at night using a map superimposed on a police dataset. In Vancouver, you can access a service to remind you when the waste collection is going to be carried out in your area and Toronto's service will help you find a childminder. We can only imagine how society would change if a real-time health database were open so that everyone could see, for example, how the symptoms of a flu epidemic are developing in their area and how other people have already managed to treat and control it.

Publicly funded research in Finland shows that data from public sector activities, for example neighbourhood maps showing people's age or energy consumption, could be better used to benefit civic society and businesses if the data were openly accessible. At present it is often not free, or it is in a format, such as PDF files, that makes it hard to use.

In the international debate, open data is considered part of the commons so that everyone should have the opportunity to make use of it. It is often thought that the public sector cannot itself develop socially useful applications for its use, whereas private agents could refine this information and turn it into something that would really benefit end users. The producers of these kinds of "live services" are often people who have themselves benefited from such an application. The end products are developed to resolve some everyday problems.

Here in Finland, the approach has been completely the opposite. For example, the enormous shared database maintained jointly by the Helsinki Region's municipalities (Helsinki Region Statistics) explicitly allows the use of data for one's own use but prohibits all use and distribution for commercial purposes.

When the current guidelines for the use of public information in Finland were established, hardly any private actors saw the value in accessing gigantic information resources like this. In today's situation, the guidelines seem antiquated. Information has become something that is enhanced and enriched through being made freely available. According to David Halpern, making use of information about citizen consumers is perhaps one of the most promising avenues for the public sector to improve its own performance. By combining information and technology, applications that currently seem modest could be developed further to help address complex, wicked problems. For Halpern, information that is produced by citizens, used by consumers but facilitated by the public sector is also a central mechanism for developing public administration suitable for a post-bureaucratic age.

HOW IS DESIGN THINKING REALISED IN PUBLIC OPEN SOURCE DATA?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
Opening up data gives rise to user-centred applications. Applications work like a kind of media for community building, helping people who are interested in the same issues to find each other..	Using open source data for new applications makes visible the local sources of global problems.	Open source data encourages people to find new solutions and to develop them into both commercial and non-commercial ventures.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?
The metropolitan area's municipalities should open up all their public data. In addition, authorities should provide an open source information specialist to advise on the use of data and to help different sectors to open up their databases. To regulate the free or paid use of open data, municipalities must devise rules that are fair and safe for all users.

CASE:

'Apps for democracy': The Best Adaptations of Democracy

WHAT'S THE BEST ROUTE BY PUBLIC TRANSPORT FROM MERIHAKA TO PUNAVUORI?

The Helsinki Region's popular Journey Planner service was born when some students came up with the idea of developing a programme for the Helsinki Region Transport (HSL) website. What if all information produced by the public sector were available as easily? How much might it benefit everyone?

The USA-based Apps for Democracy competition looks for the best ways to share public data and so to strengthen democracy. The idea is to combine citizens' skills and public data by offering prizes.

Last year there were almost fifty competition entries of internet or phone-based applications. Apps for Democracy created bigger savings for Washington's government machine than any other initiative over the year. The cost of the competition came to US$50,000 and the products were estimated to yield savings of up to US$2.3 million. The latest outright winner was the iLive.at website, through which a user can find their nearest metro station, hospital, police station or other public facility.

Apps for Democracy was run in Finland for the first time in spring 2010. The Finnish contest was won by Peter Tattersall's Tax Tree service. With its help, citizens can trace where government and municipal money is coming from and where it's going. In practice this is the same information that is published in the government's budget but which nobody can be bothered to dig out of the thick yellow book. Apps for Democracy thus saves public resources by exploiting shared property. At the same time it enhances the application of the basic tenets of democracy.

5. The ten-minute city

Poor spatial planning prevents sustainable well-being from being realised. This becomes clear when we look at the three dimensions of sustainable well-being (see Chapter 4). Congestion, bland and lifeless neighbourhoods, and the development of slum areas are barriers to a good quality of life. Growing traffic flows and energy-inefficient construction make it impossible to use natural resources sustainably. Insufficient housing and service provision and a transport system that wastes time and fuel, make sustainable housekeeping impossible.

Both in metropolitan regions and elsewhere, geographical spread (urban sprawl), social segregation and low-quality public space create challenges for use planning in cities. Partly the problems are rooted in deficient planning, partly in an unhappy relationship between planning capacity and spontaneous regeneration. Planning across the metropolitan area is weak which makes it difficult to develop sustainable transport systems, but it also intensifies segregation. And yet, some parts of the Helsinki region are over-planned: they do not leave sufficient room for local transformation to occur or for residents' own initiative regarding public space and its use.

Recently, development solutions have come from two directions:

- **Structural models at regional scale** have been used to direct the emergence of new built-up areas along public transport corridors.
- **Micro-level planning and design** have tried to shape both old and new neighbourhoods to develop their diversity and social opportunities.

Design thinking combines these approaches into the concept of the ten-minute city. In a ten-minute city, living, working and services are concentrated in and around lively neighbourhood centres. The aim is that every healthy adult could reach the most important local services within ten minutes of their home – neighbourhoods would thus develop into authentically pedestrian spaces. When key services are located correctly in relation to pedestrian flows, the footfall will also nurture the birth of other services on the same streets and squares. What were once merely residential areas become the city's neighbourhoods or quarters, each with their own strong image. Land values are raised by this mechanism and not only on waterfronts or in city centres.

Urban neighbourhoods are linked to each other by efficient public transport solutions: fast trams, overground trains, metro or underground trains and main roads dedicated to buses. With their help, it is possible to access other neighbourhoods in ten minutes as well. Strings of neighbourhoods are formed along rail links to radiate out like fingers from the central core. Transport across them can be efficiently provided by a network of connecting ring roads dedicated to buses only. This kind of integrated framework makes work or leisure destinations across the region easy to reach by public transport, which means that even more distant suburban areas are served by public transport, not the private car.

Such an integrated model has been implemented successfully in Copenhagen and in Finland's city of Kuopio. A local rail network is not practical in a town as small as Kuopio, but despite this, its public transport system has been growing. Its starting points are its neighbourhoods, linked to each other via roads dedicated to public transport, also offering pedestrians and cyclists a high-quality environment. This makes buses a competitive alternative for getting to the centre. Neighbourhood centres and public transport routes need good design of the streetscape. Routes not accessible to private vehicles can be neatly separated and marked with design features to create attractive and diverse residential areas.

The need to minimise car-dependency in urban areas is based on many factors, foremost being congestion and its associated costs in time, and dependency on imported energy. In addition to disbenefits that can be calculated in monetary terms, it is important to understand the problems that total car-dependency creates in terms of vitality and responsiveness. This pattern was well captured in the classic of urban research, Jane Jacobs' *The Death and Life of Great American Cities* (1961). According to Jacobs, the city's biggest loss is the degeneration of the public street. When people do not move on the streets on foot, the majority of small enterprises wither away (shoe repairers, cafes, florists etc.). This is not only a loss to the local economy and employment opportunities, it is toxic for the social structure. As people's ad hoc encounters are reduced, they grow distant from each other. Social life is impoverished, social groups become insular and a sense of insecurity begins to characterise experience of public space. Ultimately it also erodes democracy as people's capacity to collaborate and to tolerate difference is weakened.

In a metropolitan area this becomes visible as a lack of meeting places. Local services atrophy, and people engage less in spontaneous shared activity. This

reduces the quality of the environment and the region's attractiveness to people beyond the region.

In a ten-minute city, all elements of development are pure design thinking based on how people behave and on experimenting with various solutions. Jan Gehl is one of the most influential urban designers of our times, a specialist in developing pedestrian centres and streetscapes. Some time ago, Gehl devised his methods on the basis of observing behaviour on one afternoon a week over a period of time, charting routes and the dynamics of social encounter on a Copenhagen street, Strøget. He implemented small alterations in the street layout and made systematic observations of their impact on people's behaviour. With the insights gained, he has carried out projects to improve urban spaces in Copenhagen, London, Melbourne, New York and Sydney.

Gehl's methods are necessary for making the metropolitan area into a vibrant ten-minute city. Gehl began his work in the 1960s, and since then, a set of central tools for urban planning have emerged through geographical positioning systems, which can systematise data on people's spatial behaviour efficiently. A Finnish innovation in this area is Aalto University's soft-GIS method (from Geographical Information Systems). This enables comparisons of urban use to incorporate aspects of how people experience and feel a place or activity, and how they value it.

It could be a first small step towards creating the ten-minute city.

HOW IS DESIGN THINKING REALISED IN THE TEN-MINUTE CITY?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
Spatial planners have to understand the actual ways in which people use urban space. The starting point must be to aim for a diverse, walkable-scale proximate environment. This will also strengthen communities.	Reducing the need to travel also makes it possible to reduce noise and climate emissions. It is an investment in sustainable well-being because the coming decades will see noticeable rises in mobility costs.	Our current idea of the city is modernist, that is, one that plans neighbourhoods by function. Spontaneous sociability and services rarely emerge out of this kind of environment. The ten-minute city facilitates human encounters and new ventures.

6. Nudging people onto sustainable paths

We are astonishingly bad at making the right choices to improve our happiness and well-being. We work towards happiness in a regrettably short-sighted way, without understanding the real or long-term impacts of our actions. Often we opt for the easiest alternative although in fact it does not make us happy, for example, when we eat greasy fast food in a hurry. Society as a whole is beset by a collective illusion that money and material goods improve happiness. The Finnish experience of happiness has not improved despite rises in income and wealth since the 1980s. As many as one in four suffer from work-related exhaustion and increasingly many, from a sense of dissatisfaction. Our work days are made far too long in an effort to achieve something that does not even make us happier.

One of the more practical new developments in economics has been the rise of behavioural economics. This has happened largely thanks to Nobel Prize winner Professor Daniel Kahnemann of Princeton University. Behavioural economics has rapidly become an applied practice, often referred to as libertarian paternalism. The concept offers a rational direction for reforming the administration of society that nevertheless takes account of the complexity of human life.

Many people living in liberal democracies resist the idea of a state that manipulates behaviour, but the issue is not so black and white. Direction can take many forms; not all of it limits freedoms and some of it guides us to make better choices. This approach underpins the historic reform of the USA's healthcare system initiated by Barack Obama.

The approach centres on human choice and decision-making situations and how to influence them. In the book, *Nudge: Improving Decisions About Health, Wealth and Happiness*, published by Yale University Press, researchers Richard Thaler and Cass Sunstein present what they call "nudge theory". According to this, the public sector should build society by making the wisest outcomes for society as a whole the default values. The model does not, however, limit personal freedom: poor choices are not prohibited, but good ones are facilitated and supported with incentives. By nudging people, it is possible to get people to make the good choices that people consciously seek but cannot always achieve in practice.

In nudge theory, politicians and decision makers are seen as choice architects. Each of our choices – whether acted upon or not – has impact, which means choice architecture needs to be developed so that we can be contributing to the collective good with our everyday decisions, or at least doing as little damage as possible. Our pensions system is an example of how nudging already works. It is an automated public system to compensate for the fact that people do not save sufficiently to cover their needs in old age.

The benefits of choice architecture should also be investigated beyond the realm of politics. Ultimately, everyone can shape everyone else's choices. Halpern describes libertarian paternalism as an extension of parenthood, a kind of partnership of all adults. Society's role is to support its members well-being and happiness so that the function of the public sector becomes to encourage wise practices and create the right circumstances for happiness to flourish.

In Finland, the most significant example of a kind of libertarian paternalism is the North Karelia project in the 1970s, where the lifestyles and habits of a large population in eastern Finland were successfully transformed through cross-sectoral intervention. Vegetables were made part of the daily diet, and the use of certain fats and salt was minimised in places where large numbers of people ate regularly, such as office canteens and schools. Outdoor activities were encouraged and made pleasant and easy for everyone. Naturally growing awareness of the significance of a healthy lifestyle and improvements in healthcare also helped reduce risks, but the nudge as such has been considered a significant factor in reduced mortality rates.

The White House also trusts the power of the nudge. Dr Ezekiel Emanuel, Barack Obama's healthcare adviser, has said that choice architecture is part of current efforts to shape American eating habits. By prioritising better choices, says Emanuel, it is possible to make eating in schools, offices and the army more environmentally friendly and more healthy – all the way through the production chain, from producers to those who design the menus. The massive purchasing power of the Federal State makes it possible to transform the whole food production system by prioritising organic and local foods, less processed ingredients and more vegetables. Purchasing power can also be used to shape pricing structures and the right kinds of efficiencies in the production chain: the right choices should not be the expensive ones.

According to Emanuel, the nudge model is a practical way of directing people's habits. It does not ban bad choices, it encourages good ones. A tempting offer, cheaper prices and clear labelling, such as a local-food label, may be an answer to Michelle Obama's project to address the childhood obesity problem. Next, Emanuel would like to see nudge experts who could design processes to help people make good decisions.

Nudges can be used for other applications too. For example energy-efficient living or refurbishment can be made easier if sellers of building materials offer greener products and services. Applying the nudge theory to enhance vitality in the metropolitan area will depend on identifying the relevant gatekeepers: Where are the choices made about what will be on offer? Which agents are responsible for the everyday decisions of vast numbers of people which cumulatively generate social challenges? A broad decision tree is a good tool here. It helps set the questions about what decisions an individual must make to consume less energy or develop healthy habits. A decision tree is a way to unpack social challenges into individual and group decisions where the aims are either achieved or not, by identifying sticking points and the gatekeepers who can break through them.

HOW IS DESIGN THINKING REALISED IN CHOICE ARCHITECTURE

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
Understanding choice architecture is understanding individual behaviour. This is guided by communities and gatekeepers. Gatekeepers need to be encouraged to support choices that are good from the point of view of well-being.	Well-designed choice architecture makes choosing the options that support sustainable well-being feel easy. At the same time, it deepens people's understanding of the right choices.	This is about constant trials, following people's behaviour and reacting to it.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

Municipalities should assess their entire service organisation by how well it nudges people towards the desirable paths. In calling for tenders, municipalities can emphasise the impact of choice architecture on sustainable well-being. Health and environmental policies should start with providing information services to the area's service enterprises. Municipalities' own employees should be nudged into healthy and ecological choices in canteens, work-related travel and everyday physical activity.

7. Diverse services in a diverse society

Things that require many social resources, such as education and health care, are organised through municipalities and the state. Furthermore, Finland's welfare-state legacy lives on in the fact that for the majority of new-born babies, their first bed is the cardboard box in which the state-sponsored "maternity package", containing clothes and basic useful items for the baby, is provided.

This way that municipalities and the state organise collective aspects of life has been a tremendous source of strength in Finland. All kinds of people's resources can be drawn into social development. The system worked extremely well through most of the twentieth century when Finns were a very homogeneous population. Having grown up with the same cultural references and being used to similar daily schedules and routes, Finns could easily find the services they wanted from public authorities.

Now an ever increasing proportion of the metropolitan area's population speaks a language other than Finnish or Swedish (Finland's second official language), and they build lives oriented towards metropolitan centres like London, Mogadishu or Mumbai, where they have family and friends. Home upbringing is no longer an automatic way of creating a standard relationship to Finnish society at large.

In this kind of Finland, services that support society take on new functions. They must connect all their users to Finnish society and make the metropolitan area's residents aware of their rights and responsibilities. These days, for instance, teachers in day nurseries have an important role in helping immigrant families integrate into Finnish society.

To leave some social groups outside the sphere of publicly available services would be a great threat to vitality. And so regions, their services and their democratic structures should be available, easy to understand and welcoming for everyone: those visiting for work, tourists and immigrants. The region must offer opportunities to join business networks and professional and personal communities. The report by Charles Landry and Paul Wood, *Helsinki as an Open and Intercultural City*, published in the autumn of 2010, notes that Helsinki is already like other large European centres in terms of cultural openness, but at the same time it is diverging from the rest of Finland.

The British charity Community Links is founded on the premise that services that support communities are tools of democracy. A single service can form the strongest relationship a person or their immediate community of peers has to official society.

For the Finnish ethos of "everyone together" to be realised in the future, there must be better ways of getting people to commit to communities, services and democracy building. For administrations, linking up various communities is a kind of craft. It requires that service providers get out into the community; they must find out where communities operate, how they make decisions and how they can be brought together.

In Finland, all municipal services should disseminate the basic principles embedded in public services and live up to them. For people to engage with public services, however, they must learn to understand and serve people as members of their communities. In terms of regional competitiveness, this means a new kind of inclusion of immigrants. Immigrant families and communities must be brought as close as possible to society's core structures and drawn into using public services. At the same time, their understanding of the rights and responsibilities attached to these must be developed.

Getting diverse groups of people to use services gives them justification. In Finland, child benefit is paid, for example, for each child regardless of parental income. This has been justified on the grounds that it is good for all members of society to benefit from income redistribution at some point in their lives. The same principle should be realised in cultural services, for instance. If they are only used by a small minority, the justification for providing them will crumble, which, over time, would erode the idea of creating sustainable well-being via the public sector.

HOW IS DESIGN THINKING REALISED IN DIVERSE SERVICES?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
The starting point is the user with their individual needs and the various services needed through the life cycle. At the same time, the community becomes more relevant to guiding individual decisions. Service providers must therefore get out of their offices and into the community.	Already existing solutions are offered as examples for communities to see. In this way, understanding of the problems deepens.	Building better services requires trial and error. The premise is that the user's relationship to a provider lasts for years, not just the duration of one unit of service. This makes room for new solutions.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

Public services must also have the capacity to influence those people who do not seek out help from a service point. That is why the starting point for services must be to connect users and to go into the community, in order to identify different needs and user groups and to design model solutions that fit them.

Many public services (such as education and training, social services, caring for the chronically ill) are based on long-term relationships with customers where it is not so much a question of a single solution but rather of guiding life trajectories in the longer term. This requires motivating users and empowering them to develop the service. This means services cannot be assessed on the basis of technical efficiency alone but must also be judged on their effectiveness.

8. Warped culture as a force for change

The significance of services that support culture, the arts and sport is growing all the time. Surveys in North America and Europe have shown that people seek out urban centres whose cultural and sports activities are dynamic and attractive. Successful models, such as Glasgow and Bilbao, have helped make culture an important tool of urban regeneration.

Culture's greatest significance lies in the fact that it allows people to see life's difficult questions in new ways. It helps people to explore new ideas and to understand themselves in new ways. A "warped" cultural experience that starts from people themselves is something that can bring people together and enhance their experience of belonging.

In other words, culture's power lies in active doing and in sharing experiences. Ways of creating and experiencing, singly and collectively, are constantly changing, varying across periods and generations. To stay lively, culture demands constant experimentation and change.

Culture in the metropolitan area takes up significant public resources, just the four municipalities of Helsinki, Espoo, Vantaa and Kauniainen using around 100 million euros a year, with state-run art institutions spending at least as much again.

The journalist Antti Järvi and the researcher Tommi Laitio presented these figures in their 2010 book, *Saa Koskea: 10 konstia väkevämpään kulttuuriin* (Do Touch: 10 tricks for creating tougher culture). They found themselves asking whether we can justify from a social policy perspective how the culture budget is used. In many municipal authorities, 60 to 90 per cent of spending on culture goes into permanent institutional structures like Helsinki City Theatre, the City Museum or the Helsinki Philharmonic Orchestra, largely to maintain buildings and a permanent staff.

The unspoken justification for this division of funds is that these core arts institutions are thought to represent the best in the arts: the best people in the best surroundings. This assumes an understanding of the social significance of cultural production as being above all about end products: professionals produce a work, the audience enjoys a particular artistic experience, and the combined results strengthen society at large.

What has been discovered by Järvi and Laitio is that we have many other ways to experience culture besides the model prioritised in current policy. These other models include collaboration between professionals from the culture indus-

tries and a particular audience, whose life experience and problems influence the work and where the work becomes part of a broader social debate. Alternatively, it can start from training audiences to interpret art forms in new ways, or, just as valuably, it can start from amateurs being empowered through creating their own productions.

For this to be realised, public funding for the arts must be channelled more widely than it is at present. We must concern ourselves with how culture can make an impact on sustainable well-being among different social groups. Often it turns out that culture is produced together with non-professionals.

Such promises will, however, remain empty as long as support for cultural production is not seriously reconsidered and legitimated, and as long as institutions and convention shape it. In this situation, culture does not belong to everyone and cannot do everyone good.

At its best, culture is a way of realising the best of design thinking. Beyond institutions, more human-centred, warped culture industries can exploit design thinking, for instance through a dance work that incorporates audience participation, a sculpture that stimulates novel experiences or a theatre production that turns one's view of society inside out. A dynamic metropolis is one that supports culture but understands its diverse potential to improve and enrich people's lives.

HOW IS DESIGN THINKING REALISED IN THE WARPED CULTURE INDUSTRIES?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
The arts are a way of communicating with people. By identifying an audience's language, one is opening up the possibility of shared experiences and activities. The publicly funded cultural offer must prioritise the identification of different kinds of audiences.	Through the arts, people can be led to see their own place in the world in new ways. The more the experience incorporates a person's own active contribution, the stronger the impact.	The basic premise for the arts is trying out new forms of expression. The rules laid down by arts spaces and institutions must not limit this experimentation.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

Cultural funding in the metropolitan area should be assessed by new criteria. The starting point should no longer be the established status of certain art forms or institutions. Instead, culture should be evaluated in relation to its capacity to engage different social groups. Peo-

ple creating art themselves and the linking of the arts to other sectors (schools, healthcare, social services) will be developed. At the same time, the majority of funds aimed at municipalities' cultural institutions should be directed so that anyone can apply for them.

9. Arenas for informal learning

Lifelong learning has become a reality. We do not necessarily notice it but our learning grows each time we are confronted with a new task in our work. This means learning can take place almost anywhere.

Society as a whole is becoming pedagogised, as it were. Learning is ever more a social activity where the structure and strength of social networks influence the quality of information and its flows. In line with design thinking, enhancing our learning capital is about identifying different communities of practice. In future, those disseminating knowledge and those in need of skills and know-how will possibly find each other more efficiently via channels existing beyond conventional institutions.

According to the report *Helsinki As an Open and Intercultural City,* innovation requires new ways, foci and places of learning. Spatial and social openness support the birth of constructive informal learning spaces.

Informal arenas for learning are also formed around various communities of practice and the internet. Examples include Britain's learning network, the School of Everything, involving 35,000 people; the University of the Third Age which operates in many places outside Finland; and the volunteer-based Public School Helsinki, which offers courses and reading groups based on current supply and demand and is part of an international network.

This is part of the process of recycling the cognitive surplus mentioned earlier, as well as being a part of people's endless search for practical solutions to various problems. A society aiming for sustainable well-being should support skills and knowledge that emerge through active experimentation, and it should help make these visible, allowing good practice to spread.

Supporting informal learning is a clear step in speeding up the development of user-centred innovation. Similarly, professional innovation is often born out of practical needs rather than any idealised scientific innovation creation process.

European innovation research suggests that only about 4 per cent of commercial innovation is based on university research. Particularly when it comes to wicked problems, the solutions required are so huge that we should cultivate

cognitive surplus and share it out more evenly – just as we should with any other social resource.

HOW IS DESIGN THINKING REALISED IN CREATING INFORMAL LEARNING SPACES?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
New types of learning communities offer students the possibility of concentrating on what is central from the point of view of their own motivation. The community is what makes peer learning possible.	Our understanding of the world and the problems society faces is changing constantly. This necessitates many types of learning for the adult population..	A teacher is not the only one who can help us learn. Networked peer learning is efficient but it does require experimentation, trial and error.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

A metropolitan area peer-learning programme is needed. It will fill the gaps left by educational institutions. It will make it easier for hard-to-reach groups to adopt new ways of learning. In practice this means directing resources into peer group initiatives such as the School of Everything. Civic funds must also be increasingly used to ensure that the tools for networked peer learning are available to everyone. Municipalities' own work places can operate as pilot projects for networked peer learning.

CASE:

School of Everything: Teachers without Schools

WE ALL HAVE SKILLS THAT WE SHOULDN'T WASTE BY NOT SHARING THEM.

The Metropolitan Area has more skills than ever. To grow further, our skills base needs new learning platforms. Teaching is not the sole privilege of conventional educational institutions.

From such ideas was born Britain's School of Everything. It brings together those who need skills with those who can provide them. Through the service you can receive, for example, French lessons or training in bee-keeping. The internet-based service looks for local enthusiasts willing to share their expertise and allows you to sign up to teach others. Fees are set by the teachers themselves. You can enhance your skills in almost anything at almost any time.

Future skills needs will become ever more varied due to the transformations set out in chapter three. From the point of view of well-being and competitiveness, it is imperative that people have access to the easiest possible ways both to enhance their personal learning capital and to share it among peers.

10. The forums of deliberative democracy

The methods of direct democracy – such as binding elections – cannot be developed further to bring individuals and decision-making processes closer together. There are ample examples of problems arising from these methods. Decision making in Switzerland for instance is extremely time consuming. Furthermore, various lobby groups can have a significant influence on the outcomes of direct democracy.

In addition to the methods of direct democracy the metropolitan area must develop platforms for public deliberation; that is, deliberative forums. Examples of these include groups and forums composed of citizen-members, where randomly selected people consider a particular issue. They are presented with background materials and contrasting approaches to the problem. Much as in a courtroom situation, group members can seek out more information or invite extra witnesses. Such mechanisms have been used particularly in local decision-making situations.

In this way, diverse groups can participate in decision making and respond to the problems associated with representative processes. Very few of us feel that parliament represents the nation fairly across the range of social variation. The purpose of deliberative democracy is to fill this lacuna in collective life. Opportunities for democratic participation are also known to raise subjective feelings of well-being.

In The Wisdom of Crowds: Why the Many are Smarter than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations, the economic journalist James Surowiecki demonstrates persuasively that a large group of people often makes better decisions based on all the available information than the currently dominant decision-making mechanism built on expertise.

A significant observation is that the opinions of individuals and groups can often change in important ways as materials and discussions proliferate. In this sense, citizen forums do not simply collect together different view points, they submit them to genuine reflection. On the basis of these discussions, it then becomes easier to develop trial solutions. Those who are affected have participated in the design of the solutions from the early stages, which gives them a sense of ownership of the process.

Canada has experimented with various models of deliberative democracy even in the context of major issues such as the debate surrounding the reform of the electoral system. Politicians in Canada are concerned about what will happen to politics based on conventional parliamentary representation if these proven models

spread. Their concern is understandable, but given what we know about social change, deliberative methods suggest hopeful avenues for reforming democracy.

The most famous example of deliberative democracy is probably Porto Alegre in Brazil. Its budget is devised annually through a process of participatory budgeting, with about 50 000 citizens taking part. Obviously, not everyone participates in all areas of budgeting, but everyone does have the opportunity to influence core elements.

Because the citizens have themselves been allowed to decide how the city's funds will be used, taxes and public services have visibly grown in popularity. The method has spread from Porto Alegre to over 100 towns and cities in Brazil. Criticism has been voiced over the fact that, even with this mechanism, it is not possible to engage more than about three per cent of the population – and this three per cent contains people who are active in local affairs anyway. Despite having its critics, it has been shown to have many beneficial features that bridge the divide between the public sector and the public.

HOW IS DESIGN THINKING REALISED IN DELIBERATIVE DEMOCRACY?

IDENTIFYING THE COMMUNITIES	LINKING UP COMMUNITIES AND WICKED PROBLEMS	PROTOTYPES
At the core of deliberative democracy is the need to identify the communities whose lives are affected by the decisions being made. The only legitimate decisions can be those based on collective debate which is open to all and shaped by everybody.	Deliberative practice starts from the need to make issues understood by a variety of groups of people. At its best, making decisions this way is faster than a representative system that renews policies every four years.	Deliberative methods shorten the distance between decision making and experimentation. Information gleaned through trials is more directly incorporated into decision making.

WHAT CAN THE METROPOLITAN AREA'S MUNICIPALITIES DO?

In developing shared structures of governance in the metropolitan area, there is ample room for deliberative practices because no competing representative structure exists. For example, the municipalities of the metropolitan area could experiment with participatory budgeting pilot schemes. This is an opportunity that should not be wasted.

Municipalities' own representative structures are worth re-examining from time to time, for instance by a randomly chosen citizens' panel. This will bring common-sense user

feedback about the legitimacy of decision making and, at its best, draw innovative ideas from outside actors for further development.

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