



Towards Sustainable Architecture

Finland's National Architectural Policy Programme 2022–2035

PUBLICATIONS OF THE FINNISH GOVERNMENT 2022:62

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Publications of the Finnish Government 2022:62

Towards Sustainable Architecture

Finland's National Architectural Policy
Programme 2022–2035

Finnish Government Helsinki 2022

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Finnish Government

Ministry of Education and Culture, Ministry of the Environment, Ministry of Economic Affairs and Employment of Finland

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ISBN pdf: 978-952-383-851-2

ISSN pdf: 2490-0966

Cover photo: Helsinki, aerial photo by Iwan Baan.

Layout: Government Administration Department, Publications

Helsinki 2022 Finland

Towards Sustainable Architecture Finland's national architectural policy programme 2022–2035

Publications of the Finnish Government 2022:62

| | | | |
|---------------------|--|--------------|----|
| Publisher | Finnish Government | | |
| Group author | Ministry of Education and Culture, Ministry of the Environment, Ministry of Economic Affairs and Employment of Finland | | |
| Language | English | Pages | 63 |

Abstract

Towards Sustainable Architecture is Finland's new national architectural policy programme. Our previous architectural policy programme, which was also our first, was published in 1998. The new programme was drawn up based on the work of a working group appointed by the Ministry of Education and Culture and the Ministry of the Environment.

The ecological, social, economic and cultural sustainability of the built environment is at the heart of the new architectural policy programme. The programme offers a comprehensive perspective on the goal-oriented development of Finland's built environment.

The aim of the programme is to strengthen cooperation between stakeholders that influence our built environment. The programme's content is linked to a variety of topical international projects and initiatives, such as the Davos Declaration, which Finland joined in 2021, and the UN Sustainable Development Goals.

The programme emphasises the importance of education, training, information and communication in achieving the sustainability objectives set for our living environment.

Keywords architecture, built environment, architectural culture, planning

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|-----------------|-------------------|-----------------|-----------|
| ISBN PDF | 978-952-383-851-2 | ISSN PDF | 2490-0966 |
|-----------------|-------------------|-----------------|-----------|

URN address <https://urn.fi/URN:ISBN:978-952-383-851-2>

Kohti kestävää arkkitehtuuria

Suomen arkkitehtuuripoliittinen ohjelma 2022–2035

Valtioneuvoston julkaisu 2022:62**Julkaisija** Valtioneuvosto**Yhteisötekijä** Opetus- ja kulttuuriministeriö, ympäristöministeriö, työ- ja elinkeinoministeriö**Kieli** englanti**Sivumäärä**

63

Tiivistelmä

Kohti kestävää arkkitehtuuria on Suomen uusi valtakunnallinen arkkitehtuuripoliittinen ohjelma. Edellinen, ensimmäinen valtakunnallinen arkkitehtuuripoliittinen ohjelma julkaistiin vuonna 1998. Uuden ohjelman valmistelu on perustunut opetus- ja kulttuuriministeriön ja ympäristöministeriön asettaman työryhmän työhön.

Rakennetun ympäristön ekologinen, sosiaalinen, taloudellinen ja kulttuurinen kestävyys on uuden arkkitehtuuripoliittisen ohjelman ytimessä. Ohjelma tarjoaa kokonaisvaltaisen näkökulman rakennetun ympäristön tavoitteelliseen kehittämiseen.

Ohjelmalla halutaan vahvistaa rakennettuun ympäristöön vaikuttavien toimijoiden keskinäistä yhteistyötä. Ohjelmalla on sisällöllisiä yhtymäkohtia ajankohtaisiin kansainvälisiin hankkeisiin ja aloitteisiin, kuten Davosin julistukseen, johon Suomi liittyi vuonna 2021, sekä YK:n kestäväan kehityksen tavoitteisiin.

Ohjelma painottaa kasvatuksen ja koulutuksen sekä tiedon ja viestinnän merkitystä, jotta elinympäristöä koskevat kestävyystavoitteet voidaan saavuttaa.

Asiasanat arkkitehtuuri, rakennettu ympäristö, rakennuskulttuuri, suunnittelu

ISBN PDF 978-952-383-851-2**ISSN PDF**

2490-0966

Julkaisun osoite <https://urn.fi/URN:ISBN:978-952-383-851-2>

Mot en hållbar arkitektur

Finlands nationella arkitekturpolitiska program 2022–2035

Statsrådets publikationer 2022:62

| | | | |
|---------------------|--|-----------------|----|
| Utgivare | Statsrådet | | |
| Utarbetad av | Undervisnings- och kulturministeriet, miljöministeriet, arbets- och näringsministeriet | | |
| Språk | engelska | Sidantal | 63 |

Referat

Mot en hållbar arkitektur är Finlands nya nationella arkitekturpolitiska program. Det föregående och första nationella arkitekturpolitiska programmet kom ut 1998. Arbetet i den arbetsgrupp som tillsattes av undervisnings- och kulturministeriet och miljöministeriet lade grund för beredningen av det nya programmet.

Den byggda miljöns ekologiska, sociala, ekonomiska och kulturella hållbarhet utgör kärnan i det nya arkitekturpolitiska programmet. Programmet erbjuder ett övergripande perspektiv för målinriktad utveckling av den byggda miljön.

Genom programmet vill man stärka samarbetet mellan de aktörer som påverkar den byggda miljön. Programmet har innehållsmässiga beröringspunkter med aktuella internationella projekt och initiativ, såsom Davosdeklarationen, som Finland anslöt sig till 2021, och FN:s globala mål för hållbar utveckling.

Programmet betonar betydelsen av fostran och utbildning samt information och kommunikation för att nå de hållbarhetsmål som gäller livsmiljön.

Nyckelord arkitektur, byggd miljö, byggnadskultur, planering

ISBN PDF 978-952-383-851-2

ISSN PDF 2490-0966

URN-adress <https://urn.fi/URN:ISBN:978-952-383-851-2>

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Maritime Centre Vellamo.

Lahdelma & Mahlamäki Architects, 2008.

Photo: City of Kotka.

Introduction

Footprint of construction and handprint of architecture

It has been more than twenty years since Finland's previous – and first – Architectural Policy Programme was published. Since then, we have experienced a global financial crisis, a European refugee crisis and have started to pay closer attention to the international scientific community's message about the consequences of global warming and loss of biodiversity. The latest adversity was the COVID-19 pandemic that started in 2019 and has affected not only public health but also our sense of safety, not to mention our ways of living, working and spending free time.

In order to create a built environment that helps us overcome the challenges we face in our time and contributes to a better tomorrow, we need to redefine the role and goals of architecture in society and come up with measures to attain these goals.

Architectural policy

Architectural policy can be defined as strategic guidelines on the built environment and its design, in particular.

A high-quality living environment not only fulfils functional, technical, ecological and economic requirements but also satisfies aesthetic, social, psychological and cultural needs.

Good architectural policy can be considered to include discussion on the quality of the living environment and the processes that promote high-quality building culture.

The heading 'Footprint of construction and handprint of architecture' describes the primary challenge and opportunity of the built environment over the next few decades.

'Handprint of architecture' describes the value that a well-designed built environment brings to the people and other species inhabiting it.

'Footprint of construction' refers to the adverse environmental impact of the built environment. They arise out of the consumption of natural resources and changes in land use, which accelerate climate change and the loss of biodiversity. All sectors of the society have to become sustainable, but the transition to sustainability is particularly critical in the built environment.

The UN *Agenda 2030* programme that was launched in 2016 specifies 17 Sustainable Development Goals (SDGs)¹, most of which also have a link to the built environment. The most obvious ones are Sustainable Cities and Communities, Industry, Innovation and Infrastructure and Clean Water and Sanitation. However, goals like Good Health and Well-being and Quality Education are inseparable from the way buildings and communities are designed and constructed.

Without support from architecture and the built environment, we will not be able to solve the greatest problems of our time, such as ensuring the vitality of the economy, fair development of societies or keeping the planet habitable.

The classical goals of architecture – beauty, stability and utility – date back 2000 years to the Roman architect Vitruvius. Although these principles are still valid, their content needs to be reinterpreted and clarified in the modern world.

Beauty involves not only aesthetics but also psychological experiences, improved wellbeing and an increase in hope and human dignity.

Stability consists of environmental and financial sustainability, and also social and cultural dimensions.

Utility means flexibility instead of implementing a single permanent function. Usefulness also involves consideration for different ways of life and coping with climate change.

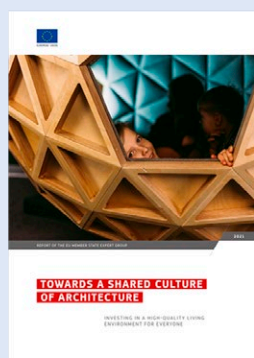
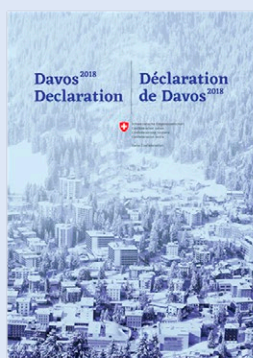
1 United Nations, Sustainable Development Goals. <https://sdgs.un.org/goals>

European initiatives speed up the architectural policy of the 2020s

In 2021, Finland endorsed the Davos declaration², which promotes the concept *Baukultur*, ‘building culture’. It views architecture more widely than just a theme associated with the built environment: architecture is a wide-ranging method for developing the society. The signatories of the Davos declaration commit to making high-quality *Baukultur* an objective in their political and strategic guidance both in the preservation of heritage and in new construction.

The European Union also considers architectural policy as a driver of development: The Open Method of Coordination (OMC) group of Member States’ experts³ that operated in 2019–2022 under the Work Plan for Culture of the Council of the EU published its final report *Towards a Shared Culture of Architecture. Investing In a High Quality Living Environment for Everyone* in autumn 2021.⁴ The guidelines in Finland’s Architectural Policy Programme are essentially similar to the report of the OMC group.

Current international initiatives on architectural policy



- 2 Davos Declaration. Towards a high-quality Baukultur for Europe, 2018. <https://davosdeclaration2018.ch/>
- 3 European Commission, Open Method of Coordination (OMC) group of Member States’ experts. High-quality architecture and built environment for everyone. <https://ec.europa.eu/culture/news/new-report-provides-recommendations-to-ensure-high-quality-architecture-and-built-environment>
- 4 Towards a Shared Culture of Architecture. Investing In a High Quality Living Environment for Everyone, 2021. <https://op.europa.eu/s/u8pQ>

The *New European Bauhaus* initiative launched by the European Commission in 2021 seeks to demonstrate how sustainable development, social cohesion and aesthetics manifest themselves as concrete and positive experiences in our built environment. The initiative seeks to speed up the transformation in different sectors of the economy, including the construction industry, in order to provide everyone with a built environment that follows the principles of circular economy and is equal, beautiful and less carbon-intensive. The initiative introduces a cultural and creative dimension to the European Green Deal.⁵ Finland has been active in putting the Commission's initiative into practice and has coordinated Nordic cooperation on the initiative during Finland's presidency in the Nordic Council of Ministers in 2021.⁶

Developments since the previous Architectural Policy Programme

Internationally, Finland has been a pioneer in architectural policy. Although the previous Architectural Policy Programme was a national programme approved as a Government Resolution, it was published in five languages. It sought to improve especially the quality of construction, introduce the principles of sustainable development in town planning and building and increase openness and interaction. As such, the objectives of the 1998 programme were not very different from the ones in the new programme.

The implementation of the 24 measures in the first Architectural Policy Programme was monitored for three years by a working group who concluded in their final report in 2002 that the objectives of the Programme were met fairly well.⁷ Objectives that were met fully included the built heritage strategy and the establishment of a registry for certified designers. Good progress was made towards some objectives, such as taking architectural quality into account in the preparation of regulations and improving the citizens' possibilities to participate in decision-making. Not all objectives were met and the report acknowledged that large-scale social changes happen slowly.

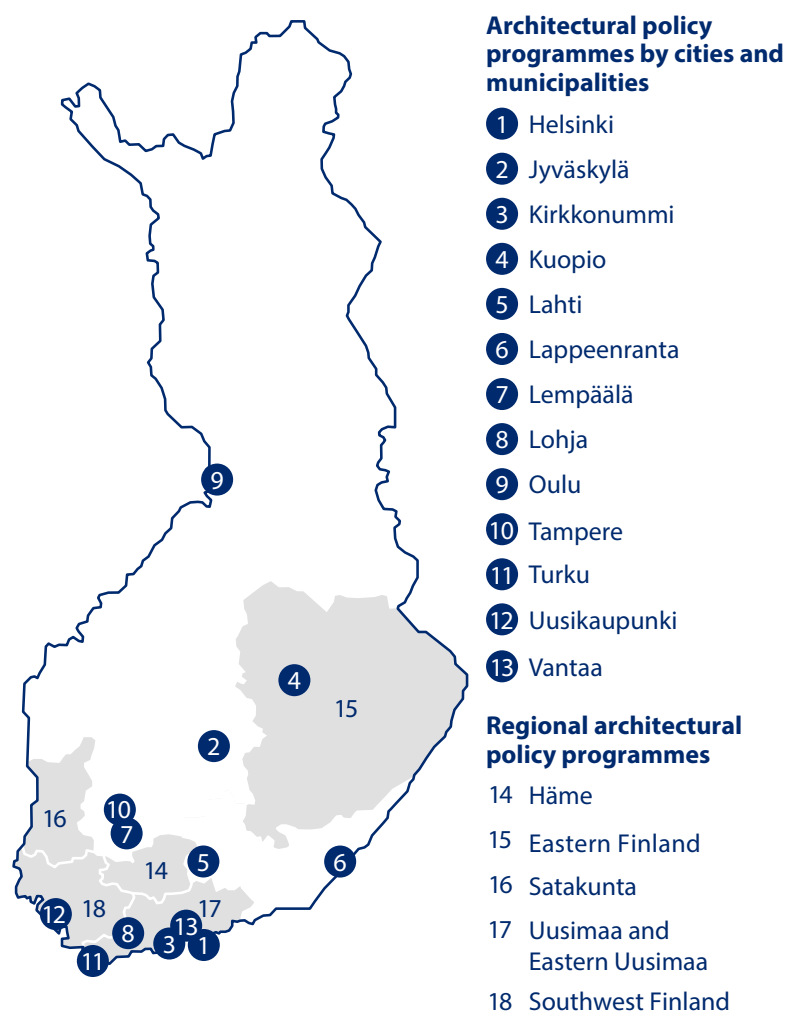
5 New European Bauhaus site: https://europa.eu/new-european-bauhaus/index_fi

6 The Nordic countries together. Programme for Finland's presidency in 2021. <https://pub.norden.org/politknord2020-708/>

7 Programme page: Monitoring group for the Architectural Policy Programme (in Finnish): <https://okm.fi/hanke?tunnus=OPM0418:00/24/99/1999>

The task of monitoring and promoting the architectural policy programme was transferred in 2004 to the National Architectural Committee that operated under the Arts Council of Finland. The promotion efforts received special grants until the Committee was terminated when the Arts Promotion Centre Finland was established in 2013. The duties of promoting architectural policy and communicating about it were then transferred to the Archinfo Finland that was established in the same year.

Figure 1. Finnish cities, regions and areas that have created an architectural policy programme (2021).



In addition to the national programme, work on architectural policy has also proceeded locally, as new cities have created their own architectural policy programmes and kept them up to date. Approximately 20 cities have their own programme, and in the latter half of 2021 at least Helsinki, Tampere and Lahti are updating their own programmes.

The fact that communities engage in long-term efforts to define these common goals and actions illustrates the strong position architecture has in the society. This also demonstrates an understanding of the impact that the built environment has in resolving social challenges. Finland has for several years been an active member in European networks on architectural policy, both at a ministerial and organisational level.

The new programme is built on cooperation

Finland's Architectural Policy Programme is a Government-level strategic document and an action plan created by two ministries, the Ministry of Education and Culture and the Ministry of the Environment. The Ministry of Economic Affairs and Employment has also been active in the creation of the programme. The programme is a part of the Government Programme of Prime Minister Sanna Marin. However, the Architectural Policy Programme is not created solely by the ministries or for the ministries.

Prepared in cooperation, the primary goal of the programme is to increase cooperation among the parties that have an influence on what the built environment is like. Similar to a good built environment in which buildings, landscape architecture and technical solutions support each other, good cooperation brings together different competencies and views in order to reach common goals. Good architecture cannot be created without seamless cooperation between design and construction. All parties of the construction process are needed to create a Finnish *Baukultur* that supports the economy in a sustainable way, offers solutions to international questions and gives everyone an opportunity to live in a good and pleasant environment.

Architecture creates a framework for our human experience in the world and is therefore an integral part of culture and our way of life. It is a part of our collective memory and heritage. When an architect visualises the future, they also help us to perceive solutions to the problems in our surroundings. In the major transformation that is going on, we need the architects' ability to show us other potential realities.

Structure and objectives of the programme

The *Towards Sustainable Architecture* programme consists of five thematic chapters. Each of the themes – climate change and biodiversity, equality and social inclusion, economy and international affairs, meaning and identity, education and research – is investigated in a cross-disciplinary way. In addition to global questions, such as climate change and overconsumption of natural resources, the programme looks into the special characteristics of Finland, such as ageing population, regional development, cultural heritage and the impact of the institutions in architecture and construction. Megatrends from digitalisation to internationalisation are seen as forces that both change the sector from within and also increase the diversity of the citizens' hopes and ways of life.

The Architectural Policy Programme does not create new regulations for the built environment sector. Instead, it shows a direction for all the parties that have an impact on Finnish architecture and construction: It defines which challenges should be solved, proposes measures that are most likely to lead to the desired outcome and suggests ways of strengthening the sector.

Figure 2. Factors of sustainable architecture.

Chapters 1–4 of the Architectural Policy Programme discuss the different areas of sustainability in architecture and the built environment: ecological, social, economic and cultural sustainability. Chapter 5 highlights the significance of education and research for the actualisation of a sustainable living environment.



The programme also introduces a new concept, 'architectural sustainability', which contributes to the ongoing European and international discussion on how to improve construction quality and increase the appreciation of the built environment as part of culture.

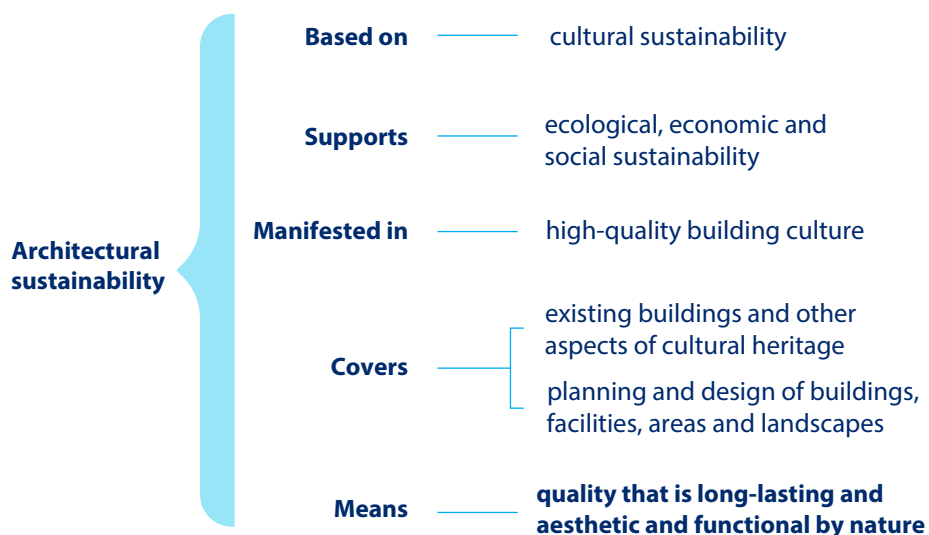
The concept of architectural sustainability

The concept of architectural sustainability arose during the creation of the Architectural Policy Programme, since there was a need for a concept that would describe a high-quality built environment and the immaterial values that guide its design.

Architectural sustainability would refer to functional sensibility and longevity. It would also entail an approach that is multisensory and a transgenerational aesthetic that meets the people's need for beauty.

In design, architectural sustainability would stem from creativity and strive towards high quality and proportionate solutions. It would take into account regional and local characteristics, the spatial context and the needs of current and future users. As a design principle, architectural sustainability would support the strengthening of the local spirit.

Achieving architectural sustainability would require an engaging and unhurried design process which would ensure the overarching quality and long-lasting value of the end result.



Running concurrently with preparation of the Architectural Policy Programme were the comprehensive revision of the Land Use and Building Act and many programmes and reforms associated with built environment, such as the *National Urban Strategy*, *Housing Policy Development Programme*, *Wood Building Programme* and the *Healthy Spaces 2028* programme. To avoid unnecessary overlaps, the goals and actions in these programmes are not included in the Architectural Policy Programme. Finland's Architectural Policy Programme supplements other strategies and programmes and offers a holistic view of the development of the built environment.

Vision 2035

I

The built environment plays a central role in solving climate challenges. Good architecture supports all aspects of sustainability. Low carbon emissions, circular economy and an understanding of the value of nature are an inseparable part of the design of buildings and the local environment and of town planning. Existing buildings, spaces and materials are used efficiently.

II

Architecture creates conditions for human dignity and equality in the built environment. Architecture responds to the diversification of ways of life and supports the emergence of communities. The link between the built environment, wellbeing and health is understood and taken into account in the planning of the living environment. Interactive methods support people's participation and activity.

III

A high-quality built environment attracts people and increases the vitality of the communities throughout Finland. The expertise of architects is needed in solving social questions. The Finnish architecture sector cooperates widely and internationally in the creation of a sustainable economy.

IV

Architecture forms a framework for everyday life: it encompasses art, functionality, comfort and quality of life. The living environment is a popular topic of discussion, and the role of the civil society has grown stronger in the creation of a good built environment. Cultural environment and architecture are understood as the cornerstones of place and a local identity. Exhibitions and communications support the internationalisation of architecture and strengthen the shared understanding of the built environment.

V

Finnish architectural education is highly appreciated in international comparisons, and research on the built environment supports the role of architecture in the development of society. Architectural education and continuing education meet the changing needs of the society. Architecture and design education covers the entire path of education and is considered one of Finland's strengths. Environmental education is diverse and available for the entire population.



Shingle church of Käsämäki.

Architect Anssi Lassila, 2004. Photo: Harri Hakaste.

Chapter I. Climate change and biodiversity

The built environment plays a crucial role in solving the climate crisis and preserving biodiversity

Mitigating climate change and adapting to it are the greatest challenges of our time. According to the UN, limiting global warming to two degrees is critical for the habitability of the Earth, and for migration and biodiversity. Climate change is also a threat to the whole of society and its structures, including the built environment and human health.

The Intergovernmental Panel on Climate Change (IPCC) stated in its 2018 report that carbon emissions must be reduced by 45% by 2030 and global carbon neutrality must be achieved by 2050.⁸ Prime Minister Sanna Marin's Government has set the target for Finland's carbon neutrality to 2035.⁹ In addition to national and international goals and agreements, many cities and municipalities have set their own goals for achieving carbon neutrality, circular economy and protection of biodiversity.

The UN's Global Biodiversity Outlook¹⁰ highlights the importance of a comprehensive approach to the human-nature relationship and reminds us that there is a link between biodiversity and human health (*one health*). The report encourages countries to increase 'green infrastructure' in cities, since providing space for nature in a city also improves the health and quality of life of residents.

Land use and construction play a key role in the mitigation of and adaptation to climate change and the preservation of biodiversity. In Finland, the built environment consumes 50 per cent of raw materials and 40 per cent of energy and produces over a third of Finland's greenhouse gas emissions.¹¹ Therefore, a carbon-neutral society cannot be achieved without a strong commitment by the real estate and construction sector.

8 IPCC – The Intergovernmental Panel on Climate Change, Special Report: Global Warming of 1.5°C. <https://www.ipcc.ch/sr15/>

9 Programme of Prime Minister Sanna Marin's Government. <https://valtioneuvosto.fi/en/marin/government-programme/carbon-neutral-finland-that-protects-biodiversity>

10 The UN's fifth biodiversity report was published in September 2020. The UN Convention on Biological Diversity (CBD), The Global Biodiversity Outlook 5. <https://www.cbd.int/gbo5>

11 Ministry of the Environment, Final report of the TALO programme 2019 (in Finnish). <https://julkaisut.valtioneuvosto.fi/handle/10024/161923>
Confederation of Finnish Construction Industries RT. <https://www.rakennusteollisuus.fi/Tietoa-alasta/Ilmasto-ymparisto-ja-energia/Materiaalitehokkuus/Ilmasto-opas.fi> <https://ilmasto-opas.fi/fi/ilmastonmuutos/hillinta/-/artikkeli/73fa2827-42d1-4fd7-a757-175aca58b441/rakennusten-lammitys-kuluttaa-runsaasti-energiaa.html>

The proposed provisions in the Land Use and Building Act that is currently being prepared would expand emissions control to the entire lifespan of the building, not just the use-phase energy consumption like at present. The proposed Act would also control the emissions from building materials, which would promote the use of renewable and recycled materials in construction. In addition, the use of spaces would also be considered in the lifespan of the building, which would place further emphasis on architectural design. New legislation would also support better utilisation of demolition materials.

Figure 3. The legislation currently being prepared steers towards low carbon solutions and circular economy throughout the lifespan of the building stock.



The new legislation would also emphasise the role of land area use especially in long-term climate actions. There is a need to increase the assessment of the climate impact of town planning both from a mitigation and adaptation perspective. The new legislation would also obligate the planners of land area use to promote biodiversity to a greater extent than at present.

The built environment is one of the most cost-effective targets for reducing emissions and the consumption of natural resources. However, the ecological challenge cannot be solved by technology alone. We also need a radical change in our ways of life and consumption habits, the society's production mechanisms and the economy. We should also seek to use, maintain, repair and develop the existing building stock better. Architects play a central role in the transformation of building culture, both as chief designers and as coordinators of multidisciplinary work.

Vision for 2035

In 2035, Finland is carbon-neutral and on track to achieve carbon negativity¹². High-quality architecture, construction and land use are essential components in the solution for climate challenges. Sustainable and low-carbon construction are at the core of architectural competence and the design of buildings and areas. Sustainable construction solutions and methods are developed in close cooperation with different scientific disciplines and technology experts.

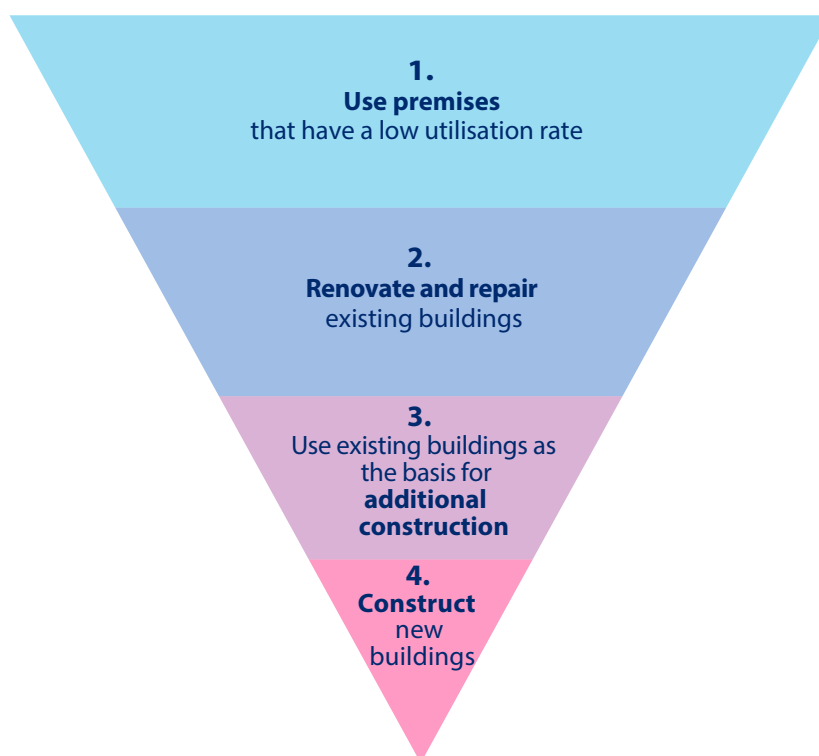
In addition to climate challenges, the significance of biodiversity is also taken into account in the design, construction, maintenance and preservation of the built environment. This is where landscape architects come in. Nature is present in all levels of the built environment, from green roofs to urban forests and rural areas. The habitats of flora and fauna are taken into account and natural life cycles are disturbed as little as possible in line with the principles of biocentrism.

The low-carbon approach, circular economy and biodiversity are supported not only in buildings but also in town planning and the local environment. Some cities and municipalities have already reached their carbon neutrality target, and support is provided for municipalities that are striving to achieve their target. Carbon sinks and stocks are important tools in the progress towards the climate objectives. Assessing the impact on the climate and the environment is already routine in town planning, and architecture makes the practical solutions for a sustainable society attractive – bicycle parking, community spaces, renewable energy and local food production.

12 Prime Minister Juha Sipilä's Government. https://valtioneuvosto.fi/-/10616/kahdeksan-eduskuntapuoluetta-paatti-yhteisista-ilmastopolitiikan-tavoitteista?languageId=en_US

Land use and building design processes enable the selection of the most sustainable solutions for the lifecycle of the site and even the entire built environment. Renovation is increasingly appreciated and more profitable and the climate impact of demolition is taken into account when creating solutions that meet the need for spaces.¹³ The built environment prioritises the utilisation, repair and development of existing premises, buildings and areas. Additional construction is a secondary priority and the very last option is to build new premises, buildings and areas.

Figure 4. Hierarchy of resource-efficient construction.
Original concept by Matti Kuittinen, Aalto University.



The lifespan of new buildings and building components is lengthened by taking the adaptability and ease of repairing buildings into account in the design and construction phase. The demolition of buildings and the reuse of their components follows the principles of the circular economy. Both natural resources and demolition materials are reused as efficiently and as long as possible.

¹³ Establishing a competence centre for renovations is being investigated as part of the state's 10-year Healthy Premises 2028 programme. <https://tilatjaterveys.fi/etusivu>

Measures

A. Ecological sustainability¹⁴ of building design is promoted

- by developing interactive design methods, operating models and cooperation among designers, clients and users by leveraging technologies like digitalisation (*Building Information Foundation RTS, Finnish Association of Architects SAFA, Association of Finnish Architects' Offices ATL, Finnish Association of Civil Engineers RIL, Construction Engineers and Architects RIA, RAKLI, Senate Properties, other operators in the sector*)
- by establishing a prize for buildings that are architecturally of high-quality and sustainably constructed and (*Building Information Foundation RTS*)
- by developing and utilising traditional construction methods and natural building materials for the purposes of low-carbon construction. (*Ministry of the Environment, universities, The Finnish Heritage Agency*)

B. Climate- and biodiversity-aware land use is supported

- by introducing a climate and biodiversity perspective in practical town planning and impact assessment by means of tools that leverage data models and geospatial information, and¹⁵ (*Ministry of the Environment, Finnish Environment Institute SYKE, research institutes, Centres for Economic Development, Transport and the Environment, cities and municipalities*)
- by strengthening the role of green area design and landscape architecture in the promotion of biodiversity and adapting to climate change and by creating land use criteria for natural processing of storm water, green factor and green efficiency. (*Association of Finnish Landscape Architects MARK, Ministry of the Environment, cities and municipalities, research institutions*)

C. Low-carbon approach and circular economy are connected with the planning of the local environment

- by promoting the capabilities of cities and property owners to engage in comprehensive repairs, additional and supplementary construction and low-carbon energy production, and (*cities and municipalities, Ministry of the Environment, Confederation of Finnish Construction Industries RT, The Finnish Real Estate Federation, RAKLI, The Finnish Heritage Agency*)

14 The cornerstone of sustainable development is the preservation of biodiversity and functioning ecosystems and the adaptation of humanity's economic and material activities to Earth's carrying capacity in the long term. <https://kestavakehitys.fi/en/sustainable-development>

15 Carbon neutrality (carbon footprint and carbon handprint), carbon binding, biodiversity and impact of transport are taken into account.

- by creating a model and criteria for a lifecycle or circular economy city block¹⁶, taking into account sharing economy of spaces, energy production, water treatment, electricity grid, green environment, subsistence agriculture, building heritage and more. (*Ministry of the Environment, Finnish Association of Architects SAFA, Building Information Foundation RTS, Green Building Council Finland, research institutes, cities and municipalities*)

D. Flexible and diverse use of premises, buildings and areas is promoted

- by utilising the opportunities afforded by legislation and town planning and by using indicators to increase the utilisation rate of premises, buildings and areas, and (*Ministry of the Environment, RAKLI, operators in the construction and real estate sector, cities and municipalities*)
- by creating the conditions and a framework for the adaptability, versatility, and ease of repairing new buildings, including the ability to demolish them in a way that supports reuse. (*Ministry of the Environment, Building Information Foundation RTS, Finnish Association of Architects SAFA, The Housing Finance and Development Centre of Finland ARA, RAKLI, Construction Engineers and Architects RIA*)

16 Circular economy is a systematic operating model that starts from material flows and engages all parties of the process, from providers to users. The model encompasses construction (construction products, recycling), use and maintenance of buildings, energy production, consumption and recovery (renewable energy, recovery of excess energy, energy storage), water consumption, housing and living (furniture, clothing, food) and transport (various modes of transport). A circular economy city block is designed and constructed in accordance with the principles of sustainable urban living, and the same principles also guide the residents' lifestyle.



A sauna boat in Tuira, Oulu.
Photo: City of Oulu / Sanna Krook.

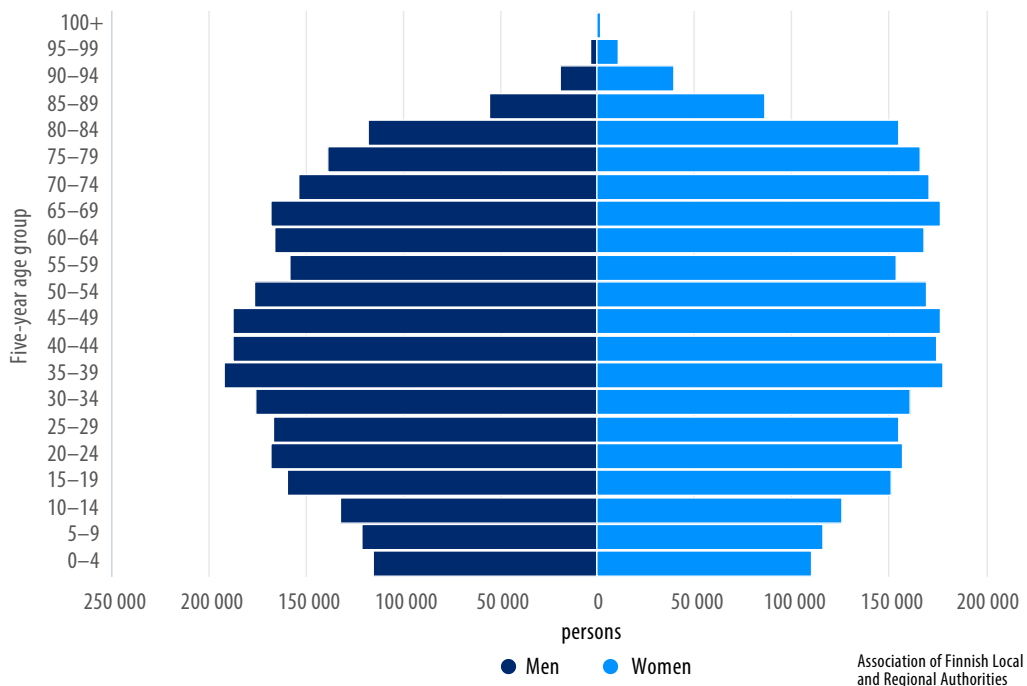
Chapter II. Equality and social inclusion

A well-designed environment increases equality and wellbeing of people

The built environment must provide the framework for a good life for everyone. Good design and architecture can create places and spaces that promote equality and social inclusion and support wellbeing and health. Good architecture also provides experiences of beauty and appreciation for all.

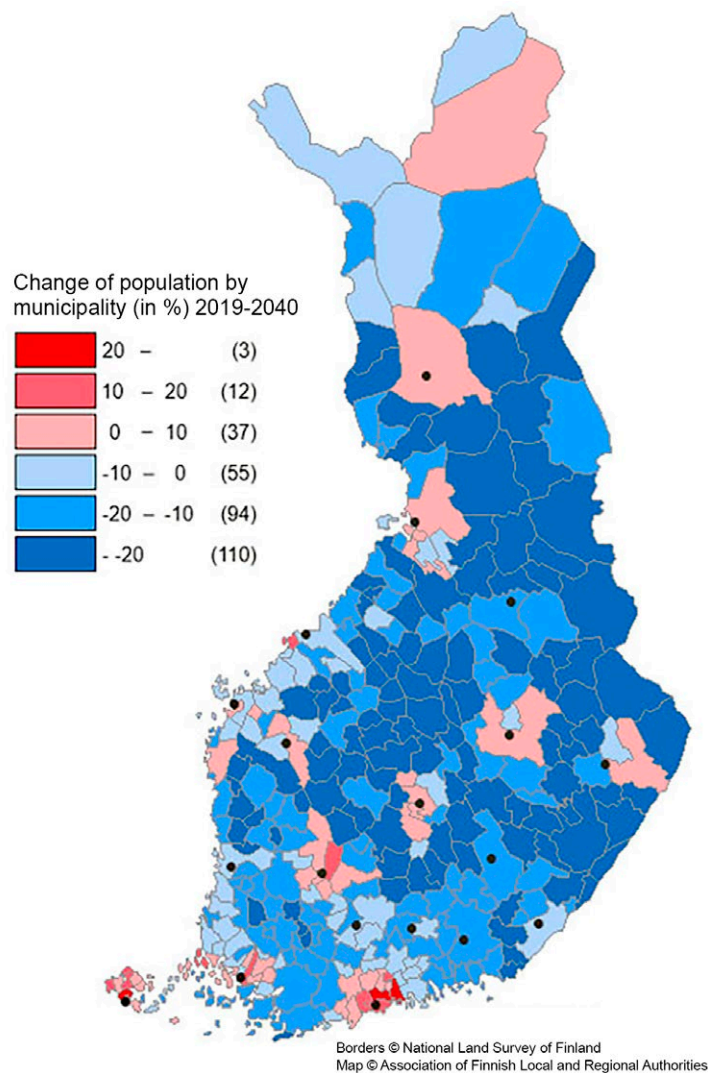
The current built environment is still not fully accessible in many places, and therefore does not fully promote social inclusion equally for everyone yet. As the population ages and becomes increasingly diverse, the built environment has to be designed to meet the new needs that arise.

Figure 5. Projected population demographics by 2030, source: Association of Finnish Local and Regional Authorities.



One of the global megatrends in the last few decades is rapid urbanisation.¹⁷ More than half of Finns live in cities or in municipalities with a population of more than 40,000, and population forecasts show that this share will increase to approximately 65 per cent by 2040.¹⁸ The value of properties in depopulating areas is falling sharply in places, and some areas will become depopulated.

Figure 6. Change of population by municipality, source: Association of Finnish Local and Regional Authorities/ National Land Survey of Finland.



17 Calculations made by the UN forecast that by 2050, approximately 70 per cent of the world's population will live in cities. <https://population.un.org/wup/Publications/Files/WUP2018-Report.pdf>

18 City Strategy of the Finnish Government (in Finnish). <https://valtioneuvosto.fi/-/10623/kaupunkistrategia-suuntaa-tulevaa>

Our everyday ways of life will be changed not only by diverging regional development but also the rapid pace of technological development. Multi-local living and working will increase, since solutions that support remote work will make it easier to work from anywhere. Digitalisation reduces the importance of the location of jobs and people, which might affect migration flows within Finland and balance the divergence between growing cities and the rest of Finland.

Another factor affecting housing needs is the rapid reduction in the number of people per household. The birth rate has been falling in Finland for a long time now, and in addition to the reduction in family size, the number of families is also falling: almost 45 per cent of all households are single households.¹⁹ Urbanisation, the change in the housing market and the reduction in household size has led to an increase in the production of small apartments and a reduction in the average size of apartments. As an example, increasing the cost-effectiveness of housing production is reflected in the apartment designs, which in turn has increased the need for a comprehensive assessment of the quality of housing construction. On the other hand, housing production has also become more diverse, for example due to an increase in collaborative construction.

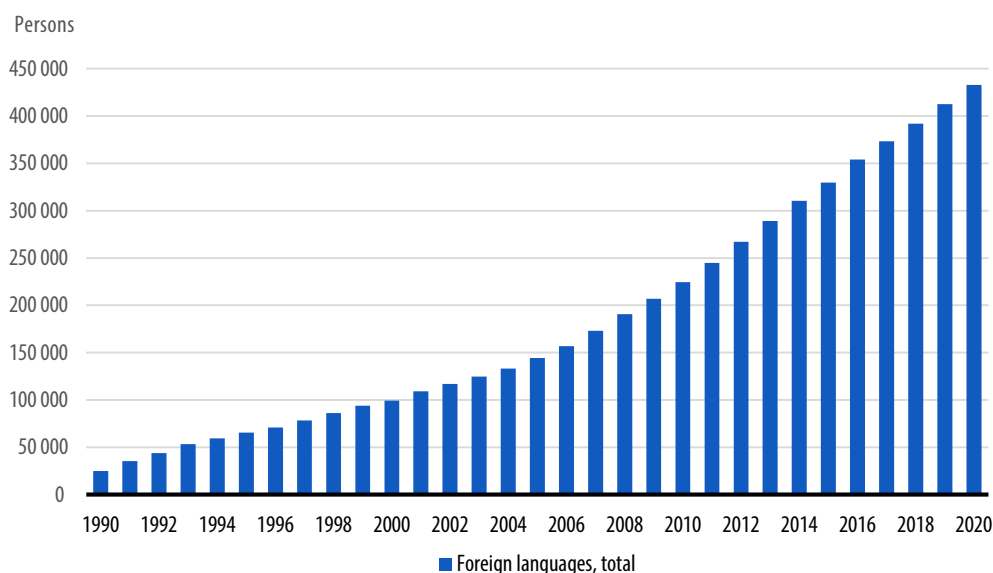
The built environment has a significant impact on people's physical, mental and emotional health. This topic is intensively researched in Finland and a wide understanding is emerging on the effects of the built environment on wellbeing and health.

Vision for 2035

The significance of good design and high-quality architecture as a prerequisite for equality and genuine social inclusion is thoroughly understood in political and administrative decision-making. The built environment is designed to be safe, healthy, accessible and inspiring for all. Architecture's ways of promoting human dignity are utilised. The design solutions promote independent activities.

An open and interactive design culture supports everyone's possibility to participate in the development of their living environment. Assessments, feedback and experiential data is collected systematically and used increasingly in planning and design. User engagement and cross-disciplinary joint planning and design are required in town planning and architectural competitions, for example, to ensure that the planning and design meet the local needs and are compatible with the other development goals of the area.

19 Findikaattori, 2020 (in Finnish). <https://findikaattori.fi/fi/93>

Figure 7. Population by language, source: Statistics Finland.

Mixing of demographic groups and functions within urban regions is encouraged. Segregation of neighbourhoods is prevented by town planning and by designing and implementing high-quality premises and services for all. Regional changes and urbanisation are researched and the research results are used as input for planning and decision-making. Regional characteristics are strengthened by cross-disciplinary cooperation in science and other specialist sectors and by supporting networking among people.

Local and regional architectural policy programmes and a novel regional architect scheme support the implementation of a high-quality living environment in localities regardless of their size. Properly designed, implemented and maintained public buildings and environments increase wellbeing and demonstrate appreciation of people.

Housing production focuses on the residents' needs, different ways of life and housing quality. New construction has diversified the building stock, and residents can now routinely influence apartment designs. Collaborative construction and other resident-driven models of implementation serve as alternatives for supplier-driven housing construction and can adapt to different economic and social situations. The transformation of work, such as the increase in remote working is taken into account in the design of apartments, residential areas and community spaces. The existing building stock is maintained, serviced and repaired in a timely manner and is also flexibly developed further to meet the needs of the residents – this also applies to supplementary construction.

The link between the built environment and social and health policy is understood even better than today. Air and water quality, lighting conditions, soundscape, and temperature, proximity of the green environment, cultural heritage, public art and an environment that supports physical activity and social interaction are seen as components of the promotion of wellbeing and health. Knowledge produced by environmental psychology on the relationship between people and their environment, the experience of beauty and multisensory experiences are taken into account in design.

Measures

A. Planning of areas is based on a desire to increase inclusion and reduce inequality

- by supporting participation in the planning process of areas, for example with tools that leverage digitalisation and geospatial information, by means of collaborative design and by promoting multilingualism in the processes and the participation of different demographic groups in ways most natural for them (*Ministry of the Environment, cities and municipalities, regional councils, Centres for Economic Development, Transport and the Environment, associations that represent different population groups*)
- by creating a common national framework for assessing people's experiences on the environment, by ensuring that this experiential information is compatible and can be linked to other information on the built environment and by ensuring that the information is used in planning,²⁰ (*universities, research institutions, Ministry of the Environment, The Finnish Heritage Agency*)
- by collecting information and good practices on community spaces in residential areas and in individual buildings and by leveraging this information in the development of pleasant spaces that support multigenerational and multicultural communities and remote work, and²¹ (*Ministry of the Environment, the Housing Finance and Development Centre of Finland ARA, cities and municipalities*)
- by highlighting the Design for All principle as the starting point for the planning of built environment and by developing the criteria for an accessible, functional and safe environment. (*Ministry of the Environment, Building Information Foundation RTS, municipalities and cities, associations representing different population groups*)

20 There may also be international demand for an information system that collects environmental experiences.

21 Community spaces that increase community spirit and encounters between people include cultural and youth premises, communal urban farming areas, courtyards inside city blocks, green areas, public art and squares.

B. Architecture promotes development both locally and at the neighbourhood level

- by investigating how a regional architect scheme could help in the preservation and strengthening of a high-quality built environment in small communities and by including high-quality town planning, landscape architecture, preservation of heritage and maintenance of the cultural environment in the regional architect's duties, (*Ministry of the Environment, municipalities and cities, Centres for Economic Development, Transport and the Environment, regional councils, museums with regional responsibility*)
- by promoting the creation of local and regional architectural policy programmes and the implementation of actions set therein, and (*Arts Promotion Centre Finland (Taite), Finnish Association of Architects SAFA/local chapters, Centres for Economic Development, Transport and the Environment, regional councils, Archinfo Finland, museums with regional responsibility, Association of Finnish Local and Regional Authorities, Ministry of Education and Culture*)
- by creating an operating models for the development of a strategy for the built environment in depopulating areas. (*Archinfo Finland, Ministry of Economic Affairs and Employment, municipalities and cities*)

C. The quality and diversity of housing and housing construction is strengthened

- by creating a set of criteria for a comprehensive quality assessment of apartments²² and by implementing them, and (*Building Information Foundation RTS, Ministry of the Environment, Finnish Association of Architects SAFA, the Housing Finance and Development Centre of Finland ARA, residents' associations*)
- by developing design methods and implementation models that improve the residents' possibilities to influence the design. (*Ministry of the Environment, Finnish Association of Architects SAFA, the Housing Finance and Development Centre of Finland ARA, Building Information Foundation RTS, residents' associations*)

22 Quality criteria for housing include the dimensions and ease of furnishing apartments, windows that open and the amount of natural light in the apartment.

D. Awareness of the impact of the built environment on wellbeing and health is increased

- by improving people's understanding on how the built environment affects health and physical and psychological wellbeing and by taking this link into account even better in social and health policy and in the planning of land use and construction, and (*Ministry of Social Affairs and Health, Ministry of the Environment, Ministry of Education and Culture, Finnish Environment Institute SYKE, municipalities and cities*)
- by compiling information on wellbeing and health into a comprehensive package that supports the design efforts and by sharing this information, and by educating designers and commissioners on the effects of built environment, green areas and public art on wellbeing and health.²³ (*Building Information Foundation RTS, Finnish Association of Landscape Industries, Association of Finnish Landscape Architects MARK, Association of Finnish Architects' Offices ATL, Arts Promotion Centre Finland (Taika), organisations that provide continuing education, other operators in the sector*)

23 Among the parties who have specified wellbeing standards for the built environment are Fitwel or the WELL Building Standard that is compatible with the LEE and Living Building Challenge construction standards.



**Railo – the spectator stands and
multifunctional building of the Rovaniemi
Central Sports Arena.**

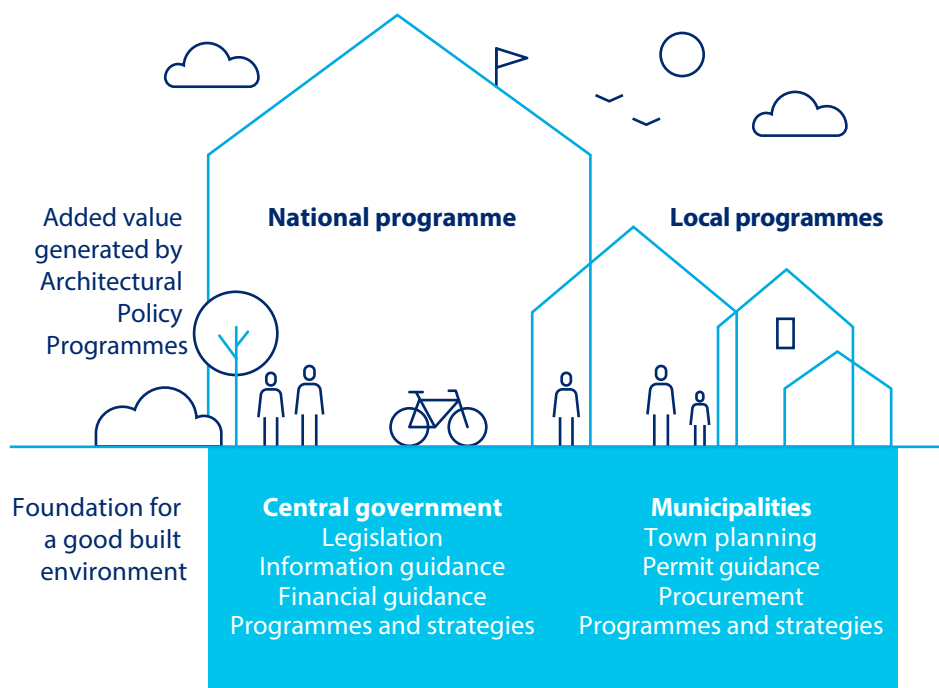
APRT Architects, 2015. Photo by Aaro Artto.

Chapter III. Economy and internationality

Architecture and construction support sustainable economy

Architecture and the built environment play a major role in Finland's economic development. More than 80 percent of Finland's national wealth lies in the real estate and construction sector²⁴ and more than half of the construction of buildings consists of renovations and alterations. Architecture has an impact on sustainable total economy and generates added value by creating thriving communities, business environments and housing needed by the labour market. Architecture has a reciprocal relationship with the large-scale development of cities. The current extensive global challenges create pressure to develop the entire construction industry, but they also open up new possibilities for collaboration between architects and other parties in the industry.

Figure 8. Architectural Policy Programmes complement the government's and municipalities' guidelines on the built environment.



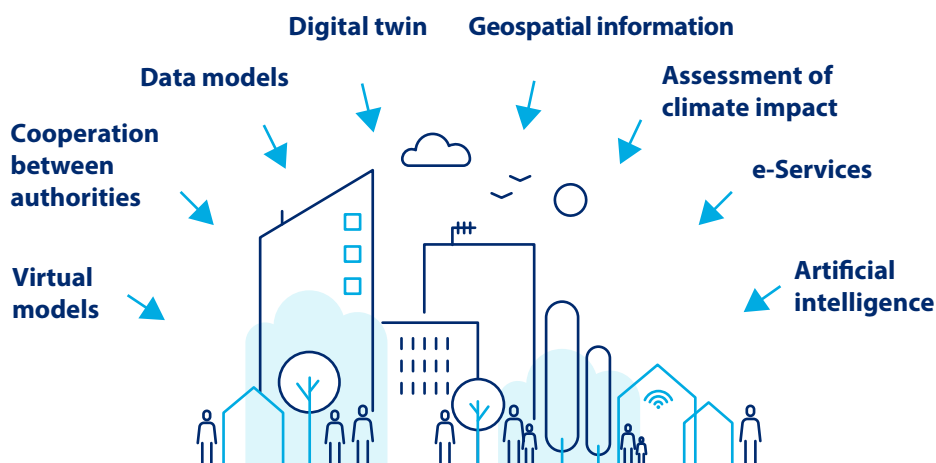
24 ROTI 2021. <https://www.ril.fi/fi/alan-kehitys-2/roti-2021.html>

The built environment also has an indirect effect on the economy, for example via human health and wellbeing. The quality of the built environment can be improved by public procurements, architectural competitions and promoting public art. Procurement expertise and appropriately chosen high-quality procurement processes promote the creation of a good built environment.

At present, in the early 2020s, Finland currently has approximately 320 architects' offices and a large number of trade names that offer architectural services.²⁵ Most of the companies are small: only about 20 of the companies are major architects' offices or multidisciplinary design offices with more than 50 employees. All architectural sectors have grown significantly, and the total size of the Finnish architecture market in the early 2020s is now EUR 250–300 million.

In spite of the growth, few Finnish architects offices operate internationally, and only about a dozen projects are currently underway abroad. At the beginning of the 2020s, the value of architectural exports was approximately EUR 7–10 million,²⁶ which represents 1.7 per cent of the turnover of the architects' offices. Compared to the other Nordic or European countries, the volume of Finnish architectural exports is modest.²⁷

Figure 9. Digital applications support the creation of a high-quality built environment.



²⁵ The Association of Finnish Architects' Offices ATL, 2020.

²⁶ The Association of Finnish Architects' Offices ATL, 2020.

²⁷ Danish architects' offices get 14.6% of their turnover from abroad, Dutch 8.9%, Swedish 5.3% and British 5.1%. Architects Council of Europe ACE, The Architectural Profession in Europe 2018.

Tools offered by digitalisation, such as data models, artificial intelligence and virtual design software create good opportunities for improving the quality of the built environment and promoting high-quality architecture. Once completed, the new building legislation will contain new requirements for the digitalisation of the data generated in town planning and construction, and the Ryhti project²⁸ will collect key data about the built environment into a single platform.

Investing in architecture can support high-quality urbanisation and the vitality of villages in rural areas. Architecture can also contribute to the unique character of localities and increase the attractiveness of regions.

Zoning and planning have an effect on the development of regions. One part of this development is tourism; architectural tourism in particular has a lot of development potential in Finland. In addition to creating a high-quality environment for everyday life and supporting the residents' sense of locality and social inclusion, high-quality architecture also attracts tourists.

Digitalisation supports architectural tourism and creates opportunities for it. Tourism in Finland has increased and internationalised rapidly. The Alvar Aalto Cultural Route, which contains sites in five countries, was selected among the cultural routes of the Council of Europe in 2021. Finland is also preparing a proposal to inscribe Alvar Aalto's architecture in the UNESCO World Heritage list. Improving the sustainability of tourism is essential for the future and social acceptability of the tourism industry. It is also required by the sustainable development goals of the UN Agenda 2030. A professionally designed built environment is an integral part of the attractiveness, competitiveness and sustainability of a tourist attraction. Promoting sustainable architectural tourism and high-quality construction for the tourism industry in cooperation with the industry is increasingly important for the preservation of the tourist attractions and sights.

Vision for 2035

The impacts of the built environment and good design on economic sustainability are widely known and the expertise of architects is utilised widely. Architecture, planning and design and the attractiveness of regions and cities in an international comparison are understood as economic factors and investments.

28 The Ministry of the Environment's Ryhti project will create an information system for the built environment in 2020–2023. The project is associated with the ongoing comprehensive reform of the Land Use and Building Act. <https://ym.fi/en/project-ryhti/the-built-environment-information-system>

The architecture industry participates actively in cross-discipline and international cooperation in the creation of scenarios, solving problems and meeting future challenges. Architects participate in working groups that produce social foresight reports and future scenarios. The expertise of architects is utilised to help solve wicked problems, such as adaptation to climate change, wide-scale immigration due to a disaster or war, pandemics and conflicts.

Finland is known for its skilful and ethical architectural expertise. The expertise of architects' and design offices has become more diverse, as different offices have specialised in different areas of construction. Finland can offer many kinds of concepts for export.

Architectural competitions are arranged to get innovative and future-proof solutions in a wide range of projects in different sizes, content and objectives. The assessment criteria of the architectural competitions meet the requirements of sustainable construction, circular economy and healthy built environments. The types of competition are tightly linked to the procurement of construction projects and provide comprehensive support for the creation of a high-quality built environment.

Finnish architecture has an internationally renowned and easily recognised identity. The value of architectural exports has increased thanks to renowned Finnish expertise in sustainable design and a successfully implemented export strategy. Finnish architects participate actively in international networks and their networking efforts are supported. Finland also offers an attractive job market for foreign architects. Cooperation brings new contacts in rapidly growing market areas and provides opportunities for building a sustainable global economy. Collaboration between the architecture sector and construction industry has created new business opportunities in the export of expertise on sustainable construction to the growing cities of developing countries.

The architectural design and implementation processes and the benefits of digitalisation are acknowledged and recognised as an asset in international competition. Data models, artificial intelligence and virtual design are commonplace. They not only increase the productivity and environmental friendliness of construction, but also offer proven tools for the management of the interaction between construction and land use. Digital construction expertise is one of the cornerstones of architectural exports.

Digital platforms have also helped make Finland a destination for tourists interested in architecture. The role of attractive architecture in ecologically, socioeconomically and culturally sustainable tourism is understood. The new Museum of Architecture and Design plays a key role in attracting architectural tourism. Architectural tourism is promoted both to foreign and domestic tourists and local tourism is encouraged. Architectural tourism

and construction for the tourism industry are developed in close collaboration between the architecture industry, tourism industry, local and regional decision-makers and financiers. The cooperation with the Cultural Routes of the Council of Europe programme has resulted in routes based on modern architecture. The Finnish world heritage sites and other significant cultural sites and areas are also marketed as architectural sites. The sustainability of sensitive sites has been ensured.

Measures

A. The role of architecture in cross-disciplinary scenario creation and problem solving is strengthened

- by creating a cross-sectoral, interactive and research-based operating model for understanding and solving contemporary and future challenges faced by architecture and the built environment, and (*Building Information Foundation RTS, Kira-Forum, KIRA-hub*)
- by supporting the R&D activities that the architects' offices carry out by themselves or in cooperation with other parties of the construction industry, and by promoting the creation of new business models and value chains. (*Ministry of Economic Affairs and Employment, Association of Finnish Architects' Offices ATL*)

B. Procurement expertise is strengthened and architectural competitions are used more frequently as a method of procurement

- by developing new solutions for procurement processes, bolstering the expertise on how to use quality criteria and compatible data structures and strengthening the procurement expertise of public bodies also in the government's procurement and design policies, and (*Ministry of Economic Affairs and Employment, Motiva/Keino, RAKLI, Association of Finnish Local and Regional Authorities, Senate Properties*)
- by developing architectural competitions for a wide range of contents, objectives, scopes and themes and by communicating the significance of architectural competitions for the creation of high-quality, functional, cost-conscious and innovative solutions. (*Finnish Association of Architects SAFA, Arts Promotion Centre Finland (Taike), Senate Properties, Association of Finnish Local and Regional Authorities, museums with regional or national responsibility*)

C. The structures of architectural exports are strengthened

- by creating an internationalisation and communication strategy for the architecture and construction industry in cooperation with the stakeholders in the sectors, and ²⁹ (*Ministry of Economic Affairs and Employment, Ministry for Foreign Affairs, Team Finland, Finnish Association of Architects SAFA, Association of Finnish Architects' Offices ATL, Archinfo Finland, Kira-Hub, Business Finland*)
- by creating a search engine for discovering international design and tendering competitions. (*Association of Finnish Architects' Offices ATL, Finnish Association of Architects SAFA*)

D. The opportunities afforded by digitalisation are utilised

- by promoting the use of digital twins in the design of the built environment, impact assessment and renderings and by utilising data models as the basis of decision-making and statistics³⁰, (*Ministry of the Environment, BuildingSMART Finland / RTM, research institutions*)
- by providing architects and architects' offices with education on AI and sensors in order to increase their awareness of and expertise on AI, by networking with domestic AI organisations³¹ and by arranging international conferences and events on the topic of AI in the built environment, (*Association of Finnish Architects' Offices ATL, BuildingSMART Finland / RTM, KIRAhub, Finnish Association of Architects SAFA, Finnish Association of Civil Engineers RIL*)
- by allocating product development funding to the application of digital technologies, such as virtual design, geospatial information and AI, in architecture and urban design, and (*Ministry of Economic Affairs and Employment*)
- by bolstering the expertise of the municipal sector on the digital technologies associated with the built environment. (*Association of Finnish Local and Regional Authorities, BuildingSMART Finland / RTM, KIRAhub*)

29 The architecture export strategies of countries that are successful in the international architecture export market will be examined in a study that will serve as background information for the creation of the strategy.

30 The model can be used throughout the process, from design to construction, use and repair.

31 Examples of Finnish AI organisations are Finland's AI Accelerator FAIA and Finnish Center of AI FCAI.

E. Architecture supports the development of regions and Finland's attractiveness as a destination of architectural tourism is increased

- by acknowledging the built environment as a factor in the strategic development of regions and by using urban planning and architectural sites to increase the attractiveness of each region. *(Ministry of Economic Affairs and Employment, Archinfo Finland, municipalities and cities)*
- by strengthening architecture's role as the driver of tourism, systematically and in cooperation with the development of cultural environments:
 1. by using the quality of architecture in the planning of tourist areas and tourist industry development,
 2. by including architectural routes, guidance, museums and architectural sites in the product development and marketing operations of the tourism industry,
 3. by improving access to information about architecture and developing digital platforms about architectural sites, and
 4. by developing the impact assessment of architectural tourism and creating indicators for customer satisfaction and sustainability of tourism. *(municipalities and cities, Business Finland / Visit Finland, Metsähallitus, The Finnish Heritage Agency, Senate Properties, museums with regional or national responsibility, architects and architects' offices, tourism entrepreneurs, regional tourism organisations, research organisations, other operators in the sector)*



Paimio Sanatorium.

Architects Aino and Alvar Aalto, 1933.

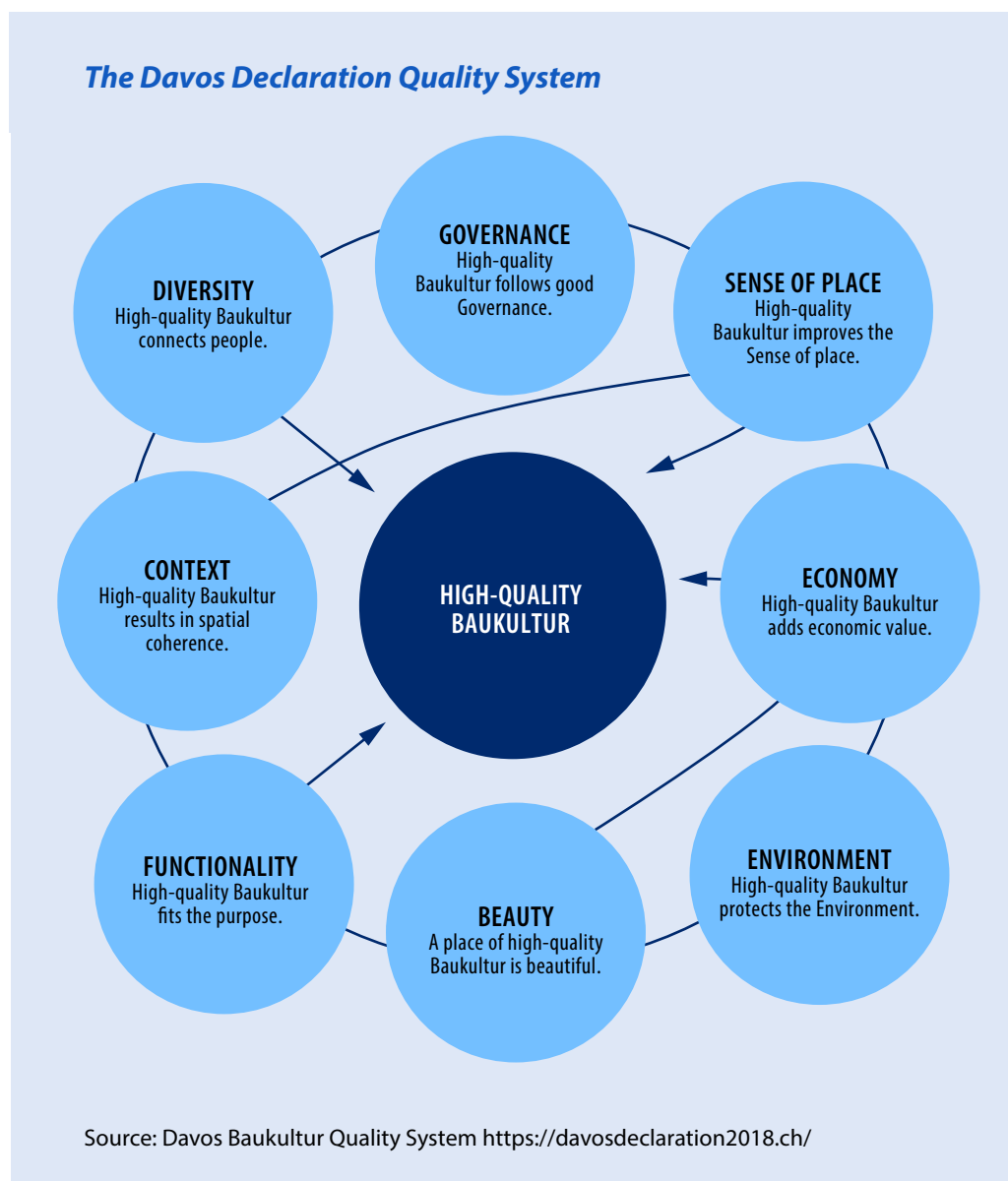
From the Paimio Series by photographer Tuomas Uusheimo.

Chapter IV.
Meaning and identity

Architecture belongs to all

Architecture is a part of a comprehensive building culture, *Baukultur*, in which the built environment is understood as an essential part of cultural identity, diversity and nature.

Although the solutions in the built environment have a direct effect on the attainment of climate goals, architecture should not be viewed merely as engineering solutions or a tool for achieving social or economic goals. Architecture is about art, functionality, comfort and quality.



Discussions about architecture and urban design that include many voices, including those of the citizens, form the foundation for a culturally sustainable built environment. Citizens' initiatives and discussions and other grassroots activity must be actively introduced into the processes that develop the built environment. Treating citizens as active participants and allowing them to also exert an influence outside any targeted participation processes creates good Baukultur.

Finland is characterised by modern architecture: only five per cent of Finland's building stock is more than 100 years old.³² Finland has fewer old buildings than any other country in Europe. Our valuable modern architectural heritage consists of high-quality everyday architecture: churches, city halls, hospitals, schools, factories and residential buildings, as well as urban and regional planning and design principles. The emphasis on the architecture of everyday public buildings illustrates the democratic principles of the Finnish society. Actions that preserve the identity of the cultural environment strengthen the residents' sense of belonging.

Exhibitions and events are a natural way of stimulating discussions. Museums offer broad perspectives on architecture: from the traditions and practices to modern architecture and the future of the built environment. Architectural exhibitions are mostly arranged by the museums with national responsibility (Museum of Finnish Architecture and Alvar Aalto Museum) and museums with regional responsibility.³³ Plans are currently being made to merge the Museum of Finnish Architecture and the Design Museum into a single, internationally ambitious museum that would serve as a museum with national responsibility on architecture and design.

At present, Finland has relatively limited production resources for creating exhibitions. Furthermore, architects participate relatively little in nearby biennials and transdisciplinary or artistic conferences held near Finland. However, international exhibitions are highly significant – for example, the Venice Biennale of Architecture has attracted an increasing number of visitors every year since its establishment in 1980.³⁴

32 Statistics Finland.

https://www.stat.fi/til/rakke/2019/rakke_2019_2020-05-27_kat_002_en.html

33 Under the new Museums Act (2020), museums with a regional or national responsibility replace the earlier system of provincial and regional art museums and national special museums.

34 Over 300,000 exhibition visitors visited the Venice Architecture Biennale in 2021, and the Finnish pavilion reached a record 107 000 visitors. Finland's New Standards exhibition was covered by the New York Times, BBC Online and the Guardian as well as dozens of other important international media with a global circulation of nearly 85 million readers in total. Archinfo Finland, 2021.

Vision for 2035

The role of architecture in people's lives is acknowledged and its ability to create solutions for spaces and functions in everyday life is understood; investments are made in high-quality design. Appreciation of the built environment has increased, since information about architecture is easily available and the discussion on the built environment handles contemporary themes that are widely considered interesting. Discussion takes many forms and the civil society plays a major role.

Architecture professionals participate actively in public discussion and enhance it with their expertise and points of view. Finland has a strong culture of architecture journalism that supports a lively public debate and offers new perspectives to architecture and the trends in construction. Architecture journalism is professional and gives voice to designers and users alike. Public discussion seeks to increase understanding on the forces that affect the built environment. Stakeholders in the field of architecture are active towards international media and the efforts to increase visibility understand the importance of professional communications.

Finnish *Baukultur* and built heritage is appreciated and actively preserved and the contribution of built heritage to wellbeing, regional vitality and international interest is understood. The building stock of different eras is maintained, cared for, repaired and protected.

The Museum of Architecture and Design has become a force that promotes the progress of architecture and design and empowers them. The museum is an excellent platform for exhibiting architecture and also serves as an impactful forum for public discussion about architecture. Architectural exhibitions and events and international touring exhibitions are arranged reciprocally with international parties. The stakeholders of exhibitions and events appreciate the roots of contemporary architecture, highlight current trends and future-oriented ideas and experiments and introduce new perspectives to the discussion about architecture.

Finland has developed a thriving culture of architectural events and events associated with the built environment in cities and villages. The Architecture Triennale, national and regional exhibitions and discussions and conferences, perhaps held online, attract both the general public and international experts. Finland's reputation as a country of architecture has increased and international curators, experts and media representatives follow Finnish architecture actively.

Measures

A. Discussion on the living environment is stimulated

- by introducing even more perspectives on architecture and the built environment that interest the general public and by developing new formats of debate and communications that reach new audiences, (*Archinfo Finland, the media, other organisations in the sector*)
- by increasing the environmental literacy of people of various ages and backgrounds and by strengthening their opportunities to have an influence on their living environment and participate in discussions about it in various forums, and (*municipalities and cities, Archinfo Finland, NGOs, Ministry of Education and Culture, Ministry of the Environment, Finnish National Agency for Education*)
- by offering additional training to journalists and by investigating the possibility of establishing a writers' academy that concentrates on architecture and *Baukultur* and by strengthening the communications expertise of architects' offices. (*Archinfo Finland, Association of Finnish Architects' Offices ATL, other organisations in the sector*)

B. The identity of locations and places is strengthened

- by increasing the understanding of municipalities, businesses, other communities and residents of the significance of the identity and cultural environment of places and by highlighting the local special characteristics of architecture and by strengthening the expertise on traditional construction, (*museums with regional responsibility, regional councils, municipalities and cities, organisations in the field of cultural environment, educational institutions*)
- by creating a template or instructions for a book that tells the history of a house, block, village or region and provides important information for the current and new residents throughout the lifecycle of the building or area, and ³⁵ (*Finnish Local Heritage Federation, Finnish Real Estate Federation, NGOs, The Finnish Heritage Agency, Ministry of Education and Culture and Ministry of the Environment*)

35 Creating an operating and service manual for a building is mandatory by law (Land Use and Building Act, section 117(i)). For more information, see the National Building Code of Finland: https://www.ymparisto.fi/fi-FI/Rakentaminen/Kiinteiston_yllapito_ja_korjaaminen/Kiinteiston_kaytto_ja_huoltoohje

- by deepening the collaboration between the construction industry and the art sector; this is achieved by applying the '1% of Construction Costs for Art' principle to a greater extent when using art in the construction of a good environment and by developing processes for public art and procurement quality. (*Arts Promotion Centre Finland (Taike), Building Information Foundation RTS, museums with regional responsibility, cities and municipalities, Ministry of Education and Culture*)

C. Cultural values of the built environment are fostered

- by developing the central government's methods of managing and using its real estate property, taking into account the cultural history of the sites, the central government's real estate strategy³⁶ and premises strategy, (*Senate Properties, Metsähallitus, Finnish Transport Infrastructure Agency, The Governing Body of Suomenlinna, The Finnish Heritage Agency, Ministry of the Environment*)
- by strengthening the appreciation of modern building heritage and by increasing proactive conservation of buildings, (*The Finnish Heritage Agency, museums with regional or national responsibility, Senate Properties, Centres for Economic Development, Transport and the Environment, Ministry of the Environment*)
- by providing the owners of buildings with information and financial incentives³⁷ so that they can look after their buildings as well as possible, and (*ministries, The Finnish Heritage Agency, museums with regional responsibility*)
- by creating an evaluation framework that considers cultural and social values as equals to technological and economic values in the decision-making on existing buildings and building stock. (*Ministry of the Environment, The Finnish Heritage Agency, Centres for Economic Development, Transport and the Environment*)

D. The culture of architectural exhibitions and events is strengthened

- by making the future Museum of Architecture and Design a central platform and medium for the development of the architecture sector, (*Museum of Finnish Architecture, Design Museum, Ministry of Education and Culture*)

36 Central Government's Real Estate Strategy, 2010. The strategy is currently being updated. <https://vm.fi/documents/10623/307565/Valtioneuvoston+periaatep%C3%A4%C3%A4t%C3%B6s+valtioni+kiinteist%C3%B6strategiaaksi+2010/484585dc-6a39-48f9-a083-81a76189e689>

37 An example of such an incentive is tax exemption of donations made by private persons to foundations that own cultural heritage.

- by supporting exhibitions and events arranged by the museums and other organisers on architecture and the built environment, (*Ministry of Education and Culture, The Finnish Heritage Agency, Arts Promotion Centre Finland (Taite), municipalities and cities, foundations and funds, museums*)
- by developing the Alvar Aalto symposium into an international architecture triennial in Finland, and (*Alvar Aalto foundation, other stakeholders in the field*)
- by creating an operating model for inviting international curators, critics and media representatives into Finland more systematically than at present. (*Archinfo Finland, Ministry for Foreign Affairs, Finnish cultural and science institutes, Museum of Finnish Architecture, Alvar Aalto foundation*)



Basic arts education in architecture at the City of
Jyväskylä School of Visual Arts.

Photo: Ilpo Vuorela.

Chapter V. Education and research

Investing in education and research will secure the future of the built environment

Built environment literacy and architecture education have developed positively in recent decades. Future competence needs of the built environment, continuous learning and contemporary questions have been addressed in the reformation of early childhood education, basic education, secondary education, higher education, basic education in the arts and liberal adult education.

High-quality architectural education and multidisciplinary research of the built environment are the preconditions for achieving a high-quality, pleasant, safe and ecologically sustainable built environment. Architectural education in Finland is provided in universities and universities of applied science. The educational programmes provide competence in the design of buildings and urban areas, landscape architecture and other specialist tasks. The cultural diversification of the society, low-carbon requirements of construction and land use and the increasing complexity of design tasks, supplementary construction and renovation and conservation require that professionals acquire new skills.

According to the programme of Prime Minister Sanna Marin, the higher education system will be developed into a platform for continuous learning so that students can take courses flexibly from any university in Finland, regardless of the status of the student.³⁸ The reform of continuous learning that is being prepared under the Government Programme will probably partially meet the needs to develop continuing education in architecture. Several organisations offer continuing education at present, but the provision of this education is not coordinated.

In addition to the need for new competences, there has been a shortage of labour in the architecture sector in recent years especially in the most demanding tasks and smaller localities despite the fact that universities have increased the intake quota in architecture and the training for construction architecture in universities of applied sciences was restarted in 2014. Therefore, the future need for architectural education and labour should be investigated in detail. In addition to architecture professionals, Finland also has a shortage of many other specialists in building, such as supervisors in the construction sector.

38 Programme of Prime Minister Sanna Marin's Government.
[https://valtioneuvosto.fi/en/marin/government-programme/
finland-that-promotes-competence-education-culture-and-innovation](https://valtioneuvosto.fi/en/marin/government-programme/finland-that-promotes-competence-education-culture-and-innovation)

Architecture, urban design, landscape architecture and built environment as research topics link to larger cultural, social and ecological contexts. Therefore, researchers should be encouraged to address multidisciplinary and transdisciplinary questions and engage in international cross-disciplinary cooperation.³⁹

In addition to the degree programmes in architecture and architecture research, the architecture and design education provided in different levels of education deepens people's understanding on the built and designed environment. It makes children, teenagers and adults appreciate the built environment more and fuels their interest and capabilities to participate in developing it further. For example, in basic education in the arts, the number of pupils studying architecture has grown in the last decade, but they still amount to less than one per cent of all the pupils in basic arts education.⁴⁰ Strengthening the education on architecture and design still needs increasingly comprehensive, systematic and long-term actions that support the learners' education continuum and continuous learning in a goal-oriented way.

Vision for 2035

Finnish architecture education is of high quality and is international, well-resourced and offered widely. Architecture education focuses on the development of our shared environment and the wellbeing of society. Sustainable design and construction is a key principle in architecture and construction education and is strictly adhered to.

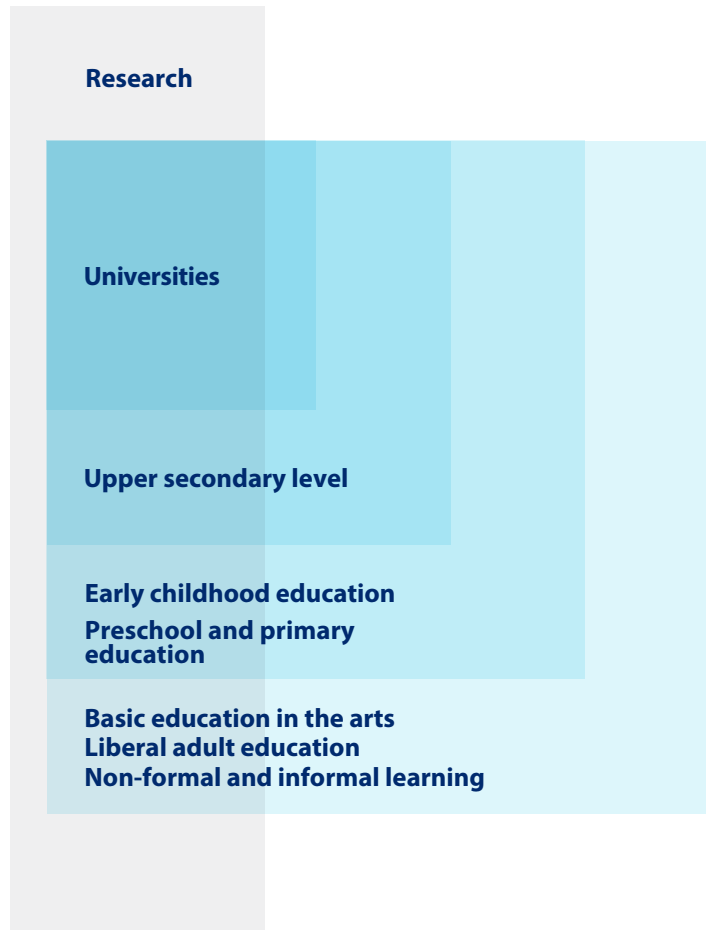
Renovation, restoration and conservation of buildings are considered an important part of the professional skills. Professional skills also include cultural awareness that covers cultural diversity, history and cultural heritage. National and international cooperation between universities and other research institutions increases Finland's capabilities to respond to social challenges and increases the diversity of the artistic goals of architecture.

39 Architecture and the built environment is also researched in neighbouring disciplines, such as urban studies, landscape studies, cultural environment studies, art history and environmental psychology.

40 Luoma Tiia, Taiteen perusopetus 2020. Selvitys taiteen perusopetuksen järjestämisestä lukuvuonna 2019–2020 (In Finnish) (Finnish National Agency for Education, Reports and studies 2020:4).

Figure 10. Research across the levels of education

Research creates new information on the built environment. Research evidence provides a basis for architectural and environmental education and training. Non-formal and informal learning about the built environment can be promoted by making diverse use of various means of communications, for example.



Internationally networked high-quality research is an essential part of learning, development of education and the renewal of architecture. The diversity, connectivity and rapid changes in architecture and the built environment require that an increasing part of research is multidisciplinary, interdisciplinary or transdisciplinary. New information obtained from research supports teaching in various levels and generates new expertise and in-depth understanding. Research results are used in practice in the development of the construction industry and the creation of a high-quality built environment.

Education, research and continuing education have enough resources to train a sufficient number of architecture professionals whose diverse skills meet the needs of their increasingly diversified duties. Appropriate intake quotas and the scope of the education guarantee that the profession is capable of responding to changes in society and taking the lead in designing a pleasant, high-quality and sustainable environment. People in the field participate in further and continuing education as necessary, and enough continuing education is available and its scope is appropriate. Support is also provided for the RDI operations and product development of businesses in the sector.

In the field of continuous learning, architecture and design education has become more goal-oriented, high quality and comprehensive on the different levels of education. Architecture and design education is accessible for all and is available for pupils and students of all ages throughout their learning path. Appreciation and understanding of the built environment is considered a civic competence. The pedagogical competence of architecture and design educators has been developed by providing a wide range of basic and continuing education and setting up development programmes and cooperation networks. Architecture and design education is perceived as one of the strengths of the Finnish education system and export of its high quality pedagogic practices is supported.

Measures

A. The importance of creativity, information and responsibility in architectural education is emphasised

- by investing in international contacts and cooperation, (*universities*)
- by increasing opportunities for research and continuous learning, (*universities*)
- by investing in cooperation between universities, and (*universities*)
- by creating opportunities for specialisation and deep specialisation. (*universities*)

B. Sustainable design and construction are made into an overarching principle in education

- by strengthening the presence of sustainable building in architectural education programmes, continuing education and research, and (*universities*)
- by strengthening expertise on the circular economy, sustainable development and high-quality building methods; this is achieved by developing the vocational qualifications in construction education and industrial arts further. (*Finnish National Agency for Education*)

C. Future-proofing the quality and expertise resources in the architecture sector and construction industry

- by developing the forecasting of the need for competencies and the number of professionals in the architecture and construction industry, (*Finnish National Agency for Education, Competence Forecasting Forum, Ministry of Education and Culture*)
- by conducting a comprehensive survey on the professional skills, workforce needs and future challenges of the architecture sector, taking into account the specialists produced in the current degree programmes in universities and universities of applied education, (*stakeholders in the sector, Ministry of Education and Culture*)
- by matching the intake quotas of architectural education of current surveys while taking the goals of the reform of continuous learning into account, (*universities*)
- by developing opportunities for further education in the sector in universities, with goals like nationwide availability of experts in renovation, sustainable land use and urban planning, and (*universities*)
- by strengthening the range of continuing education in architecture and communicating about it. (*stakeholders in the sector*)

D. Research on the built environment is strengthened

- by investing in multidisciplinary cooperation that takes into account the different aspects of sustainability and the importance of nature as part of the living environment, (*universities, research institutions*)
- by investing in architectural researcher training, scientific publications and communications and cooperation between research organisations, (*universities, research institutions*)
- by improving the level of research on architecture and the built environment across disciplines so that competitive research funding is obtained from national (Academy of Finland, Business Finland), European and international sources for an increasing number of projects, and (*universities, research institutions*)
- by encouraging the combination of research, practice and experiments and putting research results into practice in cooperation with the real estate and construction industry. (*Building Information Centre RTS, other stakeholders in the field*)

E. The role of architectural and design education is strengthened

- by emphasising the significance of architectural and design education when the cultural education plans are being created for early childhood education and primary education, *(providers of education and early childhood education, Ministry of Education and Culture, Finnish National Agency for Education, stakeholders in the architectural and design education)*
- by supporting the development of new pedagogic materials, methods and tools for architectural and design education provided in the different levels of education, *(providers of education and early childhood education, Ministry of Education and Culture, Finnish National Agency for Education, stakeholders in the architectural and design education)*
- by, in all levels of education, developing the pedagogic expertise of the teaching staff on architectural and design education⁴¹ and by allocating funding for the continuing education of personnel working in government-funded education and early childhood education when the supplementary education concerns architecture and design education, and *(Ministry of Education and Culture, Finnish National Agency for Education, those involved in basic education in the arts, liberal arts education and cultural education, pedagogical teachers' associations)*
- by using multichannel communications for a diverse and continuous environmental education of citizens. *(all stakeholders)*

41 Push for the inclusion of architecture and design education in the degree programmes of early childhood educators, classroom teachers and subject teachers of primary education and subject teachers of upper secondary schools and other teacher training.



'Atlas', the winning proposal of the architecture competition for the extension of the National Museum of Finland.

JKMM Architects, 2019.

Photo: JKMM Architects and the Finnish Heritage Agency.

Summary

The architectural policy programme seeks to provide a comprehensive picture of the main trends that affect the built environment in our time. It proposes objectives and tools for shaping the built environment in ways that take social and cultural aspects into account along with ecology and the economy.

The key message of the programme is that the creation of a good built environment requires multidisciplinary cooperation, expertise and discussion.

Figure 11. The dimensions of sustainability over the formation of the built environment.

| | | ← TEMPORAL DIMENSION → | | | |
|---------------------------------|---|--|---|--|--|
| | | Design | Construction | Maintenance | |
| ↑ DIMENSION OF SUSTAINABILITY ↓ | Four traditional dimensions of sustainability | Economical Social Ecological Cultural | Sustainability of design | Sustainability of construction (such as environmentally sustainable materials) | Sustainable solutions for maintenance and care |
| | New dimensions of sustainability | Longevity | Longevity (timelessness) of design solutions | Longevity of construction (such as environmentally sustainable materials) | Maintaining the condition of buildings |
| | | Aesthetic sustainability | Trans-generational aesthetics and room for new aesthetics | Practical aesthetics (that supports construction solutions) | Repairs that respecting the original solutions |

High-quality *Baukultur* contributes to a good living environment. The Architectural Policy Programme illustrates the many organisations, operators and means which create a good *Baukultur*. The Davos declaration and its quality tool referred to in the programme show the direction for the development of *Baukultur*.

Sustainable architecture creates a functional framework for social life and contributes to wellbeing on a planetary scale. It reduces inequality and promotes social inclusion. A sustainable living environment is beautiful and pleasant and its cultural heritage is present in everyday life in a natural way. A sustainable built environment also helps areas to thrive.

The transfer to a circular economy and a low-carbon society requires new ways of designing, building, using and maintaining the built environment. The change will affect everyone, from designers, builders and maintenance professionals to people living in the built environment. The transition to sustainability requires a new kind of thinking and competence. This poses a challenge to society: everyone must have access to information, learning opportunities and education. An understanding of the development and preservation of the living environment can be considered a civic skill of the future and can be achieved by wide-ranging environmental education, including education on architecture and cultural heritage.

How the programme was prepared

On 26 April 2019, the Ministry of Education and Culture and the Ministry of the Environment established a working group to create a proposal for Finland's new Architectural Policy Programme.⁴² The extensive working group and group of experts had a diverse range of expertise, and included representatives from different ministries, agencies, municipalities, organisations and educational sector stakeholders, and of course architects. The preparatory work consisted of 11 working group meetings between May 2019 and October 2020.

In addition to meetings of the working group and expert group, four workshops were also arranged for a large number of stakeholder representatives. The workshops were organised thematically: "Climate and sustainable development" (October 2019, 49 participants), "Lifestyle transformation" (December 2019, 51 participants), "Internationalisation" (February 2020, 61 participants) and "Education" (May 2020, 59 participants). A public consultation event was arranged in September 2020 and almost 120 stakeholder representatives participated in this.

In addition, two international conferences were held in November 2019: "Architecture for Common Good" and "Creating the Future III: Creative Education in Architecture". Both attracted approximately 200 experts from all around Europe.

The working group's programme proposal, *Towards sustainable architecture*, was completed at the end of 2020. The working group handed the proposal to Minister of Science and Culture Annika Saarikko and to the Minister of the Environment and Climate Change Krista Mikkonen on 12 January 2021.

42 Programme page of the working group drafting the Architectural Policy Programme (in Finnish): <https://okm.fi/hanke?tunnus=OKM017:00/2019>

At the beginning of February 2021, the programme was circulated for comments until mid-March 2021. A total of 77 comments were received. The Ministry of Education and Culture, Ministry of the Environment and the Ministry of Economic Affairs and Employment created a summary of the key points of the comments and published it on the project website.

In addition, the working group's programme proposal was evaluated by researchers as part of the *Science Advice Initiative of Finland* (Sofi project). The purpose of the review was to get expert feedback to improve the impact of the programme. A total of eight scientific evaluators assessed the proposal in five meetings between August and October 2021. Also present in the meetings were representatives of ministries and government agencies.

In addition, more than a dozen meetings with cities, interest groups, authorities, organisations and other stakeholders that had issued opinions about the proposal were held between August and October 2021. The meetings discussed the stakeholders' opinions and their core messages as well as tasks associated with the implementation of the programme.

The opinions, stakeholder discussions and feedback from the researchers served as input for finalising the proposal into a national architectural policy programme. The finalisation was done by a working group consisting of representatives of ministries and government agencies. Some members of the programme working group and secretaries also participated in the finalisation effort.

Implementation and monitoring of the Architectural Policy Programme

Figure 12. Dimensions and key stakeholders of the Architectural Policy Programme. Architectural policy is made at an international, national and local level.



*Centres for Economic Development, Transport and the Environment

The Ministry of Education and Culture, Ministry of the Environment and Ministry of Economic Affairs and Employment will launch the implementation and monitoring of the Architectural Policy Programme in early 2022. The implementation will also take into account international initiatives on architectural policy and the promotion of their objectives in Finland alongside the Architectural Policy Programme. The implementation partly consists of coordinating, monitoring and supporting a range of organisations in the implementation of the action items of the programme. For example, the work to promote local architectural programmes and create instructions for them will start in 2022. This policy programme will be published in the Finnish Government Publication Series and also in other versions.

The Architectural Policy Programme is a document that will be updated regularly. Work towards the next Architectural Policy Programme is estimated to start in 10 years, i.e. towards the end of the 2020s. If necessary, the national architectural policy programme can be updated or supplemented between the major revision cycles.

The working group behind the proposal

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Stakeholder meetings

Centres for Economic Development, Transport and the Environment
Regional Councils
Business Finland
Visit Finland
Arts Promotion Centre Finland
The Finnish Heritage Agency
Universities of applied sciences that issued an opinion
Cities that issued an opinion
Finnish Association of Architects
Association of Finnish Architects' Offices
Finnish Real Estate Federation
Rakli ry
The Threshold Association (Kynnys ry)
Finnish Federation of the Visually Impaired
The Finnish Association of People with Physical Disabilities

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ISBN: 978-952-383-851-2 PDF
ISSN: 2490-0966 PDF