



European Construction Sector Observatory

Policy measure fact sheet

Denmark

Nordic Built programme

Thematic Objective 1

September 2016

Implementing body:	Initiated by the Nordic Council of Ministers (Nordic Ministers for Trade and Industry) and funded and supervised by Nordic Innovation
Key features & objectives:	Nordic Built combines a charter as cooperation platform, competitions, and financing to raise awareness and develop sustainable building concepts
Implementation date:	2012-2014
Targeted beneficiaries:	Stakeholders from across the entire value chain in building and energy sectors, including policy-makers, investors, users and building owners
Targeted sub-sectors:	Building and energy sectors
Budget (EUR):	€7.7 Million for 2012-2014 period supported by industry co-financing

In a nutshell

Energy related renovation of buildings and sustainable construction are considered as priorities for growth among Nordic countries, which share comparable societal challenges and construction industry traditions. In the case of Denmark, a wide range of government strategies, regulations and subsidies have been launched to support green buildings.¹ Despite improvements, the Nordic building sector has not succeeded to position itself as the leading provider of low energy and sustainable buildings.² There is a strong need for creating more awareness both inside and outside the Nordics of the countries' qualities in sustainable construction. On the backdrop of financial, climate and resource challenges, including a fragmentation³ in the building sector, new initiatives are thus required to create awareness, collaboration opportunities and new market opportunities for sustainable solutions.

The Nordic Built programme was launched by the Nordic Council of Ministers and implemented by Nordic Innovation⁴ to accelerate the development of sustainable building concepts and to foster cross-

sector and cross-border trade and cooperation. The two-year programme, which was carried out between 2012 and 2014, represents a multi-country initiative with a strong Danish component. Nordic Built emphasises agenda setting and awareness creation around sustainable building concepts. Its core activities include the Nordic Built Charter, design competitions and a funding instrument for R&D projects. The Nordic Built Charter seeks to engage stakeholders in the charter and to encourage them in applying the charter's principles in both decision-making processes and business strategies. The overall objective is to accelerate the development of sustainable Nordic building concepts and innovation uptake in the built environment.⁵ In order to do so, it builds on existing Nordic strengths, for example in sustainable solutions for urban spaces, standard setting and certifications, citizen-involvement in decision-making processes and existing collaboration between construction stakeholders.⁶

Nordic Built has provided a platform for collaboration and agenda setting across sectors and facilitated cross border cooperation in a field that has strong national-underpinnings and fragmentation. It has equally contributed to the creation of a market for sustainable solutions in construction. The number of participating companies in Nordic Built, including in its chapter, has however remained limited; it has mainly managed to engage rather well-known and large companies that already operate in the area of sustainable construction.

General description

Nordic Built has a basis in the Nordic Cooperation Programme for Innovation and Business Policy 2011-2013⁷ and it covers Denmark, Finland, Iceland, Norway and Sweden. Nordic Innovation funds and supervises Nordic Built and stakeholders from science and industry ensure its roll out. Nordic Built initially invited 75 top leaders from science and business and tasked them to identify the strengths of the Nordic building sector, develop actions for regional progress for the Nordic models and contribute to the development of the charter.⁸ Overall, the programme is carried out

through the following three modules covering a range of interconnected activities:

Module 1:	Nordic Built Charter
Module 2:	Nordic Built Challenge design competitions
Module 3:	Joint Nordic Innovation funding programme

Nordic Innovation and the Nordic Built initiative is funded by public budgets in the Nordic countries. Nordic Innovation has spent in total around €7.7 million on the 2012 to 2014 programme. This has been supplemented by national funds and industry co-financing in projects, for example based on the requirement for 50 % self-financing⁹. Table 1 elaborates on the financial backing behind Nordic Built.

Table 1: Funding of Nordic Built – funding per module

Allocated financing ¹⁰	
<i>Charter</i>	Approx. €0.4 million to develop charter
<i>Design competitions</i>	Around €1.9 million to run 5 design competitions (Contractors contributed with approx. €0.5 million in co-financing)
<i>Financing of projects</i>	Approx. €5.4 million to finance innovation projects (Complemented €3.8 million from national funds and €12.8 million by industry co-financing)

The Nordic Built Charter makes up the main module and was launched by means of a communications and collaboration platform. It offers a venue for stakeholder cooperation, engagement and networking across the building sector and country borders and helps business participants to meet like-minded partners. The charter provides a public declaration, definitions and ten principles¹¹ for the future built environment, by the use of a holistic focus covering environmental, social and economic aspects, covering the entire value chain of the building sector. The charter also works as a tool for influencing the political agenda – it helps the participants and signees of the charter to influence the political process regarding sustainable buildings. Furthermore, signees of the charter have the opportunity to display the Nordic Built logo on their website and appear on the Nordic Built's website for committed companies¹², thus working as a branding component.

The second module, the Nordic Built Challenge, comprises design contests that aims to promote the principles of the charter and demonstrate them in practice. The open and multidisciplinary competitions seek to encourage the development of innovative, sustainable, viable and scalable building and renovation. The assessment criteria relate to the charter's ten principals, the quality of conceptual solution for architecture, energy efficiency, environmental impact etc. Following the principles of the Nordic Built Charter, the Nordic Built competition document¹³ for Denmark

outlines that, the participants are encouraged to form multidisciplinary and Nordic/international teams. This relates to the charter's principle eight, which stresses the importance of partnerships, business alliances and collaboration across disciplines and borders – both in the Nordic region and beyond – in order to improve export competitiveness. Based on national differences in regulations, buildings, owners, users, etc., the competitions rules varies slightly between the national competitions. National ministries or agencies were typically involved in the organisation of the competitions and a competition document¹⁴ outlining the applicable competition rules has been prepared for each country.

In total, refurbishment design competitions were created – one for each country – and based on two stages.¹⁵ Stage one had the format of an open idea competition on general concepts and ideas. Based on low-entry requirements and anonymous evaluation, four winners were chosen from each competition and given around €39.000 and the chance to proceed to the next stage. The four best entries proceed to stage two where a jury selects the winner. As part of stage two, the jury can require the participation of experts in the selected teams. Moreover, within stage two, it excludes enterprises and/or persons that have been involved in the organisation of the competition or have a close familiar relationship with any member of the jury etc. While the proposal with the best ranking for each of the five building was offered the option of a consultancy contract with the building owner, the final Nordic winner was given around €130.000. The final winner was chosen based on the overall use and demonstration of the charter's principles, also taking into account financial and practical viability.¹⁶

The third module covers a joint Nordic funding programme for innovation, R&D and demonstration projects. The funding module aims to enable a wider transformation through accelerating the use of new concepts for sustainable constructions and to realise concrete projects offering scalable solutions. Two call for proposals has been launched, in 2013 (max. budget of around €16.5 million) and 2014 (max. budget of €2.5 million) respectively. The assessment criteria have related to stakeholder collaboration, sustainability, energy efficiency, innovativeness, etc.¹⁷ Nordic Innovation cooperates with national funding agencies on Nordic Built funding and it works more or less as the Eurostars¹⁸ funding mechanism.

The Nordic Built programme finished in 2015. Another programme, Nordic Built Cities, was launched in 2015 and is closely linked to its predecessor. Experiences and lessons learned were taking into account and the charter works as a joint platform for both programmes. However, the more recent Nordic Built Cities focusses more specifically urban challenges, such as in developing, visualising and exporting innovative solutions for sustainable, liveable and smart cities.¹⁹

Achieved or expected results

The Nordic Built Charter has been signed by over 200 stakeholders²⁰, which have committed to the charter's principles, for example by integrating the principles in business strategy and decision-making processes. While there is some uncertainty about how each company is using the charter, it has overall helped to set up a platform for collaboration and networking in a fragmented building sector as well as enabled branding through the Nordic Built logo.

It is hard to quantify the impacts of the design competitions. They have been successful in terms of creating publicity around sustainable renovation, increasing innovative practices and creativity, changing mindset among building owners and promoting awareness of the opportunities for financing innovative projects. As part of the five design competitions, over 170 proposals were received and five projects were awarded a consultancy contract with the building owner. In the case of Denmark, the awarded consultancy entered into a contract with KAB, a customer owned non-profit housing association. The competition has to date resulted in three large and ambitious building projects that are under implementation.²¹

Table 2: Achieved results – outputs per module

Achieved results / outputs	
<i>Charter</i>	<ul style="list-style-type: none"> • Platform for collaboration and agenda setting • Around 200 signees of charter
<i>Design competitions</i>	<ul style="list-style-type: none"> • Awareness / publicity on sustainable renovation • 170 proposals received from five design competitions; 3 large building projects initiated
<i>Financing</i>	<ul style="list-style-type: none"> • Funding of 17 innovation projects²²

The funding programme has funded 13 projects in the first call and 4 projects in the second call, for example related to larger renovation projects of buildings.²³ Some projects are running until 2018. Examples²⁴ of funded inter-Nordic projects include:

- Nordic Built Component Reuse explores prototypes to find new practices for high-level reuse of dismantled building components and materials.
- Nordic Guide to Sustainable Materials create a guide that defines and harmonises sustainability criteria for building materials and provides data on practices in legislation, production etc. in Nordic countries.
- Smart Retro – Proof of Concept for Sustainable Services in the Built Environment launched a business model combining refurbishment of buildings and service development in the Nordic context.

- Sure! Nordic Built for Sustainable Retrofitting developed a retrofitting concept for improving energy usage and sustainable lifestyles for multi-storey buildings.

Perspectives and lessons learned

Nordic Built has been followed by the Nordic Built Cities programme. While the existing measure had a focus on finding innovative solutions for sustainable buildings, Nordic Built Cities focusses on urban challenges and innovative solutions for smart, liveable and sustainable urban spaces in Nordic countries. The change of focus is linked to a political shift, in which the environmental agenda for the construction sector to some extent has slipped in the background during the last couple of years, for example replaced by a push for digitalisation and urban planning.²⁵ Although Nordic Built Cities serves as a continuation of Nordic Built, only a few elements has been transferred. In particular, the charter operates as a joint platform for both programmes. Design competitions are also integrated in the new setup; the Nordic Built Cities Challenge competition was launched in early 2015. The competition takes into account the lessons learned and follows up on the previous competitions, albeit with a narrower emphasis on urban challenges.

From the **government perspective**, Nordic Built was launched by the Nordic Ministers for Trade and Industry in order to provide a platform - through the charter - that deliver a common ground among the Nordic countries for further cooperation and knowledge sharing, and thereby helps to encompass the differences in everyday modes of businesses. However, even though the Nordic countries share similar systems, culture and many Pan-Nordic companies, significant differences still exist for operating procedures, specialisations and skills.²⁶

From the **perspective of the implementing authority**, Nordic Innovation primarily functions as a fund in support of Nordic trade and innovation. A "softer" initiative like Nordic Built oriented towards agenda-setting and awareness-creation is thus different from the typical Nordic Innovation initiative. Consequently, it has involved some experimentation and a learning process for Nordic Innovation.²⁷ This is for example reflected by a major revamp of Nordic Built and its transformation into the Nordic Built Cities programme. It also appears from how the submission process for project funding under call for proposals was changed. Initially, the applicant had to submit an Expression of Interest (EoI) during stage one followed by a full project description and completed application forms to relevant national agencies under stage two. Nordic Innovation simplified the process, requiring applicants to simply submit one full application directly to Nordic innovation, thereby making it easier to apply. This has been supported by a flexible approach to funding. According to national funding agencies' financing gaps, it was ensured that Nordic Built could direct its funding towards projects with funding gaps. This means that the budget is not fixed on a country-to-country basis and that Nordic Innovation can target its financing towards projects that

falls under its scope and which lacks financing to cover project costs.

While the design competitions were considered successful, the competition format has involved some uncertainty regarding outcomes. In order to promote innovative solution-finding, Nordic Innovation applied a set of broad general criteria related to for example energy efficiency, environmental impact and the charter's ten principles, rather than defining very specific criteria for each building type. This method has induced creativity, but also led to some uncertainty with the proposed conceptual solutions in terms of their feasibility.²⁸

From the **industry perspective**, Nordic Built was structured around a platform, co-financing and a bottom-up approach for implementation. This approach has helped bring together stakeholders across sectors and countries in a sector that is very nationally-focussed and fragmented. However, the sustainability of the measure relies on engagement of participants to drive it forward. Nordic Built was successful from the offset in terms of attracting companies and creating activities. But its outreach and impacts declined over time, potentially related to a changed political landscape and reduced support for sustainable construction vis-à-vis the push for digitalisation in construction and addressing urban challenges. The political shift implied over time reduced interest of companies in the Nordic Built programme.²⁹

From the **perspective of the Danish Confederation of Industry – Construction (DI Byg)**, Nordic Built suits its industry members that are focused on the climate and energy agenda, since Nordic Built contributes to creating a market for sustainable solutions. Besides companies working in sustainable construction, beneficiaries have also included companies operating primarily in a Nordic context or have shared management structure for the Nordic countries. However, only a smaller group of DI Byg's members has participated directly in Nordic Built. It has primarily managed to reach out to some rather well-known and large companies that already operated in the field of sustainable construction. There are different explanations for this. Some members have been involved in other initiatives for influencing policy agendas and getting access to markets, such as the Green Building Council. In addition, a large group of companies have their markets outside the Nordics, for example in Germany, the Netherlands and the United Kingdom, which has limited Nordic Built's relevance. This for example concerns products and services exported in the window and insulation industries. Another factor concerns that construction companies tend to focus on markets in the very close proximity due to costly transports, heavy equipment and regulatory standards.³⁰

Endnotes

- ¹ European Construction Sector Observatory, Country Fact Sheet Denmark, 2016.
- ² <http://www.nordicinnovation.org/nordicbuilt/about-nordic-built>
- ³ European Construction Sector Observatory, Country Fact Sheet Denmark, 2016.
- ⁴ Nordic Innovation works under the auspices of the Nordic Council of Ministers. With an objective to promote trade, innovation and collaboration in the Nordics, it funds projects that fosters innovation and competitiveness.
- ⁵ <http://www.nordicinnovation.org/nordicbuilt/about-nordic-built>
- ⁶ Nordic Innovation (2015) Nordic urban strengths and challenges – How do we perceive ourselves when it comes to developing sustainable, smart and liveable cities?
- ⁷ http://nordicinnovation.org/Documents/Programmes/Nordic%20Cooperation%20Program_20112013.pdf
- ⁸ http://nordicbuiltcities.org/wp-content/uploads/2015/02/Katalog_www.pdf
- ⁹ <http://www.nordicinnovation.org/Documents/Calls/Nordic%20Built%20module%203%20Call%20text%20final%2021march2013.pdf>
- ¹⁰ According to information exchange through phone and e-mail correspondence with Nordic Innovation 21.09.2016
- ¹¹ For a presentation of the principles of the Nordic Built Chapter, see:
<http://www.nordicinnovation.org/Documents/Nordic%20Built%20Documents/Nordic%20Built%20Charter.pdf>
- ¹² www.nordicinnovation.org/nordicbuilt/committed-companies/#committed-companies
- ¹³ Nordic Built (2013) Nordic Built Challenge – Denmark – Ellebo Housing Renovation
- ¹⁴ The competition documents can be access from:
<http://www.nordicinnovation.org/nordicbuilt/the-nordic-built-charter/>
- ¹⁵ For a description of the five design competitions, see:
http://www.nordicinnovation.org/Documents/Nordic%20Built%20Documents/Brosjyre_NB_5_buildings_Spread_preview.pdf
- ¹⁶ Nordic Built (2013) Nordic Built Challenge – Denmark – Ellebo Housing Renovation
- ¹⁷ For a full list of assessment criteria for the first call, see:
<http://www.nordicinnovation.org/Documents/Calls/Nordic%20Built%20module%203%20Call%20text%20final%2021march2013.pdf>
- ¹⁸ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/eurostars-programme>
- ¹⁹ For more information about Nordic Built Cities, see <http://nordicbuiltcities.org>
- ²⁰ <http://www.nordicinnovation.org/nordicbuilt/committed-companies>
- ²¹ According to information exchange through phone and e-mail correspondence with Nordic Innovation 21.09.2016
- ²² For examples of projects, see <http://nordicbuiltcities.org/nordic-built/founded-projects>.
- ²³ <http://www.nordicinnovation.org/nordicbuilt/funding-opportunities>
- ²⁴ For further information about the listed examples, see: <http://www.nordicinnovation.org/nordicbuilt/funding-opportunities/>
- ²⁵ Interview with representative from DI Byg 01.09.16
- ²⁶ According to information exchange through phone and e-mail correspondence with Nordic Innovation 21.09.2016
- ²⁷ *ibid.*
- ²⁸ *ibid.*
- ²⁹ Interview with representative from DI Byg 01.09.16
- ³⁰ *ibid.*