



European Construction Sector Observatory

Policy fact sheet

Poland

Polish Circular Hotspot

Thematic objectives 2, 3, 4 & 5

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In a nutshell

Implementing body	Polish Circular Hotspot in collaboration with the Institute of Innovation and Responsible Development (INNOWO) and the Kingdom of the Netherlands.
Key features & objectives	Public-private initiative that provides practical and scalable solutions to help Polish businesses, cities and government to transition to a circular economy.
Implementation date	2018 – ongoing
Targeted beneficiaries	Entire Polish and international value chains in target sectors (public and private sector organisations)
Targeted sub-sectors	Construction, food, packaging, electronics, plastics, transport, energy and textiles sectors.
Budget (EUR)	Not published
Good practice	★ ★ ★ ☆ ☆
Transferability	★ ★ ★ ★ ★

Construction sector activity is traditionally based on a linear economic model and production technologies that have changed minimally in recent decades. As a result, the sector generates approximately 1 billion tonnes of solid waste each year, producing 39% of total CO₂ emissions (including the production of building materials and the use of buildings). The World Bank estimates that construction materials account for half of the solid waste generated globally¹.

The potential for resource efficiencies in the construction sector is therefore very significant. Circular economy concepts and principles provide a

clear opportunity and pathway to achieving greater efficiencies in many sectors, and particularly in construction.

The transition to a circular construction economy requires construction companies and value chains to replace traditional business models with circular models. New models are needed to extend the lifecycle of construction materials and products, placing emphasis on recycling and reuse, thereby reducing the production of waste.

The Polish Circular Hotspot (PCH) initiative was established in 2018 to help Polish businesses, cities and government to transition to a circular economy. It was inspired by similar initiatives in other countries and is actively partnering with them to extend circular transition support to the global community. In line with other Circular Hotspot initiatives, PCH support is focused on a number of high impact sectors such as construction².

PCH is a public-private knowledge platform that brings together key public and private sector stakeholders to promote circularity, share circular best practices, inspire circular innovation and build innovation partnerships that can deliver practical and scalable solutions. PCH also works with businesses, cities and governments to develop and implement circular transition strategies, roadmaps and action plans³.

In its first two years of operation, the Polish Circular Hotspot initiative has demonstrated a good degree of success. However, there are a number of significant barriers that are currently impeding it from achieving its full potential.

PCH continues to grow its membership and partner networks and is generating a growing number of circular projects and activities. However, many of its innovation actions have yet to be implemented. Legislative barriers are particularly challenging. If these barriers can be overcome, PCH should prove to be a very successful initiative.

1.

General description

Polish Circular Hotspot (PCH) is a public-private platform that connects national and local government with businesses, entrepreneurs, the scientific community and civil society to jointly develop and implement a circular economy in Poland.

PCH works with the public and private sector to promote and support national and international collaboration and the exchange of circular economy best practice. PCH partners with stakeholders to identify circular opportunities and provides practical and scalable solutions to accelerate the transition to a circular economy⁴.

Polish Circular Hotspot was founded by the Institute of Innovation and Responsible Development (INNOWO) in 2018, in collaboration with the Kingdom of the Netherlands. **In December 2018, PCH signed a cooperation agreement to join the international family of like-minded initiatives.** Examples include the European Circular Economy Stakeholder Platform (ECESP) Coordination Group members such as Circular Change, Holland Circular Hotspot, Circular Norway and Zero Waste Scotland⁵.

PCH focuses its circular economy support activities on **high-impact sectors such as construction**, food, packaging, electronics, plastics, transport, energy and textiles, as well as cities and regions. PCH member organisations are largely active in these key sectors⁶.

PCH membership enables companies to engage with national and international organisations, exchange and learn from best practices within and across sectors, and build circular innovation partnerships and projects.

PCH also works with businesses, cities and government to identify circular opportunities and provide practical and scalable solutions to transform opportunities into reality.

Figure 1 provides a summary of the activities published on the PCH website.

Figure 1: Polish Circular Hotspot – main activities

Strategies and roadmaps
Developed in collaboration with PCH partners to provide a context-specific pathway to circularity.
Business networking
Support for Polish entrepreneurs by creating a network national and international partners. Activities include study visits and B2B matchmaking sessions with the support of embassies in the Netherlands, Sweden, Germany, France and Denmark.
Circular programmes and innovation
PCH provides access to national and international circular innovations, programmes and databases. Solutions are presented to stakeholders and promoted at national conferences.
Circular workshops
PCH organises circular economy and circular procurement workshops for public and private sector organisations.
Circular business models
PCH helps entrepreneurs to create innovative circular business models.
Circular cities
PCH helps cities to become circular by identifying opportunities, proposing circular transition solutions and supporting pilot projects.
Polish Circular Week
Series of events and campaigns to make Polish businesses, government and society aware about their resource use and encourage them to change their consumer habits.
Education
PCH runs workshops and provides training for anyone interested in the circular economy.

Source: Polish Circular Hotspot⁷

2.

Achieved or expected results

The Polish Circular Hotspot has implemented a broad range of support activities commensurate with its role as a circular economy hub.

PCH has set-up a **knowledge sharing platform** (<http://circularhotspot.pl/>) on which it has published a wide array of circular information and resources. They include circular insights and publications, case studies, national strategies, information on thematic programmes, events and news items, as well as PCH member and partner listings and introductions.

PCH's online resources aim to:

- **Promote** Polish-led circular economy (CE) initiatives;
- **Inspire** businesses and entrepreneurs in Poland and around the world to develop their own CE initiatives;
- **Connect** interested parties with the Polish CE community and forge partnerships.

PCH online knowledge resources include:

- **Programmes**⁸: this section profiles the sectors targeted by PCH programmes and outlines the circular goals set for each: construction; food; packaging; electronics; plastic; energy transport; textiles; and agriculture;
- **Case studies**⁹: this section provides overviews of circular projects and initiatives developed in Poland, the Netherlands and in other countries around the world;
- **Cities and regions**¹⁰: this section explains the four-stage City Scan support process provided to improve circularity in urban areas. City Scan provides an in-depth analysis of value chains, sectors and the flow of raw materials. The key output is a Circular Transition Action Plan that identifies circular opportunities and solutions within a city or region and sets out the actions required to achieve circularity;

- **Knowledge**¹¹: this section currently contains a first report on the 'Circular construction in practice' project. The report assesses the practical aspects of implementing a circular construction economy in Poland. It was by INNOWO in collaboration with the organisations participating in the 'Circular construction in practice' debates hosted by PCH;
- **National strategies**¹²: this section provides overviews of circular economy strategies being implemented in Poland, the Netherlands and in other countries around the world;
- **Circular economy**¹³: this section assesses linear economic model results and provides an introduction and overview of circular economy concepts and principles, the roles of traditional and circular business models and the benefits of transitioning to a circular economy.

City Scan collaborative projects

City Scan projects are being delivered across Europe and beyond in collaboration with local governments and stakeholders. These projects are supported by the collective efforts of the family of Circular Hotspot organisations and related initiatives.

To date, City Scan projects have helped 15 cities to develop a circular transition strategy and action plan. Amsterdam, Rotterdam, Glasgow and Barcelona are a few examples.

Although the delivery of these projects has largely involved the support of PCH's international partners, they serve as good practice examples that PCH is using to encourage Polish cities to join the initiative.

PCH's work is only beginning to bear fruit. **Three major Polish cities (Krakow, Lublin and Gdansk) have recently commissioned** Dutch company Metabolic to conduct a **scan of their city**, laying the

groundwork for a municipal circular economy strategy. PCH will support each project.

OTO-GOZ (This is CE) collaborative project

PCH is collaborating with a consortium of Polish partners, led by the Ministry of Entrepreneurship and Technology, to develop a **Polish circular transition evaluation framework**¹⁴. The key objective is to develop of a **set of measurement indicators** that can be used to assess the progress and impact of circular transformation projects and initiatives.

The OTO-GOZ (This is the Circular Economy) project is being delivered in two phases. **Phase I (research)** is adapting circular economy concepts and principles to Polish socio-economic priorities and defining aggregated CE measurement indicators (GOZ indexes). **Phase II (application)** will test the framework and indicators at local (city Krakow), regional (Malopolska region) and national level (Transformation to a Circular Economy Roadmap).

Events

PCH has organised and participated in a number of circular economy events to promote its activities and Polish CE initiatives.

Circular Week is an international awareness raising campaign that hosts a series of events and initiatives throughout Europe on the circular economy and sustainable development¹⁵. In 2020, for example, three Polish cities (Gdansk, Krakow and Warsaw) hosted Circular Week events.

Construction-related events include:

- A **debate on the development of a “systemic approach to building construction - technologies and regulations”**. The debate brought together industry representatives and a broad group of public authorities. The debate focused on the dissonance between innovative technologies in the sector and the regulatory framework, and how to instigate improvements¹⁶;
- A series of **‘Circular construction in practice’ debates** involving construction value chain stakeholders. Examples include debates on:
 - ‘The transition from a linear to a circular model in construction - the role of public authorities’¹⁷;

- ‘The role of building owners and users in closing business cycles’¹⁸.

Table 1 summarises PCH’s main project activities and their outputs thus far.

Table 1: Summary of key PCH projects/outputs

Activities	Projects
Strategies and roadmaps	‘Transformation towards a circular economy’ (roadmap)
	City Scan project supporting circular city strategy development;
	OTO-GOZ project developing a circular evaluation framework;
Business networking	Networking section on the PCH knowledge platform, supported by a full listing of all members and partners;
Circular programmes and innovation	Sector-specific programmes supporting circular projects;
	Circular case studies and insights;
Circular workshops	Series of workshops and debates on a range of topics, including ‘Circular construction in practice’;
Circular business models	Insight on traditional versus circular business models;
	Circular business model support for companies;
Circular cities	City scan project;
Polish Circular Week	2020 edition held in seven EU capitals and three Polish cities; 2019 edition took place in Poland (four cities) and six other EU countries ¹⁹ ; 2018 edition hosted by Poland for the first time. Over 40 events in 11 Polish cities attracting over 700 participants;
Education	‘Circular construction in practice’ project.

Source: Polish Circular Hotspot²⁰

3.

Perspectives and lessons learned

Circular initiatives and programmes in Poland are hindered by Polish legislation.

According to the Polish Zero Waste Association, local and national government inaction is limiting the potential of circular economy projects and proposals. There are concerns that the circular economy will not work in Poland without changes being made to the legal system. There is a need to guarantee the right to repair products or buy products for re-packaging, including a reduction in the tax burden for the repair services sector²¹.

The Polish circular construction economy faces a range of economic, regulatory, educational and social barriers that must be overcome.

One of the main barriers to the circular transition in construction is financial. For example, concerns were raised by two business leaders during the 'Circular construction in practice' debates. According to the Director of the consulting company, A Propos, the high short-term costs of ecological solutions may limit uptake. According to the Head of Sustainable Development at WSP Poland, a design and engineering consultancy, investors are often motivated by the potential sale price of a building, even before the construction is completed. As a result, the short-term sales value of the property becomes the decisive factor, instead of its long-term cost/benefit²².

Debate participants also highlighted the fact that regulations introduced to support the implementation of circular principles in construction are often developed too quickly and without sufficient consultation. In addition, they are often not observed.

Educational and social barriers are also a challenge. Limited knowledge of circular solutions and benefits

and limited skills to implement them are knowledge and skills-related barriers. Reluctance to reuse building materials and parts is an example of social barriers²³.

Selecting suitable technologies and techniques is a key part of the circular transition in construction; however, knowing which to choose and in what combination can be a challenge.

The range and variety of technologies available to construction companies is broad:

- **Digital technologies:** to capture and process increasing the amount and flow of information to support the transition to a circular model. The main example is Building Information Modelling or Building Information Management (BIM);
- **Technology-enhanced prefabrication and modularisation:** to reduce waste and costs and improve sustainability;
- **Material technologies:** to produce more circular materials to improve recycling and reuse, and extend their lifetime and value;
- **Reuse and upcycling technologies:** to turn waste products into profitable and reusable commodities;
- **Recycling technologies:** to close the economic circle;
- **Smart building technologies:** to improve energy efficiency, air quality, for example, and to create a healthier and more comfortable experience for occupants.

For many companies, and particularly smaller companies, choosing the right package for their business can be rather daunting. The fragmented nature of the construction sector and the varied requirements and nature of projects, many of which are single instances, is an added complication.

4.

Conclusion and recommendations

The Polish Circular Hotspot is the first step in Poland's transition to a circular economy. Although it is a relatively young initiative, PCH has succeeded in building a strong network of member companies and partner organisations. PCH and its members have also developed numerous projects, although many have yet to be implemented.

A number of significant barriers are currently limiting the appeal and implementation of circular projects and innovations. Legal barriers are a particular concern for construction sector stakeholders. Legislative changes are required to stimulate and support circular innovation.

PCH has achieved a good degree of success in its first two years of operation. However, it has the potential to be much more successful in the medium-term if key barriers can be overcome (e.g. legal).

Since its launch in 2018, the Polish Circular Hotspot has made important contributions to the Polish circular economy. It has produced and published a broad range of informative support materials, from rolling news items to articles, publications, guidelines, business models, best practices, event notices, interviews and blogs.

Circular economy insight is combined with stakeholder engagement activities, including at events, and project-focused collaboration at national and international level. The hub has succeeded in forming strategic partnerships with similar initiatives in countries around the world, amassing a global network that will continue to grow.

Looking forward, two recommendations are suggested to help improve the impact of the Polish Circular Hotspot:

- The platform should focus efforts on involving more public sector bodies in its network. Although a number of local governments have joined the PCH network, nationwide public sector involvement is needed to help push for legislative changes to support and encourage circular innovation;
- PCH should consider extending its network to include technology providers, and especially digital solution providers. They are an important part of the circular economy equation. Their inclusion in PCH networks and projects would help to accelerate circular transition activities.

Overall, Polish Circular Hotspot is rated a '3-star good practice measure' on a scale of 1 (low) to 5 (high).

Polish Circular Hotspot is actively contributing to the development of the circular economy and to circular construction. The platform has already developed numerous projects, although many of them have yet to be implemented. To achieve a higher good practice score, PCH activities and projects require a more supportive legislative framework to enable them to flourish. Greater public sector involvement would help the push for better national legislation, and greater involvement of technology providers would benefit the development of circular solutions.

Polish Circular Hotspot is rated a '5-star transferable measure' on a scale of 1 (low) to 5 (high).

The Polish Circular Hotspot is highly transferable, as demonstrated by the hub's growing network of international partners, most of which are similar initiatives. Indeed, Polish Circular Hotspot was itself inspired by other Hotspot initiatives, e.g. in the Netherlands.

Endnotes

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- 6 Polish Green Building Council, Polish Circular Hotspot, 2018:
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- 8 Polish Circular Hotspot, Programmes:
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- 18 INNOWO, The role of building owners and users in closing business cycles, April 2019:
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