



# European Construction Sector Observatory

Policy fact sheet

The Netherlands

Circle Economy

Thematic objectives 2, 3, 4 & 5

January 2021



# In a nutshell

Implementing body	Circle Economy
Key features & objectives	A social enterprise and an impact organisation that provides practical and scalable insights and solutions to support and accelerate the transition to a circular economy on a global scale.
Implementation date	2012 – ongoing
Targeted beneficiaries	Businesses, governments, cities and society.
Targeted sub-sectors	All (sub)sectors.
Budget (EUR)	Not published.
Good practice	★ ★ ★ ★ ★
Transferability	★ ★ ★ ★ ★

A government-wide strategy and programme to develop a circular economy in the Netherlands by 2050<sup>1</sup> was launched in 2016. The main objective in the medium-term is to achieve a 50% reduction in the use of primary raw materials by 2030. This target needs to be met to enable the Netherlands to be fully circular by 2050. Priority sectors include biomass and food, plastics, manufacturing, consumer goods and construction<sup>2</sup>.

Launched by the Ministry of Infrastructure and Water Management and the Ministry of Economic Affairs and Climate Policy, the programme targets the implementation of a range of strategic actions.

**The Raw Materials Agreement was signed by 189 parties in January 2017. Circular transition agendas for five priority sectors were launched in 2018. The Circular Economy Implementation**

**Programme was subsequently launched in 2019 to translate each transition agenda into specific actions<sup>3</sup>.**

Construction is a priority sector for the Dutch government, as it is one of the highest consumers of natural resources. The construction industry is estimated to account for 50% of the raw materials used, 40% of the energy consumed and 30% of the water consumed in the Netherlands. In addition, 40% of the nation’s waste is generated by construction and demolition activities. The construction sector also generates approximately 35% of CO<sub>2</sub> emissions<sup>4</sup>. Construction is therefore a high-impact sector for circular transition.

The transition to a circular economy is both necessary and a significant challenge for policy makers, sectors and business leaders, and it requires effective support and guidance.

**Circle Economy is a non-profit social enterprise and impact organisation that inspires, connects and empowers the global community to create the conditions for systemic transformation.**

Circle Economy helps businesses, cities and governments to identify circular transition opportunities and provides practical and scalable solutions to turn them into reality<sup>5</sup>.

**Important achievements include the publication of over 3,000 resources and case studies on the Circle Economy platform. The rollout of five digital support tools has also enabled Circle Economy to build strategic partnerships with a growing number of businesses, cities and governments around the world. For example, 17 cities have used the Circle City Scan tool and are working with Circle Economy to develop and implement circular transition plans. These partnerships have helped to generate more than 245 pilot projects involving over 700 stakeholders.**

## 1.

## General description

Circle Economy is an impact organisation and open platform that aims to accelerate the transition to a circular economy.

Circle Economy partners with businesses, cities and governments around the world, helping them to plan, implement and scale circular projects using practical and scalable solutions.

Circle Economy was founded in 2012 and relies on the support of philanthropic partners and pro-bono partnerships to conduct its work.

Circle Economy activities are delivered in collaboration with member and partner organisations<sup>6</sup>:

- The **Circle Economy member community** is an active group of businesses and institutions that share a common goal: to make the circular economy a reality. The member community is made up of innovators that understand the potential benefits of the circular economy and are actively developing practical and scalable solutions to deliver those benefits;
- **Knowledge partners** are assisting the creation, pooling and dissemination of the knowledge and information required to implement the circular economy. Examples of knowledge partners include academic institutions and individual experts;
- **Mission partners** are using their years of experience in the field to support communities and companies that are working to strengthen the circular economy ecosystem. Their activities range from participation in train-the-trainer programmes to more extensive collaborative initiatives;
- **Media partners** are global and industry media companies and publications that disseminate the knowledge generated by Circle Economy activities to target audiences.

Circle Economy programmes, tools and resources are designed to help businesses and government bodies across a wide range of sectors to make informed decisions and develop action plans.

Circle Economy programmes target six priority themes:

- Textiles
- Cities and regions
- Finance
- Design and brands
- Circular Jobs Initiative
- **Built environment**

The **Built Environment programme** is designed to help provide the foundation for a circularly built environment. It focuses on the built environment as a living system in which building materials and products are optimally used and reused. It has three core objectives that must be delivered in collaboration with Circle Economy members and partners<sup>7</sup>:

- Develop circular economy assessment indicators for inclusion in sustainable construction standards;
- Develop knowledge, insights and tools to support the development of a circular built environment;
- Build new and innovative ventures and transform those that are ongoing.

Circle Economy has detected huge opportunities for regions that feature an underdeveloped built environment and/or a more traditional construction sector.

The Built Environment programme proposes two key strategies:

1. Prevention of lock-in thoughtful design;
2. Optimisation of material value through transformative re-design.

**Circle Economy tools and resources include strategic frameworks, digital support tools, contact points, publications and events.**

**Four Circle Economy frameworks** have been published to date:

- The **Disrupt Framework**<sup>8</sup> provides a comprehensive list of 80 circular strategies for products covering design guidance, decisions concerning inputs, use, and end-of-life, business models and collaboration in the supply chain and in the use of digital technologies to support circularity;
- The **Circular Product Design Framework**<sup>9</sup> puts forward 14 strategies for the creation of sustainable technical products. They are clustered into four groups: design for reuse, design for refurbishment, design for remanufacture and design for recyclability based on the 5R Framework. These strategies can be plugged into a comprehensive circular product strategy applicable to different industries and at different scales;
- The **Urban Policy Framework**<sup>10</sup> promotes available policy instruments for a more circular economy to support policy and decision-making. They are arranged in five categories:
  - **Mobilise** sets the direction of and builds momentum towards long-term change, while also determining how this direction is determined and governed;
  - **Educate** increases the overall levels of awareness and builds the necessary skills and knowledge around the circular economy to foster long-term change;
  - **Manage** influences the use and function of physical and material elements within the urban environment;
  - **Incentivise** sends market signals and support to businesses, citizens and governments to promote certain activities;
  - **Regulate** changes the rules of the systems to achieve compliance through enforcement;
- The **Urban Development Framework**<sup>11</sup> presents circular opportunities clustered by ‘urban theme’. The aim is to help urban changemakers to start their journey towards circularity in cities and create a shared understanding by

presenting city level interventions across pertinent urban themes based on circular economy principles.

**Two additional frameworks** are currently under development and **will be published soon**:

- The **Ends Framework**<sup>12</sup> will translate the Circle Economy vision into end goals that are founded upon core Circle Economy concepts and principles;
- The **Means Framework**<sup>13</sup> will pave the way to achieving those end goals by translating the Circle Economy vision and objectives into specific actions.

To accelerate the adoption of circular economy principles, Circle Economy has developed five **digital tools** that are available on the platform<sup>14</sup>. They are summarised in Table 1.

**Table 1: Circle Economy – Digital tools**

<b>The Knowledge Hub</b>
An online and open-source circular economy knowledge hub <sup>15</sup> with over 3,000 resources and case studies.
<b>The Challenge Platform</b>
Collaborative online platform <sup>16</sup> that enables organisations, cities, and individuals interested in co-creating circular solutions to sponsor challenges and crowdsource ideas and insights put forward by other interested parties.
<b>Circle Assessment</b>
Circular economy assessment tool <sup>17</sup> to help businesses understand the different operational and organisational aspects of the circular economy.
<b>Circle City Scan Tool</b>
Online tool <sup>18</sup> to enable urban changemakers to identify circular opportunities in their cities based on data and examples.
<b>Circular Jobs Monitor</b>
Online monitoring tool <sup>19</sup> to enable policy makers and labour organisations to keep track of the number and range of jobs that are part of the circular economy.

Source: Circle Economy<sup>20</sup>

## 2.

# Achieved or expected results

The Netherlands is at the forefront of Europe's circular economy. According to the PBL institute, **approximately 85,000 circular economy activities were launched in 2019, generating about 420,000 circular economy jobs**<sup>21</sup>.

Circle Economy is one of the leading organisations that is promoting and supporting the adoption of circular economy principles in a number of Dutch sectors.

Since 2016, the non-for-profit organisation has grown its network to include over 125 members and partners, with thousands more trusted organisations in the Circle Economy orbit<sup>22</sup>. The longer-term aim is to build a global community of circular champions.

Figure 1 summarises some examples of the impact of Circle Economy activities.

Figure 1: Circle Economy: impact examples



Source: Circle Economy<sup>23</sup>

**Key Circle Economy achievements** include the rollout of **digital tools** to support circular activities and innovations and the launch of **collaborative initiatives with cities and companies**. To support circular economy learning and knowledge, **over 3,000 resources and case studies** have been made available on the Circle Economy platform.

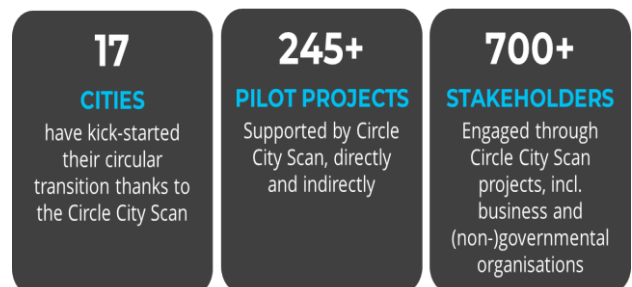
City officials and urban change makers recognise that the circular economy has the potential to delivery significant benefits to their cities. However, they lack the required knowledge and support to develop and implement circular strategies.

In response, Circle Economy created the Circle City Scan tool to provide cities with a visual roadmap for circular transition. Based on a city's specific context, the tool identifies circular opportunities and supports the development of practical strategies to transform high-impact sectors.

Figure 2 summarises the key results achieved by the **Circle City Scan** tool.

To date, **17 cities** have made use of the Circle City Scan to initiate their own circular transition programme. Those programmes have launched an average of more than **14 pilot projects** involving more than **41 stakeholders** per city, approximately **three stakeholders** per project.

Figure 2: Online Circle City Scan tool impact

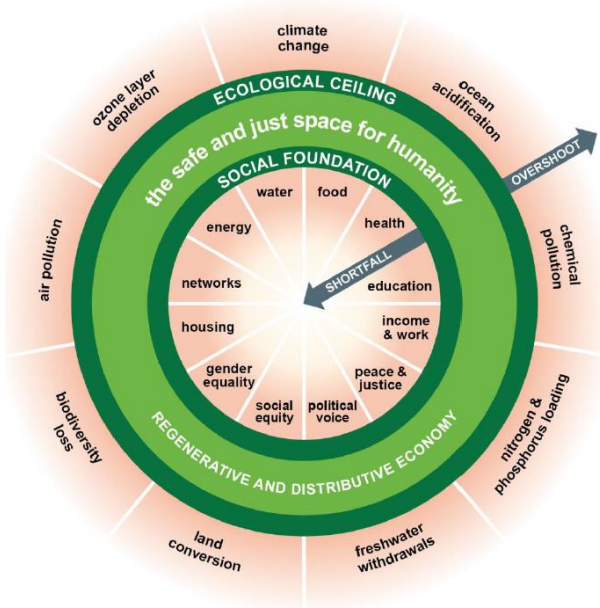


Source: Circle Economy<sup>24</sup>

The Amsterdam City Doughnut is another example of Circle Economy’s contribution to circular innovation in cities. The Amsterdam City Doughnut translates the global concept of the Doughnut economic model into a tool for transformative action in the city of Amsterdam.

The Doughnut economic model, shown in Figure 3, is a visual framework for sustainable development. It uses concentric circles to establish ecological and social boundaries. Sustainable development occurs between those boundaries.

Figure 3: The Doughnut economic model



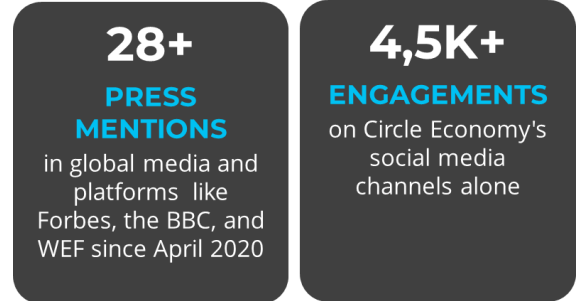
Source: Wikipedia – Doughnut economic model<sup>25</sup>

Circle Economy collaborated with the Doughnut Economics Action Lab<sup>26</sup> (DEAL), the biological intelligence consultancy, Biomimicry 3.8<sup>27</sup>, and the C40<sup>28</sup> Cities Climate Leadership Group to develop the Amsterdam City Doughnut. The collaborative work was delivered over the course of a year and received support from the KR Foundation<sup>29</sup> – an environmental foundation that supports international projects addressing the root causes of climate change and environmental degradation.

An Amsterdam City Portrait was developed based on the Doughnut model. It is not intended to provide a comprehensive assessment of the city, rather it provides a holistic snapshot of the city and establishes a starting point for big picture thinking, co-creative innovation and systemic

transformation. That collective thought process is then being translated specific actions within the scope of the Amsterdam Circular Strategy 2020-2025<sup>30</sup>.

Figure 2: The Amsterdam City Doughnut figures



Source: Circle Economy<sup>31</sup>

Circle Economy is also helping construction sector companies to become circular economy businesses. Collaboration with ROCKWOOL, a stone wool insulation producer, is one example.

ROCKWOOL<sup>32</sup> has partnered with Circle Economy to better understand the potential of the circular economy model and how it applies to their own business and value chain. Circle Economy is helping ROCKWOOL to carry out an assessment. The aim is to identify opportunities to further incorporate circular economy thinking and improve its impact across their value chain<sup>33</sup>. The company uses a significant quantity of secondary materials, most of which are sent to landfill at end of life. The company’s goal is to reduce waste materials sent to landfill and reduce emissions<sup>34</sup>.

Circle Economy used its Circle Assessment tool to identify and evaluate opportunities for ROCKWOOL to transition to a circular business model.

The collaborative assessment identified three key levers that the company could deploy to improve circularity:

1. Increase the sourcing of non-virgin and regenerative materials for both raw materials and energy supply;
2. Develop more high-value and circular product applications that can be integrated into modular, adaptive building components;

3. Reclaim more waste from the construction sector through ROCKWOOL's internal recycling and partnerships with other players.

A report on the results and outcomes of Circle Economy's partnership with ROCKWOOL is available on the Circle Economy platform. It aims

to provide construction sector companies with a real-life and practical example of the circular economy opportunities and benefits that a construction sector company can achieve<sup>35</sup>.

## 3.

## Perspectives and lessons learned

### A common understanding of circular principles and strategies is needed to accelerate adoption.

There are multiple definitions of the circular economy which vary depending on the context. The array of definitions can make it difficult for organisations to understand and adopt circular principles and strategies. Simplification is therefore key to accelerating their uptake. That requires a collective effort to agree on a common vision and shared goals, using common language and metrics.

According to a board member at Redevco Foundation<sup>36</sup>, a retail and residential real estate investment management company, many definitions have been proposed for sustainable buildings, yet practical definitions have rarely materialised<sup>37</sup>.

Change is on the way, however. Circle Economy is currently developing tools, frameworks and metrics to support scalability. Circle Economy is also working with the Dutch Green Building Society (DGBC), Metabolic and SGS Search to create 'A Framework for Circular Buildings: Indicators for possible inclusion in BREEAM'<sup>38</sup>. Underlining the need to scale the circular built environment, the Built Environment Programme Lead at Circle Economy presents the framework report as an overview of practical strategies for circular building design and construction at a global level<sup>39</sup>.

### Limited access to expertise, structured information, examples and knowledge are some of the common barriers that are hindering the development of the circular economy.

Circle Economy's five digital tools – Knowledge Hub, Challenge Platform, Circle Assessment, Circle City Scan and Circular Jobs Monitor – are designed to help solve these types of issues.

The Director of the Waste Management Department, City of Prague, emphasises the important role that the Circle City Scan tool has

played in helping the City of Prague to embark on its circular transition<sup>40</sup>. It has enabled them to identify circular economy opportunities in urban areas and to translate those opportunities into practical and high-impact applications<sup>41</sup>.

According to the Circular Economy Programme Manager at the Goldschmeding Foundation<sup>42</sup>, a public benefit organisation, Circle Economy provides a very useful and practical circular transition toolkit. It combines independent insight and forecasts with practical knowledge, visuals and support tools<sup>43</sup>.

### A common evaluation framework is needed to enable organisations to assess the progress, performance and impact of their circular transition.

Policy makers and business leaders face a common challenge. The lack of a consistent evaluation framework makes it difficult to measure the success of circular policies and business strategies. To be effective, they need the capacity to track changes over time, assess progress and to learn and adapt.

According to the Director and Senior Circular Economy Analyst at GreenBiz Group<sup>44</sup>, companies are beginning to use circularity frameworks as an internal tool to assess the full scope of materials associated with their operations to ascertain their potential value<sup>45</sup>.

The Global Circularity Metric proposed by Circle Economy in their Circularity Gap Report 2018<sup>46</sup> is an example of one potential solution. It proposes a framework for measuring the global state of circularity and monitoring annual progress. According to the Director of the Circularity Gap Reporting Initiative (CGRI) at Circle Economy, the 'Circularity Metric can provide a global or national yard-stick for progress'<sup>47</sup>.



## 4.

## Conclusion and recommendations

**Circle Economy is an impact organisation that is actively empowering the global community to transition to a circular economy. By partnering with a growing number of businesses, cities and governments, Circle Economy is helping to accelerate the circular transition through practical and scalable insights and solutions.**

Circle Economy is working to develop solutions to overcome key circular economy challenges. The challenges include the lack of knowledge, open-source tools and resources, and the need for common circular economy terms and definitions, frameworks and methodologies.

To help resolve these challenges, Circle Economy has created a set of digital tools to help cities and businesses to visualise circular opportunities and translate them into reality. A growing number of cities and businesses are now partnering with Circle Economy to deploy those tools and define a pathway to circularity.

Circle Economy is also actively collaborating with other organisations to develop common definitions, goals and frameworks for the global circular economy. The Global Circularity Metric, for example, has been developed to provide a circular measurement framework to support progress monitoring. To validate the framework and establish a baseline analysis, Circle Economy is currently partnering with Recyc-Québec<sup>48</sup> to assess the circular status of the province of Quebec, Canada, and monitor the progress of its transition<sup>49</sup>.

Looking forward, one recommendation is suggested to help improve the reach and impact of Circle Economy outputs, activities and outcomes:

- Increased focus on creating a more simplified, common and evidence-based understanding of circularity, economies and impact, progress monitoring and evaluation, would be highly beneficial to businesses, cities and governments. It would help to scale demand and adoption of circular principles in all sectors.

**Overall, Circle Economy is rated a ‘5-star good practice measure’ on a scale of 1 (low) to 5 (high).**

Circle Economy is a highly innovative and high-impact organisation that is making a growing contribution to the global circular economy. The Circle Economy platform provides a comprehensive and growing repository of practical insights, solutions and resources. A range of digital tools are actively assisting an increasing number of businesses, cities and governments to plan and implement circular transition initiatives. Circle economy is also rapidly expanding its partnerships with organisations around the world to deploy, validate and benchmark its tools, methods and frameworks. By extension, these partnerships are also helping to assess global progress.

**Circle Economy is rated a ‘5-star transferable measure’ on a scale of 1 (low) to 5 (high).**

Founded as an impact organisation that aims to accelerate the circular transition worldwide, Circle Economy is by definition a highly transferable initiative. Circle Economy resources, insights, tools and solutions are designed for a global audience and are readily accessible on the platform. Circle Economy’s international partnerships are also rapidly expanding. They are actively transferring circular economy knowledge on a global scale and are helping to build a shared knowledge base.

# Endnotes

- 1 Government of the Netherlands, A Circular Economy in the Netherlands by 2050, September 2016:  
<https://www.government.nl/documents/policy-notes/2016/09/14/a-circular-economy-in-the-netherlands-by-2050>
- 2 Government of the Netherlands, A circular economy in the Netherlands by 2050 (summary), September 2016:  
<https://www.government.nl/documents/leaflets/2016/09/22/a-circular-economy-in-the-netherlands-by-2050>
- 3 De Rijksoverheid. Voor Nederland, Nederland circulair in 2050:  
<https://www.rijksoverheid.nl/onderwerpen/circulaire-economie/nederland-circulair-in-2050>
- 4 Government of the Netherlands, A Circular Economy in the Netherlands by 2050, September 2016:  
<https://www.government.nl/documents/policy-notes/2016/09/14/a-circular-economy-in-the-netherlands-by-2050>
- 5 Circle Economy, About us  
<https://www.circle-economy.com/about>
- 6 Circle Economy, Our circular ecosystem:  
<https://www.circle-economy.com/circular-economy/community>
- 7 Circle Economy, Built Environment Programme:  
<https://www.circle-economy.com/programmes/built-environment>
- 8 Circle Economy, Frameworks, The Disrupt Framework:  
<https://www.circle-economy.com/resources/the-disrupt-framework>
- 9 Circle Economy, Frameworks, The Circular Product Design Framework:  
<https://www.circle-economy.com/resources/circular-product-design-framework>
- 10 Circle Economy, Frameworks, The Urban Policy Framework:  
<https://www.circle-economy.com/resources/the-urban-policy-framework>
- 11 Circle Economy, Frameworks, The Urban Opportunity Framework:  
<https://www.circle-economy.com/resources/the-urban-opportunity-framework>
- 12 Circle Economy, Frameworks:  
<https://www.circle-economy.com/frameworks>
- 13 Ibid
- 14 Circle Economy, Impact Report 2019-20, Chapter 6:  
<https://impact.circle-economy.com/chapter-06>
- 15 Circle Economy, The Knowledge Hub:  
<https://circle-lab.com/>
- 16 Circle Economy, The Challenge Lab:  
<https://circle-lab.com/challenges>
- 17 Circle Economy, Circle Assessment:  
<https://circle-lab.com/assessment/>
- 18 Circle Economy, Circle City Scan Tool:  
<https://cities.circle-lab.com/>
- 19 Circle Economy, The Circular Jobs Monitor:  
<http://jobsmonitor.circle-economy.com/>
- 20 Circle Economy:  
<https://www.circle-economy.com/>
- 21 Ecopreneur.eu, Circular Economy Update, Overview of Circular Economy in Europe, 2019:  
<https://circulareconomy.europa.eu/platform/sites/default/files/ecopreneur-circular-economy-update-report-2019.pdf>
- 22 Circle Economy, Impact Report 2019-20, Chapter 2:  
<https://impact.circle-economy.com/chapter-02>
- 23 Circle Economy, Impact Report 2019-20, Chapter 1:  
<https://impact.circle-economy.com/chapter-01>
- 24 Circle Economy, Impact Report 2019-20, Chapter 5:

- <https://impact.circle-economy.com/chapter-05>
- 25 Wikipedia, Doughnut (economic model):  
[https://en.wikipedia.org/wiki/Doughnut\\_\(economic\\_model\)](https://en.wikipedia.org/wiki/Doughnut_(economic_model))
- 26 Doughnut Economics Action Lab (DEAL):  
<https://doughnuteconomics.org/>
- 27 Biomimicry 3.8:  
<https://biomimicry.net/>
- 28 C40 Cities Climate Leadership Group:  
<https://www.c40.org/>
- 29 KR Foundation:  
<http://krfnd.org/>
- 30 City of Amsterdam, Policy: Circular economy, Amsterdam Circular Strategy 2020-2025, April 2020:  
<https://www.amsterdam.nl/en/policy/sustainability/circular-economy/>
- 31 Circle Economy, Impact Report 2019-20, Chapter 5:  
<https://impact.circle-economy.com/chapter-05>
- 32 ROCKWOOL BV, ROCKWOOL Group:  
<https://www.rockwoolgroup.com>
- 33 ROCKWOOL, ROCKWOOL and Circle Economy partnership shows path to circularity, September 2019:  
<https://www.rockwoolgroup.com/newsroom/2019/2019-09-18-rockwool-and-circle-economy-partnership-shows-path-to-circularity/>
- 34 Circle Economy, Impact Report 2019-20, Chapter 5:  
<https://impact.circle-economy.com/chapter-05>
- 35 Circle Economy, Circle Scan ROCKWOOL, May 2019:  
[https://assets.website-files.com/5d26d80e8836af2d12ed1269/5e5fb8b90c6eee28e62ce31b\\_Rockwool%20Public%2020190517%20-%20web%20spread.pdf](https://assets.website-files.com/5d26d80e8836af2d12ed1269/5e5fb8b90c6eee28e62ce31b_Rockwool%20Public%2020190517%20-%20web%20spread.pdf)
- 36 Redevco Foundation:  
<https://www.redevco.com/>
- 37 Circle Economy, A Practical Approach to Circular Buildings, October 2018:  
<https://www.circle-economy.com/news/a-practical-approach-to-circular-buildings#.XEYLfIxKiUm>
- 38 Circle Economy, A Framework for Circular Buildings, August 2018:  
<https://www.circle-economy.com/resources/a-framework-for-circular-buildings>
- 39 Circle Economy, A Practical Approach to Circular Buildings, October 2018:  
<https://www.circle-economy.com/news/a-practical-approach-to-circular-buildings#.XEYLfIxKiUm>
- 40 Circle Economy, Circular Prague, June 2019:  
<https://www.circle-economy.com/resources/circular-prague>
- 41 Circle Economy, Impact Report 2019-20, Chapter 5:  
<https://impact.circle-economy.com/chapter-05>
- 42 Goldschmeding Foundation:  
<https://goldschmeding.foundation/en/>
- 43 Circle Economy, Impact Report 2019-20, Chapter 1:  
<https://impact.circle-economy.com/chapter-01>
- 44 GreenBiz Group is a media and events company that advances the opportunities at the intersection of business, technology and sustainability:  
<https://www.greenbiz.com/>
- 45 GreenBiz Group, 'Trying to measure circularity? Here are some tools to consider', January 2020:  
<https://www.greenbiz.com/article/trying-measure-circularity-here-are-some-tools-consider>
- 46 Circle Economy, Circularity Gap Report 2018, January 2018:  
<https://www.circle-economy.com/resources/the-circularity-gap-report-our-world-is-only-9-circular>
- 47 Circle Economy, Countries: The Crucial Piece to Finish the Circular Economy Puzzle, November 2020:  
<https://www.circle-economy.com/blogs/countries-the-crucial-piece-to-finish-the-circular-economy-puzzle>
- 48 Recyc-Québec, Canada:  
<https://www.recyc-quebec.gouv.qc.ca/>

<sup>49</sup> Circle Economy, Circle Economy and Recyc-Québec partner to monitor the transition to a circular economy in Québec, August 2020:  
<https://www.circle-economy.com/news/circle-economy-and-recyc-quebec-partner-to-monitor-the-transition-to-a-circular-economy-in-quebec>