



Rijkswaterstaat
Ministry of Infrastructure
and Water Management

The EU playing field for Circular Infrastructure

MAPPED EU ACTIVITIES 2019-2024 AND PRIORITIES FOR RIJKSWATERSTAAT

AUGUST 2020

SGS INTRON PROJECT NUMBER: A116140

MAPPING AND PRIORITISING EU CIRCULAR ECONOMY ACTIVITIES FOR INFRASTRUCTURE

The Netherlands wants to be a circular economy by 2050. This is a major ambition to which Rijkswaterstaat contributes by realising working in a climate and neutral way by 2030. The Rijkswaterstaat-wide *Impulse Program for a Circular Economy* was set up to give an impulse to this transition. It also supports the implementation of the *Strategy Towards Climate Neutral and Circular Public Infrastructure Projects by 2030*, which Rijkswaterstaat has developed together with the Ministry of Infrastructure and Water Management (IenW) and railway manager ProRail. Rijkswaterstaat aims to strengthen its international commitment for circular infrastructure and take advantage of its frontrunning position by anticipating EU Circular Economy developments. Rijkswaterstaat therefore asked SGS INTRON to map out the EU circular infrastructure playing field, identify impactful opportunities to engage with in relation to the Rijkswaterstaat goals, suggest priorities and outline possible actions.

A project team of experts from Rijkswaterstaat and SGS INTRON cooperated to draw up this report. The results are meant for Rijkswaterstaat project team members and their colleagues who are active on the various EU dossiers. The information and suggestions in this report can be helpful for their activities in the coming years.

RIJKSWATERSTAAT'S CIRCULAR ECONOMY TRACKS ARE THE REFERENCE

The Rijkswaterstaat *Impulse Program for a Circular Economy* is built on four content-oriented elements to help realise the national strategy: (1) Data & measuring circularity; (2) Circular design and asset management; (3) Circular use of materials; and (4) Circular tendering and procurement.

The ambitions for these elements have served as a reference for identifying opportunities and suggesting priority actions.

EUROPEAN GREEN DEAL AND NEW CIRCULAR ECONOMY ACTION PLAN

The *new Circular Economy Action Plan (CEAP)*, published by the European Commission in March 2020 as part of the *European Green Deal* which aims for a climate neutral EU by 2050, has been identified as the main European programme in relation to Rijkswaterstaat's ambitions in circular infrastructure. Parts of the CEAP are connected to the *Common European Green Deal Data Space*, as far as the data for circularity is concerned. The CEAP has been mapped out. For circular infrastructure, the most important policy document for the current legislative period 2019-2024 is the *Strategy for a Sustainable Built Environment*. This Strategy foresees several actions to stimulate a circular economy in the construction sector, like developing digital logbooks and passports, promoting circular building design, enhancing the use of secondary raw materials and waste, integrating life cycle assessment in public procurement and the EU sustainable finance framework, and putting requirements for recycled content and Environmental Product Declarations in the Construction Products Regulation.

SUGGESTED EU PRIORITY DOSSIERS FOR THE RIJKSWATERSTAAT AMBITIONS

The evaluation of the mapping results in the following priorities:

High priority EU circular economy dossier: direct involvement of Rijkswaterstaat in EU recommended	<ul style="list-style-type: none"> • Strategy for a Sustainable Built Environment • Digital logbooks and data management • Measuring circularity (EPD for products and a framework for infra constructions) • Research and networks
Priority, broader EU dossier: alignment within Rijkswaterstaat and Ministries between circular economy program and other areas recommended	<ul style="list-style-type: none"> • Waste policies • Public buyers' initiatives & tendering
EU dossier for monitoring: alignment with Dutch representatives in EU recommended to ensure awareness of Rijkswaterstaat's interests	<ul style="list-style-type: none"> • Construction Products Regulation (CPR) • Ecodesign • Cooperation with regions/cities and the CE Stakeholder Platform
Lower priority EU dossier: generic Dutch and international network of Rijkswaterstaat should be sufficient to encourage stakeholders to inform Rijkswaterstaat on issues	<ul style="list-style-type: none"> • Financing, taxonomy • Chemicals policies (REACH, digital tracking) • Monitoring progress of circular economy developments

The priority and monitoring dossiers are further elaborated in [Factsheets](#).

It is recommended to contact the most relevant DGs in the European Commission on short notice for a (separate or joint) discussion to exchange views: DG GROW (unit C.1) with regard to the Strategy for a Sustainable Built Environment, and DG ENV (unit B.1 and/or the Circular Economy advisor) with regard to measuring circularity.

Furthermore, promoting an EU icon research project for infra could be considered. The Rijkswaterstaat Bureau Brussels and CEDR can be starting points for this.

To get more attention for circular infrastructure and attract like-minded stakeholders for networking, it could be considered to ask the European Commission for a dedicated event to discuss the specific challenges, opportunities and approaches in circular infrastructure across Europe.

The Netherlands wants to be a circular economy by 2050. This is a major ambition to which Rijkswaterstaat contributes by realising working in a climate and neutral way by 2030. The Rijkswaterstaat-wide Impulse Program for a Circular Economy was set up to stimulate knowledge development, give direction to innovations and pilots, develop new frameworks and working methods to give an impulse to the transition. The Impulse Program supports the implementation of the Strategy Towards Climate Neutral and Circular Public Infrastructure Projects by 2030¹, which Rijkswaterstaat has developed together with the Ministry of Infrastructure and Water Management (IenW) and railway manager ProRail. By implementing the strategy, Rijkswaterstaat will ensure that by 2030 all public tenders will incorporate the objectives of climate neutrality and circularity, and will thus make a substantial contribution to a sustainable built environment.



To facilitate achievement of the circular goals and expanding the market for knowledge, innovations and products, Rijkswaterstaat aims to strengthen its international commitment and take advantage of its frontrunning position by anticipating EU Circular Economy developments. A team within Rijkswaterstaat, together with SGS INTRON, conducted a study from April to June 2020 to provide insight into the following:

1. What are the most important developments regarding circular infrastructure in the EU?
2. Who are the most important stakeholders in this area and their respective interests?
3. What are the opportunities for (policy) influence and cooperation?
4. What are the practical entry points in the EU playing field?

The target group for this report are the Rijkswaterstaat project team members and their colleagues who are active on the various EU dossiers. This report aims to provide information and suggest priority dossiers for Rijkswaterstaat to focus on in the coming years.

READING GUIDE

This report starts with a brief description of the project under [Goal, Scope, Approach](#) and provides background information about Rijkswaterstaat's Impulse Program and the Strategy Towards a Circular Infrastructure, including the main ambitions and goals, under [Impulse Program for a Circular Economy](#). In the chapter [Mapping](#), an introduction is given to Europe's new legislative period, circular economy policy developments are mapped out and the most relevant ones for Rijkswaterstaat are elaborated. You can read more about the European policy intentions and the interactions with the Dutch policies in the section [European circular policies](#). In the [Evaluation](#) chapter, the circular economy tracks of the Rijkswaterstaat Impulse Program are compared with the mapped circular economy policy plans of the European Commission. This provides an overview of relevant EC policies for Rijkswaterstaat and the goals that Rijkswaterstaat could achieve with these policies. This results in a priority list, which can be found in the chapter [Recommended priorities](#). Finally, this list has been elaborated in [Factsheets](#). Read more about the approach how we got to the priorities in the section on [Goal, scope, approach](#).

You can navigate through this report by clicking on the sections that you are interested in.

¹Strategy "Towards climate neutral and circular national infrastructure projects by 2030", IenW, Rijkswaterstaat, ProRail, 2019.
<https://www.rijksoverheid.nl/documenten/rapporten/2020/06/15/bijlage-1-strategie-naar-klimaatneutrale-en-circulaire-rijksinfraprojecten>

The goal of this project was to:

- Map out the circular infrastructure playing field regarding policies, standardisation, technical regulations, knowledge development/sharing, and respective stakeholders
- Identify impactful opportunities to engage with in relation to the Rijkswaterstaat goals, prioritise topics and outline possible actions

By [mapping](#) the European policies and interviewing 18 Dutch and international stakeholders in 14 interviews, the most relevant issues in EU policies for Rijkswaterstaat are identified. Unfortunately, the European Commission could not be reached due to the Covid-19 situation.

Positions are laid down in a draft “non-paper” which can be further elaborated by Rijkswaterstaat together with the Ministry of IenW to exchange viewpoints and share knowledge with the European Commission and various stakeholders. Opportunities and practical entry points for Rijkswaterstaat for the prioritised topics are put together in [factsheets](#). Factsheets, the non-paper, a list of stakeholders and a background report with interviews are delivered as separate documents as well.

The project team consisted of:

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The scope was restricted to European policies, technical regulations and standardisation in the legislative period 2019-2024 with a focus on construction (building & infrastructure). Legal, financing and taxation topics were not included in the main scope and only a quick scan is performed for these.



The Dutch Ministry of Infrastructure and Water Management (IenW) has the ambition to be fully climate neutral and to operate circularly by 2030 at the latest. This means:

- Significantly reducing CO₂ emissions, both its own CO₂ emissions as well as those from infrastructure projects in its role as procurer
- Steering towards high-quality reuse of all secondary materials
- Halving the use of primary raw materials.

Rijkswaterstaat wants to work in a climate neutral and circular way in 2030. To support this transition, the organisation set up an Impulse Program for a Circular Economy, which acts as a learning and adaptive environment to develop the required knowledge, innovations, frameworks and working methods to achieve the set objectives.

It provides strategies, guidance towards innovations and pilots, enables research and knowledge development and new ways of working for infrastructure projects. This Impulse Program is built on four content-oriented and two process-oriented tracks (Figure 1):

1. Data & measuring circularity
2. Circular design and asset management
3. Circular use of materials
4. Circular tendering and procurement
5. External cooperation
6. Internal change

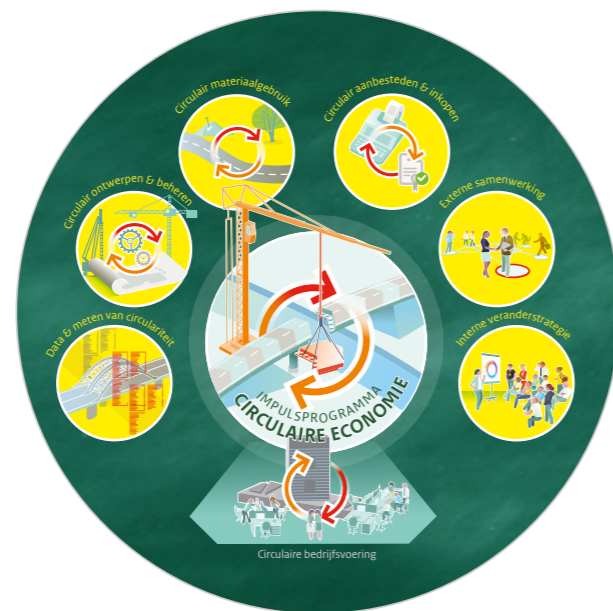


Figure 1. The six tracks of the Rijkswaterstaat Impulse Program for a Circular Economy

The content-oriented tracks, 1-4, are elaborated in this report in connection to EU dossiers. Track 5, external cooperation, is one of the goals to achieve with this study. Track 6 is not directly connected to EU policies.

The Impulse Program contributes to the Strategy towards Climate Neutral and Circular Public Infrastructure of the Ministry of IenW and its executive agencies Rijkswaterstaat and ProRail. The Strategy is developed along eight ‘transition roadmaps’ for the most relevant projects and activities with the greatest environmental impact (see Figure 2). Of the eight transition paths, four are specific and important to Rijkswaterstaat: road surface, civil engineering structures, coastline care and waterway maintenance, and groundworks and other mobile equipment (construction site and logistics). The lessons of the Impulse Program are used in the development and realisation of the transition paths. The strategy also includes a proposal for a financial strategy to incorporate the objectives of climate neutral and circular infrastructure in 2030 in the project plans (tenders) and budgets. A joint approach with local authorities will be developed in 2020. Part of the Dutch ambition is that all public tenders will be circular by 2030.

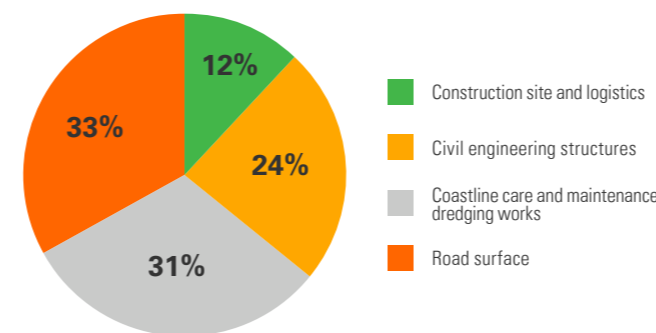


Figure 2. Transition paths for Rijkswaterstaat as part of the Strategy Towards Climate Neutral and Circular Public Infrastructure Projects by 2030

CO₂-emissions per transition path

CO ₂ in kton CO ₂ -eq/year per transition path	2017
Construction site and logistics	74
Civil engineering structures	150
Coastline care and maintenance dredging works	189
Road surface	200
Total	612

²Strategy “Towards climate neutral and circular national infrastructure projects by 2030”, IenW, 2019. <https://www.rijksoverheid.nl/documenten/rapporten/2020/06/15/bijlage-1-strategie-naar-klimaatneutrale-en-circulaire-rijksinfrastructuur>
³<http://publicaties.miniennm.nl/documenten/jaarrapport-impulsprogramma-rws-ce-2019-de-toekomst-begint-nu>

Working in a circular way requires data on materials to enhance value retention and high-quality of material reuse. The ambition is to have the following tools available by 2030:

1. A data system to exchange ‘material passports of constructions’ in the chain.

Such passports should contain data and information about the materials and constructions. A point of attention is how to keep (digital) data up to date and available during the long lifespan of infra works. Discussions within Rijkswaterstaat are ongoing about e.g. block-chain approaches (see interviews)

2. Indicators and methods to assess the circularity of infrastructure works.

Rijkswaterstaat builds upon the Dutch national method for assessing the environmental performance of construction works, based on Life Cycle Assessment (LCA)⁴ which in turn is based on the international standard NEN-EN 15804⁵. The tool DuboCalc, for calculating the environmental performance of infra works, is based on the national method and national database. Additional indicators are being developed to measure specific aspects of high-quality reuse and value retention as part of a sector wide core method for measuring circularity

Rijkswaterstaat cooperates with the sector to achieve this ambition, for example, via the national Platform CB’23 (Circular Construction 2023)⁶. English versions of the Lexicon and Guidelines for ‘measuring circularity’ and ‘passports for construction’ will be available as of September 2020.



⁴Bepalingsmethode ‘Milieuprestatie Gebouwen en GWW-werken’, National Environmental Database (NMD) <https://milieudatabase.nl/downloads/>

⁵NEN-EN 15804 ‘Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products’

⁶<https://platformcb23.nl/english>

⁷<https://www.rijkswaterstaat.nl/english/environment/circular-economy/construction-of-circular-bridge/index.aspx>

In order to design, build and maintain infrastructure works in a circular way, integrating circularity in each stage of a project is required. For this purpose, Rijkswaterstaat develops guidelines and design principles and integrates circularity in asset management. The design principles take the whole construction into account; it is not the aim to develop (eco design) principles for individual products or materials. Considerations about the lifespan and future reuse of materials are explicitly included. Training, developing tangible measures and sharing experiences is an important success factor for this track. Innovations are stimulated by new ways of cooperating with stakeholders in the chain. One example of many is the 'circular bridge' project⁷.

This track shows that in a circular economy, the roles of procurers, manufacturers and contractors in the chain are changing, possibly resulting in new business models. Improved circular results are obtained by including chain partners earlier in the process. This will influence tender procedures too.



Halving the use of primary raw materials implies changing material choices. Today's applications must allow high-quality reuse in future. Due to their high environmental impact, Rijkswaterstaat focuses on:

- Soil
- Asphalt
- Concrete
- Steel

as well as stimulating the use of:

- Wood and biobased materials

This track is closely linked to the Transition Paths of Rijkswaterstaat for which roadmaps are developed together with the concrete⁸, asphalt⁹ and wood sector.



⁸<https://www.betonakkoord.nl/>

⁹<https://www.crow.nl/asfalt-impuls>

¹⁰MKI (milieukostenindicator) is the 'one-score' result of an LCA calculation

¹¹<https://www.dubocalc.nl/>

¹²<https://www.skao.nl/wat-is-de-ladder>

Circularity and innovation in design and construction are stimulated by assigning specific criteria that attribute circular measures and low environmental impact and strengthening these criteria over time. The criteria are based on Life Cycle Assessment (LCA) and Environmental Cost Indicator (ECI or 'MKI'¹⁰). The tools DuboCalc¹¹ and the CO₂-Performance Ladder are amongst the tools used in tendering. The CO₂-Performance Ladder¹² enables to assess whether a market party is working sustainably in the field of CO₂ emissions. Rijkswaterstaat also uses this instrument to reduce its own CO₂ emissions. With software tool DuboCalc, market parties can calculate the ECI of infrastructure projects. More sustainable projects with lower ECI are rewarded in tendering procedures.

Another important instrument is 'Launching Customership' for innovations. 'Living labs' are available to test innovations. Innovative tendering methods are applied to stimulate the market to innovate, for example through SBIR (Strategic Business Innovation Request) which finances innovation development at an early stage.



The EU will be climate neutral by 2050

The European legislative period 2019-2024 prioritises, amongst other things, ‘building a climate-neutral, green, fair and social Europe’. The *European Green Deal*¹³, presented by the new European Commission under the leadership of the President of the European Commission, Ursula von der Leyen, in December 2019, is one of the prominent initiatives. Dutchman Frans Timmermans is the Executive Vice-President of the European Commission for the European Green Deal (assisted by, among other, the Dutch former politician Diederik Samson). Timmermans leads the work of the Commission on the European Green Deal and the first European Climate Law that enshrines the 2050 goal of climate-neutrality in EU legislation. The Green Deal provides a roadmap of actions to boost resource efficiency by moving to a clean, circular economy and restoring biodiversity and reducing pollution.

The COVID-19 crisis has partially delayed the elaboration of parts of the Green Deal, but it is expected that the recovery funds will embrace the further ‘greening’ of Europe, as many stakeholders and Member States have called for, including the Netherlands.

The Green Deal is an integral part of the Commission’s strategy to implement the United Nation’s 2030 Agenda and the Sustainable Development Goals (SDGs), and contains several elements (see Table 1). This project focused on the executive vice president Timmermans’ new *Circular Economy Action Plan (CEAP)*, presented in March 2020 (just before the Covid-19 crisis). It presents measures to make sustainable products the norm in the EU, empower consumers and public buyers, ensure less waste and make circularity work for people, regions and cities. One of the focus sectors is construction and buildings. Though buildings are clearly central in the Green Deal (like the ‘Renovation Wave’), the infrastructure sector is considered an integral part of the construction sector. However, discussions with stakeholders in this project revealed that it is not always clear which specific challenges exist in the infra sector and which specific actions are needed.

The Green Deal is closely connected to another important EU priority: *A Europe fit for the digital age*¹⁴, elaborated by the Cabinet of executive vice-president Margrethe Vestager. This Strategy links to the Green Deal by supporting the establishment of a ‘Common European Green Deal data space’ to unlock the potential of data in support of the Green Deal priority actions on climate change, circular economy, zero pollution, biodiversity, deforestation and compliance assurance. The reference to ‘Product passports’ is a striking element in the context of this project.



¹³https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

¹⁴https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en

6 Commission priorities for 2019-24

A European Green Deal
Striving to be the first climate-neutral continent

An economy that works for people
Working for social fairness and prosperity

A Europe fit for the digital age
Empowering people with a new generation of technologies

Promoting our European way of life
Building a Union of equality in which we all have the same access to opportunities

A stronger Europe in the world
Europe to strive for more by strengthening our unique brand of responsible global leadership

A new push for European democracy
Nurturing, protecting and strengthening our democracy

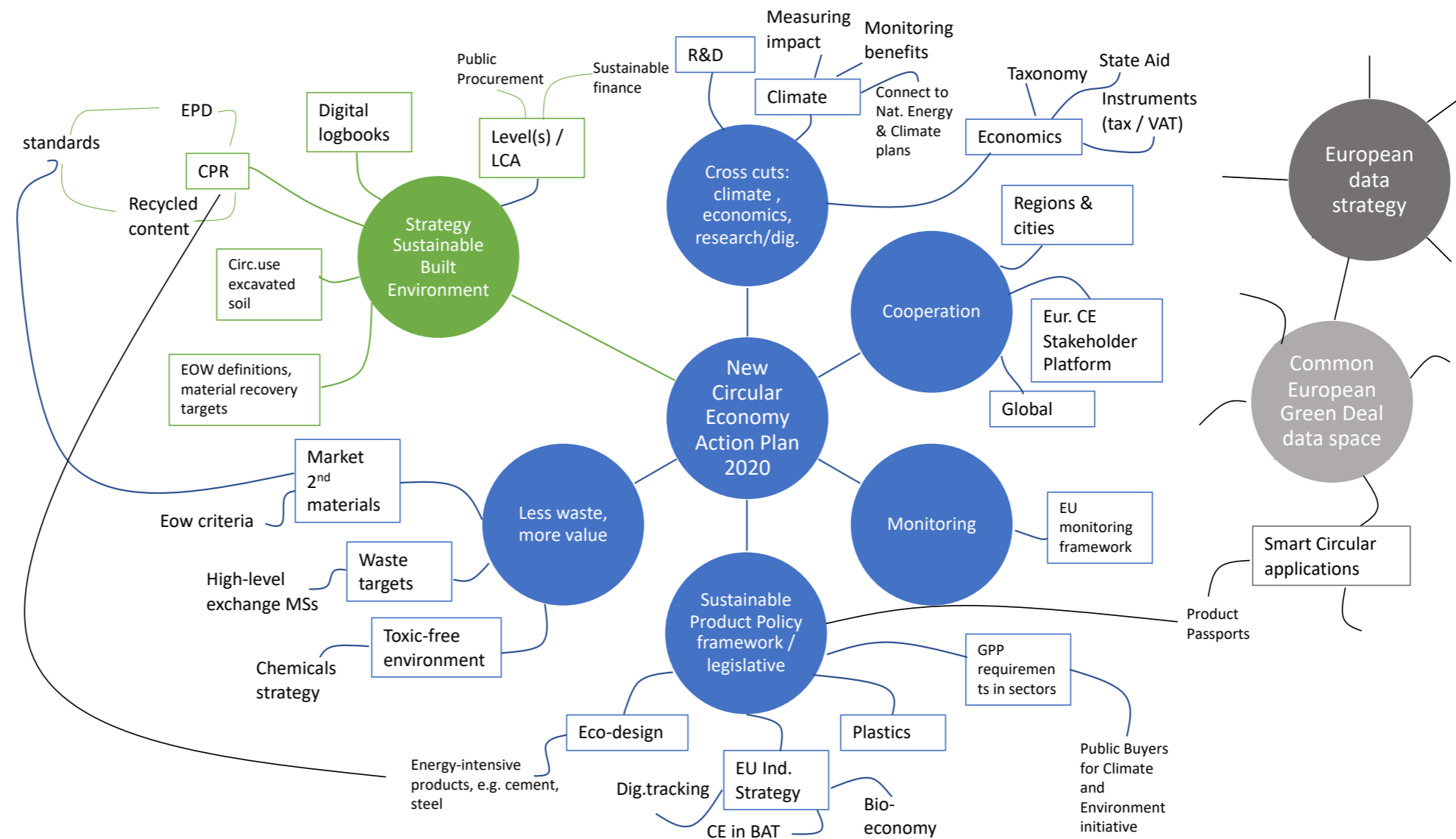
Common European Green Deal data space

The EU will be climate neutral by 2050

TOPIC IN GREEN DEAL	CONSTRUCTION-RELATED POLICIES
Climate ambition	New EU Strategy on Adaptation to Climate Change (2020-2021)
Clean, affordable and secure energy	'Renovation wave' initiative for the building sector (2020)
Industrial strategy for a clean and circular economy	Circular Economy Action Plan (March 2020)
Sustainable and smart mobility	Capacity of railways and inland waterways (2021)
'Farm to Fork' Strategy	
Preserving and protecting biodiversity	EU Biodiversity Strategy for 2030 (March 2020)
Zero-pollution ambition for a toxic free environment	
Mainstreaming sustainability in EU policies	
EU as a global leader/a European Climate Pact	

Table 1. Commission priorities, ambitions and policy initiatives as part of the Green Deal. This project focused on the Circular Economy Action Plan.

In order to get the structure of the new Circular Economy Action Plan and for the sake of discussing it with stakeholders, a mindmap is drawn up. In the section [European circular policies](#), the most relevant items are further elaborated.



This overview reflects the various elements of the new Circular Economy Action Plan. It is based on the [mindmap](#), with a focus on the most relevant topics in connection to the [Rijkswaterstaat Impulse Program Circular Economy](#). The generic topics of the Action Plan on Monitoring, Cooperation (outside Europe) and Cross-cuts, don't have a direct connection to the Rijkswaterstaat program and are therefore not elaborated.

Click on the spheres to learn more about the Strategy for Sustainable Built Environment, Less waste more value, or the Sustainable Product Policy.



The Commission will adopt a new comprehensive Strategy for a Sustainable Built Environment 'to promote circularity principles throughout the whole life cycle of buildings¹⁵'. This Strategy will ensure coherence across the relevant policy areas such as climate, energy and resource efficiency, management of construction and demolition waste, accessibility, digitalisation and skills. It will promote circularity principles throughout the life cycle of buildings by:

1. Addressing the sustainability performance of construction products in the context of the revision of the Construction Product Regulation (CPR)
2. Promoting measures to improve the durability and adaptability of built assets in line with the circular economy principles for buildings design and developing digital logbooks for buildings
3. Using Level(s) to integrate life cycle assessment in public procurement and the EU sustainable finance framework and exploring the appropriateness of setting of carbon reduction targets and the potential of carbon storage
4. Considering a revision of material recovery targets set in EU legislation for construction and demolition waste and its material-specific fractions
5. Promoting initiatives to reduce soil sealing, rehabilitate abandoned or contaminated brownfields and increase the safe, sustainable and circular use of excavated soils
6. Develop adequate skills and facilitate their rolling out at national and regional levels

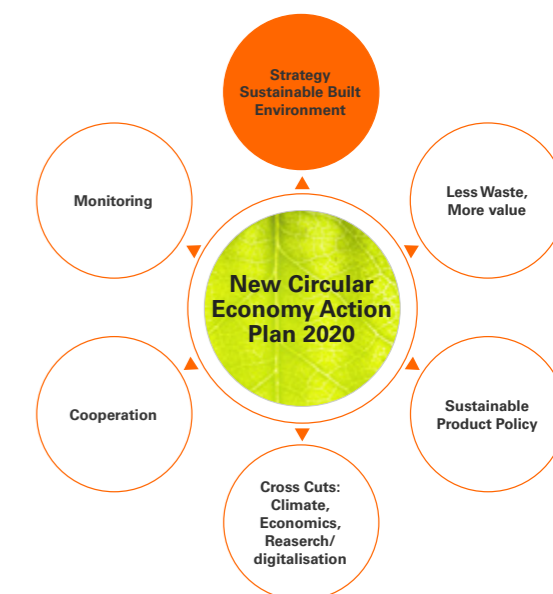
This study focusses on points 1-3. Points 4-6 are not further elaborated herein. Point 4 – material recovery targets – is less relevant for the Netherlands, as we already recover materials beyond the European targets. The Dutch approach (landfill bans and mandatory recycling for material fractions for which recycling is technically and economically feasible) can be presented as successful examples. Furthermore, the interviews showed that point 5 – reduce soil sealing – relates only to a limited extent to the Dutch circular economy interests as it mainly focuses on spatial planning. Point 6 – skills – is not considered to be in the scope of this project.

¹⁵Note that 'buildings' is communicated although infra is said to be included too

Relevant stakeholders for Rijkswaterstaat

DG GROW has the lead in developing this Strategy for a Sustainable Built Environment, though there will be a close connection with DG ENV (who is leading regarding the sustainable building framework assessment method Level(s)). Many actors in the construction sector are on top of this development.

ENTRY POINT	European Commission DG GROW (leading) Supported by DG ENV
COMMERCIAL STAKEHOLDERS	Manufacturers, e.g. CPE (Europe), NVTB (NL), FME (NL) Contractors, e.g. FIEC (Europe), Bouwend Nederland Demolishers, e.g. EDA (Europe), Veras (NL) Recyclers, e.g. FIR (Europe), BRBS (NL) Etc. (More stakeholders are included in a separate excel file delivered as part of the project)
POLICY MAKERS OTHER MEMBER STATES AND REGIONS	Dutch Ministry of the Interior and Kingdom Relations Dutch Ministry of Infrastructure and Water Management Frontrunning countries, e.g. Belgium (Flanders), Germany, Scandinavia, France
STANDARDISATION BODIES	CEN (Europe) and national bodies like NEN (NL)
STANDARDISATION BODIES	CEN (Europe) and national bodies like NEN (NL)
OTHERS	NGOs



The Construction Products Regulation (CPR) lays down harmonised rules for testing and marketing of construction products in the EU. Products only need to be tested once according to a harmonised European standard or European Assessment Document. The Declaration of Performance (DoP) provides information about the performance of a product. The CE marking indicates that a construction product conforms to the declared performance in the DoP.

The CPR has seven 'Basic Requirements for Constructions Works' (Basic Works Requirement, BWR), two of which are related to sustainability and circularity and are therefore important to consider:

- **BWR3 Hygiene, health and the environment:** links to the measurement and classification of emissions to indoor air and to emissions to soil and water (leaching). Especially the latter is a hot topic for the Netherlands, closely connected to the 'Besluit Bodemkwaliteit' (decree for soil and ground water quality regulation), which is an important reference framework for the application of secondary raw materials in construction works and therefore very important for Rijkswaterstaat. CEN TC351 leads the standardisation efforts; the Dutch standardisation institute NEN holds the secretariat of CEN TC351
- **BWR7 Sustainable use of natural resources:** links to sustainability and circularity and has not been yet put into effect. Two topics relate to this BWR:
 - Environmental Product Declarations (EPD): Pending the alignment of CEN standard EN15804 for EPD of construction products with the Product Environment Footprint (PEF) initiative of DG ENV (both based on LCA), no decisions have been made so far on using EPD in connection to BWR7. This means that EPD and EN15804 are now voluntary in Europe. The Dutch 'Bepalingsmethode' (assessment method) and national

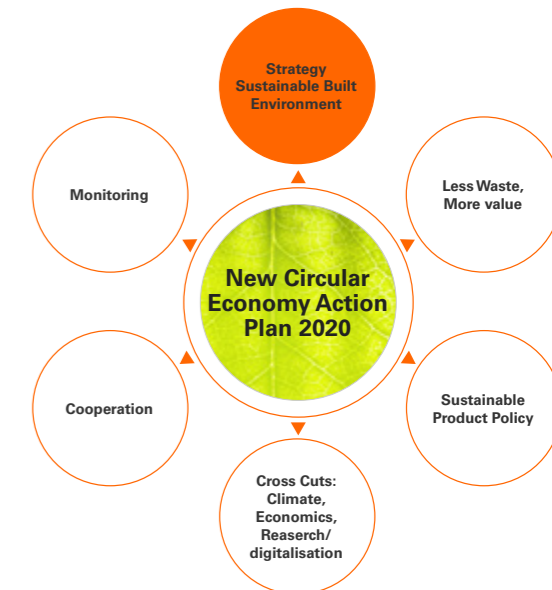
environmental database (NMD) are based on EN15804 and use product EPD for calculation of LCAs of constructions by means of the Environmental Cost Indicator. It is important for the Netherlands that EPD requirements under the CPR are in line with the Dutch ECI system. Harmonised requirements under the CPR can also be of help in international tendering. CEN TC350 leads the standardisation on sustainable construction, including standards for infra. Rijkswaterstaat participates in CEN TC350

- **Recycled content:** The revision of the CPR may include recycled content requirements for certain construction products. Details are not yet known, but standards and requirements should not hinder higher recycled contents than a European minimum or average. In the Netherlands, products generally contain relatively high percentages of recycled content

It should be noted that the CPR is under revision. Unofficial information indicates that major discussions are ongoing and suggests even withdrawal of the CPR. The Ministry of the Interior and Kingdom Relations is involved in the regulatory process by participation in the Standing Committee of Construction (SCC).

Relevant stakeholders for Rijkswaterstaat

ENTRY POINT	European Commission DG GROW and its Standing Committee of Construction (SCC)
OTHER STAKEHOLDERS	Manufacturers, e.g. CPE in Europe and NVTB in NL Ministry of the Interior and Kingdom Relations NEN: CEN TC351, CEN TC350



The topic of material passports has been introduced into the European policy area through various stakeholders and the EU-funded project Buildings as Material Banks (BAMB)¹⁶. Several private parties¹⁷ have already planned for such passports, including well-being and health issues (toxic ingredients). The Luxembourg Ministry of Economics is currently developing a pre-normative format for a Product Circularity Data Sheet¹⁸. NEN expects formal standardisation in future. The topic of passports is also put forward in more generic circularity standardisation efforts in ISO TC323 (followed by Rijkswaterstaat) and a proposed standardisation process for Circular Construction by Danish Standards (not accepted by CEN yet). Given the relationship with the Dutch initiatives to develop passports for the construction sector, Rijkswaterstaat should continue to closely monitor this development.

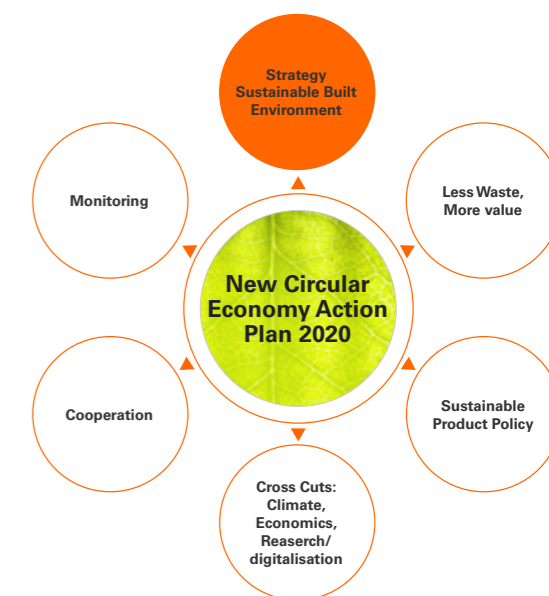
Another argument for this is the Product Passport initiative under the Common European Green Deal data space for smart circular applications. The development of a data strategy at Rijkswaterstaat may be based on 'linked data' concepts, and it would not help if Europe proposes other ways to digitise data. There is a soft link to the 'digital technologies for tracking, tracing and mapping of resources' action under the [Sustainable Product Policy](#), which also aims to develop databases for ingredients in products.

In 2019, an EU tender was issued for a study on the development of an EU framework for 'buildings' digital logbook'¹⁹ (status unknown). Initiatives such as Madaster have also been put forward by stakeholders, indicating the need for 'construction works passports', similar to a logbook concept.

Initiatives in this area have all been voluntary so far and this is not expected to change. There is no clear regulatory context to make passports mandatory, as the Commission has no mandate to regulate construction works, only construction products. A link to the CPR may be made via the product characteristics in the future, although digital CE-marking is not yet obvious and DoPs will only be kept with manufacturers for a minimum of five years. Nowadays, however, the foundation is laid for further elaboration of content, format, application and digitalisation of material passports, both for products and for construction works logbooks.

Relevant stakeholders for Rijkswaterstaat

ENTRY POINT	European Commission DG GROW
OTHER STAKEHOLDERS	<p>Manufacturers, e.g. CPE (Europe), NVTB (NL) Contractors, e.g. FIEC (Europe), Bouwend Nederland Building owners organisations</p> <p>Ministry of Economics Luxembourg Ministry of the Interior and Kingdom Relations</p> <p>NEN: ISO TC323, (future) CEN standard circular construction, (future) standard on passports Dutch Platform CB'23/passports</p>



¹⁶<https://www.bamb2020.eu/topics/materials-passports/>

¹⁷For example the private cradle-to-cradle™ scheme: <https://www.c2ccertified.org/>

¹⁸<https://twitter.com/LuxembourgLU/status/1273252811317403648>

¹⁹<https://ec.europa.eu/easme/en/tenders/study-development-eu-framework-buildings-digital-logbook>

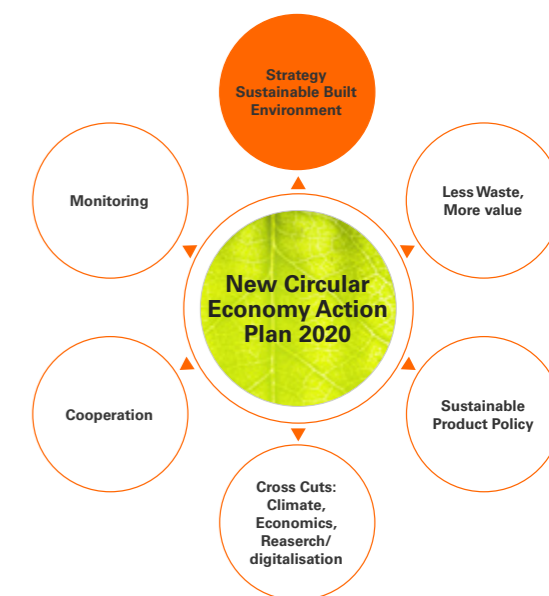
Level(s) is a voluntary reporting framework to improve the sustainability of buildings²⁰. Using existing standards, Level(s) provides a common EU approach to assessing the environmental performance of buildings. It is based on LCA and the CEN TC350 standards but has additional sustainability indicators for buildings (e.g. acoustic performance and recyclability potential). DG ENV (Joint Research Centre) has developed this framework which is being tested across Europe²¹. Further development and implementation are foreseen under the umbrella of the Strategy for a Sustainable Built Environment, with a clear link to using it for Public Procurement and Sustainable Financing.

Although it can be said that the Netherlands is a frontrunner with its construction calculation tools and DuboCalc, it is relevant for Rijkswaterstaat to examine this in more detail. Firstly, although Level(s) only applies to buildings, a similar framework for infra could enhance a stronger focus on infra in Public Procurement and Finance. This in turn could promote discussions about European tendering rules, which sometimes form an (real or perceived) obstacle to innovative circular tendering and procurement by Rijkswaterstaat. A common European language, as envisaged by Level(s), would be helpful and could also be used in conjunction with definition setting in the 'EU taxonomy'²² discussions.

Secondly, a Framework like Level(s) is directly related to Rijkswaterstaat's strategic track 'measuring circularity' and the guidelines published by Platform CB'23²³. In an international market such as construction it would be helpful to have a common understanding of relevant indicators and methods. Further international standardisation building upon CB'23 could be helpful.

Relevant stakeholders for Rijkswaterstaat

ENTRY POINT	European Commission DG ENV
OTHER STAKEHOLDERS	Manufacturers, e.g. CPE (Europe), NVTB (NL) Contractors, e.g. FIEC (Europe), Bouwend Nederland Asset managers Ministry of Infrastructure and Water Management NEN and CB'23: CEN TC350/DS-initiative for a circular construction standards



²⁰[https://ec.europa.eu/environment/eussd/buildings.htm#:~:text=Building%20sustainability%20performance%20%2D%20Level\(s,performance%20in%20the%20built%20environment](https://ec.europa.eu/environment/eussd/buildings.htm#:~:text=Building%20sustainability%20performance%20%2D%20Level(s,performance%20in%20the%20built%20environment).

²¹The Netherlands didn't participate with test cases because we already have or framework with the Bepalingsmethode and tools like DuboCalc

²²The EU Taxonomy is a tool to help investors, companies, issuers and project promoters navigate the transition to a low-carbon, resilient and resource-efficient economy. The Taxonomy sets performance thresholds (referred to as 'technical screening criteria') for economic activities. https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

²³<https://platformcb23.nl/downloads/2020>

It seems that there is not much to gain for Rijkswaterstaat with Europe’s new waste policies. The Netherlands already recycles almost all mineral materials in the construction sector. However, high-quality reuse is still a challenge, and some secondary materials may not be available in quantities needed to fulfill the demand. There is an interdependency between the infra sector and buildings: nowadays most of the building waste ends up in civil engineering, mainly road foundations. Moving towards high-quality recycling will imply that, for example, concrete granulate will be recycled into concrete rather than become available for road foundations. This gap can be filled by other secondary materials, which may introduce new challenges, for example with regard to hazardous substances. In that respect, the ‘toxic free environment and chemicals strategy’²⁴ can be interesting to follow, although it probably does not have the highest priority for Rijkswaterstaat. There is a (weak) connection to the REACH SCIP database²⁵, the database for information on Substances of Concern In articles as such or in complex objects (Products) established under the Waste Framework Directive (WFD). The SCIP database ensures that the information on articles containing Candidate List substances is available throughout the whole life cycle of products and materials, including at the waste stage. The information in the database is then made available to waste operators and consumers. Construction products for civil engineering and infra are not directly targeted by the database, but if they contain such substances, they must also be registered.

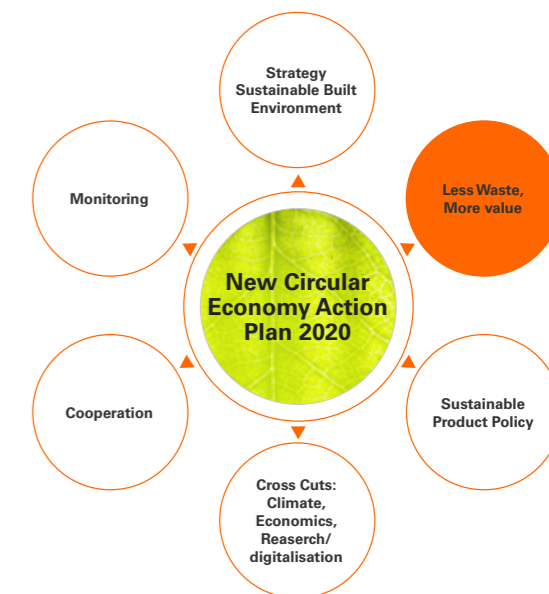
Probably more important is linking of European waste policies to European intentions to stimulate the market for secondary materials. The consistent Dutch waste policies, from a landfill ban to stimulating the request for high-quality secondary raw materials via procurement, have proven to be successful and are show-cased by the European recycling federation FIR²⁶. Member States like Denmark and Germany, as well as Belgium (Flanders), follow similar approaches.

The interviews for this study revealed that Dutch stakeholders within and outside Rijkswaterstaat believe that European waste policies are important to ensure a level playing field in Europe. As long as the European end-of-waste criteria are not clear or are not consistently interpreted and implemented across Europe, issues may (and already do) arise with import/export of waste. An example is (undesirable) import of soil which is not accepted for use abroad but could be applied in the Netherlands since the Dutch rules for soil quality are more practical regarding end-of-waste.

Finally, DG GROW has elaborated Construction and Demolition Waste Protocol and Guidelines²⁷, which may be worth updating and elaborating for infra.

Relevant stakeholders for Rijkswaterstaat

ENTRY POINT	European Commission DG ENV
COMMERCIAL STAKEHOLDERS	Demolishers, e.g. EDA (Europe), Veras (NL) Recyclers, e.g. FIR (Europe), BRBS (NL) Dredging organisations Etc. (More stakeholders are included in a separate excel file delivered as part of the project)
POLICY MAKERS OTHER MEMBER STATES AND REGIONS	Dutch Ministry of Infrastructure and Water Management
STANDARDISATION BODIES	CEN (Europe) and national bodies like NEN (NL)
OTHERS	CEDR network NGOs



²⁴<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12264-Chemicals-strategy-for-sustainability>

²⁵<https://echa.europa.eu/nl/scip-database>

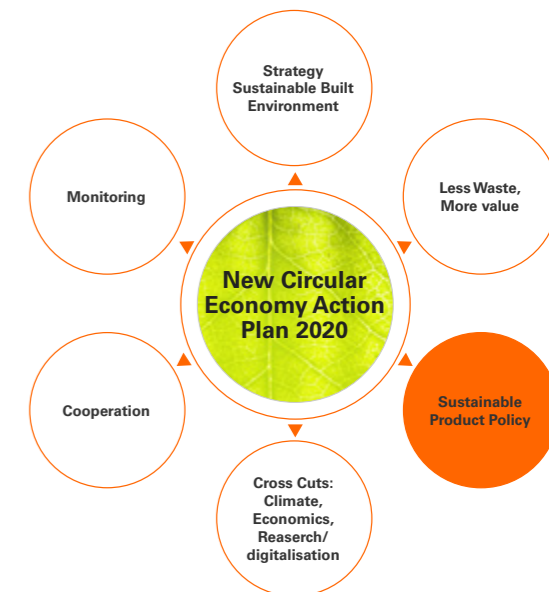
²⁶<http://webdog.brbs.nl/images/Developing-recycling-of-CDW-A-10-step-approach-V181219.pdf>

²⁷https://ec.europa.eu/growth/content/eu-construction-and-demolition-waste-protocol-0_en

In order to make products suitable for a climate-neutral, resource-efficient and circular economy, to reduce waste and ensure that the performance of frontrunners in sustainability increasingly becomes the norm, the Commission will propose a legislative initiative for a sustainable product policy.

Relevant stakeholders for Rijkswaterstaat

ENTRY POINT	European Commission DG GROW (construction) DG ENV (procurement) DG ENER (Ecodesign)
COMMERCIAL STAKEHOLDERS	Manufacturers, e.g. CPE (Europe), NVTB (NL) Contractors, e.g. FIEC (Europe), Bouwend Nederland)
POLICY MAKERS	Dutch Ministry of Infrastructure and Water Management Dutch Ministry of Economics
OTHER MEMBER STATES AND REGIONS	Frontrunning countries, e.g. Flanders with its 'Building for Change' program
OTHERS	CEDR network NGOs



Eco design

Eco design is an indispensable part of The Sustainable Product Policy. The Ecodesign Directive already exists for energy-using products (mainly installations and consumer products so far). Voluntary eco design guidelines have been developed for buildings and roads, but they have not been widely applied. The core of this new legislative initiative will be to extend the Ecodesign Directive beyond energy-related products, and to include aspects of circularity. Priority will be given to addressing product groups identified in the CEAP; high impact intermediary products such as steel, cement and chemicals are explicitly mentioned.

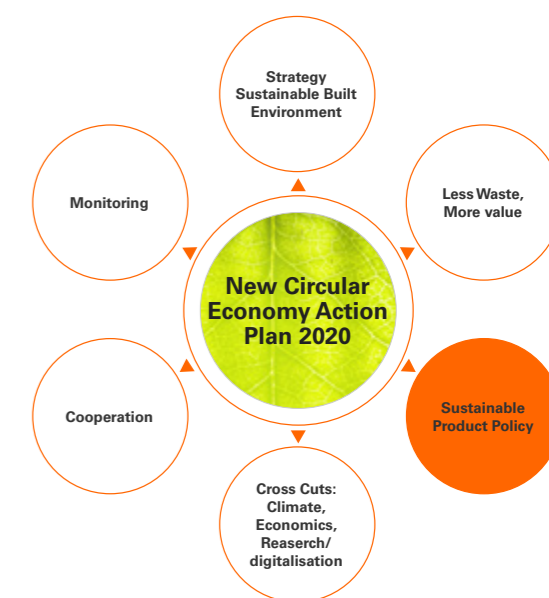
Stakeholders in the construction sector, like manufacturers and contractors, are concerned²⁸ about this initiative. Firstly, because the Ecodesign Directive provides for CE-marking, which is also regulated under the Construction Products Regulation. Stakeholders are of the opinion that construction products should be CE-marked under the scope of the CPR and its standards solely. Secondly, the environmental (and circular) performance of intermediate construction products and materials cannot be assessed stand-alone, but only in the context of an entire construction. For example: a more energy-intensive product could prolong the lifespan of a construction and thus reduce the environmental impact of the whole construction. This position is fully in line with the Dutch approach of LCA/ECI and DuboCalc, the Strategy Towards Climate Neutral and Circular Infrastructure and the Rijkswaterstaat's Impulse Program track on Circular design principles for civil engineering/infra works. European eco design guidelines for intermediary products could therefore be counterproductive to Dutch efforts.

The Ecodesign Directive developments are followed by the Dutch Ministries, but it may be useful for Rijkswaterstaat to stay connected to the Dutch representatives. Since construction materials are usually not their focus, it can be helpful to be their backup for construction issues.

Design of construction works

DG GROW's Circular Economy Principles for Buildings Design²⁹ could be further elaborated for civil engineering constructions, probably in connection to a Framework like [Level\(s\)](#). Dutch circular design approaches can be brought forward as examples, like the Cruquius bridge³⁰. The Dutch CIRCO trajectory for design training has a specific track dedicated to construction and infra. In turn, circular design experiences could be further developed, also for the benefit of the Dutch goals, for example in European living labs, European funded projects in the civil engineering/infra sector and other organisations like CEDR (Conference of European Directors of Roads, a platform for cooperation and promoting of improvements to the road system and its infrastructure).

Sustainable Product Policy



²⁸<http://www.fiec.eu/en/cust/documentview.aspx?UID=bdb62481-67f6-422f-b6e8-d438abeeb954> and position NVTB shared in interview

²⁹<https://ec.europa.eu/docsroom/documents/39984>

³⁰https://www.noord-holland.nl/Onderwerpen/Verkeer_vervoer/Projecten_Verkeer_en_Vervoer/Cruquiusbrug/Over_het_project

Digital initiatives

Within this policy track, new policies on 'digital technologies for tracking, tracing and mapping of resources' and 'digital passports' are announced. These measures may relate to the European data space for Smart Circular Applications and the 'Product Passports' mentioned therein. It has a soft link with Rijkswaterstaat's data strategy for material passports. However, the Digital Logbooks track, as part of the Strategy for a Sustainable Built Environment, is probably more important for Rijkswaterstaat.

Biobased materials

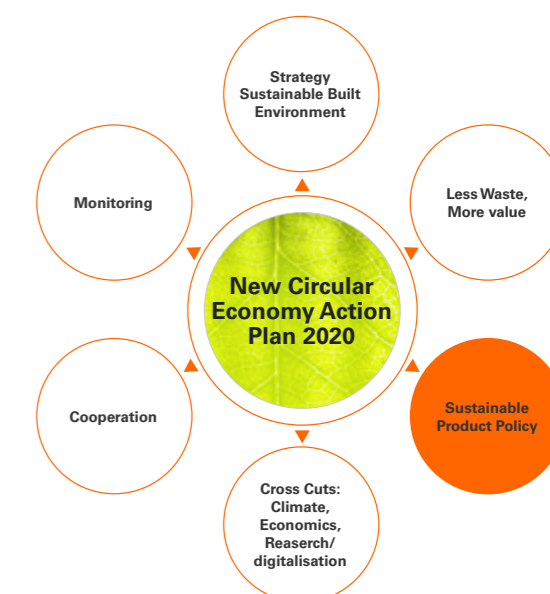
Biobased materials also play a role in the Rijkswaterstaat Impulse Program for a Circular Economy. The EU CEAP is not very explicit on this for the construction sector. In connection with 'circularity in production processes', the CEAP calls it as follows: "supporting the sustainable and circular bio-based sector through the implementation of the Bioeconomy Action Plan³¹". EU actions in the context of the CEAP are mainly foreseen for plastics.

Public Procurement

The sustainable product policy of the European Commission also recognises the important role of Green Public Procurement (GPP). To tap into this potential, the Commission will "propose minimum mandatory GPP criteria and targets in sectoral legislation and phase in compulsory reporting to monitor the uptake of GPP without creating unjustified administrative burden for public buyers". Furthermore, the Commission will continue to support capacity building with guidance, training and dissemination of good practices and encouraging public buyers to take part in a "Public Buyers for Climate and Environment" initiative, which will facilitate exchanges among buyers committed to GPP implementation. Rijkswaterstaat is and has been already involved in several GPP initiatives of the European Commission. An interviewee in this project recommends Rijkswaterstaat to continue in carefully selected initiatives which can be useful for piloting its own projects and/or to create input for discussions on EU tendering rules, which sometimes form a (real or perceived) barrier to innovative circular tendering and procurement by Rijkswaterstaat.

Less Waste, More Value

Sustainable Product Policy



³¹COM(2018) 763 final

The four circular economy tracks of the Rijkswaterstaat Impulse Program for a Circular Economy are compared with the mapped circular economy policy plans of the European Commission. This provides an overview of relevant EC policies for Rijkswaterstaat and of the goals that Rijkswaterstaat could achieve within these policies. This is further structured for the sake of prioritisation in the form of an [assessment](#).

In order to facilitate communication and exchange of ideas with stakeholders and explore the potential contribution of Rijkswaterstaat in the European context, a 'non paper' has been drafted. This non-paper not only explains why it is important to pay more attention to the infra sector in the new EU circular policies, it also provides suggestions from Rijkswaterstaat on how best to contribute to the EU policies and a long list of potential actions for the Commission. Though structured according to the EU Circular Economy Action Plan and outlining the benefits for Europe, the list naturally relates to the potential benefits for the Dutch strategy and the goals to be achieved. At the same time, Rijkswaterstaat offers its help, input and experience to the Commission.

Rijkswaterstaat will further elaborate the non-paper with the Ministry of Infrastructure and Water Management.



The announced *Strategy for a Sustainable Built Environment* is crucial for Rijkswaterstaat to become involved in and influence the EC developments in achieving a Circular Economy: the Strategy is the center of all construction actions, where individual actions – also from other policy streams – will come together and should be aligned. This will be the place to put the infra sector on the agenda and to be informed about dossiers and actions, e.g. which regulations will be elaborated, which protocols will be drafted, etc.

At first sight, many of the goals formulated in the table below may appear to be defensive (to protect Dutch interests), except for the innovations, knowledge sharing and funding that EU can bring. However, by engaging in dossiers, new viewpoints may appear, and new networks will be established. This in turn will be helpful in advocating for legislation in favor of the Netherlands, e.g. waste policies and EU tender rules, and in further digitalisation of the sector.

Entry: DG GROW (Unit C.1), coordinating the Strategy for a Sustainable Built Environment.

By being connected, it will become apparent along the way which contacts with which stakeholders and DGs are also relevant. Particularly, DG ENV will play an important role in policy streams introduced in the Strategy (like waste, Ecodesign).

RIJKSWATERSTAAT TRACK	EC DOSSIER	SUGGESTED RIJKSWATERSTAAT GOALS	WHY IS THE EU NEEDED?
Overall: infrastructure works being an integral part of all circular economy actions for the construction sector	Strategy for a Sustainable Built Environment	<ul style="list-style-type: none"> • Infra issues and examples included in several actions to come • (to be considered) A dedicated EC event on circular infra and its challenges 	<ul style="list-style-type: none"> • Innovation • Level playing field • Tools for tendering and procurement, and for getting access to financing
1a. Data/passports	<ul style="list-style-type: none"> • Digital logbooks • Digital agenda: Smart Circular Applications/Product Passports (evt. digital tracking/REACH) 	<ul style="list-style-type: none"> • Extending the scope to civil engineering works and infra asset management • Including long-term data management in data strategies • Based on CB'23 guidance 	<ul style="list-style-type: none"> • Protocols for infra (avoiding protocols that are not suitable) • Common international understanding of data/data management • Innovation in digitalisation
1b. Measuring circularity	<ul style="list-style-type: none"> • CPR-BWR7 EPD • CEN TC350, DS, ISO • Level(s) 	<ul style="list-style-type: none"> • Use of EPD for assessment of full life cycle of construction works, based on EN15804 • CPR leading for products • A framework like Level(s) for civil engineering works/ connected to eco design of works, with CB'23 guidance as best practice input 	<ul style="list-style-type: none"> • Ensure that NL can continue with ECI ('MKI'), DuboCalc and core method by Platform CB'23 • Ensure that international data can be used in Dutch methods
2. Circular design and asset management	<ul style="list-style-type: none"> • Ecodesign • Research funds • Networks of similar organisations like RWS 	<ul style="list-style-type: none"> • Ecodesign of works based on a life cycle approach • Research, sharing knowledge (Living Labs, trainings, etc.) • To be considered: icon project under Horizon Green Deal call 	<ul style="list-style-type: none"> • Avoiding EU guidelines that are counterproductive for the transition paths • Room for innovative approaches • Knowledge sharing • Establishing international networks
3. Circular use of materials	<ul style="list-style-type: none"> • CPR/BWR3 (leaching) • CPR/BWR7 (recycled content-high quality reuse) • Waste policies: (a) connection to water & soil policies (b) end-of-waste (c) stimulating the 2nd market (evt. chemicals & waste policies) 	<ul style="list-style-type: none"> • Stimulating measures implemented across Europe (similar approaches) • Level playing field regarding quality requirements • Specific legislative issues (t.b.d.) 	<ul style="list-style-type: none"> • Room for manoeuvring in applying secondary materials and validating innovations and material quality • Level playing field for import/export • No counterproductive EU legislation
4. Circular tendering and procurement	<ul style="list-style-type: none"> • Level(s) • Ecodesign • Big buyer's initiative • Tendering rules • Taxonomy 	<ul style="list-style-type: none"> • Tools based on life cycle approaches for works in infra • Sharing experiences • Specific legislative issues (t.b.d.) 	Minimising barriers for circular tendering and procurement; room for experiments

Based on the [mapping](#) and defined [goals for the applicable EC policies](#), EU dossiers are identified and assessed. This results in four categories:

- High priority EU CE dossier, direct involvement
- Priority, broader EU dossier, alignment
- EU dossier for monitoring
- Lower priority EU dossier

The assessment is summarized below. The full assessment including explanation and arguments is provided in a background report to this project.

DOSSIER/GOAL	RELEVANCY FOR RWS	INFLUENCE RIJKSWATERSTAAT VS OTHER STAKEHOLDERS	OPPORTUNITIES TO BE SUCCESSFUL
Strategy for a Sustainable Built Environment <ul style="list-style-type: none"> Include infra To be considered: dedicated EC event on circular infra 	HIGH	HIGH	HIGH
Digital logbooks and Digital agenda: Smart Circular Applications/Product Passports <ul style="list-style-type: none"> Extend scope of logbooks to infra Elaborate data strategies 	MEDIUM	HIGH	MEDIUM TO HIGH
CPR	MEDIUM	LIMITED.	MEDIUM
Measuring methods: EPD, Level(s) <ul style="list-style-type: none"> EPD and life cycle approach of works leading To be considered: Framework like Level(s) for civil engineering works 	HIGH	HIGH RE EPD MEDIUM RE LEVEL(S)	HIGH
Ecodesign <ul style="list-style-type: none"> Ecodesign of works based on a life cycle approach 	LOW TO MEDIUM	LOW	MEDIUM
Research (funding) <ul style="list-style-type: none"> Knowledge sharing (Living Labs, training, etc.) To be considered: icon project under Horizon Green Deal call e.g. with CEDR 	MEDIUM TO HIGH	MEDIUM TO HIGH	MEDIUM TO HIGH
Waste policies: Waste Framework Directive and end-of-waste criteria; Secondary materials/CPR BWR3/water & soil policies; Waste and chemicals <ul style="list-style-type: none"> Stimulating measures across Europe Level playing field 	HIGH	MEDIUM TO HIGH	MEDIUM
Public procurement – Public Buyers for Climate and Environment initiative/‘Big buyers’ projects <ul style="list-style-type: none"> Tools and life cycle approaches for infra Share experiences (see also ‘Research’) 	MEDIUM	HIGH	MEDIUM TO HIGH
Tendering rules <ul style="list-style-type: none"> Removing barriers/clarifying for innovative circular tendering 	MEDIUM	LOW	MEDIUM
Financing – Taxonomy	LOW	MEDIUM	MEDIUM
Cooperation – regions/cities, CE Stakeholder Platform, global <ul style="list-style-type: none"> Integration of infra where useful 	MEDIUM	HIGH	T.B.D. DEPENDS ON AGENDA
Chemicals policy: REACH, digital tracking <ul style="list-style-type: none"> No specific goal (no direct connection to a RWS track) 	LOW	LOW	MEDIUM
Monitoring <ul style="list-style-type: none"> No specific goal 	LOW VERY GENERIC	LOW	LOW

The evaluation of the project results in the following prioritisation:

<p>High priority EU CE dossier, direct involvement of Rijkswaterstaat in EU recommended</p>	<ul style="list-style-type: none"> • Strategy for a Sustainable Built Environment • Digital logbooks and data management • Measuring circularity (EPD and works) • Research and networks
<p>Priority, broader EU dossier, alignment within Rijkswaterstaat and Ministries between circular economy program and other areas recommended</p>	<ul style="list-style-type: none"> • Waste policies • Public buyers' initiatives & Tendering
<p>EU dossier for monitoring, alignment with Dutch representatives in EU recommended to ensure awareness of RWS interests</p>	<ul style="list-style-type: none"> • CPR • Ecodesign • Cooperation
<p>Lower priority EU dossier, generic Dutch and international network of Rijkswaterstaat should be sufficient to encourage stakeholders to inform Rijkswaterstaat on any issues</p>	<ul style="list-style-type: none"> • Financing, taxonomy • Chemicals policies (REACH, digital tracking) • Monitoring

The priority dossiers as well as monitoring dossiers are further elaborated in Factsheets (see the tabs in this page). There is no factsheet for the lower priority dossiers.

As next steps it is recommended to:

1. Contact on short notice the most relevant DGs for a (separate or joint) discussion:
 - a. DG GROW (unit C.1) to get involved in the Strategy for a Sustainable Built Environment. DG GROW is currently elaborating the program and actions. The 'non-paper' can be used as an input for discussion. As the priority dossiers 'digital logbooks and data management' and 'measuring circularity' are expected to be part of the Strategy, Rijkswaterstaat can indicate its interest for these dossiers and offer input
 - b. DG ENV (unit B.1 and or the Circular Economy advisor William Neale) to exchange views, e.g. based on the 'non-paper'. The priority dossier 'measuring circularity' in relation to Level(s) could be a subject
2. Consider an icon research project for infra: Discuss with Rijkswaterstaat Bureau Brussel about options and 'paving the way' at the Commission. Start discussing possible project proposals with CEDR
3. To get more attention for circular infrastructure and attract like-minded stakeholders for networking, it could be considered to ask the European Commission for a dedicated event to discuss the specific challenges, opportunities and approaches in circular infrastructure across Europe

HIGH PRIORITY – DIRECT INVOLVEMENT: STRATEGY FOR A SUSTAINABLE BUILT ENVIRONMENT

IMPORTANCE FOR RIJKSWATERSTAAT	<p>High overall importance for Rijkswaterstaat. The Strategy for a Sustainable Built Environment is meant to be the umbrella for circular construction actions where individual actions – also from other policy streams – will come together and should be aligned. This will be the place to put the infra sector and its specific challenges on the agenda, to get informed about and influence relevant dossiers, and to build international networks with like-minded Member States and other stakeholders.</p>
GOAL TO BE ACHIEVED	<ul style="list-style-type: none"> • Infra included in the various upcoming ‘circular construction’ actions
ACTION	<p>Ensure that Rijkswaterstaat actively participates in the upcoming EU discussions on the Strategy.</p>
APPROACH	<ul style="list-style-type: none"> • Seek cooperation with DG GROW, become an active stakeholder and provide input • Consider (internal in Rijkswaterstaat/Bureau Brussel) if Rijkswaterstaat wants to ask for a dedicated event on climate neutral and circular infrastructure, which can further mobilize the sector. Consult other active regions and Member States if they are interested too
ENTRY	<p>DG GROW – CE & Construction Unit C.1/Sustainable Built Env. Directly on civil servant level, and/or via Permanent Representation and Ministry of Infrastructure and Water Management Politically relevant via Ministry of Infrastructure and Water Management towards European Council</p>
OTHER STAKEHOLDERS	<ul style="list-style-type: none"> • The Dutch branches (NVTB, Bouwend Nederland, housing sector etc.), via their respective European counterparts (CPE, FIEC etc.). It may be useful for members of the Dutch Transitieteam and the Ministries to align on the headlines and ensure Dutch input and examples • Other (mainly the frontrunning) EU Member States, regions, etc. This will provide a useful network for RWS to exchange and align for evt. regulatory actions • European stakeholders from the housing (building) sector (e.g. energy sector, Housing Europe etc.), demolishers (EDA). They may have a specific interest in buildings (houses, offices); some topics will overlap with infra, but not all. They will most likely not be opposing infra; however, it may not be in their direct interest to put it explicitly on the agenda and topics that are in common will have to be defined

HIGH PRIORITY – DIRECT INVOLVEMENT: DIGITAL LOGBOOKS AND DATA MANAGEMENT

IMPORTANCE FOR RIJKSWATERSTAAT	<p>Medium to high importance for Rijkswaterstaat track on 'data'. If not successful, Dutch developments are not immediately in danger. If successful, RWS can benefit from common protocols and harmonisation, further development in e.g. standards for BIM etc. and innovation in digitisation.</p>
GOAL TO BE ACHIEVED	<ul style="list-style-type: none"> • Extending the scope of logbooks to include infra (next to buildings) • Data strategy issues (digitisation in the chain, management, common language, standards, etc.) on both the circular economy agenda and the EU digital agenda under the Common European Green Deal Data Space/Smart Circular Applications/Product Passports
ACTION	<p>Ensure that a Rijkswaterstaat expert will participate in the expected stakeholder meetings with DG GROW's civil servants</p>
APPROACH	<ul style="list-style-type: none"> • Ask for infra in scope via participation in Strategy Sustainable Built Environment • Participate on civil servant/expert level at DG GROW from the start • Bring the RWS data strategy and Platform CB'23 experience as input • Participate in NEN-CEN when passports are tabled in future, and in ISO TC323 • Include 'passports' in pilots and projects with other organizations (e.g. CEDR, Public Buyers' initiatives)
ENTRY	<p>DG GROW – unit C.1.001 – Sustainable construction NEN Common European Green Deal Data Space/Smart Circular Applications/Product Passports (via Bureau Brussels?) <i>Note: DG ENER may be involved because of their initiatives on logbooks for building renovation (energy oriented). To be clarified.</i></p>
OTHER STAKEHOLDERS	<ul style="list-style-type: none"> • Ministries of Infrastructure and Water Management, Interior and Kingdom Relations and/or Economic Affairs (t.b.d.) – also in relation to logbooks for buildings • Dutch stakeholders using/wanting to use construction passports, e.g. real estate sector, provinces • Dutch branches involved in producing passports (e.g. NVTB, Bouwend Nederland), via their respective European counterparts (CPE, FIEC etc.). It may be useful for members of the Dutch Transitieteam and the Ministries to align on the headlines and ensure Dutch input and examples. These stakeholders may not always support passports because of the possible administrative burden. • Platform CB'23 • Ministry of Economics in Luxembourg for product passports • CEDR (projects) • Public Buyers (initiatives to share knowledge and test)

HIGH PRIORITY – DIRECT INVOLVEMENT: MEASURING CIRCULARITY (CPR/BWR7, STANDARDS, LEVEL(S))

IMPORTANCE FOR RIJKSWATERSTAAT	<p>EU methods based on LCA are important for Rijkswaterstaat to be able to continue with MKI, DuboCalc and CB'23 guidelines (Rijkswaterstaat track 'measuring'). International data should also fit into Dutch methods (no barriers to trade). EU harmonisation is required, via standards (CEN, ISO), requirements (CPR) and frameworks (like Level(s)).</p> <p>A European life cycle framework like Level(s) would be helpful for Ecodesign, GPP and financing requirements too.</p>
GOAL TO BE ACHIEVED	<ul style="list-style-type: none"> • Use of EPD for assessment of full life cycle of construction works, based on existing CEN standards • CPR leading for products • A framework like Level(s) for civil engineering works/connected to eco design of construction works
ACTION	<p>Continue participating in standardisation of the circular economy, including 'measurement' and 'passports', in CEN and ISO via NEN.</p>
APPROACH	<ul style="list-style-type: none"> • CPR/BWR7: a monitoring dossier, alignment with Ministry of the Interior and Kingdom Relations (BZK) to ensure correct implementation of EPD in BWR7 • Via NEN, stay involved in CEN TC350, future DS/circular construction standards and ISO TC323, to table the Dutch approach • Regarding a framework like Level(s): Consider a similar European framework for civil engineering. Put on the agenda via overall involvement in Strategy Sustainable Built Environment and by connecting to DG ENV and GPP-initiatives. RWS can bring relevant experience with DuboCalc and CB'23
ENTRY	<p>NEN DG GROW/Strategy Sustainable Built Environment – Units C.1 and C.1.001 Sustainable construction</p> <p>Connect to DG ENV for Level(s) – Unit B.1/sustainable buildings, evt. via Ministry of Infrastructure and Water Management Connect to DG GROW – unit C.1 Ecodesign for connecting a framework to the ecodesign approach. Connect to DG ENV – Unit B.1/PP, DG ENV circular economy advisor William Neale and DG GROW – Unit G for connecting a framework to the Public procurement approach. Align with Dutch (RWS/Ministry representatives in DG ENV/GPP Advisory Group, the 'Big Buyers initiative' of ICLEI and Eurocities and the forthcoming 'Public Buyers for Climate and Environment initiative' under the CEAP.</p>
OTHER STAKEHOLDERS	<p>Most construction stakeholders in NL and Europe advocate for the EPD/works approach via the CPR. So far, there is no request for a 'Level(s)-like' framework for civil engineering. Check with e.g. CPE and FIEC if they would support or object when asking for such a framework; support would be helpful, but at least there should be no objections.</p> <p>Check with other frontrunning member states (Belgium (Flanders), Germany, UK, France etc.). None of them uses an instrument like DuboCalc, so their position regarding a framework is not fully clear yet.</p> <p>Alternatively, an 'ecodesign for civil engineering works' approach may be supported in research and training, for example.</p>

HIGH PRIORITY – DIRECT INVOLVEMENT: RESEARCH PROJECTS AND NETWORKS

IMPORTANCE FOR RIJKSWATERSTAAT	<p>Research projects (including practical implementation, validation and dissemination projects) are the appropriate route for material innovations (Rijkswaterstaat track 'Circular material use'), developing and testing ecodesign approaches on a larger scale in, e.g. Living Labs (Rijkswaterstaat track 'Circular design and asset management'), and exploring material passports in infra. Specially, implementation projects are interesting for Rijkswaterstaat, as one of its leading principles is 'learning by doing'.</p> <p>Relevant networks in the EU can be used for knowledge sharing, and the same for building networks and making allies for advocacy in other dossiers.</p> <p>Developing Ecodesign approaches for construction works will be helpful for Public Procurement, can avoid counterproductive EU guidelines for the Ecodesign of products and can be input for EU design protocols for infra/frameworks like Level(s).</p>
GOAL TO BE ACHIEVED	<ul style="list-style-type: none"> • Material innovations • Eco design of construction works based on a life cycle approach • Research projects for sharing knowledge (Living Labs, training, etc.) • Strengthening networks of similar organisations like RWS
ACTION	<p>Consider an 'icon' project for infra under the Horizon Green Deal call, for example with Living Labs. Discuss with Dutch representatives via Bureau Brussels and Ministry of Infrastructure and Water Management and align lobby for such a project. Initiate a project proposal e.g. via CEDR. Engage as Rijkswaterstaat in such a project proposal</p>
APPROACH	<p>Link to the goals regarding measuring methods/Level(s) icon project under Horizon Green Deal call.</p>
ENTRY	<p>Green Deal call – via Bureau Brussels, Permanent Representation and Ministry of Infrastructure and Water Management.</p>
OTHER STAKEHOLDERS	<p>Organisations like CEDR could be a vehicle to bring proposals to stage.</p>

PRIORITY – ALIGNMENT: WASTE POLICIES

IMPORTANCE FOR RIJKSWATERSTAAT	<p>The various EU waste policies have several regulatory aspects linked to applying secondary raw materials (Rijkswaterstaat track 'Circular use of materials'). EU rules may be counterproductive for NL and hamper applications. Preferably, the EU should create methods and criteria (like end-of-waste) that stimulate high-quality recycling and re-use in all members states and create a level-playing field, in order to avoid, for example the import of waste to NL. The Dutch soil and water quality approach should be defended. There should be room for national approaches in applying secondary materials.</p>
GOAL TO BE ACHIEVED	<ul style="list-style-type: none"> • Stimulating measures implemented across Europe (similar approaches) • Level playing field regarding quality requirements of (secondary) materials • Specific legislative issues (t.b.d.)
ACTION	<p>Align with Rijkswaterstaat and IenW colleagues who are already involved in EU discussions, make them aware of the Rijkswaterstaat circular economy interests and ensure to get regular feedback.</p>
APPROACH	<p>Regular exchanges with Dutch stakeholders and representatives.</p>
ENTRY	<p>Rijkswaterstaat colleagues Ministry of Infrastructure and Water Management</p>
OTHER STAKEHOLDERS	<p>BRBS/FIR, who are usually in support of the Dutch viewpoints Evt. manufacturers (NVTB) en contractors (BN)</p>

PRIORITY – ALIGNMENT: PUBLIC BUYERS’ INITIATIVES

<p>IMPORTANCE FOR RIJKSWATERSTAAT</p>	<p>Though Public Procurement is a voluntary EU policy with little influence on Member States, involvement may be important to bring specific issues for circular procurement in infra to stage in Europe. For example, in relation to the EU Tender rules, or for Sustainable Finance and taxonomy. The Rijkswaterstaat track ‘circular tendering and procurement’ sometimes experiences problems with EU tender rules. By being involved in Public Buyers’ initiatives, barriers for circular tendering and procurement could be brought forward and room for experiments created.</p>
<p>GOAL TO BE ACHIEVED</p>	<ul style="list-style-type: none"> • Procurement tools based on life cycle approaches • Sharing experiences (see also ‘Research’) • Removing barriers for innovative circular tendering (or: clarifying rules)
<p>ACTION</p>	<p>Align with Rijkswaterstaat, IenW colleagues and possibly other Ministries (Economic Affairs) on tender barriers). Make them aware of the Rijkswaterstaat circular economy interests and ensure to get regular feedback.</p>
<p>APPROACH</p>	<ul style="list-style-type: none"> • Participate (where useful) in Public Buyers for Climate and Environment initiative/‘Big buyers’ projects • Continue with bringing experience to the EC and other Member States • Align with Ministry of Economic Affairs on tender barriers
<p>ENTRY</p>	<p>DG ENV – unit B.1/PP Ministry of Infrastructure and Water Management</p>
<p>OTHER STAKEHOLDERS</p>	<p>ICLEI Cities (e.g. via Eurocities) Organisations like Rijkswaterstaat, e.g. within CEDR Other frontrunning regions/member states</p>

MONITORING: CONSTRUCTION PRODUCTS REGULATION (CPR)

IMPORTANCE FOR RIJKSWATERSTAAT	<p>The CPR applies to construction products and is therefore only indirectly relevant for Rijkswaterstaat, mainly in relation to track 'Circular use of materials' and the European intentions to elaborate Basic Works Requirements 7 on sustainability, possibly with requirements for recycled content and Environmental Product Declarations. The latter is related to the Dutch Environmental Database and Environmental Cost Calculations, see Factsheet Measuring Circularity.</p>
GOAL TO BE ACHIEVED	<p>Staying tuned with other stakeholders in case infra construction products are affected.</p>
APPROACH	<p>Align with Ministry BZK, who participates on behalf of Netherlands in DG GROW's Standing Committee of Construction.</p>
ENTRY	<p>Ministry BZK</p>
OTHER STAKEHOLDERS	<p>Manufacturers: via NVTB/CPE, and CEN/NEN via TC351 and TC350. Ministry BZK usually consults NVTB, NEN and other Dutch stakeholders.</p>

MONITORING: ECODESIGN

IMPORTANCE FOR RIJKSWATERSTAAT	<p>Low to medium importance: Though ecodesign is important for RWS's track 'Circular design and asset management', EU Ecodesign has a product approach with little focus on construction (mostly other products). However, construction products are mentioned in the Circular Economy Action Plan, but it is not clear yet how this will be elaborated.</p>
GOAL TO BE ACHIEVED	<p>Ecodesign of works based on a life-cycle approach, not a product approach</p>
APPROACH	<ul style="list-style-type: none"> • The Ministry of IenW represents NL for all types of products and could flag any construction issues. • Developing ecodesign protocols in research, advocating
ENTRY	<p>Ministry IenW</p>
OTHER STAKEHOLDERS	<p>Manufacturers (CPE) and contractors (FIEC) are on top of ecodesign of construction products (if at stake) and will flag too.</p>

MONITORING: COOPERATION	
IMPORTANCE FOR RIJKSWATERSTAAT	Networks will be important for Rijkswaterstaat to get allies in several dossiers and share experiences. However, the official EU networks like the CE Stakeholder Platform, are usually very generic. Monitoring and ad-hoc assessing requests to participate, should be sufficient. Usually, networks will be created via participation in other dossiers too.
GOAL TO BE ACHIEVED	Put 'circular infra' on the agenda
APPROACH	"wait and see"
ENTRY	DG GROW when it comes to construction
OTHER STAKEHOLDERS	Several, esp. regions/cities NGOs could be interesting in some cases (though infra is not specifically on their agenda yet)

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