



  
**CINDERELA**

## D 8.2 Initial Conference and Stakeholder Workshop

**31 May 2019 (M12)**

Responsible Partner: **TU Delft**

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## EXPLANATION OF ACRONYMS & ABBREVIATIONS

Acronym	Full name
AMS	Amsterdam Institute for Advanced Metropolitan Solutions
BAU	Business-as-usual
BIM	Building Information Modelling
BEXEL	BEXEL CONSULTING DOO BEOGRAD
CinderCEBM	CINDERELA Circular Economy Business Model
CinderOSS	CINDERELA One-Stop-Shop
D	Deliverable
EC	European Commission
GDPR	General Data Protection Regulation
GPP	Green Public Procurement
IETU	INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH
H2020	Horizon 2020 The EU Framework Programme for Research and Innovation
KplusV	KplusV organisatieadvies B.V.
LCA	Life Cycle Assessment
LCC	Life Cycle Costing
M	Project month (e.g. M6 stands for month 6 of the project)
MFA	Material Flow Analyses
NIGRAD	NIGRAD d.d. komunalno podjetje
Opencontent	OPENCONTENT SOCIETA COOPERATIVA
S-LCA	Social Life Cycle Assessment
SME	Small and medium enterprises

Acronym	Full name
SRM	Secondary Raw Materials
TECNALIA	FUNDACION TECNALIA RESEARCH & INNOVATION
TU Delft	TECHNISCHE UNIVERSITEIT DELFT
UB	UNIVERSITA COMMERCIALE LUIGI BOCCONI
WP	Work package
ZAG	ZAVOD ZA GRADBENIŠTVO SLOVENIJE

## EXECUTIVE SUMMARY

This report describes the 1.5 day initial conference and stakeholder workshop that was organised by CINDERELA project partners TUDelft and KplusV from 23<sup>rd</sup> to 24<sup>th</sup> of May 2019 at the AMS Institute (Amsterdam Institute for Advanced Metropolitan Solutions) in Amsterdam, The Netherlands. The report consists of a short introduction, stating the overall goal and brief of the event, followed by an overview of the programme, workshops and presentations that were given during the conference.



## 1. INTRODUCTION

The initial conference and stakeholder workshop was organised in May 2019 (M12) to disseminate for the first time to a wide audience of interested stakeholders the work in the initial phase of the CINDERELA project. Therefore, various parties from governmental institutions, the private sector and academia were invited for the event of keynote presentations, deep-dive sessions, panel discussions and a site-visit in the city of Amsterdam, the Netherlands. The goal of the 1.5 day event was three-fold:

- to communicate, disseminate and showcase the CINDERELA project to various governmental and private stakeholders from all over Europe;
- to harvest and integrate ideas and propositions from these stakeholders into the CINDERELA project;
- to involve and engage with the invited stakeholders in future project activities and further long-term development of the project.

In contrast to conventional conferences, the initial CINDERELA conference and stakeholder workshop was set up to go beyond the notion of traditional presentations in an auditorium or class-room set-up, and aimed to actively engage and co-create with the invited stakeholders inputs and ways forward for the CINDERELA project. With that regard, the subtitle of the conference '**Establishing a Blueprint for a resource-efficient construction sector**' was linked with one of the most important deliverables of the project (Deliverable D3.4 'Blueprint for a resource-efficient secondary raw material based urban and peri-urban construction sector'). The objective of the conference and stakeholder workshops was to jointly create within a quadruple helix framework (academia/research, governments, companies and citizens) input and ideas for this critical deliverable.

Therefore, 4 concrete actions were developed to structure the event around:

- **Gather** industry partners, national and European policymakers, experts and CINDERELA consortium members to address the opportunities and barriers for a circular urban construction sector.
- **Share** and discuss ideas and proposals enabling the use of secondary raw materials (SRM) in the construction sector.
- **Learn** about inspiring European good practices.
- **Identify** key actions towards a SRM-based construction sector.

This led to the development of the following programme, that will be discussed more in detail in the next chapter:

- **Thursday 23<sup>rd</sup> of May, 2019 (conference open to the public)**
  - see Chapter 3.1, and
- **Friday 24<sup>th</sup> of May, 2019 (site-visit open to the public)**
  - see Chapter 3.2.

## 2. ORGANISATION AND COMMUNICATION

### 2.1. Location

The conference was hosted at the AMS Institute (Amsterdam Institute for Advanced Metropolitan Solutions), at the Marineterrein in Amsterdam, the Netherlands (Figure 1). The AMS Institute is a public-private institute founded by the Delft University of Technology, the University of Wageningen and the Massachusetts Institute of Technology in close cooperation with the municipality of Amsterdam. The institute works on the nexus between academia, industry and governments and actively seeks to engage the latest technology and science together with the citizens of Amsterdam. Showcasing this quadruple helix model for innovation to a wide variety of stakeholders was one of the main reasons to host the conference at this location. Next to its central location and accessibility for national and international stakeholders, the building itself was also renovated recently and integrates several circular interventions in terms of reused and recycled materials in its meeting and office spaces. Lastly, the area around the AMS Institute will serve as the testbed for one of the demonstration cases in the WP6 Task 6.1 'Pilot demonstration of the extraction of phosphorous from municipal waste'.



Figure 1. The Marineterrein in Amsterdam with the AMS Institute on the right.

## 2.2. Communication

For the communication of the stakeholder workshop and conference, the following communication efforts were taken:

- CINDERELA newsletter published on the website and promoted via LinkedIn (Save the date);
- 5 posts via social media LinkedIn and 4 tweets on Twitter (1251 views on LinkedIn and additional views via shared through social networks of project beneficiaries and 1970 views on Twitter);
- via project website;
- via direct contacts (with potential participants and distribution of invitations through meetings and conferences where CINDERELA was presented).

In order to keep (potential) participants interested, the website and communications on social media were updated regularly.

Appendix 5.1 includes an overview of communication materials.

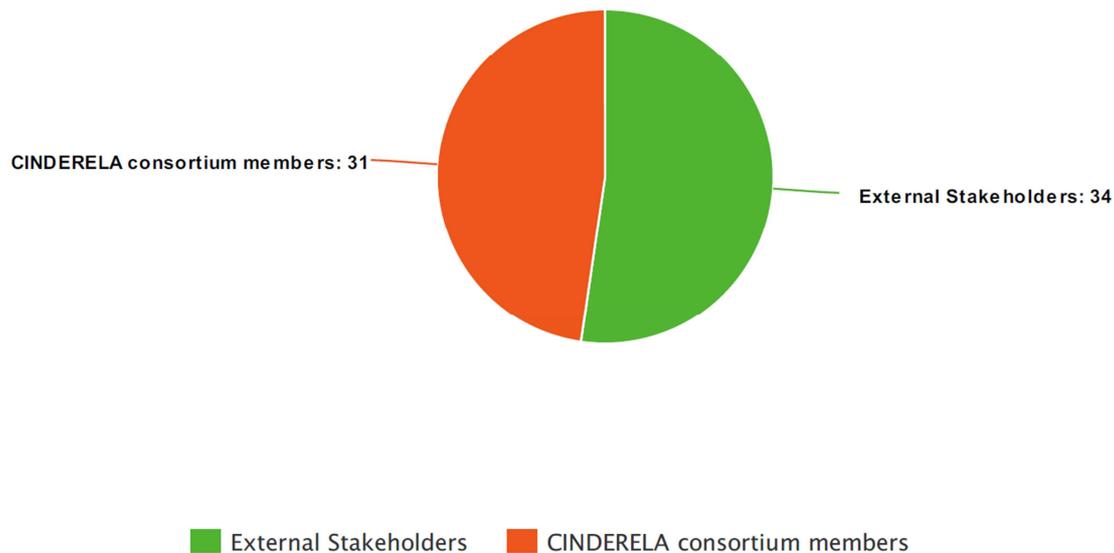
## 2.3. Invitations

A series of dedicated invitation banners with conference announcement were created for publication in social media with the links to the registration and CINDERELA website (see Appendix 5.1) where more information on the conference and the agenda were provided followed by two reminders.

A direct mailing of invitations was not possible due to the restrictions related to General Data Protection Regulation (GDPR). Therefore, most of the communication efforts were focused on contacting stakeholders via social media and announcement of the conference at events where CINDERELA project was presented. That also allowed to provide more visibility of the CINDERELA project itself.

## 2.4. Registration

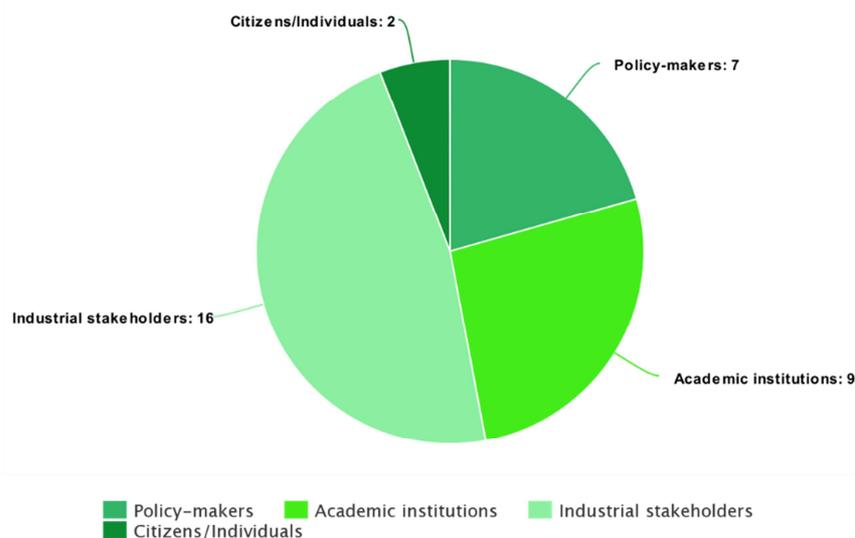
For the registration of the event, the platform 'Eventbrite' was used. Users were able to register for free for the event through an easy and intuitive registration form. In total, 65 people registered to attend the CINDERELA conference, of which 34 were external stakeholders and 31 CINDERELA consortium members (Figure 2). An overview of all registered participants can be found in Appendix 5.2.



**Figure 2. Composition of registered participants.**

Of these 34 external stakeholders, 10 came from non-Dutch companies and 24 were affiliated or active at companies based in the Netherlands. According to the quadruple helix model 34 external stakeholders were divided in following way (Figure 3):

- 7 policy-makers,
- 16 industrial stakeholders,
- 9 experts and students from academic institutions,
- 2 citizens/individuals.



**Figure 3. Composition of external stakeholders at the conference.**

## 3. PROGRAMME

### 3.1. Thursday 23<sup>rd</sup> of May 2019

As mentioned in the introduction, the conference day (Figure 4) and stakeholder workshops including Deep-Dive Sessions (Figure 5) were organized to jointly create inputs and ideas for the deliverable D3.4 'Blueprint for a resource-efficient secondary raw material based urban and peri-urban construction sector'. The overall programme of the day can be found in Appendix 5.3.

The day started with an official welcoming by prof. dr. ir. Arjan van Timmeren, scientific coordinator of the AMS Institute, professor 'Environmental Technology and Design' at TUDelft and member of the Innovation and Steering Committee of the CINDERELA project. This was followed by a keynote lecture by Mr. Antonio Paparella from the European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, where he serves as a senior expert and coordinator of DG Grow's Sustainable Construction team. His inspiring keynote presentation was followed by a presentation of dr. Primož Oprčkal from the Slovenian National Building and Civil Engineering Institute (ZAG), who is a part of the CINDERELA project coordinator's team. He presented a first draft version of the report D3.4 'Blueprint for a resource-efficient secondary raw material based urban and peri-urban construction sector'.

After a short coffee break, four parallel Deep-Dive Sessions started in two rounds; every session tackled a theme that is on the core of the CINDERELA project. Each of 4 Deep-Dive Sessions were repeated so participants could participate at 2 different sessions.

#### 3.1.1. Session A: Good building practices and demonstrations

Secondary raw materials (SRM) from locally available and recycled waste create an excellent opportunity for making the urban construction sector more circular. Despite this, their application in construction sector is still challenging in terms of scale, technological feasibility and economic viability. These challenges as well as good practices were discussed during the session.

##### Issues addressed during the session:

- How can we demonstrate the systemic, technological and economical value of SRM-based construction products in actual building projects?
- What are the main caveats and challenges to use SRM-based construction products?
- How can good practices and knowledge be shared throughout Europe?

#### 3.1.2. Session B: Circular policy-making and procurements

Policy makers all over Europe in all different levels of the public government possess the key to enable the transition towards a circular economy. In this session various policy measures and their effectiveness were discussed.

##### Issues addressed during the session:

- How is the current legislation and regulation stimulating the circular built environment and how can we, from a legislative perspective, speed this up?

- Which enablers are the most effective for the industry to use more secondary raw materials and less virgin resources?
- What is required for public procurers to start green/circular procurement? How can we enable all public procurers over Europe to adopt green/circular public procurement in their organization?
- What financial stimulants contribute in the transition towards a circular built environment?

### 3.1.3. Session C: Measurement leads to sustainability

In order to create innovative and more circular business models and construction products, we have to be able to evaluate those new solutions in comparison with business-as-usual approaches.

Issues addressed during the session:

- How can the different tools used for environmental, economic and social assessment through LCA, LCC and S-LCA, ETV contribute to a fact-based and proven circular economy?
- What is the most important information to describe the environmental characteristics of a building/construction material with?
- Which impact categories can we identify to evaluate the environmental performance of a construction material?

### 3.1.4. Session D: Identifying waste to resource opportunities through flow mapping and digital business ecosystem

Crucial to shift towards a more circular construction sector is overcoming the lack of knowledge on two levels: i) which stakeholders are active nearby and how can more proximal value-chains be set-up?, and ii) which wastes have the potential to be used as a SRM-based construction product? In this session, CINDERELA presented an online business-matchmaking platform that is able to solve the 2 aforementioned questions.

Issues to be addressed during the session:

- Which stakeholders are active nearby and how can more proximal value-chains be set-up?
- Which wastes have the potential to be used as a SRM-based construction product?
- What are the expectations and challenges of such platform to optimize the use of waste as a secondary raw material in your region?

Every Deep-Dive Session was led by a moderator, who introduced the session and gave a short introduction about the theme and goal of the session. Then a member of the CINDERELA consortium gave a short 7-min presentation on how the CINDERELA project deals with this particular theme, followed by inputs and feedback from an Industry and Policy representative who were present in every Deep-Dive Session. Hereafter, the moderator opened the room for discussion, making it possible for the participants in the session to share their ideas and discuss further ideas. At the end

of every Deep Dive Session, the whole audience needed to come up with 1 or 2 principles or recommendations within this theme that the CINDERELA project can further take action upon. All these ‘take-aways’ were then further discussed in a final plenary discussion at the end of the day.

After lunch-time, every moderator summarized the highlights from the different sessions and presented some of the most noteworthy contributions to the audience of the conference (see Chapter 4.2 Contributions).

Followed by a short break, two key note presentations were given by Rutger Sykens (Dura Vermeer, a circular developer from the Netherlands) and Eric Wuestman (Cirkelstad, an association of municipalities and companies focusing on developing a circular community of practice in the Netherlands).

The day ended with a final panel discussion that brought together all ideas from the total 8 Deep-Dive Sessions to jointly establish **‘18 CINDERELA principles for a resource-efficient secondary raw material based construction sector’**, a highly co-creative and inspiring ending of the day.



Figure 4. Final plenary discussion ‘18 CINDERELA principles for a resource-efficient secondary raw material based construction sector’.



Figure 5. Deep-Dive Sessions.



## 3.2. Friday 24<sup>th</sup> of May 2019

In the morning a guided tour was organized to the Circl Pavilion: Amsterdam's first circular building and one of the world's best examples of sustainable development from the material to the building scale. The group received a presentation from project architect Hans Hamminck (architecten Cie), after which a short tour followed throughout the building (Figure 6, Figure 7).



Figure 6. Presentation by architect Hans Hamminck in the Circl Pavilion, Amsterdam.

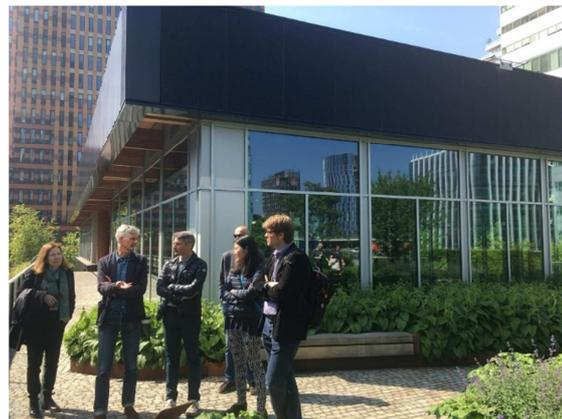


Figure 7. Final remarks by architect Hans Hamminck on the rooftop of the Circl Pavilion, Amsterdam.

## 4. EVENT AND RESULTS

### 4.1. Participation

Of the 65 registrants of the event, 43 unique participants were present, including stakeholders outside the Netherlands<sup>1</sup>. Serious obstacles for the participants' attendance at the conference were limitations related to the availability of free accommodation places and very high accommodation prices in Amsterdam at the time of the conference. However, that factor was beyond the control of the organisers.

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<sup>1</sup> Due to public character of deliverable Participation List is not included in the deliverable but is available at the organizers.

Personal Data of the Conference Participants' were handled in accordance with the GDPR EU regulations and following the rules specified in CINDERELA deliverable D1.5 H – PODP - Requirement No. 6.

## 4.2. Contributions

The conclusions of the 4 parallel Deep-Dive Sessions can be found in the Table 1 -

Table 4 below.

**Table 1. Session A 'Good building practices and demonstrations'.**

Session A Good building practices and demonstrations	
Moderator	Erik Meiberg (KplusV)
CINDERELA Expert	Mirko Šprinzer (NIGRAD)
Industry expert	Vladimir Gumilar (Construction Cluster of Slovenia)
Policy expert	Teobald Pajnik (Municipality of Maribor)
Conference Description	How can we demonstrate the systemic, technological and economical value of SRM-based construction products in actual building projects? What are the main caveats and challenges to use SRM-based construction products and how can good practices and knowledge be shared throughout Europe?
Key points	Disruptive construction technologies, Demonstration pilots
First session (11:00-12:00)	
Outcome	<p>Participants came to the conclusion that there are two main barriers for implementing circular building practices: legislation and cooperation between stakeholders. Therefore, governmental strategies (such as policy, laws and subsidies) are necessary on a national and local level. Cluster management can support the process towards a circular economy. A cluster means a group of committed participants. By giving structure to the process, interaction between different projects is enhanced and follow-up steps can be secured.</p> <p>The following recommendations were formulated:</p> <ol style="list-style-type: none"> <li><b>Close the gap between governments and companies.</b> Cluster management and/or building ecosystems along the value chain and with longer commitment (with involvement of Quadruple Helix);</li> <li><b>Identify real legislation stress and create space for pilots and experiments;</b></li> <li><b>Provide more information/education within and between sectors;</b></li> <li><b>Provide knowledge and technology transfer, for instance about good waste sorting processes, to countries with information needs.</b></li> </ol>
Second session (12:00-13:00)	
Outcome	Since this session only attracted 1 guest, we spent the session on the challenge of using best practices in Europe as reference for a <b>RVO</b> <sup>2</sup> project for developing a local waste treatment facility in Africa.

<sup>2</sup> <https://english.rvo.nl/>

**Table 2. Session B ‘Circular policy-making and procurements’.**

<b>Session B Circular policy-making and procurements</b>	
Moderator	Niels Ahsman (KplusV)
CINDERELA Expert	Nuša Lazar (NIGRAD)
Industry expert	-
Policy expert	Karlijn Kokhuis (Municipality Amsterdam)
Conference Description	Policy makers all over Europe in all different levels of the public government have the key in their hands for enabling the transition towards a circular economy. But where do you start and which enablers are most effective for the industry to use more secondary raw materials and less virgin resources? In this session various policy measures and their effectiveness were discuss.
Key points	Policy measurements, public procurement
<b>First session (11:00-12:00)</b>	
Outcome	<p>The group discussed several barriers for applying circular policy:</p> <ul style="list-style-type: none"> <li>• a conservative public sector;</li> <li>• distrust for innovative ideas, afraid for legal consequences;</li> <li>• lack of knowledge on how to use green criteria and how for you can go in using them.</li> </ul> <p>General solutions included:</p> <ul style="list-style-type: none"> <li>• sharing best practices and evaluations;</li> <li>• developing a standardized measuring method for circularity;</li> <li>• posing a balance between (practical and legal) requirements and innovation.</li> </ul> <p>The following recommendations were formulated:</p> <ol style="list-style-type: none"> <li>5. As the public sector, <b>provide financial measures (based on Life Cycle Costing)</b> for companies so that they can calculating the true pricing of construction products and services;</li> <li>6. As the public sector, <b>set the ambition high, attract the right organisations around you and facilitate circular front runner companies.</b></li> </ol>
<b>Second session (12:00-13:00)</b>	
Outcome	<p>Public organisations have a keyrole in the transition towards a resource efficient construction industry, because:</p> <ul style="list-style-type: none"> <li>• public organisations are on the largest clients in the public space;</li> <li>• policy, stimulation and regulation on a European, national or local level can combine different movements into a holistic approach.</li> </ul> <p>Because of their responsibility, green public procurement (GPP) should be used more often, especially on an EU level. There is a discussion on whether the legislation of green public procurement needs to be changed, but it is clear that the application should be improved.</p> <p>Another issue is the relation between GPP and current certification and norms.</p> <p>The following recommendations were formulated:</p> <ol style="list-style-type: none"> <li>7. <b>Use greendeals to initiate, find, evaluate and disseminate best GPP practices. Make more use of green award criteria and develop protocols and methods for applying GPP.</b></li> </ol>

**Table 3. Session C ‘Measurement leads to sustainability’.**

<b>Session C Measurement leads to sustainability</b>	
Moderator	Arjan van Timmeren (TUD)
CINDERELA Expert	Matteo Donelli (UB)
Industry expert	Igor Osmokrović (Bexel Consulting)
Policy expert	Izabela Ratman-Kłosińska (IETU)
Conference Description	In order to create innovative and more circular business models and construction products, we have to be able to evaluate those new solutions in comparison with business-as-usual approaches.
Key points	Sustainability assessment, LCA, S-LCA, LCC
<b>First session (11:00-12:00)</b>	
Outcome	<p>The group discusses several interesting points and barriers in assessing sustainability:</p> <ul style="list-style-type: none"> <li>• Does applying circular strategies in building automatically means that it will be more sustainable?</li> <li>• How can the different tools used for environmental, economic and social assessment through LCA, LCC and S-LCA, ETV contribute to a fact-based and proven circular economy?</li> </ul> <p>The following recommendations were formulated:</p> <p><b>8. Measure complexity, deliver key messages;</b></p> <ul style="list-style-type: none"> <li>- <b>Concentrate where it matters most;</b></li> <li>- <b>Data versus interface;</b></li> <li>- <b>Larger scope material passport (6D), integrate the time and maintenance dimension.</b></li> </ul>
<b>Second session (12:00-13:00)</b>	
Outcome	<p>The discussion continued on the following themes:</p> <ul style="list-style-type: none"> <li>- What is the most important information to describe the environmental characteristics of a building/construction material with?</li> <li>- Which impact categories can we identify to evaluate the environmental performance of a construction material?</li> </ul> <p>The following recommendations were formulated:</p> <p><b>9. Develop better or more standardization that allows LCA to be integrated in a nested modelling set-up by</b></p> <ul style="list-style-type: none"> <li>- the complexity of thinking and acknowledging impacts through scales;</li> <li>- secrecy of information;</li> <li>- comparing alternatives.</li> </ul> <p><b>10. Europe can only keep its producing sector if it is in an advanced quality position</b></p> <ul style="list-style-type: none"> <li>- “America innovates, Asia duplicates, Europe regulates”.</li> </ul>

**Table 4. Session D ‘Identifying waste to resource opportunities through flow mapping and digital business ecosystem’.**

<b>Session D Identifying waste to resource opportunities through flow mapping and digital business ecosystem</b>	
Moderator	Douwe Huitema (KplusV)
CINDERELA Expert	Ainara Garcia (TECNALIA), Mario Conci (Opencontent)
Industry expert	Marijn Emanuel (Madaster)
Policy expert	Carla Dekker (RVO)
Conference Description	<p>Crucial to shift towards a more circular construction sector is overcoming the lack of knowledge on two levels: i) which stakeholders (specifically wasteholders) are active nearby and how can proximal, economically viable value-chains be set-up?, and ii) which wastes have the potential to be used as a secondary raw material-based construction product?</p> <p>In this session, CINDERELA presents you the CinderOSS online business-matchmaking platform, which is able to solve these two questions. We discussed the need for this platform and success factors.</p>
Key points	Stakeholder interaction, material flow mapping, digital platform
<b>First session (11:00-12:00)</b>	
Outcome	<p>Attendants discussed the difficulties of circular networks/platforms and which aspects are important:</p> <ul style="list-style-type: none"> <li>• There must be a standardized methodology for gathering (waste flow) input.</li> <li>• By gathering information on existing waste management contracts, future developments in the amount of waste can be predicted.</li> <li>• The success of a digital platform is determined by whether a certain critical 'mass' is reached with the amount of users. Once the platform is big enough, it will grow more and more. Otherwise it will eventually collapse (once the money runs out). The same accounts for governmental institutions: they will only cooperate (with waste data) if the platform provides value for them). We call this problem the double chicken-and-egg problem, as both commercially as publically, a certain amount of users is needed to provide value as a platform, but users will only join the platform if its provides value for them.</li> <li>• It is good to start a platform by focusing on a certain niche. However, it is expected that at some point the many small platforms will merge into a few bigger platforms.</li> <li>• The displayed and shared information should be audited.</li> <li>• Use a user-friendly interface.</li> <li>• Integrate public and private parties.</li> <li>• The platform should be transparent and preferably open access. Blockchain might pose a solution, in that allow for transactions to be visible but still encrypting the sensitive information about companies/end-users.</li> <li>• Governments can possibly stimulate a platform, by linking it to (green) public procurement for instance. In Belgium the use of the FLOW2 platform was stimulated by the Flemish government.</li> <li>• Eventually a business model is needed to secure the longevity of the</li> </ul>



Session D Identifying waste to resource opportunities through flow mapping and digital business ecosystem	
	<p>platform. Most platforms use a subscription fee model.</p> <p>The following recommendations were formulated:</p> <ol style="list-style-type: none"> <li><b>11. Introduce an international standard for waste management data, so that a waste information platform can provide universal data and value to worldwide companies and governments</b> (as some waste flows are traded at international markets). Current (European) standards on waste information can be improved by also demanding data on the waste processor, not only on the waste producer.</li> <li>As a government, <b>stimulate the use of a digital platform</b> (and hopefully solve the chicken-and-egg problem) by for instance integrating them into legalisation, policy, contracts or development programs.</li> </ol>
Second session (12:00-13:00)	
Outcome	<p>Building on the outcomes of the previous session, the transparency of digital platforms was highlighted. By showing that waste AND demand is present in certain areas, new (circular) business will develop almost by themselves. As such, adding a demand side component to the GDSE waste flow mapping tool would increase the value of our platform significantly. With regard to this aspect, not only the waste holders and product users need to be active on a circular platform, but also the waste transporter, waste processor and product manufacturer.</p> <p>Another transparency issue is showing the true price of materials and products. Once societal and environmental costs are included in the price, circular products will prove more and more valuable and desirable as a society. This requires a cultural change as well.</p> <p>Finally, the role of big (recycling) companies and the associated monopolies was discussed. In Spain, there is only one plastic recycling company, which diminishes the leverage of governments over the recycling industry and the chance of this industry to cooperate in a digital waste platform.</p> <p>The following recommendations were formulated:</p> <ol style="list-style-type: none"> <li><b>13. Reduce the position of recycling monopolies by focusing on niche markets on a local and regional level.</b></li> </ol>

### 4.3. Follow-up steps

The CINDERELA project tackles some of the most pressing issues that many governmental and industrial stakeholders are facing to transition to a more circular construction sector therefore the CINDERELA consortium and organising partners were pleased to see the interest and enthusiasm of the various stakeholders that attended the conference and stakeholder workshop with Deep-Dive Sessions.

The main five guiding principles, that represent the basis of the Blueprint for the transition of urban construction sector towards resource efficient circular economy, have been initially defined as: 1. Enabling legislation, 2. Penetrating circular economy business models, 3. Environmental and social acceptance of CEBM, 4. Applicable recycling technologies – rapid transition from laboratory to practice, and 5. Powerful supporting tools (digital business ecosystem, MFA, BIM, etc.). Through the Deep-Dive Sessions the concept of the five guiding principles were expanded with information, knowledge and description of specific cases that participants provided, which resulted in additional 13 guiding principles, which will be considered during preparation of the Blueprint.

The CINDERELA workshop proved that enhanced communication between different stakeholders from different sectors (waste management sector, construction sector, industrial sector, etc.) and policy/decision makers is the best approach for effective implementation of Blueprint into practice. In the following month the Blueprint will be finalised with new inputs gained at the conference and the stakeholder workshop, and presented to EC. However, this is not the final version of CINDERELA Blueprint for Resource-Efficient Urban Construction rather it will present a living document, which will be iteratively upgraded, especially with information and knowledge gained through implementation of CINDERELA large scale demonstrations and testing of CinderCEBM and CinderOSS in living ecosystems across Europe in the upcoming three years of CINDERELA project.

## 5. APPENDICES

### 5.1. Overview of all communication materials



**CINDERELA Project conference**  
**New Circular Economy Business Model for More Sustainable Urban Construction**  
*Establishing a Blueprint for a resource-efficient construction sector*

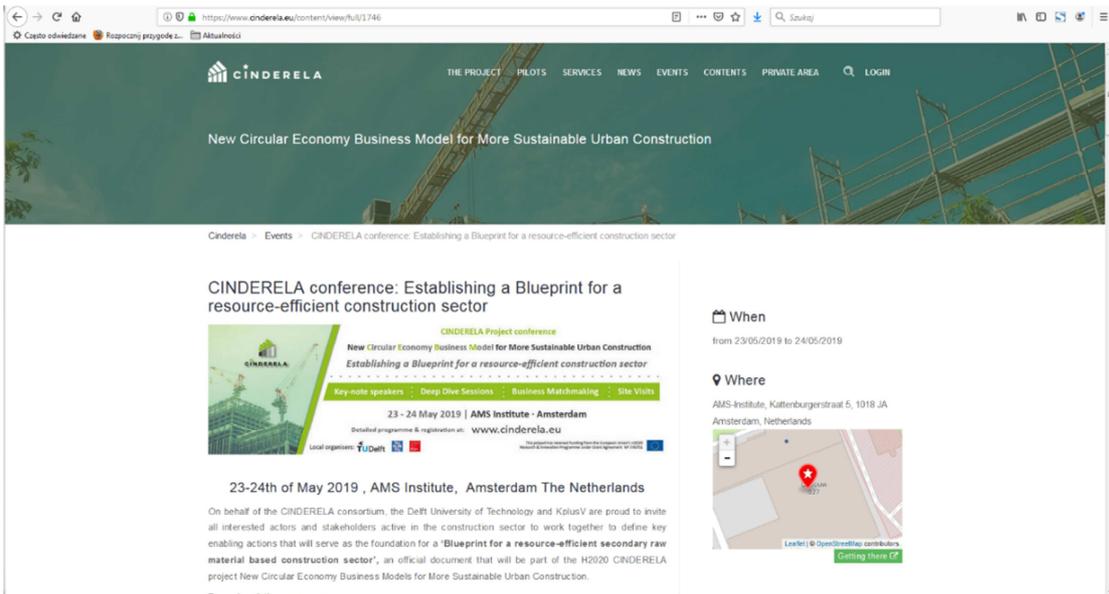
Local organisers:   

Key-note speakers : Deep Dive Sessions : Business Matchmaking : Site Visits

23 - 24 May 2019 | AMS Institute · Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's H2020 Research & Innovation Programme under Grant Agreement N° 776751 



https://www.cinderela.eu/content/view/full/1746

CINDERELA THE PROJECT PILOTS SERVICES NEWS EVENTS CONTENTS PRIVATE AREA LOGIN

New Circular Economy Business Model for More Sustainable Urban Construction

Cinderela > Events > CINDERELA conference: Establishing a Blueprint for a resource-efficient construction sector

**CINDERELA conference: Establishing a Blueprint for a resource-efficient construction sector**

**CINDERELA Project conference**  
**New Circular Economy Business Model for More Sustainable Urban Construction**  
*Establishing a blueprint for a resource-efficient construction sector*

Key-note speakers : Deep Dive Sessions : Business Matchmaking : Site Visits

23 - 24 May 2019 | AMS Institute · Amsterdam  
 Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

Local organisers:   

23-24th of May 2019 , AMS Institute , Amsterdam The Netherlands

On behalf of the CINDERELA consortium, the Delft University of Technology and KilusV are proud to invite all interested actors and stakeholders active in the construction sector to work together to define key enabling actions that will serve as the foundation for a 'Blueprint for a resource-efficient secondary raw material based construction sector', an official document that will be part of the H2020 CINDERELA project New Circular Economy Business Models for More Sustainable Urban Construction.

**When**  
 from 23/05/2019 to 24/05/2019

**Where**  
 AMS-Institute, Kattenburgerstraat 5, 1018 JA Amsterdam, Netherlands



### LinkedIn posts on CINDERELA's LinkedIn account

**CINDERELA Project**  
CINDERELA Project Coordinator - Slovenian National Building and Civil Engine...  
2mo

CINDERELA conference: Establishing a Blueprint for a resource-efficient construction sector ...see more



Local organisers: **TU Delft** **AMS** **Institute**

Key-note speakers • Deep Dive sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute - Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement No 776751

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**CINDERELA Project**  
CINDERELA Project Coordinator - Slovenian National Building and Civil Engine...  
1mo

The registration is open! CINDERELA Consortium invites to the conference "Establishing a Blueprint for a resource-efficient construction sector". Detailed agenda and registration are available at: [#circularecon](https://lnkd.in/gYZXpXA) ...see more



Local organisers: **TU Delft** **AMS** **Institute**

Key-note speakers • Deep Dive sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute - Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

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**CINDERELA Project**  
CINDERELA Project Coordinator - Slovenian National Building and Civil Engine...  
1mo

Only 22 days left to CINDERELA conference! Chiel Berends - Policy Officer, European Commission - DG Environment - Circular Economy and Green Growth - Waste Management and Secondary Materials among our keynote speakers ! ...see more



Local organisers: **TU Delft** **AMS** **Institute**

Key-note speakers • Deep Dive sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute - Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

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CINDERELA Project Coordinator - Slovenian National Building and Civil Engine...  
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Only 22 days left to CINDERELA conference! Chiel Berends - Policy Officer, European Commission - DG Environment - Circular Economy and Green Growth - Waste Management and Secondary Materials among our keynote sp ...see more



Local organisers: **TU Delft** **AMS** **Institute**

Key-note speakers • Deep Dive sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute - Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

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CINDERELA Project Coordinator - Slovenian National Building and Civil Engine...  
1mo

**CINDERELA Project**  
CINDERELA Project Coordinator - Slovenian National Building and Civil Engineerin...  
1mo

Only 22 days left to CINDERELA conference! Chiel Berends - Policy Officer, European Commission - DG Environment - Circular Economy and Green Growth - Waste Management and Secondary Materials among our keynote sp ...see more



Local organisers: **TU Delft** **AMS** **Institute**

Key-note speakers • Deep Dive sessions • Business Matchmaking • Site Visits

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Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement No 776751

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Tweets on CINDERELA's Tweeter account



**Cinderela\_Project** @CinderH2020 · Apr 4

CINDERELA conference: Establishing a Blueprint for a resource-efficient construction sector

23-24th of May 2019, AMS Institute, Amsterdam The Netherlands

On behalf of the CINDERELA consortium, the Delft University of Technology and KplusV are proud to...



**Invitation to the CINDERELA Project conference**  
New Circular Economy Business Model for More Sustainable Urban Construction  
Establishing a Blueprint for a resource-efficient construction sector

Local organisers: **TU Delft** **AMS Institute**

Key-note speakers • Deep Dive Sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute · Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement No 776751

**CINDERELA Project on LinkedIn: "CINDERELA conference: Establishing a Blueprint for a resource-efficient construction sector"**  
April 4, 2019: CINDERELA Project posted images on LinkedIn

[linkedin.com](https://www.linkedin.com)

6 7

**Cinderela\_Project** @CinderH2020 · Apr 30



**Invitation to the CINDERELA Project conference**  
New Circular Economy Business Model for More Sustainable Urban Construction  
Establishing a Blueprint for a resource-efficient construction sector

Local organisers: **TU Delft** **AMS Institute**

Key-note speakers • Deep Dive Sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute · Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement No 776751

**CINDERELA Project on LinkedIn**  
April 30, 2019: CINDERELA Project posted images on LinkedIn

[linkedin.com](https://www.linkedin.com)

1 2

**Cinderela\_Project** @CinderH2020 · Apr 16

The registration is open! CINDERELA Consortium invites to the conference "Establishing a Blueprint for a resource-efficient construction sector". Detailed agenda and registration are available at: [lnkd.in/g/YZXPxA](https://lnkd.in/g/YZXPxA) #circulareconomy #constructionsect...



**Invitation to the CINDERELA Project conference**  
New Circular Economy Business Model for More Sustainable Urban Construction  
Establishing a Blueprint for a resource-efficient construction sector

Local organisers: **TU Delft** **AMS Institute**

Key-note speakers • Deep Dive Sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute · Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement No 776751

**CINDERELA Project on LinkedIn: "The registration is open! CINDERELA Project posted images on LinkedIn"**  
April 16, 2019: CINDERELA Project posted images on LinkedIn

[linkedin.com](https://www.linkedin.com)

1 3

**Cinderela\_Project** @CinderH2020 · Apr 30

Chiel Berends - Policy Officer, European Commission - DG Environment - Circular Economy and Green Growth - Waste Management and Secondary Materials confirmed his participation as one of our keynote speakers!



**Invitation to the CINDERELA Project conference**  
New Circular Economy Business Model for More Sustainable Urban Construction  
Establishing a Blueprint for a resource-efficient construction sector

Local organisers: **TU Delft** **AMS Institute**

Key-note speakers • Deep Dive Sessions • Business Matchmaking • Site Visits

23 - 24 May 2019 | AMS Institute · Amsterdam

Detailed programme & registration at: [www.cinderela.eu](http://www.cinderela.eu)

This project has received funding from the European Union's Horizon 2020 Research & Innovation Programme under Grant Agreement No 776751

1 3 2

## 5.2. Participants list

	A	B	C	D	E	F
1	First Name	Last Name	Email	Quantity	Job Title	Company
2	Mirko	Šprinzer		1		6.maj
3	Alejandro	Bernabe Corre		1		AEDHE
4	Alejandro	Bernabe Corre		1		AEDHE
5	Ignacio	Vilela Fraile		1		AEDHE
6	Matteo	Donelli		1		Bocconi University
7	Clara	Lopez		1		CTC SERVICIOS AMBIENTALES
8	lidia	gullon corral		1		Gomez Pardo Foundation
9	santiago	rosado		1		Gomez Pardo Foundation
10	Marek	Matejczyk		1		IETU
11	Izabela	Ratman-Kłosi		1		Institute for Ecology of Industrial Areas
12	Douwe	Huitema		1		KplusV
13	Niels	Ahsmann		1		KplusV
14	Erik	Meiberg		1		KplusV
15	Nuša	Lazar		1		Nigrad
16	Tomislav	Ploj		1		Nigrad d.d.
17	Matej	Kadic		1		Nigrad d.d.
18	Mario	Conci		1		Opencontent
19	Massimiliano	Bertetti		1		Polo Tecnologico di Pordenone
20	Enrico	Pusceddu		1		Polo Tecnologico di Pordenone
21	Primož	Oprčkal		1		Slovenian National Building and Civil Engineering Institute
22	Ana	Mladenović		1		Slovenian National Building and Civil Engineering Institute
23	Kim	Mezga		1		Slovenian National Building and Civil Engineering Institute (ZAG)
24	Ainara	garcia		1		Tecnalia
25	Ekain	Cagigal		1		TECNALIA
26	Pierre	Menger		1		Tecnalia
27	Monica	Conthe		1		TU Delft
28	Foteini	Setaki		1		tu delft/ the new raw
29	Arnout	Sabbe		1		TU Delft
30	Alexander	Wandl		1		TU Delft
31	Arjan	van Timmeren		1		TU Delft
32	Igor	Osmokrović		1		Bexel Consulting
33	Bharatkumar	Patel		1		KSM Traders
34	Lukasz	Rymarz		1		Ministry of Investment and Economic Development, Poland
35	Priscilla	Asare-Bediako		1		Vardo School
36	Marian	Szudlarek		1		Ciech R&D
37	Kareem	Shukri		1		Individual
38	Apurva	Singh		1		Development Alternatives
39	chotima	ag-ukrikul		1		Chalmers
40	teobald	pajnik		1		Municipality of Maribor
41	Vladimir	Gumilar		1		Construction Cluster of Slovenia
42	Sidharth	Nanda		1		Amsterdam Business School
43	Remko	Zuidema		1		BRIQS foundation
44	Sabine	de Haes		1		Tauw
45	Tjerk	Wobbes		1		Plein06
46	Peter	Broere		1		BRBS Recycling
47	Julian	Loef		1		Mandel Circular Buildings
48	Chuan	Huang		1		TU DELFT
49	Karlijn	Kokhuis		1		Gemeente Amsterdam
50	Niels	Franssen		1		Alba Concepts
51	Christa	de Ruyter		1		Erasmus University
52	Sander	Holm		1		Royal BAM Group
53	Donia	Tawakol		1		IHS - Institute for Housing and Urban Development Studies
54	roland	haffmans		1		.
55	Alicia	Ramon		1		Alicia Ramon Architectuur
56	Carla	Dekker		1		Netherlands Enterprise Agency (RVO.nl)
57	Nico	van Hoogdale		1		iCircl.nl
58	Marius	Koops		1		Dutch enterprise agency
59	Richard	van Hoolwerff		1		RvO
60	Mario	Harms		1		AMSTA
61	xinyu	liu		1		TUD
62	Folkert	van der Spek		1		Circular Achievers
63	Marius	Koops		1		RVO
64	Lieke	van Kerkhove		1		FLOOW2
65	Virpi	Heybroek		1		AMS Institute
66	Matthew	Aubyn		1		Akweteman Stool

## 5.3. Programme Thursday 23<sup>rd</sup> of May 2019



### New Circular Economy Business Model for More Sustainable Urban Construction *Establishing a Blueprint for a resource-efficient construction sector*

#### Conference Agenda

08:30 - 09:00	<b>Registration</b> Welcome coffee and tea			
09:00 - 09:30	<b>Welcome by TUD (local organizer)</b> Introduction to the programme and Deep Dive sessions			
09:30 - 10:30	<b>Short keynotes:</b> <b>Mr. Antonio Paparella, European Commission, DG GROW, Senior Expert and Coordinator of DG GROW's Sustainable Construction team</b> <b>Ana Mladenovič - Project Coordinator, Slovenian National Building and Civil Engineering Institute</b>			
10:30 - 11:00	Coffee and tea			
11:00 - 12:00	<b>First round of Deep Dive sessions</b>			
	<b>Session A</b> Good building practices and demonstrations	<b>Session B</b> Circular policy-making and procurements	<b>Session C</b> Measurement that leads to sustainability	<b>Session D</b> Identifying waste to resource opportunities through flow mapping
	<p>Secondary raw materials (SRM) from locally available and recycled waste create an excellent opportunity for making the urban construction sector more circular. Despite this, their application in construction sector is still challenging in terms of scale, technological feasibility and economic viability.</p> <p>In this session we will discuss these challenges as well as good practices to overcome them.</p>	<p>All over Europe, the policy makers at the different levels of administration (local, regional, state) possess the key to enable the transition towards a circular economy.</p> <p>In this session we will discuss various policy measures and their effectiveness in the context of making urban construction more circular thanks to the use of SRM.</p>	<p>In order to create innovative and more circular business models and construction products, we have to be able to evaluate them not only from the economic but from the environmental and social benefits points of view as well in comparison to the business-as-usual approaches.</p> <p>The theme for discussions in this session would be the application of the different tools available for such assessments as well as the scope and relevance of information they can produce from the market and sustainability perspective.</p>	<p>Flow mapping that will be presented during this session is a powerful tool that can provide information on the availability and proximity of resources crucial for establishing an economically viable circular economy business model for using SRM in urban construction.</p> <p>In this session, we will present an online tool facilitating business-matchmaking that is able to provide two-level information:</p> <ul style="list-style-type: none"> <li>• Which stakeholders are active nearby and how can more proximal value-chains be set-up?</li> <li>• Which wastes have the potential to be used as a SRM-based construction product?</li> </ul>
	<b>Issues to be addressed during the sessions</b>			
	<ul style="list-style-type: none"> <li>• How can we demonstrate the systemic, technological and economical value of SRM-based construction products in actual building projects?</li> <li>• What are the main caveats and challenges to use SRM-based construction products?</li> <li>• How can good practices and knowledge be shared throughout Europe?</li> </ul>	<ul style="list-style-type: none"> <li>• How is the current legislation and regulation stimulating the circular built environment and how can we, from a legislative perspective, speed this up?</li> <li>• Which enablers are the most effective for the industry to use more SRM and less virgin resources?</li> <li>• What is required for public procurers to start green/circular procurement? How can we enable all public procurers over Europe to adopt green/circular public procurement in their organization?</li> <li>• What financial stimulants contribute to the transition towards a circular built environment?</li> </ul>	<ul style="list-style-type: none"> <li>• How can the different tools used for environmental, economic and social assessment through LCA, LCC and S-LCA, ETV contribute to a fact-based and proven circular economy?</li> <li>• What is the most important information to describe the environmental characteristics of a building/construction material from the viewpoint of its market relevance?</li> <li>• Which impact categories can we identify to evaluate the environmental performance of a construction material?</li> </ul>	<ul style="list-style-type: none"> <li>• Which kind of data and information are you looking for as a stakeholder to start using more SRM?</li> <li>• What kind of data are you willing to share/not to share to set-up an open-access, sharing SRM-based material flow mapping platform?</li> </ul>
12:00 - 13:00	<b>Second round of Deep Dive sessions</b>			
	<b>Session A</b> Good building practices and demonstrations	<b>Session B</b> Circular policy-making and procurements	<b>Session C</b> Measurement that leads to sustainability	<b>Session D</b> Identifying waste to resource opportunities through flow mapping
13:00 - 14:00	Lunch			
14:00 - 14:30	<b>A look at the highlights from the different sessions and some of participants' most noteworthy contributions by moderators</b>			
14:30 - 15:30	<b>Keynotes by Rutger Sypkens (Dura Vermeer) en Eric Wuestman (Cirkelstad)</b>			
15:30 - 16:00	Coffee and tea			
16:00 - 17:00	<b>Panel discussion: Establishing a Blueprint for a resource-efficient secondary raw material based urban and peri-urban construction sector</b>			
17:00	Networking drinks			



## 5.4. Materials and presentations

All materials and presentations from the conference will be available on the CINDERELA project website [www.cinderela.eu](http://www.cinderela.eu).