Circular Economy Business Models (CEBM)

Thursday 26 September, Brussels 11:00-12:00

The webinar will start shortly. We are waiting for all participants to join...

www.R2Piproject.eu
Welcome & Introductory remarks

Elisa Casazza, CSR Europe
The European Business Network for Corporate Sustainability and Responsibility

+40 Corporate Members

+10,000 Companies Reached

+ 41 National Partner Organisations across 31 countries

7 Regional Organisations

COLLABORATIVE PLATFORMS For High-Level Impact

DIALOGUE with EU Institutions
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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 730378
Welcome & Introductory remarks

Technical information

- During the webinar, you will be on mute to minimize audio noise.
- If you have trouble hearing or have any technical problems it often helps to refresh the link or to log in again.
- During the presentation, if you experience any problem or you have any questions/feedback, please use the “chat” function and write to “CSR Europe” or email Bianca Drotleff at csr9@csreurope.org.

Further information can be found in the webinar log in guide.
Raymond Slaughter
Collaborating Centre on Sustainable Consumption and Production (CSCP)

Introduction to the R$^2$π project
The project supports business leaders and policy makers to innovate and implement sustainable business models and policies that will accelerate the transition to a circular economy.
European Union Strategic Areas

- Plastics
- Food waste
- Biomass / Bio-based
- Critical raw materials
- Construction and building materials
- (Water)
Analysing Current Models & Policies

Analysing Successful Circular Business Models

Reviewing Existing Policies
Examples of Circular Business Model Cases

**Israel Water Sector**
- End of cycle product take-back
- Product-service system, offering ‘turbines-as-a-service’ model
- Value chain collaboration to enable water stewardship, efficient use, and regeneration
- Value chain collaboration to create recyclable fibres
- End-of-cycle product recovery

**Rolls-Royce**
- End of cycle product take-back
- Closed loop material supply chain
- Product-service system, offering ‘turbines-as-a-service’ model

**Venlo City Hall**
- Subscription/leasing solution enabling ‘clothing-as-a-service’
- Reuse of electronics
- Value from discarded products
- Circular building design
- Managed building services and end-of-cycle material recovery
- Reducing food waste
- Exchange platform and logistics

**Mud Jeans**
- Subscription/leasing solution enabling ‘clothing-as-a-service’

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Integrating Stakeholder Views

Collaboration Events + Interviews & Surveys

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Co-Innovating New Models

Circular Economy

Innovating New Circular Business Models

Lessons Learned

Design Thinking

Expertise

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Examples of Innovation Cases

- End of cycle product take-back
- Alternative secondary uses of critical material natural rubber

- Demand pull for more circular construction
- Value chain modifying norms

- Food, housekeeping, interiors that enable efficiency, comfort, convenience and circularity
Project Activities and Outputs

Analysing & Innovating Circular Business Models

Reviewing Existing Policies

Integrating Stakeholder Views

Case Reports

Key Factors

Policy Packages

Learning Modules

Transition Guidelines

October 2019

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Registration - https://docs.google.com/forms/d/e/1FAIpQLScAfowsv6dO2wWfH5d4zINkQmRoxx1TBQixANbTVCEGqSP0Cg/viewform

Aleyn Smith-Gillespie, The Carbon Trust

Description of circular economy business models patterns and approaches

www.carbontrust.com
Our mission is to accelerate the move to a sustainable, low carbon economy.
What is a business model?
Source: Business Model Generations
Source: Business Model Generations
Source: Business Model Generations
What is a circular business model?
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 730378
Production Phase CEBM patterns

**Co-product recovery.** Residual / secondary outputs from one process (or value chain) become inputs for another process (or value chain).

**Circular sourcing.** Sourcing recycled or renewable materials that can be returned to either the technical or biological cycle.

**Re-condition.** Fixing of a fault / aesthetic improvement of a product, but with no new/additional warranty on the product as a whole. Includes repair and refurbishment.

**Re-make.** Manufacturing steps acting on an end-of-life part or product in order to return it to like-new or better performance, with warranty to match.
Use Phase CEBM patterns

**Access.** Providing end-users with access to the functionality of products/assets, instead of ownership.

**Performance.** Focus on guaranteed performance level or outcome based on the functionality of a product/asset. Typically provided as a product-service bundle.
End-of-cycle Phase CEBM patterns

Resource recovery. Materials or products at end-of-cycle are incorporated into different products, or used as feedstock/inputs for another process (or value chain).
What does a circular business model look like?
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 730378.

Risk and Revenue Sharing Partnerships (RRSPs)

TotalCare services + ‘Power by the Hour’ revenue model aligning incentives with customer

Greater service efficiency and effectiveness; lower input costs

Commercial airlines – Key needs/challenges:
- Maintenance costs
- Asset value
- Aircraft availability

Service revenue over 4x greater than equipment revenue over lifetime

- 95% of materials recycled; half can be reused for new engines.
- 92% of customers feel TotalCare has improved their business
New approach to sales and customer relationships (hunter vs. farmer) – needing new tools, processes, and mindsets

SmartPath
- Enhancing asset value
- Capturing and re-using value (trade-in, refurbishment)

- Hospitals and imaging centres – Key needs/challenges:
  - Keeping asset up to date
  - Digitisation
  - Cost pressures

- Additional recurring revenues and ‘second life’ sales

- Aim to deliver 15% of total revenues from circular solutions by 2020
- Pledge to take back and repurpose all large medical systems returned
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- WEEE processors
- Plastics compounders
- EPR organisation

• Future proofed for regulations on extended producer responsibility and reparability
• >40% recycled content achieved

New tools and processes for **product design** and **procurement/sourcing**

Virgin plastic commodity **prices/costs are key driver**

Increasing demand for sustainability (varies by market – still niche)

Values quality
### Summary of potential CE business model elements to consider

**Key Partners**

- **Circular materials supplier**: Supplier of circular materials

- **Reverse logistics**: Provided by a third party?

- **Technology**: Partners providing key technologies.

**Key Resources**

- **Asset management platform**: Booking, paying, tracking assets.

- **Specialised production process**: Specialised processes and facilities (e.g. remanufacturing; 3D manufacturing, etc.)

- **Assets**: Assets or product stock available to provide as a service.

**Product design**: Design-for-"X" (repair; maintenance; disassembly; remanufacturing; recyclability; material substitution, etc.)

**Reverse logistics**: Executed in-house by organisation?

**Service provision**: Provision of "product-as-service", and/or value-added services (e.g. preventative maintenance, asset diagnostics, etc.)

**Cost Structure**

- **Labour**: Labour cost (increase or reduction?)

- **Materials**: Materials costs (increase or reduction?)

- **Waste Disposal**: Cost of disposing waste outputs (increase or decrease?)

**Financial Incentive**: To incentivise take-back or return of product.

**Financing cost**: Cost of customer financing (e.g. for leasing solutions)

**Revenue Streams**

- **Product sale revenue**: Sale of product, component, or material (customer-owned)

- **Bundled product-service sale revenue**: Sale of product and service bundle (customer-owned)

**Price**: Provides outcome and level of performance corresponding to a customer’s ‘job-to-be-done’ (e.g. equipment uptime; output; etc.). Includes product, system models.

**Access**: Convenience of on-demand availability; flexibility; and greater range of choice. Models include: Pay-as-you-go; rental; leasing.

**Sustainability**: Provides a sustainability-related outcome that is valued by the customer (environmental, social, etc.).

**Co-value**: Value provided to a ‘vertical customer’ outside of the main value chain.

**Transactional vs. Long-term or recurring**

- **New customer segment**: Sale to a different customer segment?

- **Vertical customer**: Customer outside of main product value chain

**Channels**

- **Re-sale channel**: Distinct sales channel, separate from ‘new’ product sales

- **Return channel**: Collection or return channel for product at end of life.

**Secondary material market**: Markets for sale of recovered materials (co-products; scrap; recycled, etc.)

**Social and environmental**

- **Potential decrease of jobs in new products or virgin material sector**

- **Potential increase of environmental impacts due to additional transport between value chains**

- **Reduced waste to landfill**

- **Reduced waste to incineration**

- **Increase of Jobs in circular materials/ repair and refurbishment/ service/ recovery and recycling sector**

**Waste-as-value**: Revenue stream from waste or co-product being used instead of disposed.

**Waste Disposal**: Cost of disposing waste outputs (increase or decrease?)

**Labour**: Labour cost (increase or reduction?)

**Materials**: Materials costs (increase or reduction?)

**Financing cost**: Cost of customer financing (e.g. for leasing solutions)

**Product sale revenue**: Sale of product, component, or material (customer-owned)

**Bundled product-service sale revenue**: Sale of product and service bundle (customer-owned)

**Service sale revenue**: Sale of service only (no ownership)

**Financial Incentive**: To incentivise take-back or return of product.

**Privacy statement**

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 101028.
Prof. Aurélien Acquier, ESCP Europe Business School

Stakeholder and supply chain partnerships for CE
Transition towards Circular Economy requires multi-stakeholder collaboration

- Circular cities and urban development
- Extended Producer Responsibility
- Short food circuits
- Waste reduction
- Industrial symbiosis
- Product as service
Managing partnerships for circular economy

- Mapping the different regimes/logics of partnership for circular economy
  - How are these collaborations designed and managed over time?
  - Who takes the leadership / cost / risks for these collaborations?

- Identifying their conditions of relevance, key advantages and risks
Axis 1: steps of a product life-cycle

1. Sourcing
2. Manufacturing / production
3. Consumption
4. End of life / end of cycle

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## Axis 2: three partnership regimes

<table>
<thead>
<tr>
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<th>Centralized Governance (Firm Centric, led by focal firm)</th>
<th>One actor centralizes the cost of organizing relationships, managing the risks and benefits of partnerships</th>
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<tr>
<td>1</td>
<td>Distributed Governance (Pluri-actors, mutualized)</td>
<td>Several actors (public &amp; private) share the costs, potential risks and benefits of partnerships</td>
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<tr>
<td>2</td>
<td>Platform-based governance (Platform/data Centric, market based)</td>
<td>A platform creates new market transactions to reframe relationships between existing supply &amp; demand</td>
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**Key question:** which advantages, drawbacks / risks & conditions for each model?
Model 1. Centralized governance

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**Advantages**
Direct image benefits, securing supply, better control over actors and processes

**Drawbacks / Risks**
Cost and coordination rely on one actor. High level of investment.

**Tends to prevail when…**
- High economic value or high social exposure (potentially strong image benefits / costs)
- Strong need for technical coordination
- High vertical integration of the sector
# Model 2. Distributed governance

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<td><strong>Advantages</strong></td>
<td>Mutualized resources &amp; competencies, potentially opened to external stakeholders (democratic governance?)</td>
<td><strong>Drawbacks / Risks</strong></td>
<td>High coordination costs, high asset specificity, high risk of opportunism (hold-up). Complex decision making process (political complexity / time).</td>
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<td><strong>Tends to prevail when...</strong></td>
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<td>Limited economic value potential for one actor, sector wide controversies, complex coordination, high investment required, political involvement</td>
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Industrial ecology

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## Model 3. Platform-based governance

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### Sourcing

**Critical resources**

### Manufacturing / production

- **openLca nexus**
- **BlaBlaCar**

### Consumption

### End of life / end of cycle

### Advantages

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<th>Low coordination costs for user, market driven innovation</th>
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### Disadvantages / Risks

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<th>Identifying profitable &amp; scalable business model / winner takes all ?</th>
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### Tends to prevail when...

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<th>New value-potential perceived by entrepreneurs. Market failures &amp; lack of data, dormant assets, economies of scale on small transactions. New incentives created by regulation.</th>
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Discussion & takeways

Each governance model has its own risks/costs and benefits

Common patterns related to Circular Economy partnerships:
- From transactional models to service/solution based approaches
- Consolidating relationships with strategic partners + complexifying network of actors (specialized suppliers, public actors, non-profits, etc…)
- Integrated mono-firm logics -> business ecosystems
- Importance of geographic, institutional, organizational, and cultural proximity
- Broadening performance measurement: beyond short term economic gain, operational, environmental et social value
Your turn to speak!

Q&A Session
Important note:

To ask a question, you can:

• Use the ‘raise hand function’ and take the floor – In this case you will be called out and un-muted

• Write your question using the “chat” function addressing to CSR Europe

• Email Bianca Drotleff at csr9@csreurope.org
## Agenda

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Next steps and Upcoming events
Upcoming events

The Webinar Series will continue with a final webinar next week. Do not forget to sign up!

- Wednesday 2nd October, 11:00-12:00: Business toolkit to implement circular business models. To register, please click here.
Upcoming events

The Consortium is inviting you to the final event of the R2Pi project:

• “Transitioning to Circular Business Models” Conference, 24th October, Brussels

• To register, click here
Thank you for listening!

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- https://twitter.com/R2PiProject
- info@r2piproject.eu

Elisa Casazza,
ec@csreurope.org