City-Business collaboration as a driver for Circular Economy

Sustainable Living in Cities
City-Business collaboration as a driver for Circular Economy

28th of October 2015

Philippe WEILER – CSR EUROPE
## Agenda

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Cross-Sectorial Practitioners’ Network of 60 Multinational Companies
45 National Partners reaching out to 10,000 companies in Europe
Sustainable Living in Cities
Enterprise 2020

Leaders:

L’ORÉAL

Partners:

Social innovation
Sustainability through business innovation

1. Product & Services Innovation
Sustainable Living in Cities

2. Workplace Innovation & Employment
Skills for Jobs

Governance and accountability
For improved economic, social and environmental performance
Managing the impact of the business

1. Performance and Reporting
2. Business and Human Rights

EU Policy Dialogue
Urban Sustainability Challenges

- Demography: 75%
- Footprint: 75% of GHG
- Consumption: 80%
- Integration

Cities can not do it alone

- 99% of cities work with business but 50% believe it is not efficient
- Cities design their sustainability visions on their own and involve businesses late in the planning process

Why a campaign?
Barriers & Solutions

1. Source: City Leaders Survey on City-Business engagement for Sustainable Development. WBCSD. ICLEI. 2014
By 2030, in each European city, relevant city actors work together in the development and implementation of long-term sustainability strategies.
The campaign objectives:

• define a new **model of urban multi-stakeholder partnership** by analyzing the opportunities and challenges of existing urban partnerships

• mainstream the approach by implementing the new model in **10 cities** in 10 European countries.
Knowledge sharing

- Demonstrate good practices via **Business Impact Map**
- **Webinar series** and a **blueprint** on effective business-city partnership.

European Roadshow

- One-day **national workshops** with city actors to present and discuss local sustainability strategies
- Set up 10 pilot **business-city alliances**, in 10 European countries.

EU Policy dialogue & High Level events

- Organize EU **policy seminars** and dialogues with relevant EU DG. Invite leaders, strategic partners and corporate members
- **High Level** events
Sustainable Living in Cities Impact Map

- 21 Commercial partnerships
- 11 Pre-commercial collaborations
- 11 Multi-stakeholder strategic alliances

Filter Projects

- by type of partnership
  - Any

- by topic of partnership
  - Select Some Options

- by company

- by sector
  - Select Some Options

- by country
  - Any

- by city

Share your best practice. Get on the map!
TYPES OF BUSINESS-CITY COLLABORATION

1. Commercial partnership
   - One-to-one
   - Mostly of commercial nature
   - Established during public-procurement

2. Pre-commercial collaboration
   - Companies collaborate on driving innovation on smart cities solutions
   - Pre-procurement discussions and studies followed by procurement

3. Multi-stakeholder long-term strategic alliance
   - Multi-stakeholder
   - Companies collaborate on driving innovation on smart cities solutions
   - As city stakeholder, companies have positive impact by improving own business performance
   - Early stage of strategy and planning process
Opportunities for cities in partnering with business in pre-procurement phase

1. Use knowledge and expertise from businesses to support urban sustainability strategies
2. Improved access to finance
3. Take advantage of innovative products, services and solutions tailored to city and citizens needs
4. By working together, expand the capacity for changing citizens behaviour
5. Integrate city planning and economic strategies through improved coordination between various departments
6. Create real social innovation.
Opportunities for business to help solving urban sustainability challenges by:

1. Play an active role by becoming strategic partners and advisors to city authorities.
2. Provide cities with innovative products and services and better suited solutions to the identified sustainability challenges.
3. Ensure positive impact by improving their own business performance and reducing the footprint of their operations.
4. Demonstrate their genuine commitment to sustainability.
5. Collaborate with other urban stakeholder to share their expertise and unlock the market for new products and solutions.
So now, let’s do it!

Thank you
City-Business collaboration as a driver for Circular Economy

Sustainable Living in Cities
Circular Economy

Time to make an impact

Arnoud Walrecht
Brussels, 28\textsuperscript{th} of October 2015
CSR Europe & BaseEUcities

kpmg.nl
Agenda

0. About megatrends

0. Circular economy – a refresher

1. Societal value creation– also a driver for circular economy

2. State of debate

3. A joint and compelling business case: Businesses and governments co-operation

4. An example: societal impact measurement transforms business cases

5. Five ingredients to make an impact in the circular economy
0. Megatrends that influence today's discussion

- Climate change
- Growing energy demand
- Material resource scarcity
- Water scarcity
- Food security
- Ecosystem decline
- Deforestation

- Economic power shift
- Entrepreneurship
- Changing demographics
- Urbanization
- Global migration
- Digitalization and hyper-connectivity
- Technology diffusion and innovation

- High-tech homes
- Focus on personal health and well-being
- Value-conscious customer
- Radical transparency
- Collaborative economy
- Circular economy
- Empowered stakeholders
The **circular economy** is a system in which products and materials are reused as much as possible to use their full potential. Doing so, **creates both economic and societal value.**

As a matter of fact, the **circular economy** offers a opportunities worldwide to create societal value through:

- Strategic (x-) sector partnerships
- Innovative business models
- Transparency in the supply chain
- Energy and resource efficient operations
- Consumer education
Circular economy – time to make an impact
1. Societal value creation – a driver for circular economy

The circular economy is not a new concept, classic drivers for internalization however offer opportunities to those industries that create value

- Stakeholder and consumer expectations
- Growing wealth
- Increasing material scarcity and volatile resource pricing
- Stricter environmental regulations
- Resilience of the system
Circular economy – time to make an impact

2. State of debate

From strategy on paper to…

In theory it is clear how to benefit from the circular economy: strategic partnerships, co-creation, resource efficiency, etc.

…making societal impact

What is needed now are organizations that take the opportunities the circular economy offers and start making societal impact.

Main challenge governments:
- Setting the example in procurement and purchasing,
- Ability to focus on circular business models instead of short term financial considerations.

Main challenge businesses:
- Understanding the value chain and setting up innovative partnerships when the (societal) business case is favorable.
Circular economy – time to make an impact

3. Businesses and governments need to cooperate

**Role government:**
- Setting the example in procurement and purchasing,
- Facilitating stimulant regulatory environment
- Stimulate societal impact

**Role businesses:**
- Understanding the value chain and building business cases
- Sharing knowledge and expertise
- Measure impact

**Public-private partnership:**
- Create societal value in a financially sound manner = circular economy
Circular economy – time to make an impact

3. Businesses and governments collaborate for shared and true value
Circular economy – time to make an impact
4. Societal impact measurement will add robustness to PPP in Circular Economy

Focus on joint societal value creation

- Determine societal costs and benefits
- Optimise CE strategy

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Circular economy – time to make an impact

4. An example: building societal costs into the cost of ownership

UN GLOBAL GOALS

Conventional TCO vs TrueTCO

Previously not accounted for

Socio-economic

Environmental

Tax incentives

Conventional TCO

External costs

Socio-economic

Environmental

Tax incentives

Conventional TCO

TrueTCO
Circular economy – time to make an impact

4. What did we learn? *TrueTCO* transforms the business case for sustainable and smart public solutions.

**KPMG True Value Analysis**

**Comparison of *TrueTotal Cost of Ownership* of electric bus vs diesel bus**

<table>
<thead>
<tr>
<th>Traditional TCO</th>
<th>GHG emissions</th>
<th>Resource use</th>
<th>Energy use</th>
<th>Conflict mineral risk</th>
<th>Local pollution</th>
<th>Noise</th>
<th>Safety</th>
<th>Travel time</th>
<th>Tax incentives</th>
<th>True TCO</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>S</td>
<td>S</td>
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<td>S</td>
<td>F</td>
<td>F</td>
<td>F + E + S</td>
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*TrueTCO* per bus per year:

- **TCO (F/Financial)**
- **Socio-economic (S)**
- **Environmental (E)**

Using scarce materials in batteries adds to the *TrueTCO* of the electric bus.

Sweden’s carbon tax means that diesel’s much higher carbon emissions are largely accounted for in the TCO analysis.

Expected increases in the cost of extracting fossil fuels affect electric buses much less than diesel buses.

The current tax incentive structure in Sweden favors diesel buses over electric. The *TrueTCO* analysis levels the playing field.

Traditional TCO (financial) of an electric bus is higher than diesel.

Less pollution and noise reduces public healthcare costs compared to diesel.

Electric bus design reduces travel time by enabling swifter boarding and disembarking of passengers.
Circular economy – time to make an impact

5. Five ingredients to make an impact in the circular economy

1. **Leadership**
   Show leadership, start and know your strategy

2. **Dare to ask for market solutions**
   Ask the market for solutions and share your ambitions

3. **Co-creation beyond procurement**
   Focus on co-creation and non-traditional contracting

4. **Facilitate collaboration**
   Moderate supply chain collaboration

5. **Design projects for impact**
   Measure societal impact & steer towards upscaling
City-Business collaboration as a driver for Circular Economy

Sustainable Living in Cities
Panel 1: Political Landscape of Circular Economy & City-Business Collaboration

Guiding Questions:

1. Which policies are needed to enable a transition towards local circular economies?

2. How could European policies influence city-business collaborations (e.g. new working package on circular economy)?
Panel 1: Political Landscape of Circular Economy & City-Business Collaboration

Moderator:
Arnoud Walrecht, Manager KPMG Sustainability services, KPMG

Panellists:
• Peter Czaga, Policy Officer, European Commission, DG Environment
• Dr. Sander Happaerts, Policy Analyst, European Commission, DG Regio
• Kathrine Overgaard Rasmussen, City of Copenhagen
• Dr. Yves De Weerdt, Research Coordinator Urban Sustainability, VITO
• Maciej Surowiec, Corporate Affairs, Microsoft Corporation
Coffee Break

Sustainable Living in Cities
Good Practices of City-Business Collaboration & Circular Economy

Moderator:
Marjolijn Wilmink, Head of Department of Private Sector Relations, MVO Nederland

A city perspective:
Charlotte Palmer, Climate Change Manager, Peterborough DNA Programme, Peterborough City Council

A business perspective:
Sofie Narinx, Associate Partner, IBM Global Business Services
Presentation

A city perspective:
Charlotte Palmer, Climate Change Manager, Peterborough DNA Programme, Peterborough City Council
City-Business collaboration as a driver for Circular Economy

Sustainable Living in Cities
Circular Economy Insights

Disruptive technology to optimize reuse

Sofie Narinx, Associate Partner IBM
28 October 2015
IBM is the leading player in cloud and cognitive computing

- **2014 Revenue**: $92.8bn
- **400,000+ employees** operate in 170+ countries
- **3rd largest Software Company worldwide** (Gartner)
- **104 years in business**
- **R&D investment**: $5.7bn annually
- **Record for most patents**: 22 consecutive years
- **4th most valuable brand in the world** (Milward Brown 2015)
- **Cognitive Computing (Watson)**
- **Strives for Circularity of Products and Companies through GARS and GBS**

*GARS is Global Asset Recovery Services, part of IBM Global Financing and responsible for optimizing residual value of all IBM assets worldwide. GBS is Global Business Services*
Our CE transformation offering builds on …

- IBM’s own *25+ years of experience* of optimizing asset reuse (GARS)
- IBM’s own transformation to *service business models*
- IBM’s *advanced analytics capabilities*, including Watson cognitive computing
- IBM’s *EmA CE100* membership
IBM Global Asset Recovery Services (GARS) is the world’s largest, most efficient IT asset reuse organization with robust offerings and processes.

**GARS Overview**

- Part of IBM Global Finance, refurbishing and selling used IT equipment with **healthy profits**

- **$761 million revenue from reuse** of 1,293 IBM System z® and IBM Power Systems TM equipment

- Process operations in **40+ countries WW**; 12+ major remanufacturing sites

- Nearly **30 years of experience** refurbishing

- **2.4 million assets sent for refurbishment** with more than **90% resold or reused** in the past 3 years

- In 2011 GARS remanufacturing **operations processed nearly 1,000,000 machines**

- **91.1% of the units processed were readied for resale & reuse**, while the remaining 8.9% was sold for recycling, leaving around 0.2% for landfill

- IBM received the inaugural **Climate Leadership Award** from the U.S. EPA in the Organizational Leadership

- IBM received **World Environment Center’s 2012 Gold Medal** for International Corporate Achievement in Sustainable Development

**Video about GARS**

IT Asset Disposal Ranking in NA (Gartner)
Critical capabilities for success

**Product Design & Mgmt (incl. PLM)**
- Design for Circularity for Product and Component
- Design for Material Reuse
- Lifecycle Management for Product and Component

**Reuse Operations**
- Remanufacturing
- Refurbishment
- Parts Harvesting
- Material Harvesting

**Reuse (Loop) Selection**

**Solutioning & Selling**
- Portfolio for new and used products
- Solutioning, including products
- Performance based contracts

**Reverse Mgmt**
- Reverse Logistics (transport and handling)
- Regulatory and Legislative Compliance
- Installed Based Management
Navigating between the loops

In a complex, multi-level system (products, parts and materials) make and execute the optimal decision regarding the next most valuable use for a previously used product.

Source: CE graph adapted from the Ellen MacArthur report “Towards the Circular Economy”
The next most valuable loop?

Reuse as product, or harvest parts?

Reuse parts in Remanufacturing?

Reuse parts in Remanufacturing/Manufacturing or as Spare Part?

Is there demand on part level from Spare Parts Org. or (Re)Manufacturing?

Harvest parts as material? Is there demand for types of critical material?
Need to capture and integrate the relevant data

**Engineering-Material Data**
List of parts and components: interchangeability/upgradability/reusability
List of Materials with tagging reuse potential and toxic features in context of usage (ex. C2C tagging)

**Product Journey Data**
Lifecycle tracking of configuration and status, sensor generated data of products, parts and materials.
Need to capture and integrate the relevant data

**Engineering-Material Data**
List of parts and components: interchangeability/upgradability/reusability
List of Materials with tagging reuse potential and toxic features in context of usage (ex. C2C tagging)

**Product Journey Data**
Lifecycle tracking of configuration and status, sensor generated data of products, parts and materials.

**Supply Data**
Available and expected

**Demand Data**
History, firm orders and requests

**Financial Data**
Contracts (e.g., Lease), depreciation/accounting rules, (market) pricing, commodity/recycle index, logistics and remanufacturing costs

**Regulatory Data**
Legislation/regulatory constraints across industry/geography

**Facility Capacity Data**
Utilization of refurbishment, remanufacturing and recycling lines
Apply advanced analytics

- in current version -
Advanced Analytics
Cloud Computing

- next integration -
Cognitive Systems
Internet of Things

Secure and Private
Leading to value-driven actionable reuse insights

Scenario Analysis

- Insights on all Product levels
- Matching Supply & Demand
- Expressed in Value by Reuse Loop

Forecast

€ +
Solution overview

Integrate relevant data sets

• Supply Data
  available and expected

• Demand Data
  history, firm orders and requests

• Engineering-Material Data
  BOM, interchangeability/ upgradability/ reusability

• Product Journey Data
  lifecycle tracking of configuration and status, sensor generated data

• Regulatory Data
  legislation/ regulatory constraints

• Financial Data
  contracts, depreciation/ accounting rules, (market) pricing, commodity/ recycle index, logistics and remanufacturing costs

Circularity Insights as a service

Actionable Reuse Insights

All Product levels

Supply & Demand matching

Value by Reuse Loop

Circularity Insights as a service
- in current version -
Advanced Analytics
Cloud Computing

«click to play»

- next integration -
Cognitive Systems
Internet of Things

$+€$
Becoming a Cognitive Business is a journey.

Leaders can capitalize on all the foundational work they’ve done to deploy cloud, analytics, mobile, social, security.
When your business thinks, you can outthink. And build cognitive industries: cognitive healthcare, supply chains and much more.

Advantages of Cognitive Business:

- Deeper human engagement.
- Elevated expertise.
- Cognitive processes and operations.
- Intellectual exploration and discovery.
- Cognitive products and services.
Thank you
City-Business collaboration as a driver for Circular Economy

Sustainable Living in Cities

#E2020Cities www.csreurope.org
Panel 2: City-Business collaboration as a vector for Circular Economy

Guiding Questions:

1. How can cities encourage businesses to embed circular economy approaches into their strategies and contribute to a transition towards a circular economy?

2. How can businesses help the transition towards circular economies at local level?
Panel 2: City-Business collaboration as a vector for Circular Economy

Moderator:
Marjolijn Wilmink, Head of Department of Private Sector Relations, MVO Nederland

Panellists:
• Gert Vandermosten, Coordinator Stadslab2050, City of Antwerp
• Pieter van de Glind, Co-founder, ShareNL
• Olga Horn, Officer, Smart Urban Infrastructure, ICLEI WS
• Ariane Thomas, Environmental Director, L'Oréal SA
• Francois Tasmowski, CSR & Communications Director Continental Europe, McCain Foods
Innovative city-business collaboration – Emerging good practice to enhance sustainable urban development
Innovative city-business collaboration – Emerging good practice to enhance sustainable urban development

- Shared objectives and a common vision
- Multi-stakeholder involvement
- Political will and leadership
- Defined roles and collaboration process
- Neutral facilitator or bridging organization
- Multi-sector expertise
Video: BON et Bien

McCain Food
City-Business collaboration as a driver for Circular Economy

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City-Business collaboration as a driver for Circular Economy

CLOSING REMARKS

Philippe WEILER – CSR EUROPE
FUTURE-PROOFING TOMORROW'S CITIES TODAY

THE CONFERENCE
URBAN EUROPE - The Economic Power of Cities

The inaugural ‘baseEUcities’ event focuses on the economic power of cities and the need for action now to address the challenges that threaten long-term sustainable growth.

29 October 2015

SPEAKERS

Some of the most inspiring and authoritative voices in the global sustainability debate will speak at the baseEUcities event.

JEREMY RIFKIN
The renowned US economist, adviser to German Chancellor Angela Merkel, and author of “The Third Industrial Revolution”

JOHN ELKINGTON
The leading advocate for measuring company results based on social, environmental and financial performance (the “Triple Bottom Line”)

JØRGEN RANDERS
Professor of climate strategy, former rector of the BI Norwegian Business School, and co-author of “The Limits to Growth”

GRAEME MAXTON
Secretary-General of the Club of Rome think-tank network and author of “The End of Progress – How Modern Economics Has Failed Us”
ENTERPRISE 2020
SUMMIT
THE FUTURE OF EUROPE

16-17 November 2015
BOZAR, Brussels, Belgium

www.enterprise2020summit.com
Please take 2 min to give us your feedback on the workshop.
Thank You

Sustainable Living in Cities as a driver for Circular Economy