


Criteria to determine how circular a SME is

(in order to grant it public support)

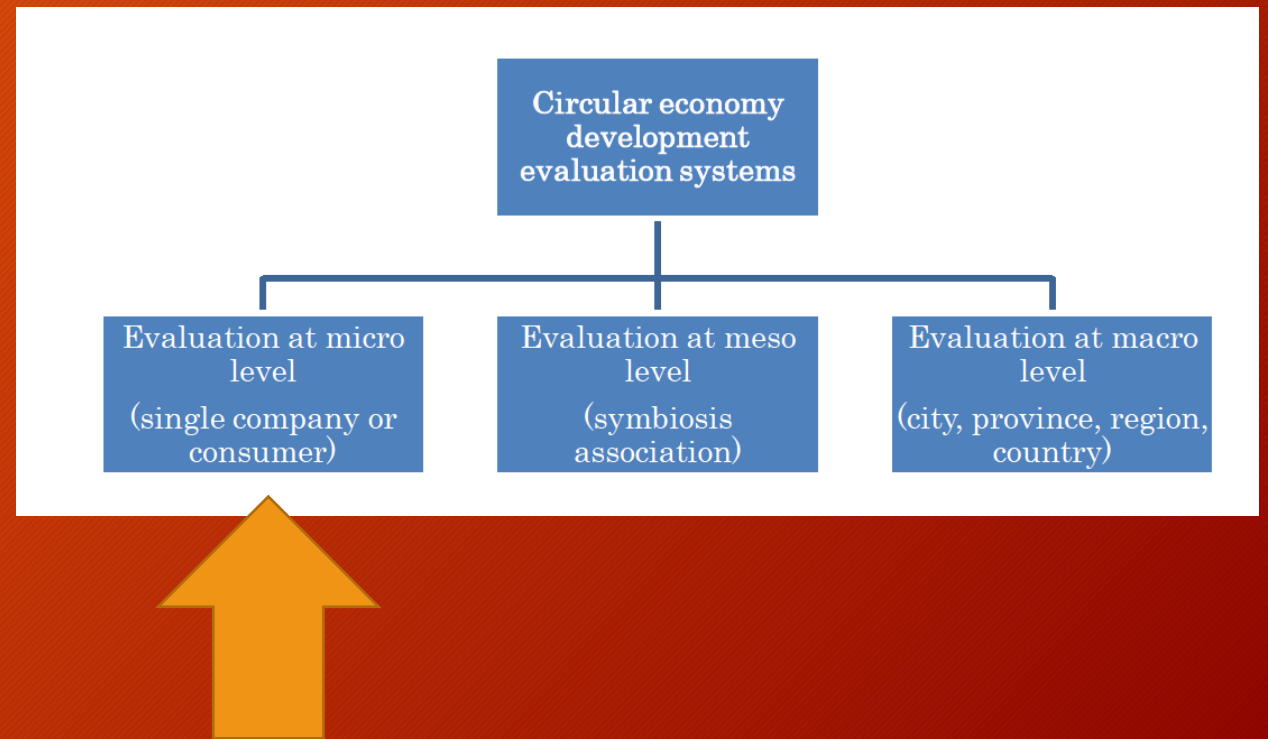
Presentation by Xavier Marichal, Factor-X (xavier.marichal@factorx.eu)
of a study conducted by Factor-X & ACR+ for the Brussels Ministry of Economy

Scope

- Since 2016, Brussels has created a regional Programme in Circular Economy to improve quality of life in the capital city of Belgium, and publicly support businesses that are part of it
- Several tools have already been deployed (notably calls for projects)
- The **objective** here was to develop a set of criteria to recognize a company as “circular” in order to provide it with extra support (+10% grant) on some financial instruments
 -  label or official recognition
 - Only for the purpose of those financial instruments

Challenges

- Need for a GO / NO GO final decision
- Without discussion, nor visit → **questionnaire**, but no human interpretation!
- At company level
- Include all the variety of initiatives in the “circular spirit”
- Be restrictive enough not to accept everything



Approach - 1

Figure 1 – Outline of a circular economy

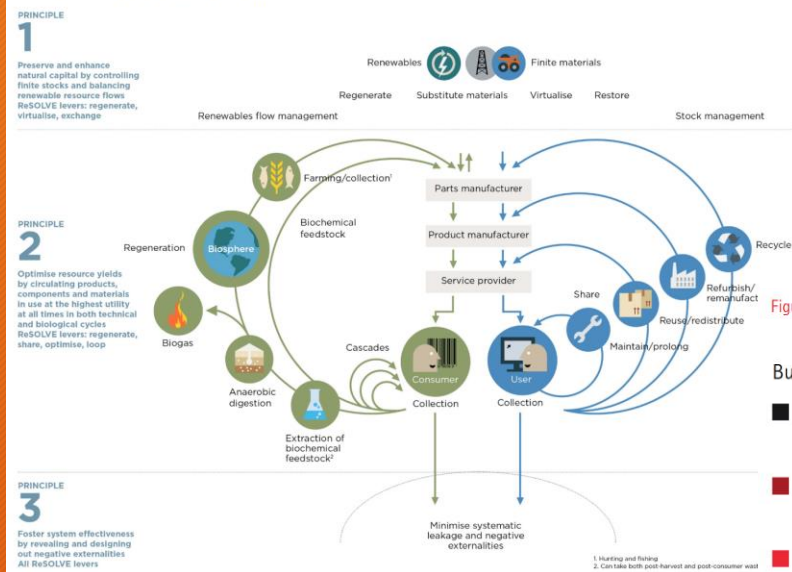
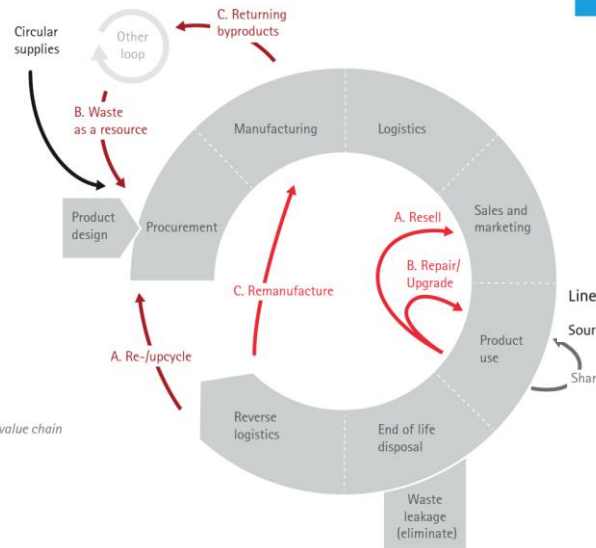


Figure 5: The five circular business models

Business Models

- Circular Supplies:** Provide renewable energy, bio based- or fully recyclable input material to replace single-lifecycle inputs
- Resource Recovery:** Recover useful resources/energy out of disposed products or by-products
- Product Life Extension:** Extend working lifecycle of products and components by repairing, upgrading and reselling
- Sharing Platforms:** Enable increased utilization rate of products by making possible shared use/access/ownership
- Product as a Service*:** Offer product access and retain ownership to internalise benefits of circular resource productivity

* Can be applied to product flows in any part of the value chain



Circular economy		Strategies		Innovations in core technology	Innovations in product design	Innovations in revenue model	Socio-institutional change
Increasing circularity	Rule of thumb: Higher level of circularity = fewer natural resources and less environmental pressure						
Smarter product use and manufacture	R0 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product					
	R1 Rethink	Make product use more intensive (e.g. through sharing products, or by putting multi-functional products on the market)					
	R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials					
Extend lifespan of product and its parts	R3 Re-use	Re-use by another consumer of discarded product which is still in good condition and fulfils its original function					
	R4 Repair	Repair and maintenance of defective product so it can be used with its original function					
	R5 Refurbish	Restore an old product and bring it up to date					
	R6 Remanufacture	Use parts of discarded product in a new product with the same function					
	R7 Repurpose	Use discarded product or its parts in a new product with a different function					
Useful application of materials	R8 Recycle	Process materials to obtain the same (high grade) or lower (low grade) quality					
	R9 Recover	Incineration of materials with energy recovery					

Source: RLI 2015; edited by PBL

Approach - 2

- IDEAL = can clearly demonstrate a **lower amount of resources** (materials, energy) consumption and **waste** production
 - and/or is implement a virtuous **business model**
 - and/or implements **good practices**
- Various criteria
 - Each criteria gives points
 - All points are added up
 - If sum > threshold: OK, you're circular (for the instrument)

“Flow of materials” criteria

- Material flows:

$$C_{FM} = 1 - ((2 * T_{supplies}) - T_{postC} - T_{recycled} - T_{products}) / (2 * T_{supplies})$$

Or

- Financial flows:

$$C_{FMM} = 1 - ((V_{supplies} + V_{coproducts} + V_{waste} - V_{recycled}) / (V_{supplies} + V_{products} + V_{coproducts} + V_{waste}))$$

“Business Models” criteria

- Resources Saving: % of post-consumer supplies, % of 2nd hand sales
- Warranty extension: duration of the “average” warranty (beyond the mandatory 2 years)
- Extension of life duration: #objects repaired, upgraded, restaured vs #direct exchanges
- Functional Economy: ~intensity of usage
- Sharing Platform: ~intensity of transactions vs offer + limitation of dividends (sharing finances)

“Good Practices” criteria

- Zero Waste: % of non-packed supplies and sales
- Eco-conception: level of good practice on packaging and product itself
- Sustainable input: % of renewable supplies (reused/recycled or labeled)
- Local: % of local supplies and sales (50 km radius)
- Cradle 2 Cradle products: % of sales