

Trainers Training Program on Waste Management in Textile & Garment Industry in BGD

Promotion of Sustainability in the Textile and Garment Industry in Asia - FABRIC

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

FABRIC Asia



GIZ FABRIC -Training on Waste Management

Presentation 11: Circularity in the Textile sector



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Conceptual consideration on a circular textile industry



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Circular textiles economy



A circular textiles economy describes an industrial system which produces **neither waste nor pollution** by redesigning fibres to circulate at a high quality within the production and consumption system for as long as possible and/or feeding them back into the bio- or technosphere to restore natural capital or providing secondary resources at the end of use

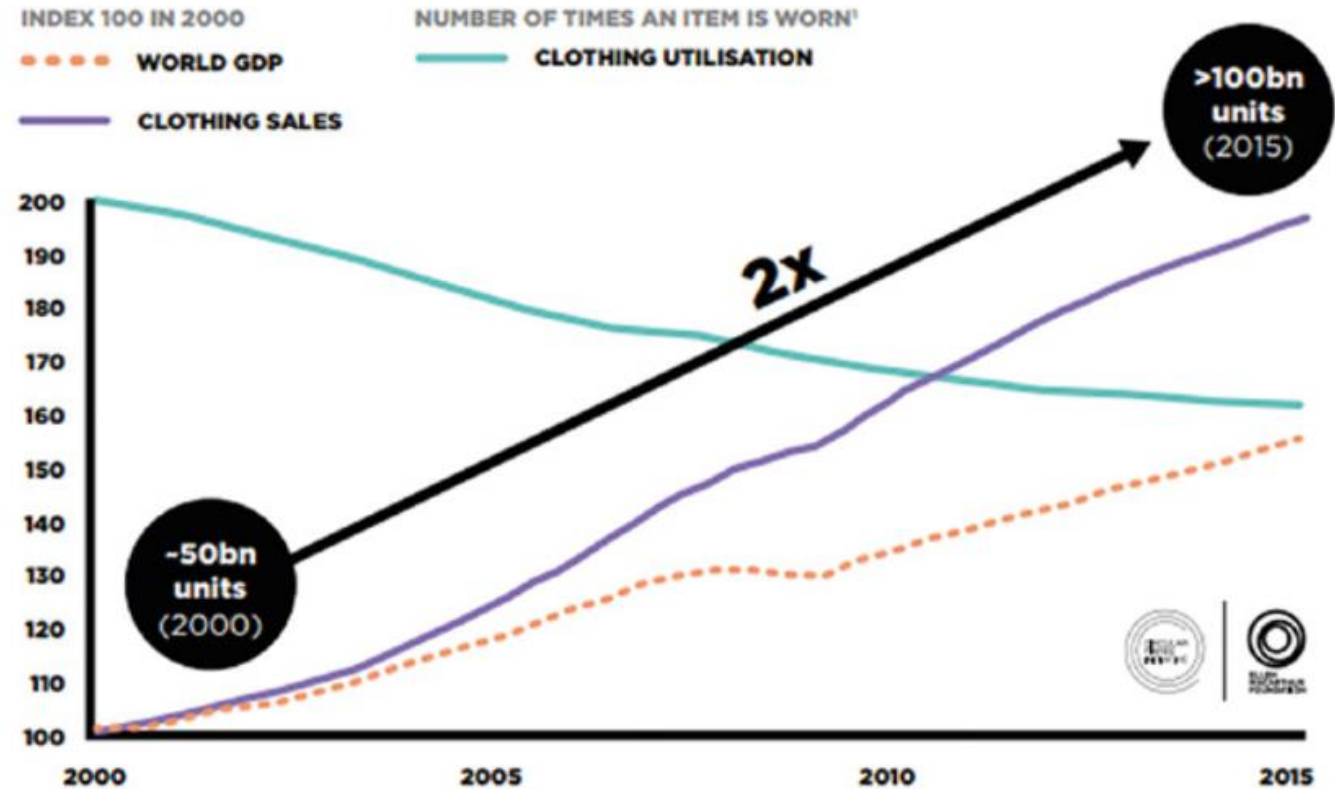
Source: Circular Economy in the Textile Sector, GIZ 2019

Quiz: How much do you think we throw out globally?

globally, the annual cost to consumers of throwing out clothing that they could continue to wear is estimated at **\$460 billion**

UNEP circularity platform - Textiles





1 Average number of times a garment is worn before it ceases to be used

Source: Euromonitor International Apparel & Footwear 2016 Edition (volume sales trends 2005-2015); World Bank, *World development indicators - GD* (2017)

Circular Economy as a paradigm shift

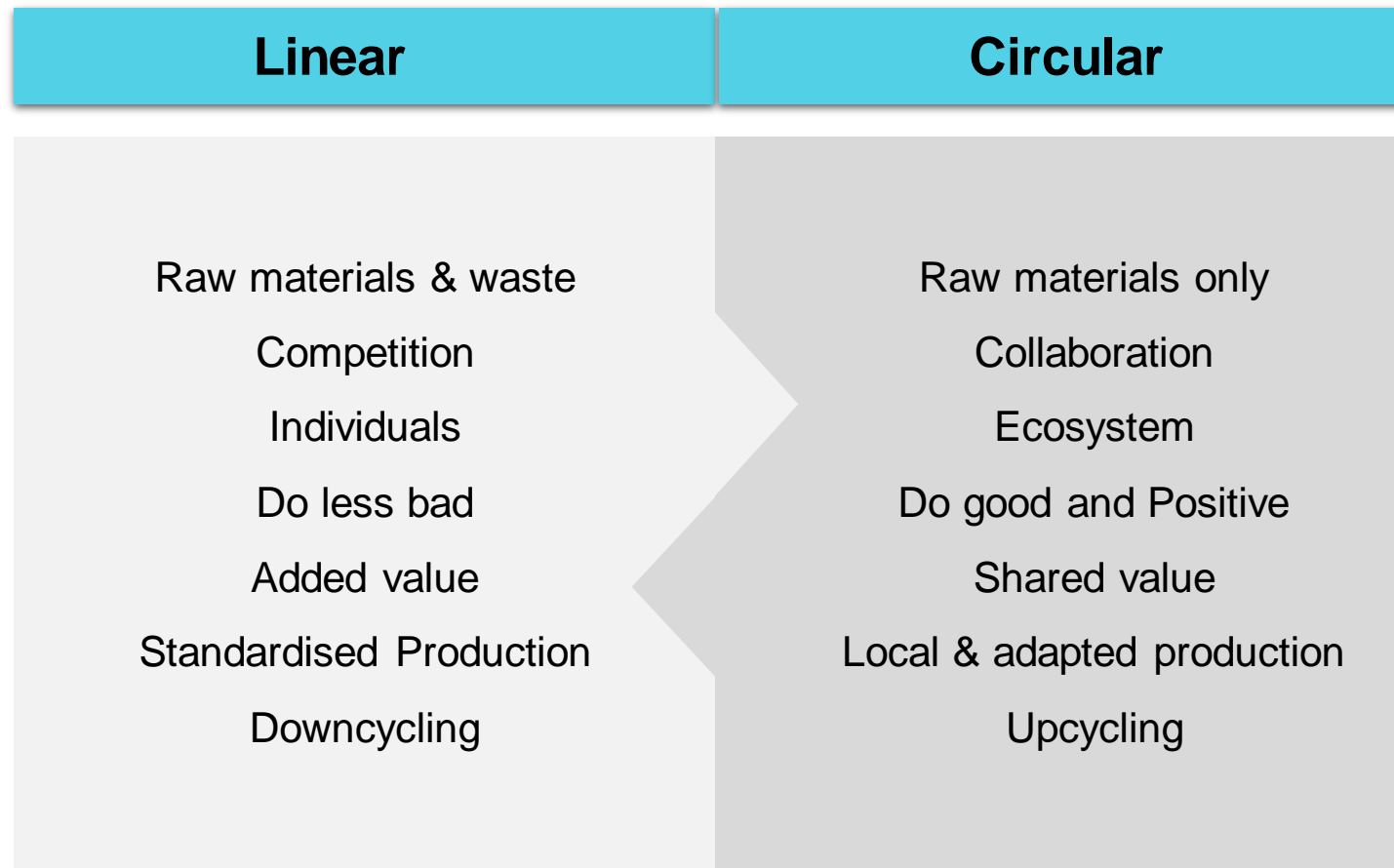





Figure 2: Framework for circular business models in the textile industry (Circle Economy 2015)

 Circular	 Servitization	 Sufficiency
<p>Create Value From Waste</p> <p>The concept of waste is eliminated By turning waste streams into useful and valuable input for other processes</p>	<p>Functionality over Ownership</p> <p>Provide services that satisfy users' need without having to own physical products.</p>	<p>Encourage Effective Resource Use</p> <p>Solutions that actively seek to reduce consumption and production</p>
<p>Closed Loop Models</p>	<p>Repair & Warranty</p>	<p>Demand Management</p>
<p>Reuse</p>	<p>Renting & Leasing</p>	<p>Co-Creation</p>
<p>Recycle</p>	<p>Pay for Result</p>	<p>Use Excess Capacity</p>

4Rs

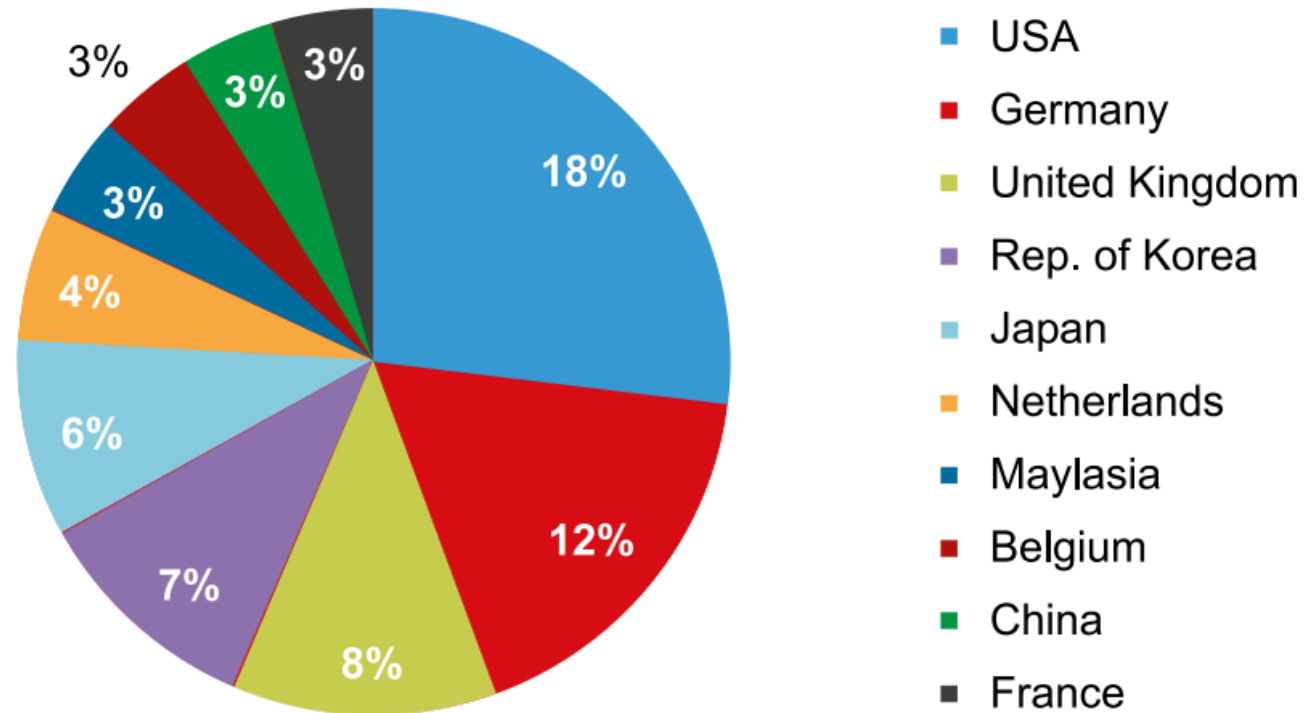


Seven strategies

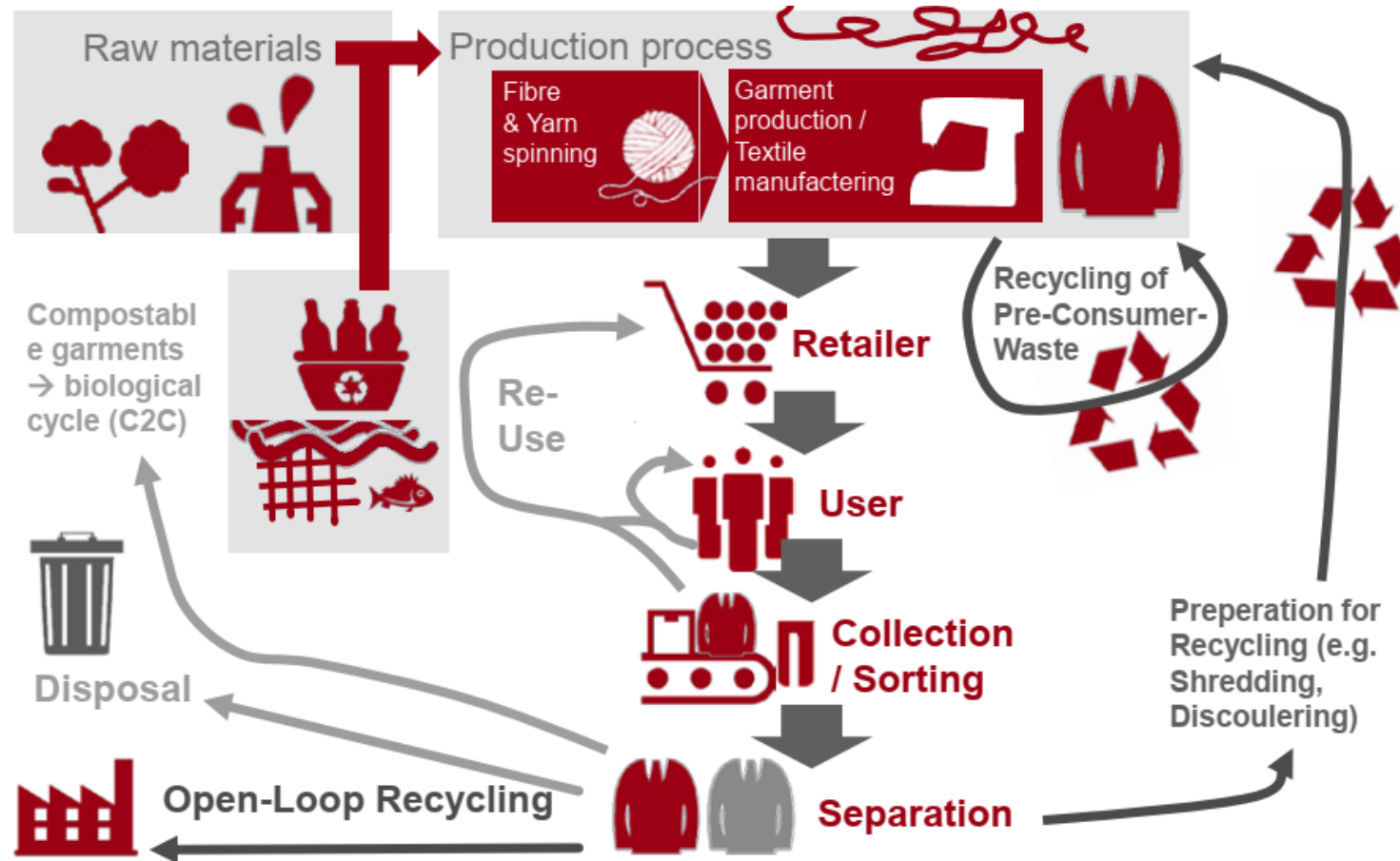
1. Redesign manufacturing processes and products to use less material and energy
2. Redesign manufacturing processes to produce less waste and pollution
3. Develop products that are easy to repair, reuse, remanufacture, compost, or recycle
4. Eliminate or reduce unnecessary packaging
5. Use fee-per-bag waste collection systems
6. Establish cradle-to grave responsibility
7. Restructure urban transportation systems



Top ten exporters of used textiles (share of total mass exported globally)



Textile recycling at a glance



Solutions and best practices



Recycling technologies

Chemical recycling/ Mechanical recycling

Innovative closed-loop recycling technologies

- Infinited Fiber (Relooping Fashion Initiative)
- re:newcell pulp
- Refibra (Lenzing)
- Innovative chemical polymer recycling (Worn Again/HKRITA/Evrnu)



Sorting technologies

- Fibersort
- SIPTex
- Textiles4Textiles

Challenges and barriers

- Low-grade quality of collected textiles, insufficient data on amount of collected textiles and lack of standards for collection and processing
- Lack of consumer awareness and insufficient education on circularity across schools for textile (design)
- Limited information exchange, low market penetration of innovative start-ups and path dependencies for established businesses in competitive market environments



Challenges and barriers

- Externalisation of costs, underdeveloped infrastructure for separate collection and recycling, textile exports and lack of funding
- Absence of extended producer responsibility (EPR), inconsistent policies, lack of global governance mechanism for textile supply chains and regulatory barriers



Solutions and best practices

- Integration of learning modules on circular economy into curricula for secondary and higher education
- Incremental innovation and disruptive business models which encourage circular production and consumption patterns
- International collaboration and the role of multi-stakeholder initiatives
- Enabling regulations, soft policies as well as research and development for circular economy principles in the textile sector
- Strategies to overcome challenges in recycling technologies

Questions for you

1. How circular economy is different from other concepts?
2. What are the 4Rs concept here?
3. How Bangladesh is Championing to some extent on Circular economy on textile material context?

Acknowledgement

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