

NEW BUSINESS OPPORTUNITIES IN CIRCULAR ECONOMY IN RESPONSE TO COVID-19 PANDEMIC

Presented by

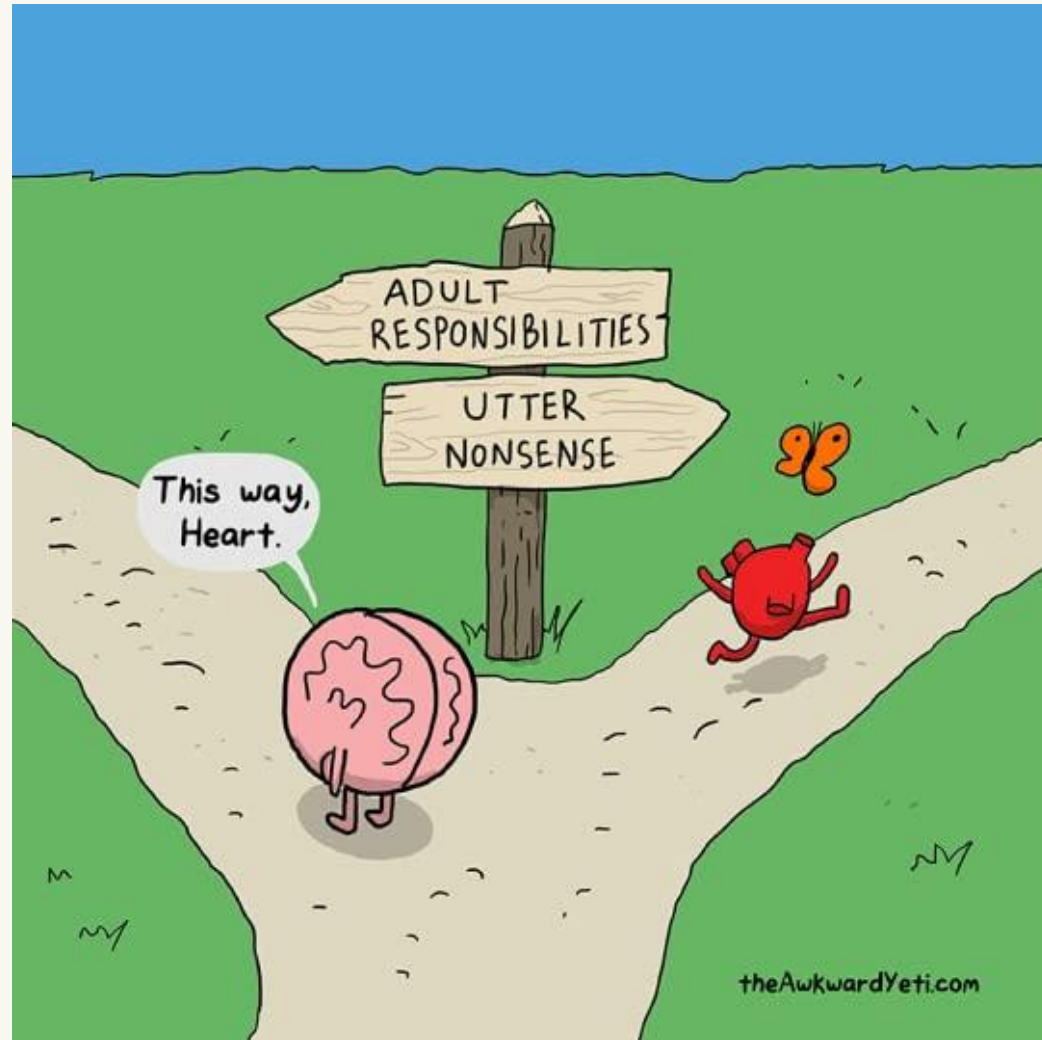
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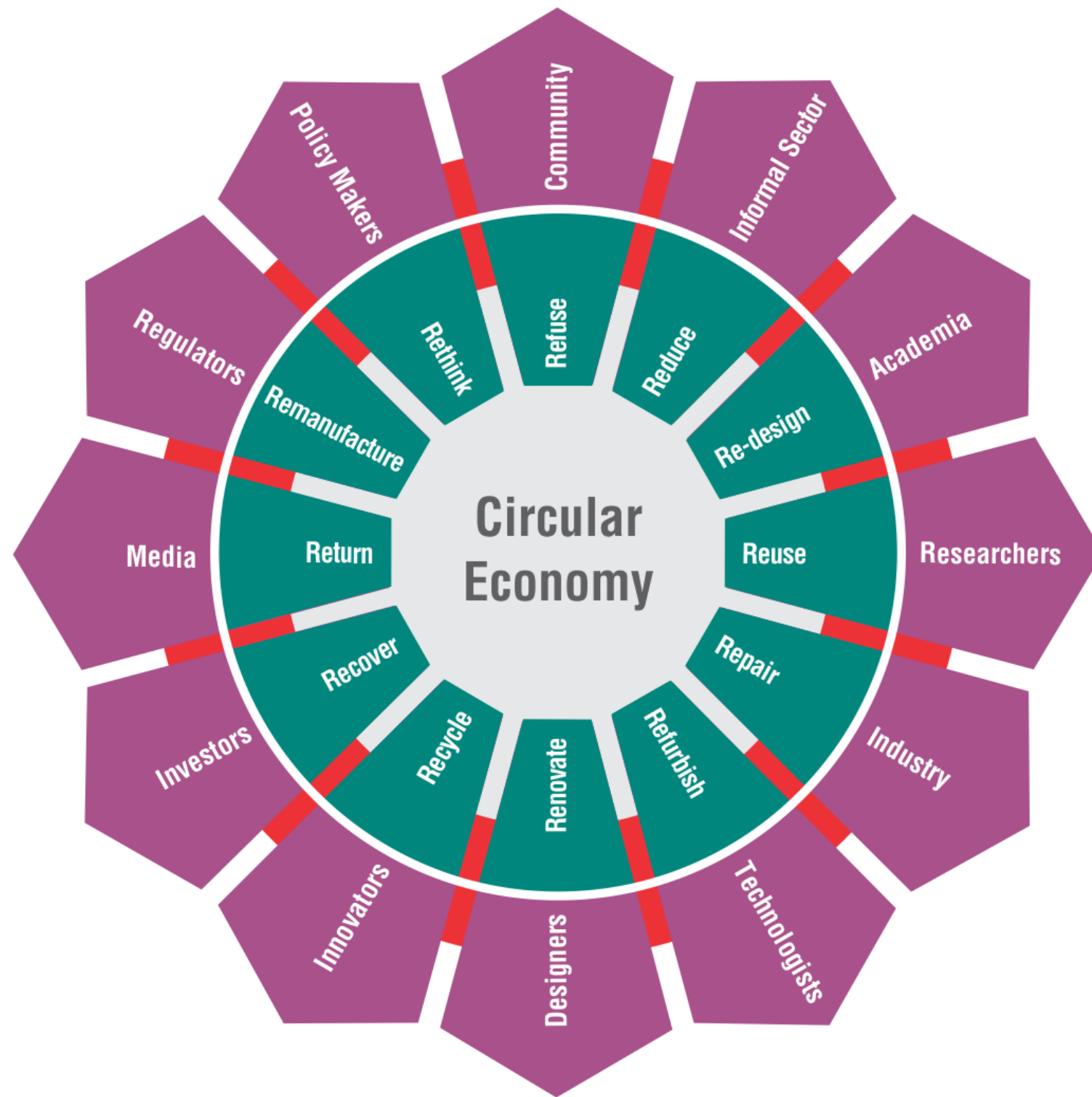
3R Forum
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Do you agree COVID-19 has made us -



- Appreciate **cleaner air, blue skies and healthier lifestyle**
- Support **local sourcing** and **inclusive** supply chain
- Adapt to **advent of technology** and learn gadgets to stay afloat – **especially the digitalization**
- **Re-think** about your usage and dependence on **single-use plastics**

Circular Economy



- Minimizes resource extraction
- Increases resource use efficiency
- Prolongs resource recirculation
- Brings in resiliency in responding to climate change and global pandemics like COVID-19

Sourcing locally - Circular Supplies

- **Ecoware**, manufactures compostable cutlery products from agricultural waste and offers **sustainable food packaging** solutions
- **Saathi Pads** offers compostable and biodegradable **sanitary napkins** made from banana fibers



Changing consumer preferences

- Brands like **Bare Necessities** and **Trash is for Tossers** advocating sustainable, minimalistic and low-impact lifestyle- biodegradable and compostable toiletries



- Brands like **Biji Bijli** upcycle discarded seatbelts and banners, sourced locally to produce fashionable bags



Design based solutions

- Reusable, Biodegradable and Compostable Masks



Reusable Biodegradable Masks



Cork Antibacterial Masks



Abaca leaf Fibre Masks

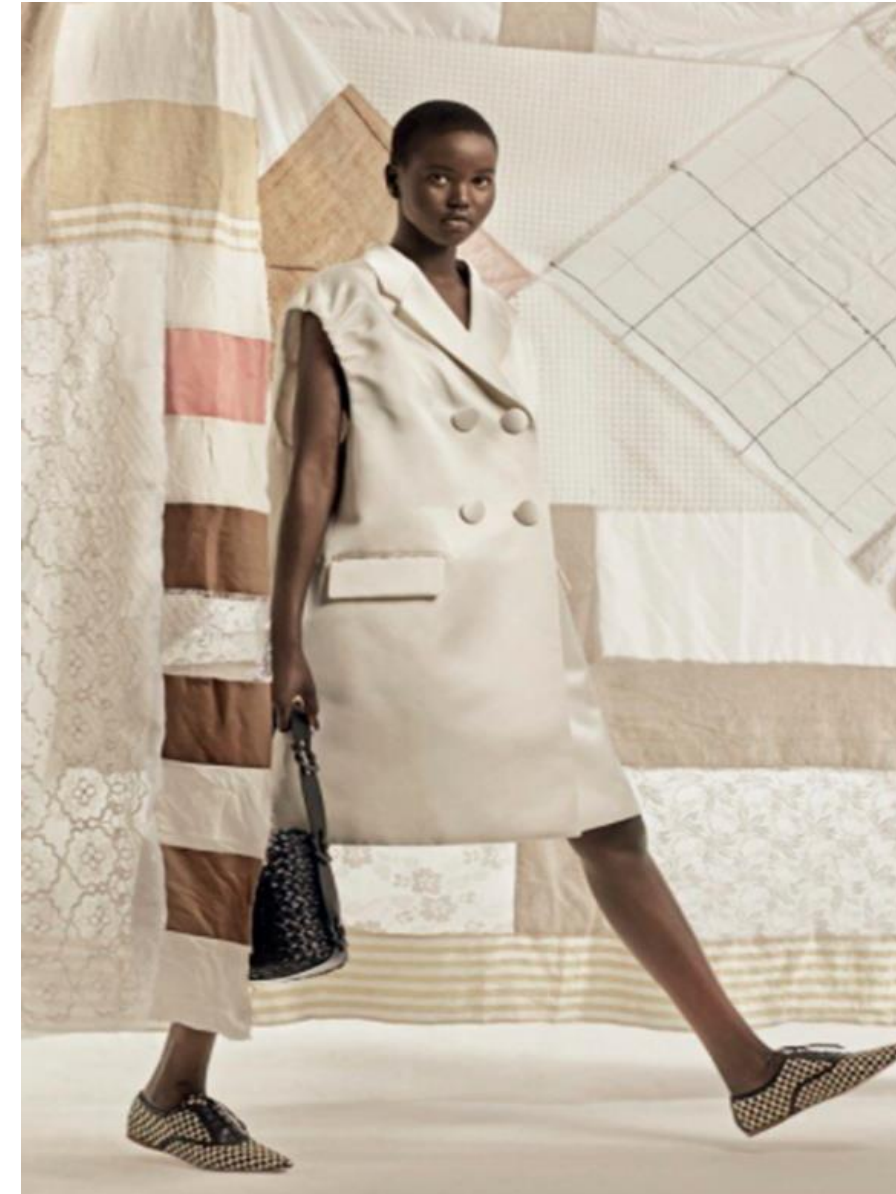
Green Sanitizers

- **Safe** sanitizers from herbal family
- Developed by LUSH, the '**Self-timing**' soap dissolves soon after 30 seconds of use
- Innovative **toaster for charging and disinfecting mobile phone**
- MIT robot that uses UV light to disinfect warehouse, schools and offices avoiding sanitizers



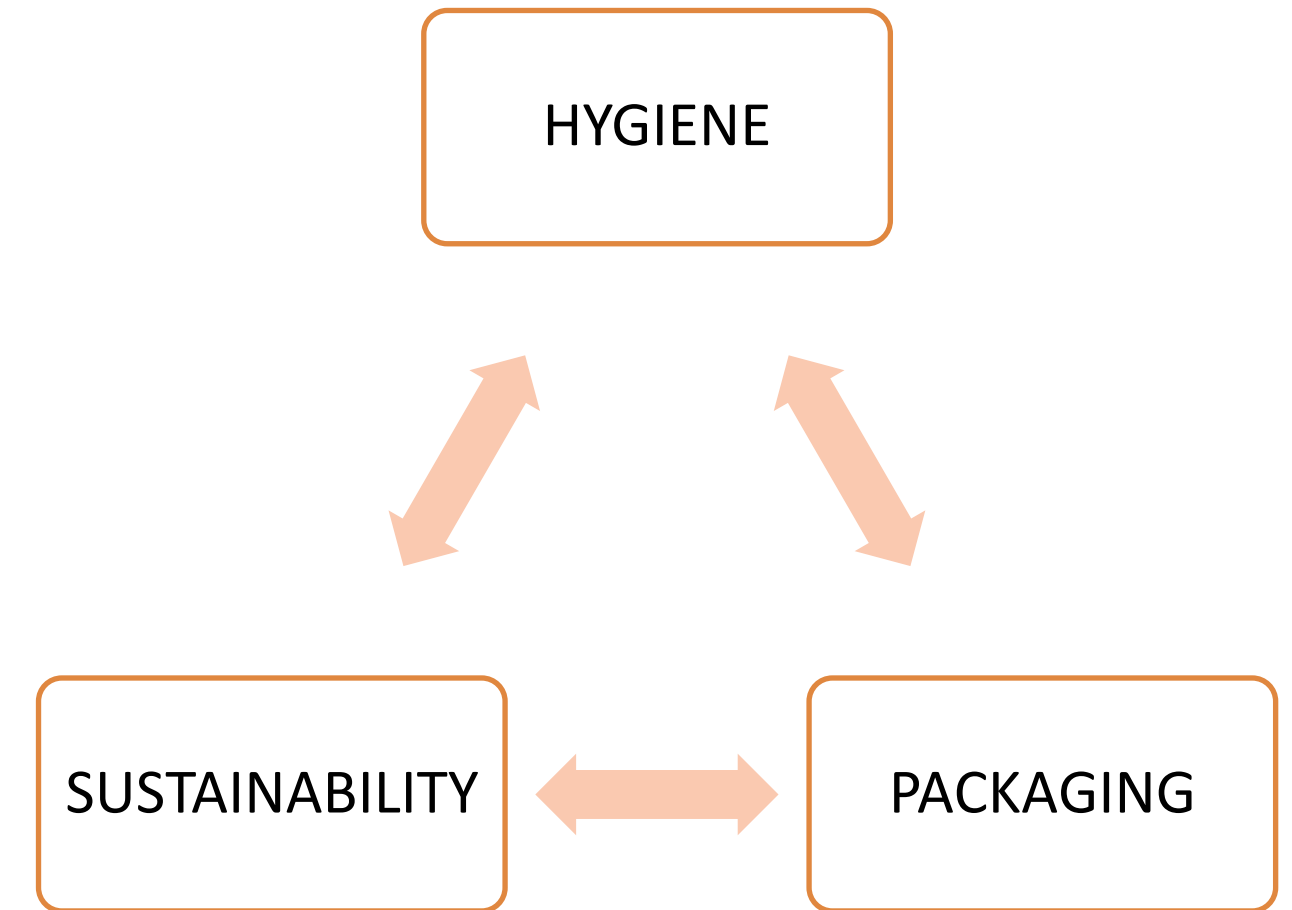
Safety Fashion

- **Zodiac** Fabrics, are processed with Swiss Textile “**HiveQL viroblock**” that imparts anti-bacterial and anti-viral properties
- Brazilian textile company Dalila Têxtil and Italian Albini Group create fabrics capable of **destroying the protective outer layer of COVID**
- Will they cause challenges for recycling?



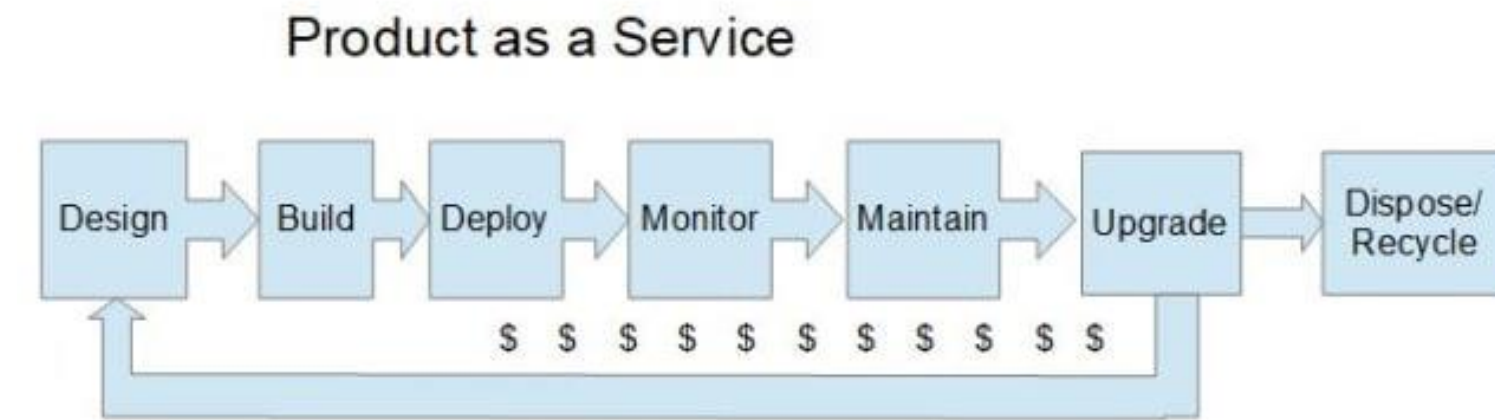
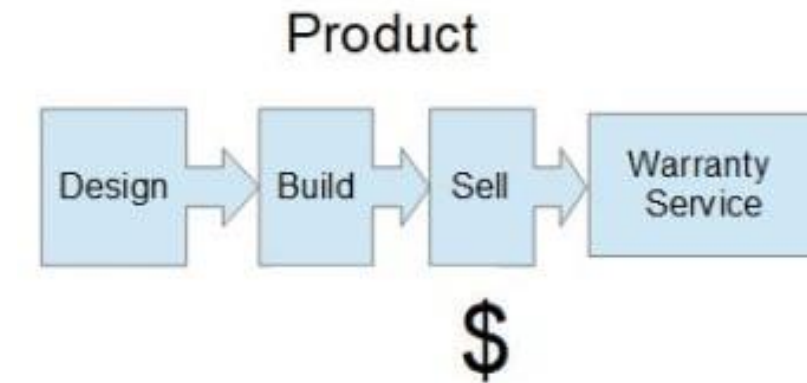
“COVID compatible” Sustainable packaging

- “Corona Free” packaging labels to build trust amongst consumers
- Use **laser treatment** for metal surfaces to make their texture virus resistant
- Use of active chemicals that could inactivate the spike glycoprotein as well as viral nucleotides
- Increased demand for **recyclability**
- Demand for tamper-proof packaging



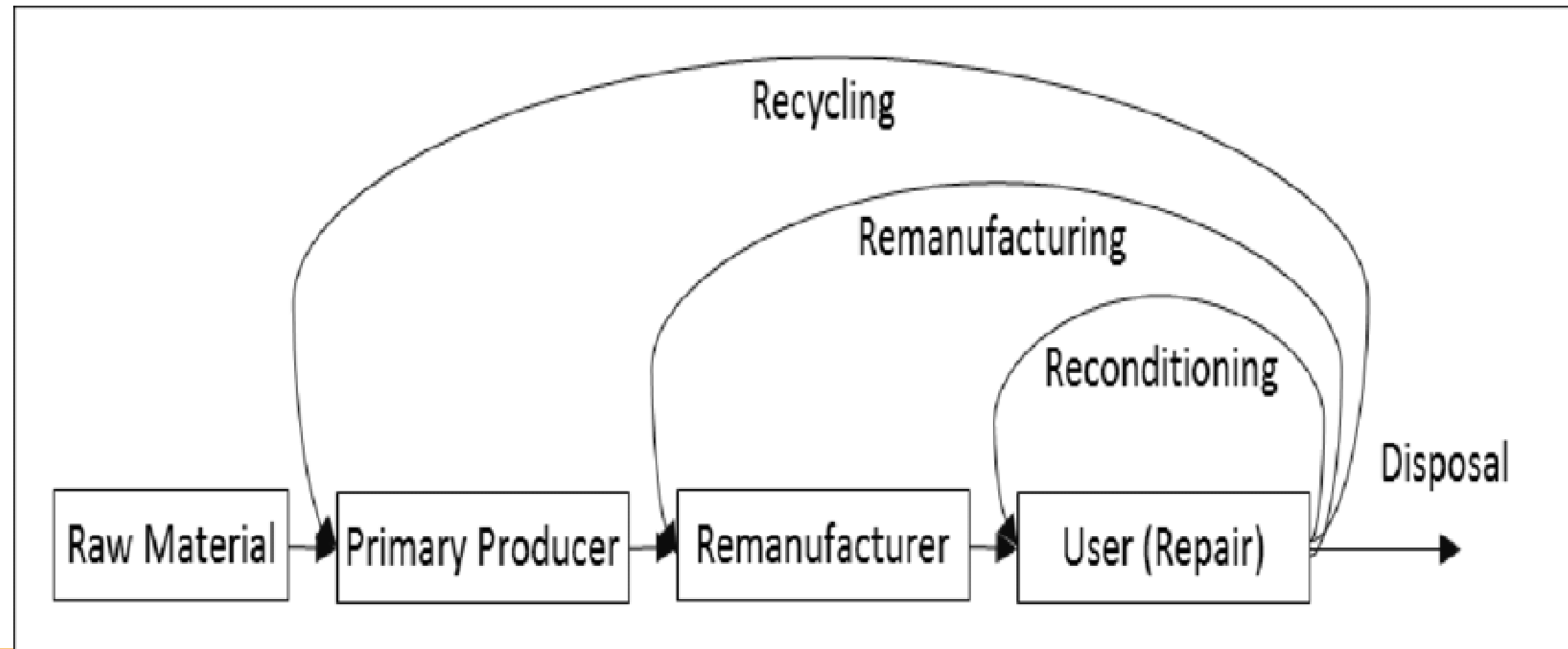
Product as a Service (PaaS) models

- Cash flow crunch on capital spending
- Work from Home (WFM) signalling need for flexibility and exits
- Maintenance and repair integration preferred
- Preferences to PaaS models to rise for vehicles, white goods and housing
- **Great opportunity for circular businesses**



D4S, D4D, D4R

- Remanufacturing will sharply rise influencing design thinking and smart reverse logistics
- Design for Sustainability
- Design for Disassembly
- Design for Repairability



EPR and Circular Supply Chains

- Extended Producer Responsibility (EPR) and **Extended Consumer Responsibility (ECR)**
- Demands on **Transparency, Traceability and Ethical sourcing** to rise
- Assessing **resiliency** of supply chain networks essential
- More expectation on reporting on circular economy metrics



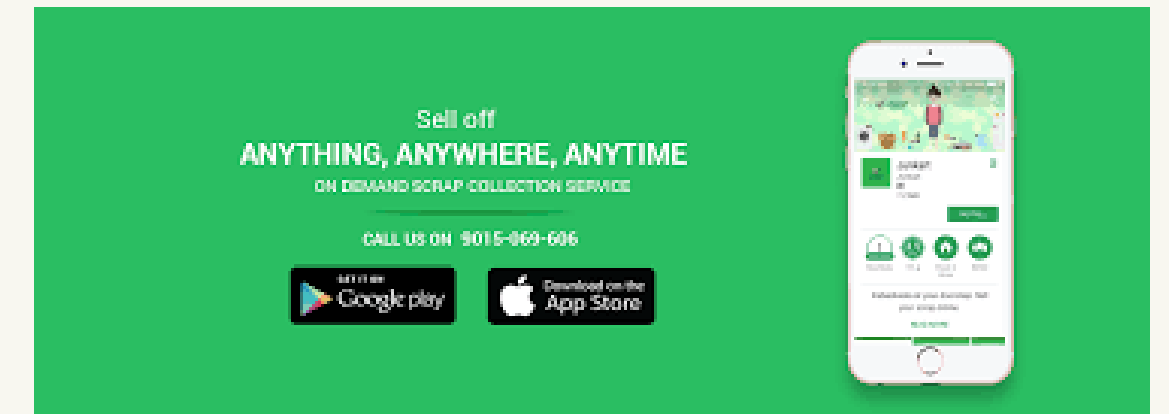
Digitalization– Connecting Informal Waste Pickers with Aggregators



UNDP-Hindustan Coca Cola –
Unilever and Recykal
partnership



'The Recykal Platform



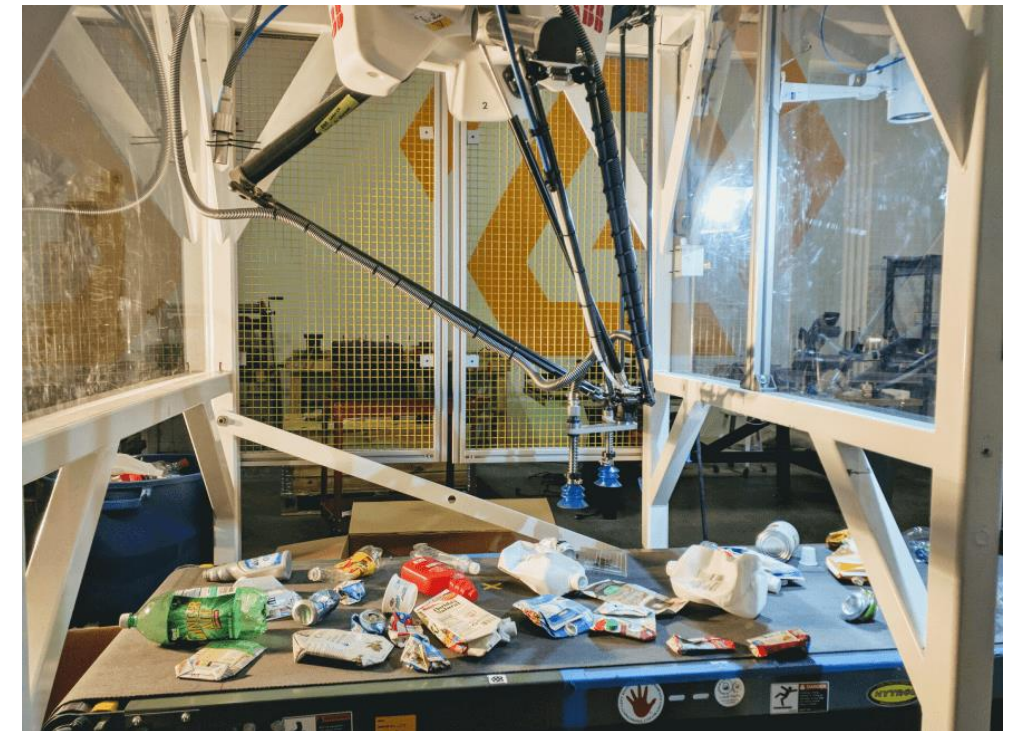
Kabadiwala Connect

AI and Robotics in Waste Sorting for Recovery

- COVID highlighted **risks to recycling**, worker safety, **bale purity**, addressing **labor shortage** and increased cost of recycling
- **Robotics** assures promising applications for waste sorting
- **Machine learning** is used to train robots for sorting domestic, commercial and industrial waste at recycling centers



Source: Zen Robotics



Source: AMP Robotics

More investments in Recycling Infrastructure

- Single Use Plastic will continue to be the focus followed e-waste and clothing
- Funds dedicated on circular economy (e.g. closed loop, circulate capital etc.)
- Performance based contracts and PPP to be preferred for resource efficiency and resource recovery
- Push on common recycling infrastructure e.g. MRFs



Summing up

COVID-19 could be an opportunity to “Build Back Better” and “Rethink” on our production and consumption patterns



Epidemics like COVID-19 reveal the fundamental tenets of the trade-off we consistently face: humans have unlimited needs, but the planet has limited capacity to satisfy them

We need policy frameworks that embed principles of circular economy

COVID-19 outbreak is a test how the world leaders turn the development ahead towards more resilient, circular and sustainable society