

Impact of COVID-19 Pandemic

16th December 2020

Presented by Dr. Prasad Modak

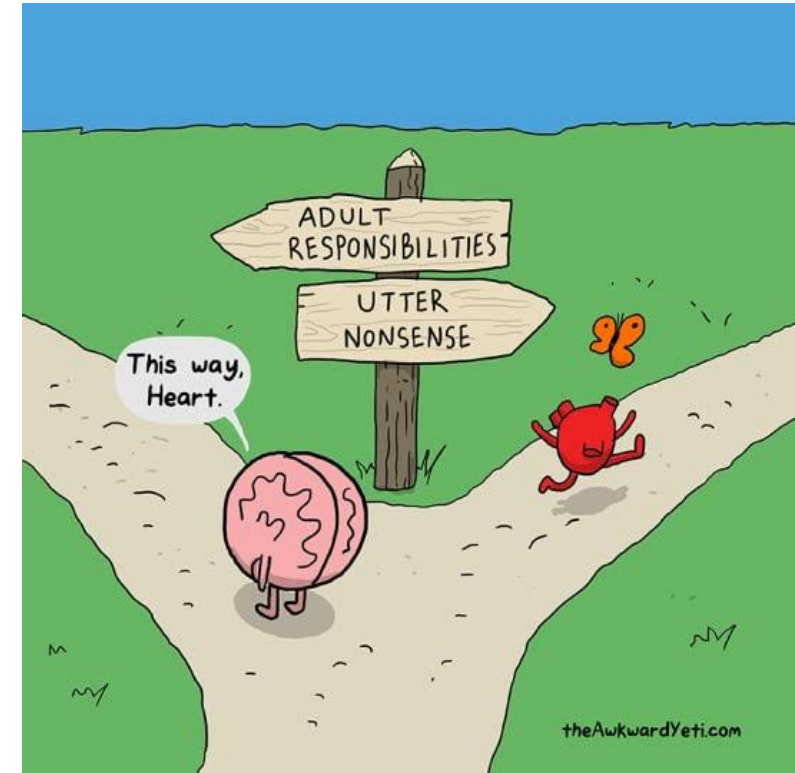


Today's Topics

- 1** Challenges
- 2** Innovations as a result of COVID-19
- 3** Way forward

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**



Challenges of COVID-19

- Most severe **recession** of the century
- Advanced and developing **economies** to shrink by **7% and 2.5% respectively**
- World lost **400 million jobs** between April to June 2020
- Change in **lifestyles (e.g. work from home)** and consumer **consumption patterns**
- Rise in **e-commerce and digitalization, packaging waste**



Psychological Stress

- **Reduced social contact**, prolonged separation
- Difficulty to adjust to the **new normal of working from home**
- Highlighted **gender inequality** issues – unpaid care work
- Increase in **domestic violence**
- Increase in **mental health cases**- depression, anxiety, insomnia



Impact on Environment

- Zoonotic Pandemics like COVID-19 are a result of **biodiversity loss and intensive food systems**
- Short-term positive effects- **better air & water quality and noise levels**
- **Ecological risks** due to **sanitizers and cleaning chemicals**
- Increased production of medical plastics
- More consumption of **single-use plastic**
- Pressure on **recycle and disposal infrastructure**- masks, bodysuits, biomedical waste
- **Reduced use of public transport**, Increased **GHG emissions**



COVID-19 impact on SDGs



COVID-19 pandemic is an opportunity to build a resilient and low carbon economy

New businesses are coming up and older ones are adapting

COVID-19 has inspired innovation

Sourcing locally

- Sourcing **Circular Supplies**
- Eradicate plastic and eliminate waste
- **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 fibres '**Zero-Waste**' grocery



Design based solutions

Reusable, Biodegradable and Compostable Masks



Abaca leaf Fibre Masks



Cork Antibacterial Masks



Reusable Biodegradable Masks

Changing consumer preferences

- Advent in bands like **Bare Necessities** and **Trash is for Tossers** for advocating sustainable, minimalistic and low-impact lifestyle- biodegradable and compostable toiletries
- Brands like **Biji Biji** upcycle discarded seatbelts and banners, sourced locally to produce fashionable bags



Innovative Sanitization Solutions

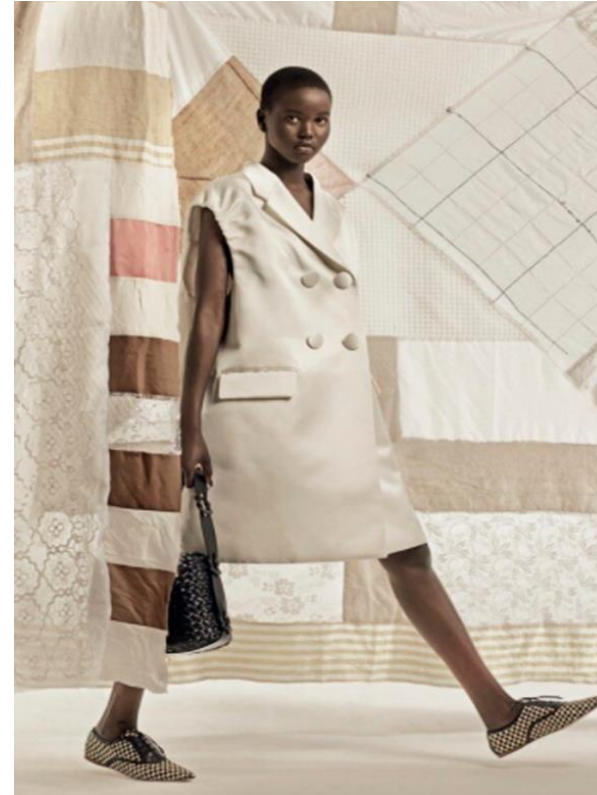
- **Safe** sanitizers from herbal family
- Developed by LUSH, the '**Self-timing**' soap dissolves soon after 30 seconds of use
- Innovative **toaster for charging and disinfecting mobile** phone
- MIT robot that uses UV light to disinfect warehouse, schools and offices avoiding sanitizers



Types and use of sanitizers need to be controlled with sound alternatives

Safety Fashion

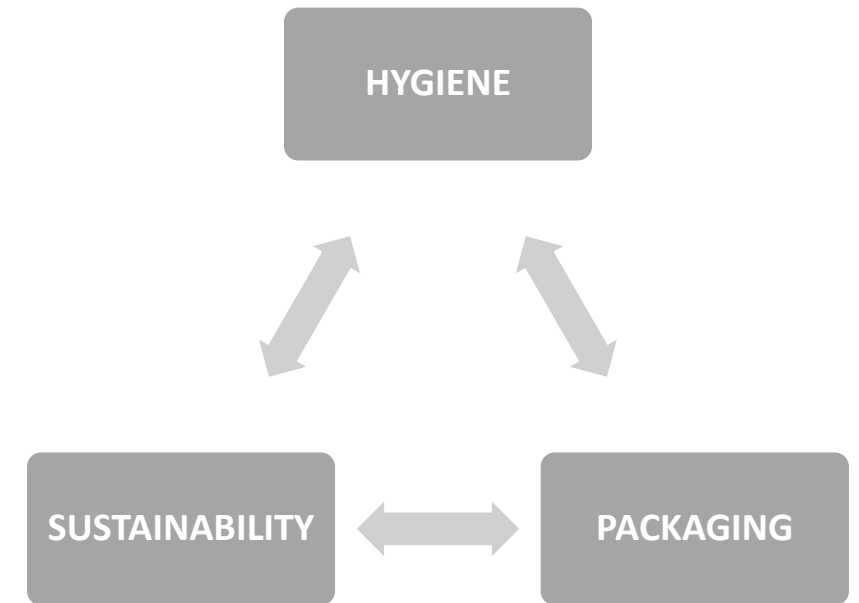
- **Zodiac** Fabrics, are processed with Swiss Textile “**HiveQL viroblock**” that imparts anti-bacterial and anti-viral properties
- Brazilian textile company Dalila Têxtil and Italian Albini Group create fabrics capable of **destroying the protective outer layer of COVID**



Will they cause challenges for recycling?

“COVID compatible” Sustainable packaging

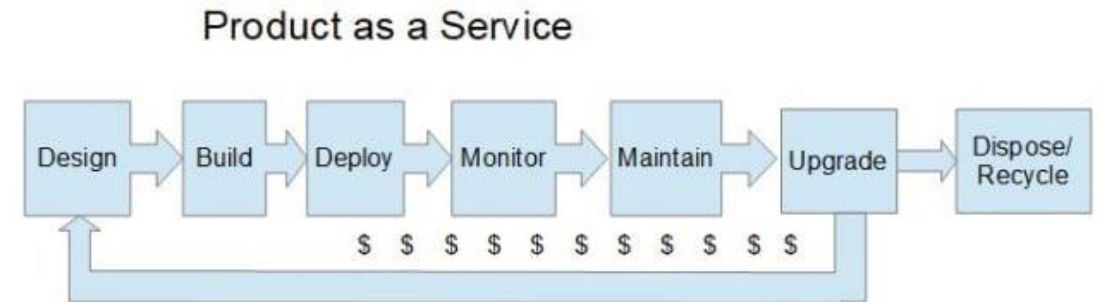
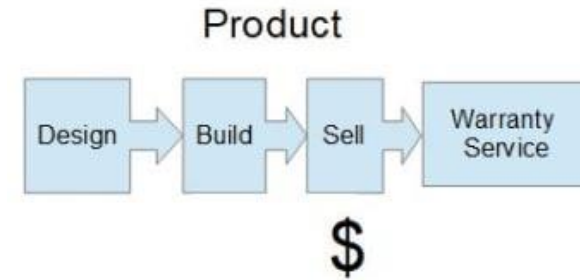
- “Corona Free” packaging labels to build trust amongst consumers
- Use **laser treatment** for metal surfaces to make their texture virus resistant
- Use of active chemicals that could inactivate the spike glycoprotein as well as viral nucleotides
- Increased demand for **recyclability**
- Demand for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



Safe and sustainable packaging is the need of the hour

Product as a Service (PaaS) models

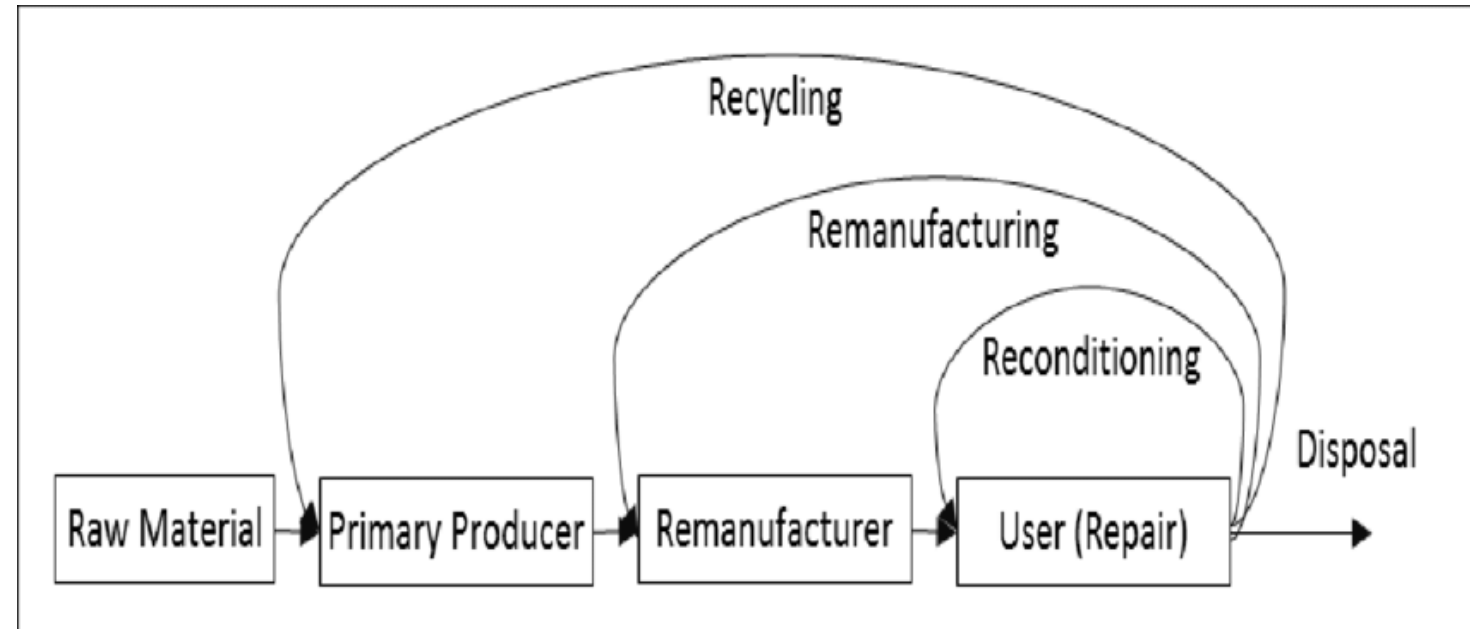
- Cash flow crunch on **capital spending**
- Work from Home (WFM) signalling need for flexibility and exits
- **Maintenance and repair integration preferred**
- Preferences to PaaS models to rise for vehicles, white goods and housing



Great opportunity for circular businesses

Remanufacturing will sharply rise influencing design thinking

- Design for Sustainability
- Design for Disassembly
- Design for Repairability
- Smart reverse logistics



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**

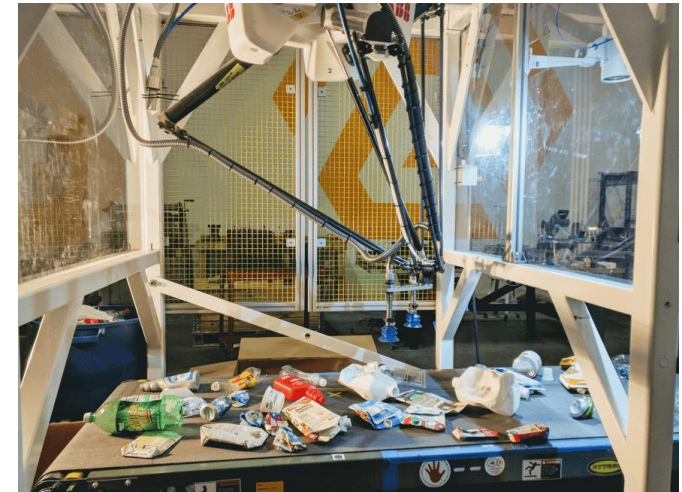


AI and Robotics in Waste Sorting for Recovery

- 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

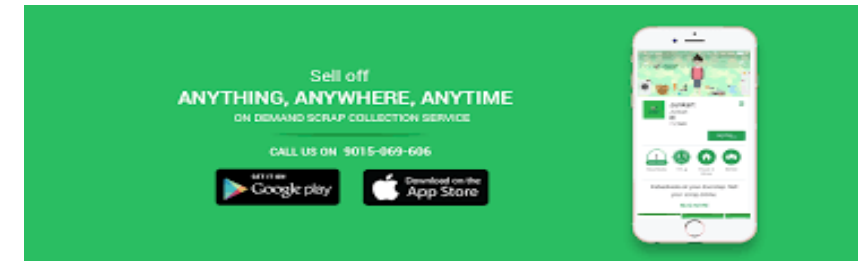


Source: Zen Robotics



Source: AMP Robotics

Digitalization– Connecting Informal Waste Pickers with Aggregators



UNDP-Hindustan
Coca Cola –
Unilever and
Recykal
partnership

The Recykal Platform

Kabadiwala Connect

More investment in recycling infrastructure

- **Single Use Plastic** will continue to be the focus followed by 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



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**

**12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION**



Way Ahead

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



Funded by the
European Union

Thank You 

