Report on Circular Economy and Sustainability-Innovative IT Workshop

Date: 7 March 2016
Time: 2.00pm-3.30pm (1 hour 30 minutes)
Venue: Suntec Convention and Exhibition Centre Room 310

1. Introduction

The Circular Economy and Sustainability-Innovative IT Workshop was part of the SMU 2016 Logistics and Supply Chain Symposium. The theme of the workshop was related to waste reduction and regenerative consumption.

2. Workshop

A presentation on Circular Economy was delivered by DHL- Mr Stephan Schablinski, followed by an interactive session of discussions and activities.

There were 13 participants seated at 3 tables. Each table was given 3 sets of the following items as choices based on their passion in wastage reduction for the selected item:
a) Primary packaging
b) Secondary packaging
c) Food
d) E-waste
e) Tyres
f) Glass
g) Clothes
h) Wildcard (participants may substitute with other item e.g., furniture)

Selection outcome: E-waste and Food were the most common choices. Other selections were clothes, tyre, glass and wildcard (substituted by books).

Based on the selection outcome, the participants were grouped into 2 teams – E-waste and Food. 7 participants joined the team of E-waste and 6 joined the team of Food Waste. They were tasked to complete the following table according to their thoughts on reducing, reusing or recycling the allocated item.

Each team presented their discussion outcomes as follow:

Team A: Food Waste

a) **Motivation**
   - Wasting of food is not ethical

- Production and operational efficiency can lead to reduction in wastage
- Wastage can be reduced as organizations aim to reduce cost and increase productivity of resources
- Conservation and less dependence of resources
- Alleviation of climate change through reduction of wastage

b) Challenges
- Cultural norm and mind-set of preparing more food than required is hard to change
- High Velocity Supply Chains for certain speciality product market e.g., highly perishable food like bread, raw food where freshness and quality are important
- Customers' lifestyle and expectation of products

c) Methods
- Set regulations and policies e.g., Some cities in India only allow serving of one dish per table during social events
- Manage customers' expectations
- Education and raise awareness for both children and adults through campaigns as well as media would be a long term solution
- Organize food drives and campaigns
- Invest more into R&D for food waste reduction

d) Wishlists
- Likeminded industrial players who have common interest in reducing food wastage
- Incentives and support from government to reduce food wastage
- Willingness for start-up companies to participate
- Conversion of food waste to energy
- Transparency – to track the source of food wastage in supply chains. Relevant party to be made responsible to reduce food wastage

Team B: E-Waste
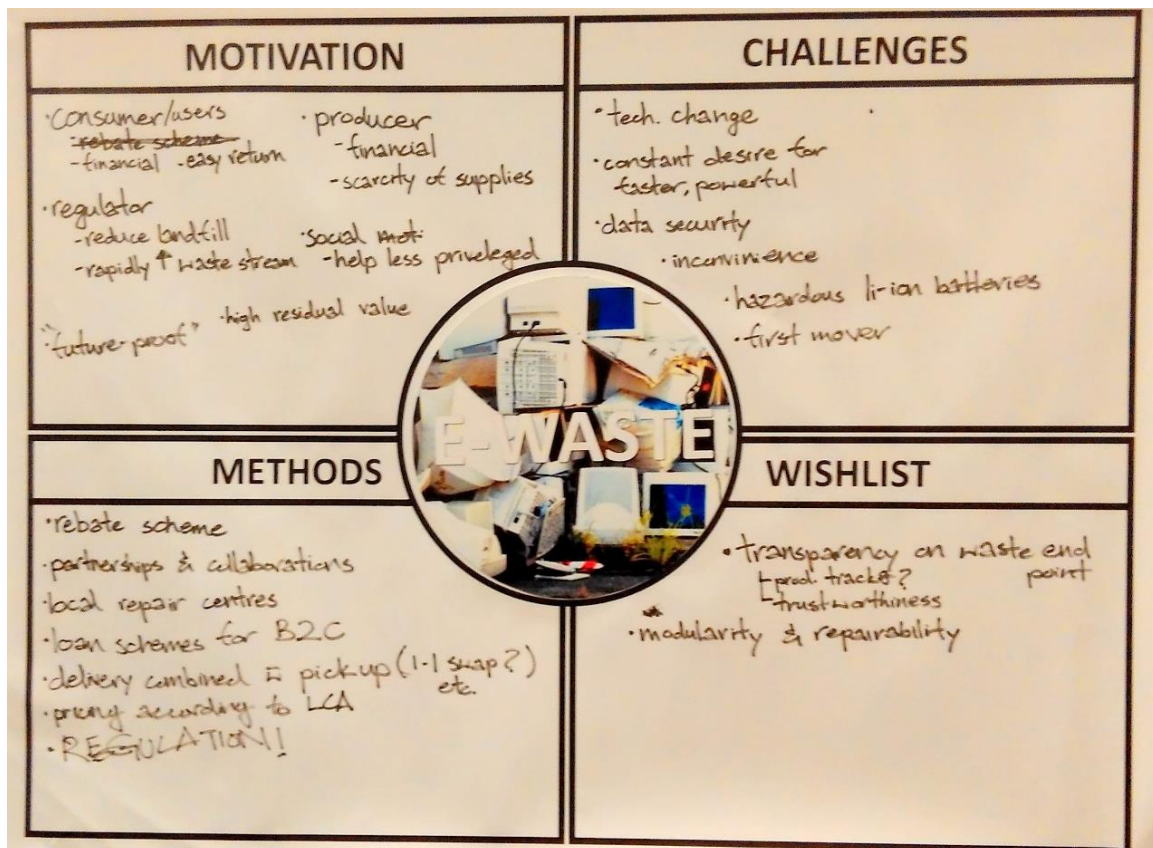
a) **Motivation**
- Consumers/users – financial return for recycling e-waste
- Producer – financial return, scarcity of supplies
- Regulator – landfill reduction and the obligation in managing the rapid increase of waste stream
- Social – to help the less privileged
- High residual value of e-waste

b) **Challenges**
- Rapid technological advancement leads to constant stream of new electronic products and a resulting decrease in the life span of electronics
- Consumers' constant desire for faster and more powerful devices
- Data security is a concern and consumers find the importance of upgrading for data protection
- Recycling of some electronic products is challenging e.g., hazardous li-on batteries

c) **Methods**
- Rebate scheme to encourage e-waste recycling
- Partnership and collaboration between large organizations
- Establishment of local repair centre to prolong life of electronic devices

- Introduction of loan scheme for B2C to encourage e-waste recycling
- 1-1 swaps of old and new devices during delivery and pick-up
- Life-cycle Assessment standard (LCA) conformance
- Introduction of regulations

d) Wishlists
- Transparency on waste's end point: product tracking, trustworthiness
- Product designs- modularity and reparability

3. Conclusions and Recommendations

Food waste and E-waste were two most commonly voted concerns by the workshop participants. Each team had a discussion on waste reduction and regenerative consumption.

With regard to E-waste, the rationale given was that each person/family can own multiple gadgets e.g, handphone, tablet etc, and these devices became obsolete quickly due to exponential technological advancement. Very often, these devices were not disposed properly leading to high wastage of resources which may still have reuse or recycling value.

For Food Waste, it was opined that cultural practices have a part to play. For example, Asians tend to provide an abundance of food to guests at social or festive events, leading to unnecessary wastage. It was also highlighted that the Singapore Government has started raising awareness on food wastage through campaigns by the National Environment Agency (NEA). NEA is currently promoting food waste reduction as part of the Sustainable Singapore Blueprint of achieving a Zero Waste Nation.

In both cases, the Green Transformation Lab hope to be able to explore and work with interested organizations to explore potential projects to make adoption of circular economy practices a reality.