

### Driving A Circular Economy Transition Through Digitalization in ASEAN and East Asia

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# **Twin Transition: Key questions**

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Why circular transition and digitalization matter?

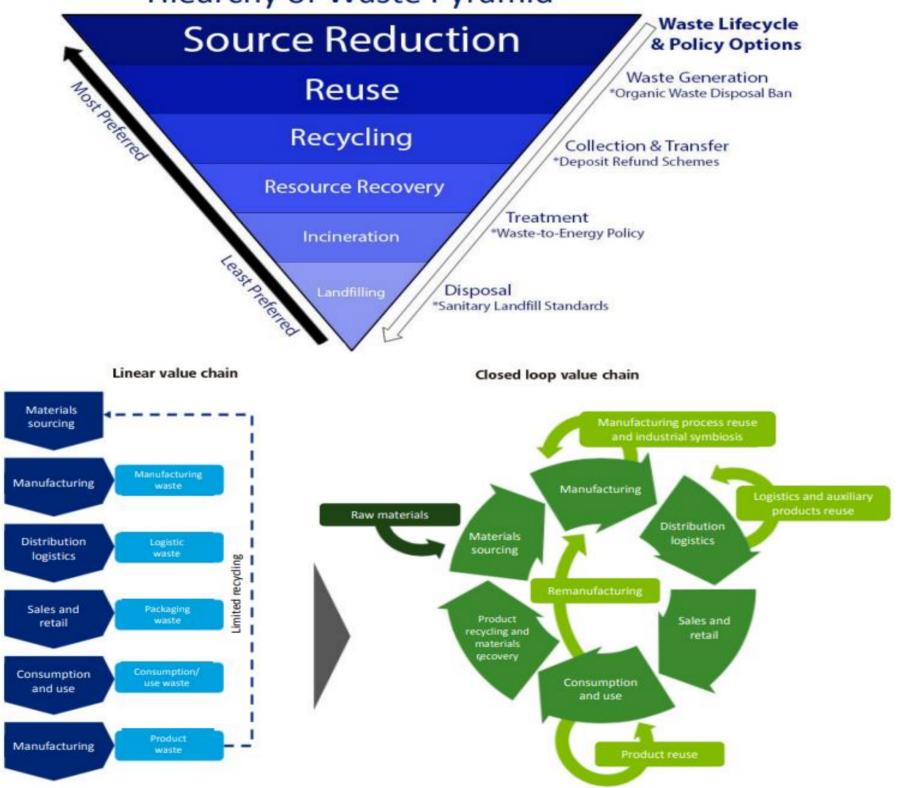
What are the opportunities and challenges of circular economy and digital innovation in ASEAN and East Asia?

**How** to make circular transition and digitalization work?

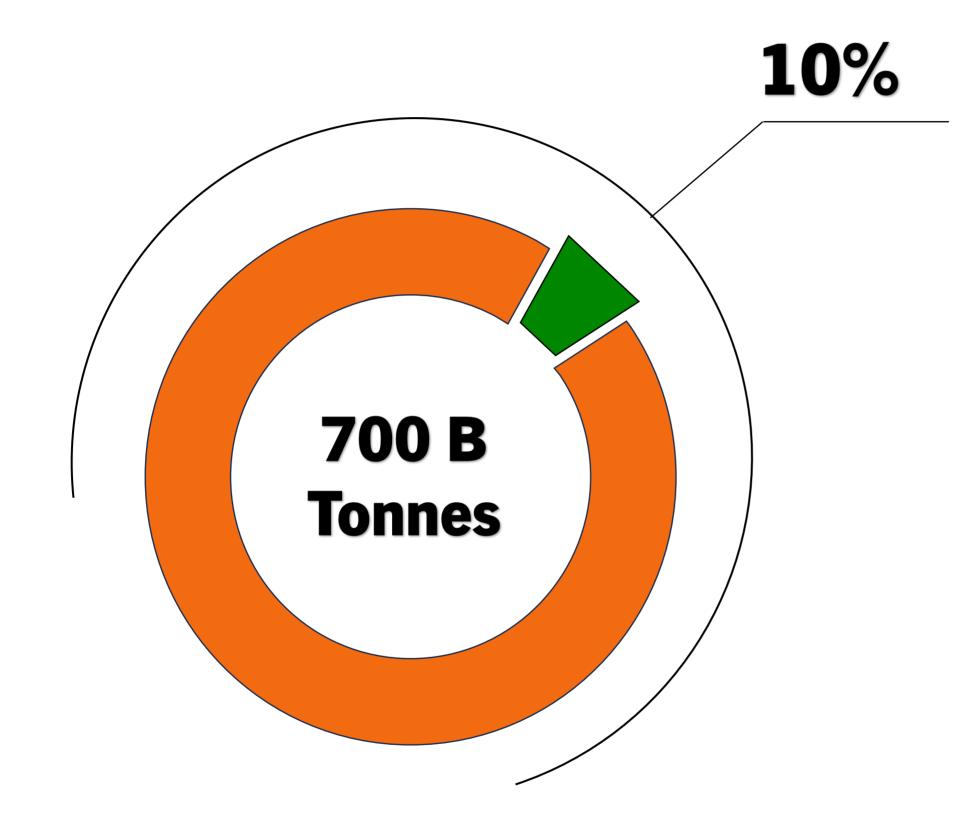
# Imperatives for circular economy

### Basic Principles of Circular Economy – A Cycle of Resource Efficiency Improvements

### **Hiearchy of Waste Pyramid**

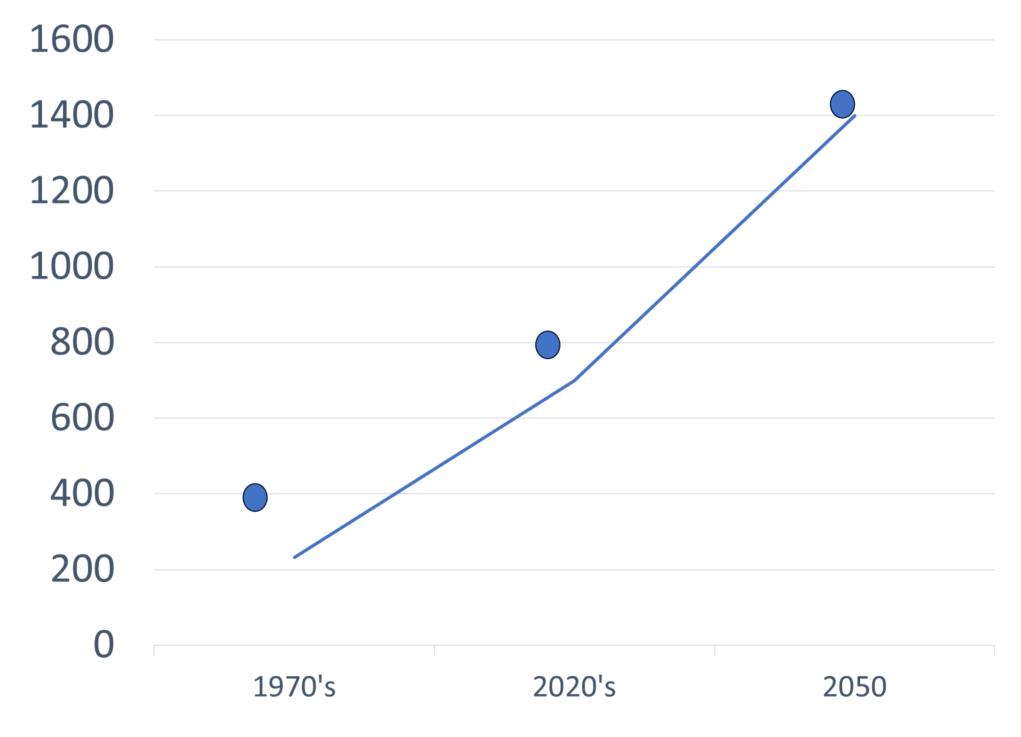


- Circular Economy is a means to improving resource efficiency along supply chains both upstream and downstream by adopting regenerative business model that need innovation
- ERIA's research demonstrates a positive vision of a circular transition
- ERIA's CADP 3.0 recognized the importance of digitalization in navigating the post-pandemic era
- Regional initiatives acknowledge how circular economy is crucial for inclusive and resilient future



Resource Entry = 700 B Tonnes Recycled = 10%

### The Use of Resources in EAS



Will double by 2050

# Digitalization as a driver of circular economy

# 1. Transformation to Circular Economy

Requires a change in production, consumption and distribution

### 4. Big Data Usage

Mapping of problems within various stages of economic cycle



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# 2. Digitalization as key to circular economy

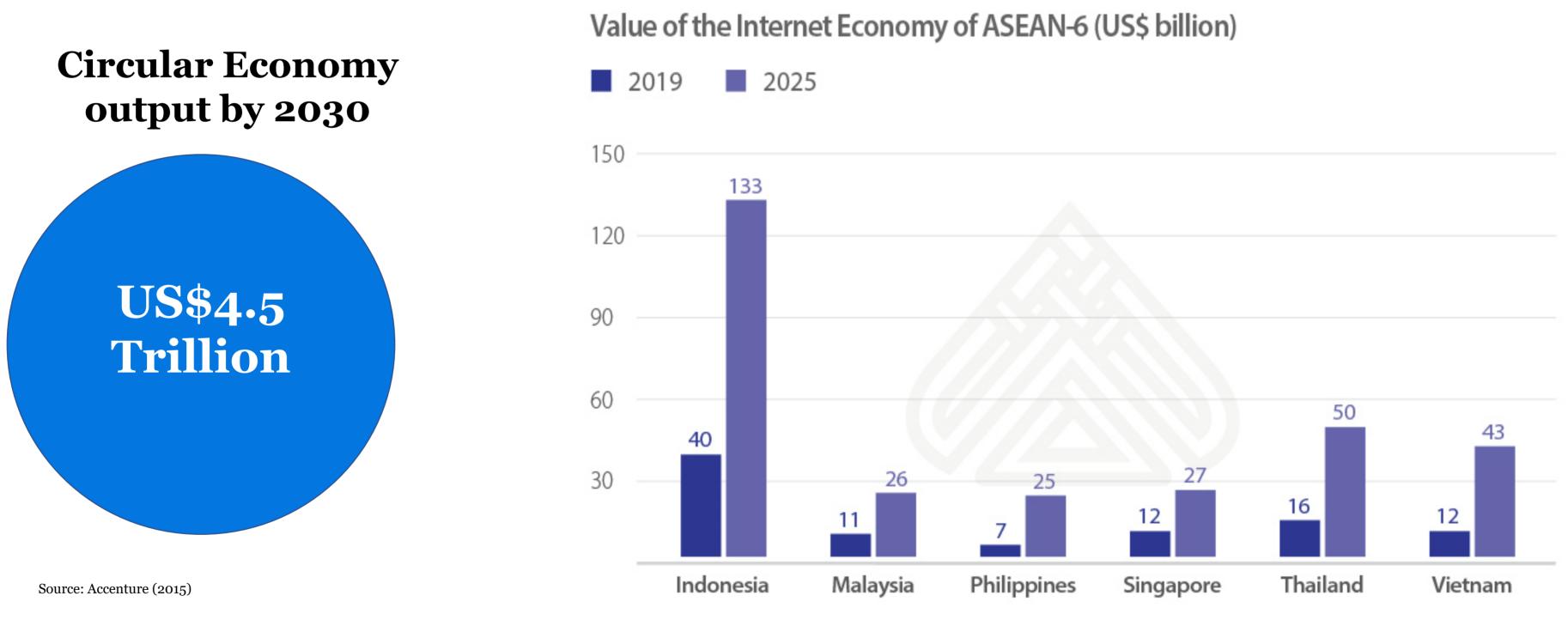
Robots, AI, IoT and ICT tools support recycling, re-manufacturing and enhancing connectivity

### 3. Digitalization of Supply Chain

Digital solutions can:

- Enhance efficiency and visibility
- Optimize production
- Minimize impact of future shocks

# Maximizing the opportunities of circular economy and digital innovation in ASEAN and East Asia ...



Source: e-Conomy Report, Google, Temasek Holdings, and Bain & Co

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# ... and addressing challenges and constraints

### Infrastructure

- Digital divide at the local level
- Limited powerful ICT infrastructure for new technologies e.g., AI, Blockchain

### Governance

- The interconnected nature of EAS countries through trade and tech
- Lack of harmonized system codes and policy instruments

# Circular transition and digitalization: Making them work in ASEAN and East Asia

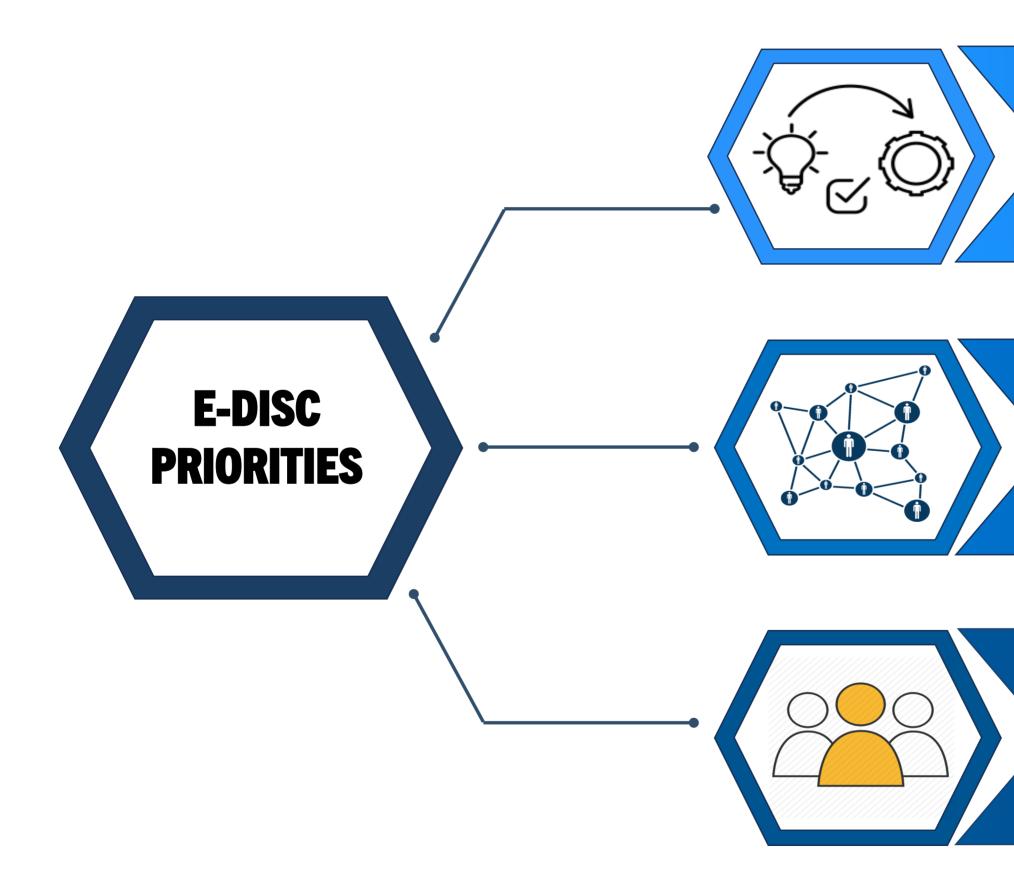
- 1.Provide technical solutions and raise awareness of the imperatives of circular economy
- 4. Implement systematic knowledge sharing and capacity building



2. Ensure digital ecosystem is supportive of a more circular economy

3. Identify priorities to support more circular business models

## Supporting ASEAN and East Asia through E-DISC: ERIA's Digital Innovation and Sustainable Economy Center



### RESEARCH

- Digital Trade and E-commerce
- Data Governance and Cross-Border Data Flows
- Circular Economy & Low-Carbon Transition
- ASEAN Digital Economy Framework Agreement

### **ENTREPRENEURSHIP AND INNOVATION**

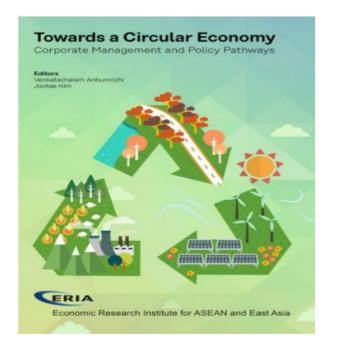
- Networking platform for Businesses & Investors;
- Incubators for Startups; and
- A Strategic Hub for promoting start-up ecosystem

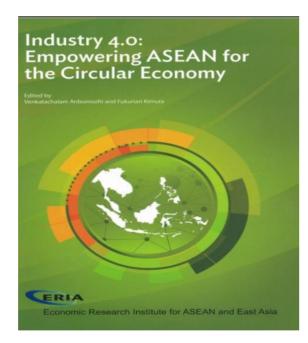
### **DEVELOPING DIGITAL SKILLS**

- Training Programs & Workshops;
- Fellowships; and
- Capacity Building & Knowledge Sharing

# Thank you! arillo@eria.org

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