Collaboration models for CE in Asian countries

Climate mitigation effort in Asian countries
Stakeholder mapping in CE
Learning Outcomes
Learning Outcomes

101 - Day 2

1. Understand **climate change in Asia** and **mitigation** measures
2. Acknowledge **collaboration models** in CE in Asia
3. Understand **stakeholders** in CE
4. Distinguish between a **CE** and a **recycling** economy
Agenda

101 - Day 2

1. Warm-up
2. Day 1 Review
3. Climate change in Asia
4. CE and climate change mitigation
5. Stakeholders map in CE
6. Circular, recycling and sharing economies
1. Warm-up
What if...
Work individually

Imagine 5 years from now, when the sea level rises, what will Vietnam/where you live look like?
2. Day 1 Review

03 dimensions of sustainable development
Circular economy
Transition towards CE
What is sustainable development?

“Development that meets the needs of the present without compromising the ability of future generations to meet their needs”

(Brundlandt, 1987)

03 dimensions of sustainable development
(Purvis, B et al., 2019)
A circular economy is a production and consumption model such that the life cycle of existing products and materials is extended as much as possible.

(European Union, 2022)
## Transition towards CE around the world

**Perspectives from different stakeholders**

<table>
<thead>
<tr>
<th>Government</th>
<th>Corporations</th>
<th>SMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries such as China, South Korea, Japan, and Indonesia have all <strong>set national goals for their CE strategy</strong></td>
<td>Shift to a CE through cooperations between corporations/ corporations and startups helps large corporations <strong>increase business efficiency and minimize negative impacts</strong></td>
<td>Act as main force to accelerate the transformation of the CE but <strong>change slowly due to technology and face most difficulties in transition</strong></td>
</tr>
</tbody>
</table>
Transition towards CE around the world
Perspectives from different stakeholders

**Investors**
Committed capital for the CE worldwide in 2021 will reach a record **12.7 billion euros**, nearly four times the figure in 2020.

**Community (People)**
Many communities of people and people - businesses were born to reduce waste by **recycling and reusing**
3. Climate change in Asia

Current status of climate change in Asia
Some initiatives to combat climate change in Asia and Vietnam
SEA's cooperation framework
5 Strategies of the transition to the CE in SEA
Climate change in Asia

Average temperatures are projected to increase in many parts of Asia.

Increase in average annual temperature,¹

°C shift compared with preindustrial climate (based on RCP 8.5)

<table>
<thead>
<tr>
<th></th>
<th>Today</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: See Technical appendix, Climate risk and response: Physical hazards and socioeconomic impacts, McKinsey Global Institute, January 2020, for why we chose RCP 8.5. Projections based on RCP 8.5 CMIP 5 multimodel ensemble. Heat-data bias corrected. Following standard practice, we typically define current and future (2030, 2050) states as average climatic behavior over multidecade periods. Climate state today is defined as average conditions between 1998 and

Climate change in Asia

Flooding in Tokyo is expected to become more frequent and intense by 2050 due to climate change in the absence of adaptation and mitigation.

Combined flood effects from 100-year rainfall, storm surge, and streamflow in Tokyo (based on RCP 8.5)

<table>
<thead>
<tr>
<th></th>
<th>Flooded area within modeled area, %</th>
<th>Average flooded depth within modeled areas, meters</th>
<th>Real estate damage and destruction, $ billion</th>
<th>Infrastructure damage and destruction, $ billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today</td>
<td>64</td>
<td>0.3</td>
<td>0.5</td>
<td>5</td>
</tr>
<tr>
<td>2050</td>
<td>81</td>
<td>0.8</td>
<td>1.7×</td>
<td>2.2×</td>
</tr>
</tbody>
</table>

Wildfires are expected to become more frequent in Australia by 2030 and 2050 without adaptation or mitigation.

Change from today’s number of high-risk fire days annually, (additional high-fire-risk days per year based on RCP 8.5)

By 2050 30% of country area will see an increase of 20+ days in number of high-fire-risk days per year

Note: See Technical appendix, Climate risk and response: Physical hazards and socioeconomic impacts, McKinsey Global Institute, January 2020, for why we chose RCP 8.5. Following standard practice, climate state today is defined as average conditions between 1988 and 2017, in 2030 as average between 2031 and 2040, and in 2050 as average between 2041 and 2050. To simulate the worst-case scenario, all three flood sources were used as inputs to model the 24-hour compound flood event. In this context, the compound flood event is defined as the flood-extent caused by the 1-in-100-year flood rainfall, streamflow, and storm surge events occurring simultaneously. The 1-in-100-year flood rainfall, streamflow, and storm surge values were calculated independently from each other using various data sources. These events are not independent, and this was done therefore in order to avoid underestimating flood risk and to provide a realistic estimate of the 1-in-100-year flood event. See Technical appendix for further details.

Climate change in Vietnam

On average,

300 Individuals die from floods each year.

If the sea level increases by 1 meter,

40% of the Mekong Delta area will be flooded.
Climate actions in Asia

Initiatives to combat climate change in Asia focus mostly on the Transport and Energy sector.

Note: Adapted from ADB (2021)
Climate actions in Asia

Examples

- **Corn-based biofuel** (China)
  - Driving with clean fuel. Corn fuel can be mixed with gasoline to produce a cleaner transport fuel (Photo by ADB).

- **Electric cars** (Thailand)
  - Promoting electric mobility. More electric vehicle charging outlets like this one will be installed across Thailand (Photo by Energy Coast).

- **Flood mitigation** (Bhutan)
  - Paro airport is located on the border with India in the Himalayan foothills of eastern Bhutan (Photo by Sonam Phuedel).

*Image: ADB (2021)*
Climate actions in Vietnam

Examples

Metropolitan Line 3 (Hanoi)

Deutsches Haus Green Building (HCMC)

Nature-Based solutions enhance resilience in Cities (HCMC, Vinh Yen, Hue)

Image ADB (2021)
The framework of cooperation aims to **guide SEA countries to achieve their long-term goals** of a resilient economy, resource efficient use and sustainable and inclusive growth.

- EU and ASEAN set up a Stakeholder Platform Secretariat to promote the region's circular economy in September 2022.
5 strategic priorities to transition towards CE in ASEAN

1. **Standard Harmonisation and Mutual Recognition** of Circular Products and Services;

2. **Trade Openness** and **Trade Facilitation** in Circular Goods and Services;

3. Enhanced Role of **Innovation, Digitalisation, and Emerging/Green Technologies**;

4. Competitive **Sustainable Finance** and Innovative ESG Investments; and

5. **Efficient Use** of Energy and Other Resources.
CE case studies in Asia

Style Theory

- Singaporean circular economy fashion platform.
- Circularity by allowing consumers to rent or buy pre-owned tailor-made clothing items.
- Contribute to avoiding fashion waste and create financial value to Style Theory and consumers.
When looking at the TV value chain, Samsung clearly recognizes:

- TV packaging is often thrown away
- Many TV buyers are also buying additional cabinets for their TV accessories.

Their solution: **Award-winning Serif eco-packaging.**

- By introducing corrugated cardboard with a dot-matrix design, Samsung has allowed customers to **upcycle** their TV boxes by assembling them into an accessory shelf or even a cat house.
- As a result, these boxes are directed **out of landfills** and value is created for consumers.

**Risk:** After being upcycled (value-add), if the product is not continued to be used in the same manner, it will still be released into the environment.
Do you know?

Work in group

- Do you know of any initiatives that are reducing the impact of climate change in Asia/Vietnam?
- Which initiatives do you think are related to/belonging to CE model?
  - If yes, is it it upstream or downstream?
4. CE and climate change

CE and climate change
CE solutions to mitigate climate change
Achieving climate goals will also require addressing the remaining **45% of emissions** associated with product manufacturing.

The circular economy offers a systematic and cost-effective approach to address this challenge.
When applied to the four main industrial raw materials (cement, steel, plastic and aluminum), circular economy strategies can reduce emissions by 40% by 2050.

When applied to the food, the reduction can be as high as 49% in the same year.
Nguyen Khoi Farm pioneered in Vietnam to develop and apply the Circular Organic Agriculture Model (COAM).

Respect harmony with nature:
- No agricultural emissions
- Limit the use of fossil energy
- Reduce irrigation water by 50%
5. Stakeholders mapping

Why is it important and how to create stakeholders map
Why is it important?

1. Impact in any activity has two sides: positive and negative.

2. Stakeholders all have certain participation in each link of the value chain in the circular economy.

3. Without identifying the parties and their influence, projects may face unforeseen risks.

- Stakeholder mapping is a process of finding out the key individuals involved in the project and who will be affected by the project.
- Stakeholder mapping can provide the insights your projects require to complete smoothly.
- This technique plays an important role in stakeholder management. (Source: Appvizer)
Stakeholder mapping

02 approaches

Approach 1

Approach 2

Image: Unsplash
Stakeholder mapping

Approach 1

- Use Mindmap and brainstorming to figure out:
  - Indirect stakeholders
  - Direct stakeholders
Stakeholder mapping

Approach 2

- Use business model canvas
- Identify stakeholders
Stakeholders Matrix

Approach 1

As a decision making tool, steps include:

- Build stakeholders matrix
- Select of evaluation criteria (suitable to the project/enterprise)
- Rank them (if necessary) to make decisions
- Develop a corresponding action strategy

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Importance level</th>
<th>Interest and Problems</th>
<th>Channels</th>
<th>Frequency of communication</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Map out the stakeholders in the CE and clarify:

- What parties are included?
- Name some organizations for each component group
- Use the Stakeholder Matrix to determine the level of influence and how to reach them
- Make your decision/strategy based on the results of stakeholder analysis
Example - Stakeholders map
Example in textile industry

Linear economy
Circular economy
Stakeholders map

Example - Stakeholders map
Example in textile industry

Linear model
Example - Stakeholders map
Example in textile industry

Circular model
Example - Stakeholders map

Example in textile industry

Stakeholders map in CE
Key takeaways

- The effect of the stakeholder mapping tool on providing the big picture for the project
- Quantifying the impacts of project stakeholders will make the decision-making process more efficient
6. Circular, Recycling, Sharing economy

Difference among economies
Same or different?

Are they the same or different?
- Circular economy
- Recycling economy
- Sharing economy
CE vs. Recycling economy

Reusing economy
Start at the end of product life cycle

Circular economy
Start at the beginning of product life cycle to minimize the waste created throughout the life cycle

The Sharing economy belongs to Circular economy.
Challenges to move to CE

- Culture
- Technology
- Market
- Institution
Wrap-up

Write down 03 takeaways from today’s lesson (05 minutes)
Assignments

1. Adjust the problem you want to focus on solving
2. Map out/Adjust 3 ideas to solve that problem
Copyright

Copyright and citation
The material was developed, tested and evaluated by KisImpact as part of the Circular Innovation Pilot Training program funded by the ICM Falk Foundation.

Copyright of the teaching materials belongs to the ICM Falk Foundation. The Teaching Materials Kit is licensed to you under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0) This means that you are allowed to use, adapt, build your materials on this teaching material in any way with the following conditions: citation is required (See next page).

The certificate also allows you to use it for commercial purposes. If you adapt or build on the document, you need to use the same certificate.
For citation purposes, kindly use the following:

**In Vietnamese:**
- Short version: Quỹ ICM Falk (2022) [CC BY-SA 4.0]
- Full version: Bộ tài liệu giảng dạy năm trong Chương trình đào tạo thí điểm Khởi nghiệp Đổi mới sáng tạo trong Kinh tế tuần hoàn 2022 tài trợ bởi Quỹ ICM Falk, xây dựng, thử nghiệm, đánh giá bởi KisImpact

**In English:**
- Short version: ICM Falk Foundation (2022) [CC BY-SA 4.0]
- Full version: Lesson support was developed from Circular Innovations pilot program 2022, funded by ICM Falk Foundation and implemented by KisImpact