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?

Image: Pixabay

Trainers' Guides

Slide 06 - What if...

Objective: **Stimulate students' creativity** and at the same time, trainers can observe which social, environmental and economic issues students are interested in to further **orient students to develop ideas** in different areas. next activity.

Duration: 20 minutes

- **PREPARATION:** Trainers can prepare a white Padlet/Miro for students to upload the exercise results.
- **TRAINING TIME:** The trainers invite 3-5 random students to present their ideas. Each student has a maximum of 2 minutes to present

Trainers' Guides

Slide 06 - What if...

- **CONCLUSION**:
  - The trainers can summarize the activity with “Climate change (*1 out of 9 planetary boundaries*) has a tremendous impact on their lives, in which Vietnam will be one of the countries that will suffer the most. Who will make the change? It's us - Trainers and friends here. What can we do? That is the goal of this course - to launch an innovative startup project that contributes to combating climate change according to circular economy.”
  - Trainers can share pictures of erosion in Ca Mau, severe weather, storms and floods in the provinces where students live/ near where students live.

2. Day 1 Review

03 dimensions of sustainable development
Circular economy
Transition towards CE

What is sustainable development?

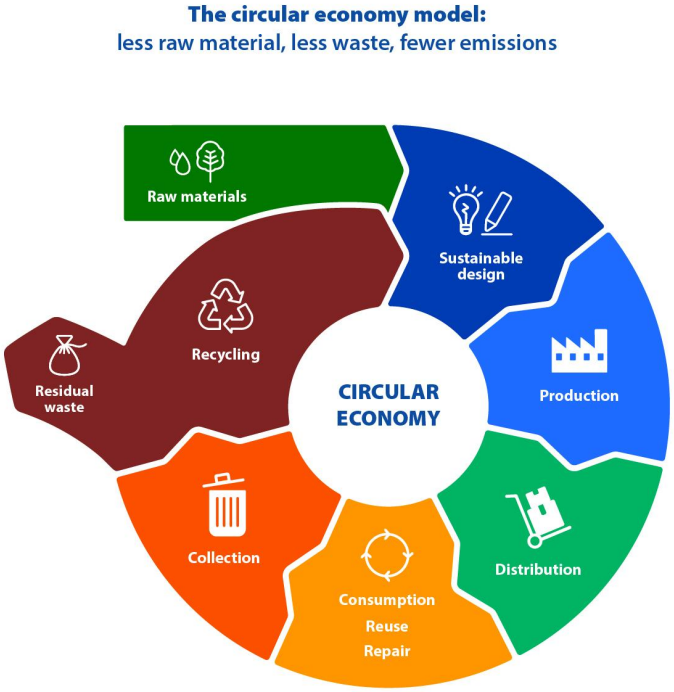
03 dimensions of sustainable development
(Purvis, B et al., 2019)

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

(Brundlandt, 1987)

Circular Economy

Definition



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

Government

Countries such as China, South Korea, Japan, and Indonesia have all **set national goals for their CE strategy**

Corporations

Shift to a CE through cooperations between corporations/ corporations and startups helps large corporations **increase business efficiency and minimize negative impacts**

SMEs

Act as main force to accelerate the transformation of the CE but **change slowly due to technology and face most difficulties in transition**

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**

Trainers' Guides

Slide 10, 11, 12, 13 - Day 1 Review

In this part, the trainers review the important content of the previous session

Duration: 10 minutes

Key points:

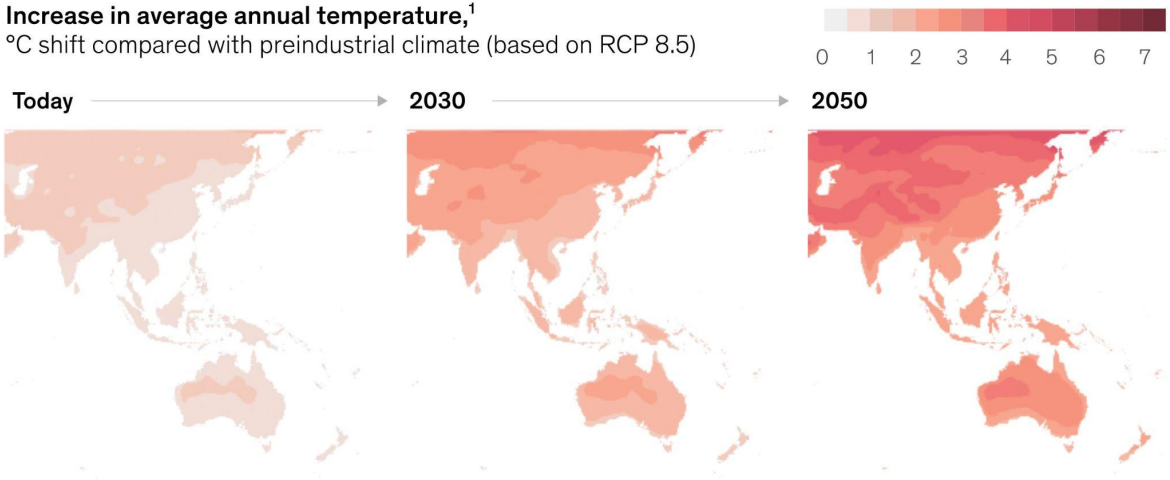
1. Key contents from Day 1:
   a. 03 dimensions of sustainable development: Economy, society, environment
   b. Circular economy & upstream - downstream innovation
   c. Transition towards CE in the world
2. The trainers emphasize the objectives of Day 2 and its relation with Day 1 to the extent which is to dig deeper into the *current state of the circular economy* in Asia, in addition to using 03 dimensions of sustainable development to analyze and evaluate examples given.

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.



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

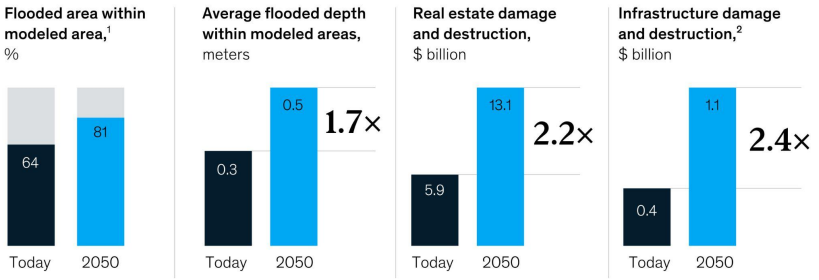
Image: McKinsey (2020)

Asia is **more severely affected** by climate change than other regions

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.

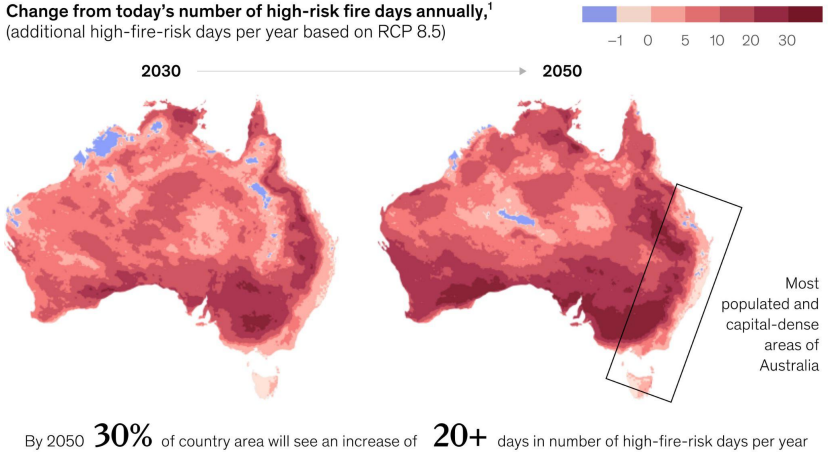
Combined flood effects from 100-year rainfall, storm surge, and streamflow in Tokyo (based on RCP 8.5)



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 1998 and 2017, in 2030 as average between 2021 and 2040, and in 2050 as average between 2041 and 2060. 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.
[1]Flooded area considered for grids with depth greater than 0.01.
[2]Damage identified for several assets (eg, substations, stations, data centers, hospitals).
Source: European Commission; Woodwell Climate Research Center; McKinsey Global Institute analysis

McKinsey & Company

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



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 2017, in 2030 as average between 2021 and 2040, and in 2050 as average between 2041 and 2060.
[1]ined as day when fire weather index is high enough to account for majority (79%) of observed historical fires. Fire weather index is general metric of fire

Image: McKinsey (2020)

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Trainers' Guides

Slide 16 & 17 - Climate change in Asia

Trainers should read Climate change and response in Asia report by McKinsey in advance.

Duration: 05 minutes

Key points

1. **Slide 16:** Asia is more severely affected by the change than other regions. By 2050, parts of Asia could see **increasing average temperatures,** deadly heat waves, extreme rainfall events, severe storms, droughts and changes in climate. water supply source. In 2050, the world will have **700 million - 1.2 billion people living in areas suffering from deadly heat waves**. 600 million of them are in Asia, including Vietnam.

2. **Slide 16:**
   a. It is estimated that **1.2 trillion USD of capital in Asia will be lost** due to floods by 2050. Japan alone - a highly developed economy in Asia, will lose 13.1 billion USD in 2050 due to floods and extreme rains, 2.2 times more. current number. The same goes for damage to other facilities.

   b. In Australia, McKinsey found bushfires can cause significant damage to infrastructure assets ranging from transport to energy (Figure 6). The proportion of the population living in an area with more than ten days of **high fire risk per year could rise to 46% by 2050**, from 26% today. Climate change could increase the share of equity that is exposed to at least five days of high fire risk from 44% today to 60% by 2050.

Trainers' Guides

Slide 16 & 17 - Climate change in Asia

3. Trainers ask the following question:
    a. "*Are these two phenomena common in Vietnam in recent years*?" (Suggested answer: Emerging economies like Vietnam see an increase in extreme heat and humidity by 2050 (though potentially less extreme than Frontier countries - India, Bangladesh) , Pakistan) and an increased tolerance to extreme rainfall events, these countries will have a significant impact on their ability to work because their work takes place in outdoor and it is labor-intensive)

—

References:

1. https://www.mckinsey.com/capabilities/sustainability/our-insights/climate-risk-and-response-in-asia

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.

Trainers' Guides

Slide 21 - Climate change in Vietnam

Duration: 02 minutes

Key points: Vietnam is one of the countries that will be most affected by climate change and this problem is present or in front of us when storms, floods, epidemics, natural disasters, and droughts increase each year such as the record heat wave or extreme weather in Ho Chi Minh City.

Suggestion: Trainers can turn figures about climate change in Vietnam into games on Kahoot or other forms to make it more attractive.

Trainers' Guides

Slide 21 - Climate change in Vietnam

Some figures trainers can refer to:

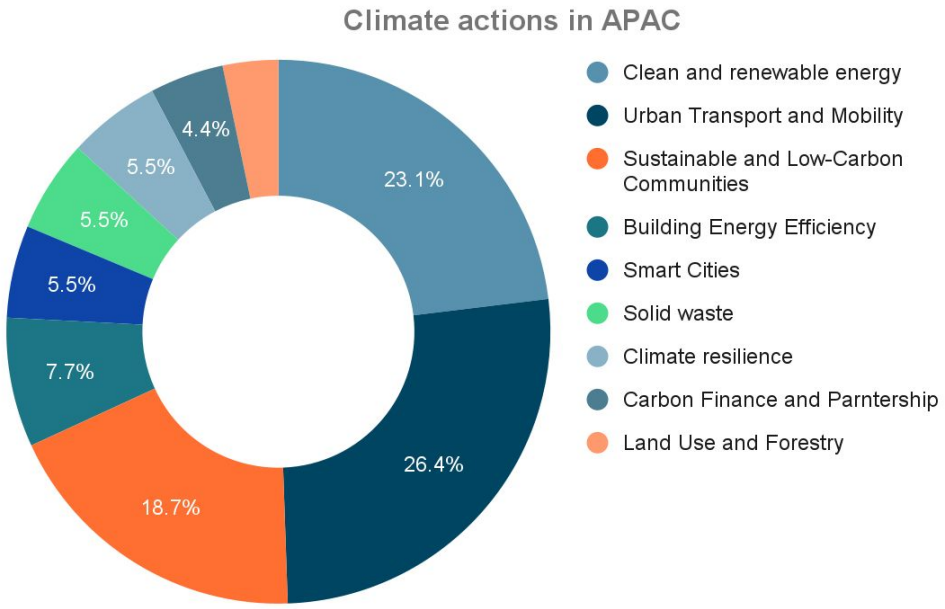
- Number of people who died in the past 10 years because of natural disasters: **9,500 people** (of which 3600 people were due to storms and floods).
- Number of people dying each year from storms and floods: **300 people. Damage 1 - 1.5% GPD**
- If the sea level rises by 1 meter, **40% of the Mekong Delta and 10% of the Red River Delta will be flooded**, directly affecting 20-30 million people.

—

References:

1. https://special.nhandan.vn/Vietnam_nolucchong_biendoikhihau/index.html
2. https://www.youtube.com/watch?v=L7KxvjRCjUg
3. http://tapchimattran.vn/van-hoa-xa-hoi/anh-huong-cua-bien-doi-khi-hau-den-phat-trien-ben-vung-o-viet-nam-hien-nay-46163.html

Climate actions in Asia



Note: Adapted from ADB (2021)

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

Trainers' Guides

Slide 24 - Climate actions in Asia

In this part, trainers should learn in advance about the prioritized sectors as well as potential ones such as Green Finance.

Duration: 03 minutes

Key points:

- Trainers should explain some areas (What it is) to students
- Trainers asks questions: *What field are you interested in and want to implement a project related to? Why?*

CONCLUSION: Encourage students to explore the area of interest and the solutions (the interesting point about that solution) and think about whether they are doing the same or different from the existing projects and at which level. This helps students think and refine their original ideas.

—

Reference:

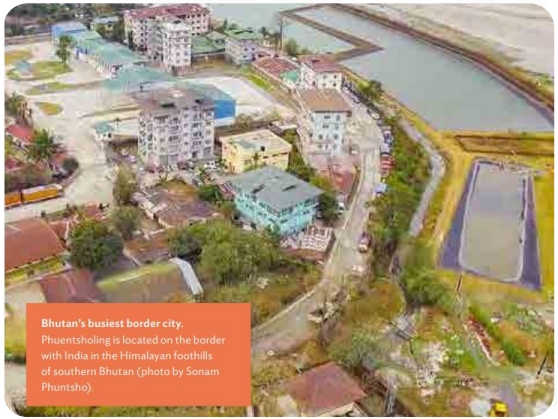
1. https://www.adb.org/publications/100-climate-actions-cities-asia-pacific

Climate actions in Asia

Examples

Corn-based biofuel
(China)

Electric cars
(Thailand)



Flood mitigation
(Bhutan)

Image: ADB (2021)

Trainers' Guides

Slide 26 - Climate actions in Asia - Case studies

In this section, trainers should read the case studies presented in *ADB's 100 Climate Actions from Cities in Asia and the Pacific Report* and similar reports. Lecturer should explore the positive and negative impacts of the project to help students see from different perspectives. Impact Assessments will be taught in *Module 103*.

Duration: 03 minutes

Key points:

1. Lecturer explains what they are doing and what benefits are there for the community.
    a. Corn-based biofuel (China): Increase 300K tons of bio-ethanol gasoline per year.
    b. Electric cars (Thailand): Reduce 53.2K tons of CO2 per year.
    c. Flood mitigation (Bhutan): 15K people access safe new land, helping regional economic growth

Trainers' Guides

Slide 26 - Climate actions in Asia - Case studies

2. Lecturer should point out the negative impact of these solutions. For example:
    a. Biofuel from corn: Corn is a food, so it will lead to the risk of food insecurity. Or in the US biofuel production align with the increase the production of genetically modified corn, if using this corn for food will be able to affect human health.
    b. Electric vehicles (Thailand): Alkane mining to produce electric vehicle batteries causes heavy pollution for countries with Alkane mines

—

References:

1. https://www.adb.org/publications/100-climate-actions-cities-asia-pacific
2. https://nhipcaudautu.vn/kinh-te-xanh/nghich-ly-luong-thuc-dung-de-nuoi-o-to-3346618/?fbclid=IwAR3bFTG2RAJVVHlHlaSwhvRy00hojdCvB88bELKx7jz0BcSIxEg0d_NClFw
3. https://nhipcaudautu.vn/the-gioi/su-phat-trien-bung-no-cua-xe-dien-di-doi-voi-benh-tat-tiem-an-3344599/

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)

Trainers' Guides

Slide 29 - Climate actions in Vietnam

Duration: 02 minutes

Key points: Trainers explain what they are doing and what benefits they bring the community.

a. Metropolitan Line 03 (Hanoi): Reduce 8.4K tons of CO2 per year.
b. Green Building (HCMC): The building takes advantage of the water and energy saving strategy, so it reduces electricity and water consumption.
c. Nature-Based solutions enhance resilience in Cities: Improve water quality, prevent soil erosion, etc.

—

References:

1. https://www.adb.org/publications/100-climate-actions-cities-asia-pacific

Framework for CE in ASEAN

Image: ASEAN

- 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.

Trainers' Guides

Slide 31 - Framework for CE in ASEAN

Duration: 02 minutes

Key points:

1. As a major producer and consumer region of the world, ASEAN shows great potential for a circular economy. However, *rapid urbanization and industrialization* have resulted in an increase in waste pollution and greenhouse gas emissions with alarming environmental impacts.
2. In October 2021, ASEAN adopted the Framework for a Circular Economy to scale and accelerate the region's transition to a low-carbon economy.

Trainers' Guides

Slide 31 - Framework for CE in ASEAN

3. However, it is noted that ASEAN's cooperation framework for CE was signed in 2021. However, the focus of this cooperation framework has not been determined.
4. There should be spearheads and/or priorities for this framework rather than over every aspect. Some areas that ASEAN can consider focusing on due to commonalities such as CE in marine economy, CE to reduce plastic pollution and ocean pollution; circular agricultural economy

—

References:

1. https://asean.org/asean-adopts-framework-for-circular-economy/
2. https://asc.fisipol.ugm.ac.id/2022/08/23/circular-economy-in-asean-a-brief-view-on-plastics-harmonization-and-micro-small-and-medium-sized-enterprises-inclusion/
3. https://www.eeas.europa.eu/delegations/association-southeast-asian-nations-asean/linear-circular-eu-and-asean-inaugurate_en?s=47

5 strategic priorities to transition towards CE in ASEAN

Image: 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.

Trainers' Guides

Slide 34 - 5 strategic priorities to transition towards CE in ASEAN

Duration: 03-05 minutes

Key points:

1. Although there is no focus, the framework aims at promoting cooperation and coordination among countries in the region for the transformation of the local economy as *5 priorities* mentioned above.
2. Trainers may ask additional questions such as:
   a. *According to you, what are the outstanding priorities of the region?* (Suggested answer: greening products and services to ensure intra-regional trade)
   b. *What would be the next priorities?* (Suggested answer: Green Technology and Investment)

—

References:

1. https://asean.org/asean-adopts-framework-for-circular-economy/

CE case studies in Asia

Image: Pixabay

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.

Trainers' Guides

Slide 36 - CE case studies in Asia

Duration: 05 minutes

1. The Lecturer introduces some models of CE in Asia.
2. The *Style Theory* example above is a model that minimizes the impact of fast-moving fashion.
3. There may also be other good examples in China (see references).

_

References:

1. https://www.asiaglobalinstitute.hku.hk/storage/app/media/pdf/Circular-economy_tnv3.pdf
2. https://www.boardofinnovation.com/blog/asia-circular-economy/

CE case studies in Asia

Image: Samsung

Samsung

- 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.

Trainers' Guides

Slide 38 - CE Case studies in Asia

Duration: 05 minutes

1. Another example is Samsung's model of "upcycle" - creatively upgrading & reusing
2. Instructor can explain “upcycling” and the difference between “upcycling” and “recycling”
   a. Upcycling: Creative reuse for another purpose
   b. Recycling: Reusing into new materials
3. After introducing the example, the Lecturer can ask more questions: *Does Samsung apply this in Vietnam? Why?*

—

References:

1. https://www.boardofinnovation.com/blog/asia-circular-economy/
2. https://www.evolvebeauty.co.uk/blogs/news/recycling-vs-upcycling#:~:text=What%20is%20Upcycling%3F,update%20and%20renew%20old%20items.

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?

Image: Pixabay

Trainers' Guides

Slide 40 - Do you know

Duration: 10 minutes.

1. Students work in group to find the initiatives they know
2. The Lecturer can also expand the discussion by asking “how will Asia be affected by climate change?”
3. Lecturer jointly analyzes the initiatives by asking why they think that it is CE and that has the potential to change/create a large-scale impact, and whether they are *upstream or downstream innovations*.

4. CE and climate change

CE and climate change
CE solutions to mitigate climate change

CE and Climate change

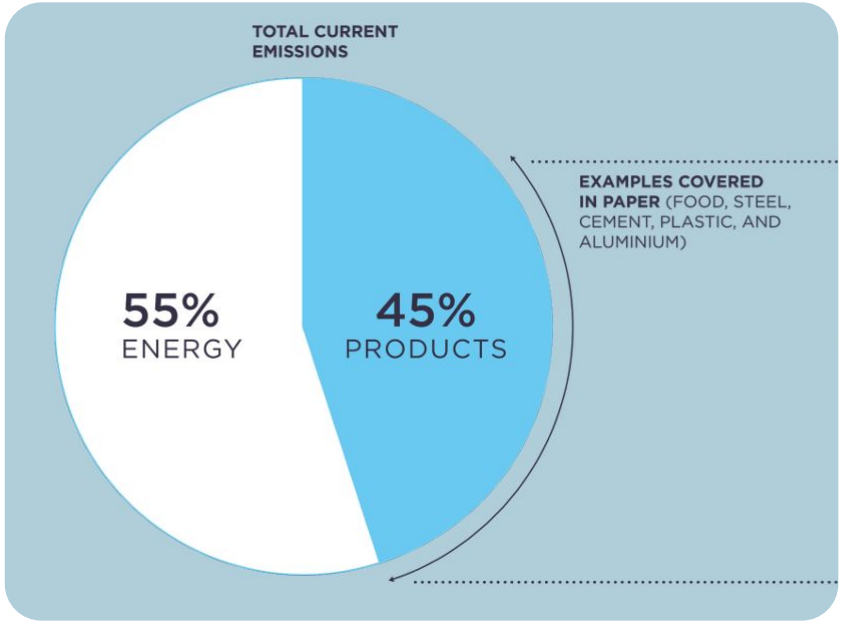


Image: Ellen MacArthur Foundation (2019)

- 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.

CE and Climate change

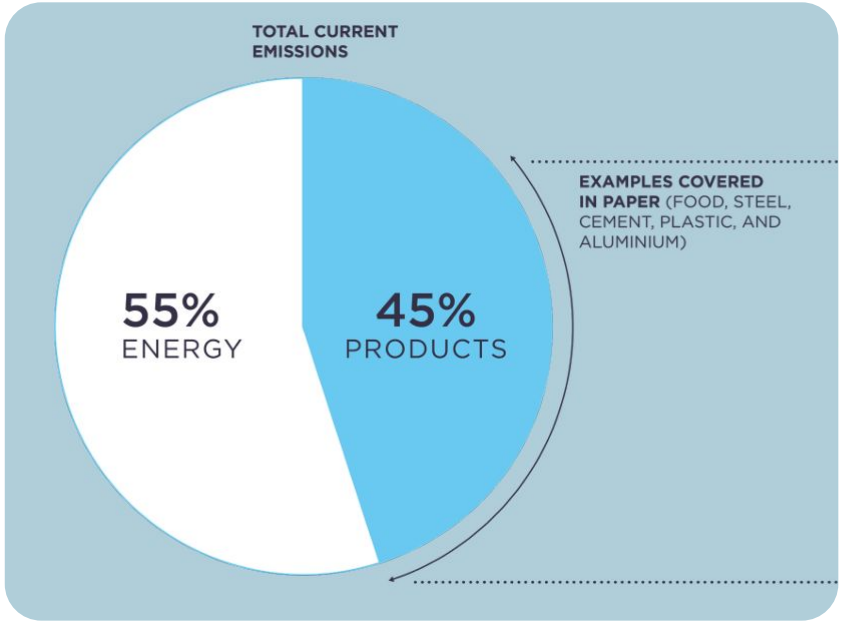


Image: Ellen MacArthur Foundation (2019)

- 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.

Trainers' Guides

Slide 43 & 44 - CE and Climate change

Duration: 05 minutes

1. The trainers explain the relationship between the CE and climate change to show that the CE will contribute to *reducing greenhouse gas emissions and contributing to the fight against climate change*.
2. Trainers can also ask what problems are most serious in Vietnam

—

References

1. https://ellenmacarthurfoundation.org/completing-the-picture
2. https://www.eea.europa.eu/publications/building-renovation-where-circular-economy

CE in climate change mitigation effort in Vietnam

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%

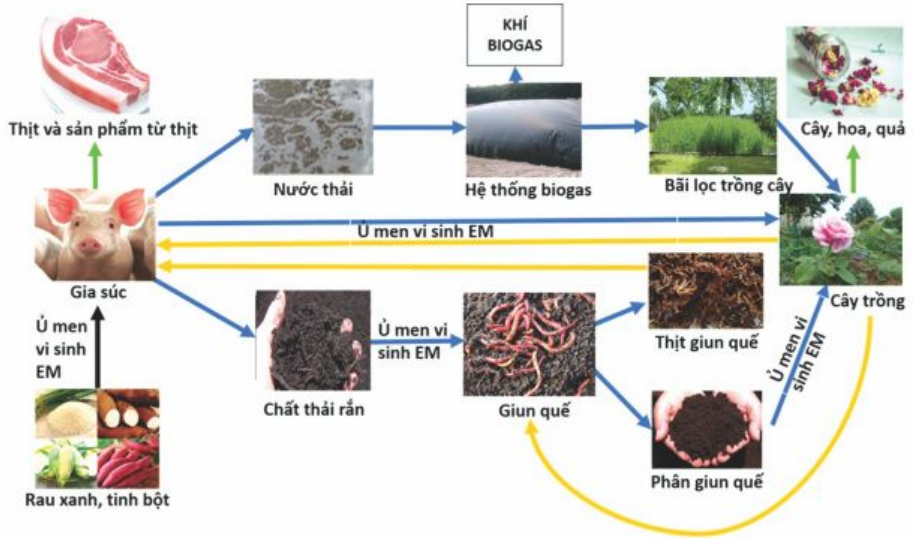


Image: Nguyên Khôi Farm

Trainers' Guides

Slide 46 - CE in climate change mitigation effort in Vietnam

Duration: 05 minutes

1. In this part, trainers should spend time to learn about Nguyen Khoi Farm's model / other models that they are interested in.

—

References

1. https://nguyenkhoifarm.com/wp-content/uploads/2020/01/Catalog-Nguy%C3%AAn-Kh%C3%B4i-Farm.pdf
2. https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/examples

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)

Trainers' Guides

Slide 49 - Why is it important?

Duration: 10 minutes

Key points:

1. Trainers may ask questions:
    a. *What are stakeholders? In each project, who are they?* (Suggested answer: Stakeholders are those who have direct and/or indirect influence on the project)
2. Trainers can ask *why it is important to understand stakeholders* and get students' opinions before presenting
3. The trainers briefly explains that any project always has stakeholders.
    a. In CE projects in particular, it is necessary to pay attention to the positive and negative aspects. Each link in the value chain of a CE project has potential positive and negative impacts.
    b. Therefore, without identifying them and their level of influence, it will be difficult to determine the potential risks and impacts of the project.

Trainers' Guides

Slide 49 - Why is it important?

4. Trainers should emphasize it is very important to put stakeholders on the map to ensure that they do not miss out and have a comprehensive view of the project, especially for innovative projects in CE
5. Stakeholder mapping is what needs to be done to minimize negative impacts.

—

References:

1. https://www.appvizer.com/magazine/operations/project-management/stakeholder-mapping

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

Trainers' Guides

Slide 52, 53, 54 - Stakeholder mapping

Duration: 05 minutes

Key points:

1. The Lecturer introduces two approaches:
   a. **Approach 1**: Determine stakeholders by 2 classes: direct and indirect. The tool used is mindmap. Students, can brainstorm in groups and then classify into direct / indirect
   b. **Approach 2**: Identify stakeholders based on business model analysis of a project. All partners and stakeholders will be identified after identifying 9 important components of the business model

Suggested tools: Smaply.com, Miro, Mindmup

Stakeholders Matrix

Approach 1

Stakeholders	Importance level	Interest and Problems	Channels	Frequency of communication	Note
	7	8			
	6	1			
	9	6			

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

Trainers' Guides

Slide 56 - Stakeholders Matrix

Duration: 10 minutes

Key points:

1. The Lecturer explains the tool
2. Then give the example of a stakeholder matrix based on the criteria shown in the table. The above criteria are indicative only. The score in the example is on a 10-point scale.
3. After giving the example, the Lecturer suggests that students develop their own project criteria and apply them to their business/project reality.

Encourage participants to measure and calculate themselves so that they can make decisions based on the data they have about their choice of approach to stakeholders.

Suggested tool: smaply.com

Design stakeholders map in CE

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

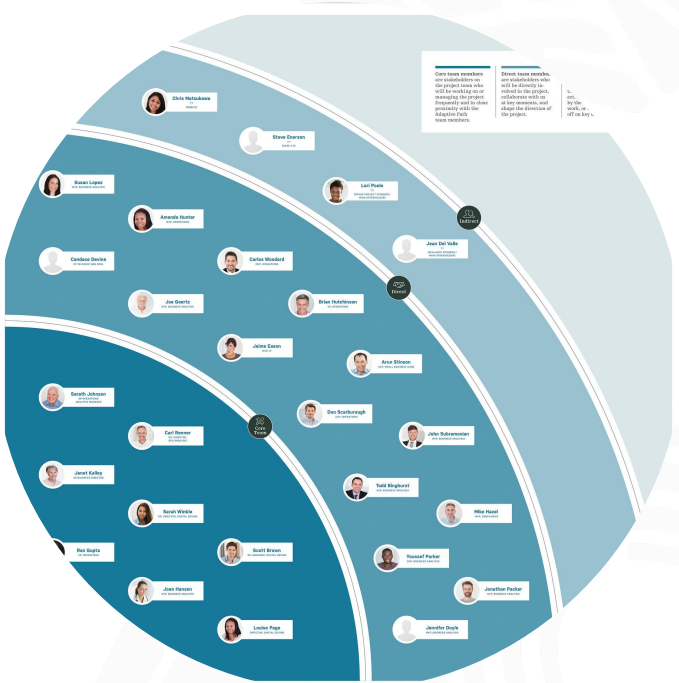


Image: Rosenfeld Media

Trainers' Guides

Slide 58 - Design stakeholders map in CE

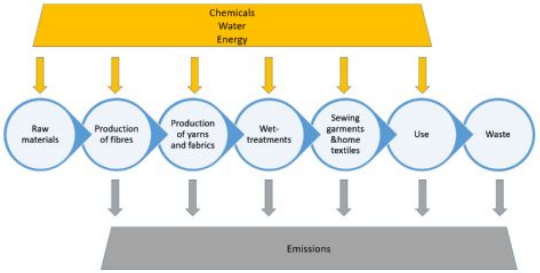
Objective: Help students clarify the Stakeholder Mapping and Stakeholder Matrix tools

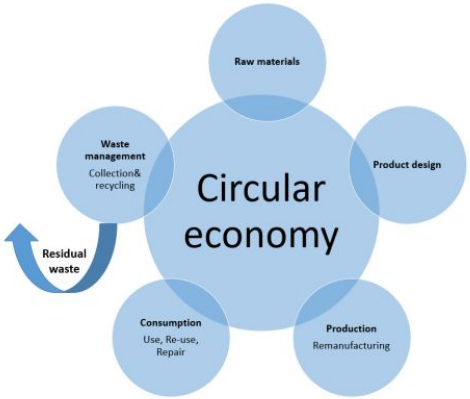
Duration: 10 minutes

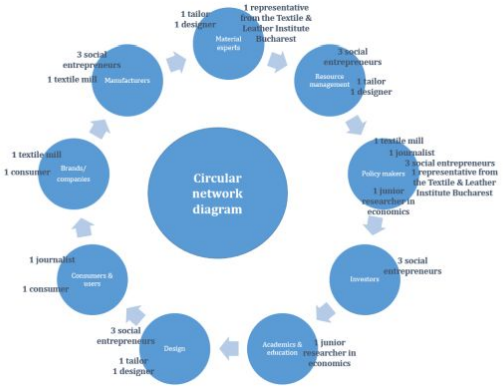
1. The trainers explain the requirements of this activity: Clarify the content of the previous part.
2. Trainers can divide the class into groups of 3-5 students or invite them back to their group, discuss to map stakeholders in their project or a real-life example.
3. In case projects have not yet formed, students can choose a circular economy model according to their understanding and analyze the stakeholders in the project, acting as the project owner for a more general view.

Example - Stakeholders map

Example in textile industry







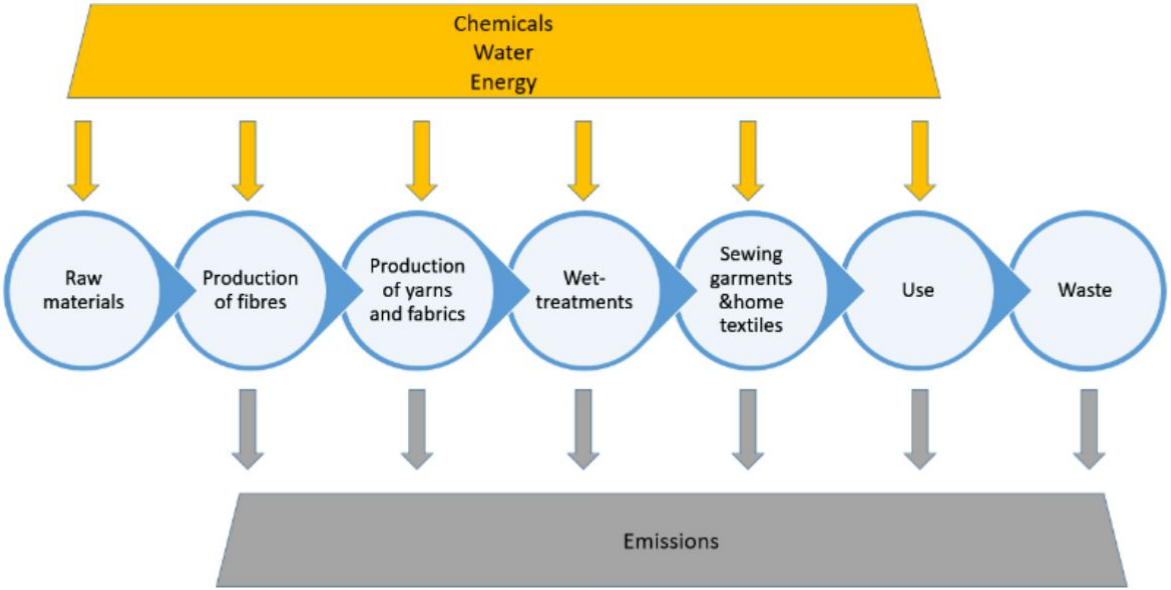
Linear economy → Circular economy → Stakeholders map

Source: Staicu, D., Pop, O. (2018), “Mapping the interactions between the stakeholders of the circular economy ecosystem applied to the textile and apparel sector in Romania”, Management & Marketing. Challenges for the Knowledge Society, Vol. 13, No. 4, pp. 1190-1209. DOI: 10.2478/mmcks-2018-0031

Example - Stakeholders map

Example in textile industry

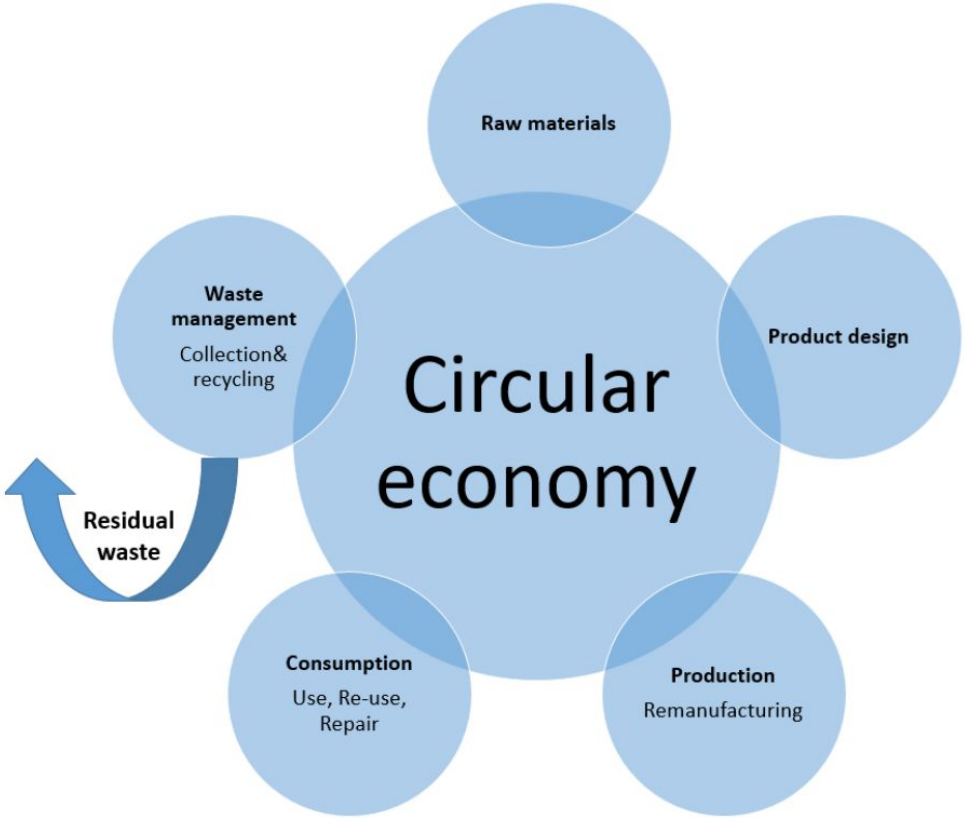
Linear model



Example - Stakeholders map

Example in textile industry

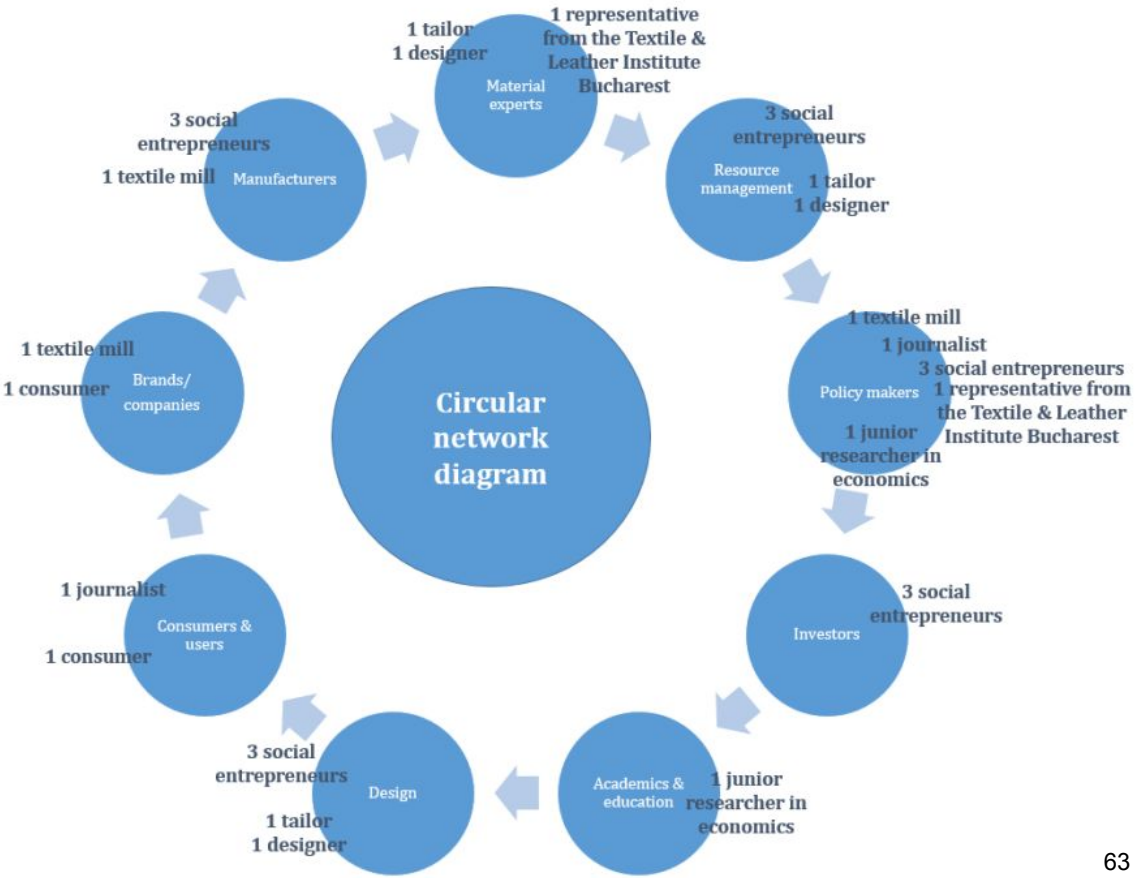
Circular model



Example - Stakeholders map

Example in textile industry

Stakeholders map in CE



Trainers' Guides

Slide 60, 61, 62, 63 - Examples - Stakeholders map

Duration: 03 minutes

1. The figure above depicts the how to *identify the stakeholders in the textile sector*'s transition from linear to circular economy.
2. It can be seen that, going from the linear model, they have determined how the circular model will work, thereby identifying the stakeholders in the entire consultation process.
3. After explaining to the students, the trainers also encourage them to do the same activities with their project.

—

References:

1. https://sciendo.com/pdf/10.2478/mmcks-2018-0031

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

Trainers' Guides

Slide 65 - Key takeaways

Duration: 05 minutes

1. The trainers create and show the Stakeholder Map of CE and outlines the role of the CE in the decision-making process
2. Tools that can be used at every step of circular economy design and make decision making more efficient and inclusive

6. Circular, Recycling, Sharing economy

Difference among economies

Same or different?

Are they the same or different?

- Circular economy
- Recycling economy
- Sharing economy

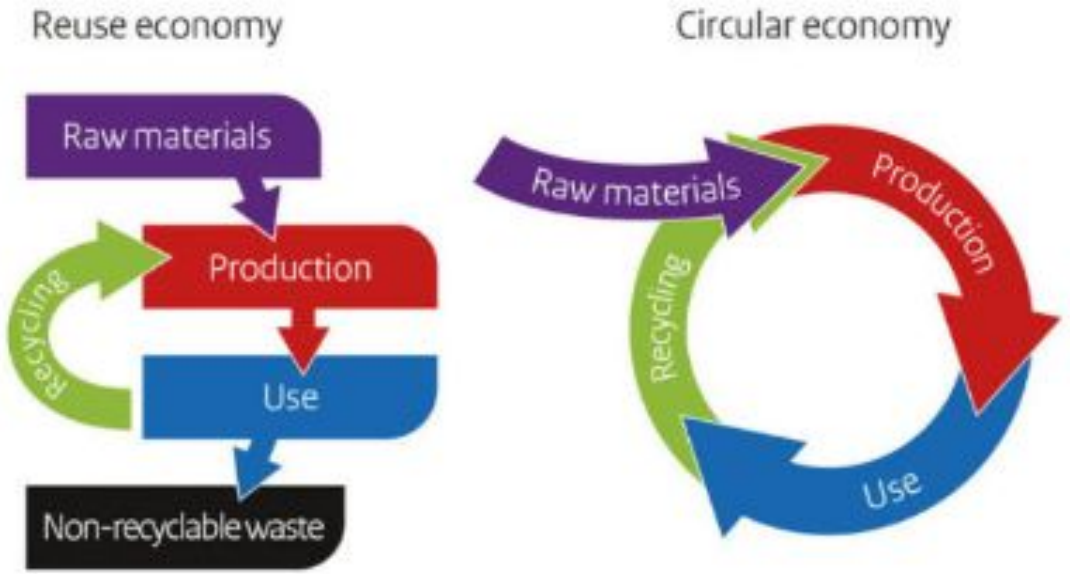
Trainers' Guides

Slide 68 - Same or different?

Duration: 10 minutes

1. Trainers divide class into group of 5 students to discuss the question.

CE vs. Recycling economy

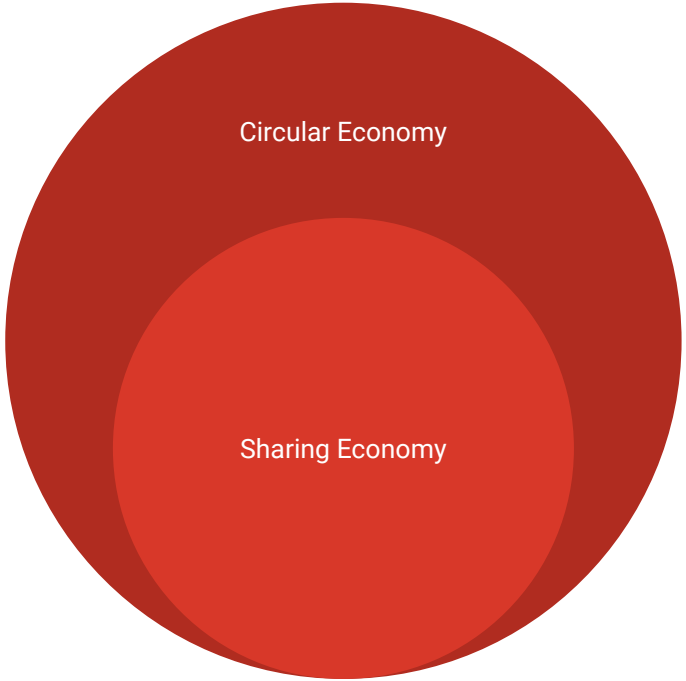


Recycling economy
Start at the end of product life cycle

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

Waly MM, Mickovski SB, Thomson C. Application of Circular Economy in Oil and Gas Produced Water Treatment. *Sustainability*. 2023; 15(3):2132. https://doi.org/10.3390/su15032132

CE vs Sharing Economy



The Sharing economy belongs to Circular economy.

Trainers' Guides

Slide 70, 71 - Circular, Recycling, Sharing economy

In this section, Lecturer should read about three economy models - Circular, Recycling and Sharing economy.

Duration: 20 minutes

Key points: Lecturer asks questions :

1. **Circular vs Recycling:**
    a. *For business models following the recycling economic model, which direction should they go to move to a circular economy?*
    b. *How is the recycling economic model in Vietnam?*
    c. *If you enter this field, what opportunities do you have? Doing what?*

Trainers' Guides

Slide 70, 71 - Circular, Recycling, Sharing economy

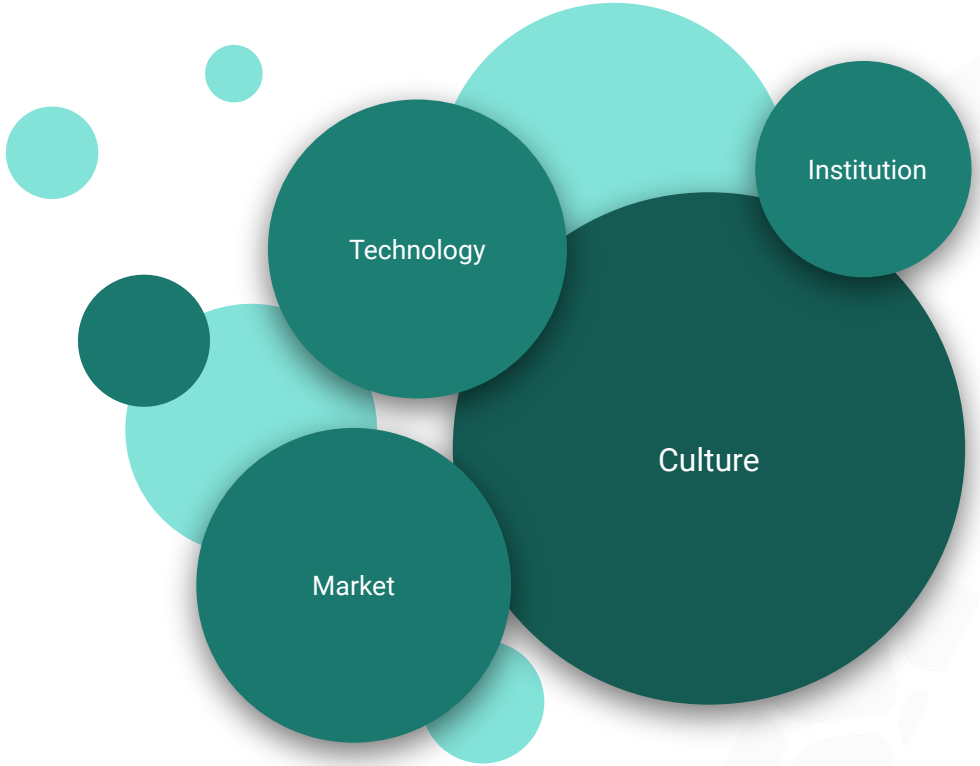
2. **Circular vs. Sharing:**
   a. *Does the sharing economy model really have a positive impact on the environment?*
   b. *How is the sharing economy model in Vietnam?*
   c. *If you enter this field, what opportunities do you have? Doing what?*

—

References:

1. https://www.mdpi.com/2071-1050/15/3/2132
2. https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/examples
3. https://ellenmacarthurfoundation.org/regions/asia
4. https://www.researchgate.net/publication/321677578_Sharing_economy_and_circular_economy_How_technology_and_collaborative_consumption_innovations_boost_closing_the_loop_strategies

Challenges to move to CE



Challenges to move to CE

CULTURE

The main barrier to transition to the CE. Specifically, according to Deloitte's survey, cultural barriers include:

- Consumers **lack awareness and interest** in smart economy (47%)
- **Company culture**: many companies have obstacles in the current business model
- **Operating** in a linear economic system (take - produce - distribute - use - discharge): The company wants to switch to a linear economy, but the supply chain follows a linear economic system.
- **Willingness to cooperate** in the value chain

Challenges to move to CE

MARKET

- **The cost of raw materials** is relatively low, so a recycled product is more expensive than a traditional product (e.g. Bioplastic is more expensive than traditional plastic)
- **High initial investment cost**
- **Limited investment** in circular business models [1]
- **Standardization** is not high

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1. *The ICM Falk Foundation's Circular Innovation Grant program was one of the only non-profit funder to invest in circular, upstream innovative projects from 2020 to 2022 in Vietnam*

Challenges to move to CE

TECHNOLOGY

- **Lack of impact data**
- **Few** test projects on a large-scale
- **Design** (products) that is circular *(opportunity area for students/young professionals)*
- Low capability to **develop high-quality remanufactured products**
- **Low investment** in technology, technology commercialization capacity (*)
- **Underutilized technology** (exploit and commercialize innovations) (*)

—

(*) KisImpact's experience

Challenges to move to CE

HUMAN RESOURCES

- Limited capacity to design, operate, maintain and improve operating models related to CE

LAWS/ INSTITUTIONS

- Lack of existing/effective institutions and laws

SOCIETY

- 81 million job opportunities in the informal sector could be lost.
- In India alone (garbage collection, waste bottles, etc.). Vietnam alone counts Ho Chi Minh City as 5,000 people and 1,800 scap centerpoints (VnEconomy, 2022)

Trainers' Guides

Slide 74, 75, 76, 77, 78 - Challenges to move to CE

Duration: 10 minutes

1. The trainers explain more about the gap in the institution from 101 - Day 1 and can refer to 102 - Day 1
2. The trainers ask:
   a. *Which opportunity stands out to you?*

—

References:

1. https://circulareconomy.europa.eu/platform/sites/default/files/171106_white_paper_breaking_the_barriers_to_the_circular_economy_white_paper_vweb-14021.pdf
2. https://www.boardofinnovation.com/blog/bringing-social-impact-into-circular-economy/
3. https://www.valtech.com/sv-se/blogg/challenges-with-circular-economy/

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

Copyright

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Citation

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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*