



A CoP Chat Series

LET'S TALK PLASTICS

SESSION #9
TACKLING PLASTIC POLLUTION
IN ASIA AND THE PACIFIC

10 March 2021, 7.30 - 9.00 AM EST



TODAY'S SPEAKERS



**JACO
CILLIERS**

Manager
Bangkok Regional Hub,
UNDP Asia and the Pacific



**ALEXANDRU
OPRUNENCO**

Innovation Specialist,
UNDP Asia and the Pacific



**TOSHIKAZU
TOKIOKA**

First Secretary of the
Embassy of Japan,
Cambodia



**MOEKO
SAITO JENSEN**

Environmental Policy
Specialist (Circular Economy
and Plastic Management),
UNDP Cambodia



**MENG EANG
TAING**

Director of the Department of
Green Economy, National
Council for Sustainable
Development & Project
Manager for Combatting
Marine Plastic Litter Project



**DANIELLA
RUSSO**

Chief Executive Officer,
Think Beyond Corp and Think
Beyond Plastic Foundation



**NICK
BERESFORD**

Resident Representative,
UNDP Cambodia

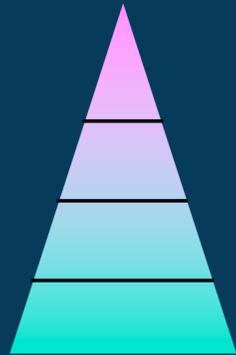
Innovation and system transformation

A journey of driving systemic changes in waste management

Alex Oprunenco, Regional Innovation Centre, UNDP Bangkok Regional Hub



Plastic waste is a complex development challenge



Driven by multiple factors



Interlinkage across the processes and sectors of waste management



Entangling relationship & power dynamics in the ecosystem

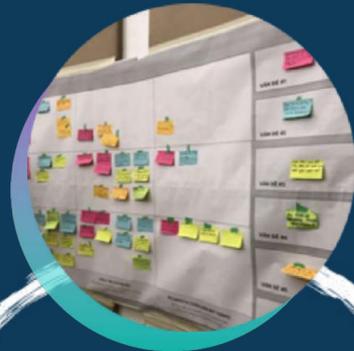
Uncertainty in the second order effects

A journey of systemic design in Viet Nam

Our learning and experience so far...



Ethnographic research and interviews to understand the needs and pain points



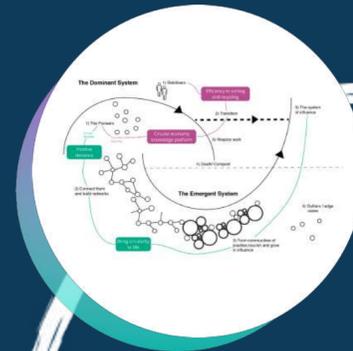
Brainstorming possible initiatives and co-designing prototypes



Reimagining the current system with circularity in mind and envisioning a common future



Develop a portfolio logic to act on leverage points in the system



Articulating the portfolio logic and creating narratives for systemic transformation



Re-engaging local communities and ecosystem with the narratives to shape activities and ultimately reality

A journey of systemic design in Viet Nam

The waste sorting experiment: moving from the desk to action

Unseen impact



After 1 month





Illegible Natural vs. Legible "Scientific" Forests
(pages 16-17 of James Scott's *Seeing Like a State*)

Reframing the Plastic Issue

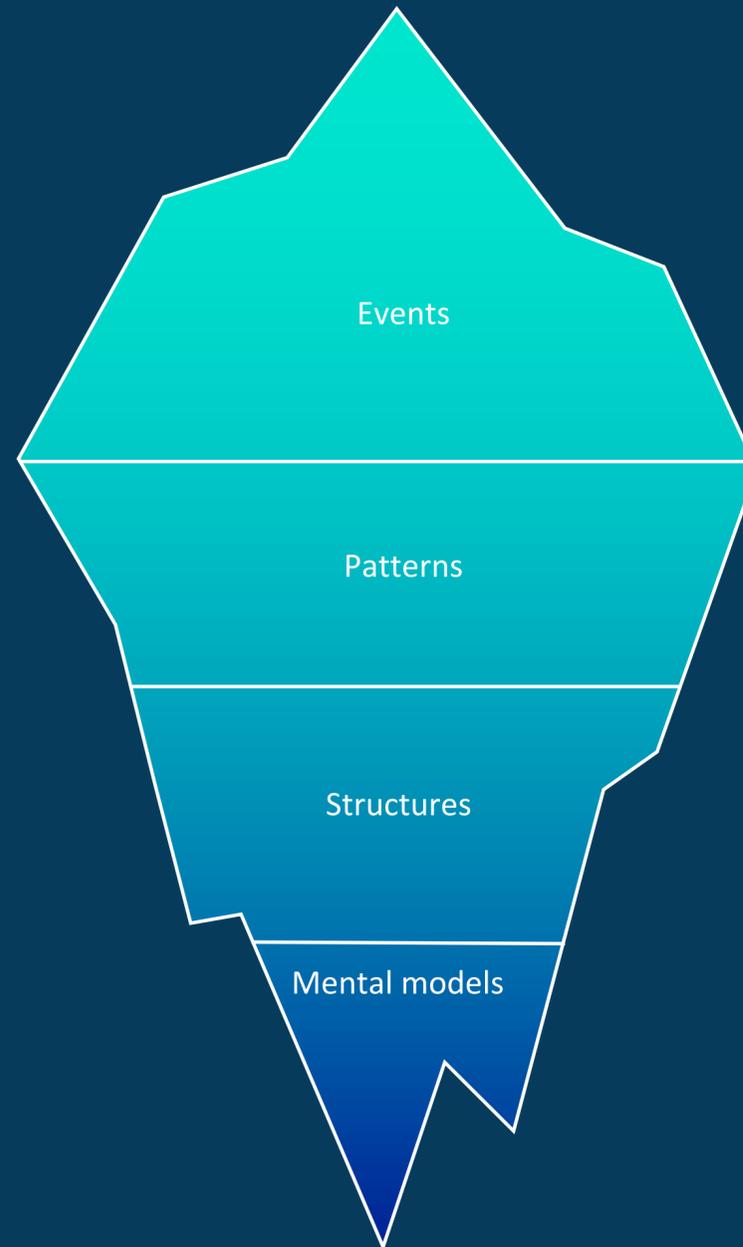
Sense & Frame

- Focus on the symptoms (fixing stuff)
- Only have a part of the system
- Lead to the single-point interventions such as an App, a campaign or a facility
- Miss the informality

Engage & Position

- Deep dive into the root causes
- Navigate the whole system
- Act on multiple leverage points
- Shift the paradigm (circularity)

Transform



Examples from Da Nang, Viet Nam experience

Landfills collapse

Illegal dumping

Cheap Plastic packaging

Low recycling rate

Failure of the pilot projects

Lack of incentive mechanism for waste recycling in private sector

Lack of strict policy enforcement & monitoring

Informal sector is marginalized

Technology will save us

It is not my job

Waste is dirty, less interaction the better

Lack of hope in collective action

Shift to a new narrative



"Cradle to Grave"

Improve efficiency in sorting and recycling/secondary materials

Generation



Sorting



Collection



Recycling



Treatment

Focus on reducing waste from the production and consumption

"Cradle to Cradle"



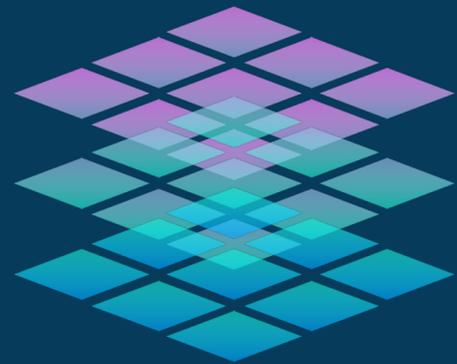
A portfolio approach for systemic problems

Explore a portfolio of options and enhance coherence

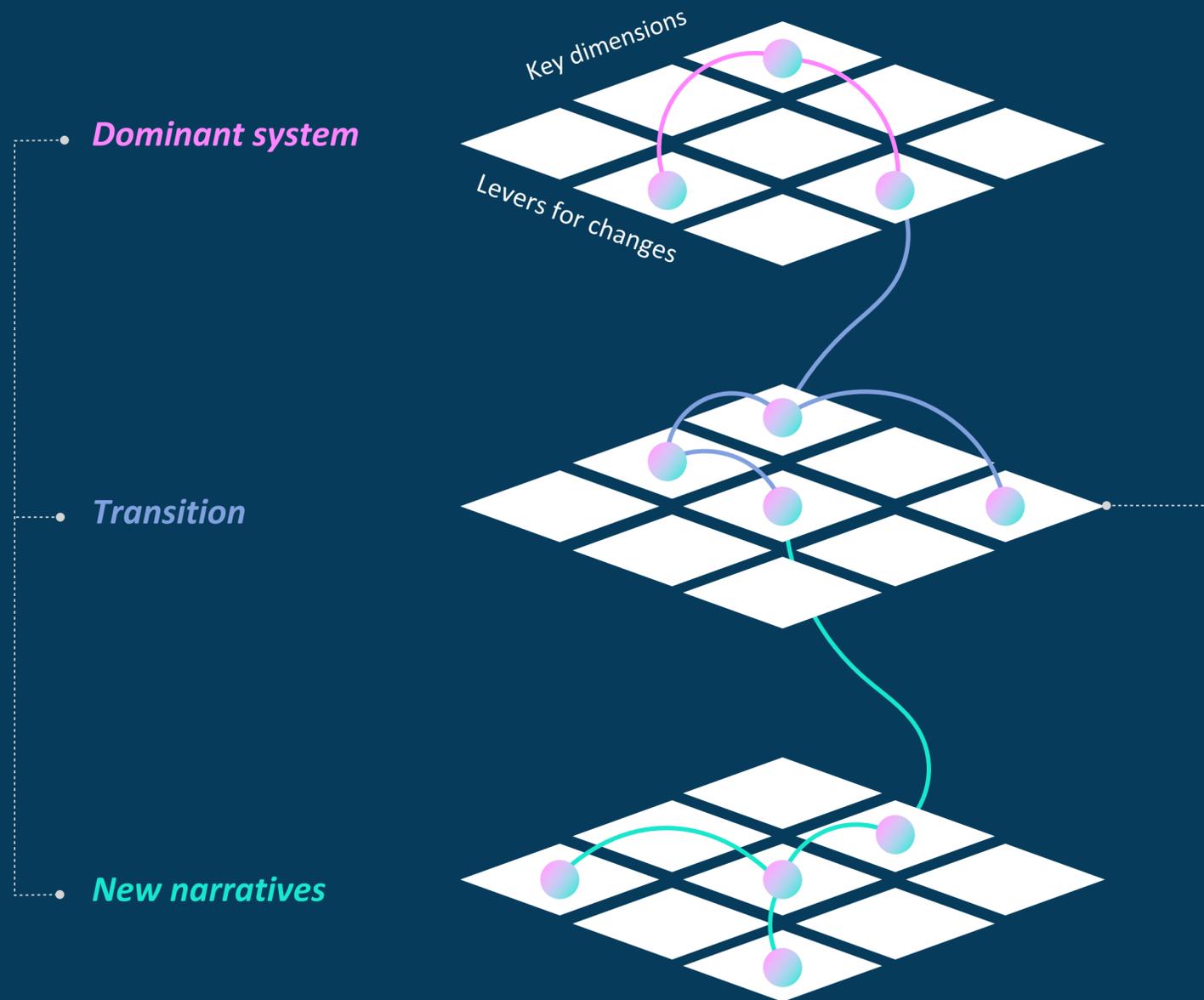
Sense & Frame

Engage & Position

Transform



Systemic view to align with a portfolio logic



Waste flow	Generation	Sorting	Collection & transport	Recycling & secondary material	Treatment & disposal
Policy	○	●		○	
Technology		○	○	●	●
Infrastructure		●			○
Information			○	○	
Incentive	●	○	●	○	
Behavior	●		○		

Levers for changes

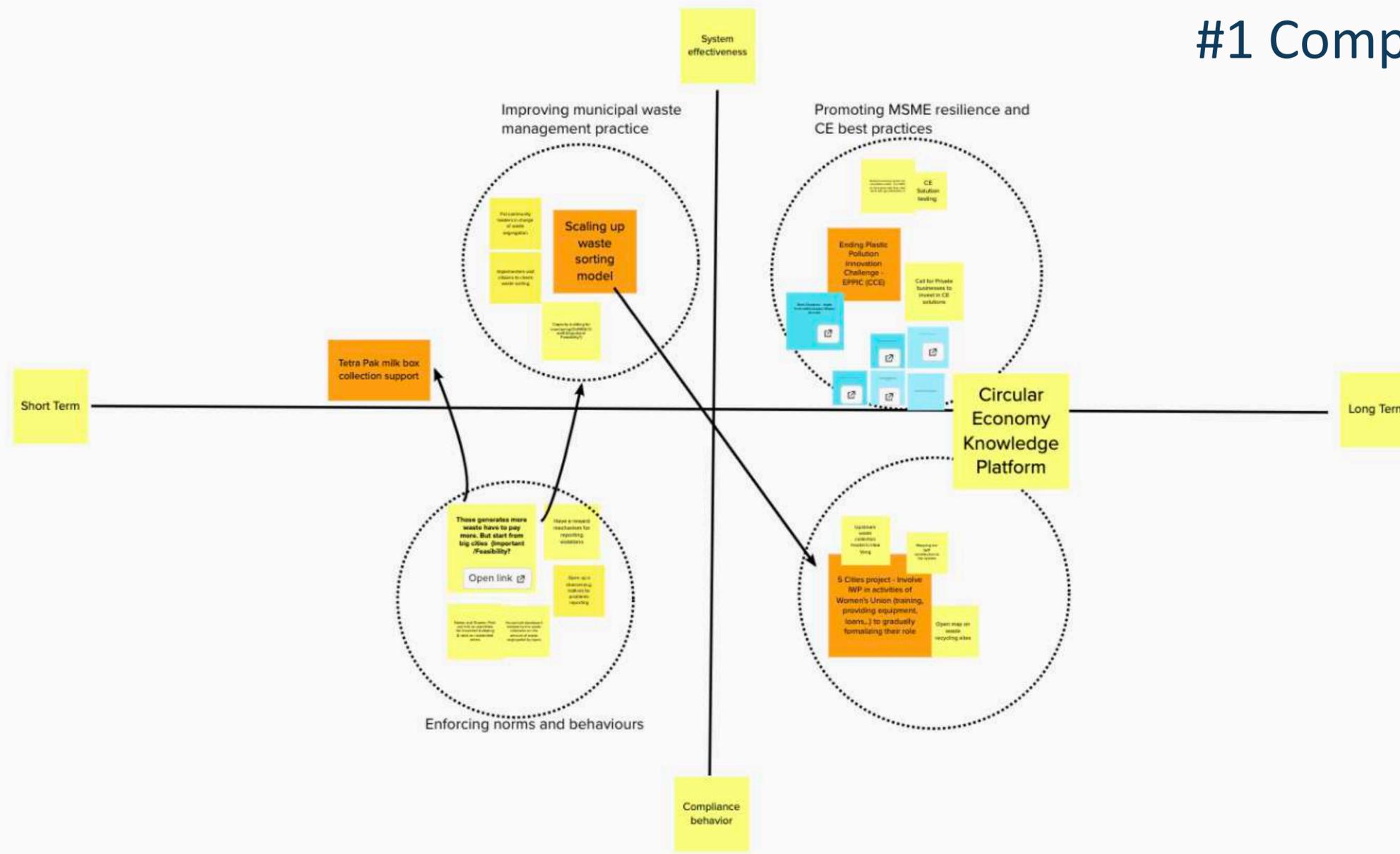
Act on multiples leverage points

A journey of systemic design in Viet Nam

Building the narratives to enable systemic transformation



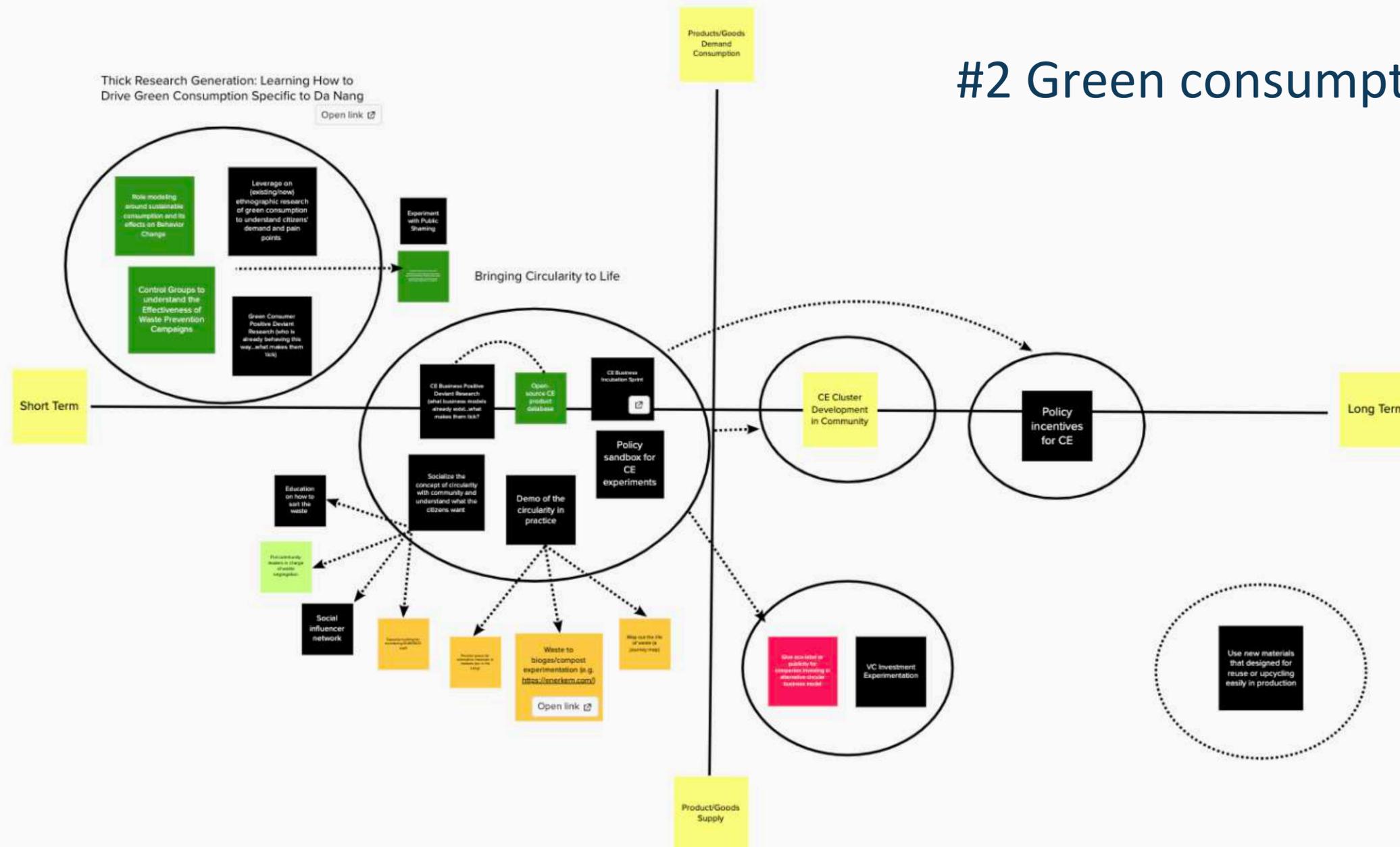
#1 Compliance portfolio



A journey of systemic design in Viet Nam

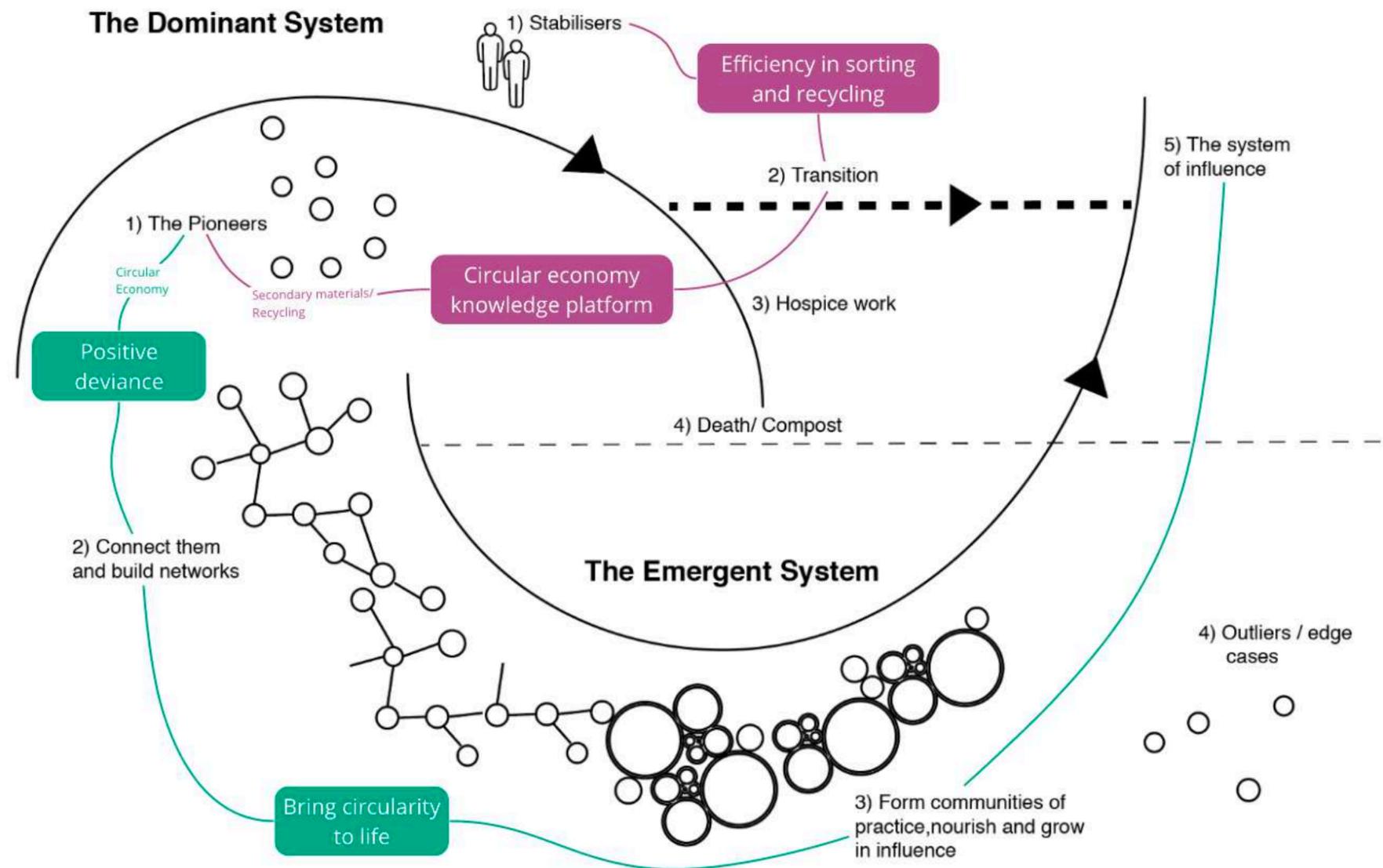
Building the narratives to enable systemic transformation

#2 Green consumption portfolio



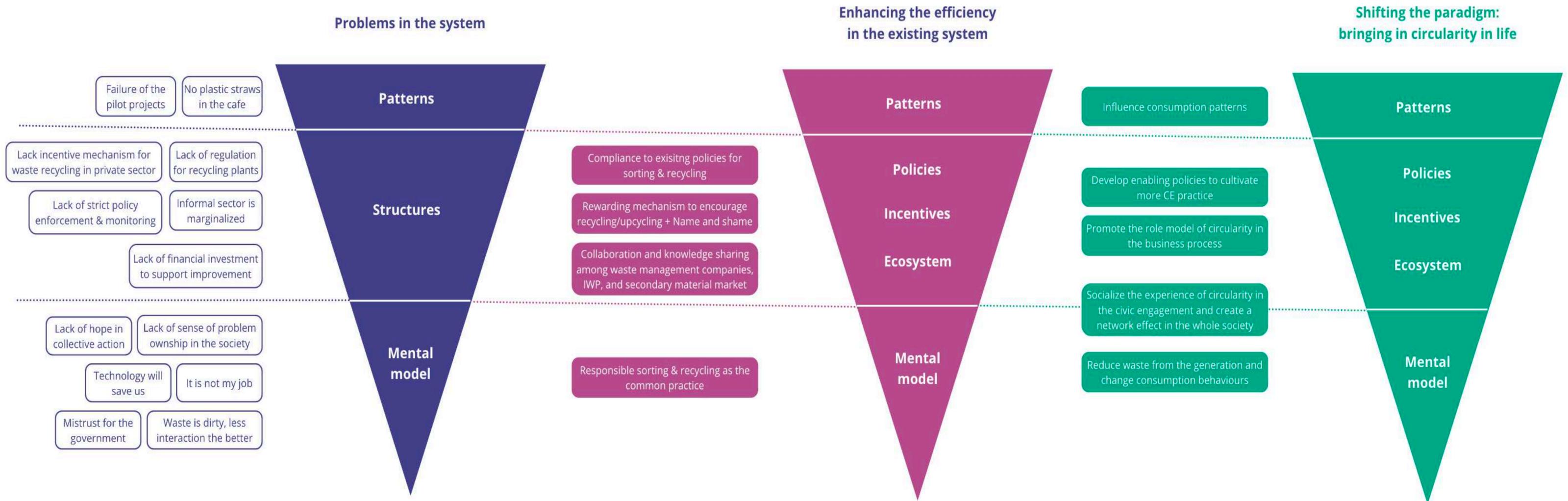
A journey of systemic design in Viet Nam

Building the narratives to enable systemic transformation



A journey of systemic design in Viet Nam

Acting on leverage points in a portfolio logic





Viet Nam

SUSTAINABLE DEVELOPMENT GOALS

OUR FOCUS

MORE



Posted on November 11, 2020

Launching Danang Circular Economy Hub for a green and sustainable city

Green Avengers acts for the environment



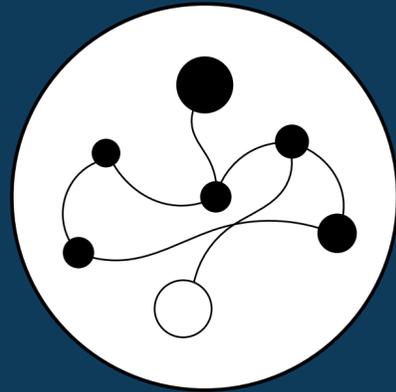
Phase out ‘scrap’ plastic imports completely by 2025 with a view to promoting innovative materials use and production aligned to CE principles in Vietnam.

- A mission towards reduction of plastics use and transition to a circular economy entails gradually decoupling economic activity from the consumption of finite resources and designing waste out of the system.
- It represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits.

Embedding the portfolio logic in a service offering

Executors vs. Strategic shapers

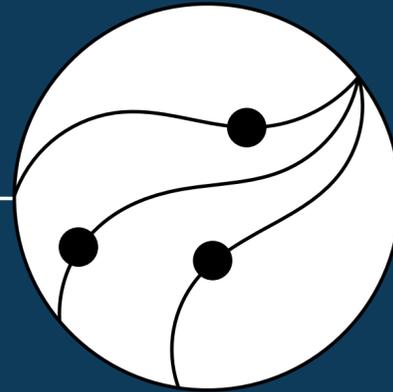
Ethnographic research



- > Collect thick data
- > Understand pain points
- > Empathize with stakeholders' experience

- + Surface needs from the ground
- + Differentiate stakeholders
- + Explore the "unseen"

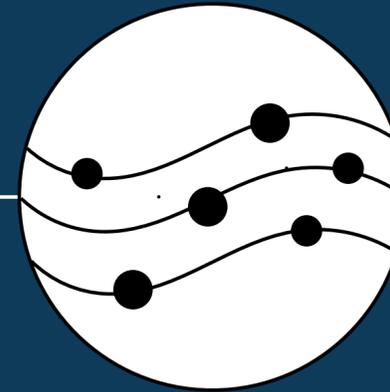
Systemic design workshop



- > Common understanding
- > Common vision
- > Ideation and socialization

- + Stakeholders alignment
- + Identify problem areas for action (e.g. call for proposal)

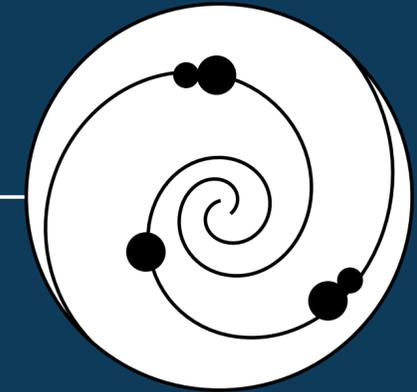
Portfolio design



- > Enhance coherence
- > Act on levers for changes
- > Interact with the whole system

- + Synthesize ideas with coherence
- + Design portfolio of interventions
- + Build investment pipelines

Running Experiments



- > Experiments design & testing
- > Evaluate effectiveness & impact
- > Capture learning and feedback

- + Reduce risks for investment
- + Accelerate learning
- + Generate impact at scale

What

Why

Let's Talk Plastics Session 9.

Tackling Plastic Pollution in the Asia Pacific Region

Japan's "Marine Initiative"



TOKIOKA Toshikazu

First Secretary, Embassy of Japan in Cambodia

10 March 2021

Phnom Penh, Cambodia



Marine Plastic Litter(MPL) at the G20 Osaka Summit in June 2019

- The **“Osaka Blue Ocean Vision”** which aims to reduce additional pollution by MPL to zero by 2050 **was shared by G20 leaders**

Towards realization of the “Osaka Blue Ocean Vision”,

- **The government of Japan launched the “MARINE Initiative”** in order to support developing countries effort in the area of waste management mainly through the following policy measures:

1. **International Cooperation** including bilateral ODA assistance through **international organizations**
2. International Operations by Japanese Companies, NGOs and Local Governments
3. Dissemination and Sharing of Best Practices of Measures to combat marine plastic litter

“MARINE Initiative” toward Realization of the Osaka Blue Ocean Vision

- Toward realization of the “**Osaka Blue Ocean Vision**” that we aim to reduce additional pollution by marine plastic litter to zero by 2050, which was shared at the G20 Osaka Summit, Prime Minister Abe announced that Japan will support developing countries’ efforts including their capacity building and infrastructure development in the area of waste management at the summit.
- To this end, the Government of Japan has launched the “**MARINE Initiative**” to advance effective actions to combat marine plastic litter at a global scale focusing on (1) **Management of wastes**, (2) **Recovery of marine litter**, (3) **Innovation**, and (4) **Empowerment**.

Japan will support empowerment in developing countries to promote waste management, recovery of marine litter, and innovation, mainly through the following policy measures.

1. International Cooperation including bilateral ODA and assistance through international organizations

- ◆ Provide ODA and assistance through international organizations to:
 - **Develop capacities and institutions** including waste-related legal frameworks and waste sorting/collection systems to **promote waste management and “3R (Reduce, Reuse, Recycle),”**
 - Introduce quality **environment infrastructure** such as waste disposal facilities including recycling facilities and waste-to-energy plants.
- ◆ Provide **training for 10,000 officials** engaging in waste management all over the world by 2025.



2. International Operations by Japanese Companies, NGOs, and Local Governments

- ◆ Promote international business promotion and partnerships with NGOs and local governments, to facilitate **export of infrastructure** such as waste-management-related facilities, and **innovation and technology introduction** regarding plastic alternatives and recycling.



Waste-to-energy plant



Marine biodegradable plastics

3. Dissemination and Sharing of Best Practices of Measures to combat marine plastic litter

- ◆ Disseminate and share Japan’s best practices through relevant international conferences and initiatives.
- ◆ Advance sharing knowledge with ASEAN, through the “**Regional Knowledge Centre on Marine Plastic Debris.**”

Japan's Cooperation Projects after the G20

Multilateral Cooperation

- UNEP with Lao PDR, Sri Lanka, and Bangladesh
Determine the origins of plastic pollution and establish local partnerships for reducing plastic pollution
- UNEP-IETC with ASEAN countries
Support for research on environmentally sound management, technology and treatment for Plastic Waste throughout Asia
- ESCAP with ASEAN countries
Scaling up innovation to tackle marine plastic pollution
- AIT with Developing countries
Master's Degree Program in Marine Plastic Abatement
- WCO with Asia Pacific countries
Improve knowledge and capacity of Customs administrations for border management to deal with illegal shipment of plastic waste
- UNIDO with Nigeria and Egypt
Study the availability of sustainable alternatives to plastics, and the viability of innovative packaging and recycling technologies



Japan's Cooperation Projects after the G20 (cont.)

Bilateral Cooperation

- **UNIDO with South Africa**
Develop an action plan to strengthen the capacity of local industry to manufacture alternative materials, and build up capacities for plastic recycling
- **UN-HABITAT with Philippines**
Enhance the gov. capacity for tackling plastic waste management, improve access to technology in cities & communities, and raise awareness of citizens/communities/private sector
- **UNDP with Cambodia**
Develop policies and regulations, improve awareness among citizens/private sector, implement pilot initiatives in target cities, establish plastic recycling business models and disseminate best practices



Cambodia's Systematic Approach for Fighting Against Plastic Pollution

Mr. Meng Eang Taing

Director of the Department of Green Economy, National Council for Sustainable Development & Project Manager for Combatting Marine Plastic Litter Project

Dr. Moeko Saito-Jensen

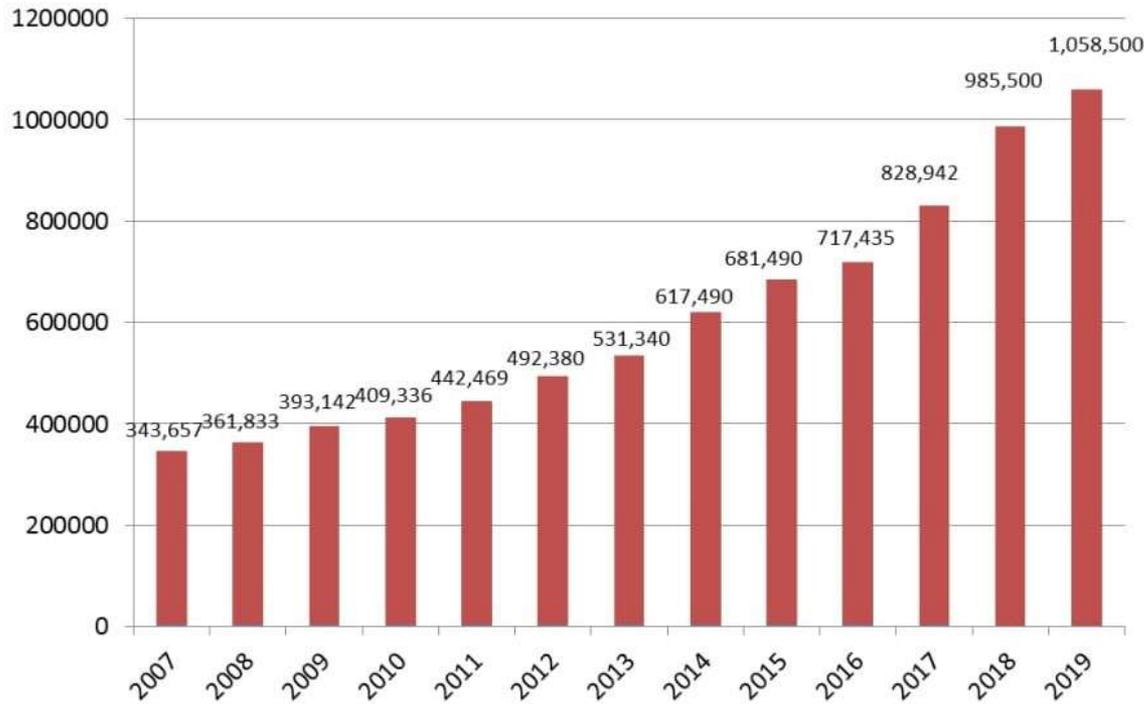
Environmental Policy Specialist (Circular Economy and Plastic Management) UNDP Cambodia

Ongoing Fight to Prevent Marine Plastic Pollution



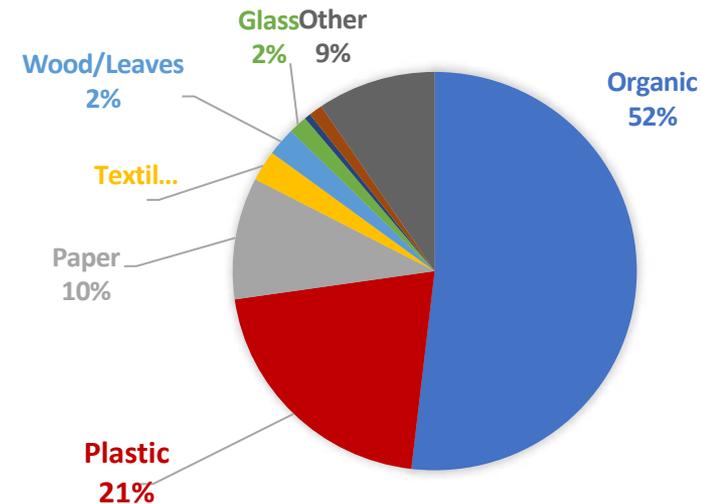
Rapidly Growing Volume of Waste including Plastic

Municipal Solid Waste Landfill Disposal in Phnom Penh (tons/year)



Source MoE (2020)

Municipal Solid Waste Composition in Phnom Penh

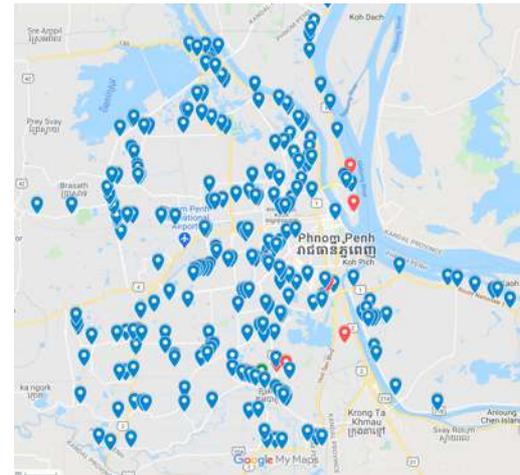


Source: Seng (2015)

Municipal Solid Waste Management in Cambodia

	Volume (Tons)	Percent of total waste
Generated	4,090,209	100%
Formal Collection	2,571,235	63%
Illegal Dumping and Burning	1,194,456	29%
Informal Collection/ recycling	324,512	8%

Source: MoE (2015)



In Phnom Penh, 292 depots- 2,000 people

Challenges with Plastic Waste and Pollution

Rapidly growing volume of plastic waste- adding pressure on existing landfills

Burning and illegal disposal of plastic waste is common and highly polluting

Marine plastic pollution:

- 80% of debris on beaches is plastic- (cigarettes, plastic food wrappers and plastic bags) & fishing gears – causing marine plastic pollution (FFI)
- Many mammals, fish and birds suffer from ingesting plastic

Challenges remain with large-scale investment in plastic recycling

- Less than 1 % of plastic waste is formally recycled by small-medium scale enterprises



4Rs (Refuse, Reduce, Reuse, and Recycle) Framework

5 WAYS TO REDUCE PLASTIC

1 REFUSE
One-single use plastic bottles, plastic cups, plastic straws, expanded polystyrene (EPS) food containers or plates

2 REDUCE
Install a water dispenser and use eco bags

3 REUSE/REPLACE
Reusable bottles, cups, bags, food containers, and straws (bamboo or stainless)

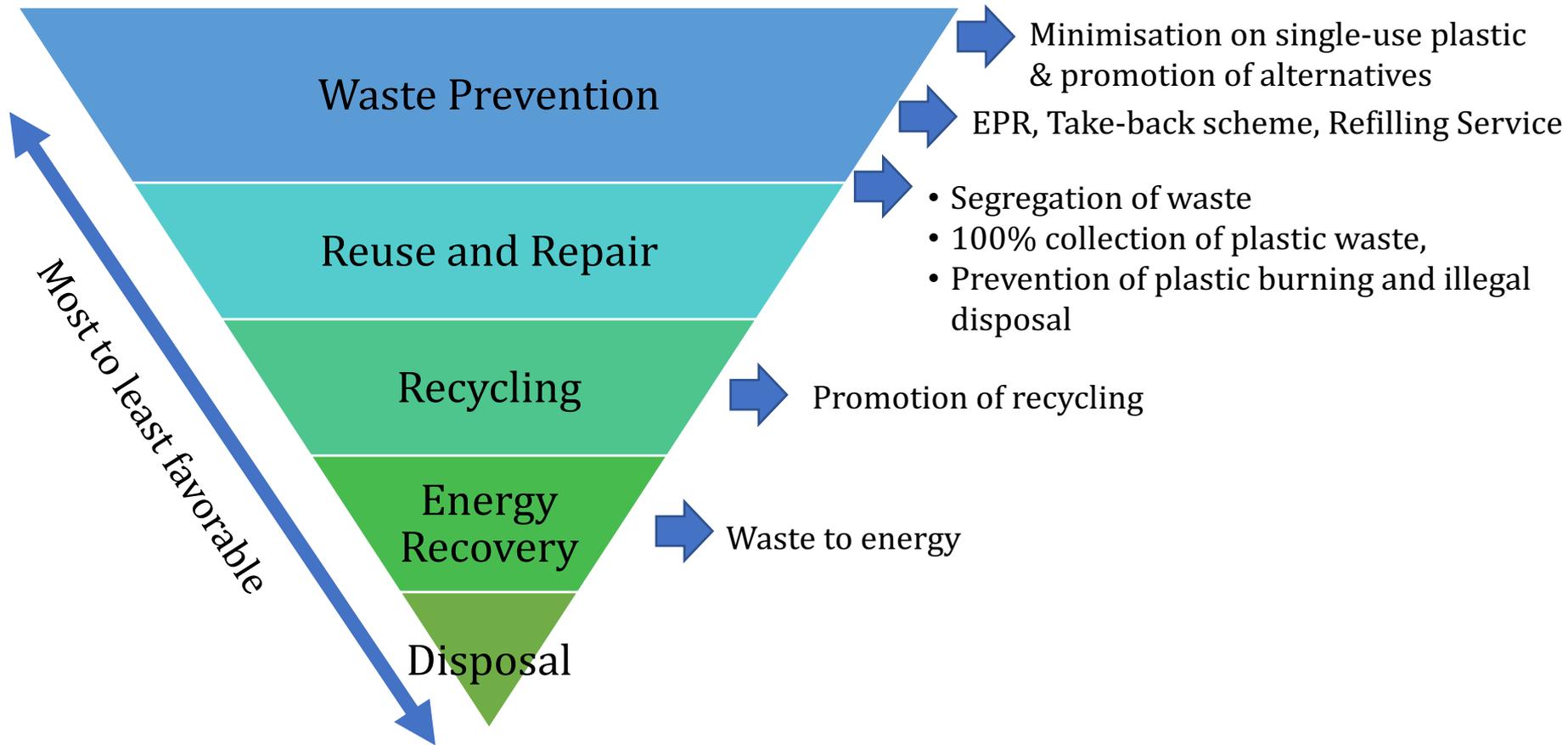
4 RECYCLE
Dispose plastic waste in the recycle bins

5 REMIND
tell others to follow 4Rs above

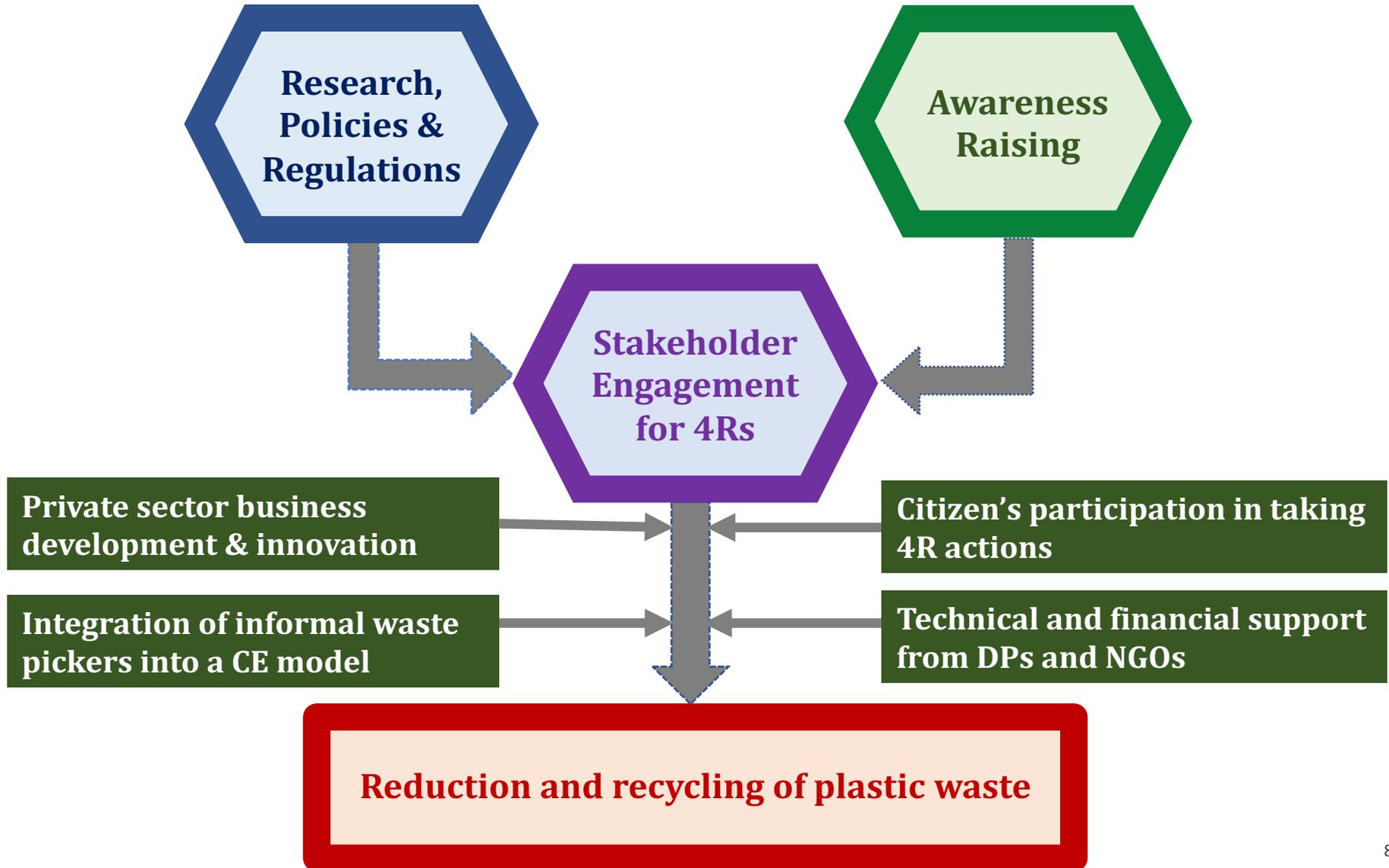
1+2+3+4

Logos: UNDP, Ministry of Natural Resources and Environmental Conservation, Ministry of Environment, Sweden (Sverige), and Japan (From the People of Japan).

Priorities for Plastic Waste Management (under the draft National Circular Economy Strategy)



Cambodia's Systematic Approach for Tackling Plastic Pollution



Research, Policies and Regulations

Research

- Rapid assessments of **global plastic regulations**
- **Research to identify top 10 most commonly found plastic items in water ways**
- **Behavioral insight into consumers' preferences for straws and waste bins**
- Rapid assessments of **plastic recycling** challenges and enabling elements
- Review of existing **Extended Producer Responsibility (EPR) & take-back schemes** and policy recommendations for Cambodia (upcoming)

Policies

- National Policy for **Urban Solid Waste Management: 2020-2030** (2021)
- Draft national **Circular Economy Policy and Action Plan**
- Draft national **Plastic Action Plan and Roadmap**

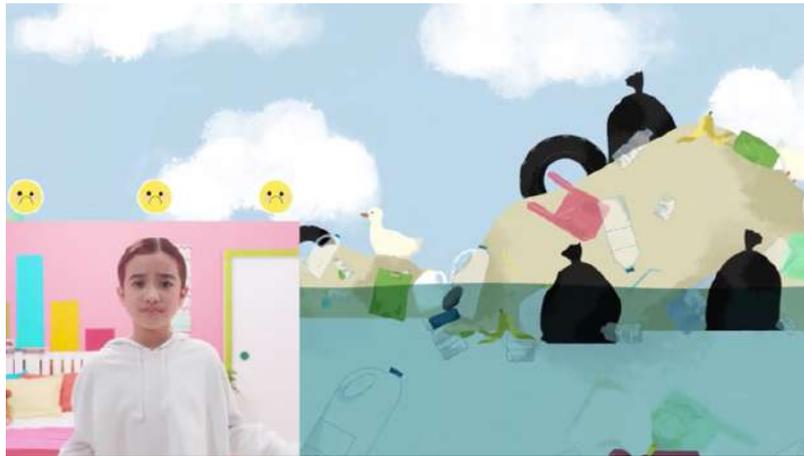
Regulations

- Sub-decree 168 on management of **plastic bags** to charge small levy (2018)
- Draft **sub-decree on plastic management-** including **new measures on single-use plastic items**

Note: most of the above have been led by MoE with support from DPs (e.g. Japan, Sweden, UNDP, World Bank)



Strategic Communication for Awareness Raising



A series of Campaign activities (FB, videos, posters, concerts) in 2019 and 2020 reached over 10 million people & this year's campaign target is 5 million through using social media and working with influencers,

Stakeholder Engagement



National forum on plastic in 2019 mobilized over 130 participants and built a strategic coalition of to promote the shared goal of promoting a circular economy

Circular Economy (CE) Leader platform targeted at the private sector (under development)

- Garment factories
- Wholesale, retail & packaging
- Delivery services
- Hotels
- Restaurants
- Coffee shops

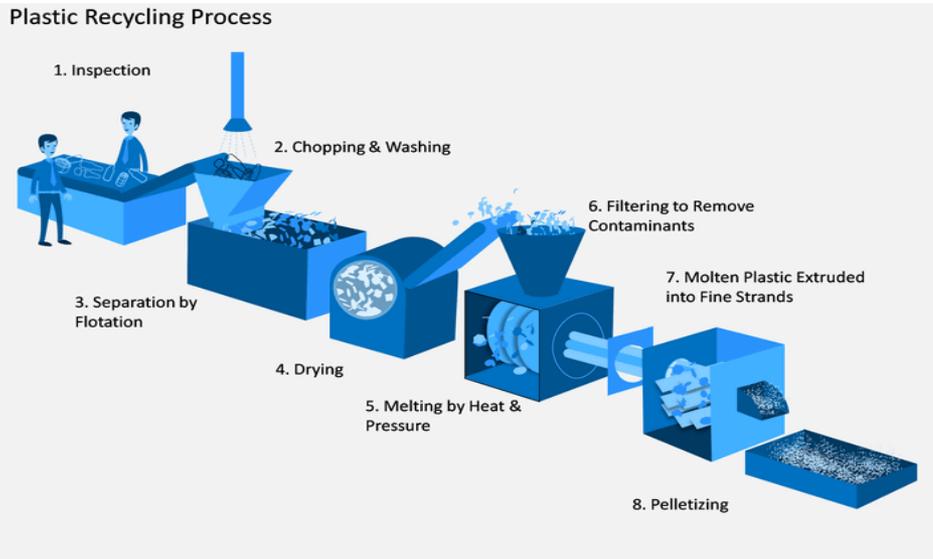


Business Development for Recycling and Plastic Alternatives

Identification of business solutions for plastic waste recycling and alternatives

- Assessment of business needs, potentials, and feasibility for plastic recycling and alternative business models

Piloting and support for selected business interventions



Implementation of Priority Measures in Target Provinces

Target provinces: major cities and coastal areas (e.g. Phnom Penh, Siem Reap and Sihanoukville)

- Scoping research to analyse waste volume and composition and identify major sources and hotspots of plastic waste for formulating priority measures
- Implementation of the priority measures to promote 4Rs in partnership with the govt, businesses, citizens and NGOs
- Linking to possible larger-scale investments for integrated waste management, transfer centres and recycling (e.g. ADB, WB and private sector)
- Capacity building of subnational govts for proper waste management



Thank you

Cambodia's plastic initiatives have been supported by many including:

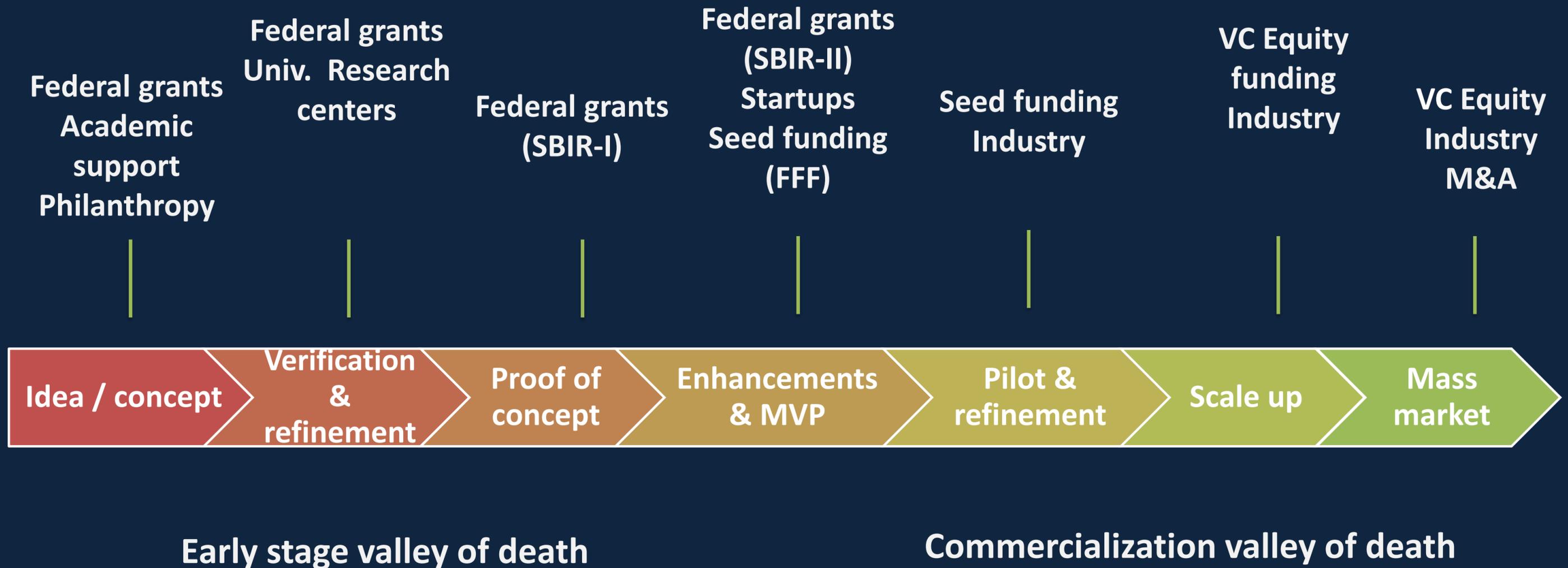




THINK BEYOND Plastic™

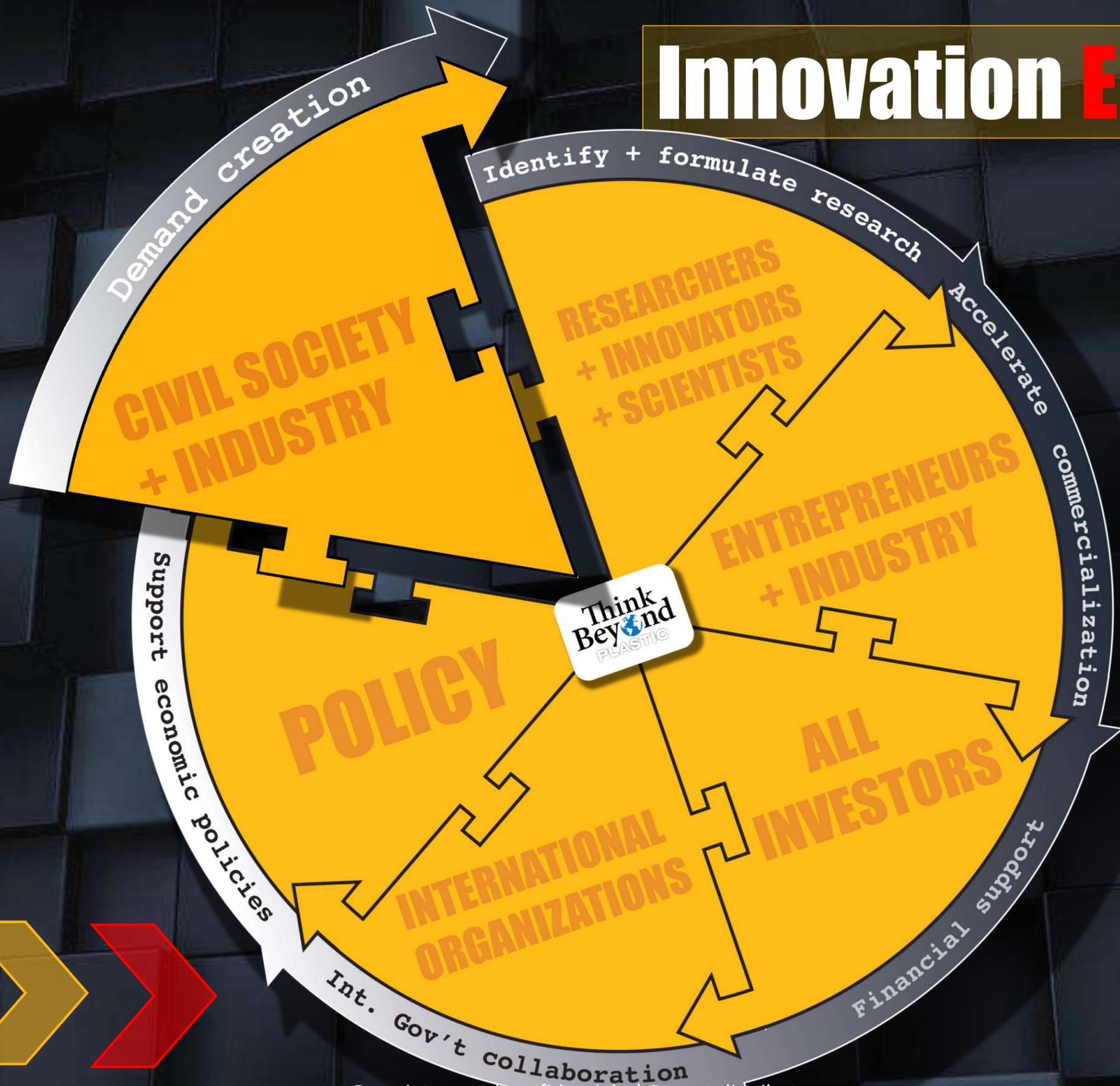
Harnessing the forces of innovation

The Bridge to Commercialization



1

Innovation **Eco**-System

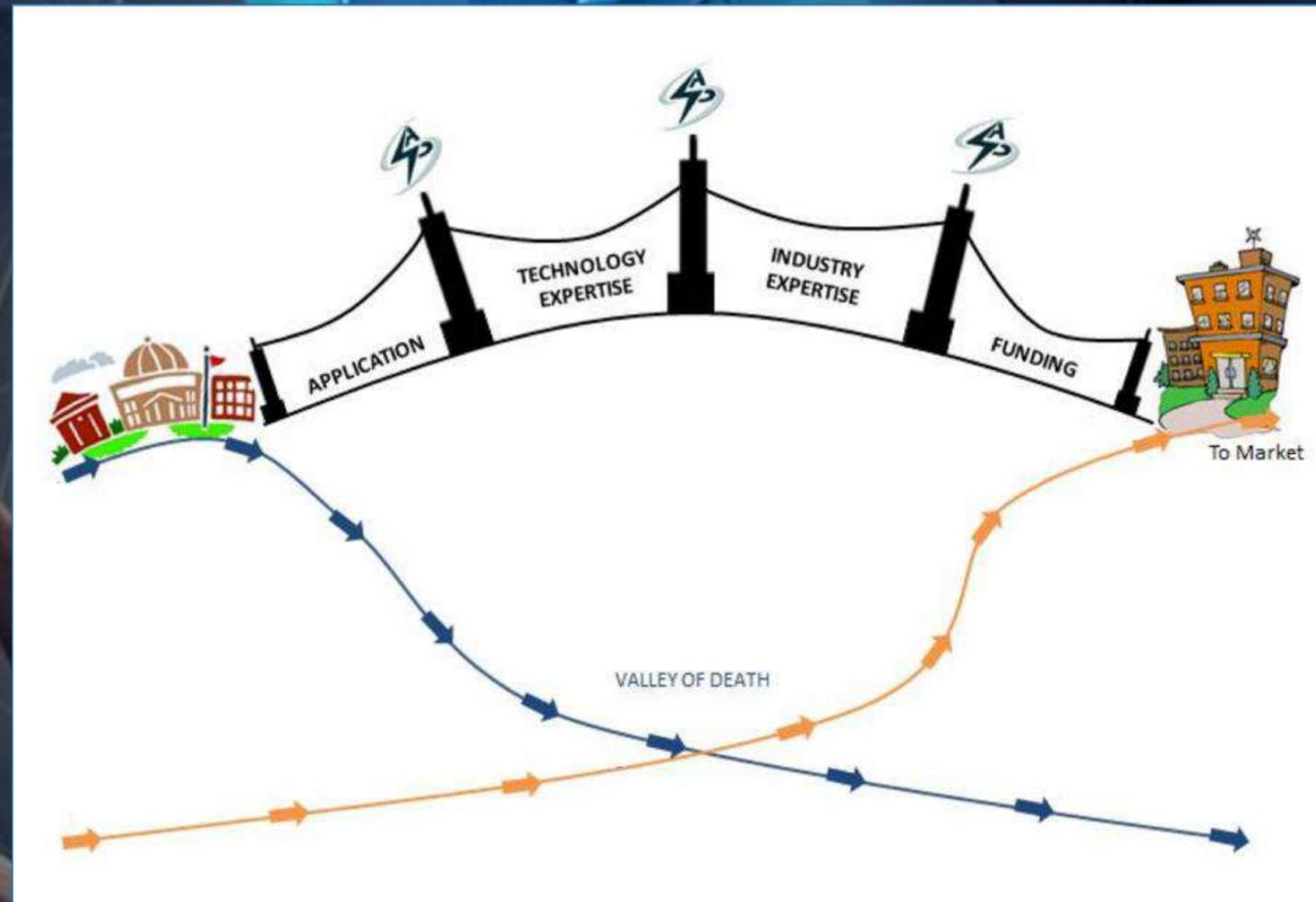


2

Catalytic Fund



Availability of Resources



Commercialization Timeline

Tiered seed funding supported by an acceleration program;

De-risking follow-on investment;

Access to Innovation Hub Network

- Specialized labs for development, testing, characterization, prototyping, scaling
- Science guidance and resources

Industry mentorship

Startup mentorship

3

Acceleration and Scale Up Program

Acceleration

Scale Up

Local partners and resources

Global partners and resources

6 Months

TRL 1 - 4

8+ Months

TRL 6-9

Non-dilutive

Training
Mentoring
Business
Guidance
MVP

Equity

Lab Space
MVP
Industry
Guidance
Pilots



Our Philippines Discovery

- Strong demand but singular focus
- Capacity to innovate - untapped
- Strong, supported entrepreneurial spirit – more potential
- Job creation is a need
- Policy instruments need diversification
- Financing needs more diversity



Regional Hub

- Complete innovation portfolio
- Directed research
- Resources, guidance and innovation labs
- Appropriate Financing
- Policy instruments supporting innovation
- Industry guidance
- Global network

Circular Economy

Services

Bio-benign materials

Green chemistry



New Trends

**Home deliveries and
e-commerce**

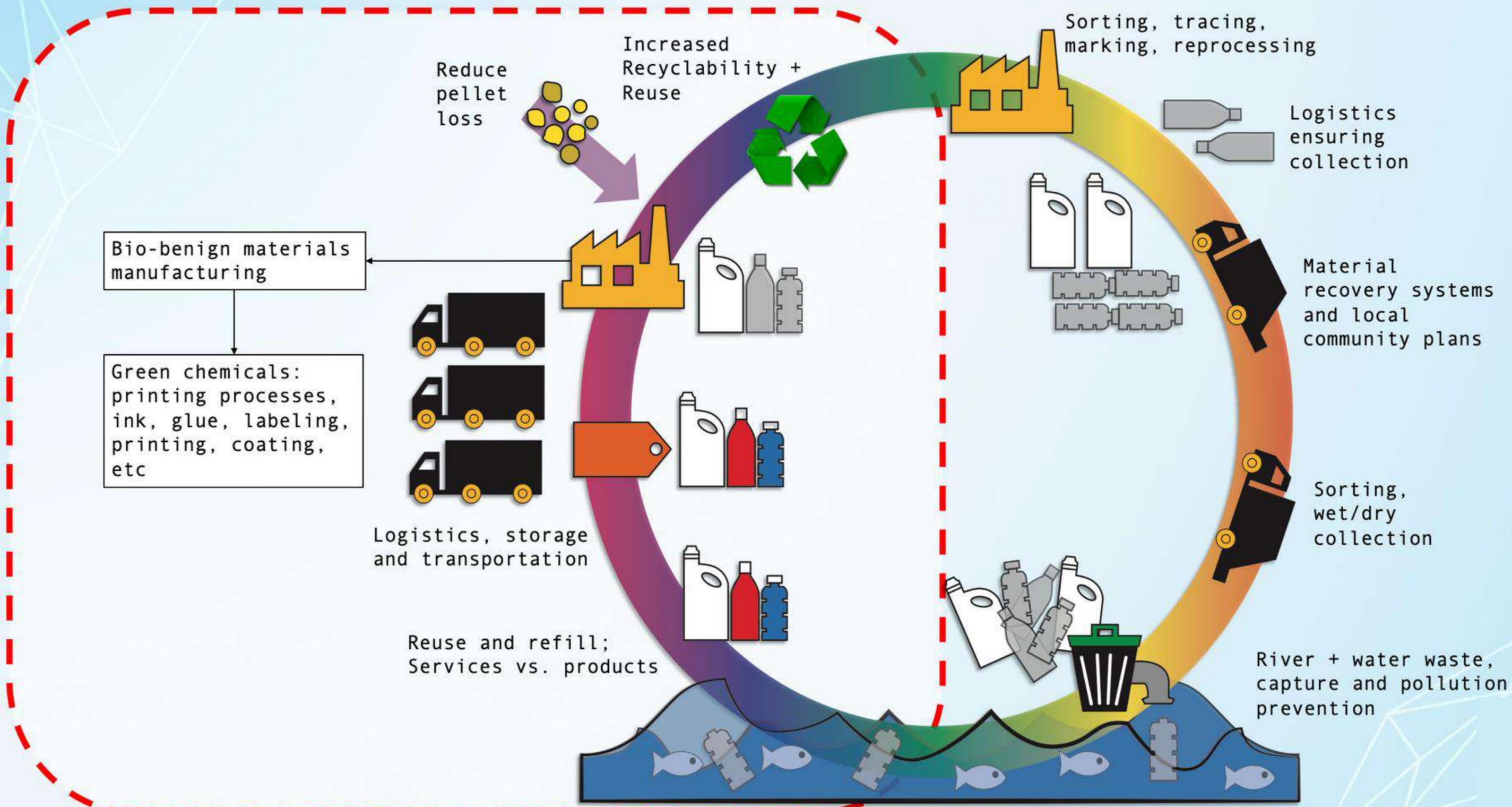
Safety

Budget constraints

Shortened supply chains

Vertical brand integration

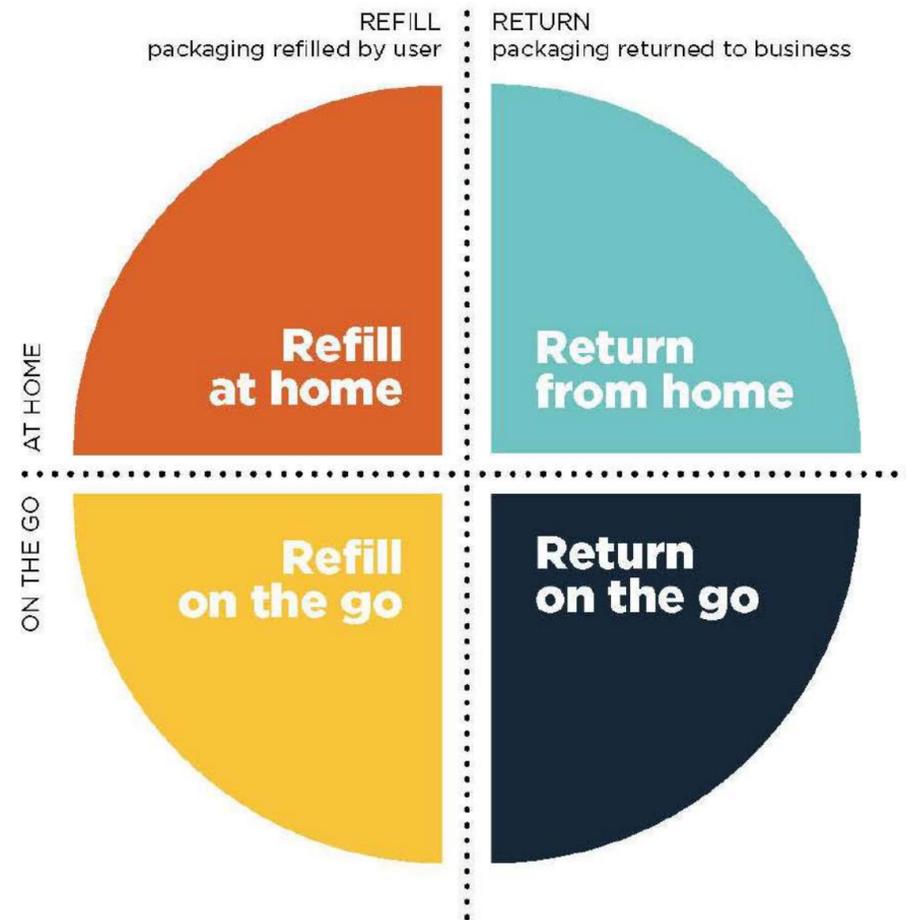
Innovation Opportunities in Packaging



Innovation Opportunities in Product Delivery

The four reuse models

Business-to-consumer reuse models differ in terms of packaging 'ownership' and the requirement for the user to leave home to refill/return the packaging.



Refill at home
users refill their reusable container at home (e.g. with refills delivered through a subscription service)

Return from home
packaging is picked up from home by a pick-up service (e.g. by a logistics company)

Refill on the go
users refill their reusable container away from home (e.g. at an in-store dispensing system)

Return on the go
users return the packaging at a store or drop-off point (e.g. in a deposit return machine or mailbox)

Note: B2B packaging and 'naked'/packaging-free products are not included in this framework.



Daniella Russo

drusso@thinkbeyondplastic.com

TbplInnovate.com | ThinkBeyondPlastic.com



Q&A

RAISE YOUR HAND
OR POST YOUR QUESTION
IN THE CHAT BOX



THANKS TO TODAY'S SPEAKERS



**JACO
CILLIERS**

jaco.cilliers@undp.org



**ALEXANDRU
OPRUNENCO**

alexandru.oprunenco@undp.org



**TOSHIKAZU
TOKIOKA**

toshikazu.tokioka@mofa.go.jp



**MOEKO
SAITO JENSEN**

moeko.saito-jensen@undp.org



**MENG EANG
TAING**

mengeangtaing@gmail.com



**DANIELLA
RUSSO**

drusso@thinkbeyondplastic.com



**NICK
BERESFORD**

nick.beresford@undp.org



THANK YOU!

STAY TUNED FOR SESSION #10
ON APRIL 14