

A large red circle on the right side of the slide contains a photograph of an iceberg. The top of the iceberg is above a horizontal line representing the water surface, while the much larger bottom portion is submerged. The background of the slide is a blue-tinted image of a body of water under a cloudy sky.

lab of tomorrow 8

Insights Report

How might we reduce, reuse or replace single-use plastic in order to decrease plastic waste in Thailand?

Executive summary

This insights report provides a basis to enable you to co-create **desirable, feasible & viable** business ideas in the Innovation Workshop by giving you an **understanding** of:

- Thailand's plastic waste problem ([Chapter 1](#))
- The Thai market and the business potential of decreasing plastic waste ([Chapter 2](#))
- Consumer and other stakeholder perspectives on the plastic waste challenge ([Chapter 3](#))
- Seven key fields of opportunities for the creation of new business ([Chapter 4](#))
- Potential solution approaches ([Chapter 5](#))

These insights put you in a strong position to solve one of the seven sub-challenges of the 8th lab of tomorrow process in the innovation workshop:

- 1 Tourism industry packaging reduction
- 2 Green consumer goods production
- 3 Increasing recycled content
- 4 Processed foods packaging

- 5 Plastic-free delivery for ready-to-eat food
- 6 Households & cosmetics packaging
- 7 End of single-use plastic beverage containers

[Chapter 4](#) provides more information on each sub-challenge.

How did we gather the insights in this report?

Desktop Research

Desktop research

Partnership with the Öko-Institut e.V. for the understanding of the broad challenge & each of the sub-challenges

Field Research

User (consumer) research in Thailand

Stakeholder Workshop in Bangkok to source and discuss the sub-challenges

1 week of interviews in Thailand

- 27 people interviewed
- 9 experts interviewed

Stakeholder research in Thailand and Europe

Stakeholder Workshop in Frankfurt to refine and finalize the sub-challenges

Plastic Free World Conference in Frankfurt

Phone calls with experts and interested stakeholders

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CHAPTER 1

Thailand's plastic waste problem

Thailand is one of the biggest plastic waste polluters

A number of estimates compiled in GIZ's Circular Economy Briefing Series: Country Profile Thailand (2018) illustrate the problem:

4.93 million tonnes of [plastic waste](#) were generated in Thailand in 2017

At **40** kg per capita, Thailand has the highest annual per capita plastic use in Southeast Asia


198 billion plastic bags are used per year in Thailand, which equals 8 plastic bags per day per person

90% of the total plastic waste is not recovered (when including disposal in dumps or open uncontrolled landfills)

Thailand is the world's **6th** biggest contributor of marine plastic litter, with 0.15–0.41 million tonnes of plastic per year leaked into the ocean

For more background information, visit the [research section](#) on our *lab of tomorrow* website.





Thus, we set out to answer the central challenge for
the 2019 *lab of tomorrow*:

**How might we reduce, reuse or
replace single-use plastic in order to
decrease plastic waste in Thailand**



Political trends in Thailand concerning single-use plastic

- Environmental quality management planning (2017- 2021) aims at **controlling plastic consumption through appropriate tax mechanism**, promoting the use of bioplastic and other alternatives to plastics
- Thailand has drafted Plastic Debris Management Plan (2017-2021) which targets to **increase plastic waste recycling to at least 60%**
- Thailand's cabinet passed the **Roadmap on Plastic Waste Management**, 2018-2030. The roadmap consists of banning certain types of plastics in phases and all remaining plastics to be 100% reusable by 2027.
- Cooperation of PCD with Plastic Institute, FTI, Thai Plastic Industry Association and Chulalongkorn University, efforts are made to **improve the data base on the flow of plastic material in Thailand**
- **Prohibition of plastic bags and Styrofoam containers in national parks** (announced by the Department of National Parks, Wildlife and Plant Conservation, Thailand on 8 June 2018)
- The Department of Medical Services of the Ministry of Public Health announced to completely **phase out the usage of plastic bags in its 30 hospitals** from 1 October 2018, aiming to reduce the usage of 9 million bags per year
- Ministry of Natural Resources and Environment made a **Memorandum of Understanding with 16 business organizations to not distribute plastic bags** to their customers on the 15th and 30th of each month
- The Sustainable University Network (SUN) with 27 universities nationwide has organized a **campaign to reduce single-use plastic on all campuses by 80-90%** over the year 2018
- A **"Public-Private Partnership for Sustainable Plastic and Waste Management"** initiative, launched in June 2018 and led by the Plastic Industry Club, aims to halve the amount of ocean waste Thailand produces by 2027



CHAPTER 2

Thailand's market

Thailand's population

69.63

Million Total Population,



making Thailand the 20th most populous country on earth with an estimated generation of as much as 0.2 kilogram of plastic waste per head per day. Sustainable or low packaging solutions would cater to a big market and can have a tremendous impact regarding single-use plastic reduction.

52%

Urbanization



with 8.281 million living in Bangkok. Especially in the cities, take-away food packaging and single-use beverage containers lead to high amounts of plastic waste every day. Providing (convenient) alternatives and a change in mindset are key to address the plastic challenge in cities.

90%

of the population use Thai



as their daily language in their home and at work. Solutions such as educational campaigns which promote sustainable alternatives to single-use plastic have to reach people in their national language.

71.31%

are aged between 15-64



with 17.32% aged between 0-14, and 11.37% are 65 and older. With that, Thailand has one of the highest shares of elderly people in East Asia and the Pacific due to a decline in fertility rates and an increase in life expectancy. The life expectancy is 75 years according to WHO.

Socio-economic data for Thailand

The second largest economy in Southeast Asia after Indonesia, Thailand is conveniently located to be a hub for continental ASEAN. A regional leader in tourism, automotive, electronics, Thailand has shown a resilient economy despite going through tense political situations in recent years.

16,904.7 US\$

Gross Domestic Product (GDP) per capita adjusted by purchasing power parity (PPP) in 2018

Within less than a generation, Thailand has progressed from a low-income country to an upper-middle income one.

GDP per capita is projected to keep growing until 2020 at an annual rate of 3%.

44,633.50 mil. US\$

Consumer spending in the first quarter of 2019 reached an all time high

Thailand's consumer spending has been steadily increasing, with a parallel expansion of the retail industry, whose growth rate was 9.45% in 2018.

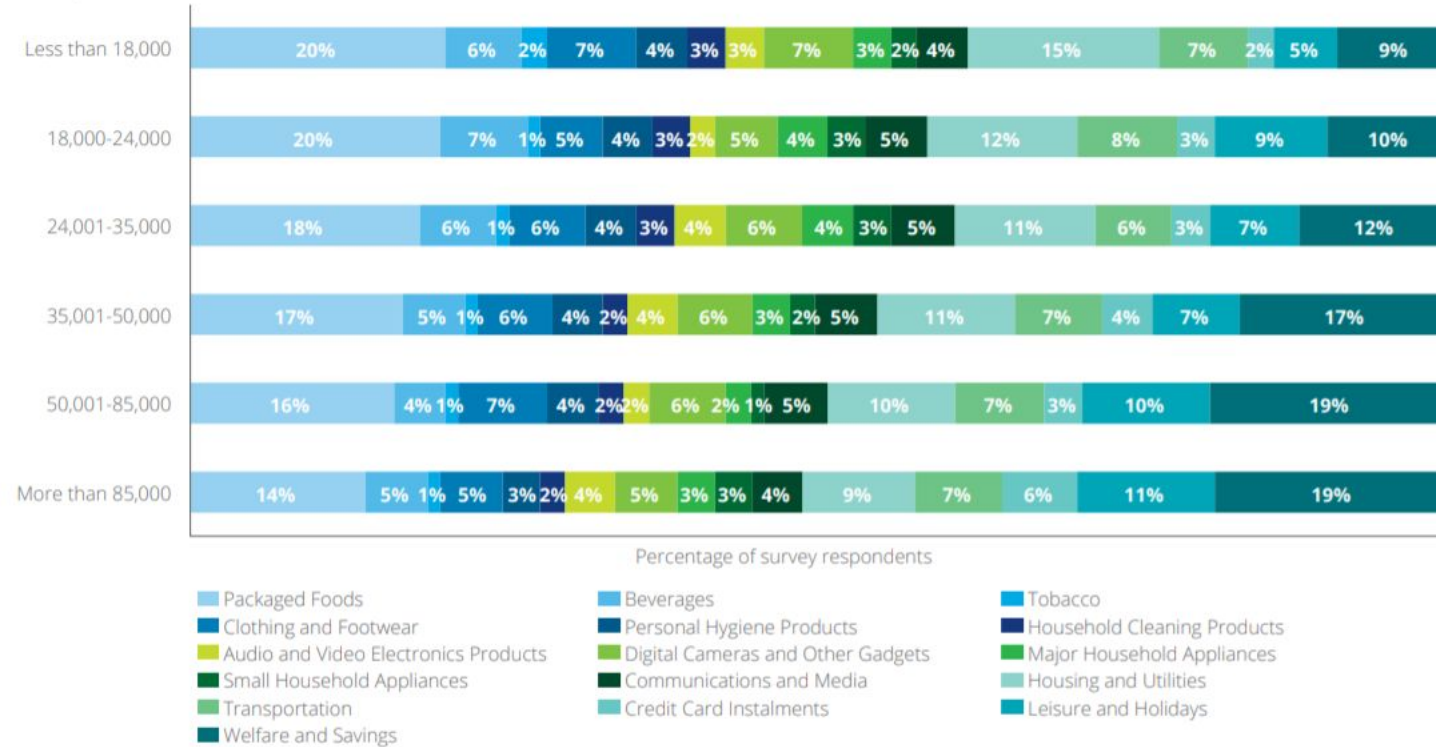
A survey by Deloitte on Thai consumer spending can be found [here](#).

A country report on Thailand by Deloitte including projections for 2019 can be found [here](#).



Consumer spending in Thailand

Monthly household income, THB



Breakdown of monthly expenditures by household income level

Source: Deloitte's Thailand Consumer Survey

Consumer trends in Thailand

5 consumer trends to watch according to the Boston Consulting Group:

1. Growth is strong in categories that offer indulgence & experiences

Small indulgences such as ice cream or juices increased their penetration by 10 to 15% from 2013-2016. Frozen meals doubled during that period. Upper-income shoppers are spending even more on dining out, leisure travel & luxury products.

2. Consumers are very brand loyal

People in Thailand might be the most brand-conscious in the region. Of the consumers interviewed by BCG, 75% agreed with the statement “I look for my favorite brand and purchase that”. At the same time, discounts or promotions offer a reason to switch brands.

3. Women have substantial buying power

Thai women are well educated, paid and digitally savvy. Their disposable income relative to Thai men’s is higher than in other developed Asian economies and women are more likely to be the decision makers for household purchases, even for products such as alcohol and durables. At the same time, birth rates are dropping and there are an estimated 31% single women. Online shopping is an increasing trend, especially for women.

4. Social media is driving e-commerce

E-commerce in Thailand is growing at double-digit rates, as a result of the increasing use of the internet, smartphones, and credit cards. 40% of purchases by Thai consumers are digitally influenced. Social media commerce is on the rise and accounts for 40% of online sales.

5. Convenience stores are shaping shopping behaviour

Convenience stores are the fastest-growing channel in Thailand. Consumers tend to buy more spontaneously, which is a result of a changing life-style. The biggest convenience stores are Big C, Tesco and 7-Eleven.

These trends match the field research findings depicted in [chapter 3](#).

Digitalisation in Thailand

With strong enthusiasm from the Thai for digital and mobile technologies, Thailand shows some of the region's strongest engagement in Social Media. Taking profit from these trends, the Thai authorities are thus increasing their support to startups with the ultimate goal of modernizing the economy through their vision "Thailand 4.0".

55.56

million unique
mobile users,

with 37% of the
population using a
smart- phone.

57

million internet
users,

with good coverage,
but Thailand's
download speeds
compare subpar
with the world.

51

million Social Media
users,

with the leading
networks in terms of
penetration being:

- [Facebook: 93%](#)
- [YouTube: 91%](#)
- [LINE: 84%](#)

The startup ecosystem

102

Startups founded
in 2017

280 mil.

US\$ estimated disclosed
funds raised in 2017

E-logistics

FinTech

E-commerce

are the booming sectors based on
funding rounds in 2017

A photograph of a busy street market scene, likely in Southeast Asia, featuring people, a white car, and a large umbrella. The image is overlaid with a large circular graphic that is blue on the left and red on the right. In the background, there are signs with Thai text: 'ผัก' (vegetables), 'รถจักรยานยนต์' (motorcycle), and 'คลินิก' (clinic).

CHAPTER 3

Field Research Insights

User (Consumer) Research



Who are our users in Thailand?

Definition of “user”

When speaking of users we are referring to the direct consumers of single-use plastic, or of products and services related to the single-use plastic. This can be the street vendors who are using plastic to wrap their food, as well as the consumers purchasing the food. Placing the user of plastic to the center of our research ensures a deep understanding of behavioral patterns and biases, and thus user-centered solutions.

The detailed documentation of the interviews can be found [here](#).



Scope of the interviews

- 27 users from different backgrounds were interviewed in Bangkok, Thailand from the 04.06. to the 07.06.
- We tried to interview a balanced mix of gender. However, one bias that we realized is that we interviewed more women than men when trying to target specific buyers of groceries and household goods
- We tried to interview a balanced mix of vendors and buyers, thereby primarily targeting people already having single-use plastic in their hands
- We interviewed people on the streets of Bangkok and did a few user interviews by phone
- We did three main research trips to malls, little shops and to restaurants in the neighborhoods Charoenkrung Road and Ari, a neighborhood that is developing & gentrifying fast

User research insights

5 insights about single-use plastic consumption in Thailand from a user perspective

1. Lifestyle

The Thai lifestyle in cities heavily relies on spontaneity, outside food consumption & on-the-go purchasing habits.

2. Social Norms

Plastic is considered an evident part of all purchasing acts. Also, individuals are prone to follow “role models” or “ambassadors”.

3. Cognitive Dissonance

Awareness towards plastic waste overload is there but little is done on an individual level.

4. Customer Satisfaction

Single-use plastic is intrinsically linked with customer satisfaction & good service.

5. Convenience & Beauty

Convenience & Beauty are the two main attributes mentioned when talking about single-use plastic.

Key Insight 1: Lifestyle

The Thai lifestyle in cities heavily relies on spontaneity, outside food consumption & on-the-go purchasing habits.



“Foreigners have awareness about these issues. Thai people don’t. It’s impossible to change Thai people’s mindset.”

Insights

- All take-away food is wrapped in plastic
- Most vendors are reluctant to allowing the use of own boxes for takeaway meals
- When entering public transport, each drink has to be wrapped in a plastic bag to avoid spilling
- Getting a drink on-the-go is a common routine for most people in the city
- Reusable cups exist, but are often not brought along

Key Insight 2: Social Norms

Plastic is considered an evident part of all purchasing acts. Also, individuals are prone to follow “role models” or “ambassadors”.



"[Consumers have a] stronger desire to do what they've been told than to do the right thing"

Insights

- Plastic containers and cups convey a modern feeling and a higher social status
- Deciding against plastic feels like going back in time or resisting the modern
- Imitation game: Recognized personalities and social media have a strong influence

Key Insight 3: Cognitive Dissonance

Awareness towards plastic waste overload is there but little is done on an individual level.



"I know that there is a problem, but my lifestyle prevents me from avoiding plastic"

Insights

- There is a very strong divide between people who are not aware of the challenges of single-use plastic at all, and those who are very aware
- Still, most users interviewed are aware of the negative side effects of single-use plastic (e.g. health and pollution) and are willing to promote a more sustainable lifestyle, but are reluctant to change their own behavior or point at the retailers / food vendors to offer alternatives (chicken-egg problem)

Key Insight 4: Customer Satisfaction

Single-use plastic is intrinsically linked with customer satisfaction and good service.

"The customers wait for me to give them a bag"



"I would prefer not to not use plastic bags, but if I don't, I can't sell"

Insights

- Reusable bags are not common
- Customers expect plastic bags as part of their shopping experience
- Street vendors cannot afford to lose their regular customers due to avoidance of plastic bags
- Plastic is seen as the safest and most hygienic way to transport food - thus, vendors who wrap their products in a lot of plastic are considered trustworthy

Key Insight 5: Convenience & Beauty

Convenience & Beauty are the two main attributes mentioned when talking about single-use plastic.



“Convenience really matters for my consumption experience”

Insights

- Beauty aspect: Plastic makes the products look attractive to customers, food can be seen through the plastic
- Convenience above all: Pre-planning to take their own boxes or cups is considered too time consuming
- It was observed that the users interviewed like to buy small, “cute” products (small lotions, little toys, snacks), increasing the amount of plastic consumed (e.g. regarding shampoo, face masks, dry food etc.)

Stakeholder Research



Who are the stakeholders in Thailand?

Stakeholder vs. User

Although each user is per se a stakeholder regarding the challenge, not all stakeholders are considered users when defining the challenge. While users are the direct consumers of products and services, our stakeholders are those producing or offering them (companies, NGOs etc), or those who influence legislation (governmental bodies). Stakeholders also include the wider ecosystem including investors, research institutions or the waste industry. When designing products, services and laws, it is important to have a deep understanding of user behaviors, wishes and needs, in order to create sustainable solutions that are implementable.

People interviewed

- Several experts and stakeholders from different industries both in Thailand and Europe were interviewed via phone, at conferences, and during the field research
- We held two challenge-framing workshops in Bangkok and Frankfurt with representatives from companies and civil society to discuss and shape the sub-challenges

Who are the stakeholders in Thailand?



Stakeholder research insights

5 insights about single-use plastic consumption in Thailand from a stakeholder perspective

1. SMEs have as much a role to play as big companies

SMEs serve up to 50% of Thai consumers and should be involved in single-use plastic reduction.

2. Community vs. individual effort

Single-use plastic avoidance can only happen with a switch of mindset, strong role models & a sense of community acting together.

3. Lack of alternatives

It is difficult to find good alternatives that match all the advantages of plastic - be it lightness, convenience, hygiene protection etc.

4. Awareness is on the rise

Awareness has to be supported by:

- Policies
- Goodwill initiatives
- Strong company commitment

5. Rewards

Single-use plastic reduction should be linked with advantages or rewards and not just be seen as a reduction of convenience for the greater good.

Key Insight 1: SMEs have as much a role to play as big companies

SMEs serve up to 50% of Thai consumers and should be involved in single-use plastic reduction.



“I’m not worried about large companies. I’m more concerned about SMEs who serve more than 50% of Thai consumers.”

Key Insight 2: Community vs. individual effort

Single-use plastic avoidance can only happen with a switch of mindset, strong role models & a sense of community acting together.

“Co-creation certainly works, but we don’t co-create”



“Thai people like convenience and like to throw responsibilities at other people”

“Thailand has a very hierarchical culture”

Key Insight 3: Lack of alternatives

It is difficult to find good alternatives that match all the advantages of plastic - be it lightness, convenience, hygiene protection etc.



“Walking in a fresh market versus a supermarket... you see two completely different ways of engaging with single-use plastic.”

Key Insight 4: Awareness is on the rise

Awareness has to be supported by:

- Policies
- Goodwill initiatives
- Strong company commitment

“Thai people’s nature is to listen, but no action”

“There is a disconnection between what people do everyday and the cause we are fighting for”



“People don’t believe that municipalities separate waste.”

Key Insight 5: Rewards

Single-use plastic reduction should be linked with advantages or rewards and not just be seen as a reduction of convenience for the greater good.



“I believe that if 7-11 installed water coolers, we could surely reduce the amount of PET. The reason that it hasn’t happened yet is because it doesn’t create income and not as convenient”

A man in a light-colored shirt and dark pants is pushing a large, heavily loaded cart. The cart is stacked high with various items, including white plastic jerrycans, black plastic bags, and other supplies. The scene is set outdoors, with a building and trees in the background. The image is overlaid with a blue and red color scheme, with a large red circular shape on the right side.

CHAPTER 4

Fields of opportunities

A set of sub-challenges offers business potential

The 8th *lab of tomorrow* process will focus on the following seven sub-challenges:

Tourism industry packaging reduction

How might we promote sustainable alternatives to single-use plastic in the tourism industry?



Green consumer goods production

How might we promote green consumer goods through a green currency?



Increasing recycled content

How might we increase recycled content?



Processed foods packaging

How might we reduce single-use plastic packaging in the processed food industry?



Plastic-free delivery for ready-to-eat food

How might we disrupt the delivery of ready-to-eat food to reduce single-use plastic whilst not jeopardizing hygiene?



Households & cosmetics packaging

How might we reduce single-use plastic packaging and promote reduced packaging retail in the households and cosmetics industry?



End of single-use plastic beverage containers

How might we replace all single-use plastic beverage cups in a given safe space?



The research paper with details on each sub-challenge by Öko-Institut can be found [here](#).



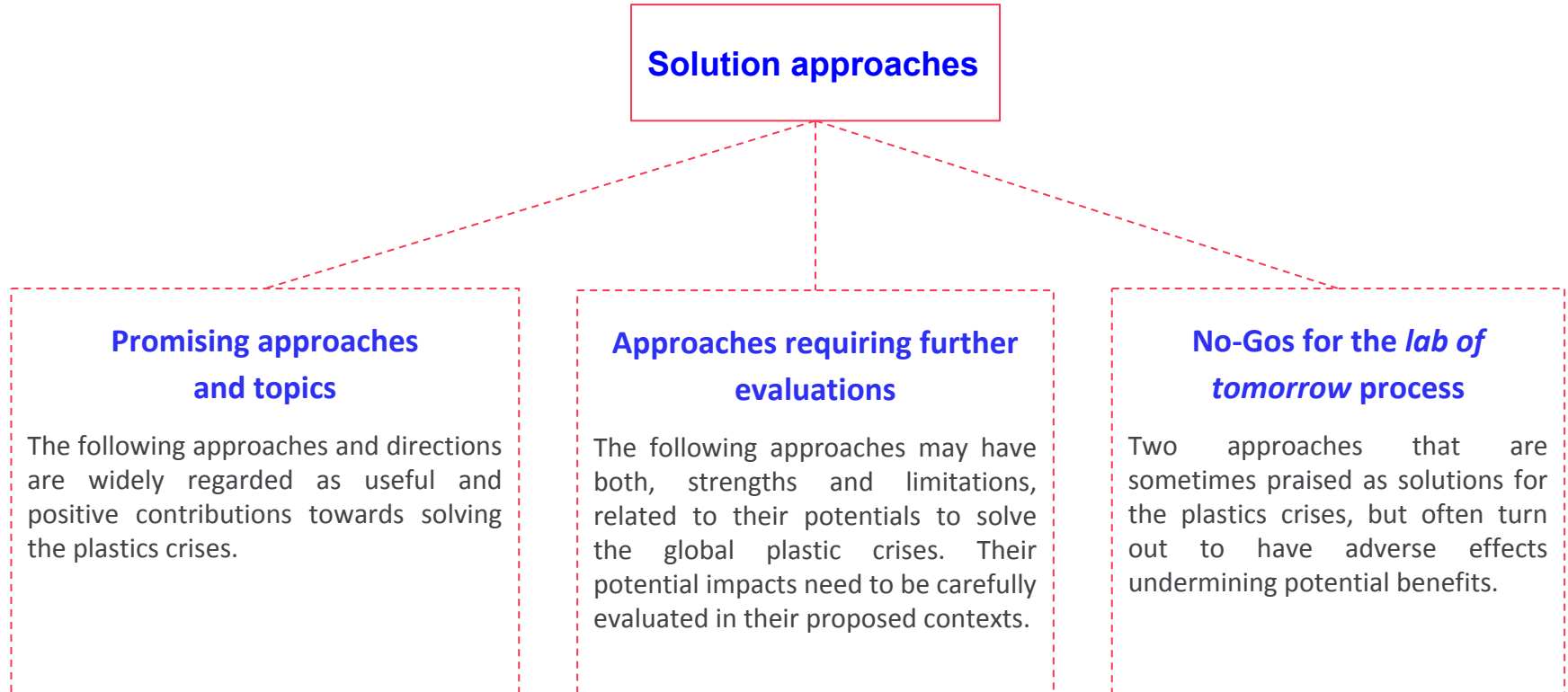
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CHAPTER 5

Potential solution approaches



Existing solution approaches



Existing solution approaches

Promising approaches and topics

1. Substitution of PVC

Polyvinyl chloride (PVC) is used in many durable applications such as cable insulation, pipes and window frames, but also in a number of single-use packaging applications such as labels of plastic bottles, transparent packaging boxes and trays. While the material itself is non-toxic, it forms highly toxic fumes if it undergoes uncontrolled combustion e.g. in open (waste) fires or smoldering waste dumps.

Therefore, substitution of PVC with other polymers (e.g. PET) in single-use applications is likely to have positive effects. However, such substitution will not reduce the volume of plastic being used.

To date, the level of PVC-use in single-use applications in Thailand is not known.

2. Plastic-free or zero-waste canteens, markets, office buildings etc.

Entities with high-volume waste generation and clear management structure (e.g. canteens, markets, office buildings) often have a huge untapped potential to reduce and recycle generated waste. Approaches might even be cost saving and can have multiple additional positive effects (e.g. promotion of zero waste approaches to users of such entities).

Government bodies (e.g. on country, province or city level) can strongly support related business models by enacting bans on certain types of single-use plastic types.

The research paper
by Öko-Institut can
be found [here](#).



Existing solution approaches

Promising approaches and topics

3. Promoting the use of recycled plastic

A major obstacle to increase plastic recycling is the limited market demand for secondary (recycled) plastics. Stipulating mandatory or voluntary quotas for the use of secondary plastics in new products can support plastic recycling and reduce the demand for new virgin material.

Verification and certification systems for secondary plastic content are rapidly developing and might be interested to enter the Thai market.

4. Reusable packaging

Reusable packaging might refer to traditional packaging methods and materials, or embrace modern materials and designs such as thermo-isolated steel cups for hot drinks.

For some applications, reusable packaging might require additional considerations on hygienic issues.

It needs to be stressed that reusable packaging often requires more material compared to single-use packaging - environmental benefits will only be realized if reusable packaging is intensively used by consumers so that it replaces large amounts of single-use applications.

5. Low or no packaging alternatives

Next to substituting single-use packaging with reusable packaging, systemic substitution can also reduce plastic and packaging waste. A common example for such systemic alternative is drinking water: Drinking water is commonly sold and distributed in single-use or reusable bottles. In a more systemic approach, this distribution path may be questioned in general be using and purifying tap water. In many settings, such systemic alternatives might prove to be economically preferable for consumers.

Existing solution approaches

Approaches requiring further evaluations

1. Use of biodegradable plastics

Biodegradable plastics have some distinct disadvantages:

- Full decomposition might take several years or decades
- Need special treatment to decompose the first weeks in specially designed composting plants; decomposition does not yield any humus

Nevertheless, biodegradable plastics can have advantages for specific applications, e.g. biodegradable plastic bags.

2. Use of single-use non-plastic packaging

Substituting plastic with other material (wood, paper, metal, straw) in single-use applications is often considered a “natural”, environmentally friendly option

However, such substitution does not necessarily have positive environmental net-benefits as production of such substitutes is also associated with environmental impacts.

3. Design-for-recycling

Design-for-recycling (DfR) aims at optimizing certain characteristics of packaging (such as shape, color, and material combinations) so that the waste items are more compatible with existing collection, sorting and recycling schemes

However, where waste management schemes are insufficient, the DfR approach is limited because even well designed plastic packaging might end-up in the environment or on waste dumps.

Therefore, design-for-recycling should be seen as a complementary undertaking to be implemented in parallel to the development of proper collection and recycling systems.

The research paper
by Öko-Institut can
be found [here](#).



Existing solution approaches

Approaches requiring further evaluations

4. Waste to art / upcycling

Waste-to-art and upcycling activities often receive positive media attention and can be a means to support waste reduction campaigns and improve the public perception of sound waste management and recycling.

Nevertheless, as standalone they do not have the capacity to absorb a significant amount of waste.

5. Chemical recycling

Conventional plastic recycling entails the sorting, cleaning and remelting of plastic material and is in many cases associated with problems related to downcycling, because recycled plastic has lower qualities compared to virgin material. Considering established plastic recycling today, main focus of global recycling industries is on PET and HDPE, while most other

plastic types are either only recycled in niche markets or not recycled at all.

To overcome these limitations, new research and pilot plants are currently testing chemical recycling paths for plastic waste. In contrast to conventional plastic recycling, these approaches break down polymers to base chemicals that can be used to produce new polymers with identical properties as those from primary raw materials.

More recent experimental approaches utilize hydrolysis (for PET recycling) or solvent based processes (e.g. for polyurethane recycling). While these approaches undoubtedly have considerable potential to improve plastic recycling, it needs to be considered that these technologies are not yet tested at industrial scale. If this shall be done – it will be associated with quite significant investment costs. Moreover, there is a certain danger that strong focus on chemical recycling might undermine waste prevention efforts.

Existing solution approaches

No-Gos for the *lab of tomorrow* process

The research paper
by Öko-Institut can
be found [here](#).



1. Use of plastics from biotic feedstock

Plastics from biotic feedstocks (“bio”-plastic) are not necessarily more environmentally friendly than conventional, fossil-oil based plastic. In contrast, plastic derived from agricultural feedstock (e.g. sugar, corn) may even have higher environmental impacts over the whole life cycle. Advantages may exist for plastic from bio-waste. But here, net-impacts often depend on the scales of application: large scale roll-out may overstretch the availability of suitable bio-waste and cannibalize other important bio-waste uses (e.g. as fertilizer).

Plastics from biotic feedstock should not be confused with biodegradable plastics (see next slide).

2. Municipal solid waste incineration

Municipal solid waste incineration has some distinct limitations and disadvantages:

- In many emerging economies, the calorific value of collected waste is quite low. Therefore, the approach does not eliminate the need for source separation and/or additional sorting efforts in the process chain.
- The electricity output is commonly too low to cover operational costs. Therefore, also the operation of waste incinerators needs substantial constant financing.
- It does not fully eliminate waste but achieves only a reduction in weight and volume. Incineration ashes are commonly contaminated with pollutants and require costly disposal.

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ANNEX 1

The *lab of tomorrow* process

What is the *lab of tomorrow*?

The *lab of tomorrow* is an open innovation process that functions as an incubator for sustainable businesses.



Each *lab of tomorrow* process focuses on a specific **development challenge with strong business potential** in a specific developing country.



The process brings together **key players from local and European companies** as well as the **local public sector** and enables them to **co-create sustainable business models** in small interdisciplinary venture teams, based on agile methods such as Design Thinking and Business Design.



Committed venture teams with **promising business ideas receive intense support** – from testing and refining their business models to piloting them in the local market.

Benefits for the participating stakeholders

- **EXPLORE** a **promising business case** in a growing market.
- **ACCESS** experts from diverse backgrounds and **local expertise**.
- **GAIN** facilitated **market access**.
- **RECEIVE** **agile coaching** to test and refine your business ideas after the workshop.
- **POSITION** your company as a **frontrunner** in sustainable business.

For more information please refer to our [exposé](#) or visit the *lab of tomorrow* [website](#).



How does the *lab of tomorrow* process work?



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ANNEX 2

Investor and support landscape

Thailand offers a vibrant investor and support landscape

Traditional
VCs

AddVentures

Beacon Venture
Capital

Digital Ventures

Public Actors

DEPA - Digital
Economy
Promotion Agency

NIA

DEG - Deutsche
Investitions- und
Entwicklungsgesells
chaft GmbH

Social &
Impact
Investors

AVPN

ChangeFusion

PhiTrust

Start-up
Support

ASPEN

Google Academy -
True Digital Park

Facebook
Developer Circle

Line ScaleUp

Incubators /
Accelerators

True Incube

KungsriRISE

SCB

TechGrind

German
Accelerator South
East Asia