



# PLASTIX

HARVARD KENNEDY SCHOOL  
ARTIC MARINE PLASTIC POLLUTION WORKSHOP

Hans Axel Kristensen, CEO

# Facts

- *The world has a growing problem: Plastic Waste*

**+8,3Bn**

Since 1950 around 8.3 billion tonnes of plastics have been produced globally- *HALF* of which in the last 13 years alone!

**348M**

In 2017 348 million tonnes of plastic have been produced globally, with 64 million metric tonnes produced in Europe alone

**+400Mt.**

This corresponds to approx. 400 million tonnes in CO<sub>2</sub> emission per year

# Facts

## - *Plastic Waste: A Detriment to our environment*

**+15T**

According to UN and WWF 15 metric tonnes of plastics are entering our seas and oceans every minute

**+8M**

Corresponding to 5-13 million tonnes of plastic waste seep into our seas and oceans every year

**11%**

Around 11% of this plastic waste, stems from the maritime industry in the shape of fishing nets, trawls, ropes, and boxes



Plastix is a manufacturer of Green Plastics specialized in recycling waste fishing nets, trawls and ropes into high quality raw plastics materials ...

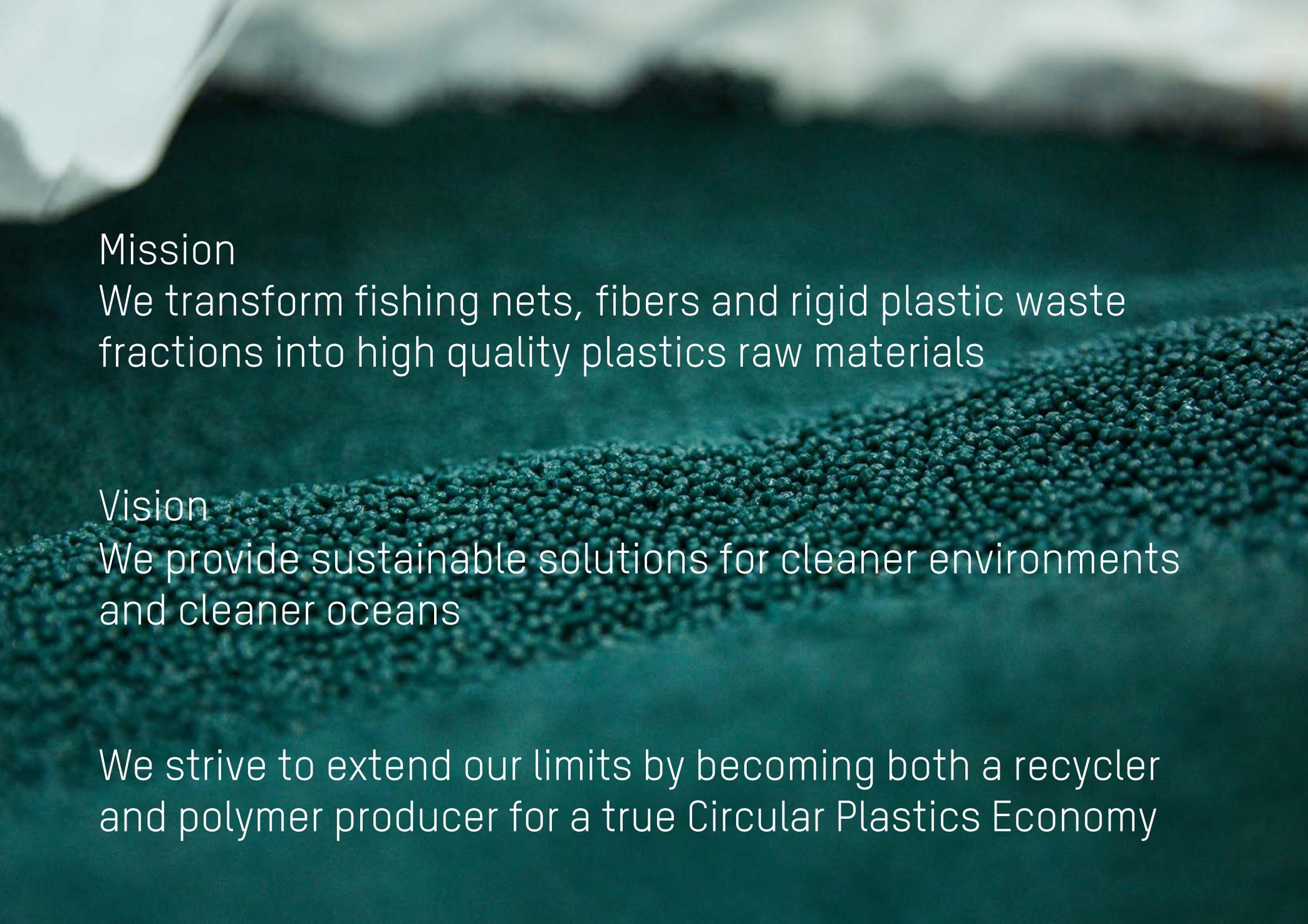
“Green Plastics”

Current capacity 12.000 Mt/Y  
with planned expansion to 30.000 Mt./Y

READY TO SCALE-UP

PLASTIX





## Mission

We transform fishing nets, fibers and rigid plastic waste fractions into high quality plastics raw materials

## Vision

We provide sustainable solutions for cleaner environments and cleaner oceans

We strive to extend our limits by becoming both a recycler and polymer producer for a true Circular Plastics Economy

## WE WORK EVIDENCE BASED

More than +900 laboratory analysis in our database, growing day by day



### PLASTIX SOLUTIONS

- HELP YOUR COMPANY INTEGRATE GREEN PLASTICS -
- HELP YOUR COMPANY DESIGN FOR RECYCLABILITY -

# PLASTIX

# All types of plastic are recyclable, theoretically!

*(in actuality only the dark green squares are commercially viable)*

		Secondary fraction**																			
		ABS	PA6	PA66	PBT	PC	PC/ABS	LD PE	HD PE	PET	PMMA	POM	PP	PP co	PS	PVC rigid	PVC soft	SAN	TPE-PP/PE	TPU	
Primary fraction*	ABS	Compatible	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable	Acceptable
	PA6	Normally not acceptable	Compatible	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Acceptable	Acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable						
	PA66	Normally not acceptable	Acceptable	Compatible	Normally not acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable												
	PBT	Normally not acceptable	Normally not acceptable	Normally not acceptable	Compatible	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable											
	PC	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Compatible	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable						
	PC/ABS	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Acceptable	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable						
	LD PE	Normally not acceptable	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Compatible	Acceptable	Normally not acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable
	HD PE	Normally not acceptable	Acceptable	Acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Acceptable	Compatible	Normally not acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable						
	PET	Normally not acceptable	Acceptable	Normally not acceptable	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Compatible	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable						
	PMMA	Normally not acceptable	Compatible	Normally not acceptable	Not Acceptable	Not Acceptable	Acceptable	Not Acceptable													
	POM	Not Acceptable	Compatible	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable														
	PP	Normally not acceptable	Not Acceptable	Not Acceptable	Compatible	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable								
	PP co	Normally not acceptable	Acceptable	Acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Compatible	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable						
	PS	Acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Normally not acceptable	Not Acceptable	Normally not acceptable	Compatible	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Not Acceptable				
	PVC rigid	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Not Acceptable									
	PVC soft	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Compatible	Not Acceptable	Not Acceptable	Not Acceptable									
	SAN	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Compatible	Not Acceptable	Not Acceptable
	TPE-PP/PE	Normally not acceptable	Acceptable	Acceptable	Normally not acceptable	Normally not acceptable	Not Acceptable	Not Acceptable	Acceptable	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Acceptable	Not Acceptable					
TPU	Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Not Acceptable	Compatible	

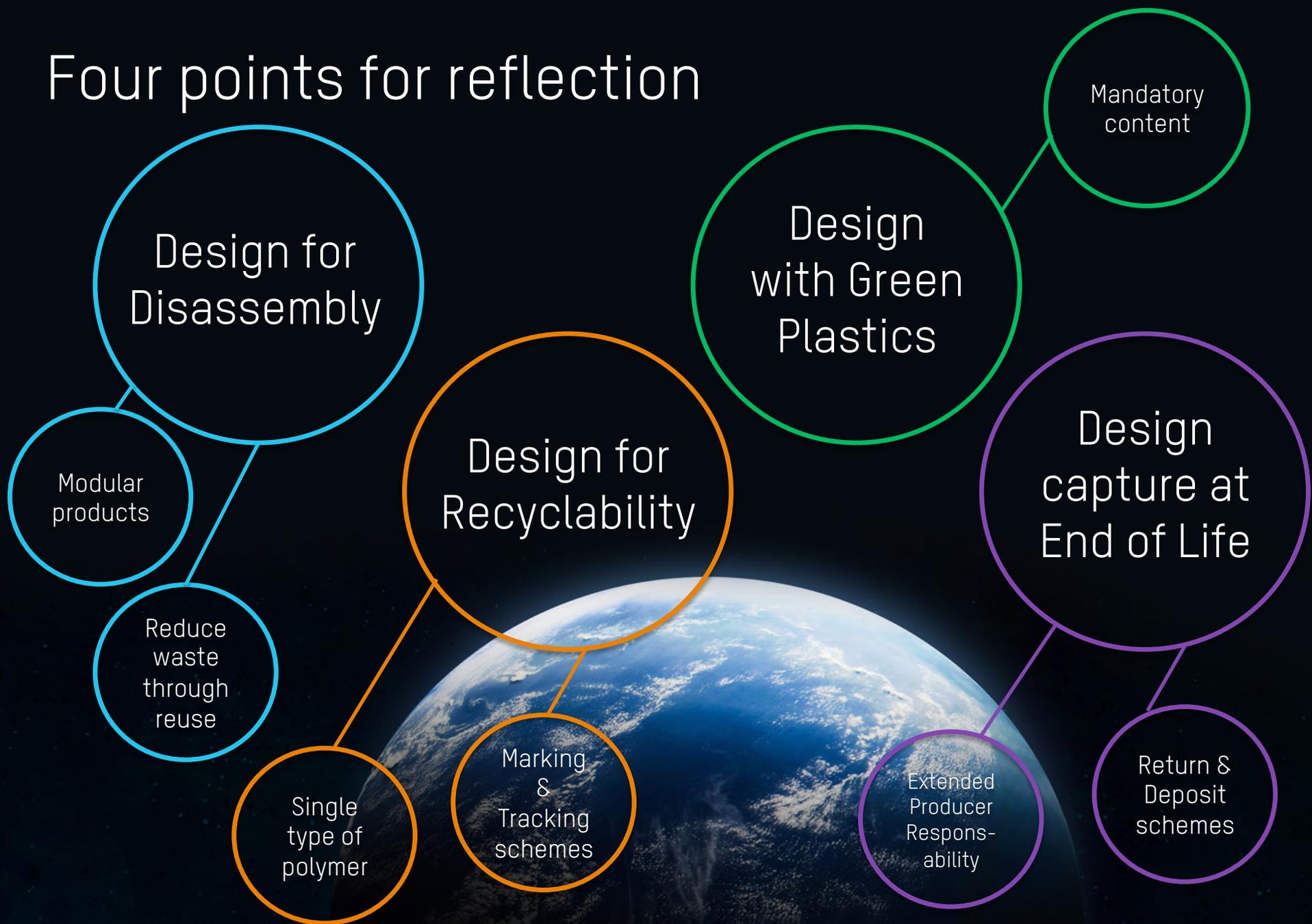
\* **Primary fraction** defines the larger volume of material

\*\***Secondary fraction** defines minor volume of material mixed into or added to the primary fraction

- Compatible / mixable
- Acceptable / partly mixable
- Acceptable, if the secondary fraction is kept below 2%\*\*\*
- Normally not acceptable
- Not Acceptable / not mixable

\*\*\* The secondary fraction, which can be added in these (yellow) blends will vary from case to case. In some cases, only 1% of the secondary fraction can be added, and in other cases, up to 5-10% can be added.

# Four points for reflection

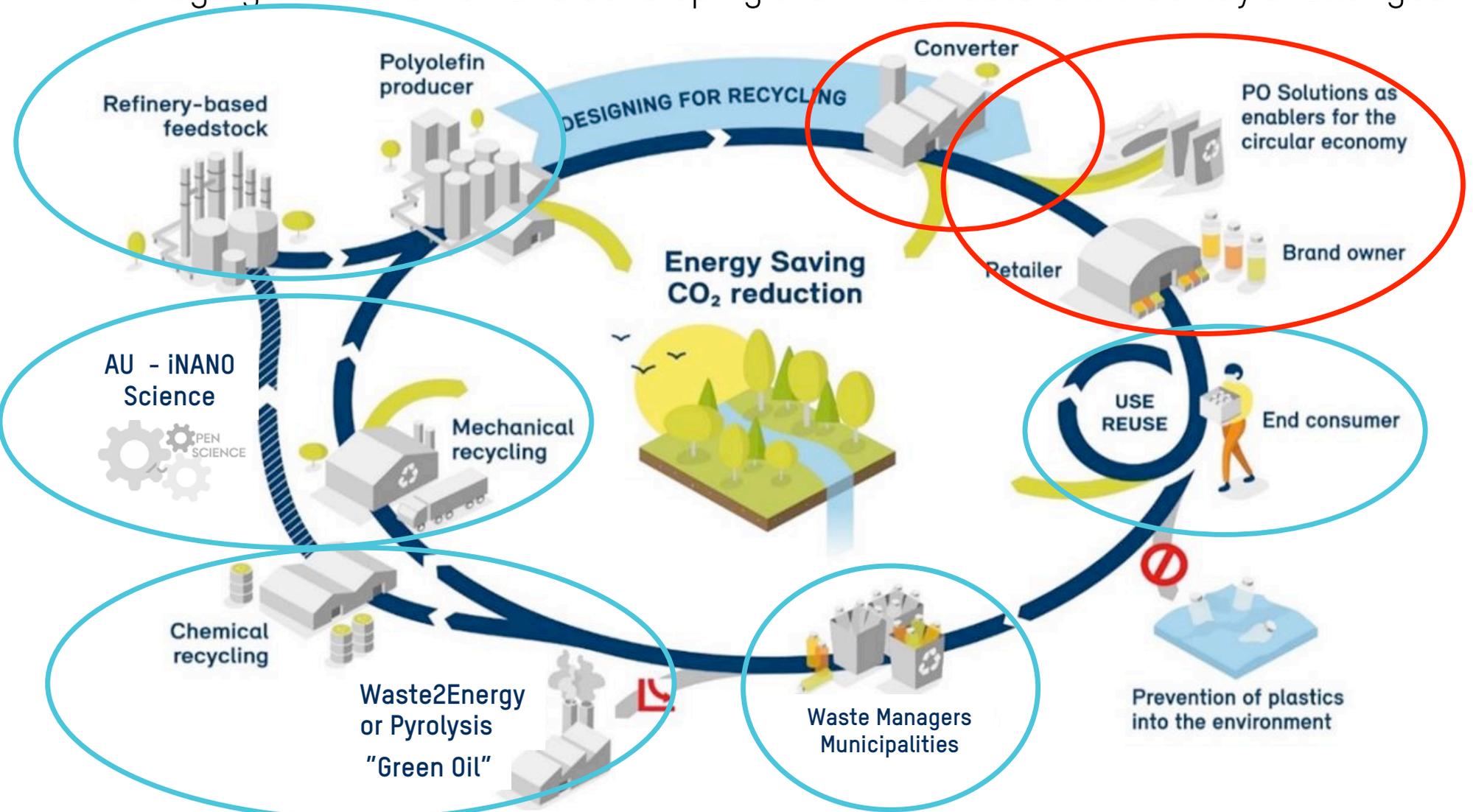


Legislation as an accelerator

# SDG Accelerator Project

## Imagine a fully circular plastic economy

- Managing the transition and developing the infrastructure will be key challenges



Only a collaboration with the entire value-chain, can shape a better tomorrow

# The UN SDGs and the Circular "New Plastics" Economy

WILL RADICALLY CHANGE THE WAY WE RUN OUR BUSINESSES ...

## RECYCLERS

must ensure the **highest quality standards** for recycled polymers that they put up for sale on the market

## CONVERTERS & BRAND OWNERS

should **maximise** their effort to design easily-recyclable plastics articles  
"License to Operate"

## WASTE MANAGERS

must ensure that plastics wastes are **collected separately** & that the different polymers are **sorted/homogenized**

**CONSUMERS** *should be made aware of their responsibility in this endeavour* to maintain the value of plastics material: the way they dispose plastics has a spill-over effect on all following steps in the value-chain



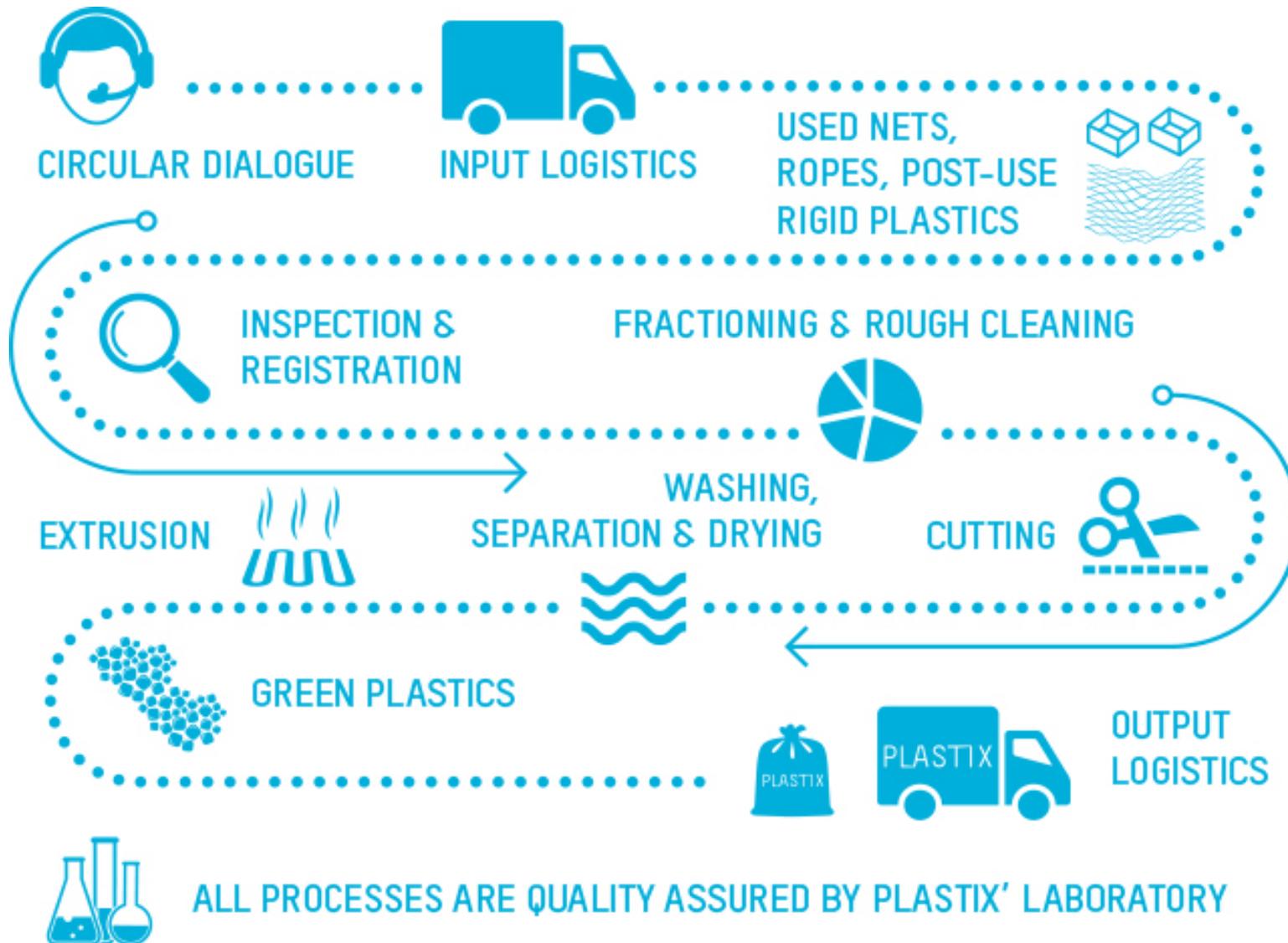
# PLASTIX

THANK YOU FOR YOUR KIND ATTENTION  
Q&A

2019 · Hans Axel Kristensen, CEO

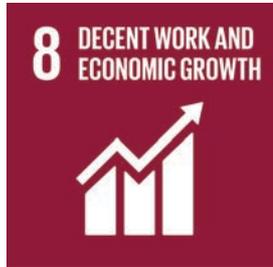
BACK\_UP\_SLIDES

# Our Process



# The Circular “New Plastics” Economy and the SDGs

## - An innovation agenda and a tremendous business opportunity



## Can Plastix save the world?

The short answer is yes. We have been called upon to be a part of the SDG Accelerator. Together with the other companies in the Accelerator and companies committed to the 17 Global Goals around the world, we will work towards achieving a better future for people and planet. We begin today.

Find more information about the Global Goals at [www.sdg-accelerator.org/global-goals](http://www.sdg-accelerator.org/global-goals)

## THE WORLD’S MOST IMPORTANT PLAN!



“The UN was not created to take mankind to heaven, but to save humanity from hell”

- Dag Hammarskjöld -  
Second UN Secretary-General

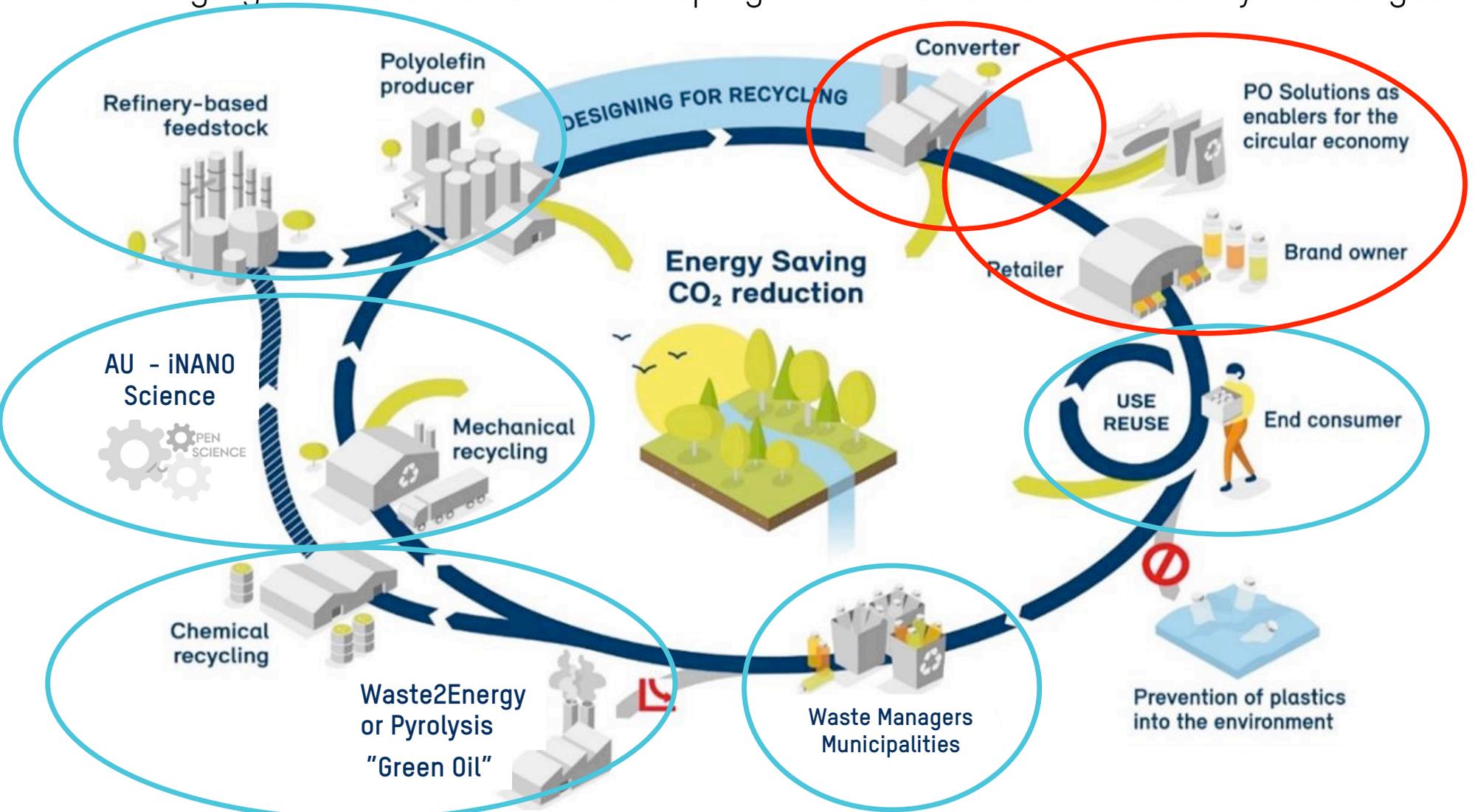


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Recyclers must aim to produce the highest quality & ensure stable supply (=stable input)

## FROM OUR "GREEN PLASTIC" YOU CAN PRODUCE:

INJECTION MOULDING  
EXTRUSION  
BLOW MOULDING  
ROTO MOULDING  
FILM EXTRUSION  
FIBERS  
3D PRINTING

## ADJUSTING TO YOUR NEEDS:

COLOURS  
FLOW INDEX  
E-MODULUS  
UV STABILITY  
IMPACT RESISTANCE  
ETC.

...FOR INNOVATIVE SOLUTIONS

# ECO FootPrint

**PLASTIX REDUCES CO<sub>2</sub>  
EMISSIONS UP TO 82%  
COMPARED TO VIRGIN PLASTICS**

1 TON OCEANIX rHDPE OR rPPC USED MEANS  
1,7 TONS CO<sub>2</sub> EMISSIONS SAVED IN THE WORLD

Source: PLASTIX' Life Cycle Assessment (LCA)



Our Ocean "Green Plastics" blending with single color pigments



"Green Plastics" is more than just black ...

Personal Care, Skin Care made from recycled fishing ropes  
- *Blow Moulding and Injection Moulding*



# Fibres made from recycled fishing ropes



Approx. 30-50 tex fibers - made from:  
100% OceanIX rPPC and OceanIX rHDPE  
(30 tex = 300 gram per 10km fiber)



2,2 dtex fibers - made from:  
20% OceanIX rPPC  
(2,2 dtex = 2,2 gram per 10km fiber)

ScanCom – DuraOcean Chair produced 100% from ocean waste



LifestyleGarden®

# Ocean Collection, by Nanna and Jørgen Ditzel and Mater Design



Wallpaper\*

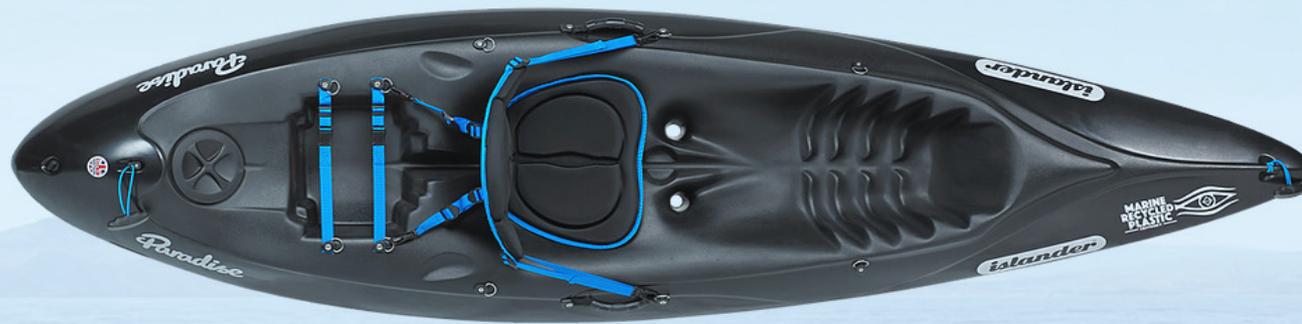
DESIGN  
AWARDS  
2019

Winner

**mater**

DESIGN CRAFTSMANSHIP ETHICS

# The worlds only marine plastic recycled Kayaks



# Bench made from 100% recycled fishing nets



FILM: WHERE BLUE MEETS GREEN

## OCEANIX® - MADE FROM 100% RECYCLED FISHING NETS

Denne havplastbænk er produceret af 100% genanvendt plast fra brugte fiskenet

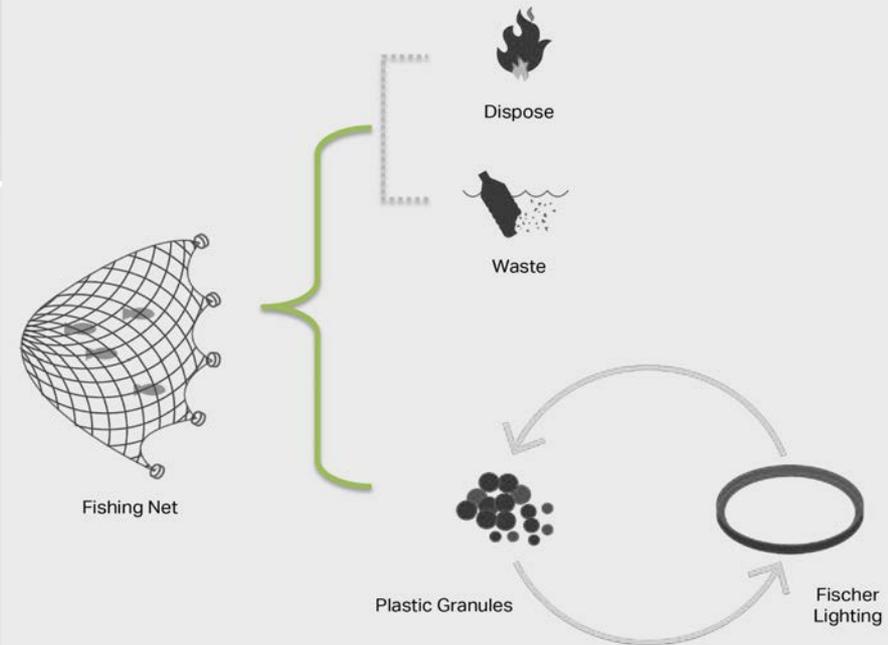
This ocean bench is made from 100% recycled plastics from used fishing nets

Diese Bank ist produziert aus 100% recyceltem, ozeanischem Kunststoff aus gebrauchtem Fischernetz

[www.plastixglobal.com](http://www.plastixglobal.com)

PLASTIX

# Circular Lamp - Design for disassembly and recyclability



Body Bike® OceanIX made from recycled fishing nets



**BODY BIKE®**

SMART+  
OceanIX

# The RUM (Re-Used Materials) Chair – made from ocean plastics



# Facts

## - *The world is waking up: Initiative & Partnerships*

The plastification of our seas and oceans has created a global movement

Legislative framework through influencers as UN, McKinsey, Ellen McArthur Foundation, NGOs, and Foundations

We need a systemic shift towards a circular economy for plastic, in which plastic never becomes waste.

If we do not rethink to recapture and recycle plastic waste for a sustainable future, we risk billions of tonnes of plastic in our oceans by 2050. More plastics than FISH by weight

Growing momentum to tackle plastic waste ...



China Ban on plastic import



Media Campaign



EU Plastics Strategy



Policies to increase recycling and improve waste management

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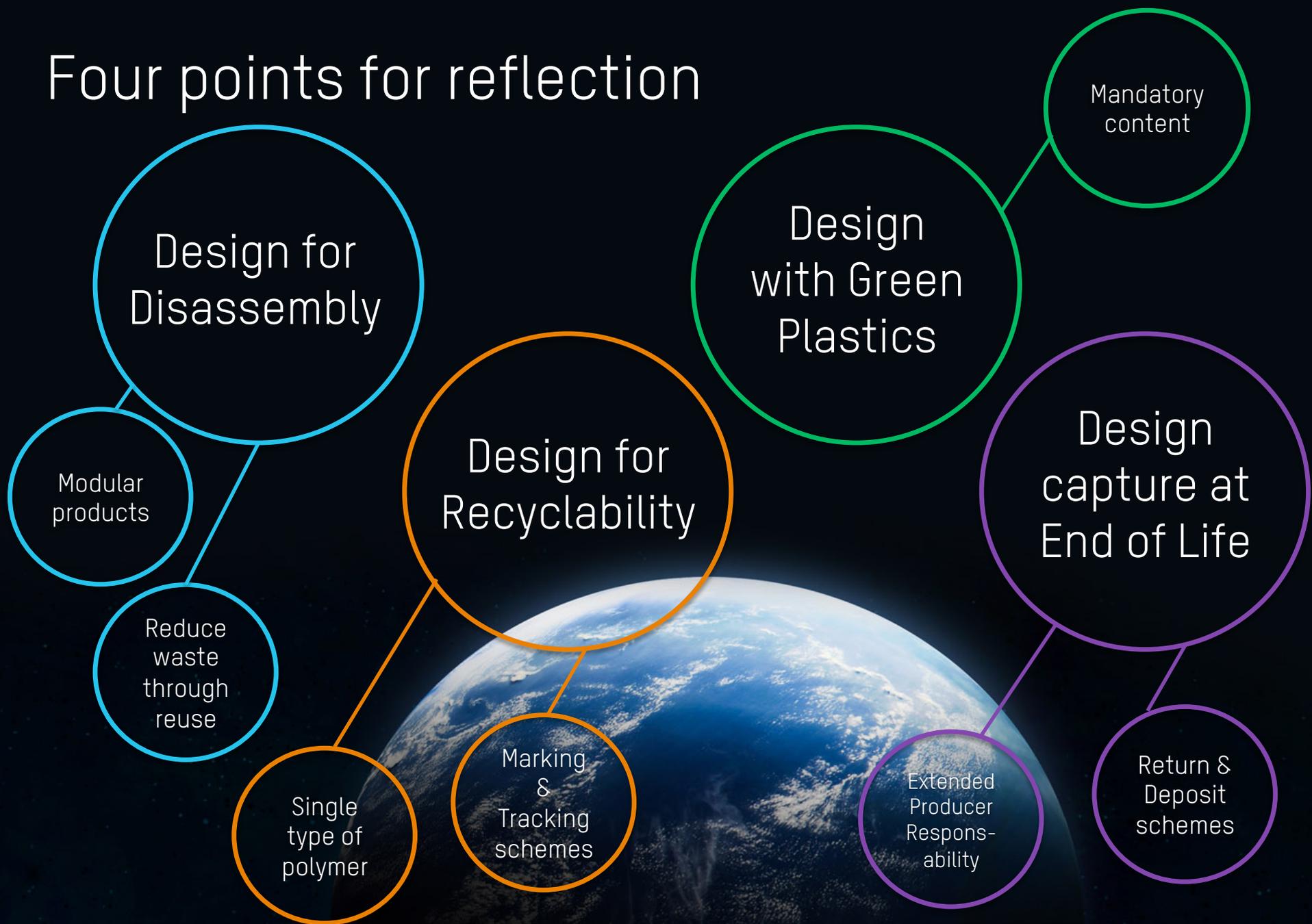
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