PLASTIC ENERGY®

Recycling Plastic No-One Else Can

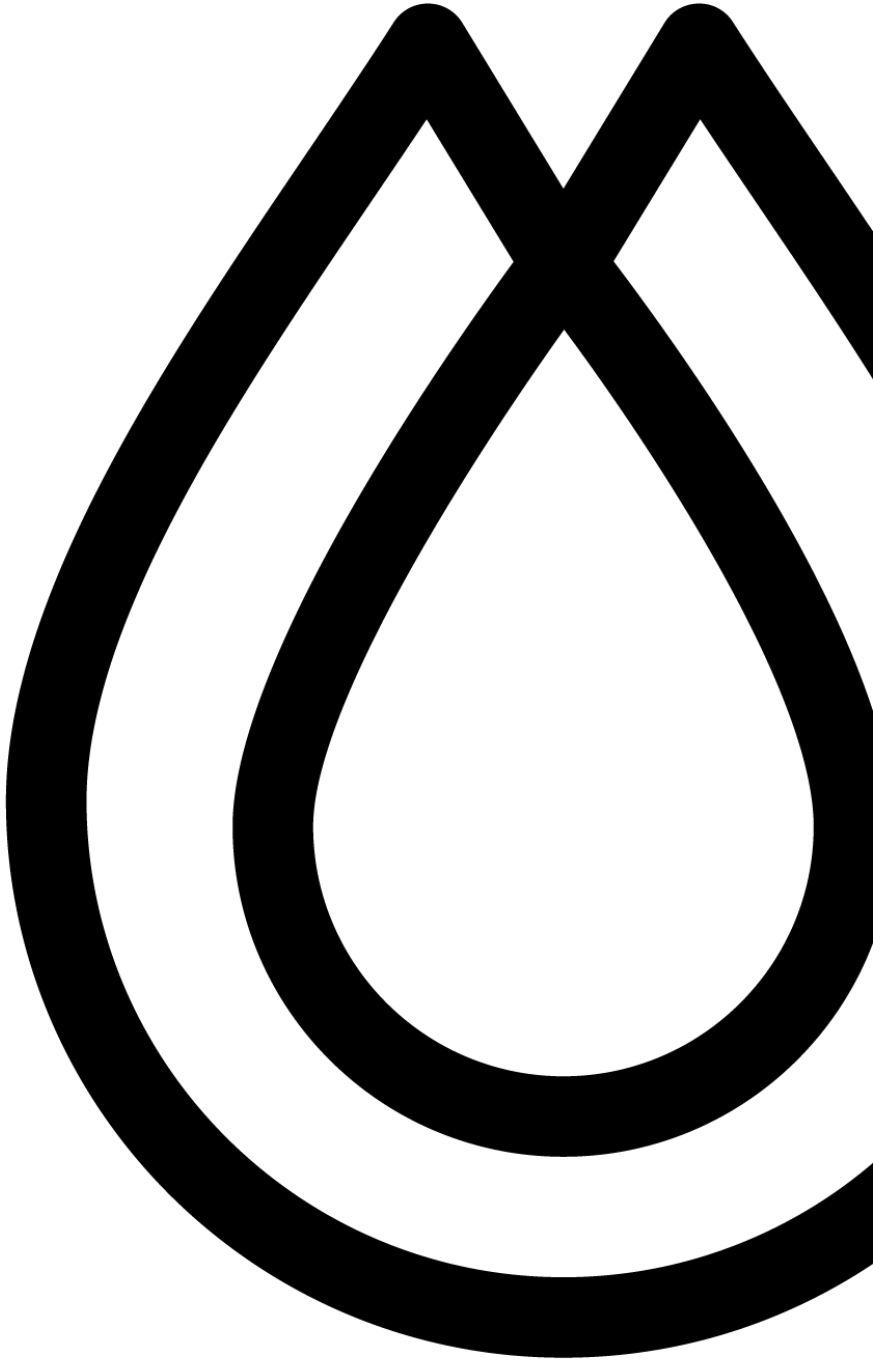
Chemical Recycling – An Innovation In Plastic Recycling

PLASTIC ENERGY - TAKEAWAYS.

- Plastic Energy is a leader in chemical recycling, converting end-of-life plastic waste into hydrocarbon oils, to be used as a feedstock to make clean recycled plastics

- We are the only company to:
  - own and operate two industrial plants,
  - have 3 years operational experience
  - have long-term agreements with major industry players
  - have validated the Plastic2Plastic process with the whole value chain.

- We provide value to valueless waste destined to incineration, landfills, or our environment, and support the creation of a circular economy.



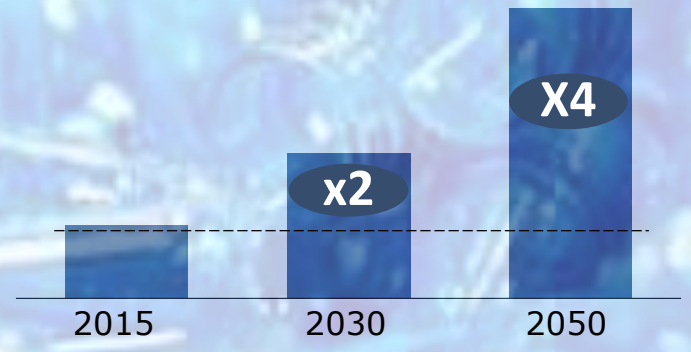
A WORRYING STATE OF PLAY.

Growing plastic production and limited recycling. If we continue in the current path, the consequences would be irreversible.

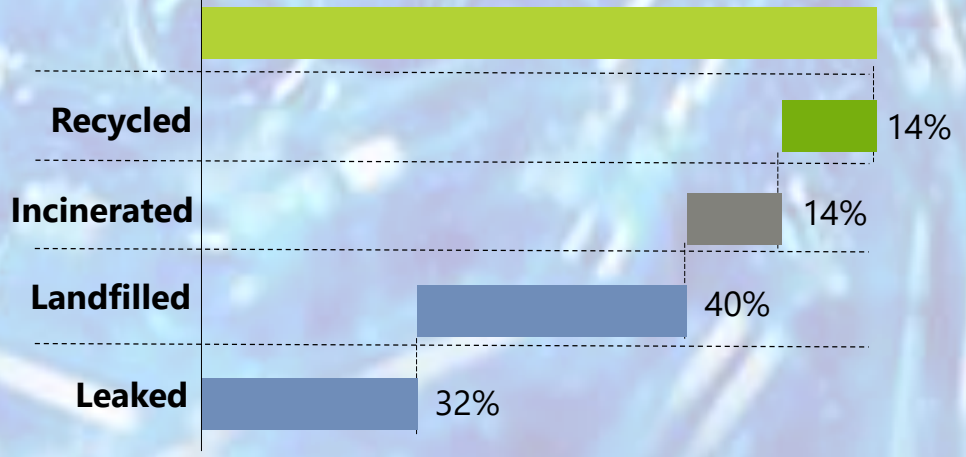
Plastics today

322 millions tonnes of plastics produced globally in 2015

Plastic packaging production expected to continue growing



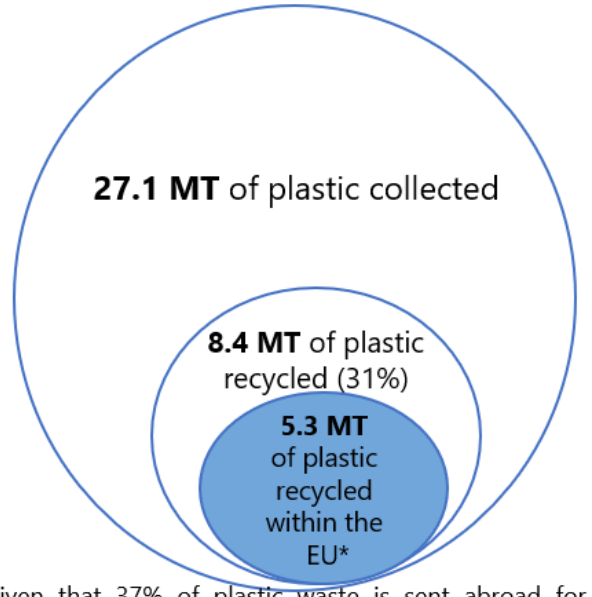
Global flows of plastic packaging (2013)
How little do we recycle?



PLASTIC ENERGY

A WORRYING STATE OF PLAY… ALSO IN THE EU.

Plastic recycling remains low in the EU

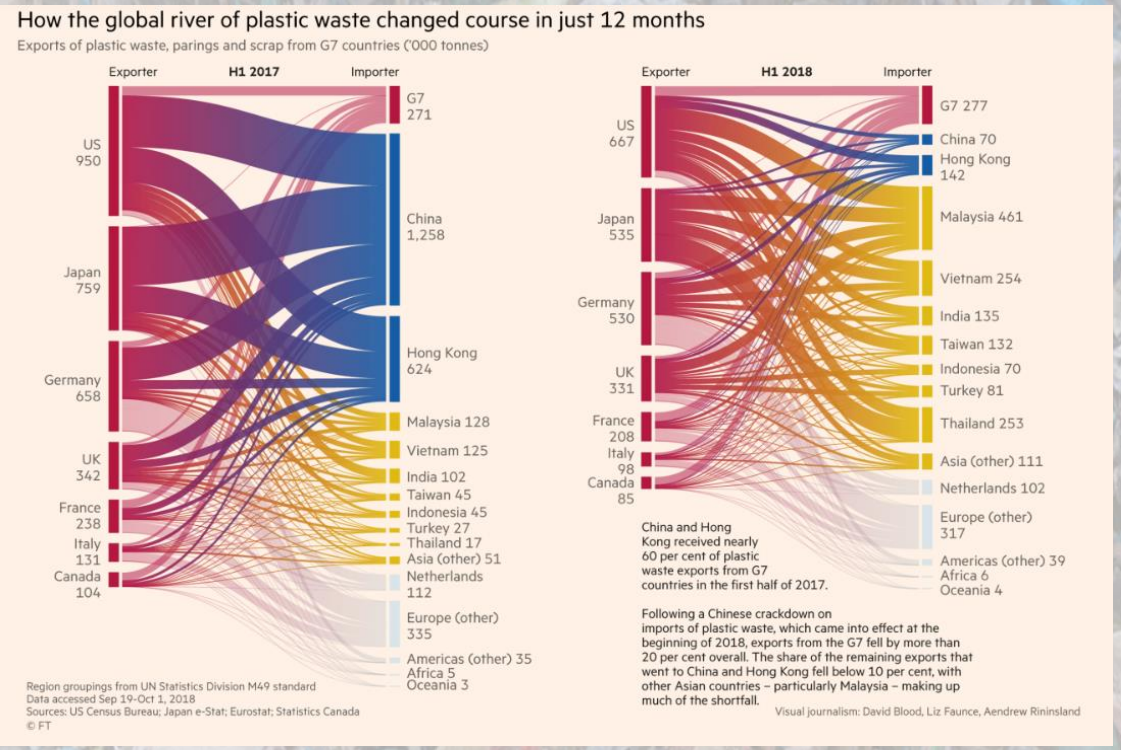


*Given that 37% of plastic waste is sent abroad for 'recycling', only 19.5% of EU plastic collected is recycled inside the EU.

- Despite available technologies, EU countries do not have enough infrastructure to deal with their own plastic waste
- Exports have slowed down the expansion of recycling facilities.

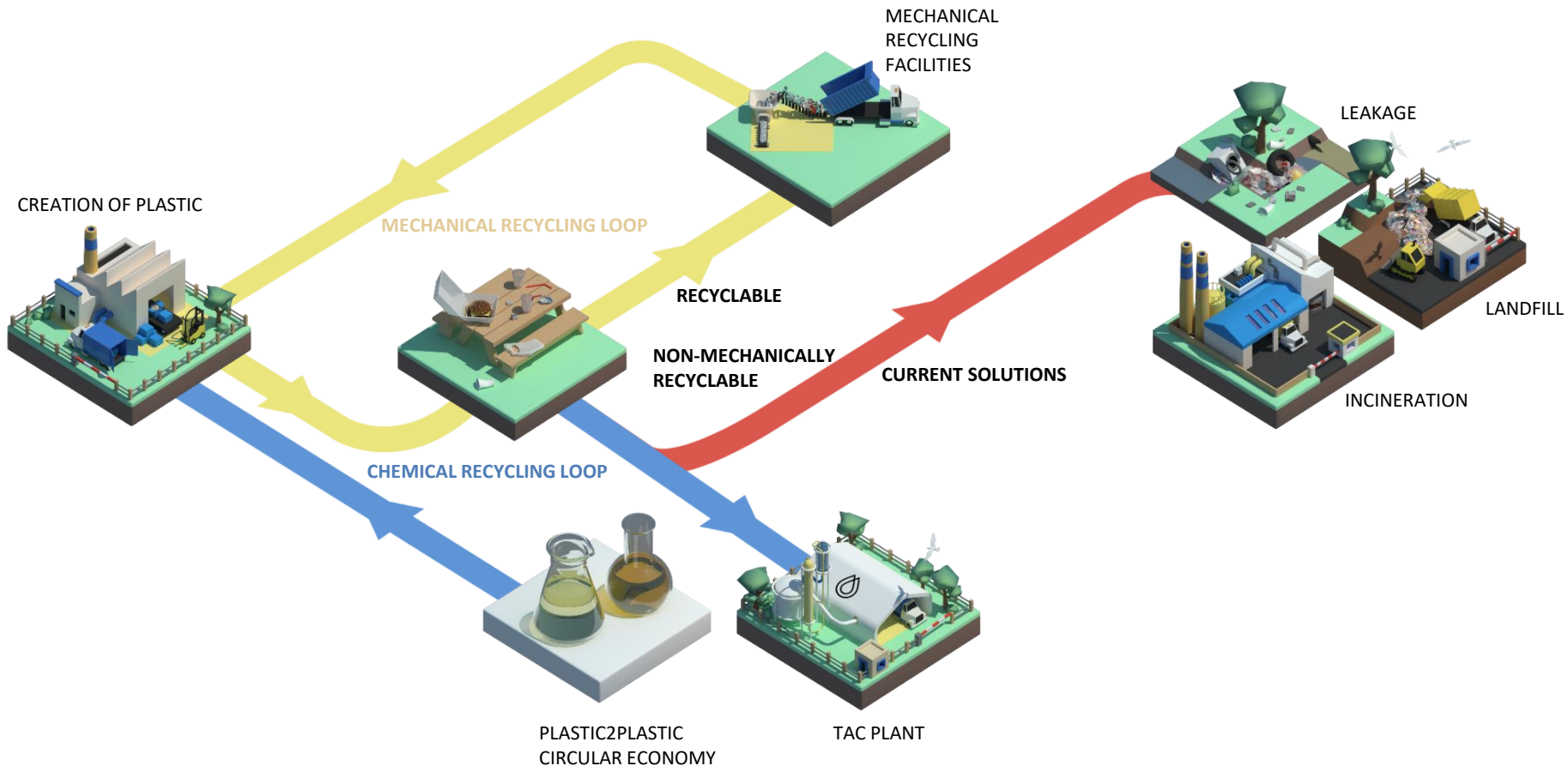
China ban divert plastic waste to countries with even less infrastructure

- Plastic export got redirected to other countries in South-East Asia with even less waste management and recycling infrastructure.
- These countries are starting to close their doors on plastic waste.



CHEMICAL RECYCLING - A SOLUTION FOR NON-MECHANICALLY RECYCLED PLASTICS.

- Plastic Energy's optimal feedstock (TACOIL) is used for making new plastic
- Chemical recycling complements mechanical recycling:
  - Overcome some of its challenges
  - Support in creating a circular economy



CLICK THE PLAY BUTTON ABOVE TO WATCH A SHORT VIDEO

CHEMICAL RECYCLING – CIRCULAR ECONOMY OF PLASTICS.

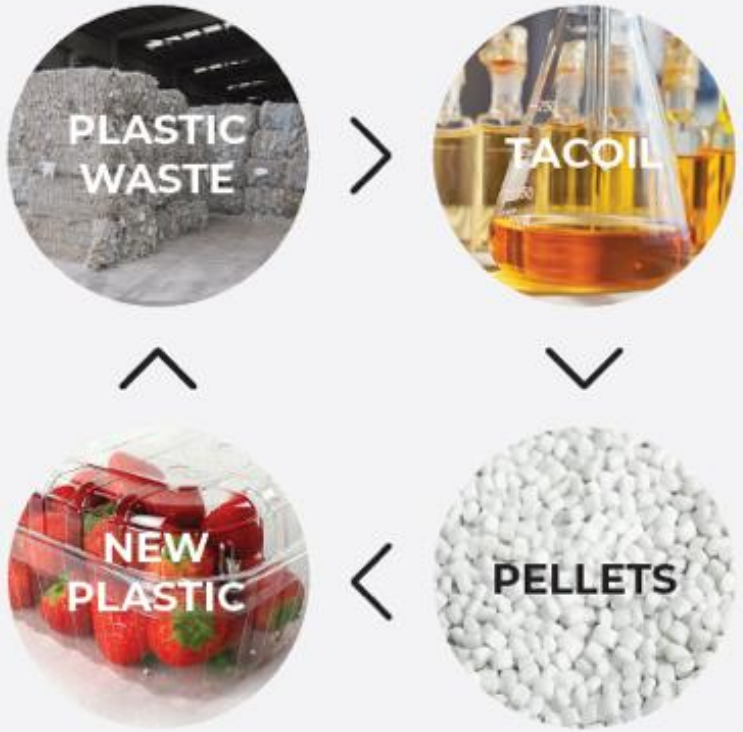
CIRCULAR POLYMERS :

1ST company worldwide having validated the circular economy of end-of-life plastics.

- Announced in Davos 2019
- Renewi, PLASTIC ENERGY, SABIC, Unilever / Vinventions / Walki Group
- Certified circularity and traceability by the ISCC+
- Recycled content following mass-balance approach

PROPERTIES:

- Virgin quality oil made from end-of-life plastic waste
- Food-grade packaging
- Endless recycling without degradation



WHY IS THIS INNOVATION IMPORTANT?

Support countries in increasing recycling rate and creating a circular economy

Recycle previously non-recyclable plastics

Divert plastics away from landfills and incineration, and preventing leaks in our ocean

Contribute to reducing oil extraction / the production of virgin plastics and reduce CO2 footprint

A FAST GROWTH.

> **We aim to build 10 plants in Europe and 10 plants in Asia by 2023**
> - Carlos Monreal, CEO

Almeria (SP)

- Plant commissioned in 2015.
- First one in Europe with the REACH certificate.

Seville (SP)

- Plant operating since 2017
- Incorporates several improvements over Almeria

France

To be announced in Q4 2019 for start of construction in 2020

- Focus on Plastic2Plastic

Geleen (NL)

Expected to be built in 2021

- MoU signed with SABIC for building a large scale plant
- Focus on Plastic2Plastic

Malaysia

Signed: Q2 2019;

- MoU signed with Petronas for building a large scale plant
- Focus: Plastic2Plastic

Indonesia

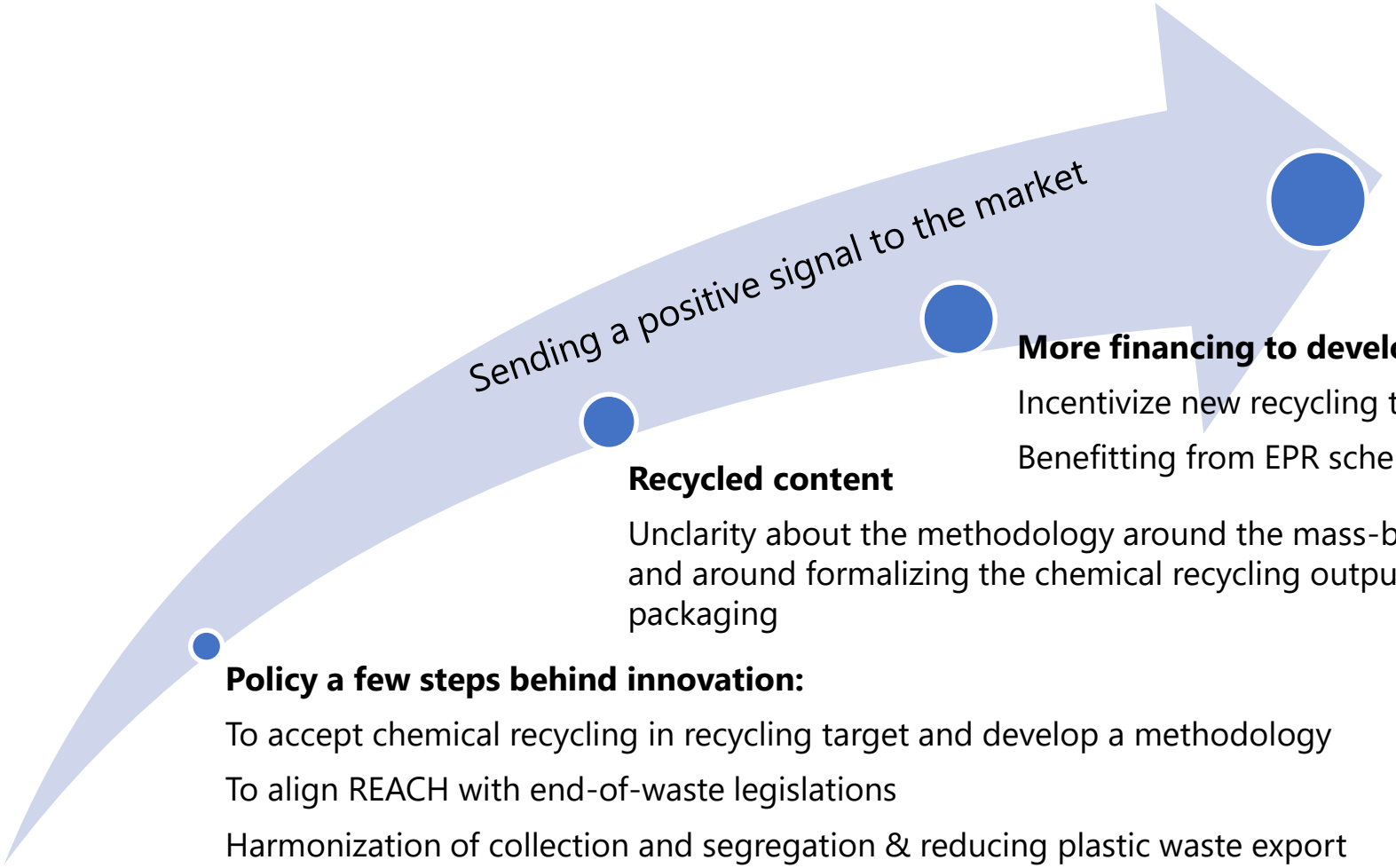
- MoU signed in West Java for the construction of 5 plants

Tenerife (SP)

Expected to be operational in 2020

And many other projects in the pipeline...

SOME CHALLENGES ON THE WAY TO INNOVATION



Development of chemical recycling

More financing to develop a solution

Incentivize new recycling technologies

Benefitting from EPR schemes

Recycled content

Unclarity about the methodology around the mass-balance approach and around formalizing the chemical recycling output for food-grade packaging

Policy a few steps behind innovation:

To accept chemical recycling in recycling target and develop a methodology

To align REACH with end-of-waste legislations

Harmonization of collection and segregation & reducing plastic waste export

www.plasticenergy.com

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