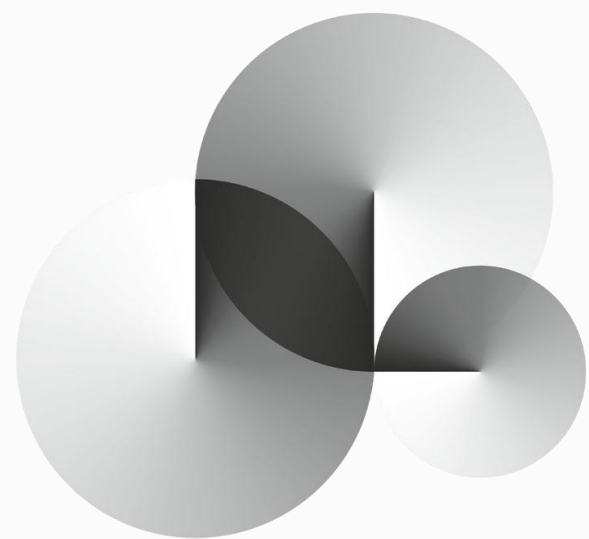




INDELOOP

Looper

Waste-to-Hydrogen System



WHO WE ARE?



Indeloop is a Croatian company that endeavours to convert non-recyclable organic waste into clean hydrogen.

What are current problems in waste management and hydrogen sectors?



What to do with nonrecyclable waste?

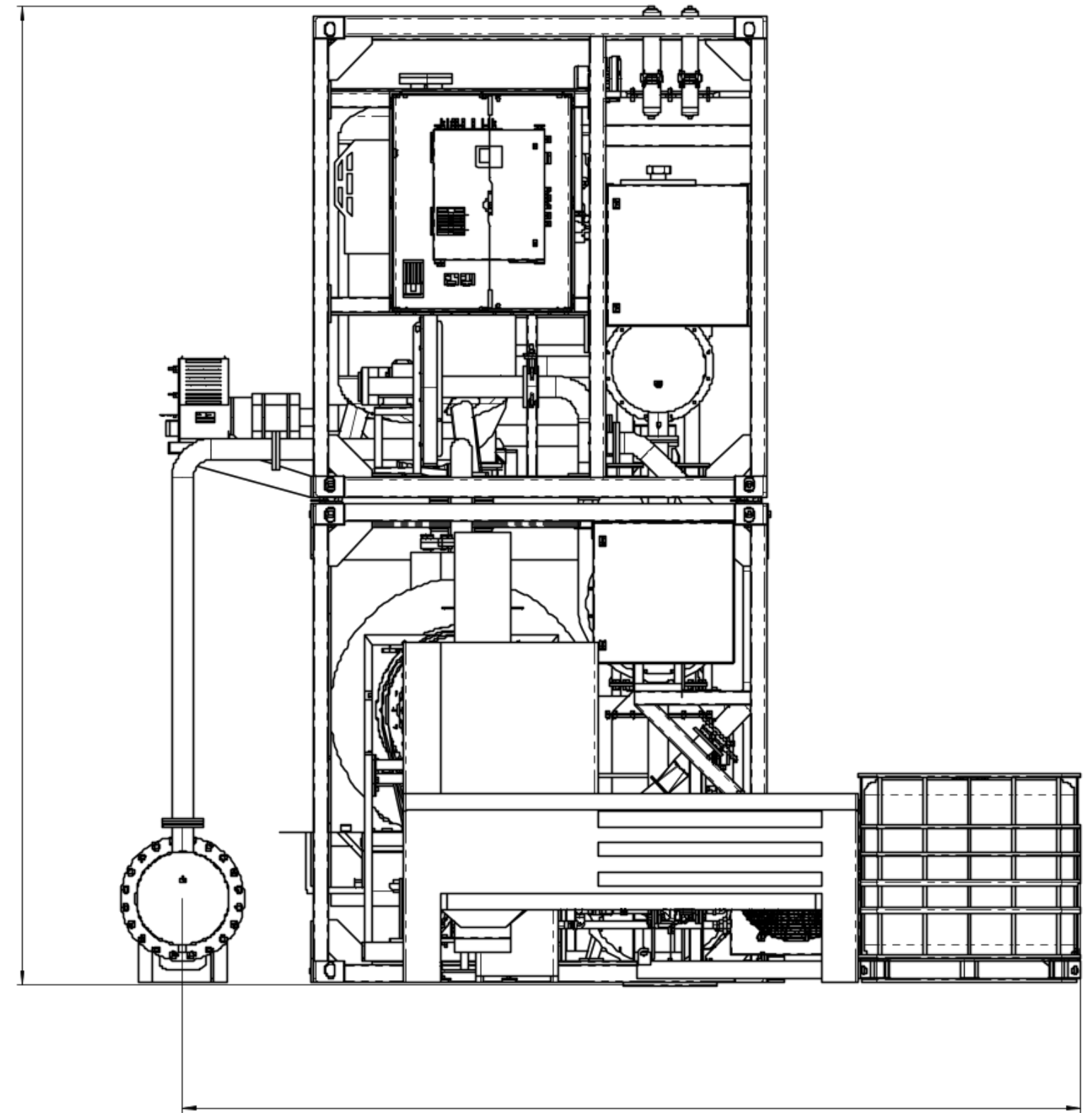


How to produce clean energy? How to produce hydrogen in affordable and renewable way?



HOW WE SOLVE THOSE PROBLEMS?

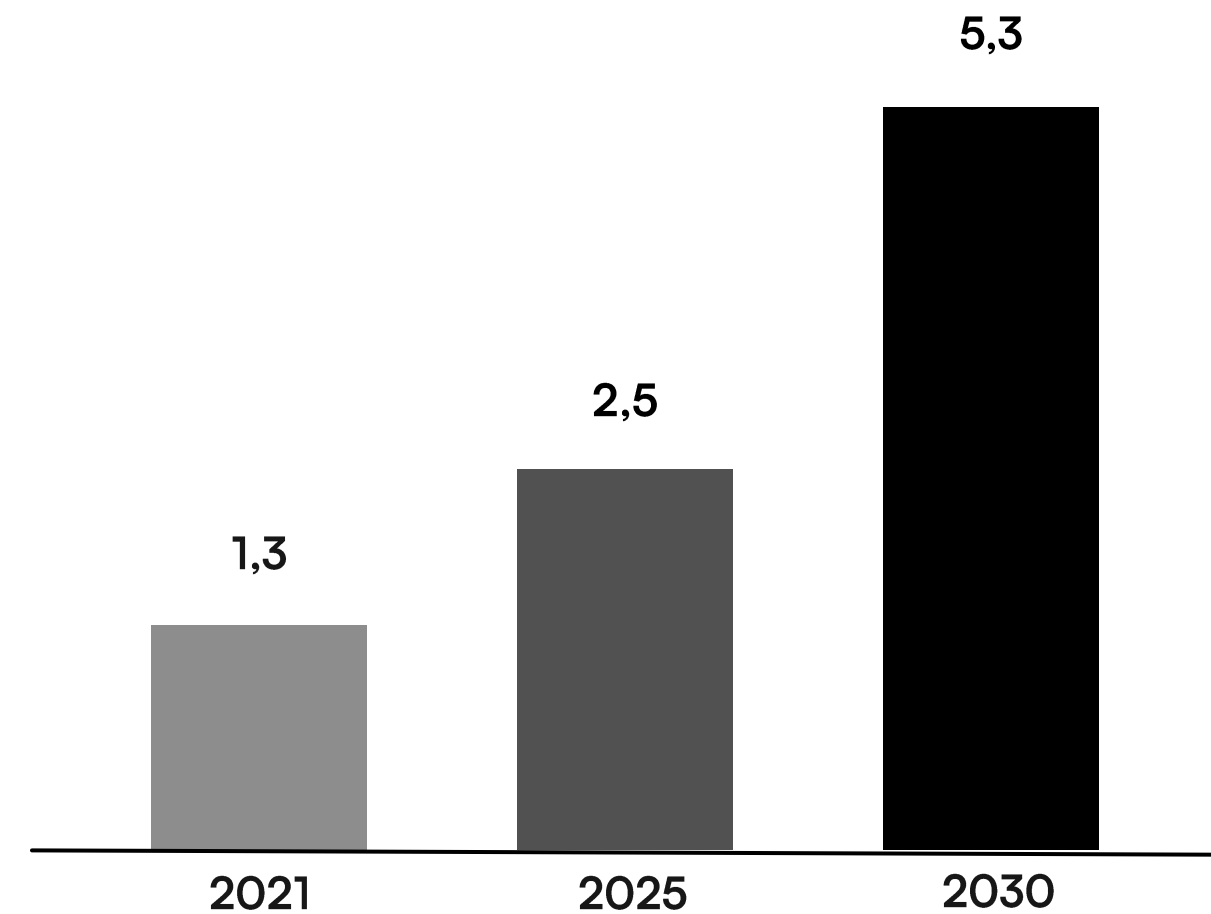
**By developing waste to
hydrogen system Looper.**



HOW WE SOLVE THOSE PROBLEMS?

...to contribute to the carbon neutrality and energy independence by introducing a new, innovative method of producing clean hydrogen.

Global clean hydrogen
market growth (EUR billion)



Source: Precedence Research

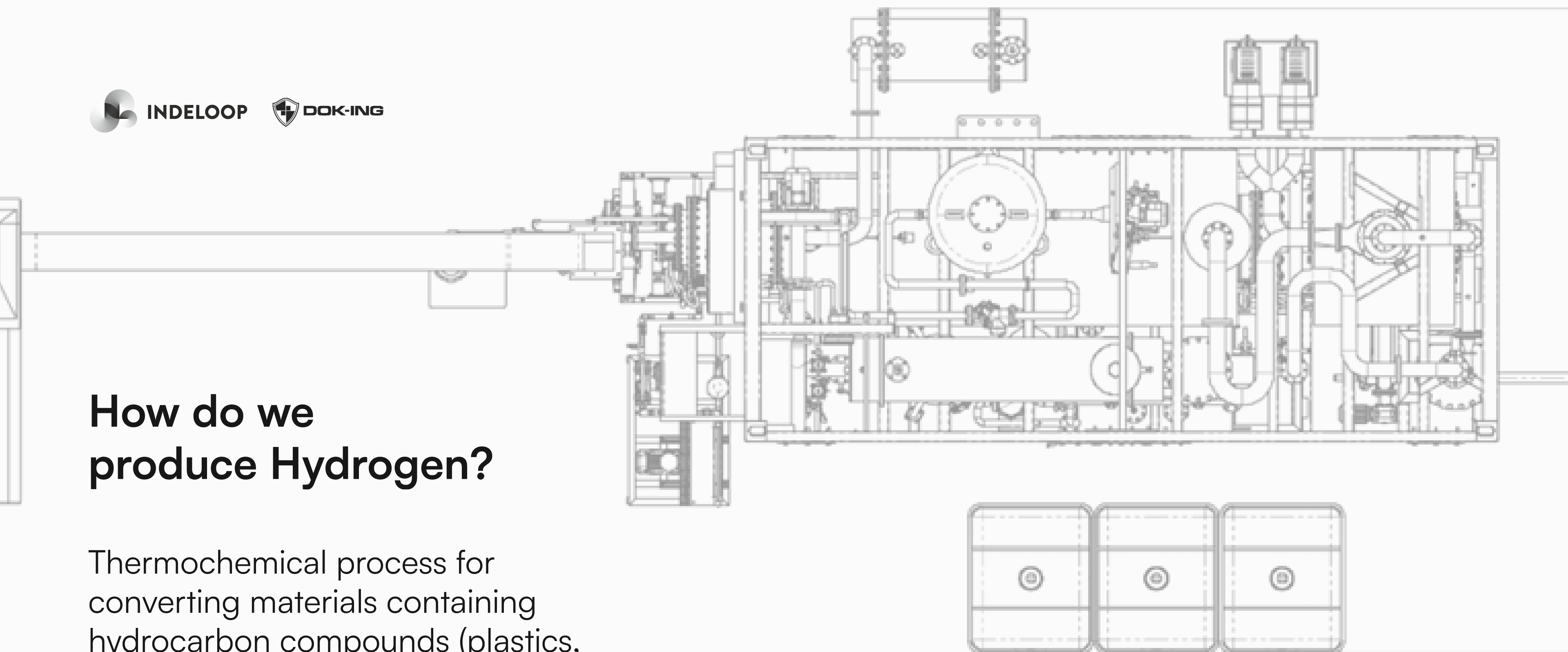
HOW WE SOLVE THOSE PROBLEMS?

...to convert waste into clean hydrogen (for energy sector, industry or transport) and solid residues (for construction).



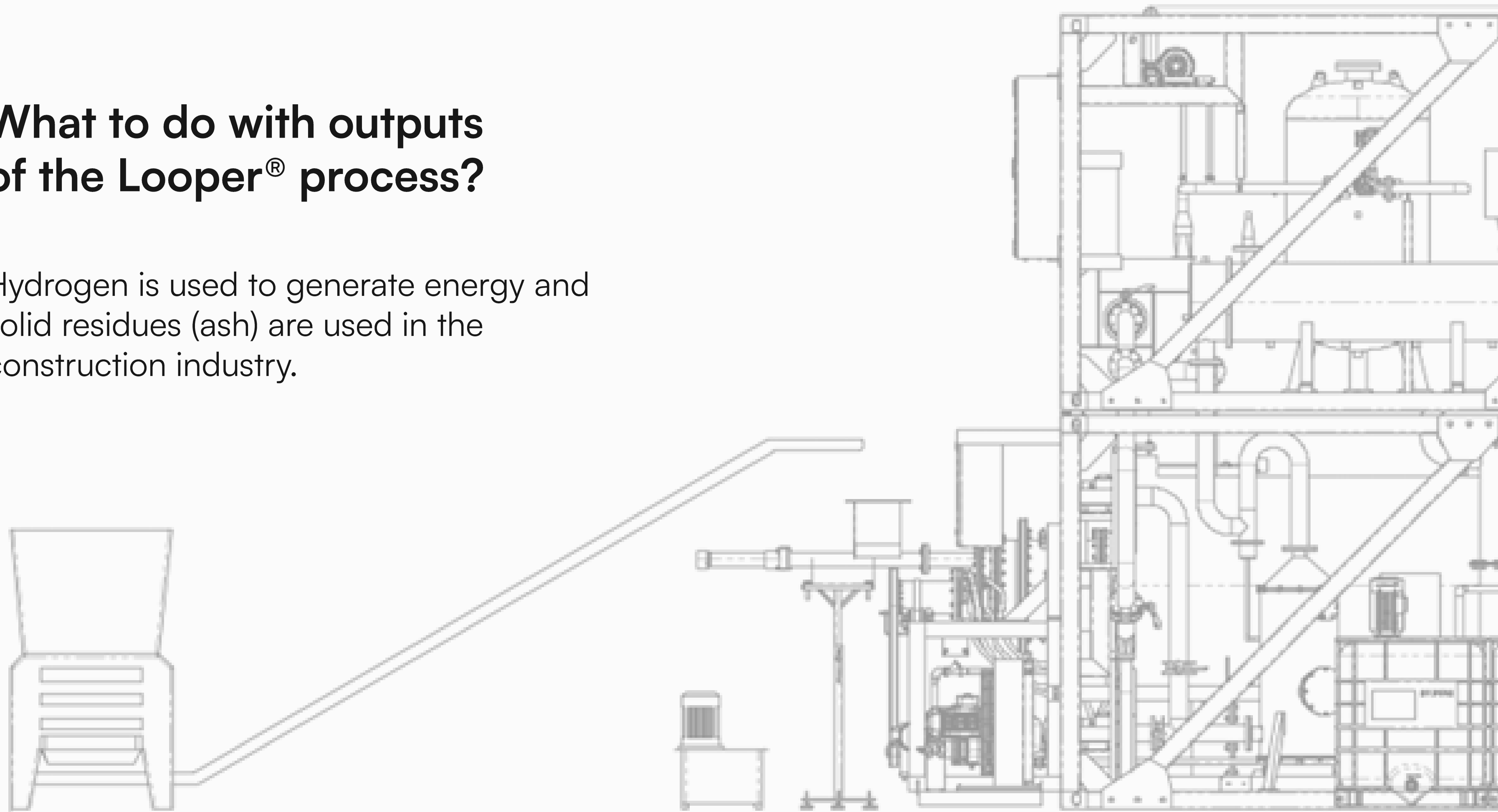
How do we produce Hydrogen?

Thermochemical process for converting materials containing hydrocarbon compounds (plastics, sewage sludge, textiles...) into syngas/hydrogen and solid residues.



What to do with outputs of the Looper[®] process?

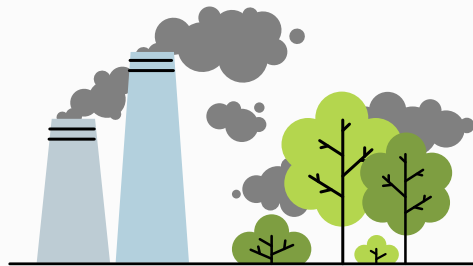
Hydrogen is used to generate energy and solid residues (ash) are used in the construction industry.



Looper key characteristics



**System output-syngas-
used for hydrogen
generation**



**Reduced greenhouse
gas emissions-compared
to landfilling and
incineration of waste**



**End users become energy self-
sustainable with continuous
and affordable energy
production while decreasing
cost of energy and waste
management**

How is Looper[®] different?

2-stage thermochemical process that **increases the efficiency and service life** of the system.

The compact design and modularity make it **easy to use for different end users** (industry, waste disposal companies...).

Production of **ready-to-use clean hydrogen** and solid residues.



REUSER QD 450



REUSER
RUBUST

How our Hydrogen can be used?

Hydrogen is **extracted from produced syngas** via membrane separators.

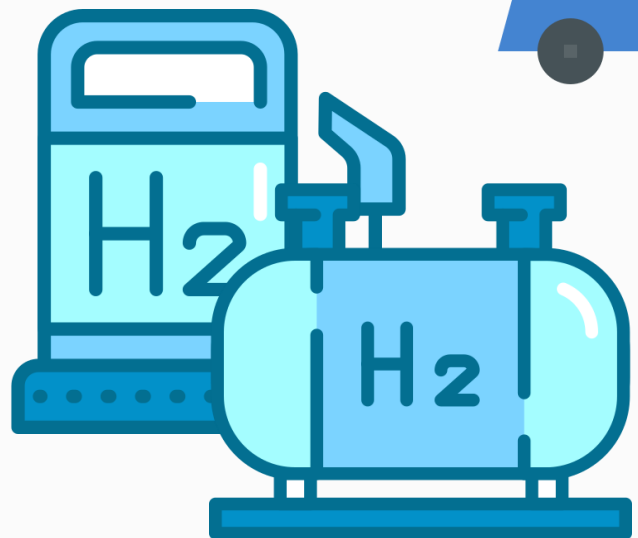
Hydrogen is **stored and ready for use** when needed.

High **purity of hydrogen** for various purposes: transport, various types of industries (chemical, fertiliser industry etc.)

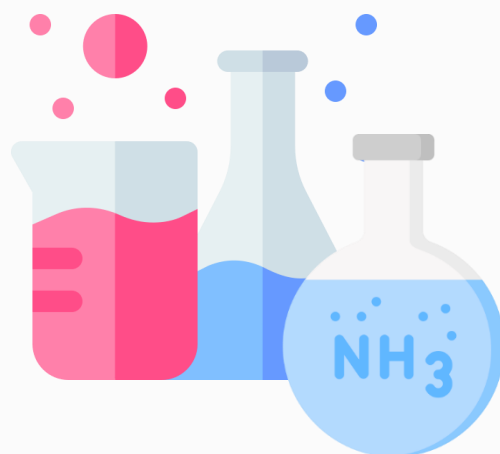
Such produced hydrogen is classified as clean or renewable hydrogen.



Endless possibilities of hydrogen...



Fuel cell vehicles, chemical and energy intensive industries, energy storage (especially remote areas), military camps...



Connection to Smart Cities

Circular Economy

transforming non-recyclable waste into clean hydrogen reduces landfilling and creates valuable energy.

Decentralised Energy

compact and modular design enables local, resilient, and independent energy production within cities.

Green Mobility

hydrogen powers public transport and fuel cell vehicles, cutting CO₂ emissions and improving air quality.

Smart Infrastructure

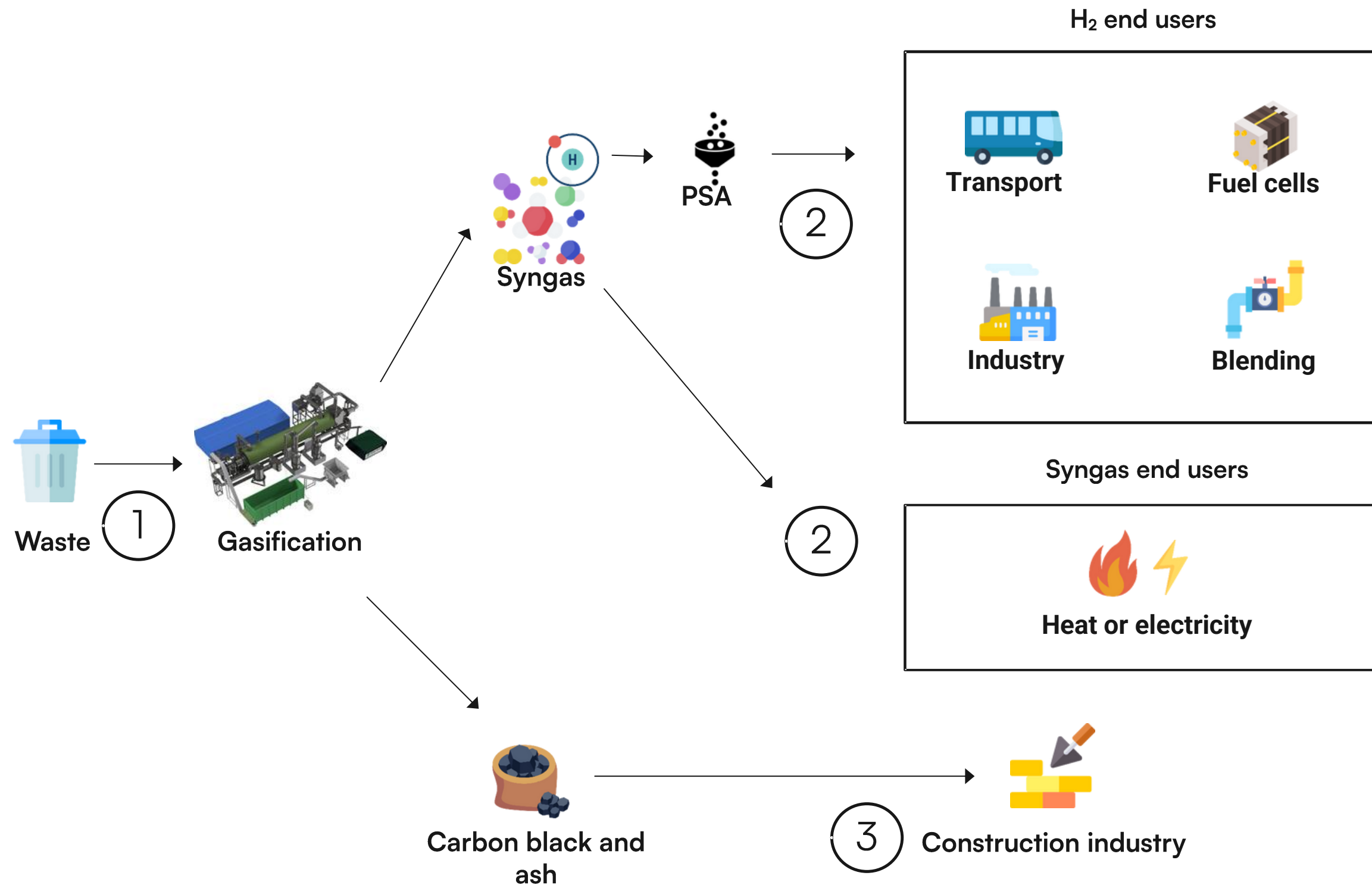
integration with digital platforms, IoT systems, and energy grids for optimized waste and energy management.

Sustainable Urban Development

solid residues are reused in construction, closing the material loop in urban environments



What are Looper's revenue streams?



Key takeaways

3 main revenue sources:

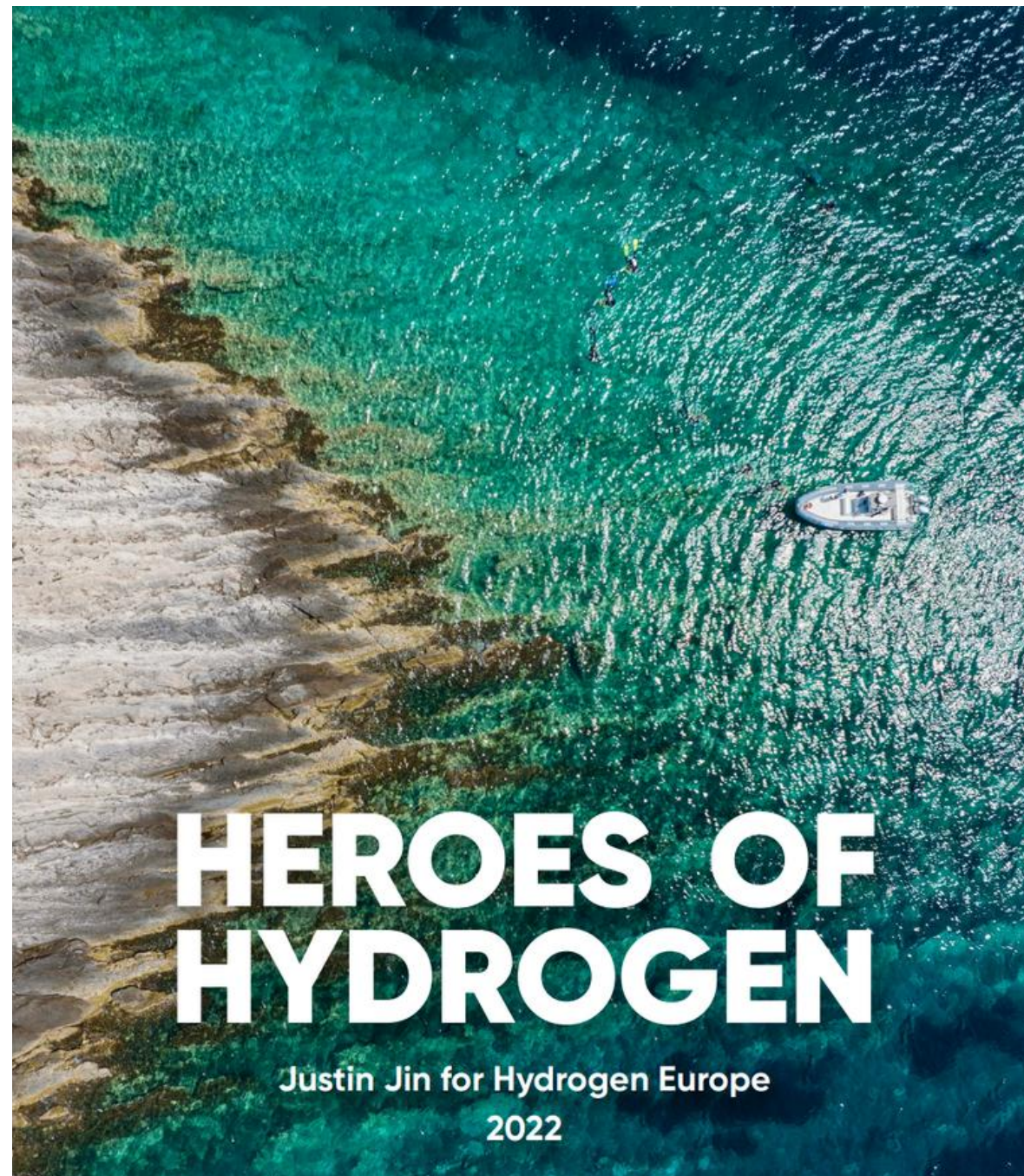
- ① Disposal fee: end-user doesn't have to disposal fee for waste material
- ② Hydrogen/syngas: the hydrogen can be sold to off-takers or used for hydrogen blending (injection in the natural gas network)
- ③ Byproduct ash and carbon black: the ashes can be sold to tire manufacturers or construction industry

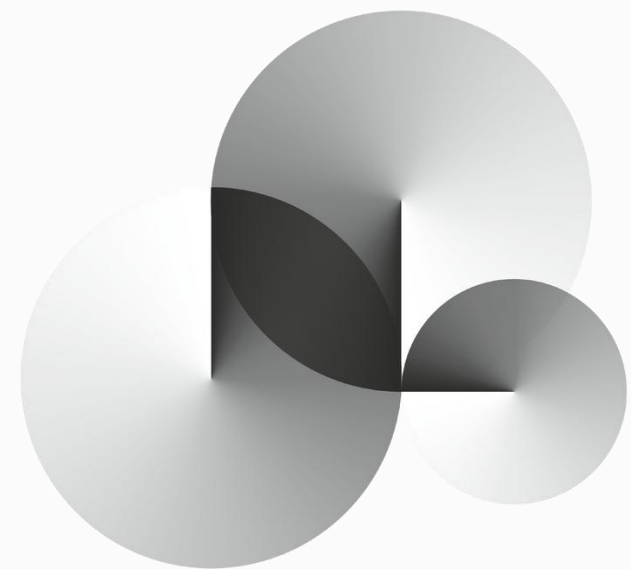
CO₂ savings!

Indeloop was Hydrogen Hero of 2022



In 2022 Looper was featured in the first issue of Heroes of Hydrogen by Hydrogen Europe. Looper was introduced among four stories that have great potential to significantly boost hydrogen economy.





INDELOOP

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