

# Ember

## PYROLYSIS TECHNOLOGY FOR HYDROGEN AND CARBON

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for life

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# PROGRESS AND FUTURE VISION

MAKE IT  
HAPPEN!  
WORK IT  
PLAN IT  
DREAM IT

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# PROPOSED APPROACH

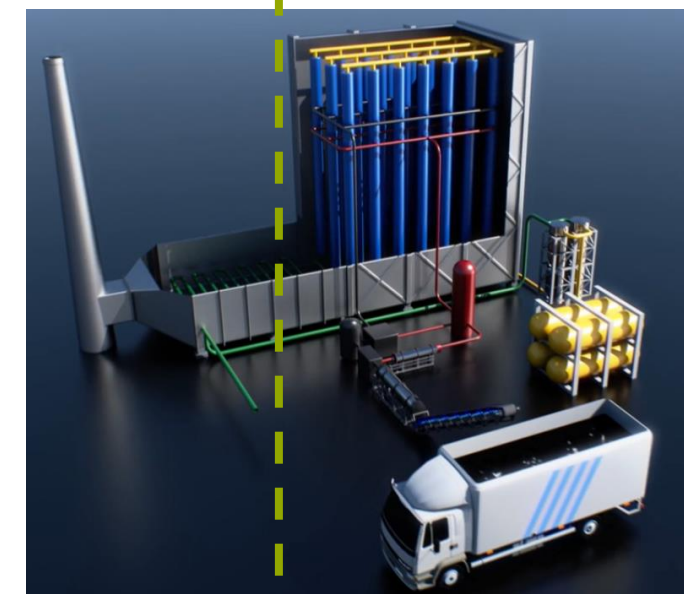
Proof of  
concept

Bench Scale

Continuous  
Process

Pilot Plant

Demonstration  
Plant



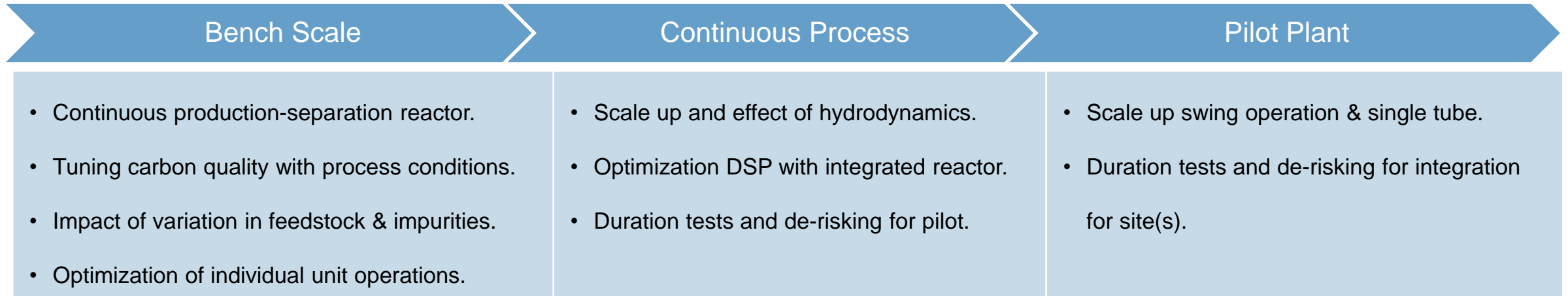
Today

In 2030

# FUTURE OUTLOOK AND APPROACH

## TECHNOLOGY PROGRESS STATUS

TRL 1 - 3			TRL 3 - 6			TRL 6 - 9
Conceptual design	Proof of concept	Techno economic evaluation	Optimization and batch scale pilot	Scale up continuous operation	Pilot plant	Commercial scale demonstration and application.
Established proof of concept for removal of carbon.			Identified main steps and questions for progressing technology.			Gained interest from companies for demonstration.
Timeline			2019	2020	2023	2025



+ Continuous improvements with the cost estimates for the reactor and overall plant.

# THANK YOU FOR YOUR ATTENTION

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Take a look:  
**TNO.NL/TNO-INSIGHTS**

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