



PUHI

Down to Earth Climate Tech



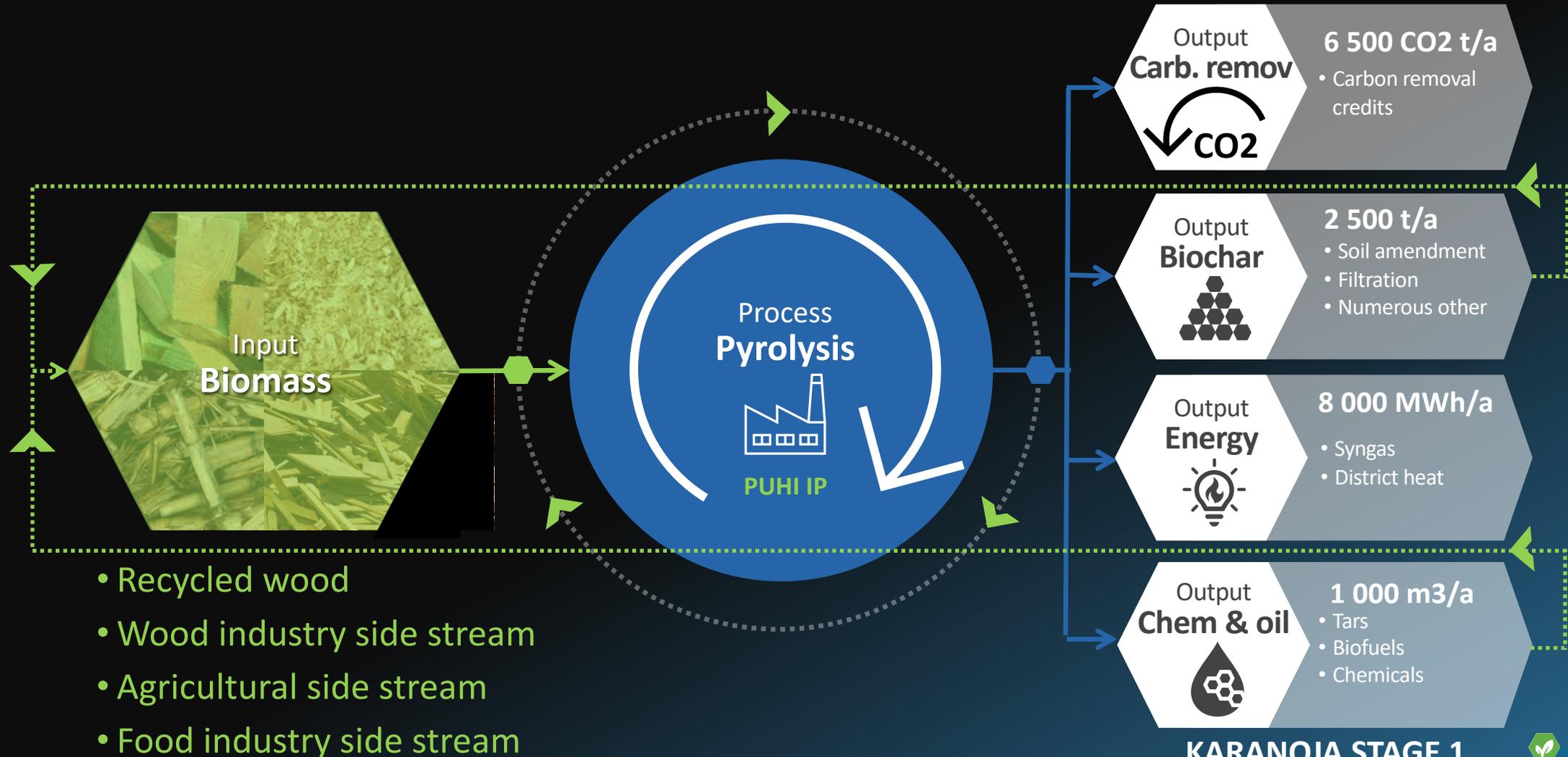


Wouldn't it be FANTASTIC if...

..we dared to tell our children
what we accomplished?

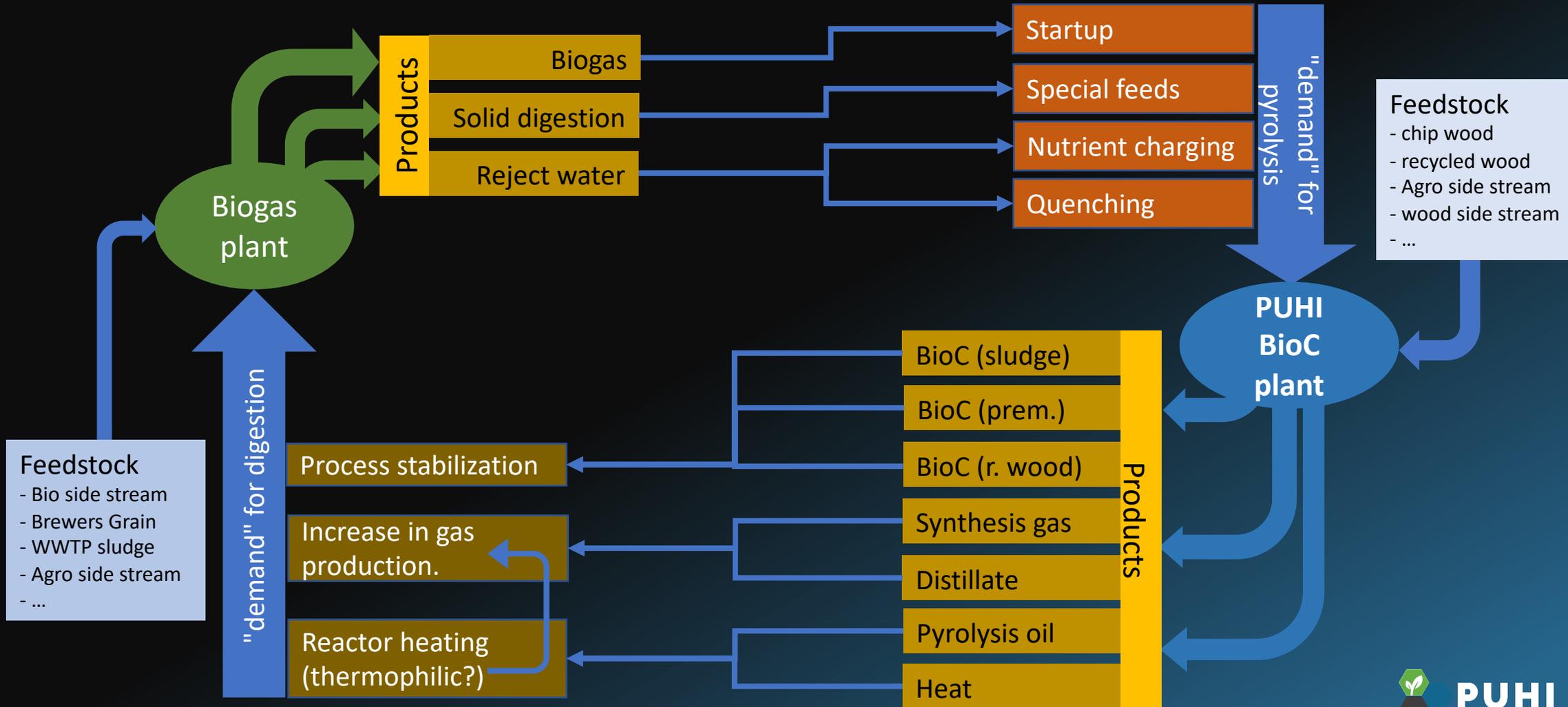
PUHI – SOLUTION

PRIORITY NO 1 – CIRCULAR ECONOMY



BIOCHAR & BIOGAS

PROCESS SYMBIOSIS & SYNERGIES



PUHI - FEEDSTOCK

WOOD SHAVINGS? – NOT INTO THE BOILER FOR GOD’S SAKE!

- Wood shavings
- Waste/recycled wood
- Forestry residues
- Grain residues



PUHI – FUTURE FEEDSTOCKS

ANAEROBIC DIGEST, SEWAGE AND INDUSTRIAL SLUDGES

CHALLENGE

- Difficult matrix
- Harmful substances

OPPORTUNITY

- Sewage sludge solution
- Various applications

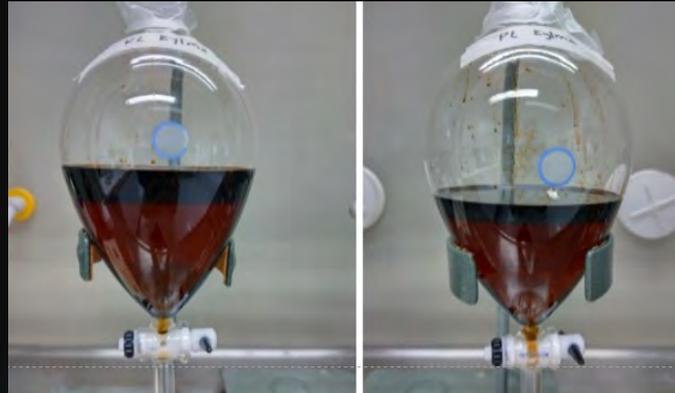


PUHI - SOLUTION

HIGHLY VALUABLE PYROLYSIS SIDE STREAM

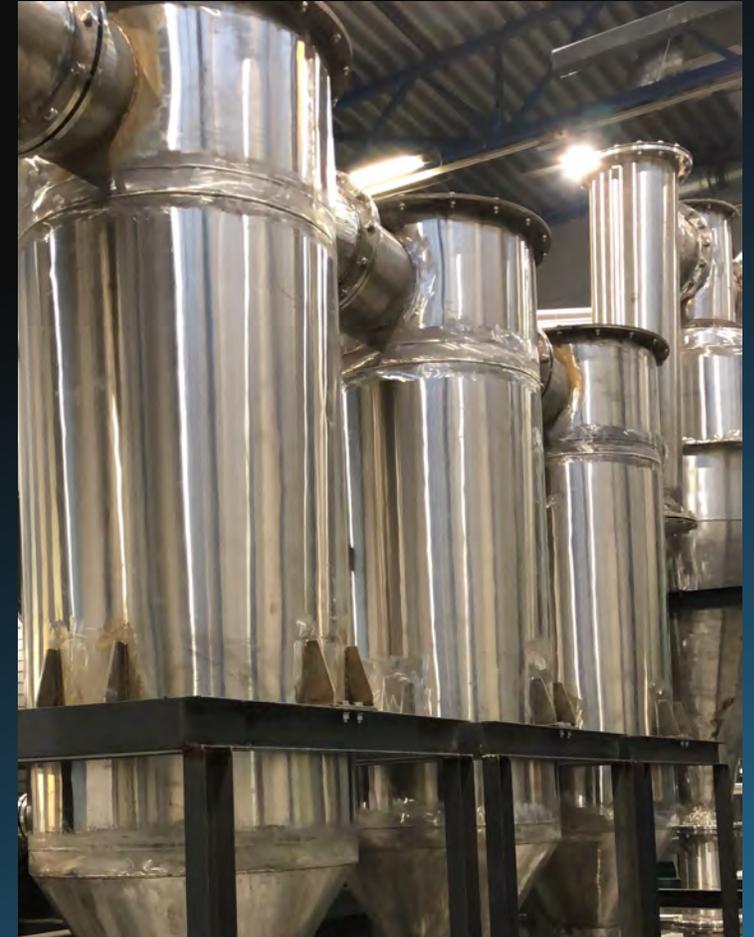
PYROLYSIS LIQUIDS

- Tars, oils and chemicals
- Known applications
- New applications



PUHI PROCESS

- Three phase condenser
- Minimized emissions



PUHI – TECHNOLOGY

KEEPING IT SIMPLE BUT INNOVATIVE

KON TIKI

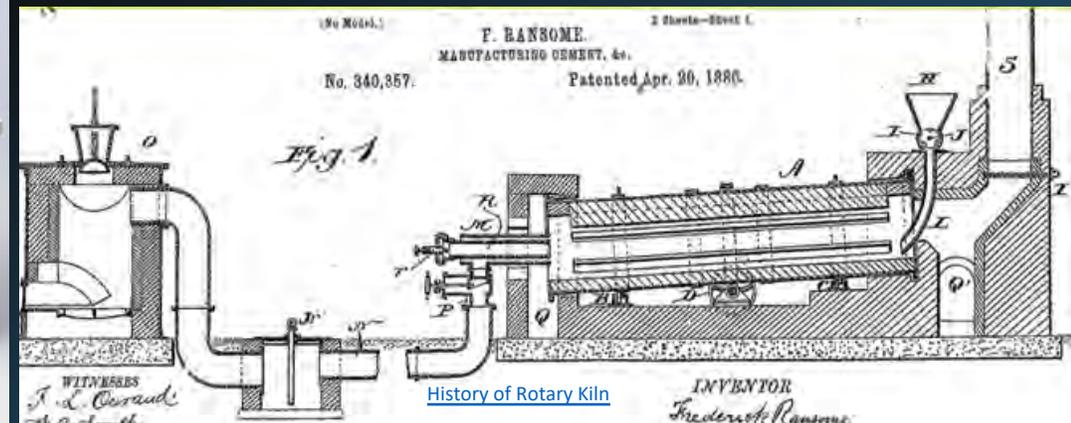


Kuva: Avoin pyrolyysipolttio. (Kuvat: Annakaisa Elo)

BATCH KILN



ROTARY KILN (since 1891)



PUHI – R&D SERVICES

PYROLYSIS R&D – TEST – VERIFY - PRODUCE

BATCH REACTOR

- Suitable feedstock
- Initial parameters
- Biochar properties

CONTINUOUS REACTOR

- parameter definition
- Pre-production verification



PUHI – KARANOJA FINLAND

ENVIRONMENTAL PERMIT - 20 000 TONS BIOMASS

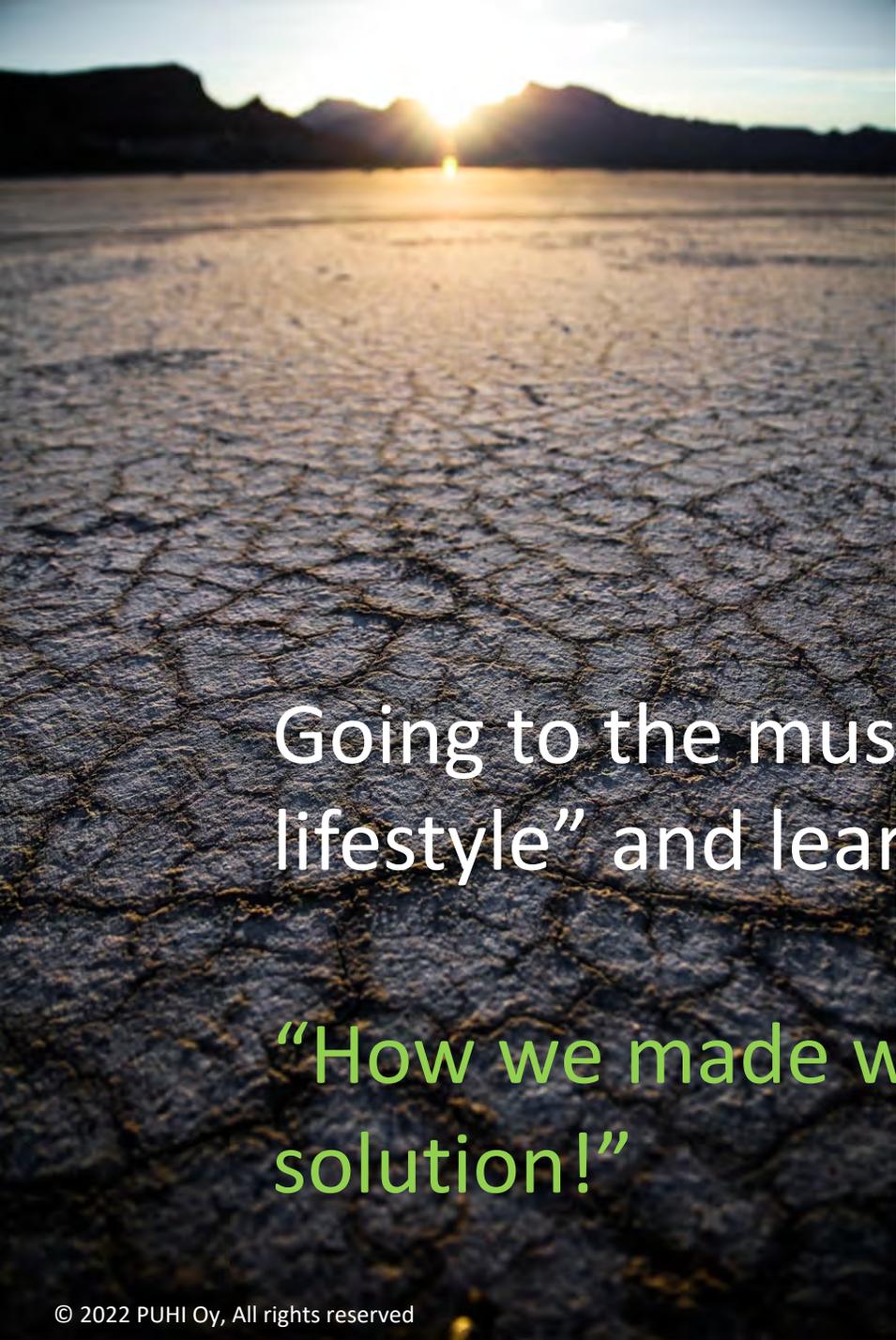
YEARLY CAPACITY

- Feedstock: 20 000 tons
- Biochar: 6 500 tons
- CO2 removal: 18 000 tons

YEARLY CAPACITY STAGE 1

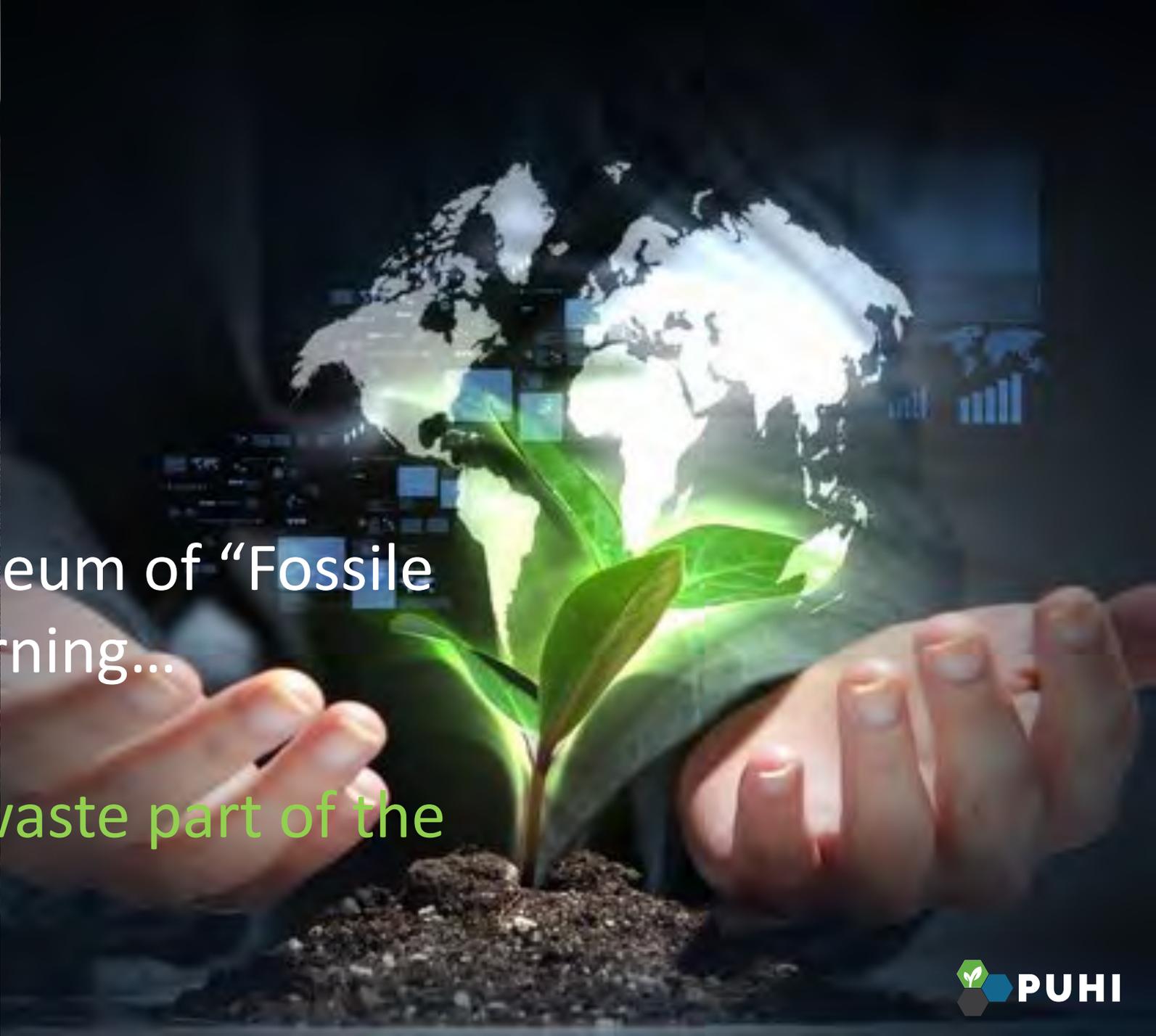
- Feedstock: 8 000 tons
- Biochar: 2 500 tons
- CO2 removal: 6 500 tons





Going to the museum of “Fossile lifestyle” and learning...

“How we made waste part of the solution!”





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