

Aspire to a cleaner, brighter future

Bioelectrical Conversion of Organic Waste to Hydrogen Fuels

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Co-Founder and CEO



INNOVATION
CROSSROADS

OAK RIDGE NATIONAL LABORATORY



URBAN FUTURE LAB

NYU TANDON



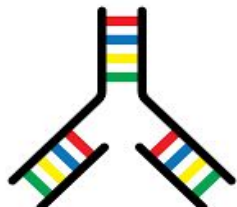
TOYOTA



NYSERDA
Supported



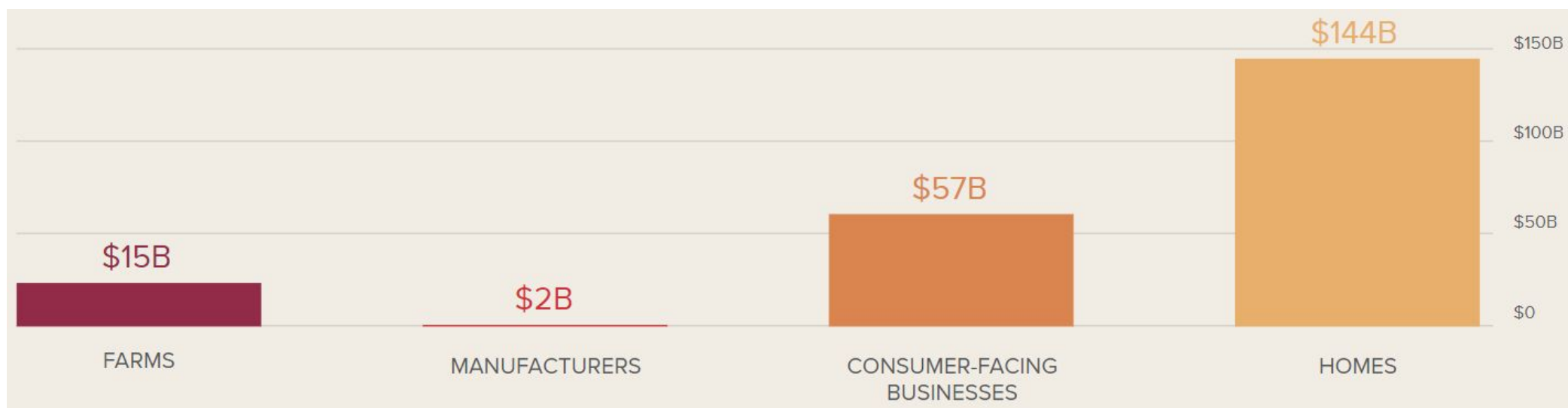
SUSV
THE ACCELERATOR VC



INDIE BIO
ACCELERATING BIOLOGY



80% of food waste at consumer level



Food Waste Disposal



6.0

Million tonnes of
food waste is
generated every year



Landfilling results in methane
production, 30x potent GHG
compared to CO₂

SB-1383 Goals:
2020: 50% diversion
2025: 75% diversion

Food Waste Disposal



electro-active
technologies



6.0

Million tonnes of
food waste is
generated every year



LONG TRANSPORT



Compost is main
alternative

Food Waste Disposal



electro-active
technologies



6.0

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generated every year



**Other options for processing waste
typically rely on centralized approaches
and require quite a bit of scale and are
very capital intensive**

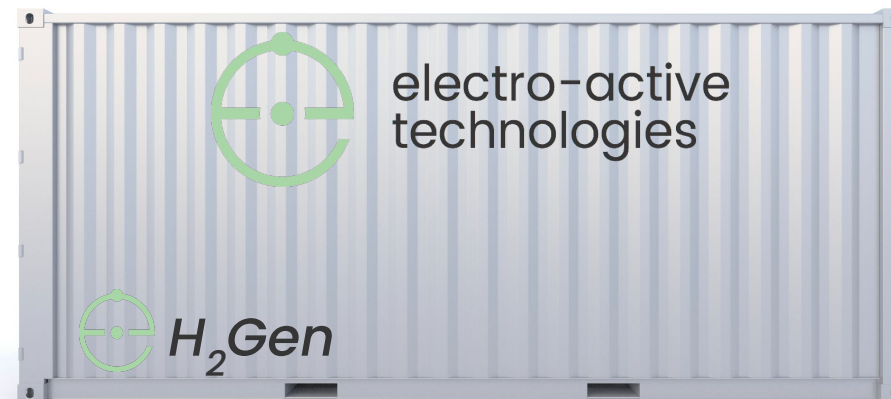
Food Waste Disposal



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Million tonnes of
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Results in methane production,
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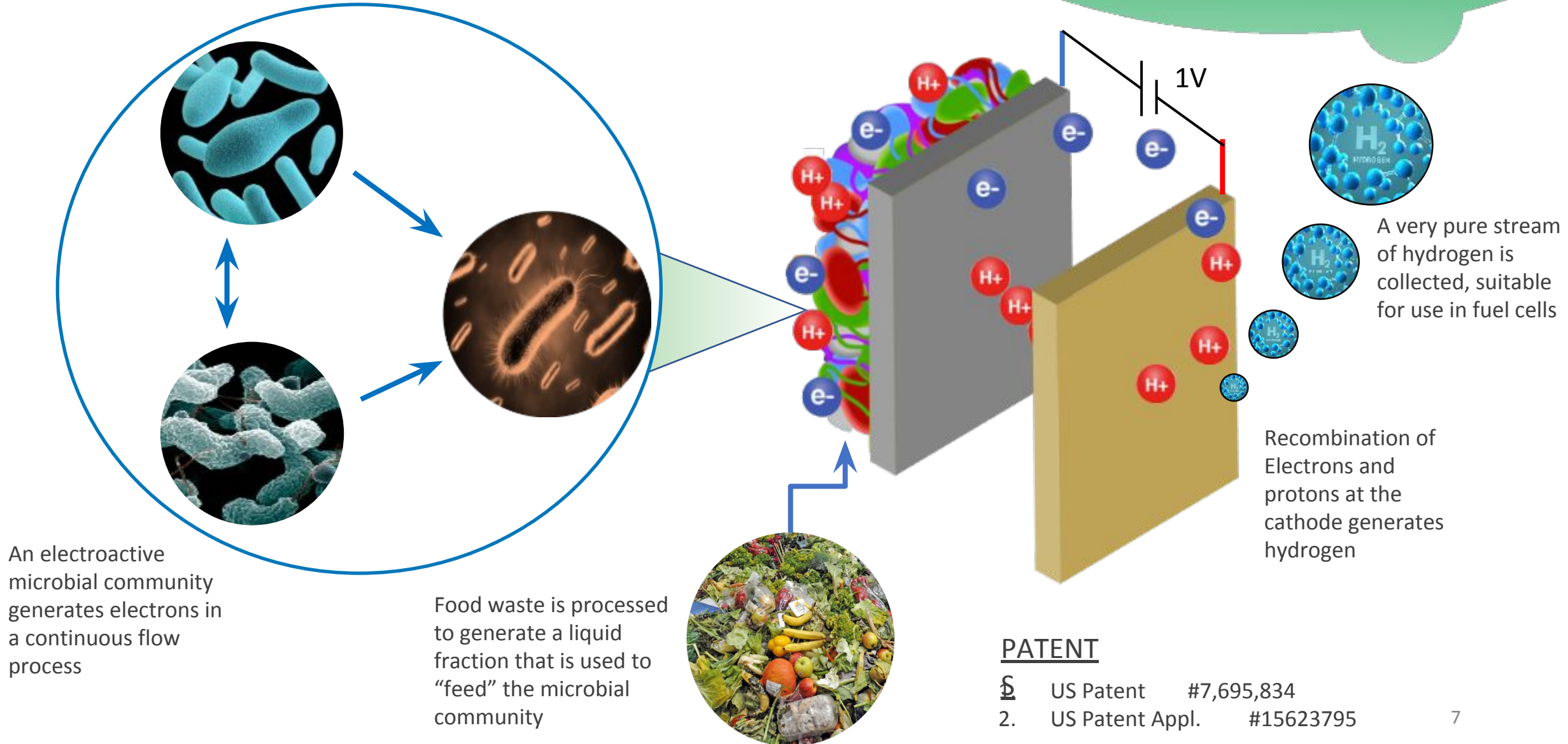
Using electron-generating bacteria in a
proprietary process

Technology

5+ Years of R&D at Oak Ridge National Laboratory



electro-active
technologies



Scale-up



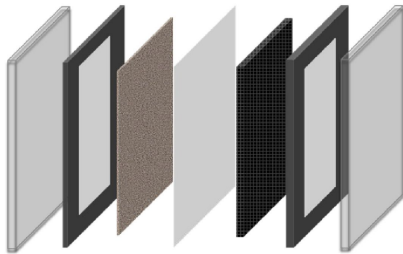
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technologies

2019

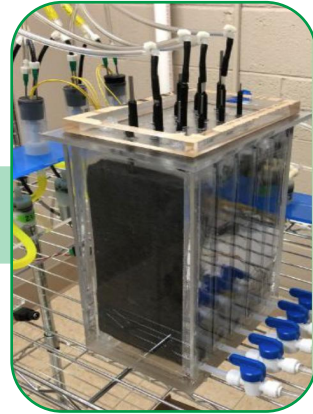
2020

2021

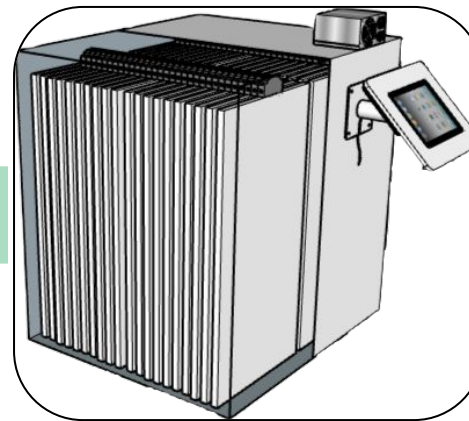
2022



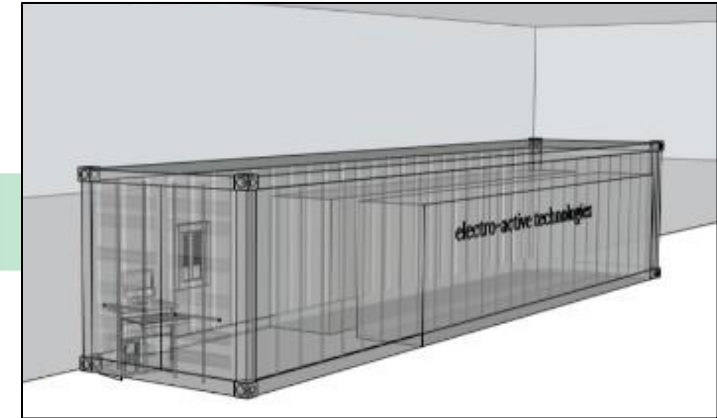
Single set of plates



Four plate cell



1m Cube Pilot Plant



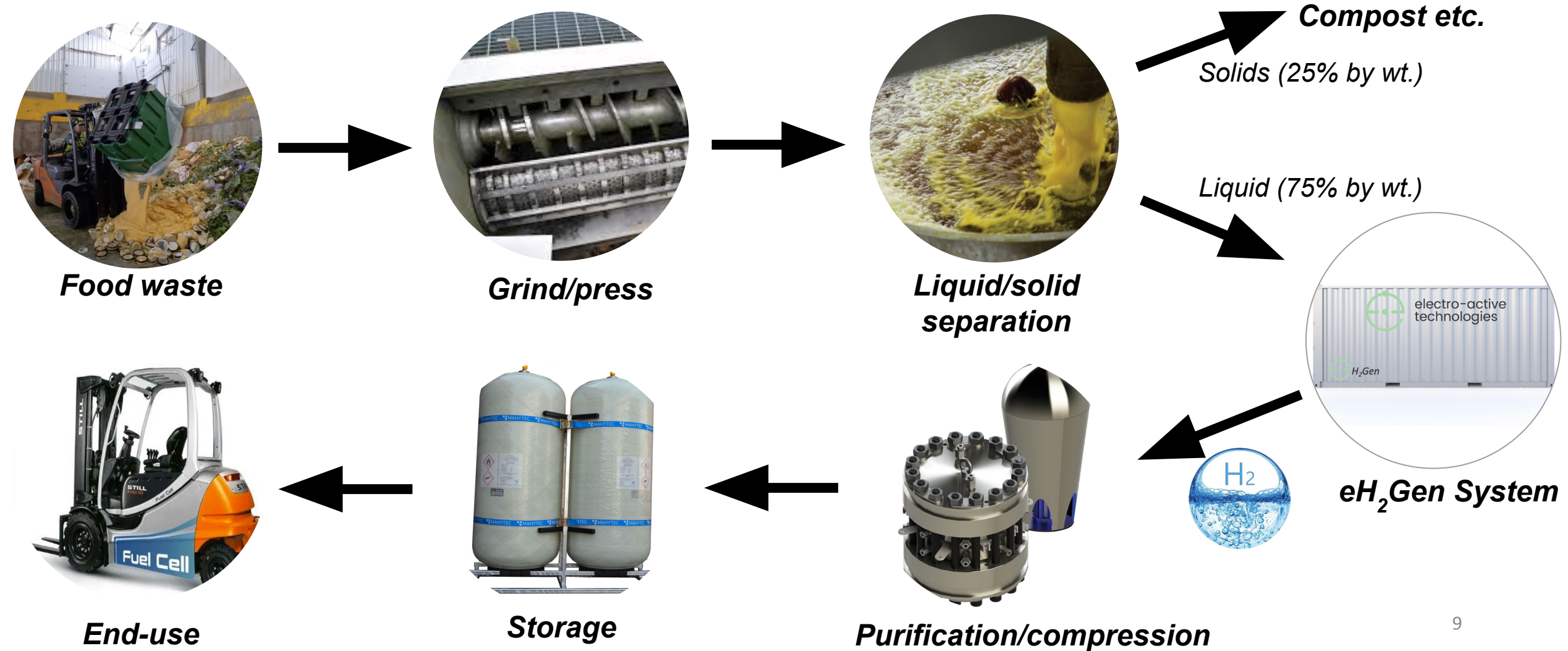
Production Scale Container Plant

EAT will move to full production scale container plant in the next two years. The Container plants are a highly flexible deployment solution.

Process flow



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Growing hydrogen applications



Forklifts

backup/continuous power

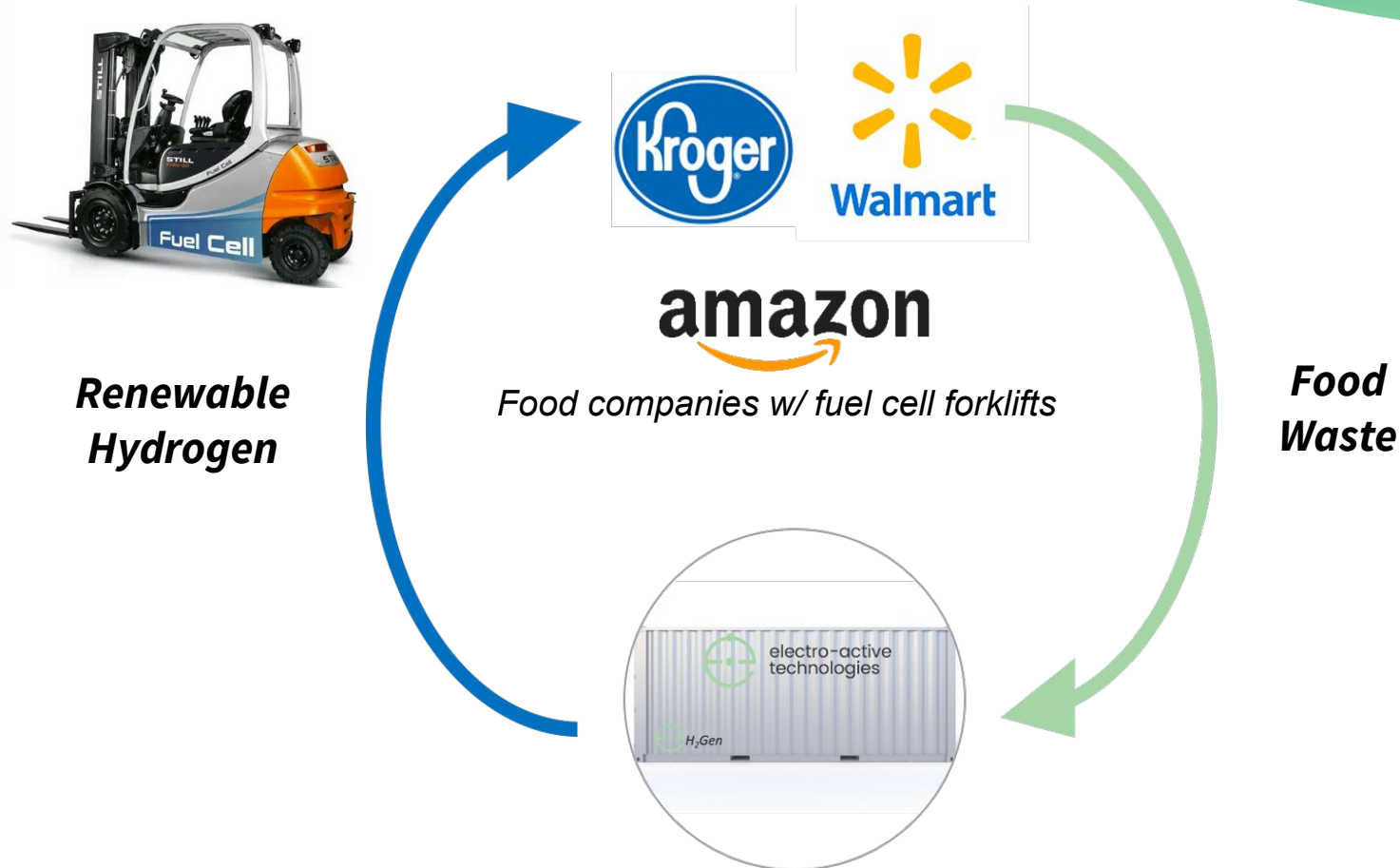
Fleets and
transport



Integrated hydrogen and waste service



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Example hydrogen
partnerships

*Onsite food waste management and hydrogen supply for one
simple fee*

Growth to larger markets



Waste service

6 MTons/year

City of
SACRAMENTO

UC San Diego



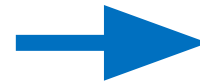
REPUBLIC
SERVICES



Dewatered solids for composting



Building
distributed
network



H2 sales



30k tons/year



TRUE ZERO

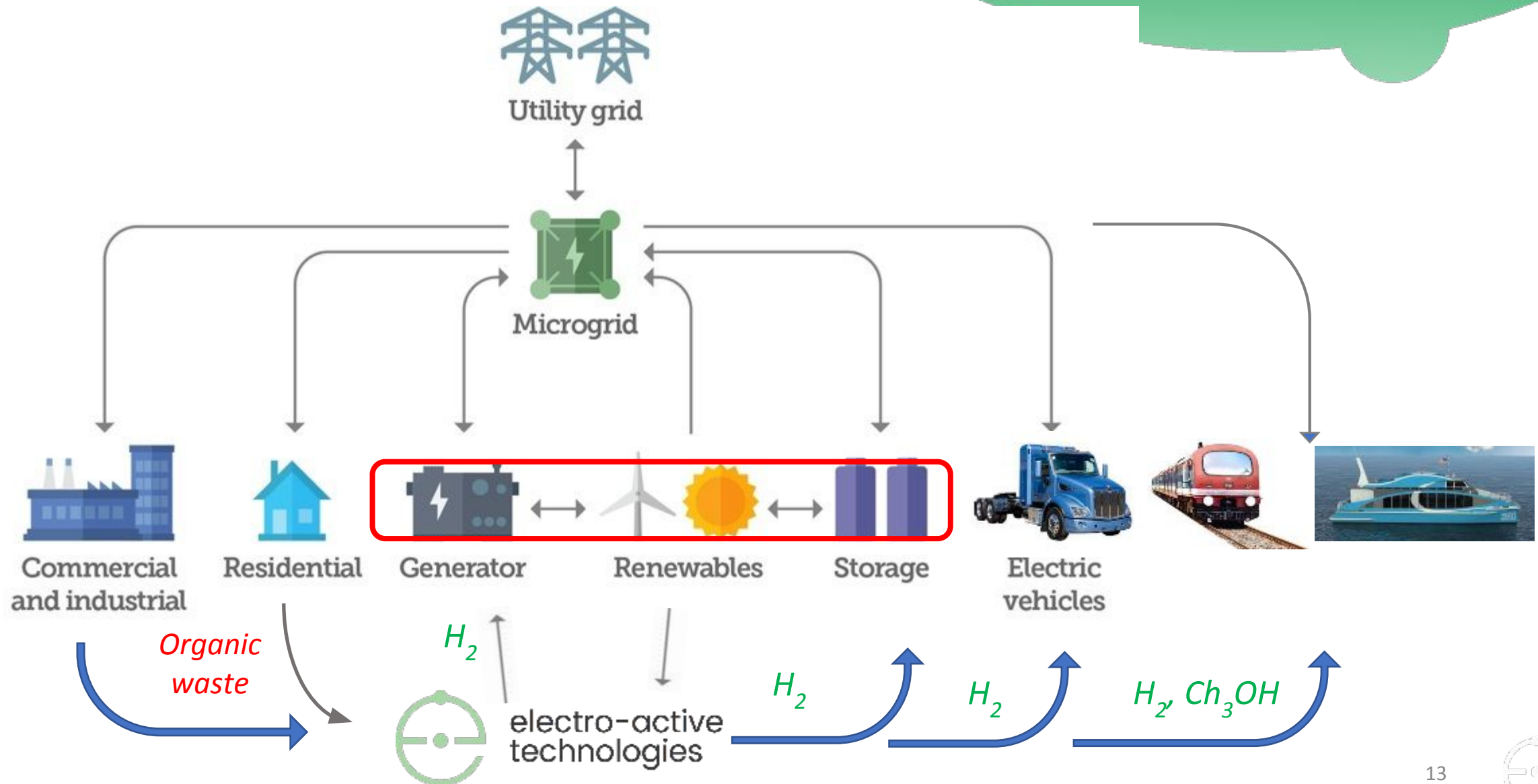


TRANSIT



Work with haulers and municipalities to tap into largest sources of organic waste and hydrogen markets

Advanced Energy Communities



Negative Carbon pathway



Local Urban Solution

Food waste used locally to produce energy for local use, minimizing transport



Fighting climate change

Drastically reduces landfill emissions and offsets fossil fuel use for negative carbon pathway



Waste upcycling

Food waste is upcycled to renewable hydrogen, with residual solids a better feedstock for compost or animal feed

Timeline



Seed, \$250k

VC Funding \$1.4M

\$450k

m+corps

Manufacturing
begins

2019

2020

2021

2022



Valley Ventures™
A BlueTechValley Accelerator



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NYU TANDON



Nov 2020
prototype
demo



June 2021 full
operational
pilot plant

Customer
contracts



TOYOTA



Raising Seed phase II \$1.2M

A Great Team

The Research Team



Alex Lewis, Ph.D.
Co-Founder & CEO

**Business Dev
& BioConversion**



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Co-Founder, President

**Engineering and
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**BioProcess
Dev**



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**Automation and
Process Control**



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Thank you!



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Help us power California with waste!



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