

Francesco Maria Benedetti
Co-Founder and CEO

Global Startup Campus Initiative

Presentation to the Expert Committee



Outline

- 1) What is Osmoses and what it is building
- 2) Our journey: key programs and accelerators
- 3) Recommendations for the Campus Initiative

Transforming Molecular Separations

OSMOSES



The cost of unmixing molecules is massive

15%

OF THE WORLD'S ENERGY
AND CARBON EMISSIONS

OSMOSES

→ MISSION

To rebuild industrial infrastructure where
separations are not a bottleneck to a cleaner future

Commercializing breakthrough science

OSMOSES

RESEARCH

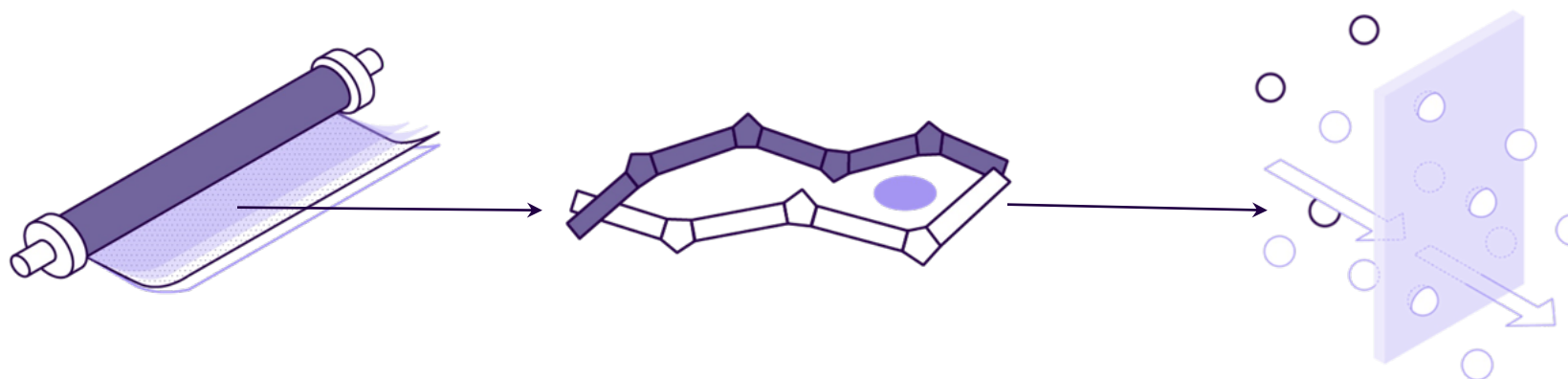
Science
JOURNALS



MEMBRANES

Hydrocarbon ladder polymers with ultrahigh permselectivity for membrane gas separations

Holden W. H. Lai^{1†}, Francesco M. Benedetti^{2†}, Jun Myun Ahn^{1†}, Ashley M. Robinson¹, Yingge Wang³, Ingo Pinnau³, Zachary P. Smith^{2*}, Yan Xia^{1*}



ENERGY CAPITAL VENTURES



Fine Structure
VENTURES

orbia
ventures

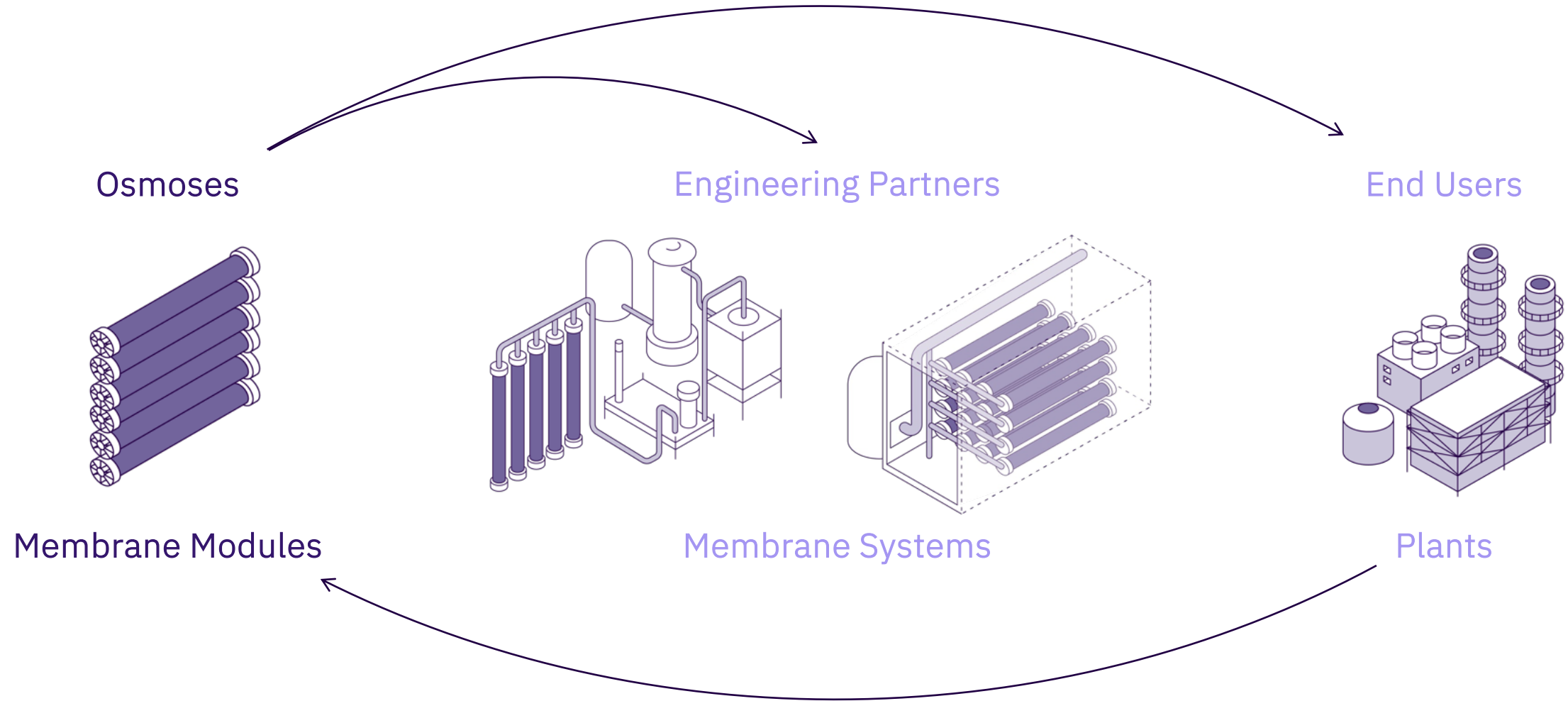


Activate



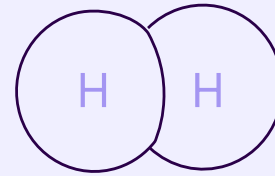
Business model

OSMOSES

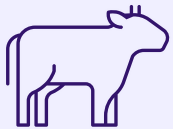


A platform technology for the energy transition

OSMOSES



HYDROGEN



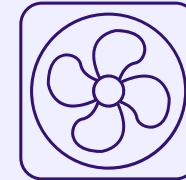
Biomethane



Oxygen



Carbon capture



Refrigerant reuse

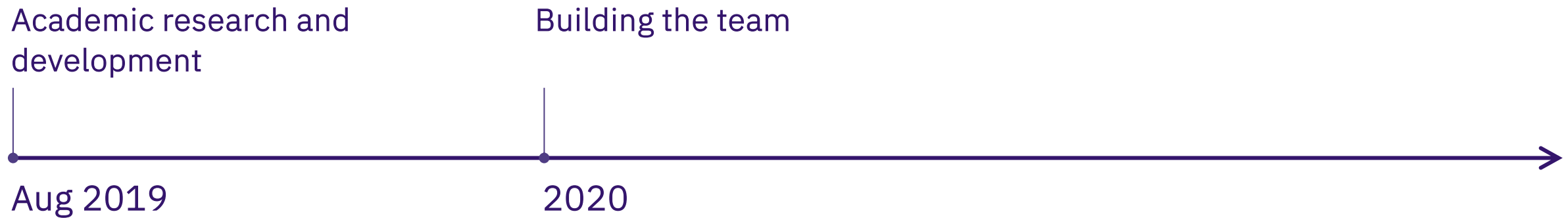


Helium

→ \$10-15B markets today growing to \$35B+ by 2030

2019/2020 – Entrepreneurial programs at MIT

OSMOSES



Founders

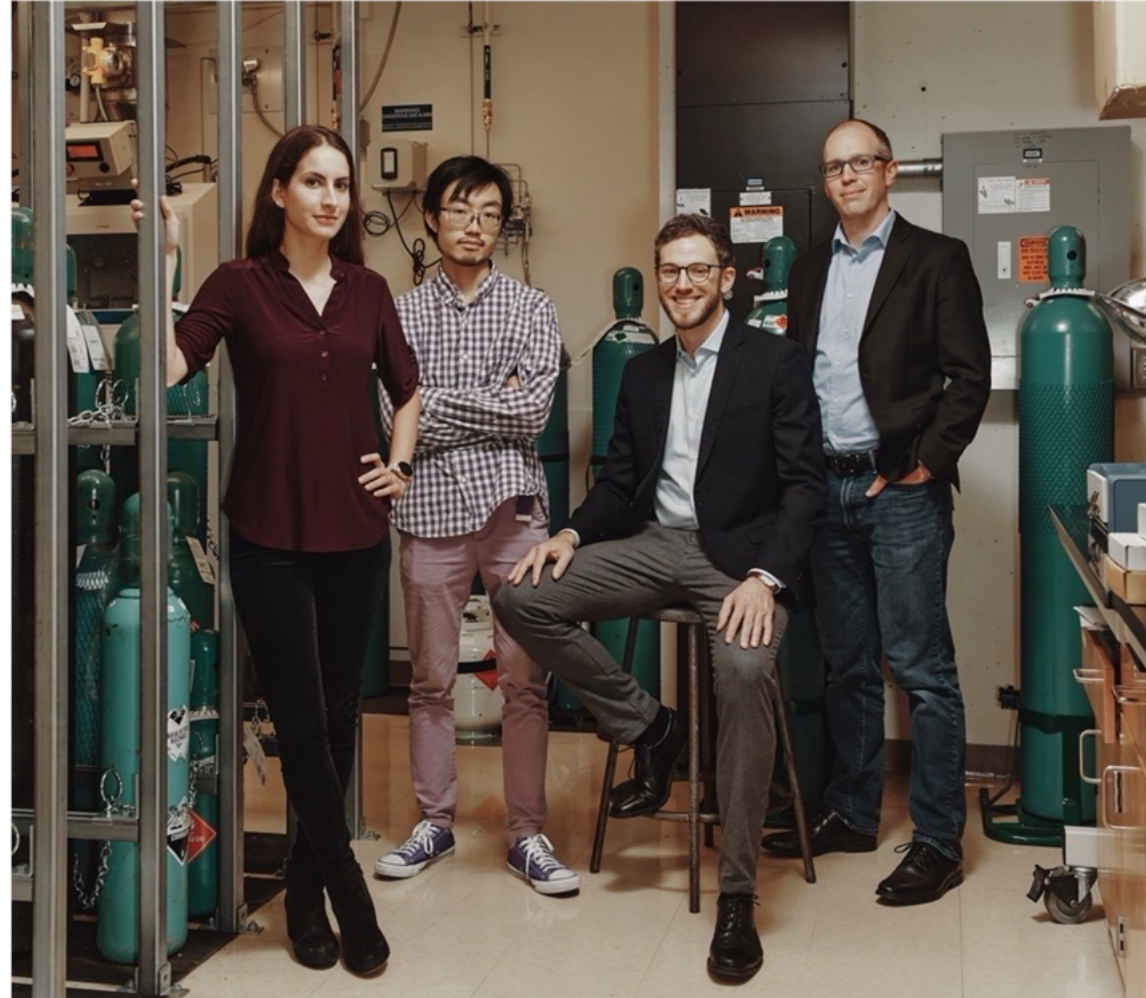


KATHERINE MIZRAHI RODRIGUEZ, PH.D.
CIO, Engineering and Implementation

HOLDEN LAI, PH.D.
CTO, Product Development

FRANCESCO BENEDETTI, PH.D.
CEO, Strategy and Funding

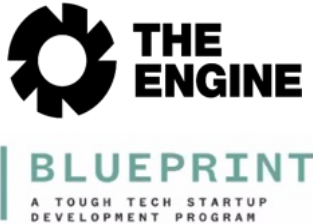
ZACHARY SMITH, PH.D.
CSO, Scientific Innovation



2021 – Launch: spinning out of university



Awards and competition



Closed \$3M dollars round

Nov 2021

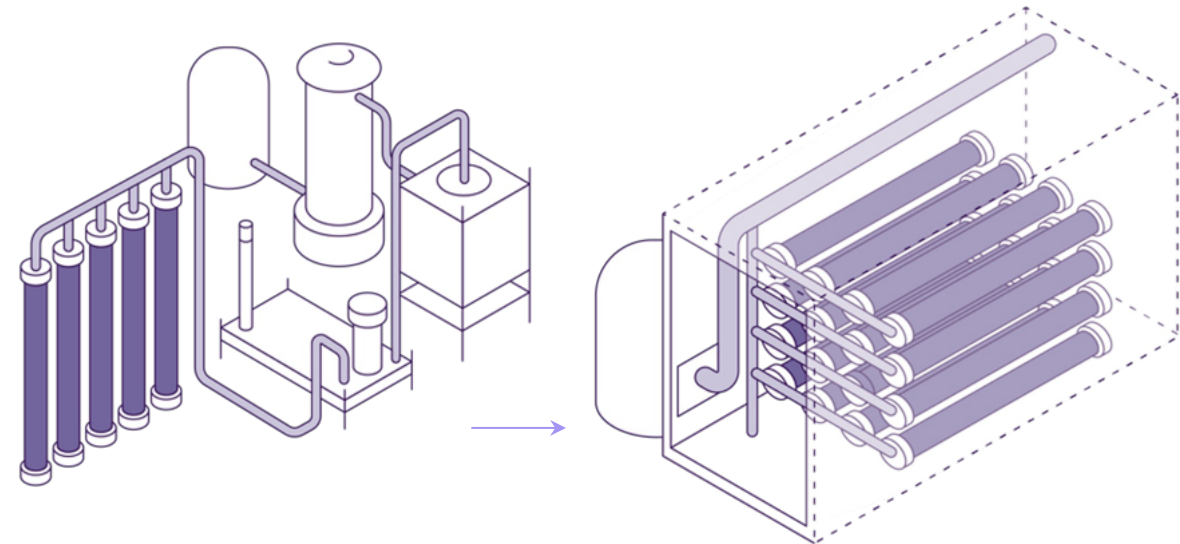
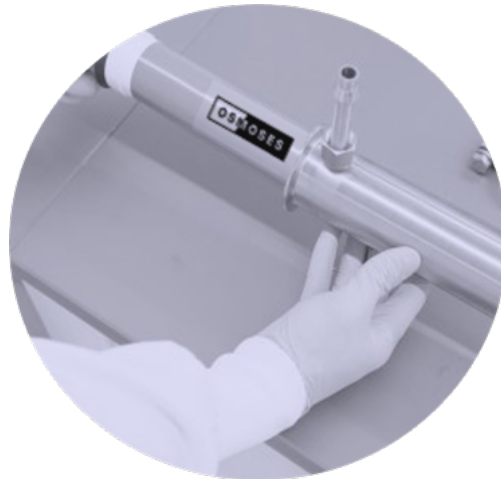
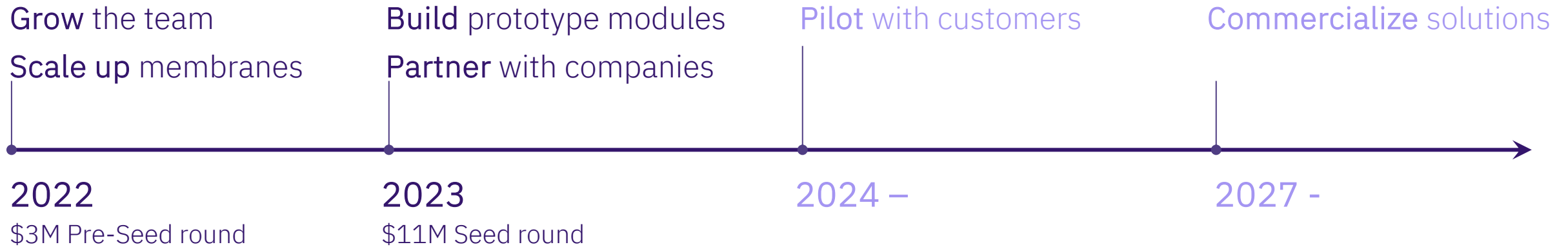


2022



Roadmap to commercialization

OSMOSES



Recommendations

- Create excitement around entrepreneurship as a rewarding tool to solve big challenges (starts in academia)
- Financial and laboratory space support is key for founders to spin out (The Engine model)
- Offer education about building a product that solves customers' problems (Focus on value proposition, not just on technology)
- Initiate prestigious awards and competitions so people are challenged to build solutions
- Facilitate transfer of Intellectual Property between the university and the startup
- Build a community of like-minded people at different stages of development

Where the smallest molecules meet the biggest opportunities in the energy transition

