



Co-Creating Possible.

NSF Workshop
15 October 2021

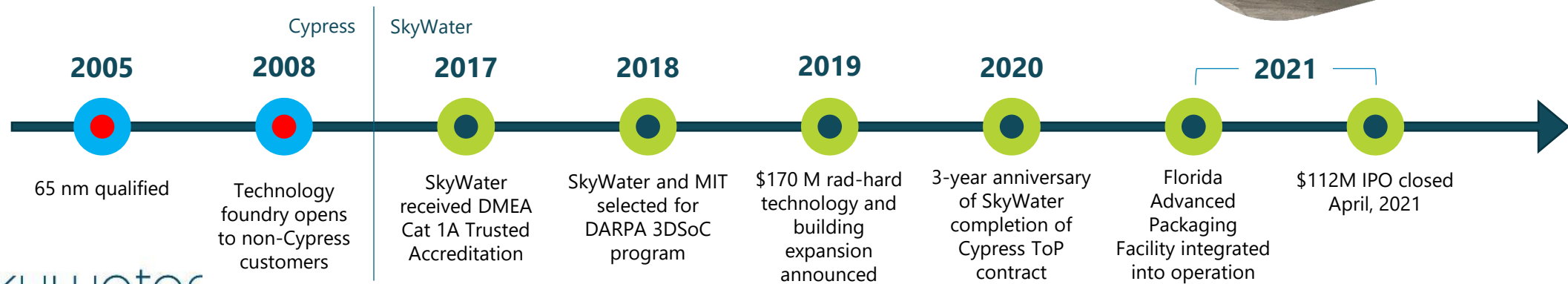
Ross Miller
VP Strategic Marketing & BU



America's Foundry

U.S. investor owned

Extending a legacy of manufacturing excellence to meet the industry's needs in a **post-Moore's Law reality**



We streamline the **concept to market journey.**

Technology as a Service

Innovation as a Service



Manufacturing as a Service



SkyWater is Defining a New Category



skywater

**Technology
Foundry**

Advanced Technology
Services
+
Wafer Services

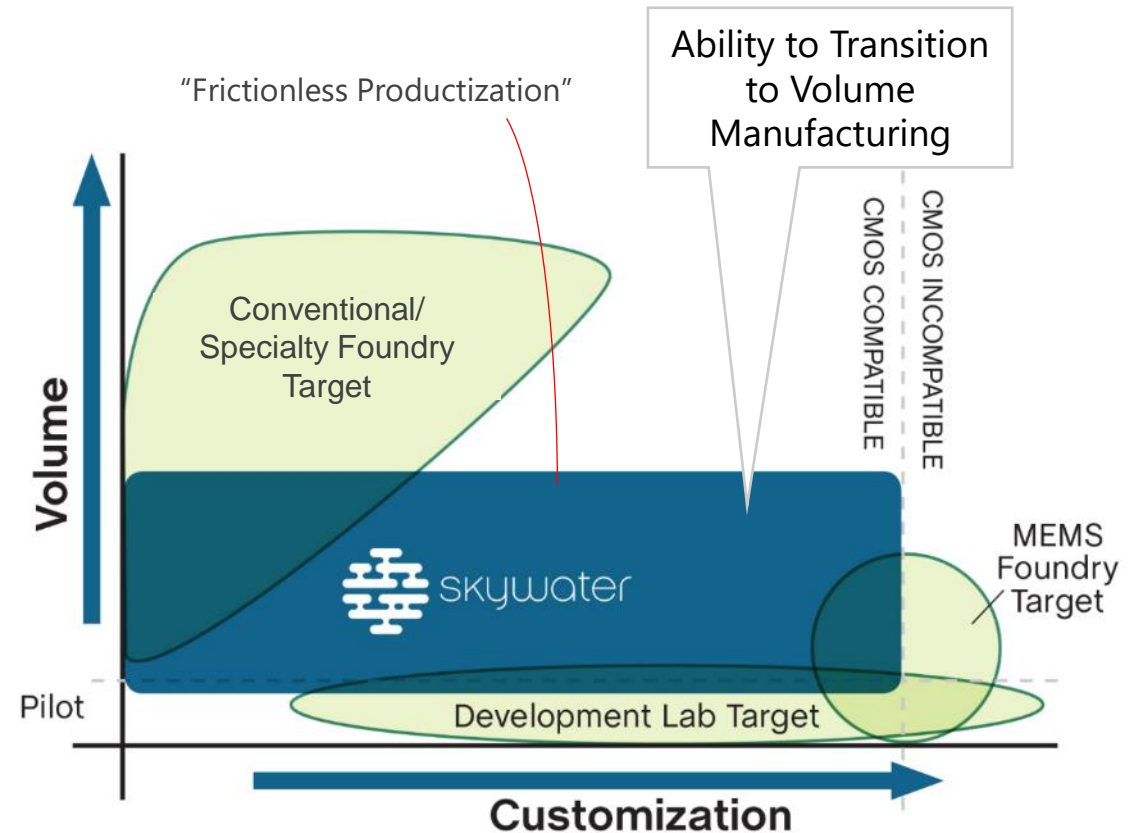
- ✓ High customization
- ✓ Next-generation technologies
- ✓ Variable volumes
- ✓ 200 mm substrates

**Specialty
Foundry**

- Moderate customization
- Specialty technologies
- Medium volumes
- 200 mm and 300 mm substrates

**Conventional
Foundry**

- Minimal customization
- Digital processors, CPUs, GPUs
- High volumes
- 300 mm substrates



Technology Categories



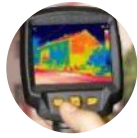
Mixed-Signal CMOS

Flexible Solutions for Commercial & Defense



Rad-Hard

Leading Strategic Rad-Hard Solutions



MEMS

Microfluidics
Microbolometers



Power Discrete

MOSFET
Differentiated Flows
Support for IGBTs, TVSs



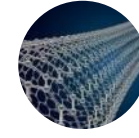
Superconducting

Foundry service provider for quantum and supercomputing applications



Photonics

Capabilities for passive photonic device integration



Carbon Nanotubes

CNT enabled 3DSoc for AI and edge computing



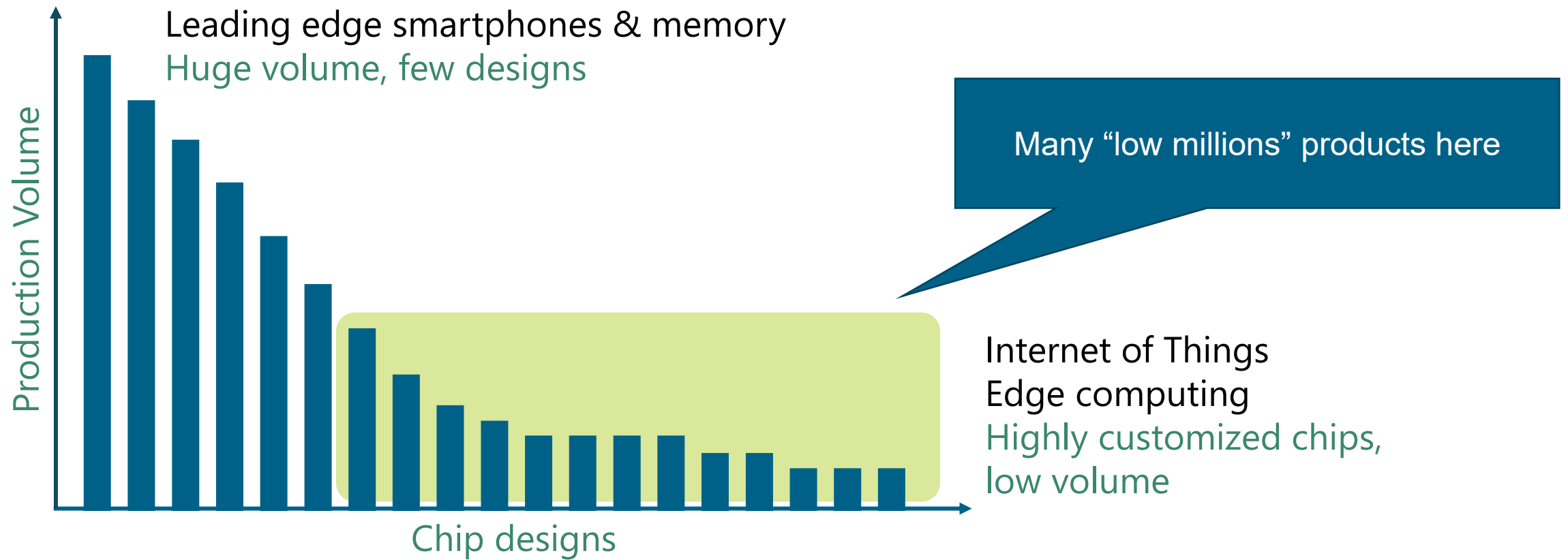
Advanced Packaging

Interposers, hybrid bonding, FOWLP

Connected Devices, Sensors and Sensor Integration

Advanced Computing & Artificial Intelligence

Enabling the “long tail”



chipIgnite

Rapid IC Creation

Shuttle 2110C



8 of 40 project slots reserved

chipIgnite provides you with a pre-designed carrier-chip along with automated open-source design flow making your own chip easy and affordable

- Rapid design implementation leveraging an automated digital design flow and full chip template
- Prototype and early volume fabrication for the SKY130 open PDK
- Two pricing options:
 - \$9,750 for 100 QFN or 300 WCSP parts
 - 1000 parts for \$20 each
- Private shuttle -- no open-source requirement
- Guaranteed reservation with \$200 deposit



10 mm²
User Design
Area

\$9750
per project

WCSP
Package

efabless.com



Proprietary

New Frontiers Require Collaboration

- Application discovery
- Development
 - Technology
 - Architecture
 - Product
 - Talent/workforce



We want academic community engagement to help drive emerging technologies into the market

Pathfinding Opportunities Through Collaboration

Today



Mixed-Signal CMOS



skywater

chipIgnite

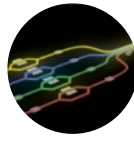
efabless.com

Future

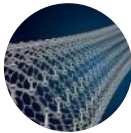
Technologies?
Reference designs?
IP?



Superconducting



Photonics



Carbon
Nanotubes



Advanced
Packaging

Tell Us What You Need

Start Brainstorming
Programs

A World of
Possibilities

Sensor →

ASIC →

Opto →

IOT →

Qubits →

Edge AI →

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