neuromorphica

European AI chips for Next-Generation Edge Computing

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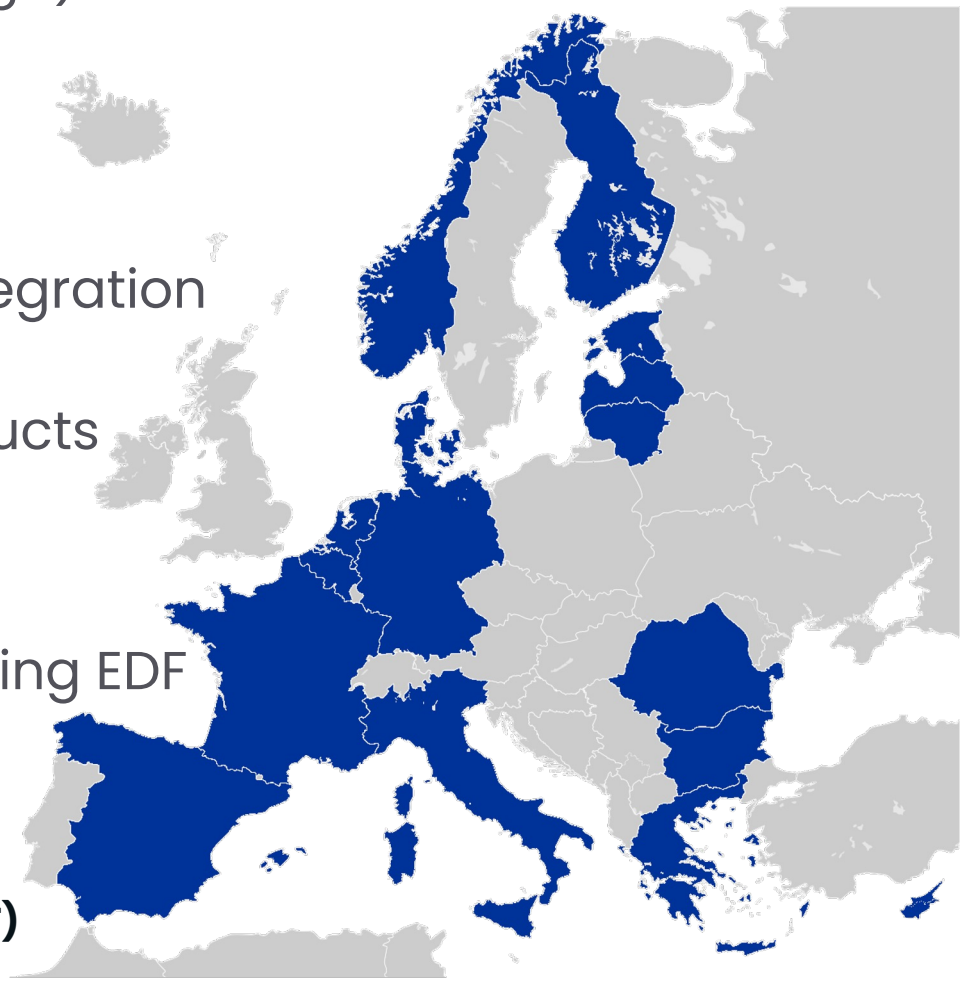
About Neuromorphica

- Design of custom chips for dual-use (ASIC design)
  - Sovereign and sustainable supply chains
  - Bespoke for superb price/performance

- Next-generation technology evaluation and integration
  - Bold to work with disruptive technologies
  - Full-stack integration on concrete end products

- Selected by NATO DIANA from 1300 proposals
- Integrated in many International Projects including EDF

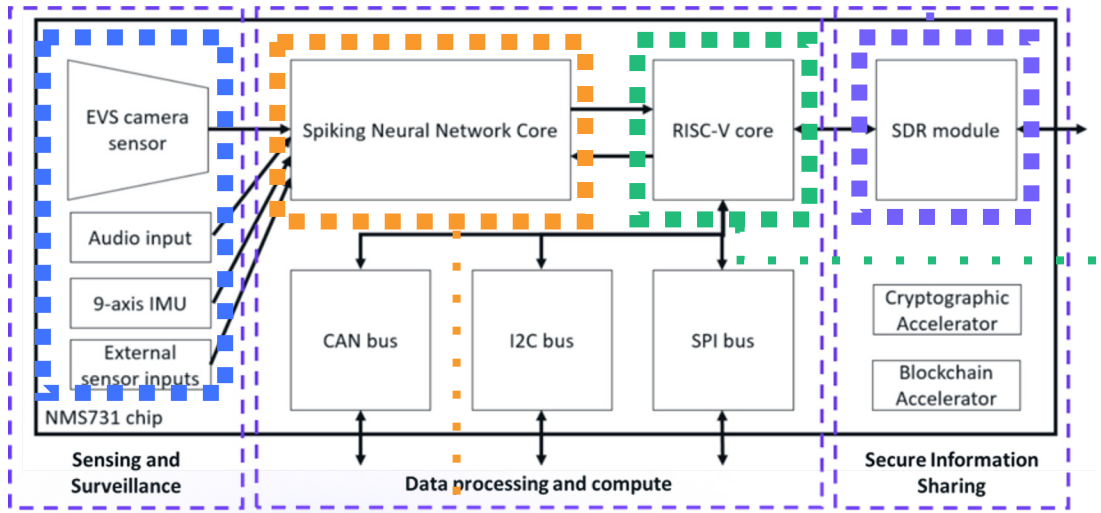


NATO OTAN
Defence Innovation Accelerator for the North Atlantic

European Commission
European Defence Fund (EDF)

Features/Capabilities – system-on-chip

Integrated sensors for faster product development



Software Defined Radio (SDR) module for listening on any radio frequency in any protocol

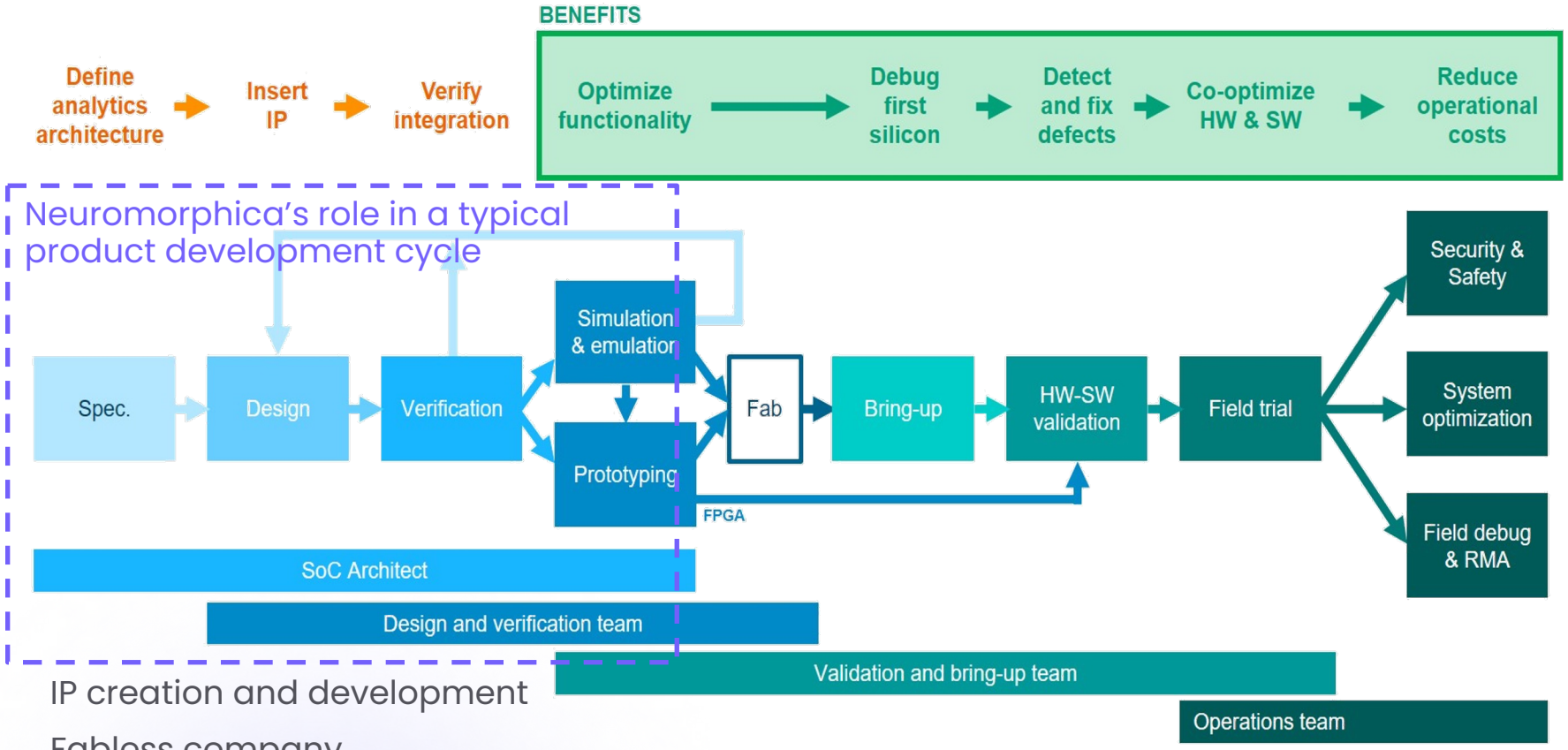
RISC-V processor core for running any software logic

Neural Network for running AI algorithms on the Edge at 100x less power

Competition – only we do a hybrid Neuromorphic/Traditional compute

	Large AI models	Neuromorphic hardware	Edge AI	RISC-V architecture	Security hardened	Wireless SoC	Origin
neuromorphica	✓	✓	✓	✓	✓	✓	
intel.	✓	✓	✓	✗	✗	✗	
IBM	✗	✓	✓	✗	✗	✗	
SpiNNaker	✓	✓	✗	✗	✗	✗	
NVIDIA	✓	✗	✓	✗	✗	✗	
SynSense	✗	✓	✓	✗	✗	✗	
ESPRESSIF	✗	✗	✓	✓	✗	✓	
MICROCHIP	✗	✗	✓	✗	✓	✗	
TEXAS INSTRUMENTS	✗	✗	✓	✗	✓	✓	
RENESAS	✗	✗	✓	✓	✗	✓	
innatera	✗	✓	✓	✗	✗	✗	
ST	✗	✗	✓	✗	✓	✓	

Our Business Model – B2B Fabless



IP creation and development

Fabless company

In-house novel chip development

Revenue model – key supplier of components

Applications and Markets

Edge AI / AIoT

Medical Devices
Local sensor data processing
Sensor networks
Industrial robots

Wireless Communications

Flexible SDR
Satellites
Multi-regulatory compliance

Mission applications

RADAR & SONAR
Guidance and Smart Munitions
Adaptive control
Electronic Warfare

Drones and Autonomous Vehicles

Land
Air
Sea
Underwater

Achievements and Traction

2024

Graduated in Plug and Play Takeoff Turin System-on-Chip design
B2B market validation:
7 projects with 38 organizations
Excellence in Innovation Award
Best-Startup on Balkans Award by SEEIC

2023

PoC of a complete system
Reached TRL4
3 publications
Selected for NATO DIANA

2022

First prototypes
Collaboration with TU-Sofia
EVS camera and sensor inputs

2021

Founded
DeepTech at TRL2

Next steps

Industrial partners

Scientific publications

Academic and Technological partners

European Commission

European Defence Fund (EDF)

Chips JU

Horizon Europe

2025

System-on-chip architectural design
European Defence Fund (EDF) project funded by EC
2 scientific publications
Additional B2B market validation:
9 projects with 57 organizations (2/3 are Large Industry and RTO)

2026

Send for Fabless manufacturing
Field trials

2027

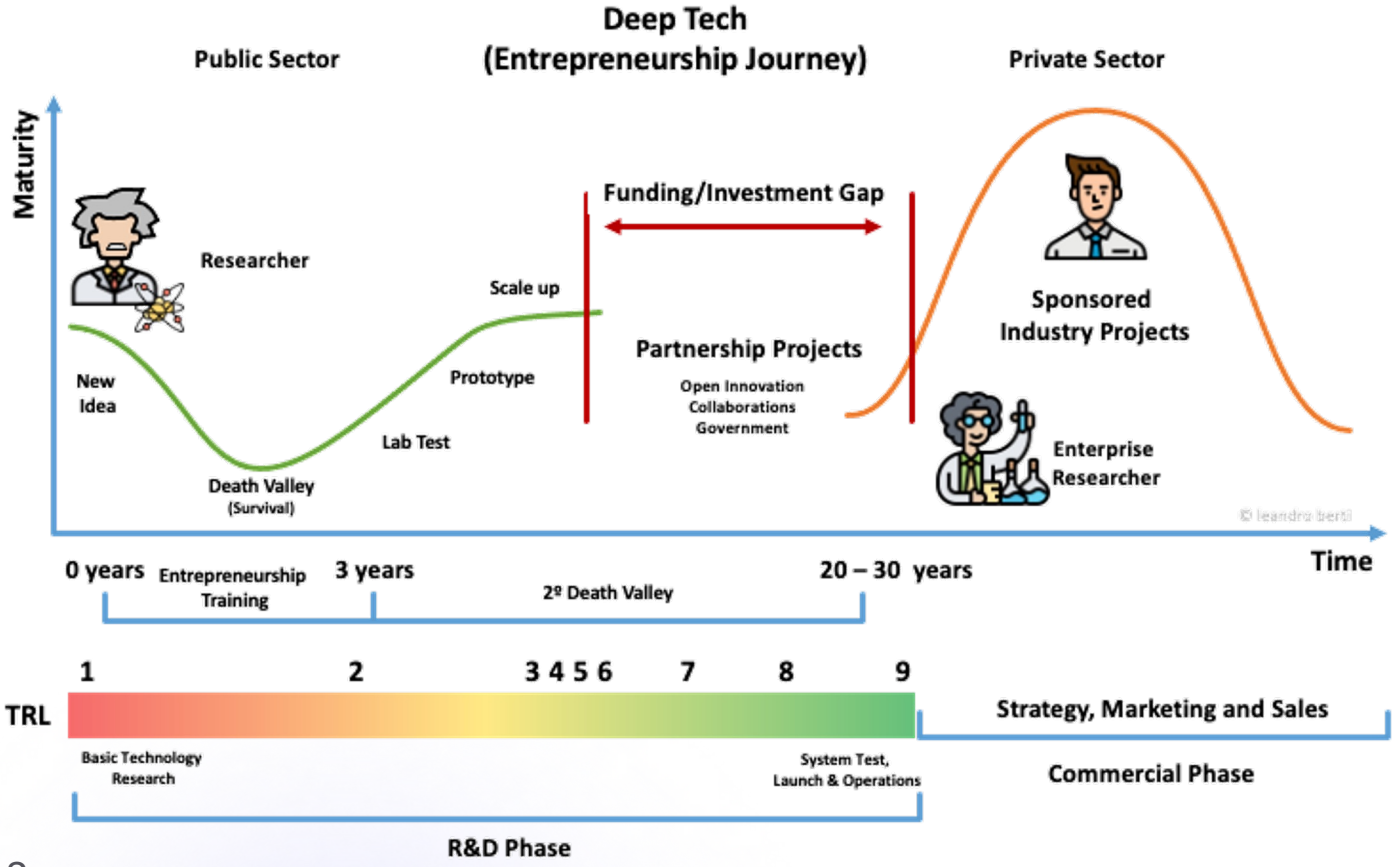
First Chip Bring-up and Verification
Start work on second revision
Field trials

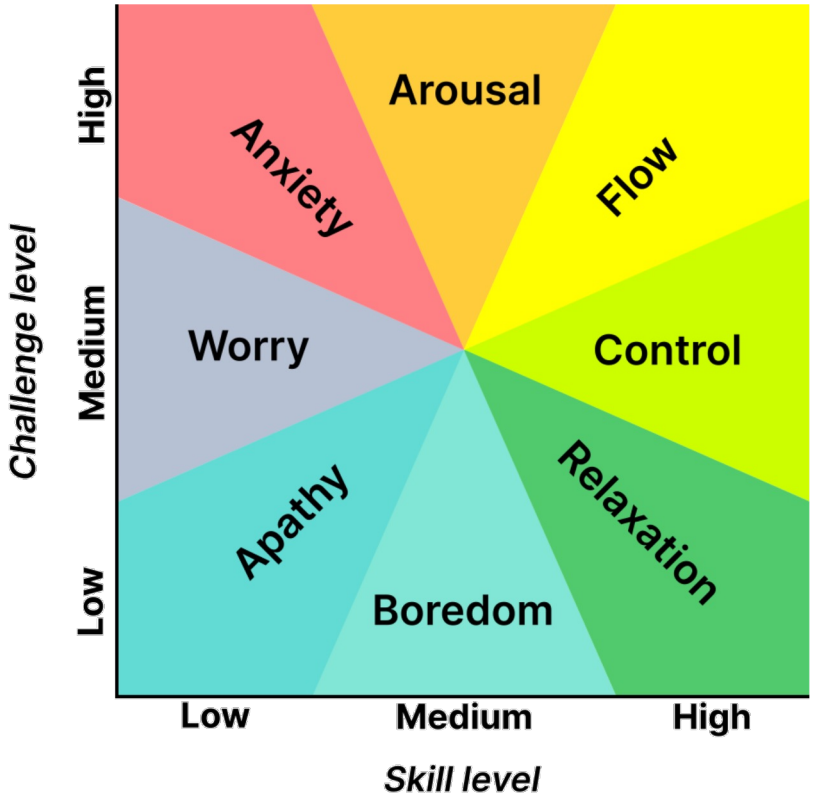
2028

Second Chip Bring-up and Verification
Start work on third revision
Field trials

Partner Map, Awards and Achievements

The Deep Tech curse(s) (there are many more)





Sources:

https://www.linkedin.com/pulse/what-deep-tech-entrepreneurship-journey-faraz-ahmad-woesf/

https://insights.quantum.salon/p/deep-techs-death-valley

https://en.wikipedia.org/wiki/Flow_(psychology)

The problem acquiring funding

”We are a Deep Tech fund” is a lie

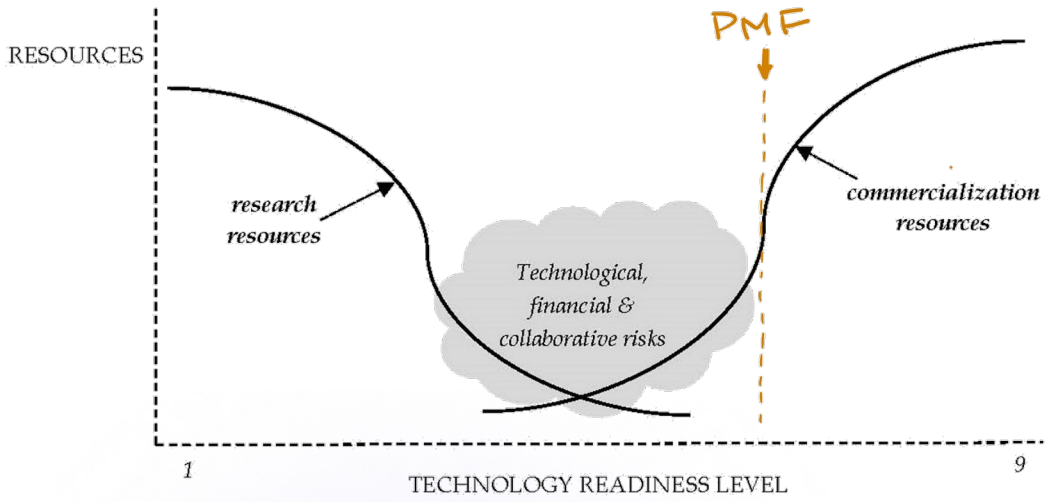
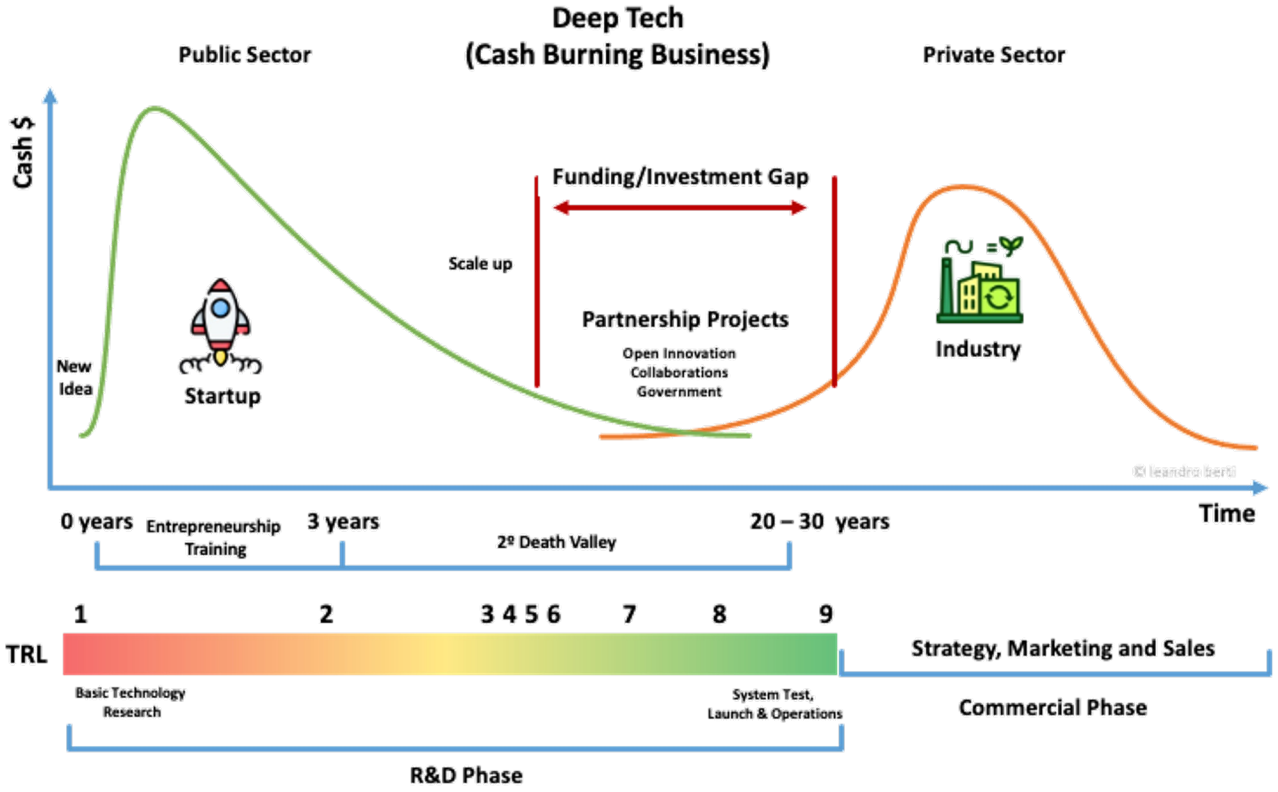
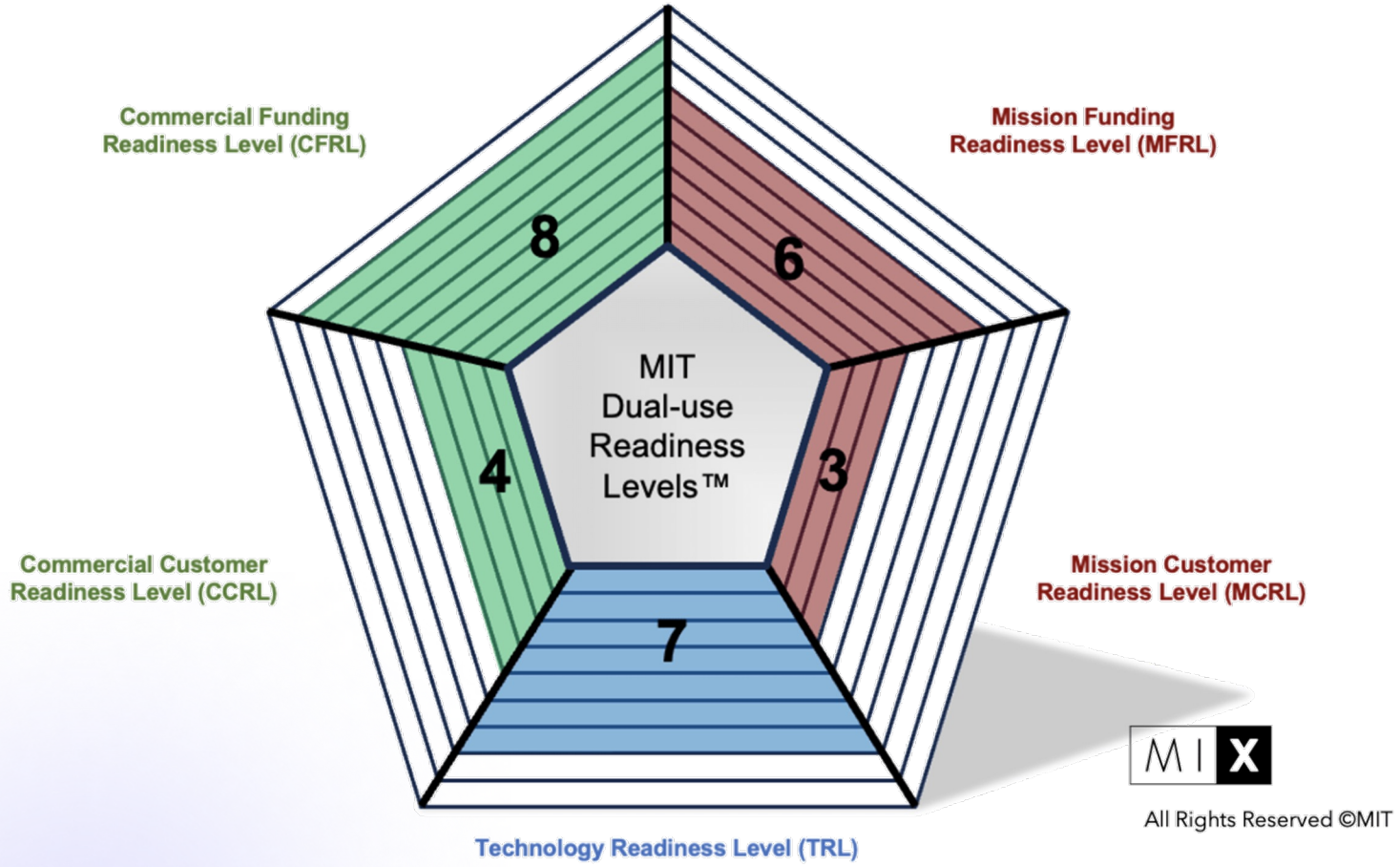


Figure 1. The Valley of Death in Deeptech Entrepreneurship.



Much more than just TRL

Dual-use Readiness Levels™



Source: https://mix.mit.edu/mit-dual-use-readiness-model/

My tips for DeepTech venture

1. Try not to get into DeepTech
2. Understand and accept the risks
3. Do a product-market fit before you start – make sure you solve a real problem
4. Prepare a strategy focusing on delivering the end **product**
5. Find partnering organizations that can operate on that risk level
6. Reduce OpEx to the bare minimum
7. Find multiple sources of funding for at least 5 years ahead
8. Continue finding new funding long-term funding each year

Let’s talk about the technology of tomorrow!

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