

PHYSICS AND DEEP TECH ENTREPRENEURSHIP

HELIVALTNA, PHD

UT DELTA BUSINESS SCHOOL

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DO THE COMPANIES GROW?











Idea and Vision

Idea Validation

Growth phase

Plateau

Deceased

A COMPANY IS MADE OF BUSINESS FUNCTIONS



GROUPING FUNCTIONS TO 5-DIMENSIONAL SPACE

Strategy



Business model



Global trends



Decision making

Customer



Product



Product dev.



Technology dev.



Supply chain



Manufacturing

Organization



Personnel



Culture

 $0\rightarrow \diamondsuit$

□←Ò

Admin

Processes

Finances



Legal

Networks



Business partners



Mentors



Development **Partners**



Funding agencies

WHERE DOES THE INNOVATION TAKE PLACE?

DEEP TECH

Deep Tech represents innovative technologies of (cyber-) physical nature that are

- characterized by long development times,
- high capital requirements, as well as
- high market and technology uncertainty, and
- addresses fundamental societal as well as environmental challenges.
- Deep Tech exhibits significant technological advancement compared to established technologies and have the potential to radically change existing markets or create completely new ones.

WHERE DOES THE INNOVATION TAKE PLACE?

Strategy





Business model



Global trends



Customer





Marketing



Sales



CRM



User story





Switching cost

Product





Technology dev.



Value chain



Manufacturing

Organization





Finances



Legal



Personnel



Culture





Admin





Business partners



Mentors

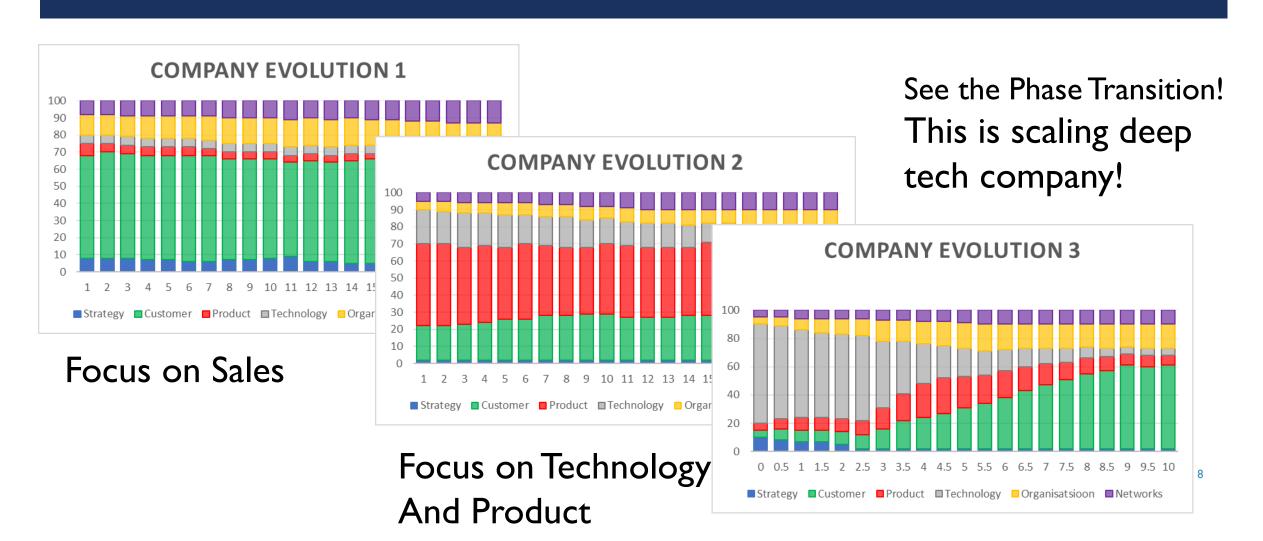


Development Partners



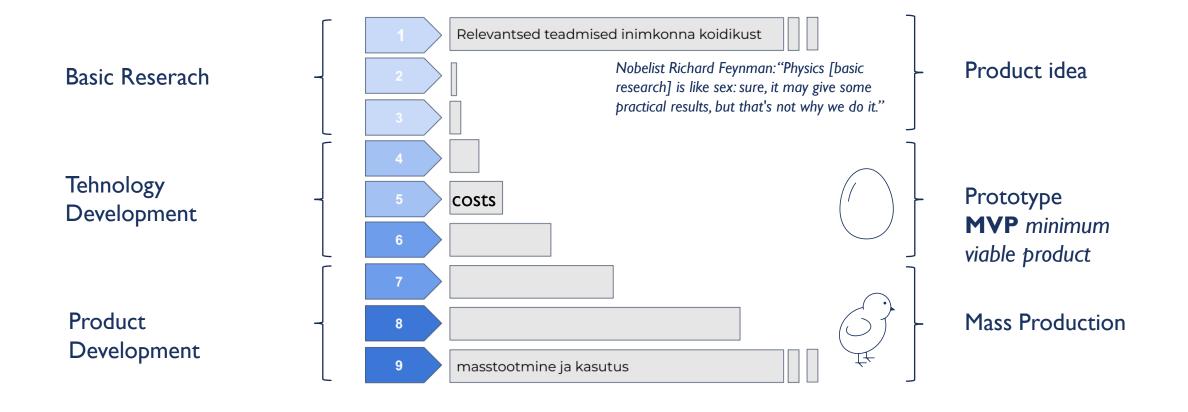
Funding agencies

ARE THE COMPANIES ALIKE?

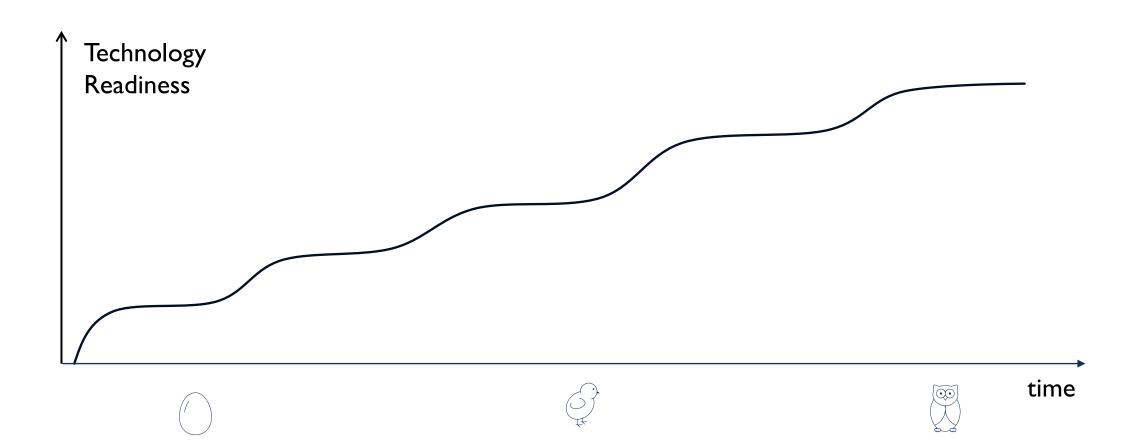


WHAT IT TAKES TO GROW A DEEP TECH COMPANY?

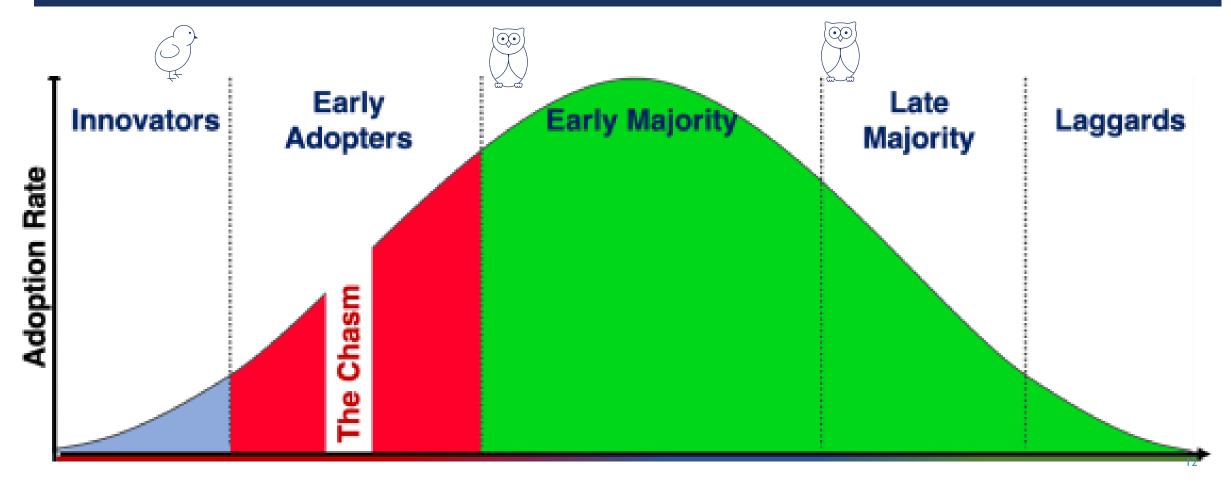
TECHNOLOGY READINESS



GROWTH SPURTS



PRODUCT ADOPTION LIFECYCLE



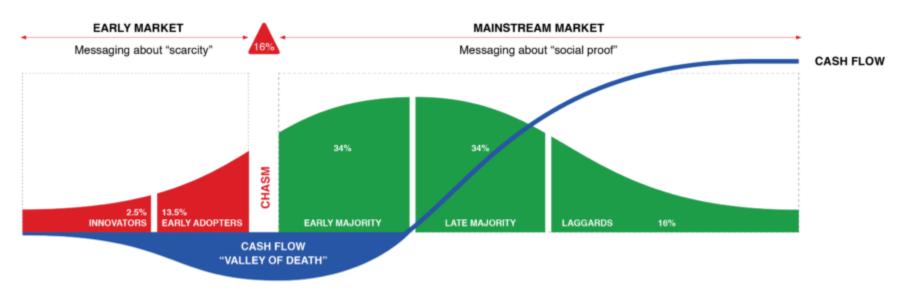
Siegel, J.E., Krishnan, S., (2020). Cultivating Invisible Impact with Deep Technology and Creative Destruction - Letter from Academia, Journal of Innovation Management, www.open-jim.org, 8(3), 6-19.

VALLEY OF DEATH

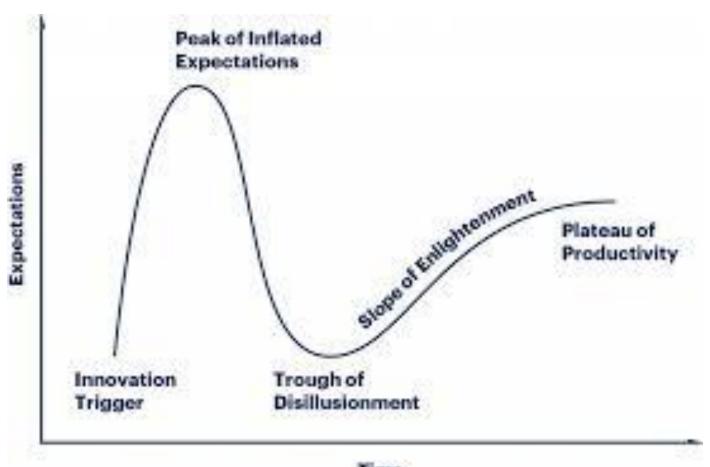


ADOPTION CURVE OF NEW TECHNOLOGIES

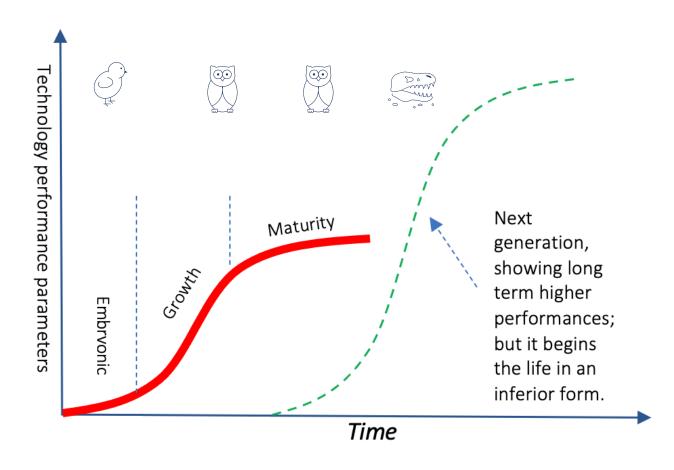
THE 16% RULE



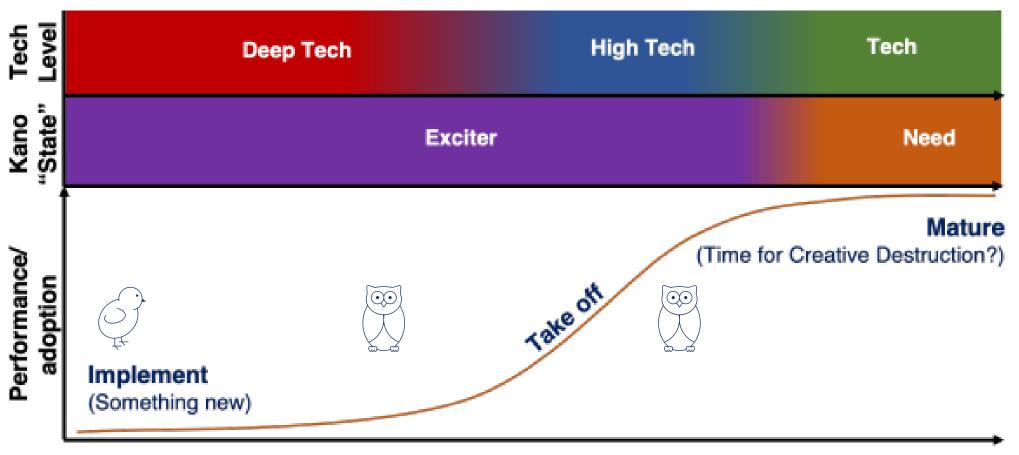
GARTNER'S HYPE CYCLE – INVESTMENTS AND MARKETS



SYSTEM LEVEL - CREATIVE DESTRUCTION



FROM DEEP TO HIGH AND SETTING NEW STANDARD





Time / Effort / Investment

DEEP TECH COMPANY GROWTH MODEL

Internal

 Maturity and Gap to Next Milestone in Tech, Customer Functions, Business Strategy, Organization, Partners and Network Enablers Knowledge

Resources

Mindset

Agility, efficiency and cooperation in operation

Processes:
Decision making speed and ability to

adapt

External

 Challenges in Tech, Customer adoption, Market and Global Trends, Labor Market, Ecosystems and Institutions

Milestone

1

Milestone

N

Exit



HELI.VALTNA@GMAIL.COM