

Journey through the Valley of Death  
From idea to investment

# Témavázlat

Innovációs ökoszisztéma

A technológia transzfer folyamata

Kulcsfogalmak

Vállalkozói lét

A vállalkozásod meghatározása

A vállalkozás finanszírozása

Skálázás

Az egyetemi inkubátor szerepe

Üzleti modell – BMC

BMC validálás

Befektetés

A startup finanszírozás ma

# Topics for discussion

Commercial side of tech transfer

How an invention crosses the valley of death

The role of university incubators

The path from idea to investment – AQDOT

- The Business Model

- BM validation

- Investment

Launching your startup

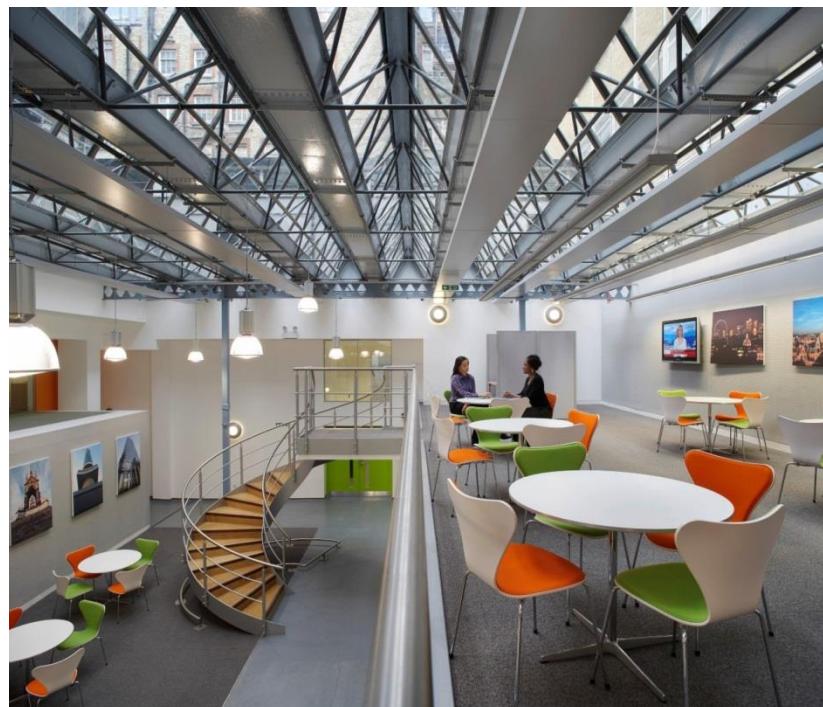
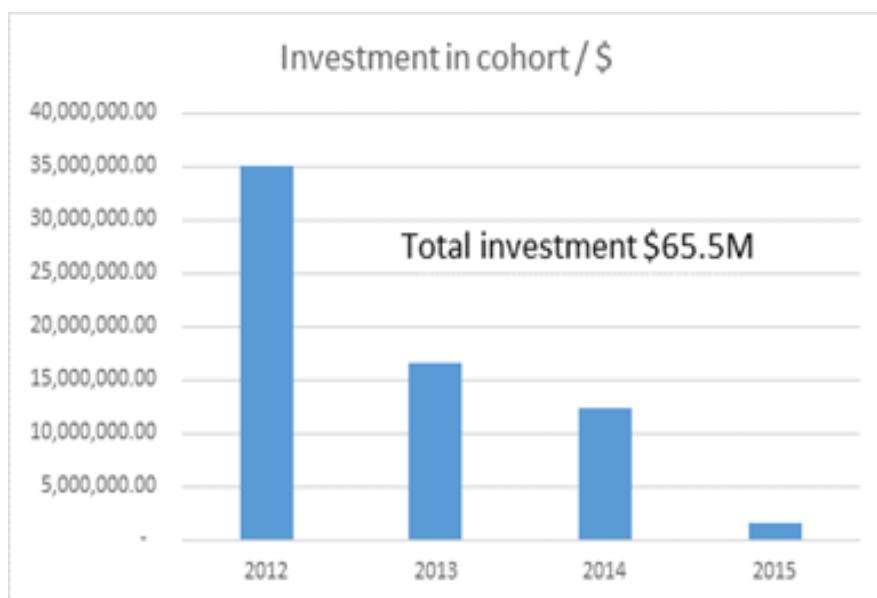
Venture capital 101

# Key achievements

Accelerated 66 startups since 2011  
27 graduated from programme  
Cumulative investment in startups  
\$65.5 million



Imperial College  
London  
Incubator



# Changing pathways to innovation

Transformation of the industrial context of innovation in past decades

## **Universities**

Widened brief from R+E focus to translation of research into innovation

## **Large tech companies**

No positive returns from R&D

Struggle to retain role as leading innovators

Slow to keep up with changing markets

Lack agility to drive disruptive technological change

Increasingly outsource parts of their R&D

Acquire specialist technology companies

Reduce spending on internal fundamental research

## **Small tech companies**

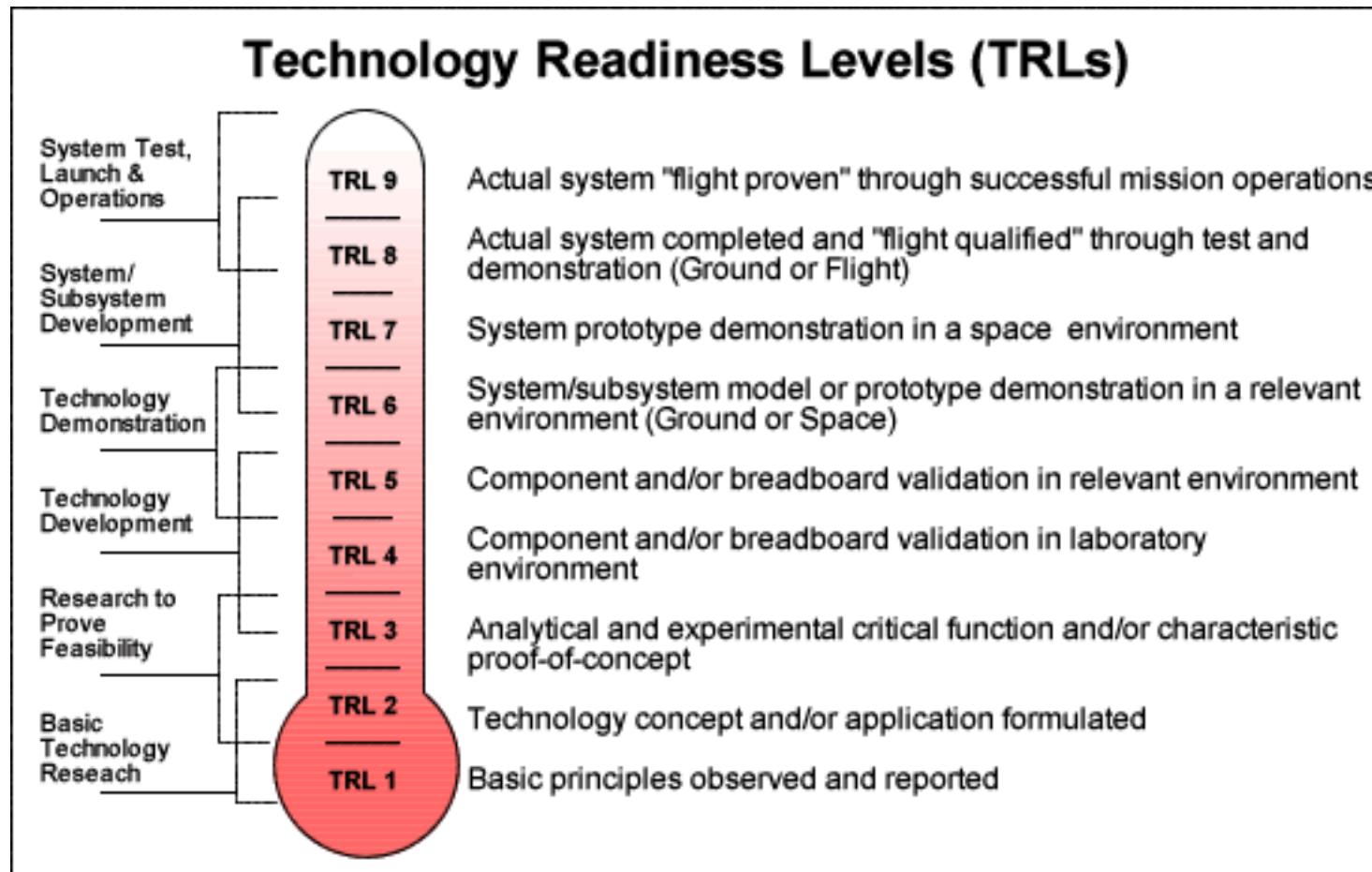
Taken the lead in driving transformational change

Success dependent on universities and large corporates

# Key terms

- TRL
- Valley of death
- Startup/spinoff
- Incubator/Acceleration
- Business model (not business plan)
- Life cycle of a venture
- Hype cycle

**Technology readiness levels (TRL)** a method of estimating technology maturity of Critical Technology Elements (CTE) of a program during the acquisition process. TRL are based on a scale from 1 to 9 with 9 being the most mature technology. The use of TRLs enables consistent, uniform discussions of technical maturity across different types of technology. Source: European Association of Research and Technology Organisations (EARTO)



# TRL in EU

## Technology Readiness Level Description

TRL 1. basic principles observed

TRL 2. technology concept formulated

TRL 3. experimental proof of concept

TRL 4. technology validated in lab

TRL 5. technology validated in relevant environment

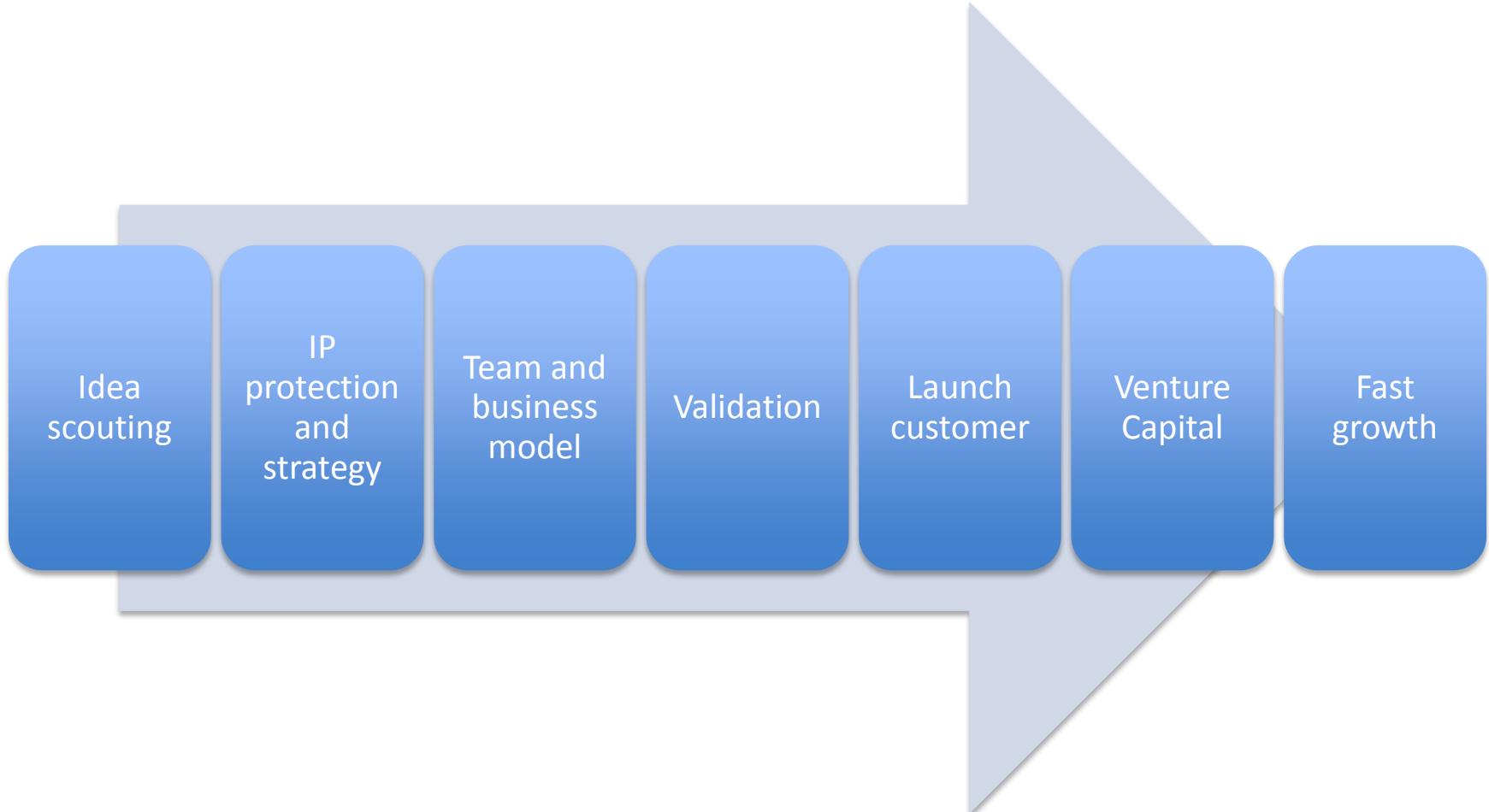
TRL 6. technology demonstrated in relevant environment

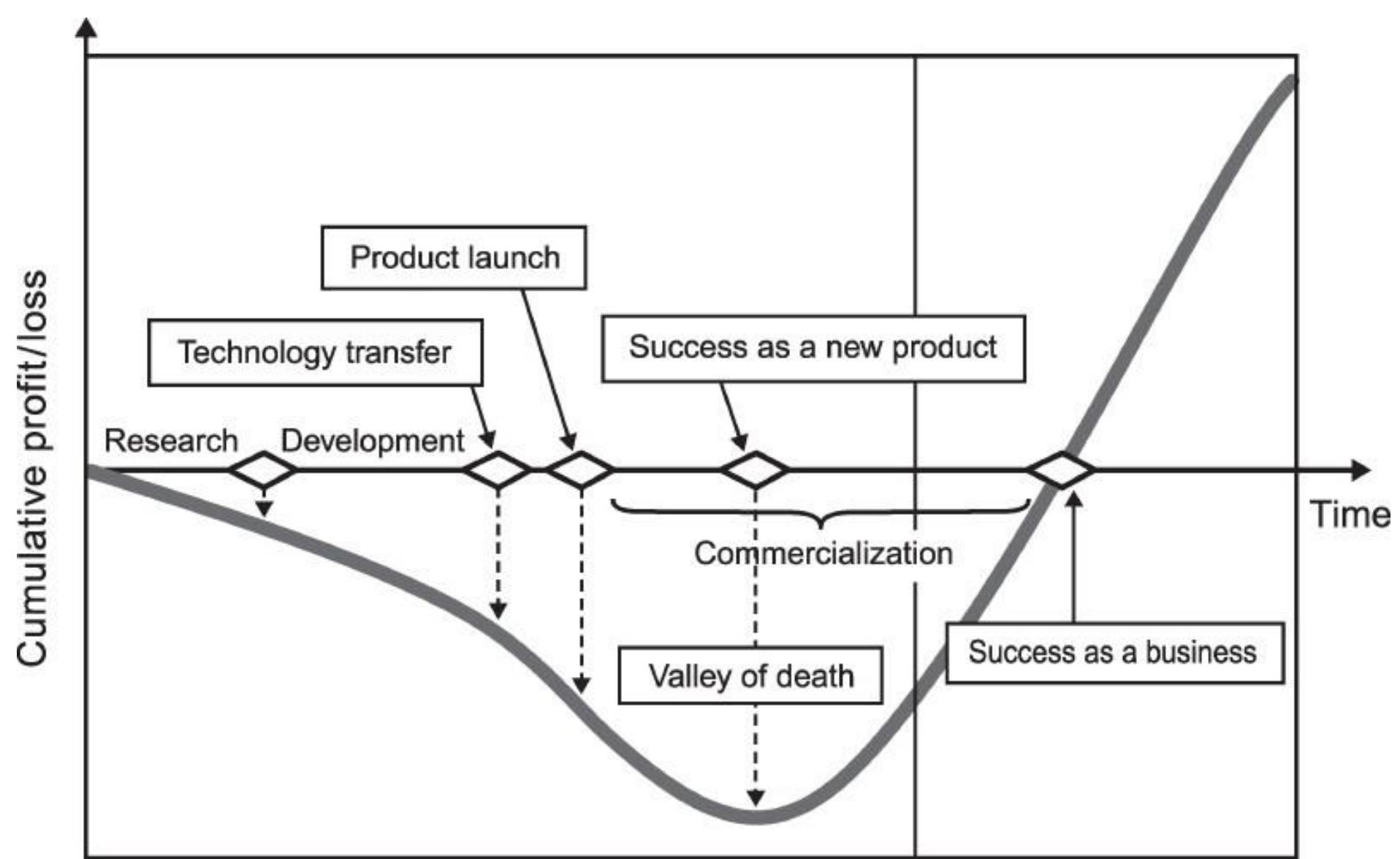
TRL 7. system prototype demonstration in operational environment

TRL 8. system complete and qualified

TRL 9. actual system proven in operational environment

# R&D Commercialisation chain





View of the valley from Osawa and Miyazaki

# Valley of death

Few companies that enter ever emerge

Three character traits all survivors share are

Determination

Focus

Fiscal restraint



# Incubator - Acceleration

An incubator is a company that helps new and startup companies to develop by providing services such as management training or office space

- Helps ideas grow from early stage (R&D) to maturity
- Funds vs. investment
- Training (skills, team, strategies, pitch)
- Services

## Accelerator

- Enterprise development programme
- Shorten time to market
- Stages and gates

# Incubator services

Help with business basics

Networking activities

Marketing assistance

Market Research

High-speed Internet access

Help with accounting/financial management

Access to bank loans, loan funds and guarantee programs

Help with presentation skills

Links to higher education resources

Links to strategic partners

Access to angel investors or venture capital

Comprehensive business training programs

Advisory boards and mentors

Management team identification

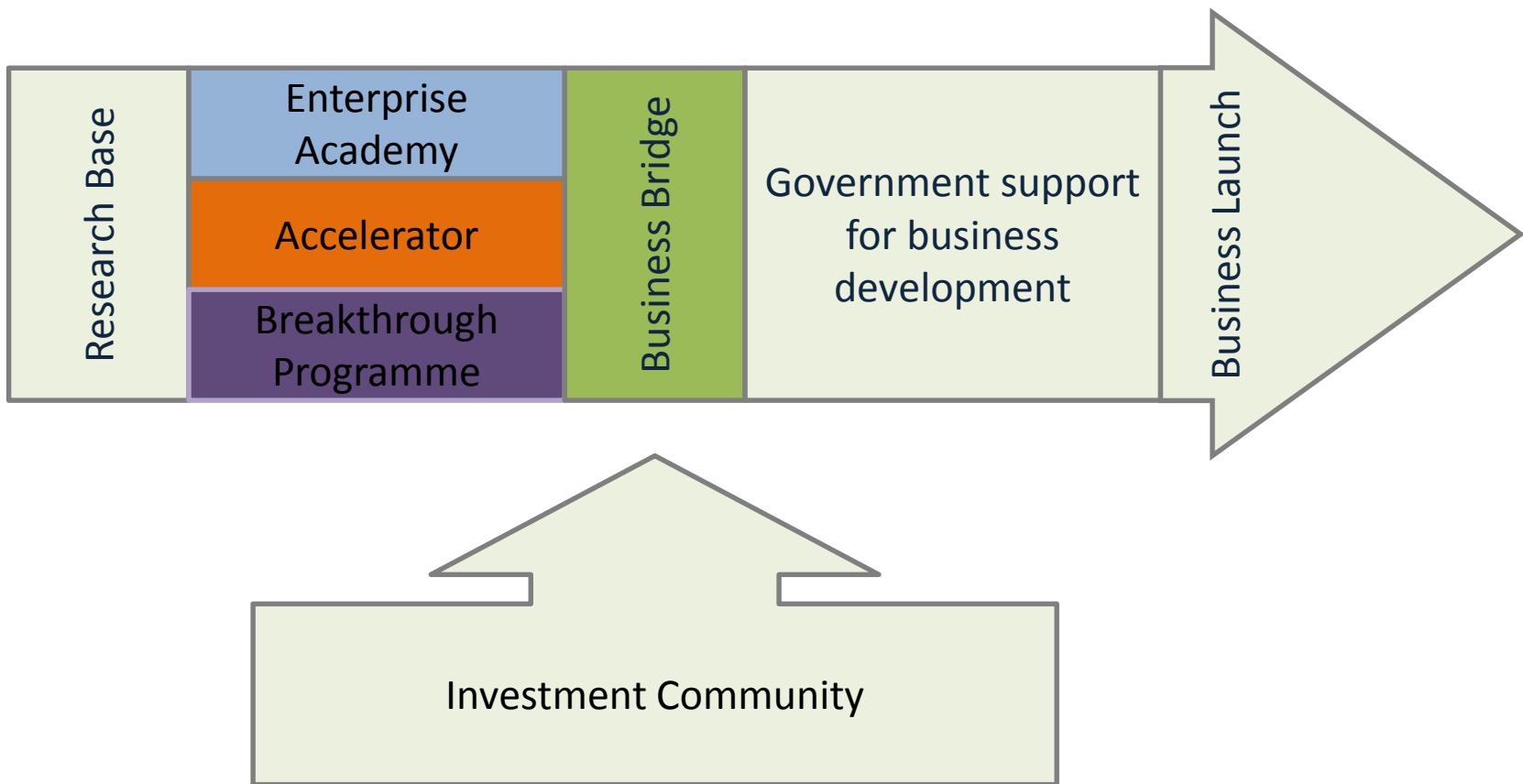
Help with business etiquette

Technology commercialization assistance

Help with regulatory compliance

Intellectual property management

# Incubator design



# Professional Ideation

- Support both challenge led and push innovation ideas through professional ideation approaches.
- Bring together all partner categories and integrate across ecosystem. Incubator to lead on this.

# Elements of Acceleration

- The three stage accelerator approach and start-up support mechanisms are applied, where appropriate, to all early stage innovation and business creation activities.
  - Stage 1: business model development
  - Stage 2: customer discovery
  - Stage 3: team establishment

# Innovation Translation Team

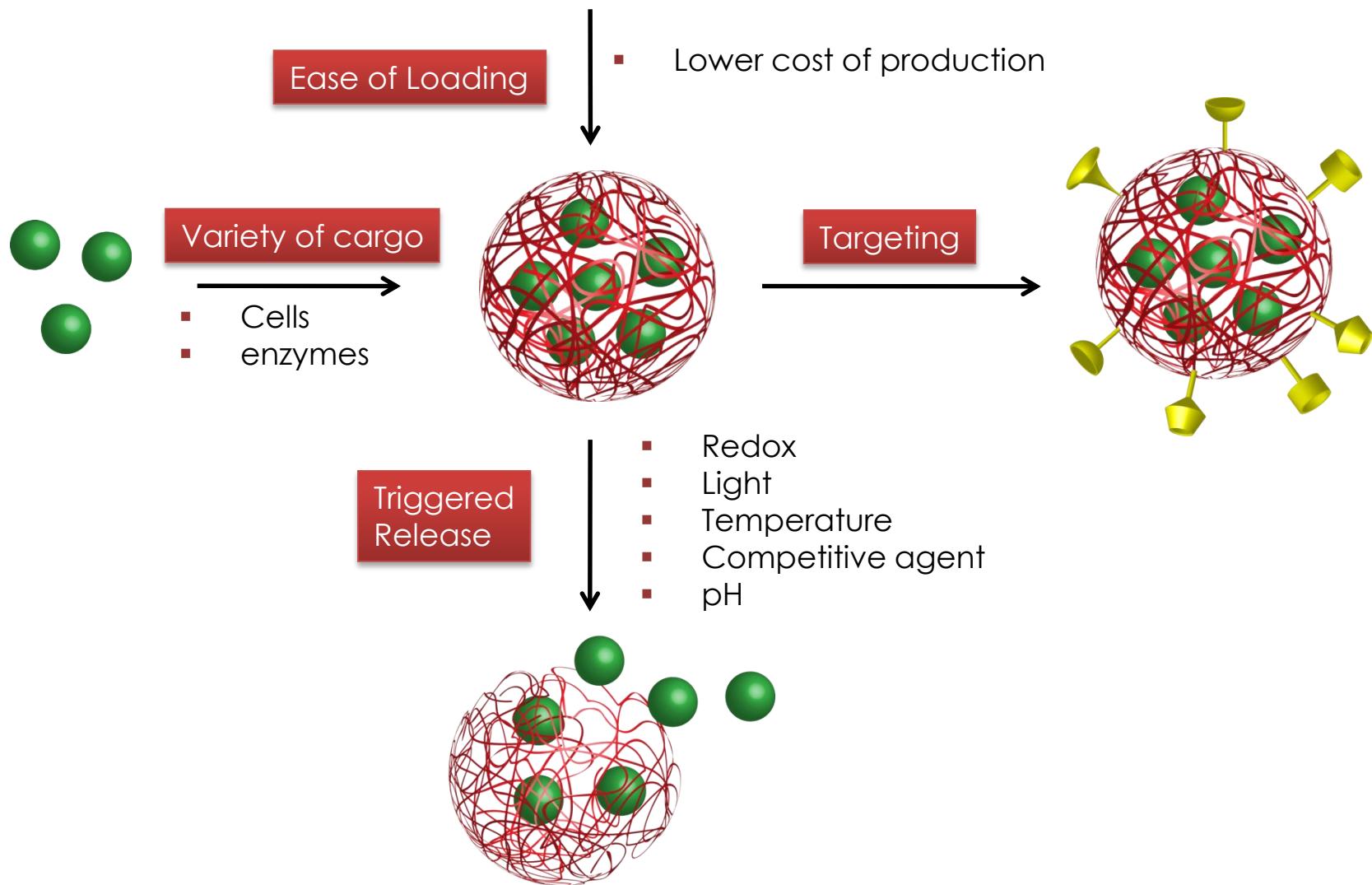
- A team that would typically include appropriate technical people and business acumen. They work with the inventor to translate the idea into a viable start-up
- Teams trained through Venture Academy, with continuing training and support whilst doing innovation translation

# Climate-KIC Stage 3 Incubation Programme

**aqdot**



# Platform Technology



# Application Potential



**Oil and Gas**



**Paints & Coatings**



**Paper**



**Textile**



**Adhesive,  
Sealants, &  
Lubricants**



**Food**



**Pharma and  
Medicine**



**Household Care**



**Agriculture**



**Personal Care**

# Industry Validation

# aqdot

## Climate-KIC added value

Links between UK start-up and enzyme industry giant Novozymes

R&D Director confirms that aqdot's approach is novel and potentially applicable to Novozymes enzyme systems  
Application for funding of aqdot/Novozymes innovation project submitted to Climate-KIC in 2014



# Startup

- Not a small sized company
- Does not execute a business plan
- A temporary organisation searching for a replicable and scalable business model

# Spinoff

- a company founded on the findings of a member or by members of a research group at a university

# Business model

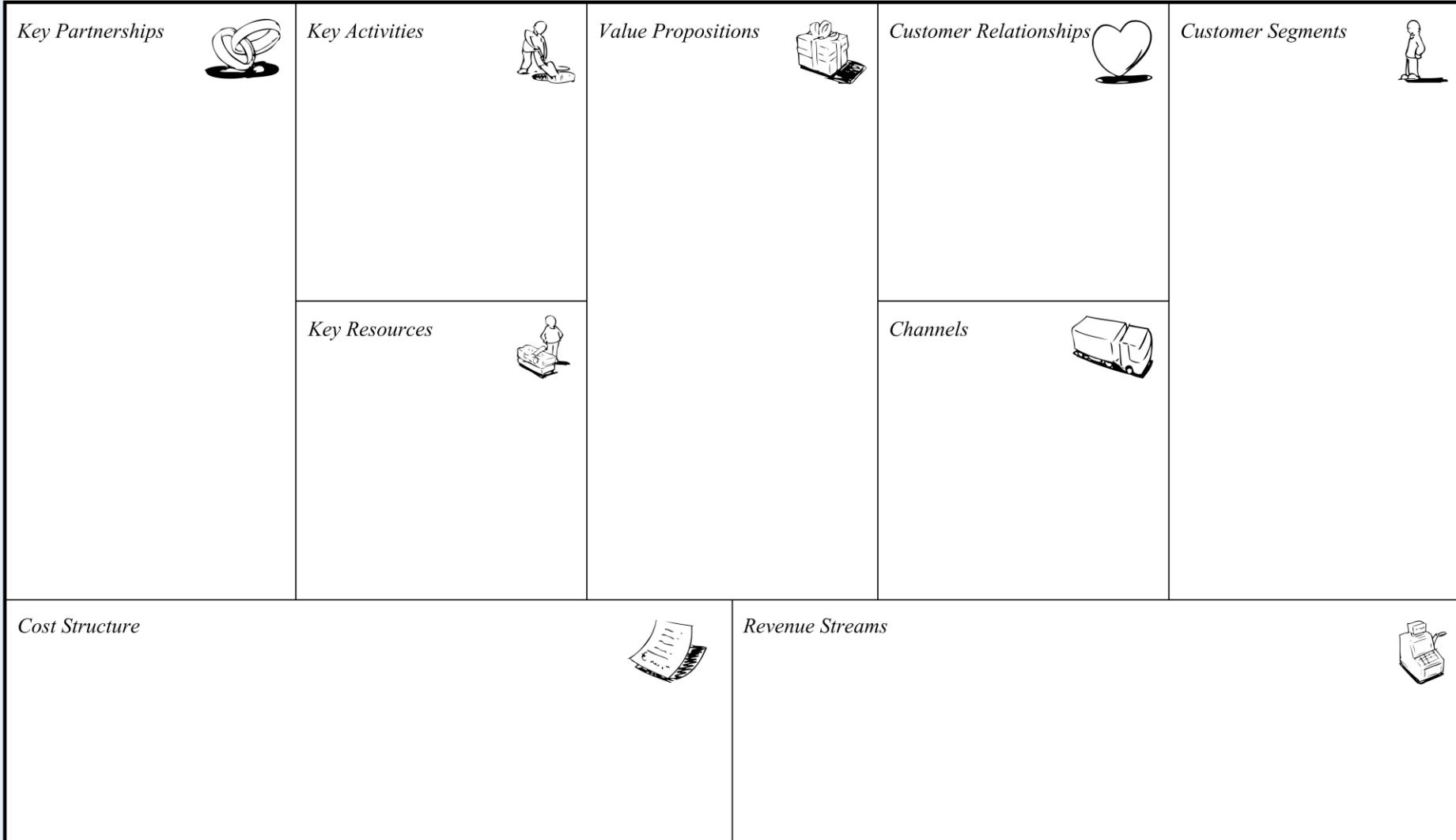
[https://www.youtube.com/watch?v=QoAOzMTL  
P5s](https://www.youtube.com/watch?v=QoAOzMTLP5s)

# The Business Model Canvas

Designed for:

Designed by:

On: Day Month Year  
Iteration: No.

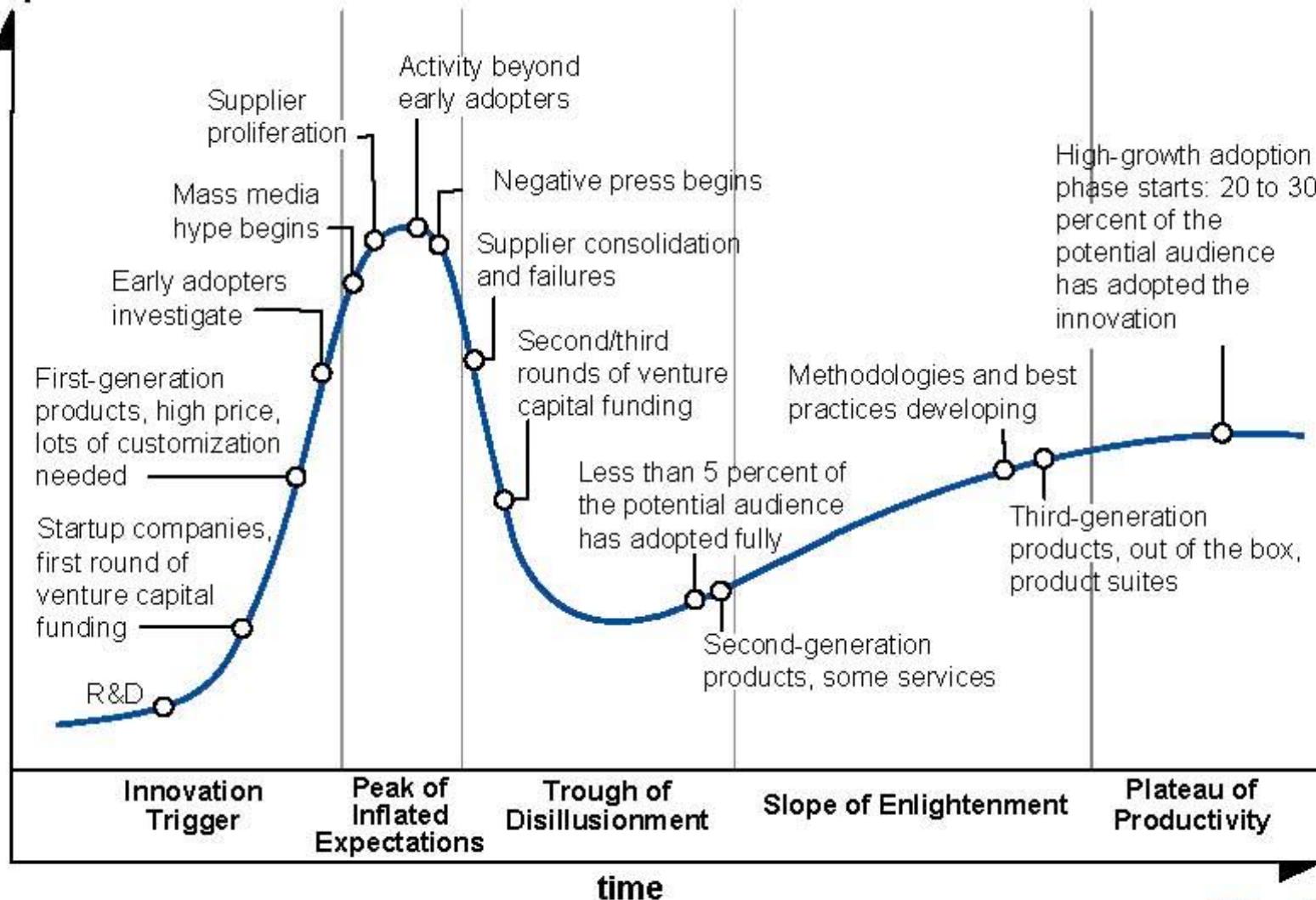


# Startup launch

- Idea
- Team (vision, sales, fiscal restraint)
- Sweat equity
- BMC
- MVP vs prototype

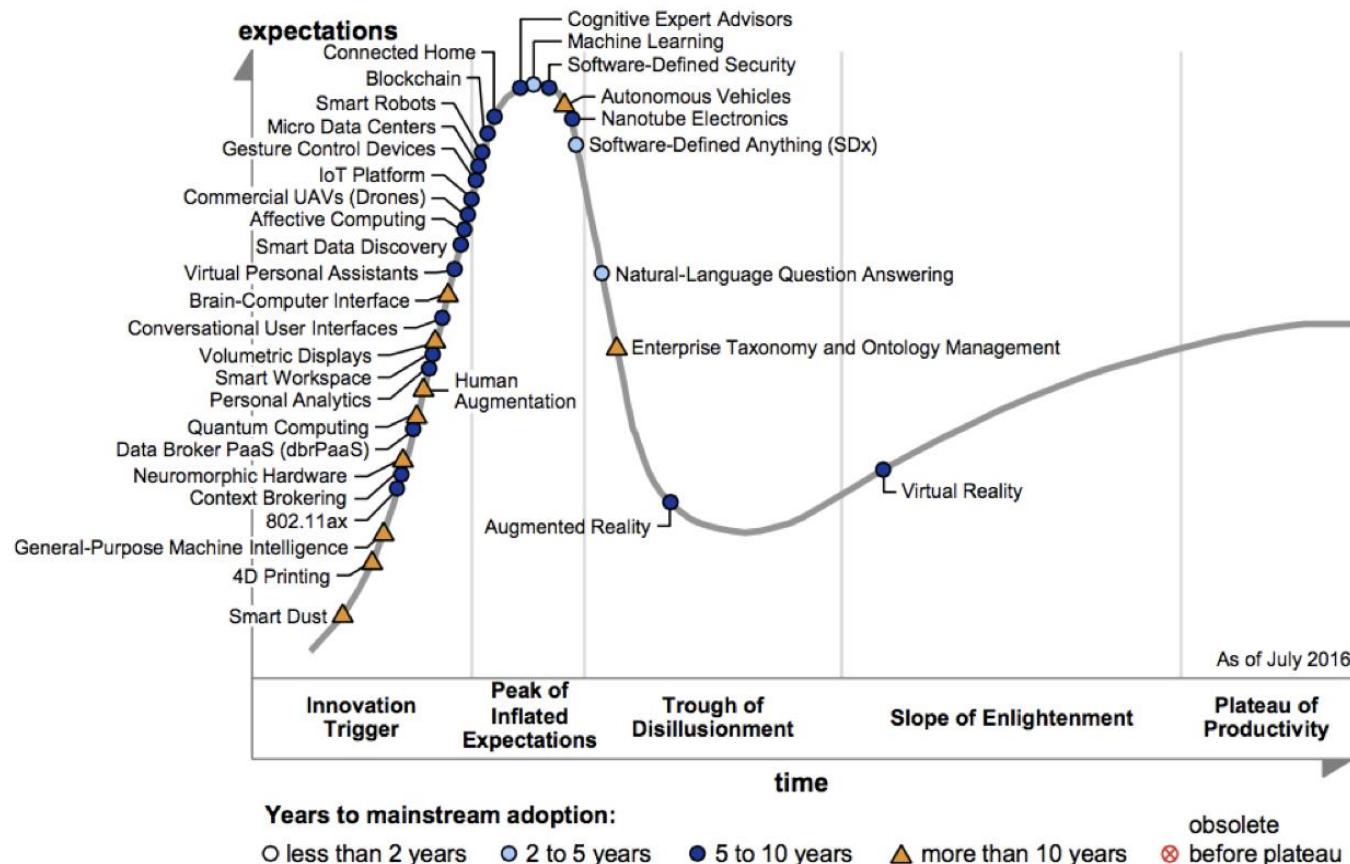
# Hype Cycle Indicators

expectations



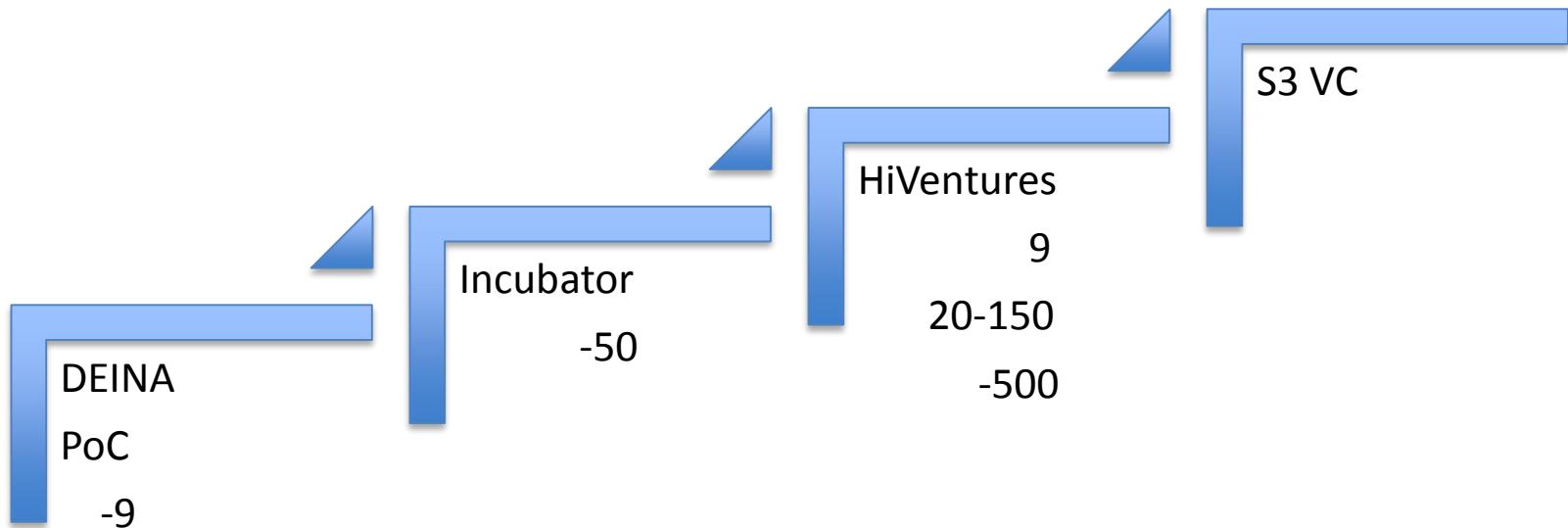
# Gartner Hype Cycle

Figure 2. Hype Cycle for Emerging Technologies, 2016



Source: Gartner (July 2016)

# Finanszírozási folytonosság



UniDeb  
500mHUF

GINOP  
8x500mHUF

EU+HU  
52BnHUF

GINOP  
70BnHUF

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# Economics and Ecology

- Economics

oikonomia, "management of a household, administration") from Greek οἶκος (oikos, "house") + νόμος (nomos, "custom" or "law"), hence "rules of the house(hold)"

The science which studies human behavior as a relationship between ends and scarce means which have alternative uses. (Robbins, 1932)

Determine choices for optimal combination of resources

- Ecology

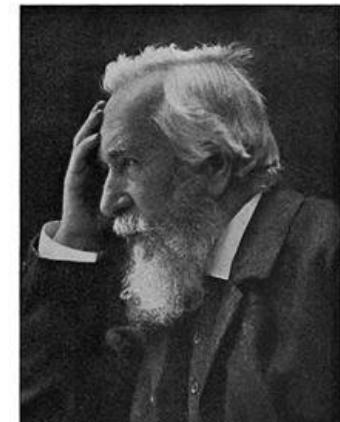
oikos-logos (from Greek οἶκος, oikos, "house(hold)"; and -λογία, -logia)

Study of the interrelationships among organisms and between organisms, and all aspects, living and non-living, of their environment (Oxford Dictionary of Ecology)

Optimal combination of resources in natural systems



Adam Smith



Ernst Haeckel