

Smart and CO₂ free processing

Surfing on the wave of sustainability?

MEAM DNA

Growth strategy

Business model ecosystem

Strategy in action

Investment needs



Maxi surfing on the micro-wave of sustainability

1968 Club of Rome

2015 UN Paris agreement

EU Green deal 2050 – climate neutral (+ 1,5°)

2030 churn point

2021 decade of action

Knowledge – raising the awareness

Innovation – developing solutions

Technology – making it happen



MEAM contributes to most SDG's - Cleantech !

MEAM – burning platform

Reduce CO2 emission

Paris' agreements and Eu's answer on it should lead to a **55% CO2 emission reduction in 2030 (FIT_4_55)**. Microwave are a solution for this challenge. ETS CO2 is 50 euro/ton, CEO Shell estimates it will raise to 120 euro/ ton.

Smart Electrification

A new wave of **electrification** will run through EU, which also will be smart. Microwave applications can include that **smartness**.

More products
Lower OPEX

Becoming **more energy efficient**. The greenest energy is the one you don't consume. Macro waves use a factor 10 less space // have a higher throughput – speed // and lower liabilities: lower insurance

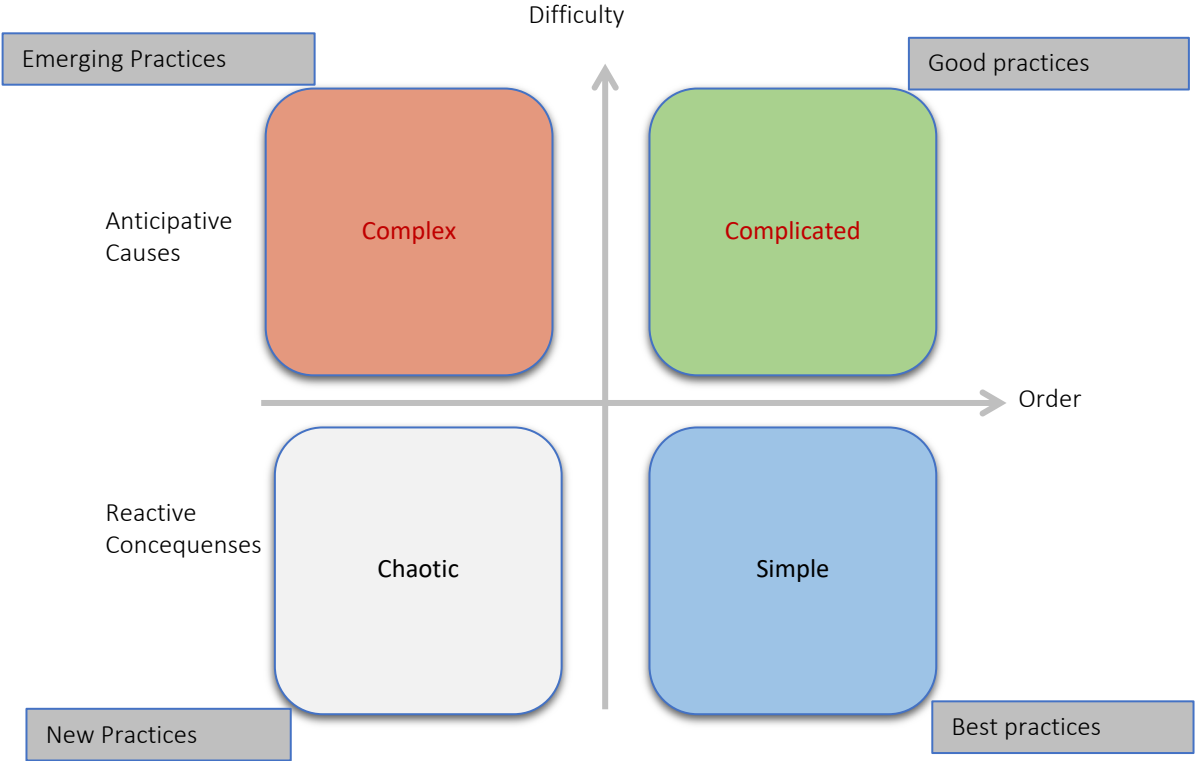


CO₂- emission (ton/year):

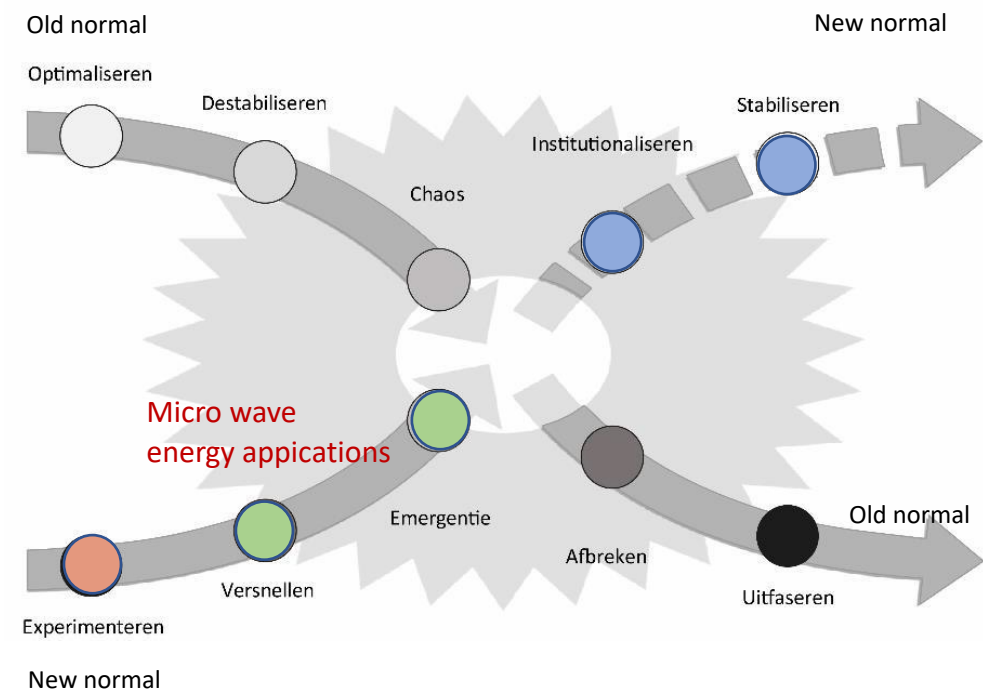
	Fluidised bed	Fluidised bed HR	Microwave Hybrid	Microwave HR
Electricity	100	340	1453	726,5
Natural Gas	2464	881	0	0
Total	2564	1221	1453	726,5
Avoidable	100	340	1453	726,5
(%)	4%	28%	100%	100%



Maxi surfing on the micro-wave of sustainability



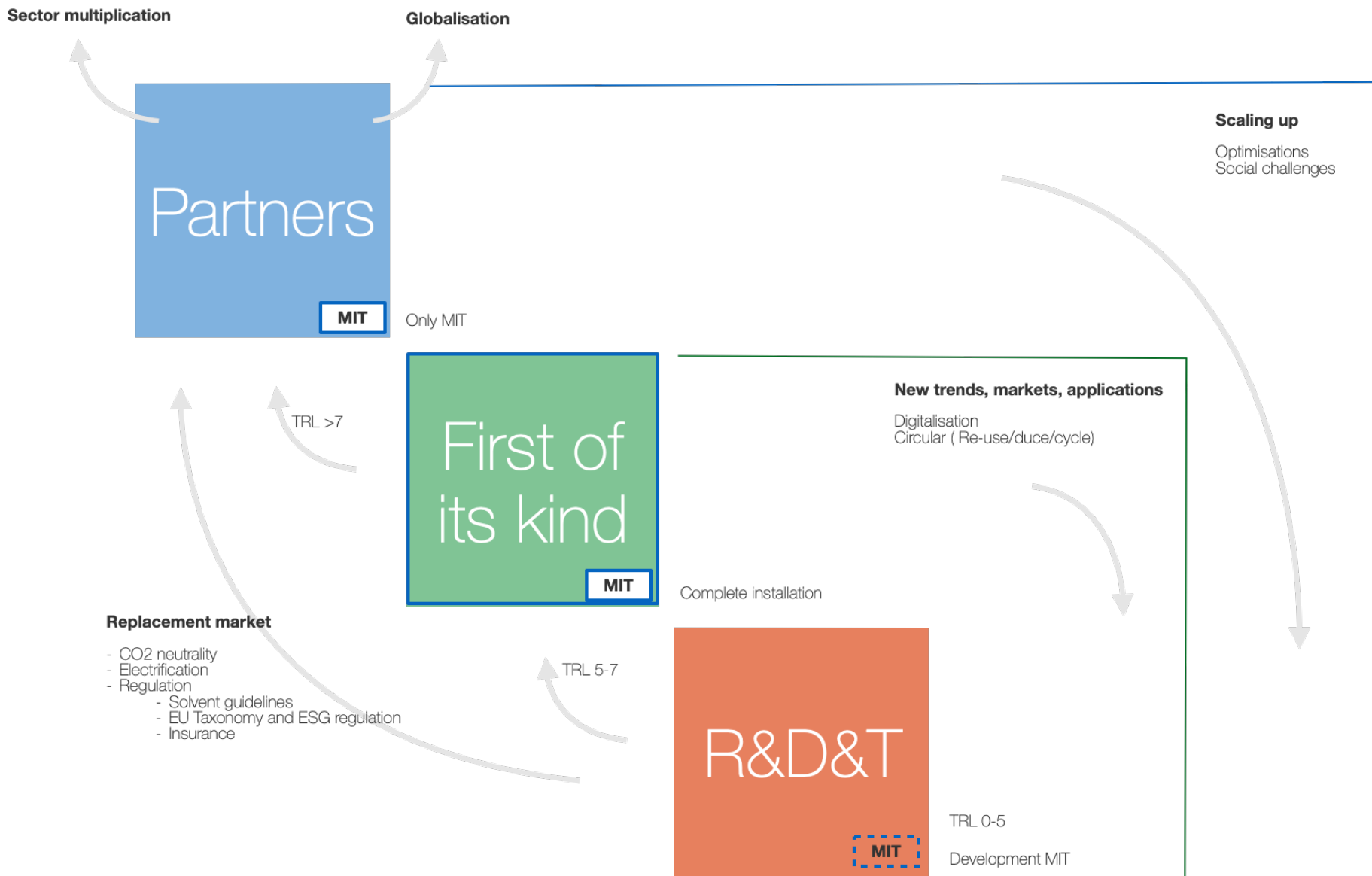
Cynefin framework - Dave Snowden



MC Social Transitions Drift



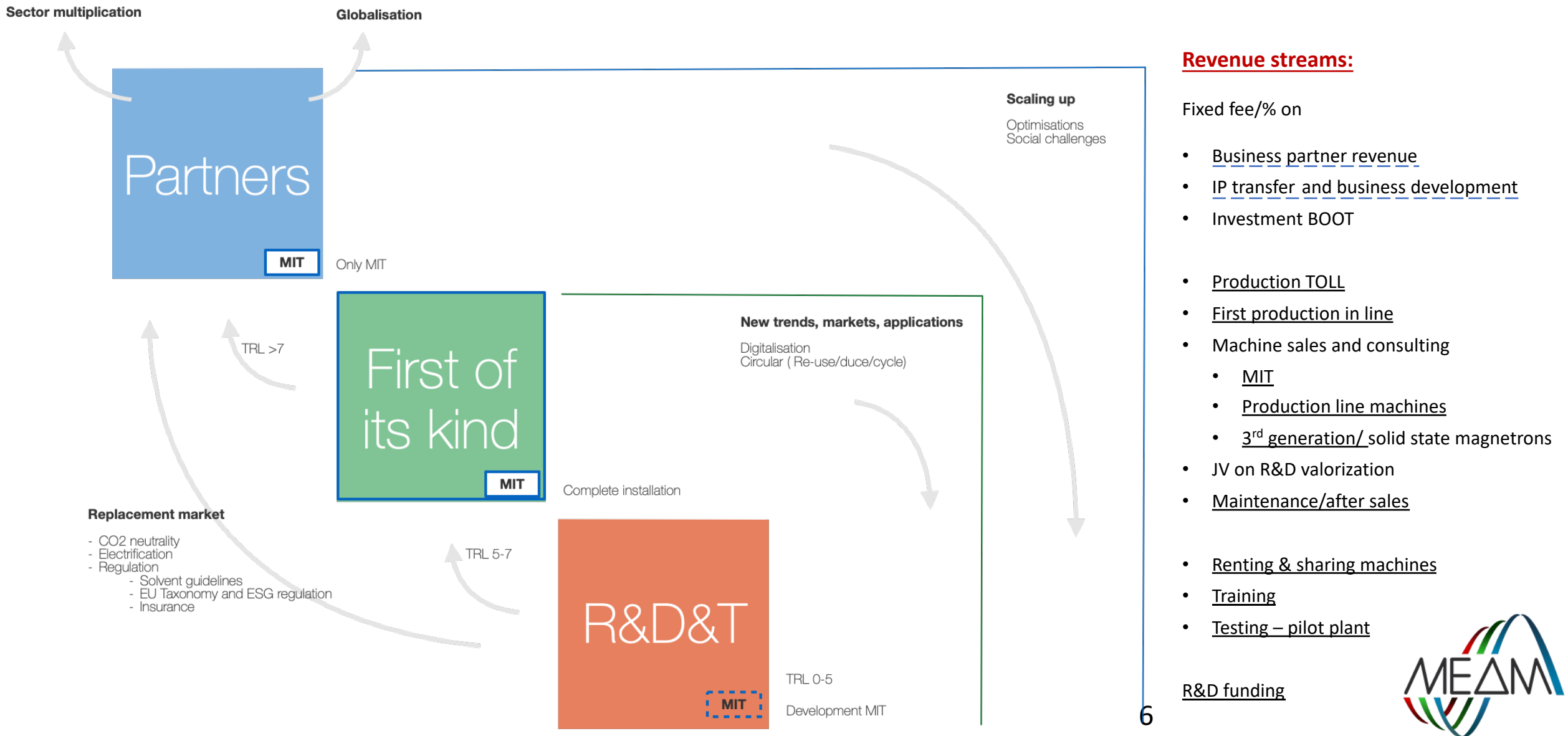
MEAM growth strategy: fly-wheel approach



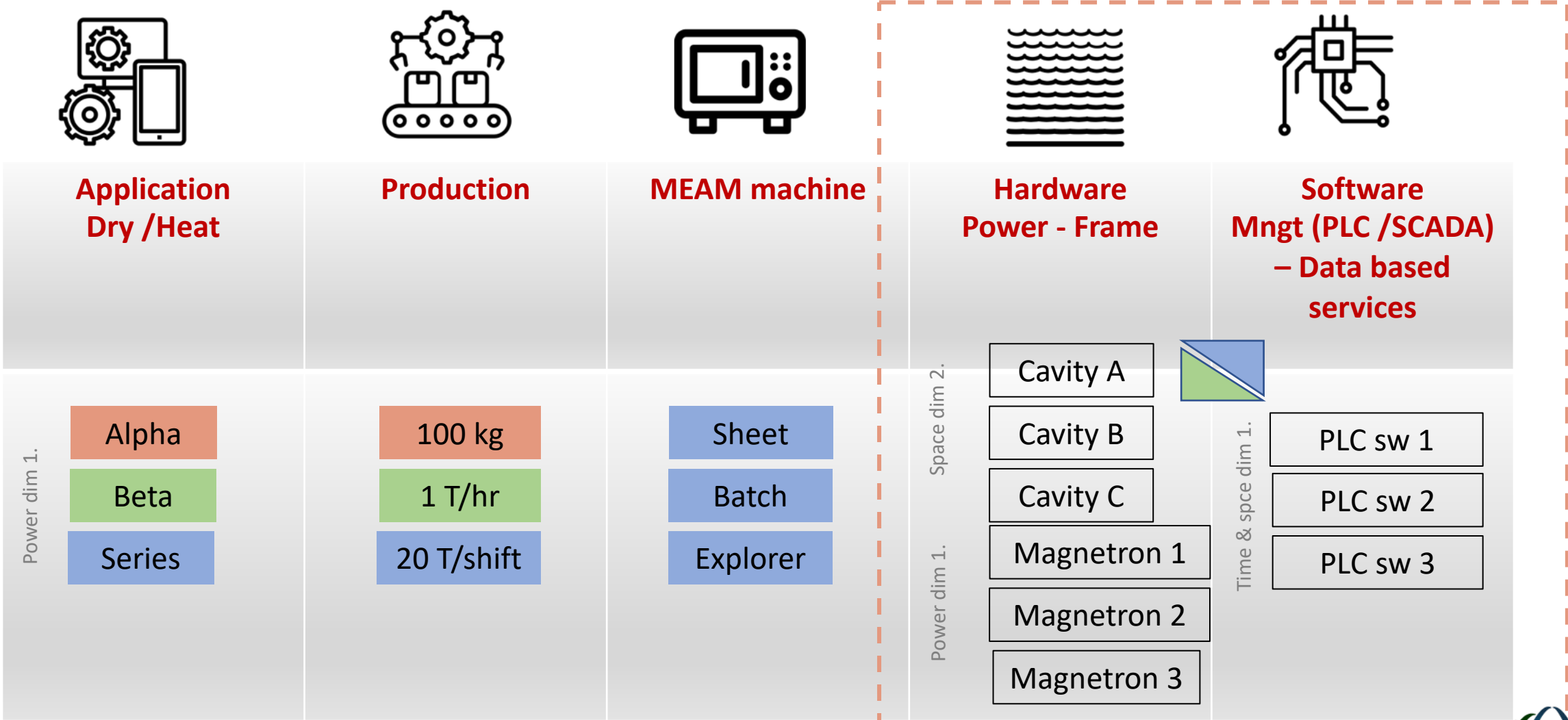
Technology and market readiness

- Go to market through partnerships with established industry players for sector multiplication and globalisation (replacement of traditional technology and scale up of proven micro wave technology) (red ocean) (triggering new opportunities)
- First time co-development with industry and academic pioneers for new trends, markets and applications (blue ocean)
- Local research, development and testing satellites (BE, NL,...) + 200 personyears of R&D and pilot testing waiting to be scaled up and marketed for industry optimisations, adding value and to answer social challenges

MEAM business model ecosystem



MEAM technology solutions are combinations of product (space), energy & time



MIT - MEAM INSIDE TECHNOLOGY



MEAM – Patents

Patents in **green** are active at clients, in **red** patent present in all modules/machines produced by MEAM

1. Method and device for densifying ceramics (JP2010025452 (A))	PROCESSING
2. A device and method for heating multiple prepared meals simultaneously (EA200970053 (A1))	FOOD
3. Densification Process of Ceramics And Apparatus Therefor (US2009079101 (A1))	PROCESSING
4. Industrial microwave oven for the thermal treatment of products and method applied thereby in particular for killing insects in wood (SI1570710 (T1))	SANITATION
5. Tempering frozen foods (GB2412563 (A))	FOOD
6. Improved method and apparatus for drying water-containing coatings (WO2007107367 (A1))	COATING/CHEMICALS
7. Processing frozen compositions (WO2007039284 (A1))	FOOD
8. Densification process of ceramics and apparatus therefor	PROCESSING
9. Improvements in investment casting . (MXPA06012914 (A))	PROCESSING
10. Microwave Applicator Control (EP3784004A1)	TECHNOLOGY



MEAM - References



Coating 

Chemicals 

Circular economy 

Food 

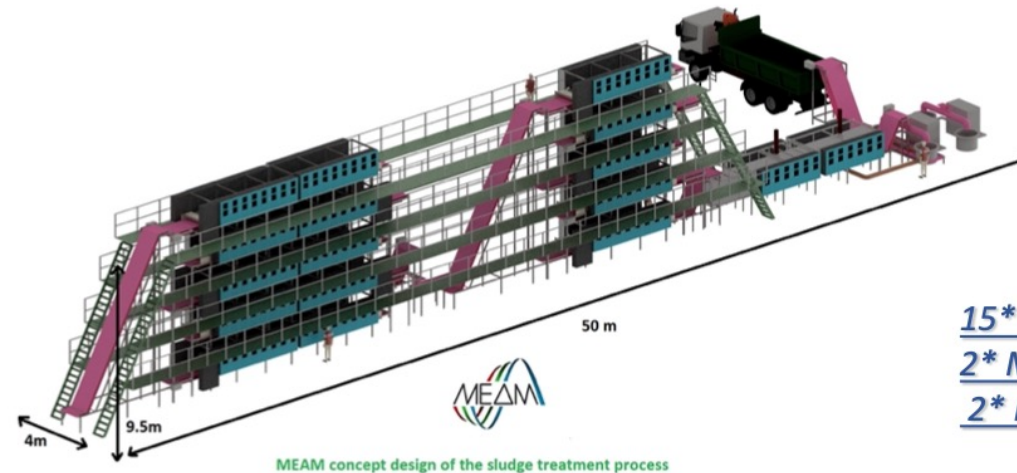


Growth path

	2019	2020	2021	2022	2023	2024	2025
TOTAL Income	1.238.248	1.117.997	2.083.718	7.176.297	10.924.355	17.091.895	19.441.417
TOTAL CoGS	86.215	17.817	764.778	3.217.448	5.843.796	9.693.882	5.680.561
Total General Cost	948.184	868.589	2.020.150	2.617.211	3.221.451	4.306.542	5.465.468
EBIDTA	203.848	231.590	(701.209)	1.341.638	1.859.108	3.091.471	8.295.387



MEAM DRY 32



15* MEAM DRY 32
2* MEAM HT 32
2* MEAM BOX 100

