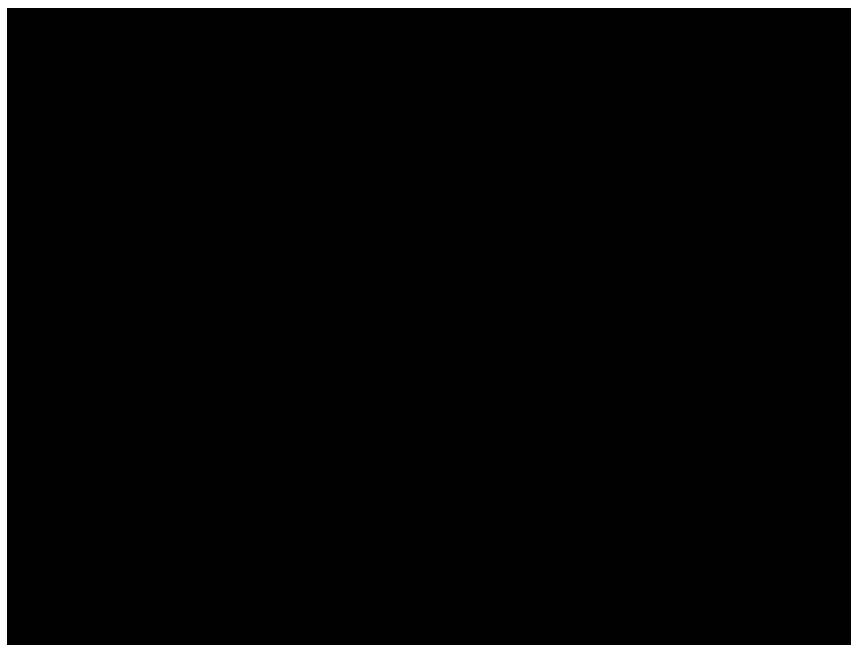


Where innovation starts

Learning and teaching in 2030

Maarten Steinbuch
@M_Steinbuch

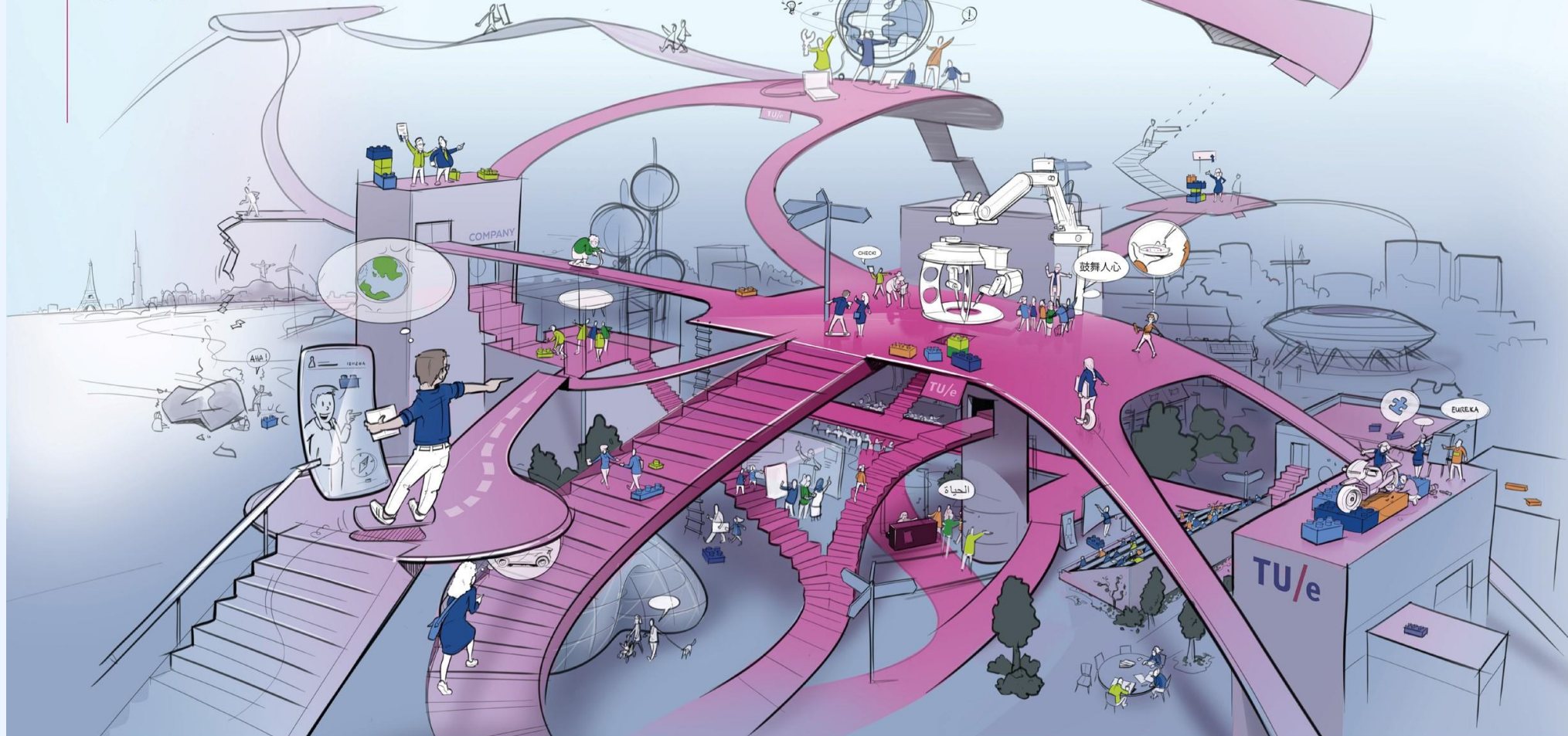




2030

TU/expedition: Education

In 2030 the world has changed significantly and TU/e has determined how to adapt to these changes. Key elements in the desired future scenario for TU/e education in 2030 are:



Learners create their own playlist

By 2030, the group of learners is very diverse in culture, age and beta-mentality. Learners take responsibility for their own learning process. They develop paths that fit with their dreams, ambitions, stages of life, possibilities and ways of learning. TU/e staff support learners to understand themselves and to discover their talents, goals and the various possible routes to gain 'knowledge blocks'. They create a sense of urgency in learners to develop competencies, offer knowledge in different forms and create challenging lines of learning.

In their search for knowledge to be able to fulfill their "dream", learners take online modules at TU/e but also across its borders. TU/e campus offers a base where they feel at ease, supported and connected.

Hands-on learning labs

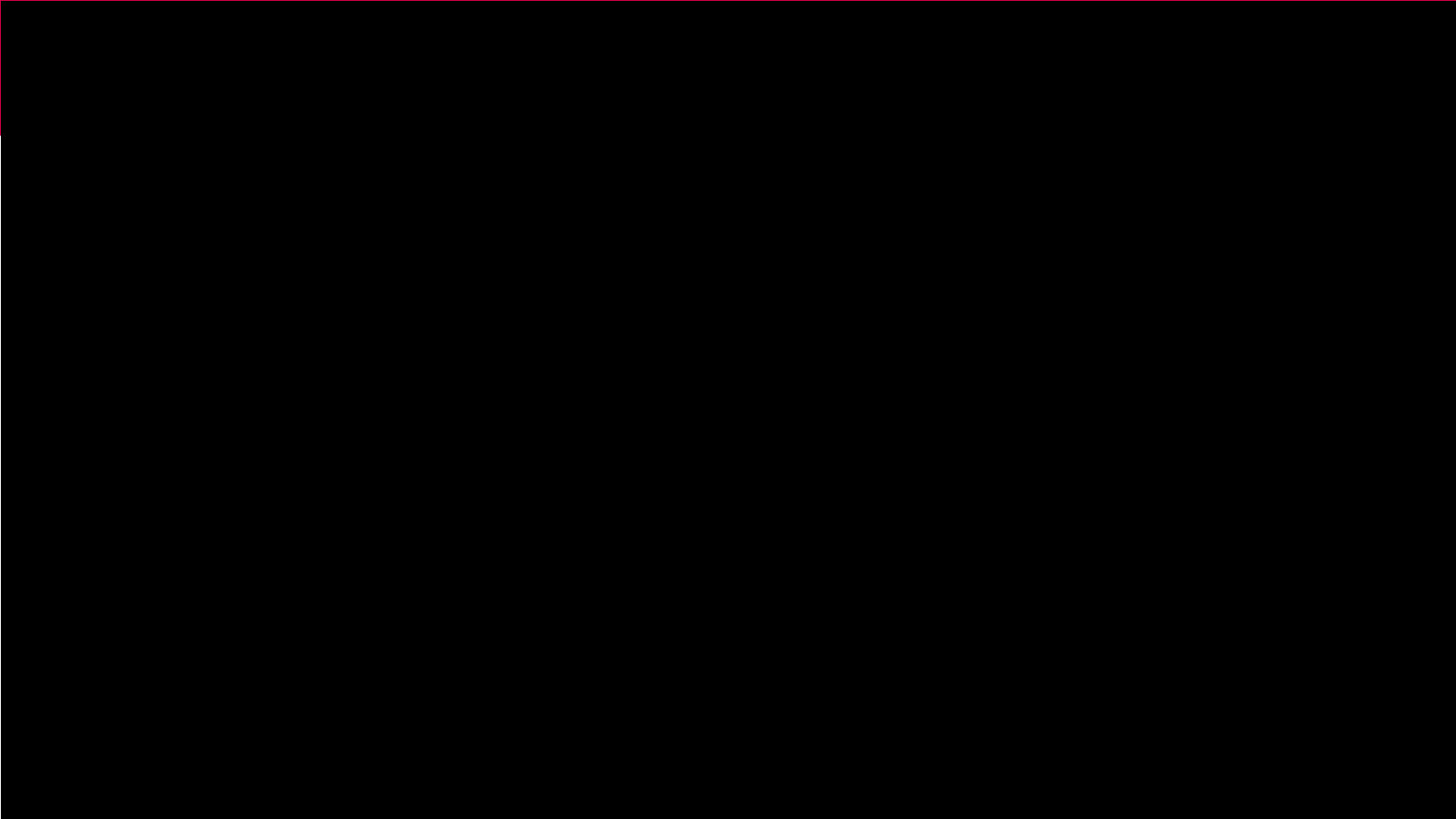
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Embedded in the ecosystem

In 2030 TU/e is intertwined with its surroundings. By its strong connection with high tech industry and local living labs as well as by connecting campuses TU/e is a strong, international player. By focusing on a few themes within which research, interdisciplinary education, collaboration and specific labs are the core, Eindhoven is a powerful place in the world for learning and innovating.

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Boston Dynamics



Boston Dynamics







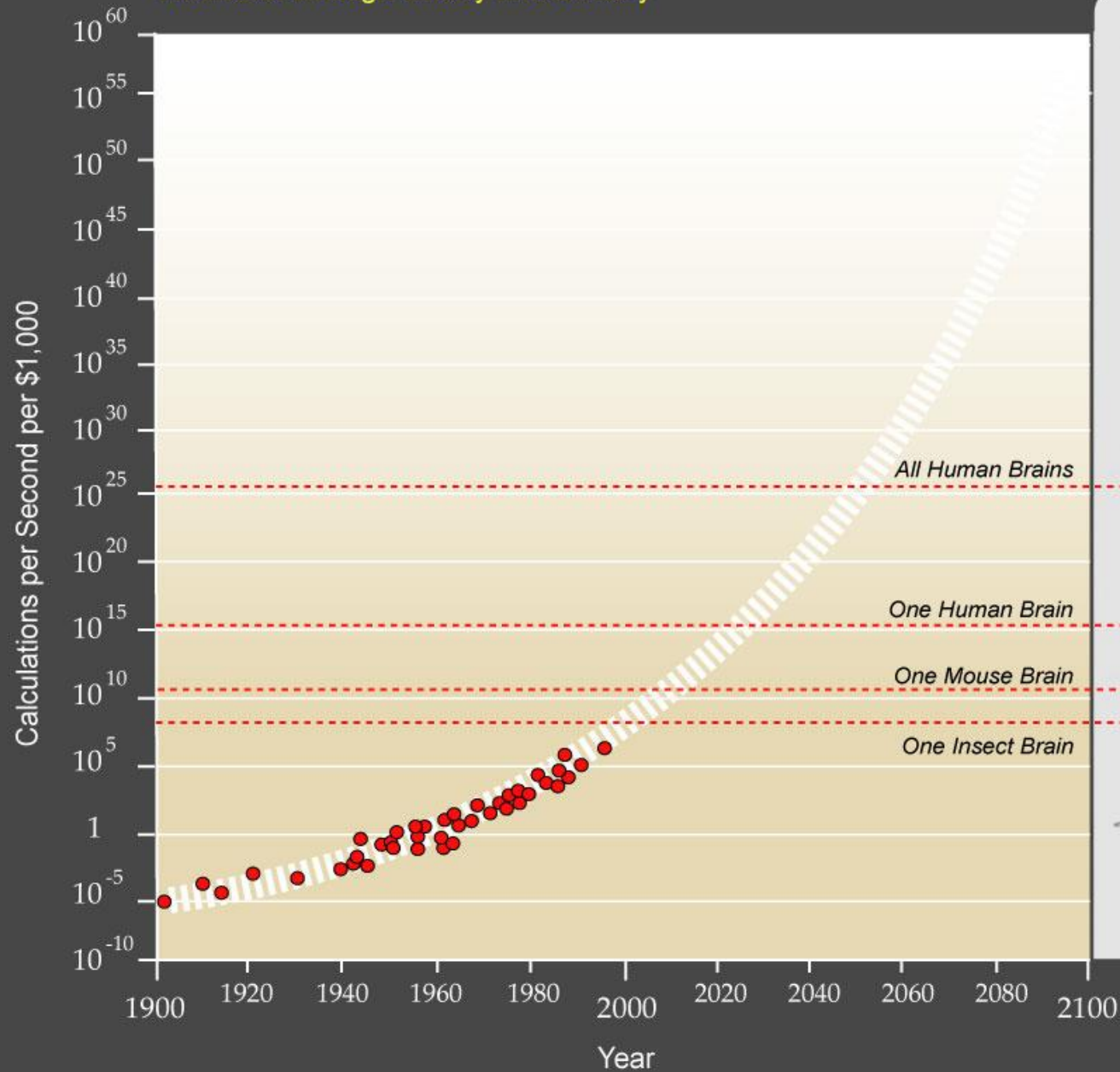
SingularityU
The Netherlands





Exponential Growth of Computing

Twentieth through twenty first century



Logarithmic Plot



Cyber Physical Systems

Internet of Things

Robots

Drones

Smart Mobility

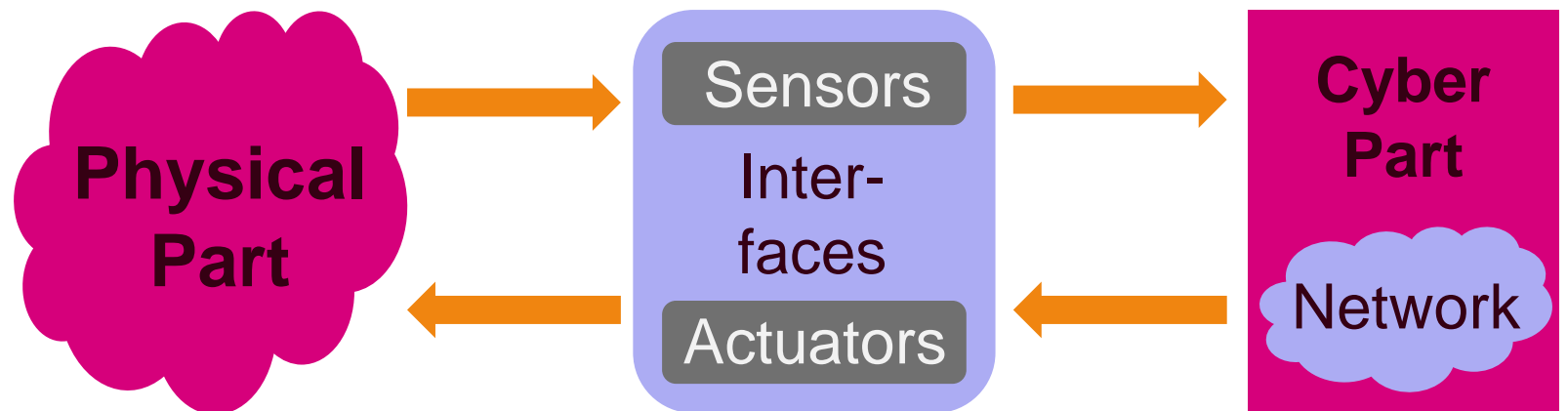
Smart Buildings

Smart Energy

Smart Infrastructure

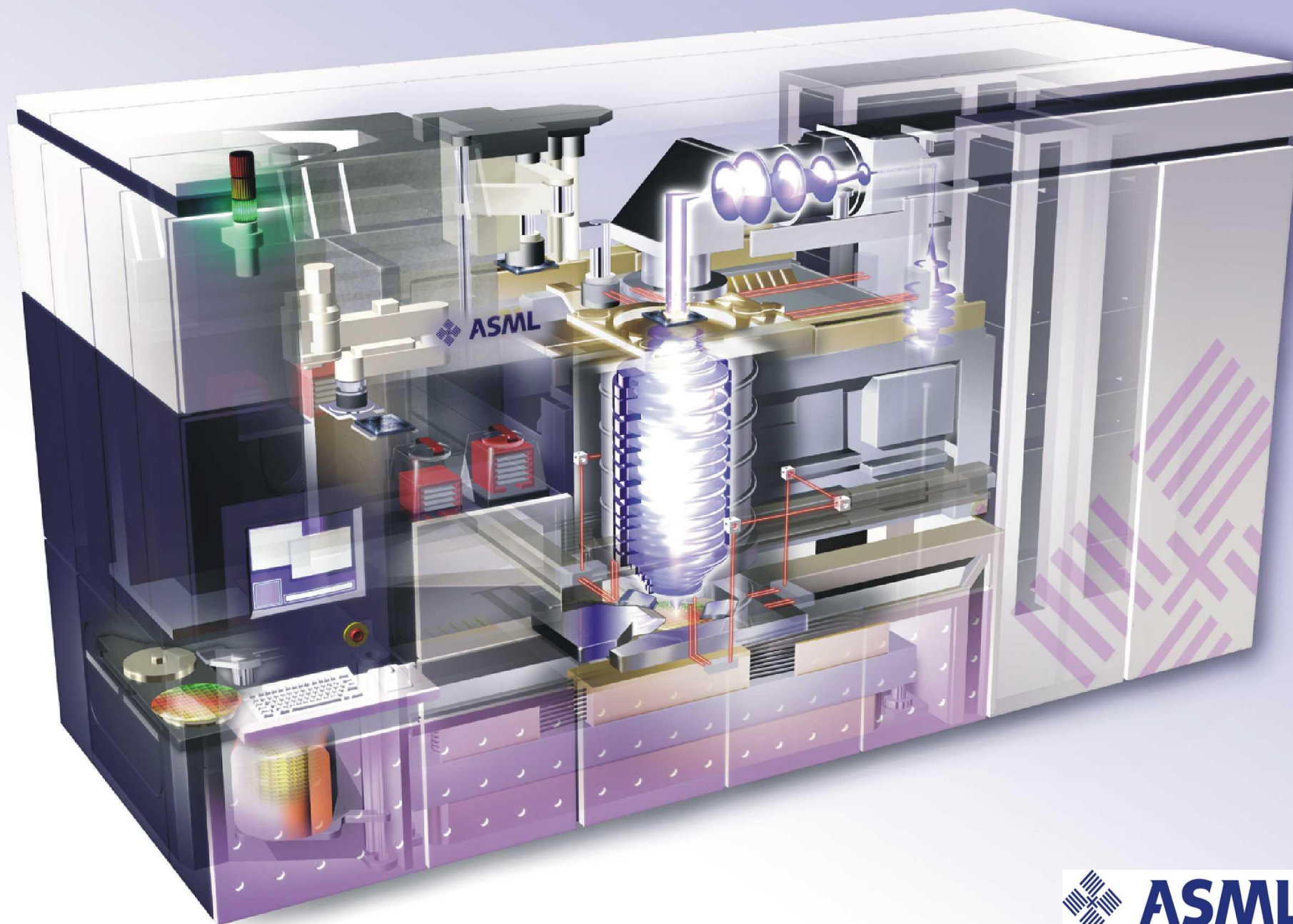
Smart Healthcare

And the Human...



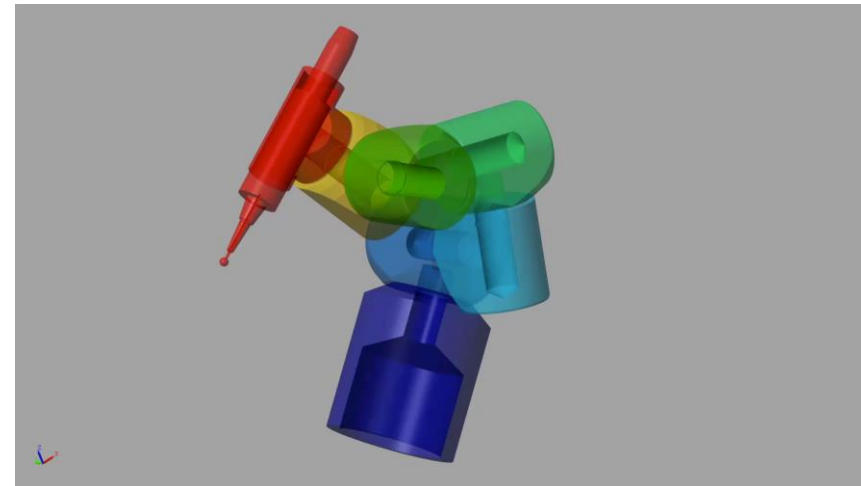
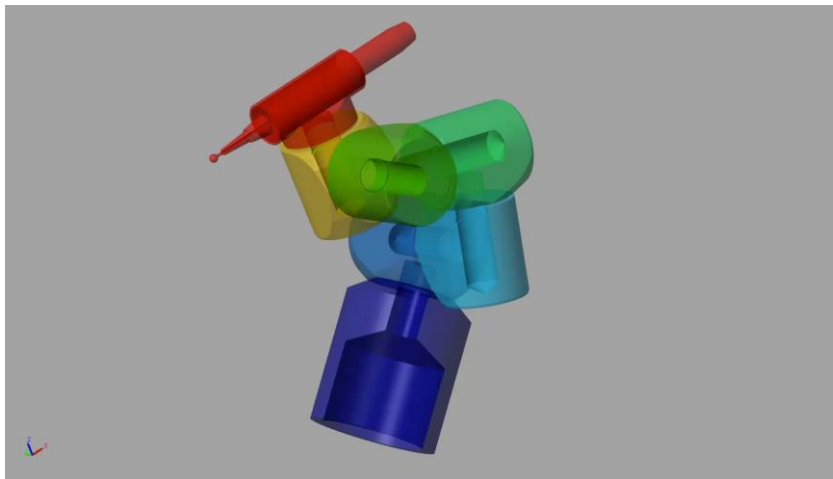
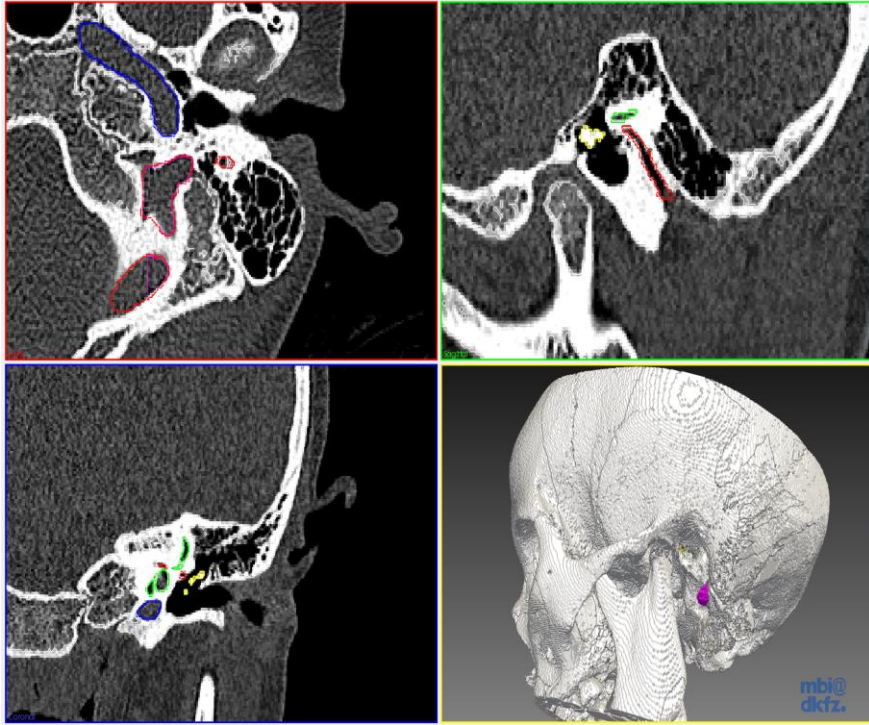
The Human in 2045?



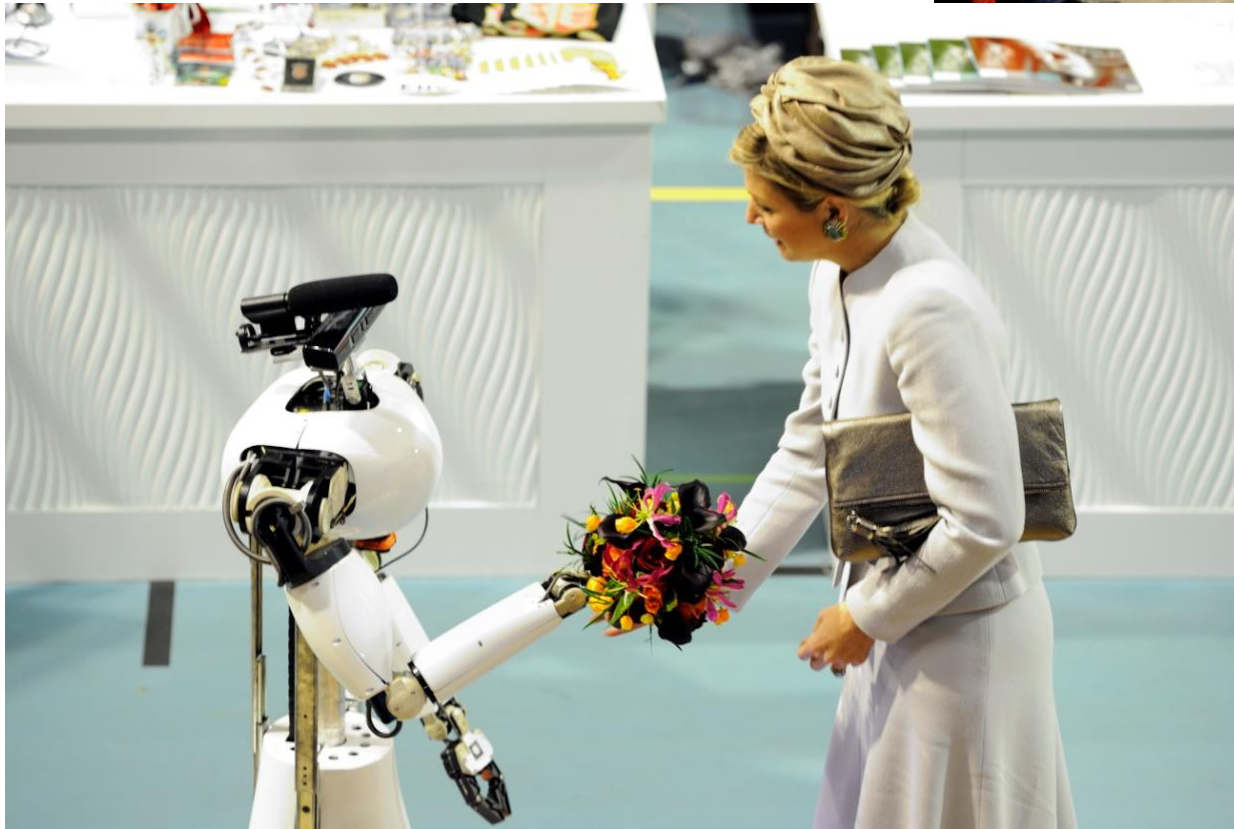
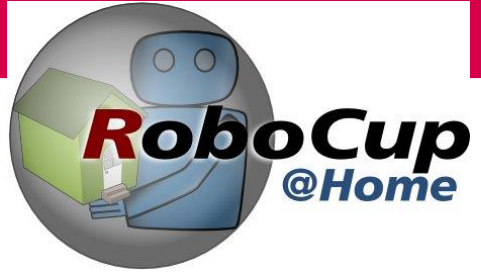




RoboSculpt



RoboCup@Home

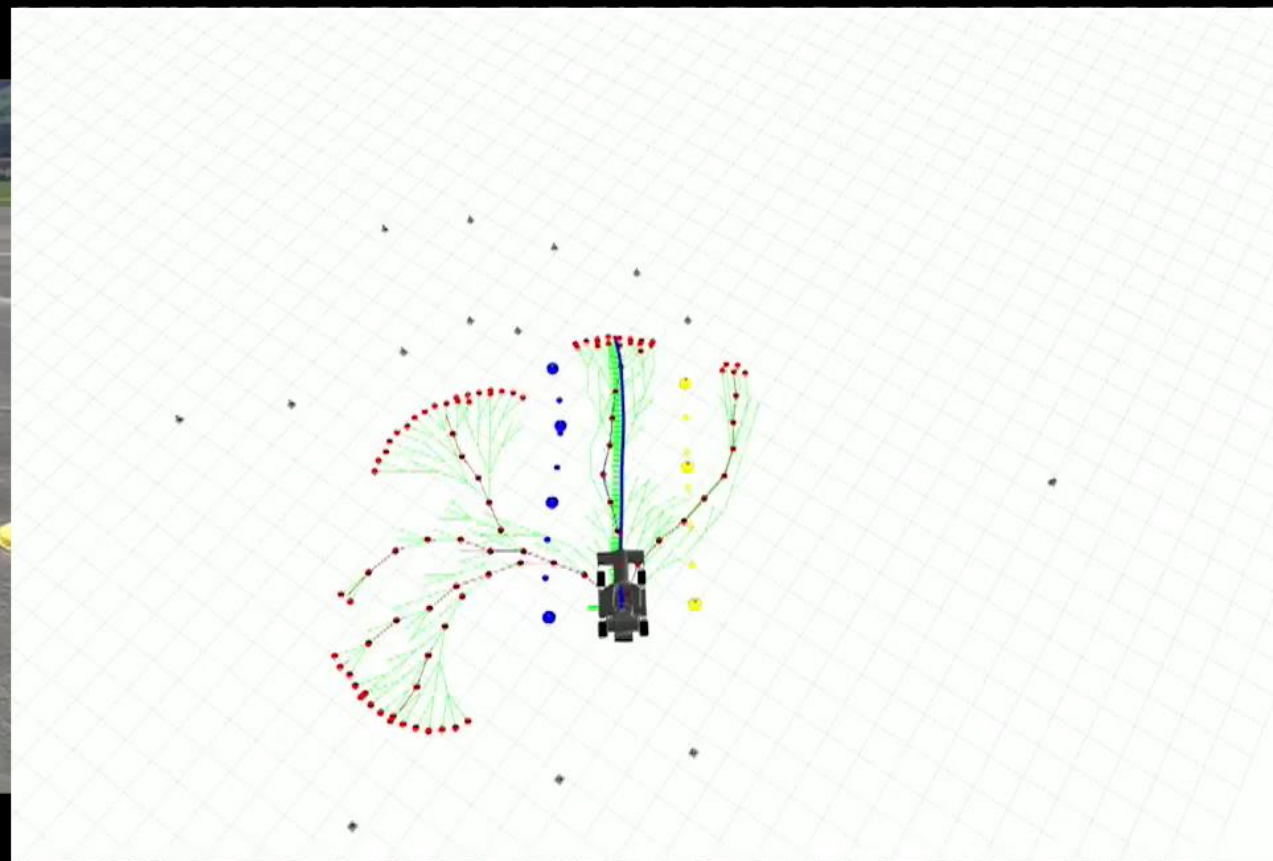


The Car as an Ipad on Wheels



The auto industry is poised for more change in the next five to ten years than it's seen in the past 50.

Mary Barra, CEO General Motors







EUROPEAN TRUCK PLATOONING images





**In an exponential world,
should the research still be linear?
And education?**

Core aspects 2030 (TU/e vision)

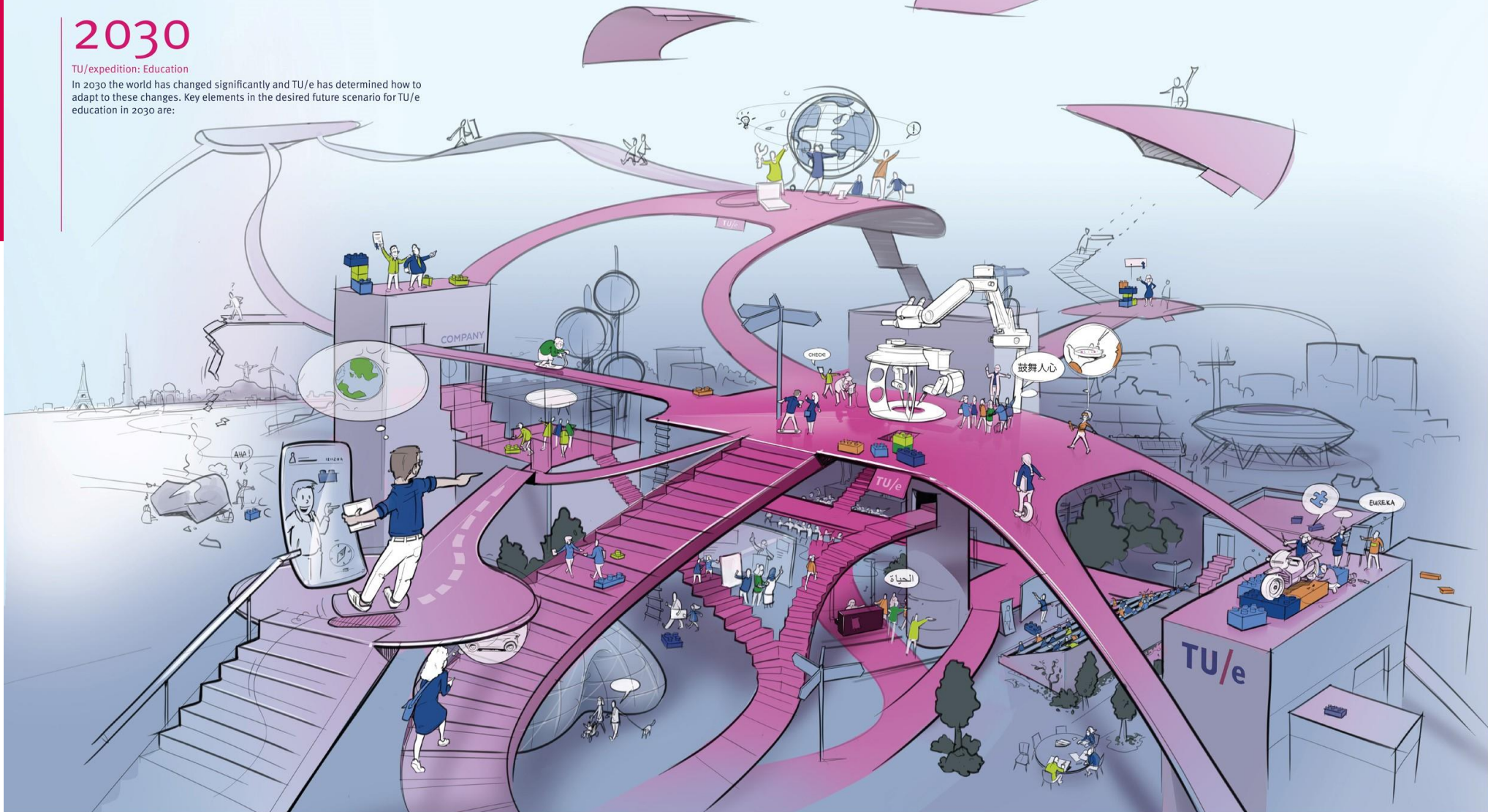
- all study programs get at least 50% 'hands on' education.
- all (theoretical) knowledge will be offered online
- All students are part of student teams
- Highly individualized
- Systems thinking will be key



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Towards a 4th generation University....

	1 st Generation	2 nd Generation	3 rd Generation
Objective	Education	Education & research	Education, research & know-how exploitation
Role	Defending the truth	Discovering nature	Creating value
Method	Scholastic	Mono-disciplinary science	Inter-disciplinary science
Human capital development	Professionals	Professionals & scientists	Professionals, scientists & entrepreneurs
Orientation	Universal	National	Global
Language	Latin	National languages	English
Organization	Colleges	Faculties	Institutes & centers
Management	Rector & Chancellor	Part-time academics	Professional management

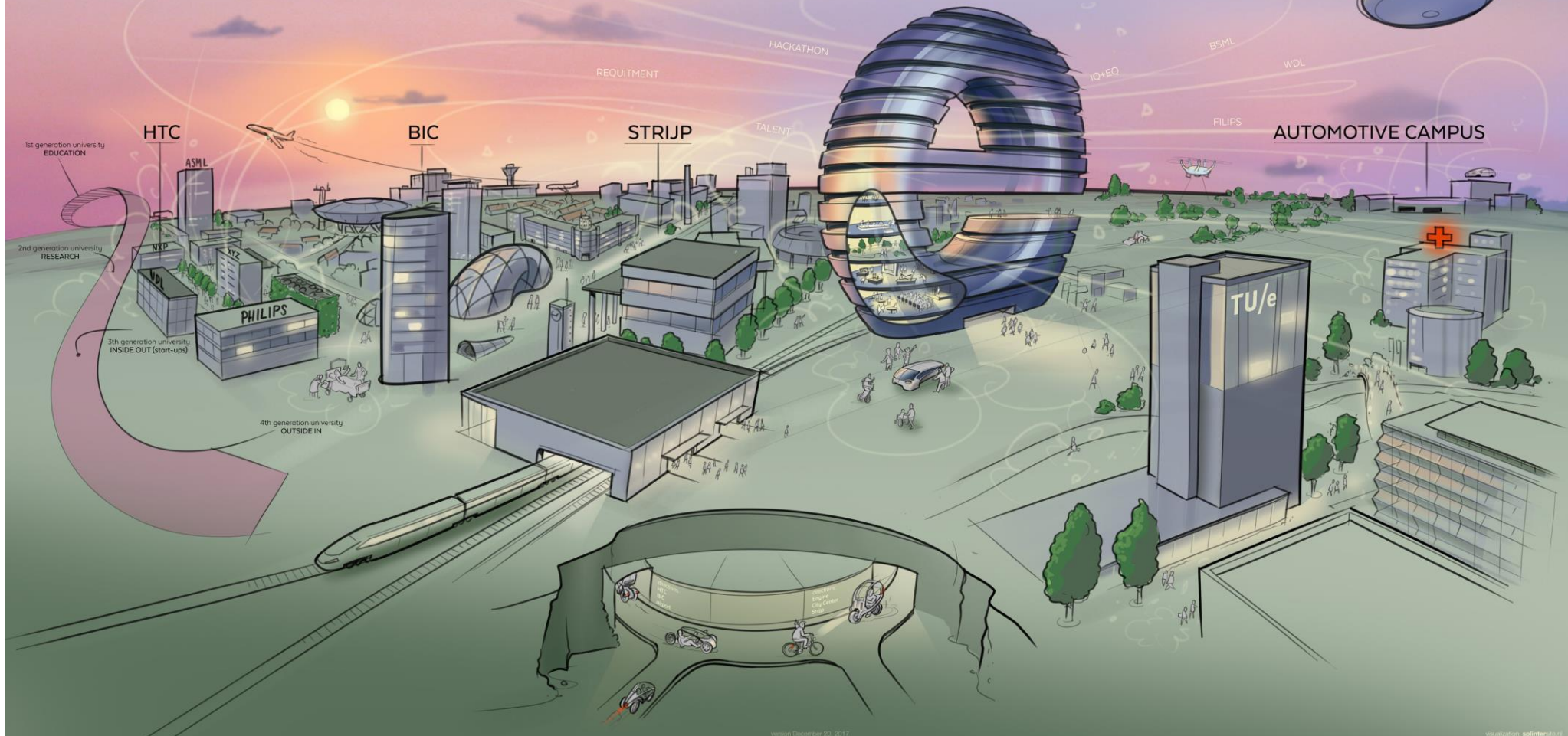
Towards a 4th generation University....

	3 rd Generation	4 th Generation
Objective	Education, research & know-how exploitation	Education, open innovation (research)
Role	Creating value	Enabling value creation
Method	Inter-disciplinary science	Multi-actor innovation
Human capital development	Professionals, scientists & entrepreneurs	Professionals, scientists entrepreneurs, artists, customers, ecosystem participants
Orientation	Global	Ecosystem
Language	English	English
Organization	Institutes & centers	Innovation spaces
Management	Professional management	Disruptors





HEALTH
ENERGY
MOBILITY

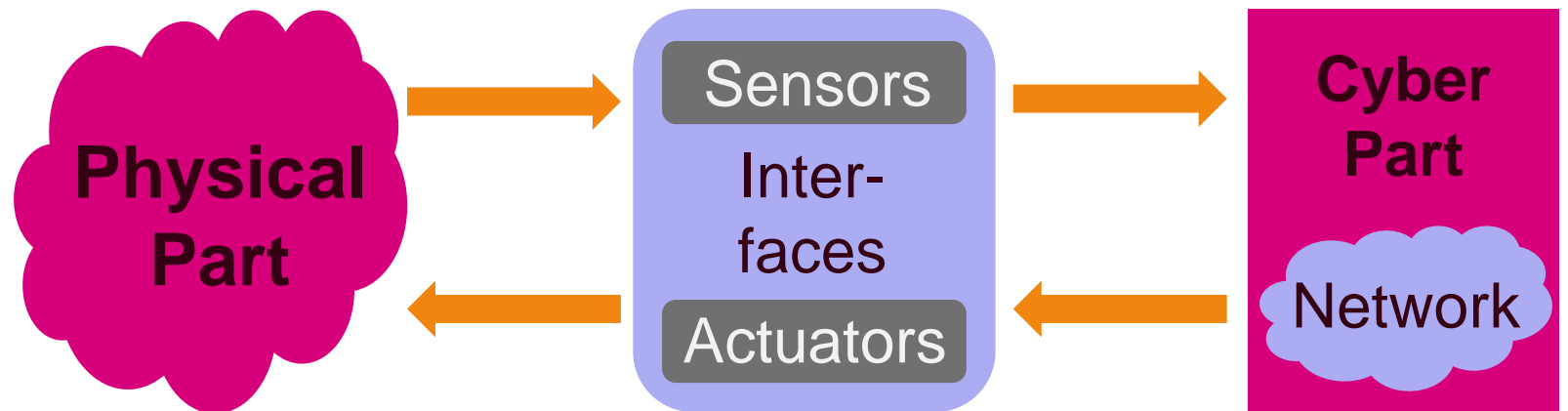


new perspectives on working









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