acmit
AUSTRIAN CENTER FOR MEDICAL INNOVATION AND TECHNOLOGY

Surgical ~~Medical~~ Robotics - Where are we and where are we going

AUTUMN ITAPA 2022

Tech trends in Health and Care

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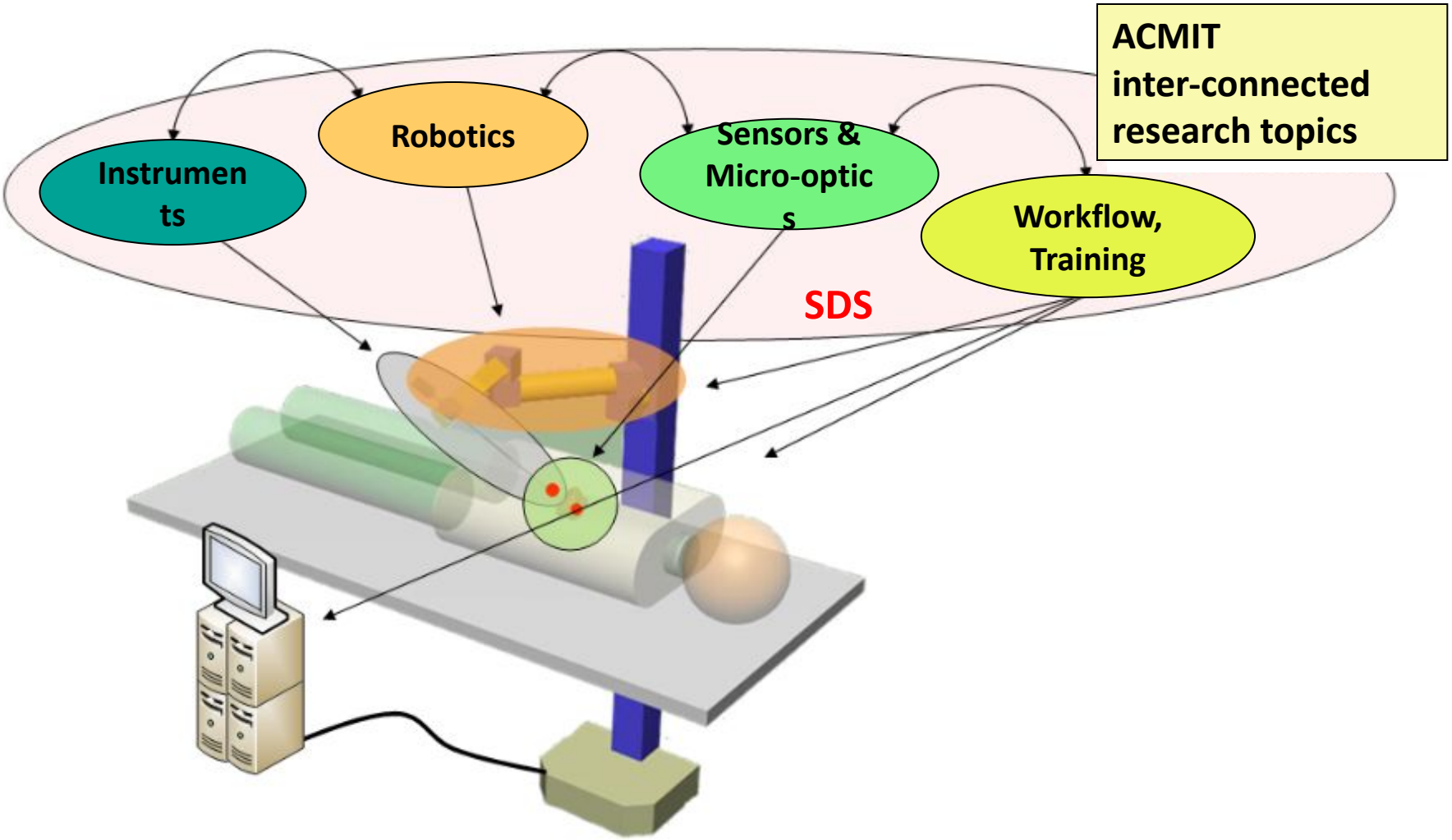
ACMIT in a nutshell

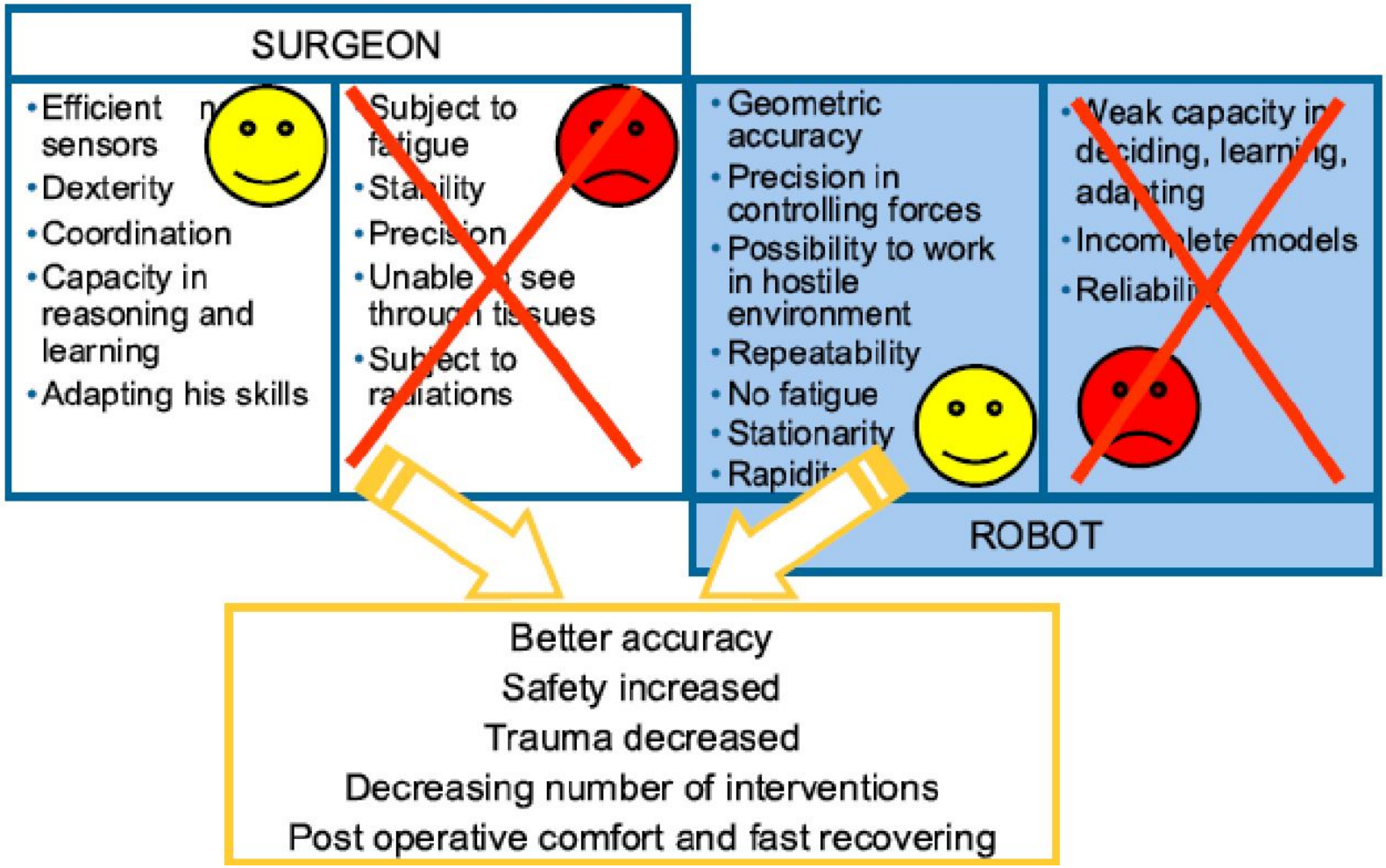
- Development of mechatronic and information assisted medical technology
- Translational R&D and product development
  - Inter-disciplinary work
    - Technical development
    - Regulatory affairs management
    - Clinical investigation/implementation
    - Product development
    - Contracted manufacturing services

- Team of 40+ researchers and developers
- Worldwide international network (status 04/2022)
  - 33 industry partners
  - 32 research institutions

ACMIT – Main Topics



Surgical Robots – Why?



Surgical robotics to date

- Nice variety of systems in several disciplines
  - Neurosurgery
  - Orthopedics
  - Visceral surgery
  - Interventional radiology
  - Microsurgery
  - Imaging
- On the way from experimental surgery to routine use
- Stable growth rates – “big players” well involved
  - CAGR 2021-2027: 17.5%

Neurosurgery

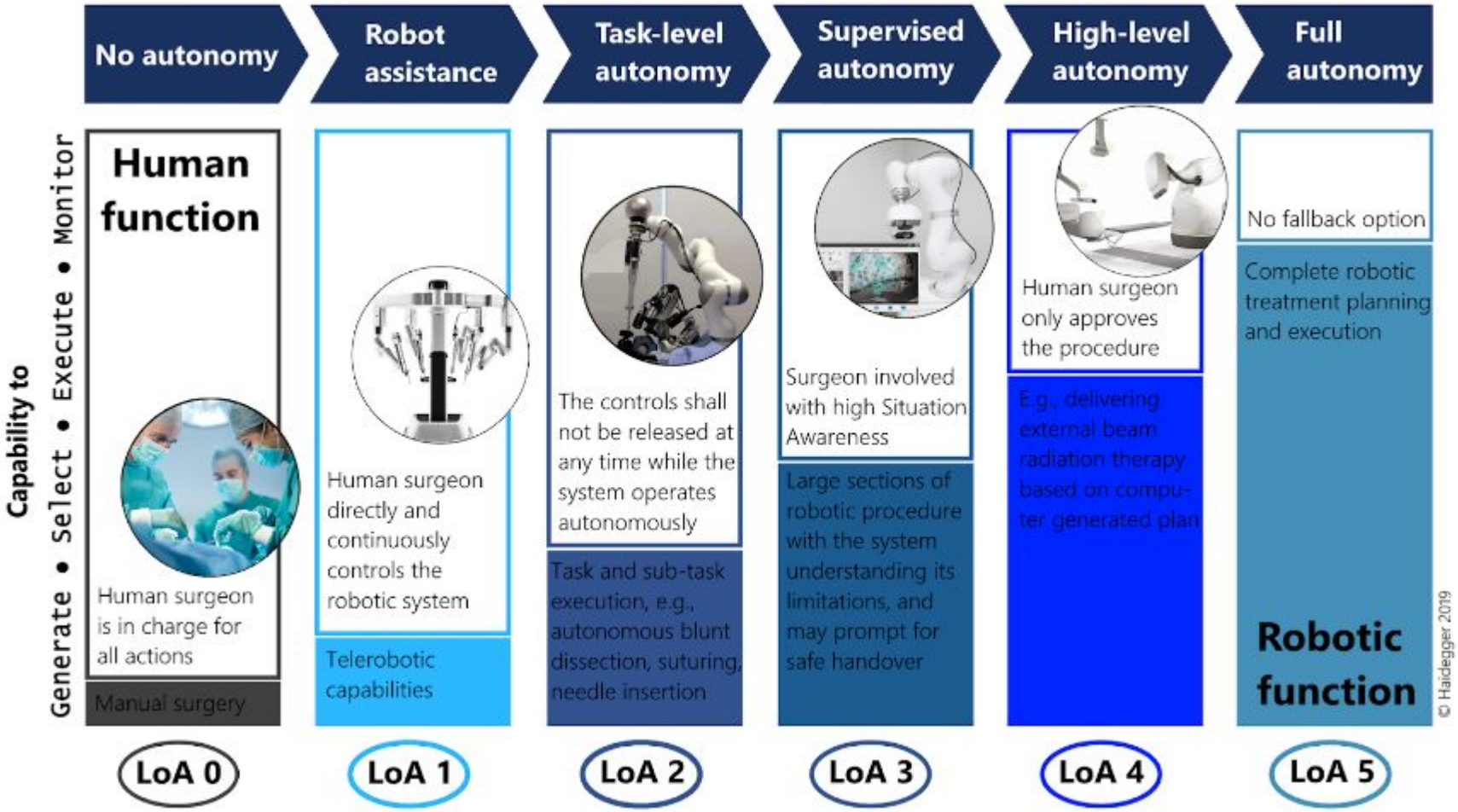
Orthopedics

Visceral (MI) Surgery

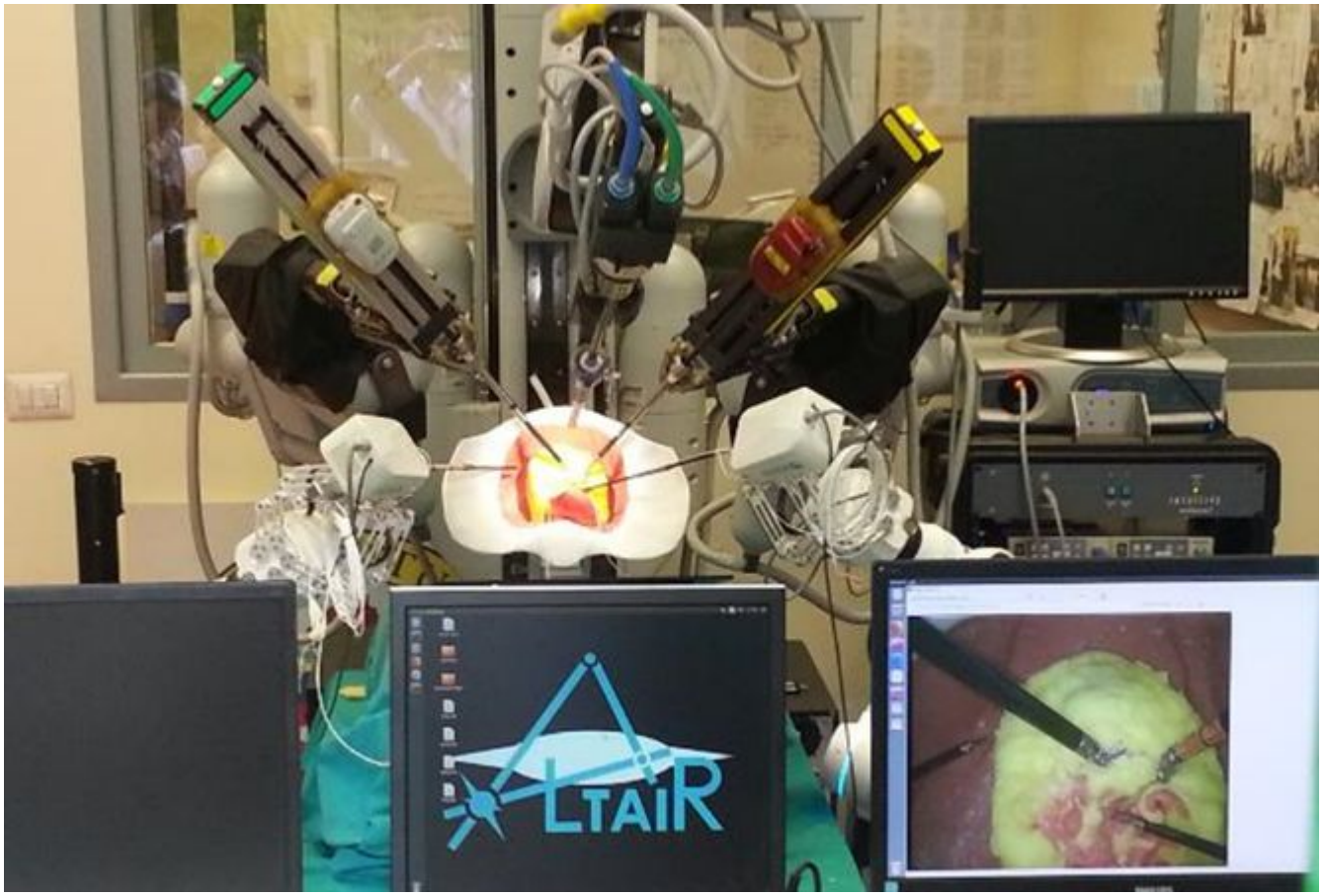
What the future brings?

- More?
  - More competition to be expected (e.g. patents running out)
- Cheaper?
  - More competition may help to lower cost
- Smaller?
  - Might help to integrate to existing environment/workflow
- Added value / improved patient outcome proven?
  - Clinical trials still needed!
- Autonomy?
  - How much autonomy is needed/accepted for certain tasks?

Autonomy of surgical robots

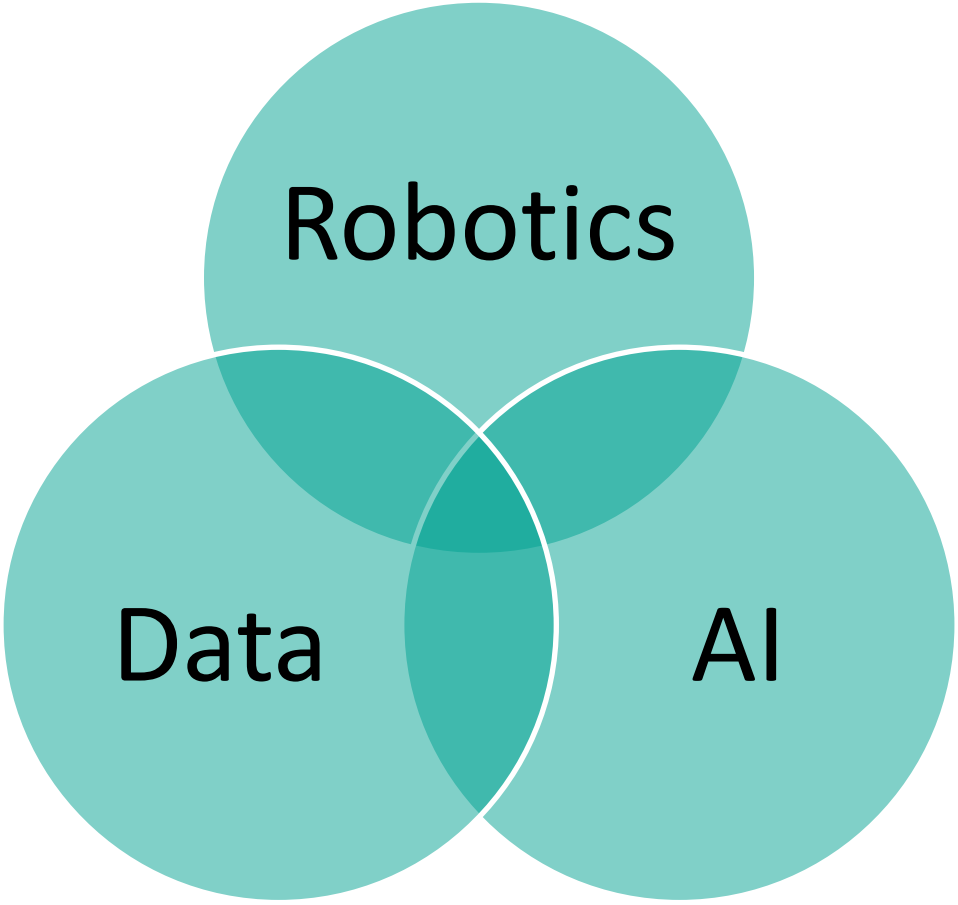


Autonomy of surgical robots



Example: H2020 SARAS

Autonomy of surgical robots



Example: Horizon Europe „AI, Data and Robotics Partnership” (Cluster 4)

THANK YOU !

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