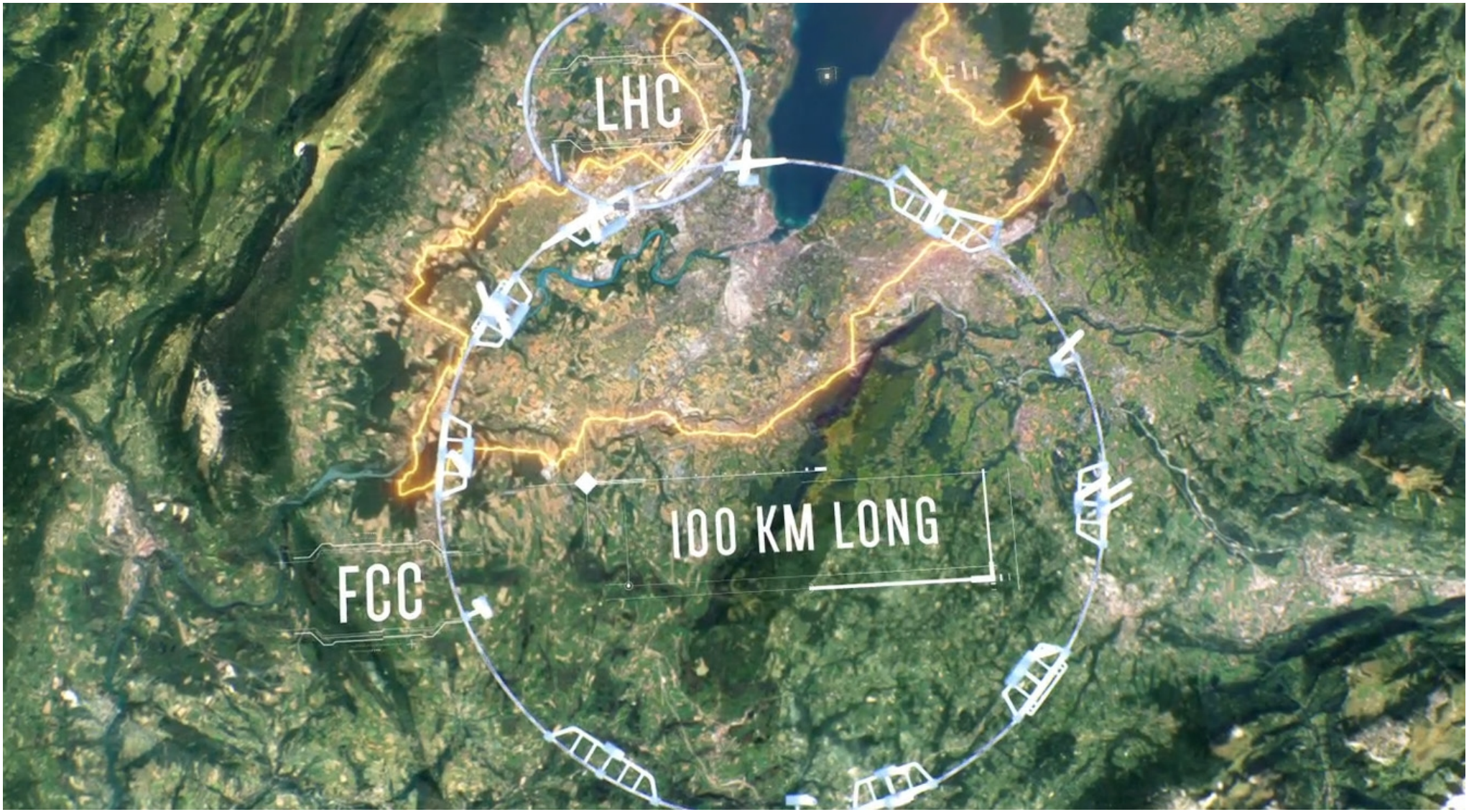
FCCR

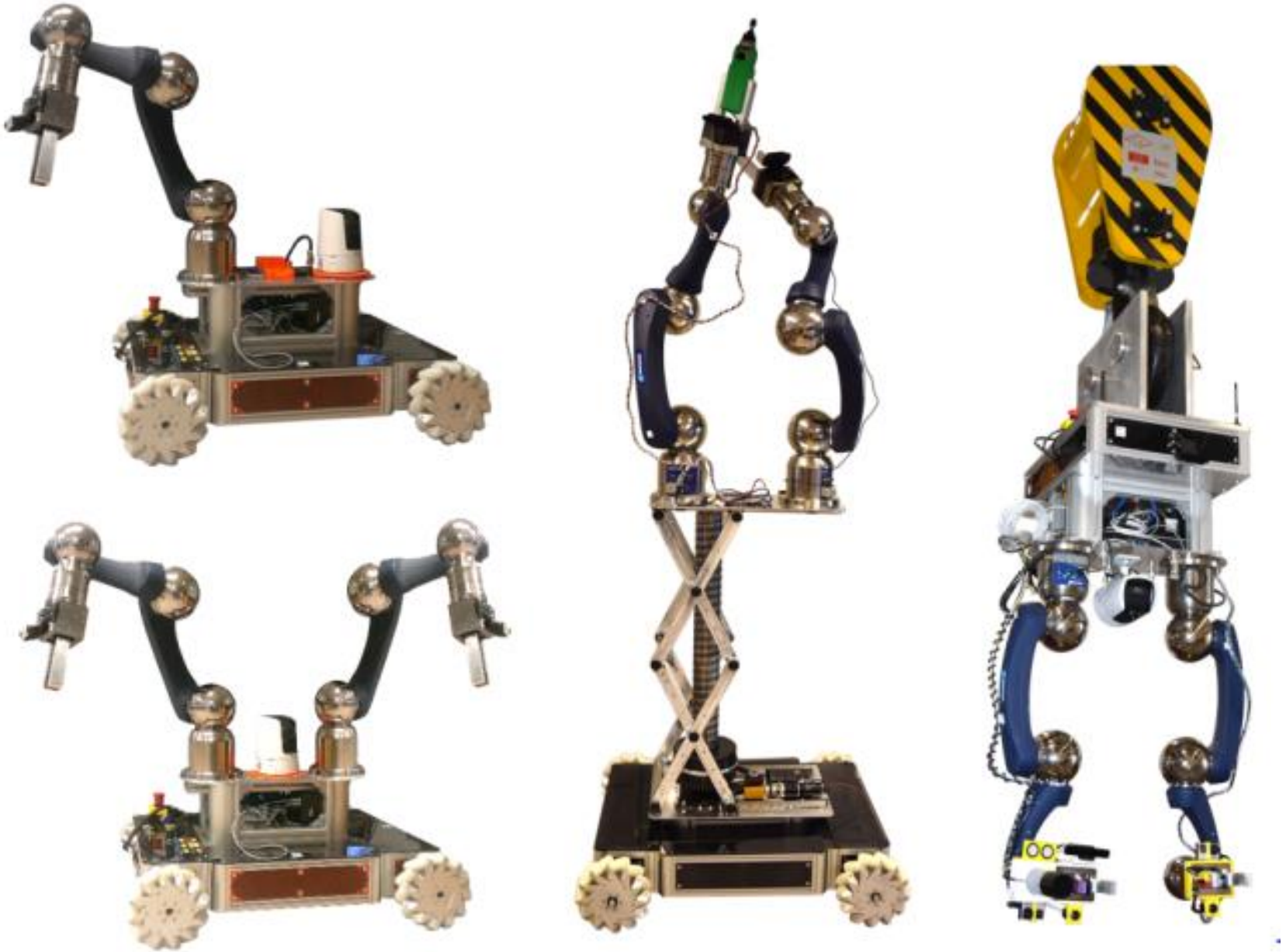
The challenges of the FCC



The challenges of the FCC

- Everything is scaled up
- Increased manpower requirements
- Long travel distances

CMS robots



A proven and tested system

- Focuses mostly on radioactive waste disposal and simple repairs
- 116 interventions, 250 tasks in the last 40 months (November 2018 report)
- ~110 mSv saved during that period

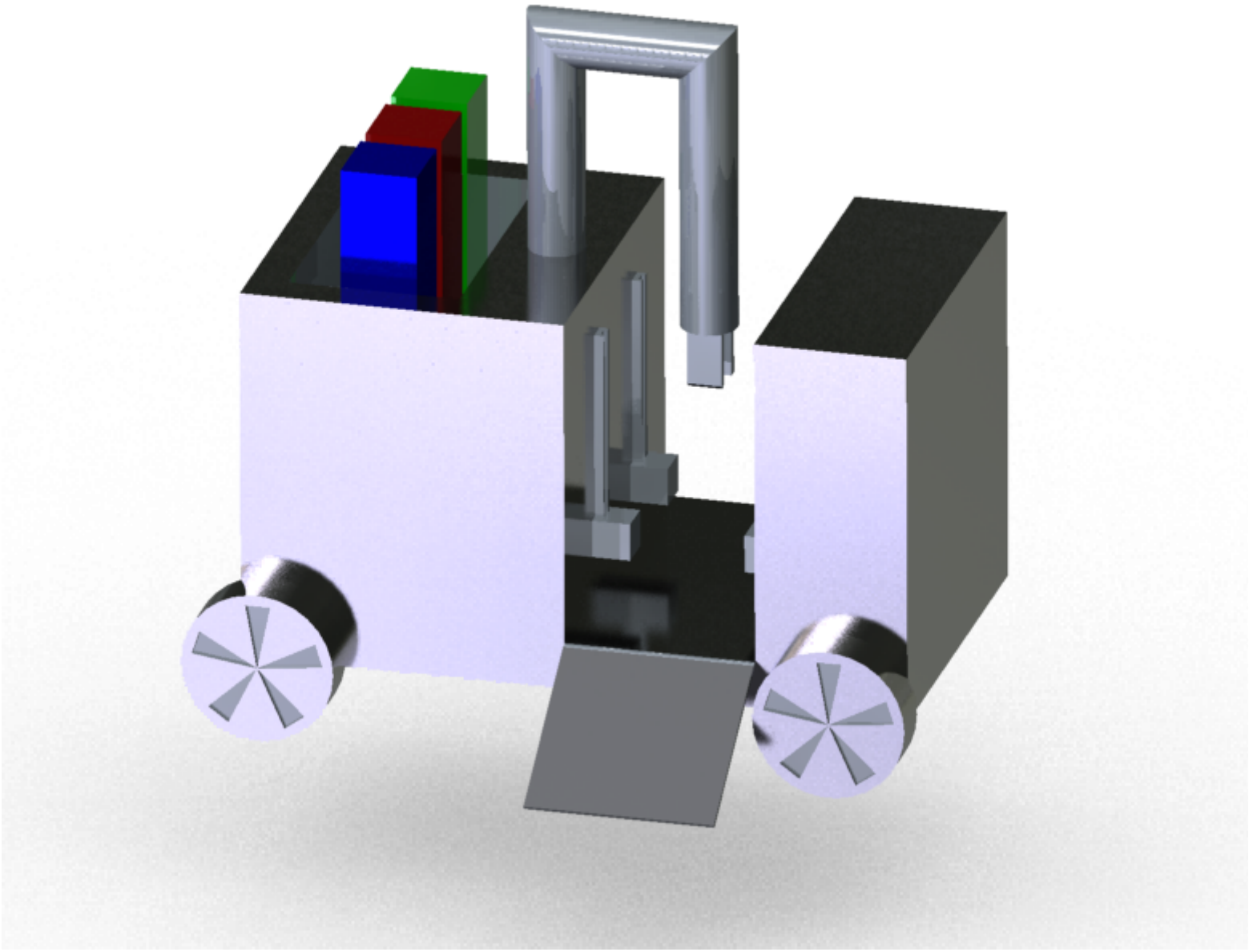
However

- Limited types of actions
- Currently transported manually to locations
- The arms are manually mounted every time
- Limited update-ability

Transport

- If manual transport is slow and inconvenient
- Let’s make a smart bus that delivers robots !

The project



Advantages

- Fast
- Unmanned
- No “downtime”
- Multiple deployments are way easier

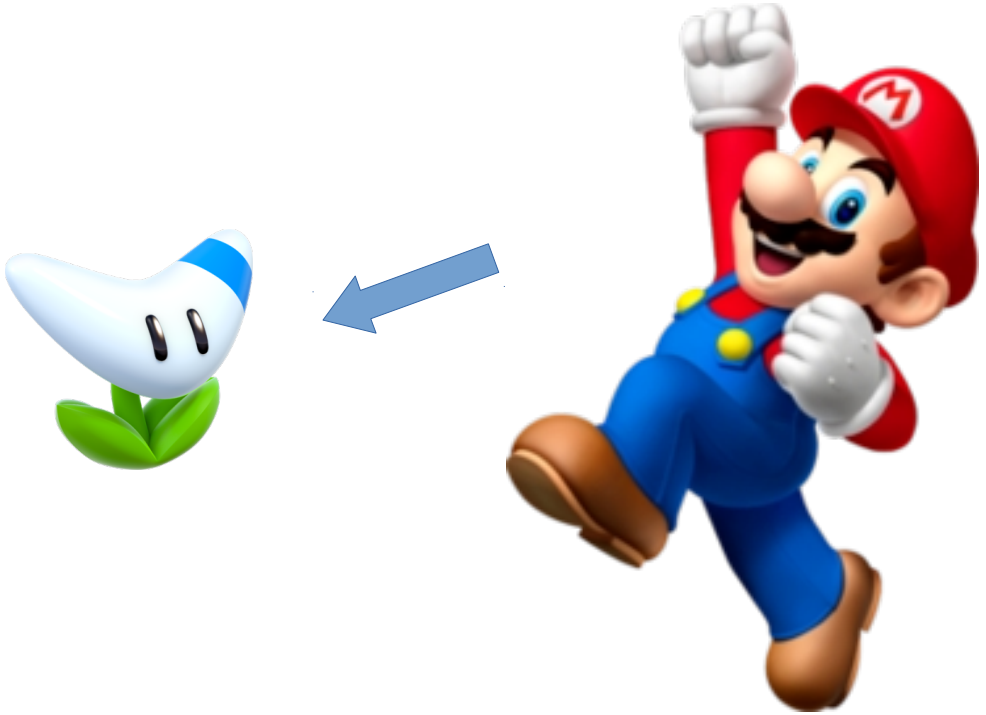
Cloth makes man

- Normally, you need a proper set of skills to use complex tools
- A toque won’t make you a chef, a hammer and an anvil won’t make you a blacksmith

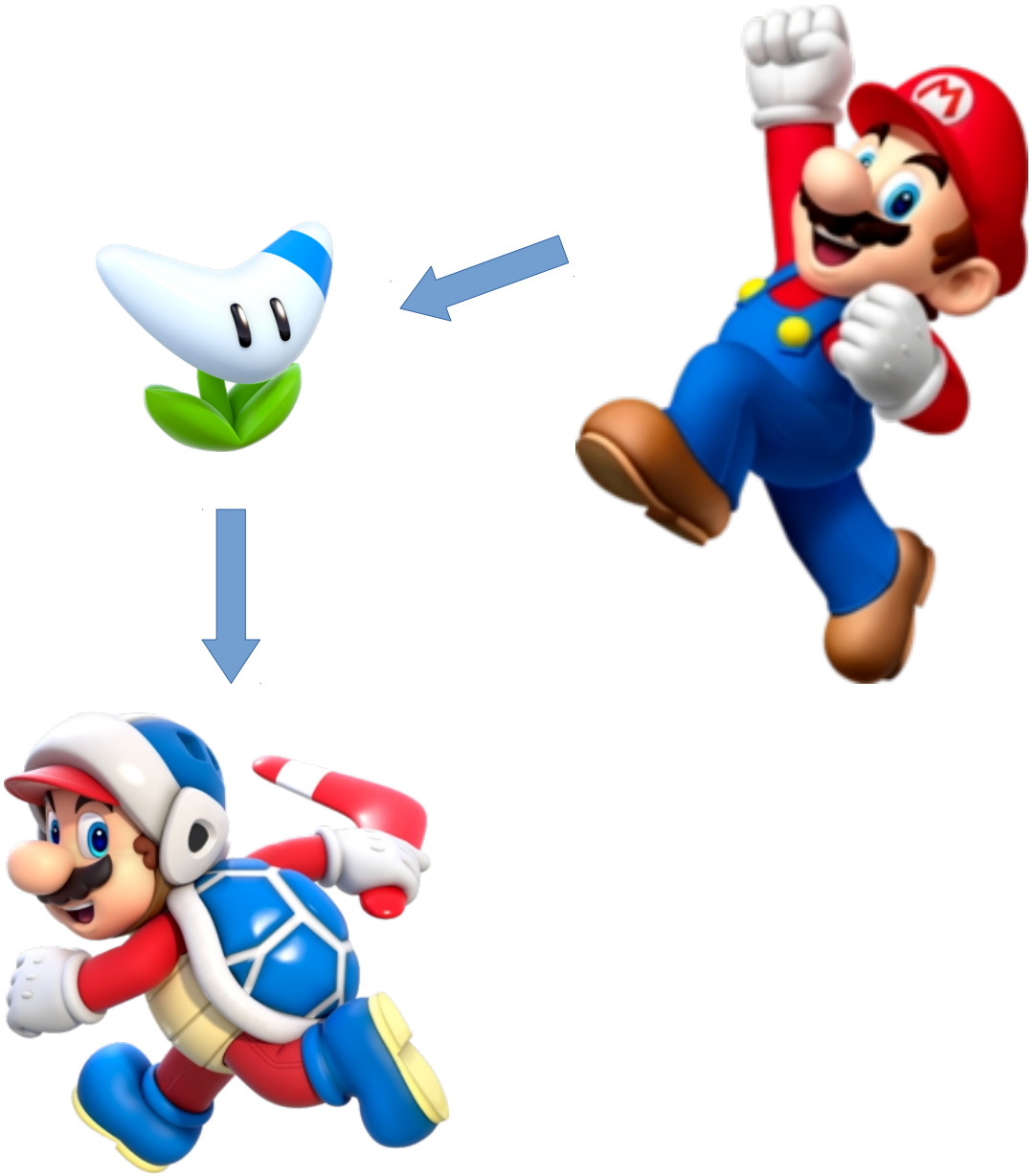
What if it did ?

Cloth makes man

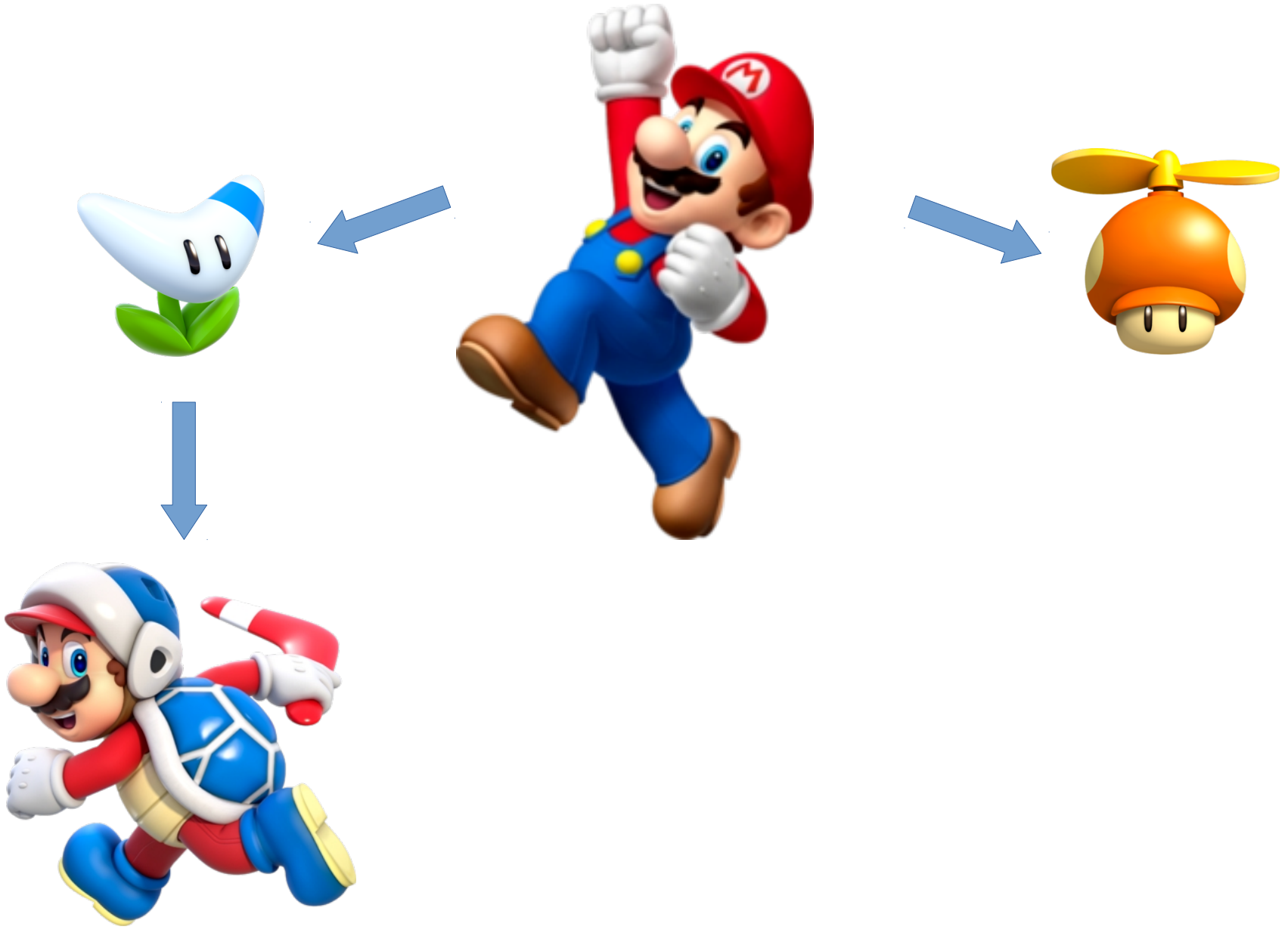
Cloth makes man



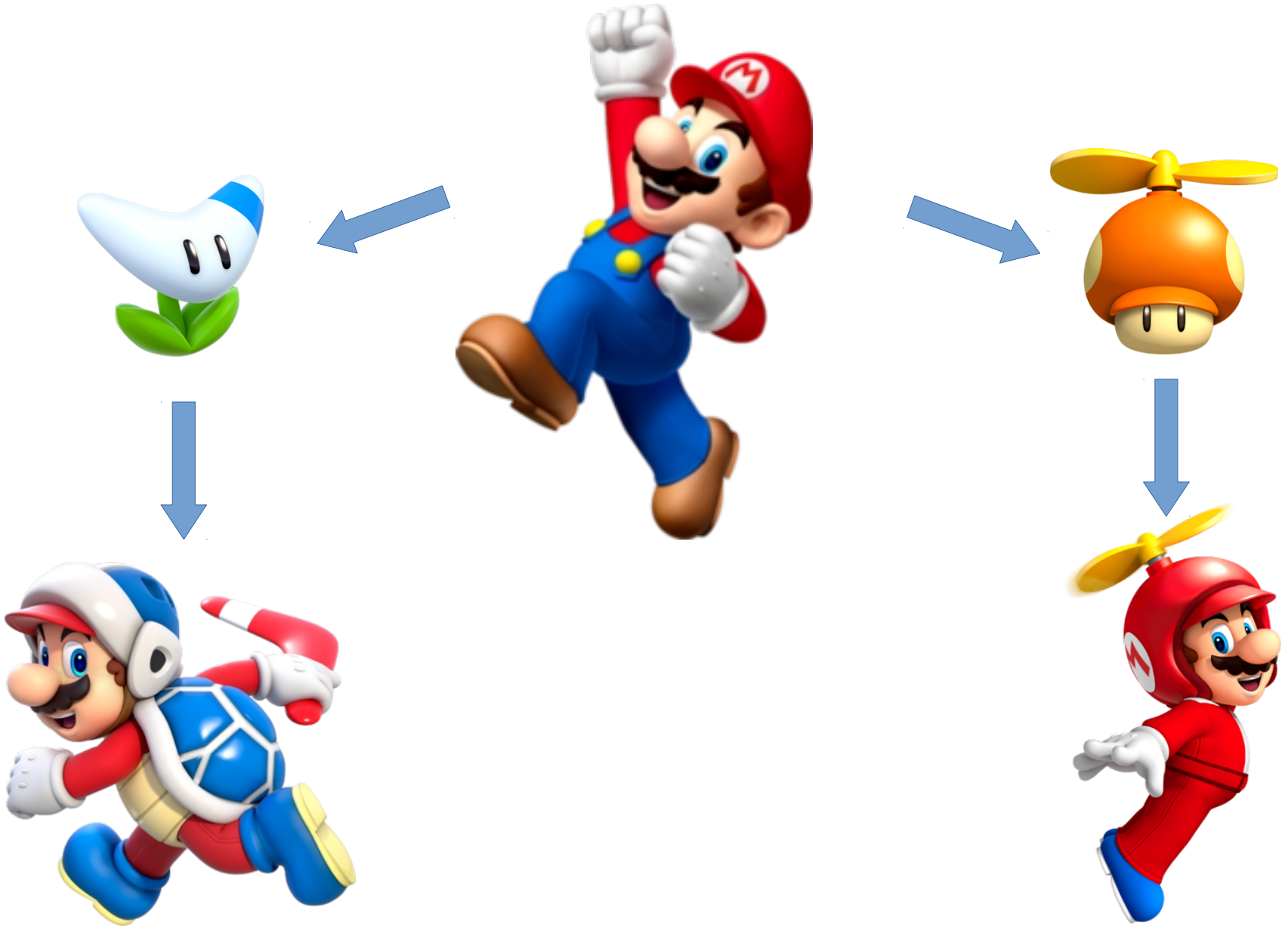
Cloth makes man



Cloth makes man



Cloth makes man



Simple protocol selection

- As long as the FCCR is properly geared, it already knows what to do
- Avoids any overcapacity issue as specific software is stored directly into the modules
- No update required to use a new item

Robots teaching robots

Robots teaching robots

- Both parts work with machine learning
- The modules learn how to be operated, then teach the bots
- The bots recognise issues and and learn what modules they need to solve them, then teach the bus