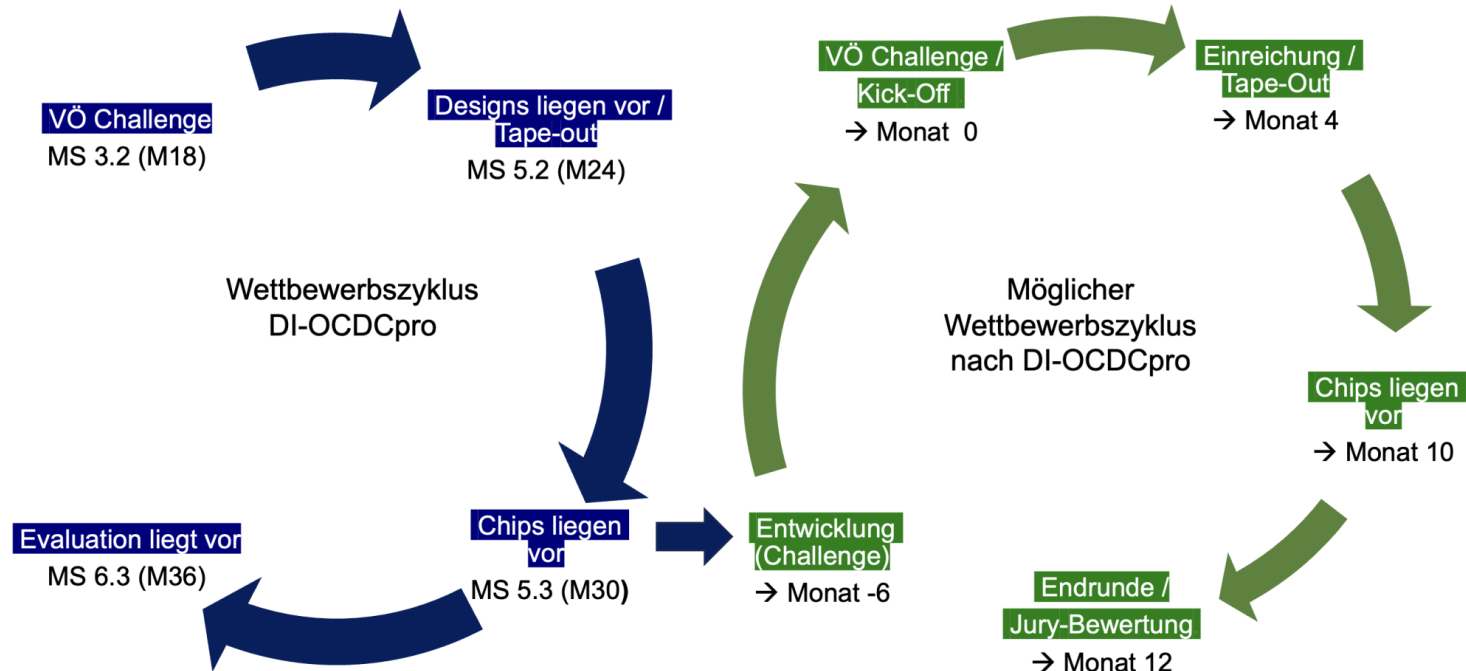
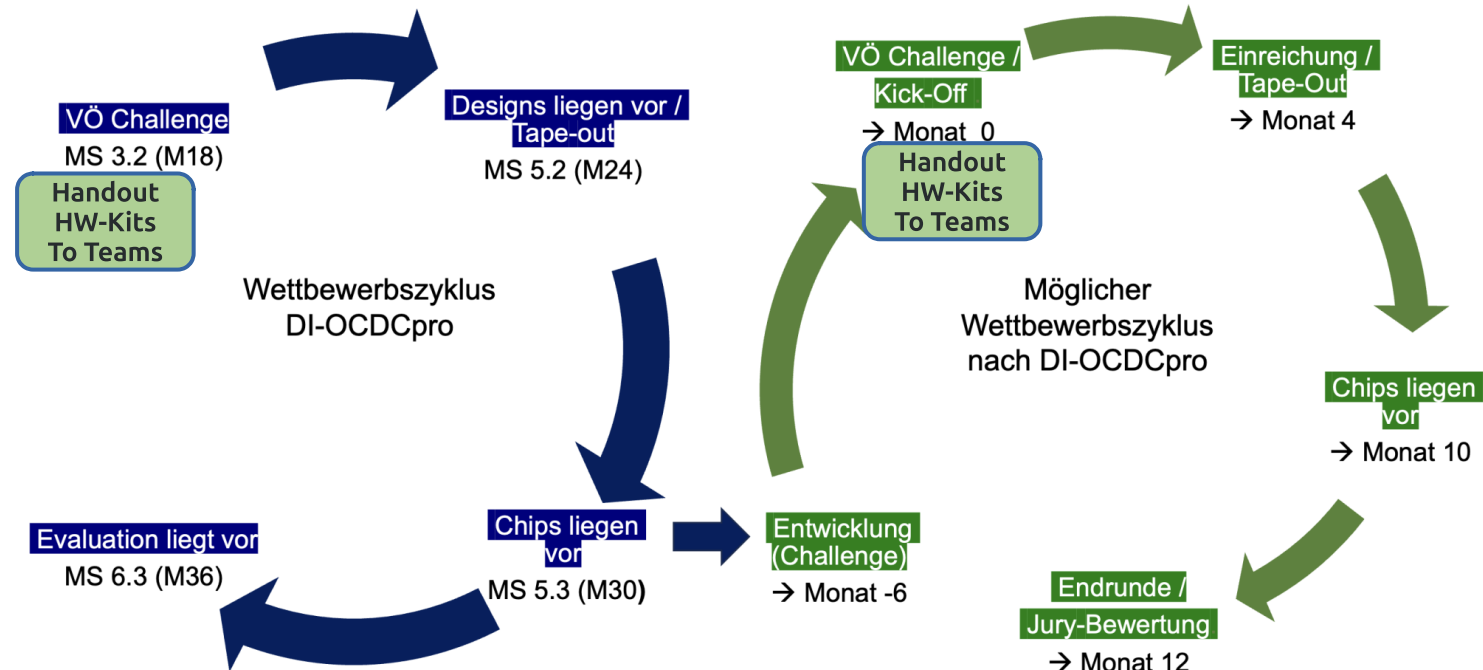


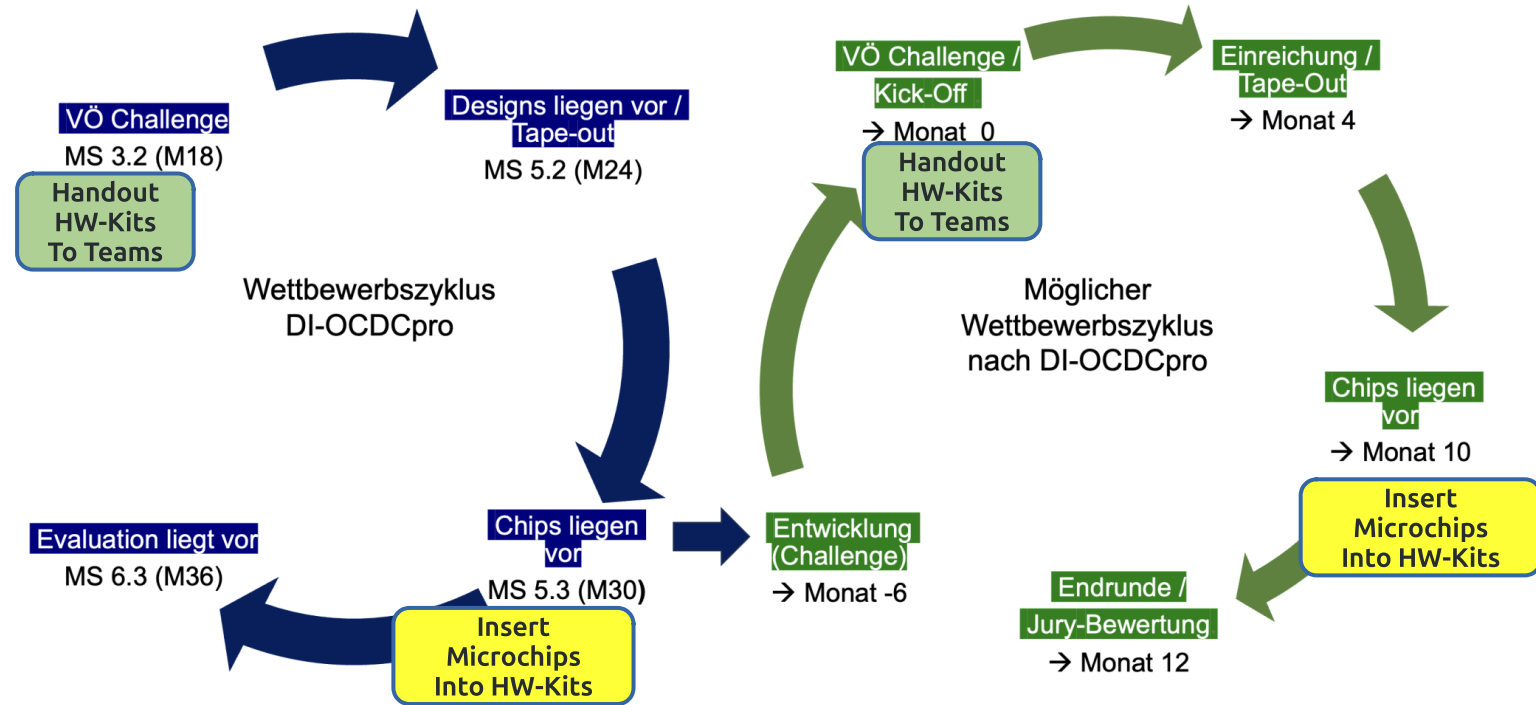
AP 5: Demonstrator



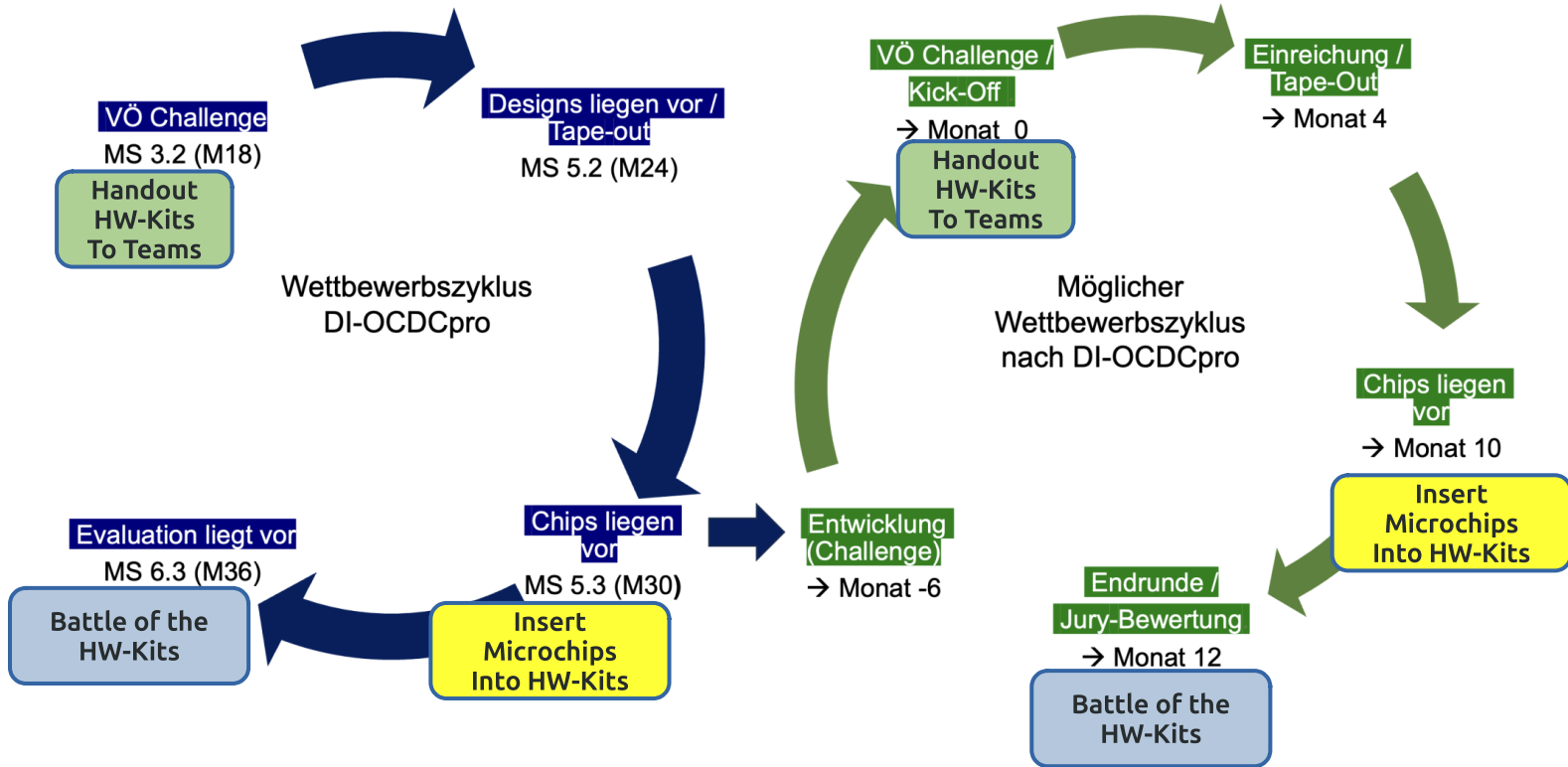
Give HW-Kits to Teams

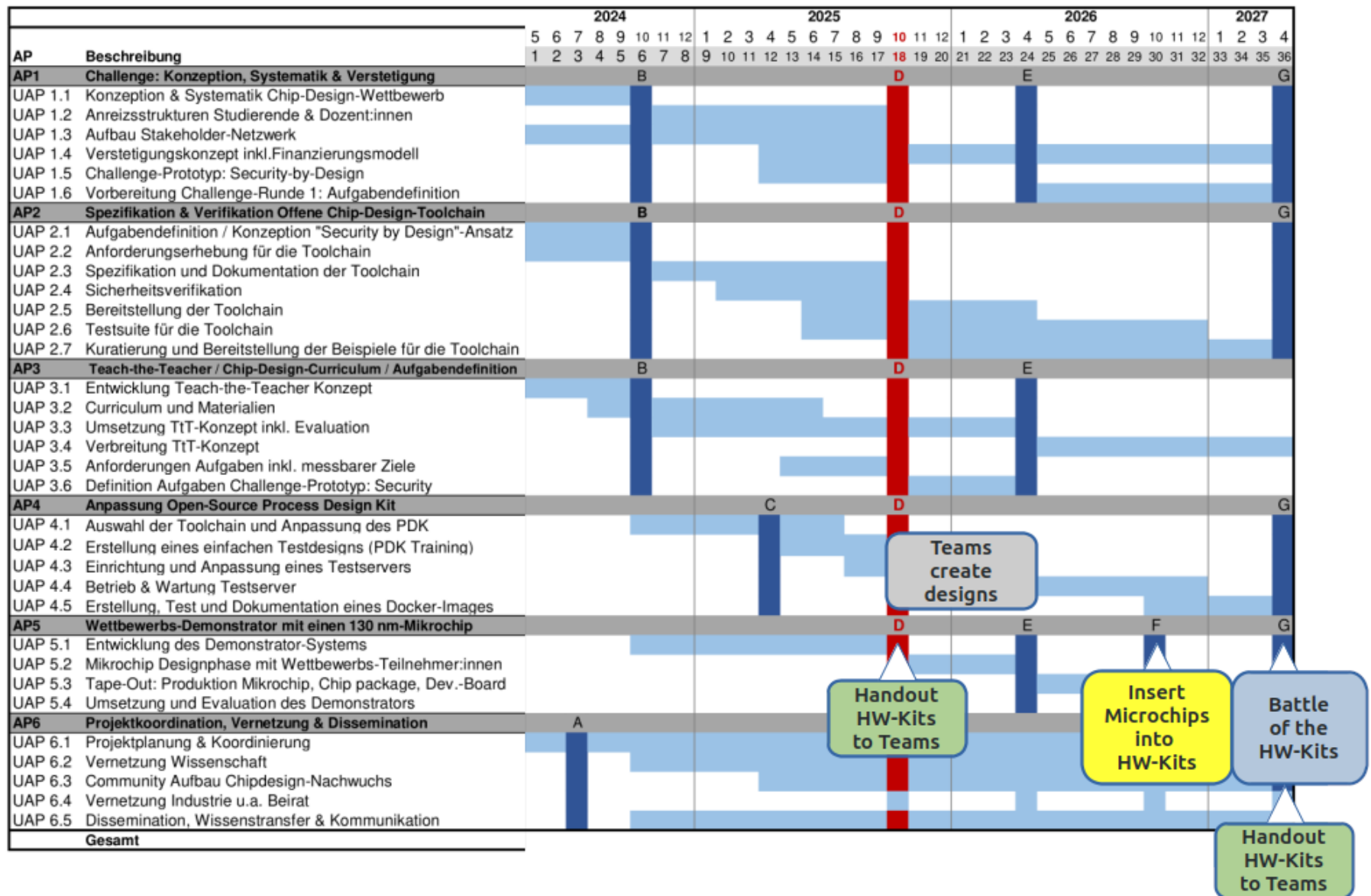


Insert Microchips into HW-Kits



Battle of the Microchips (HW-Kits)



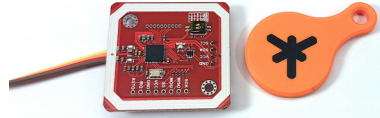


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HW-Kits for the Teams:

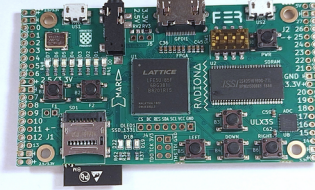


NFC / RFID
keys

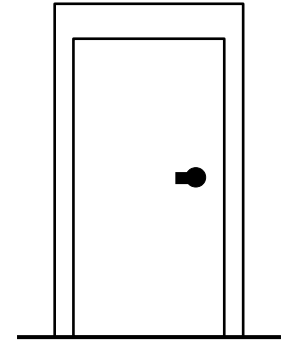
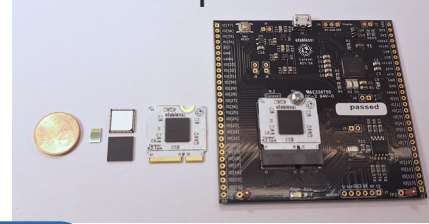


NFC / RFID
reader

During design:
FPGA



In competition:
Microchip



Door:
t.b.d.

Electronic
key

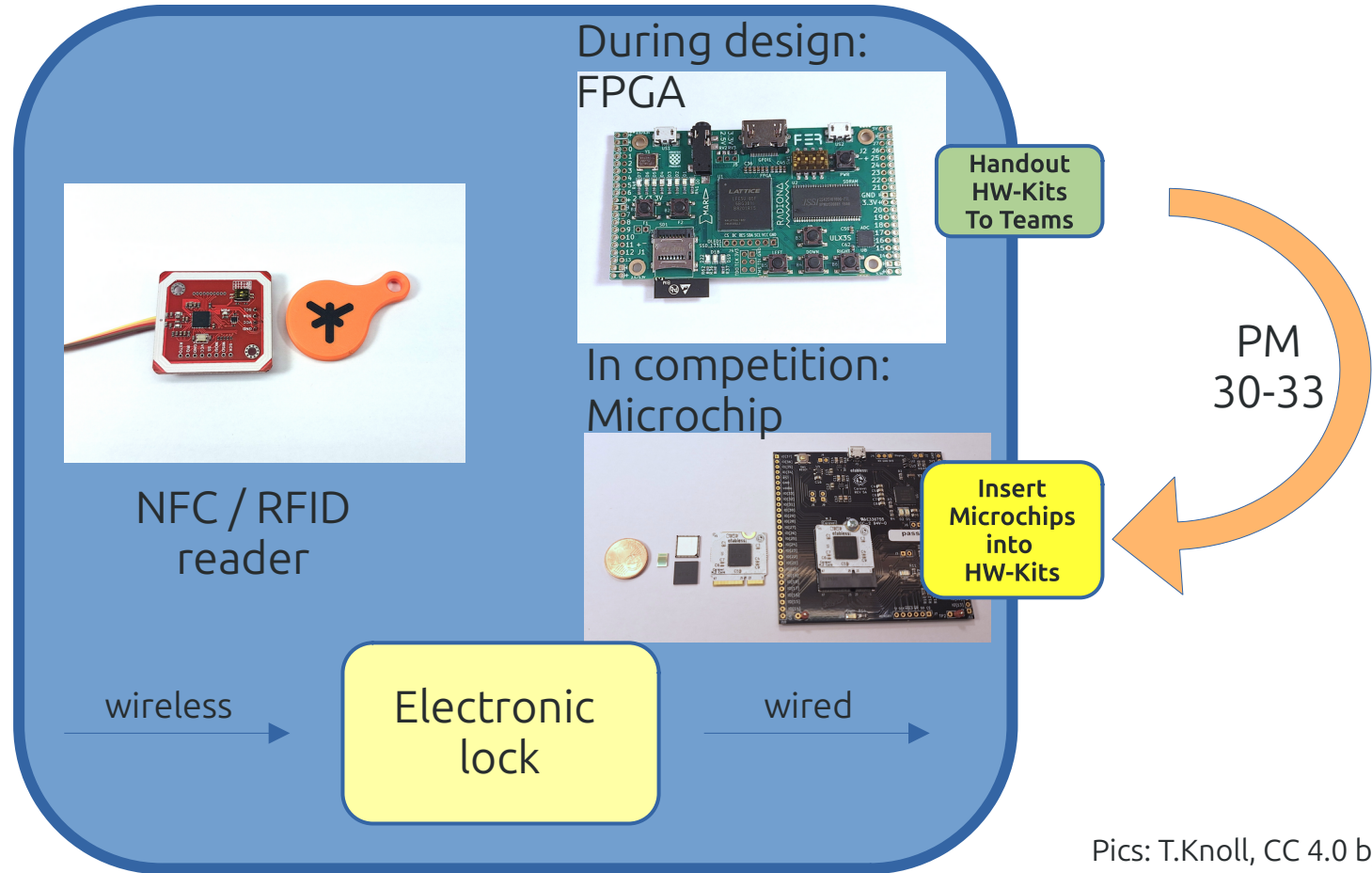
wireless

Electronic
lock

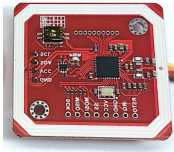
wired

Electro-
mechanic
handle

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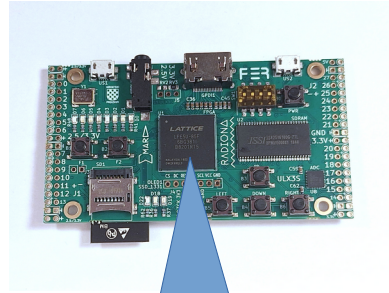
HW-Kits for the Teams:



NFC / RFID
reader

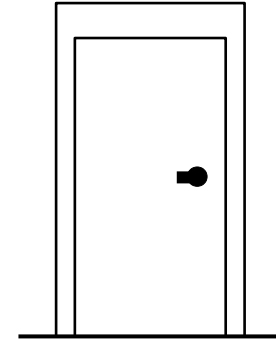
Serial protocol
I2C ?

4-8 wires



One pin high?

2 wires



Door

Chipdesign from Teams:

- Verilog HDL (generated?)
- Teach the teacher
- Security by design
- Verification
- PDK

Tools:

- FPGA: YosysHQ releases
- ASIC: OpenROAD stable

FPGA:

- ECP5 Chip (Size LUTs?)