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## Motivation

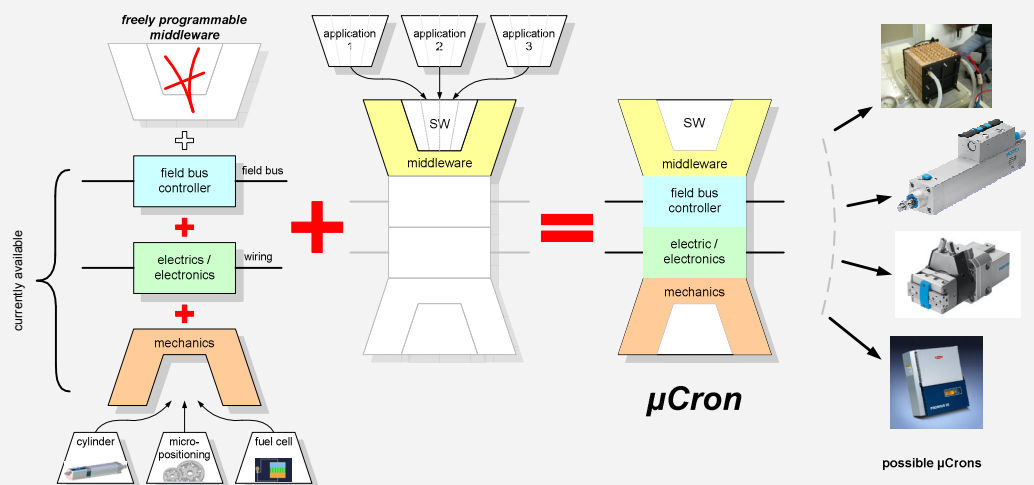
- Future markets demands urge
  - For „real-time-adptable“ equipment for production of goods, energy and service
  - No downtime &
  - Minimal cost for change

## Project aims

- Zero Downtime of distributed embedded real-time systems during operation and maintenance
- Middleware for reconfigurable execution of standard compliant PLC programs on extremely resource limited distributed embedded processors in mechatronic devices ( $\mu$ Crons)
- Distributable control system that supports real-time reconfiguration together with real-time execution
- Support of both – time triggered – and event based execution model
- Support “value added engineering”

## Project objective

- Real-time constraints specification
- Migration of software components across controllers
- Predictable real-time execution
- Execution model



A  $\mu$ Cron is the mechatronic assembly of mechanic, hydraulic, pneumatic, and other parts with electric, embedded computing, networking and software level components to an intelligent, reconfigurable, user-programmable device.