

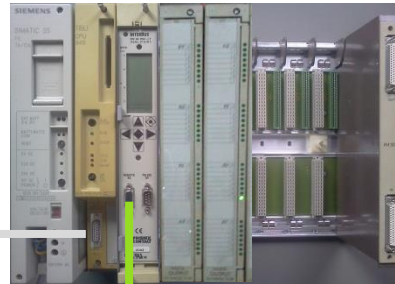
# Interbus Proxy

Plant modernisation with  
ABC IT Systems

# Current Condition

- Simatic S5 PLC-System 115U
  - Central rack
    - CPU 945
    - Interbus activation IBS S5 DSC /I-T
    - Digital input/output cards
  - STEP5 program
  - Decentralised Interbus peripherals

STEP5



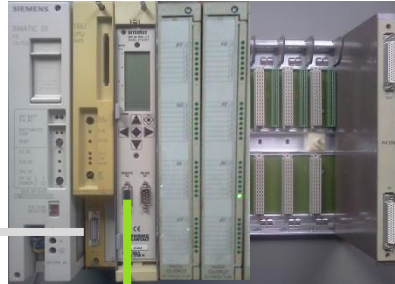
Interbus Modules



# Current Condition - Assessment

- S5 components to be discontinued
- Procurement of spare parts difficult and expensive
- **Interbus system can be retained**
- System expansion is difficult

STEP5



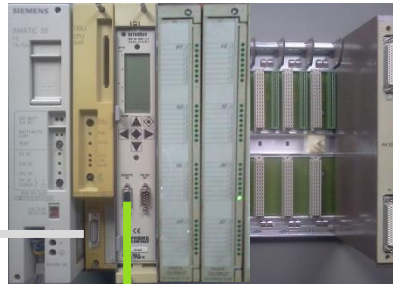
Interbus Modules



# Modernisation targets

- Replacement of CPU945 with ABC X-CPU-2 m57 PN (STEP 5 and STEP 7 programmable).
- Conversion of STEP5 program into STEP7 (optional).
- Replace S5 Interbus activation with Profinet Interbus proxy.
- Replace local I/Os with PN slave.
- Replace 115U rack.
- Creation of performance reserves.

STEP5



Interbus Modules

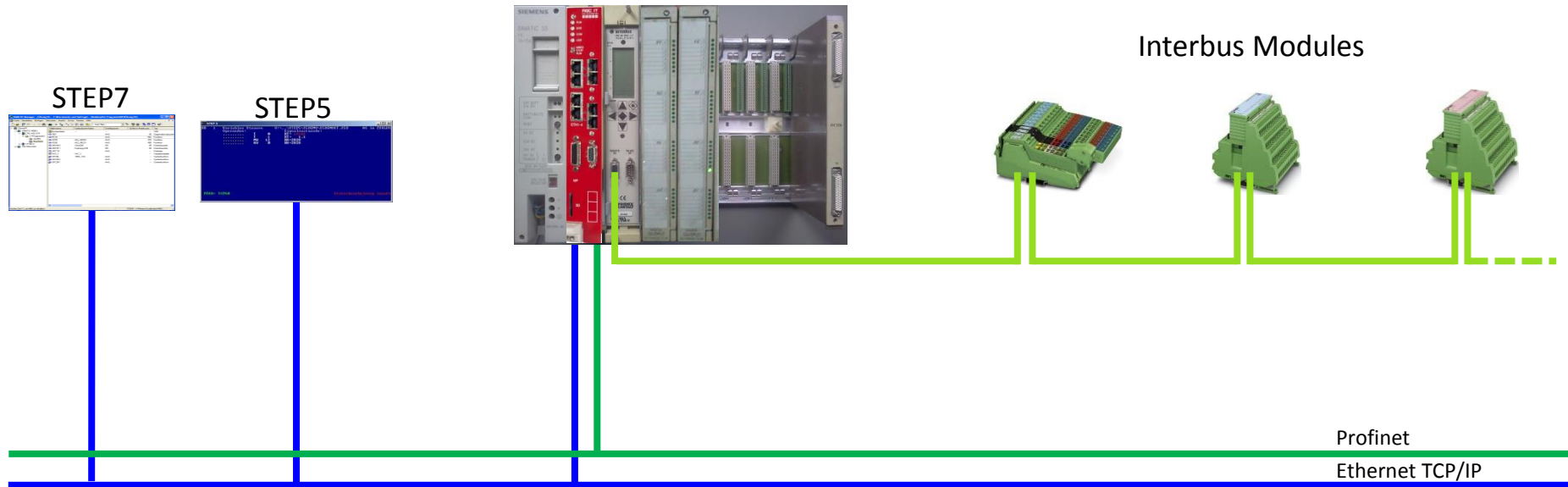


# ABC retrofit - concept

- ✓ The ABC retrofit concept constitutes the basis for the expansion and modernisation of Simatic S5 system controls.
- ✓ The costs for the individual modernisation and conversion phases may be precisely specified (cost control).
- ✓ Systems will be modernised according to the state-of-the-art over a planned period of time (planning reliability).
- ✓ No additional system downtimes during the individual phases of modernisation.

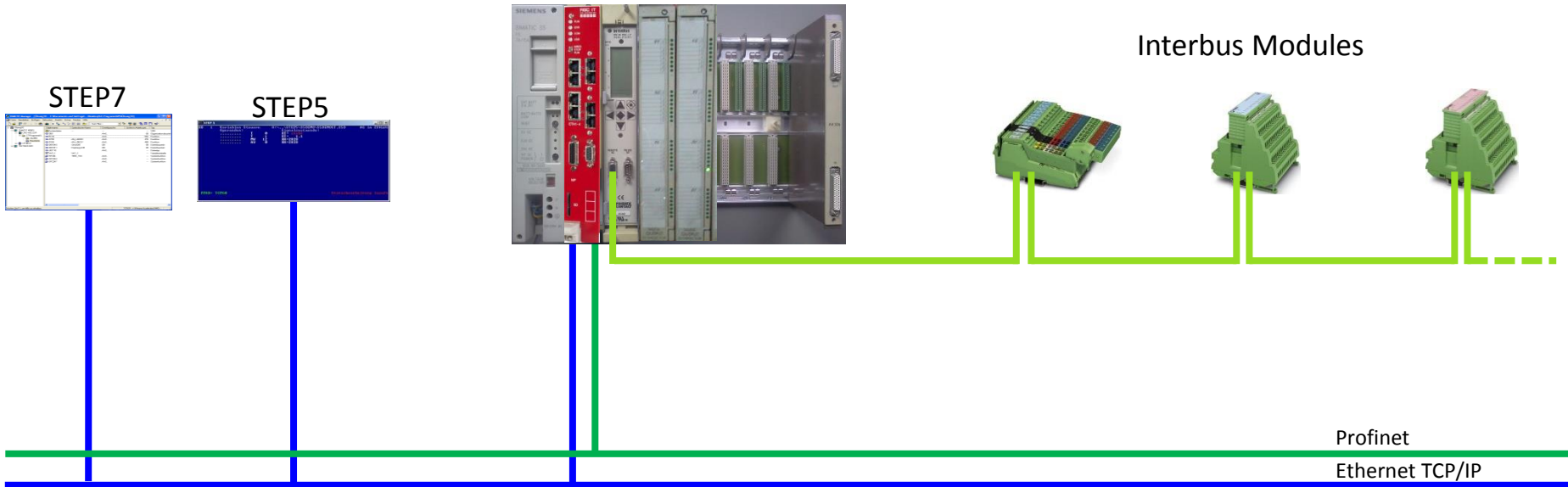
# 1.1. Replacement of CPU945 with X-CPU-2

- Free review of the S5 software.
- Software customisations for mixed operations with S5 and S7 (optional).
- Program pulled from existing CPU945.
- The power to the existing control will be switched off, the CPU945 will be replaced with ABC X-CPU-2 m57 + Profinet Extension.
- Ethernet connection to ABC X-CPU-2 .
- Loading of the S5 program with STEP5.
- Test run / production with ABC X-CPU-2.
- Phasing out easily possible.



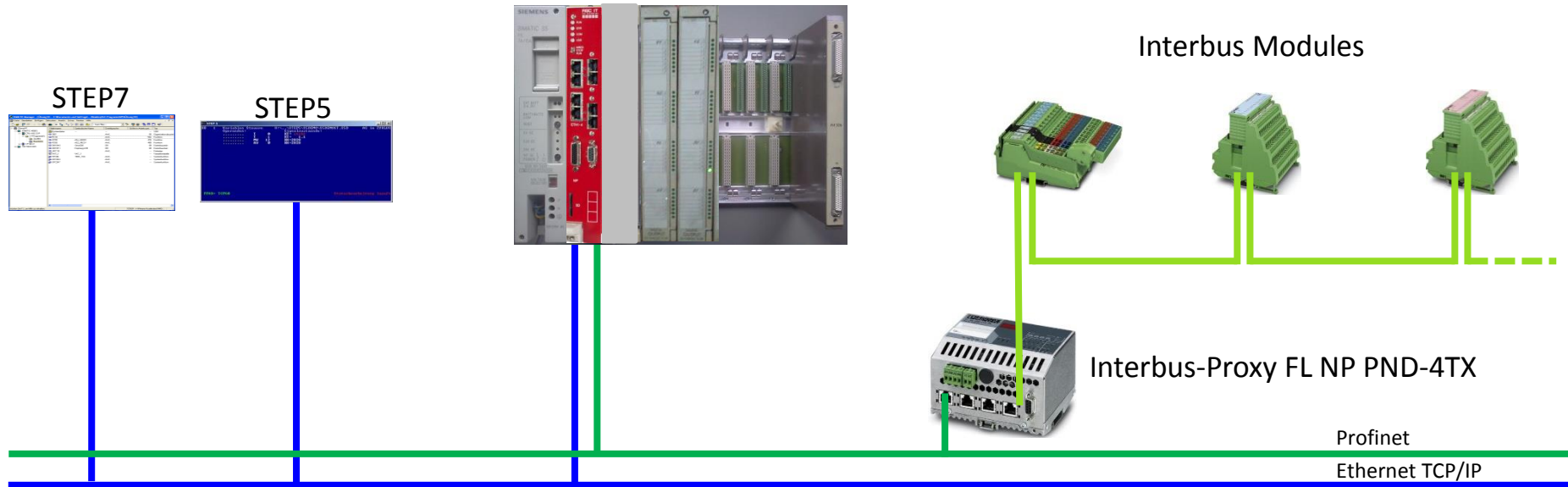
# 1.2. S5 conversion into S7 program (optional)

- S5 program will be converted into an S7 program.
- Software customisations for special component groups in STEP7.
- System will be stopped.
- The S7 program will be loaded into ABC X-CPU-2 with STEP7.
- Test run / production with STEP7 program.
- Phasing out easily possible.



# 2. Replace Interbus IBS S5 DSC /I-T

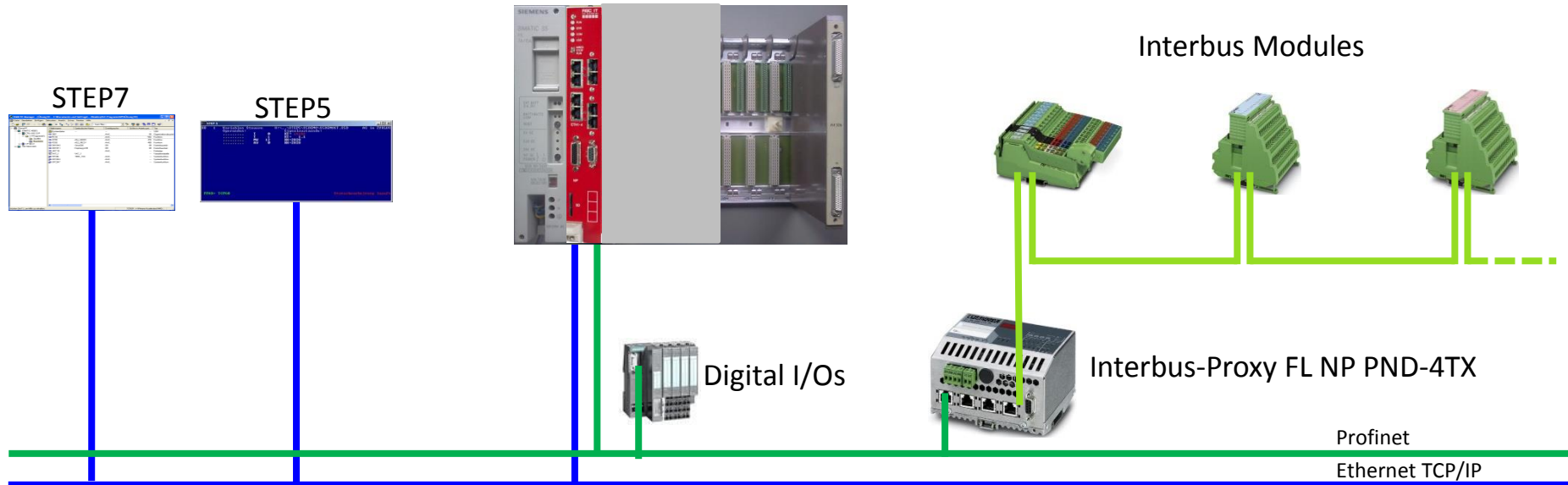
- **Interbus configuration is created with the help of the GSDML file in the Profinet configurator. (no Phoenix configurator necessary)**
- Dismantle Interbus IBS S5 DSC /I-T from the system.
- Install PHOENIX Interbus proxy FL NP PND-4TX and connect to Profinet extension.
- Connect existing Interbus line to proxy FL NP PND-4TX. (Also available for fibre-optic cable)
- Test run / production with Interbus-Proxy.
- Phasing out easily possible.





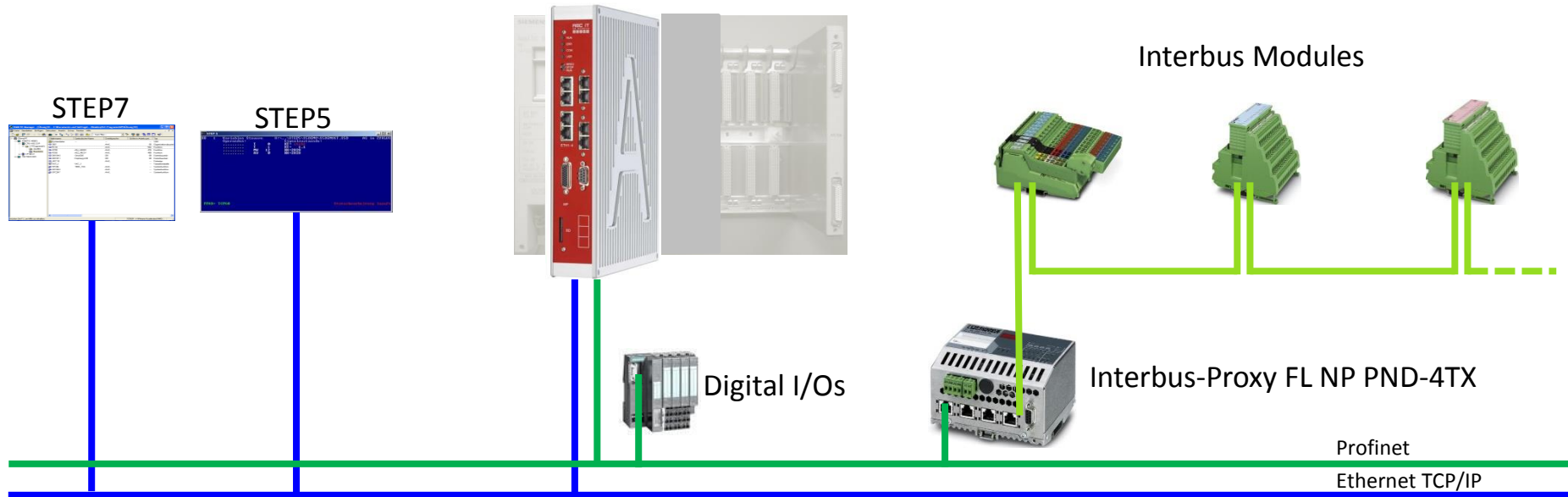
# 2.1. Replace input/output cards

- Remove input/output cards from the central rack and replace them with modern Profinet components.
- Adjust Profinet configuration.
- Test run / production



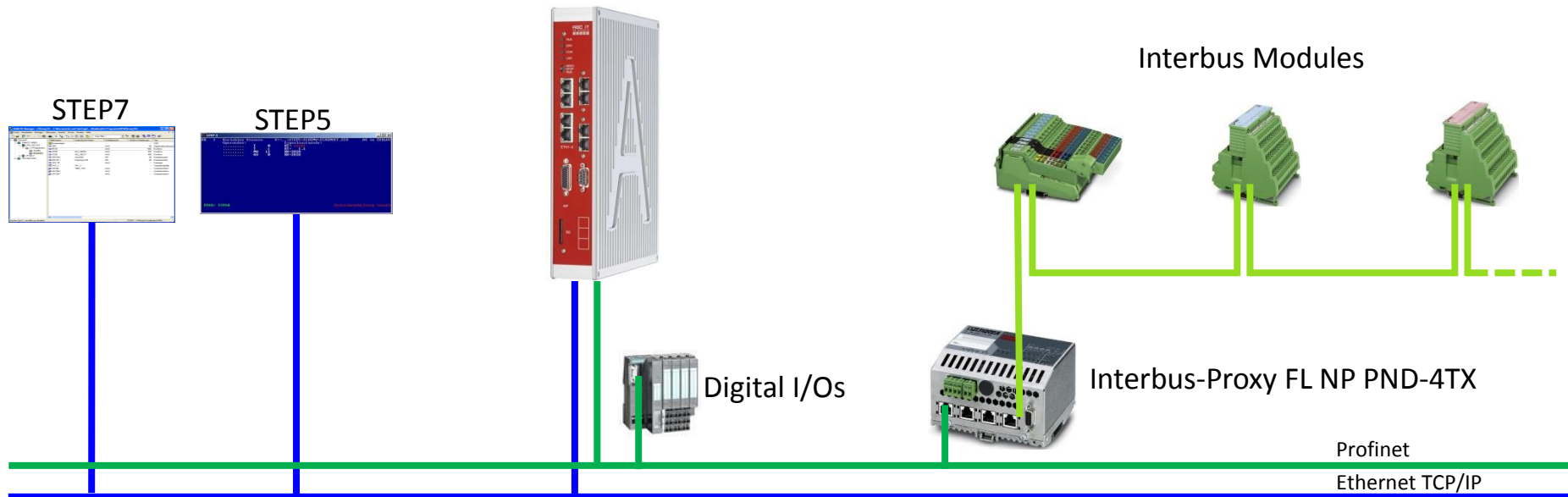
# 3. Removal of the central rack

- All Simatic S5 rack components are realised decentrally via Profinet.
- Only ABC-X-CPU-2 m57 still remains in the Simatic S5 rack (prerequisite for substitution).
- The ABC-X-CPU-2 m57 with Profinet extension is integrated into a compact housing.
- Housing is supplied with power.
- Power supply unit and rack can be dismantled.

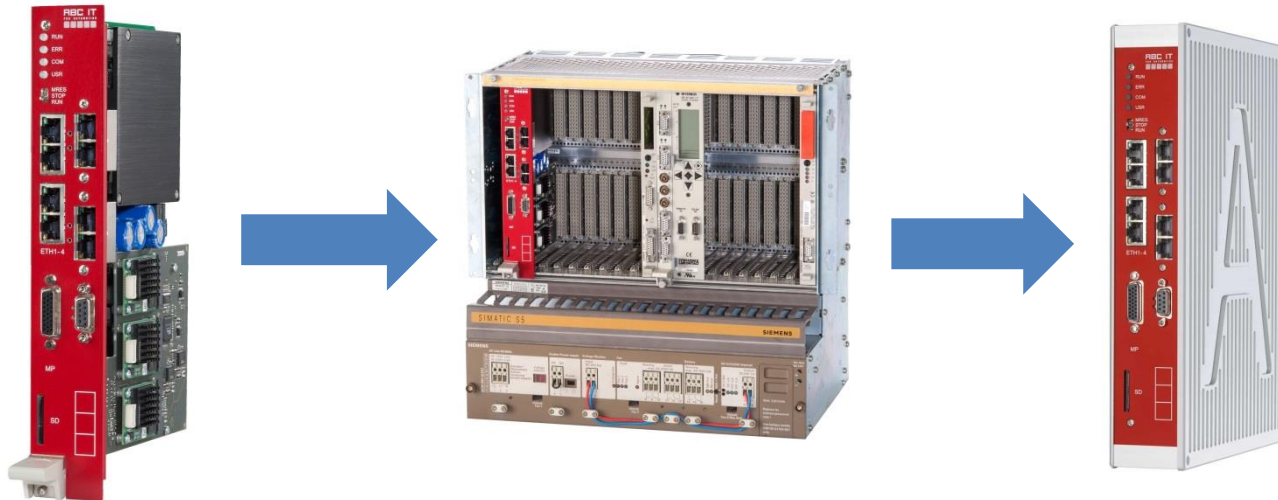


# System modernised to be future-ready

- Interbus can remain in operation or be replaced by Profinet.
- The S5 program can be converted into a S7 program (optional).
- Expansions can take place with Profinet and in S7.



# ABC components



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