

**ABB AG - Calor Emag Medium Voltage Products** 

#### Medium Voltage Solutions Modular Systems

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- ABB offers MV Switchgears as turn-key Solutions
  - Care-free Packages
  - ABB's 'Modular System'
- Such Projects includes ...
  - ABB MV Switchgear
  - Other ABB products
  - Non-ABB products
  - Services (especially project and site managers)



## Medium Voltage Solutions – Modular Systems Product scope



ABB MV Switchgear (ZX, UniGear, ZS8.4, SafePlus)

- Other ABB products
  - Distribution transformers (Liquid filled, Dry, type RESIBLOC)
  - I<sub>S</sub>-Limiter and UFES
  - Basic station automation (Com or RTU)
  - Low voltage switchgears (MNS, TriLine)
- Non-ABB products, e.g.
  - Cables, Cable tracks, Fire walls,
  - Earth termination system,
  - · False floor,
  - DC supply / Battery back-up
  - Concrete stations (compact/ walk-in)



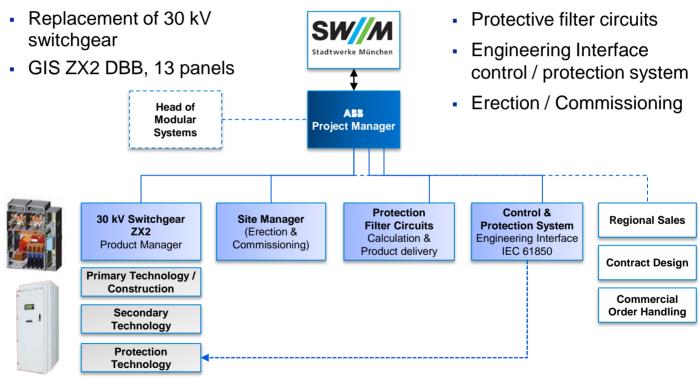
## Medium Voltage Solutions – Modular Systems Service scope



- ABB project manager
  - Coordination of all activities (whole project lifetime)
  - Organization of time schedules and meetings
  - Communication to sub deliverers
  - Managing interfaces to provided products
- Site manager (supervising all erection & commissioning activities)
- Small Engineering services, e.g.
  - Interfaces between control and protection system (IEC 61850)
  - Short-circuit calculations
  - Schematic diagrams for interconnections of products in scope and other interfaces
  - Cable listing and cable layout

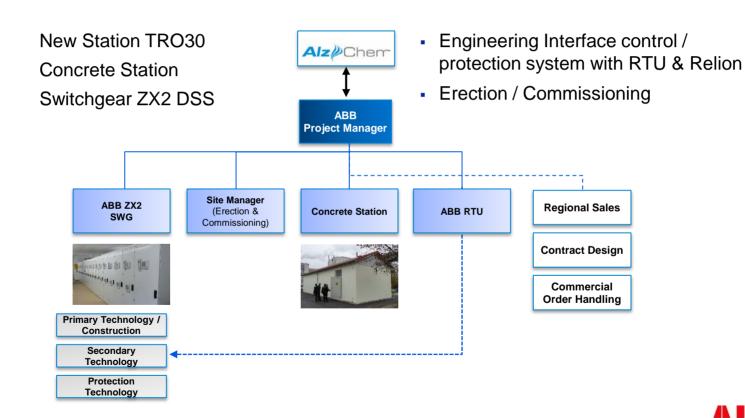


### Medium Voltage Solutions – Modular Systems Project reference: Stadtwerke München





### Medium Voltage Solutions – Modular Systems Project reference: AlzChem, TRO30, TRO23



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