

Background challenge

- Scale up x60 of CPU and x10 storage by 2026
 - Assume ~x5 scaling from technology (Moore)
 - Remaining x10 from innovation and optimization
- Possible new data centre
 - PUE <1.1
 - 15-20kW density
 - 4MW equipment load with staged growth to 12MW
 - Shared facility for LHC experiments and IT
 - Very high bandwidth to experiment pits required

Some topics

- Logistics, racking, repairs
 - Warehouse automation
- Assets tracking & management
 - IoT for FRU tracking
 - Spare parts & stock mgmt.
- Inhomogeneous density
- Disaggregation
 - Component granularity
 - Lifecycle mgmt. & service level per device
 - Fault management
 - Future proof interconnect
- Rolling upgrades sleds/bricks/blade/drawer
 - Cable free *electrical* and *interconnect*
- Rack unit: proprietary or loosely coupled
 - Sourcing upgrades
- SDI & Integration with tool-chain
 - Provisioning, configuration, monitoring
- Any convergence among disperse initiatives RSD, OCP, Open19,..