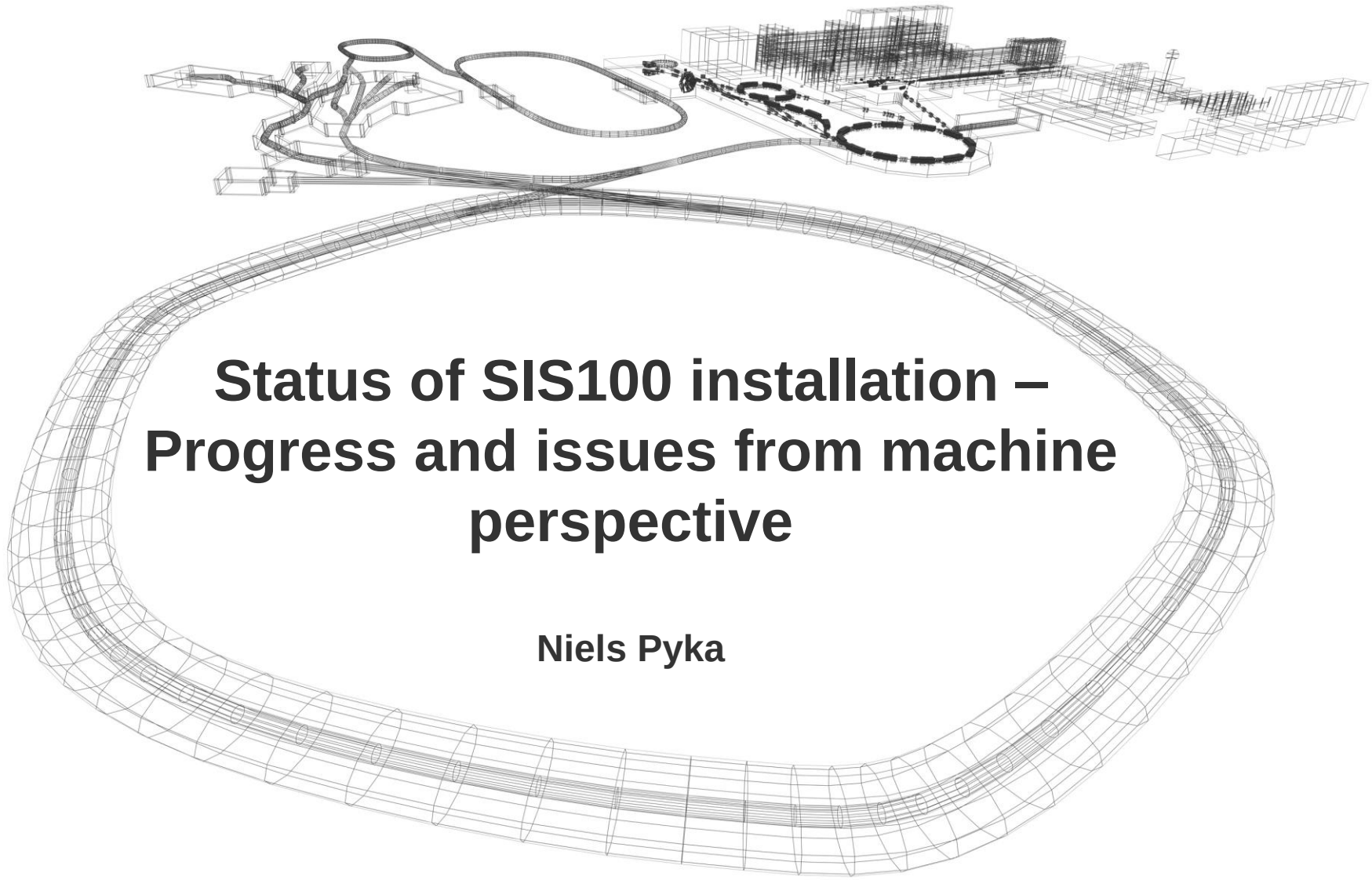

Status of SIS100 installation – Progress and issues from machine perspective

Niels Pyka

Status of SIS100 installation

U10_U20_cryo-niches

- **GE Vernova Main Power Supply installations**
- **Delayed start but on good track now**
- **End of installation 1/2026**
- **Commissioning planned Q1/2026 (with dummy load)**

- For details see talk of V. Plyusnin

U30 cryo-niches: local cryo installations

- No installation yet, but first CLB delivered

- For details see talk of M. Kauschke

Status of SIS100 installation

U30 accelerator tunnel

- **Length** of the ion target track: 1084 m, thereof 82% are cold
- Installation started 3/2024
- At present **29%** of the total length is attached to the ground
- Estimated completion: 3a

- For details see talk of H.J. Löcker

Status of SIS100 installation

U30 supply tunnel

- A variety of racks, power supplies, power converter to be installed (additional racks from ACO etc. are not counted below)

- In total 737 pc, 51% installed, some are still empty
- Estimated completion: 2/2027 (basis: last 10 months)

- For details see talk of M. Draisbach

Status of SIS100 installation

U30 cable installation

- Preconditions for cable laying:
  - Cable routing, GSI check, correction, cable pull cards
- Start in Q4/2023: laying of 128 cables (mostly koax pc)
- Total number of cables to be layed: 20k pieces
- Achieved until week 33 / 2025: **53%**

- Estimated completion: Q3/2026 (basis: last 9 months)
  - Disabilities may lead to Q4/2026: different prioritization, issues with subcontractors, holidays etc.

- For details see talk of H. Welker

TBI installation to be continued

U30 Supply tunnel

- Ground marking, fire protection walls, pump sumps, rework (existing list) etc.

U30 Accelerator tunnel

- Ground marking, fire protection walls, exchange of fire extinguishing line, rework (existing list) etc.

- **Close coordination with TBI necessary**

- **Planning of parallel work in same areas necessary**

Requirements to assure SIS100 installation in time

REMINDER

Follow-up work is much more time consuming than floor installation of ACC assemblies only

Cancel outdated paradigms

- Cable laying must not determine the ACC installation
- Install all available ACC assemblies as fast as possible: complete cells should be no precondition
- Keeping comfortable free moving space in the ACC tunnel must not be an argument to not install ACC assemblies
- Start to equip electronic racks or PSUs in the supply tunnel even under not perfect room conditions

Requirements to assure SIS100 installation in time for commissioning

- Immediate commissioning of a second, external welding team (frame contract) to keep the time schedule and as backup
- Reinforcement of the SIS100 TRI team (6+1) for installation and immediate support of IFJ PAN
- Dedicated bridges for cable pulling between all fire protection walls to reduce risc of damage for ACC
- Resumption of the preparation of cable trays close to the ACC: without - no plugs; supply tunnel accordingly
- LCM planning: allow for much more parallel work (ACC & TBI)
  - Straights are 50m, arcs 130 m long! Definition of work by axis sections