



**EUROPEAN
SPALLATION
SOURCE**



Update from the Director General

IKON Meeting 18

JOHN WOMERSLEY

24 FEBRUARY 2020

ESS Highlights

February 2020

Progress continues

- No major new technical issues to report
- Critical path schedule stable since Spring 19

Important interventions continue on key procurement and in-kind deliveries

Licensing application and follow-up for commissioning of the Normal Conducting Linac remains on track

All internal processes to support reorganised ESS structure now in place

Good progress on refining the planning for initial operations within 810M€₂₀₁₃ envelope





ESS Highlights

Conventional Facilities

Civil construction remains on schedule

Steelwork erection for target building high-bay and for D03 instrument hall now underway

ESS offices and laboratory campus making rapid progress -
move-in
Q1 2021



ESS Highlights

Accelerator

Installation proceeding

- RFQ in commissioning in June
- DTL being integrated

Cryo-test stand cooled to 4K

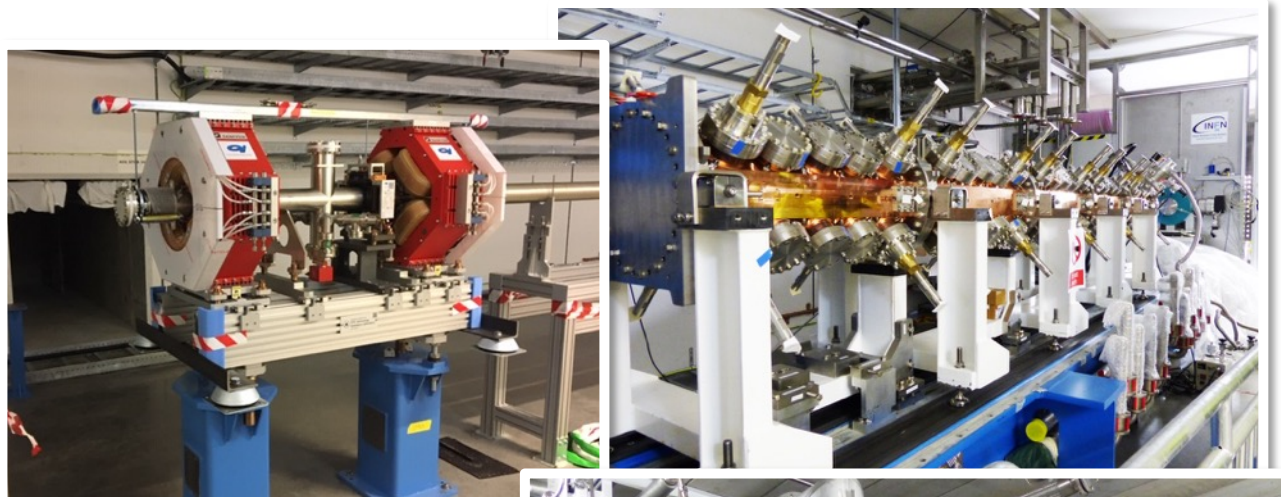
Key challenges

RFQ and DTL commissioning is delayed

Spoke cavity fabrication delays at IPNO - ongoing

Accelerator not on critical path for ESS BOT but float eroding

- *< 6 months remains (originally 14 mos, was 7 mos at Council.16)*
- *External project review (w/ Reinhard Brinkmann from PAC)*





ESS Highlights

Target

Installation proceeding

- High bay steelwork, hot cell, monolith shielding, tuning beam dump

Monolith vessel delivery May 2020

- Watching this closely, challenging fabrication, on-site QA contractor
- Cadinox (vendor) is working 24 x 7

Key challenges

Target BOT still shows 3-4 months delay

- *6-7 month impact of neutron beam port blocks has now been partially worked back*
- *Steel delivered, first block completed*





ESS Highlights

NSS

Bunker is in manufacturing

Instruments design phase complete – moving into construction

7 of “First 8” instruments endorsed by IKRC

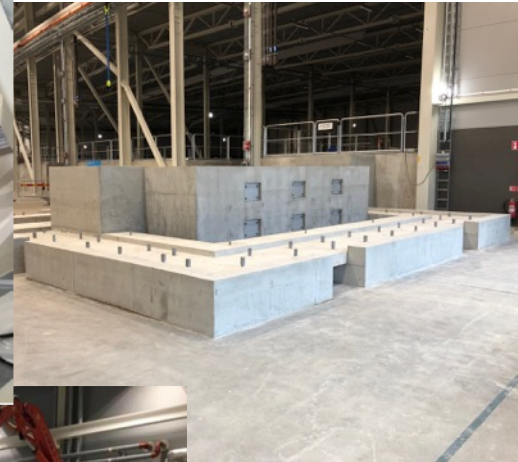
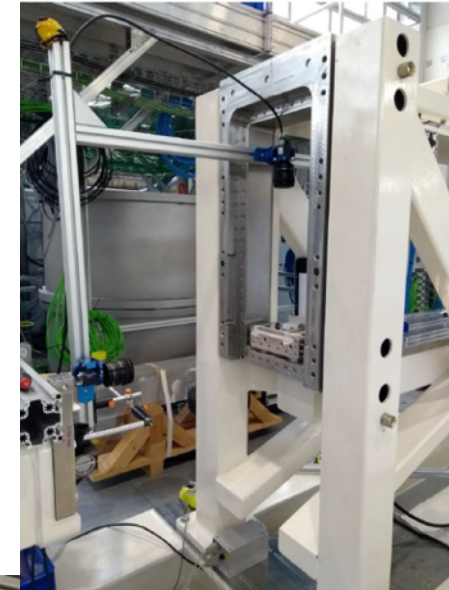
Common shielding, chopper and monitor designs developed

D03 building in construction

Key Challenges

Rapid ramp-up of work

Will review schedule of first 3 instruments during IKON



ESS Highlights

Installation and Integration

There has been a big ramp up of work in the second half of 2019.

Working across all areas of ESS

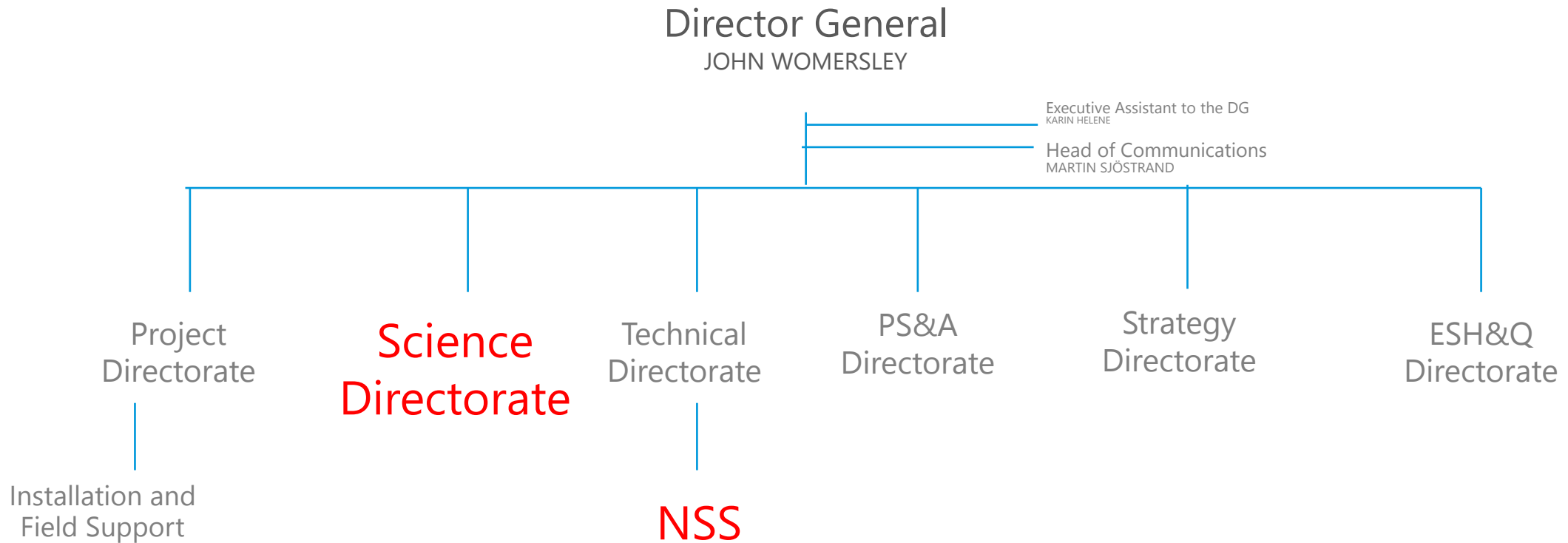
- *NC Linac*
- *Accelerator RF, cryomodules*
- *Target equipment*
- *ICS server room*
- *First instrument infrastructure in E01*

New organisational structure is the way to better deliver



ESS Organisational Structure

as of 1 October 2019





What we are watching

Schedule

- Especially in-kind deliveries. Nothing comes early and too many come late
- Quality must also improve to avoid additional delays for rework or returns

Cost to complete

- Project contingency is limited. Initial Operations Plan therefore contains funding for construction risk reduction.

Integration and installation is ramping up

Management agility and the need to intervene when necessary

- Issues on major procurements, and in-kind

Safety, Quality and In-kind

- Further developing existing framework and processes based on lessons learned

ESS Council

February 2020



Council noted that ESS is now 65% complete and progressing according to plan, well on track to deliver first science in 2023.

Council approved in-kind contributions to a value of 44 million Euros

- FREIA (STFC), T-REX (Jülich, INFN, CNR) and MIRACLES (ESS Bilbao)

Discussions about the Initial Operations financial plan for the full period leading up to steady-state operations in 2026 progressed, and will continue during 2020.

Outreach and External Relations

Canadian Neutron Initiative

Meeting with 17 university vice-presidents and the chief scientist of Canada

LENS and LEAPS

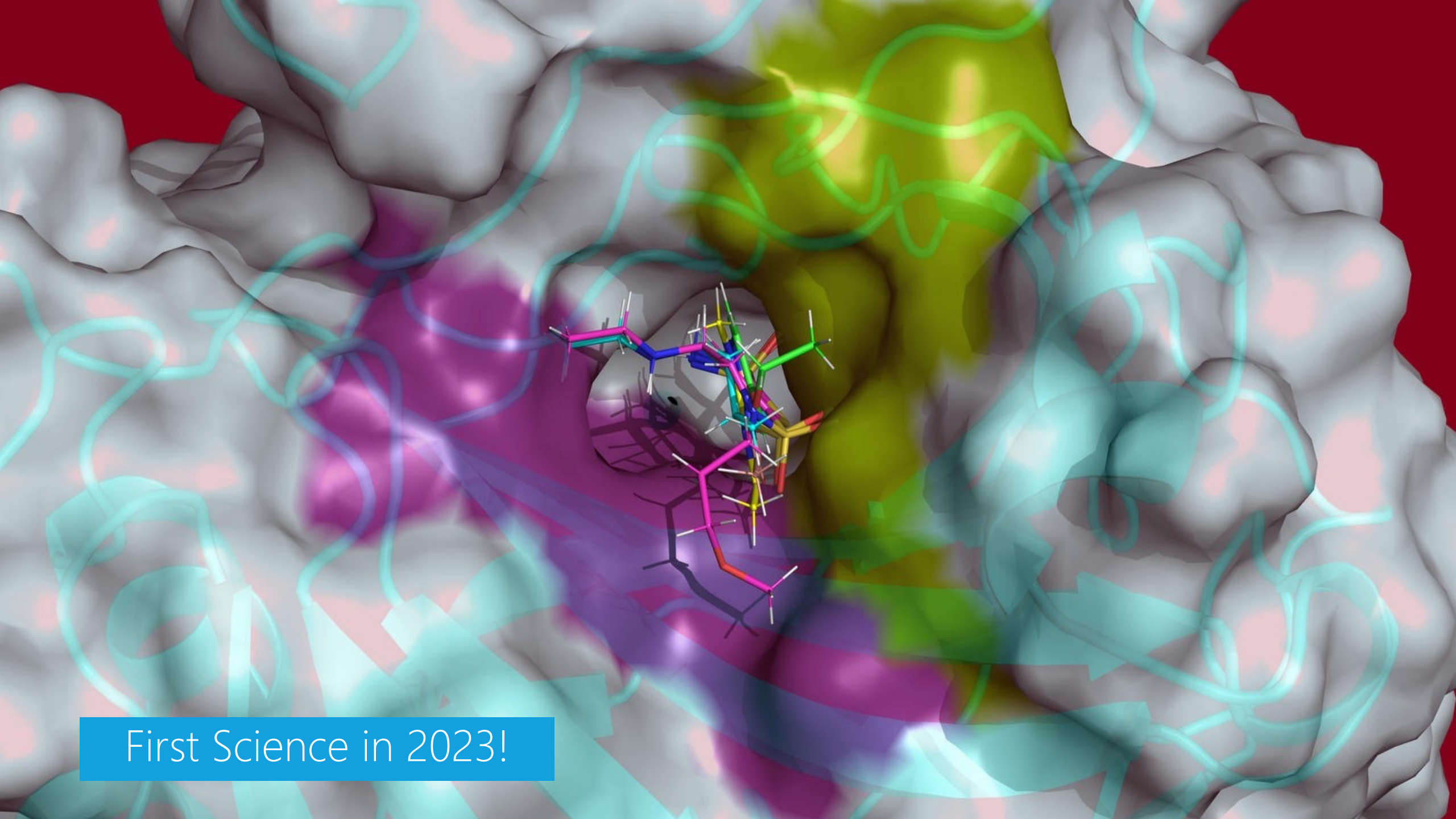
Agreed to work together to develop a joint position on how to engage with Horizon Europe's Missions

LENS Colloquium in Brussels

ERIC Forum

Opportunity to give input to ERIC committee on the ERIC guidance





First Science in 2023!