

Infrastructure for DAQ, etc

The DMSC perspective

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DMSC Responsibilities (operation)

DK-SE bilateral agreement (MOU), TDR:

- Instrument control
- Data acquisition
- Data reduction
- Data analysis
- Visualization
- Computational science (MD, DFT, etc)
- Instrument simulations
- User office

DMSC Responsibilities (operation)

DK-SE bilateral agreement (MOU), TDR:

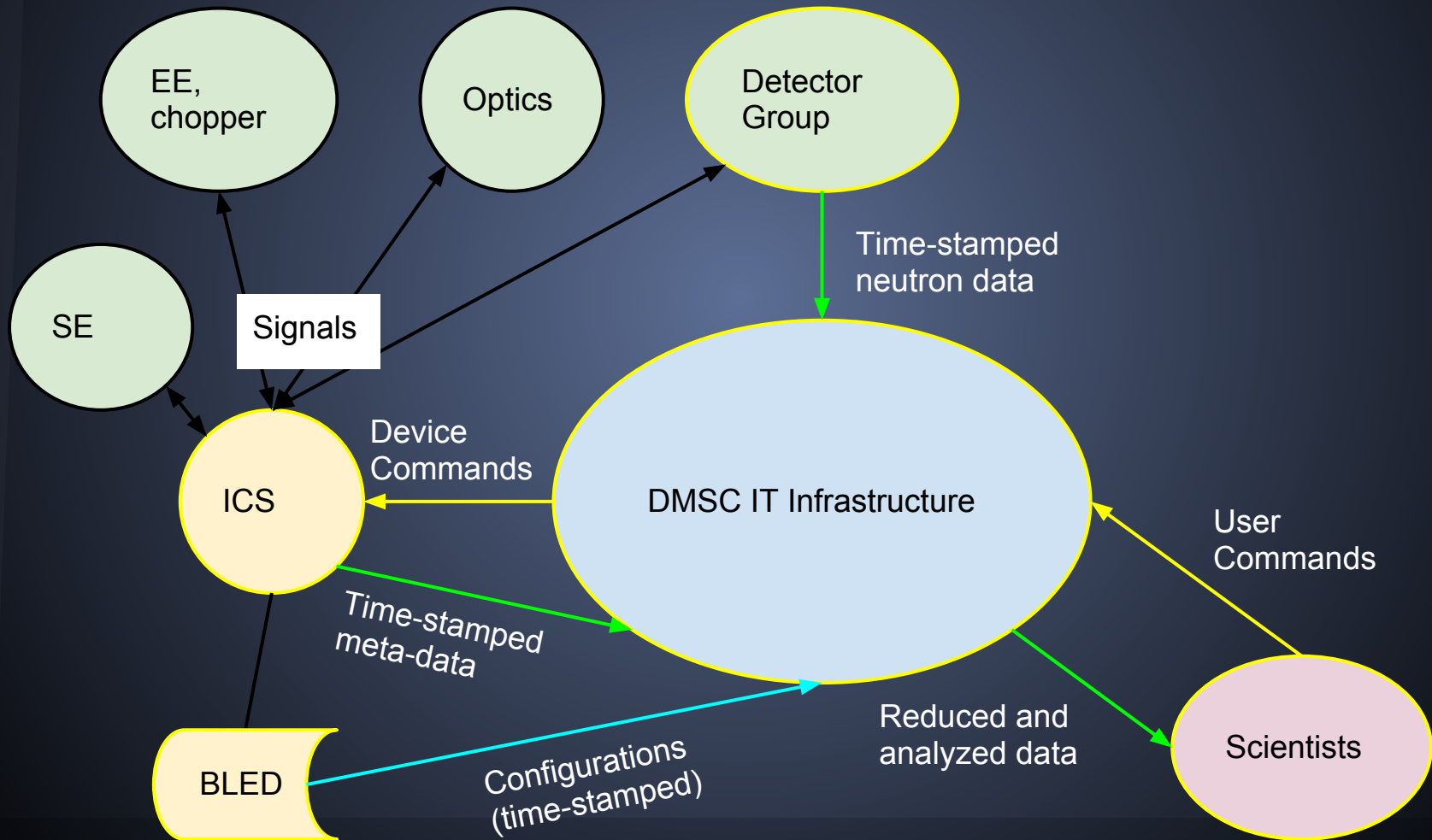
- Instrument control ... but also ICS and NT
- Data acquisition ... but also DG
- Data reduction
- Data analysis
- Visualization
- Computational science (MD, DFT, etc)
- Instrument simulations
- User office

Vision: DAQ increases scientific ROI

- Scientists can monitor the experiment and results live
- Easy to retrieve data at any time after experiments
- Electronic log-book
- Instrument control, daq, reduction, analysis, storage, user office all work seamlessly together
- Authentication and authorization are implemented
- No unnecessary delays, reduce downtime
- Reliable, flexible and easy to use
- In house sample environments are plug and play
- We support alien sample environments
- Remote access and control (from mobile device)
- We all use best practice

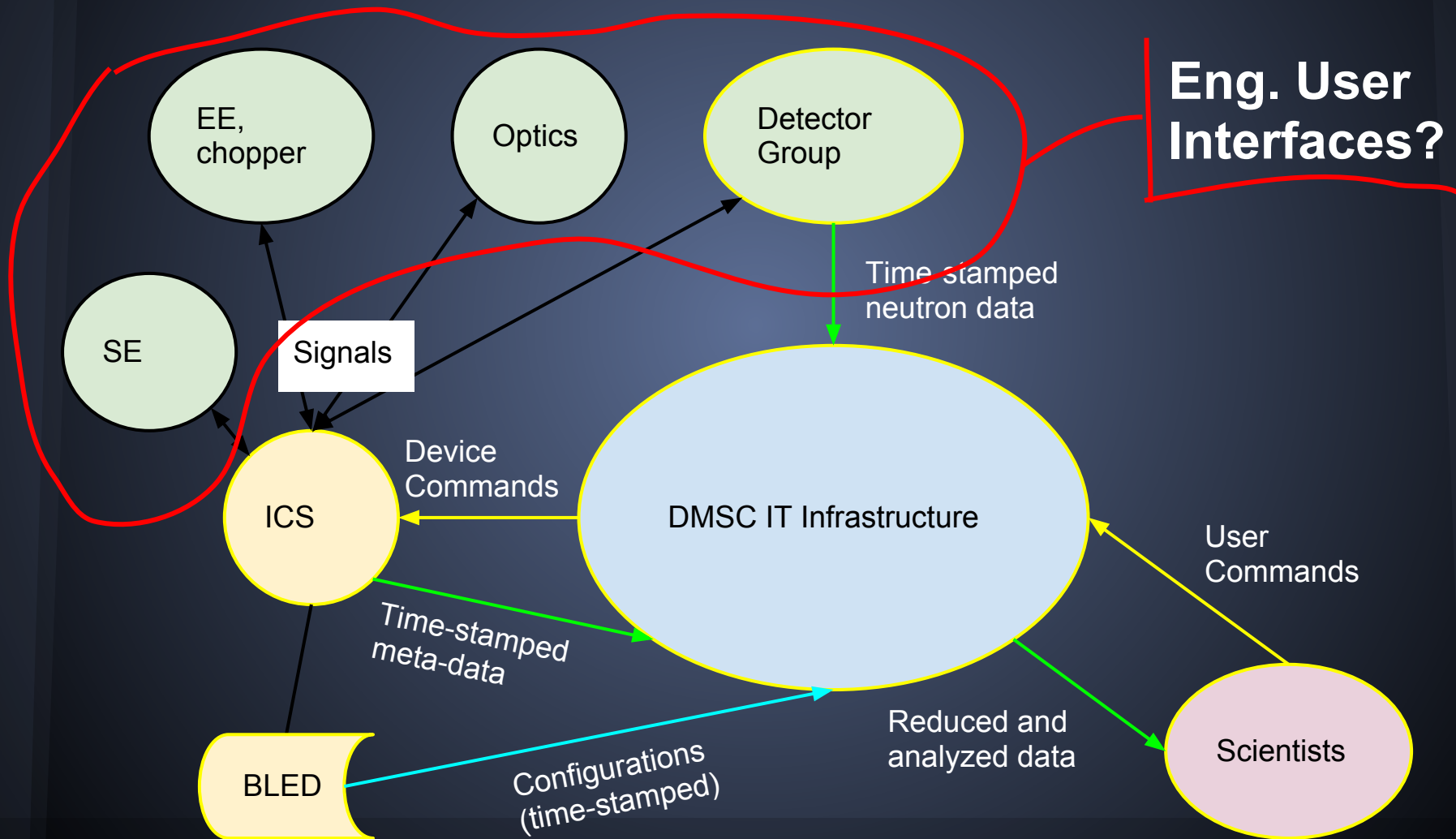
DMSC interfaces scientists with ICS

Data flow in and out of the DMSC system while in operation

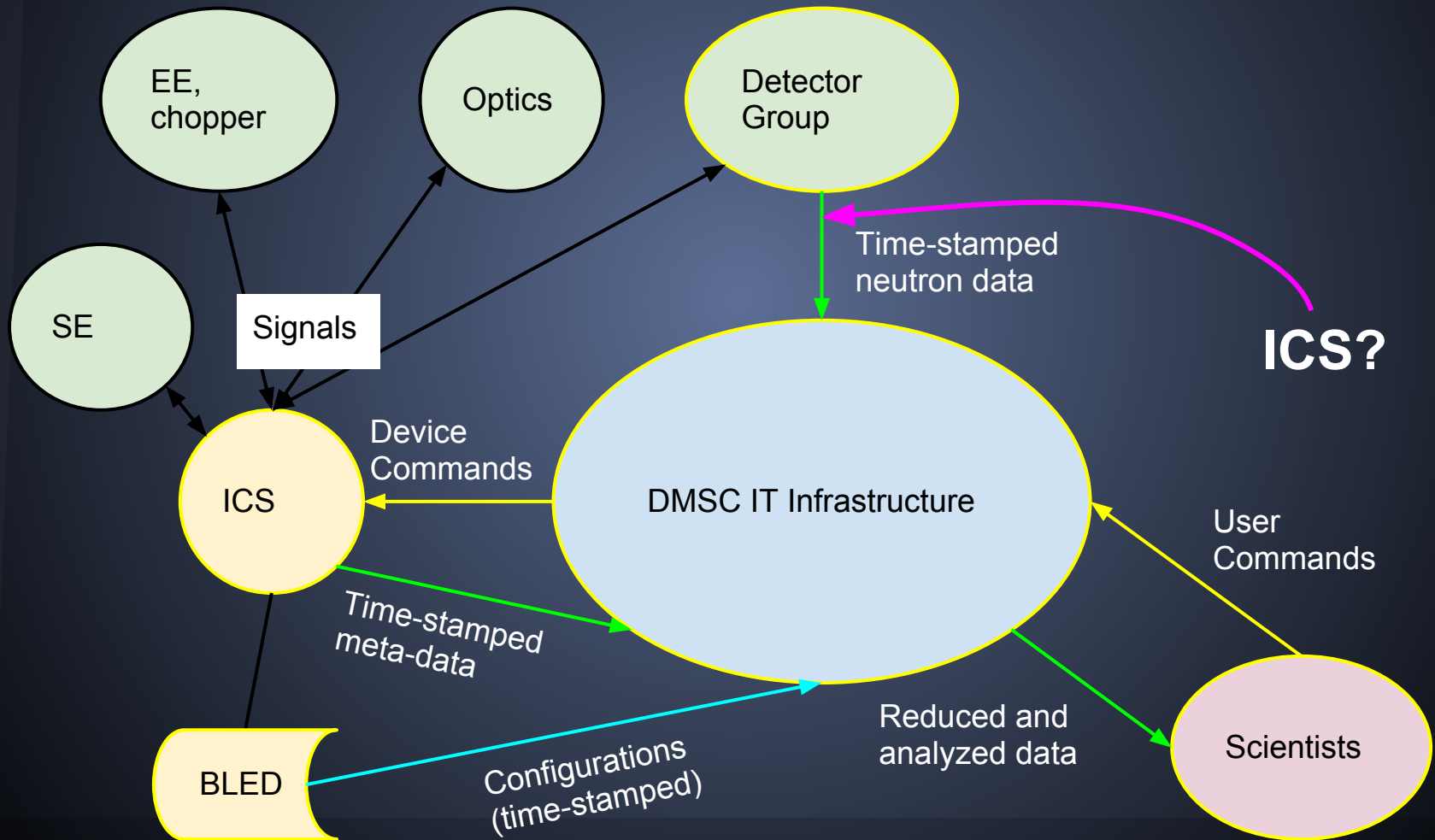


Is DMSC responsible for UI to NT?

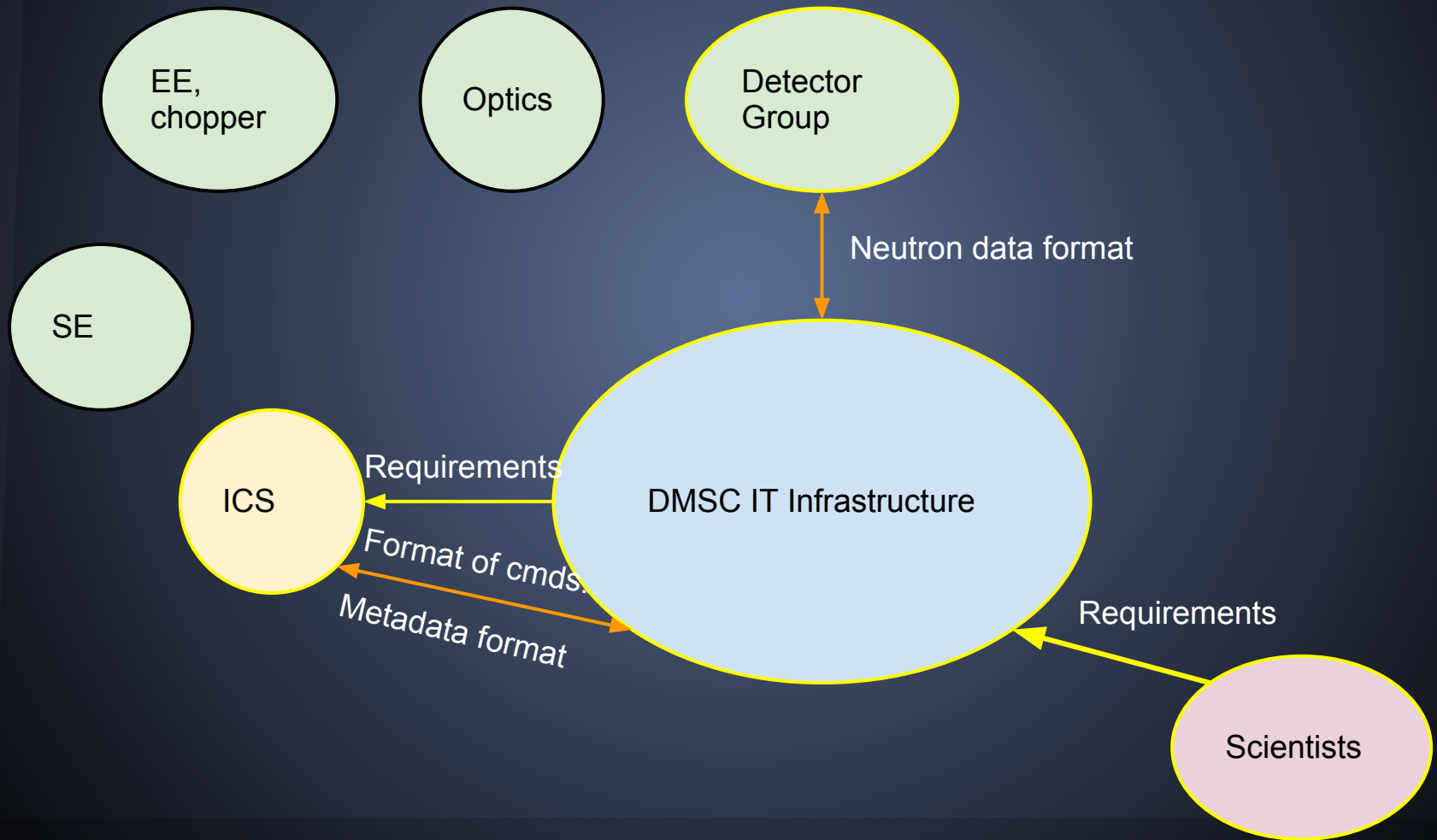
How does NT configure and test their systems?



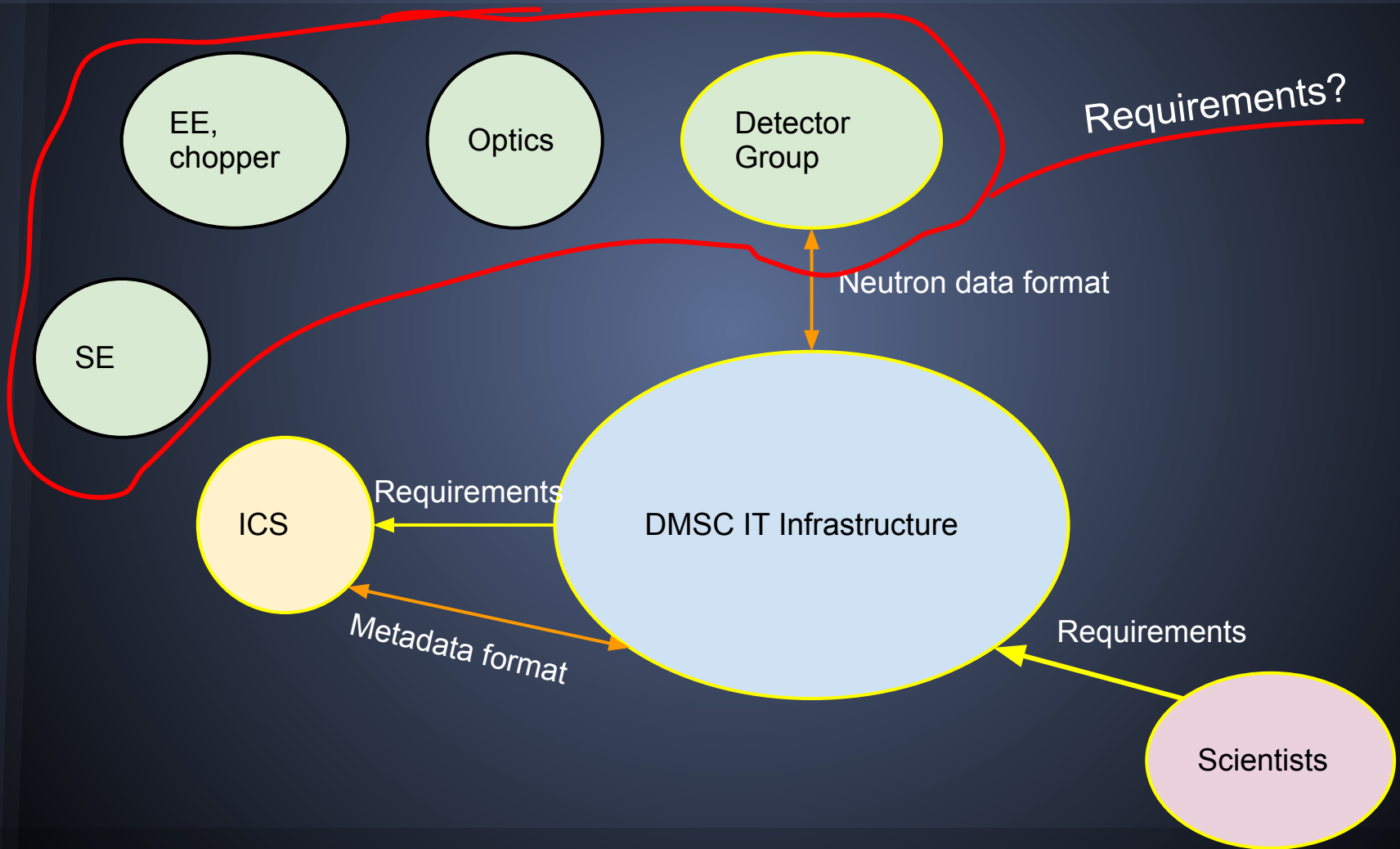
Who does DMSC interface to with regard to neutron data



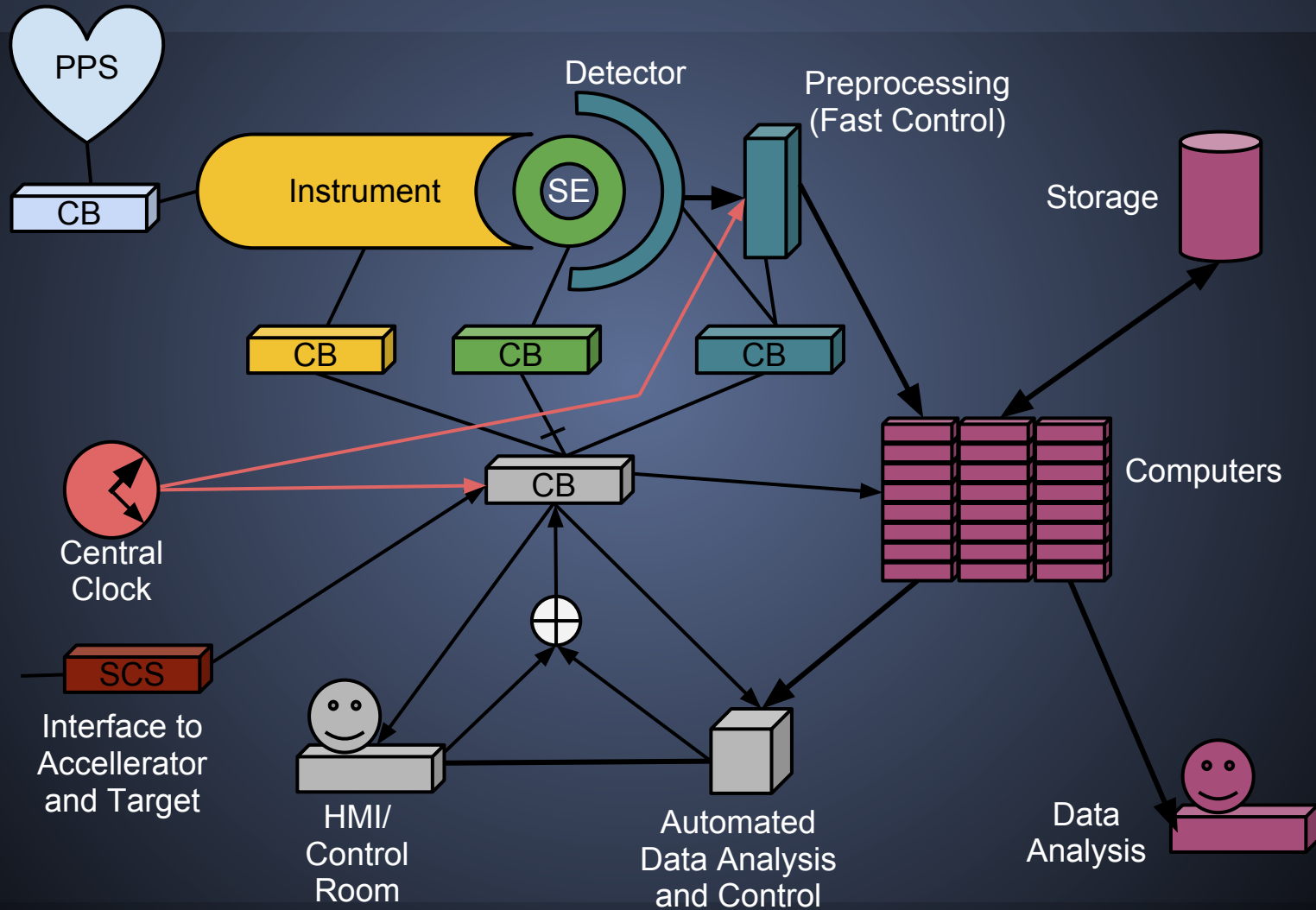
It's important for DMSC to know who are responsible for requirements?



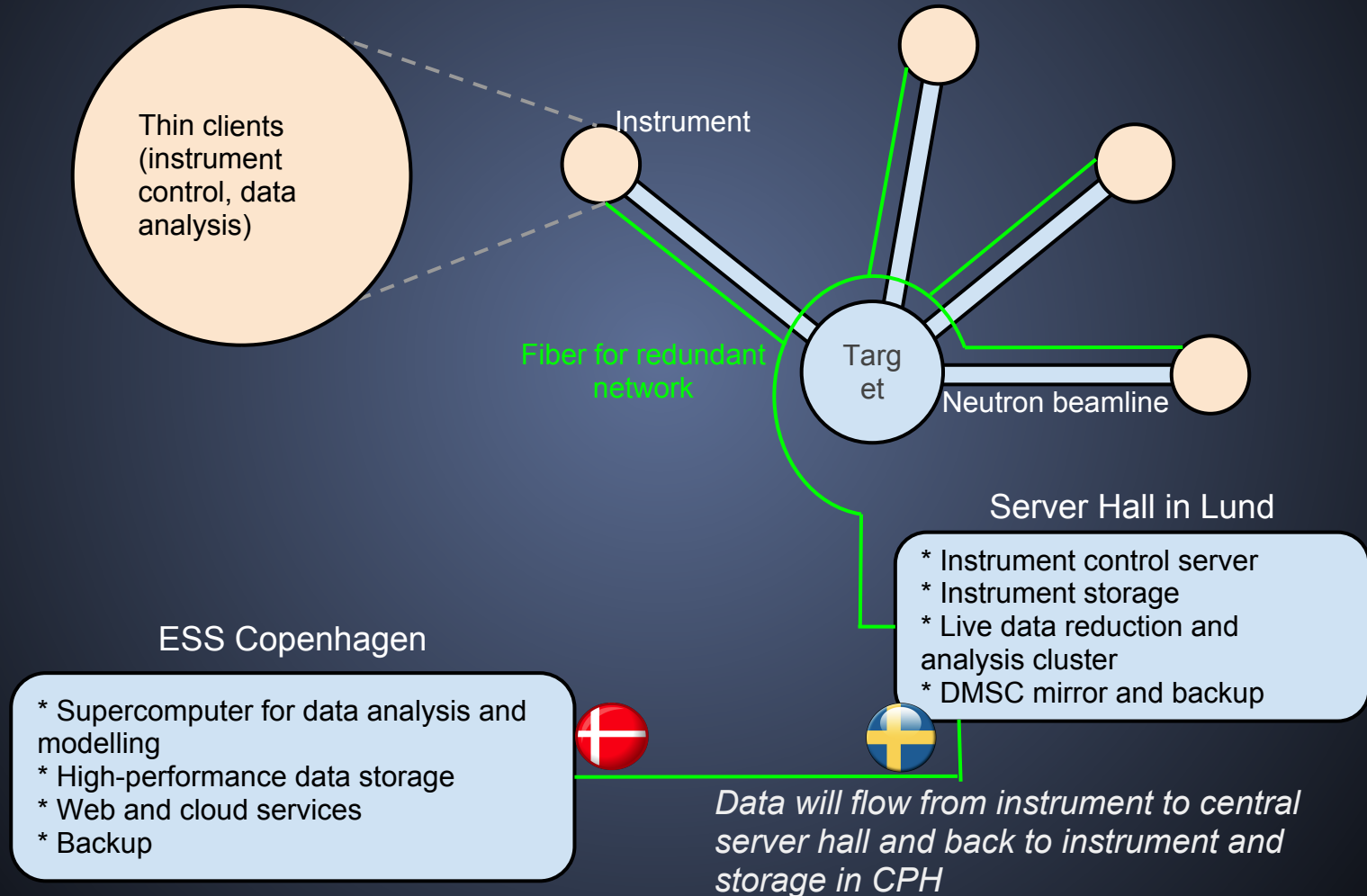
What about NT groups?



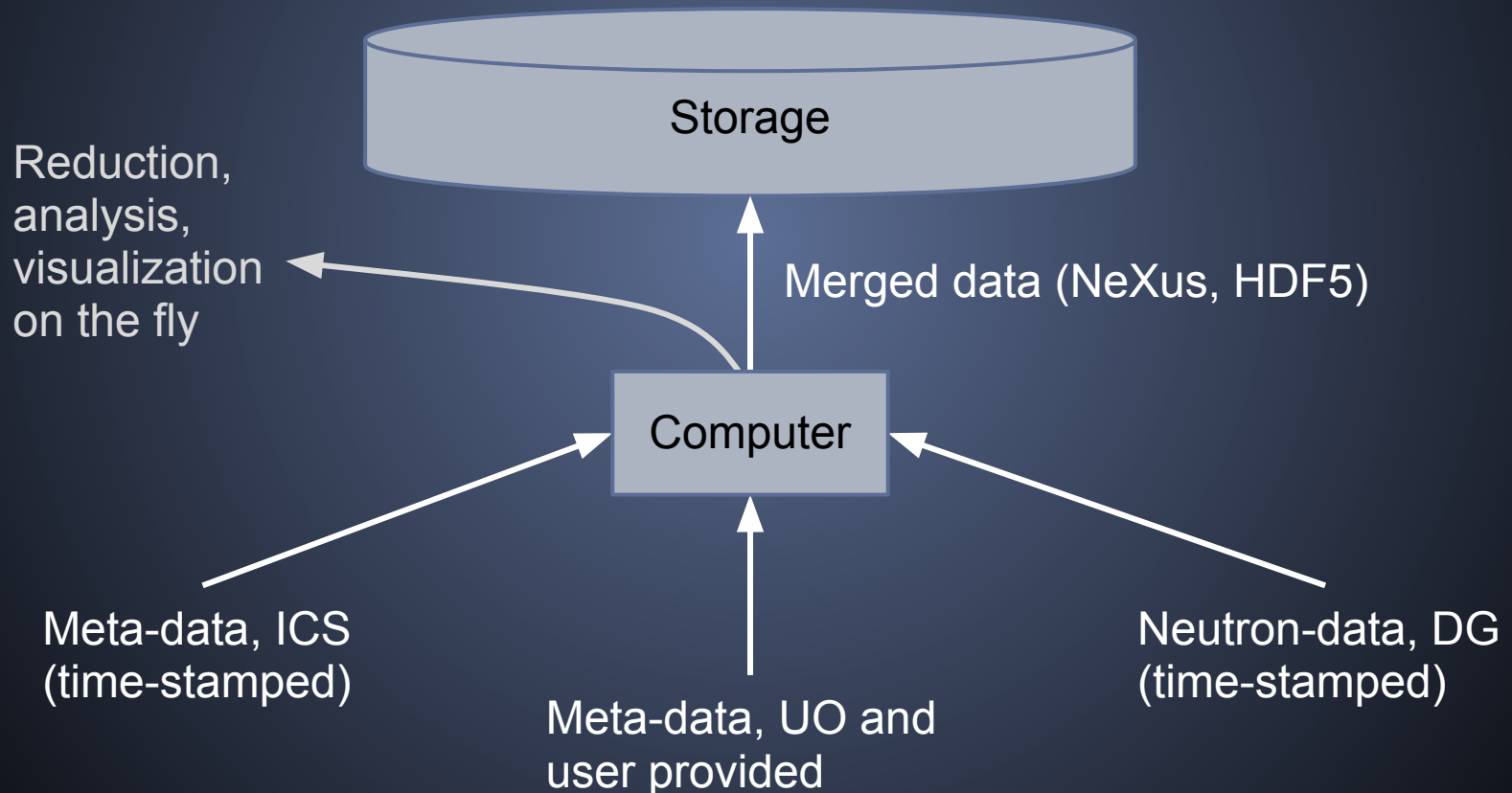
This old image is still (kind of) valid



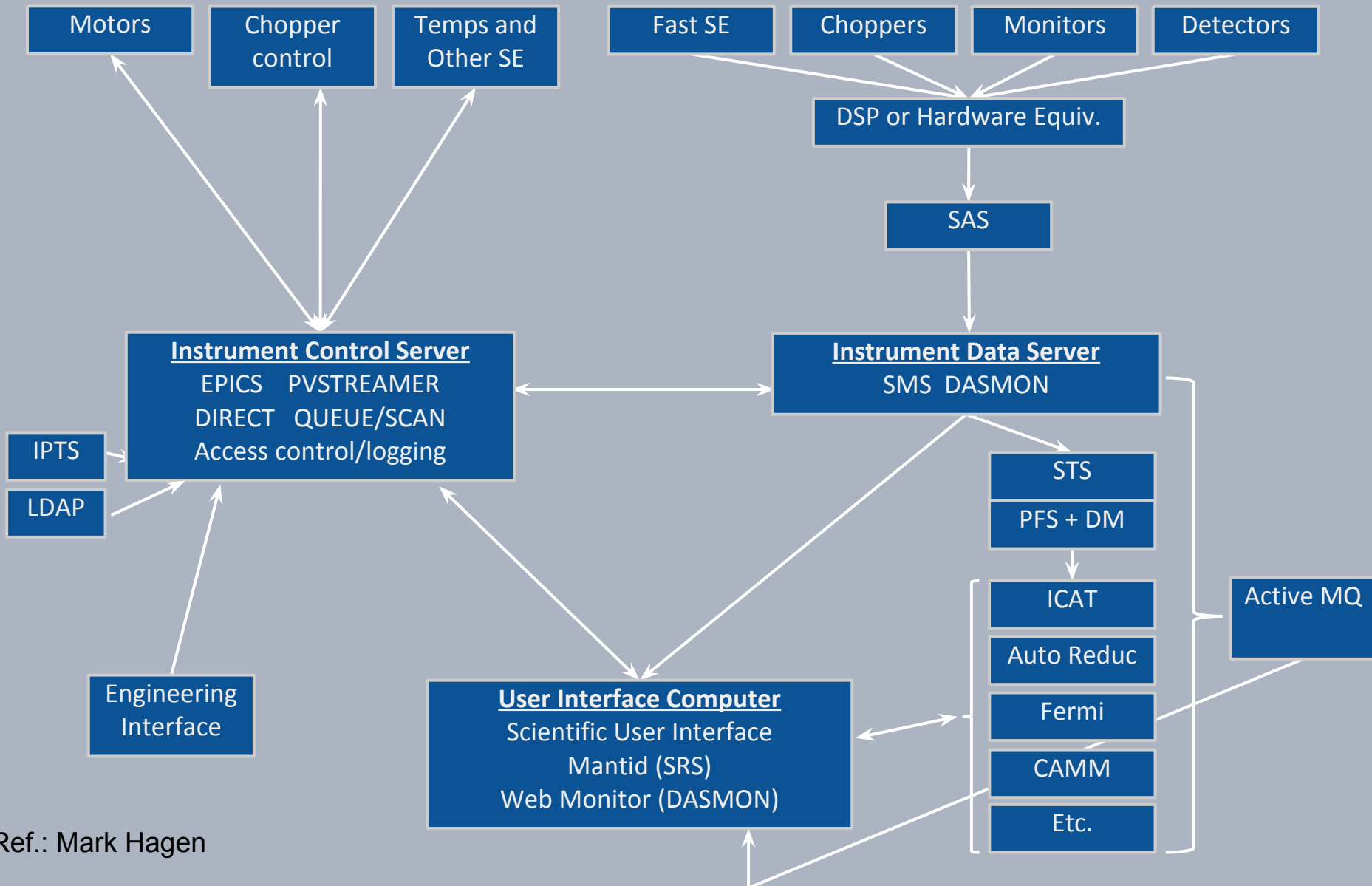
DMSC intends to centralize



DMSC stores all data required by scientists



Latest lessons-learned iteration at SNS



10 open questions

1. Is ICS involved in the data flow from detectors to DMSC computers? Who should DMSC interact with?
2. What are the "Device Commands" to be sent from DMSC control console to ICS control box?
3. Should DMSC take care of all Science requirements towards ICS?
4. Who takes care of the engineering user interfaces? (CSS@control box OR engineering mode in DMSC user interface OR?)
5. Does the centralization of computer equipment cause problems?
6. Where does the NT groups find their historic data?
7. How can and should we use BLED? Will there be a (RESTful) API?
8. Where do we need Service Level Agreements?
9. Who are responsible for cabling and network in operation and in construction phase?
10. What are the data formats? How do we agree?