

PSI Center for Neutron and
Muon Sciences

Materials Innovation Cluster (MIC)

Steering Committee intermediate report (Nov. 24)

- Daniele Pergolesi
- 28 November 2024

Discussions, Decisions, Update of Pending Issues (A. Amato):

- To be discussed: What are the costs for the use of MIC? How do we organize the use of the MIC? Different for internal and external users? An estimate about the costs to use the system should be provided by the Project Team. What is really the user base? If the access price is too high, the instrument will not be used, therefore it seems better to have reasonable prices and a good quality. It cannot be completely free for external people. We still have time to think, beginning next year how to manage. We should try to keep it free for internal users. Suggestion from ETH: internal users should get cheaper prices, otherwise no one will come.
- Postdocs responsible for the chambers now, could be possible that they can help the instrument scientist.
- Contact with new partners: The question arises, if not a person listed above should ask. It would give more weight if a Lab head or center head is asking for collaboration.
- It would be good to have a timeline for spending the budget. This would provide a better overview. Suggestion from M. Janoschek, please contact Artur Glavic who uses a specific tool.
- Table with risks: please also talk to Artur.
- How do we proceed with the decision process? Budget is coming from different sides – so there are also different accounts: R'equip, external and internal money. We should define in a project handbook and the decision process is performed
- Marc notes that CNM gives more than half of the budget and the connection to the existing CNM instruments like AMOR or to LMU is not shown enough in the presentation. Should be supplemented.
- Alex corrects the remark made in the preparation meeting by Milan: MIC is a PSI project not” an addition to SLS”.

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On-going discussion

We need feedback from SteCo

See also risk assessment sheet for personnel

Discussion postponed to next year

Claudia Cancellieri suggested the submission of research projects in collaboration with the MIC to hire PhD or Postdocs that work 10 – 20 % for the MIC (see risk assessment sheet for personnel)

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New partner

ZHAW, Zurich University of Applied Sciences, School of Engineering → 3500 CHF

(Dr. Jon G. Bell and Dr. Jacinta Edebeli) - Delay (at PSI) with the contract for money transfer – info requested but no answer

Problem!!

2 proposed partnerships sent to EPFL → no answers

3 proposed partnerships sent to UniGE → no answer, or “super! but currently we cannot help”

2 proposed partnerships sent to EMPA → “super! but currently we cannot help” or “let’s see what I can do”

(Dr. Jakob Schwiedrzik, Head of Laboratory for High Performance Ceramics)

It would be good if members of the SteCo could “push” in person the request for partnership and financial support

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Actions?

Advertise officially the new facility (from PSI management)

Organize a webinar (especially for Labs and Centers/Divisions heads) to describe the project and ask for collaboration/support

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Done
Report in a few slides

We have 2 MIC accounts: (1) SNF_MIC_R'EQUIP, and (2) MIC

The second includes LMX plus all other contributions (ENE groups and labs, ETH-Z and EMPA).

I assume this account will be soon used also for ZHAW and for additional partners, if any.

None of the partners requested detailed information regarding the specific allocation of their financial contribution

Suggestion:

we go on in this way, all contributions are for the entire facility and not for a single piece of equipment, unless we receive specific requests

1. We use first the SNF_MIC_R'EQUIP account (deadline Oct. 25) for the 2 new satellite chambers (PLD-RHEED-LAXS and NAP-XPS + DRIFT), and we integrate this account, if needed, with the MIC account.
2. We complete the MIC project with the MIC account

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Absolutely true!

We will strength the connections with CNM for all future presentations of the MIC project

For thin film applications, the main techniques are NR (AMOR) and spin μ spectroscopy (LEM); we will appropriately balance the scientific SLS and SINQ applications of the new facility.

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All clear!

No one think of this new facility and an “add-on” of SLS

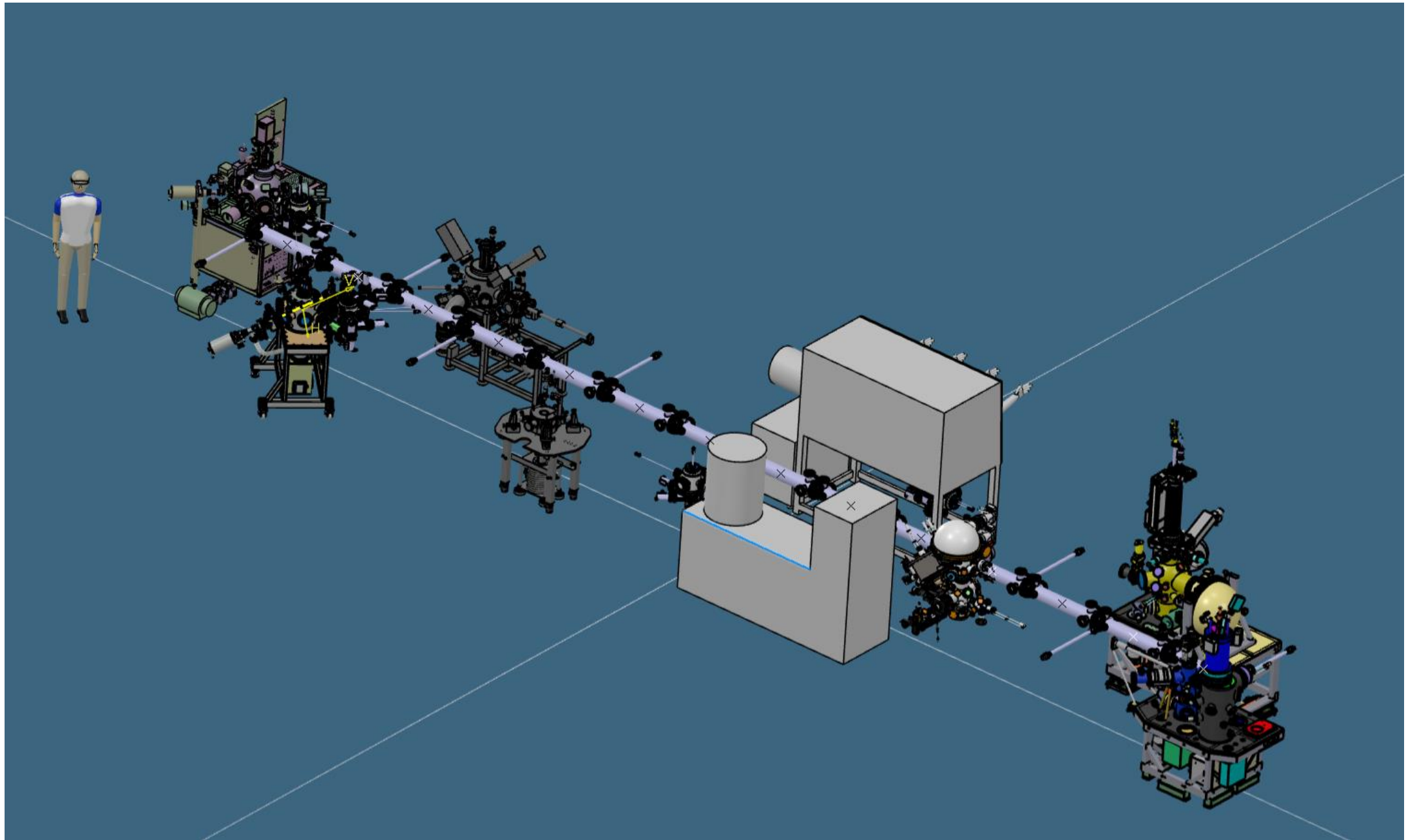
It was just a misunderstood/misinterpreted sentence

What we wanted to say it was that “from the point of view of CPS scientists”, the MIC will greatly help and support the research projects, especially for photoemission-based science

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Pending list:

- Project Handbook (can be short) → postponed to next SteCo meeting
- Risks matrix (see with Artur) → ok
- Spending time-profile (see with Artur) → ok
- Contact Hans Braun about bake-out Daniele will provide inputs to Alex → ok: agreement reached for bakeout test of the UHV tunnel of the MIC in collaboration with the PSI vacuum group (BTW: the planned timeline works very well for both parties)
- Decision “make” of “buy” for the NAP part should be taken soon
Luca will contact the SteCo prior the next meeting → ok, WTO Direct Procedure closed
- Investigate names of possible partners at Swiss universities → ongoing ...

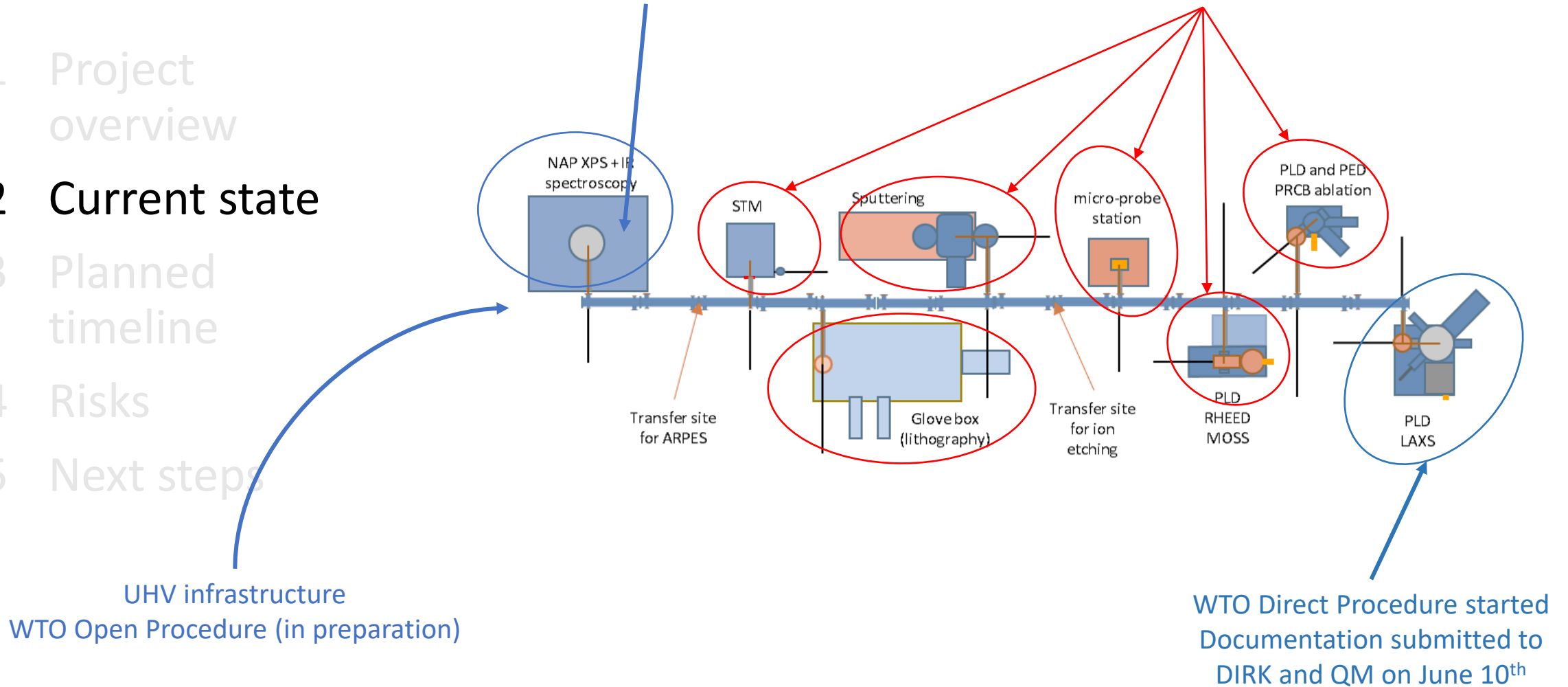


Agenda

- 1 Project overview
- 2 Current state**
- 3 Planned timeline
- 4 Risks
- 5 Next steps

NAP-XPS + DRIFT: WTO Direct Procedure
Procedure in preparation
Expected submission Sept 24

What we have



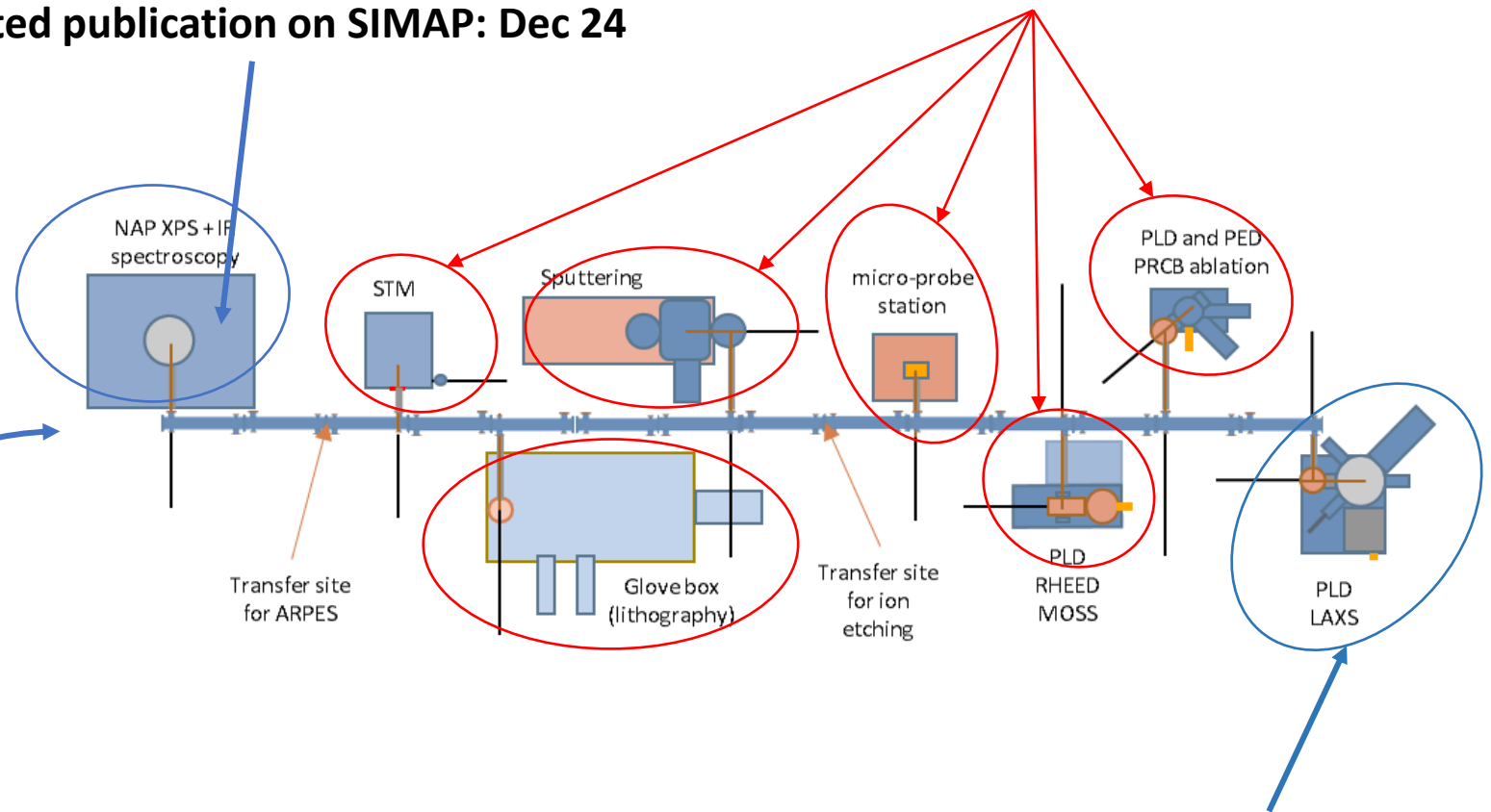
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Expected publication on SIMAP: Dec 24

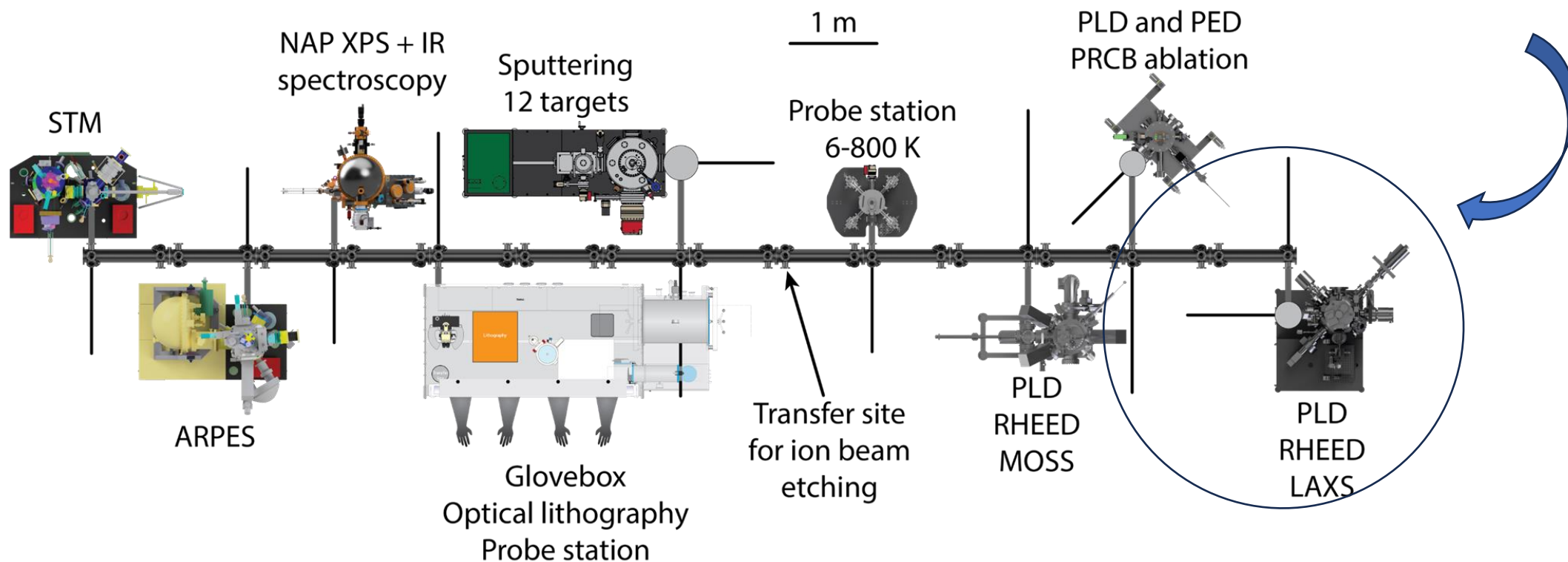
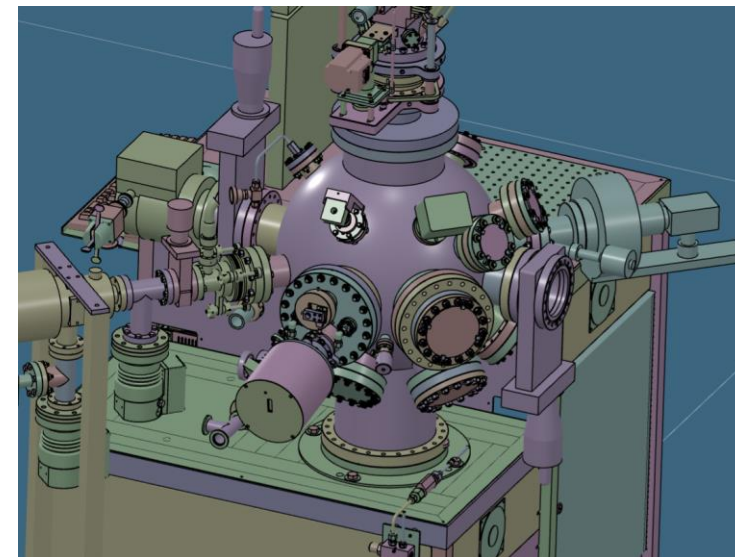
What we have



UHV infrastructure
WTO Open Procedure (in preparation)
Expected submission Dec 24 → **Jan 25**

WTO Direct Procedure started
Documentation submitted to
DIRK and QM on June 10th
Procedure closed

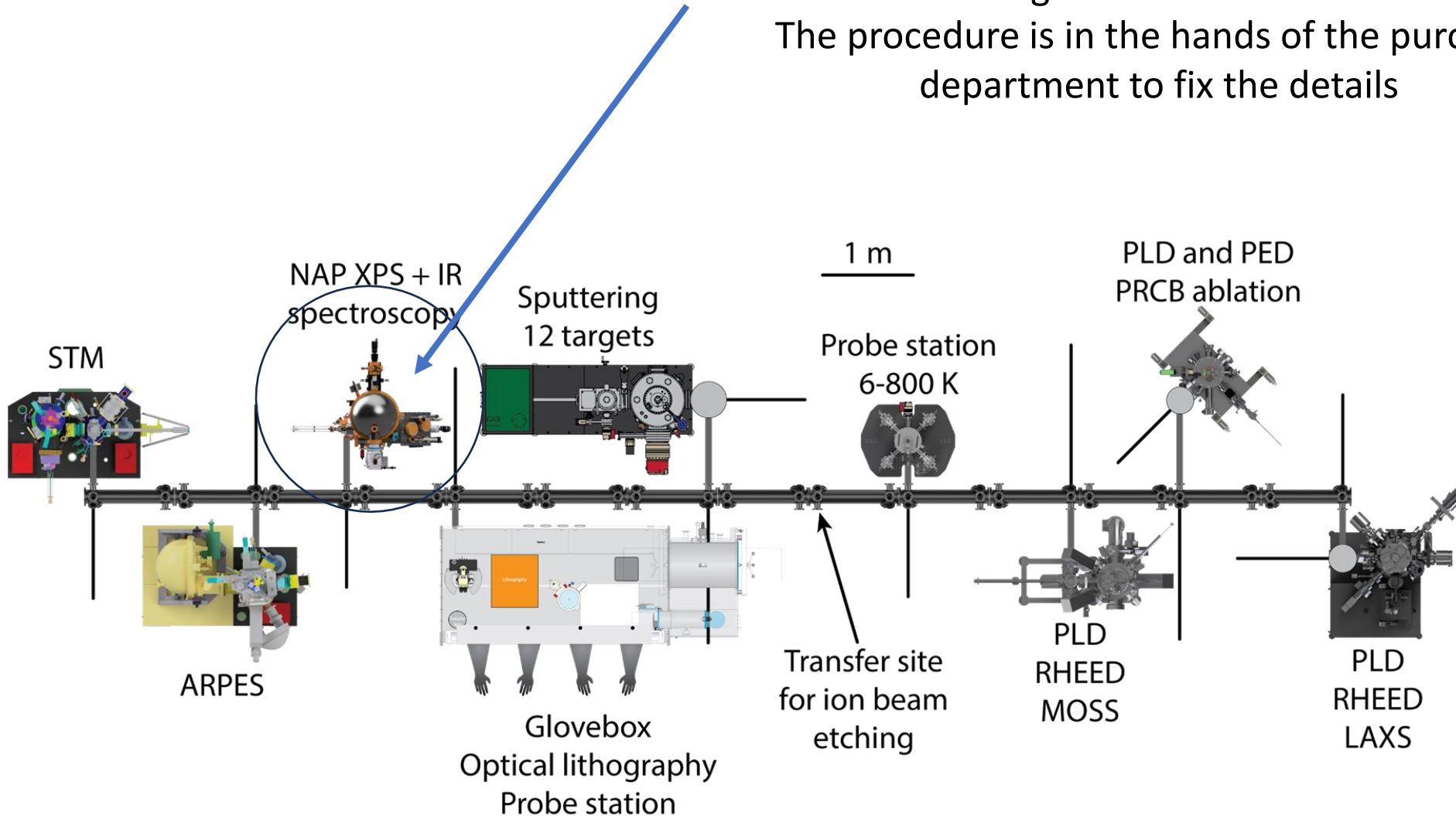
All good for the PLD-RHEED-LAXS chamber



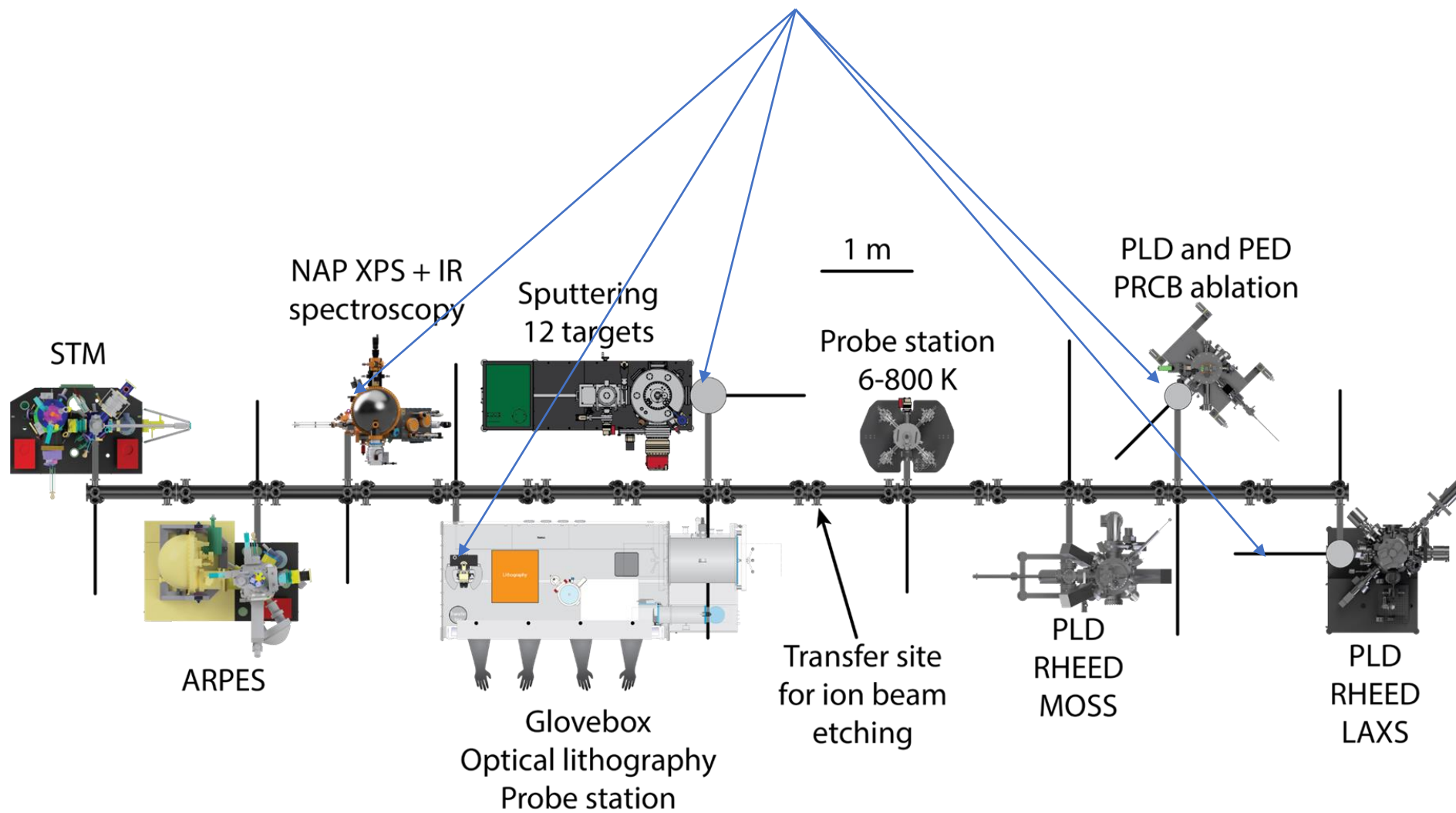
All good for the NAP-XPS + DRIF chamber

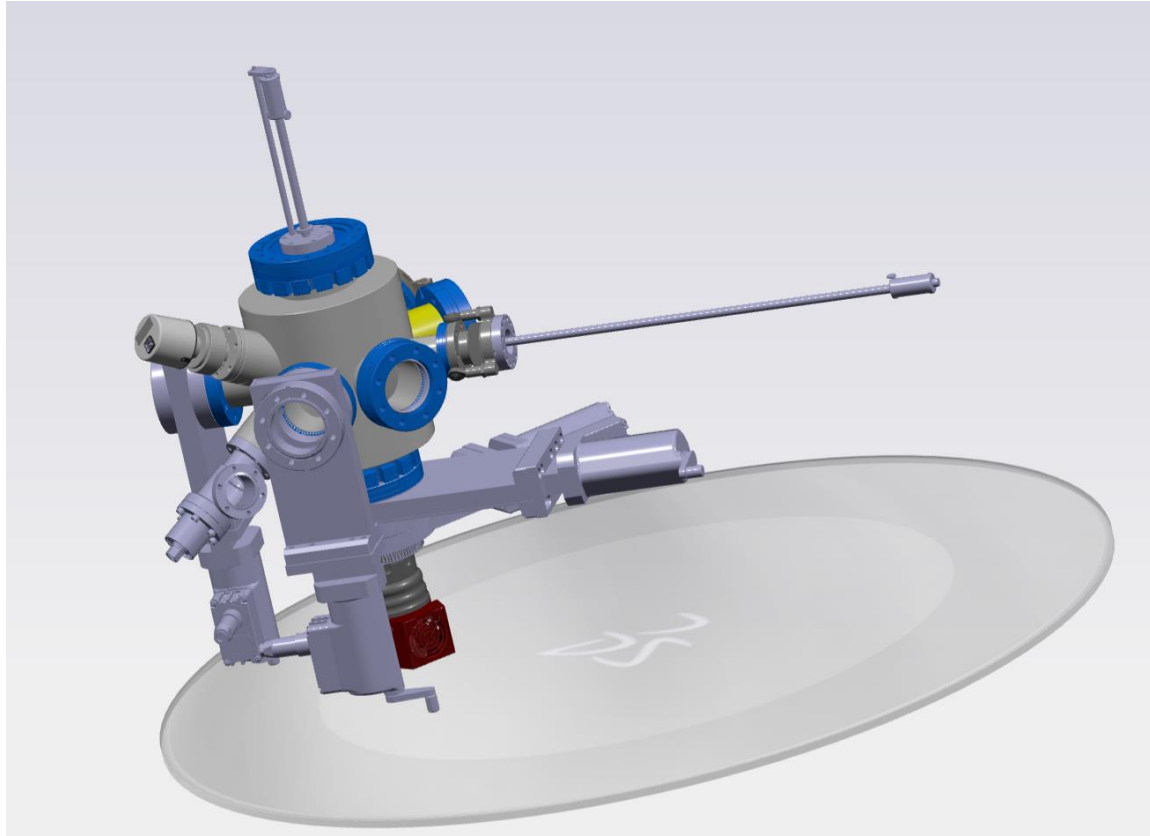
Green light from Alex and DIRK

The procedure is in the hands of the purchase department to fix the details



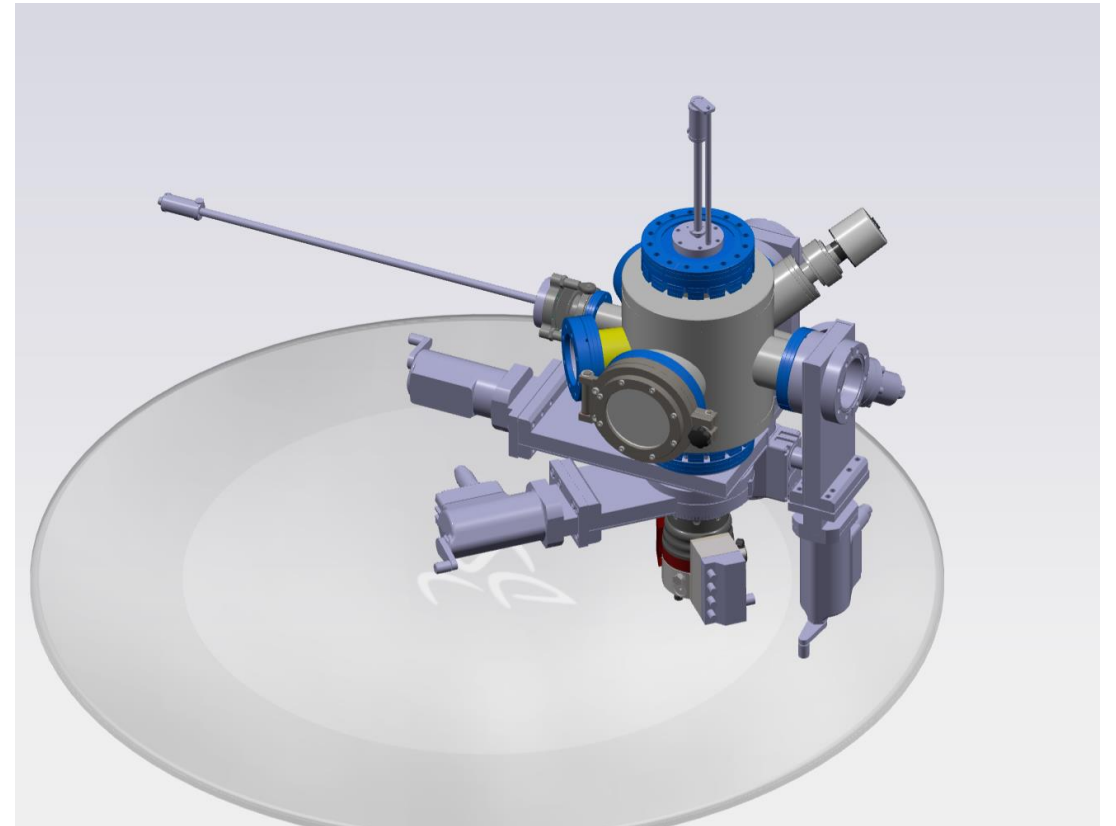
Load-lock chambers





Load-lock chambers

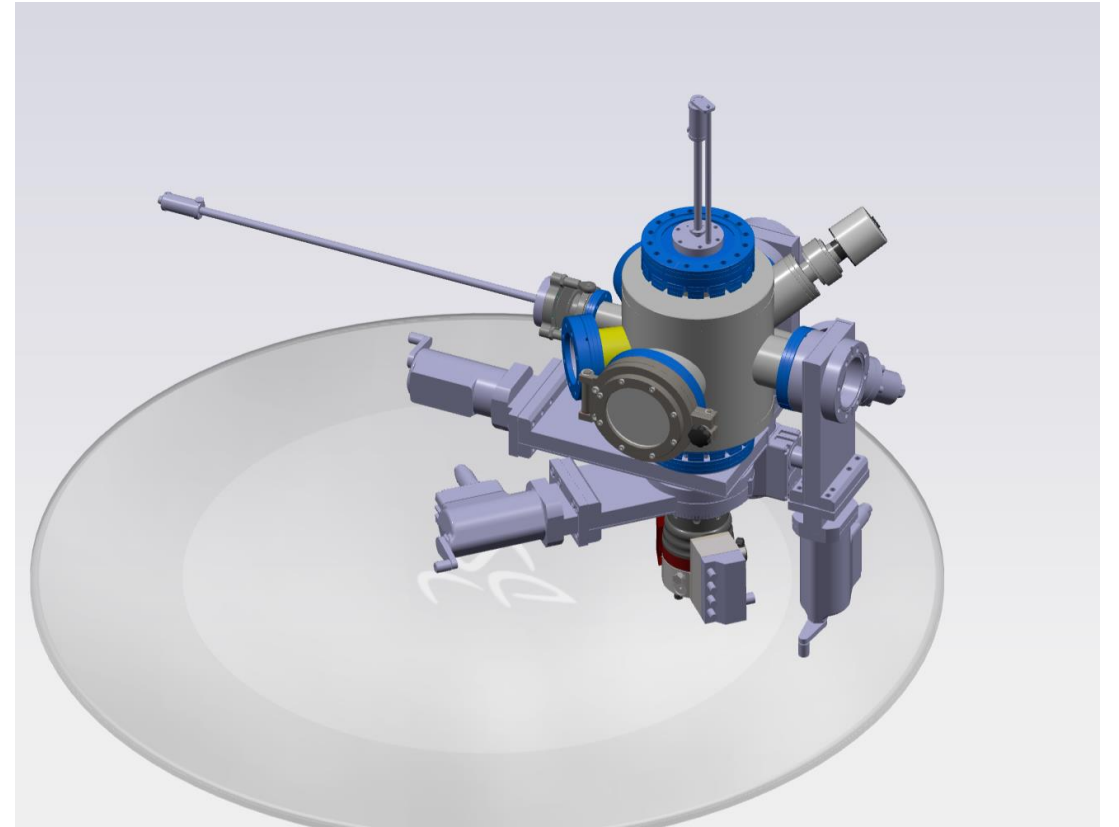
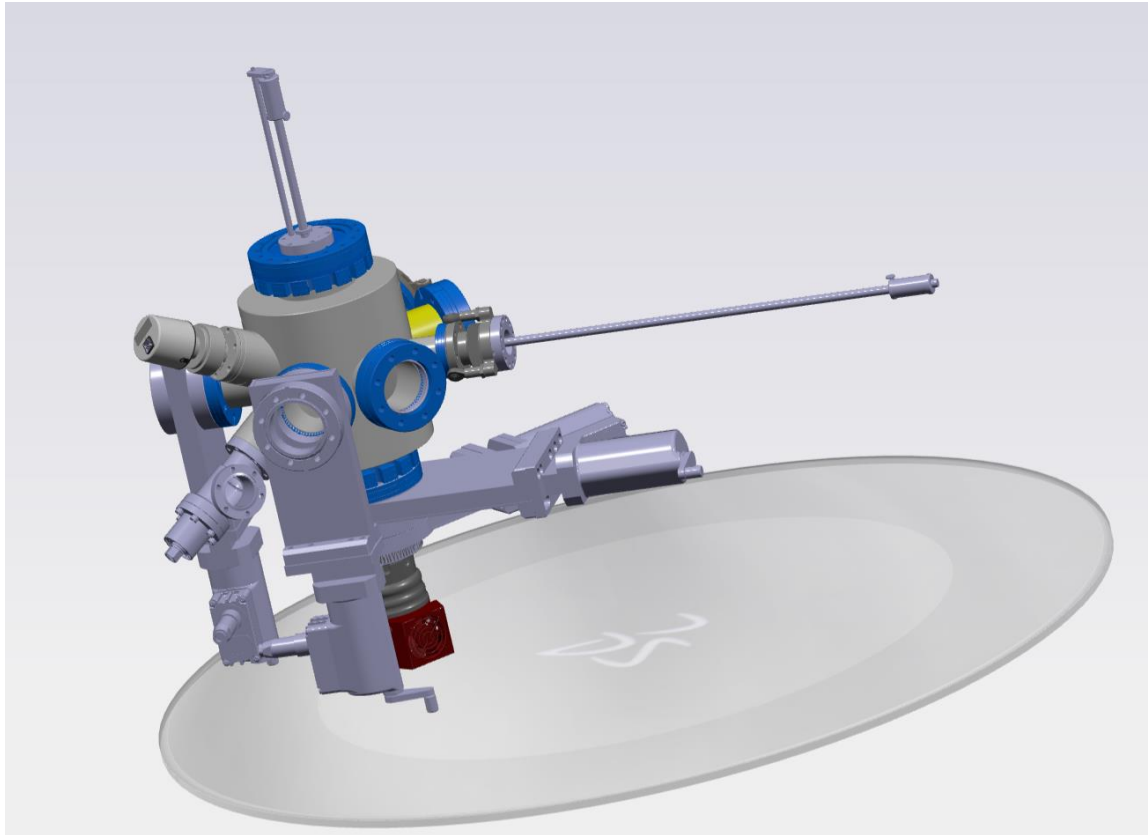
Same design for all load-lock chambers

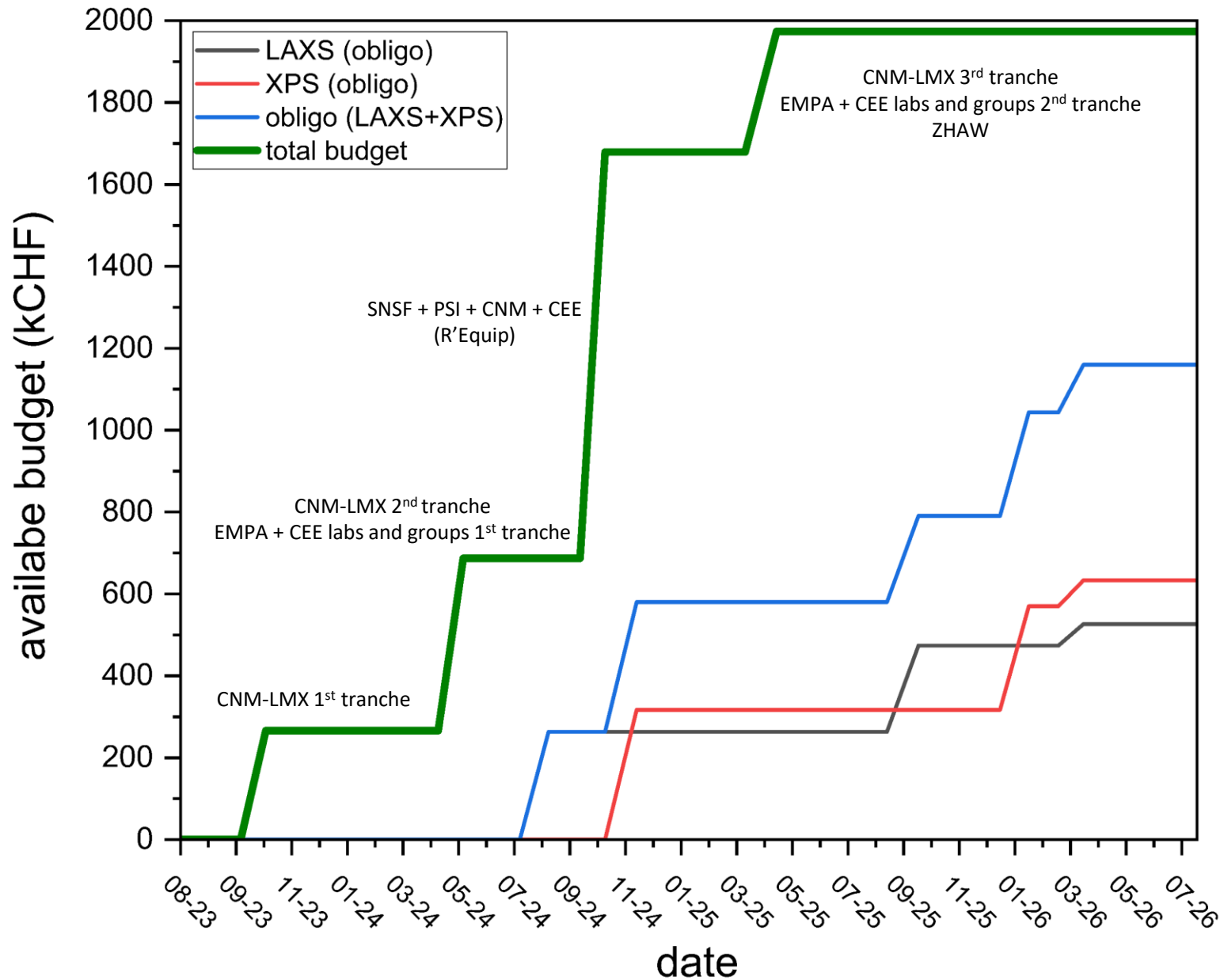


Load-lock chambers

Ask quotations

- 1) Only the chamber
- 2) Complete setup

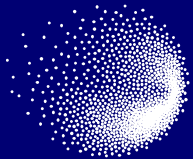




Budget timeline

	2023	2024	2025
CNM	233	233	233
R'Equip (PSI+CNM+CEE)		992.4	
LMX	33	33	33
EMPA		10	10
ETH (K)		100	
ETH (B)		20	
LSK		5	5
LEC		10	
LAC		5	5
LEP		5	5
ZHAW			3.5
tot	266	1679.4	1973.9

Risk assessment



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THANKS!!

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