

NTN IBAM – Matching Event: “How can AM post-processing be optimized?”

Welcome to our first matching event !



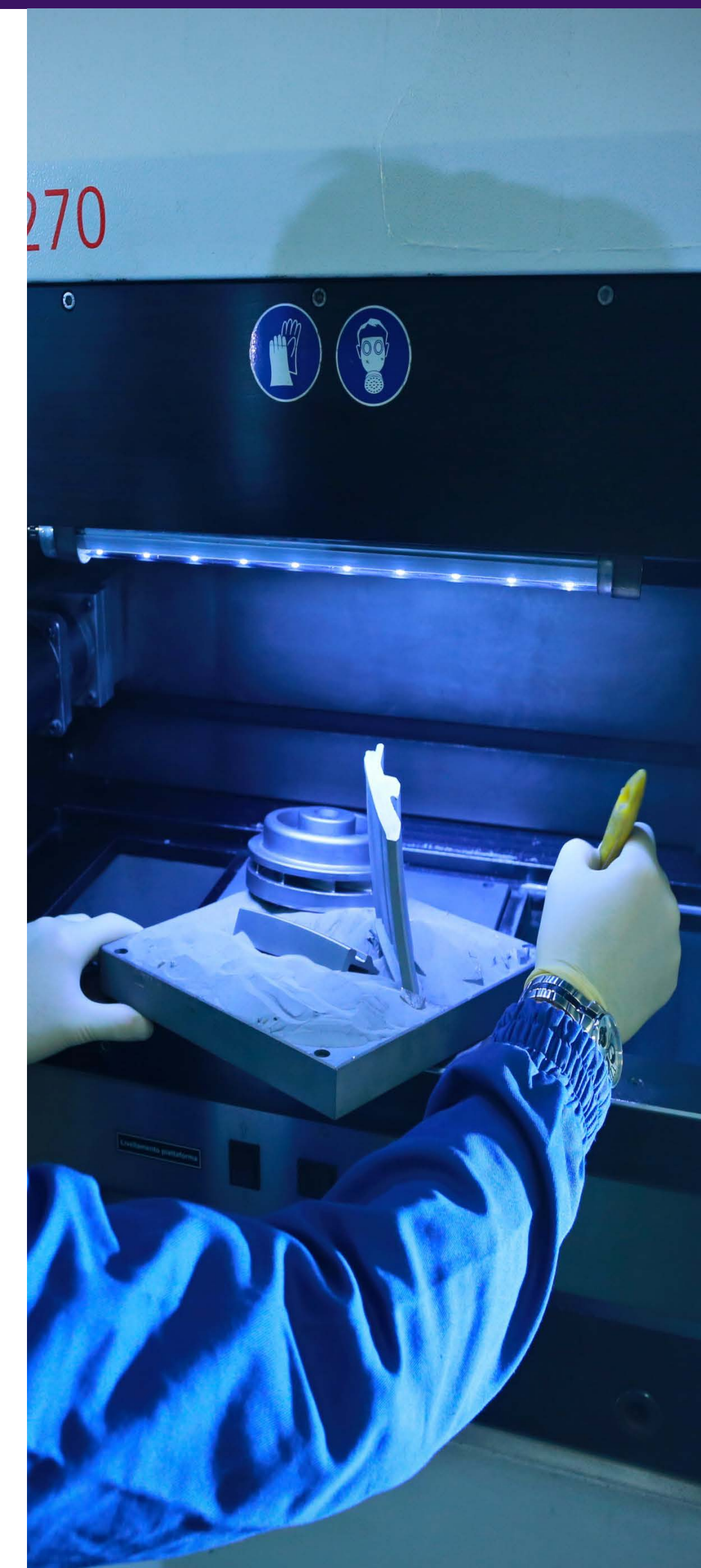
Patrick Roth
President NTN IBAM



Hendrik Holsboer
Managing Director IBAM

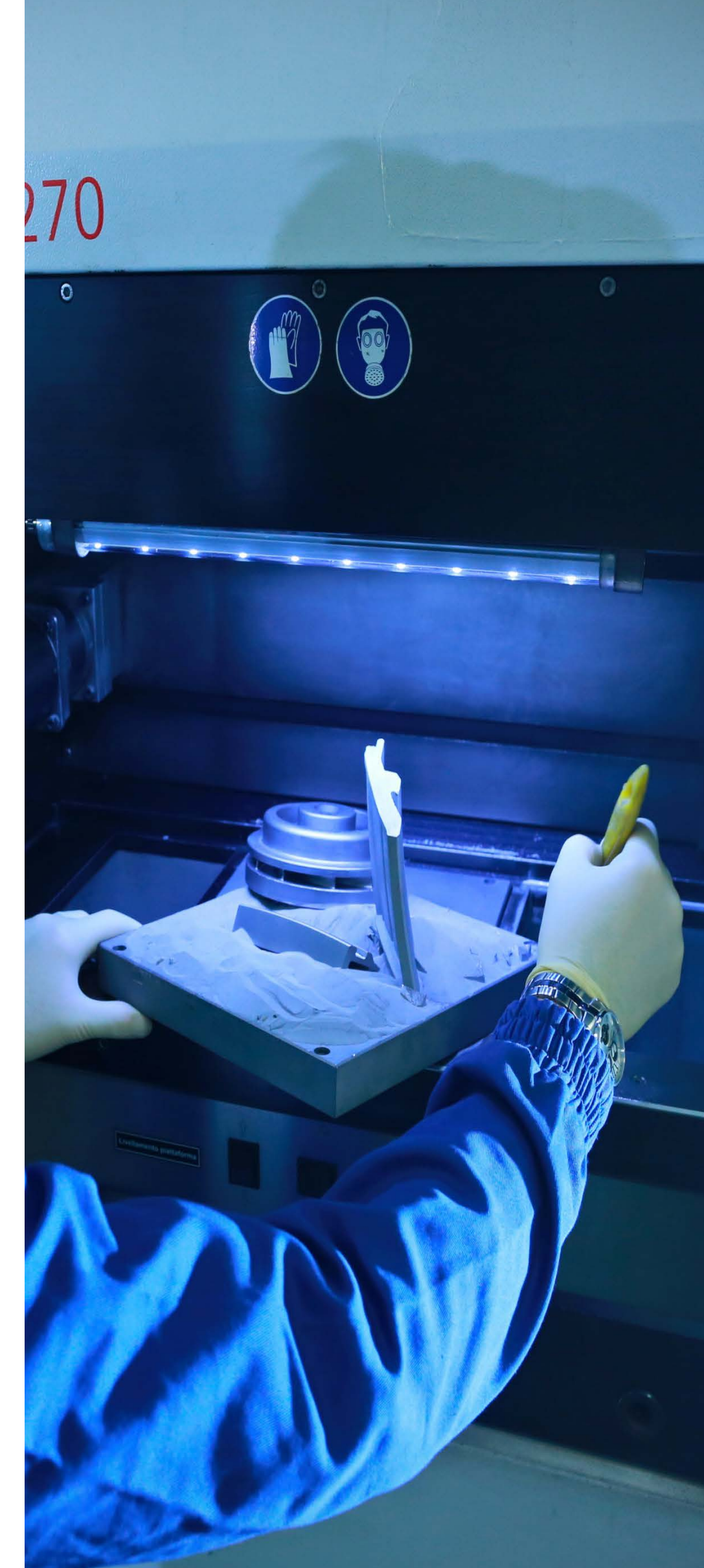


Jürg Kuster
Moderator



Program Overview

09:00	<ul style="list-style-type: none"> • Welcome and Program • Keynote: Patrick Roth, President NTN IBAM • Innosuisse Mentoring Program: Prof. Markus Baertschi
09:15	<ul style="list-style-type: none"> • Agreements for the matching event (Open innovation, different roles, use of information)
09:20	<ul style="list-style-type: none"> • Block 1: Surface treatment / Material research Presentations of «idea & needs» (5 min. each)
10:10	<ul style="list-style-type: none"> • Short break
10:20	<ul style="list-style-type: none"> • Block 2: Handling / Software / Market Research Presentations of «idea & needs» (5 min. each)
11:10	<ul style="list-style-type: none"> • Explanation of the matching procedure • 4 breakout sessions with moderation
11:20	<ul style="list-style-type: none"> • Conducting breakout sessions <ul style="list-style-type: none"> → Room 1: Process optimisation incl. associated software solutions → Room 2: Surface processing and optimisation - Metal → Room 3: Investigation and evaluation of different AM post processing methods → Room 4: Improvement of material properties during post-processing of AM parts (all materials)
11:50	<ul style="list-style-type: none"> • What are the next steps?
12:00	<ul style="list-style-type: none"> • Closure of the event



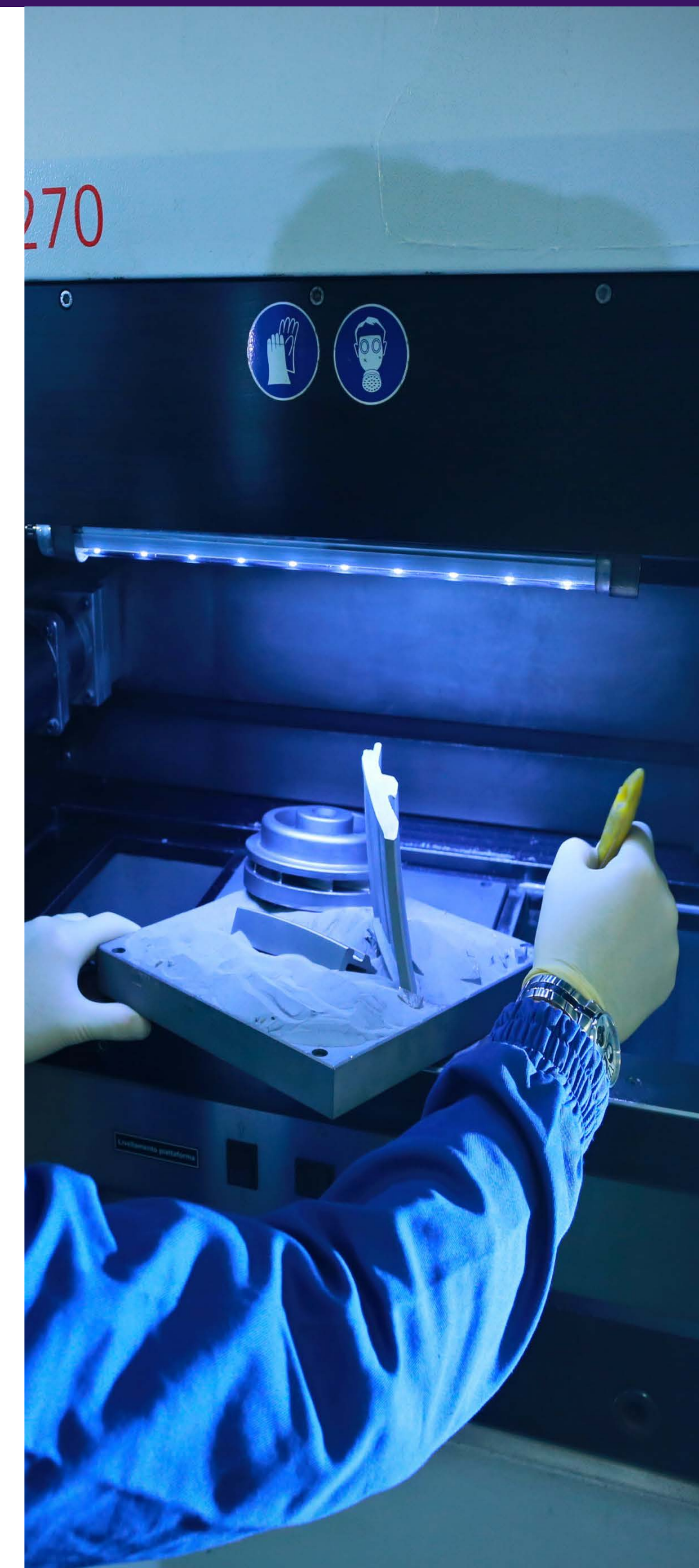
Keynote

Patrick Roth, President NTN IBAM



Innosuisse Mentoring Program

Prof. Markus Baertschi



INNOSUISSE

SWISS INNOVATION AGENCY

Innosuisse is the Swiss Confederation's agency for promoting innovation.

OUR MISSION

Innosuisse promotes **science-based innovation in the interest of the economy and society** in Switzerland – in all disciplines.

START YOUR INNOVATION PROJECT

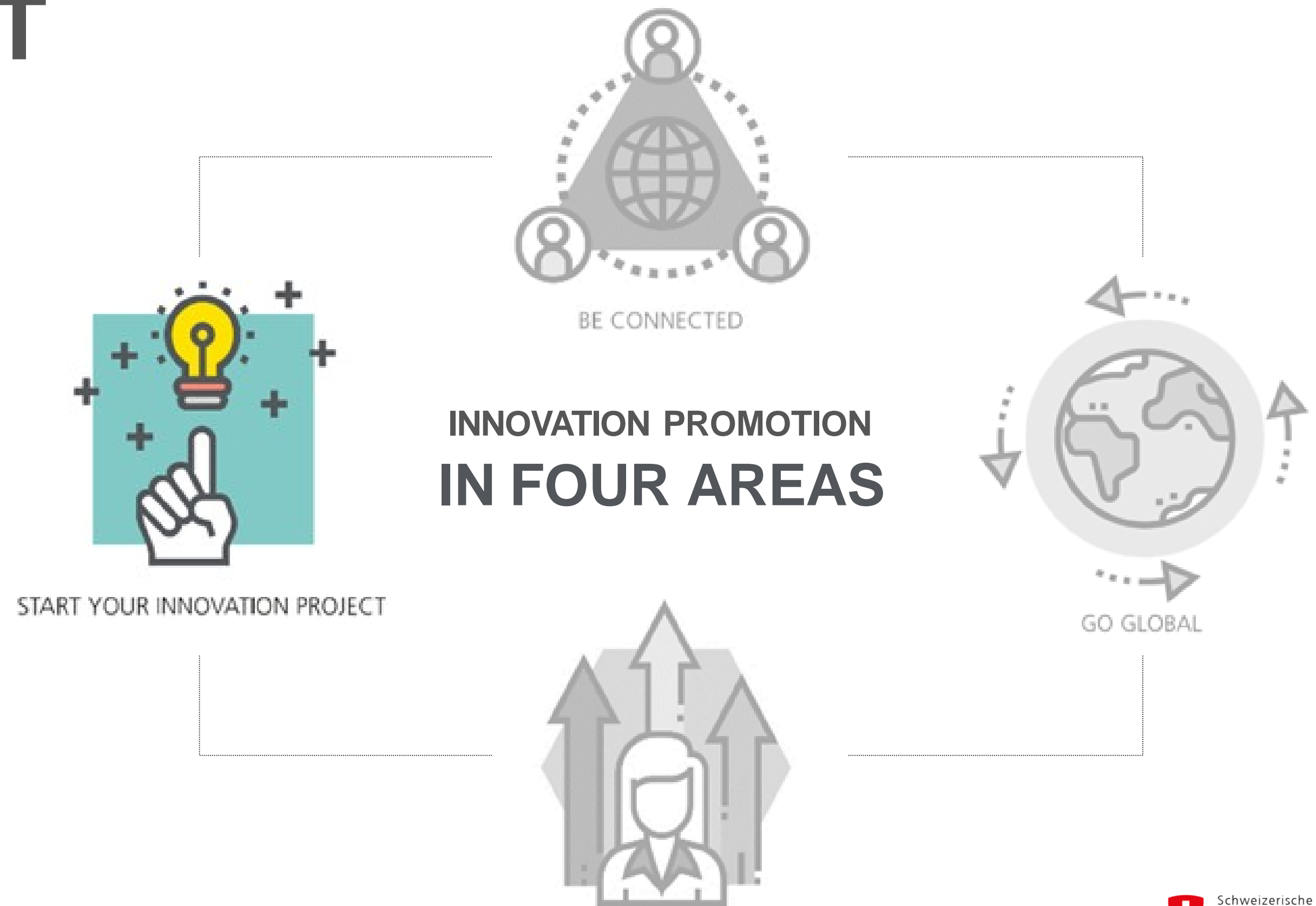
PRELIMINARY STUDIES WITH INNOVATION CHEQUE

INNOVATION PROJECTS

IMPULSE PROGRAMME «SWISS INNOVATION POWER»

FLAGSHIP INITIATIVE

BRIDGE FUNDING OFFER BY INNOSUISSE AND SNSF

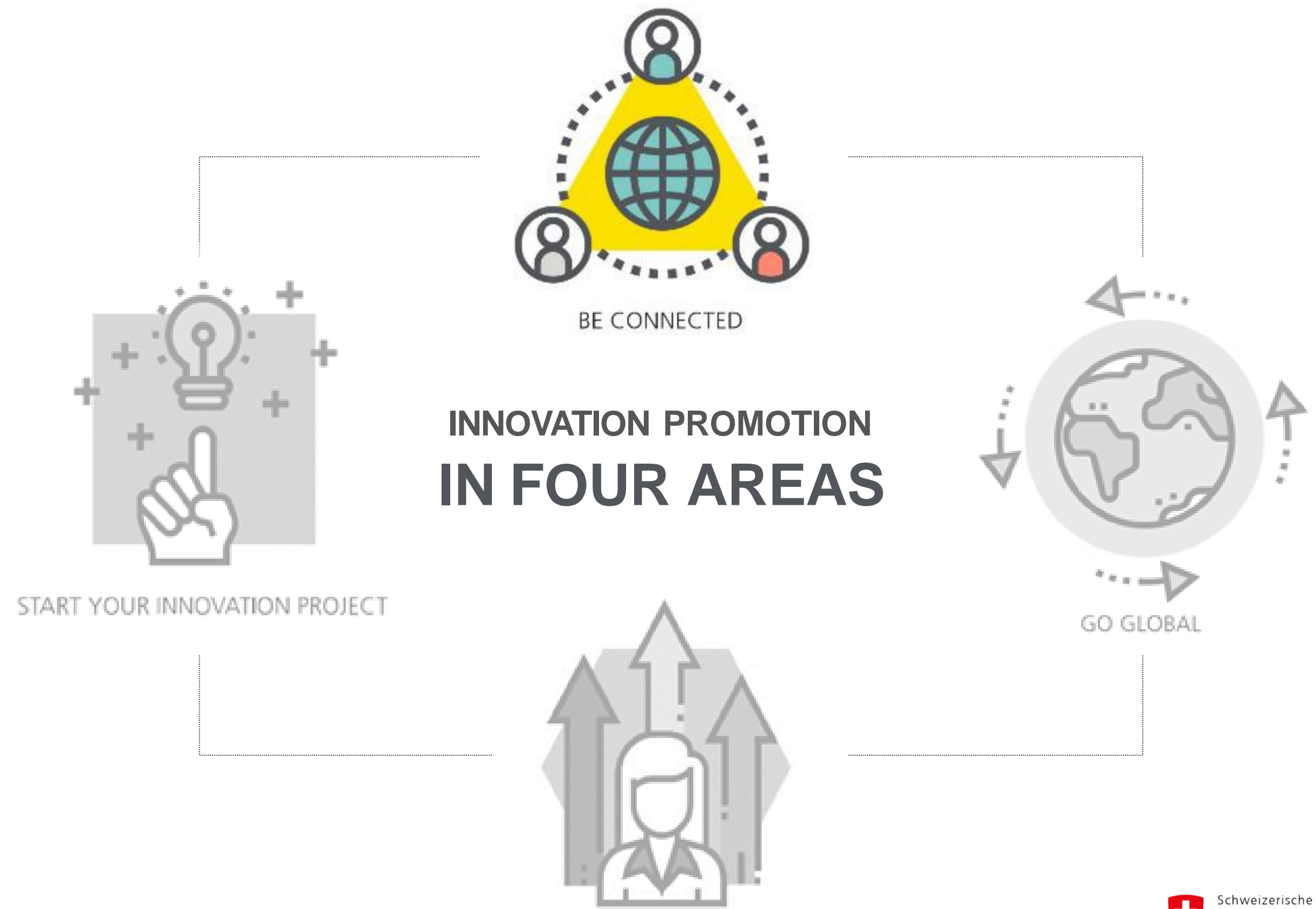


BE CONNECTED

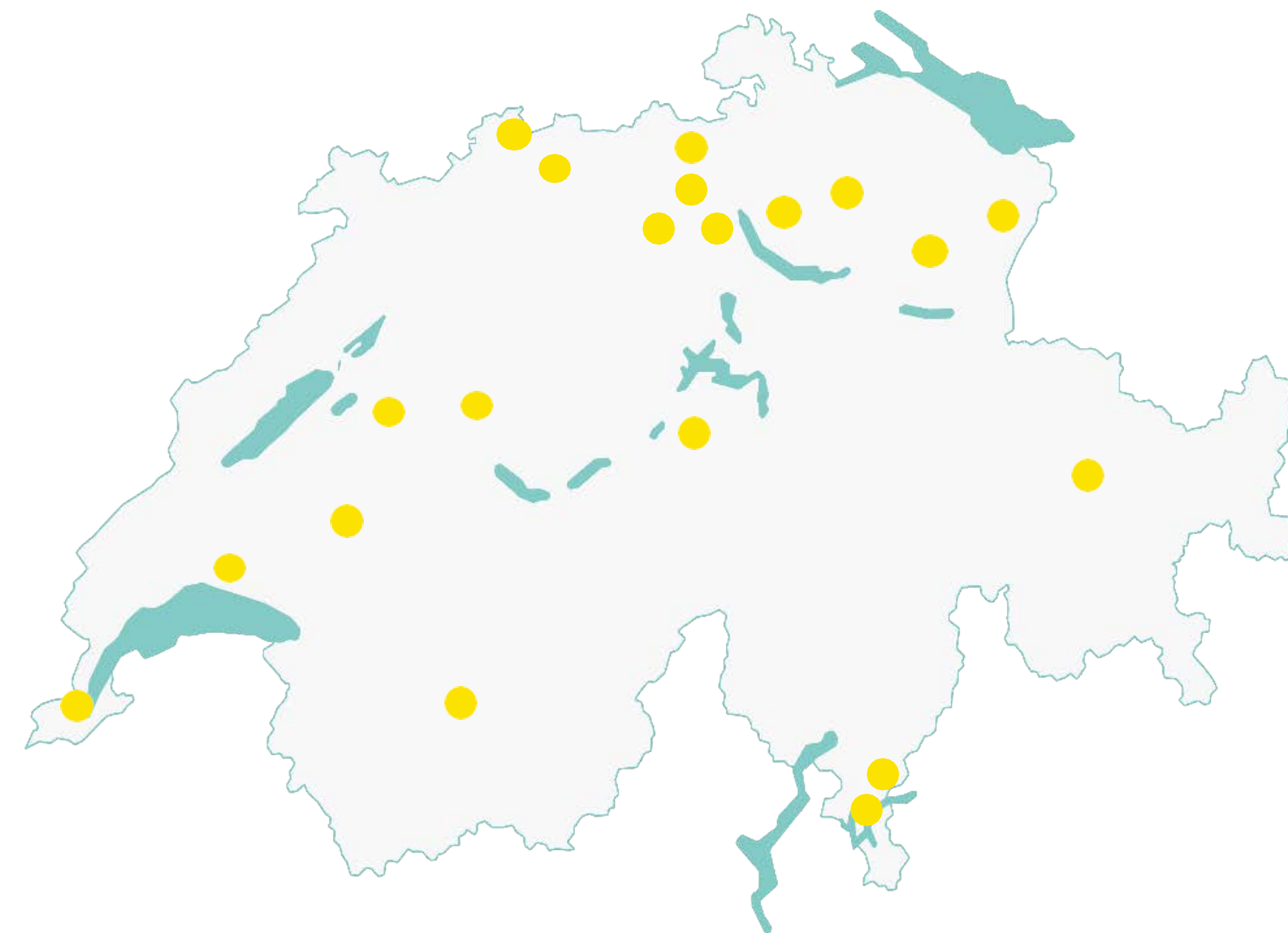
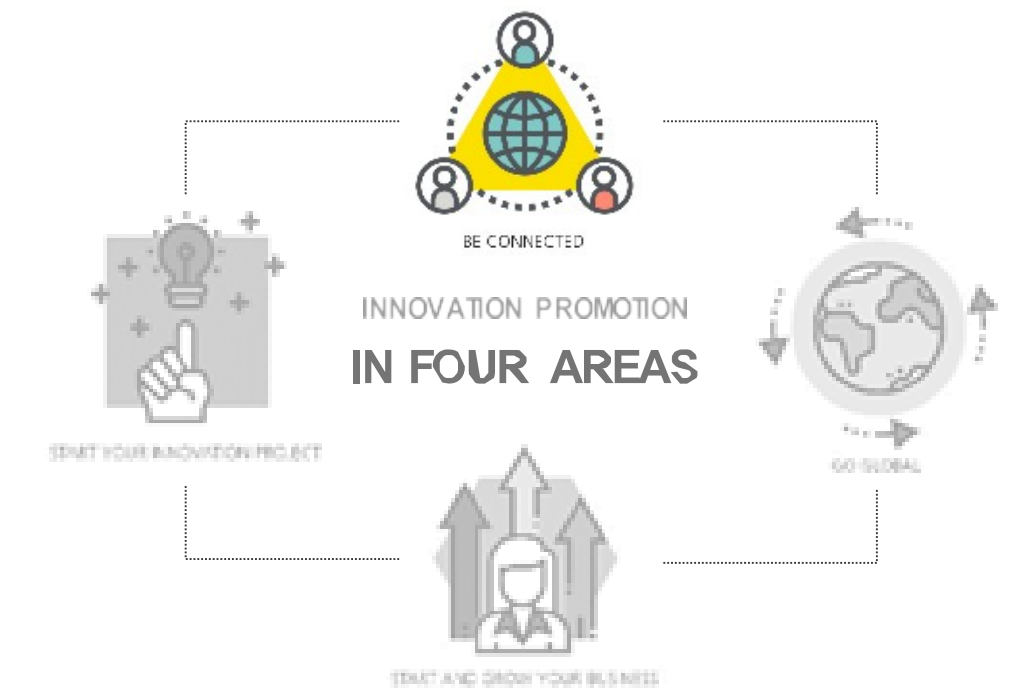
MENTORING
FOR SME (<250 FTE)

NTN INNOVATION BOOSTER

NETWORKING EVENT SERIES



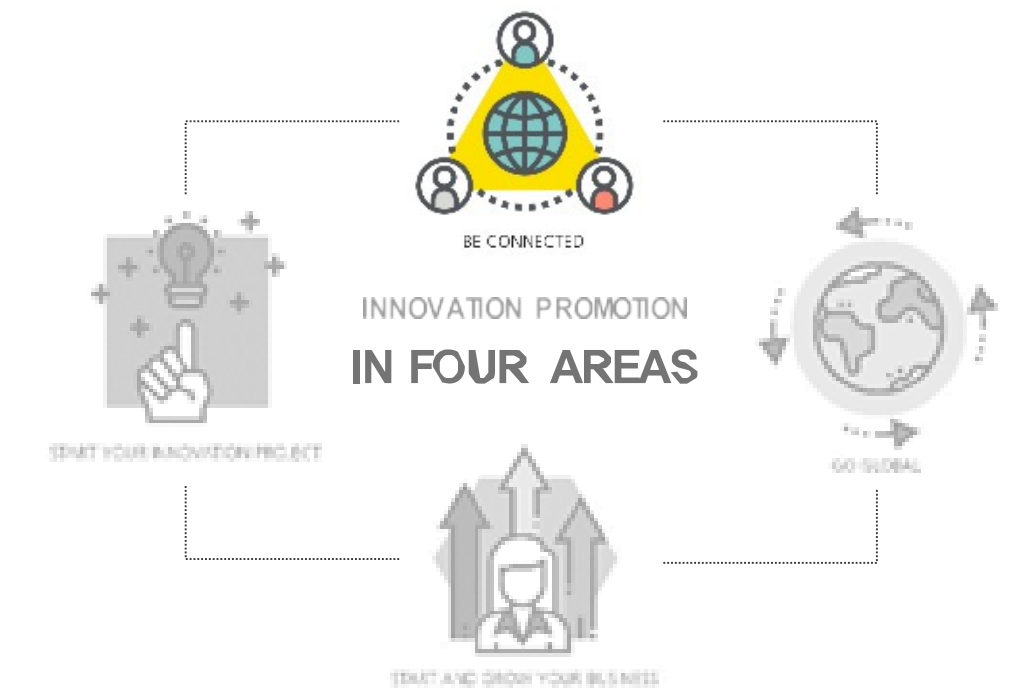
DEVELOP YOUR INNOVATION PROJECT WITH INNOVATION MENTORS



21 MENTORS THROUGHOUT SWITZERLAND:

- Provide you easy access to technology and research
- Provide you support with the search for the right research partner
- Assess your innovation project and assist with the application
- Free offering for Swiss SMEs and other organisations with less than 250 FTEs

INNOSUISSE MENTORING WORKS WITH CONSULTING VOUCHERS



BASIC SUPPORT
Max. of 10
consulting hours

Analysis of your
innovation project




PARTNER SUPPORT
Max. of 25
consulting hours

Search for
research partners



APPLICATION SUPPORT
Max. of 25
consulting hours

Support with comp-
iling the application



REVISION SUPPORT
Max. of 25
consulting hours

Review of rejected
applications

PROJECT
DEVELOPMENT
UNTIL SUBMISSION

Apply for a voucher:
<https://www.innosuisse.ch/mentoring>

for further information contact:
markus.baertschi@fhnw.ch

Guidelines for Zoom meeting

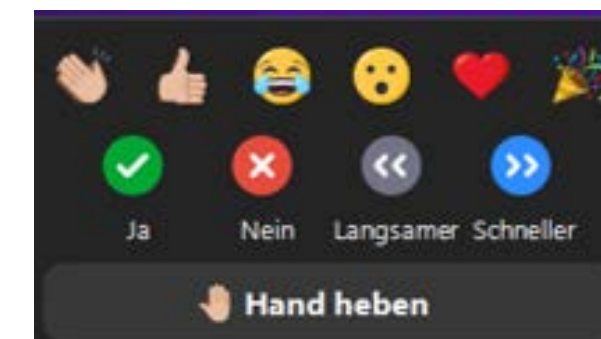
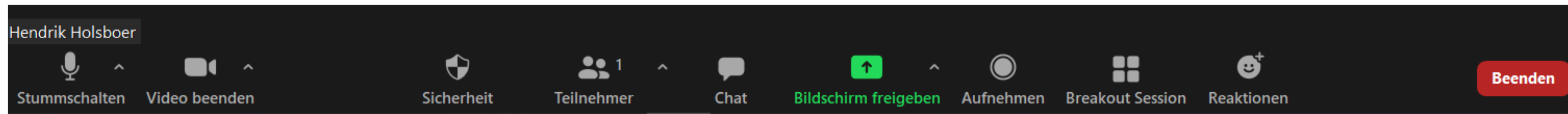
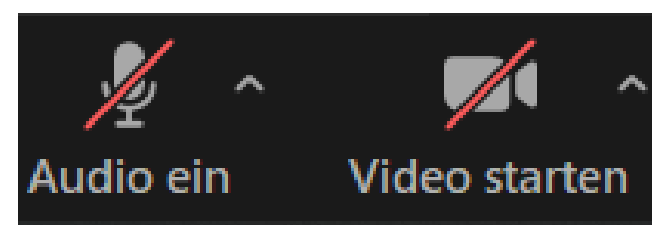
Mikrofon ausschalten
Éteindre le microphone
Turn off microphone

Nur bei Verbindungsproblemen
Kamera ausschalten
Éteindre la caméra seulement en cas de problème de connexion
Switch off camera in case of connection problems

Bei Fragen Hand heben
Levez la main si vous avez des questions
Raise your hand if you have any questions

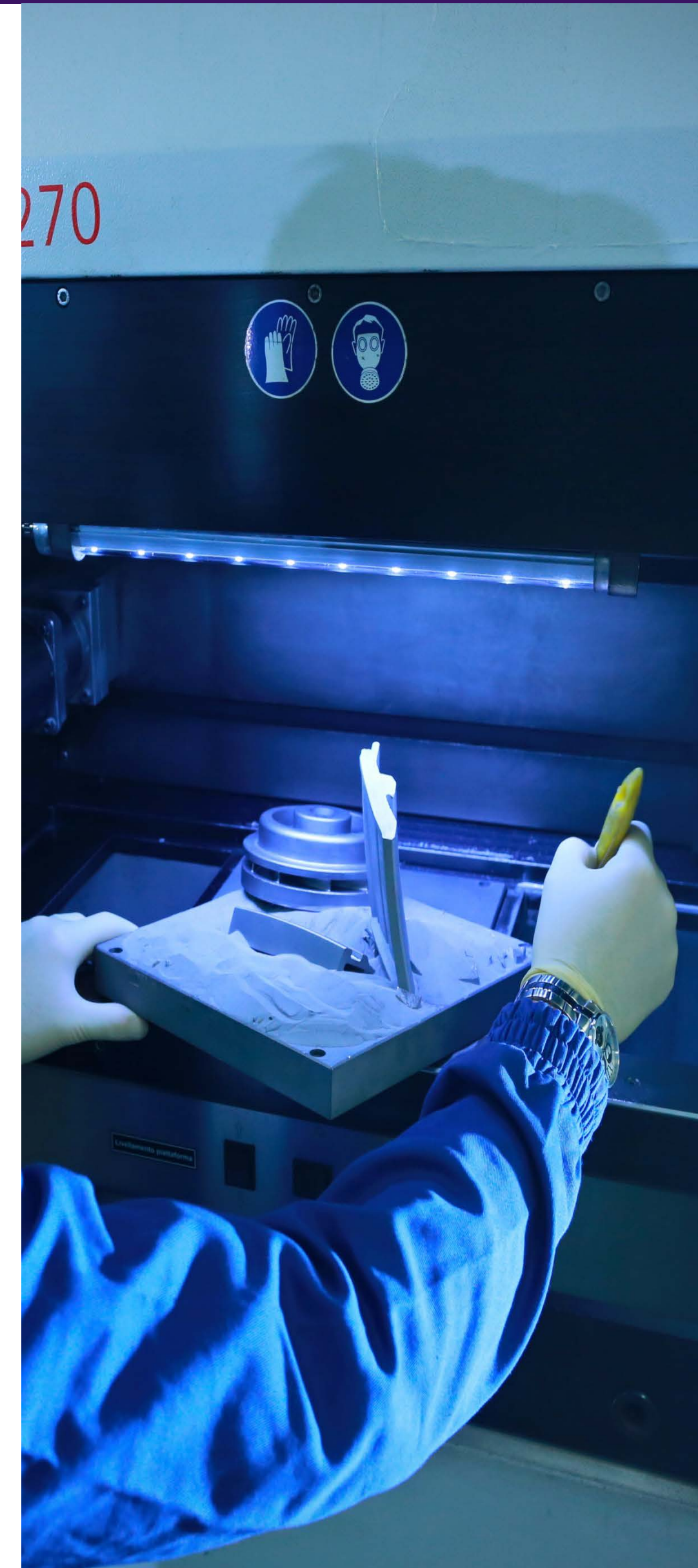
Wer nimmt teil?
Qui participe?
Who takes part?

Schriftlich fragen
Demande écrite
Written questions



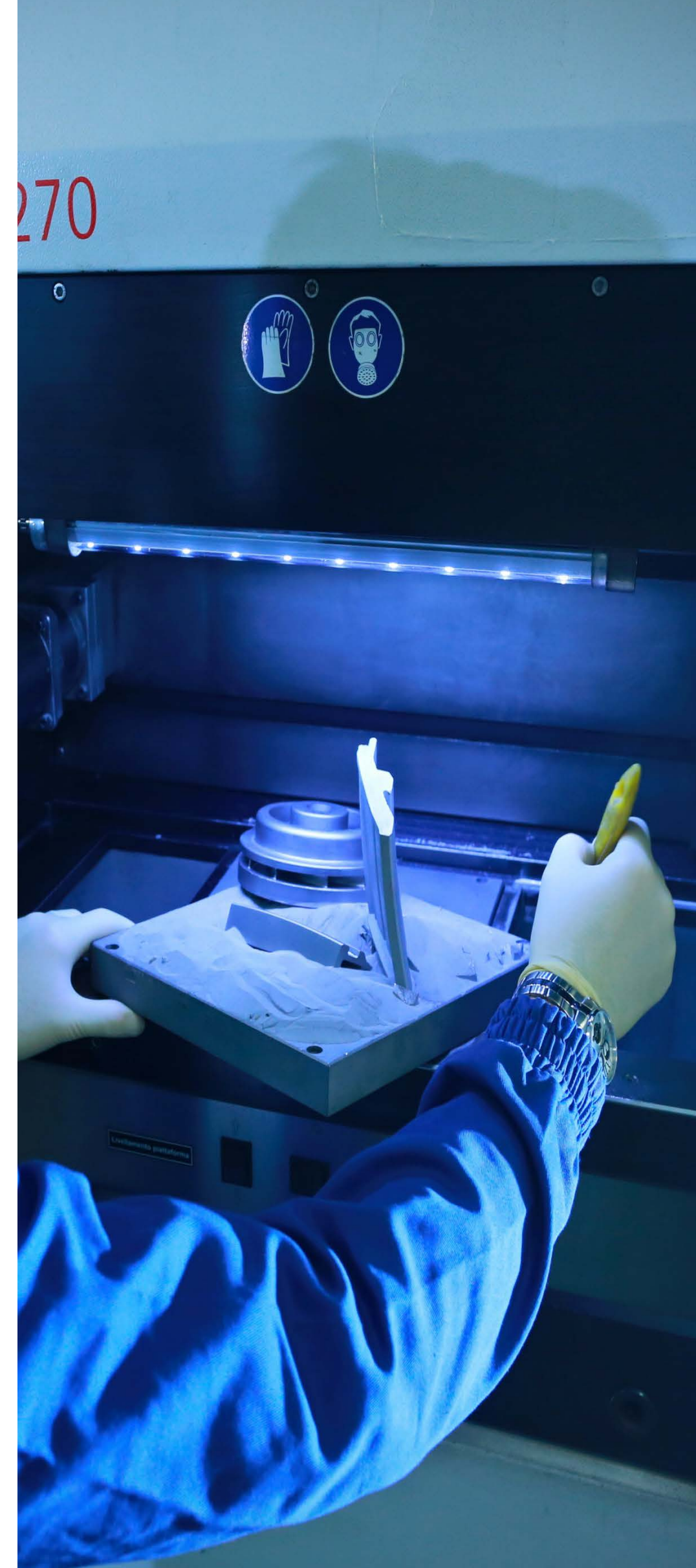
Some agreements for today

- The base of today's event is "Open Innovation"
... later on maybe a NDA shall be established
- Role clarification (presenters, partners, visitors)
- Recording of main Zoom session?
- Language: if necessary switch shortly to Français or Deutsch
- You will receive a copy of this presentation



Block 1: Surface Treatment / Material Research Presentations of «ideas & needs»

- Max. 5 min for each presenter (... it's a pitch)
- You will be reminded after 4 minutes
- Questions to be discussed in the breakout sessions



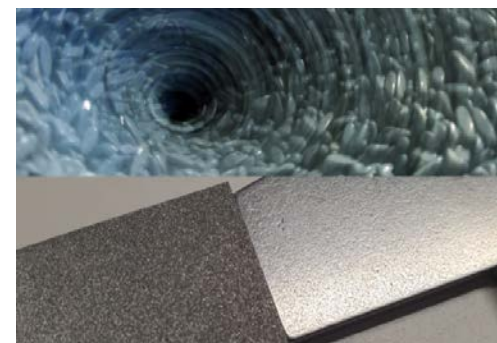
Block 1



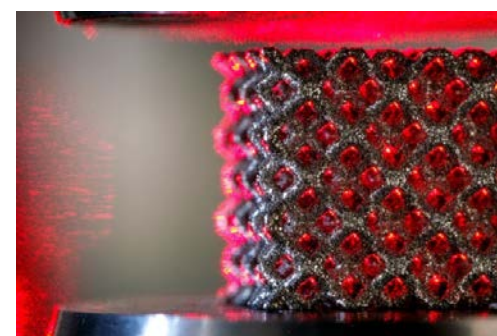
- 1. Improving medical AM post-processing**
Nicolas Bouduban, Swiss m4m Center
nicolas.bouduban@swissm4m.ch



- 2. Meet the requirement of the watch market**
Dr. Sébastien Lani, CSEM
sebastien.lani@csem.ch



- 3. Generic process for improving surface quality by chemical etching/polishing**
Maxim Auchlin, Auchlin SA, La Neuveville
dev@auchlin.ch



- 4. Holistic AM-post-processing**
Daniel Seiler, FHNW
daniel.seiler@fhnw.ch



- 5. Explore the chemical etching method to improve the surface quality of AM processed parts.**
Loic Bonsack, ProtoShape
loic.bonsack@protoshape.ch



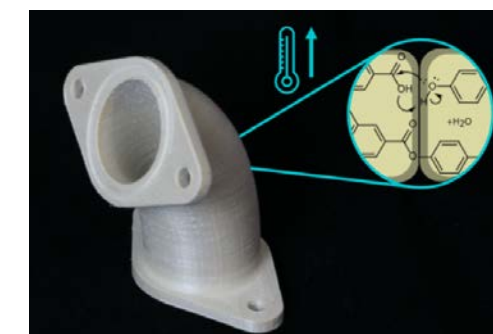
- 6. Postprocessing of additive manufactured part using abrasive Waterjet finishing**
Prof. Dr. Mohammad Rabiey, FH Ost, Rapperswil
mohammad.rabiey@ost.ch



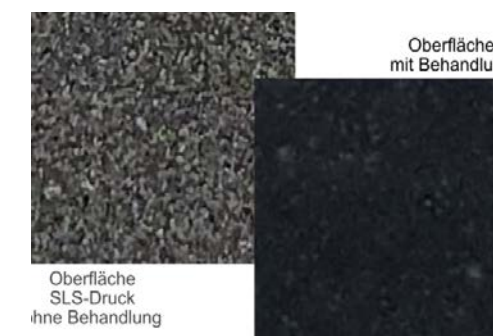
- 7. Reliable non-mechanical AM-optimized surface post-processing**
Dr. Andreas Burn, SIP Biel/Bienne
andreas.burn@sipbb.ch



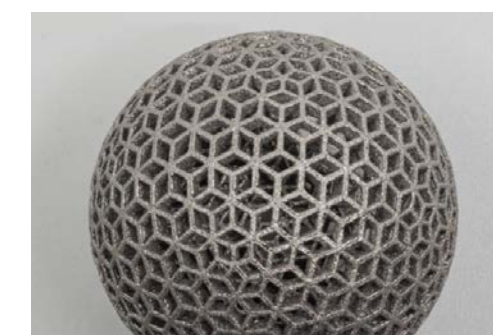
- 8. Making AM parts gas leak tight**
Dr. Denys Sutter, condenZero GmbH
dsutter@condenzero.com



- 9. Thermal-Annealing (Glühen) of 3D Printed Polymer Parts to Enhance Mechanical & Thermal Performance**
Raphael Heeb, NematX
raphael.heeb@nematx.com



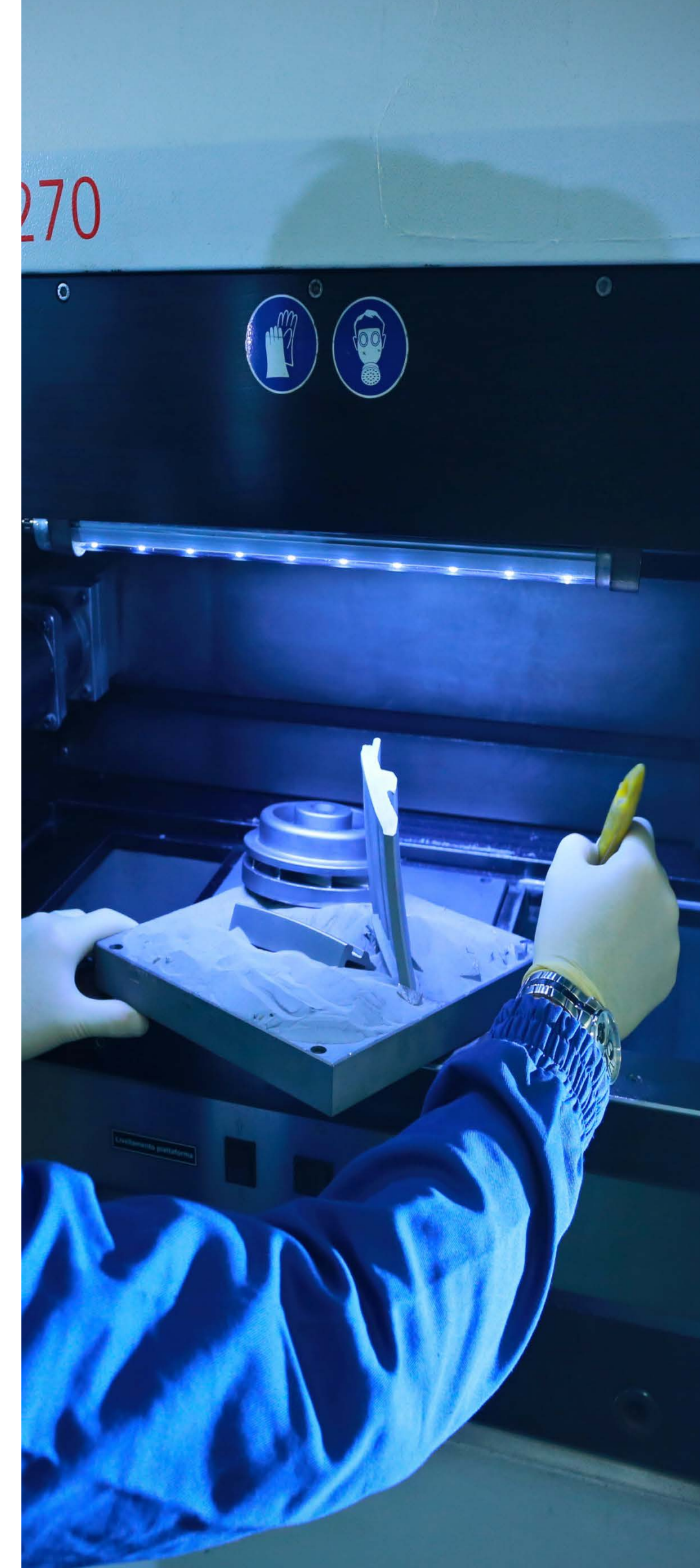
- 10. Simple surface finishing of FDM/FFF and SLS 3D printed components**
Pascal Soland, Powersnet
pascal.soland@poweers.net



- 11. Thin Wall Thickness AM Parts**
Alain Goffaux, Ultrahart Diamantkeramik AG
alain.goffaux@ultrahart.com

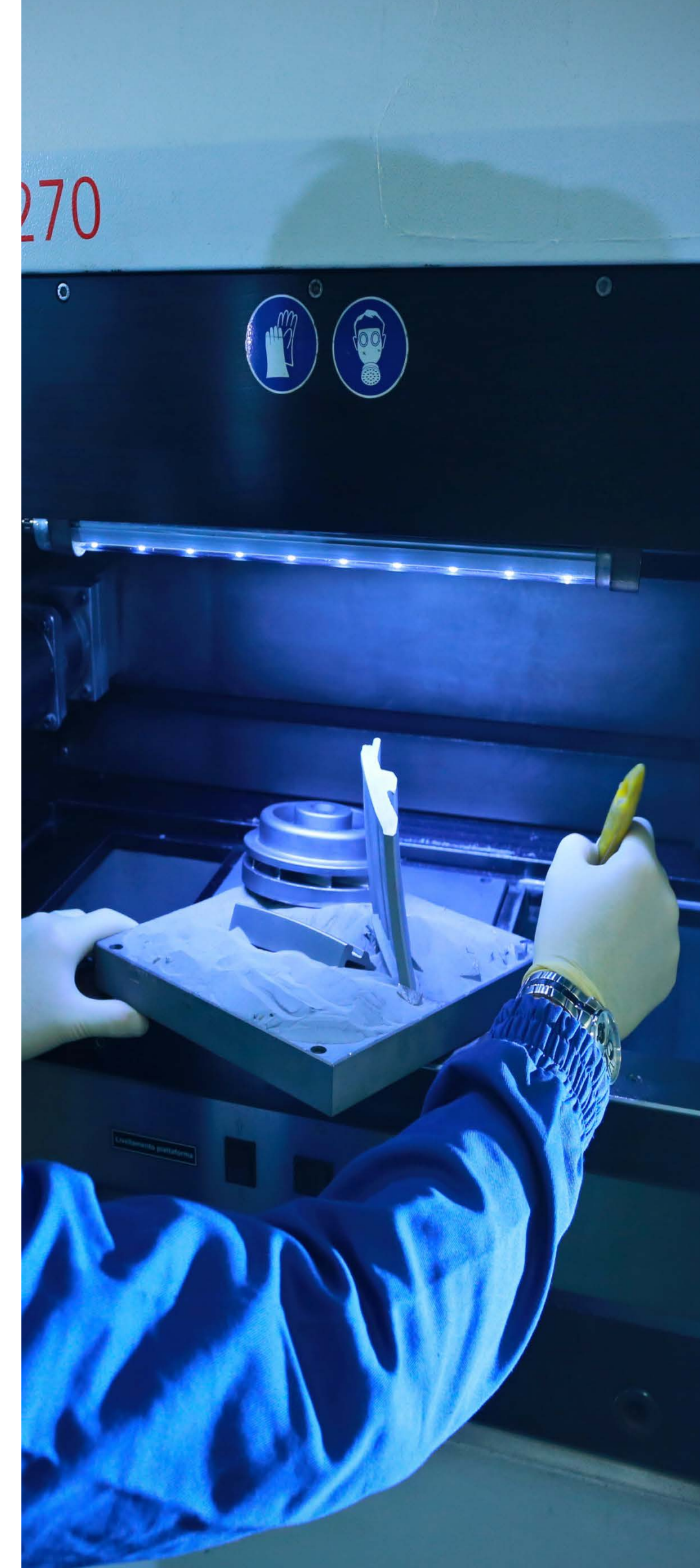
Time for a short break

Please be back in 10 minutes



Block 2: Handling / Software / Market Research Presentations of «ideas & needs»

- Max. 5 min for each presenter (... it's a pitch)
- You will be reminded after 4 minutes
- Questions to be discussed in the breakout sessions



Block 2



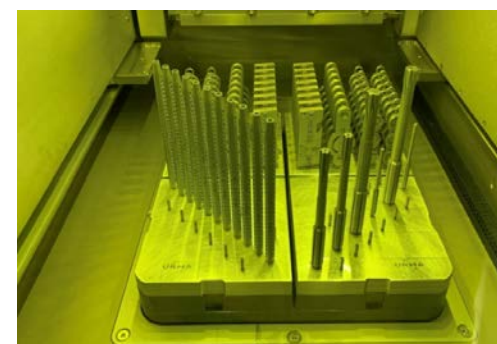
12. Unpack components automatically

Maurizius Mazonauer, Prodartis AG
maurizius.mazonauer@prodartis.ch



13. Postprocessing of advance, additive filter material

Jörg Walther, Ultrahart Diamantkeramik AG
joerg.walther@ultrahart.com



14. AM-LOCK - an interchangeable pallet clamping system

Holger R. Dörre, Lehmann Peter AG
h.doerre@plehmann.com



15. Fully automated 4-in-1 post processing solution for SLS / MJF parts

Dimitri Marcq, Sika AG
marcq.dimitri@be.sika.com



16. BOLT-IT

Julian Ferchow, Inspire AG / ETHZ
ferchow@inspire.ethz.ch



17. AM Post Processing further development of existing processes ...

Thomas Reber, Rösler AG
t.reber@rosler.com



18. Rethinking threaded inserts for 3d printed plastic parts (Gewindeeinsätze)

Daniel Omidvarkarjan, ETHZ
omidvarkarjan@inspire.ethz.ch



19. Annealing of FDM prints in lost mold for property improvement

Oliver Döbrich, FHNW
oliver.doebrich@fhnw.ch



20. Application of cryogenic deburring for 3D printed parts (SLM), (Tieftemperatur-Entgraten)

Dr. Carsten Haack, HSLU
carsten.haack@hslu.ch



21. Design for post processing of additively manufactured parts

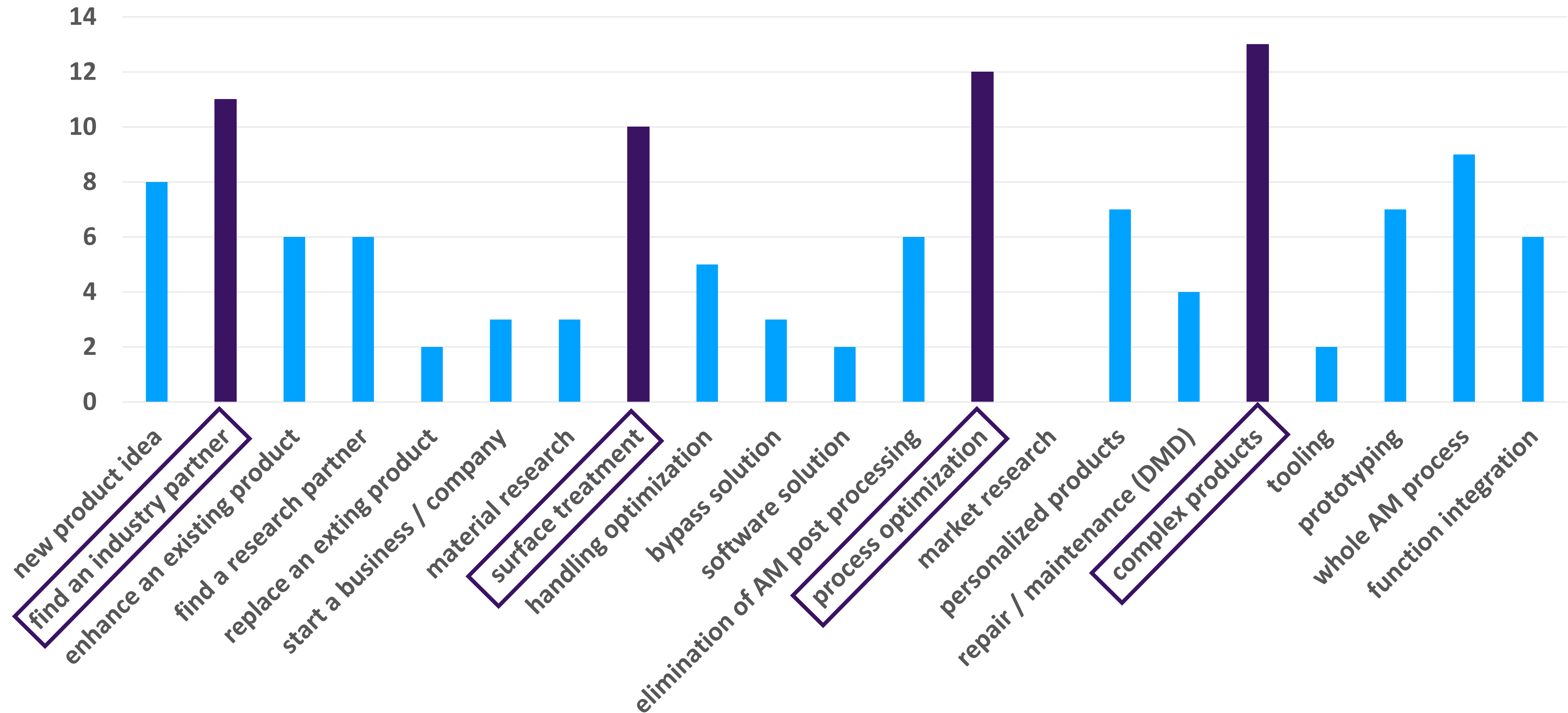
Thorsten Kramer, BFH
thorsten.kramer@bfh.ch



22. Re-machining of AM parts with 3D scan

Dr. Sébastien Lani, CSEM
sebastien.lani@csem.ch

Results Survey Form



4 Breakout Sessions

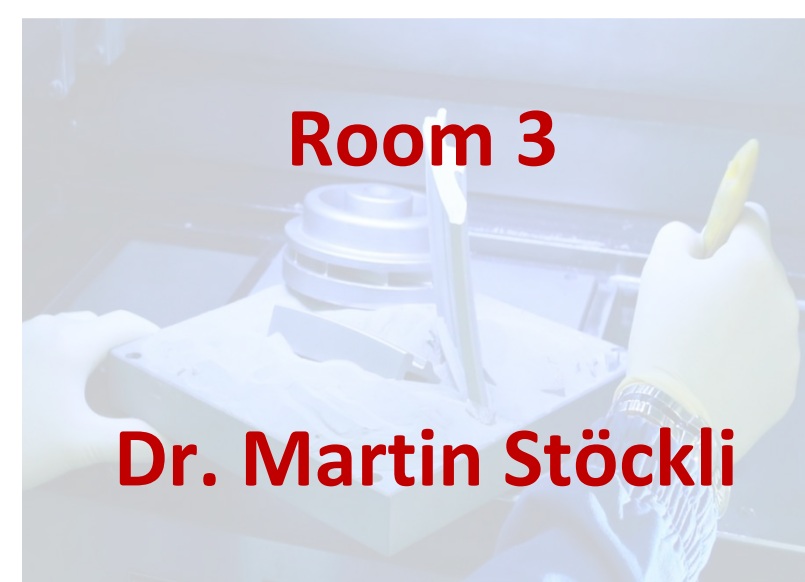
- You will be assigned to the group you reported
- Expected procedure within session:
 - short introduction of participants
 - identify as many interest for collaboration as possible
 - Exchange contacts
 - Finish after 30 minutes



Process optimisation
incl. associated
software solutions



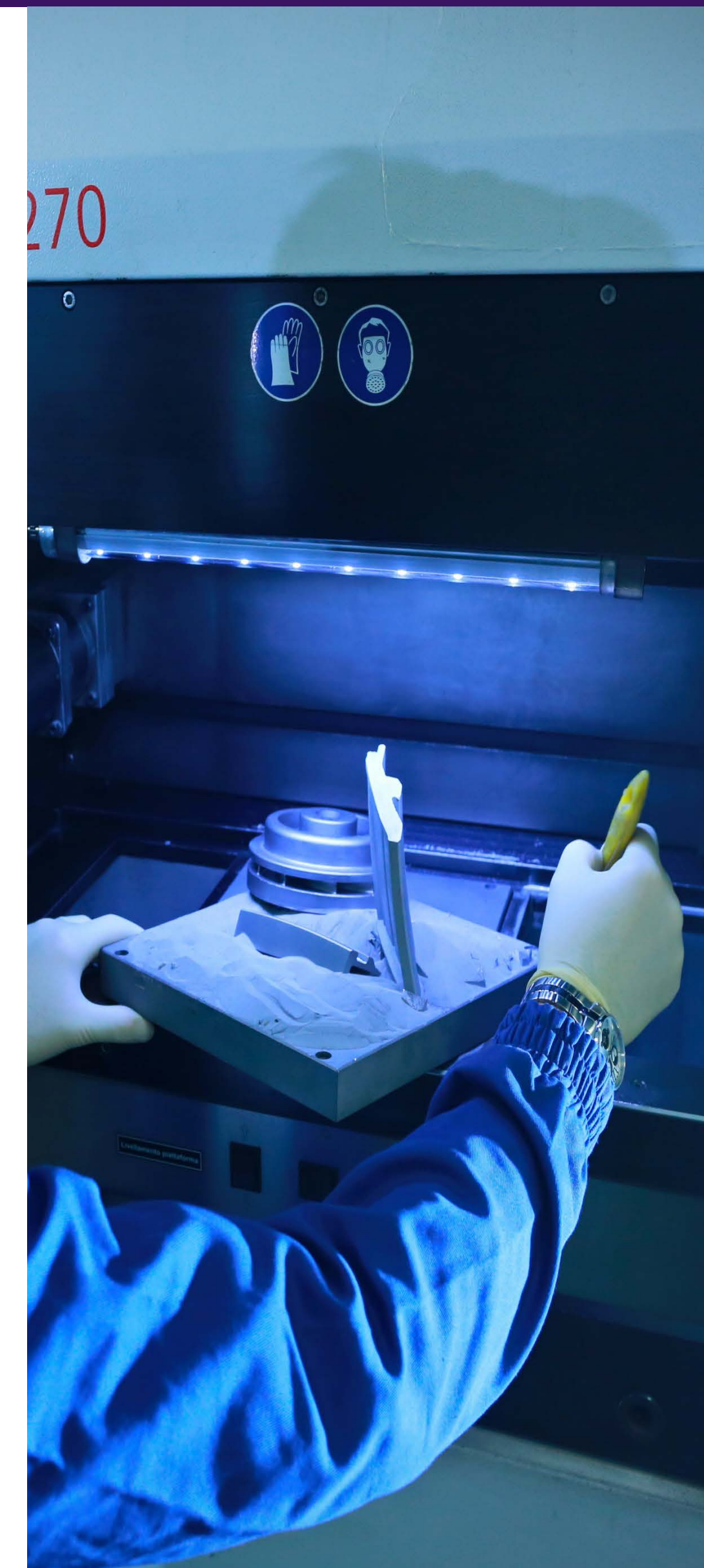
Surface Processing and
Optimisation – Metal



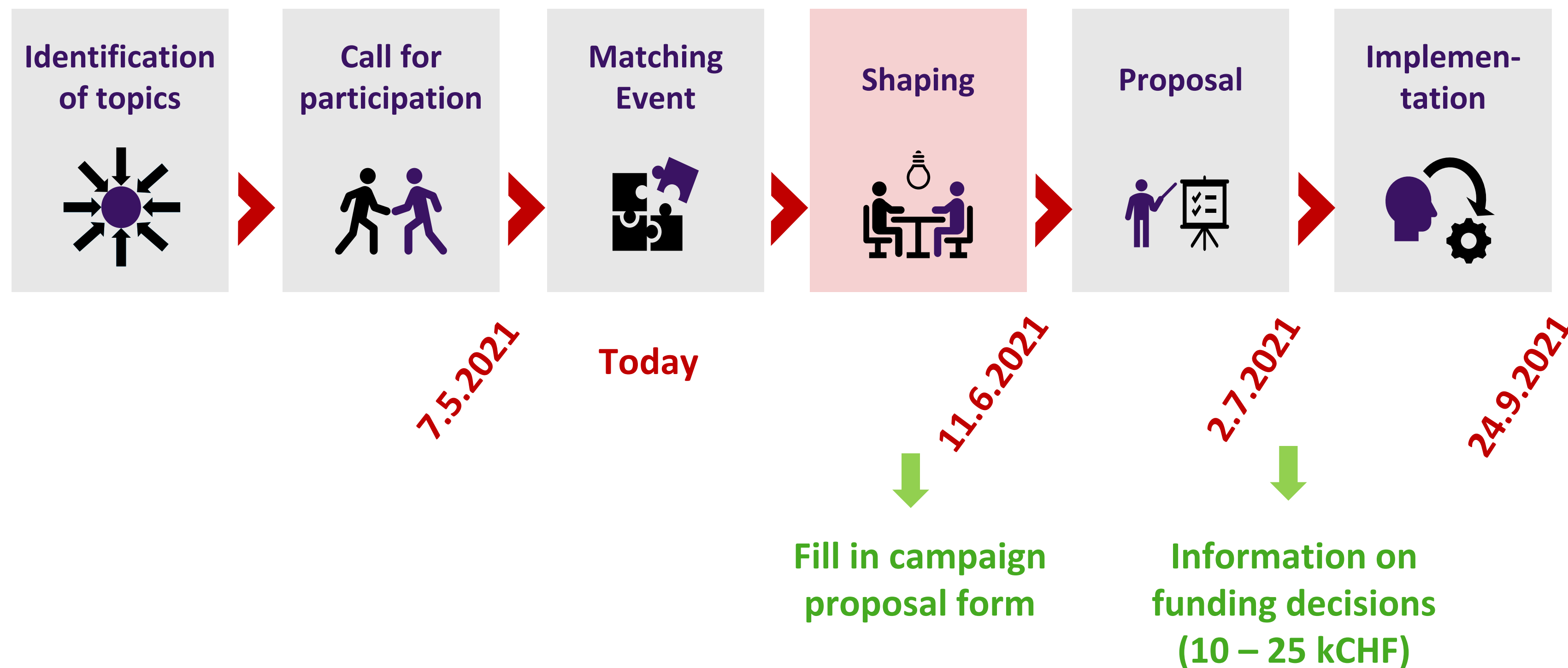
Investigation and
evaluation of different
AM post processing
methods



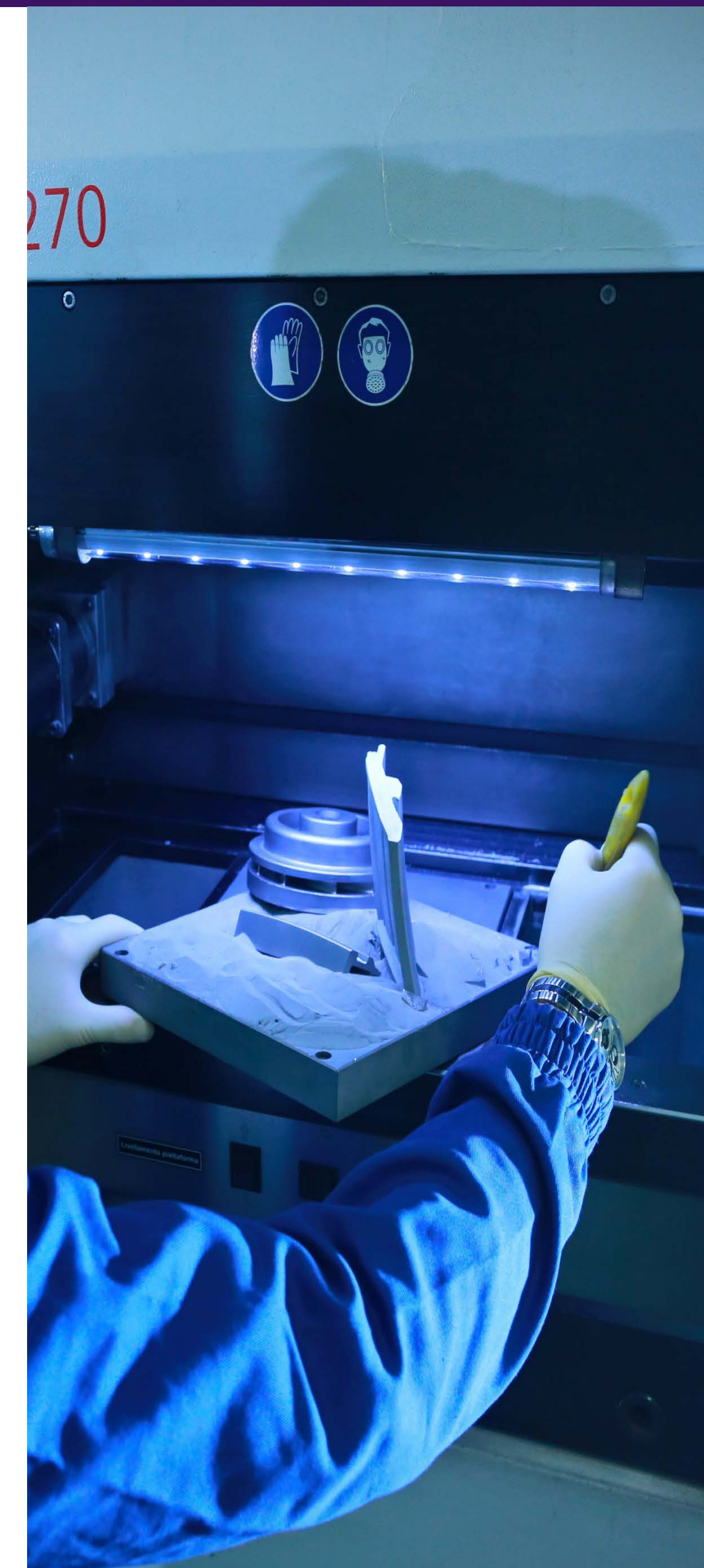
Improvement of
material properties
during post-processing
of AM parts
(all materials)



NTN IBAM Next steps

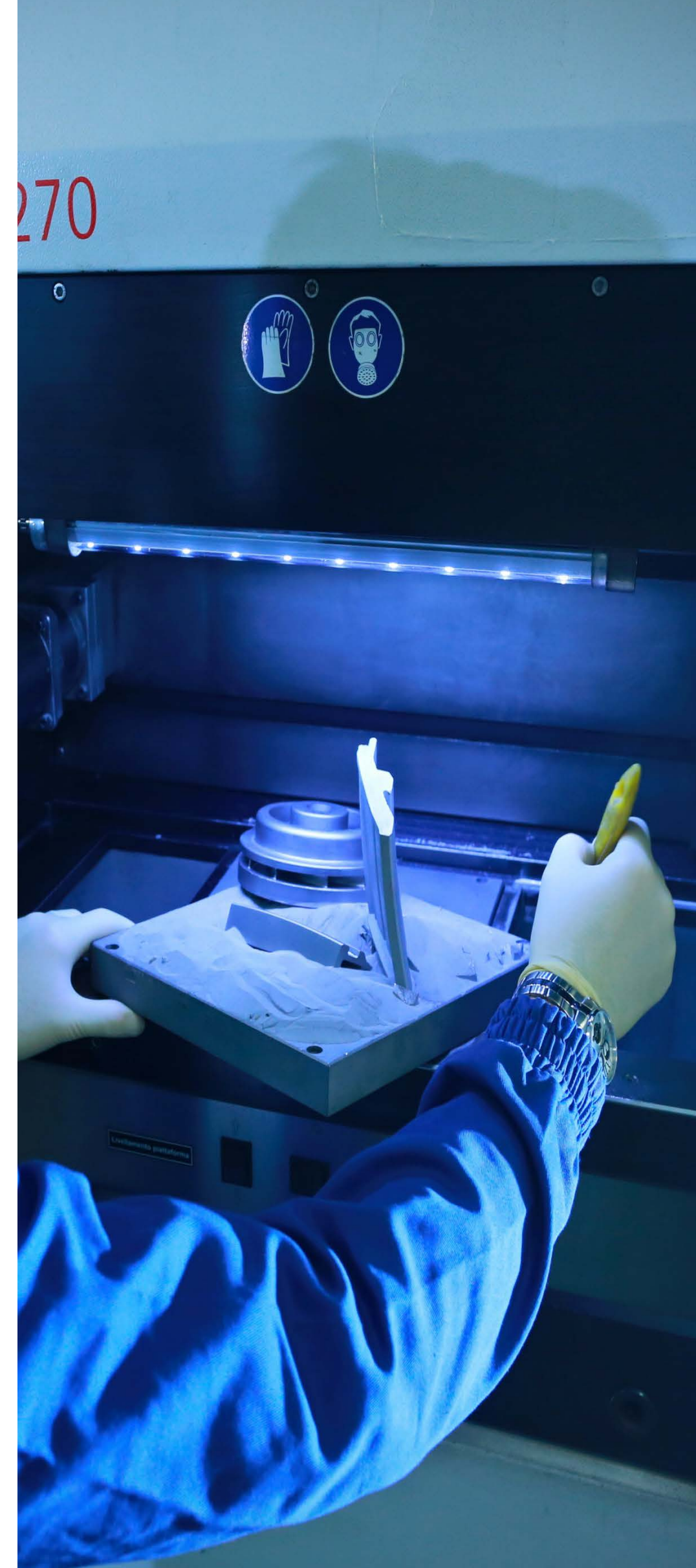


For more details: see flyer attached in invitation mail from 10. May 2021



NTN IBAM – Matching Event Closure

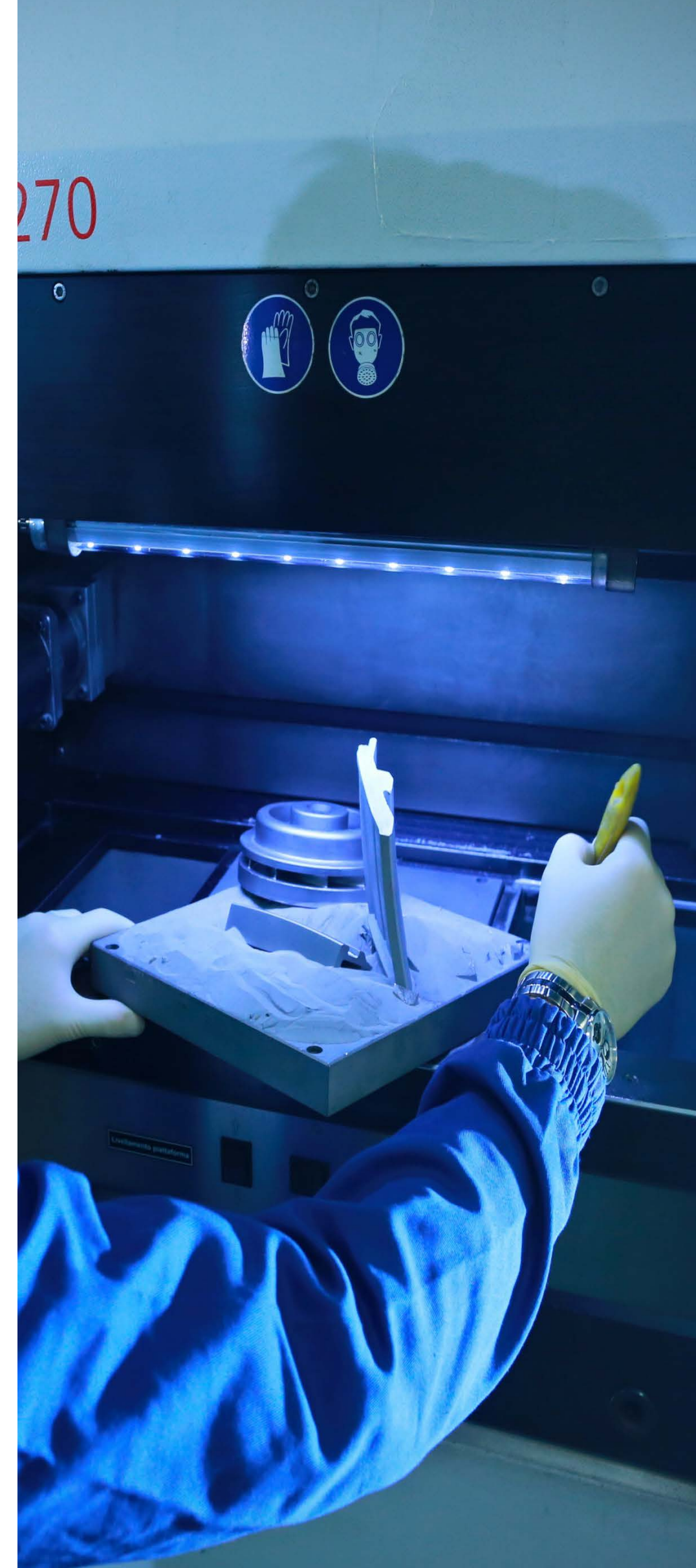
- **Promotion of IBAM** in your business network is highly appreciated
- Further questions and contact: hendrik.holsboer@ibam.swiss
- You will receive a **copy of this presentation** after the session?
- Visit our website: www.ibam.swiss
- Visit NTN Ideation Platform: www.innobooster.org



NTN IBAM – Matching Event

“How can AM post-processing be optimized?”

**Thank you for your participation
and good luck!**



Details for next steps

<p>Matching Event</p>	Start: Tuesday 18. May 2021, 09:00	End: Tuesday 18. May 2021, 12:00
<p>On-line event: Zoom-Link Visibility: open for registered participants Inputs of participants who have submitted needs and ideas: - fill in matching form and send to NTN IBAM until Friday 14. May 2021 - prepare “5 Minute”-presentation (5 slides) and send until Monday 17. May 2021 Target: forming teams to hand in proposals</p>		
<p>Shaping</p>	Start: Monday 19. May 2021	End: Friday 11. June 2021
<p>Teams report names of members until Monday 24. May 2021 Visibility: team only Involved people sign a non disclosure agreement (NDA) Teams hand in a proposal until Friday 11. June 2021 - fill in the proposal form (template with two A4 pages)</p>		
<p>Proposal</p>	Start: Tuesday 15. June 2021	End: Friday 2. July 2021
<p>Presentation of proposals to the experts Tuesday 15. June 2021 time: tbd Experts evaluate proposals until Monday 21. June 2021 NTN IBAM key persons nominate the projects to be funded and communicate the funding amount to the teams until Friday 25: June 2021 Teams will hand in budget incl. own cash contributions until 2. July 2021</p>		
<p>Implementation</p>	Start: Monday 4. July 2021	End: Friday 24. Sept. 2021
<p>Nominated teams work on their topic and realise a prototype. Teams set up a) a final report open to everyone and b) for people having signed the NDA until Friday 24. Sept. 2021</p>		

