

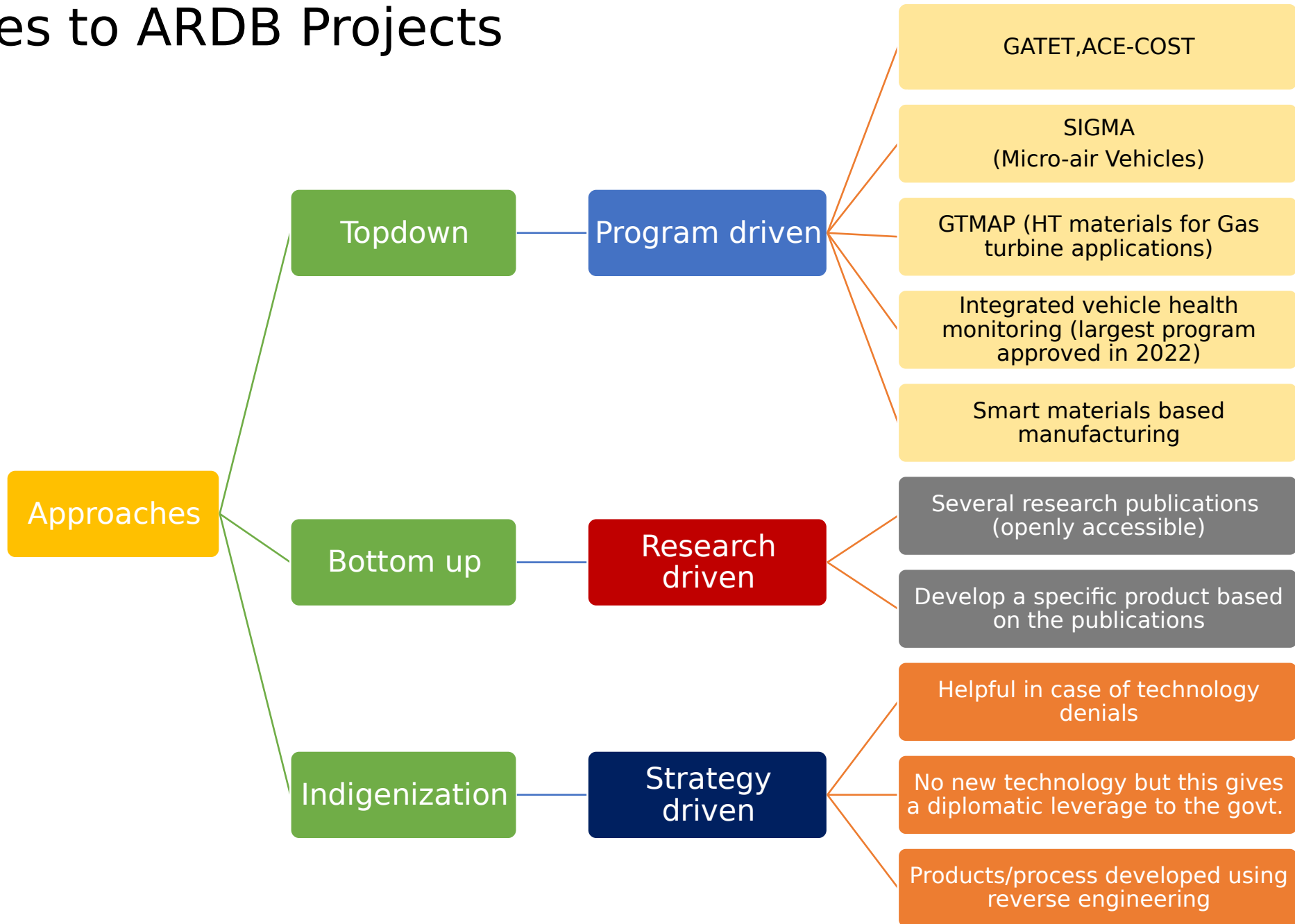
ARDB Materials and Manufacturing Panel

Workshop and the First Call for Proposals

January 10, 2023, 5 pm

Indian Institute of Technology Indore

Approaches to ARDB Projects



Materials Domains

Feedstock powder making for Additive Manufacturing

Nb/C103 powders

Ti alloy powders

Al 7XXX and 2XXX alloy powders

Inconel superalloy powders

Material characterization and mechanical properties

Ultra high temperatures

Cryogenic temperature

High strain rate loading

Static and dynamic loading conditions

Multiaxial loading

Ceramics and composites

SiC based ceramics and composites

TiB₂ based composites

Ceramic cores for aerospace components

Ceramic shell making

Smart materials

Self healing materials

Self reporting materials

Self repairing materials

Meta materials

Technical Textiles

Damping materials

Thermoelectric materials

Self cleaning materials

Sensors and actuator materials for SHM

Materials & Design

AI/ML based design

Computational materials design

Process modelling and simulation

Integrated computational materials design

Materials for quantum computing

Cellular materials

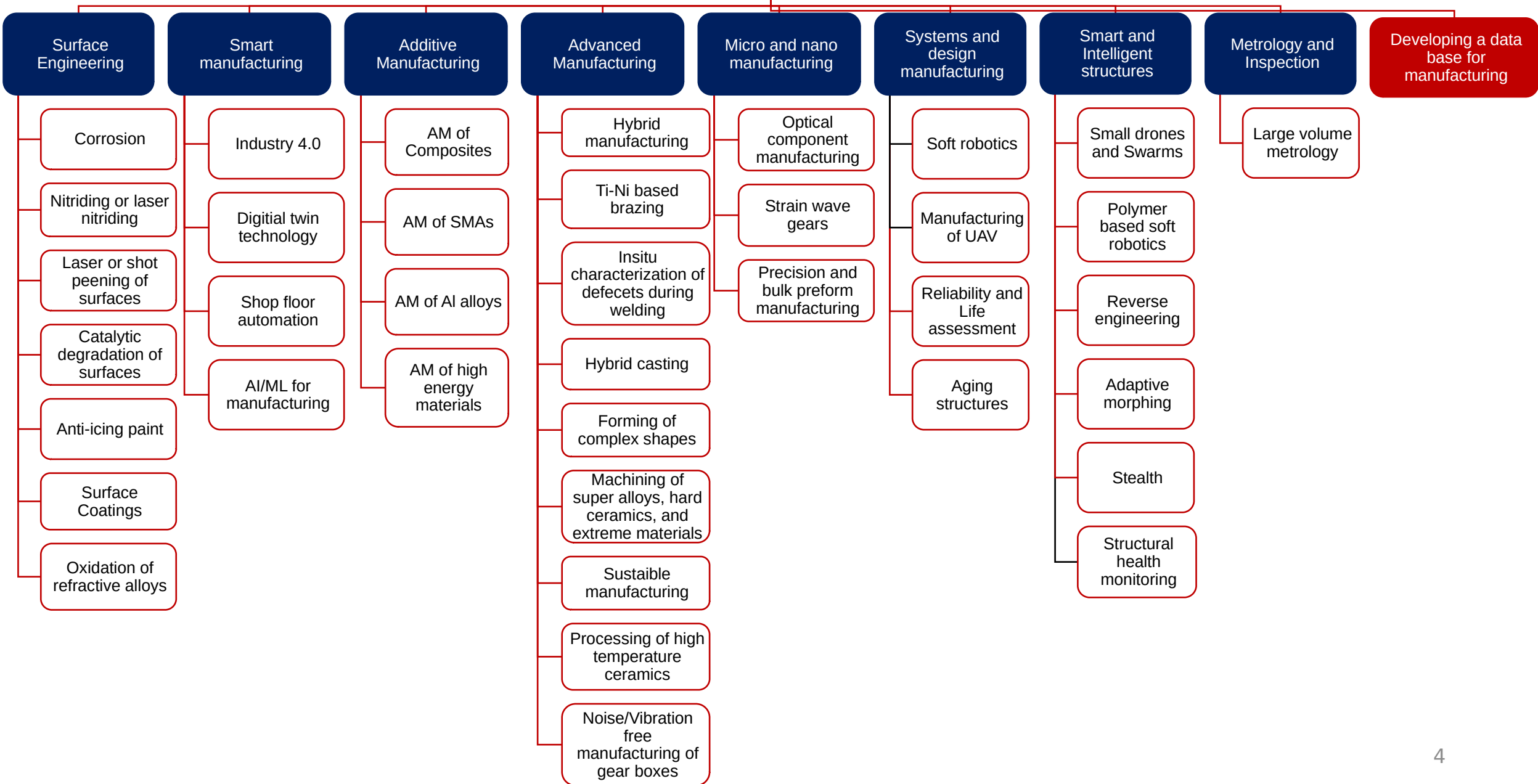
Protective Materials for CBRN threats

Radome materials

High density materials

Development of Mechanical properties database for metals and alloys

Manufacturing Domains



Proposal Submission Guidelines

- **Establishing Connect with DRDO**

- Establishing connect is must for every proposal. But is the most difficult task.
- Complete Proposal: If you have already established connect within DRDO, then you may submit the complete proposal
- Conceptual Proposal: If you do not have specific connect within DRDO, we will help you to establish connect.
- Upon review and acceptance of the conceptual proposal, you can submit the Full Proposal.

- **Nature of the Proposal**

- Program Driven (Top-down)
- Research Driven (Bottom-up)
- Strategy Driven (Indigenization)

- **Aimed at solving a problem or an issue**

- Clear definition of the problem you are trying to solve
- How your solution will help resolve or alleviate the issue

- **Scientific Merit**

- Detailed review of the issues (literature) relevant to the problem
- Appropriate solution to the problem – clear definition of the methodology: experimental, numerical, mathematical or combinations
- Results and analysis leading to the solution

- **Deliverables**

- Clear definition of the deliverables

Proposal Submission Guidelines

- **Two-stage Review of the Proposals and Feedback**
 - Preliminary Review: Experts from DRDO and Academia
 - Final Review: Experts from DRDO and Academia
- **Presentation to the Experts Committee**
 - Upon acceptance of the proposal in the review process, the PIs will be called to make a presentation.
 - Final Acceptance of the proposal and recommendation for the release of grants
- **Funding Available by AR&DB – M&M**
 - AR&DB – M&M Panel can recommend the proposals up to INR 1 Cr.
- **Proposals with Higher Funding Requirements**
 - Proposals with more than INR 1 Cr funding will be reviewed but recommended to the council for further review and approval.
 - Ideally, proposals with larger funding requirements (more than INR 1 Cr) may be submitted as a Conceptual Proposal at first.
- **Last date for submission of proposals under the first call is February 10, 2023**

Please Refer to the website

<http://ardbmmpanel.iiti.ac.in/>

Thank you for your attention and Q&A in the
Chat Box !!