

Fostering Innovations in Technical Textiles –Hackathon for unleashing creativity in technical textiles

The textiles industry is undergoing a major shift with integration of advanced materials and innovations in traditional textiles involving both synthetic and natural fibres, giving rise to the field of Technical Textiles. The application areas of technical textiles are not limited to apparel but includes use of advanced fibres and materials in Agrotech (Agro-textiles), Buildtech (Construction Textiles), Geotech (Geo-textiles), Hometech (Domestic Textiles), Meditech/Medtex (Medical textiles), Mobiltech (Textiles used in transport), Packtech (Packaging textiles), Protech (Protective textiles), Sportech (Sports textiles), sustainable textiles etc. and other composite applications. Government of India, through Ministry of Textiles has launched a National Technical Textiles Mission (NTTM) to foster research, innovation, promotion, and education in the field of technical textiles. To harness the potential of technical textiles, a hackathon focused on Technical Textiles is being organized. This dynamic event aims to create a platform for innovators from textile engineering, materials science, composites and allied fields to explore, collaborate and generate innovative solutions for technical textiles.

The objective of the hackathon is to bring students, researchers, entrepreneurs, and industry professionals on a common platform to promote awareness, spark innovation, foster collaboration, and identify potential solutions to the real-world challenges in technical textiles. The participants will be benefitted through learning opportunities, networking, recognition of their efforts and working on real-world applications of technical textiles.

Themes:

1. **Smart Textiles** for integrating sensors, actuators, and other smart technologies into textiles to create fabrics/fibres with enhanced functionality.
2. **Sustainable Textiles** for addressing environmental concerns in the life cycle of textile value chain by developing sustainable and eco-friendly textile solutions.
3. **Medical Textiles** for developing advanced wound care and innovative wearable medical devices.
4. **Protective Textiles** for developing protective and safety equipment for different applications.
5. **Composites** for developing advanced composites for Aerospace, Defense, and other applications.
6. **Functional Fabrics** for developing textiles with improved functionalities, such as temperature regulation using Phase changing materials (PCM), moisture management, antimicrobial properties and self-cleaning properties.
7. Development of Specialty and high-performance fibres like meta aramids, para aramids, carbon fibre, glass fibre, high tenacity/super high tenacity nylon, high tenacity/super high polyester, high tenacity/super high polypropylene, high tenacity/super high viscose, ceramic fibre, Zylon, Ultra-Uigh Molecular Polyethylene, Nylon 66.
8. Development of Indigenous Machinery/Equipment/Instruments.
9. Integration of Technical Textiles with applied sciences and Engineering using of Artificial Intelligence, Internet of Things, 3D/4D Printing and Rapid Prototyping, Drones, HMI, Robotics, Sensors, etc., for Human Protection, Plant protection, Environment protection, and related disciplines to potentially facilitate transforming the technical textiles markets and application areas thereof.

10. Any other areas in the domain of technical textiles.

Format: The hackathon will consist of multiple phases:

1. **Ideation Phase:** Participants will brainstorm and pitch their ideas as individuals or as teams.
2. **Development Phase:** Teams will work on the pitched projects, with the mentorship and guidance from experts.
3. **Presentation and Judging Phase:** The innovative solutions developed will be evaluated to a panel of judges.

Prizes:

Top 3 winners may be considered for funding under the Grant for Research and Entrepreneurship across Aspiring Innovators in Technical Textiles (GREAT) for a grant amounting up to INR 50 lakhs for a period of maximum 18 Months subject to fulfilment of other eligibility criteria of the GREAT scheme.

Contact Information / Enquiries:

For inquiries, please contact at cons.sci-nttm@govcontractor.in, srcons-nttm@govcontractor.in or +91-9619610582, +91-9418712195 only.

Submission of Proposals:

The Proposals can be submitted by 5th February 2024 through mail at nttm-textiles@gov.in with subject line “**Hackathon – (Title of the proposal) Bharat-Tex 2024**”.

Event Duration: 26th -29th February, Bharat-Tex 2024.

Location:

- **New Delhi, India**

Expected Outcome:

- Development of innovative solutions using technical textiles for various industries.
- Creation of new business opportunities and partnerships.
- Increased awareness of opportunities in technical textiles.
- Develop a culture for rapid translation of ideas/prototypes to products in Technical Textiles.
- Generation of valuable data and insights for further research and development.

Sponsorship and Partnerships:

- National Technical Textiles Mission (NTTM), Ministry of Textiles, Government of India.

Application Form:

The following application form is mandatory for participating in the hackathon

Applying as:

1. Individual
2. Team leader

Personal Information:

1. Full Name:
2. Email Address:
3. Phone Number:
4. LinkedIn Profile (if applicable):

Academic and Professional Background:

1. Current Institution/Organization:
2. Field of Study/Work:
3. Year of Study/Work Experience:

Skills and Expertise: In case of team, expertise of the

1. Textile Engineering or other technical skills:
2. Previous Hackathon/Project Experience (if any):

Team Information:

1. If you already have a team, please provide the names and email addresses of your team members.
2. If you do not have a team, are you open to joining a team during the hackathon?

Project Idea:

1. Do you have a specific project idea or area of interest within technical textiles that you would like to work on during the hackathon? (Max 200 words)

Additional Information:

1. How did you hear about the hackathon?

Signature (with date) and Name

Terms and Conditions:

By submitting this application, I confirm that I have read and agree to abide by the terms and conditions of the hackathon.

Innovate Textiles Hackathon - Terms and Conditions

1. Eligibility:

1. The hackathon is open to individuals aged 18 and above.
2. Participants must fill out the application form accurately and completely.

2. Teams:

1. Participants can register as individuals or as part of a team.
2. Teams must consist of no more than 3 members.
3. Teams can be formed in advance or during the event.

3. Intellectual Property:

1. Participants retain ownership of their intellectual property.
2. By participating, participants grant the organizers the right to use their project details for promotional purposes.

4. Judging Criteria:

1. Projects will be evaluated based on creativity, feasibility, and potential impact.
2. The decision of the judges will be final and binding.

5. Prizes:

1. Prizes will be awarded to the top 3 teams.
2. An opportunity for funding up to INR 50 lakhs for a period of 18 months may be considered.

6. Liability:

1. Participants are responsible for their own well-being during the hackathon.
2. The organizers are not liable for any loss, damage, or injury that may occur during the event.

7. Data Privacy:

1. Participants consent to the collection and use of their personal information for hackathon-related purposes and in promotional events.
2. Personal information will be handled in accordance with applicable data protection laws.

8. Disqualification:

1. The organizers reserve the right to disqualify any participant or team found to be in violation of these terms and conditions.
2. Disqualified participants forfeit any claim to prizes or awards.

9. Acceptance of Terms:

1. By participating in the Innovate Textiles Hackathon, participants agree to abide by these terms and conditions.
2. Failure to comply with these terms may result in disqualification from the hackathon.

By signing up for the Innovate Textiles Hackathon, you acknowledge that you have read, understood, and agreed to these terms and conditions.