

Reforming the Past

Note: The following themes are just guidelines to help you. You are free to think unconventionally and come up with innovations of your own. So do not fetter yourselves to these problem statements.

Ideate, Reforming the Past wants to stimulate the creation of scientific solutions that can be emulated in real life for the benefit of mankind and society at large, to build a world that is safe for men, women and children alike, where disparity is non-existent, and where disasters are mitigated ideally through harmony and cooperation.

'Reforming the Past' wants to bring innovative solutions to build smart disaster management systems, create a risk-free society for women, where they are treated with the dignity they deserve, a world unassailable by armed and other threats, address the causes of farmer suicides and design optimal transport systems.

Broad aims are to tackle problems of-

- **Women Safety :**

"Violence against women is perhaps the most shameful human rights violation and the most pervasive"

Since a decade or so the awareness about girl child, women safety and their rights have increased drastically. But on the other hand, the fact cannot be ignored that the news is getting filled up with incidents of rape and murder and sexual assault of a woman or abuse and many other serious and shameful stuff. So Ideate 'Transforming The Past' provides you a platform to showcase your technical ideas so that history wouldn't get repeat

Problem Statement: Participants are invited to come up with innovative solutions that will help in preventing crimes against women, and/or further, help them in reporting, mitigating and rehabilitation of such crimes (both victim and perpetrator)

e.g. Low cost wearable devices like bracelets which can send alert signals to predetermined friends or women safety apps or any other device which can help women to raise their voice against sexual abuse.

- **Disaster Management**

In today's progressive and developing world we have utilised the available natural resources to the very brink of exhaustion. In our unidirectional approach to development, we have neglected the effect our actions have on the environment, causing a lot of

unwanted reactions. These disasters causes a large number of deaths, social disruption and affect economic activities.

Disasters are broadly classified into :

- **Natural:** Earthquakes, Droughts, Floods, Epidemics, Hurricanes, Wildfires and Tsunamis.
- **Man-made:** War, man-made famines, nuclear and radiation accidents, biochemical hazards and cyber terrorism

Problem Statement: Participants are invited to come up with innovative technical solutions that can help in prognosticating, prevention, mitigation and rehabilitation related to natural and/or man-made disasters.

e.g. Participants may come up with an earthquake resistant model or low cost disaster predictor mechanism or any technical model which can rescue people from disaster affected areas.

- **Empowering Farmers :** *“If you ate today, thank a farmer”.*

Various countries still lack cold storage, food packaging, safe and efficient rural transport system, etc. This is the cause of one of the world's highest food spoilage rates, particularly during monsoons and other adverse weather conditions. Although India is the second largest irrigated country of the world after China, only one-third of the cropped area is under irrigation. Agricultural marketing still continues to be in a bad shape in rural India. All of these aggravate the situation of farmers who are already too reliant on the weather and climatic conditions. Ultimately, this leads to a **high rate of farmer suicides**.

Problem Statement: Participants are invited to come up with innovative solutions that can help farmers grow, store and sell their products effectively and cheaply so that agriculture becomes profitable enough to sustain their livelihoods with greater stability. Solutions regarding transportation, distribution and economy of production are also welcome.

- **Security**

The security Infrastructure is vastly inadequate to deal with crimes like burglary, murder, cyber, terror-related, economic and other social crimes. Safety may be of any kind, from any means. May it be bomb blasts or shootouts or pre planned riot. To prevent our people from these threats we can use technology as our tool.

Problem Statement: Participants are invited to come up with innovative solutions that can help detect, identify, and prevent various crimes across the globe.

e.g. Low cost security devices like metal detector or Ring video doorbell or any mechanism to save data from cyber crimes.

- **Industrial Improvements**

Industries have remained a key aspect for the development of the country and also, this is an area where technology is extensively used. They form a substantial part of the nation's economy. In response to the demand, they certainly call for conservative, sustainable and economical amendments to make production faster, simpler and more efficient. The production, organisation etc. of industries like construction, textiles, food, drugs, chemicals and petroleum can be enhanced by new technologies.

Problem statement: Participants are welcome to present innovative methods pertaining to technological development in an industry like:

- Introduction of new tools and techniques for performing given tasks in production, distribution and data processing etc.
- The mechanization of the production process or the achievement of a state of greater autonomy of technical production systems from human control, responsibility, or intervention.
- Changes in the nature and level of integration of technical production systems.
- Development, utilization, and application of new scientific ideas, concepts, and information in production and other processes.

- **Transportation :**

Transport and distribution of all resources and products are an integral part of any economy and any improvement in this sector directly manifests as an improvement in life. In fact, talking about problems in transportation, it is a vast topic and there may be many regional problems that may be a major problem of country or world in future. Ideas that can help optimize transportation are urgently needed. Cheap and environment friendly ways of transportation need to be encouraged.

Problem statement: Participants are invited to come up with innovative solutions to wastage of fuel, time and other resources occurring due to Infrastructure inadequacy as well as better means of managing transport systems

e.g. App based public transport in rural areas, Low cost and high strength concrete etc.

- **ABSTRACT FORMAT**

- i. Title**

- ii. Abstract**

- 1. Objectives
 - 2. Beneficiaries (For whom)
 - 3. Value of results (Usage)

- iii. Background**

- iv. Statement of Problem**

- 1. Succinct definition of problem addressed (follows from material in the background section)

- v. Research**

- 1. Present methods of tackling the problem (if any)
 - 2. Proposed Solution
 - 3. Alternate solutions/approaches
 - 4. Novelty of Approach: How is/will your solution be better than the existing products that address the same problem?

- vi. Technical Report**

- 1. Description of concepts, theories and/or approach involved in the proposed solution
 - 2. Technical aspect of the proposed solution
 - 3. Detailed technical specifications and pictorial representations (block diagrams/ flow chart)
 - 4. Description of the flow of operations demonstrating key features and functionality.
 - 5. Performance estimate of the solution
 - 6. Experimentation/Verification done to establish the workability of the above
 - 7. A link to the video of the working model/ prototype

- vii. Results**

- 1. Actual findings, significant output of tests and analysis (Must be readable)
 - 2. Include problems encountered, credibility of results, accuracy estimates
 - 3. Pros and cons of your solution
 - 4. Utility of results

- viii. A link of the Google Drive Folder** which contains Pictures and Video of the working model/ prototype.

- ix. Application**

- 1. Your idea as a solution to the problem
 - 2. Additional applications
 - 3. Benefits to the users

- x. Future prospects and research in it and further development (in brief)**

- xi. Any other details : (Patent/Business plan etc.)**

- **ELIGIBILITY**

- 1) Individuals or teams from the following categories are allowed:
 - a) Students/research scholars of the authorized institutions (Students have to show their valid College ID).
 - b) Early stage startups or upto 3 years old college passouts.
- 2) A team is allowed to have a maximum of 4 members.
- 3) If the participating team feels that their idea requires more participants in their team, they can forward their request, with suitable reasons, to rtp@techfest.org with the subject "Ideate: Team number increase request".

- **REGISTRATION AND SUBMISSION**

The Participants have to register on the official Techfest Website and fill all the necessary details.

www.techfest.org -> Ideate -> Reforming the Past -> Explore More -> Register -> Fill all your details -> Your team will be formed and now you can add other team members

Abstract Submission:

Teams will be required to submit one report to rtp@techfest.org. This report should contain the idea they are looking forward to work on.

- **PROJECT REPORT SUBMISSION**

The project report should be mailed to rtp@techfest.org with the subject 'Ideate: "Reforming the past" Project Report: <Team Id>'

(for eg. Ideate: "Reforming the past" Project Report: **RP1234**). Teams must follow the following details for the submission:

1. The abstract must be submitted in PDF format only
2. Font: Arial
3. Size: 11
4. Spacing between two lines: 6 pts
5. Spacing between two paragraphs: 10 pts
6. Bottom margin: 1 inch

- **EVALUATION**

'Reforming The Past' abstracts will be judged by a panel of experts. Following are the broad guidelines for judging:

- 1. Creativity and Novelty:** How novel is the idea? How different is it from the current solutions available? The innovation must be ingenious and novel in its area of application and should have a high potential for leaving an impact on the society.
- 2. Originality:** The innovation should not, by any means, include copied or stolen work. Such applications will be disqualified immediately.
- 3. Performance**
- 4. Cost/Market Value and Acceptance**
- 5. Durability and Usability:** Durability of the prototype/method proposed.
- 6. Implementation ability:** Is the solution implementable as described? Is it repeatable? Is the solution feasible for diverse and changing conditions?
- 7. Scalability:** Is the solution scalable to a higher level, how easy is it to scale up and what are the factors affecting it?
- 8. Potential of Impact:** How does it benefit the society? The scale of problem that it solves, intensity of the solution and number of people catered from the solution directly and indirectly.
- 9. Design:** Has the design been taken into consideration? How optimized is the product?
- 10. Ergonomics** (if the team decides to make a well-designed product)

In case of any discrepancies, the decision of the Organizers or Judges will be final and binding on all.

- **SHORTLISTING**

Top 20 teams will be selected and would get the chance to present their model/idea in the Final round at Techfest, IIT Bombay which is from 14th -16th December 2018. Participants will get a slot for presenting their model/idea to the Judges based on which the evaluation will be done.

Top teams would get an opportunity to display their projects in the Ideate exhibition during Techfest, IIT Bombay. These teams will be selected by the panel of judges.

- **GENERAL RULES**

1. All projects being displayed will have a fair chance of receiving further development opportunities offered by funding organizations and venture capitalists.
2. Every team has to register online on our website for the competition. A Team ID will be allocated to the team on registration which shall be used for future references.
3. A team can register at any point of time before 2nd November 2018 and submit the final abstract and video. (as mentioned in the structure).
4. The decision of the organizers or judges shall be treated as final and binding on all. Techfest has all the rights to verify the identity and accuracy of the details provided by the participants.
5. No responsibility will be held by Techfest, IIT Bombay for any late, lost or misdirected entries.
6. The idea presented by the teams should be original (not protected by means of patent/copyright/technical publication by anyone else).
7. Note that at any point of time the latest information will be that which is on the website. However, registered participants will be informed through mail about any changes on the Website.
8. All modes of official communication will be through the Techfest e-mail.

- **INTERNATIONAL PARTICIPANTS**

All international participants will have to register and will have to submit the complete report along with video prototype before 2nd November 2018. The shortlisted international teams' details will be put up on the website by 6th November 2018.

International Participants would get a chance to present their prototype through video conferencing.

- **CERTIFICATE POLICY**

Only those teams that are shortlisted for the finals and giving a final presentation about their work during Techfest 2018-19 would be awarded a e-Certificate of Participation. The top entries from this event would be provided with Certificate of Excellence.

- TIMELINE**

First Project Report Submission	20th September 2018	Submission of First Draft Report
Mentorship Stage	26th September to 24th October 2018	Mentors will be allocated for the guidance of the participants
Last Date of Registration	2nd November 2018	Participants need to register before this date
Final Project Report Submission	2nd November 2018	Submission of final project report along with video prototype (if any) has to be submitted before this date
Declaration of Result	6th November 2018	Declaration of shortlisted teams for final presentation at Techfest, IIT Bombay on the basis of final report and the supporting materials
Improvisation Stage	6th November to 25th November 2018	Shortlisted participants are to improve upon their model and prepare a presentation for the final round
Final presentation & video submission	26th November 2018	Participants have to submit the final video of the prototype and presentation to be displayed during the festival before this date
Presentation Stage	14th-16th December 2018	Final presentation along with a demonstration of the working prototype
Exhibition	14th-16th December	Techfest would give an opportunity to teams selected by judges to exhibit their projects



- **PRIZES**

The Prize money will be awarded to top 3 Winners via NEFT and will be processed within 30 working days.

The Winner have to mail the following information (immediately after announcement of results) to rohan@techfest.org.

Subject: Reforming The Past, team id- your position (example- Reforming The Past, RP1003- 3rd Position)

Body of mail-

1. Account Holder's Name
2. Account Number
3. Bank name and Branch name.
4. IFSC Code