

VISION 2030

Note: The following themes are just guidelines to help you. You are free to think like an unconventional thinker and come up with great innovations. Do not limit yourselves to these problem statements.

Ideate, Vision 2030 wants to create and encourage science-based solutions for the benefit of mankind and society at large; to create a world which is prosperous and healthy, where governance is responsive, transparent and corruption-free; a world where poverty has been totally eradicated, illiteracy removed and crime against women and children eliminated. Vision 2030 wants to bring innovative solutions to build smart villages, tackle problem of water management, stop corruption, improve health sector and save the world from pollution.

- **Smart Villages - Bringing Technology to Rural areas**

Almost 1.3 billion people worldwide remain without access to electricity and 2.7 billion are still cooking on harmful and inefficient stoves. Smart villages can act as a catalyst for the development of villages which in turn will support further improvements in access to energy. Smart villages will allow communities to become more aware of their rights, engage in governance processes and hold policy-makers accountable.

Some issues to be tackled are-

- **Education-** 'Quality access to Education' is the major concern in rural schools due to fewer committed teachers, lack of proper textbooks and learning material in the schools. eg. Super app
- **Health-** Healthcare is the right of every individual but lack of quality infrastructure, scarcity of qualified medical functionaries, and non-access to basic medicines and medical facilities thwart its reach to rural areas of the world
- **Food Security-** Approximately one in every seven people in the developing countries are unable to consume sufficient food to sustain a healthy and active life
- **Transportation-** Rural residents are more reliant on personally-owned, single driver automobiles for transportation than their urban counterparts. Efficient and affordable transportation is an important aspect in economic growth of rural areas
- **Poverty-** Dependency on farming for income is the major issue in rural areas. Alternative income options using technology can bring change in the severity of situation
- **Quality of life -** Through the provision of modern energy, smart villages will have a transformative impact on villagers by alleviating the drudgery of repetitive tasks that are pervasive in lives of many people in rural communities

Problem Statement: Participants are invited to come up with technical solutions to solve the issue of poor education, bad health care system, poverty, lack of proper transportation, unemployment and infrastructure in rural areas to build smart villages for a quality life.

- **Water management in drought-prone areas**

Critical situation of water as a resource needs no reiteration. It is well recognized that quality water in right quantity, at the right place and at the right time is essential for survival and sustainable economic development. Obtaining sufficient drinking water with acceptable quality under severe circumstances, such as droughts, is a challenge. Access to quality water is key to economic prosperity and better living standards.

Problem Statement: Participants are invited to come up with innovative solutions to tackle problems like:

- Inadequate rainwater harvesting
- Lack of efficient water management and distribution of water between urban consumers, agricultural sector and industry
- Sewage and wastewater drainage into traditional water bodies
- Inefficient use of water for agriculture
- The release of chemicals and effluents into rivers, streams, and ponds

- **Corruption-free world**

The main motto behind this idea is to work against corruption, bringing together technology and government to increase the transparency in the present government processes hindering activities of corruption everywhere

Problem Statement: Participants are invited to come up with an innovative technical solution which would set a benchmark to bring a change and make government sectors more transparent, thereby resulting in better governance.

e.g. Web platform to bring transparency, electronic toll system

- **Health Sector**

21st century has witnessed a lot of advancements and challenges as far as the health sector is concerned. Healthcare is a fundamental necessity for every individual but lack of medical personnel, the dearth of quality infrastructure, minimal access to medical facilities and basic medicines cause to impede the condition.

Problem Statement: Participants are invited to come up with new digital solutions to tackle the problems in health sector like expensive health facilities, exclusion of rural population, dependency on imported western models and shortage of medical personnel.

e.g. IOT based healthcare system, HandTalk: A Smart Handglove Interpreter

- **Pollution Control**

The effect of humanity on the environment is becoming ever-more important. Through our actions, we are destroying habitats and endangering the lives of future generations.

Industrialization and Urbanization have intensified environmental health risks and pollution, especially in developing countries. According to the World Health Organization (WHO), an estimated 12.6 million people die of environmental health risks annually.

Problem Statement: Participants are invited to come up with novel tech-prototypes which can bring a change in the current severe situation of environmental pollution.

e.g. improving the fuel combustion cycle, air purifying tower which sucks in pollution and expels clean air

- **Education for Underprivileged Children**

Globally, about 263 million children and youth are not attending school. Education is a crucial part of life for everyone personally and socially, but being deprived of it is an issue of major concern. According to UNESCO Institute of Statistics (UIS) data, almost 60% of youth aged between 15-17 years are not in school, which is a big failure as far as providing education to underprivileged section is concerned.

Problem Statement: Participants are invited to come up with innovative technical solutions to tackle problems like lack of good infrastructure in schools, lack of trained teachers, expense of education 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, 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 up to 3 years old college pass-outs.

2. A team is allowed to have a maximum 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 vision2030@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 -> Vision 2030 -> Explore More -> Register -> Fill all your details -> Your team will be formed and now you can add other team members

Abstract Submission:

Teams are required to submit one report to vision2030@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 vision2030@techfest.org with the subject

'Ideate: "Vision 2030" Project Report: <Team Id>'

(for eg. Ideate: "Vision 2030" Project Report: **VI1234**). 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**

Vision 2030 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 -16st December 2018. Participants will get a slot for presenting their model/idea to the Judges based on which they will be evaluated.

Top teams would get an opportunity to display their projects in Ideate exhibition during Techfest, IIT Bombay. These teams will be selected by a 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 also also give a final presentation about their work during Techfest 2018-19 would be awarded an e-Certificate of Participation. The top 3 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 after receiving the prize money from sponsors.

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

FORMAT OF MAIL :

Subject: Vision 2030, <Team ID> - <Your Position> (example- Vision 2030, VI1003 - 3rd Position)

Body of mail:

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