

AAHAAR

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. So do not limit yourselves to these problem statements.

India has an aim to feed every mouth of its huge population. Considering the fact that India is already struggling to feed its existing population, the country's current food crisis is only going to worsen in the coming years. Food production is not an issue of the day as farm outputs have set new records, showing increased outputs. The most significant problem is that enough proportion of the food that India produces is never consumed.

The farm produce is subjected to damage during storage, processing, transportation and selling (post-harvest processes). To reduce wastage there should be efficient methods to remove wastage at every step of the food value chain

Due to the presence of highly perishable foods and large lead times for the produce to reach the consumer, there is a need to bringing methods for increasing shelf life of the products

Problem Statement: Participants are required to come up with new methods of improvising the shelf life of perishable food products

Examples: Use of antimicrobial agents to prevent microbial attacks, freeze drying etc.

Production: At the farm level, loss occurs due to lack of storage facilities for harvested crops, pest and insect infestation and degradation due to microbial growth. Farmers are neither untrained nor lack the resources. From farmland to a processing industry, loss occurs due to improper transport facilities. Loss in industries is due to inefficiency of the machines, high energy utilization of the machines leading improper handling of the material reducing quality and there by wastage

Problem Statement: Participants are invited to present innovative technical or non-technical ideas to reduce the postharvest wastage.

Examples: pre-cooling methods to reduce wastage of harvested crops, increasing efficiency of milling machines, efficient cleaning methods for crops, etc.

Distribution: High loss in perishable food is due to absence of modern food distribution chains, very few cold-storage centers and refrigerated trucks, poor transportation facilities, erratic electricity supply, and the lack of incentives for companies to invest in this sector. It is estimated that cold-storage facilities are available only for 10% of perishable food products, leaving around 370 million tons of perishable products at risk.

Problem Statement: Participants are required to present innovative ideas to improve supply chain.

Examples: solutions for reducing costs of cold storage, models that provide solutions to speed up the lead time of the product etc.

Selling: A vast amount of food is turned out as non-edible through regular business practices. Waste is generated by folly practices at the retail level during purchasing, preparation and storage process. Late stock replenishment, improper storage conditions, bulk purchasing of food products, over trimming and not using all the parts of the produce during processing cause for food wastage in retail sector.

Problem statement: Participants are required to come up with new models which provide solutions to minimizing food wastage in retail sector/during selling.

Examples: an integrated model that helps minimize food wastage at purchasing, processing and storage levels of the selling process.

STRUCTURE:

Progress Report:

Those who sent the final report and video of prototype, need to send the final presentation and demonstration of the working prototype on or before 26th November. All the submissions should be mailed to aahaar@techfest.org.

Project Report Format

i. Title

ii. Abstract

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

iii. Background

iv. Statement of Problem

1. Succinct definition of problem (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 your solution better than existing products that addresses the same problem?

vi. Technical Report

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

vii. Results

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

viii. Application

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

ix. Any other specific details**Project Report submission:**

The project report should be mailed to aahaar@techfest.org with the subject -Ideate: Aahaar: Project Report: Team Id (For example Ideate: Aahaar Project Report: AR1234). Those who sent the final report and video of prototype, need to send the final presentation and demonstration of the working prototype on or before 26th November. All the submissions should be mailed to aahaar@techfest.org. Teams must follow the following details for the submission:

1. The abstract must be submitted in pdf format only
2. Font: Verdana
3. Size: 11
4. Spacing between two lines: 0.6 inches
5. Spacing between two paragraphs: 1 inch

6. Bottom margin: 1 inch

The panel of judges will analyze the report and the video and will give them a detailed feedback on the modifications of the model to achieve better results. The details of the shortlisted participants based on this submission along with feedback from the judges would be communicated to them by 29th November, 2015.

Prototype and Final Presentation:

After declaration of the finalists, participants are required to improve upon the prototype/ working model of their project. They will also have to make a presentation covering the technical and financial aspects of their product in a detailed manner. This final presentation and the video will have to be submitted at aahaar@techfest.org before 11th December, 2015. The teams can however, continue to work on their prototypes till 25th December, 2015. The teams will have to bring their prototypes to be judged and showcased at Techfest 2015-16 during 26th to 28th December, 2015. The working prototype should be as close as possible to the product that the team intends to present to the end user. This would also help in deciding a better estimate of the cost of the prototype, reflecting closely the actual cost of the product.

JUDGING:

General Rules:

1. The competition is open to all college students and research scholars. 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 registration number 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 26th November, 2015 and can submit final abstract and video (as mentioned in the structure).
4. The decision of the 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).
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.

Evaluation Criteria:

Aahaar will be judged by a panel of experts. Following are the broad guidelines for judging:

1. Innovation and creativity in the method used or product developed will be given high weightage.
2. Implement ability of the product to be assessed on the following parameters:
 - a. Technical feasibility
 - b. Cost of the product
 - c. Usability
 - d. Acceptability
 - e. Market Value and acceptance
 - f. Reliability/ durability of the product or method developed
 - g. Number of industrial visits and implementation of product (if happened)
8. Performance
9. Ergonomics if the team decides to make a well-designed product.

In case of any dispute, decision of the organizers or Judges will final and binding on all.

International Participants:

All international participants will have to register before 26th November 2015, and will have to submit the complete report along with video prototype before 26th November 2015. The shortlisted international team details will be put up on the website by 29th November, 2015

Certificate policy:

Only those teams that are shortlisted for the finals and also give a final presentation about their work during Techfest 2015-16 would be awarded a Certificate of Participation. The top entries from this event would be provided with Certificate of Excellence.

Team Specifications:

The participating entries must be in a team of a maximum of 4[four] people. If the participating team feels that their idea requires more participants in their team, they can forward their request, with suitable reasons, to aahaar@techfest.org with the subject "Ideate: Aahaar team number increase"

TIMELINE:

Mentorship Stage I	October 15, 2015 to November 14, 2015	Mentors will be allocated for the guidance of the participants.
Registration Deadline	November 26, 2015	Last Day of registration and submission of the project report for both national and International participants.
Project Report Submission	November 13, 2015	Submission of final project report along with video prototype (if any) has to be submitted Before this date.
Declaration of Result	November 29, 2015	Declaration of shortlisted teams for final presentation at Techfest, IIT Bombay on the basis of final report and the supporting Materials.
Improvisation Stage	December 9, 2015	Shortlisted participants are to improve upon their model and prepare a presentation for the final round.
Final Presentation and Video submission	December 11, 2015	Participants have to submit the final video of prototype and presentation to be displayed during the festival before 12th December.
Presentation Stage	December 26, 2015 to December 28, 2015	Final presentation along with the demonstration of the working prototype