



SSN - ICE STUDENT INNOVATION CHALLENGE 2022

Theme: *Zero Stagnant City*

Registration link: [CLICK HERE](#)

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Section 1: Mission & Summary

Population and disasters are increasingly concentrated in cities. The growing rate of urbanization and the increase in population density (in cities) can lead to risk of floods, especially when urbanization is rapid and cities are poorly planned with respect to drainage system.

There is no end to effects that urbanization can have on water bodies. For example, the system of rain water management, pioneered by the British in Chennai (Cooum River) has been laid waste by indiscriminate construction across the city. Water channels, ravines and natural drains, which connected the bunds (small channels), have been blocked, encroached and built upon during the last two decades of realty boom. Given the grave threat posed by regular water-logging in the cities, people and the government of every nation, is looking for a more holistic solution.

Institution of Civil Engineers (ICE-UK) SSN Student Chapter brings to you an exciting virtual competition. Participants will have to address infrastructure problems and identify innovative and feasible solutions which can address this problem using various domains like automation, prefabrication, 3D printing, 5G, Internet of Things (IoT), Machine Learning (ML), Artificial Intelligence (AI), hybrid cloud and many more.

Participants will have to come up with solutions that can be called 'innovative', 'radical', 'unconventional' or 'out-of-the-box'. The solutions provided should be thoroughly researched, must not include any sort of plagiarism, carried out as a student effort with a feasible work plan and should be presented with required deliverables.

Section 2: Problem Statement – *Zero Stagnant City*

The participants can take any city of their choice and come up with innovative solutions to tackle the problem of flooding. The solutions shall be in such a way that is feasible and economical. This can also be an improvisation of the existing system used to prevent stagnation or can be a completely new plan. Due consideration shall be given if there are any natural drainage bodies like marsh lands, rivers, lakes, ponds etc.

Section 3: Ethics

This competition will follow high ethical standards. In this regard, any 'means of unfair competition', as stated below, will lead to immediate disqualification:

- Any means of plagiarism in the materials and ideas used in the competition
- Failure to provide credit for any sources referred to as aid in the development of solutions
- Any false or malicious statements about other contestants, organizers of the competition, panel of judges or others involved in the competition

Section 4: Eligibility

The following criteria must be adhered to:

- Individual participation or team participation is allowed with the team having not more than 4 members.
- Only one entry per participant or team is allowed.
- The teams shall be led by undergraduate/postgraduate students, and may be mentored by faculty and/or graduate students.
- We invite students from all nationalities & all backgrounds to join the challenge, whether you are working and studying in technical, art/design, or social science disciplines.
- Multi-disciplinary teams are encouraged and preferred; however, the innovation must focus on providing solutions to problems related to the Civil and Environmental Engineering (CEE) industry and the built environment.
- Deadlines should be strictly followed. No entries will be accepted past the deadline

4.1. Levels of Competition

There are two levels to the competition

Level 1: Idea/Paper submission

Participants are required to come up with a solution that is innovative, practically feasible, sustainable and economical in accordance to the problem statement. The Idea(s) submission can be either in a word document/PDF or PowerPoint presentation.

Note: Level 1 is an elimination round. The best of the idea submission shall be taken and the selected participants or teams will move on to the final round. Level 2 will be an extended round of level 1.

Level 2: Final/Presentation round

The qualified participants from level 1 will have to present and explain the idea(s)/solution(s) submitted in Level 1 via virtual mode. The presentation should not exceed 5-10 minutes which will be followed by viva- voce by the panel of judges.

4.2. Required Conduct by the Participants

All participants are required to act in a professional and ethical manner throughout the competition. Failure to act as per code of conduct can result in disqualification at any stage of the competition.

Section 5: Judging

The panel of judges for both the levels of the competition will involve highly qualified professionals and academicians who will judge the submissions by the participants strictly based on the criteria as given in Section 6: Scoring.

Participants are encouraged to bring in innovative ideas to present their proposed solution. Judging will be done only upon ensuring completeness of the presentation of the ideas. Judges and organizers of the competition will have all rights to disqualify any participant at any stage of the competition if found violating the code of conduct. Any and every decision by the judge panel will be final and must be adhered to by the participants.

Section 6 : Scoring

Being a professional and creative student chapter, this competition organized by ICE-UK SSN Student Chapter, would like to ensure that your ability to present an original and innovative infrastructure solution in a professional way plays a major role in the scoring part.

CRITERIA	LEVEL 1: IDEA SUBMISSION	LEVEL 2: FINAL ROUND
Innovation & Creativity	30%	25%
Relevance & Accuracy	25%	20%
Efficiency & Feasibility	20%	20%
Communication	20%	20%
Code of Conduct	5%	5%
Viva Voce	N/A	10%

6.1. Submission for Competition

Initial Submission: Upon registering for the competition, participants should prepare an initial idea/paper submission for Level 1 and submit it before the deadline. Creating and submitting an initial submission is how student teams enter the competition and indicate that they are working on a project. The submission of the idea/paper for Level 1 shall be done as a Google drive link that is set to public mode (before the given deadline).

Final Submission: Teams whose Level 1 submissions are accepted should submit a presentation reflecting their complete idea/innovation solution for Level 2 before the deadline. The same presentation that was submitted should be presented on the day of the finals.

Deadlines should be strictly adhered to and no further entries will be accepted beyond them.

Please note that there is no sponsorship or reimbursement available for competition costs such as developing design prototypes.

6.2. Criteria

6.2.1. Innovation & Creativity

Higher scores will be given to entries that skip a generation of existing solutions and give out-of-the-box approaches to solve the problem.

6.2.2. Relevance & Accuracy

Submission of the solution should have reference to the theme of competition and should provide innovative, efficient, sustainable, rapid and economical solution to the problem. The submission will receive higher scores if it addresses the problem with feasibility, economy and has a modern-day approach and receive lower scores for just nice-to-have solutions.

6.2.3. Efficiency & Feasibility

The competition doesn't want the participant to just come up with an innovative solution but one that is technically and practically feasible.

Lower scoring will be given if the innovation does not appear to be a realistic success. Higher points will be given if the innovative solutions are cost effective and try to prove the same with a well-thought-out plan by considering market size, expenditure, socio-political and economic impact.

6.2.4. Communication

Communication plays a vital role to portray ideas and put them to action. A good submission should not only include a critically-thought, innovative and feasible solution but should also be effectively demonstrated and communicated.

6.2.5. Code of Conduct

Participants should follow proper code of conduct and maintain decorum at all stages of the competition. In case any violation is found, the organizers of the competition and the panel of judges will have all rights to disqualify the participant at the very instance.

6.2.6. Viva Voce

During the final round, participants will be asked technical questions by the panel of judges based on the solution provided and the presentation of the same.

Decision made by the panel of judges on the scores is final and should be adhered to by all the participants.

Section 7 : Prize Distribution

Top 3 winning teams from the final round will be awarded with a cash prize.

1st place	: ₹ 3000
2nd place	: ₹ 2000
3rd place	: ₹1000

Section 8 : Important Dates

15 May 2022 (23:59 Hrs IST)	: Level 1 Submission Deadline
16 - 18 May 2022 (23:59 Hrs IST)	: Acceptance Notification

Early submission results in early acceptance notification and thus the team will have more time to prepare for Level 2.

21 May 2022 (23:59 Hrs IST)	: Level 2 Submission Deadline
22 May 2022	: Level 2 Final Round

Section 9 : Submission

All submissions should be made in the Google drive link that is sent.
For further information contact *Team SSN-ICE* icessnchapter@gmail.com

