

Term Of Reference

Call For Innovation

The 17th CENS UI

Call For Innovation is a paper competition brought annually by CENS UI. This year the competition seeks innovative ideas concerning Construction Revolution. This competition is open for all undergraduate students of any major. The top 5 finalists will create videos and infographics. They will be invited to present their paper in the final presentation and join the national conference of the 17th CENS UI. The winners will be rewarded with:

- **1st Place : Rp10.000.000,- (ten million rupiahs)**
- **2nd Place: Rp7.000.000,- (seven million rupiahs)**
- **3rd Place: Rp5.000.000,- (five million rupiahs)**
- **Favorite Infographic: Rp500.000,- (five hundred rupiahs)**

1. THEME AND SUBTHEME OF THE 17TH CENS UI

“Construction Revolution: Way of New Era Involving Cutting Edge Technology For Resilient Construction”

Subtheme:

1. Structure

Innovation in Construction and Design Method of Buildings.

The construction industry continues to operate as it has for the past 50 years. It still relies heavily on manual labour, mechanical technology, and established operating and business models. As a result, productivity and invitation have stagnated.

Construction method and design have not changed much from the early days of construction. Innovations and disruptive changes in this field could potentially change the way we build resilient buildings. How does cutting-edge technology support the construction method and the design of structural strength?

2. Water Resources Management

Water Conservation in Overcoming Land Subsidence.

Land subsidence is the lowering of the land-surface elevation due to changes that take place underground. Subsidence has damaged buildings, aqueducts, well casings, bridges, and highways.

In general, the groundwater system responds to the climate. In wetter periods, water goes into storage, while in drier periods, or droughts, water is removed from storage. Long-term overdraft or excessive pumping of a groundwater aquifer, can also result in subsidence and sinking ground surface. How can cutting-edge technology generate innovations that enhance groundwater conservation to prevent land subsidence?

3. Construction management

The Foremost Innovation in Accelerating Construction.

Construction process usually takes a long time to complete, and thus several things may be hampered. How can cutting-edge technology save time to speed up the construction process?

4. Transportation

Resilient Public Transport to Support Urban Life.

Urban life is all about transport and mobility. In this industrial revolution era, the objective is to provide fast mobility to support an urban life. The biggest transport challenges are often related to urban areas and take place when transport systems, for a variety of reasons, cannot satisfy the numerous requirements of urban mobility. A well-designed resilient form of public transport is believed to be the solution for sustainable mobility of urban lifestyle. What kind of public transport might utilize cutting-edge technology to support the urban life?

5. Geotechnics

Improving Soil Quality for Sustainable Infrastructure.

Industrial revolution is very influential in the world of construction. It creates a new way to build sustainable infrastructure through cutting-edge technology. One of the important part is soil. Soil determines how sustainable the building is. Describe the method in which cutting-edge technology can be utilized to improve soil quality for sustainable infrastructures

6. Environment

Environmentally Resilient House.

An environmentally resilient house could withstand the external forces of climate change and reduce the effect on climate change as well. How can we use cutting-edge technology to remind residents to reduce the effects of climate change and other natural conditions?

7. Social

Innovative Public Housing Policies or Development Plan to Achieve Resilient Community.

A house without a neighbour would not be complete, a well-designed neighborhood could strengthen community values between the residents. However, increasing social tensions based off racial, tribal, and religious issues pose a threat to national security and peace. Some sort of policy to keep these tensions away is needed. What kind of policy or development plan can be implemented to take us one step closer to a Resilient Community?

8. Economy

Cost Efficiency in Construction.

Buildings provide one of the three basic human needs. However, recently it seems that purchasing buildings is more of a dream than a basic need because of the exorbitant prices. Therefore, affordable buildings are needed to sustain basic human life. How can cutting-edge technology save costs in construction?

2. TERMS OF COMPETITION

- Participants must choose one of the following outputs for their paper:
 - ✓ System
 - ✓ Tangible Product
 - ✓ Application software
- Participants can join individually or as a team (max. 3 members including one team leader) from the same university.
- Team members are allowed to come from different majors.
- Participants must be active undergraduate students (by June 21, 2019) in public or private universities in Indonesia or abroad.
- Each person can only be in one team (is not allowed to be in two or more team).

3. TERMS OF PARTICIPANTS

- 15 best papers will be published by Pusat Dokumentasi dan Informasi Ilmiah Lembaga Ilmu Pengetahuan Indonesia (PDII-LIPI) with International Standard of Serial Number (ISSN)
- Papers will be reviewed by 2 high-quality reviewers.

- Selected abstracts will be announced through our website <https://cens-ui.com/call-for-innovation/>
- Top 5 finalists will be announced through our website <https://cens-ui.com/call-for-innovation/>
- Each of the top 5 finalists chosen must create an animation video regarding their paper with a minimum duration of 90 seconds and a maximum duration of 120 seconds.
- Each of the top 5 finalists chosen must create an infographic regarding their paper
- Top 5 finalists chosen will be invited to present their papers in the final presentation and join the conference of the 17th CENSUI
- Participants involved in any form of cheating will be disqualified.
- Decisions made by the judges and the committee are absolute.

4. REGISTRATION MECHANISM

- Registration is open on June 21, 2019 until August 21, 2019
- Participants must register online through <https://cens-ui.com/call-for-innovation/>
- Each participant must attach a scan of valid student identity card.

5. TERMS OF ABSTRACT

- Format for the abstract can be downloaded through <https://cens-ui.com/call-for-innovation/>
- The selected output for the paper must be written in the abstract by the participants (example: System – Transportation subtheme)
- Abstract is submitted through <https://cens-ui.com/call-for-innovation/>
- File name : Abstract_Team Name_University
- Abstract should be written in correct English without any abbreviation
- Participants that have passed the abstract selection must pay a registration fee of Rp150.000,00/team for Indonesian students and US\$11/team (per

June 21, 2019) for international students, to the bank account of Nabila Baqarizky 90012081509 BTPN Bank.

- Participants confirm the payment by attaching the payment receipt on the payment receipt section at the end of the full paper.

6. TERMS OF PAPER

- Format for the full paper can be downloaded through <https://cens-ui.com/call-for-innovation/>
- Full papers must be submitted through <https://cens-ui.com/call-for-innovation/>
- Full papers must be submitted in .pdf file.
- File name: TeamName_University_ChosenOutput_ChosenSubtheme (example: Pandawa_Universitas A_System_Transportation Subtheme)
- Full papers should be written in correct English and should not use any abbreviation.
- You may submit the paper before the September 29 , 2019.
- Participants must fill in the curriculum vitae section at the end of the full paper.
- Participants have to fill in the originality statement form, scanned and attached at the end of the full paper. Originality statement form can be downloaded through <https://cens-ui.com/call-for-innovation/>

7. TERMS OF INFOGRAPHIC

- Each of the top 5 finalists chosen must create an infographic regarding their paper
- Infographic is created in portrait position
- Infographic is created on one page in A3 size
- Infographic must include the 17th CENS UI logo. The 17th CENS UI logo can be downloaded through <https://cens-ui.com/call-for-innovation/>
- Infographic must be submitted in .jpg file

- Top 5 finalists have to fill in the originality statement form for video and infographic. Originality statement form is scanned and submitted in .pdf file. Originality statement form can be downloaded through <https://cens-ui.com/call-for-innovation/>
- Infographic and originality statement form must be submitted in one file through our Contact Person in .rar file.
- File name: TeamName_University
- Top 5 finalists must submit their infographics on October 24, 2019.
- Infographics will be posted through the 17th CENS UI Instagram (@cens_ui) on October 26, 2019. The score will be based on the amount of likes for each infographic on the day of final presentation.

8. TERMS OF VIDEO

- Top 5 finalists chosen must create an animation video regarding their paper
- Video is created with a minimum duration of 90 seconds and a maximum duration of 120 seconds
- Video must include an explanation by voice with subtitles in English
- Video must include the 17th CENS UI logo. The 17th CENS UI logo can be downloaded through <https://cens-ui.com/call-for-innovation/>
- Each of the top 5 finalists must submit their video on the day of final presentation. Video will be displayed and scored in final presentation.
- Video will also be displayed in CFI EXPO in the conference of the 17th CENS UI

9. TERMS OF FINAL PRESENTATION

- Each of the top 5 finalists chosen must present their paper in front of judges on November 4, 2019 in Faculty Of Engineering, Universitas Indonesia
- Presentations must be prepared in Microsoft Power Point with .pptx file

- The presentation will last for 15 minutes each team, including video playback, as well as question-and-answer session with the judges.

10. TIMELINE

No.	Event	Date
1	Registration & Abstract Submission	June 21 – August 21 , 2019
2	Abstract Announcement	September 1, 2019
3	Payment	September 2 – September 29, 2019
4	Paper Submission	September 2 – September 29, 2019
5	Top 5 Announcement	October 14, 2019
6	Infographic Submission	October 24, 2019
7	Final Presentation	November 4, 2019

11. SCORE CHART

PAPER	PRESENTATION	VIDEO
50%	40%	10%

- Infographics will be scored based on the amount of instagram likes.