# HILTI

# IT COMPETITION 2019

## The Future of Construction in a Digital World

### CALL FOR SUBMISSION

# HILTI IT COMPETITION 2019

**The annual IT competition serves the purpose of tackling real world problems about the application of technology in the construction environment. Students and graduates from all over the globe are encouraged to participate to display their ideas and skills, and explore potential career opportunities.**

## / THE COMPETITION

The previous competition in 2018 was a revelation to Augmented Reality (AR) and Internet of Things (IoT); together, these technologies could revolutionize the way communication and data exchange between interconnected devices which can boost the quality of customer services and productivity. For customer service, the field of Modern Digital Collaboration and Mobility plays a pivotal role, especially for organizations that emphasize quality of after sales services and product support. In this era of digitalization, collaboration via digital platforms is becoming quintessential in this domain and the time has come to think beyond the horizon to achieve further breakthroughs in digital collaboration.

To enhance the level of digital collaboration, Hilti uses the chatbot for immediate and on-the-spot response to our customers for preliminary questions on our products. They may also refer to ask.hilti.com. It is critical to keep up with emerging technologies that could further enhance the way the construction industry operates. Hence, the usage of the latest in machine learning and artificial intelligence lay the foundations to build futuristic operations within the construction industry. The best of these technologies, however, can reach further, benefiting other areas such as our own workplaces, and assisting in how the industry retains its talents.

## / THE TOPIC

The Hilti IT Competition is an annual management initiative aimed at generating new and innovative technology ideas from students and graduates. The Hilti IT Competition 2019 lays emphasis on:
- Digital Collaboration & Mobility
- Disruptive Technology in the Construction Industry
- Creative & Innovative Talent Management Culture

We recognize these three topics as Collaborate, Connect and Communicate.

### Topic 1: Collaborate
### Digital Collaboration & Mobility

At Hilti, two-thirds of our 27,000 strong workforce are in our sales organizations and technical service units, dealing directly with our engaged customers. They generate more than 250,000 customer interactions daily, creating the basis for the ongoing development of new products and services. Hence, the need to streamline collaboration with our customers using digital platforms has become growingly important.

**Your task:** Kick-start the next generation of technologically advanced applications to improve future connected mobility and digitalized collaborations in the construction industry. Mobile applications, social media and other platforms can be explored to boost collaboration. You need to build a prototype to present your idea.

# HILTI IT COMPETITION 2019

## Topic 2: Connect
## Disruptive Technology in the Construction Industry

Hilti provides premium products, systems and services to construction professionals. We set the standard in the construction and building maintenance industry by developing and providing innovative solutions with our internationally renowned products.

**Your task:** Design and develop disruptive solutions that support or enhance Hilti products and services for the construction industry. Your solution may use VR, AR, AI, IoT, Machine Learning or any other emerging technologies of your choice. You need to build a prototype to present your idea.

## Topic 3: Communicate
## Creative & Innovative Talent Management

The pressure to innovate has been increasing in response to the speed at which technology itself has been evolving. To keep up, Hilti is also continuously growing and aims to keep attracting the greatest talents from around the world. By having creative and innovative talent management solutions, we will be able to attract, develop and retain these talents.

**Your task:** Develop a concept to create an exciting working environment in the construction industry. Explore gamification, marketing techniques for encouraging engagement, branding awareness, talent management platforms and other innovative ideas.  You need to develop a framework to present your idea. Prototype is optional but would be an added advantage.

**Important Note: You may choose one topic or a combination of more depending on which best fits your interest, skills and potential.**

## / THE CONDITION

• You need to make the necessary assumptions.
You may include the usage of prototyping boards (e.g. Raspberry Pi, Arduino, etc.) or other alternative means to simulate your idea.
• You may use any open-source communication protocol (e.g. HTTP, MQTT) and mobile application or cloud-based solution.
• You are free to use any hardware, programming language, database or platform services of your choice.
• Decide the scope of your topics (the idea, front end, back end, any special algorithm(s), etc.) and the output of your idea
• Your solution can be in the form of a framework and/or supplemented with slides.
• For more details about Hilti processes, products and services, go to Hilti Online (https://www.hilti.group).

## / IMPORTANT DATES

**Registration Period:** 1st October 2018 to 30th November
**Submission Deadline:** 15th January 2019
**Semi-Final:** 1st -15th February 2019
**Final Competition:** 8th -12th April 2019
**Webinar Info and FAQ Session 01:** 30th October (3pm, UTC+0800)
**Webinar Info and FAQ Session 02:** 1st November (9.30am, UTC+0800)
Webinar links will be sent to registered participants

## / OBJECTIVES

There are many reasons for you to participate in the Hilti IT Competition 2019.

# HILTI IT COMPETITION 2019

## Build your skills

You will engage with science and IT technology by creating a project in an area of your passion. Build your presentation and communication skills by showcasing your project to industry experts. You will receive constructive tips and feedback from these experts to take your work further. Ultimately, it is a prestigious platform for your intellectual work to receive recognition.

## Build your experience

Compete against like-minded graduates from across the world. You will meet leading technologists, subject matter experts and build networks with these peers. It is an opportunity to put yourself, your educators and your university on the world map.

## Build your career

Every finalist will gain access to a fast-track application for a paid internship. The internship provides finalists with the chance to develop their idea and to bring it to life at Hilti. It is also our opportunity to identify talented individuals for possible employment at Hilti in the future. .

## REGISTRATIONS

Registration is open from **1st October** till the **30th of November.** Registration is via the online registration form at our competition website https://www.hilti.group/content/hilti/CP/XX/en/non-transactional/misc/hilti-it-competition.html. Early registration is important to express your interest in participating, keep yourselves informed about competition updates and the chance to participate in our webinar(s). Complete the registration form with all relevant information; incomplete registrations will not be accepted.

## PARTICIPATIONS

Participation in this competition is free, and open to all undergraduate and postgraduate students of any disciplines internationally. Submissions are welcome from individual participants or teams of up to five people. Team size is not relevant to the evaluation criteria. Detailed technical knowledge of the construction industry is not a pre-requisite to participate in this competition. Plagiarism is strictly prohibited. The project entry must be the original work of the entrant(s) only. By entering the competition, you agree that your entry can appear on public display. The organizers of the Hilti IT Competition 2019 may use the entry on the internet, on radio, on television and in print to promote the competition.

Entries must be made in accordance with the competition instructions. Entries received later than the specified closing date are deemed invalid. It is the responsibility of the entrant to inform the Hilti IT Competition 2019 committee of any changes to their contact details. Failure to do so may result in the entrant not receiving notification of results or similar correspondences. By participating in the Hilti IT Competition 2019, participants are deemed to have agreed to be bound by these rules.

## SUBMISSIONS

Competition submission(s) should reach us not later than 15th January 2019. Participants should submit their:

- Prototype (or a framework for topic 3: Communicate)

# HILTI IT COMPETITION 2019

•Presentation document. The presentation document should explain the purpose of your idea and how it supports Hilti and our customers. Use an illustrative and attractive way to present typical application situations, a proposal for the design and the benefits your idea will bring to Hilti.

•A short film not exceeding five (5) minutes in duration. The short film should be interesting and includes sufficient details about the technical concept behind your project. You may use visual aids to demonstrate your work. The presentation document should explain the purpose of your idea and how it supports Hilti and our customers. Use an illustrative and attractive way to present typical application situations, a proposal for the design and the benefits your idea will bring to Hilti.

Feel free to make reasonable assumptions about the technical requirements as needed. Sample competition presentation template can be found at our competition website. The template serves as a guide for you to create your own presentation.

## / JUDGING CRITERIA

Upon the deadline for submissions **(15th January 2019)**, all the competition submission summaries and films will be reviewed by Hilti's internal subject matter expert judges. The judges will score them based on innovation, originality, design, mutual benefit, quality, technical feasibility, sustainability and presentation.

### Innovation and originality

Judges look for innovation and inventiveness. Build an idea that finds a new way to address a problem, a fresh application to provide value or a novel way to process data. Your submission may be an innovative technology, or it may be an existing technology being used in a new way. It may also be an innovation in how you market the product.

### Design and mutual benefit

Core to high quality engagement is the design and idea of mutual benefit. We would expect there to be benefits to all those involved – increasing Hilti employee productivity and enhancing customer service and experience.

### Quality and sustainability

Judges are interested to know about if and how you measure product quality and the plan for a sustainable solution. This includes the usability of the product and the success criteria of the project.

### Presentation

Make it clear what you are doing and why. Make sure your message is clear and that the judges will be able to understand your presentation. It must be a neat and clear message that you are proud of.

## / SEMI-FINAL

The semi-final period will be from 1st – 15th February 2019. The semi-final qualifiers will be announced through emails. Semi-final session will be via video conferencing where the exact slot for each groups will be notified through emails. Details on selection schedule and video conferencing details will be shared directly with the semi-finalists.

## / FINAL COMPETITION AND WORKSHOP

The final competition is from 8th – 12th April 2019 at Hilti Asia IT Services Sdn. Bhd. The selected finalists will be invited to an on-site workshop followed by their final presentations at:

# HILTI IT COMPETITION 2019

**Hilti Asia IT Services Sdn. Bhd.**

Level 5,

Brunsfield Oasis Tower 3,

No. 2, Jalan PJU 1A/7A Oasis Square,

Oasis Damansara,

47301 Petaling Jaya,

Selangor,

Malaysia.

The workshop is an avenue for finalists to further develop their ideas and learn more about Hilti business whilst networking with a group of highly creative individuals. An international panel of experts will be the judges for the final presentations. The judges' decisions are final and no appeals will be entertained.

Winners will be announced at the awards ceremony at the end of the competition. A full list of prize winners will be published on the Hilti IT Competition 2019 website and other publications selected by the organizers.

Finalists' airfare, travel and accommodation for the above-mentioned workshop, presentations and awards ceremony are sponsored by the organizer. Participation at this event is mandatory for prize eligibility.

## / PRIZES

### 1st Place: Paid Study Trip

The winning team (of up to five people) will receive air fare and a five-night stay at one of Hilti's strategic IT locations: Kuala Lumpur, Malaysia; Plano/Tulsa, USA or Schaan, Liechtenstein. The trip will be arranged based on the winning team's home country. The team members will have the opportunity to learn about Hilti IT services and build their Hilti network.

### 2nd and 3rd Place: A Piece of Hilti

Each member of the 2nd and 3rd place team will be awarded with a Hilti power tool box. Hilti power tools are one of the finest products with advanced technology, precision, reliability and a lifetime warranty.

### All finalists: Internship

Each finalist will have access to a fast-track application process to a paid internship at Hilti. The internship provides finalists with the chance to further develop their idea and to bring it to life at Hilti.

Please visit the competition website for registration:



Competition website: hilti.work/itcomp30
Or scan the QR code.

For further information, questions or queries please contact us at:

**Hilti Asia IT Services Sdn. Bhd.**

Email: Hilti-IT-Competition@hilti.com

*mailbox are monitored during Asia Pacific work hours.

We will reply to you email within two (2) working days.