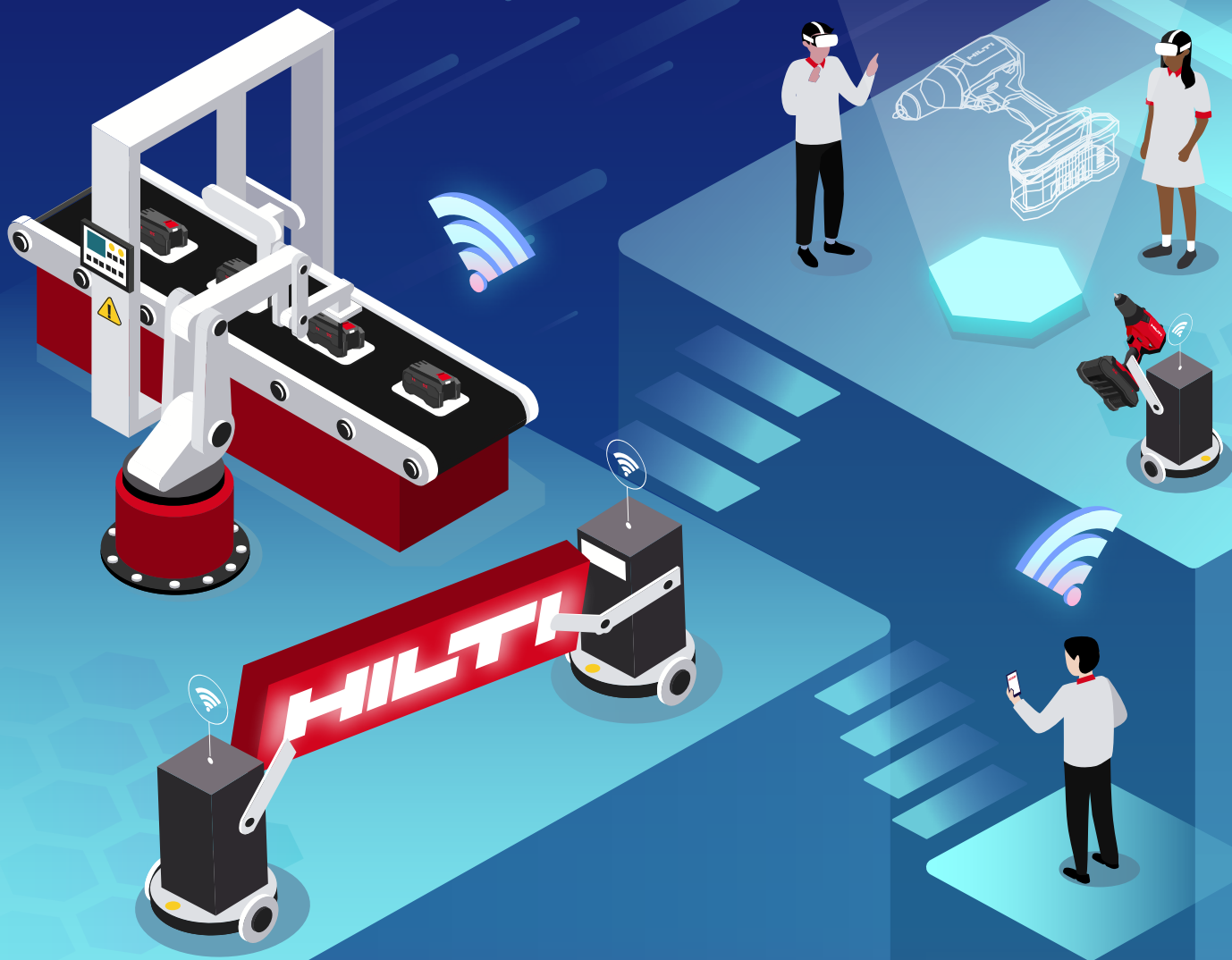


INDUSTRY

4.0 Revolutionize the construction industry.



HILTI 2023
IT COMPETITION
KUALA LUMPUR MAY 9th – 12th

INFOPACK HANDBOOK



STEP 1: TEAM UP

Participants must be pursuing one of the following higher educations:

- Diploma
- Bachelor's Degree
- Master's Degree
- PhD

Team Size: 1-5 person(s).

STEP 2: REGISTER

Participants may register between **1st October 2022 – 20th January 2023**. This can be done through online registration [**HERE**](#). Participants should submit the complete registration form with all relevant information by **20th January 2023**.

STEP 3: IDEATE

Help us with your innovative idea!

Hilti is constantly on the move to forge ahead towards IR4.0 in the construction industry. That is why we invite you to be a part of this movement to innovate and break the boundaries of what is currently available in the digitalization of construction. Your solution should attempt to be specific to the problem you are trying to solve, although there should be an awareness of the impact it has on the larger scale of things (e.g. business viability, SDG). Feel free to select the technology used in your solution, so long as it keeps the spirit of integrating various technologies that can improve our current production.

Some example topics to refer, but not limited to:



IoT machinery sensor & “digital twin” to track operational effectiveness and create opportunities for predictive maintenance in Hilti manufacturing plants.



Augmented reality for training and maintenance. Learning how to use dangerous machinery in a safe, virtualized environment.



Robotics in construction industry for building operations like painting, brick laying, and earthwork.



A digital VR/AR marketplace for Hilti tools or space for knowledge sharing within workplace.



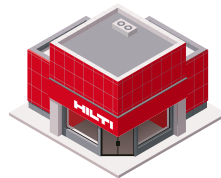
Area of Consideration

The context

As a construction tool company, HILTI is a multi-national company that offers premium products and services for professionals on construction sites around the globe. Behind this catalogue is a global team comprising of team members of 133 different nationalities located in more than 120 countries. There are many potential avenues in which we can potentially benefit from this paradigm shift and improvements in any of the processes in our operations. Examples of where IR4.0 could potentially produce the greatest positive impact are in our:



Hilti manufacturing plants.
With plants based in over 9 countries, the manufacturing focus of our plants ranges from Hilti tools like our Diamond Cutter to consumables such as drill bits.



Hilti stores. Brick and mortar stores where customers may enter to buy Hilti products or hold a tool demonstration session with our Hilti representatives.



Hilti Online Store. An online catalogue that stores information on all Hilti products. Customers utilize our website to research and place orders.



Hilti tool service center.
When you buy a Hilti tool, you get more than just a tool, a comprehensive repair service is also part of the purchase. The Hilti tool service center is where the magic happens for tools and return to our customers in a lightning-fast timeline.



Customer construction job sites. Construction sites can be messy and dangerous. Hilti aims to not only be a provider of power tools, but also an answer to our customers' pain points such as with the use of our IoT tool management system, ON!TRACK.



Hilti Global IT department.
Committed to innovation, the Global IT arm in Hilti is constantly looking for methods to improve inclusivity, productivity and promote our Hilti Culture.



Value creation strategy

It is highly recommended that participants consider the following areas to create value when developing their respective solutions:

1. Business model:

The development of a new solution implies the definition of the involved stakeholders, the required resources, the key activities, and the channels for distributing the new solution, both for internal communication and when communicating with external parties.

2. Technological innovation:

The development of a new solution is based on the utilization of different technologies that can potentially help us step closer towards an Industrial 4.0 workplace, or how well it can improve on our existing manufacturing processes/working environment.

3. Internal user's perspective:

The usage of the system should be straightforward.



The condition

- You are required to define the scope of your topic (the idea, the front end, the back end, any special algorithm, etc.) and the output of your idea.
- You need to make the necessary assumptions.
- You may use any open-source communication protocol, platform, or cloud-based solution to craft your solution/proof of concept.
- You are not restricted to any kind of hardware, tools, programming language, database or platforms that are suitable for your solution.
- You are encouraged to demonstrate your solutions with case studies.
- Your solution can be in the form of a framework and/or supplemented with slides.

For more information on Hilti processes, products and services, kindly visit Hilti Online: www.hilti.group



STEP 4: SUBMIT YOUR IDEAS

After registering your team, you will receive an email with a unique link for you to submit your ideas. Submission period will be on **1st October 2022 – 20th January 2023**.

Submission materials

Participants are required to submit their:

1. Presentation document (mandatory):

This document (.pptx/.ppt) should explain the context 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 that will bring to Hilti. You may also submit supporting documents in any format.

2. Short video (mandatory):

The short video should be brief not exceeding 5 minutes. It should be interesting with sufficient details to explain your idea. You may use visual aids to demonstrate your work.

3. Prototype (if applicable)

Judging criteria

- All submissions will be reviewed by Hilti's internal subject matter expert judges. The judges will evaluate the entries based on the following criteria: innovation, originality, design, mutual benefit, quality, sustainability and overall 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 solution within the topic of industrial revolution in the construction industry and how you market the product.
- **Design and mutual benefit:** Core of High-Quality Engagement is the design and idea of mutual benefit. We would expect there to be benefits to those involved, which is to increase the sense of safety within the company and to its employees, while enhancing their learning experience.
- **Quality and sustainability:** Judges are interested to know about 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 on what you are doing and why. Ensure your message is clearly communicated to the audience and the judges.



/ SEMI-FINALS

The semi-finals will be held from **6th March 2023 – 17th March 2023**. **15 – 19 semi-finalists** will be selected and notified through email. This session will be conducted through video conferencing and the scheduled slots for each group will be communicated directly through email.

/ FINAL COMPETITION AND WORKSHOP

The finals will be held from **9th May 2023 – 12th May 2023** at Hilti Asia IT Services Sdn. Bhd.

Around **7 teams** will be selected for the finals and will be invited to an on-site workshop followed by their final presentations at:

Hilti Asia IT Services Sdn. Bhd.

Level 6, 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 acquaint their ideas and learn more about Hilti business whilst networking with a group of highly motivated and creative individuals. The judges for the finale will consist of an international panel of experts. The judges' decisions are final. No appeals will be entertained.

Winners will be announced during the awards ceremony which will be held at the end of the competition. A full list of prize winners will be published on the Hilti IT Competition 2023 website and other means of publications selected by the organizers.

Do take note that the finalists' airfare, travel and accommodation for the workshop, presentation and awards ceremony will be sponsored by the organizer. Participation at this event is mandatory for prize eligibility.



IMPORTANT DATES



Registration

1st October 2022 –
20th January 2023



Submission

1st October 2022 –
20th January 2023



Semi-Finals

6th March 2023 –
17th March 2023



Finals

9th May 2023 –
12th May 2023

PRIZES

Grand Champion: Sponsored Trip to one of Hilti's IT Strategic Locations (Switzerland, US, Malaysia)

All members of the winning team will get to travel to one of our strategic locations: Kuala Lumpur, Malaysia, Plano/Tulsa, USA or Buchs, Switzerland. The trip will be arranged based on the winning team's home country. On top of that, the team members will have the opportunity to learn about Hilti IT services and build their Hilti network.

First & Second Runner-Up: A Hilti Tool

First and second runner up teams will walk away with a Hilti power tool per participant.

Finalists: Internship or Career Opportunity at Hilti

All finalists will have access to a fast-track application process to a paid internship at Hilti. The internship provides finalists with the opportunity to develop their ideas and bring it to reality at Hilti.



TERMS & CONDITIONS

- I. Detailed technical knowledge of the construction industry is not a pre-requisite to participate in this competition.
- II. Plagiarism is strictly prohibited. Project entry must be the original work of the participants.
- III. Entries must be made in accordance with the competition instructions.
- IV. Entries received after the specified closing date will be disqualified.
- V. Participants must take up the responsibility to inform the Hilti IT Competition 2023 committee of any changes to their contact details. Failure to do so may result in the participant not receiving any updates regarding the competition.
- VI. Participants are to agree that their entries can appear on public display. The organizers of the Hilti IT Competition 2023 may use their entries on any form of media such as the internet, radio, television and in print to promote the competition.
- VII. By participating in the Hilti IT Competition 2023, participants are deemed to agree to be bound to the above terms.

Register now! At our registration platform: hilti-itc.awardsplatform.com



For more information, please email us at: Hilti-IT-Competition@hilti.com



FAQ

General

1. What is Hilti IT Competition about?

Hilti IT Competition is an annual IT competition to encourage students of all disciplines around the world to come up with innovative IT solutions to overcome challenges faced in the construction industry.

2. Who can participate?

The contest is open to individuals (“participants”) who are:

- Full-time tertiary students currently pursuing their Diploma, Undergraduate (Bachelor’s) / Graduate (Master’s) / Postgraduate (PhD) studies in any of the tertiary institutions around the world.

By entering the competition, participants confirm that they will be available to travel for the Final competition that will take place on 9th May 2023 – 12th May 2023 in Kuala Lumpur, Malaysia.

3. Who owns the Intellectual Property of the solution?

The participants and/or their university own the rights to their work submitted for this competition.

4. How many teams will proceed to the semi-finals and finals stage of the competition?

15 - 19 teams from the submission pool will be selected to compete in the semi-finals and from there, around 7 teams will be chosen to compete in the finals.

5. How do I find out more information regarding the topic of the competition?

For more detailed inquiries, please feel free to email us via Hilti-IT-Competition@hilti.com

Registration

1. How many teams can I join?

Each participant is only eligible to join one team.

2. Am I allowed to team up with students from different faculties and different universities?

Yes, your team may consist of participants from different educational backgrounds and from different universities if they are within the same region.

3. Can I register on behalf of my team members?

The participants and/or their university own the rights to their work submitted for this competition.

4. I would like to add another member to our team, is this possible?

Yes, this is possible. Please include the profiles of the new team members when you submit the proposal latest by 20th January 2023.



5. Am I allowed to participate in this competition if I had participated in the previous Hilti IT Competition?

Participants from previous Hilti IT Competitions are welcome to participate again in this competition.

6. Is there any registration fee?

There is no fee for participation and no purchase is necessary.

Submission

1. What language does my submission need to be in?

The official language of this competition is English. All the submitted documents must be in English only.

2. Is hardware/software prototype required?

Hardware or software prototype/proof of concept is preferred but not mandatory. You should be able to illustrate your idea sufficiently with or without a prototype.

3. Are we required to submit the source code and/or hardware prototype?

If you have developed a hardware prototype, please include the details in the final submission. You do not need to deliver/submit the physical device to Hilti. However, if you are shortlisted as one of the finalists, you are required to bring along your device during the final competition for an on-site demo.

Similarly, if you have software or a system platform, please describe the setup in your submission and include the relevant source code as an attachment. You will be required to demo your working prototype during the final competition.

4. What technology, communication protocol or platform are allowed?

We accept the usage of any technology or tools in your work. It is recommended to use materials that are publicly available and/or open source when possible.

5. Where should I submit my proposal?

Submissions can be done via the Awardforce website after team registration. The link can be found [HERE](#).