

# UTM NEWSLETTER



## The MAGICX 4.0 IR Mission

### Visit to MAGICX UTM

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The Faculty of Computing at Universiti Teknologi Malaysia organised an industrial visit to the Media and Game Innovation Centre of Excellence (MaGICX). A group of 17 students and lecturers participated in the visit and were able to gain valuable insights on the operations, technologies introduced by MaGICX and the immersive technology industry.

The visit started with an introduction delivered by the director of MaGICX, Accos. Prof Dr, Mohd Yazid Idris about the center's mission and vision.

Students get to explore the state-of-art AR and VR facilities to experience immersive technology firsthand. There has various facilities available including virtual lab / workstations / workshops for industrial training and a Virtual Cycling Game that tracks cycling performance using headset configurations. The MaGICX staffs explained about the development and implementation of these technologies and

other ongoing projects they are doing. Students are given the opportunity to actively interact with staff during a Q&A session and have a deeper understanding about the constructions and applications of AR and VR solutions.



### ● About MAGICX

**MaGICX** was established in 2013 at UTM and specializes in immersive technology for media and game innovation. In 2019, it was recognized as an Industry4WRD Competence Centre under the coordination of the JPT Ministry of Higher Education (MOHE) and the Ministry of Investment, Trade and Industry (MITI). Following Malaysia's National Fourth Industrial Revolution (IR 4.0) Policy, MaGICX is committed to drive digital revolution by implementing the core IR 4.0 agenda.

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## Technologies and Issues

During the visit, several technologies were introduced and MaGICX's role in the IR 4.0 innovation is showed. First, the immersive AR and VR facilities include various softwares, design platforms, multiple headset configurations and workstations. These resources support research, experimentation and innovation across industries such as education exemplified by the Classroom of the Future and AR Brochure. Next, the Digital Twin Technology is a tool for digitally replicating physical assets in the virtual environment. It supports predictive analysis, immersive monitoring and transformative solutions for real-world challenges. It is applied in various sectors such as oil & gas, automotive, aerospace, and manufacturing.



Example

### Digital Twin Technology of Offshore Pipelines

showcase how digital twins enhance pipe monitoring, hazard prediction and safety measures.

Additionally, MaGICX has collaborated with **Unity Technologies** to provide globally recognized certifications for programmers, artists and game developers. MaGICX also developed impactful industry case studies such as AR FlexiHome, a toll for real estate sector, and Industrial Building System (IBS) that enhance construction efficiency through immersive technologies.



Discussion during visit

Throughout the visit, issues and topics about **implementing and sustaining the immersive technologies** are discussed. With the rising demand of IR 4.0, MaGICX realised the importance of creating an ecosystem for this industry. It includes five important elements: **the technology, platform, content enablers, end users and industry use cases**. To address the gap between industry needs and educational offerings, MaGICX offers a certification program enabling participants to earn professional diplomas in the new industry revolution. It is to help align technical and vocational education and training with industrial demands. Also, upskilling instructors and talent at higher education institutions including universities and strengthen collaborations between education institutions and industry.



### ● Reflection

This industrial visit provided valuable insights into how innovation enhances human life in many aspects. We are able to reduce risk and build advancements beyond our natural abilities as demonstrated by Digital Twin Technology. Furthermore, innovation addresses resource limitations and lowers the cost of trial and error. We can safely explore possibilities and feasibility. It allows us to prepare thoroughly for real-world operations and gain learning opportunities that might be challenging to achieve in real-world settings.