

HIGH-TECH CASE STUDY
INNODESIGN



Challenge:

To accelerate its creation of innovative products to satisfy rapidly changing consumer tastes, INNODESIGN needed to improve the sharing of design ideas and streamline its design processes.

Solution:

INNODESIGN adopted Dassault Systèmes' **3DEXPERIENCE** platform on the cloud and its *HT body* industry solution experience to support an open collaborative approach to design.

Benefits:

HT body on the cloud helps stylists generate and evaluate more design ideas and it speeds the transformation of ideas into convincing concepts and engaging products.

PRODUCTS THAT DELIGHT CONSUMERS

Designers not only need to be in touch with consumer preferences and trends, they must also embrace new technologies and try new approaches. This is the opinion of Youngse Kim, CEO of INNODESIGN, founded 30 years ago in California's Silicon Valley. "New ideas and speedy design processes are the most important factors that contribute to a product's victory or failure in any market," Youngse Kim, CEO, INNODESIGN said. "A good design exists to please people. Designers live in the future today and create objects that people will buy because it makes their lives happier. When I created INNODESIGN, the notion of innovation was a novel idea at the time. But it resonated in me, which is why I used part of the word in my company's name."

20 years after INNODESIGN was founded, Youngse Kim imagined a new direction for his company – to create the foundation for a new era of design. His idea took ten years to mature and on the 30th anniversary of INNODESIGN, he announced the creation of the South Korea's first Design Accelerator Lab (DXL-Lab). "I wanted to provide Korean startups with a place they could go to obtain design expertise and financial assistance, if needed, to get their projects off the ground when starting their own businesses," Kim said. "After Korea, we will establish a DXL-Lab in the USA and China."

BIG DATA + DIGITAL TECHNOLOGY = BIG DESIGN

In addition to design expertise and financial assistance, DXL-Lab will also give startups access to world class technologies and teach them how to use them to develop their projects. "We partnered with Dassault Systèmes to equip the lab with the **3DEXPERIENCE**® platform and its *HT body* industry solution experience on the cloud that includes CATIA design

tools. The lab's motto is 'Design Together' and the best way to achieve this is with a powerful platform that can support all designers who want to work together to collectively create exciting concepts," Kim said. "The benefit of working on the cloud is that the design process is nurtured by people sharing their ideas. In the digital age, the role of a designer is growing. Big data and digital tools open up many new possibilities. I think that combining the two will create something amazing. I call this 'big design'. Designers can work together more easily, and this is important for what I believe is a new trend for the future of design. 'Big design' basically provides designers with the ability to make better use of shared IT infrastructures and the large amount of data out there. Today's digital tools on the cloud are definitely a way to do this.

ELECTRICALLY-POWERED BICYCLE

The first product designed in the DXL-Lab using the **3DEXPERIENCE** platform on the cloud is an electric bicycle. "We joined forces with Dong-hyun Park, CEO of Hycore, a startup that designs and manufactures the "Hycore Bicycle", an innovative electric bicycle wheel, to design a new type of bicycle," Kim said. "Hycore's electric wheel, which includes the electronic components and battery, will be mounted on INNODESIGN's foldable bicycle frame.

The design applications from *HT body* used in the electric bicycle project perfectly supported designers' creativity and imagination. "CATIA provides us with a much easier and more flexible design approach than other tools on the market," Youngmin Kang, design team manager said. "With CATIA we can freely express our thoughts and ideas and also narrow



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– Youngse Kim, CEO, INNODESIGN

down on details that we would miss if we used less precise design applications.”

“It’s amazing how easily we can draw shapes using the sketching tools on the **3DEXPERIENCE** platform,” Jin-gi KIM, product design team manager, continued. “It’s actually like modelling with clay.”

DESIGN HISTORY ACCELERATES CHANGE MANAGEMENT

The project took particular benefit of the **3DEXPERIENCE** platform when design changes occurred. “With other tools, if we had to make modifications, we would need to start from scratch,” Jaewoong Lee, design team designer said. “However, since CATIA records the design history, if we make one change, its impact is automatically propagated throughout the entire design. It’s faster and more secure than if we had to manually make all the changes ourselves, since the risk of forgetting something is always present. The fact that the system took care of this for us helped us to save a lot of time,” Lee said. “We also used CATIA’s real-time rendering capabilities to analyze different materials and colors in various lighting situations. The photorealistic quality helped us optimize designs rapidly,” he added.

INNODESIGN selected the cloud-based solution that requires minimal IT resources and is easy to set up. “Dassault Systèmes is our single point of contact for all services and support, which ensures our designers have fast, easy and secure access to the **3DEXPERIENCE** platform on the cloud,” Youngmin Kang said.

“Before using the **3DEXPERIENCE** platform, we would have to call up each tool and juggle from one to the other, which was inconvenient. Now we have all the design applications we need on one platform. We can access it in few minutes and then there is no need to transfer information from one application to another and no risk of data incompatibility,” he said.

DESIGNERS TAKE THE LEAD

Youngse Kim believes in casting the designer as the lead role in product development. “The principle of ‘design first’ means designers are no longer in supporting roles but are taking the lead thanks to the digital technologies at their disposal,” he said. “The virtual world provides the power to communicate design intent to clients and to show them what the future product will look like,” Kim said. “We can impress our clients



Top image: INNODESIGN’s designer working on the **3DEXPERIENCE** platform on the cloud

Bottom image: Hycore Bicycle, an innovative electric bicycle wheel

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by showing them our ideas before even proceeding to the tooling or manufacturing phase.”

THE FUTURE IS ON THE CLOUD

For Youngse Kim and INNODESIGN, 3DEXPERIENCE on the cloud is a strategic choice for the future. “We will continue to use the cloud because it offers a truly collaborative approach, which is essential for design,” he said. “I dream of one day having creative people, designers, engineers, investors, and technology buffs join me in the design process, collaborating and sharing ideas because this is the key to a successful design.”

“I think the 3DEXPERIENCE platform and its applications will become increasingly popular throughout the design community because they make designers more efficient in developing their products. I hope that the younger generation of designers will be broadly familiarized with the 3DEXPERIENCE design tools CATIA and SolidWorks. My wish is to see many designers graduate from design schools with practical training so that they are ready to jump on projects with our team. Making these tools more readily available on the cloud will certainly boost their potential.”

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