

Published Date:	26 Jun 2023	Publication:	The Times of India [Mumbai]
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HUL taps AI to predict trends & turnovers

FMCG Co's Innovation Hub Looks To Spot Big Opportunities Before They Turn Mainstream

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In a different era, Steve Jobs famously said "figure out what customers are going to want before they do", and revolutionised the tech market with innovative Apple products.

Now, in an AI universe, an FMCG company is reading your mind, developing a product that you would want, and manufacturing it, without the need perhaps for factory trials.

From picking up a signal on a developing trend to the inception of an idea to producing it, Hindustan Unilever (HUL) is using its agile innovation hub to bring goods straight into consumer homes. According to HUL, the new age technology is not only cutting down the duration of the manufacturing process but also helping in predicting the expected turnover from the product.

At HUL's head office in Mumbai, its agile innovation hub (AI hub) pivots around three axes—consumer, customer and operations. The hub, the facilities of which are also accessible by all locations in Unilever across its global markets, is part of the company's 'Reimagine HUL' journey. It falls under the consumer ecosystem and is integrated into the company's business process and category innovation programmes.

Once consumer signals are picked up at the AI hub, they are quickly assessed for their merit in being converted into product ideas, said Vibhav Sanzgiri, executive director (R&D), HUL, and head, global skin cleansing R&D. "This AI-led digital transformation is an enabler. The need has always been there. The approach has evolved, and we realise that in today's world, doing more of the same doesn't help, and therefore, we use data, technology, automation, and artificial intelligence to fast-track the product journey," he added.

But there was one problem. The data available at one's fingertips is enormous. HUL realised the need for sense-making to cut through the noise. "Our teams filter through the noise to stay on top of relevant data. We have created a pathway that links up the disjointed datasets to make sense. We then put an AI-based analytical layer on top, creating value-added data that helps teams unlock trends," said Sanzgiri.

If one has to truly predict the future, he added, one needs the tools to do that. "By using AI and machine learning, we generate hundreds of concept ideas, beyond which a combination of machine and human intelligence draws a comparison between past learnings on innovations by the company and competitors. We then fine-tune it to a list of smaller innovations before taking consumer response through rapid always-on digital panels to understand their purchase intent," said Sanzgiri.

This helps HUL in targeting the biggest opportunities before they become mainstream. "We can predict the expected turnover of a specific product if we were

in-house panel of sensory experts and thousands of consumers who are on speed dial across India. After the formulations are perfected, HUL's AMC, which is also located at the headquarters, simulates manufacturing processes at the company's digital factories to rapidly scale up production without the need for actual factory trials. It is the only second such centre for Unilever globally and the first focused on soap bars.

The next part is scaling up the technology into something marketable. "We see the AMC as part of our 'labs of the future'. Once the scale-up happens, we pass them on to our nano and digital factories. This way, the 'always on' process keeps feeding into

CONSUMER SIGNALS TO PRODUCT IDEAS

- > HUL is using an 'agile innovation (AI) hub' to shorten the manufacturing process & help predict the turnover from a product
- > Once consumer signals are picked up, they are assessed for their merit in being converted into product ideas
- > Before producing these innovations, augmented reality is used to visualise packs on retail shelves and in consumer homes
- > This helps HUL in targeting the biggest opportunities before they become mainstream
- > Fragrance selection time has been reduced to hours



using a robot-assisted library with over 2,000 fragrances

- > Digital design and 3D printing too are used for rapid prototyping and pack testing
- > HUL experiments with more products at the same time. It launched over 20 innovations, including certain direct-to-consumer (D2C) brands, last year alone — using its innovation hub capabilities

to take it to full fruition. We can map out the future opportunities five years down the line," he said.

"Through our interconnected network of next-gen capabilities, such as the AI hub and the advanced manufacturing centre (AMC), we have been successful in bringing down GTM (go to market) lead times by a third. In some cases, innovations hit the marketplace in a matter of weeks and months versus years," said Sanzgiri.

For instance, fragrance selection time has been reduced to hours using an in-house robot-assisted library with over 2,000 fragrances. On the other hand, digital design and 3D printing are used for rapid prototyping and pack testing.

Before beginning the process of producing these innovations, augmented reality is used to visualise packs on retail shelves and in consumer homes. To gauge consumer response, HUL works with an

this virtuous cycle of innovation, scale-up, and digital operations," said Sanzgiri.

Scaling up a product — from a few grams in a laboratory beaker to a few kilos or tonnes in a factory — can be complex. "The ambition behind some of these digital and automation capabilities is how do we avoid factory trials altogether. The purpose of doing that is to speed up the innovation process. What matters to consumers is whether the product meets their needs, delights them, and is available at the right price point," he said.

HUL now experiments with more products at the same time. It has launched over 20 innovations and new launches, including certain direct-to-consumer (D2C) brands, in the last year alone. Additionally, multiple claims, e-commerce compliance of its packs, and key savings projects — all happened using AI hub capabilities in the past 12 months.