

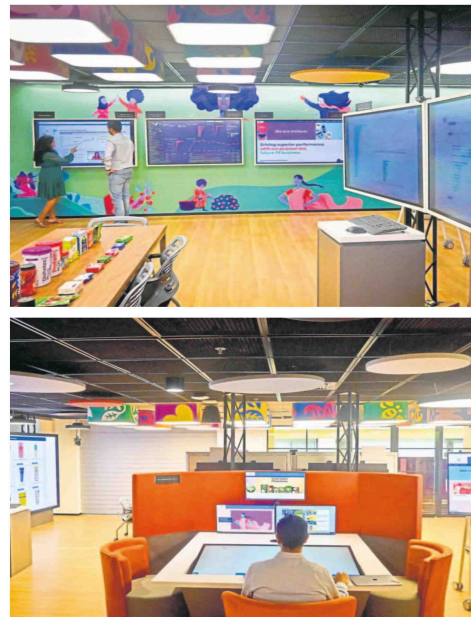
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HOW HINDUSTAN UNILEVER MAKES WHAT YOU WANT

The FMCG company is using emerging tech like AI to sense demand, crash R&D cycles and rapidly prototype



HUL's Agile Innovation Hub at the company's Andheri campus in Mumbai. (Bottom left) Vibhav Sanzgiri, executive director, R&D, HUL, and head, Global Skin Cleansing R&D.

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Acting as a fairly common problem to have. Teenagers develop zits that stay with them for years. People spend thousands of rupees on skin specialists, buy over-the-counter treatments, and spend hours online searching for quick-fix remedies.

Searches for acne clearing products peaked during the pandemic. Hindustan Unilever Ltd (HUL), India's largest packaged consumer goods maker, noticed the trend and wanted to meet this demand.

It turned to its newly minted Agile Innovation Hub. The AI Hub, as it is called in short, is a place where emerging technologies such as artificial intelligence (AI) are harnessed to shape products of the future. Tucked inside HUL's massive Andheri campus in Mumbai, it opened in March 2022 and was the first such global hub set up by Unilever. HUL's parent, another AI Hub is also operational in Shanghai, China.

Here, using publicly available data via Google Analytics and its proprietary data, the company created several models. The entire universe of skincare products available in the market was scanned and consumer concerns around skincare were accounted for.

Acne has various stages. HUL's research and development (R&D) team realized that while many products were available in the market, they were mostly generic solutions. The gap was for products that can cater to the different stages of acne. So, the company assembled top dermatologists at the AI Hub to help create a regime for these stages.

Starting March last year, and within a span of 180 days, including trials and regressions, the company developed a range of products under the 'Acne Squad' brand.

"Almost every single aspect of it has been developed using the capabilities that we have in our AI Hub," Vibhav Sanzgiri, executive director, R&D, HUL, said. "The entire thinking behind the design happened there. We next designed the packaging, the mock ups," he added.

In a world without the AI Hub, a new launch the size and scale of Acne Squad would have taken the company over a year and a half to develop. Earlier, HUL would rely on conventional research tools instead of reading real-time consumer trends that are now tracked every minute at the Hub. It would have outsourced services such as fragrance development and product moulding to multiple third-party vendors or its own internal units.

Now, emerging technologies have changed the paradigm significantly, both at the R&D stage and in manufacturing. The cycles have shrunk considerably for companies that can leverage such technologies. Besides the AI Hub, HUL runs two advanced manufacturing centres (AMCs) in India—in Bengaluru and Mumbai. They are the digital replicas of large factories and help the company quickly prototype a product. Like the AI Hub, this is part of Unilever's R&D investment in India. Annually, the multinational ploughs around \$850 million in R&D, according to the company's 2022 annual report.

M&A visited the AI Hub and the AMC in Bengaluru to get a ring-side view of how a large enterprise pivoted to the digital in an effort to stay relevant, in a market that is ever changing. Turns out, this digital strategy is intertwined with HUL's many other goals—stay-ers, becoming more efficient.

The AI Hub has a robotic fragrance library. It is a repository of over 2,000 fragrances and helps researchers pick the apt fragrance for a product.

ing ahead of rivals, winning more consumers, becoming more efficient.

NEED FOR SPEED

HUL's crash course in HUL's history. Unilever's ties with India date back to well over a century. Brands such as Lifebuoy were introduced in India in 1895, followed by the likes of Pears, Lux and Virel. In 1951, Unilever set up its first Indian subsidiary, the Hindustan Vanaspati Manufacturing Company. This was followed by the Lever Brothers India Ltd (1933) and United Traders Ltd (1935). These three companies merged to form HUL in November 1956.

In 2022-23, the company reported a turnover of ₹58,544 crore. India is Unilever's largest market by volume; HUL's products reach nine of ten households in India and are retailed in over nine million outlets. People across the country have been mop-

ping up its brands, household names such as Dove, Sunsilk, Horlicks and Kissan.

The revenue underlines its strong distribution network, one built over decades; the history tells us about the consumer insight and data HUL has, something few organizations in India can boast of. Data, we know, is the new oil. And data has now exploded because of social media. The challenge, therefore, is in identifying the right data, processing it, and using it to shape products that work.

HUL's digital transformation addresses this. The company earlier outlined a "Re-imagine HUL" agenda, which aims to use data, AI and other emerging technologies to transform the entire value chain.

"Re-imagine HUL" is about how we make HUL an end-to-end digital and data-driven company," Sanzgiri said. It involves linking all of the company's operations—from trend spotting to innovation to manufacturing, from demand generation to demand fulfillment at the consumer end—in a seamless way using emerging technologies.

All this is tied to a goal the company doesn't want to miss: Speed. Inside the AI Hub, on large white screens, hundreds of data points flash, capturing the latest buzzwords in beauty, skincare, and oral care. Trends peaking in Korea, for instance, could make their way to India over the next few months, and HUL wants to lead their launch in the country.

The quicker the company is able to tap into new, emerging trends, the sooner new products can flood the market. This is likely to give HUL an edge over rivals, especially at a time when competition in the fast-moving consumer goods (FMCG) segment appears to be heating up. This also comes in the backdrop of changing consumer preferences and a trend towards premiumization of products and services.

More Indian consumers are switching from unbranded to branded goods. To take advantage, many large and small FMCG companies have ramped up capacities. For instance, ITC Ltd has invested in Integrated Consumer Goods Manufacturing and Logistics facilities (ICMLs)—it currently has 11 such facilities in India. Swiss packaged foods company Nestle has promised to invest ₹5,000 crore in India to build factories and R&D centres. Reliance has made a splash in the consumer goods market with its acquisition of Campa, the iconic beverage brand, and the launch of Independence, a brand of

WHAT

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MOREOVER

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household goods, in Gujarat. That's not all. As the internet opens up new avenues for consumers to shop from, new-age brands have flooded the market with hair oils, beauty products and multi-vitamins. HUL has to both protect its market share and tap into new consumption trends.

Meanwhile, speed saves time and the resources required to create new products. In India, the global capital investment in R&D, which include the AI Hub and AMCs, are also leading to "significant cost savings for the company," HUL said in its 2022-23 annual report.

In order to cater to the need for niche premium products, the company has set up seven nano factories or fully functioning, mini production lines that house everything HUL needs to produce a batch of final products quickly. Over the last year, these nano factories have produced 'digital-first' brands such as Simple, Acne Squad and Novelogy.

Digital-first brands are those that are

launched online first before being made available offline.

MACHINE'S MAGIC

How does the AI Hub spot a trend? There are three parts to the answer. The first is what consumers want and search for. The second trend spotted is around what people buy; what they think about such products. Finally, the Hub keeps a check on products that are already in the market globally, not just in India.

"This gives us an understanding of what the next big thing could be," Sanzgiri said. The company then dips into its machine learning and analytical tools to understand similar trends for products launched in the past. Complex algorithms are used to predict the probability of the trends succeeding. Well, the AI Hub is run by a team of R&D experts, data scientists and consumer insights experts.

"We use AI-computer-learning tool that automatically generates almost 500 concepts. Once we have these concepts, we can run them through a second cycle of rapid consumer assessment, where we look at consumer interest, purchase intention, and what they are willing to pay. That helps make a compelling business case," Sanzgiri added.

Once an idea is locked, like an acne-fighting product, the AI Hub's rapid prototyping capabilities help convert ideas into digital and physical product designs. The Hub has a 3D printing machine for prototyping the packaging design and the product—let's say a soap bar. Also, a robotic fragrance library. Internally called Chanel Number One, it is a repository of over 2,000 fragrances available with Unilever and helps HUL's researchers pick the apt fragrance for a product.

In the past year, over 40 new product ideas have used the AI Hub. Not just India, even teams, worldwide, have used this capability for global products. One example is the Lux Gluta Range of body washes from Thailand.

While the AMCs and the AI Hub is work in progress, HUL has its work cut out. With growing competition, the company has to stay relevant by rapidly introducing new products while rejuvenating the older ones, some of them 100 years old. Apart from Lifebuoy, there is Diroko Bond Bed Label—Bed Label launched in India in 1903. Come to think of it, your great grandmother could have sipped tea marketed by this brand!

Just like white-collar employees are living in an era of 'continuous learning', Sanzgiri and his team have perhaps realized that FMCG companies are traversing the age of 'continuous reinvention'.

ONCE the products are prototyped at the AI Hub in Mumbai, they move to

the minimum viable product (MVP) stage. Like the name suggests, at the MVP stage, the product can be used by a customer but doesn't have all the capabilities just yet. At this stage, a product can be validated and inputs to improve it are gained.

This is also when a product is ready to be passed on to the AMCs, either in Mumbai or Bengaluru.

Just to reiterate, the AMCs are not full-fledged manufacturing plants—they are advanced pilot plant facilities co-located within the company's R&D centres in these cities. You could say these pilot plants are the replicas of HUL's large factories. The AMCs allow the company to run several trials before products are green-signalled for commercial scale manufacturing, be it in India or overseas.

While the Mumbai AMC is dedicated for products such as skin cleansing bars, dishwash and detergent bars, the Bengaluru one is primarily meant for skin cleansing bars.

So, what happened when the AMCs were not around? HUL would carry out multiple rounds of trials in its large factories, while simultaneously tweaking the processes until the final result was achieved. If one product was undergoing trials in different factories, it led to more complications—different plants can have hardware set-ups that are not similar. In short, in a world without AMCs, the process was time-consuming. In addition, it led to a loss of productivity since factories running existing product lines had to be shut for the new trials to start.

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