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Face Race

While daily use of facial recognition in much of the world is largely limited to unlocking iPhones, Chinese companies have already put the technology to widespread use as a method of payment. From KFC to vending machine manufacturers, project sponsors are pushing initiatives to integrate the next-gen technology into more everyday transactions. "In China, facial recognition has developed into a fairly mature state and will likely be adopted as a standard feature for cashless transactions in the future," Zheng Qingzheng, an analyst with Suning Financial Research Institute, told The Wall Street Journal.

The rollout of these facial-recognition payment projects has mainly been a race between Ant Financial Services Group and Tencent Holdings, the two largest

mobile payment networks in the country. They respectively operate Alipay and We-Chat Pay. Taken together, the two networks handle almost 90 percent of China's thirdparty mobile payment market, according to BigData-Research. Ant was the first to finish its project to adopt its facial-recognition tech for payment, in December, followed closely by Tencent wrapping up its WeChat Pay transaction tech in March.

Tencent's initiative has, at its core, the strategic decision to integrate facial-recognition transaction capabilities into its alreadypopular WeChat instant messaging app. That means keeping everything in the native app, making it convenient and natural for users to make the leap to facial-recognition payments on a service they already use daily. "Typically as a Chinese consumer, you are going to use WeChat on a regular basis, and the payment function within the app is much more common and normal for people,"

Zennon Kapron, founder of Shanghai-based consultancy KapronAsia, told Forbes. In contrast, the main challenge for Alipay is to connect to consumers, he said.

For its part, Alipay has approached merchants and retailers with subsidized partnership deals, pledging to spend CNY3 billion on smaller initiatives to get the tech up and running and offer rebates to customers who use it. Only time will tell which project will realize the most benefits, as facial-recognition payments continue to spread.

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the future."

Packaged Good

The world is at war with plastic. Roughly one dump truck full of plastic waste enters the ocean every minute, adding up to 8 million tons annually, according to the World Wildlife Fund (WWF). Packaging is a major cause: 40 percent of all plastic produced is for single-use items.

In turn, some of the world's biggest companies are launching projects to reduce waste—and ultimately lure eco-conscious consumers—by eliminating plastic in packaging. In May, major consumer companies partnered with the WWF on a pledge to cut plastic waste by 10 million tons. "I sometimes wonder if it's a fair accusation that we're in the branded litter business," Unilever CEO Alan Jope said at a conference earlier this year. "That's what people care about right now."

Unilever launched a project in May to roll out refillable containers across nine of its brands for 5,000 shoppers in New York, New York, USA and Paris, France. (The idea is that someone would finish, say, a bottle of shampoo and then send that bottle back to be refilled.) The pilot will extend to Toronto, Ontario, Canada and Tokyo, Japan next year. Recycling company TerraCycle is working with other major companies, including Procter & Gamble and PepsiCo, on similar initiatives. In December, Nestlé announced the creation of a dedicated research unit, the Institute of Packaging Sciences, to rapidly prototype potential solutions with the goal of making all of its packaging recyclable or reusable by 2025.

These initiatives come with considerable risk: Companies are investing in projects with uncertain ROI. As a result, teams are taking an iterative approach and incorporating user feedback into designs to ensure products hit the many requirements. Project teams will also have to determine how to scale up products for global companies with extensive footprints.

Slow and Steady

Closed Loop Partners launched an innovation challenge last year to find an alternative to disposable fiber cups that could be implemented on a global

Carlsberg's Snap Pack. Below, one of the ideas in the **Closed Loop Partners** accelerator

scale. More than 250 billion fiber cups are used annually, the vast majority of which end up in landfills. Major companies, including Starbucks, McDonald's, Coca-Cola and Yum! Brands judged nearly 500 ideas submitted from 50 countries to identify a dozen finalists. Six of these have entered an accelerator program, with real-world beta testing expected to begin this year.

The accelerator will give participating teams a chance to vet concepts. Ultimately, selected cups will have to be environmentally friendly, affordable at scale and practical given varying global regulations, environments and recycling infrastructures. Constant testing and prototyping will be key, says Daniel Liswood, director of the NextGen Consortium, an initiative of the Center for the Circular Economy at Closed Loop Partners.

"Teams will need to work closely with suppliers and manufacturers to ensure that these next-generation cups can be manufactured with existing equipment and without significant disruption to current processes," says Mr. Liswood, who is based in New York, New York, USA. "Commercial scale manufacturability is a critical step before solutions can be tested in market, and the process can be costly and time-consuming."

Project teams will need to contend with a host of requirements, including sorting through criteria such as: Is the cup strong enough to withstand sitting in a cup holder in varying weather? Does the cup influence flavor? Does it keep hot beverages hot?

Once all that vetting is done, project teams must also win over consumers. Factoring in all these requirements makes eliminating plastic waste a lengthier endeavor than some might hope. "Displacing the current polyethylene-coated cup won't happen overnight," Mr. Liswood says. "Scaling a particular solution will likely be more gradual at first."

Sustainable Buzz

Carlsberg Group, the 172-year-old brewer from Copenhagen, Denmark, had customers and retailers top of mind when developing prototypes for its project to overhaul packaging.







"Sustainability does not immediately change consumer preferences."

> -Myriam Shingleton, Carlsberg Group, Copenhagen, Denmark

In 2018, the brewing group announced it would replace the plastic wrapping around its six-packs with an innovative glue that would reduce waste by 1,200 metric tons annually when fully implemented. The Snap Pack, as it's known, is just one part of a larger initiative targeting a 50 percent reduction in carbon emissions at its breweries by 2022 and a 30 percent reduction of carbon

emissions for the company by 2030, says Myriam Shingleton, vice president of product development, Carlsberg Group, Copenhagen, Denmark.

The three-year Snap Pack project, along with other innovations such as recyclable shrink-wrapping and more environmentally friendly packaging ink, were developed in partnership with outside specialists and scientists, she says. Their feedback was crucial during development, but so was relying on the expertise of end users.

"We interacted regularly with consumers to evaluate the performance of this new packaging and collect insights. We also engaged in some discussion with retailers to check their interest and assess how the Snap Pack could fit their strategy of reducing plastic consumption," Ms. Shingleton says.

The company is continuing its efforts, even as Ms. Shingleton notes that they are not likely to yield a positive return on investment in the near term. That strategy aligns with the company's overall mission: Carlsberg is governed by a foundation that gives its profits back to society, so sustainability is a core part of the company's long-term vision.

"Sustainability does not immediately change consumer preferences," she says. "All these efforts are introduced to confirm that Carlsberg remains probably the best beer in the world and also for the world—and that was the scope of the project."