TD Tawandang and Google Cloud Democratize Analytics and AI to Rejuvenate Mom-and-Pop Stores and Thailand's Grassroots Economy

Google Cloud accelerates the delivery of a high-tech, retail-as-a-service platform that levels the playing field for micro-retailers across the country

Bangkok, Thailand, May 5, 2022 – TD Tawandang ("TD"), a leading retail technology company, is collaborating with Google Cloud to help conventional mom-and-pop stores reinvent their business operations, overcome competitive challenges, and boost profitability.

Thailand's mom-and-pop stores – also known as *shohuays* – have traditionally been local communities' retailers of choice for groceries and other daily essentials at affordable prices. They have, however, been overshadowed by fast-expanding convenience store chains that offer lower price points due to economies of scale. These micro-retailers have also been adversely affected by the pandemic, which has led to 61.6% of local micro, small, and medium enterprises (MSMEs) experiencing a decline in income.

To safeguard mom-and-pop stores' livelihoods and elevate their competitiveness, TD offers a profit-sharing partnership model, gives their stores a visual makeover, and provides them with access to its unified TD Retail Platform. The platform is built entirely on Google Cloud's secure and scalable infrastructure, and advanced analytics, artificial intelligence (AI), and machine learning (ML) technologies. Each refurbished store then features a "Tookdee" logo alongside its original name.

Through the platform, which includes a smart point of sale (POS) application connected to a full retail distribution network, TD automates stock replenishments and financial accounting on the store's behalf. Instead of closing their stores to visit wholesalers and manually recording sales transactions, store owners can focus on other tasks like receiving goods, printing out price tags and promotion messages from the smart POS, restocking shelves, and building relationships with their customers.

"At the heart of every village and province lies mom-and-pop stores that have befriended their customers and served their communities for years, but many have struggled lately to make ends meet. We're also seeing individuals who lost employment during the pandemic return to their hometowns and open small retail shops to earn a baseline income. TD was established to ensure that these store owners are fully equipped to grow their businesses and thrive as our economy recovers," said Tientham Setthasit, Executive Director, TD Tawandang.

"By tapping Google Cloud's industry-leading technologies and expertise, we have designed an integrated platform that close to 4,000 micro-retailers have been using in the past three years to more than double their daily incomes, while retaining full ownership of their stores and 85% of profits. With more than 100 micro-retailers now joining the Tookdee network each week, we will continue collaborating with Google Cloud to scale reliably, enhance the platform, and deliver more value-added services," added Setthasit.

Reducing Wastage, Predicting Product Shortages and Reclaiming Lost Revenue

The critical challenges faced by mom-and-pop stores are limited product visibility and difficulty matching demand and supply. Their profit margins are then eroded by perishables expiring before they can be sold or customers' needs being unmet when desired items are not replenished quickly enough.

By implementing Google Cloud's Dataplex to facilitate data flows between POS applications and a centralized, cloud-based enterprise resource planning (ERP) system, TD and store owners can track products sold and gain real-time visibility over their earnings and available inventory. TD then uses Google Cloud's predictive modeling, Vertex AI, business intelligence, and data visualization tools to help its retail distribution teams forecast demand and schedule deliveries for just-in-time stock replenishments. Through handheld devices provided by TD, store owners receive delivery information beforehand and push notifications once these replenishments arrive.

Many mom-and-pop stores are also located in rural areas with intermittent internet connectivity. By leveraging Google Cloud's capabilities in lightweight application development, serverless computing, and low-latency data storage and retrieval, TD can give store owners a smooth and reliable user experience across its cloud-connected applications. These include the POS software at in-store terminals and communications services on handheld devices. In addition, these capabilities allow the applications to work offline to minimize disruptions to store operations, while newly generated data is automatically synchronized across systems once connectivity is restored.

“The applications we provide to micro-retailers, while easy-to-use on the frontend, are underpinned by numerous processes on the backend. All of these also produce terabytes of data on a daily basis, which must be effectively organized and ingested for the TD Retail Platform to benefit store owners as intended,” said Ruud Akarapanitsakul, Chief Technology Officer, TD Tawandang. “Google Kubernetes Engine and Anthos Service Mesh make it easy for our staff to securely pull large datasets for analysis and our software developers to continuously release new features – without causing downtime. This robust architecture enables all aspects of the TD Retail Platform to run in tandem and scale up without issues, even if we were to support 30,000 stores and connect to many more devices."

New Innovations in Store for Micro-Retailers and Consumers

With its robust architecture firmly in place, TD has accelerated its pace of innovation. Through new self-service kiosks that further transform mom-and-pop stores into “virtual hypermarts,” consumers can now access TD’s wider catalog of fast-moving consumer goods and pre-order items that are not a part of the in-store inventory, before paying upfront and returning to collect these items once they are delivered to the store. To notify customers when their orders arrive, TD is rolling out a LINE mini app. To help micro-retailers better engage with and retain customers, the mini app also provides consumers with a Tookdee membership account, an earn-and-burn rewards program, and personalized product recommendations and promotions.

“By integrating data from the mini app onto our platform, granular insights into consumers’ purchasing behavior in each province can be derived to provide initial assortment recommendations and boost sales quicker when a store joins our network, pinpoint new items that each store should carry on a regular basis, promote local brands’ signature snacks, incentivise suppliers to run discounts due to economies of scale, and inform decisions to establish new distribution centers,” added Akarapanitsakul.

As part of its next phase of collaboration with Google Cloud, TD is exploring data collection from sensors that measure air temperature and humidity outside each store or track movements to different areas of the shop floor. These could help the TD Retail Platform respond to weather patterns and consumers’ seasonal needs, while product displays and store layouts can be optimized to attract customer attention and expose them to more merchandise.

“TD is not just helping mom-and-pop stores to protect and grow their livelihoods, it is also opening up more business opportunities for independent, homegrown packaged food brands, and job opportunities in grassroots communities,” said April Srivikorn, Country Manager, Thailand, Google Cloud. “With Thailand setting this year’s Asia-Pacific Economic Cooperation agenda and spearheading conversations on MSME recovery across the region, TD can serve as a great example of how cloud, analytics, and AI technologies can be used to empower groups with untapped economic potential. We’re proud to contribute to TD’s vision for inclusive growth, and look forward to supporting the expansion of the company’s retail operations and innovations to other markets in Southeast Asia.”

About TD Tawandang
TD was launched in 2019 to disrupt the retail landscape and shift the paradigm of traditional retailers. Currently the fastest-growing retail technology company in Thailand, we aim to create business and employment opportunities that raise local communities’ standard of living. More than 100 traditional retailers are adopting TD’s distinctive partnership model and technology-enabled business solutions on a weekly basis to help them thrive in a digitalized world. We are on a mission to serve more than 100,000 mom-and-pop stores across Southeast Asia and establish ourselves as the region’s largest retail network.

About Google Cloud
Google Cloud accelerates every organization’s ability to digitally transform its business. We deliver enterprise-grade solutions that leverage Google’s cutting-edge technology – all on the cleanest cloud in the industry. Customers in more than 200 countries and territories turn to Google Cloud as their trusted partner to enable growth and solve their most critical business problems.

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