

Barcode Killer

At a Tokyo bakery, a new type of cash register has an eye for bread.

JAPANESE BAKERIES ARE known for their myriad types of bread—sweet bean bun, tuna cheese bread, custard pastry—and lots of them look alike. So how do you train clerks to memorize the names and prices of more than a hundred varieties? If you're a popular bakery chain like Donq, where employee turnover is high, you don't. One of its Tokyo locations now uses a system that relies on a smart cash register capable of identifying treats by sight rather than depending on a flunky cashier who can't.

The solution wasn't obvious right away. A pilot test at another Japanese bakery proved that offering more kinds of bread meant earning more dough, but employees couldn't remember all the prices. So the shop tried wrapping each item in cellophane and slapping on a barcode sticker. Customers didn't like their bread prepackaged, though, so sales dropped by two-thirds.

"It's impossible to put a barcode directly on the pastries," says Minori Kambe of Brain Corporation, which spent four years developing the system at Donq. Called Bakery-



Scan, it's a camera perched above a backlit countertop. The software compares images of each snack to those of all the goods for sale—it can even correctly identify one that's a bit overdone. Once it finds a match, it coughs up a price. Success rate: 98 percent.

Sure, this seems like a lot of effort for bean

buns, but the researchers behind the technology say the premise could work with other items too, like fresh produce and medicine. The team at Brain hopes to market Bakery-Scan stateside soon (for just \$20,000 per machine). The ultimate goal: to replace the barcode entirely. —Lisa Freedman