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Biggest tech upgrade in SF's government's history under way

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Photo: Michael Macor, The Chronicle

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As the director of San Francisco's Department of the Environment, part of Debbie Raphael's job involves making sure the city selects the most environmentally friendly products possible in the thousands of purchasing decisions made by dozens of government departments each year.

Over time, Raphael and her staff have built up a comprehensive list of green products — everything from liquid cleaners to light bulbs and furniture — to encourage city departments to buy more eco-friendly supplies.

But there's a problem. While they may be able to highlight the greenest products available, Raphael and her team have no way of knowing in real time what city departments are actually purchasing. Blame it on old technology.

"I don't have confidence that the data is complete," Raphael said. "It's not nimble. We don't know which departments are doing great and which ones need help."

But after years of being hobbled by outdated systems, San Francisco city government is in the midst of the largest technological upgrade in its history. The result, city officials hope, will be a government that conducts business more efficiently and transparently than ever before.

City Hall's appetite for upgrades has arisen now because the city has both "the need to modernize and the means available to do it," City Controller Ben Rosenfield said. In June, the city hired Linda Gerull as its new director of technology. Over the next few years, Gerull said there would be "an explosion of new services" that will benefit both bureaucrats and the public by digitizing processes currently being done on paper or in-person.

That's already started. Last month, the city switched over to an allnew, \$60 million computing system that will administer its \$10 billion budget, manage invoicing, purchasing and payments to over 5,000 vendors, and handle the payroll for the city's

30,000 employees.

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"It's the backbone of the city's back-office functions," said Rosenfield, who oversaw the rollout. San Francisco, he said, is the last county in the state to embark on a major upgrade of its technological underpinnings. And that's just a start: The city's Department of Public Health is also getting new technology to track thousands of patient records.

The new financial system's predecessor, which Rosenfield described as "very stable, but very limited," was switched on in 1980 and hadn't seen a meaningful upgrade since 1997. Because of its limitations, Rosenfield said, city departments independently adopted bespoke financial systems for contracting, dealing with vendors and recording the funds flowing in and out of their offices.

"Some departments had sophisticated online systems, and others have been doing it all on paper," Rosenfield said.

When it's fully operational, the new system will allow 80 subsystems used by individual departments to work together.

Being able to quickly access data should provide some relief to Raphael as she tracks the city's eco-friendly purchasing efforts.

Raphael and her team have had to stitch together an annual report of the city's green purchases from a patchwork of disparate data. That process takes a staffer "hundreds of hours" each year and provides a frustratingly incomplete picture of whether the city is living up to its "buy-green" goals.







Rosenfield said technical kinks are still being worked out and employees are getting used to the new system, but, with time, vendors will be able to register to do business with the city, bid on projects and get paid, all online.

As it is now, each city department has its own method of contracting with vendors and tracking payments, making the process of doing business with the city "very uneven" and overly cumbersome, Rosenfield said.

Another benefit, Rosenfield said, is that the city will be able to track large amounts of data to create more detailed and better-informed budgets.

"We're going to have much more information on what the city is spending and with whom it's spending at a much more granular level and in a much more transparent way," he said.

The overhaul represents the largest information technology project in city history, but it will soon be eclipsed by an ambitious medical records upgrade under way at the Department of Public Health.

The department is working to unify the digital records system for its entire health network, which treats 100,000 patients at nine hospitals, clinics and health centers. Using a single system, instead of the 50 now in use for things like clinical documentation and regulatory compliance, will allow the patient medical information to move more easily through the department's health care system and provide clinicians with better access to patient data.

"It is an essential tool for the organization to function as a unified network so that patient care and experience is consistent and of the highest quality, wherever the patient may be," said Dr. Albert Yu, the department's chief health information officer.

Over the next 10 years, the project is expected to cost around \$377 million, which includes staff training. The Health Department hopes to begin rolling out its new system in July 2019.

Despite the recent improvements and big projects on the horizon, some of the city's inner workings remain deeply mired in the technological past.

In November, Muni fell victim to a ransomware attack that one independent cybersecurity analyst blamed on outdated







And the city's Assessor-Recorder's Office, which tracks \$2.7 billion in property tax revenue each year, is running on a computer system fraught with many inefficiencies, according to Assessor-Recorder Carmen Chu.

The programming language is no longer being taught, and inputting and accessing is cumbersome, Chu said. But Chu said that she expects to begin soliciting proposals for a new department system later this year.

"It's not really an option for the city not to be paying attention to how we modernize our property tax system," Chu said, adding that while governments don't operate with the nimbleness of the private sector, they should still work to meet citizens' growing expectations for service in the modern age.

"People want to see a government that's responsive to them, that helps to make their lives easier," she said. "Even though we're not there yet, we should strive for that."

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