

Build a Functional Ecosystem Through Cloud Architecture

An interview with Winston Chang, Chief Technology Officer for the Global Public Sector, Snowflake Inc.

In data transformation, it helps to view things through a different lens.

"It's looking at your data like an ecosystem," said Winston Chang of Snowflake, a leading data cloud company. "Think of the quality data that lives and breathes as an ecosystem." As data management health grows, so does the entire ecosystem across an organization.

Within the data ecosystem, Chang identified three core pillars for transformation: people, processes and technology.

"If you're going to do transformation correctly, you've got to really pay attention to all three of those," he said.

Evolve Through Upskilling

While technology is at the core of a total agency transformation, Chang advised against having it "dragging process and then dragging people along." The process and the people need to move along with the technology instead of clinging to its shirttails.

"One thing I would offer as a piece of advice, having done multiple transformations in the federal government, is invest in upskilling your people," said Chang. "If your people can't use the technology — no matter how great the technology is — the organization as a whole does not move forward."

For federal environments, he urged technology upskilling to improve employees' data literacy, analytics awareness and coding abilities — or at least to provide a basic familiarity with those activities.



Architecture Eases Processes

Chang said agencies face challenges using their data technology: data silos, security vulnerabilities and an inability to support collaboration.

Simple, singular data platforms should work with an architecture that breaks down information silos rather than creates them. That facility comes through in qualities such as data mesh or a decentralized data architecture that's organized by business domain and operates through self-service. The architectural design also must help strengthen system security. That's enormously important for federal data, Chang said.

"The security piece is so big, and with Snowflake, it's baked in at a fundamental level," he said. "In the design of the architecture, security was one of the first things...and it's really designed all the way through the entire system."

Technology Boosts Collaboration

There's a whole variety of new tools that help an agency better access and share data correctly, Chang said.

One example is data clean rooms, which enable secure sharing with third parties without revealing all the underlying data.

Agencies can reconstruct how their businesses work when they use Snowflake solutions that remove technical constraints.

"We take care of that technology and process piece, and organizations have the ability to truly collaborate at new, fundamental levels," said Chang. "Every legislator should know that their constituents will be directly affected by how well the government operates. And how well the government operates relies on how well agencies use their data."