The federal government is drafting ambitious plans to transition to a wide assortment of next-generation telecommunications and network services technologies over the next half-decade. The end result, planners and experts say, will be a substantially more robust and responsive capability to communicate and manage data where and when needed, all delivered within a more agile acquisition environment.

Likewise, the Defense Department has set 2020 as the year in which it intends to install a cohesive global network that will consist of all types of wired and wireless communications, with voice, video and data transmitted around the world on a 100-gigabit-per-second backbone, 10 times the speed of the circuits it uses today.

However, the transition will require significant effort and expense, a fact that became apparent during the transition from the previous telecommunications contract, known as FTS2001, to Networx, the present contract vehicle. Complex acquisition processes and weaknesses in project planning contributed to the transition taking almost three years longer than planned, and resulted in cost increases of $86.4 million and $329 million in missed savings, according to a General Accountability Office report released earlier this year.

Armed with the lessons learned from the Networx transition, GSA has laid the foundation for Network Services 2020 (also known as NS2020), a comprehensive framework and acquisition strategy designed to assist agencies governmentwide in making smooth transitions away from the 10-year Networx telecommunications contracts due to expire in 2017.

“NS2020 is really all about the future, and [it is the] strategy for delivering services within our program area, everything from organization changes to system changes,” said Mary Davie, assistant commissioner of the Integrated Technology Services office within GSA’s Federal Acquisition Service.

New contracts are coming, “so we’re looking at those and rationalizing them in terms of what customers need, what’s out there, where things are going, how to replace expiring...
things, and what kinds of services will people need to be buying around traditional network services given where content delivery networks are going — data has taken off and [so has] IP," Davie said recently during a panel on evolving government acquisitions held by the American Council for Technology and Industry Advisory Council (ACT-IAC) in Washington, D.C.

Meanwhile, the Defense Information Systems Agency is moving forward this fall with solicitation for the Global Network Services (GNS) contract, which will support more than a million users worldwide and be worth more than $4 billion. GNS will provide DISA with a vehicle to procure leased telecommunications services in support of the Defense Information Systems Network (DISN) and DoD Information Network (DoDIN) worldwide.

GNS will also support DISA and DoD strategic initiatives, including the Joint Information Environment (JIE), "by providing seamless transport services across contract boundaries, single security architecture, network normalization, positive control, encryption and other capabilities needed to support the warfighter globally, independent of technology," according to a DISA request for proposal.

Building on past success
NS2020 offers DISA and GSA the opportunity to build on past contracting partnerships. DISA and GSAs contract partnership began in 2009 with the Future Commercial Satellite Communications (COMSATCOM) Services Acquisition (FCSA) contract. At the time, GSA had a satellite contract it was using to support the entire federal government, and DISA had a satellite contract that was expiring. So the two agencies decided to work together on a governmentwide contract that would have the weight of the whole buying power of the federal government behind it.

Networx is another program that came out of DISA and GSAs partnership. So it makes sense that DoD officials along with other federal agencies have been actively involved in the formulation of the NS2020 strategy and the Enterprise Infrastructure Solutions program, which will be the primary end-solution contract under the NS2020 strategy, according to Amando Gavino, director of Network Services Programs within GSAs Integrated Technology Services office, a part of the agency’s Federal Acquisition Service.

“We are certainly working with DISA; they are an important partner with us. And, we are looking for ways to clearly position acquisitions to best support DoD mission requirements,” Gavino said.

“The first step in seeing how this will work begins on Networx, where we are about ready to start a pilot to give DISA more delegation of procurement authority,” said Gavino, a retired Air Force officer who came to GSA’s Federal Acquisition Service following a stint with DISA.

“We’ve developed this sort of partnership before with DISA. The Future COMSATCOM Services Acquisition partnership with DoD has exceeded expectations,” noted Gavino, who will be working with DISA and the DoD.

Both NS2020 and GNS are focused on the concept of providing solutions to solve problems, rather than point-to-point products, noted Meg Coker, director of capture management for the public sector with Level 3 Communications, a provider of telecommunications solutions and services to the federal government and enterprises.

Agency managers are looking for better pricing and better technology. A lot of the emerging, newer technologies are IP- and cloud-based and are being outsourced as well. “It is not an à la carte approach, but one that focuses on solving problems with a solution,” Coker said.

“DISA and GSA realize there are ways to leverage each other’s [contract vehicles] to bring solutions quicker to market for their customers,” Coker said. For instance, there are a lot of similarities in the way DoD is approaching unified communications as a service (UCaaS) and how UCaaS is being administered under the GSAs Washington Interagency Telecommunications System (WITS) contracts, which will be rolled into NS2020, Coker noted.

Although there are certain synergies in the way the two networking strategies are unfolding, defense security requirements will dictate whether a particular DoD agency goes with a NS2020 or GNS contract, Coker noted.

Jennifer Augustine, the former technical director for the Procurement Directorate with DISA, said as much two years ago. “What we want with NS2020 is the ability to leverage the suite of contracts quickly and agilely to respond to a wartime [or emergency] situation, but we also need to ensure these vehicles offer requisite security posture so we can utilize them,” Augustine, now DISAs vice director of manpower,
personnel and security, said in a statement issued in August 2012.

**Flexible, agile portfolio of technology and services**
The aim of both programs is to offer federal agencies a flexible and agile portfolio that supports a range of government purchasing patterns, and provides cost savings through aggregated volume buying.

“The NS2020 portfolio is designed to enable access to a wide range of service providers and provide the agility and flexibility for them to introduce advanced capabilities,” GSAs Gavino said. The services could range from carrier Ethernet, to software-defined networking, to managed security services, to hosted solutions, he said.

The current strategy is to release three regional infrastructure contracts — Northeast Infrastructure Solutions (NIS), Central Infrastructure Solutions (CIS), and Western Infrastructure Solutions (WIS) — as a bridge to the nationwide Enterprise Infrastructure Solutions (EIS) vehicle, said Chris Wiedemann, a market analyst with the ImmixGroup, a consulting firm that helps technology companies do business with the government.

The EIS program will promote migration to a converged IP environment through access to a full suite of emerging technologies and unified communications services and features with continuous technology refresh. As a result, said GSAs Gavino, “the EIS contract will allow industry to deliver to government modern and innovative solutions in wide-ranging communications areas, from infrastructure solutions, advisory services, emerging technologies and services, and government shared services to the latest in satellite and mobility and wireless.”

“One of our primary roles at GSA is to be able to efficiently meet demand at the best possible price,” he continued. “We are setting up EIS to do that. We are looking for ways to do less contract modifications than we did on Networx without giving up some of the visibility into what is being purchased and at what price,” he said.

“For example, some of the detailed service definition for newer services will be done when there is demand for that service. We won’t define everything up front for services where the demand has not yet emerged,” Gavino explained, adding, and “competition may occur at the task order level.”

**Supporting cloud services**
The NS2020 strategy also directly supports specific points in the federal IT management reform plan, such as the shift to a “cloud first” policy, development of a shared services strategy, the creation of contract vehicles for infrastructure as a service and commodities, as well as the identification and adoption of best IT acquisition practices.

“Cloud services are very much a part of NS2020. Cloud computing is a broad term and a broad market, with a diversity of services and service providers,” GSAs Gavino explained. As a result, cloud computing is grouped under data center services in the NS2020 strategy. GSA is writing the EIS requirements with data center services in mind.

For instance, consider co-location and dedicated hosting services, Gavino said. These are services where government agencies might put their hardware in a third party’s data center and have the third party manage it. But, they don’t fit exactly in the National Institute of Standards and Technology’s definition of “cloud.”

Co-location and hosting data center services are purchased on Networx today and the demand for these services continues to grow. These types of services are frequently a stepping stone to purchase infrastructure as a service, Gavino noted.

“Telecommunications services providers are some of the major cloud computing providers. When the government wants to procure cloud services integrated with telecommunications infrastructure, then it’s a natural fit for NS2020,” he said.

Depending upon the nature of the service sought, the procurement and the integration, NS2020 or another GSA acquisition program — such as Alliant or Schedule 70 — might be the preferred source.

“We will be broadly looking for the best place to drive competition around data center and cloud services. In some cases, that might be NS2020, but in other cases, there might be a better pool of competition on other programs, like Federal Supply Schedules,” Gavino said.

**Cost savings and pricing**
According to the GSA whitepaper that lays out the NS2020 strategy, aggregated volume and pricing mechanisms will result in competitive pricing. Pre-competitive contracts with baked-in features like security will reduce acquisition costs. Improvements in inventory and billing systems will foster expense management, enabling automatic detection of billing errors, and improved service level agreement monitoring and reporting.

Other cost-savings will come from the consolidation of the array of local service level contracts into fewer vehicles as well as consolidation of regional and national aspects of the NS2020 program, consolidation of back-office systems and the implementation of other operational efficiencies.

As for the GNS program, the strategy has evolved in recent years. Once envisioned as a replacement of other multiregional contracts coming to an end, it now is planned as a single global contract having multiple awardees with a five-year base plus five, one-year option periods.

The goal is to drive down costs for delivering services and capabilities and to tap into the innovation industry can offer, but still be flexible enough to provide the services DISA offers today such as point-to-point, metropoli-
Coker of Level 3 Communications sees some real opportunity for cost savings and better pricing models as agencies move from a capital expenditures (CapEx) approach to an operational expenditures (OpEx) model in acquiring systems and services. The issue is about how agencies budget and account for IT expenses.

CapEx are expenditures creating future benefits, such as acquiring or upgrading assets like information systems, while OpEx are ongoing costs related to the production of an organization’s goods or services, such as wages, utilities, maintenance, and repairs. Many organizations are looking to adopt an OpEX model to pay for cloud computing services, wherein cloud service providers let organizations adopt a “pay as they go” model. This lets organizations use the resources and expertise of cloud hosting experts, only pay for what they use, and realize potential cost benefits throughout the year.

Additionally, there are other ways to achieve cost-savings while moving to new technology, Coker said. Both civilian and defense agencies have a lot of antiquated services and solutions such as asynchronous transfer mode (ATM), Central Office Exchange (Centrex) and T1 Lines. Agencies can move beyond these older technologies by deploying SIP trunking and realize cost-savings immediately, Coker said. Based on the Session Initiation Protocol, SIP trunking is a Voice over Internet Protocol (VoIP) and streaming media service, which allows organizations to connect their private branch exchanges to the Internet. It basically allows users to aggregate and eliminate telecom lines while creating a platform for unified communications: data, voice and video and other streaming media applications. Organizations that Level 3 Communications has worked with have realized significant cost savings with SIP trunking, Coker noted.

**Future reflections**

Going forward, agency managers are going to need to take a hard look at their environments and how they want to evolve to more capable technologies, said Allen Bintz, principal for solutions architecture with Level 3 Communications.

“They have [to decide if] they are satisfied with their current solution set in the current data realm,” he said. “Everyone knows that copper is going away on the voice side sooner or later. You can see that traditional carriers are trying to move away from copper services like Centrex. So you can expect that those [services] will be priced higher than they are today to persuade agencies to move to the UCaaS or hosted VoIP technologies,” he said.

Agency networks range in complexity and volume from several dozen locations for smaller agencies to hundreds or even thousands of locations for larger departments. Network transitions have evolved into overall IT management and operations that involve agency network, IT, security and procurement offices, which further complicates the effort. “A successful transition must have senior executive support, effective collaboration, clear delineation of responsibilities, careful project planning and a realistic timeline that is accepted by all participants,” according to the GSA NS2020 strategy, citing some of the lessons learned from the Networx transition.

The NS2020 strategy and accompanying contract vehicle also ties into the Government Acquisition Marketplace GSA is constructing with other agencies. A Common Acquisition Platform (CAP) — a digital portal that allows agency customers to search contract vehicles, compare prices on various contracts, and connect easily with other federal procurement experts — and category management, are key supporting initiatives central to the creation of the marketplace.

GSA’s Mary Davie is confident that the transition to next generation can be a lot smoother than previous migrations because the government has been working on this sector for a long time.

“The telecommunications category management and expertise we have are probably more mature than other areas because we have been delivering those services in terms of a category for some time, we just haven’t called it that,” Davie said.

The NS2020 and GNS strategies are designed to provide a more robust and responsive capability to communicate and manage data, delivered within a more agile acquisition environment. To help agencies get to this end state, the GSA is providing agencies guidance on project planning and is in the process of fully archiving, sharing and prioritizing lessons learned from the previous networking transitions. According to the GSA, agencies can undertake certain tasks to help ease the transition to next generation telecommunications, including:

- Prepare a complete and validated inventory of all services, facilities and locations.
- Acquire an in-depth knowledge of usage and bandwidth volumes.
- Forecast potential growth, technology refreshment and implementation of new services.
- Determine special requirements.