

# Case Study: Data Center Modernization

## A Stepwise Strategy for Consolidation, Automation and Innovation

### Challenges

Our client, a large federal agency, is on a digital transformation journey, leveraging information technology (IT) to drive operational efficiency, security, compliance, and innovation. The data center, the foundation layer of all their IT operations, is a core component of the agency’s digital transformation agenda.

The agency’s data center operation is facing various challenges, including low customer satisfaction, inconsistent service delivery quality, burned-out operation team, many end-of-life (EOL) servers, inadequate operational data for ongoing support and future capacity planning, lengthy manual server provisioning process, a cumbersome cloud migration process, to name a few.

It is clear to agency leadership that a **comprehensive, “fix the foundation,” and forward looking data center modernization strategy is imperative** to the success of its digital transformation initiative.

### Solutions: The Precise Approach

#### Overview

The Precise team employed the holistic approach illustrated below to determine and analyze data center “people, process, and technology” issues; research and explore potential solutions resolve pain points; and recommend new technologies and implementation strategies that will improve agency operational efficiency, service, security, and compliance while minimizing upgrade costs.

#### 1. Current State Analysis

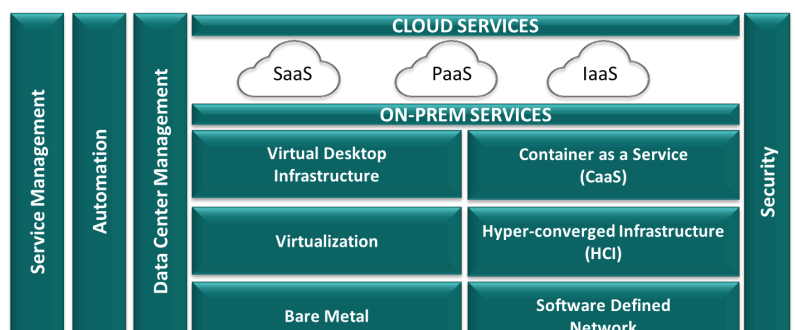
To identify pain points and areas for improvement, we developed a comprehensive questionnaire covering “people, process, and technology” and all five data center lifecycle areas defined in ITILv3: Service Strategy, Service Design, Service Transition, Service Operation, and Continual Service Improvement. We then facilitated discovery sessions with the data center operation teams; conducted interviews with business and IT leadership; and reviewed data center technology artifacts, including data center inventories, operation manuals, and IT compliance reports.

#### 2. Market Research

Based upon the current state analysis, extensive market research and interviews with vendors were conducted and new, innovative technologies in the data center space were evaluated to address the pain points and the agency’s requirements for data center security, quality, efficiency and innovation. These included bare metal servers, Hyper Converged Infrastructure (HCI), server virtualization, Software Defined Network (SDN), Virtual Desktop Infrastructure (VDI), containerization, cloud, and related technologies.

#### 3. Future State Recommendations

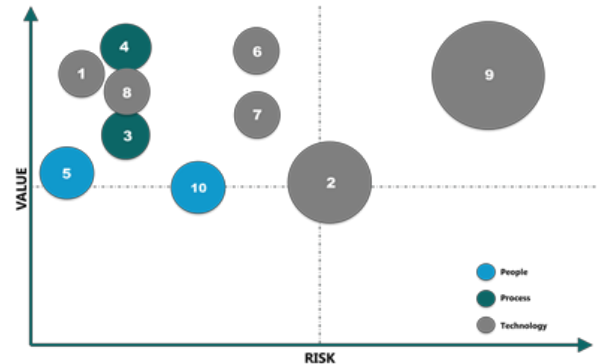
Precise developed a data center reference architecture to cover both on-premises and cloud, with cross-cutting concerns on security, service management and automation.



Based upon the reference architecture, comprehensive future state recommendations on “people, process and technology” were then developed. **The theme that emerged is “consolidation, measurement and automation”, both on-premises and in the cloud**, to achieve several positive outcomes, including addressing pain points, improving the maturity of the on-premises data center and cloud operations, and modernizing the agency’s data center technology landscape.

#### 4. Roadmap

Precise then developed a set of milestones to facilitate the agency’s efforts to achieve its future state data center operation. It is clear that the data center modernization is a multi-year, multi-discipline journey. To ensure some quick and cost-effective improvements, we recommended 10 initial projects based on assessments of value, risk and complexity.



### The Results

Our data center modernization strategy was extremely well received by the agency’s IT leadership and data center operation team. The journey has since started. Several projects focusing on data center monitoring, measurement and automation, are well underway. Initial results are very encouraging and have demonstrated values in improving service quality and reducing time-to-provisioning. These projects also lay the foundation for future data center modernization initiatives.

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