

Driving Data Center Modernization and Cloud Adoption Maturity in the Public Sector

A Precise Software Solutions Presentation:

Ben Duan, Chief Technology Officer

Ellen Crayton, Enterprise Architect

— PRECISE —

About Precise Software Solutions – Rockville, MD

ABOUT PRECISE

Precise Software Solutions, Inc. (Precise) is a nimble and fast-growing SBA 8(a) certified small business focusing on strategy and IT consulting services to public sector customers. We are proud of our strong reputation for overcoming obstacles and delivering innovative, quality work with measurable results. For detail information, please visit us at www.precise-soft.com



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Precise Software Solutions – Relevant Services & Solutions

MISSION SUPPORT & STRATEGIC CONSULTING IT Transformation and Innovation Services

We developed the data center modernization strategy and roadmap for a large federal agency. Work included multi-cloud adoption and migration and on-premises data center consolidation and automation. Enabling Data Sharing Through a National Exchange. We are implementing a National Food Safety Data Exchange (NFSDX) to integrate federal, state, and local regulatory partners in forming a more holistic regulatory oversight.

SYSTEM MODERNIZATION & INTEGRATION System Modernization and Integration with 30+ Legacy Systems

We supported a large \$150M+ system integration program to modernize, streamline, and automate a federal agency's mission critical regulatory program. The program was completed on time, within budget, and with high customer satisfaction. Laboratory Information System Development. We streamlined our critical information processes. Our 40+ laboratory and technical experts help our customer to perform high quality laboratory analysis using our Agile approach to management and operation management methodologies with 100% on-time delivery and zero defects.

DATA MANAGEMENT & ANALYTICS Large Scale Enterprise Data Management

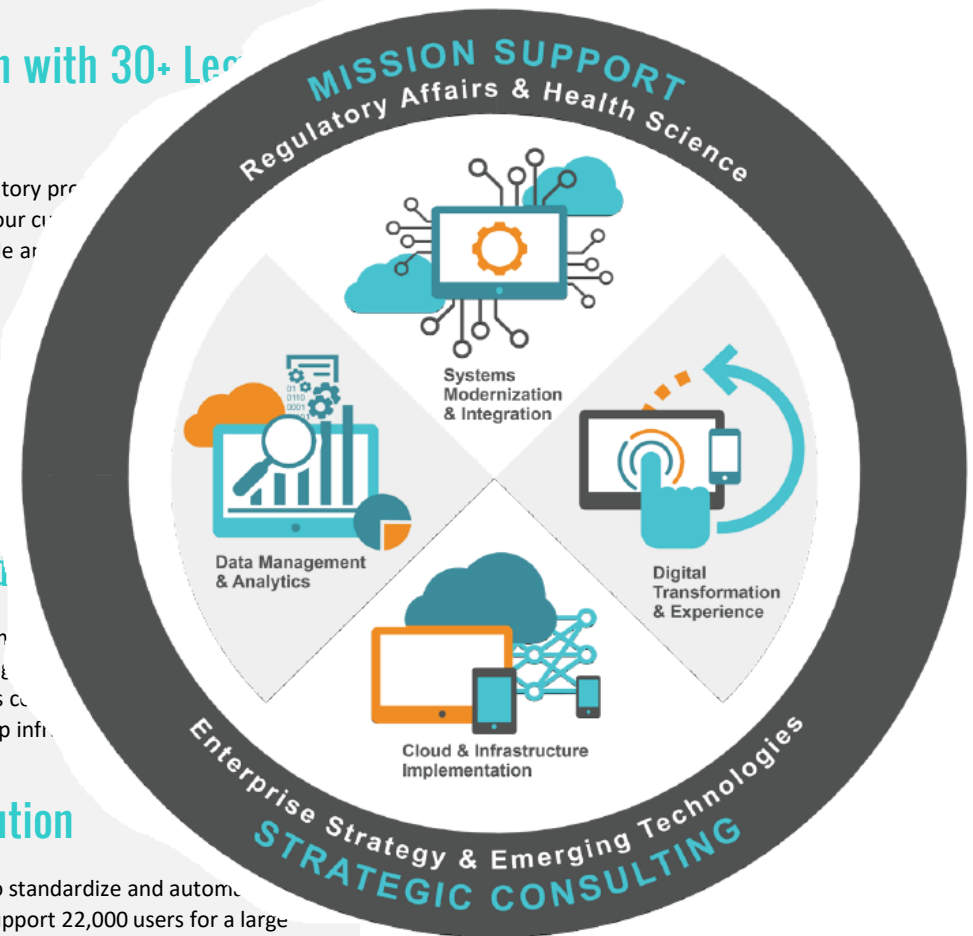
We performed all aspects of data management for a large government program including database modeling, design, database migration and implementation of over 2,500 database tables with the total database size of 3.2 TB. Advanced Data Analytics Services. We supported the Financial Industry Regulatory Authority (FINRA) in searching, data analytics, data visualization, pattern recognition, and predictive analysis. Our implementation at FINRA included processing multiple stock exchanges to recognizing patterns for fraud detection.

CLOUD & INFRASTRUCTURE IMPLEMENTATION Enterprise Azure IaaS Design and Implementation

We designed an enterprise IaaS platform for a large government agency on Azure GovCloud to provide a highly secure, reliable and easy to manage extension of their on-premises data centers. Server Strategy and Implementation. We developed a server modernization strategy for a large government agency and conducted a comprehensive data center and server inventory assessment and designed a future state architecture that includes on-premises and cloud technologies such as bare metal, hyper-converged infrastructure, software-defined network and storage, server virtualization, virtual desktop infrastructure, and containerization.

DIGITAL TRANSFORMATION AND EXPERIENCE Automated Mobile Inspection Solution

We supported 4,000 agency investigators to carry out their regulatory mission by developing a comprehensive mobile inspection platform to standardize and automate customer's field operations. Enterprise IT Service Automation with ServiceNow. We developed the IT Service Portal and Service Catalog to support 22,000 users for a large agency using ServiceNow with the goal to streamline and transform customer's manual and labor-intensive IT service processes into smart online forms and end-to-end automated workflows.



please visit

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Overview of IT Modernization Public Sector Mandate

Modernizing Federal IT will enhance mission effectiveness and reduce mission risks through a series of complementary activities that culminate in 2022

01

Enhance Mission Effectiveness

Enhance the effectiveness and efficiency of government services, leveraging data-driven, customer-focused strategies to **modernize legacy systems, consolidate common agency services, adopt new shared services models, and embrace commercial cloud solutions.**

02

Reduce Cybersecurity Risks to the Federal Mission

Mitigate the impact of risks and impact of threats to Federal agencies' data, systems, and networks **by implementing cutting edge cybersecurity capabilities.**

03

Build a Modern IT Workforce

Enable agencies to develop and empower an IT workforce with the skills to achieve modernization goals and support up-to-date technology.



Source: https://www.performance.gov/CAP/action_plans/FY2018_Q1_IT_Modernization.pdf

Value Based Enterprise Architecture: EA, ITSM & ITIL v3

Integrating the EA, ITSM and ITIL frameworks is critical for the collaborative process; valuable insight is realized that contributes to the future state recommendations on the subject of capability-based planning, IT consolidation and automation, data center management, security and risk management, regulatory compliance and most important, continuous service improvement.

Our holistic approach helps exceed expectation and fulfill our commitments with excellence:

Public Trust, Safety and Security

Architecture Management, Risk Management, Resource Management, Investment Oversight, Transformation, New Technology Vision, Cybersecurity

Practice Duties

Alignment, Models, Learning, Strategic, Measures, Influence, Fiduciary, Governance, Best Practices, Modernization and Automation

Practice Standards

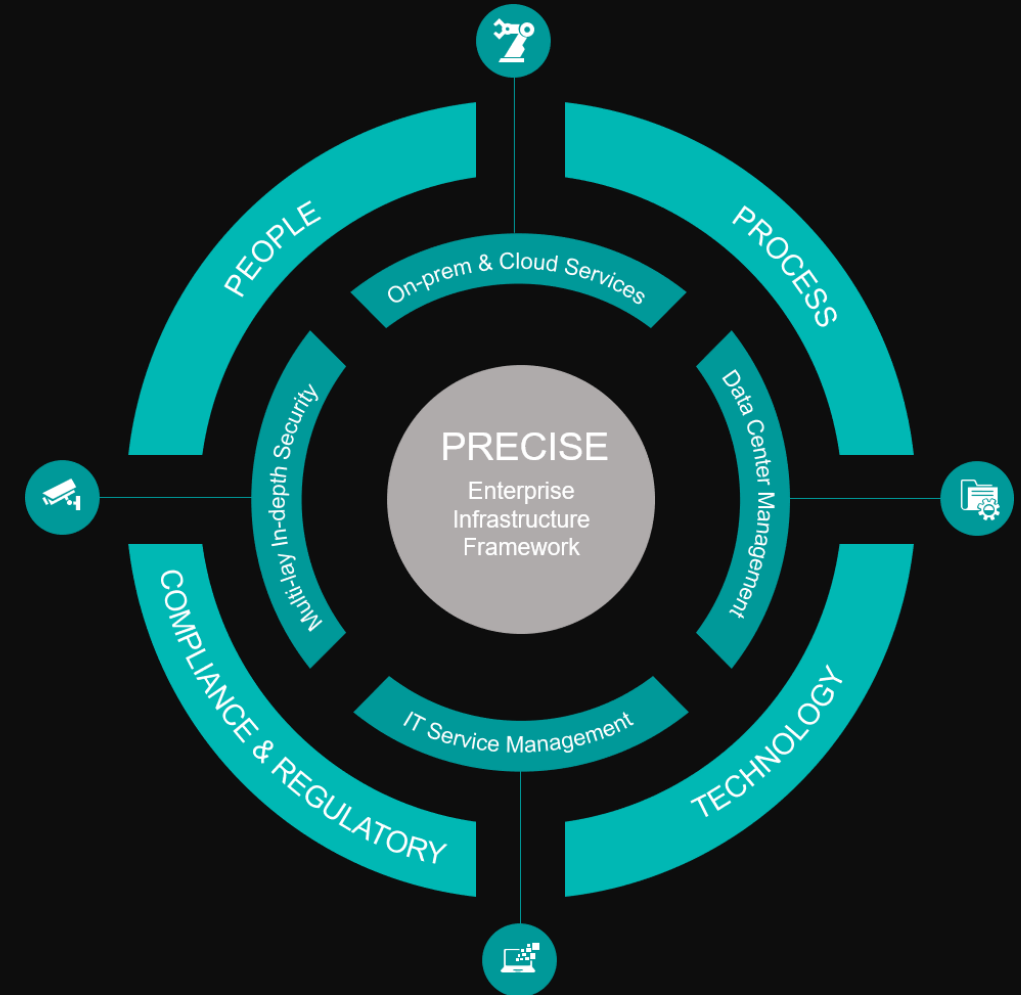
Examinations, Experience, Education, Modernize Workforce, Ethics

Standard of the Profession

Industry Body of Knowledge, IT Working Groups, Professional Education, Industry Governance, Protecting our Brand, Code of Ethics, Accreditation, Professional Development, Skill Development.

Precise Enterprise Infrastructure Framework (EIF)

Our proprietary framework, Precise EIF, built on the best practices of EA, ITSM and ITIL, helps identify challenges and pain points using a 46 points questionnaire that aligns with our customer's IT transformation strategy and mission mandate



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Precise Software Case Study

PRECISE

Case Study - Summarized



It was clear to the agency's leadership that a comprehensive, "fix the foundation," forward-looking data center modernization strategy was imperative to its future success. By pursuing a digital transformation initiative and better leveraging IT resources, the agency would achieve greater operational efficiency, security, compliance, and innovation.



A large federal agency's data center, the foundation for its Information Technology (IT) operations was facing various challenges, including: low customer satisfaction, inconsistent service delivery quality, operations team burn-out, inadequate operational data for ongoing support and future capacity planning, a lengthy manual service provisioning process, a cumbersome cloud migration process, and many end-of-life (EOL) servers.

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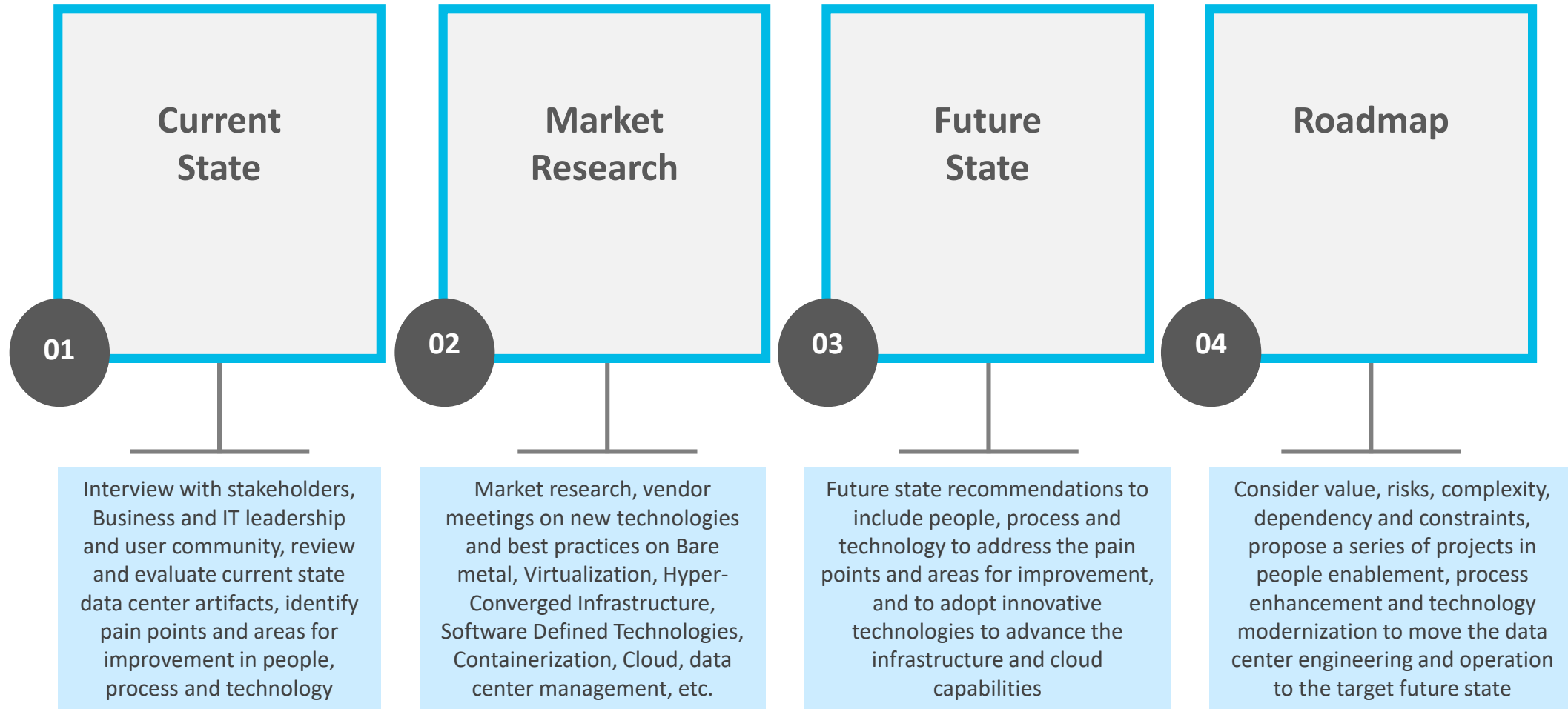
OUR TASK

To provide high quality, secure, and efficient IT solutions that enable our federal customer to fulfilled is public mandate

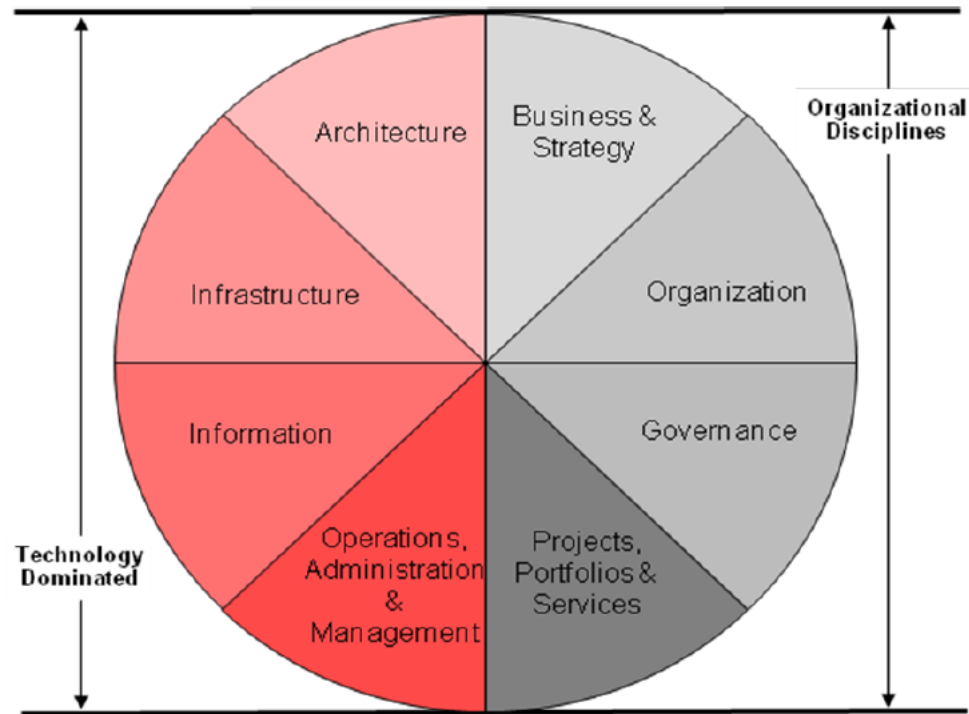
OUR DELIVERABLE

Data Center Modernization - Server Strategy:
Future State Recommendations,
Implementation Road map

Our Approach



Cloud Computing Maturity Model – Oracle

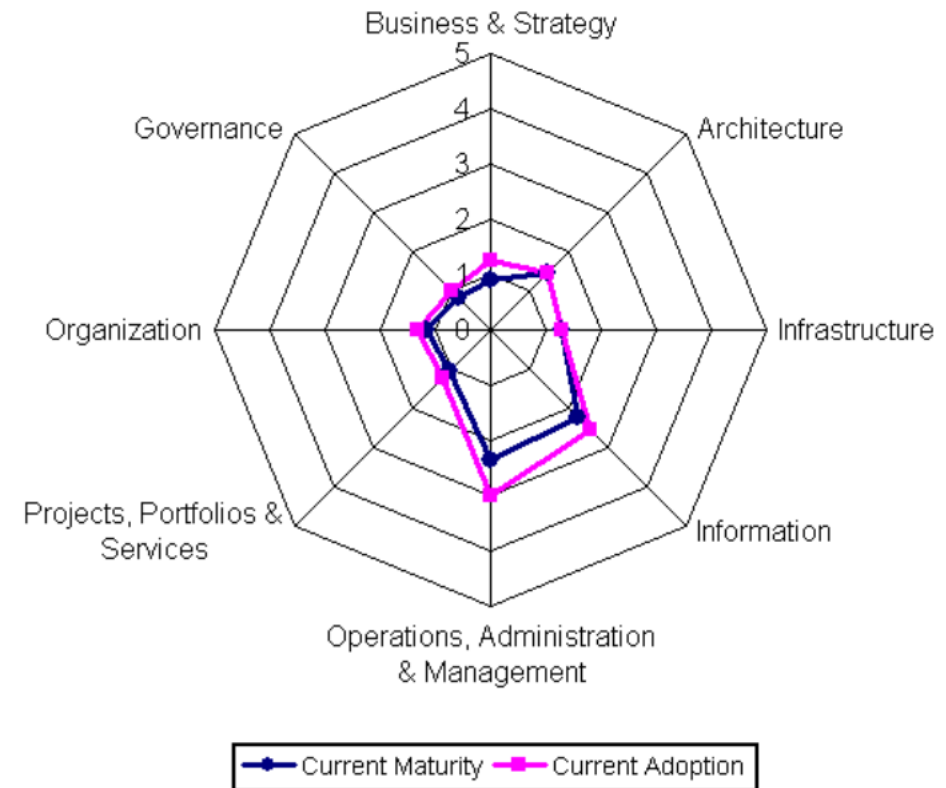


Maturity

1. Adhoc
2. Opportunistic
3. Systemic
4. Managed
5. Optimized

Adoption

1. No Implementation
2. Discrete Resource
3. Across Collections
4. Across Pools
5. Across Units
6. Across Clouds



Cloud Center of Excellence



Cloud Center of Excellence Key Focus Areas

Ensuring cloud workload is well-architected to enhance mission effectiveness and reduce mission risks



AUTOMATION

- CI/CD pipelines for end-to-end cloud infrastructure provisioning and application deployment



REFERENCE ARCHITECTURE & IMPLEMENTATION

- Reference architectures and implementations for typical solutions
- Standard Cloud service catalogs
- Templates for design, test, infrastructure provisioning, O&M

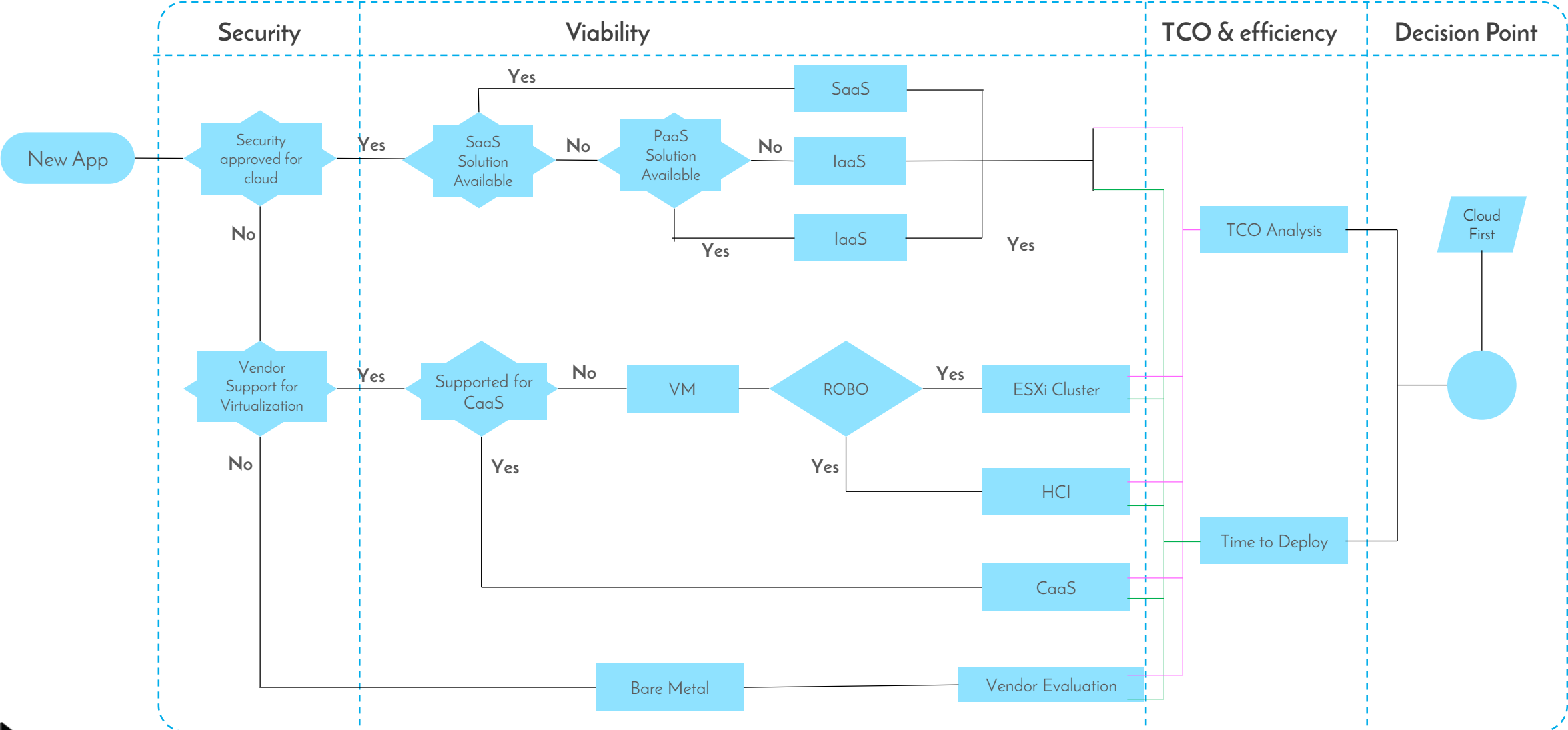


ACTIVE CENTER ENGAGEMENT

- Advocate Cloud value proposition
- Assist in the entire lifecycle of Cloud projects

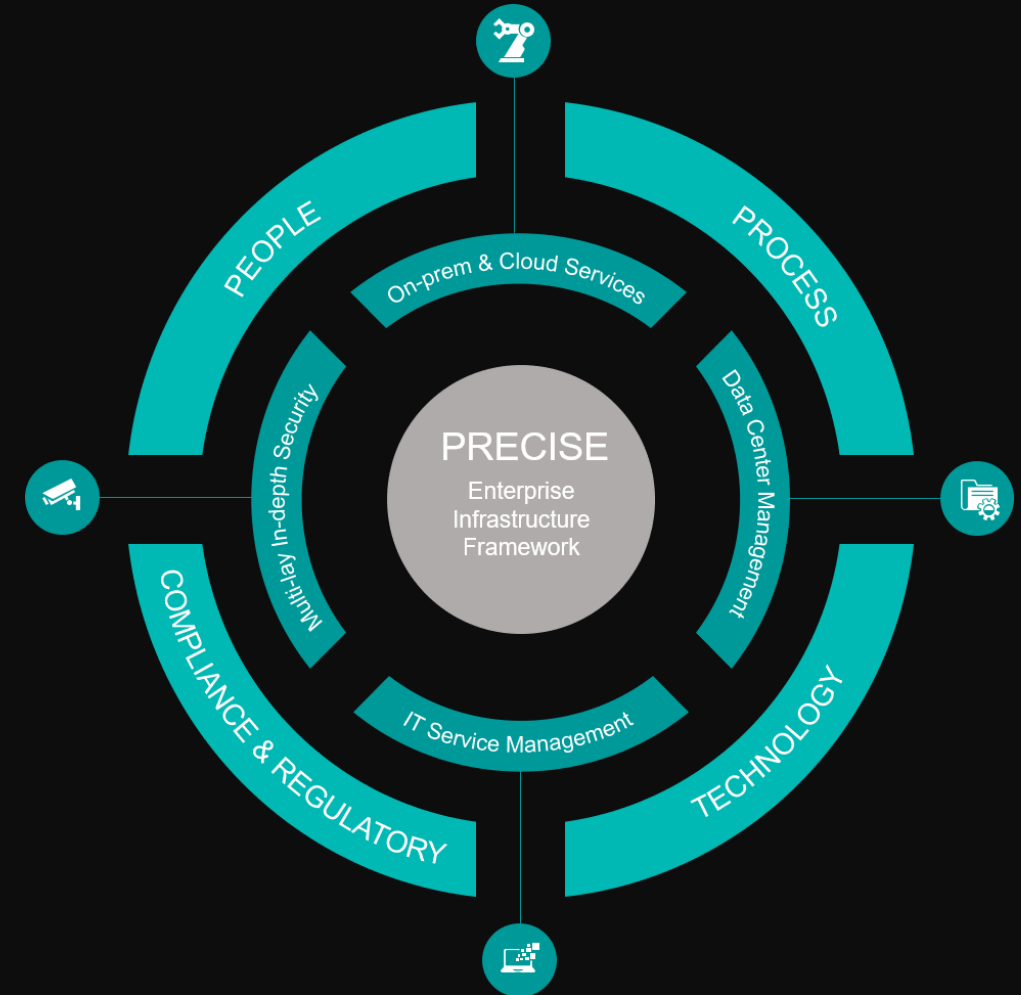


Technology Decision Tree - Sample



Key Takeaway

Integrating the EA, ITSM and ITIL frameworks is critical in the collaborative process; valuable insight is realized that contributes to decisions on capacity planning, new technologies, retiring and sunsetting unused equipment, risk management, regulatory compliance and continuous improvement and most important, to an **actionable** future state recommendations



The Presenter

BEN DUAN CTO Precise Software Solutions Ben is the Chief Technology Officer at Precise Software Solutions, Inc. In this capacity, he is responsible for driving Precise's technology strategy and roadmap, building new capabilities, leading innovations, and advising IT Strategy, enterprise architecture and technology implementation for Precise customers. Ben has over seventeen years of experience in technology, strategy, program and operations management.

Prior to Precise, Ben held leadership roles in Oracle, CSRA and Nielsen. Ben has a PhD degree in Aerospace Engineering and an MBA.

Ben is an TOGAF certified Enterprise Architect. He is currently an Adjunct Professor at George Mason University teaching graduate level classes on Big Data and Advanced Data Analytics.



BEN DUAN, MBA, PHD
CERTIFIED: TOGAF

The Presenter

ELLEN CRAYTON is a strategic leader and subject matter expert on IT Modernization, Cloud and Innovation with over 25 years of enterprise-level consulting experience in the life and health sciences, financial, and retail sectors. She has led enterprise level IT strategic initiatives for the public and private sectors covering health care, finance and ecommerce for clients at the Gauteng Shared Service Centre (GSSC) in Johannesburg, South Africa; Dow Jones Markets, New York; Ernst & Young, New York; NYNEX Meridian Systems, New York; and, the City of New York Office of the Mayor, New York City, New York. She is currently a key member of the Precise Software strategic team that provides C-Level IT advisory for a federal agency in the Mid- Atlantic area.

Prior to consulting, she held senior positions in both the private and public sectors, including positions with Ernst and Young, LLC; Dow Jones Markets, Inc.; Nortel (Meridian); the International Trade Center in Geneva, Switzerland; and Gauteng Shared Services Centre in Johannesburg, South Africa.

She is at the forefront of research in value-based enterprise technologies, cloud infrastructure, service automation and innovation. Having lived abroad and traveled extensively, Ellen has a strong understanding of IT and management strategies in various markets throughout North America, Europe, and Africa.

Ms. Crayton earned her Master of Business Administration (MBA) degree from Case Western Reserve University's Weatherhead School of Management in Cleveland, OH, and a Bachelor of Science (BS) degree in Management Science from Saint Francis College in New York, NY.



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The background of the slide is a blue-tinted illustration of a server room. It shows two long aisles of server racks with glass doors, filled with various electronic components and glowing lights. The racks recede into the distance, creating a sense of depth. The floor is highly reflective, mirroring the racks and the lights above. The overall color palette is dominated by shades of blue, from light sky blue to deep navy blue.

Thank You!

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