

MITRE Cloud Strategy

Cloud Engineering Technical Capability Area (TCA)

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MITRE Cloud Strategy: Audience and Motivation

- **Audience:**
 - Who should read this briefing? Cloud leaders that need to optimize existing cloud investments
- **Additional Resource:**
 - MITRE Enterprise Cloud Adoption Framework (ECAAF)
 - <https://www.mitre.org/news-insights/publication/enterprise-cloud-adoption-framework-briefing>



Motivation: Why did the MITRE Cloud Engineering TCA create a strategy?

Shifts in technology require MITRE and our sponsors to continually assess cloud computing

Most organizations are now operating complex hybrid, multi-cloud environments



MITRE Cloud Strategy: Use and Content

▪ **How to use:**

- Adapt and tailor the information in this briefing based upon your organization's current cloud state and available resources
- Use this strategy to guide your cloud action planning and build consensus with key leaders

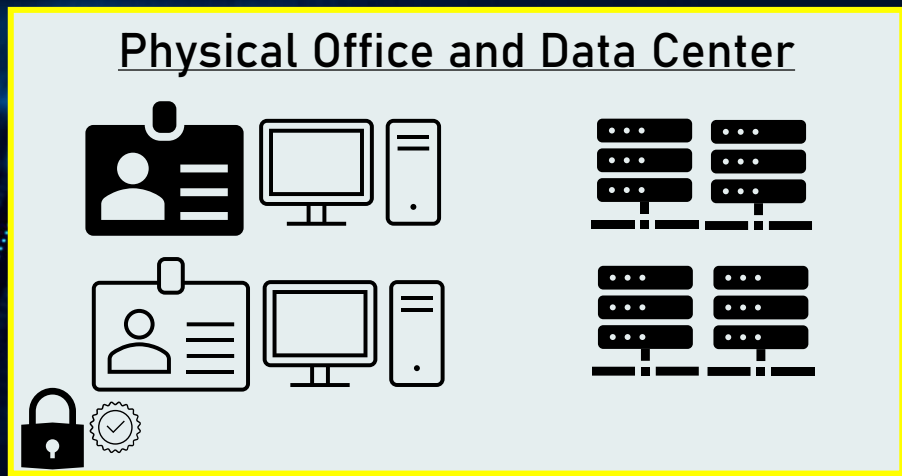
▪ **What's inside:**

- Cloud Trends: Evolution of cloud and current cloud trends
- Cloud Challenges: Common hurdles that hamper cloud investments
- Cloud Leader Action Areas: Focal areas that can advance your organization



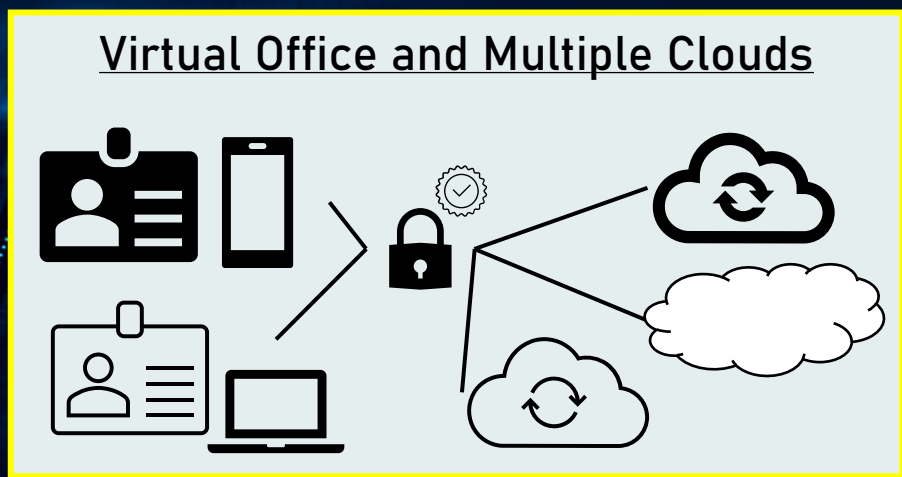
Cloud Landscape – Cloud Uses Have Changed

Early
2010s



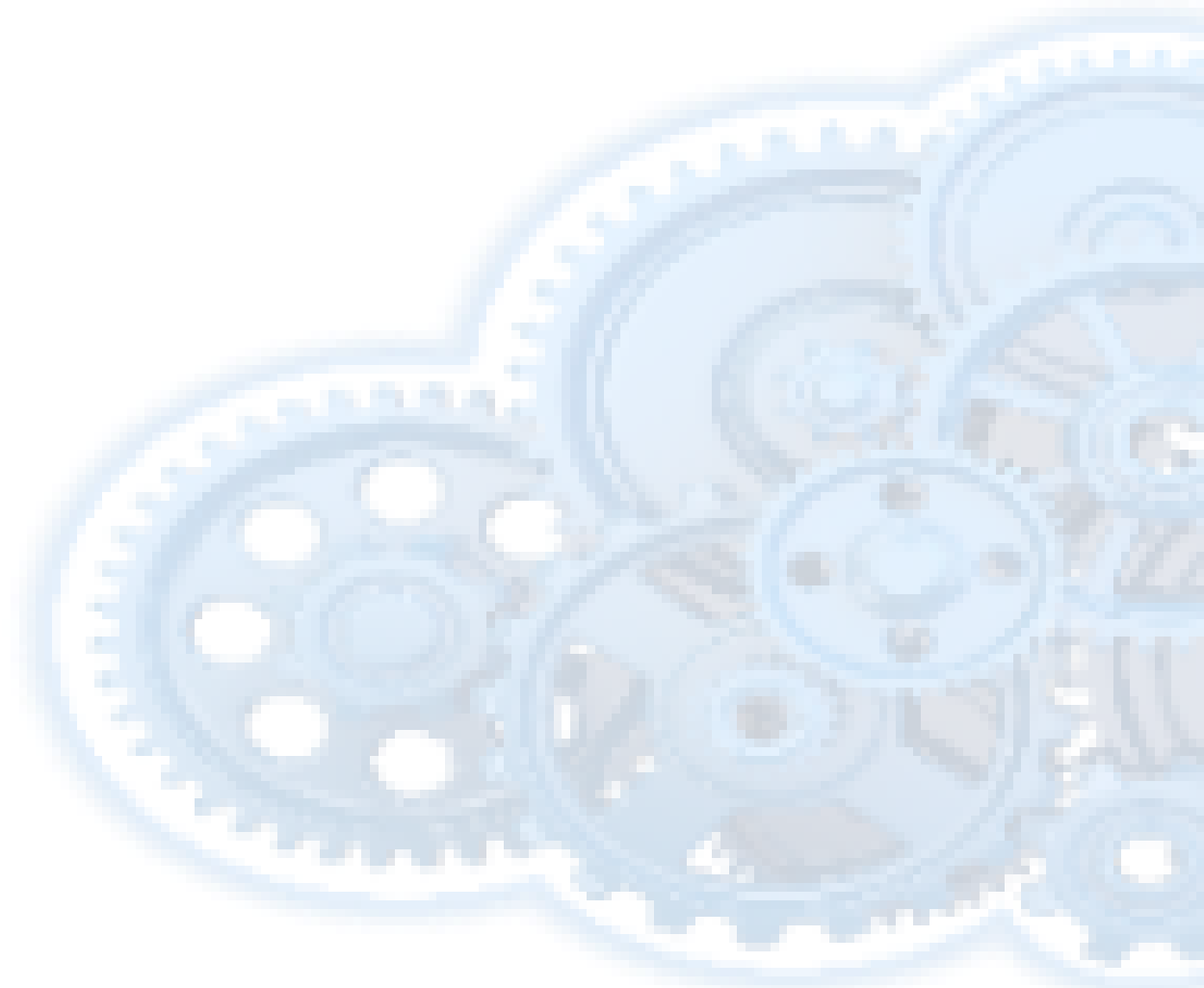
- **Early cloud adopters, primarily for raw compute**
 - *Compute and Store*: Data center ownership still the primary compute environment
 - *Applications*: Development and hosting in the data center
 - *Security*: Network centric security model

Early
2020s









- **Multi and Hybrid cloud is the reality**
 - *Compute and Store*: Cloud Service Provider (CSP) adoption continues, most organizations using multi-cloud; on premise footprint minimized
 - *Applications*: SaaS adoption exploding; internal development taking place on CSP machines
 - *Security*: Identity centric security model increases; VPN connections being retired

Cloud Trends



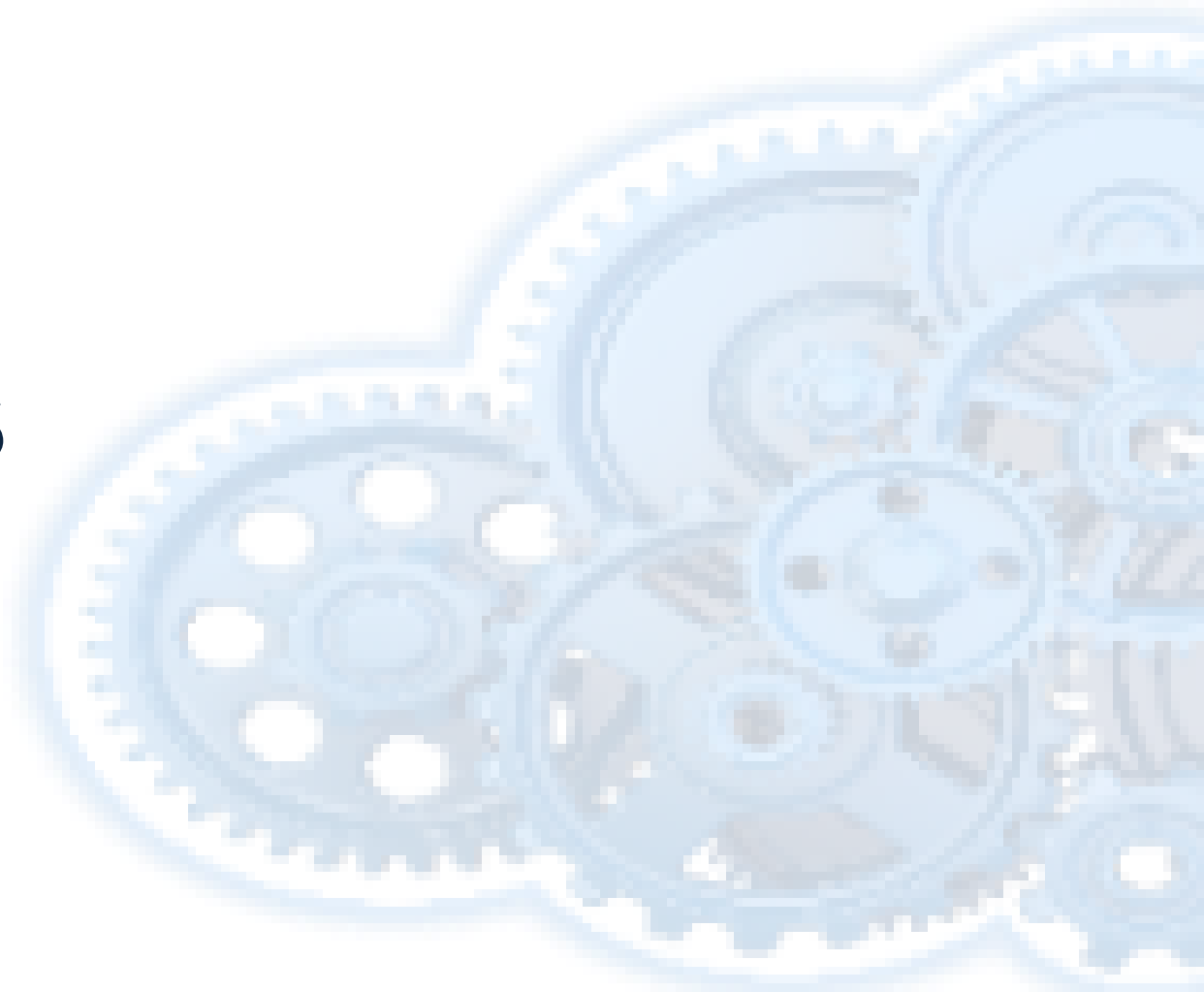
Cloud Trends



Trend	Description
 Digital Transformation	Loosely defined set of organizational and cultural changes intended that enable organizations to adapt to (and take advantage of) our increasingly technology-centric world
 Technology Commoditization	As technologies are adopted, the number of competitors increases. The resulting competition drives innovation, differentiation, and imitation which eventually results in a commoditized market
 Software as a Service (SaaS)	Software applications delivered via the cloud
 Low Code and No Code Development	Software development conducted on cloud platforms that enable the application developer to create applications without deep knowledge of software coding
 Hybrid Cloud	IT architectures that consist of a combination of multiple public cloud and private cloud (e.g., on-premise data center) environments
 Zero Trust	Security concept focused on applying identity to verify every digital interaction between entities








How to use: Identify the trends that are relevant to your organization

Cloud Challenges





Cloud Challenges

Challenge	Description
 Staffing	Without the right team of technologists, good things will not happen
 Acquisition strategy	IT efforts are too complex to skip up front “thought investment” that examines how solutions will be acquired
 Architectural understanding	Current and future state architectures must be embraced by key leaders across the organization
 Team friction points	Organizations increase risk by failing to examine and address inter-team friction points
 IT operational effectiveness	After all these years...still building and buying things that do not support operational user needs
 Effective cloud leadership	Cloud leaders that do not first set strategy and continuously attack blockers are still out there
 Security efficiency	Security is no longer an afterthought, but it is still not fully embedded in architectural designs







How to use: Identify the challenges that apply to your organization

Cloud Leader Action Areas





Cloud Leader Action Areas

Action Area	Description
 Document the Architecture	Basic architectures showing major capabilities and interfaces are created, maintained and broadly socialized to facilitate awareness and decision making
 Draft Digital Transformation Strategy	Logical approach to maximizing the value of technology investments to organization and its mission. Address People, Process and Technology
 Conduct Application Deep Dive	Inventory of the organization's current software assets that can be used for decision making and IT roadmapping
 Conduct CSP Deep Dive	Inventory of the organization's current cloud assets that can be used for decision making and IT roadmapping
 Conduct DevSecOps Deep Dive	Assessment of software engineering methodologies and technologies
 Draft Security Overlay	Overlay that shows how security components fit within, and support, the organization's architecture








How to use: Identify the areas that apply to your organization




Challenges and Trends Drive Action Planning

Identify your organization's challenges and trends, then formulate action plans







CHALLENGES

-  Staffing
-  Acquisition strategy
-  Architectural understanding
-  Team friction points
-  IT operational effectiveness
-  Effective cloud leadership
-  Security efficiency

TRENDS

-  Digital Transformation
-  Technology Commoditization
-  Software as a Service (SaaS)
-  Low Code and No Code Development
-  Hybrid Cloud
-  Zero Trust

ACTION AREAS







-  Document the Architecture
-  Draft Digital Transformation Strategy
-  Conduct Application Deep Dive
-  Conduct CSP Deep Dive
-  Conduct DevSecOps Deep Dive
-  Draft Security Architecture Overlay

1. Check challenges and trends that apply to you 2. Use these mappings to help identify action plan areas that may apply to you 3. Formulate action plans for the areas that apply to you



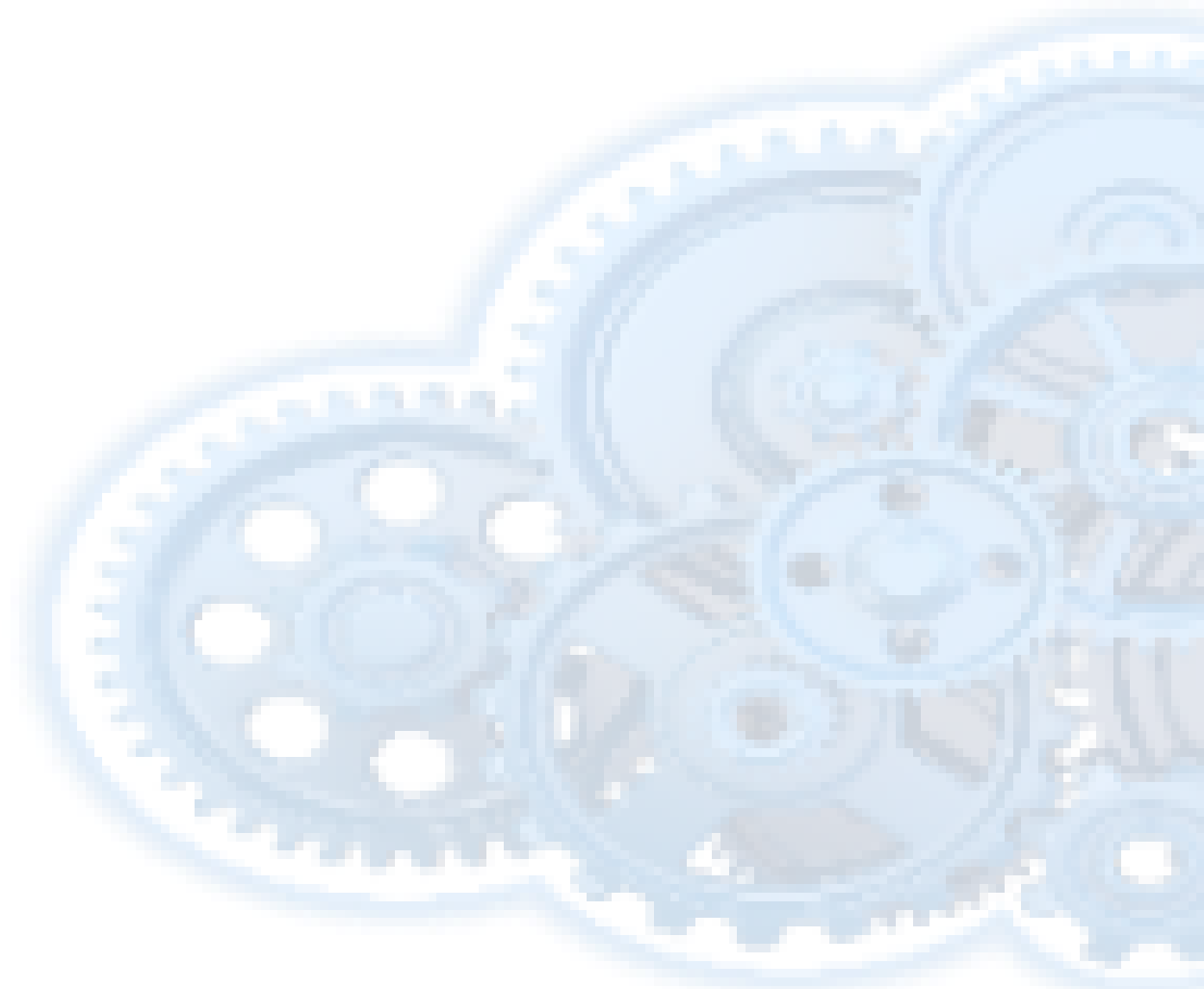
Cloud Leader Action Areas

Initial Action Steps To Consider

Action Area	Initial Action Steps To Consider
 Document the Architecture	Collect and study existing architectural artifacts; Update or create high level views to provide single look at the enterprise (technologies, owning sub-organizations, major interfaces)
 Draft Digital Transformation Strategy	Draft Digital Transformation Strategy focused on vision and mission; Identify potential silo reducing organizational and process changes
 Conduct Application Deep Dive	Examine previous application rationalization work; Examine all internally developed and operated applications (on premise and IaaS/PaaS); Develop recommended modifications
 Conduct CSP Deep Dive	Identify the rationale for current CSP service portfolio and supported applications (including apps that remain on premise); Leverage experts to identify all CSP services, contracts
 Conduct DevSecOps Deep Dive	Conduct a deep dive on development and operations teams and the technologies in use; Analyze team structure; Analyze the potential for low and no code development platforms
 Draft Security Overlay	Create a security overlay for the architecture, ensuring that all security technologies are included (SOC, audit / compliance, etc.); Initiate or accelerate zero trust initiative

How to use: Apply and create action plans for your organization

Next Steps





Next Steps for Cloud Leaders

- Adapt and tailor this material to create action plans that address your organization's cloud challenges and unique situation
 - Use architecture to make objective decisions
 - Base Digital Transformation strategy on the mission
- Continually assess your organization's cloud posture to ensure you are maximizing the value of cloud investments

Reach to MITRE for more help on your cloud journey!

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