Housekeeping

All participants are automatically muted by webinar administrators

Please type any questions using the chat feature on the right-hand side of your screen

Webinar will be recorded for future reference on the SIGConnect website

@SIGCorpLive

Gabriel Tocci
@gabetocci

> whoami

Gabriel Tocci
Senior DBA/Certified Cloud Architect

Focused on application of Cloud and Container Technologies
- Cloud Migration
- Cloud Optimization
- Containerization

Certified Cloud Solutions Architect
- Amazon Web Services (AWS)
- Oracle Cloud Infrastructure (OCI)

Senior Banner Admin and DBA
- Banner ERP Implementations
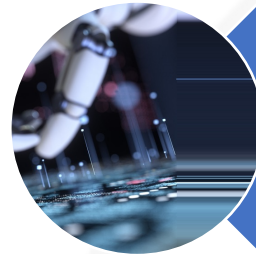- Banner Product Implementations and Upgrades
- Oracle Upgrades

Diverse IT Background
- Senior Software Engineer
- Systems Administrator (windows and Linux)
- Networking / Information Security
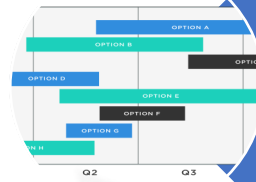- BS and MS in Computer Science

Presentation Summary

Determine Desired Outcomes

Cloud Provider Assessment/Fit

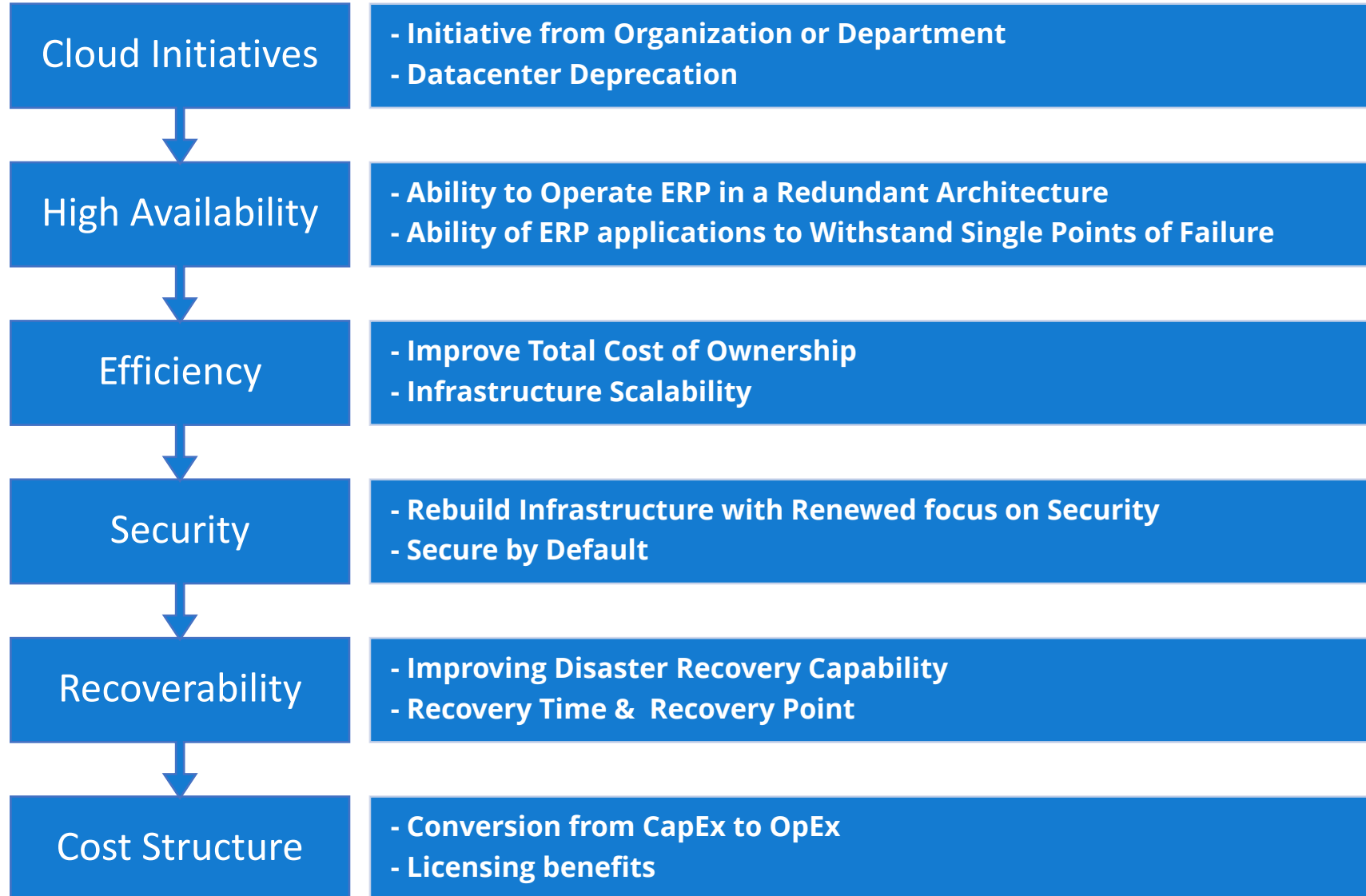Analyze Modernization Capacity

Project Planning

Assess Team/Partner Capability

Architecture Recommendations

Desired Outcomes

Cloud Initiatives
- Initiative from Organization or Department
- Datacenter Deprecation

High Availability
- Ability to Operate ERP in a Redundant Architecture
- Ability of ERP applications to Withstand Single Points of Failure

Efficiency
- Improve Total Cost of Ownership
- Infrastructure Scalability

Security
- Rebuild Infrastructure with Renewed focus on Security
- Secure by Default

Recoverability
- Improving Disaster Recovery Capability
- Recovery Time & Recovery Point

Cost Structure
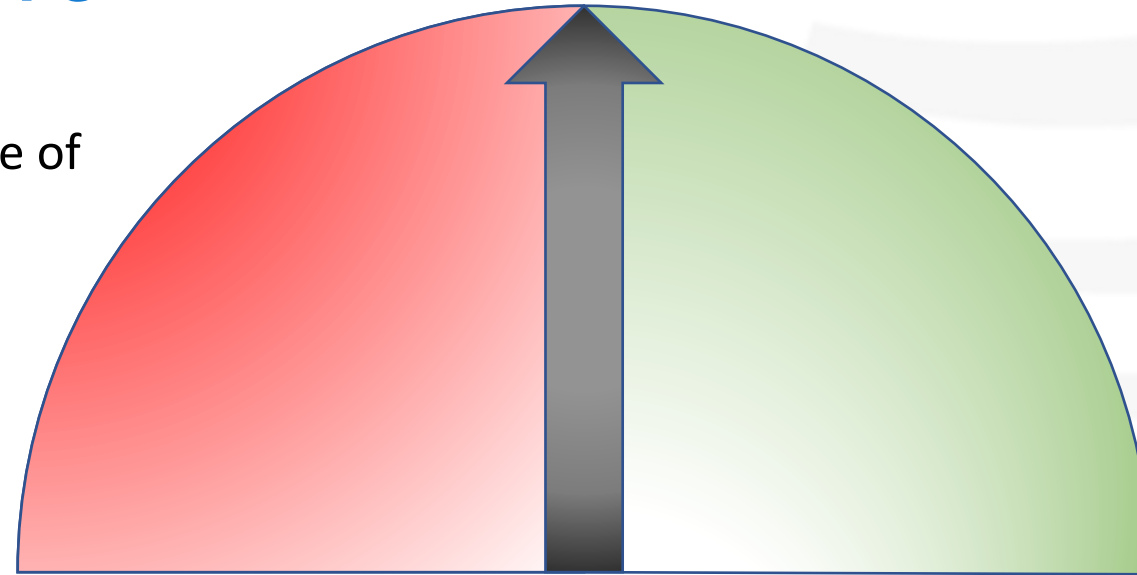- Conversion from CapEx to OpEx
- Licensing benefits
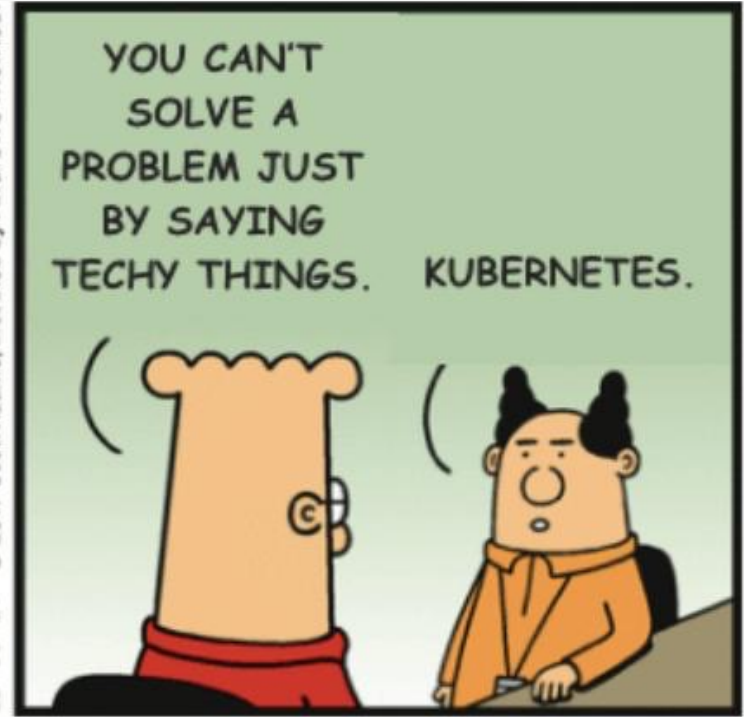
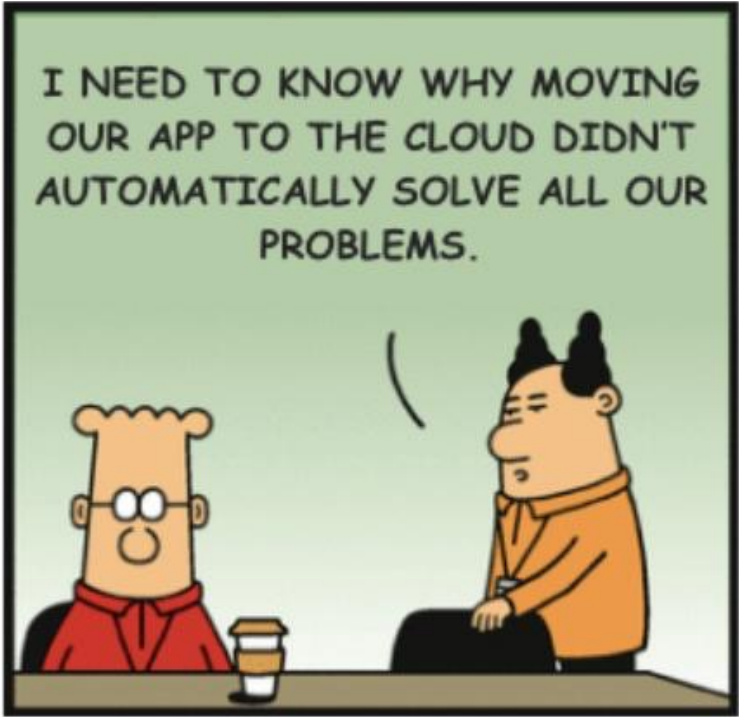# High-Level Strategy

Lift and Shift

- Higher Long-Term Cost
- Does not take Advantage of Cloud Technology

Move and Improve

- Lower Long-Term Cost
- Takes Advantages of Cloud Technology

Modernization Spectrum

Modernization Capability

1. Refactor
2. Replatform
3. Repurchase
4. Rehost
5. Relocate
6. Retain
7. Retire

Migration Strategy	Effort (Time and Cost)	Opportunity to Optimize
Re-Host	★★	★
Re-Platform	★★★★	★★★
Re-Purchase	★★★	★
Rearchitect	★★★★★	★★★★★
Retire		
Retain	★	

Discovery — Assess/prioritize — Determine migration path

Relocate (Containers/VMware Cloud) — Determine configuration — Validation

Rehosting (Lift and shift)
- Manual: Install → Config → Deploy
- Automate → Use migration tools

Replatforming (Lift and reshape)
- Determine new platform → Modify underlying infrastructure

Repurchasing (Replace—drop and shop)
- Purchase COTS/SaaS & licensing → Manual install and setup

Refactoring (Re-writing/decoupling applications)
- Redesign application/infrastructure architecture → App code development → Full ALM/SDLC → Integration

Retain/move
Retire/decommission

Validation — Transition — Production

Team Capability

Cloud Technologies

- Difficult to assess prior to provider selection
- Infrastructure as Code
- Cost Management

ERP System Implementation

- Were existing systems are inherited by current staff?
- Were existing systems implemented by outside consultants?
- ERP Core, Ancillary, Third Party Integrations

Infrastructure Technologies

- On-premise and Cloud
- Systems Administration
- Networking
- DNS
- Load Balancers
- Security Systems

Bandwidth

Partner Capability

Familiarity

- Cloud Platforms
- ERP Systems
- Infrastructure Technologies

Bandwidth

Additional Considerations

- Partner Builds Cloud Systems <u>WITH</u> you
  - Your team builds with guidance from partner
  - Train your team throughout process
  - Longer timeline
  - Client decision driven
    - Tools of your choice

- Partner Builds Cloud Systems <u>FOR</u> you
  - Partner builds with guidance from you
  - Train your staff after implementation
  - Shorter timeline
  - Opinionated decisions
    - Best practices
    - Existing Tooling
    - Automation
    - Cloud Optimized

Cloud Providers

Amazon Web Services (AWS)

- Market Leader
- First Mover (2006)
- Services Broad and Deep
- Extensive Ecosystem
  - Partnerships
  - Conferences
  - Training

Oracle Cloud Infrastructure (OCI)

- Modeled after AWS
- Oracle Database License with Cloud Infrastructure
- Managed Oracle Database Service
- Multi-cloud Architecture with Azure

Microsoft Azure

- Second Largest Market Share
- Largest YoY Growth
- Broad Range of Services
- European Gap
- Industry Tailored Solutions
- Multi-cloud Architecture with OCI
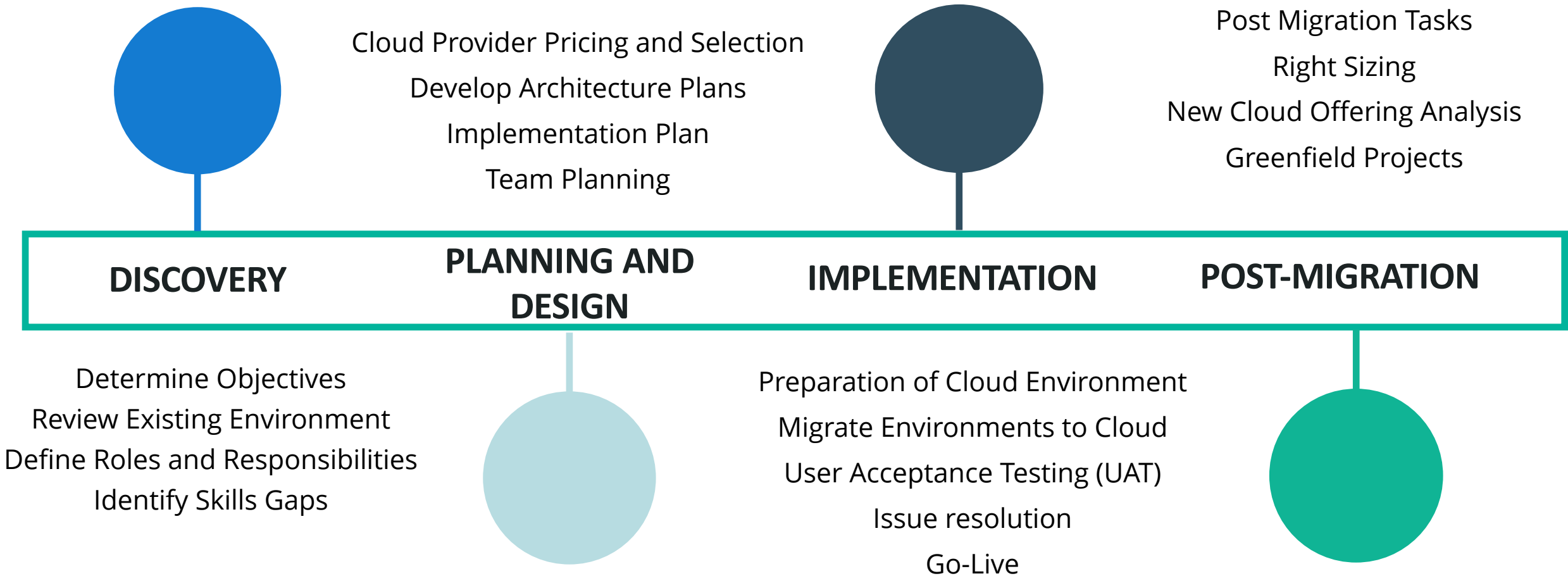- Unique User Experience

Google Cloud Platform (GCP)

- Least Familiar Platform
- Not Many Higher Ed ERP Systems
- Highly Capable, by all Reports

Figure 1: Magic Quadrant for Cloud Infrastructure and Platform Services

CHALLENGERS

LEADERS

● Amazon Web Services

● Microsoft

● Google

● Alibaba Cloud

● Oracle

Tencent Cloud ●
● IBM

● Huawei Cloud

NICHE PLAYERS

VISIONARIES

ABILITY TO EXECUTE

COMPLETENESS OF VISION →

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Project Planning

DISCOVERY

PLANNING AND DESIGN

IMPLEMENTATION

POST-MIGRATION

Cloud Provider Pricing and Selection
Develop Architecture Plans
Implementation Plan
Team Planning

Post Migration Tasks
Right Sizing
New Cloud Offering Analysis
Greenfield Projects

Determine Objectives
Review Existing Environment
Define Roles and Responsibilities
Identify Skills Gaps

Preparation of Cloud Environment
Migrate Environments to Cloud
User Acceptance Testing (UAT)
Issue resolution
Go-Live

Project Recommendations

Collaborative Effort
- Combining Knowledge
  - Client Team
  - SIG Team
  - Cloud Provider

Clearly Defined Roles
- Cloud Technologies
- Infrastructure Technologies
- ERP Systems

Committed Effort
- Dedicated Time for this Project
- Free them up from other Duties
  - Cross train NOW
  - Cloud Train NOW

Organized Work Tracking
- Work Tasks
- Task Blockers
- UAT Issues

Defined Communication Channels
- Email
- Teams / Slack
- Ticket System
- Meetings
  - Scheduled – weekly minimum
  - Ad-Hoc

UAT Test Plans
- Assigned tests with Completion sign Off
- Throughout Project
- Core and Ancillary ERP Systems
- Integrations and Custom Processes

Architecture Recommendations

Separation of Concerns

- Multi-Tenant/Account Landing Zones
  - Root/Master
  - PROD/TEST
  - Networking/DevOps
  - Security
  - Billing/Governance
- Network Separation
  - PROD/TEST
  - Pubic/Private

Security First

- Least Principal Privileges
- SSO with MFA
- Encryption at Rest
- HTTPS Only
- Network Security/Firewalls
- Threat Detection
- Cloud Tenant/Account Configuration Compliance

Managed Services

- Low or No Maintenance
- Highly Available

Infrastructure As Code (IaC)

- Provisioning Processes
  - Repeatable
  - Auditable
- Automated Deployment of Supporting Services
  - Security Restrictions
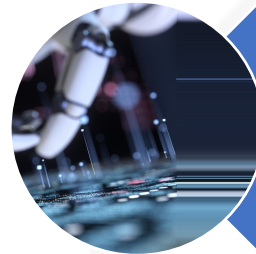 - Monitoring

Containerization

- Extension of Infrastructure as Code
- Orchestration Services
- Managed Services for Tooling
- Wide Adoption for ERP
- Efficient Use of Resources
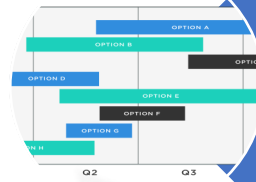
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QUESTIONS

Contact

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