Delivering a Successful Cloud Project

Colin Smith

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He has over 25 years of experience deploying Microsoft-based solutions for the private and public sector with a focus on mobile, desktop, and cloud.

MVP Microsoft® Most Valuable Professional

MVP Windows Insider MVP

Agenda

- Introductions
- Why Cloud?
- Explaining Cloud to non-technical audiences
- How to Measure Success
- Project Structure

Introductions

- Me
  - CTO Cistel Technology Inc.
  - Delivering Cloud Solutions since 2010
- You
  - Consultant
  - Project Manager
  - Information Manager
  - BA
  - Internal IT
  - Developer
  - Other
- Client
  - Internal LOB
  - External Customer

What is your role?

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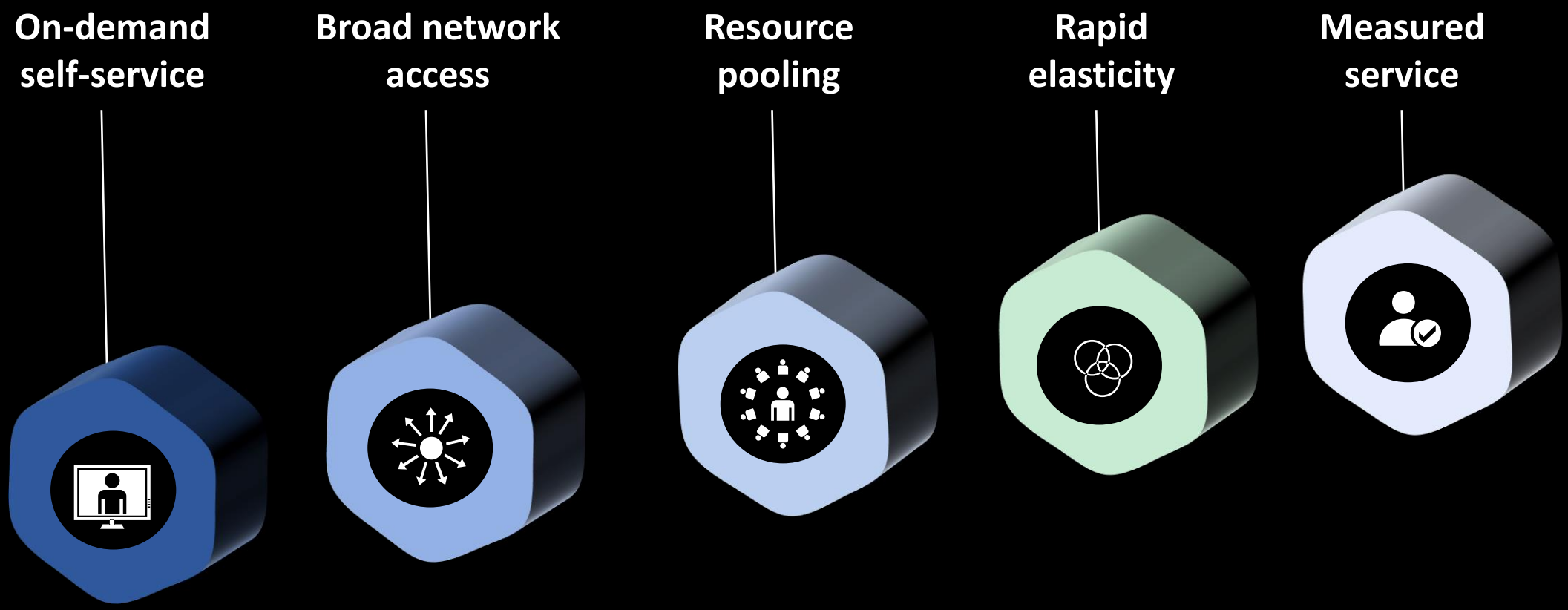
Why Cloud Computing?

Characteristics of Cloud Computing

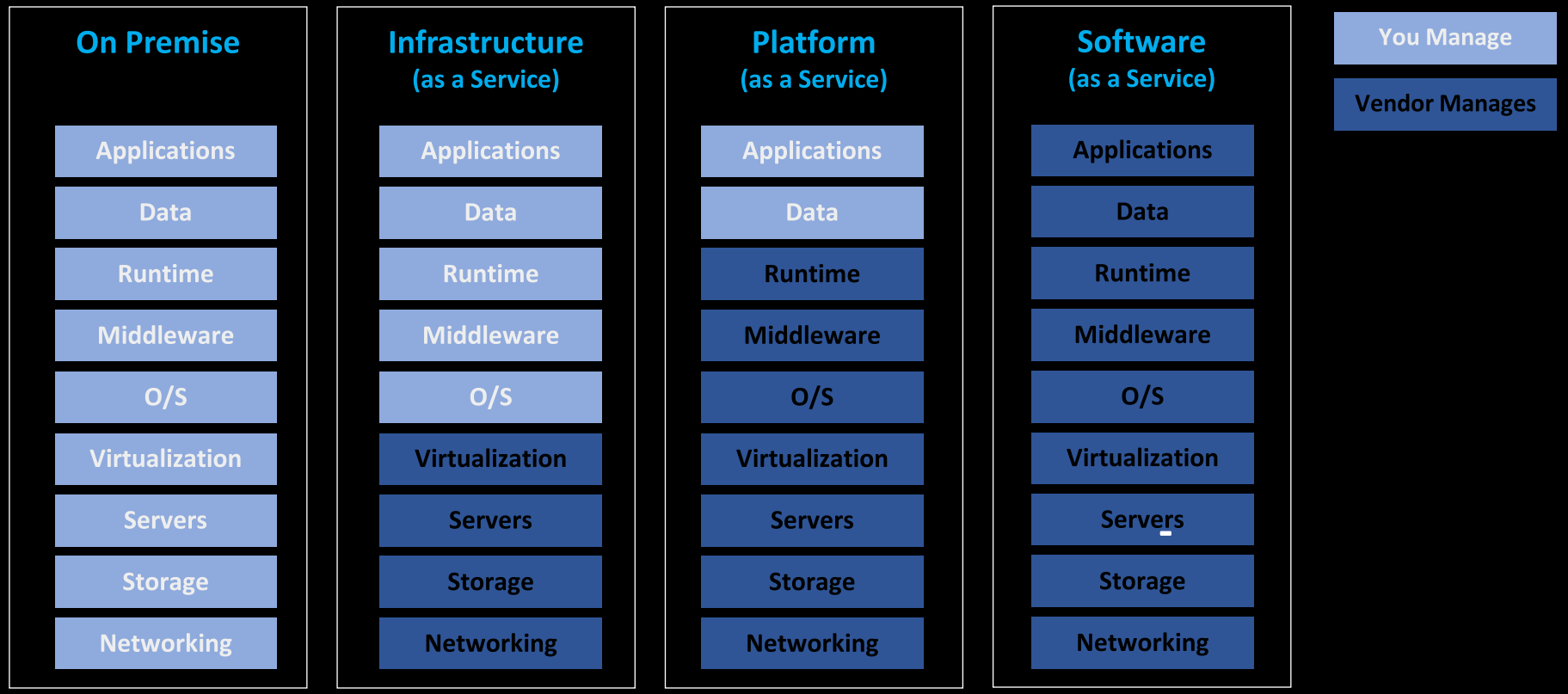


Examples of Cloud Services

- **Gmail**
- **Youtube**
- **DropBox**
- **Facebook**
- **Twitter**
- **Netflix**

- **Azure**
- **Salesforce.com**
- **Google Office**
- **M365**
- **Dynamics Online**
- **AWS**

Cloud Service Models



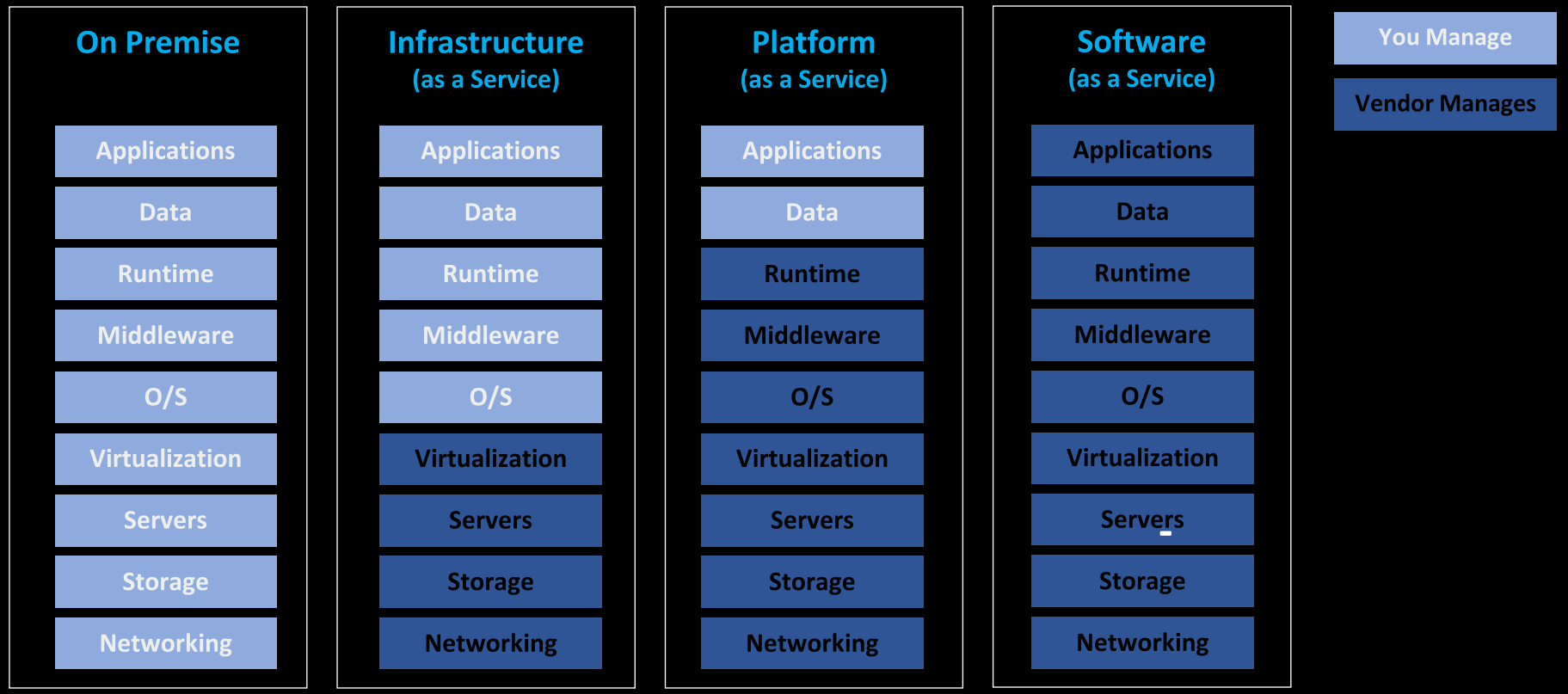
Pizza Service Models

On Premise	Infrastructure (as a Service)	Platform (as a Service)	Software (as a Service)
Dining Table	Dining Table	Dining Table	Dining Table
Soda	Soda	Soda	Soda
Electric / Gas	Electric / Gas	Electric / Gas	Electric / Gas
Oven	Oven	Oven	Oven
Fire	Fire	Fire	Fire
Pizza Dough	Pizza Dough	Pizza Dough	Pizza Dough
Tomato Sauce	Tomato Sauce	Tomato Sauce	Tomato Sauce
Toppings	Toppings	Toppings	Toppings
Cheese	Cheese	Cheese	Cheese
Made at home	Take & Bake	Pizza Delivery	Italian Restaurant

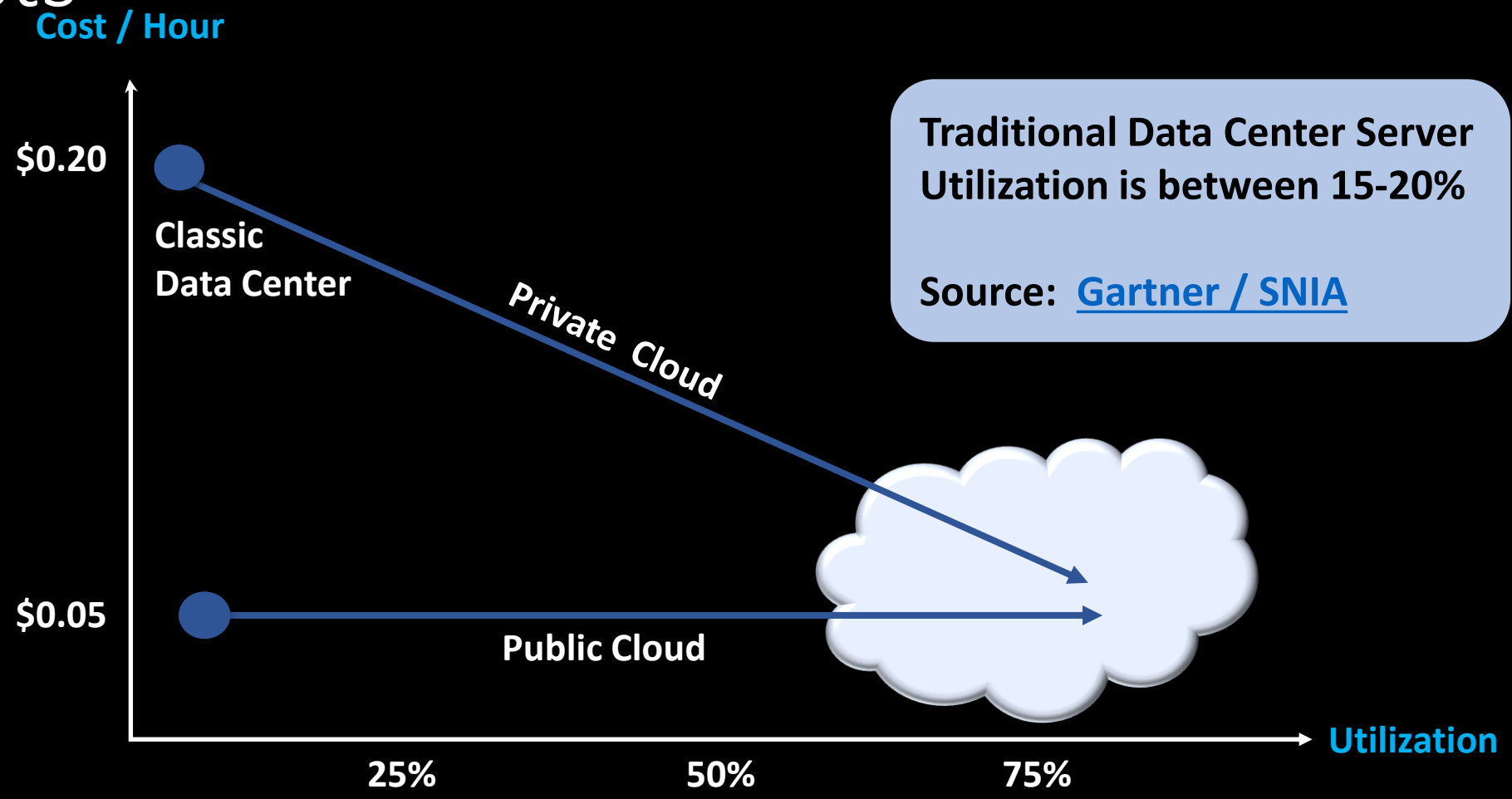
You Manage

Vendor Manages

Cloud Service Models



Costs

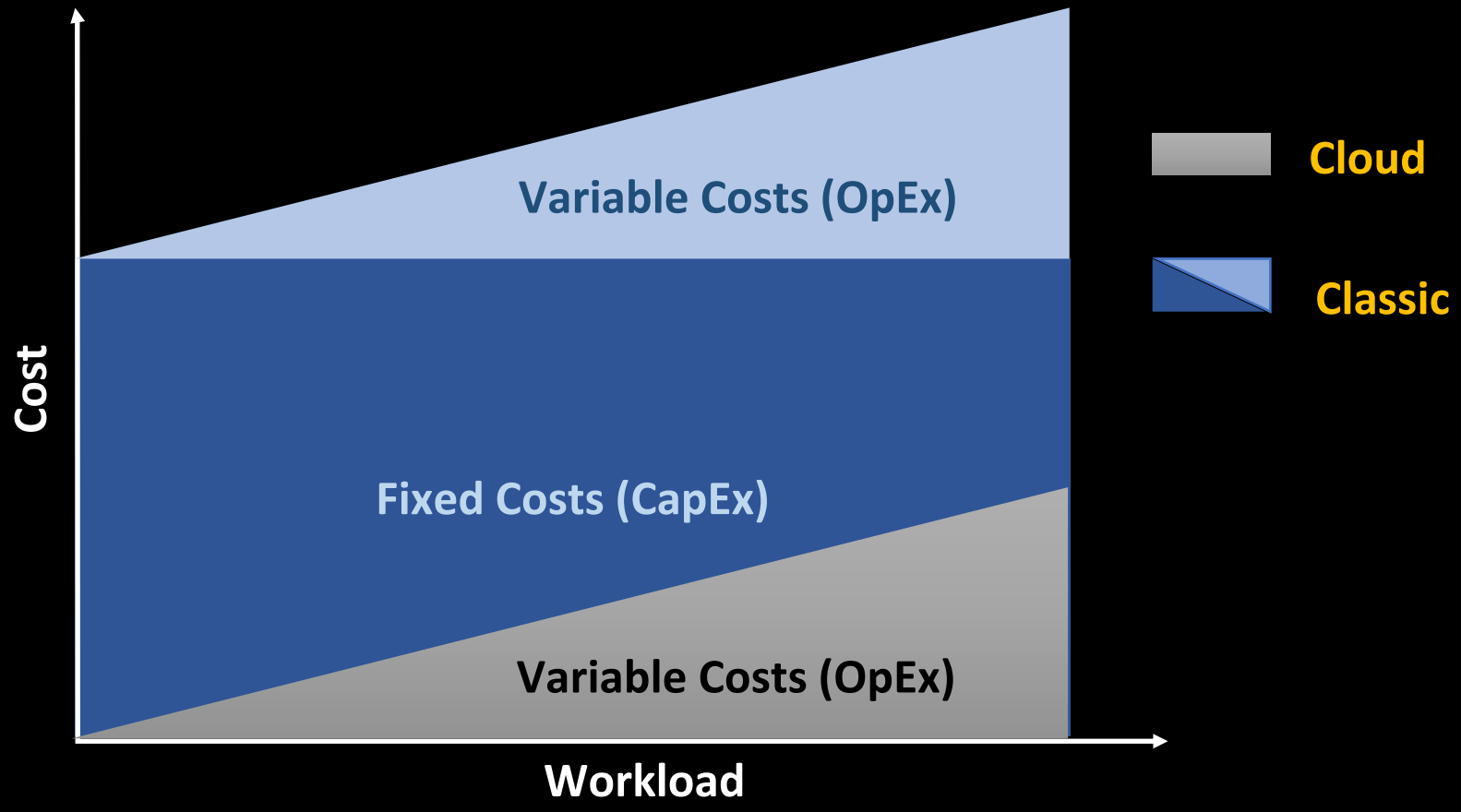


Traditional Data Center Server Utilization is between 15-20%

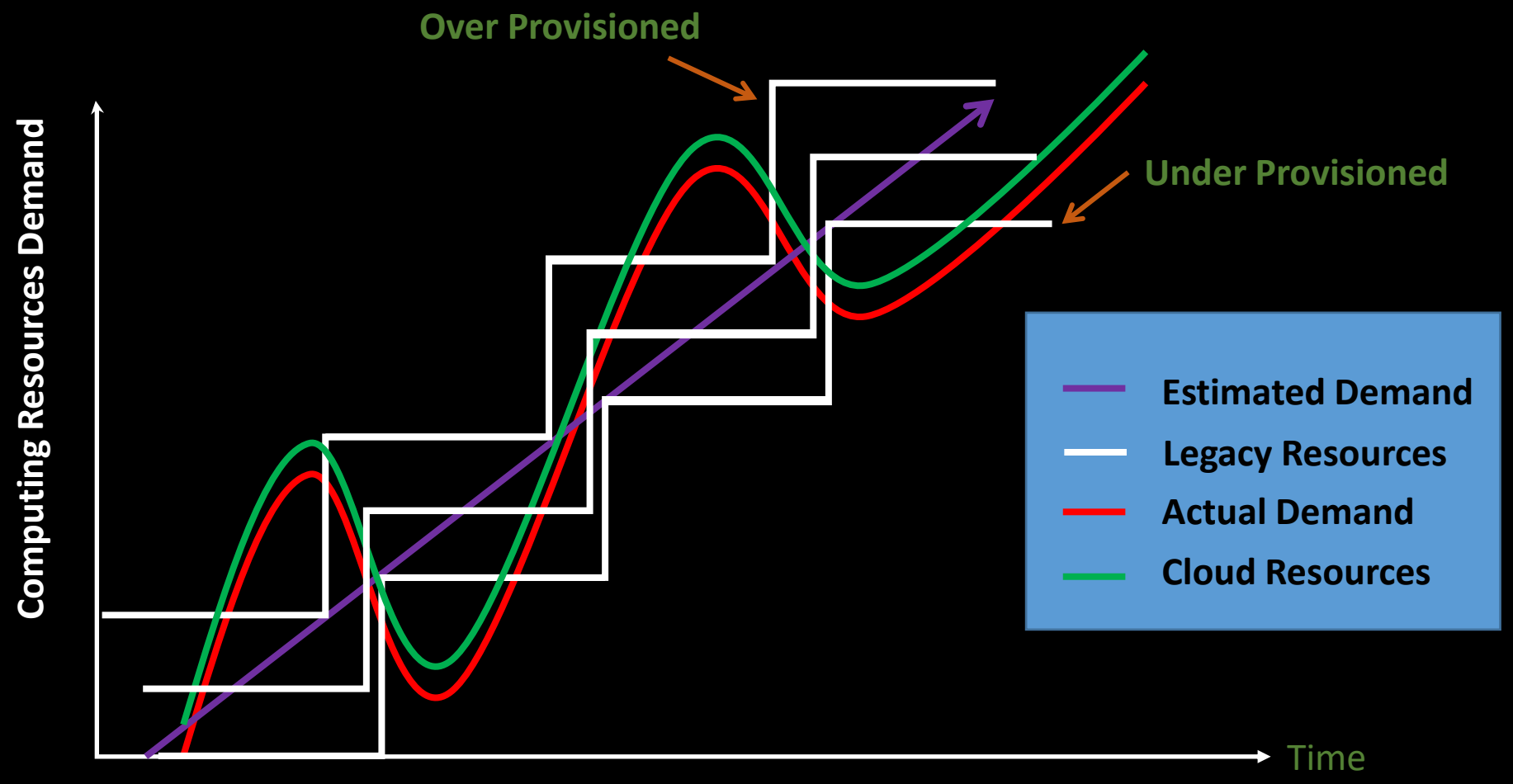
Source: Gartner / SNIA

Source: EMC Cloud Infrastructure Group

CapEx vs OpEx



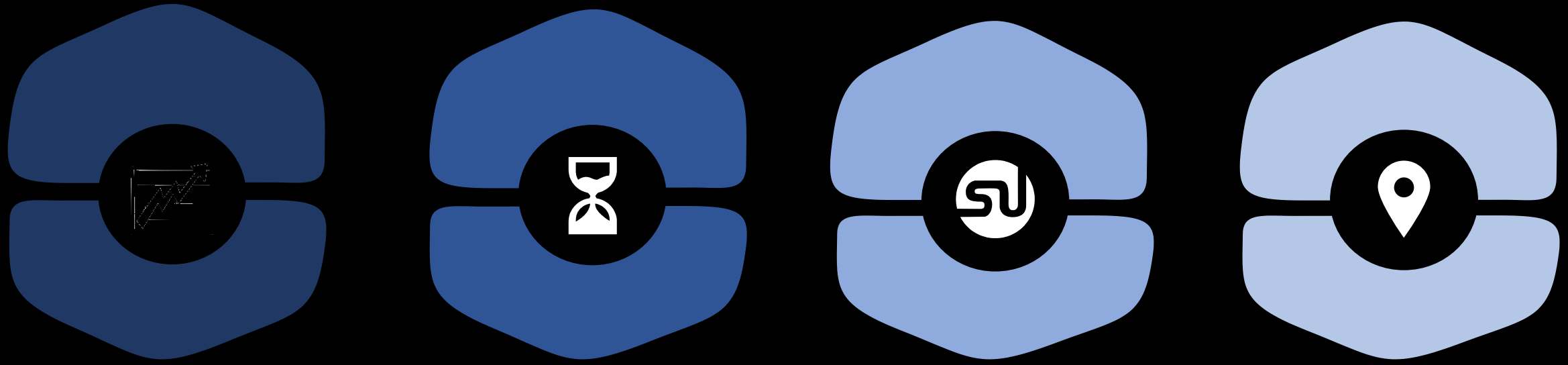
Elasticity


Over Provisioned
Under Provisioned
Computing Resources Demand
Time
Estimated Demand
Legacy Resources
Actual Demand
Cloud Resources

Challenges

Security & Privacy	• Jurisdiction (Data Sovereignty vs Data Residency) • Data Leak • Ownership
Regulatory Compliance	• PCI • SOX • PIPEDA
Service Levels	• Amazon and Microsoft have a 99.9% Uptime SLA • Network Latency / QoS
Open Standards	• Vendor Lock in • Licensing

Benefits Realization



Scalability

Fail Easy Implementation – Fail Fast

Improved Mobility

Flexibility & Focus

Need to translate this into something relevant to the business

Business Drivers of Cloud Adoption

1. Delivering Better and More Efficient Services to Customers	2. Reducing Business Risk and Improving the Sustainability of Services	3. Better Supporting the Workforce and Evidence-based Decision Making
▪ Accelerating time to market and expediting information sharing with stakeholders. ▪ Maturing early warning, prevention and emergency management systems. ▪ Changing the way information is shared for decision making.	▪ Mitigating risk of service failure by reducing reliance on legacy data centres and improving security and stability of mission critical business applications. ▪ Replacing and modernizing an aged application portfolio. ▪ Reduce carbon footprint by adopting cloud and reducing physical IT assets.	▪ Creating a more flexible work structure in an activity-based workplace to support modern workforce agility. ▪ Enabling more agile deployment of modern IT solutions for remote and mobile workers. ▪ Unifying, managing and exploiting data assets.

Strategic Perspective on Cloud

Development of a diversified cloud service portfolio is a strategic opportunity to strengthen the stewardship of IT services in an enterprise model.

- Subscription service model shifts the legacy IT focus from devices, licenses and technology to users and usage for improved organizational alignment on business value.
- Makes the business value of IT assets a more predictable and visible OPEX line item in financial management and business planning (e.g. SW evergreening, application retirement).

SOFTWARE
as-a-service

Opportunities:
- Rapid time to market
- Continuous modernization

Challenges:
- Limited to generic solutions

INFRASTRUCTURE
as-a-service

Opportunities:
- Easy WLM
- Simple exit strategy

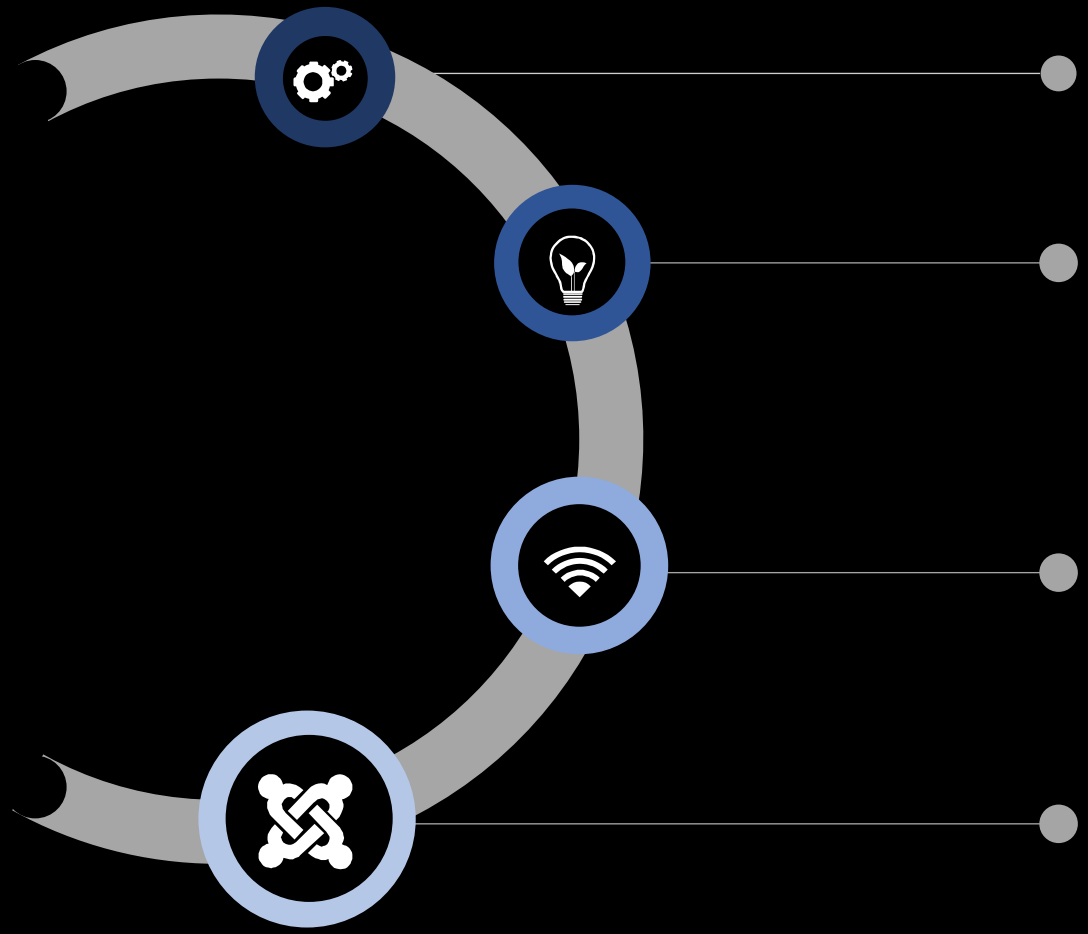
Challenges:
- Limits application modernization opportunities
- Repatriation of IT skills at SSC

PLATFORM
as-a-service

Opportunities:
- Elasticity of supply
- Simpler architecture

Challenges:
- Complex WLM
- Avoiding vendor lock-in

Where do I start?



1. **Low Risk Workloads**
2. **Net New Services**
3. **Mobility Services**
4. **Mature Service Offerings**

Initial “Cloudability” Considerations

Total Cost	Security	Dependencies	Agility
Lifecycle cost of public cloud versus GC data centre ▪ Staffing requirements ▪ Hardware costs ▪ Ongoing operations ▪ SSC cloud levy	• Physical and logical security requirements that cannot be addressed in the cloud • Data classification limitations for cloud hosting • Application disaster recovery requirements that cannot be addressed in the cloud	▪ Application dependencies on other applications or services that have already been identified as having an on-premise requirement	▪ IT service model benefits sought (e.g. accelerated development) ▪ Rapid elasticity benefits ▪ Rapid provisioning benefits

Architecture
▪ Suitability of application architecture for a cloud model (E.g. Web app) ▪ Availability requirements ▪ SaaS version alternative options ▪ COTS vendor support for cloud migration ▪ Specific hardware requirements ▪ Application real-time requirements ▪ Application location sensitivity

Migration and Modernization

- Migrate
  - Move from Datacenter to Cloud
  - Typically IaaS or SaaS
- Modernize
  - Refactor?
  - Replatform?
- Containers vs Microservices vs Serverless?
  - It’s not one size fits all
  - Chose the right approach for each application

Cloud Adoption Guiding Principles

Cloud First Services: Use SaaS->PaaS->IaaS adoption strategy as the preferred option when investing in new sector projects or application modernization.

Enterprise First: Adopt an ‘Enterprise’ approach when prioritizing legacy workloads to be migrated, managing data and deciding on priority projects to be enabled by the cloud.

Secure: Adopt a structured risk-management approach aligned with GC security guidance for PBMM workloads that safeguards data and privacy.

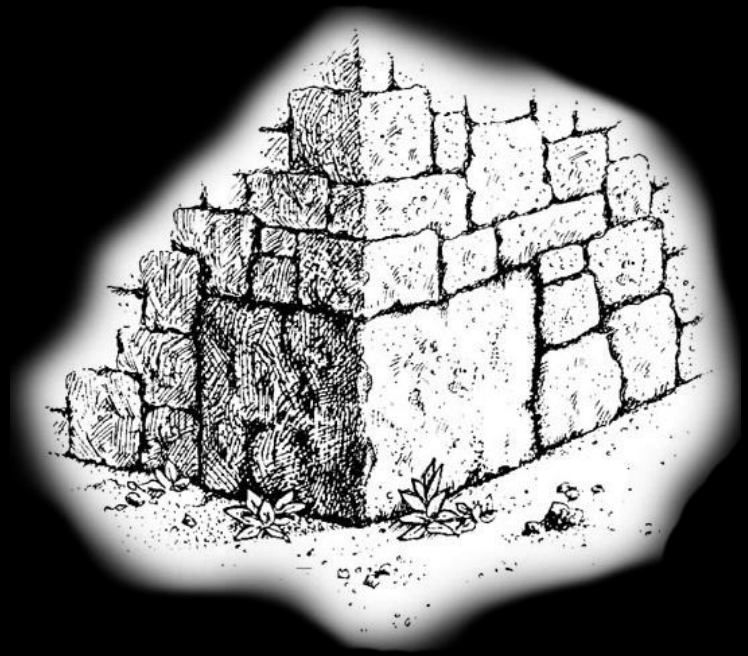
Shared: Leverage cloud where possible to address common needs and unify business capabilities into platforms.

Modern: Improve agility of IT services and speed of adoption of modern digital tools for a remote and mobile workforce so they can better serve clients.

Collaboration: Promote collaboration within and across the department, across the Government of Canada and with external stakeholders.

Cornerstones of Success

- Identity Management
  - Control plane for cloud services
    - Locations and Devices are fluid
- Cloud to Ground Strategy
- Governance
  - Naming Conventions
  - Hierarchy
  - IM
  - Cost Management / Consumption /Billback
- Security & Compliance
  - Data residency
  - Encryption
  - ITSG-33 / ISO / NIST



Project Management Success

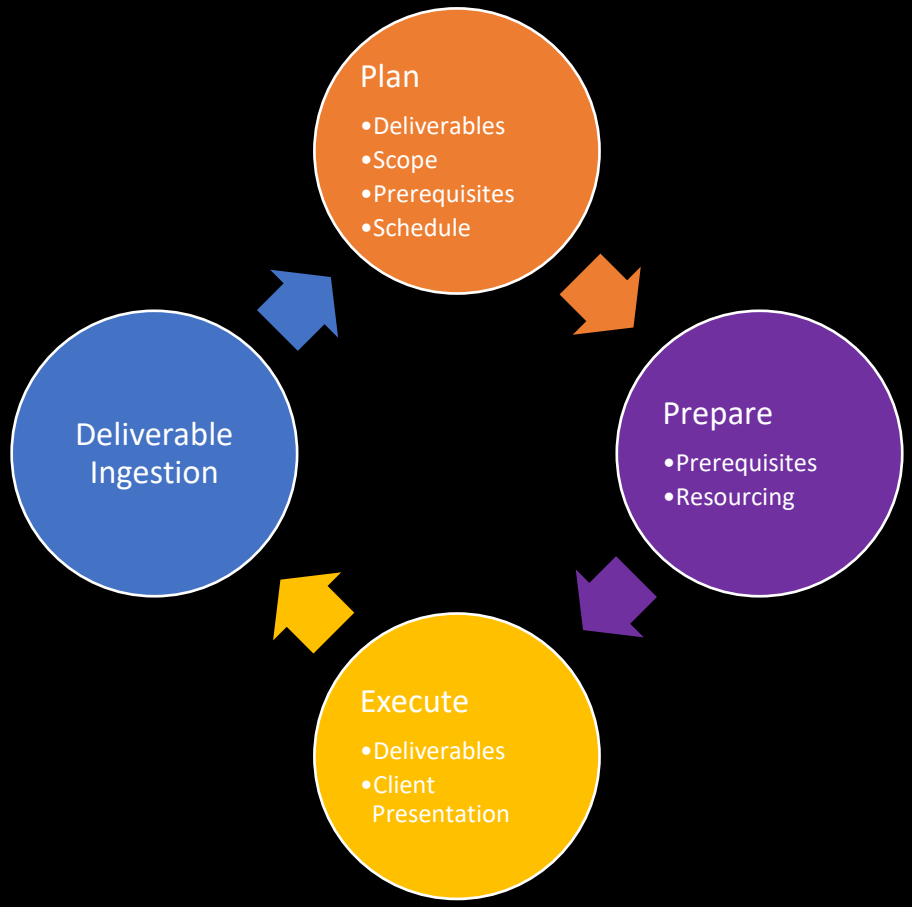
- Be sure to capture the business success factors up front
  - Know your goal posts
  - Use the success factors for option analysis
- Client side PM?
  - They will protect the interest of their organization not yours
  - Be clear about client side dependencies
  - Engagement Management Option?
- Scope
  - Be very clear about scope and dependencies
  - Review dependencies often
  - Have a pause option built in to plan
- Testing
  - Rely on client SMEs for all testing
  - Remediation is a separate scope

Benefits Realization – Measuring Success

- Is ROI ever the wrong way to measure success?
  - It can be tough to compare the ROI of legacy vs. cloud based solutions unless there is a parity relationship – if there is a parity relationship why are you switching?
  - If you base IT decisions purely on a comparison of the ROI you will miss out on the non-ROI opportunities available?
  - Definitely do an ROI analysis but don't forget the soft value
- Measure success in terms of desired outcomes such as:
  - Increased mobility
  - Increased collaboration
  - Decreased time to market
- Link success to existing business KPIs such as:
  - Average Revenue per User (ARPU)
  - Free Cash Flow (FCF)
  - Customer Acquisition
  - Solution Usage
  - Customer Satisfaction
  - User Satisfaction

What is a sprint?

- Iterative approach to solution delivery
- Manageable (logical) piece of work
- Delivery team has total control of deliverable
- Set tasks and deliverables
- 1 to 4 week duration
- Sprints only start once all prerequisites are met



What’s in it for Customers?

- Access to in demand resources (E.g. Azure architect)
- Lower cost of delivery
  - Less time spent waiting for prerequisites
  - Architects focus on architecture tasks while others take care of ancillary tasks
- More predictable delivery schedule
- Value based milestones
- Alignment with business objectives

Success Factors

- Well defined solution requirement (end state)
  - Well defined work plan including any client constraints
  - Clear roles and responsibilities (Delivery Team and Client)
  - Well understood dependencies and impacts if not met
  - Clear business objectives
  - Clear success criteria
- Scope that can be phased with clear value-driven milestones
- Engaged and available client
  - Must understand the process and deliverables
  - Must be able to make decisions quickly if required
  - Must be able to review and accept/reject deliverables quickly
- Engagement management and business risk mitigation

Requirements for sprints

- Well defined scope
- Well defined inputs for the tasks
- All prerequisites met before delivery starts
- Engagement Manager

Resource Management

- Team based approach
  - Right resources for the sprint
  - Focus on positional play
- Team must share common vision
- Team must share commitment to deliver

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How can Cistel help you?

- Presales (RFP, Project planning, etc.)
- CSP = Money in your pocket
- Project Management
- Staff Augmentation

- Federal Government Vehicles
- Security Clearances

Project Management

- Different than engagement management
- May not be necessary for the sprint team
- This can be handled by the client

Engagement Management Role

- Works with the client to align the engagement with clear business objectives
- Ensures the delivery team understands the client's business objectives
- Develops a workplan and sets clear milestones with the client on the engagement
- Helps the client understand technical activities and deliverables
- Clearly delineates with the client:
  - Key pre-requisite information and activity dependencies prior to kick-off
  - Delivery team and client resource roles and responsibilities in the workplan
- Leads the kick off with the delivery team and any client resources on the project
- Manages the delivery with the client from start to finish including risk mitigation and proactive issue resolution

Cautions

- Overcommit (under estimate LOE)
  - Optimistic vs Realistic
- Scope management
- Client must be engaged and available
  - Must understand the deliverables
  - Must be able to make decisions quickly if required
  - Must be able to review and accept/reject deliverables quickly
- Prioritization of sprints
- Not meeting prerequisites
- Do not have the sprint team working on prerequisites

Billing for sprints

- Pricing:
  - Adapt per diems?
  - Fixed price? Value-based pricing
- Penalty for missing prerequisites?
- Discount for late deliverable?

Cloud Purchase Options

- Pay-As-You-Go Subscription
- Microsoft Cloud Solution Provider (CSP)
- Enterprise Agreements
- VS / MSDN
- GoC Public Cloud Vehicle

Pay-As-You-Go Subscription

- There are no minimum purchases or commitments
- You can cancel anytime
- You can pay for them by credit-card as well as by invoice

Microsoft Cloud Solution Provider (CSP)

- With the Cloud Solution Provider program, work directly with a partner to design and implement a solution that meets your unique needs
- CSP provides customers access to all Microsoft cloud services (i.e., Azure, O365, Enterprise Mobility Suite and Dynamics CRM Online) through a single platform
- CSP will directly bill customers; directly provision and manage subscriptions; attach value-added services; and be the first point of contact for customer support
- CSP provides flexible payment options (monthly or annually)
- CSP provides more cost-effective pricing

Enterprise Agreements

- Large organizations often sign up for a Microsoft Enterprise Agreement (EA)
- This involves an upfront usage commitment to Azure
- By making the upfront monetary commitment to Azure, customers earn several additional benefits including flexible billing options and cost-effective pricing

MSDN & Visual Studio

- $70 Visual Studio Professional
- $130 MSDN
- $190 Visual Studio Enterprise

GoC Public Cloud Vehicle

- Awarded October 2017
- Provides GoC departments with access to cloud services
- No professional services
- Current RFP was for unclassified data
- SSC Cloud Broker team will be ready for requests in December
- Numerous companies awarded a contract providing various cloud services
- Cistel awarded a contract in partnership with Microsoft