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CLOUD MIGRATION & RISK MIGRATION:

A BLUEPRINT FOR SECURE DIGITAL INNOVATION

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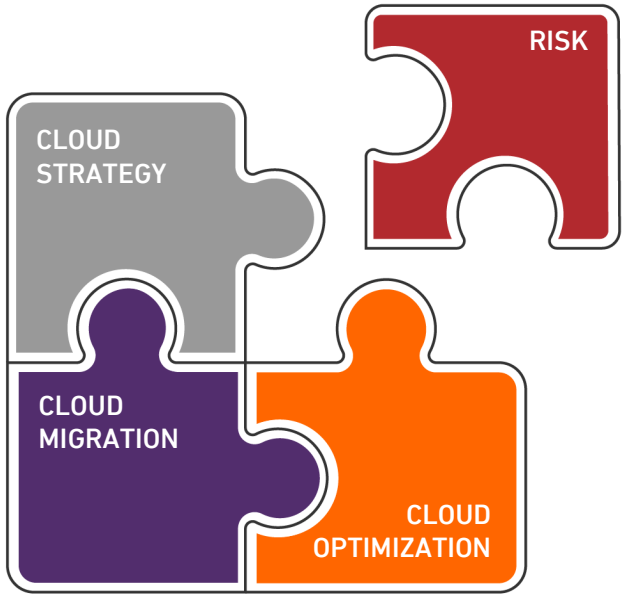
AGENDA

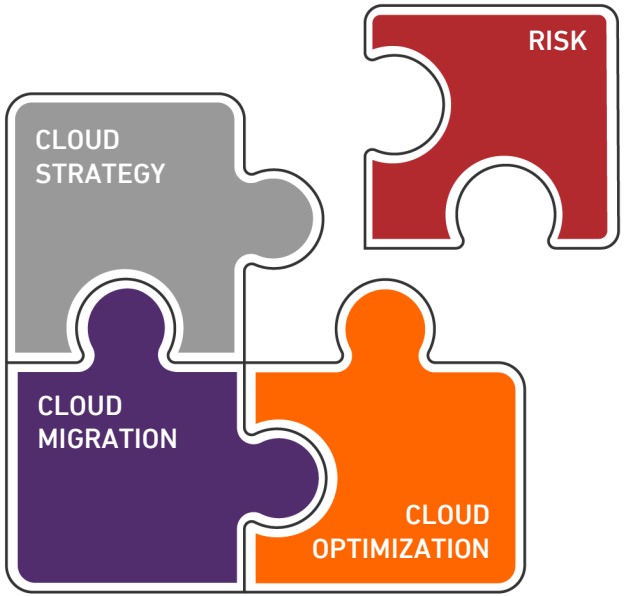
1. Risk in the Cloud
2. Devising Your Secure Cloud Strategy
3. Using a Secure Cloud Migration Framework
4. Optimizing in the Cloud
5. Q & A

RISK IN THE CLOUD

IT'S ALL CONNECTED



RISKS



CLOUD STRATEGY

- Lack of cloud strategy dooms all other efforts
- Poorly formed strategy mis-prioritizes overall objectives
- Opportunities for transformation and/or modernization overlooked
- Lack of unified hybrid IT/multi-cloud strategy
- Enablement of Shadow IT

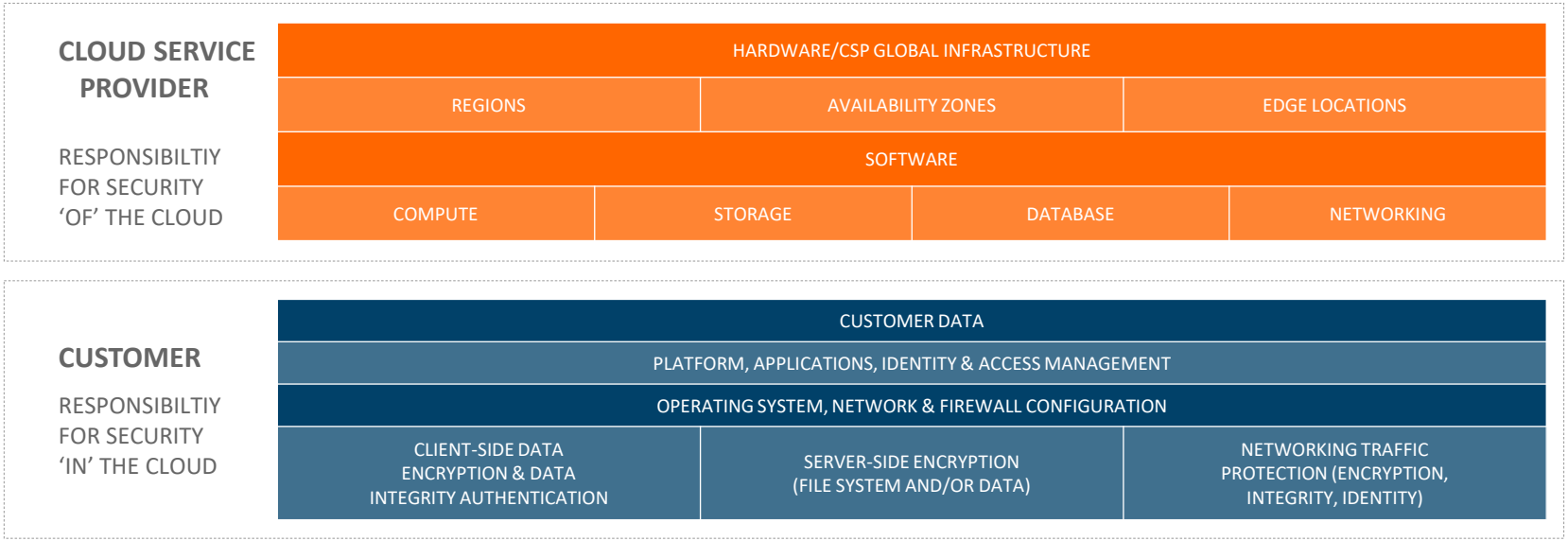
CLOUD MIGRATION

- Delayed and even failed migration efforts
- Higher-than-expected resource usage/costs with migration
- Mis-prioritized and mis-allocated application migration efforts
- Security and compliance controls inadequately addressed; expanded and exposed attack surface

CLOUD OPTIMIZATION

- Low realized Return on Investment (ROI) and/or performance metrics
- Increased technical debt due to lack of strategy and use of proven migration approach
- Transformation and/or modernization not achieved as part of efforts
- Security and compliance controls not unified across hybrid IT nor optimal in approach

SHARED RESPONSIBILITY MODEL



HOW DO YOU ADDRESS RISK IN THE CLOUD?

1. Treat the cloud as an enabler for IT and broader Corporate Objectives.
2. You need a Comprehensive Cloud Strategy.
3. You need to leverage a proven Cloud Migration Framework.
4. Do the due diligence to get it right at all stages.

HOW DO YOU ADDRESS RISK IN THE CLOUD?

5	Know your team; Put the right skills and expertise in place.
6	Plan for scale, efficiency and modernization to address requirements for the next 3 years.
7	Engage a third-party with proven experience to help you.
8	View security and compliance as strategically important from the start.

DEVISING YOUR SECURE CLOUD STRATEGY

SECURITY AND COMPLIANCE CONSIDERED...

POLICY	TECHNOLOGY	ENVIRONMENT
▪ Shared Responsibility ▪ Articulation of global security and compliance policy for cloud and hybrid environments ▪ Continuous Compliance ▪ Cloud-agnosticism ▪ Multi-cloud ▪ Proactive, Not Reactive ▪ Security and Compliance early in the CI/CD cycle	▪ Cloud native security toolsets and services ▪ Automated policy automation and adherence ▪ Automated operations efficiencies ▪ Workload security ▪ Container security ▪ IAM ▪ Logging ▪ Encryption ▪ Multi-Factor Authentication ▪ Segmentation ▪ Response in the Cloud	▪ Containers ▪ Microservices ▪ Serverless ▪ Hybrid Environments ▪ Immutability ▪ Software-Defined Network ▪ Zero Trust

> Business transformation enabled by the cloud should also encompass transformation of your security and compliance program to gain similar scale, performance, and efficiency advantages.
>
> —JOSH BOSQUEZ, CTO, Armor

MODERNIZATION & TRANSFORMATION

- You have to know what you have in place today
- Don't confuse modernization for transformation
- Modernization and transformation are intertwined
- In a dog fight, transformation will win
- Modernize processes and not just technology
- Have the right teams, expertise and organization structures to support modernization
- Take incremental, measurable steps toward broader goals
- Be prepared for continuous improvement across initiatives

> 10 IT modernization mistakes to avoid - ***Modernizing IT*** takes more than just replacing old tech with newer models. It ***requires*** a ***nuanced strategy that considers business needs and objectives alongside technical capabilities***.
>
> — MARY KAY PRATT, CIO Magazine, August 19, 2019

UTILIZING A SECURE CLOUD MIGRATION FRAMEWORK

LEVERAGE FRAMEWORKS AND 'TOOLS' TO HELP

aws

> The AWS Well-Architected Framework documents a set of foundational questions that allow you to understand if a specific architecture aligns well with cloud best practices.

OPERATIONAL EXCELLENCE	SECURITY	RELIABILITY	PERFORMANCE EFFICIENCY	COST OPTIMIZATION

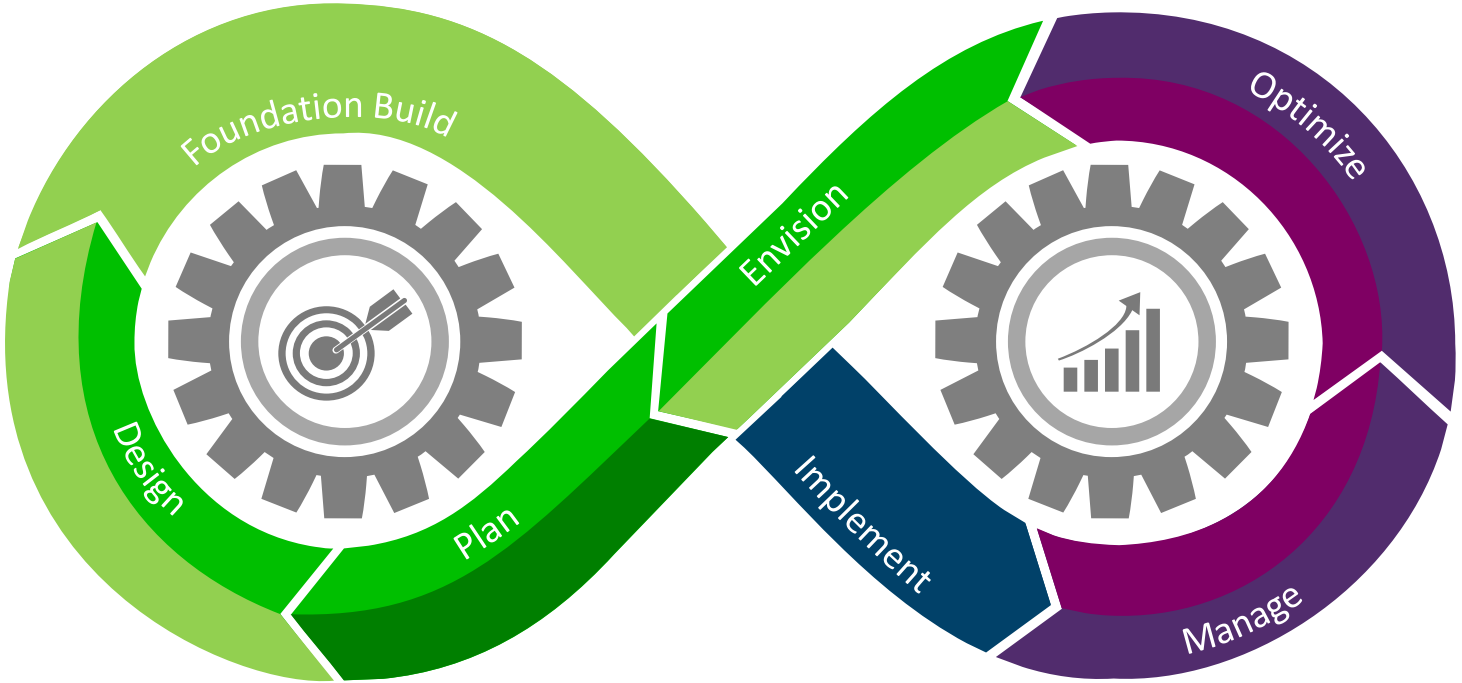
Gartner

5 R's

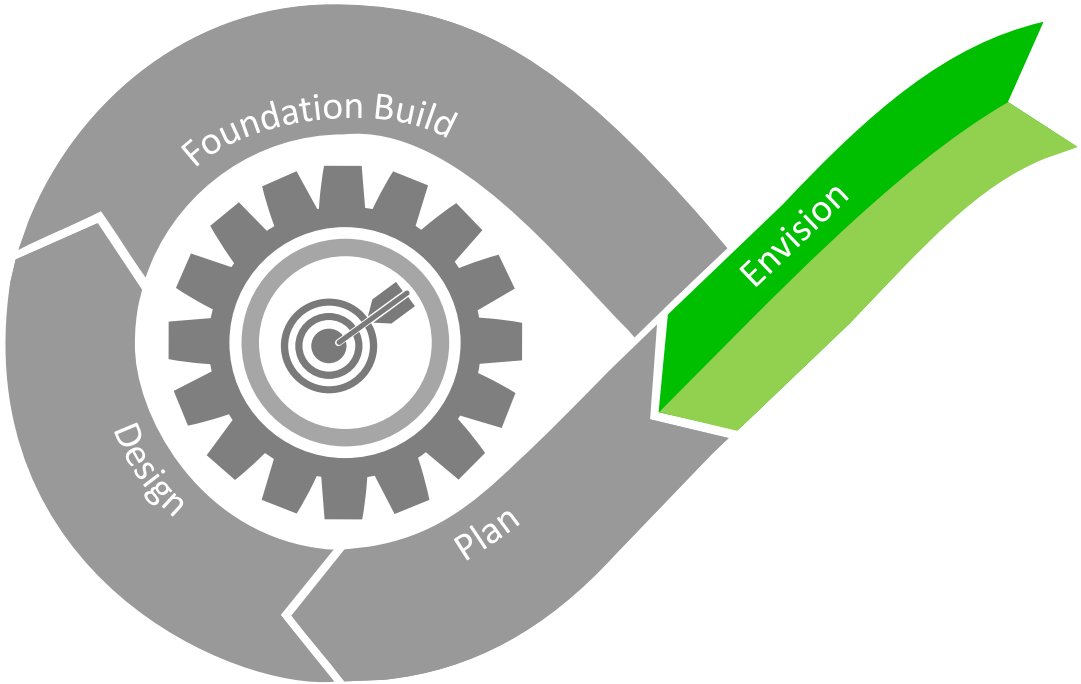
REHOST	RETIRE	REVISE	REBUILD	REPLACE

OPTIMIZING APPLICATIONS, SECURITY AND COMPLIANCE IN THE CLOUD

CLOUD SECURITY ACTIONABLE FRAMEWORK



ENVISION.



Common Misconceptions

- The Cloud is just another Data Center
- The Cloud is Secure
- Operational Controls and Resiliency are included

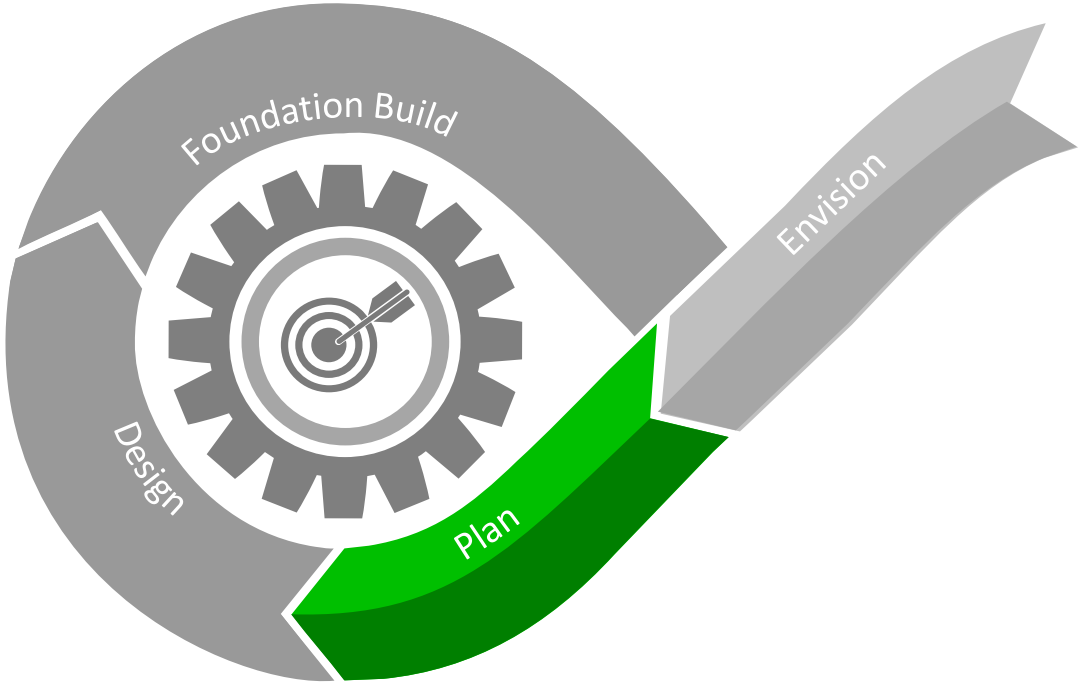
Big Challenge

- Ensure that your Business Objectives Align with Technical Attributes

Advice

- Leverage public cloud as an opportunity to transform

PLAN.



Common Misconceptions

- Security can be an add-on later
- Cloud doesn't require extensive planning

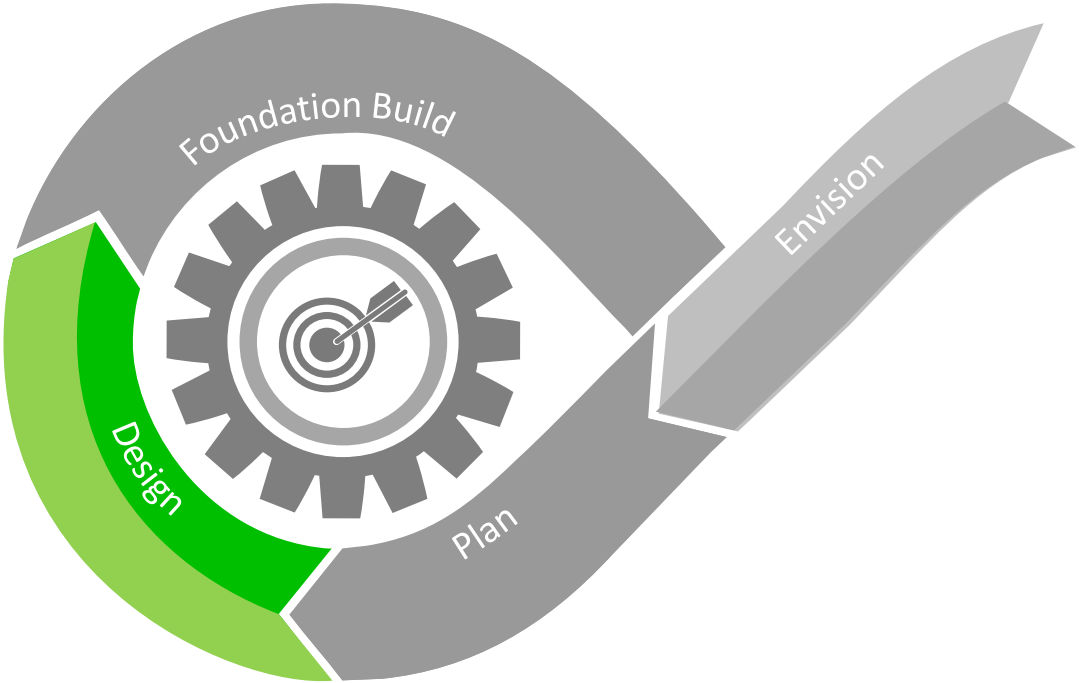
Big Challenge

- Plan for tomorrow, execute for today

Advice

- Align a CSP with the Business Objectives defined in the Envision Phase
- Identify your Operational Controls, Resiliency, Financial Alignment, Security and Compliancy Requirements

DESIGN.



Common Misconceptions

- Existing Operational Controls, Application Deployment patterns and Security Methodologies will work in the Cloud

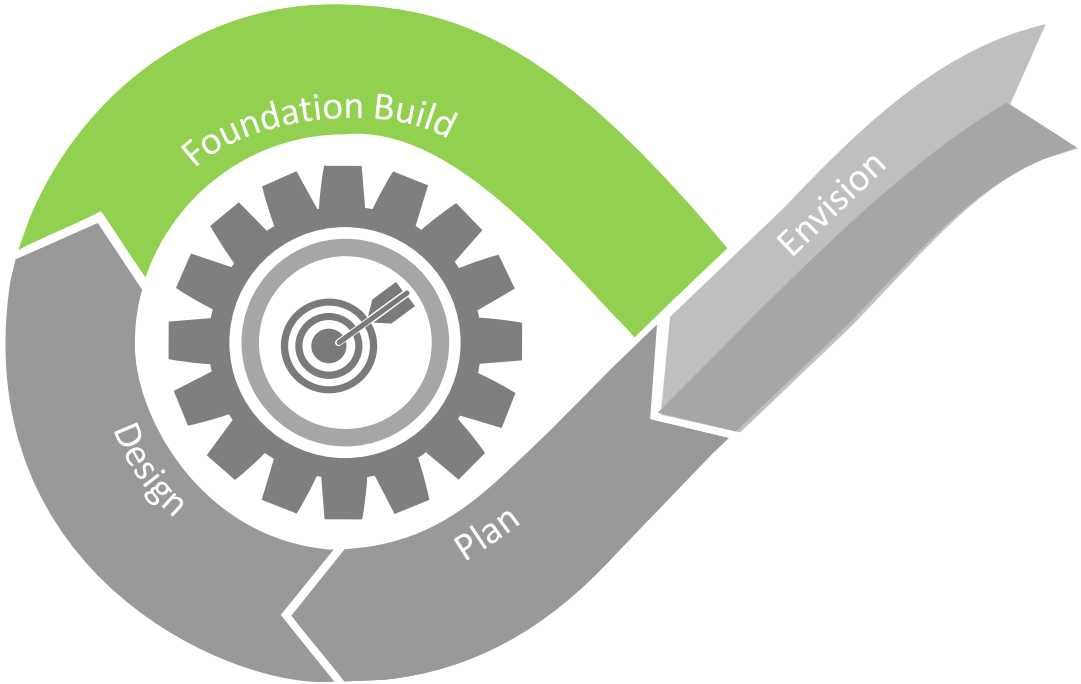
Big Challenge

- Design an architecture that fulfills the Business Objectives defined in the Envision Phase

Advice

- Leverage serverless architectures wherever possible
- Ensure your design accommodates cloud focused Operational Controls, Resiliency, Financial Alignment, Security and Compliancy Requirements

FOUNDATION BUILD.



Common Misconceptions

- The Core Cloud Infrastructure can be deployed with the workloads
- Any mistakes can be fixed later

Big Challenge

- Deliver a foundation you can build upon

Advice

- The foundation of your Cloud deployment dictates your success in the Cloud

IMPLEMENT.

Common Misconceptions

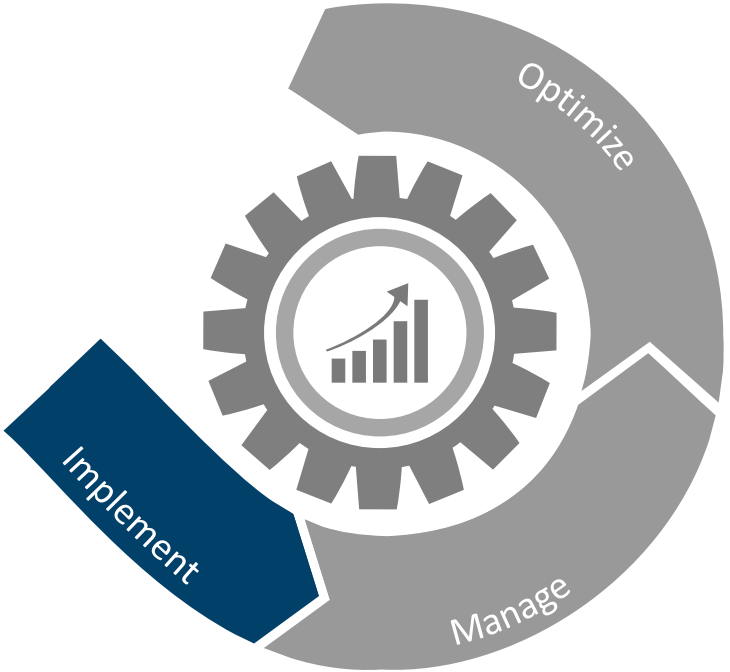
- The Cloud can support any workload
- Multi-cloud strategies are relatively easy

Big Challenge

- Templatize security components into build cycles

Advice

- Automate as much as possible
- Include security into the templates, builds
- Version control, document your templates



MANAGE.

Common Misconceptions

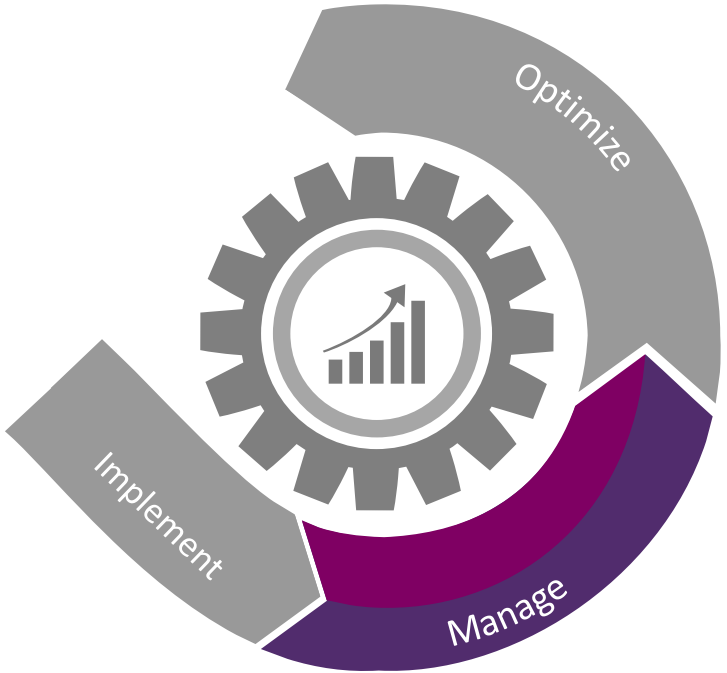
- Existing management tools can be extended easily to the cloud
- Your CSP will maintain and update your cloud

Big Challenge

- Real-time visibility and compliance/security

Advice

- Implement tools that provide visibility – this is key
- Standardize on a tool platform where possible
- Decide whether our security operations team has the capacity/capability to manage your cloud



OPTIMIZE.

Common Misconceptions

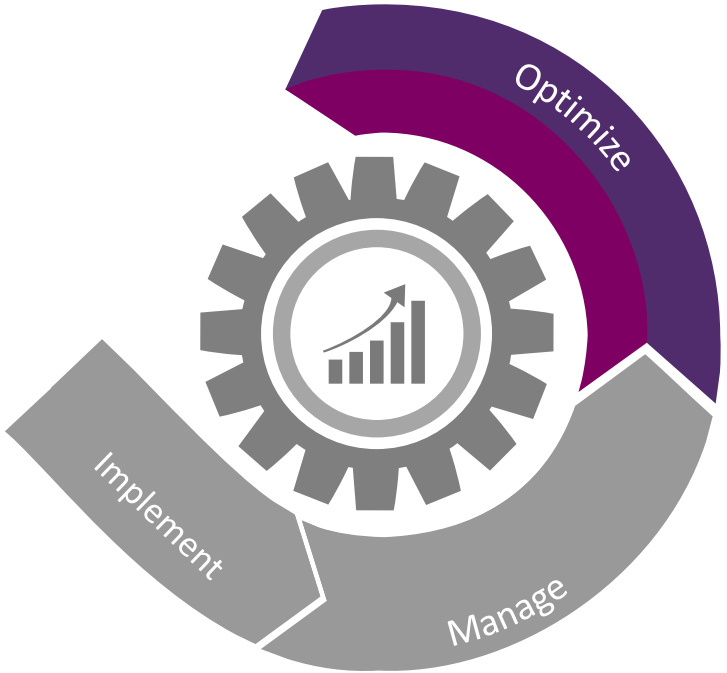
- The Cloud is static

Big Challenge

- Successful Cloud Implementations continually evolve

Advice

- Constant evolution is key
- Automate touchpoints wherever possible
- Ensure consistent alignment with the Operational Controls, Resiliency, Financial Alignment, Security and Compliancy Requirements defined in the Plan Phase and evolve as Business Outcomes change



Q & A

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THANK YOU.

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BACK-UP SLIDES