# Tim Rehac
## Principal, Americas Cloud Leader, EY

- Tim is a Principal in EY's Technology Consulting organization and leads EY's Cloud Competency in the Americas
- Tim has a Bachelors of Science in Mechanical Engineering from Syracuse University and is a frequent speaker at IT Industry events including The International Management Forum, IT Financial Management Association and the Pacific Northwest State & Local Government IT Summit
- His skills: IT Strategy & Transformation executive with a focus on Cloud, IT Strategy and IT Operating Model change. Has led large scale Transformations of Infrastructure (to Cloud), Applications (DevOps / Agile / Micro-Services), IT Operating Model (ITaaS) in Fortune 500 Global Clients
  - Cloud Strategy, Economics, Operating Model Transformation, Migration
  - Enterprise Architecture / Business Architecture
  - IT Infrastructure / Data Center transformation
  - Experience in Life & Health Sciences, State / Local Government, Financial Services and Retail & Consumer Products industries
- Prior to joining EY, Tim spent 10 years at EMC where he led the IT Transformation Practice in the Americas. In that role, Tim led the team that worked with Global clients on their IT Transformation efforts. The Practice included competencies around Cloud, Application, End User Services and IT Operating Model Transformation

# RILA: Cloud Conversations

August 2021

The better the question. The better the answer. The better the world works.

Building a better working world

# Agenda

- A Few Definitions
- Establishing trust in the Cloud
- Maintaining control of multi-Cloud ecosystem
- Cloud strategies for migration
- Transforming to Cloud

# Cloud Definitions and Service Models

| Cloud Definitions - Foundational terms | |
|---|---|
| Public Cloud | Short hand for hyper-scale cloud IaaS / PaaS providers. It is noted that for many configurations, including likely Client architectures, these vendors restrict access from the Internet, much like Client does on-premises. |
| On Premises / On-prem | Short hand for Client owned, leased or co-lo datacenters. |
| Hosted Application | Third party hosting of an application, possibly in a subscription model. |
| Cloud Management Platform (CMP) | Integrated products that provide for the management of public, private or hybrid cloud environments. The products included in this category have a variety of functionality including; self-service interfaces, provision system images, orchestrate automated provisioning, enable metering and billing, provide for some degree of workload optimization through established policies. |
| Hybrid-Cloud | Public cloud connected to on-premises for the sharing of resources. |
| Multi-Cloud | When an organization makes the choice of leveraging multiple cloud vendors instead of only one vendor, the cloud service provider strategy is termed as multi-cloud. |

# Cloud Definitions and Service Models

| Cloud Service Models - NIST cloud service models | |
|---|---|
| Software as a Service (SaaS) | The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings. To be considered true SaaS, the application is at least offered in a multi-tenant option. Single tenant subscription software solutions are better categorized as IaaS or PaaS. |
| Platform as a Service (PaaS) | The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming. |
| Infrastructure as a Service (IaaS) | The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls). |

# Polling Question 1:

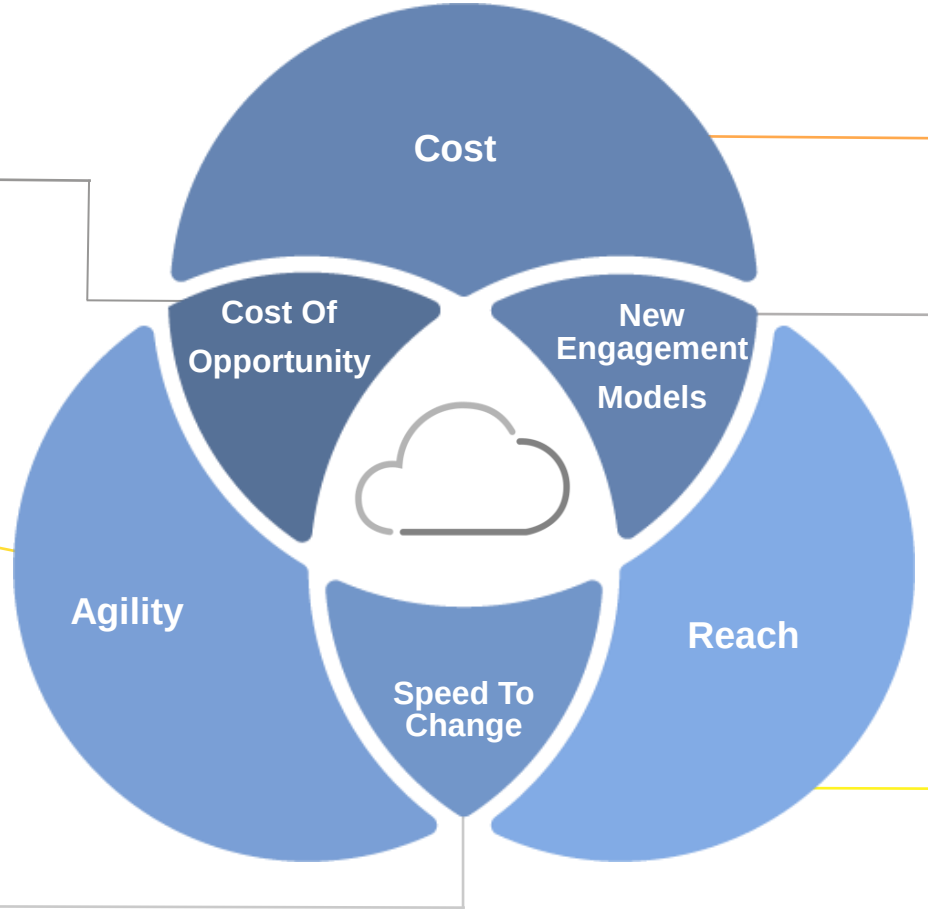
- Which is not a common Cloud “as a Service” model:
  A. IaaS
  B. SaaS
  C. KaaS
  D. PaaS

# Why Cloud: It is the business innovation platform

## Cloud accelerates the digital enterprise of the future

- Avoid lost time for slow deployment
- Ease of bringing new functionality
- No capital cost to new ideas without the analysis of end game before starting
- Try fast, fail fast, at low cost of failure
- Rapid iteration on success

- Abstraction of Infrastructure with commensurate economics
- Increasing acceptance of Cloud costs in rate base
- Only pay for what business used with clear mapping between cost & business values



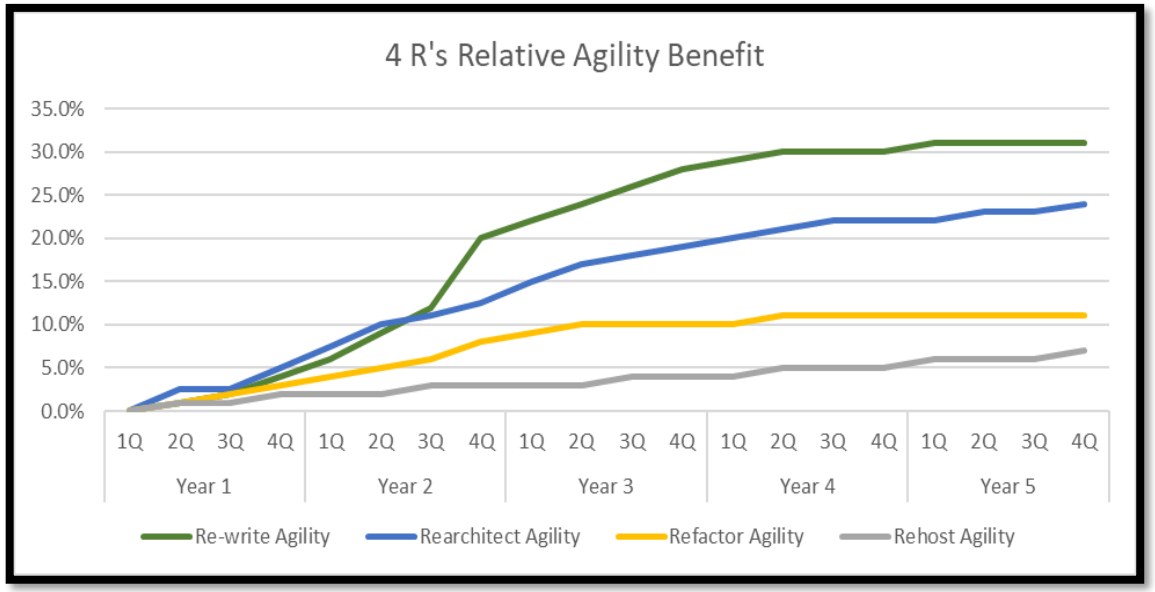

- Fore-knowledge of scale isn't needed
- Easy to scale up with customer uptake
- Easy to scale down with demand
- Continuous improvement by iterating small changes drives high efficiency

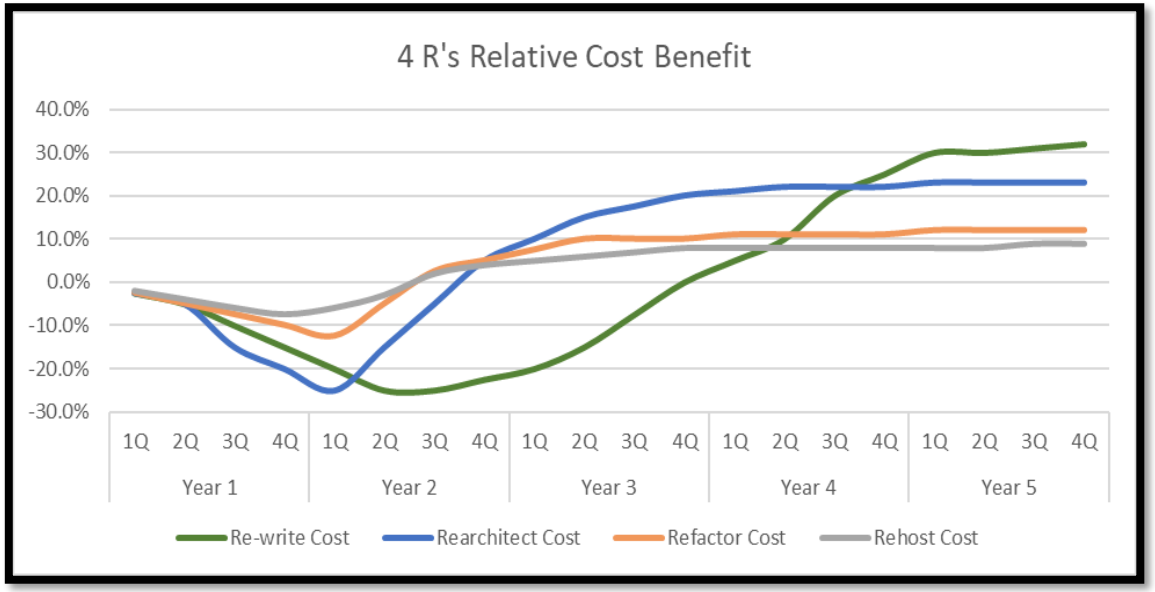
- Capitalize on new ideas from outside the organization
- External Apps integration with simple data exchange
- Deliver contextual & personalized citizen offerings

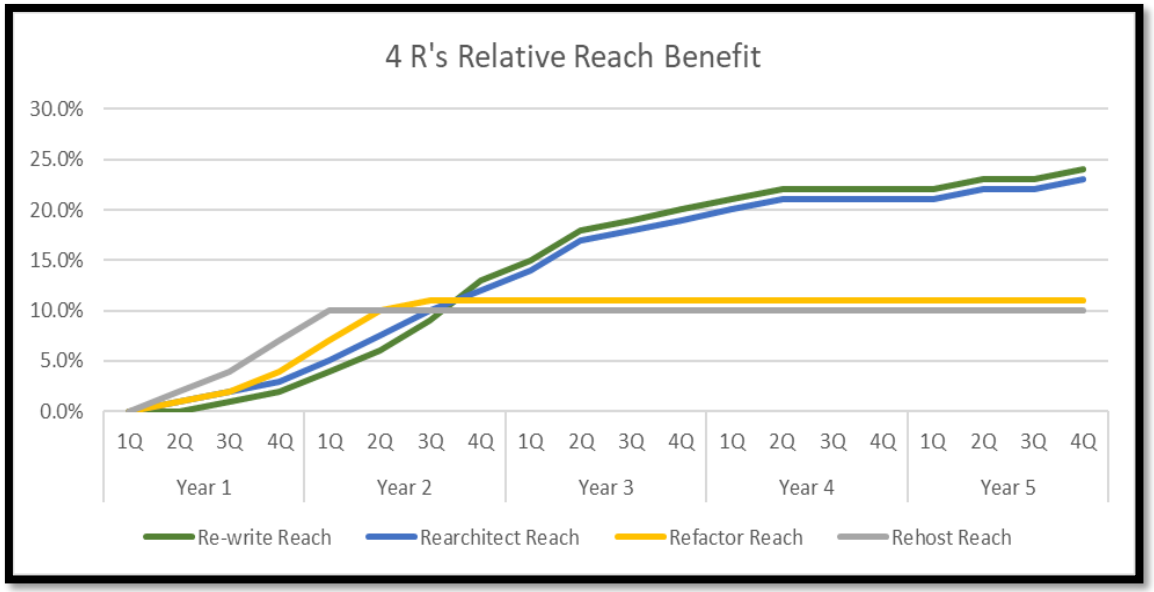
- Business agility with improved speed to respond to change
- Accelerate time-to-market and time-to-value
- Data driven, real-time adaptation with closed-loop feedback mechanism

- Deliver to local and global markets
- Engage customers anywhere and anytime through any device
- Extend technical reach – innovation platform of choice built on huge R&D investments of Hyper-scale Cloud providers

# Relative Benefits of Rehost, Refactor, Re-architect, Re-write

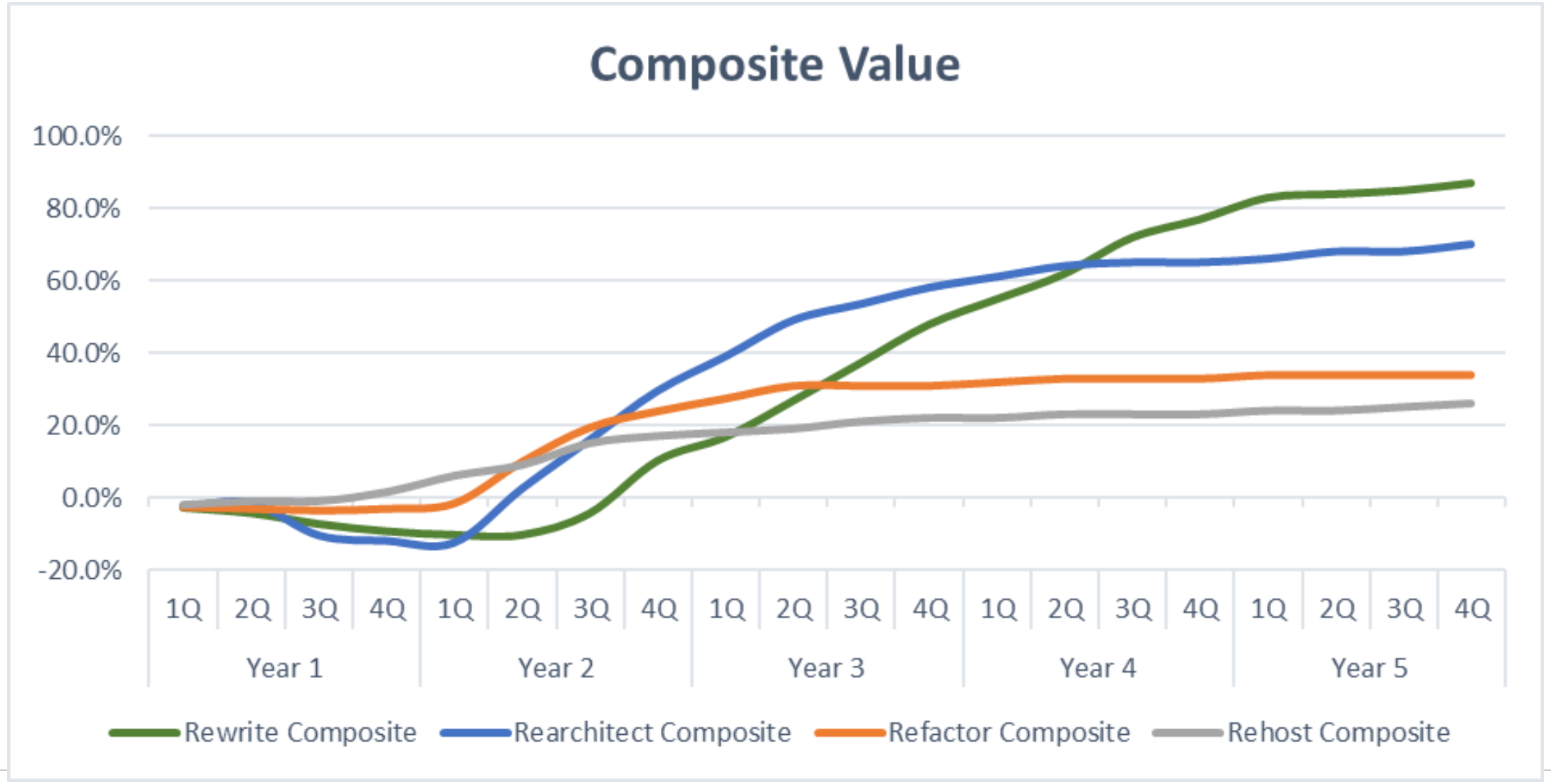


# Composite Value Comparison of “R’s”

## Agility / Reach / Cost Weighted Equally





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# The market is evolving from legacy-based transactions to innovative technologies enabling business

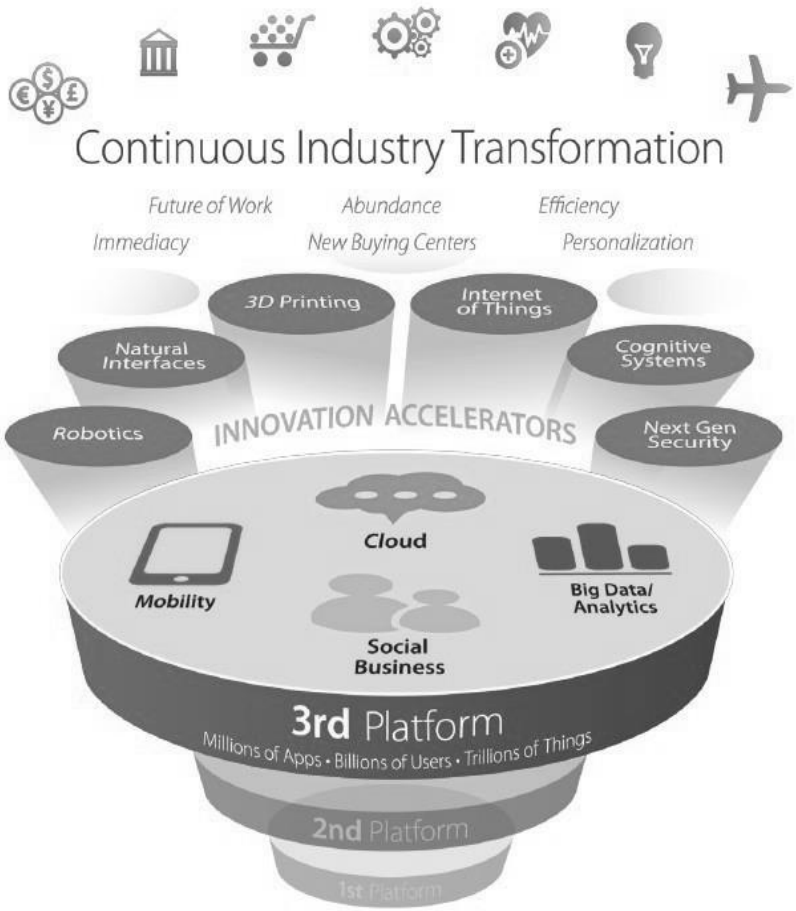
1. The IT market is increasingly split into two main segments with opposing dynamics.

2. Digitalization using Internet of things will transform both IT markets.

3. Mobile has become the device of choice in communicating, sharing and transacting.

4. Anything-as-a-Service and social will continue to fuel the digital revolution and transform the customer journey.

5. Cloud is absolutely foundational for all 3rd Platform applications



# Migration Approaches
## Definitions

| Migration approaches | |
|---|---|
| **Retire** | Archive data and make available long term, de-provision hardware, reclaim software licenses etc. (two options: archive and keep data available or decommission) |
| **Replace** | Where a feasible SaaS alternative exists to an existing commercial-off-the-shelf (COTS) or in-house developed application |
| **Rewrite** | To redevelop the application, procure a new application from a third party or net new “green field” application development in cloud native fashion |
| **Re-architect** | Significant application modification required, for example: re-architecting for resilience & scale, moving from two tier to n-tier architecture, adding load balancing, new multi-geo redundancy / data replication, moving to PaaS, automated full environment build (test / dev) etc. |
| **Refactor / Re-platform** | A lift and shift of existing virtual machine instances (or physical instances in a P2V scenario) from on-premises to cloud provider, upgrading non-supported OS or database version, changes to backup / DR processes, some interface changes, data masking or multi-stage migrations etc. |
| **Rehost** | A lift and shift of existing virtual machine instances (or physical instances in a P2V scenario) from on-premises to cloud provider, some small amounts of infrastructure remediation may be required, for example: removing hard coded server names or IP addresses |

# Polling Question 2:

- Which is not a common Cloud migration / modernization approach:
  A. Rehost
  B. Redo
  C. Re-write
  D. Refactor

# It’s a Hybrid Cloud World

- For the third time, (2012, 2014 and 2018) Gartner has predicted within 4 years more than 50% of all workloads will be running in the “public” Cloud
- While the speed of adoption is in doubt, and where / with who the majority of workloads will run – there is zero doubt that “Cloud Architecture” / third platform is / will be the dominant architecture.
- Everything that is written in second platform at this point is immediately technical debt that will ultimately have to be re-architected to a Cloud model
- It is also clear that **Cloud is the foundation for digital transformation / innovation**

# Maintain Control / Without Impacting Agility

- Governance
  - Cloud Operating Model
  - Architecture, Security, Cost, Program / Transformation
- Security
  - Ensuring Security Leading Practices
  - Vulnerability Management
- Transformation
  - Program Management
  - Organizational Change Management
- Operationalization
  - Key Operational Metrics
  - Resource Deployment Management
- Disaster Recovery (DR)
  - Planning and Exercise Processes
  - DR Application Tiers
- Data and Storage Management
  - Data Classifications
  - Access Controls

# Polling Question 3:

- Which is not an important Cloud governance domain:
  A. Program
  B. Security
  C. Cost
  D. Operating Model

# Cloud transformation – key success factors

1. Do not underestimate transforming people / skills, Cloud requires more “T” shaped skill profiles, ultimately this will be the limiting factor on Cloud adoption
2. Automation of infrastructure components is required to fully achieve Cloud benefits, treating Cloud as another Datacenter will get you another Datacenter
3. IT Operating Model change is required, not day 1, but prior to getting to scale
4. Like any other transformation, a compelling vision, storytelling and a disciplined change management approach is required
5. When Cloud is part of a digital transformation, Doing Digital to Being Digital – maintaining momentum behind the transformation
6. Building security & compliance into infrastructure patterns / automation and CI / CD pipeline – at scale – DevSecOps including IAC
7. Having a complete Cloud Strategy / Cloud Decision Framework early prevents significant delays as each new application opens up new areas of debate
8. Migration factories require business knowledge / client service skills / program management discipline to maintain velocity

# Polling Question 4:

- When transforming an IT Operating Model today, which dramatic changes in IT are important to consider:
  A. Agile
  B. Cloud
  C. DevSecOps
  D. All of the above

# Thank You / Questions

I appreciate your time today, any questions / comments, please email me @ tim.rehac@ey.com

And / or connect via LinkedIn https://www.linkedin.com/in/rehac/

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