THE POWER OF BEING UNDERSTOOD

AUDIT | TAX | CONSULTING

RSM

GETTING TO KNOW US

RSM

A world leader in providing audit, tax and advisory services to ambitious and growing companies.

RSM member firms vary in size, structure and age, but they are united under the RSM brand and share a strong entrepreneurial spirit and a unique client-centred approach. Above all, member firms maintain the highest standards of technical excellence with a focus on providing outstanding service to clients.

GLOBAL

- 123 countries
- 51,000+ staff
- 4,000+ partners
- 860+ offices
- 57 years
- $ 7.26 billion revenue

INDONESIA

- 700+ staff
- 40+ partners
- 2 offices
- 37 years
- #3 in number of listed entities audited
- Shortlisted as Tax Firm of the Year in Asia Tax Award 2020
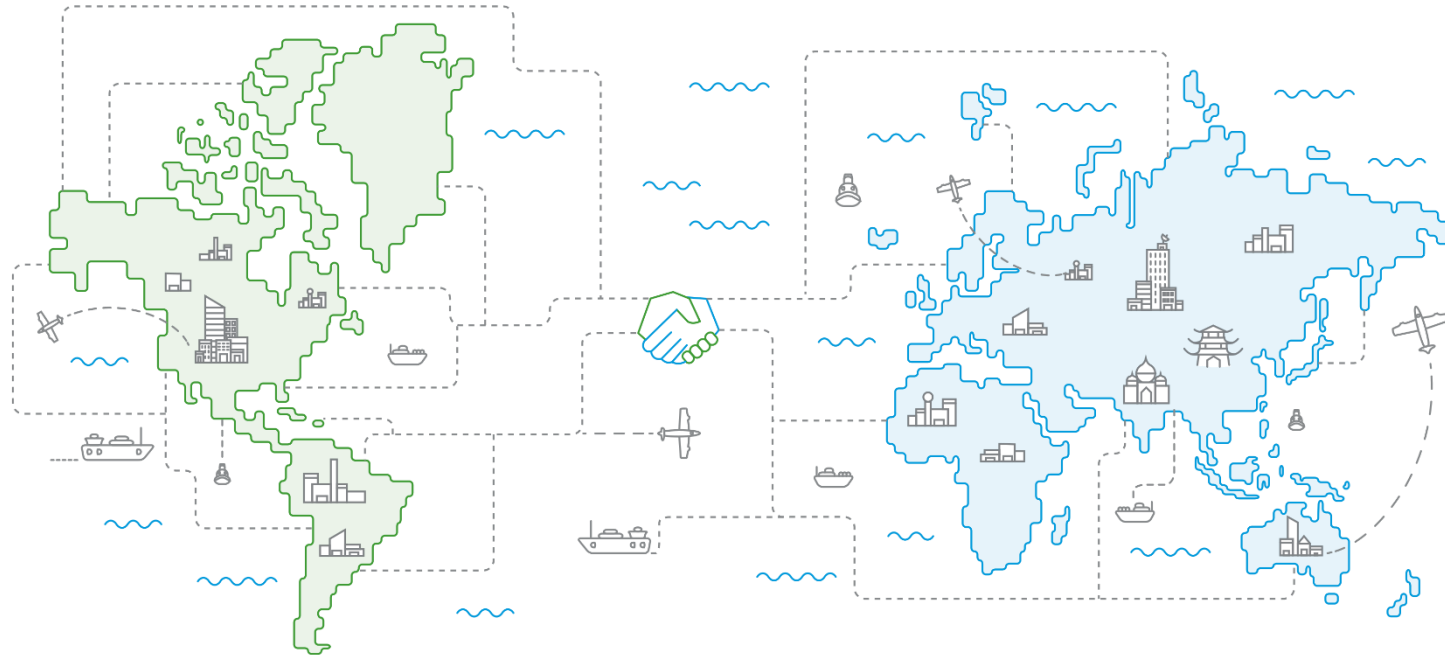
Our Services in Indonesia

AUDIT

Agreed Upon Procedures | Financial Information Review | General Audit |

TAX

Business Tax | International Tax | Tax Merger & Acquisition | Transfer Pricing |

CONSULTING

Accounting Advisory | Corporate Finance & Transaction Advisory Services | Finance & Accounting Outsourcing | Governance Risk Control Consulting Services | Management Consulting | Technology Consulting | Other Consulting |

RSM

Our Tax & Consulting Services

BUSINESS TAX
Customs & Trade
Tax Advisory
Tax Audit & Dispute
Tax Compliance

INTERNATIONAL TAX

TAX MERGER & ACQUISITION
Tax Due Diligence
Tax Structuring

TRANSFER PRICING

ACCOUNTING ADVISORY
Complex Accounting & Financial Reporting
New Accounting Standards & Implementation

CORPORATE FINANCE & TRANSACTION ADVISORY SERVICES
Corporate Finance
Corporate Recovery & Insolvency
Restructuring
Valuation

FINANCE & ACCOUNTING OUTSOURCING
Accounting Services
Financial Outsourcing Services
Payroll
Secretarial

GOVERNANCE RISK CONTROL CONSULTING SERVICES
Anti Money Laundering
ESG Risk
Fraud Prevention and Investigation
Process, Risk & Controls
Security & Privacy Risk
Technology Risk

MANAGEMENT CONSULTING
Business Consulting
Operations & Supply Chain
People & Organization
Technology & Digital

TECHNOLOGY CONSULTING
Application Development & Integration
Data Analytics
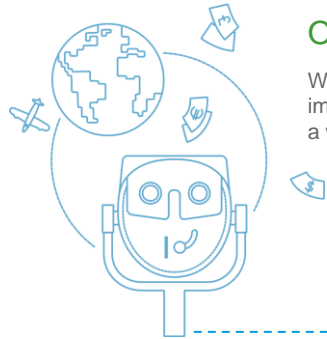Technology Infrastructure

OTHER CONSULTING
Business Establishment & Licensing
Executive Search

RSM

Bringing you ideas and insights to help you move forward with confidence

ONE POINT OF CONTACT

When you are under pressure, quick and easy communication is of paramount importance. At RSM you have one trusted senior contact who will connect you to a well-informed team, exactly when and where you need them.

MAXIMIZING POTENTIALS

When you work with us, you have a team of advisers who are constantly looking out for your business interests. Based on a thorough analysis of your markets, laws and customs, we will identify opportunities and challenges before they arise. We will help you analyze risk, establish the right direction of your business and maximize your potential, supporting you every step of the way.

UNDERSTANDING YOUR BUSINESS

We devote a great deal of time, thought and energy to understanding you and your organization. We will immerse ourselves in your business so we know who you are, what you believe in and what motivates you. Your management team will receive high quality feedback on issues that are pertinent to your business, together with personalized reports and advice from experts in your sector.

QUICK ANSWERS

The partners of our member firms around the world know each other extremely well. This means they can personally recommend colleagues in other international offices, and draw on those close relationships to get you quick answers and fast decisions.

RSM

Profil Pembicara

Resdy Benyamin
Partner
Technology Consulting Practice

Faisal H Susanto
Senior Manager
Technology Consulting Practice

RSM

Panduan Webinar

1. Peserta dapat menyampaikan pertanyaan secara tertulis melalui **CHAT BOX** di layar peserta

2. Mohon menyampaikan nama dan perusahaan

3. Pertanyaan diharapkan singkat, padat dan jelas serta menggunakan bahasa yang santun

4. Pembicara akan memilih pertanyaan untuk dijawab di sesi Q&A

RSM

PREPARING YOUR CLOUD IMPLEMENTATION STRATEGY

Resdy Benyamin

Partner – Technology Consulting Practice

Faisal H. Susanto

Senior Manager – Technology Consulting Practice

RSM

Topik Webinar

- What is Cloud Computing

- How does Cloud Computing Work

- Benefits of Cloud Computing

- Types of Cloud Computing

- Types of Cloud Services

RSM

Cloud Computing

"Cloud is a model of computing where servers, networks, storage, development tools, and even applications (apps) are enabled through the internet. Instead of organizations having to make major investments to buy equipment, train staff, and provide ongoing maintenance, some or all of these needs are handled by a cloud service provider."

RSM

How does Cloud Computing Work?

Cloud computing is the on-demand availability of computer system resources without the direct active management by the user. It takes away the management aspect of IT systems and helps organizations focus on their core business.
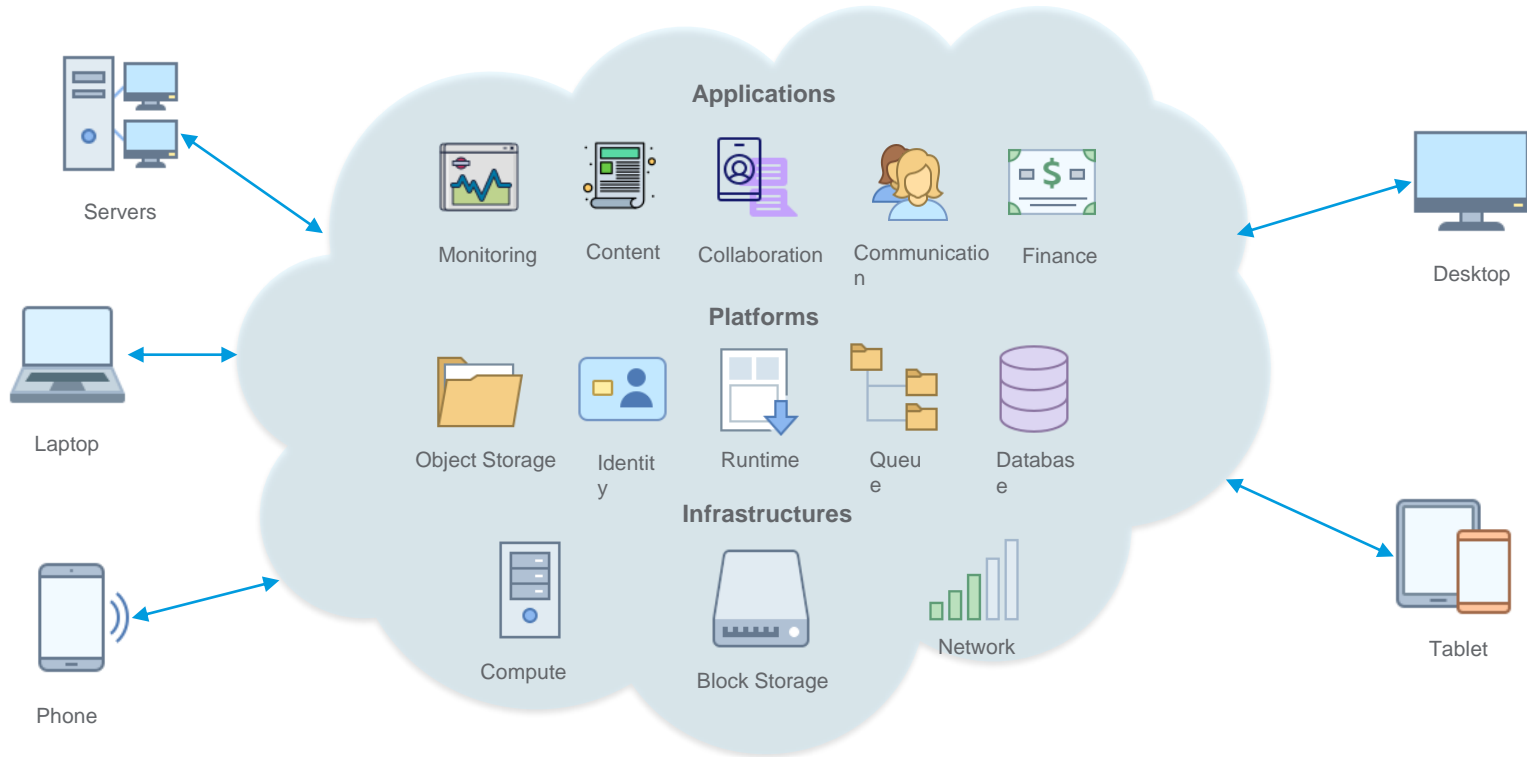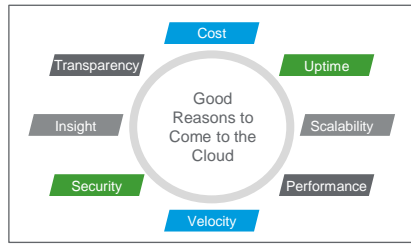
Why Exactly are you Going to the Cloud?

There are many good reasons to come to the cloud. Luckily, the list of common motivations for IT to move to the cloud isn't infinitely long, as the following compilation shows. You might find a few unexpected entries.

Cost

Transparency

Uptime

Insight

Good Reasons to Come to the Cloud

Scalability

Security

Performance

Velocity

RSM

Good Reasons to Come to the Cloud

Cost

Cloud providers have favorable Economies of Scale but nevertheless invest heavily in global network infrastructure, security, data-center facilities, and modern technologies such as machine learning. Organizations looking to reduce cost should migrate workloads that have uneven usage profiles and can thus benefit from the cloud's elasticity.

Uptime

Cloud providers also maintain massive network connections to the internet backbone, affording them improved resilience against distributed denial-of-service (DDoS) attacks. Set up correctly, cloud applications can achieve 99.9% availability or higher, which is often difficult or expensive to realize on premises.

Scalability

Cloud platforms teach instant availability of compute and storage resources, allowing applications to scale out to remain performance even under increased load. The cloud model makes capacity management the responsibility of the cloud provider, freeing your IT from having to maintain unused hardware inventory.

Performance

Many end users access applications from the internet, typically from a browser or a mobile application. Hosting applications with a cloud provider can provide shorter paths and thus a better user experience compared to applications hosted on premises.

Good Reasons to Come to the Cloud (Cont'd)

Cost
Transparency
Uptime
Good Reasons to Come to the Cloud
Insight
Scalability
Security
Performance
Velocity
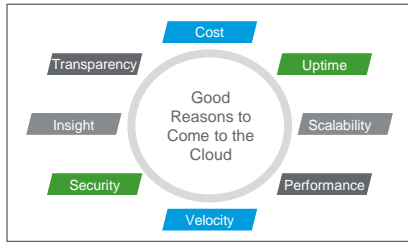
Velocity

Cloud providers have favorable Economies of Scale but nevertheless invest heavily in global network infrastructure, security, data-center facilities, and modern technologies such as machine learning. Organizations looking to reduce cost should migrate workloads that have uneven usage profiles and can thus benefit from the cloud's elasticity.

Security

Cloud providers also maintain massive network connections to the internet backbone, affording them improved resilience against distributed denial-of-service (DDoS) attacks. Set up correctly, cloud applications can achieve 99.9% availability or higher, which is often difficult or expensive to realize on premises.
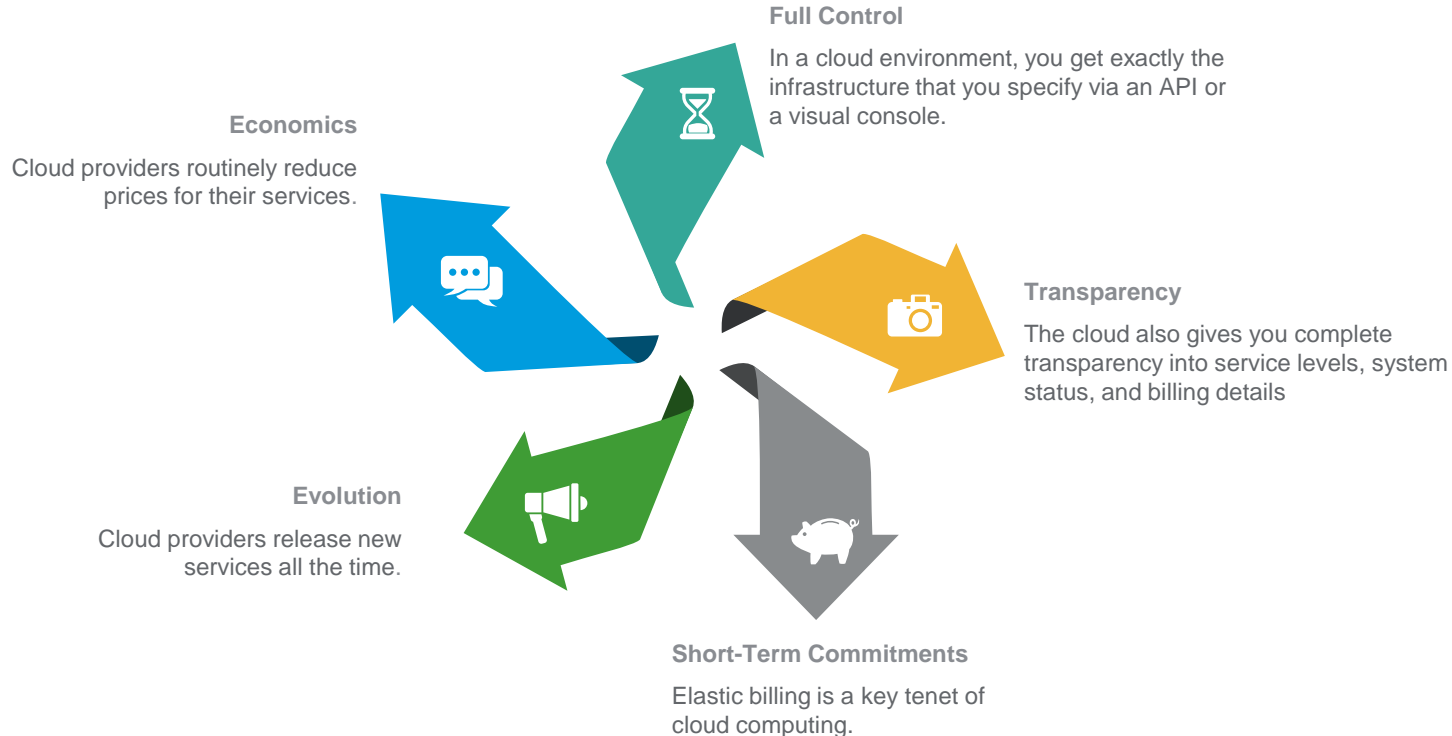
Insight

Cloud providers offer services that are impractical or impossible to implement at the scale of corporate data centers. For example, large-scale machine learning systems or pre-trained models inherently live in the cloud. So, gaining better analytic capabilities or better insights—for example, into customer behavior or manufacturing efficiency—can be a suitable motivator for going to the cloud

Transparency

Classic IT often has limited transparency into their operational environments. Simple questions like how many servers are provisioned, which applications run on them, or what is their patch status are often difficult and time consuming to answer. Migrating to the cloud can dramatically increase transparency thanks to uniform automation and monitoring.

RSM

Cloud is Outsourcing

The competitive environment is no longer defined by a company's size, but by its speed and agility. The cloud excels by providing all the important capabilities that traditional outsourcing could not

Full Control

In a cloud environment, you get exactly the infrastructure that you specify via an API or a visual console.

Economics

Cloud providers routinely reduce prices for their services.

Transparency

The cloud also gives you complete transparency into service levels, system status, and billing details

Evolution

Cloud providers release new services all the time.

Short-Term Commitments

Elastic billing is a key tenet of cloud computing.

RSM

Wishful Thinking isn't a Strategy

3 Wishful Thinking Isn't a Strategy

Strategy = Meaningful Decisions

Prioritizing forces you to make choices - you can't have it all.

Strategy = Meaningful Decisions

meaningful decisions is intuitive but nevertheless a little

Strategy = Creativity + Discipline

strategy relies on both creativity and decision-making discipline

4 Principles Connect Strategy and Decisions

A Strategy You Need
Developing a cloud strategy is significantly more difficult than stating aspirations, another corporate euphemism for wishes.

Decisions Define the Journey
When embarking on a journey, the defining element isn't the destination, but the turns you take along the way.
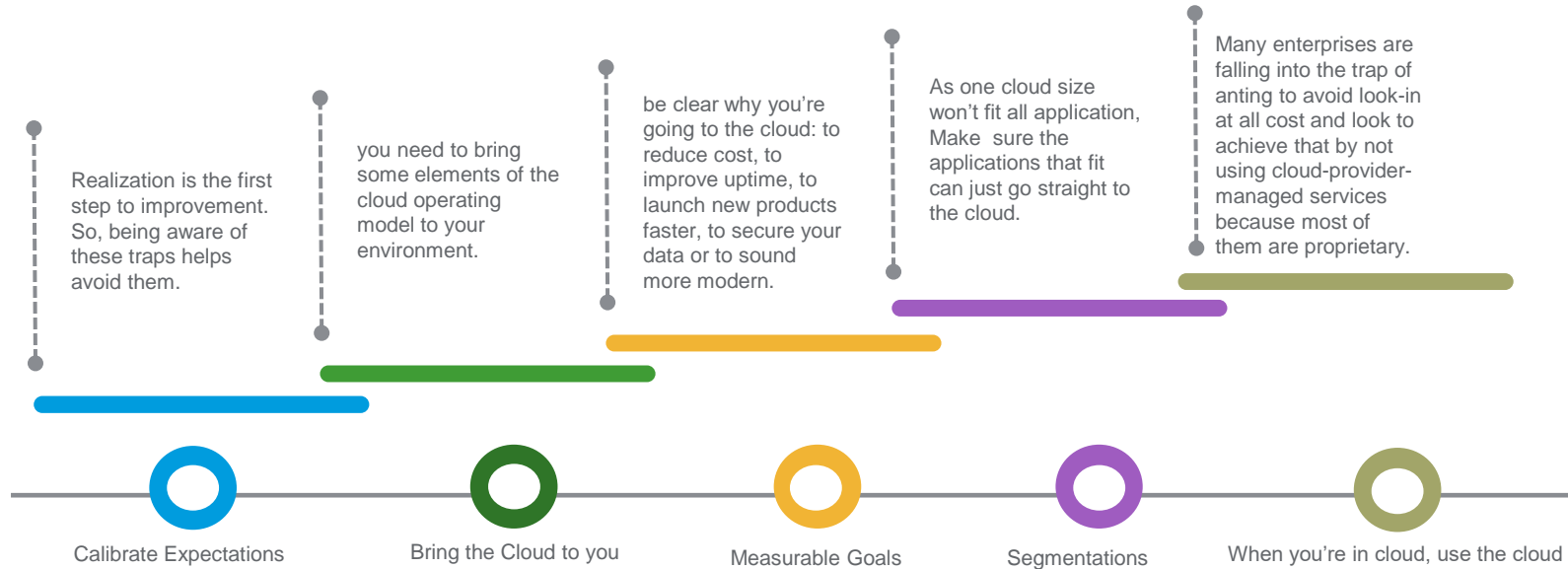
Be Aware of Your Decisions
The first critical step towards a decision-based approach is to be aware when you are making a decision.

Strategy Informs Decisions
Strategy and principles provide decision consistency

RSM

Don't Build an Enterprise Non-Cloud!

Enterprise and Cloud are largely contradict. To make sure your enterprise cloud remains deserving, this few consideration can help.

Realization is the first step to improvement. So, being aware of these traps helps avoid them.

you need to bring some elements of the cloud operating model to your environment.

be clear why you're going to the cloud: to reduce cost, to improve uptime, to launch new products faster, to secure your data or to sound more modern.

As one cloud size won't fit all application, Make sure the applications that fit can just go straight to the cloud.

Many enterprises are falling into the trap of anting to avoid look-in at all cost and look to achieve that by not using cloud-provider-managed services because most of them are proprietary.

Calibrate Expectations

Bring the Cloud to you

Measurable Goals

Segmentations

When you're in cloud, use the cloud

RSM

Don't Build an Enterprise Non-Cloud! (Cont'd)

When enterprises move to a commercial cloud provider, They must abide by existing policies and regulations, need to ensure spend discipline, and often have special data encryption and residency requirements. This is the challenges that might be occurs.

Onboarding Process
Enterprises have special requirements for cloud accounts that differ from startups and consumer.

Hybrid Cloud
For enterprises, not all applications in hybrid cloud can be migrated overnight.

Virtual Private Cloud (VPC)
Many enterprises are not too keen to share servers with their cloud tenant neighbors.

Legacy or Monolithic Applications
Applications that are built in house cannot easily scale out across multiple server instances.
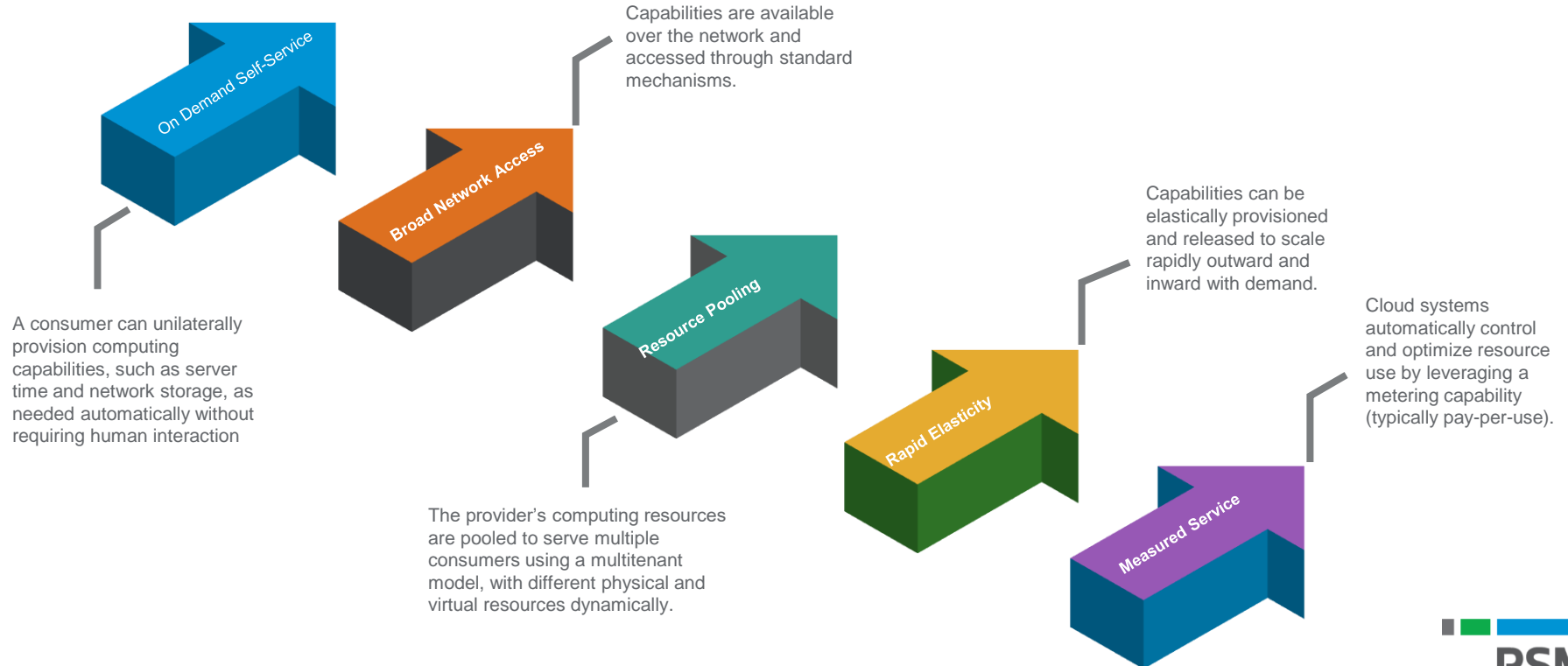
Cost Recovery
preparing the enterprise for a commercial cloud, or the commercial cloud for enterprise, isn't free.
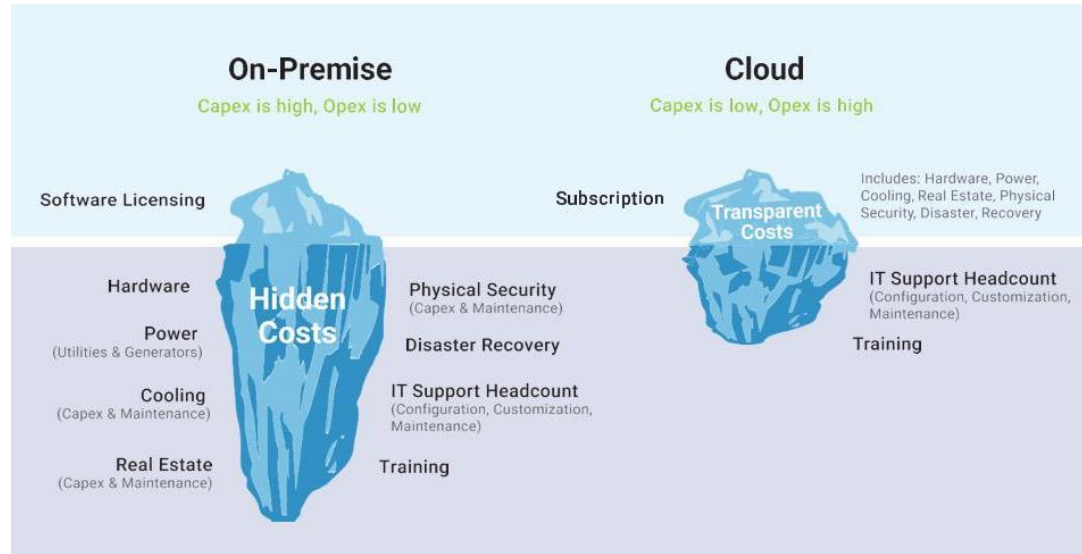
Cloud

RSM
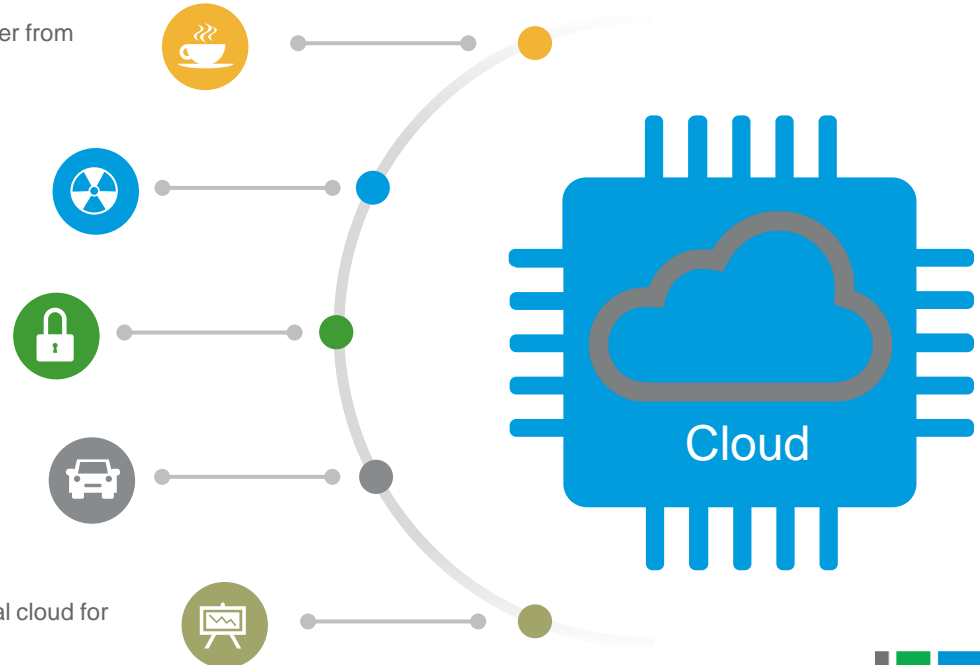
Don't Build an Enterprise Non-Cloud! - (Cont'd)

The US Department of Commerce's National Institute of Standards and Technology (NIST) defines five major capabilities for cloud computing

On Demand Self-Service

Broad Network Access

Resource Pooling

Rapid Elasticity

Measured Service

Capabilities are available over the network and accessed through standard mechanisms.

Capabilities can be elastically provisioned and released to scale rapidly outward and inward with demand.

Cloud systems automatically control and optimize resource use by leveraging a metering capability (typically pay-per-use).

A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction

The provider's computing resources are pooled to serve multiple consumers using a multitenant model, with different physical and virtual resources dynamically.

RSM

Cloud Saving have to be Earned

When we use Cloud we need to be aware of the following:

1. You will incur cost each second, minutes, days
2. Cost Optimization is your new religion
3. However, there is hope:
   - Cost in the cloud is transparent
   - Cloud providers actually want you to optimize your cost and provide you with the means and tool to achieve this

RSM

Cloud Saving have to be Earned (cont'd)

On-Prem → Migration → Cloud → Transparency → Optimized → Automation → Resilient
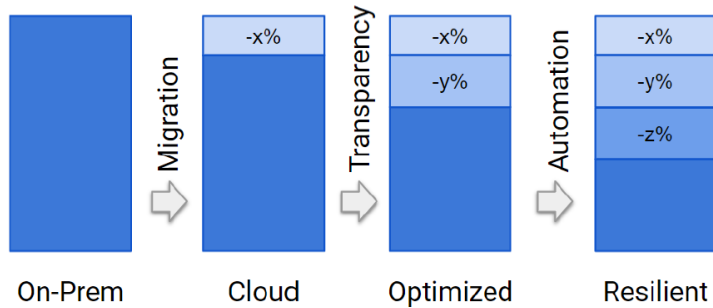
When migrating to the cloud, many organization stop at Migration.

It is your job to fully utilize the Power of the Cloud to achieve your cloud transformation goal (whatever that maybe) while at the same time also optimize your cloud cost.

CLOUD COST OPTIMIZATION

Regular Cloud Bill

Right Sizing
Reserved Instances
Storage

Reduced Cloud Bill
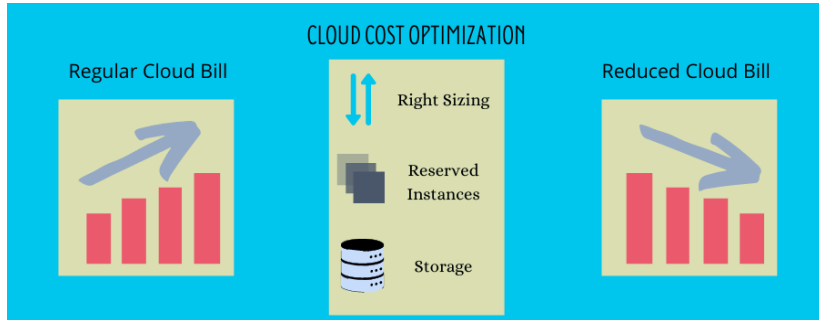
Beware Supermarket Effect

I just went to pick up some milk…

Cloud resources costs are "cheap"

Melihat 3 dari 75 instans yang tersedia

Nama instans ▲	Tarif per jam Sesuai Permintaan ▽	vCPU ▽	Memori ▽	Penyimpanan ▽	Kinerja jaringan ▽
t3.xlarge	0,2112 USD	4	16 GiB	Hanya EBS	Hingga 5 Gigabit
m5.xlarge	0,24 USD	4	16 GiB	Hanya EBS	Hingga 10 Gigabit
m5d.xlarge	0,282 USD	4	16 GiB	1 x 150 NVMe SSD	Hingga 10 Gigabit

You might be tempted to either:
- Buy more than you need
- Do not track your spending

RSM

Beware the Supermarket Effect!

Cloud computing is more like going to the grocery store, it will have many more line items, each at a relatively low price. So, if you exercise good discipline it can be significantly cheaper. However, it's also more difficult to predict total costs and keep it as needed.

Cost Control

Cost Out of Control

Know Your Biggest Problem
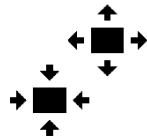
Checking Out

Being Prepared

RSM

Cost Management Tips

Cost Optimization Tips

AWS' Five Optimization Pillars

Right Size **Increase Elasticity** **Leverage the Right Pricing Model** **Optimize Storage** **Measure, Monitor & Improve**

1. Right Size
   Start small, you can always add/reduce more capacity later
2. Elasticity
   Make sure your application can be scaled up/down.
   Take advantage of serverless approach
3. Leverage Right Pricing Model
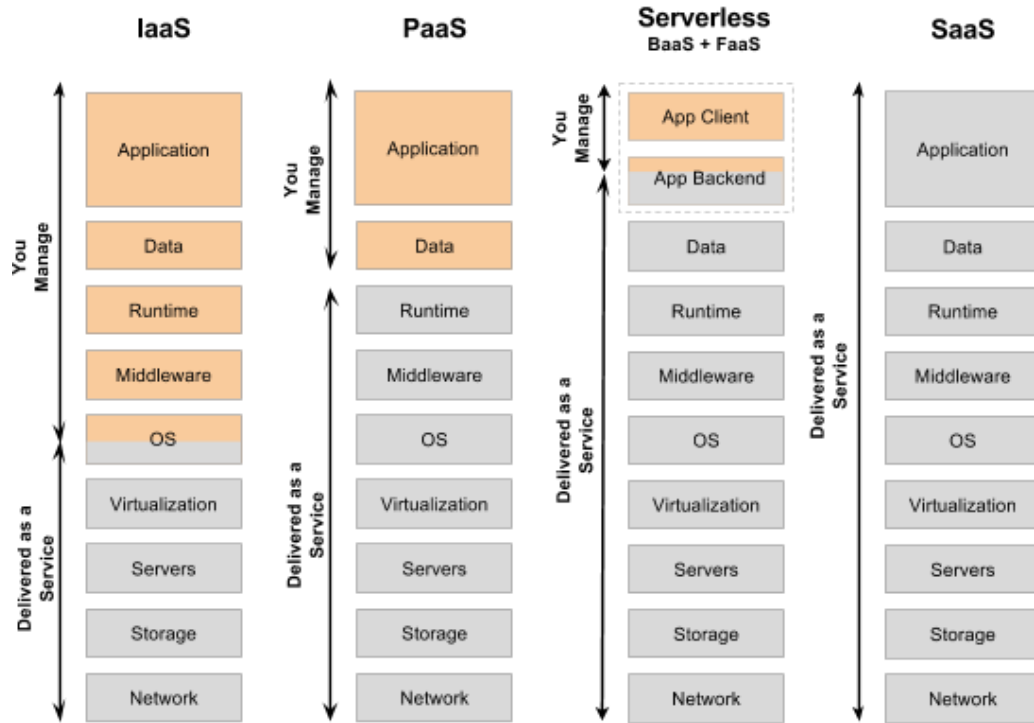   Take advantage of the many pricing models in the Cloud
4. Optimize Storage
   Ensure your storage reflect your data access characteristics.
   Segregate Hot and Cold data
5. Measure, Monitor & Improve
   Always, always monitor your cost

RSM

Let's Clarify What Serverless is

	IaaS	PaaS	Serverless BaaS + FaaS	SaaS

Serverless architecture is an approach to software design that allows developers to build and run services without having to manage the underlying infrastructure.

Developers can write and deploy code, while a cloud provider provisions servers to run their applications, databases, and storage systems at any scale.

Please note that the more item are managed by cloud provider, it means you loose control over it and consequently, there will be incremental cost associated to it.

Managed by Cloud Provider ($$)

RSM

Serverless Computing Use Cases

Use cases of Serverless Computing

Static Web Pages
- Load Static Webpages only when needed
- Eliminates continuous Website hosting on VM
- Just-in-time Web Services

IoT Data Processing
- IoT data is processed only on trigger events
- Achieve massive scale for IoT & lower costs
- Consolidate IoT management in cloud

Mobile Backend Apps
- User triggered Backend processing
- Simplify App Backend development & deployment
- Faster App development

Streaming Analytics
- Real Time Analytics based on key events
- Automated & On-Demand reporting
- Greater flexibility through connected analytics

Cognitive Processing
- Automated image processing
- Decentralized Processing
- Automated Identity validation

RSM

Serverless Pros and Cons

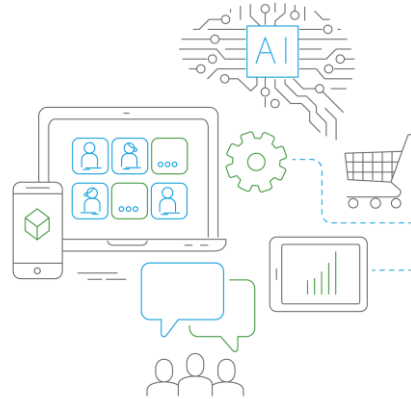| Benefits of Serveless | Drawback of Serverless |

Serverless computing biggest benefit is their (perceived) cost saving potential and simplified management and operations.

Biggest drawback is the (as of now) limited debugging capability and response latency.

Effortless Efficiency	Debugging
Productivity Boost	Security
Cost-effective	Vendor Limitations
Simplified Operations	Response Latency

RSM

Who's Afraid of Lock-In?

Vendor lock-in

Life lock-in ?

Addressing Lock-Ins

Public Cloud Providers

Microsoft Azure

IBM Cloud

Google Cloud Platform

amazon web services
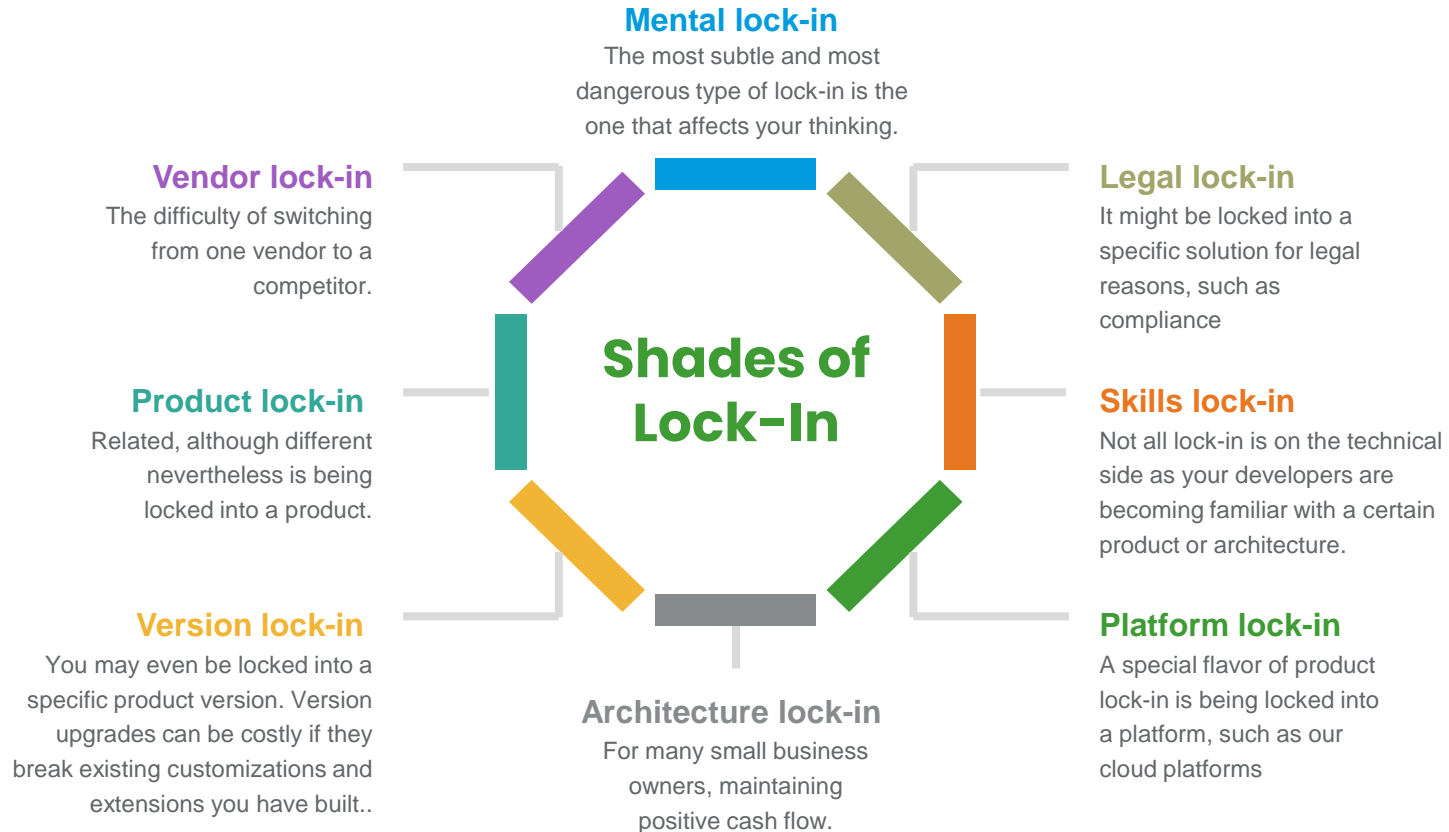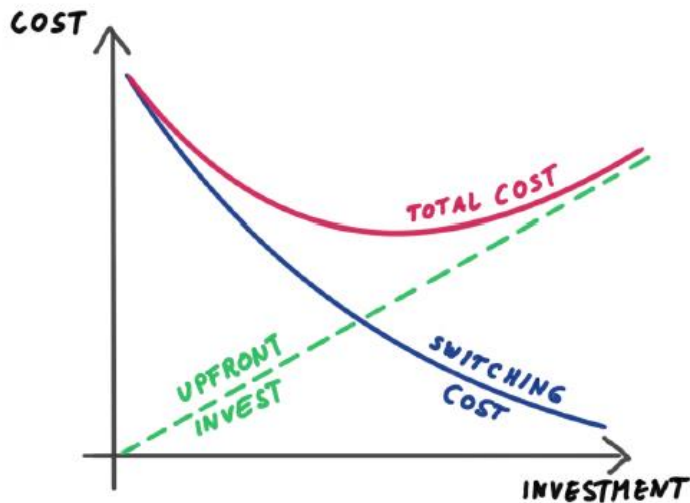
1. Accept that there will be lock-in to some degree, and that's OK

2. You can avoid Lock-Ins by creating options, but these option comes with cost in term of real $, time, complexity or worst, new Lock-Ins

3. Lock-Ins comes in many flavours. Identify what are acceptable and address those that are not

   - Vendor Lock-Ins
   - Product/Version Lock-Ins
   - Architecture Lock-Ins
   - Platform Lock-Ins
   - Legal Lock-Ins
   - Mental Lock-Ins

RSM

Shades of Lock-In

Mental lock-in
The most subtle and most dangerous type of lock-in is the one that affects your thinking.

Vendor lock-in
The difficulty of switching from one vendor to a competitor.

Legal lock-in
It might be locked into a specific solution for legal reasons, such as compliance

Product lock-in
Related, although different nevertheless is being locked into a product.

Skills lock-in
Not all lock-in is on the technical side as your developers are becoming familiar with a certain product or architecture.

Version lock-in
You may even be locked into a specific product version. Version upgrades can be costly if they break existing customizations and extensions you have built..

Platform lock-in
A special flavor of product lock-in is being locked into a platform, such as our cloud platforms

Architecture lock-in
For many small business owners, maintaining positive cash flow.

Shades of Lock-In

RSM

Look Past the Panacea and See the Real Enemy

COST

The total cost of lock-in

We will have better return of our time (investment) if we look past the "cost" and see the real enemy:

1. Complexity

   Avoid making your architecture too complex to avoid lock-ins

2. Underutilization

   Avoid underutilize/not using the benefit of a particular vendor product just to avoid lock-ins

   e.g you are avoiding to use GCP CloudSpanner and opted to instead standardized your database to use PostGreSQL

This simple graph tells us one thing, Minimizing switching cost is not the most economical choice because it will increase the total cost of lock-ins
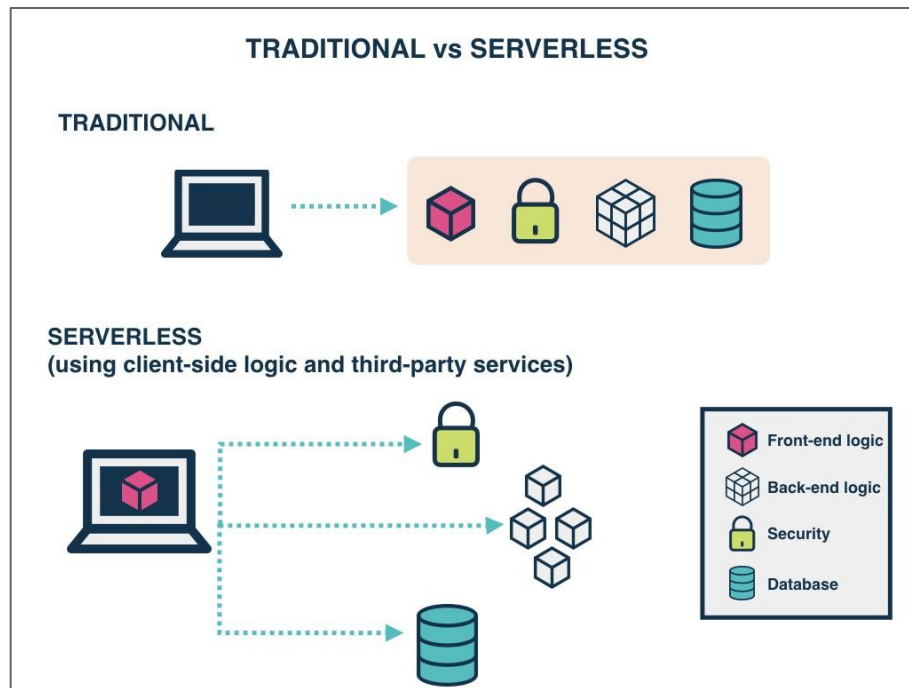
RSM

Serverless = Less Server?

Serverless computing (or serverless for short), is an execution model where the cloud provider (AWS, Azure, or Google Cloud) is responsible for executing a piece of code by dynamically allocating the resources. And only charging for the amount of resources used to run the code.

Serverless is sometimes referred to as "Functions as a Service" or "FaaS". Following are the FaaS offerings of the major cloud providers:

• AWS: AWS Lambda
• Microsoft Azure: Azure Functions
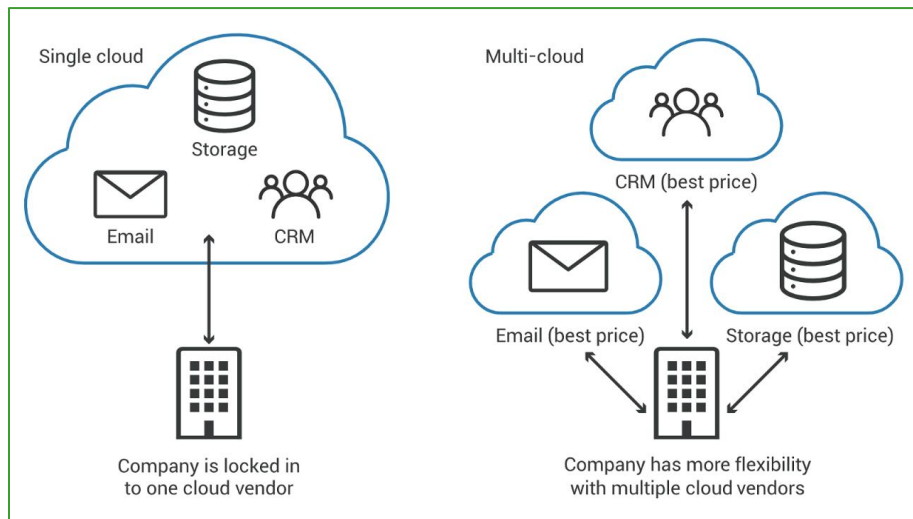• Google Cloud: Cloud Functions

While serverless abstracts the underlying infrastructure away from the developer, servers are still involved in executing our functions.

Since your code is going to be executed as individual functions, there are a couple of things that we need to be aware of.

TRADITIONAL vs SERVERLESS

TRADITIONAL

SERVERLESS
(using client-side logic and third-party services)

Front-end logic
Back-end logic
Security
Database

Don't Get Locked up into Avoiding Lock-In

Vendor lock-in refers to a situation where the cost of switching to a different vendor is so high that the customer is essentially stuck with the original vendor. Because of financial pressures, an insufficient workforce, or the need to avoid interruptions to business operations, the customer is "locked in" to what may be an inferior product or service.

Single cloud

Storage

Email   CRM

Company is locked in
to one cloud vendor

Multi-cloud

CRM (best price)

Email (best price)   Storage (best price)

Company has more flexibility
with multiple cloud vendors

Experienced architects have a more nuanced view on lock-in:

- First, architects realize that lock-in isn't binary: you're always going to be locked into some things to some degree—and that's OK.

- Second, you can avoid lock-in by creating options, but those options have a cost, not only in money, but also in complexity or, worse yet, new lockin.

- Lastly, architects need to peek behind common associations; for example, open-source software supposedly making you free of lock-in.

RSM

Hybrid Cloud vs Multi Cloud

The first step in dissecting the buzzwords is to split the multi-hybrid combo-buzzword into two, separating hybrid from multi. Each has different driving forces behind it, so let's try two simple definitions. Enterprises can't avoid hybrid cloud, but they can choose their path

Hybrid Cloud:
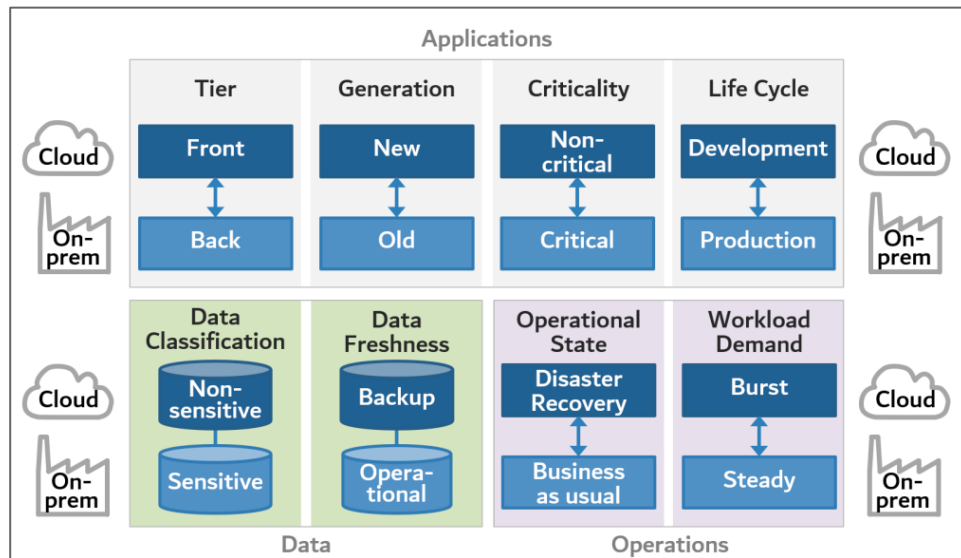Splitting workload(s) across the cloud and on premises
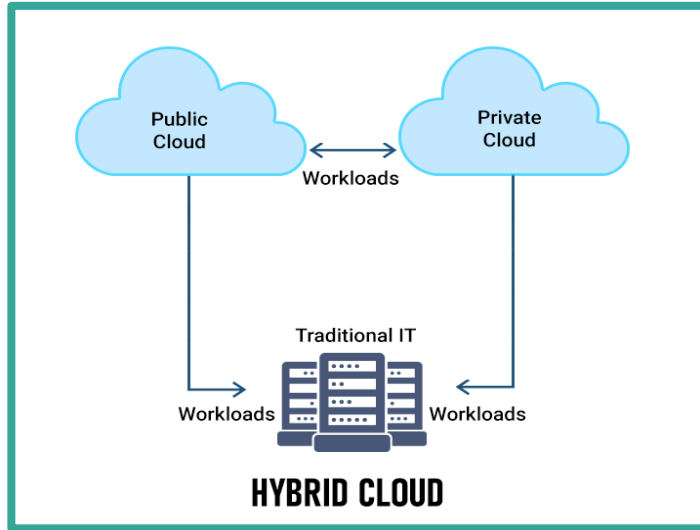
Multi Cloud:
Running workloads with more than one cloud provider
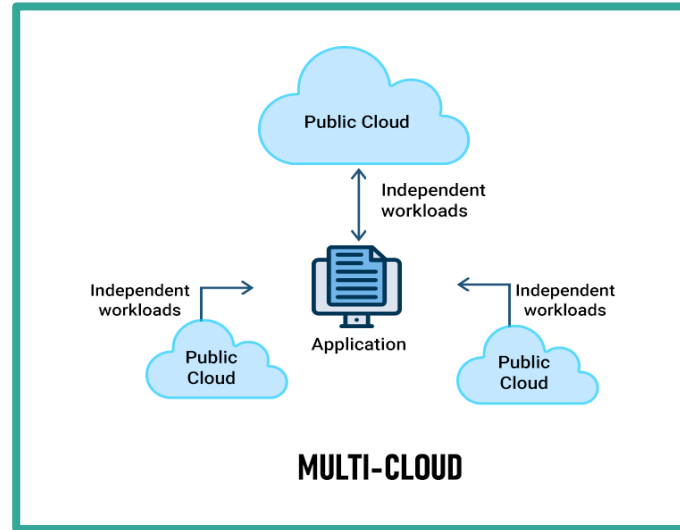
Hybrid Is a Reality | Multi Is an Option

RSM

Eight Ways to Split a Hybrid Cloud

Enterprises split their application portfolios in at least eight common ways, divided into three categories of applications, data, and operational considerations

Highlight

This list's main purpose isn't as much to find new options that no one has ever thought of you might have seen more. It's much rather a collection of well-known options that makes for a useful sanity check.
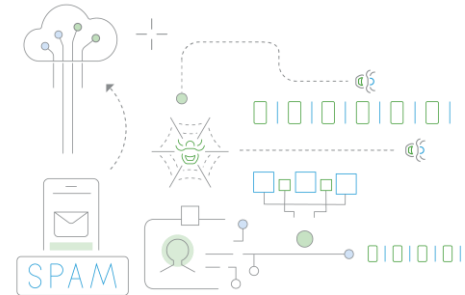
Cloud Migration

Whether migrating from your on-premises infrastructure to the cloud or migrating between clouds, systematically breaking the task down into three main phases—planning, execution and validation—can reduce the inherent stress and uncertainty.

| Phase 1:
Planning and Staffing | Phase 2:
Execution | Phase 3:
Validation |

Highlight

Despite a steady supply of tooling and frameworks, cloud migrations are hardly ever fun. And while it's all too easy to take comfort in not having to do them very often, that very fact makes migrations particularly risky.

RSM

Cloud Migration – Phase 1

The first order of business in a migration is to get a picture of what the migration is going to look like and how it would proceed.

Phase 1: Planning and Staffing	Phase 2: Execution	Phase 3: Validation
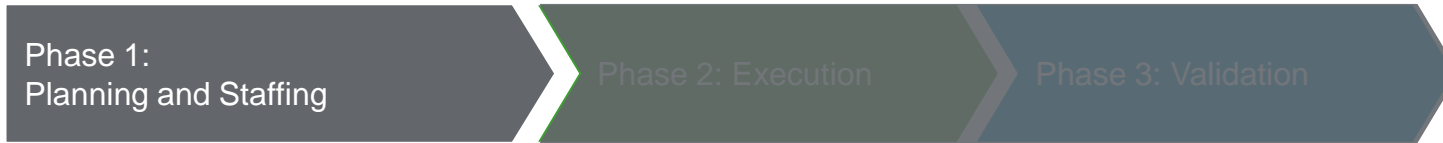
Size up the migration	Define the scope of the migration, both in size (e.g., how many applications or computing resources) and complexity (e.g., to what extent applications will change during the migration).
Clarify the motivations and goals	A clear set of goals is critical for success in the cloud and the same is true for the migration
Define success metrics	During the cloud migration journey, success metrics are the GPS device that lets you track progress and correct your course.
Get stakeholder buy-in	Every stakeholder should have a clear idea of how they are going to benefit from the migration so that they can assist rather than resist.

RSM

Cloud Migration – Phase 2

It's all about execution, but jumping in head-first is risky.

Phase 1: Planning and Staffing	Phase 2: Execution	Phase 3: Validation
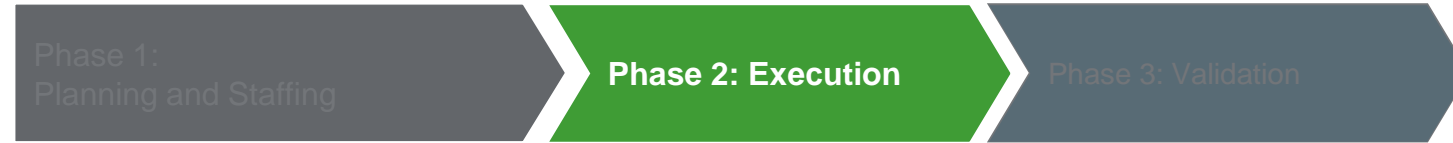
Discovery	Gathering information about the existing environment helps formulate a mapping of existing components to the new environment. The outcome of discovery is the tech plan describing what the destination environment would be like and a sequence of high-level tasks to get there.
Automation and Federation	Provisioning and validating the new cloud environment can be time consuming. However, this process can be accelerated along two dimensions: using automation instead of manual deployments and federated instead of centralized execution.
Training	Whether migrating from an on-premises environment to the cloud or migrating between clouds, a change in the operational practices and tooling can have a debilitating impact on teams if they are not sufficiently trained for the new environment.

RSM

Cloud Migration – Phase 3

The chances that a large migration project exactly yields the anticipated results are low. A well-planned validation structure helps to continuously correct course and arrive at a result that is in line with expectations.

Phase 1: Planning and Staffing	Phase 2: Execution	**Phase 3: Validation**

Environment Validation	Environment validation ensures that things work as expected, conducted during the warranty period mentioned in the previous section. It also ensures that the migrated components perform their business functions as they are expected to.
Cost Validation	Benchmarking the actual cost of operation against the projected cost helps detect deviations early and adjust the project budget and funding. It also uncovers any faulty assumptions in the initial cost projections so that the value proposition of the migration exercise can be reevaluated.
Business Goal Validation	Finally, the team must validate the migration's business goals, such as improving agility, enhancing the security posture, or providing better system availability

RSM

RSM INDONESIA
PLAZA ASIA LEVEL 10
JL. JEND. SUDIRMAN KAV.59
JAKARTA 12190 INDONESIA

w w w . r s m . i d

RSM