

30/06/2022

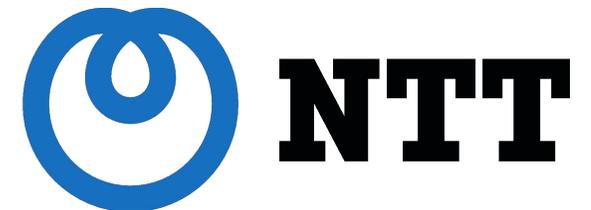


# Nyrstar's journey to cloud:

*"From Technology Debt to Engine for Innovation"*

  
nyrstar

*With support and Managed  
Public Cloud from*



## About the speakers



**Dewald van Dyk** is the IT Operations and Architecture Lead for the Nyrstar group. He has particular interest in technology enabled, business transformation.

**Scott King** is Cloud Enterprise Architect at NTT specialized in facilitating clients Journey to Cloud and helping organizations embrace new technology to transform their business. Scott is American by origin and a member of the CAA since 2014.



## Talking points Nyrstar

- **Who is Nyrstar?**
- **The Challenge**
- **The Approach**
- **The Result**
- **The Future...**

## Talking points NTT

- **Multi-Cloud as a Service**
- **Multi-Cloud Adoption Framework**
- **Managed Services geared towards Application Modernization**

## Who is Nyrstar?



Nyrstar is a global multi-metal business that can meet the demand for zinc, lead and other metals and products for many generations to come.



We have a market leading position in zinc and lead and have mines, smelters and other operations in Europe, the Americas and Australia.



\*Footnotes can be added here

# The Nyrstar Challenge

- ❑ Neglected IT Landscape
- ❑ High levels of technical debt
- ❑ Weak cybersecurity posture
- ❑ “Keep the lights on” mindset
- ❑ Inability to leverage technology innovation in struggle to remain competitive

## Pain Points:

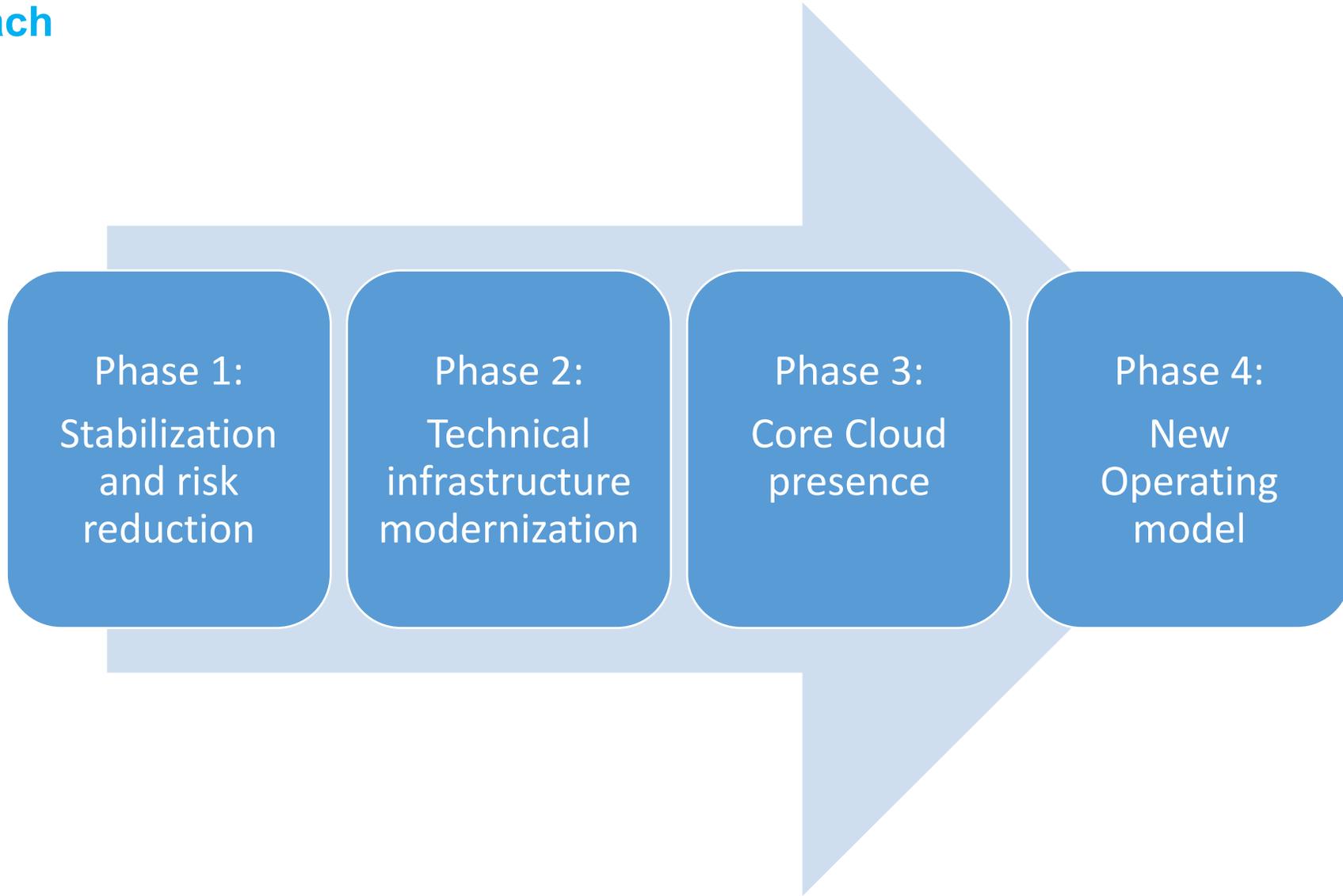
- Employee Collaboration
- Consolidated Financials – able to close faster and more efficiently




Culminated in global level Ransomware attack in 2019...


THEN Nyrstar was bought in late 2019 by world class metals trader, Trafigura, who have since been heavily investing across the board in order to modernize, optimize production safely and reduce risk.

# The Approach



## Phase 1: Stabilisation & Risk reduction (1 – 1.5 years)

- ✓ Setting up the corporate team
- ✓ 5 to 7 year technology “leapfrog”
- ✓ Policy review and revamp
- ✓ **Enhance security posture with introduction of Microsoft MFA, CrowdStrike**, frequent vulnerability scanning regimen, various Cisco products and the establishment of a formalized SOC
- ✓ **Consolidation of technology and support** vendor / supplier landscape
- ✓ Standardization on Core and Firewall technology
- ✓ ServiceNow ITBM (Project management) introduction

## Phase 2: Technical Infra modernization (2 years)

- ✓ **Partnering with NTT in introducing of SDWAN technology**
- ✓ **Definition of Purdue based network segregation** zoning model and launching IT / OT network segregation projects
- ✓ Implementation of standard Firewall and Core across all sites
- ✓ Standardization of on-premise virtualization, storage and backup solutions implemented through old-hardware refresh programs
- ✓ Definition of Nyrstar IIoT policy
- ✓ POC on Industrial IoT using LoRAWAN and “bare bones” design pattern

# Pain Points leading Nyrstar to choose for Public Cloud



Lack of Business Agility



Outdated tech



**Increased speed**  
not just of applications –  
but of the business

**Easier interoperability**  
not just between technologies –  
but between services

**Improved control**  
not just of your own assets –  
but of resources you don't own

Slow delivery times  
for new requests

Open

Lack of Standardization

Challenges with Security

Insufficient cost controls



**Reduced risk**  
not just defending a perimeter –  
but multiple attack surfaces



**Optimised cost**  
not just capex versus opex –  
but blending fixed and variable

## Phase 3: Establish Core Cloud Presence (1 year)

- ✓ **Migration of DC infrastructure and services to Azure base, executed and supported by NTT**
- ✓ User access policy design and update
- ✓ Privileged Access management
- ✓ Transition to PowerBi Premium
- ✓ OT Cybersecurity approached with introduction of specialized monitoring appliances
- ✓ ERP change program and readiness assessment and readiness (SAP RISE)

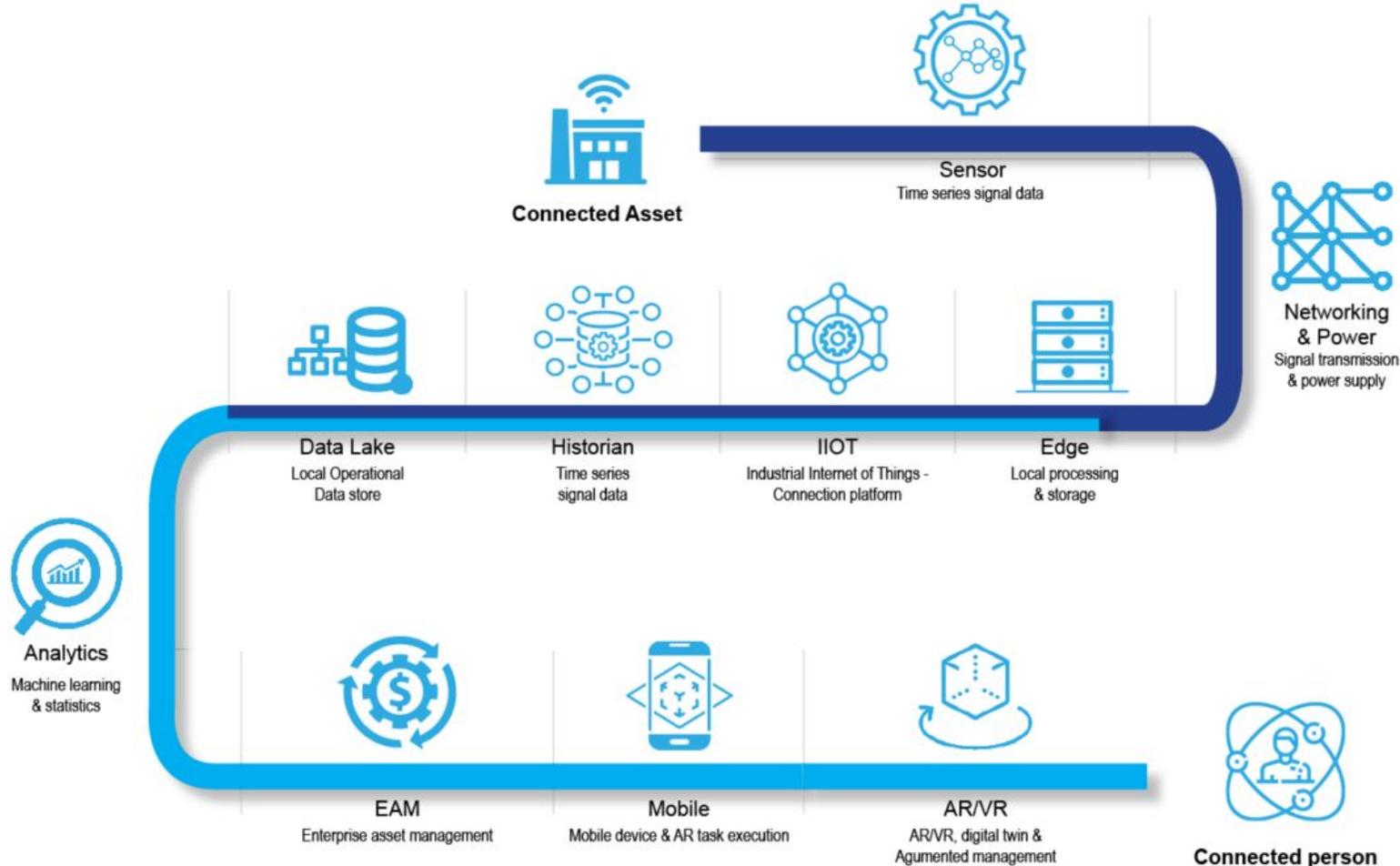
### Key Components of the Nyrstar Cloud Architecture

- Establish Cloud Governance
- Define Security Policies and Procedures
- Define Cloud Transformation Plan

#### Design and build Azure Foundation including:

- Landing Zone – hub & spoke network model using Azure vWAN
- Azure Firewall Premium
- Azure Application Gateway
- Azure Defender for Cloud
- Identity federation & RBAC roles
- Azure Key Vault
- Azure Monitor

# Nyrstar: Phase 4: The New Operating Model (A connected organisation)



- ✓ **Culmination of 3 years' worth of following an aggressive strategy lays the foundation for this new operating model**
- ✓ **Strengthening the partnership with NTT as a technology partner and not a service provider**
- ✓ **Sets the strategy for IT side investment for the near to mid term**
- ✓ **This operating model perfectly places Nyrstar to take full advantage of cloud in identifying, pursuing and implementing innovation based on or utilizing the technology that is now at our disposal**

\*Footnotes can be added here

# NTT Multicloud as-a-Service



Simplify the Complex

Secure & Optimise

Innovate without compromise

Transform & Innovate

Operate & Optimise

Cloud Management

Security Management

Application Management

Financial Management

360 Observability

## Cloud Services Platform

VMs

Containers

PaaS

SaaS

Data platforms



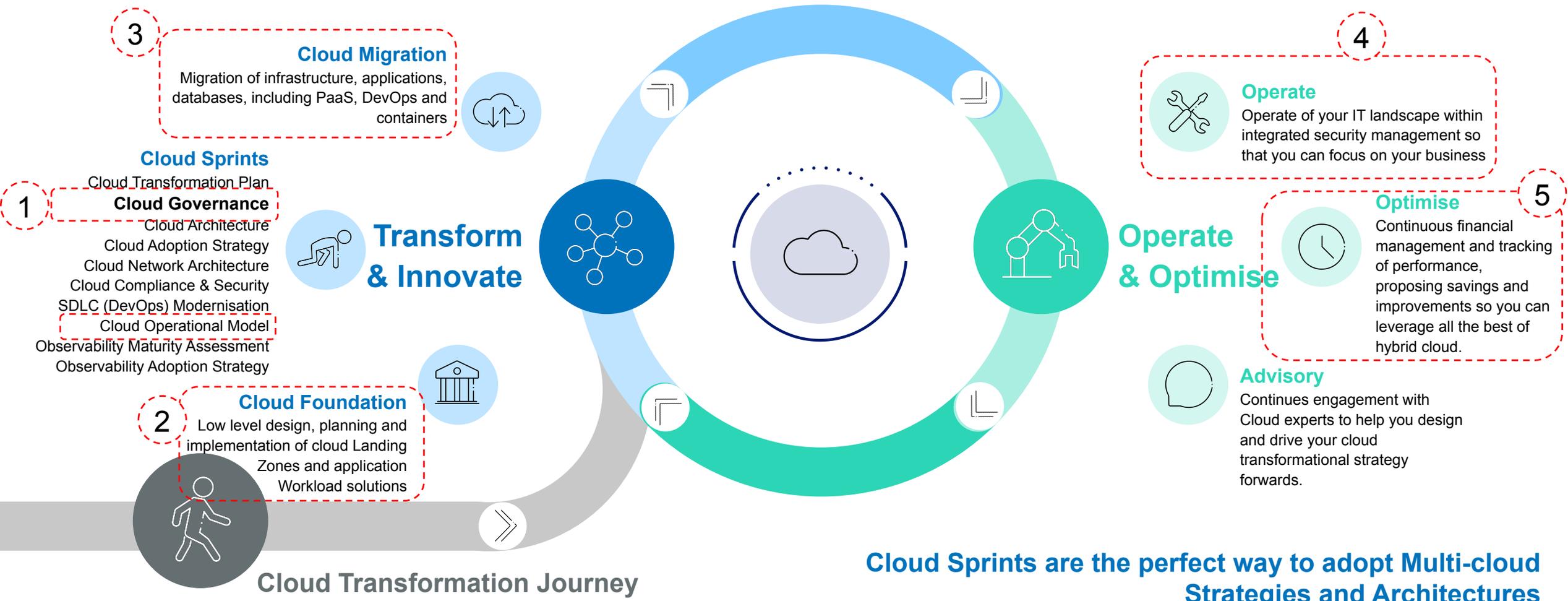
= Selected for Nyrstar scope

[Red dashed box] = Selected for Nyrstar scope



# NTT Journey to Cloud Approach

A continuous outcome driven, advisory service for every stage of our clients cloud adoption journey

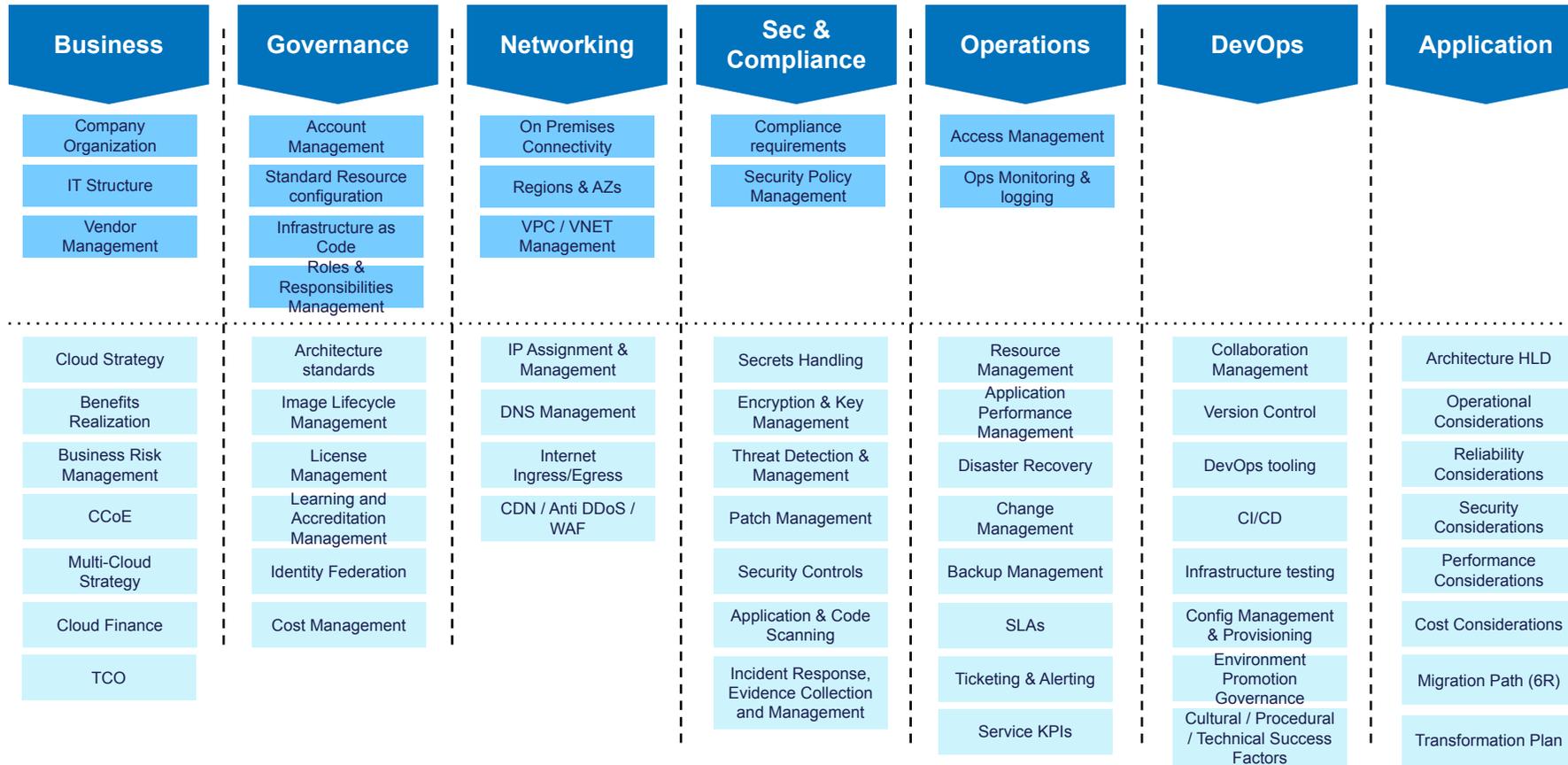


**Cloud Sprints are the perfect way to adopt Multi-cloud Strategies and Architectures**

# NTT Ltd. Multi-Cloud Adoption Framework (CAF)



## One Governance Framework across your Multi-Cloud Platforms



Our Cloud Adoption Framework (CAF) includes a series of adoption areas that are considered at varying depths and assembled into the relevant sprints. It continually **evolves best practices** to ensure systems are architected, implemented, and operated according to a **set of agreed standards, tailored to each client.**

**Common topics** are considered for the majority of engagements to **ensure consistency.**

\*Topics are subject to changes as they are in continuous evolution and refinement

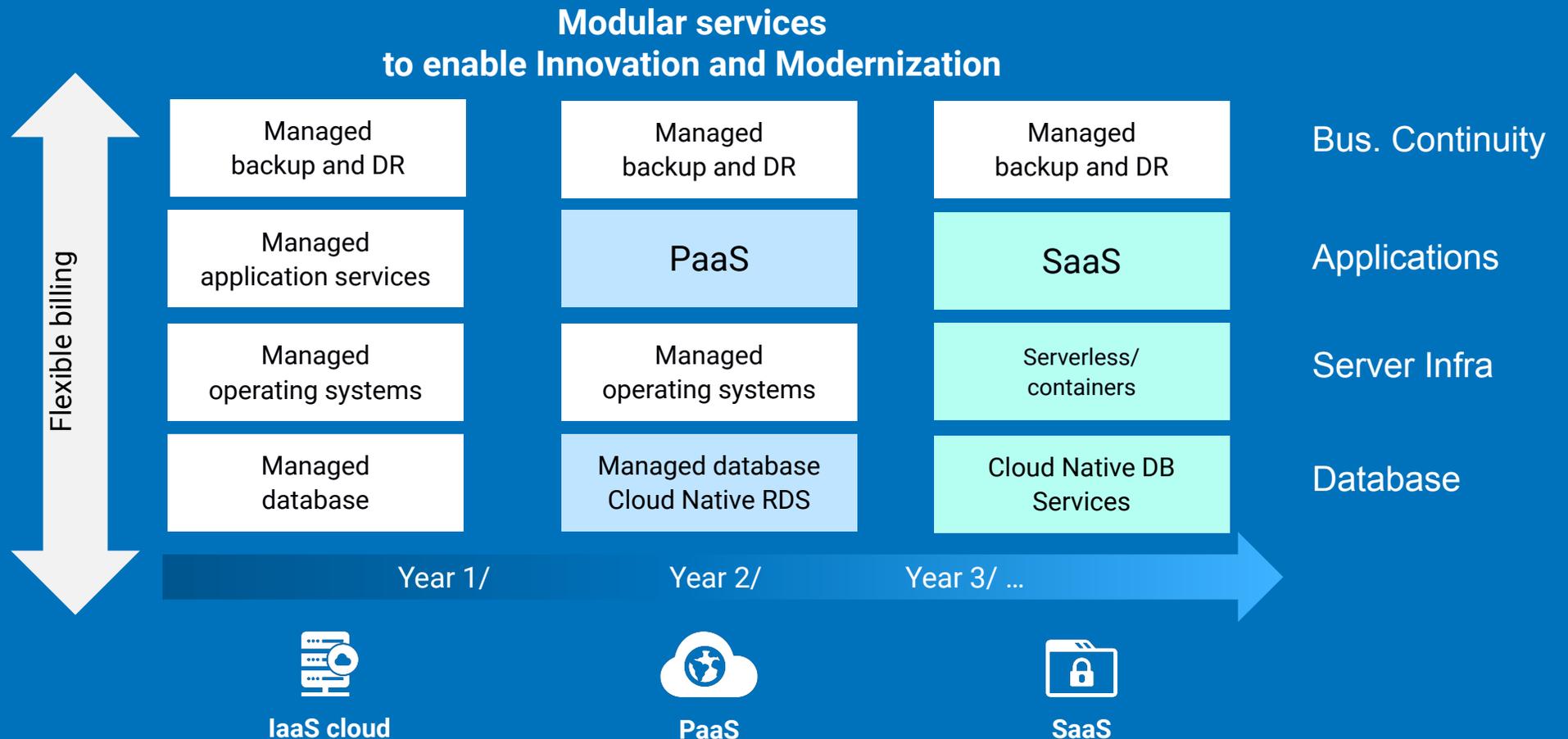
Adoption areas    Common topics    Sprint level topics

# NTT Managed Cloud enables Nyrstar to evolve

Services designed to evolve to support your digital transformation journey

NTT enables Innovation through application modernization and adopting cloud native capability

As cloud adoption matures, and applications evolve, NTT's Modular services support this evolution.



**With Nyrstar in Azure, these modernizations are promising for innovation:**

- SQL servers to Azure SQL (and other IaaS to PaaS replacements)
- DevOps & CI/CD process and platforms to develop new bus. functionality
- Autonomous scalability and failover of Nyrstar applications
- Adopt Azure DataLake to create an operational data store
- Utilize Azure analytics tools to provide actionable insights for Nyrstar operations
- Adding AI PaaS services in Azure (Azure ML workbench, Cognitive services) to make better business decisions.

**In Short: Cloud is becoming a driving force for Innovation within Nyrstar**





**NTT**

**NOW HIRING:  
CLOUD  
ARCHITECTS**

**Together we enable the connected future**