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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.



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

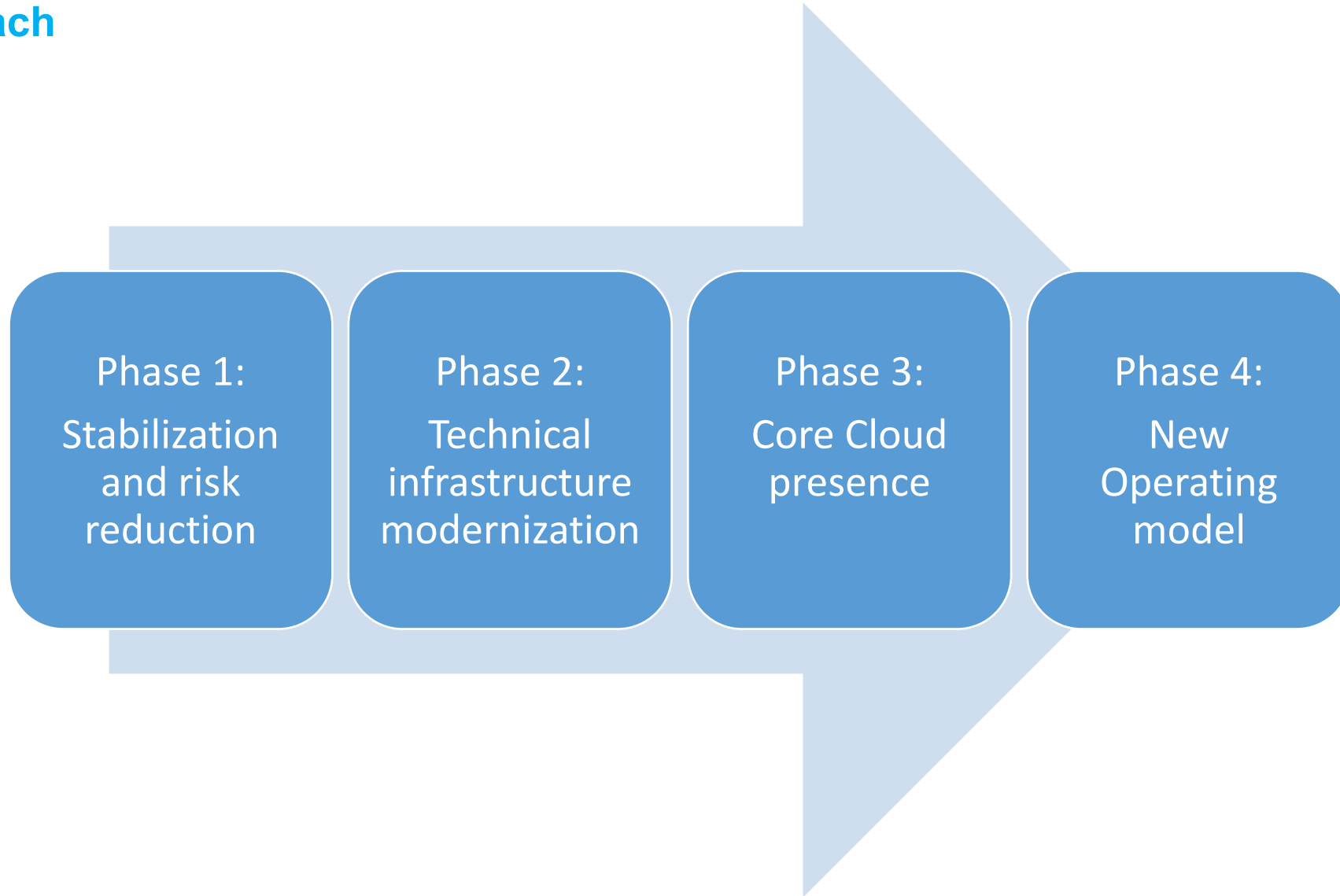


Culminated in global level Ransomware attack in 2019...



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)

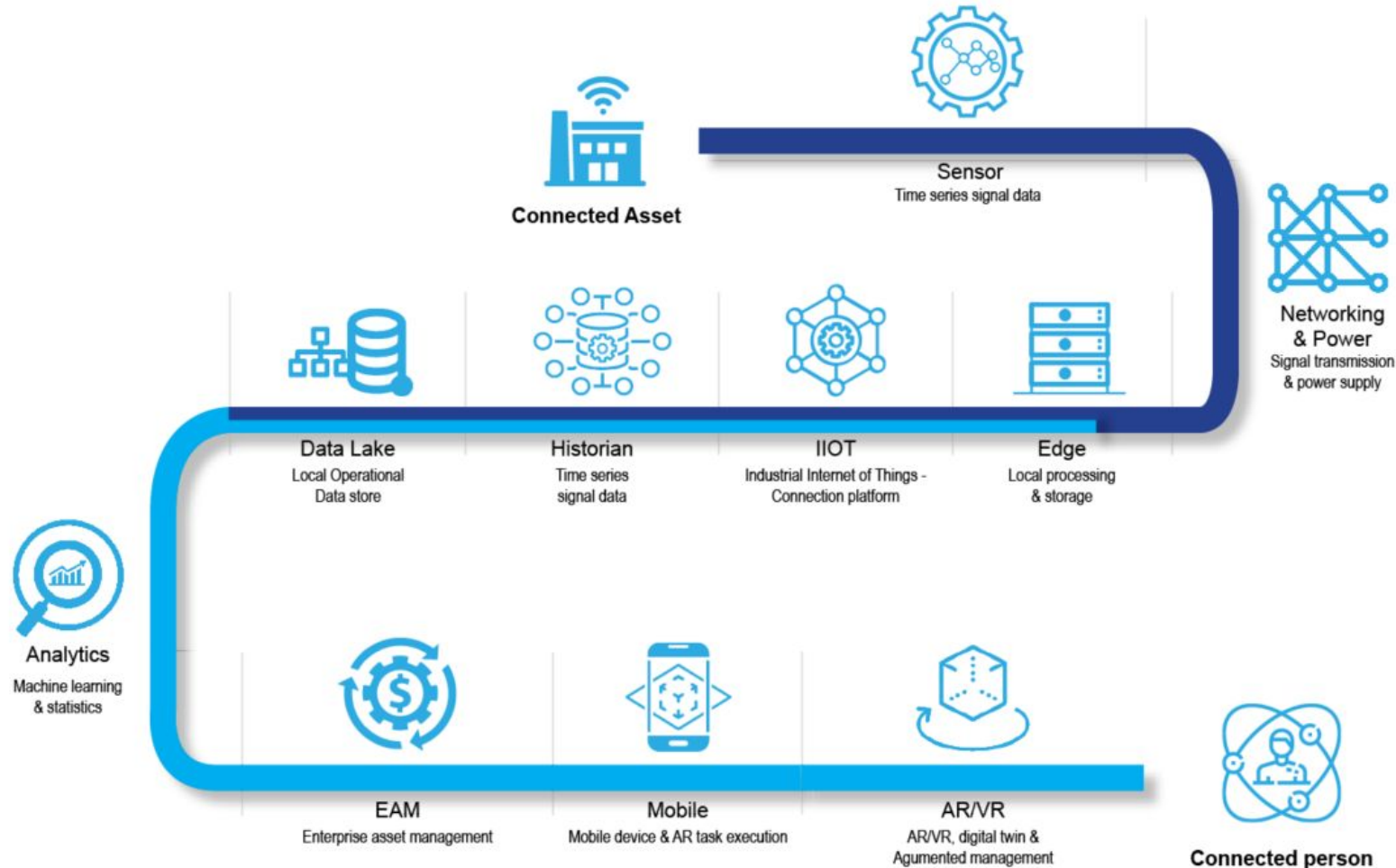
Key Components of the Nyrstar Cloud Architecture

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

Design and build Azure Foundation including:

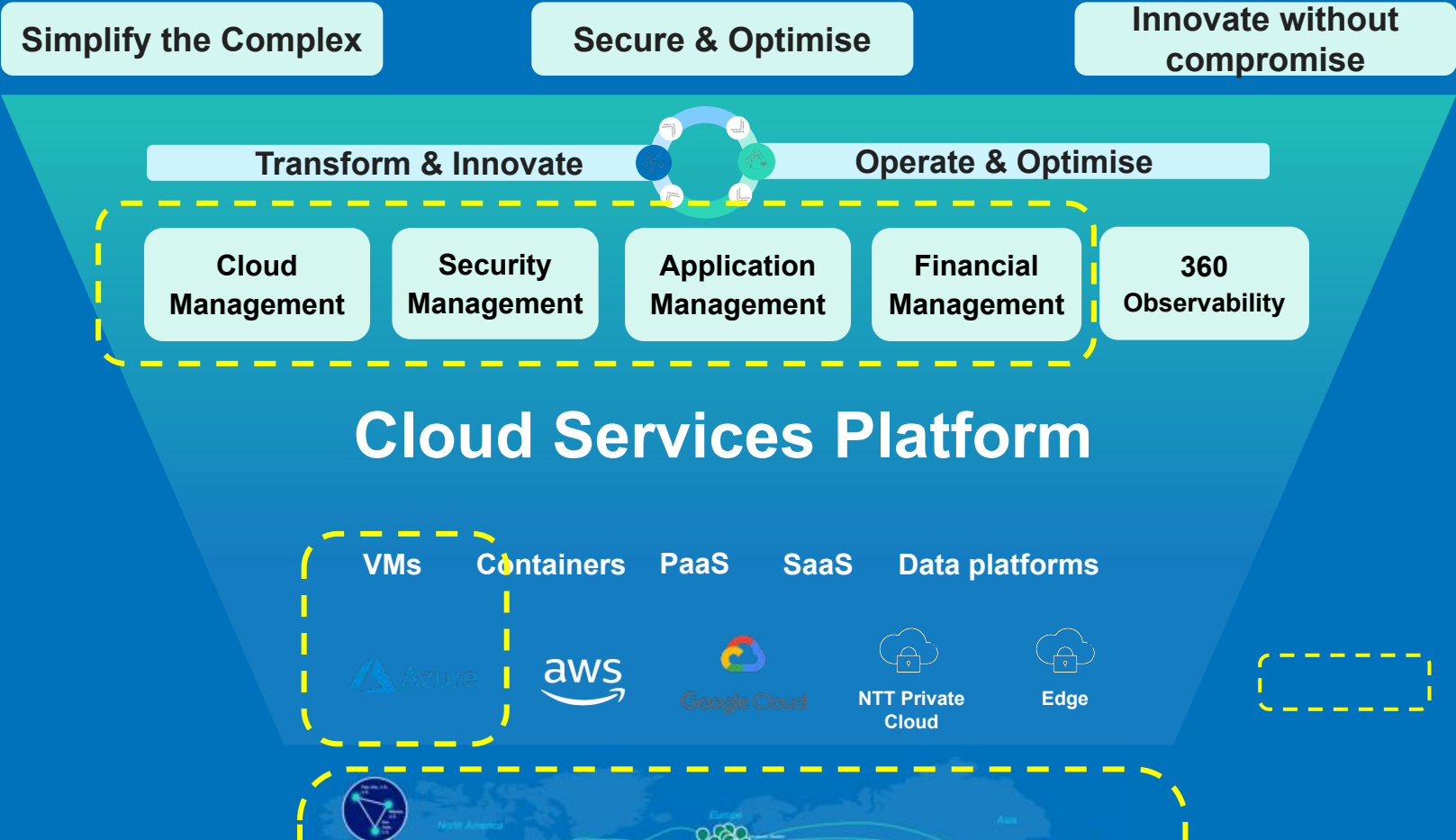
- Landing Zone – hub & spoke network model using Azure vWAN
- Azure Firewall Premium
- Azure Application Gateway
- Azure Defender for Cloud
- Identity federation & RBAC roles
- Azure Key Vault
- Azure Monitor

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

NTT Multicloud as-a-Service

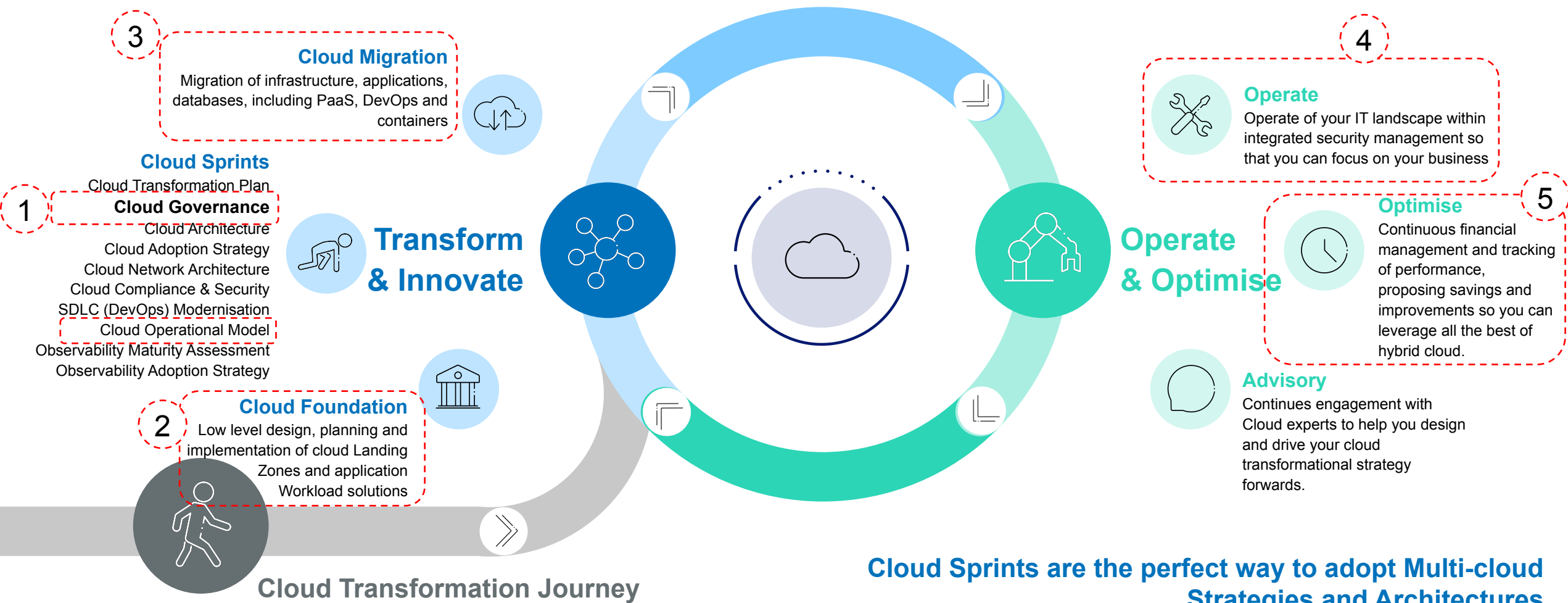


= Selected for Nyrstar scope

NTT Journey to Cloud Approach



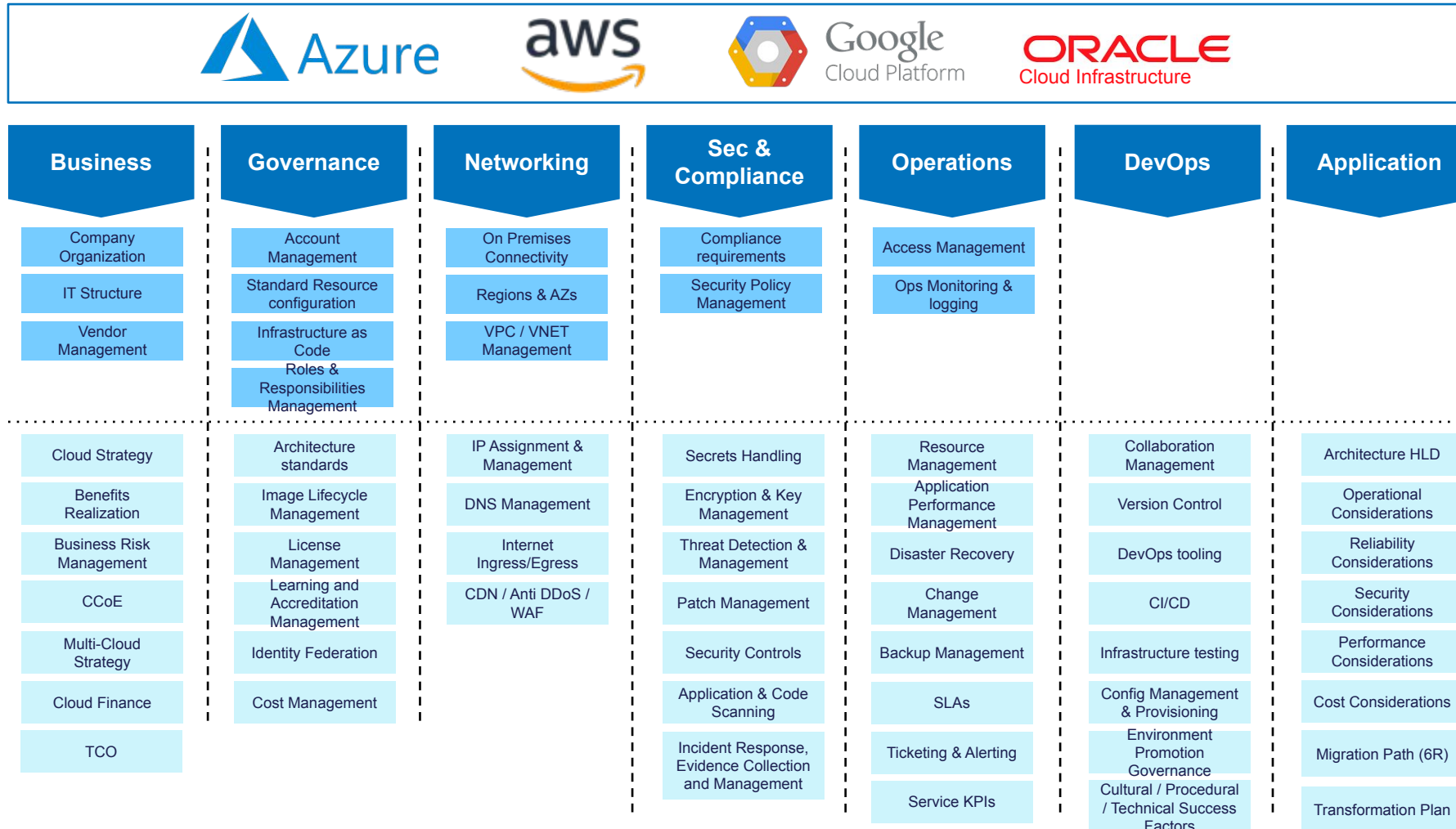
A continuous outcome driven, advisory service for every stage of our clients cloud adoption journey



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

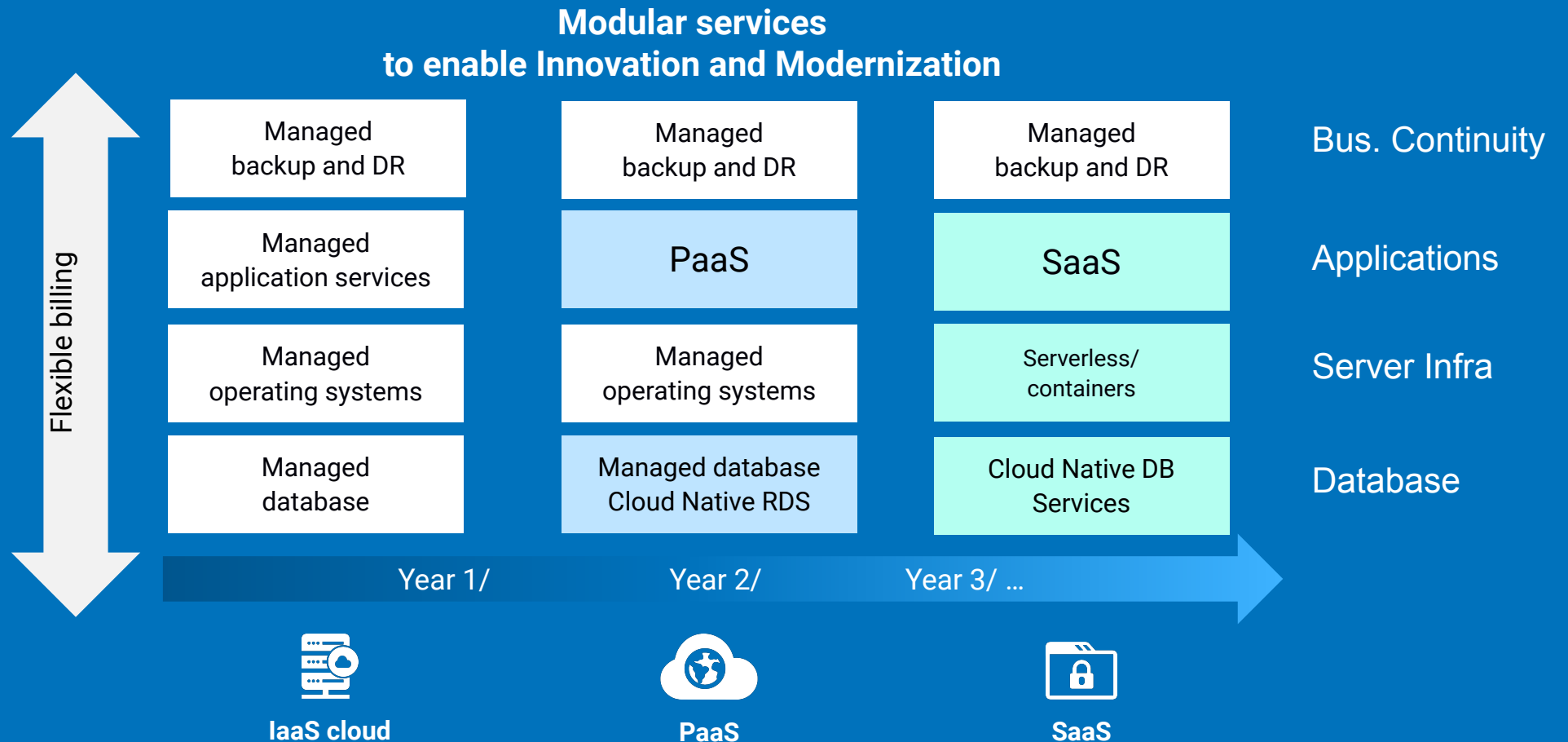
Sprint level topics

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





**NOW HIRING:
CLOUD
ARCHITECTS**

Together we enable the connected future