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pSeries Modernization to Azure

Why customers choose Kyndryl with Microsoft

Our Customers

We work in partnership with thousands of customers, dedicated to ensuring that each achieves its peak digital performance

>4,000
global customers

Including
of the Fortune 100; more than half of the Fortune 500

~60%

Providing undisputed leadership

6.1M mainframe installed MIPS

3.5M LAN ports managed

300K network devices managed

5,200+ WAN devices managed

67K+ VMware systems managed

14K+ SAP instances managed
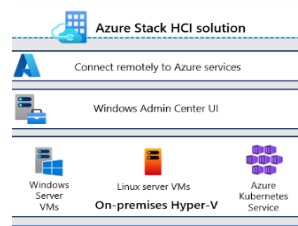
3.5+ exabytes of customer data backed up annually

Modernizing and managing the world's mission-critical systems

Enterprise AI Services

vmware | Microsoft Azure

Azure VMware Solution (AVS)

Mainframe Modernization

Azure Stack HCI solution
Connect remotely to Azure services
Windows Admin Center UI
Windows Server VMs | Linux server VMs | Azure Kubernetes Service
On-premises Hyper-V

Azure Stack HCI + ARC

SAP on Azure
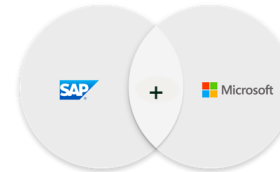
SAP + Microsoft

Digital Workplace Services (DWS)

Copilot

Skytap
A Kyndryl Company

Cyber Incident Recovery

RECOVERY

Kyndryl Services

Cloud
Delivering seamless advisory, migration, modernization, and management services integrated with Microsoft Cloud

Core Enterprise & zCloud
Manage mission-critical workloads seamlessly by modernizing mainframes to handle high-volume, always-on computing with Microsoft AI Cloud

Digital Workplace
Accelerate hybrid work and enable collaboration from anywhere with strategy, design, architecture and implementation of Copilot for M365

Application, Data & AI
Providing full application platform hosting and expert assistance for application modernization and GenAI on Microsoft Azure
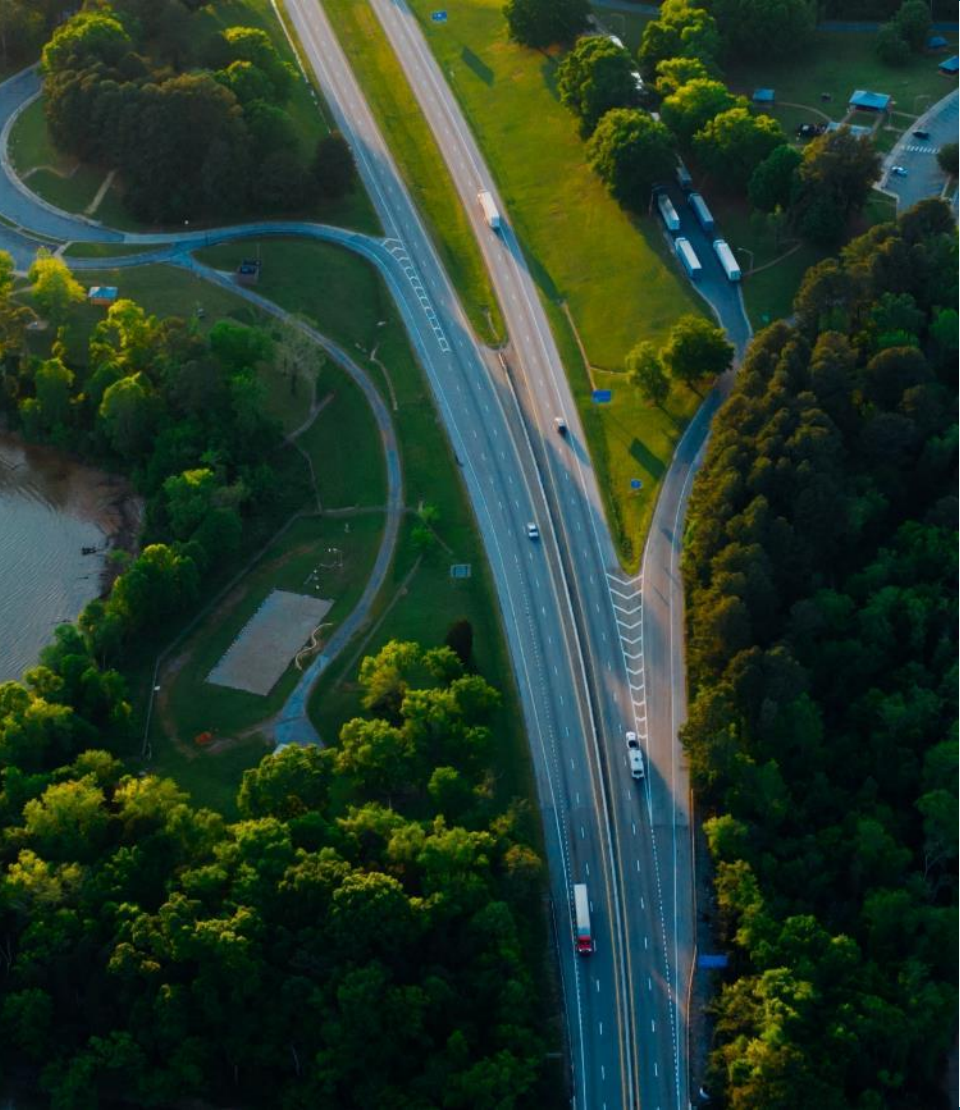
Network & Edge
Provides unified Network Services for Microsoft Cloud and data center connectivity

Security & Resiliency
Providing full application platform hosting and expert assistance for application modernization

Kyndryl advances the vital systems that power progress

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Kyndryl brings talent, expertise, and a proven service design to help you co-create solutions that deliver innovative customer experiences
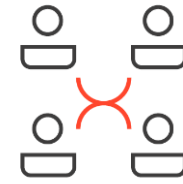
Rich experience and deep expertise through our **people**, best-practice **frameworks** & **IP**

Reliable services across hybrid/multicloud environments with **minimal business disruption**

Innovate with **Kyndryl Bridge** digital integrations & co-create with designer-led **Kyndryl Vital** teams

Kyndryl offers an integrated portfolio of services to help you unlock the full value of your applications

kyndryl bridge

An open integration platform delivering IT solutions by leveraging Kyndryl's core strengths, data-driven insights and expertise

kyndryl vital.

Our designer-led co-creation experience that brings partners and customers together to solve complex business problems

3

Modernize for efficiency and growth

Modernize apps, data, and infrastructure to be more responsive to business needs

Key goals

- Faster time to market with new products and services

- Flexibility to use open, scalable and adaptive platforms

- Improved data trust and governance

- Secure scalability to meet organizational growth priorities

- A more energy-efficient technology stack

- A cloud strategy aligned with business priorities

Your challenges

- Complex, high-cost legacy infrastructure and networks

- Containerized, distributed, and latency-sensitive apps

- Insufficient automation

- Data sovereignty concerns

- Sustainability struggles

- Cloud strategy confusion

How Kyndryl helps you
Modernize

- Integration expertise to simplify complex IT environments

- Agnostic alignment of workloads to platforms for compliance and performance

- Unique solutions with the providers in your ecosystem to accelerate transformation

- Proven hybrid cloud and automation strategies that speed deployment and improve resiliency

- Modern management of ongoing mission-critical operations for efficiency and security

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Wherever you are on your transformation journey, we'll meet you there

Kyndryl offers solutions to address common application development challenges

Experts in delivering application migration and modernization projects of various sizes and complexities across cloud and hybrid environments

Consistent and repeatable delivery experience derived from expertise in executing similar projects utilizing standard and repeatable processes

Broad range of technologies and tools to deliver client engagements, including cloud-native and third party

Thought leadership and innovation to solve customer challenges based on numerous client engagements delivered

Agile delivery and continuous improvement to maximize lessons learned, minimize risks and manage costs

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When and why to modernize pSeries AIX workloads

Organizations modernize pSeries systems to increase agility, future proof operations and stay competitive in a fast-changing market:

Focus areas

Accelerate application release cycle

Difficulty to acquire and retain legacy skills

Difficulty to acquire and retain legacy skills

Data center real estate cost

Application modernization strategy

- Containerize core application services
- Migrate databases to Azure managed databases
- Shift messaging workloads to Azure native services
- Introduce cloud-native management tools

Infrastructure modernization strategy

- Transition workloads from AIX to Linux
- Move on-prem AIX systems into Azure
- Resolve production and mission-critical constraints
- Replace traditional operations with automated cloud practices

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Modernization journey: Skytap and non-Skytap (Azure-native approaches)

Kyndryl provides end-to-end migration and modernization services for pSeries AIX to Azure, leveraging both Skytap on Azure and Azure-native platforms based on client needs. This service provides a structured transformation strategy tailored to mission-critical workloads, including:

- Java-based applications (WebSphere, WebLogic, Tomcat)
- Messaging systems (IBM MQ)
- Databases (IBM DB2, Oracle)

Our comprehensive services include:

Skytap on Azure: Seamless migration of pSeries AIX workloads to Skytap on Azure for clients seeking minimal application changes, fast datacenter exit, and flexible cloud scalability

Non-Skytap (Azure native): Re-platform, refactor and rearchitect pSeries AIX workloads directly to Azure-native services enabling deeper transformation, cost savings and future-proofing
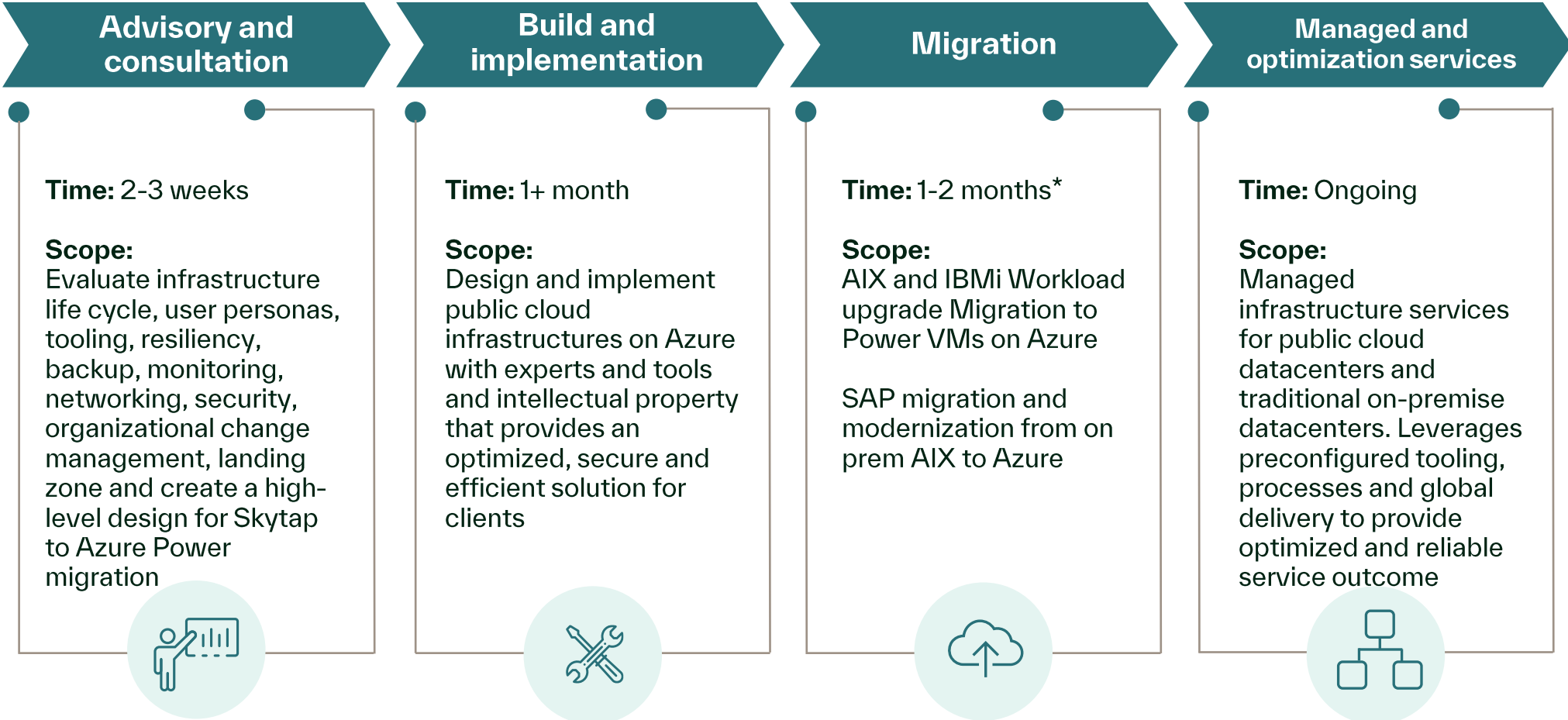
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Skytap on Azure

Kyndryl's migration services to Skytap on Azure

End-to-end Azure migration journey

Advisory and consultation

Time: 2-3 weeks

Scope:
Evaluate infrastructure life cycle, user personas, tooling, resiliency, backup, monitoring, networking, security, organizational change management, landing zone and create a high-level design for Skytap to Azure Power migration

Build and implementation

Time: 1+ month

Scope:
Design and implement public cloud infrastructures on Azure with experts and tools and intellectual property that provides an optimized, secure and efficient solution for clients

Migration

Time: 1-2 months*

Scope:
AIX and IBMi Workload upgrade Migration to Power VMs on Azure

SAP migration and modernization from on prem AIX to Azure

Managed and optimization services

Time: Ongoing

Scope:
Managed infrastructure services for public cloud datacenters and traditional on-premise datacenters. Leverages preconfigured tooling, processes and global delivery to provide optimized and reliable service outcome

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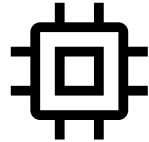* Assumed an environment of 50 LPARs and up to 100TB of storage

pSeries to Skytap on Azure use cases

Key business drivers for IBM pSeries migration to Microsoft Azure

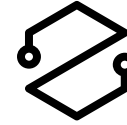## Data center exit

- Replicates data center in Skytap
- Scales on demand
- Reduces capital expenses
- Moves to consumption based operational expenses

Hardware refresh avoidance

- Helps run business critical applications in Skytap with minimal changes
- Allows customers upgrade at their own pace
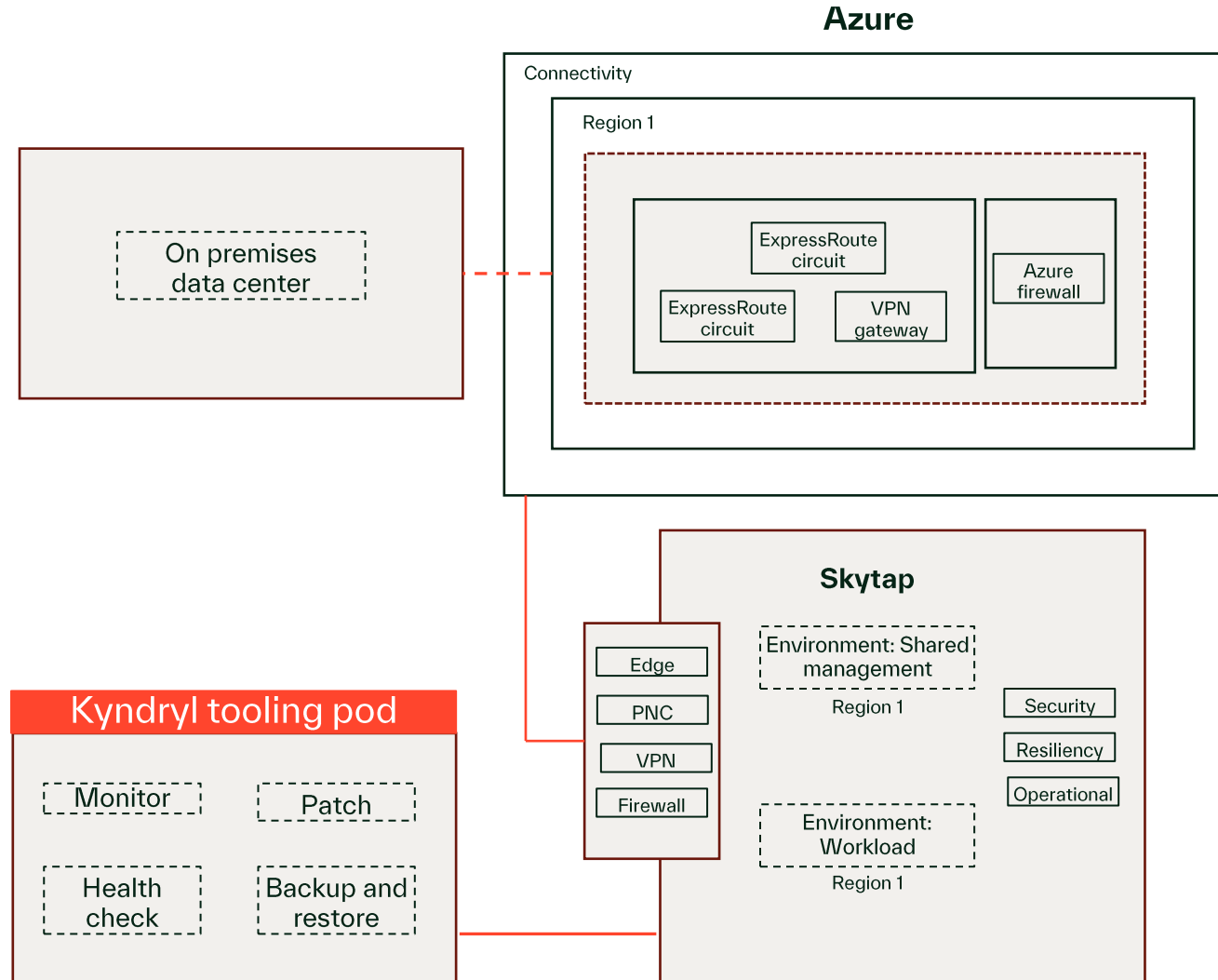
DevOps and application modernization

- Allows self-service and automatic environment provisioning
- Accelerates innovation by connecting existing Skytap applications to Azure

Disaster recovery and high availability

- Protects critical business operations dependent on on-premise applications with flexible disaster recovery and high availability solutions running in Skytap

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High-level architecture: Skytap on Azure

Azure

Connectivity

Region 1

ExpressRoute circuit

ExpressRoute circuit

VPN gateway

Azure firewall

On premises data center

Skytap

Edge

PNC

VPN

Firewall

Environment: Shared management

Region 1

Environment: Workload

Region 1

Security

Resiliency

Operational

Kyndryl tooling pod

Monitor

Patch

Health check

Backup and restore

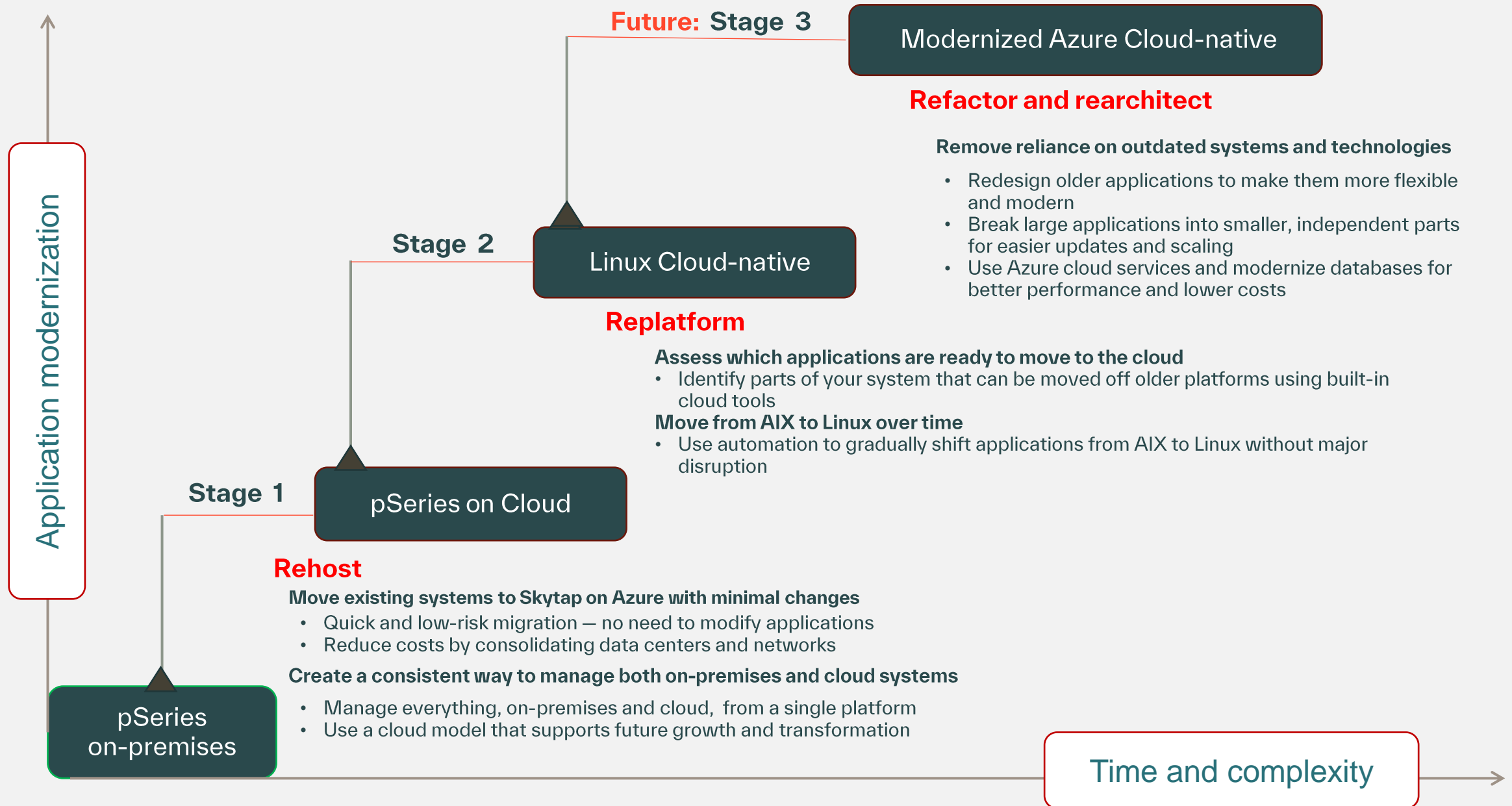## Key architecture components and capabilities:

- Single or multi-environment deployment within Skytap on Azure

- ExpressRoute connectivity between Skytap and Azure environment

- Shared management environment to host shared services

- Proposed architecture is suitable for:
  - Production and DevTest
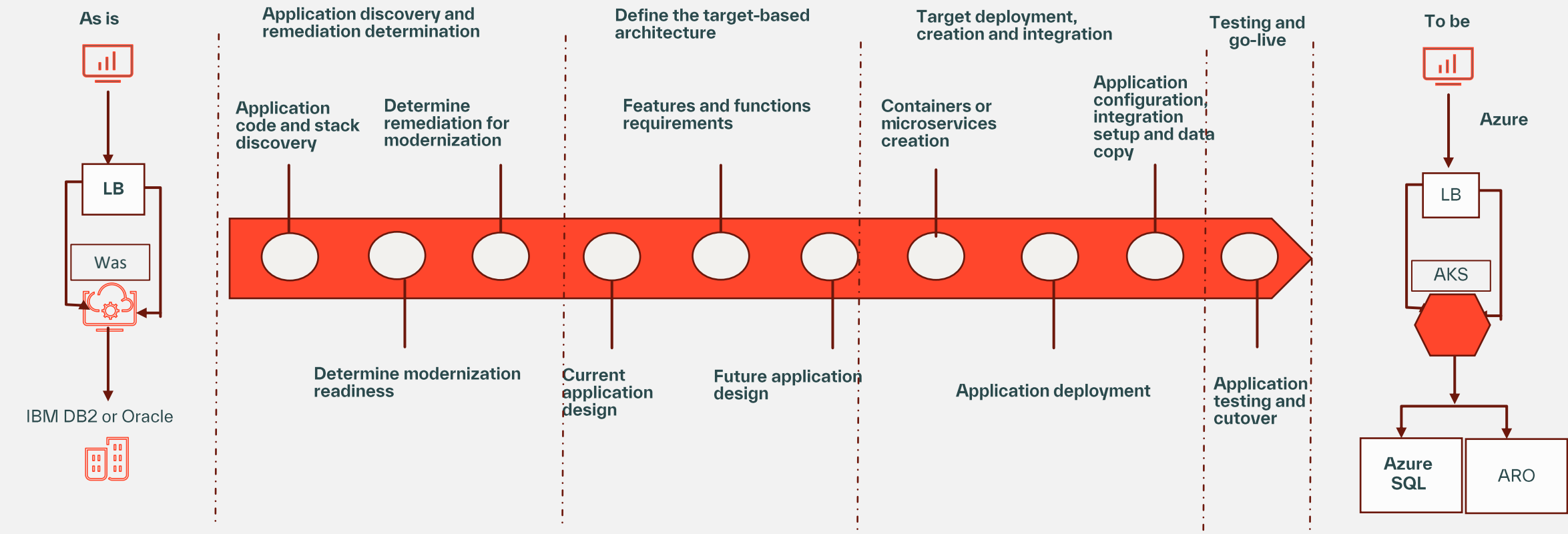 - Migration
  - Disaster recovery
  - Managed operations

Non-Skytap (Azure-native)

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Evolution from pSeries to Azure Cloud-native architecture

Application modernization

Future: Stage 3

Modernized Azure Cloud-native

Refactor and rearchitect

Remove reliance on outdated systems and technologies

- Redesign older applications to make them more flexible and modern
- Break large applications into smaller, independent parts for easier updates and scaling
- Use Azure cloud services and modernize databases for better performance and lower costs

Stage 2

Linux Cloud-native

Replatform

Assess which applications are ready to move to the cloud
- Identify parts of your system that can be moved off older platforms using built-in cloud tools

Move from AIX to Linux over time
- Use automation to gradually shift applications from AIX to Linux without major disruption

Stage 1

pSeries on Cloud

Rehost

Move existing systems to Skytap on Azure with minimal changes
- Quick and low-risk migration — no need to modify applications
- Reduce costs by consolidating data centers and networks

Create a consistent way to manage both on-premises and cloud systems

- Manage everything, on-premises and cloud, from a single platform
- Use a cloud model that supports future growth and transformation

pSeries on-premises

Time and complexity

Transforming legacy AIX applications for Azure cloud-native environments

An application-led approach to modernizing workloads running on AIX requires close collaboration between Kyndryl specialists, application and business owners.

As is

LB

Was

IBM DB2 or Oracle

Application discovery and remediation determination

Application code and stack discovery

Determine remediation for modernization

Determine modernization readiness

Define the target-based architecture

Features and functions requirements

Current application design

Future application design

Target deployment, creation and integration

Containers or microservices creation

Application configuration, integration setup and data copy

Application deployment

Testing and go-live

Application testing and cutover

To be

Azure

LB

AKS

Azure SQL

ARO

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Kyndryl's AIX migration and modernization services for Azure Cloud-native architecture

Kyndryl recommends an application-led approach to modernizing workloads running on AIX

Source (On premises)

- Java application

- IBM WebSphere

- Tomcat

- Oracle Web logic

- IBM MQ

- IBM DB2

- Oracle

Target: Azure Cloud

- Java on Azure VM and Azure app services

- Websphere or Open Liberty on Azure AKS or Open Liberty on Azure Redhat OpenShift

- Tomcat on Azure App Services and Azure AKS

- Web logic on Azure VM

- MQ on Azure app services, Azure logic apps, Azure Bus services

- Azure SQL database

- Azure Database for PostgreSQL

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Key solution features and benefits

Application modernization:

- Refactor and containerize legacy applications for deployment on Azure Kubernetes Service, Azure Red Hat OpenShift or Azure Container Apps, with integrated continuous integration and deployment pipelines

- Migrate messaging platforms like IBM MQ to Azure Service Bus, Event Grid or Kafka, and enable scalable provisioning using infrastructure-as-code tools

Database modernization:

- Migrate IBM DB2 and Oracle databases to Azure SQL, Azure Database for PostgreSQL or Oracle on Azure, with data replication and transformation using Azure DMS and Schema Conversion Tool

- Ensure high availability, disaster recovery and compliance with Azure Site Recovery, Azure Backup and geo-replication

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The Very Group

Skytap on Azure: Legacy Workload Modernization

The Very Group, based in London, is a unique digital business that combines online
retail and flexible payments. With over 4.4 million customers and an annual revenue of £2.15bn, The Very Group has become the leading premier digital retail and payments provider for UK.

Business Challenge

The organization's reliance on aging IBM Power Systems infrastructure created significant operational risk and escalating maintenance costs, necessitating an urgent but complex migration to Azure cloud without disrupting critical business applications or requiring extensive redevelopment of legacy workloads.

Transformation

– Partnered with Skytap to enable seamless migration of Power workloads to Microsoft Azure

– Conducted comprehensive workload assessment identifying 140 critical systems spanning AIX, Linux and Wintel environments

– Implemented hybrid management approach combining core service management toolset with cloud-native capabilities

– Deployed Kyndryl Bridge and AIOps to enhance operational visibility and automate infrastructure management

Results

– Reduced infrastructure expenditure through optimization

– Transitioned 25% of applications to Azure with no performance impact

– Achieved performance improvements in some migrated applications

– Successfully initiated rehosting as first step toward application modernization

– Maintained critical operations throughout migration process

– Minimized transition risks through proven migration methodology

– Built internal cloud capabilities through structured training

Benefits of Kyndryl's Azure migration and modernization services

Kyndryl can help customers assess their pSeries AIX Workloads and provide a migration and modernization path to Azure

Fast-tracked migration (Skytap) for immediate cloud benefits or a gradual modernization for long-term innovation

Robust security frameworks ensure regulatory compliance and protection against threats

Streamlined management through Azure-native tools and automated operations

Enables agile development, continuous integration and deployment, and easy integration with emerging technologies like AI and machine learning

Optimized resource utilization and lower operational costs by eliminating legacy hardware dependencies

Kyndryl's end-to-end expertise minimizes migration risks and ensures a smooth transition

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Thank You