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Kyndryl Distributed Cloud Offering for Microsoft Azure Stack HCI with Azure Arc

January 2023

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Why Kyndryl?

Kyndryl was spun-off of IBM IT infrastructure services in 2021

Our people:

90,000
Skilled professionals

247,000
Skills badges earned, including:

61,000 in cloud
43,000 in agile
43,000 in analytics
42,000 in AI
38,000 in design thinking

400,000
years of engineering experience

31,000
Vendor-recognized certifications in Microsoft Azure, VMware, Cisco, Red Hat, AWS, and more

Powering mission-critical technology systems across essential industries

5/5 top airlines by revenue passenger miles (RPM)

45% of passenger cars made by our customers

61% of assets under management by the top 50 banks managed by our customers

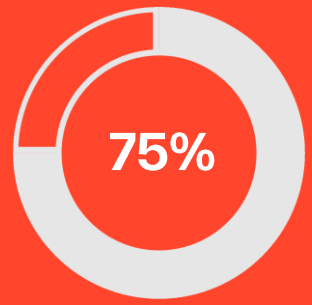
4/5 largest retailers

49% of mobile connections managed by our customers

Empowering thousands of customers

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

4,600
Global customers, including:



...of the Fortune 100 and more than half of the Fortune 500

Providing undisputed leadership

6.1M mainframe installed MIPS

270K network devices managed

5,200+ WAN devices managed

3.5M LAN ports managed

67K+ VMware systems managed

14K+ SAP instances managed

3.5+ exabytes of customer data backed up annually

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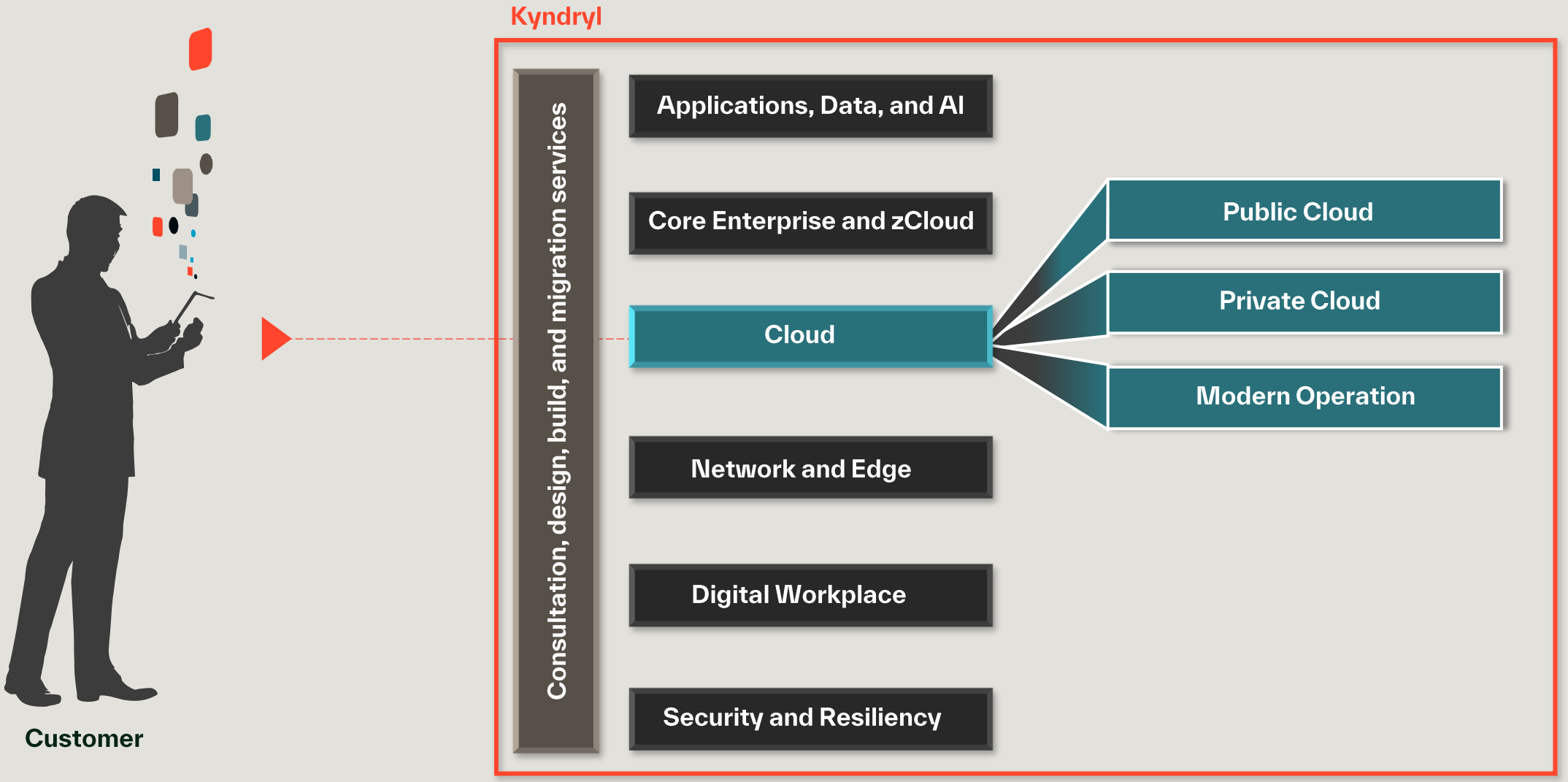
Kyndryl practices and services stack view



Kyndryl Services for Private Cloud

Customer

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Containers

Build and Manage services for microservices-based apps

- Red Hat OpenShift, AWS EKS, Azure AKS, VMware Tanzu

Virtualization

Monitoring and management of virtual machines in any environment

- VMware, VMC on AWS, Nutanix AHV

Platform

Integrated infrastructure with VMs or containers in a fully managed environment

Distributed Cloud/Hybrid Cloud

Managed infrastructure for public and private cloud with a single pane of glass

- Microsoft Azure Stack HCI
- VMware Aria, Nutanix

Infrastructure

Build and Manage in a pay-per-use/as-a-service model

- Compute, storage, networking, hyperconverged infrastructure (HCI)

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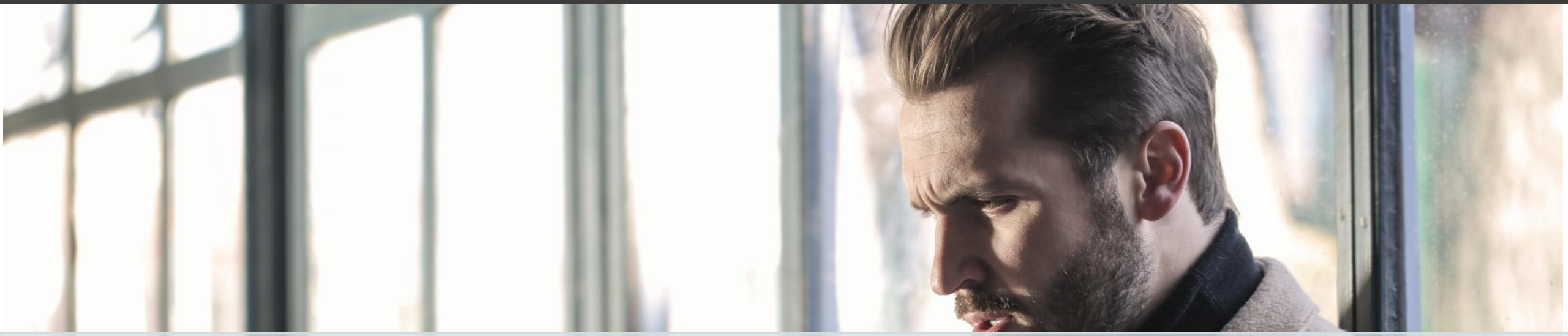
Introduction to Kyndryl's offering for Microsoft Azure Stack with Azure Arc HCI

Customer challenges leading to a managed distributed cloud

"A distributed cloud is an architecture where multiple clouds are used to meet compliance needs, performance requirements, or support edge computing while being centrally managed from the public cloud provider." — VMware



- Manual management of federated IT environments
- Limited resource availability and cloud skill gaps
- Inability to support or deliver business value at remote or edge environments
- Workloads with strict data sovereignty, proximity, and security requirements
- Delayed time to value through manual orchestration and resource deployment
- Rising costs associated with the maintenance and updating of legacy systems

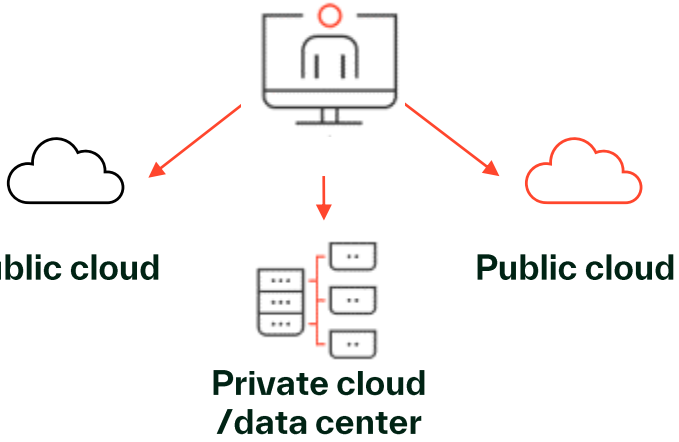
Comparing cloud operating models

Hybrid Cloud

- Scale as necessary
- Leverage cloud innovations and tools
- Facilitate cloud journey while keeping assets on-premises

Complexity ++

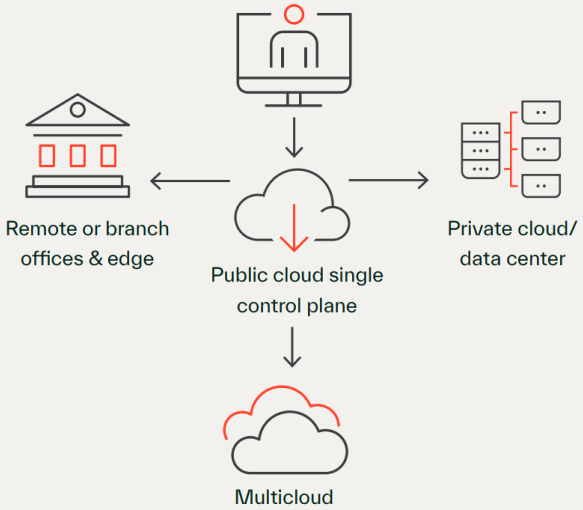
Multicloud



- Avoid vendor lock-in
- Adhere to geographical and location-based requirements
- Gain best-of-breed cloud services and technologies
- Take advantage of best-in-class costing

Complexity ++++

Distributed Cloud



- Leverage cloud-native tools and ways of working
- Use a single pane of glass to monitor/manage workloads across all environments
- Implement consistent security and governance policies
- Support remote and edge use cases
- Access and easily deploy additional Azure services on-premises

Complexity +

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Kyndryl Distributed Cloud for Microsoft Azure Stack HCI with Azure Arc

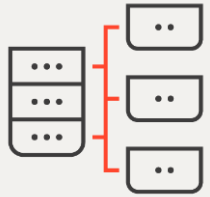
What we offer:

Remote office/edge deployment

Small solution (1–3 Azure Stack HCI nodes)

Dell or Lenovo Microsoft-certified hardware

Azure Arc Services



Regional office/data center

Scalable solution (4–16 Azure Stack HCI nodes per cluster)

Dell or Lenovo Microsoft-certified hardware

Azure Arc Services

Customer value:

Leverage single-pane-of-glass management of distributed IT assets to reduce administrative complexity

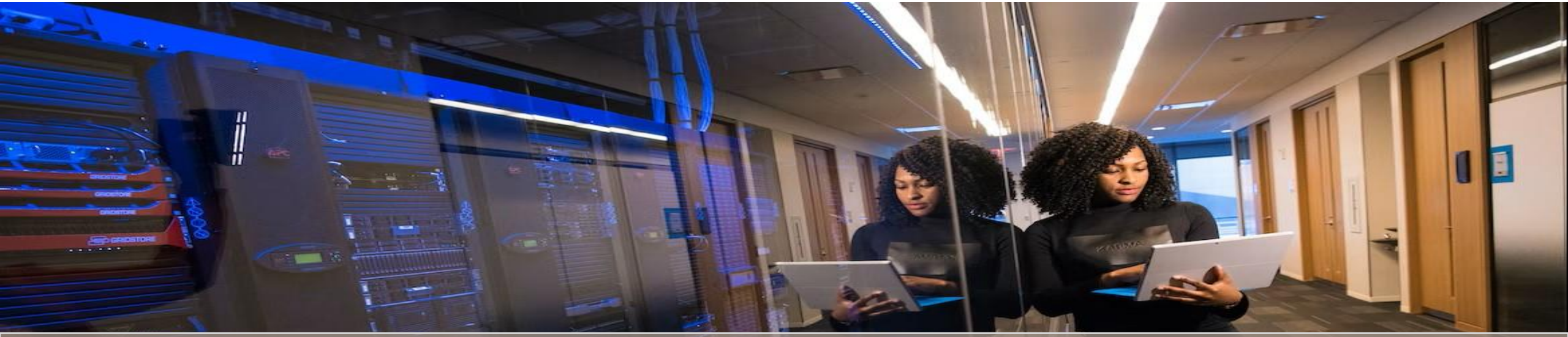
Meet business-critical needs by deploying or modernizing remote and edge environments

Get granular control of infrastructure and data for improved security and performance

Reduce operational and administrative tasks to empower teams to focus on high-value activities

Pay for only the resources you need by transforming legacy infrastructure

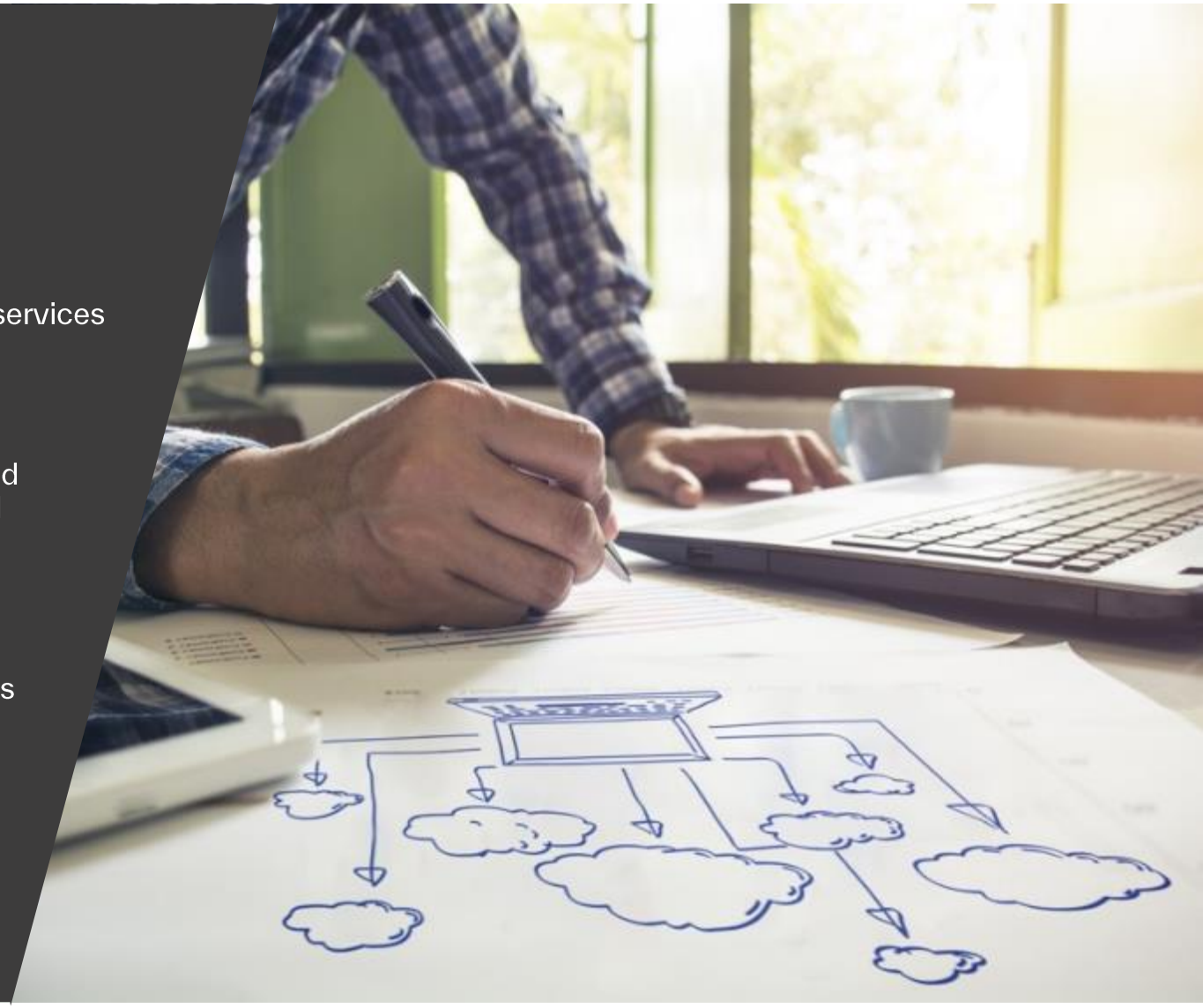
Critical capabilities and features



- Microsoft Azure Arc included
- Microconfigurations for edge deployments
- Azure Kubernetes Service
- Azure Arc-Enabled SQL Managed Instance
- Microsoft Azure Backup
- Azure Virtual Desktop
- Azure Arc Resource Bridge for VMware vSphere
- Access to Azure Marketplace

What we provide

- Microsoft-certified Dell hardware
- Design, plan, build, migration, and management consulting services
- Industry- leading delivery and support teams. Integration and management of on-premises, multicloud, remote office, and edge deployments
- Support of your modernization journey through the implementation of incremental Azure Stack services, such as backup, virtualization, containers, VDI, and database
- Additional support of your modernization journey through access to additional Kyndryl services: Digital Workplace, Data & AI, Network & Edge, and Applications



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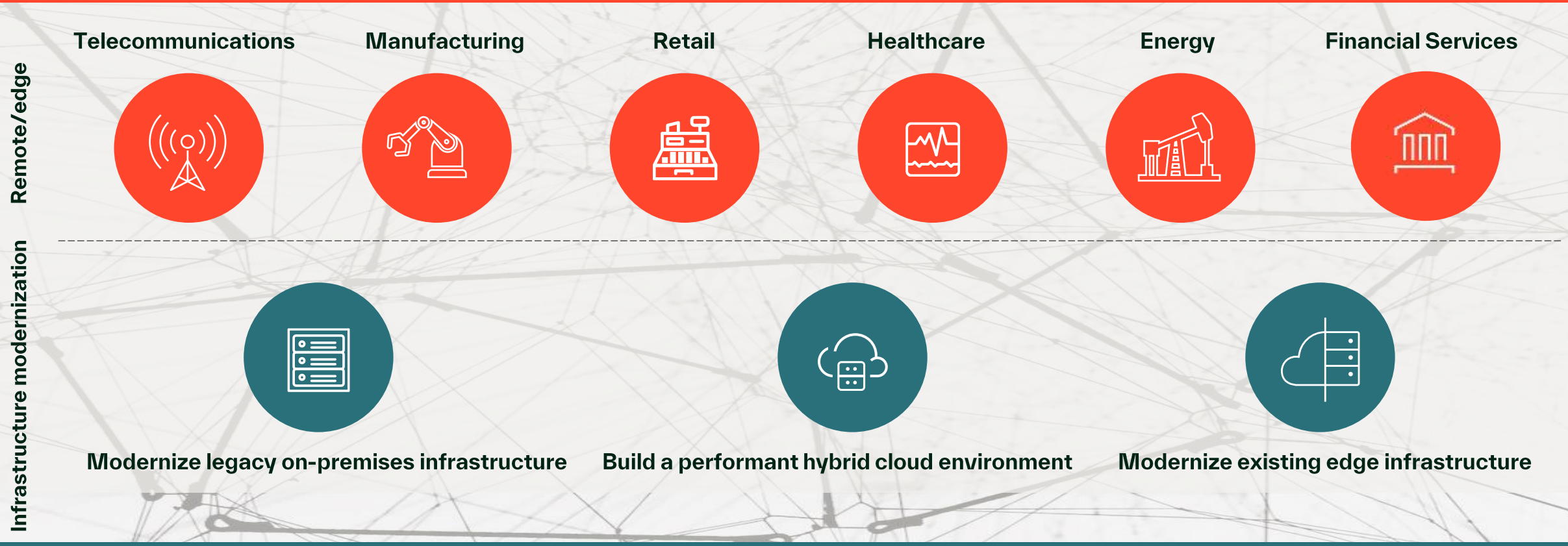
Industry use cases

Verticals with high-propensity alignment

"It's imperative that enterprises prioritize a distributed cloud-based model as the default and future-proof edge solution by relying on partnerships and ecosystems over a single-vendor approach." — John McArthur, Senior Analyst, Gartner



A recent Virtana study found that a staggering 72% of respondents report having had to bring applications back on-premises after migrating them to a public cloud due to performance issues, technical complexity, or unexpected costs.

Customer use case: Vodafone opens UK's first edge innovation lab

Kyndryl Distributed Cloud/Edge

Transform the customer experience where network, cloud, and new infrastructure technologies converge

Challenges:

- Differentiating in a competitive market and providing a positive customer experience
- Creating demos of existing apps, such as visual inspection, so customers can test latency
- Enabling predictive maintenance capabilities through real-time apps like AR, drone, and virtual reality

Outcomes:

- Increasing sales opportunities through the ability to demo existing applications via edge computing model
- Improving user experience through secure and reliable service, using AR and virtual reality
- Monitoring drone traffic to prevent damage to 5G and other infrastructure

https://www.vodafone.co.uk/newscentre/press-release/now-open-uk-first-edge-innovation-lab-at-host-mediacity/

Manufacturing use cases

Remote use case

Modernization use case

When used in maintenance and repair, AR software can help accelerate activities by **30%** and improve work quality by **90%.**

Build connected factories that run manufacturing software and gather real-time machine data for analytics related to product quality and predictive maintenance

Deliver augmented reality software to facilitate real-time maintenance and repair (ARMAR)

Run video systems for hazard prevention, improved safety measures, and to ensure quality control

Modernize legacy infrastructure creating a data pipeline from the edge to analytics services where data can be converted into business insights

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Retail use cases

Remote use case
Modernization use case

40% of shoppers would be willing to pay more for a product if they could experience it through augmented reality.

Deliver innovation with a connected store. Introduce smart fitting rooms, mobile point of sale (mPoS), self checkout, smart asset tracking, electronic shelf labels, motion-based lighting, etc.

Run PoS, inventory, merchandising, and digital signage software

Run security monitoring hardware and software

Create a data pipeline from the edge to data warehouse or analytics platforms to evaluate the impact of promotions, reallocate inventory, monitor buying trends by locale, etc.

Banking financial services and insurance use cases

Remote use case
Data compliance requirements

38% of bank customers still prefer branch offices for all their banking needs.

Addressing compliance (GDPR) challenges by bringing customer-facing workloads back on-premises

Running small clusters for new smart-branch technologies such as interactive teller machines, video conferencing, and banker tablets

Running small clusters for productivity applications or powering VDI for branch employees

Running security hardware and software with AI for image-recognition software

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Healthcare use cases

There are **48,000** hospitals and non-emergency clinics in the US alone.

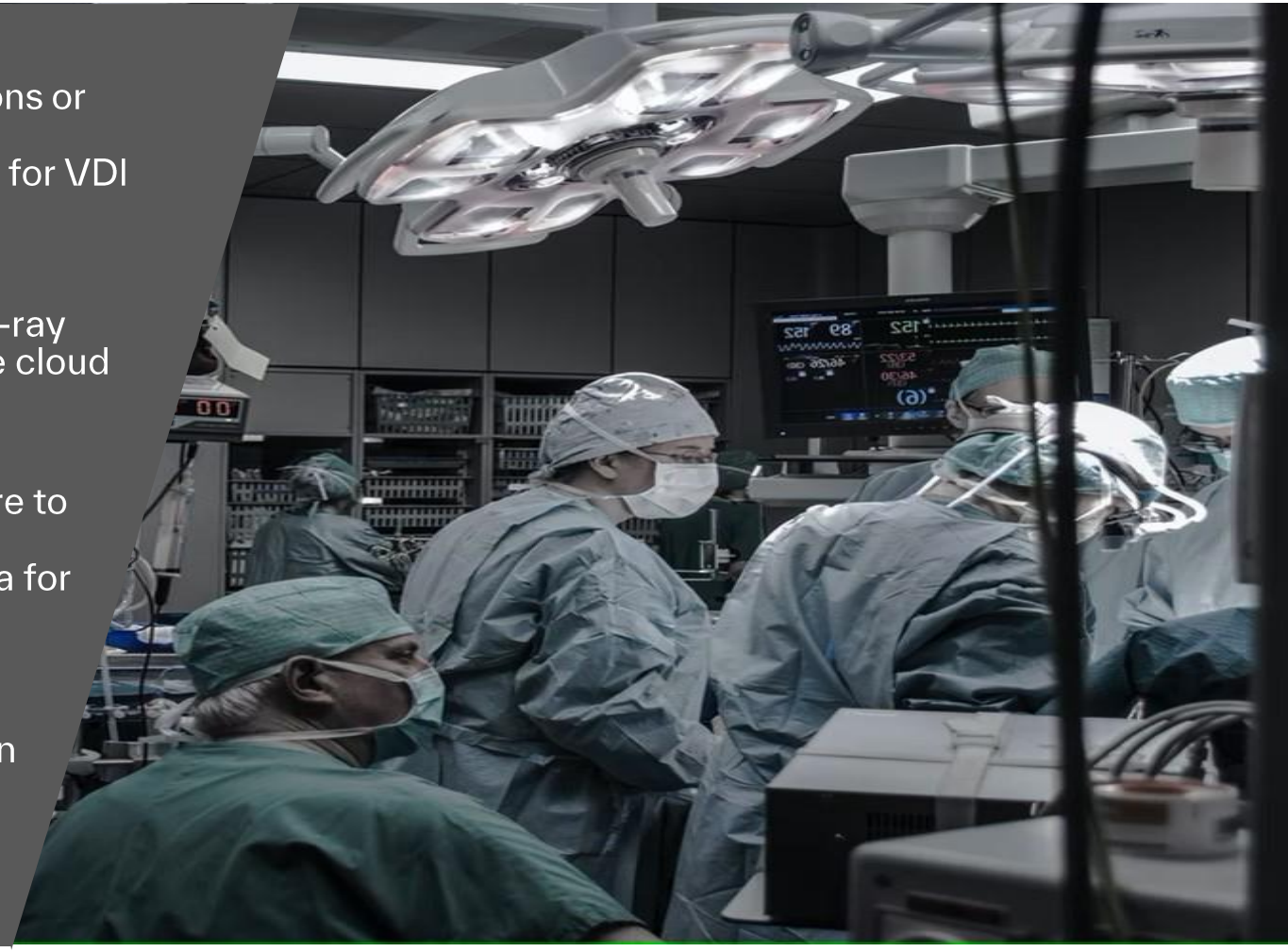
- Remote use case
- Data compliance requirements

Running small clusters for productivity applications or thin-client workloads for administrative staff as healthcare is projected to see the largest growth for VDI

Running clusters for gathering diagnostic data, x-ray images, or other patient data as a gateway to the cloud

Building connected clinics that run niche software to power patient translation terminals or check-in tablets, or serve to gather real-time machine data for predictive maintenance analytics

Providing continuous data backup and replication to the cloud for compliance and regulatory requirements



Energy use cases

There are **1,716** total oil refinery on-shore and off-shore exploration sites in the world.

- Remote/branch-office computing
- Modernization

Running small clusters to deliver operational IoT data for predictive maintenance, hazard, and safety management

Running small clusters for gathering sensor data at remote sites for transfer to high-performance computing (HPC) clusters for analysis

Powering graphic-intensive VDI for the visualization and conversion of HPC data into business insights for executive review

Running larger clusters for modernizing legacy infrastructure to support workloads such as application development and data management

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Next steps

Next steps: Preparing for your modernization journey

1. Review these public assets for more details
   - Microsoft, Dell, and Kyndryl press release link
   - Vodafone press release link
   - One Summit network and edge session with Dell link
   - Kyndryl and Lenovo fireside chat link
   - Kyndryl Azure Stack HCI with Azure Arc Managed Service: solution brief link
2. Ask that your account team set up an executive or technical briefing to learn more about the offering and the potential value for your organization
3. Request an initial consultation

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Thank You

Why companies are turning to consulting and private cloud managed services

Depending on the role, IT personnel can see up to **90%** of their time dedicated to maintenance versus innovation.[1]

54% of companies indicated that they have cloud skill gaps that deter or delay strategic initiatives.[2]

As a result, **70%** of enterprise cloud migrations fail.[3]

74% of organizations reported moving an application back to their own infrastructure.[4]

And **70%** of modernization or digital transformation projects fall short of goals.[5]

Kyndryl delivers outcome-driven initiatives

- Trusted expertise and experience
- The opportunity to refocus teams on core business activities
- Support for team resources to meet peak demand
- Solutions that prove a competitive edge
- Reduced costs and controlled expenses

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Sources:
1. DBTA
2. Jefferson Frank & O'Reilly
3. Cloud Control
4. Tech Target
5. Tech Target