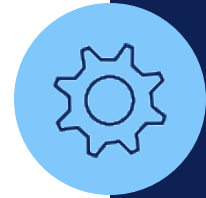# Navigating What's Next

Dell Technologies and SAP

DELLTechnologies

A new reality
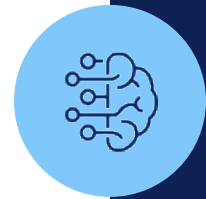
End of maintenance
2027
Support for innovational SAP® ERP requires a transition to S/4HANA®.

Budget challenges
29%
of SAP customers lack funding for IT implementations and upgrades.[1]

GenAI adoption
73%
Compound annual growth rate of the GenAI market through 2027.[2]

84%
of SAP customers have no plans to use SAP RISE.[3]

Hybrid environments
73%
of enterprises follow a hybrid cloud strategy.[4]

[1] ASUG, ASUG 2024 Pulse of the SAP Customer Research, 2024.

[2] Markets and Markets, Artificial Intelligence Market Global Forecast to 2030, May 2024.

[3] TechTarget, Rise with SAP evolves, but struggles to make a case for some, May 2024.

[4] Statista, Hybrid cloud – statistics & facts, January 2024.

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Top 5 concerns for SAP landscapes

SAP S/4HANA
transitions

SAP RISE
adoption

GenAI
integration

Business process
transformation

Budget and funding
rationalization

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SAP S/4HANA transition

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S/4HANA is coming. Are you ready?

How and when will you transform to SAP S/4HANA?

"How does the new architecture with all the cloud products work?"

"Management expects a business case and strategy paper."

"SaaS? Or on-premises? Or on public cloud?"

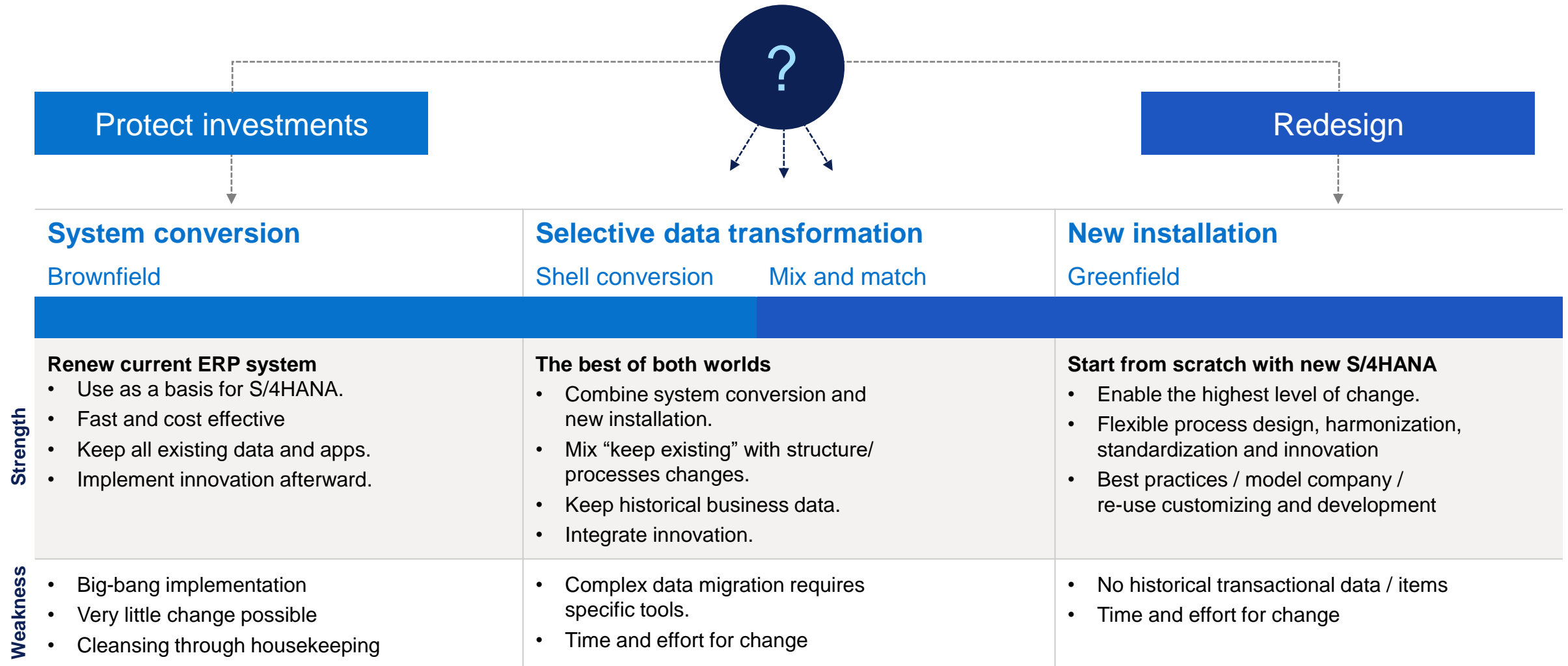"Greenfield? Brownfield? Something else?"

"How do we get this done by 2027?"

SAP S/4HANA implementation plans

12% have **no plans** or have put plans **on hold.**[1]

[1] ASUG, ASUG 2024 Pulse of the SAP Customer Research, 2024.

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SAP S/4HANA transition scenarios

Different scenarios focus on specific requirements

?

Protect investments		Redesign

System conversion	**Selective data transformation**	**New installation**
Brownfield	Shell conversion Mix and match	Greenfield

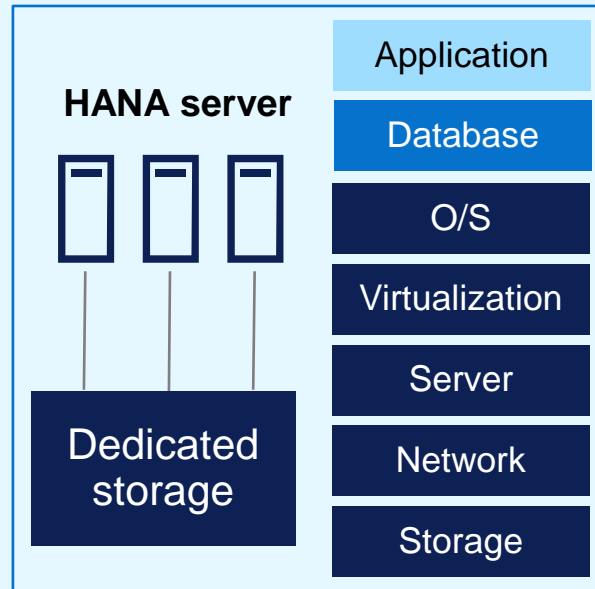|	**Renew current ERP system**	**The best of both worlds**	**Start from scratch with new S/4HANA**
Strength	• Use as a basis for S/4HANA. • Fast and cost effective • Keep all existing data and apps. • Implement innovation afterward.	• Combine system conversion and new installation. • Mix "keep existing" with structure/ processes changes. • Keep historical business data. • Integrate innovation.	• Enable the highest level of change. • Flexible process design, harmonization, standardization and innovation • Best practices / model company / re-use customizing and development
Weakness	• Big-bang implementation • Very little change possible • Cleansing through housekeeping	• Complex data migration requires specific tools. • Time and effort for change	• No historical transactional data / items • Time and effort for change

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On-premises SAP HANA deployed through an appliance or tailored data center integration (TDI)

Appliance model
"All in one box"

- Fast implementation
- Standard and highly optimized
- Preconfigured hardware set-up
- Preinstalled software package
- Fully supported by SAP

HANA server

| Application |
| Database |
| O/S |
| Virtualization |
| Server |
| Network |
| Storage |

Dedicated storage

SAP HANA on
dedicated infrastructure

TDI model
Use your own preferred hardware

HANA server

Shared network

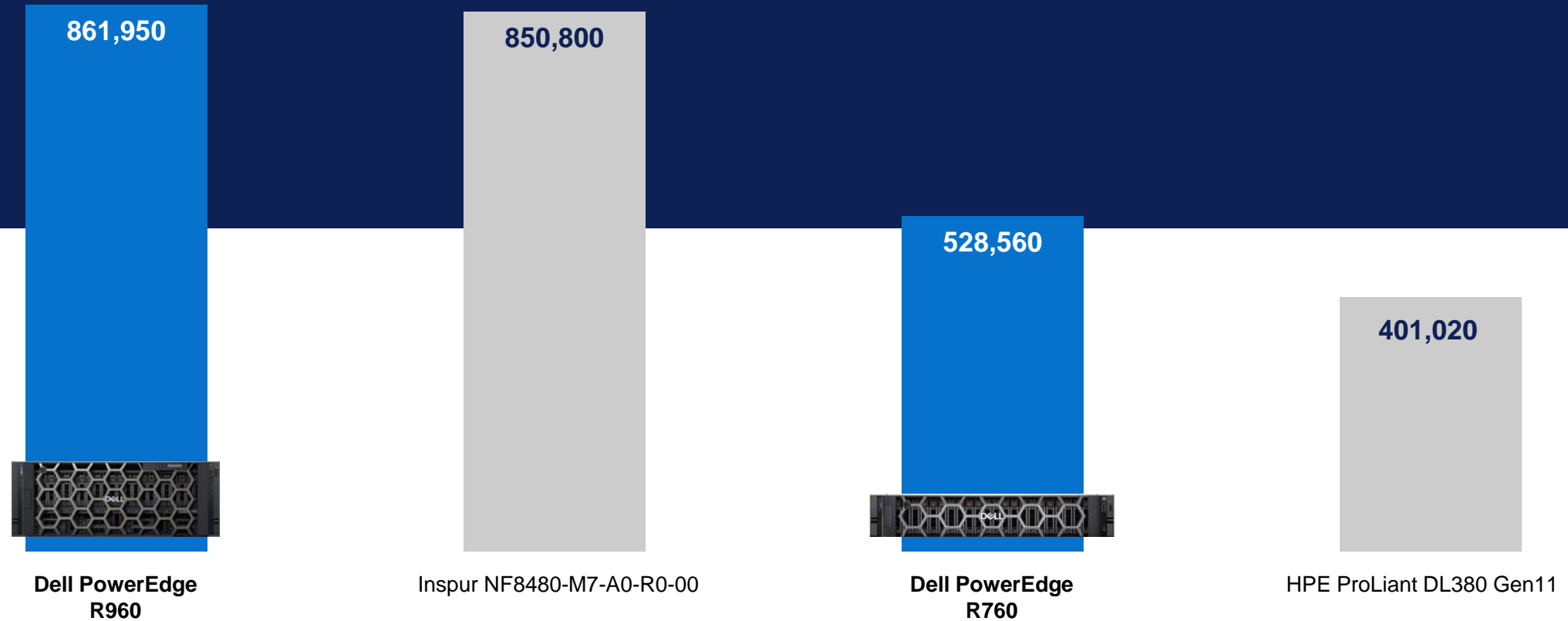| O/S |
| Virtualization |
| Server |
| Network |
| Storage |

Enterprise storage

- More flexibility
- Reuses existing hardware components and operation processes
- Saves IT budget and existing investment
- Customer aligns with the hardware partner on individual support model.
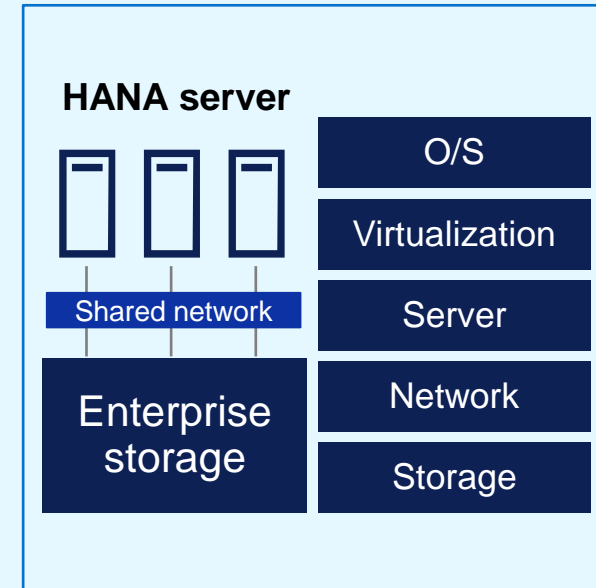
SAP HANA on
shared infrastructure

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Dell PowerEdge world record performance

2-tier results for SAP Sales and Distribution (SD) benchmark for SAP ASE 16

861,950

850,800

528,560

401,020

**Dell PowerEdge
R960**

Inspur NF8480-M7-A0-R0-00

**Dell PowerEdge
R760**

HPE ProLiant DL380 Gen11

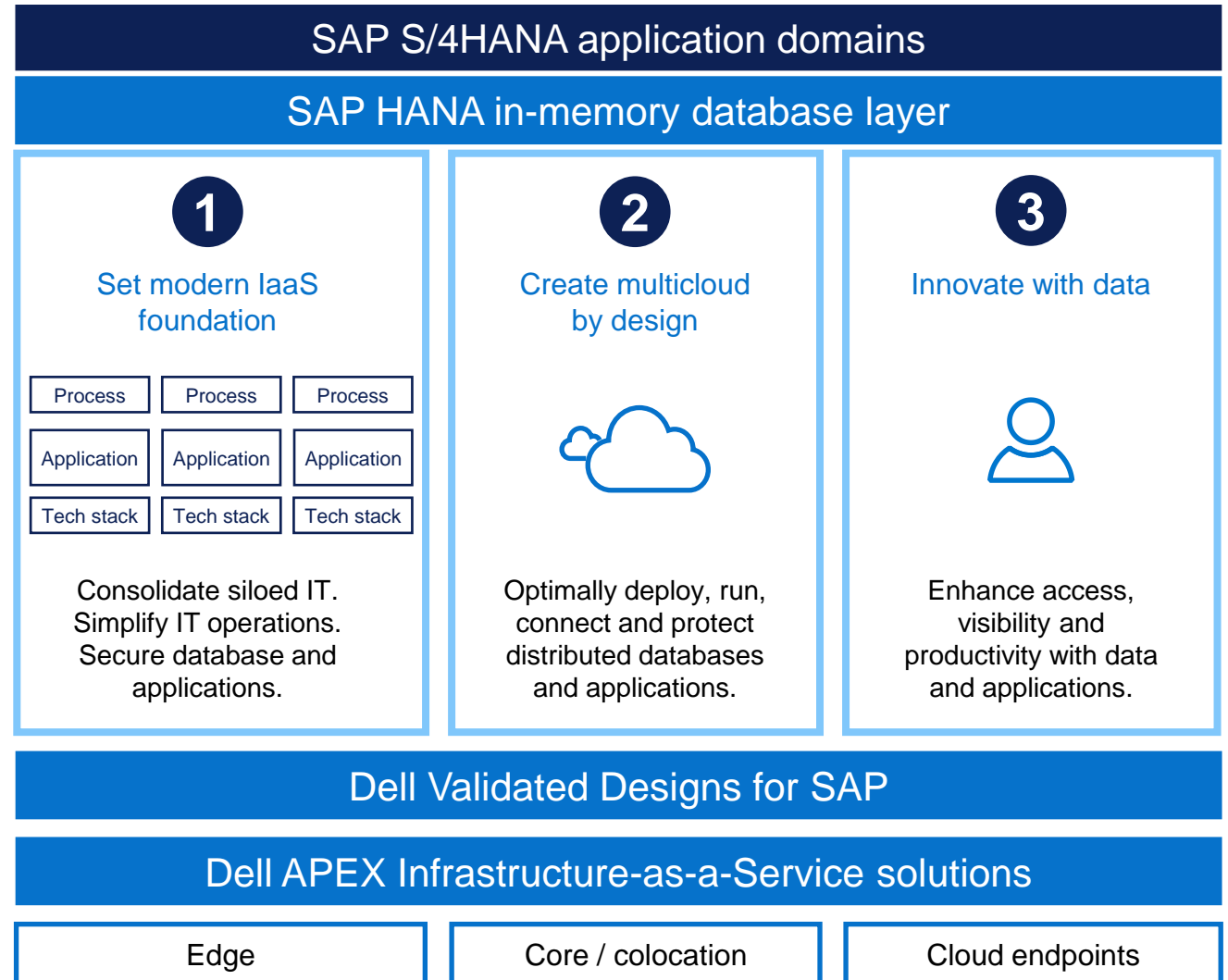Based on Certification Number 2023077 from December 2023 and Certification Number 2023058 from September 2023. Source: https://www.sap.com/dmc/exp/2018-benchmark-directory/#/sd.

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Why partner with Dell Technologies?

Dell meets you where you are on your SAP journey

Dell Technologies provides a choice of best-in-class paths and solutions to SAP S/4HANA.

Take the guesswork out of SAP HANA® in-memory databases and SAP S/4HANA applications running on our broad portfolio of Dell APEX solutions and Dell Validated Designs for SAP.

1. Set modern IaaS foundation.
2. Create multicloud by design.
3. Unlock the value of data.

SAP S/4HANA application domains		
SAP HANA in-memory database layer		
1 Set modern IaaS foundation	**2** Create multicloud by design	**3** Innovate with data
Process Process Process Application Application Application Tech stack Tech stack Tech stack		
Consolidate siloed IT. Simplify IT operations. Secure database and applications.	Optimally deploy, run, connect and protect distributed databases and applications.	Enhance access, visibility and productivity with data and applications.
Dell Validated Designs for SAP		
Dell APEX Infrastructure-as-a-Service solutions		
Edge	Core / colocation	Cloud endpoints

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SAP RISE adoption

DELLTechnologies

Challenges adopting SAP as-a-Service models

Time and cost of migrating to public cloud

Complexity and **security** concerns

Poor **performance** paired with **access and egress fees**

Time and costs | Complexity | Security | Compliance | Latency | Fees

Only
6%
of SAP customers run or plan to run SAP S/4HANA on public cloud.[1]

56%
Private or managed cloud[1]

21%
On-premises bare metal or virtualized[1]

[1] ASUG Insights, ASUG Members Embrace the Future in 2024 Pulse of the SAP Customer Research Results, March 2024.

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SAP RISE deployment preference is on-premises[1]

84% of SAP customers have no plans to use SAP RISE, citing:

- A questionable cost-benefit ratio
- Increased testing efforts
- Limited expansion options
- High dependence on SAP with a lack of exit options

"

Many of the companies surveyed want to stay on-premises with their SAP ERP systems…they did not see any advantages of migrating to the cloud.

"

DELLTechnologies

Multicloud is the path to digital transformation

Have the flexibility to choose the right path to best meet your objectives

76% of cloud strategies include private cloud.[1]

97% of organizations leverage public cloud services.[1]

Private

- Risk mitigation
- Enhanced performance
- Predictable costs

Public

- Simplified operations
- Increased agility
- Accelerated innovation

Bridge the divide

Move forward with the best of both clouds

D√LL Technologies
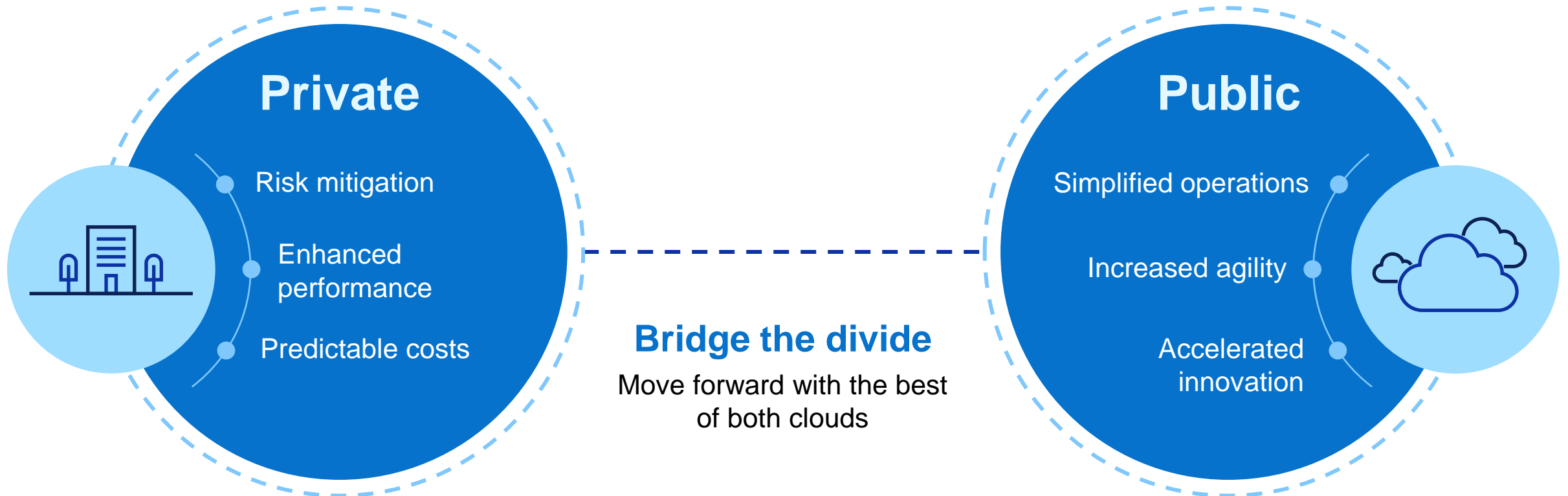
There isn't one journey; there isn't one path to follow

SAP S/4HANA

As a service ─── SAP S/4HANA ─── As a product

SAP S/4HANA cloud   **SAP S/4HANA any premises**

One
Data model | Semantic | User experience

Implementation
Upgrades
Scope
Extensibility

Degree of standardization

Deployment
Configuration

Degree of flexibility

Operations
Security
Licensing

RISE with SAP on Dell APEX   **Dell APEX IaaS**   **Dell APEX Private Cloud**   **Dell infrastructure**

DELLTechnologies

Deploy a pay-per-use consumption or an enterprise-scale managed utility

SAP on Dell APEX
Organization's **point of departure**

Dell APEX IaaS

Dell pay-per-use technology
For organizations that want maximum agility and control and extensibility to the entire breadth and depth of Dell APEX portfolio

SAP

Your data center

Colocation

At the edge

In the cloud

RISE on Dell APEX

SAP end-to-end services
For organizations that want to simplify management, retain existing SAP investments and leverage SAP Business Technology Platform

D∠LL Technologies

Dell APEX is your path to as-a-Service with SAP

Simplicity

Take advantage of technology that's operated by you, managed for you.

Agility

Align technology with business needs; rapidly scale with greater flexibility.

Control

Minimize risk and maximize resources. Run your business on your terms.

Dell APEX is our enduring commitment to deliver any workload as-a-Service, wherever it is needed

Backed by global services, scale and supply chain leadership

Driven to deliver unmatched time to value all around the world

Built on the broadest and most innovative infrastructure portfolio

DELLTechnologies

RISE with SAP fully managed service on Dell APEX

Reach the cloud without compromise — run in the cloud while staying within your own data center

SAP S/4HANA Cloud, Private Edition, Customer Data Center option with Dell APEX

- Subscription-based, agile cloud experience

- Fully managed, turnkey service through SAP

- Infrastructure supplied, installed and managed via Dell APEX

- Customer location of choice — data center, edge, colocation environment

- All industry ready — supporting 25 industries

SAP S/4HANA Cloud

Private Edition Customer Data Center option

A P E X

D⦻LL Technologies

Use SAP on Dell APEX in colocation facilities

Dell APEX manages your IT infrastructure and services at a colocation facility of your choice

- Establish cloud adjacency.
- Create a presence at the edge.
- Reduce demand on IT resources.

- Strengthen cyber-resiliency.
- Facilitate rapid organizational growth.
- Leverage cross connections to third parties.

EQUINIX

Choice, agility and scale

230+	65	27
Data centers	Metros	Countries

>99.9999%	400,000+
Uptime record	Interconnections

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GenAI integration

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Responding quickly to the opportunity is critical

The excitement for consumer-grade AI and GenAI is unprecedented

65%
are already
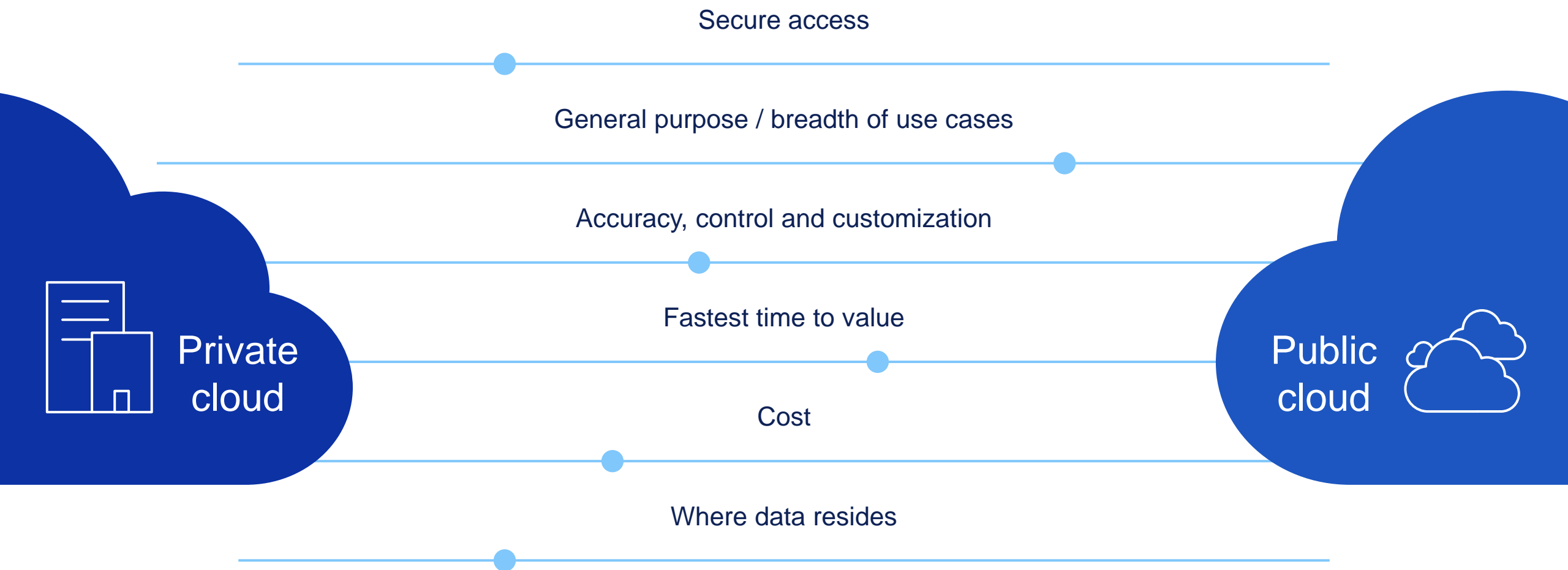using GenAI.[1]

36%
Compound annual
growth rate of the AI
market through 2030[2]

73%
Compound annual
growth rate of the
GenAI market
through 2027[3]

82%
prefer a primarily
on-premises
or hybrid
GenAI model.[4]
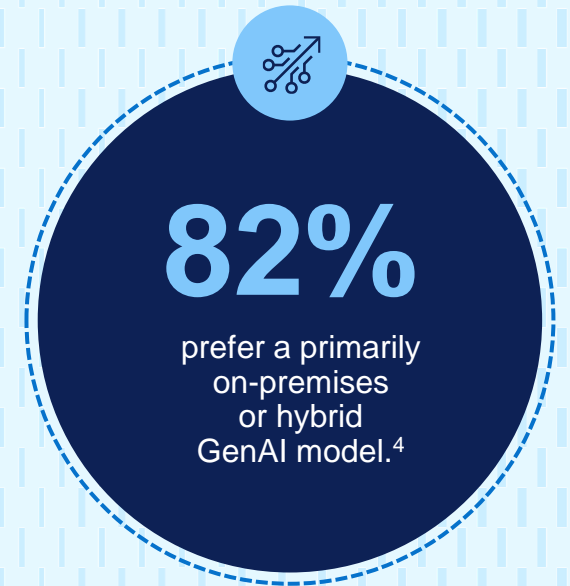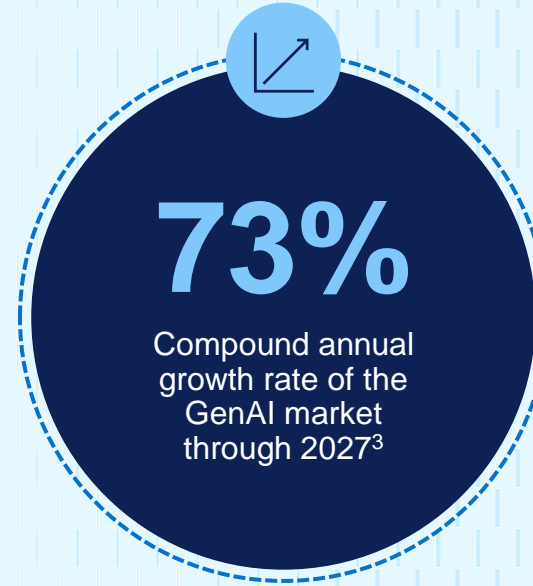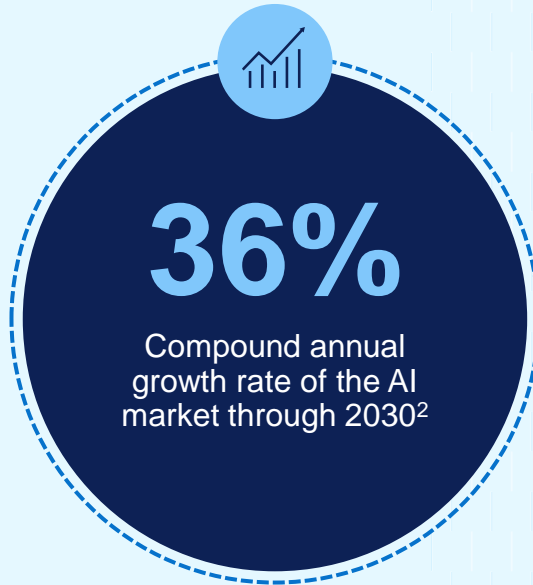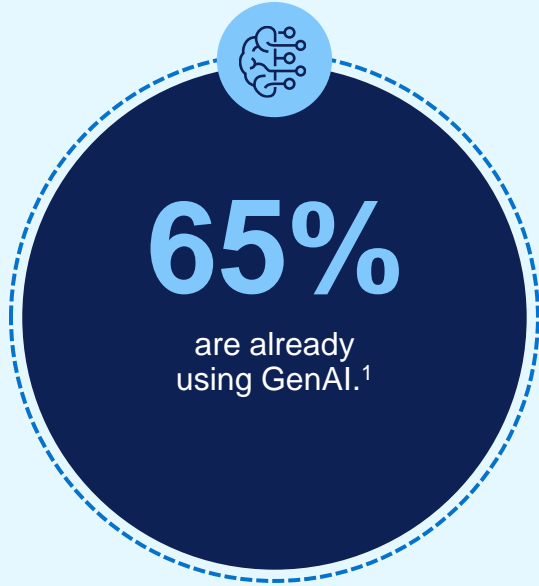
[1] QuantumBlack by McKinsey, The state of AI in early 2024: GenAI adoption spikes and starts to generate value, May 2024.
[2] Markets and Markets, Artificial Intelligence Market Global Forecast to 2030, May 2024.
[3] IDC, IDC Forecasts Spending on GenAI Solutions Will Reach $143 Billion in 2027 with a Five-Year Compound Annual Growth Rate of 73.3%, October 2023.
[4] Dell Technologies, Generative AI Pulse Survey, August and September 2023, (N=500).

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Considerations for AI and GenAI placement

Secure access

General purpose / breadth of use cases

Accuracy, control and customization

Fastest time to value

Private cloud

Cost

Public cloud

Where data resides

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The SAP approach to AI

Only RISE with SAP customers can access SAP Business Technology Platform (BTP) GenAI capabilities.

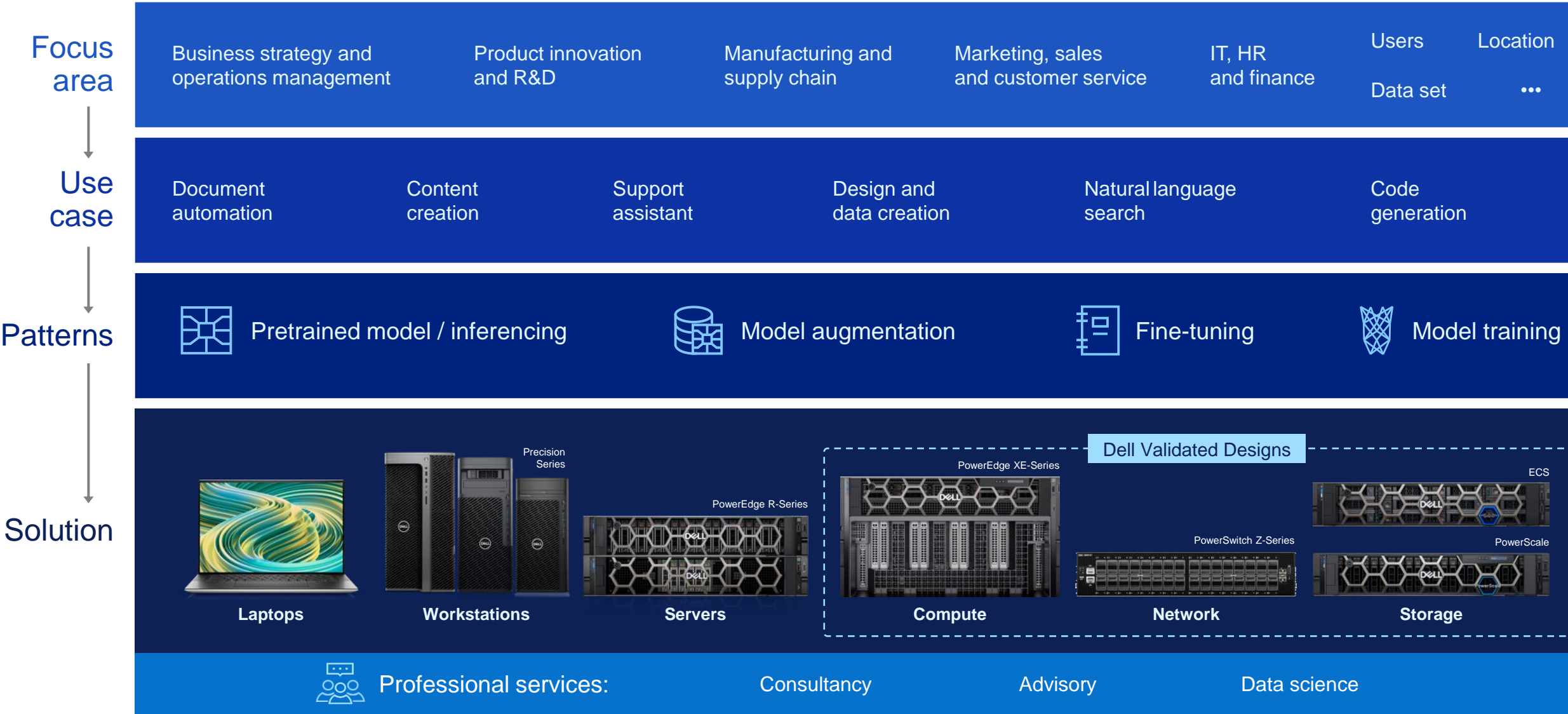## SAP GenAI technology is deeply integrated with SAP S/4HANA

- SAP BTP is at the heart of GenAI transformation.
- It gives customers access to GenAI capabilities within SAP S/4HANA.
- It helps customers easily develop, extend and integrate GenAI applications.

- -

However, not all customers will benefit

- SAP BTP GenAI innovations are only available to RISE with SAP subscribers.
- There is limited transparency into what the benefits and costs will be.
- Older SAP ERP versions and on-premises and hosted SAP S/4HANA environments **are not included.**

D∕ELL Technologies

Dell Technologies: Delivering GenAI innovation end to end

Focus area	Business strategy and operations management	Product innovation and R&D	Manufacturing and supply chain	Marketing, sales and customer service	IT, HR and finance	Users	Location
						Data set	...

Use case	Document automation	Content creation	Support assistant	Design and data creation	Natural language search	Code generation

Patterns

Pretrained model / inferencing   Model augmentation   Fine-tuning   Model training

Solution

Dell Validated Designs

Precision Series

PowerEdge R-Series

PowerEdge XE-Series

PowerSwitch Z-Series

ECS

PowerScale

Laptops   **Workstations**   **Servers**   **Compute**   **Network**   **Storage**

Professional services: Consultancy   Advisory   Data science

DØLLTechnologies

Framework for AI success

Standardize delivery of SAP AI scenarios with the Dell AI Factory
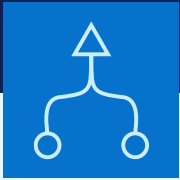
Simplified

Simplify and scale AI deployments and operations to production, with workflow automation for fast time to value.

Tailored

Transform your data into insights that scale across your organization, with leading capabilities aligned to your objectives.

Trusted

Deploy AI on secure foundations, from data to infrastructure to operations. Implement secure data workflow from source to outcome, ensuring data privacy, governance and control.

Turbocharge AI adoption | Boost productivity

DELLTechnologies

Dell NativeEdge accelerates AI at the edge

NativeEdge automates the delivery of NVIDIA AI frameworks to edge devices

Optimized inferencing:
NVIDIA NIM

Video analytics:
NVIDIA Metropolis

Speech and translation:
NVIDIA Riva

| **Simplify and standardize AI at the edge**.

| **Faster, easier development** of AI inferencing solutions

| **Zero Trust**, **zero-touch deployment** of edge AI apps to endpoints

| Ease of edge AI solution **lifecycle management** with NVIDIA GPU Cloud (NGC) for NVIDIA AI Enterprise solutions on NativeEdge

Support for
NVIDIA AI Enterprise
NVIDIA.

Zero-touch
deployment

Zero Trust
security built-in

D&LL Technologies

Business process transformation

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What's driving business process transformation?

Modernization

—

Top 3

CEOs named modernization as a top three priority— and a top 3 challenge.[1]

Security

—

74%

of CEOs are concerned about their ability to avert or minimize cyberattack damage.[2]

Sustainability

—

160%

increase in energy demands from AI predicted by 2026.[3]

[1] IBM, 6 hard truths CEOs must face, 2024.
[2] Cisco, 2024 Cisco Cybersecurity Readiness Index, 2024.
[3] Goldman Sachs, AI is poised to drive 160% increase in data center power demand, May 2024.

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Modernize SAP landscapes with Dell edge-to-core-to-cloud solutions for SAP

Set an IT framework to orchestrate data management.

Become data-driven from edge to core to cloud.

Leverage AI / ML / blockchain.

Work with varying data types from different sources.

Dell Technologies advantages

- SAP-certified RISE Private Edition, CDC Partner
- SAP-certified Dell Edge Gateways for IoT
- SAP-certified infrastructure end to end
- Data management platform AI-ready

SAP edge services Edge to core and IoT	SAP Intelligent Technologies
	SAP S/4HANA Digital Core
	SAP Data Intelligence
	Data inside S/4HANA · IoT and big data outside S/4HANA

Dell
Edge servers for IoT

Dell
PowerEdge   PowerMax   PowerScale
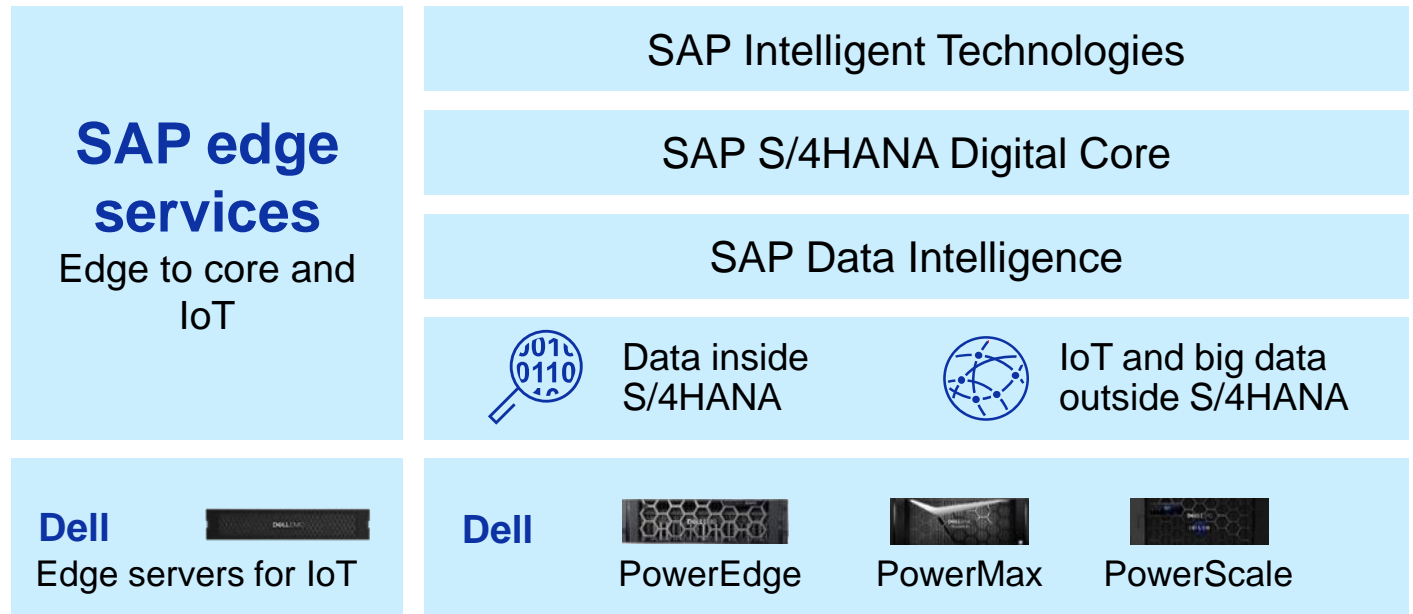
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Security: Increase business resilience

Dell Technologies cybersecurity approach for SAP

What we deliver

Data protection and recovery aligned to risk

Advanced detection and response platform

Technology and process automation

Business continuity and incident response plan

Cyber-recovery aligned to business needs

Outside experts operating key processes

DELLTechnologies

Sustainability via Dell infrastructure efficiency

> *We're hyper-focused on AI innovation in our AI Proving Ground, and the all-flash PowerScale F910 has exceeded our expectations. It doubles performance, reducing the power and energy costs required for the same workload, further advancing our customers' sustainability goals.*
>
> — *John Lochausen, Technical Solutions Architect, WWT*

Up to 10X greater performance per watt[1] for better power efficiency

Lower capacity overhead, with 80% or higher usable capacity

World's most efficient scale-out NAS: Dell PowerStore[2]

More hardware-efficient starter implementations, with 3-node 12-drive minimum clusters

#1 most energy-efficient servers: Dell PowerEdge[3]

More e-waste efficient cluster with non-disruptive node decommissioning

5:1 data reduction, the world's best scale-out NAS data reduction guarantee[4]

ENERGY STAR® certifications

[1] With Dell PowerEdge servers using direct-to-chip and rack-level liquid cooling. Based on performance per watt gains of 1.46X to 10.6X with built-in accelerators on a range of AI, database and networking workloads. See A19-A25, D1, D2, D5, N16 at intel.com/processor claims: 5th Gen Intel Xeon Scalable processors. Results may vary.
[2] Based on Dell analysis of public information on data reduction guarantees. April 2024. See terms and conditions for details at dr-guarantee-tc-powerscale.pdf (delltechnologies.com). Actual data reduction rates will vary.
[3] PowerEdge has more EPEAT registered platforms than the competition. Based on Dell analysis of EPEAT registered servers, February 2024. EPEAT registered where applicable. EPEAT registration varies by location. See www.epeat.net for registration status by location.
[4] Based on Dell analysis comparing primary storage data reduction guarantees vs Dell Storage Data Reduction program, May 2024. For PowerStore, applies to new arrays initially installed with PowerStoreOS 4.0. For details, see All-Flash Data Reduction Guarantee Terms and Conditions. Actual data reduction rates will vary.

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Budget and funding rationalization

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SAP budget challenges

35% of SAP users say budget constraints block technology implementations and upgrades.[1]

29% lack funding for SAP projects/ initiatives.[1]

16% say market/economic factors are causing budget challenges.[1]

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Sprawling SAP landscapes increase costs and complexity

S/4HANA

BW

ECC

DR	Production	Training	Quality assurance	Development
CI/DB servers	CI/DB servers		Integration and stress test	Sandbox
		Staging		
		Support	**Data conversion**	
Apps	Apps	Apps	Apps Apps	**Development**
DR DB	PRD DB	Support DB	QAS DB PPD DB	DEV DB

SAP landscapes are complicated.
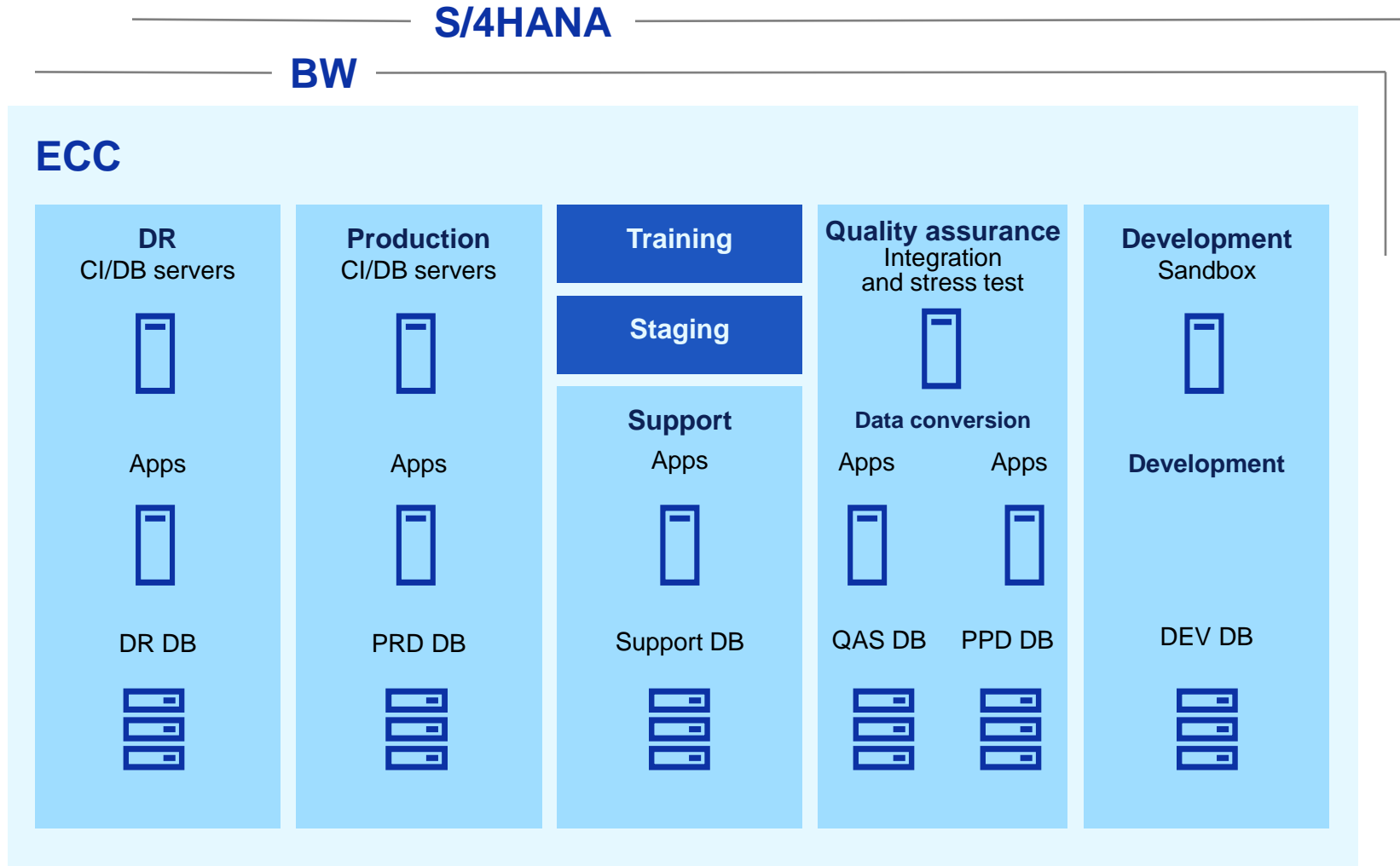
Multiple landscapes for each application.

Most customers still run **dedicated physical stacks.**

3+ days Moving projects between environments requires copies that can take **several days.**

Data sets must be **regularly backed up.**

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A cloud experience

As you build and manage your environments

Modern cloud experience

DELLTechnologies
A P E X

Modern consumption experience

- Elastic scale
- Accelerated TTV
- Delivered aaS
- Self-service transactability
- Delivers an outcome

- Pay as you go
- Use subscriptions
- Vendor/partner-owned assets
- Typically consumed as OpEx

Storage   Data protection   Compute
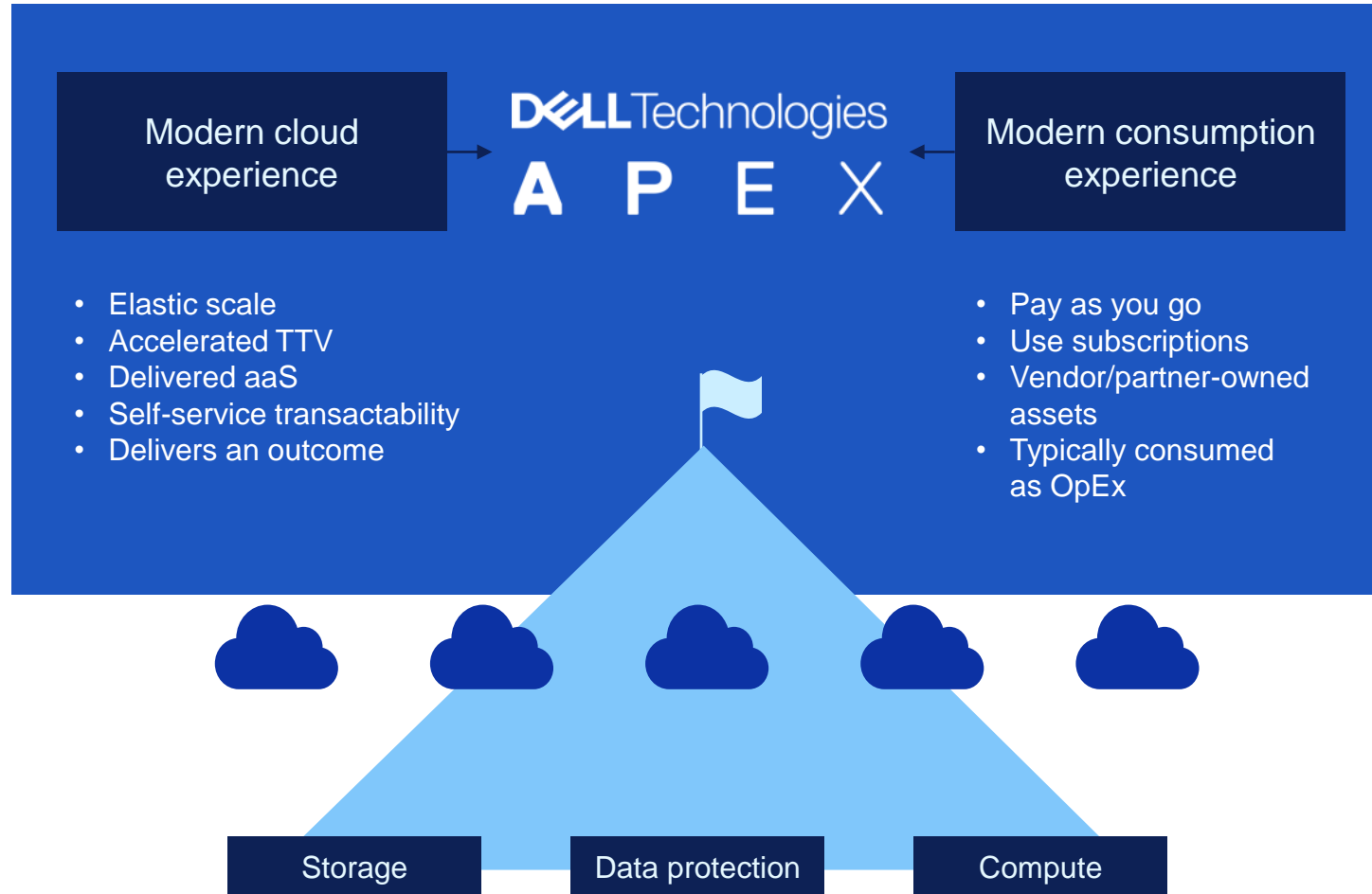
Take advantage of best-of-breed Dell innovation across clouds.
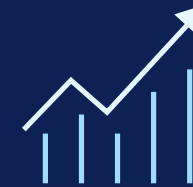
Modernize your enterprise to secure and maximize your cloud experience.

Consume technology in new ways to cut unwanted cost and complexity.

Unique SAP benefits

Day 2 operations

S/4HANA

BW

ECC

DR	Production	Training	Quality assurance	Development
CI/DB servers	CI/DB servers		Integration and stress test	Sandbox
		Staging		
		Support		**Development**
Apps	Apps	Apps	Data conversion	
			Apps Apps	
DR DB	PRD DB	Support DB	QAS DB PPD DB	DEV DB
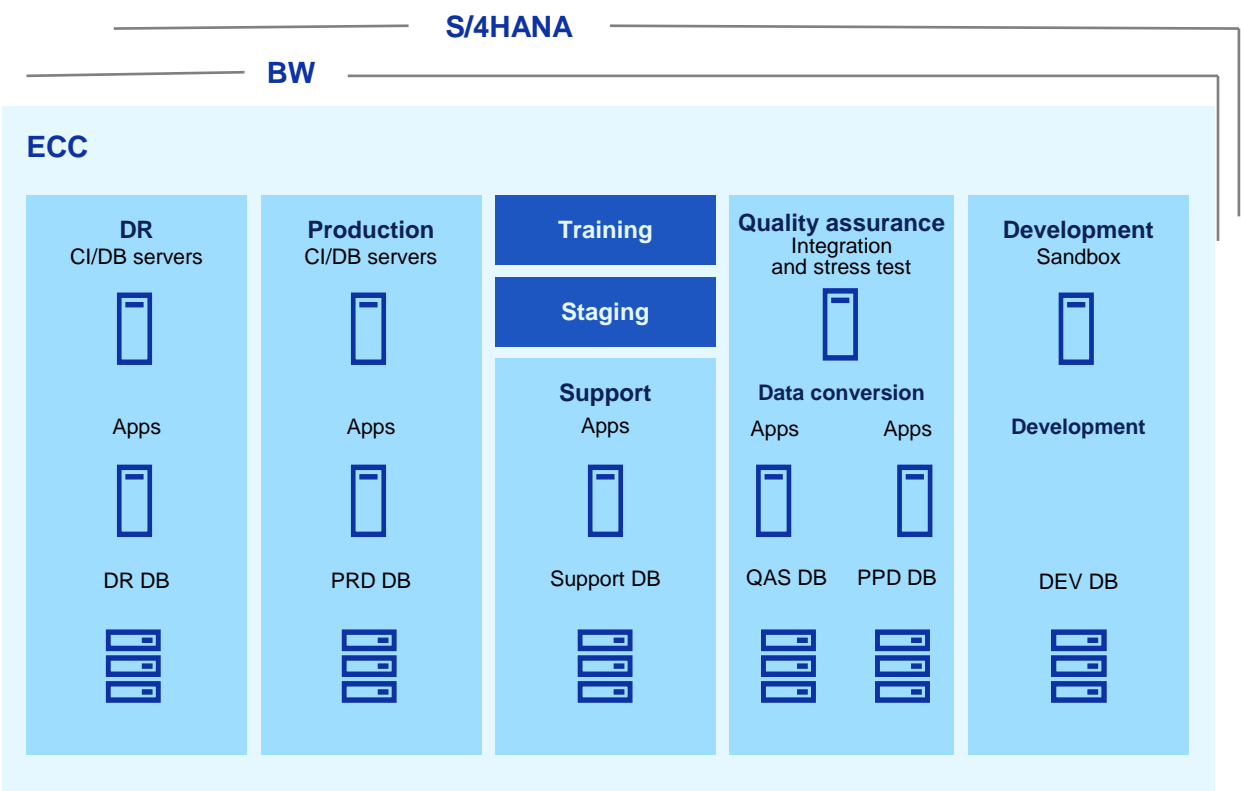
Lower TCO ↓   Increase SAP admin and productivity ↑   Faster time to value Migrations | Upgrades ↑

Dell SAP IT solutions

Application lifecycle management

Data reuse	Migration	Operational recovery
System	Database refresh Go-live rehearsals	Testing Tech refresh / data migration	Application and DB patch	Maintenance Data corruption
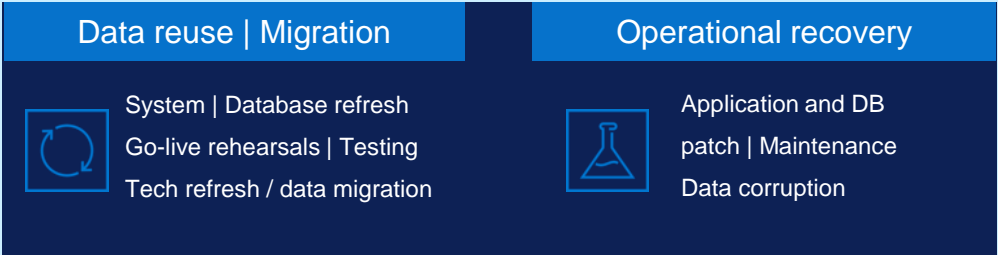
Data protection | Availability | Long-term retention

App aware	Operational backup / restore	Long-term retention
Cyber protected Native application / DB access	Any-premises cloud Hybrid cloud

Availability

Mission-critical applications
Eliminating SPOF Local	Metro distance

Remote protection

Disaster recovery
Automated testing Automatic failover	Failback
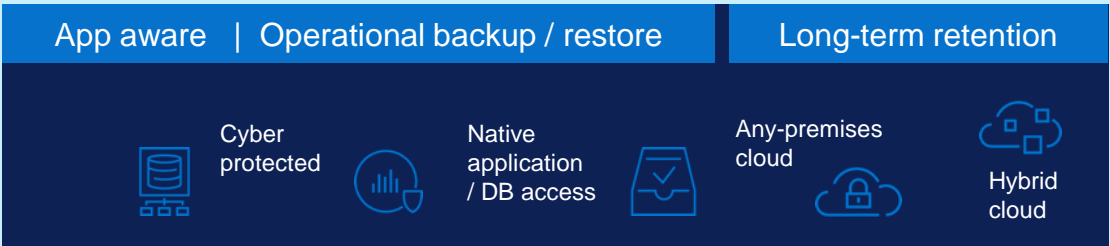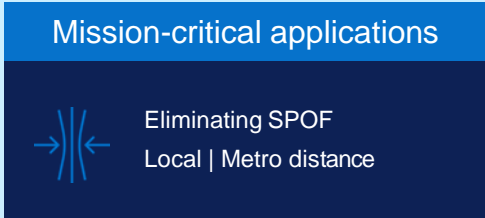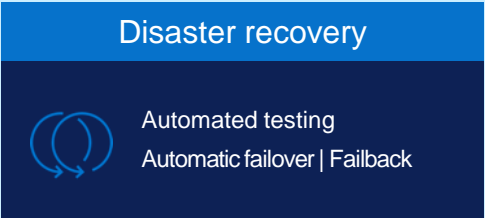
D∅LL Technologies

Dell Technologies delivers simplicity and standardization that lead to cost savings

Address budget and funding challenges with

DELLTechnologies
A P E X

39%
lower three-year cost of operations[1]

38%
more efficient IT infrastructure teams[1]

54%
more efficient help desk[1]

39%
lower infrastructure costs[1]

34%
reduction in buffer capacity required[1]

33%
faster to prepare IT for business extensions[1]

12%
faster development lifecycles[1]

$7.66 million
in higher revenue per year per organization[1]

45.9%
lower costs compared to AWS[2]

9.8%
better performance compared to AWS[2]

[1] IDC Business Value white paper, sponsored by IDC, The Business Value of Dell Technologies APEX Multicloud and As-a-Service Solutions, August 2023.

[2] Dell APEX Private Cloud and Dell APEX Data Storage Services Block solution vs. 16x 1TB volumes of Amazon EBS io2 Storage with a provisioned IOPS rate of 22,000 each when configured with similar quality-of-service (QoS) settings. Source: Principled Technologies Infographic, A solution with Dell APEX Private Cloud and Dell APEX Data Storage Services Block delivered stronger Oracle Database performance at a lower cost than Amazon EBS io2 storage, 2023.

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In conclusion…

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Dell Technologies supports your journey to the SAP intelligent enterprise, your way

RISE with SAP on Dell APEX

Dell APEX IaaS

Dell APEX Private Cloud

Dell infrastructure

Performance and scale of SAP-certified Dell infrastructure brings the cloud experience to any premises.

Storage	Servers	Data protection	Networking	Converged and HCI

D∕∕LL Technologies

We help you thrive in the new normal

Transition to **SAP S/4HANA**	**Dell Validated Designs for SAP and Dell APEX**
Adoption of **SAP RISE**	**Dell APEX**
Integration of **GenAI**	**Dell AI Factory**
Business process **transformation**	**Modernize IT, protect data and advance sustainability with Dell.**
Budget and funding challenges	**Dell gives you simplicity, standardization and choice.**

DELLTechnologies

Choose Dell Technologies solutions for SAP

Leading market positions and a differentiated strategy, supported by durable competitive advantages

#1 team

#1 enterprise infrastructure vendor[1] and world's largest supplier of enterprise application software

25+

years of partnership of innovation between Dell Technologies and SAP

15K+

joint customers globally

60+

joint engineering and certification projects

Strategy supported by durable competitive advantages
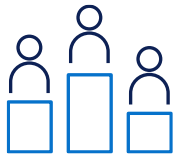
#1 positions in CSG and ISG

E2E product and multicloud offerings

Largest GTM and channel ecosystem
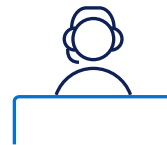
Leading global services footprint

Industry-leading scale and supply chain

Leading financial services capabilities

First and best VMware® alliance

---

[1] Q3FY22 earnings call.

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Next steps

Explore

Deep dive on some of today's topics and solutions.

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