NetApp StorageGRID

Your Data at Scale

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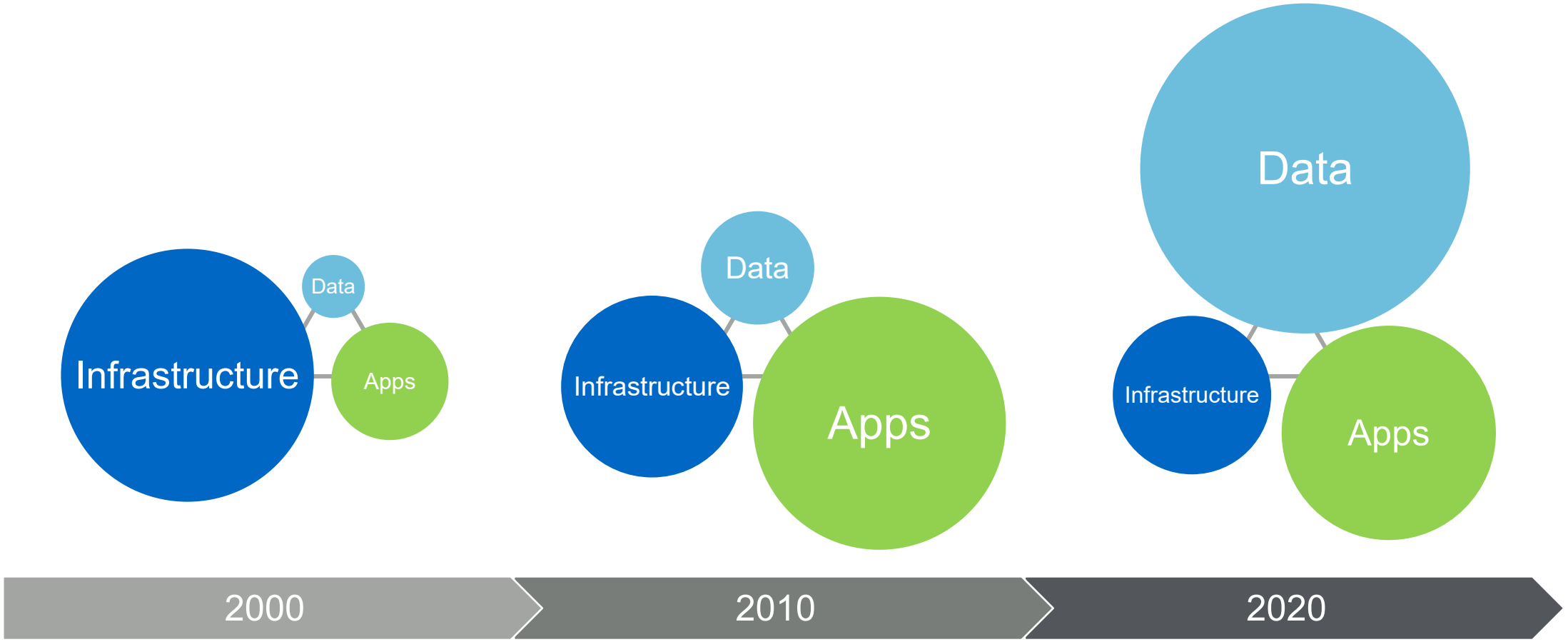
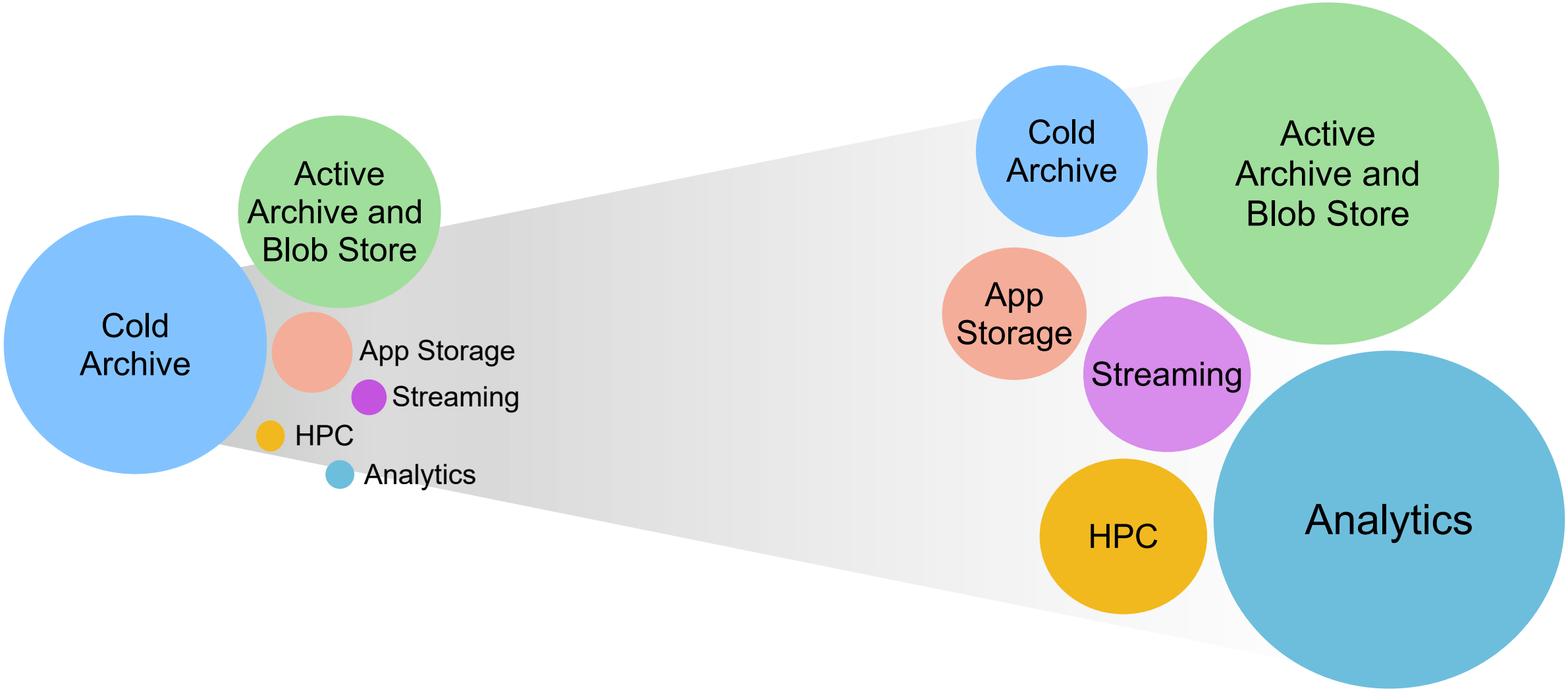
CIO | USDC Technology

Unstoppable Drive Toward Data Management

The rise of a data-centric business



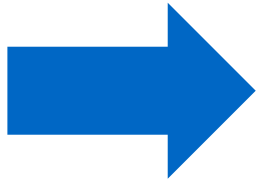
Object Use Cases Are Evolving



As use cases evolve, so are the demands for object

Secondary Storage

- Backup Repository & Secure Archive
- Capacity optimized, low transaction loads, long retention periods, latency tolerant
- **Criteria: high efficiency, durable, automated tiering as value of data changes**



Primary Storage

- Rich Content Services
- Video, images, pdfs, sensor data, decentralized, Billions of objects, New Apps (S3), streaming data access, large throughput rates
- **Criteria: Scalability, multi-site, multi-app, automated data distribution**

Compromises of Current Object Storage

Proprietary

Rigid

Stranded

NetApp StorageGRID: Your Unstructured Data at Scale

Open

Future-proof investments

Optimized

Deliver differentiated service levels

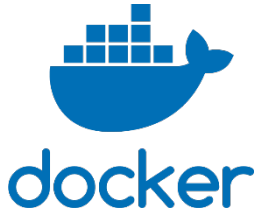
Extensible

Bridge hybrid cloud workflows

Open: Future-Proof Investments

Deploy with no platform or application lock-in

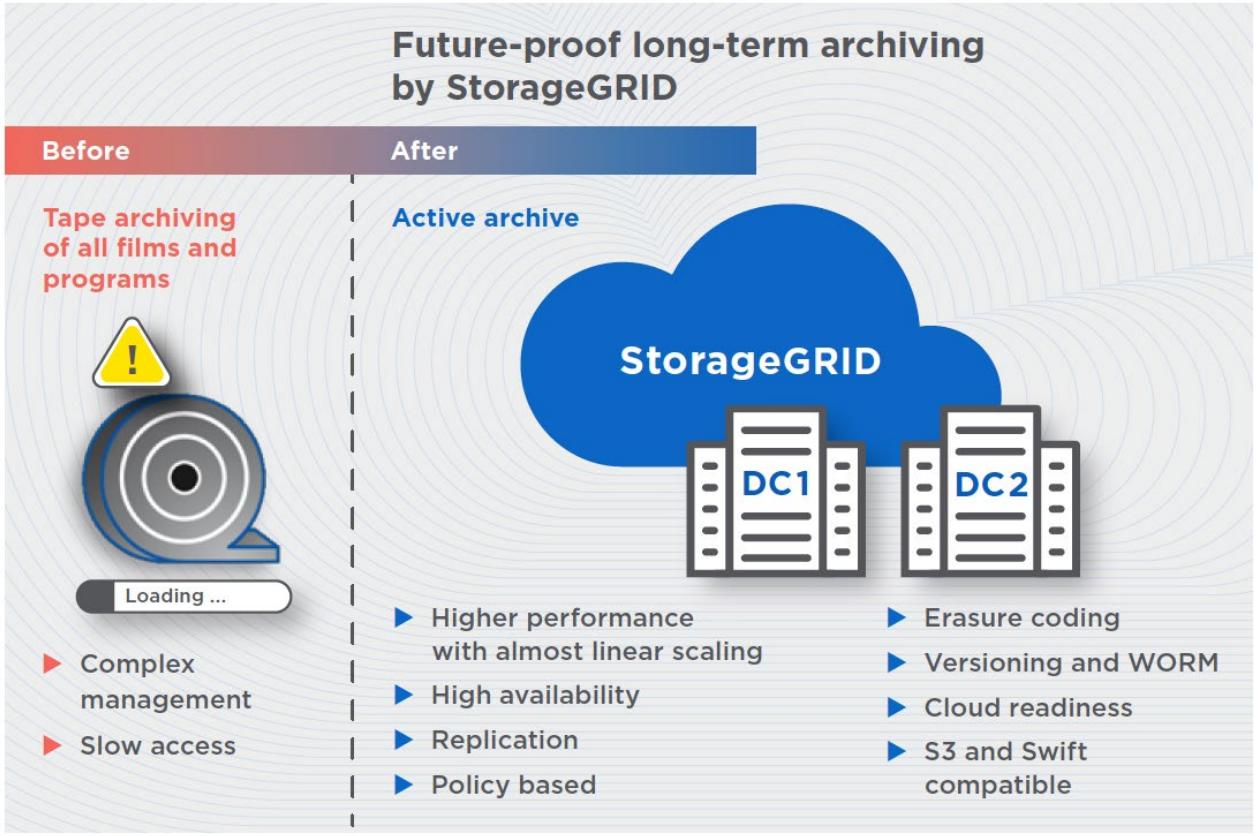
- Support for leading object APIs Amazon S3 and Swift: no application lock-in
- Flexible deployment models: no platform lock-in
- Subscription or perpetual licenses: OpEx or CapEx models



Customer Example: Rich Media

Unlimited scalability, high availability, and improved media workflows

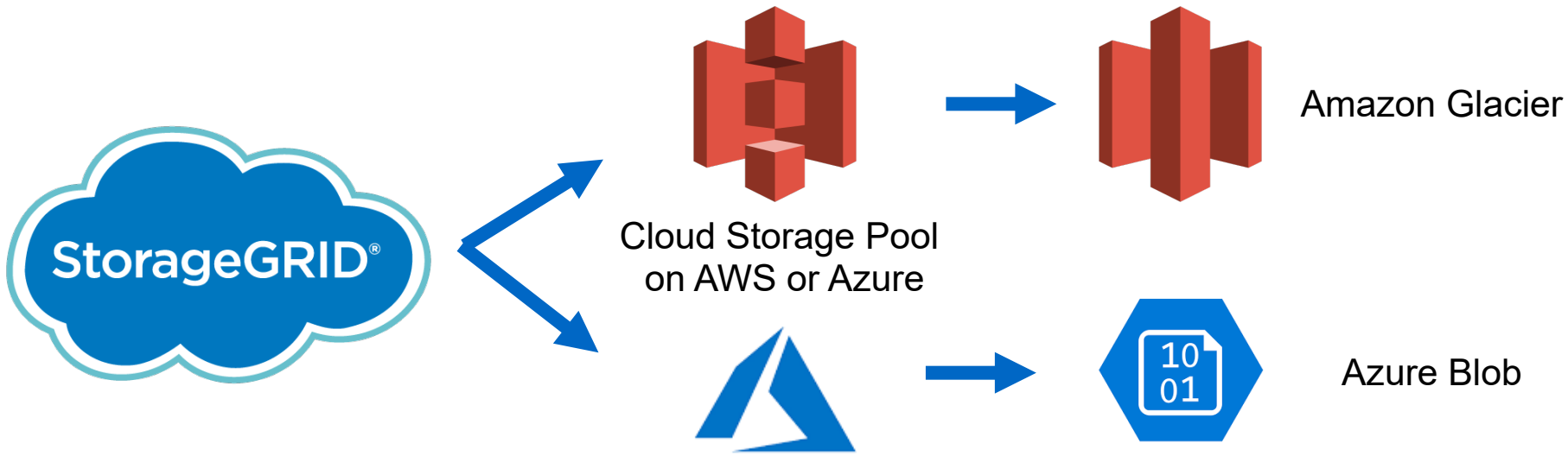
- The challenge
  - Future-proof distributed content platform
- The solution
  - NetApp® StorageGRID® for rich media
  - Unlimited supported
- Customer benefits
  - Linear scalability, high availability, and cloud readiness
  - Direct access to data objects and their metadata
  - Future proofing thanks to the support of standards
  - Easy to operate and minimum complexity due to unified management
- Next phase
  - Transcoding
  - Cloud DVR



Cloud Storage Pools

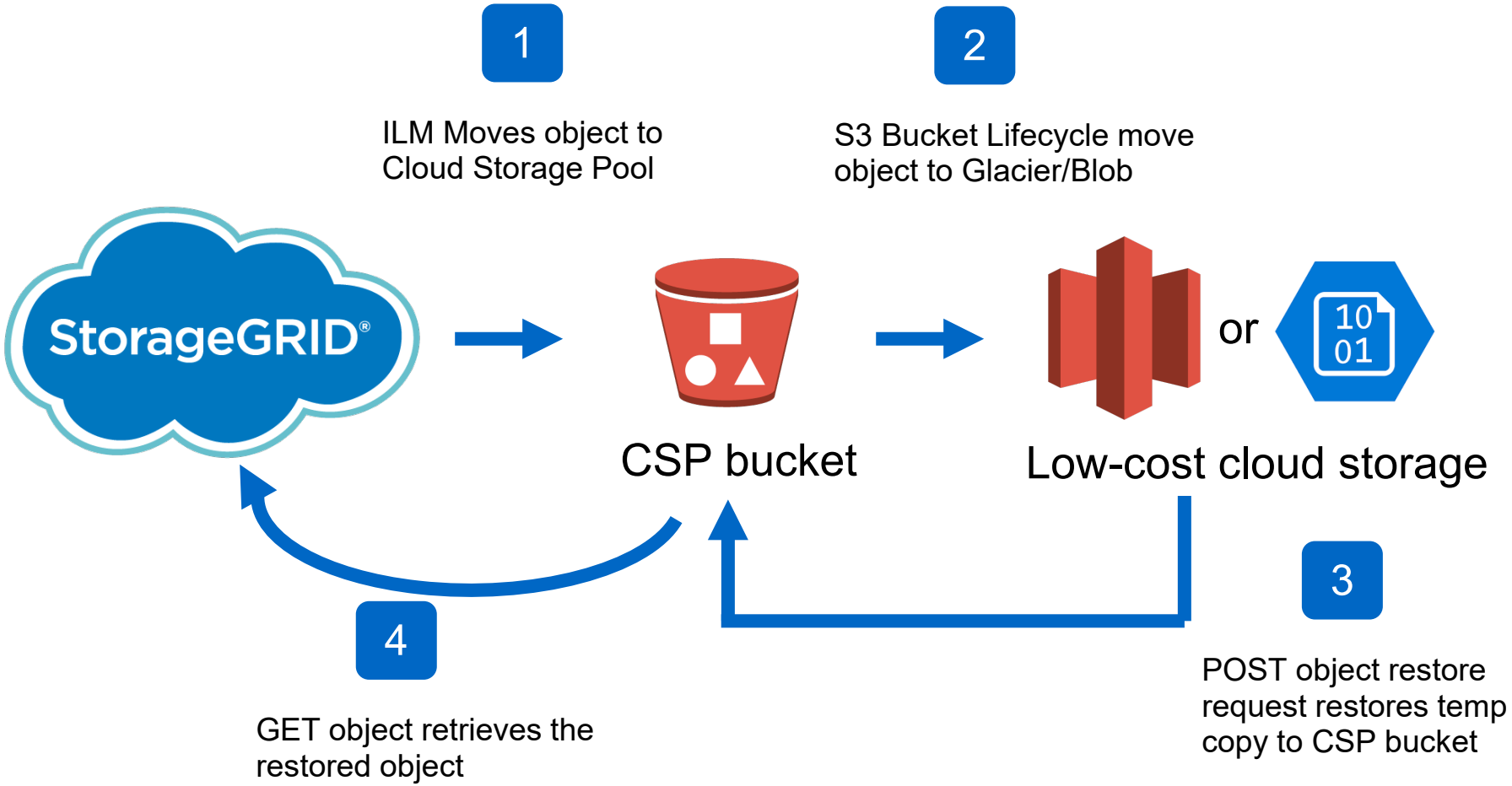
Deploy borderless

- A Cloud Storage Pool lets you use Information Lifecycle Management (ILM) rules to move object data outside of your StorageGRID system.
- Move infrequently accessed object data to low-cost cloud storage
- Free up on-premise storage by storing older versions of objects in external storage.



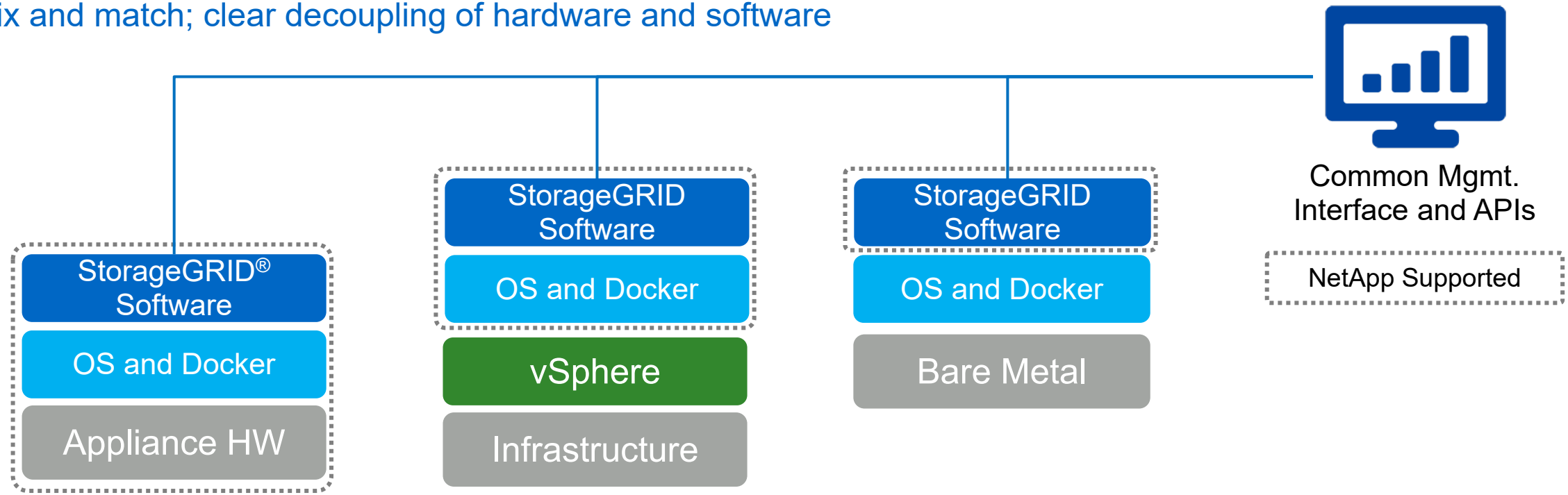
Cloud Storage Pools (CSP) Lifecycle

Deploy borderless



Open: Choice of Deployment

Mix and match; clear decoupling of hardware and software



Appliance-based

- "Ready to go"
- All flash and HDD

VMware-based

- NetApp® or third-party storage
- Automated install

Bare metal

- BYOH: internal storage or external array
- Supports RHEL, CentOS, Ubuntu, Debian

Optimized: Integrate Data Lifecycle Management

Deliver differentiated service levels with advanced data policies

Lifecycle

Define durability, cost-of-storage, and retention requirements for each stage of data's lifecycle, from ingest to purge.

Location

Place data where it will be needed and prevent it from going where it shouldn't.

Retention

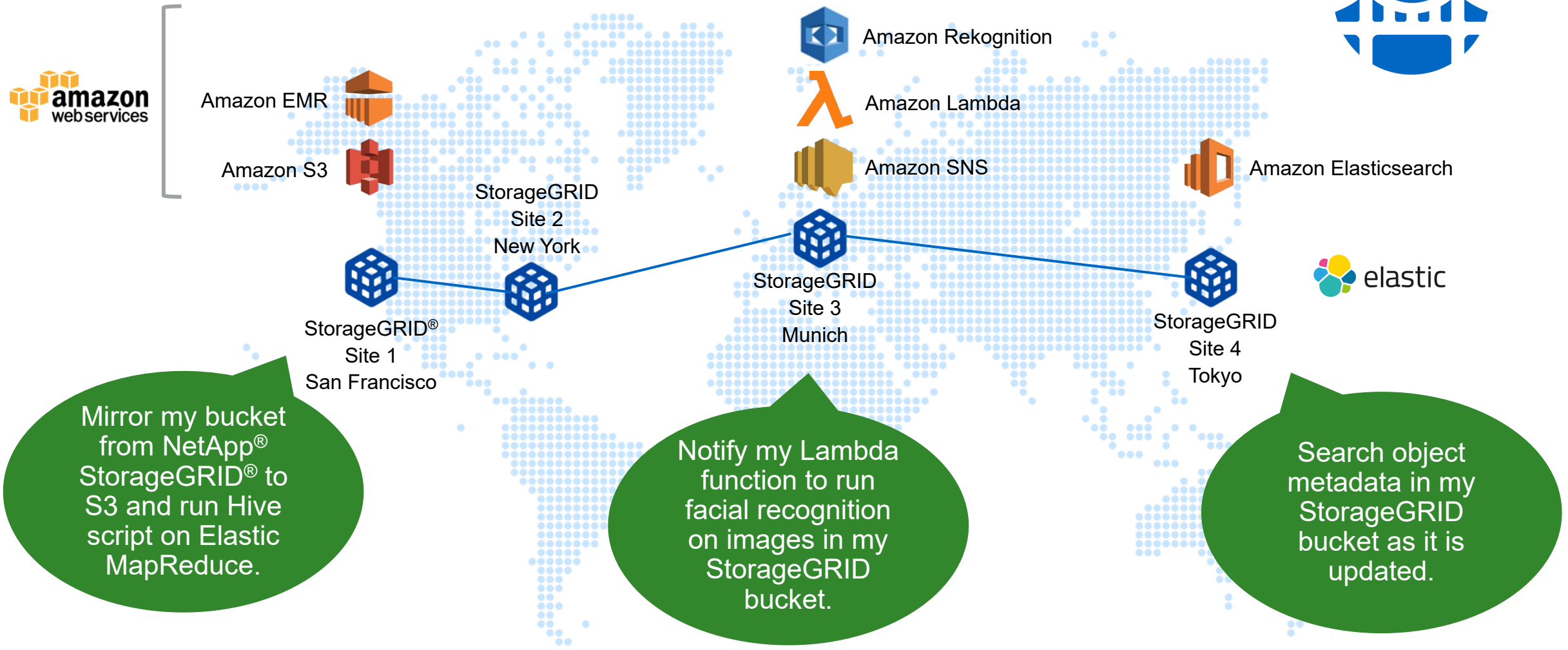
Prevent data from being modified, overwritten, or erased until the retention period and legal holds have expired.

Change

Adapt your policies to changing business requirements.

Extensible: Build a Truly Hybrid Cloud

Deliver workloads spanning on-premises environments to the cloud and back



NetApp StorageGRID: Your Unstructured Data at Scale

Open

Future-proof investments

Optimized

Deliver differentiated service levels

Extensible

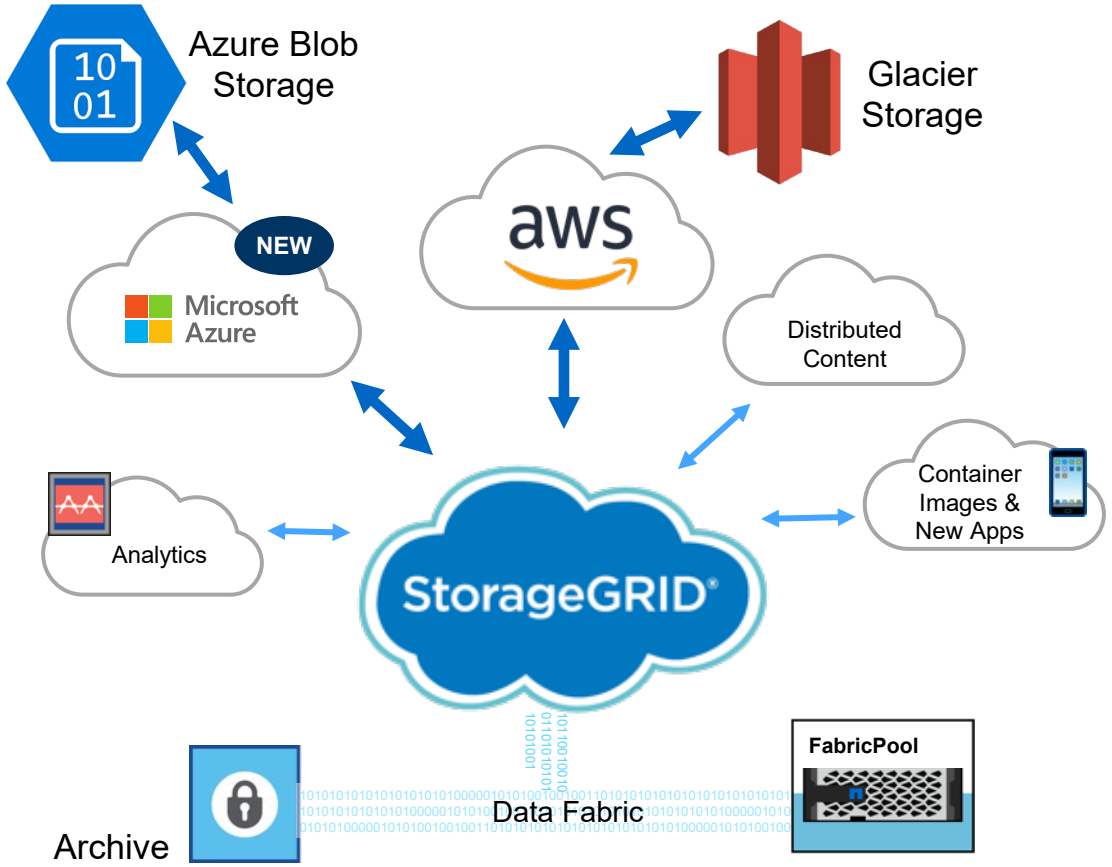
Bridge hybrid cloud workflows

Thank you

Backup

StorageGRID is essential to your hybrid, multicloud experience

More Clouds, More Options



- Open—S3 or Swift API: the most deployment flexibility
- Extensible—bridge workflows across clouds, like SNS, Lambda, Rekognition, Elasticsearch, to fit your business needs
- Optimized—integrated lifecycle management policies optimize data lifecycles

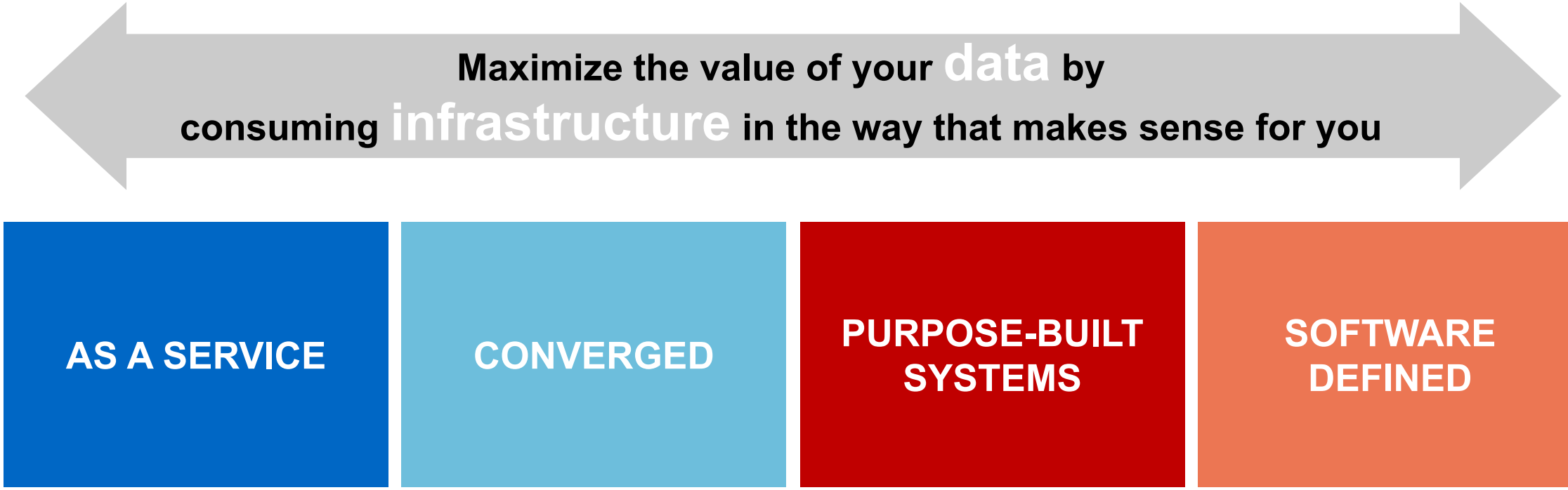
Backup - Additional Content

Note: only use if needed to address a specific request.

Best plan is to set up a second meeting to present NetApp StorageGRID Technical Deck in detail.

Consumption Choices in the Next-Generation Data Center

Solution for the data of the future



StorageGRID Value: Quantified

5 hours

16PB up and running across three data centers

80%

Reduction in time, cost, and data volumes

ZERO TOUCH

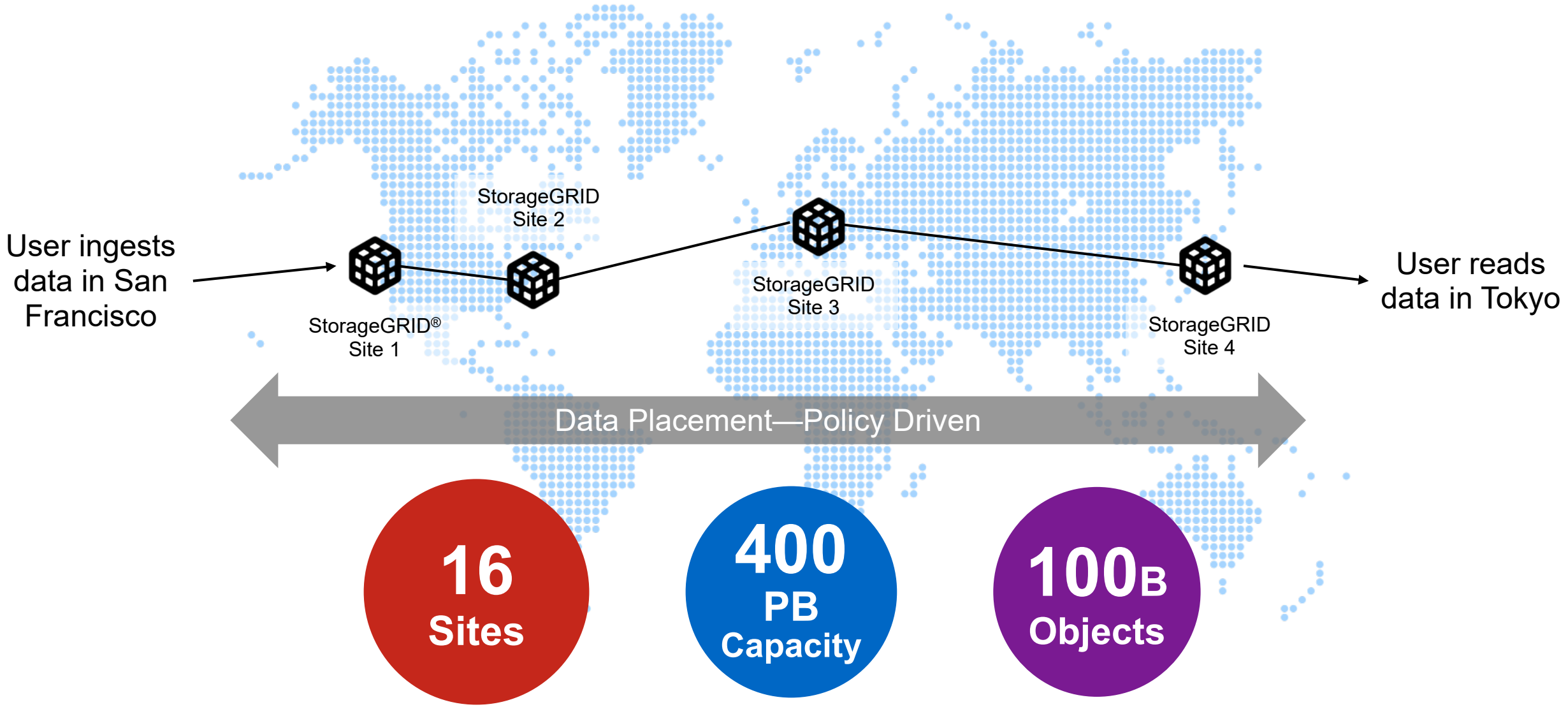
Policy-based lifetime optimization of content

100%

Flexible on implementation over time, driving best pricing

USDC TECHNOLOGY Smart Data Center NetApp

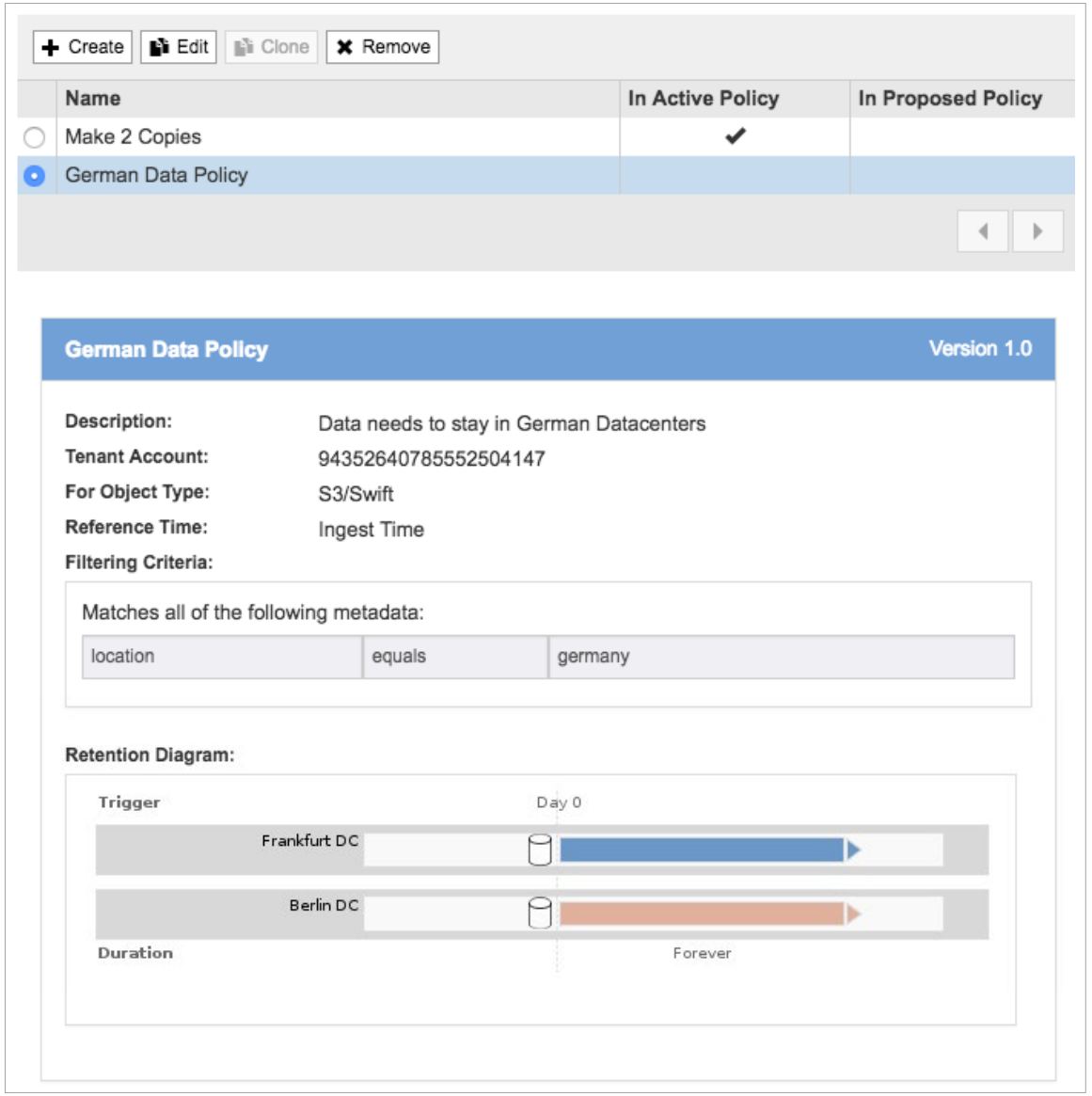
Global Scalability



Policy-Driven Data Management

Policies define…

- Where data lives
  - Place objects in specific data centers or specific media (disk, tape, cloud).
- How long data is stored
  - Have different lifecycles for objects.
- How securely the data is stored
  - Create more or fewer replicas of objects or erasure-encode objects.



Data Assurance

- Encryption at rest
- Transport layer encryption
- Data integrity checks
- Tunable availability
  - 99,9999% (six nines) and more
- Tunable durability
  - > 99,999999999999% (15 nines) and more

Burst to the Cloud: NetApp Private StorageGRID

- Use of hyperscale compute and services without moving data into the public cloud
- Seamless data mobility between on-premises environments and NetApp® Private StorageGRID® for cloud with StorageGRID—one namespace
- Secure, high-performance integration between NetApp StorageGRID and industry-leading S3 clouds