Tarmin GridBank: Education & Research Solutions
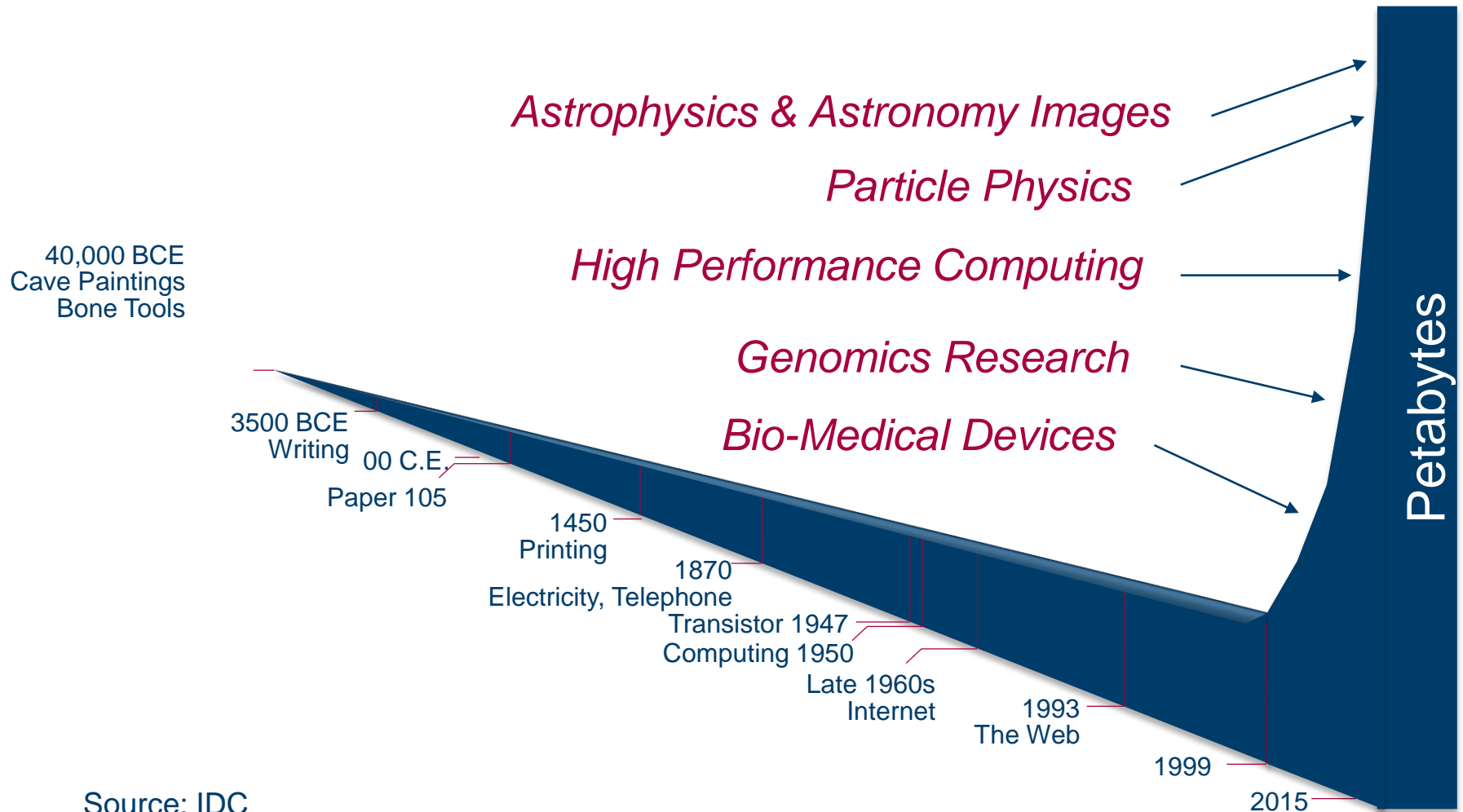
Where Data Defines Value.™

Tarmin. Where Data Defines Value.

TARMIN
Where Data Defines Value.

About Tarmin

- Founded in 2007

- Corporate Headquarters: Boston, London

- Pioneer of Data Defined Storage

- Solution: GridBank Data Management Platform

Gartner 2013 CoolVendor

STORAGE AWARDS THE STORRIES XI

CRN 5 STAR PARTNER PROGRAM WINNER 2014

2014 WINNER DCS awards

WORLD FINANCE 100

CIO 100 HONOREE 2014

Education & Research Data Growth

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Astrophysics & Astronomy Images

Particle Physics

High Performance Computing

Genomics Research

Bio-Medical Devices

Petabytes

40,000 BCE
Cave Paintings
Bone Tools

3500 BCE
Writing

00 C.E.
Paper 105

1450
Printing

1870
Electricity, Telephone

Transistor 1947
Computing 1950

Late 1960s
Internet

1993
The Web

1999

2015

Source: IDC

Challenges and Opportunities in Education and Research Data

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Challenges

Funding	• Shrinking gov funding & rising demand for aid
Data Volumes	• Massively growing machine generated data
Research Data	• Huge data flows from internal & external sources
Regulation	• Increasing regulatory environment
HPC Analytics	• Massive compute power for analysis
Online Media	• Online course provisioning in mixed media

Opportunities

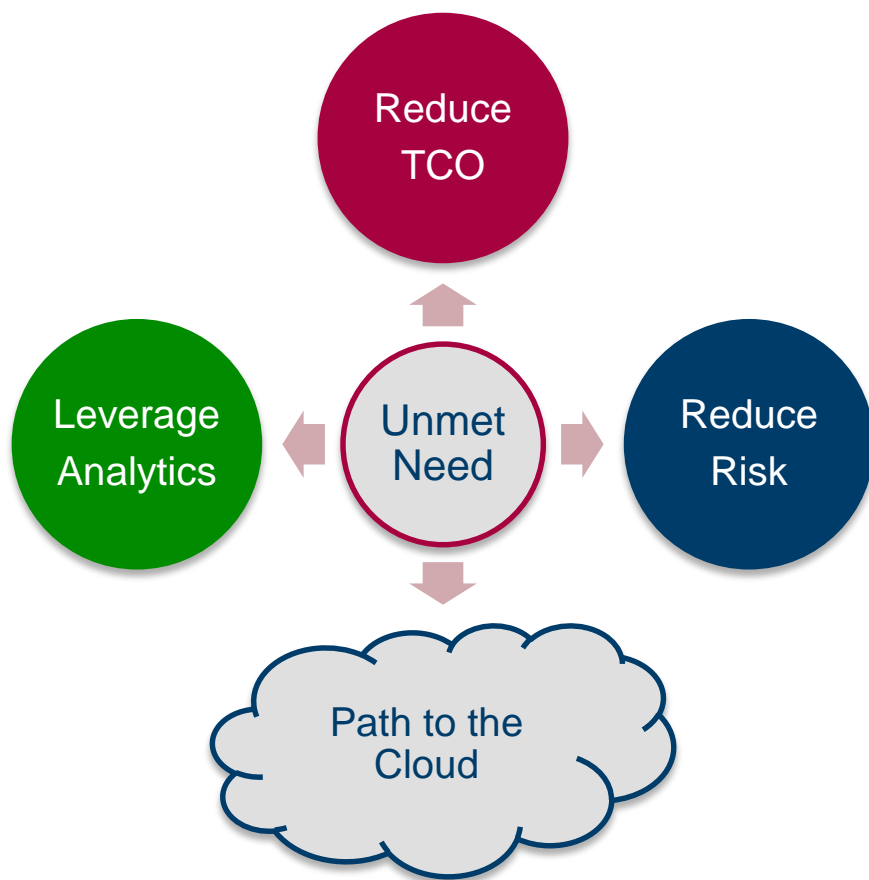|	
Budget	• Chargeback & lower TCO for decreasing budgets
Massive Scalability	• Scale to very large, rapidly growing data sets
Multi-Site	• Replication bandwidth requirements
Retention Periods	• Retention requirements outlive hardware & media
Data Analysis	• High performance analysis of data repositories
Variety	• Ingestion & indexing of multiple file types

![TARMIN — Where Data Defines Value.]

Customer Priorities

Reduce TCO
- Reduce CAPX with no vendor lock in
- Constrain data growth & storage OPEX

Reduce Business Risk
- Meet compliance & regulatory mandates
- Simplify storage & data management

Leverage Analytics
- Drive new revenue streams
- Gain competitive advantage

Path to the Cloud
- Simple, agile cloud migration model
- Transparent, non-disruptive transition

Diagram labels: Reduce TCO · Leverage Analytics · Unmet Need · Reduce Risk · Path to the Cloud

GridBank Feature Set

Reduce TCO

- Optimize Data Storage & Limit Volume Growth
- Reduce TCO with Data Consolidation
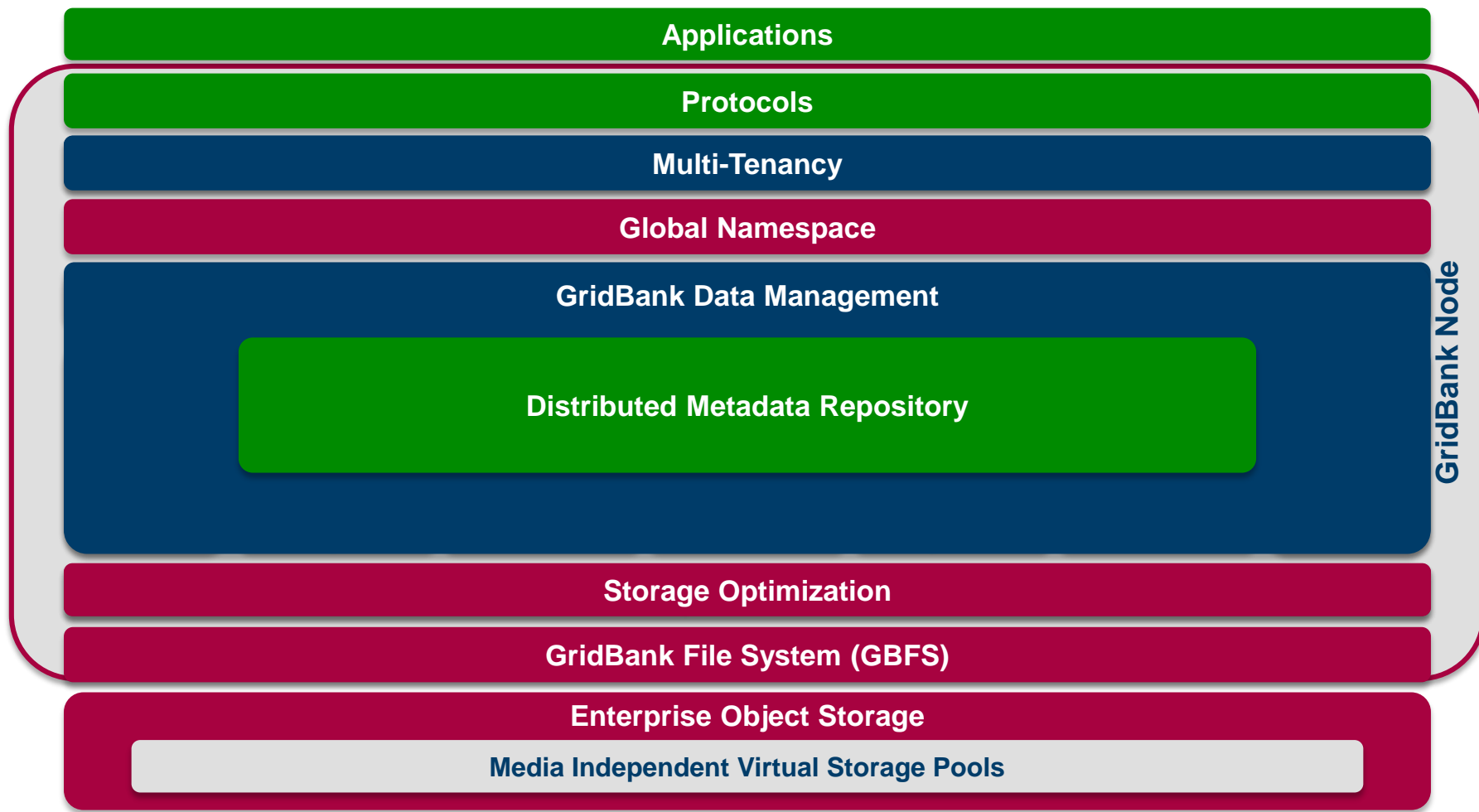- Evade Data Silos with Media Independence

Mitigate Risk

- Information Governance for Compliance
- AD-Integrated Security & Authentication
- High Availability Global Replication & BYOD
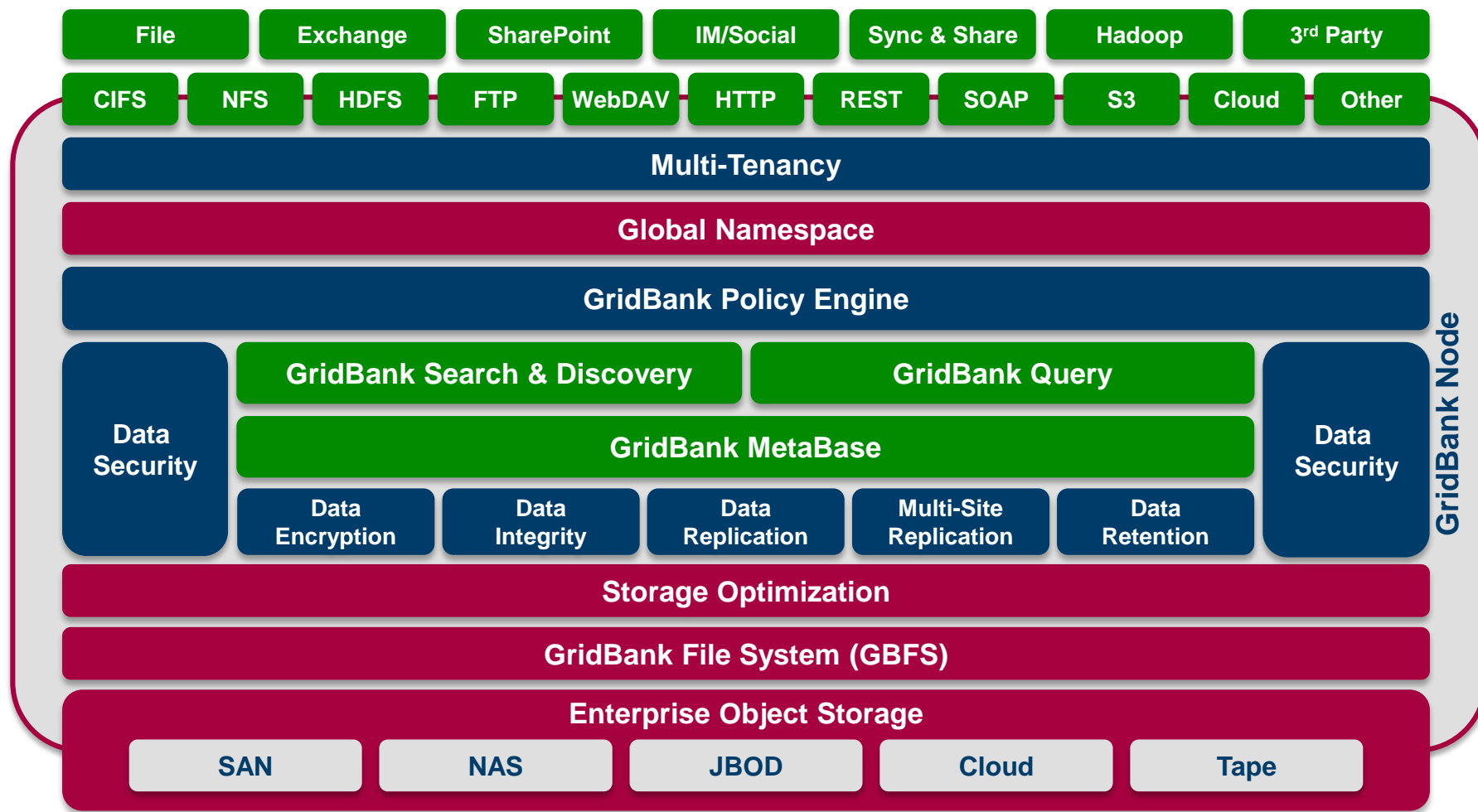
Grow Business Potential

- Enterprise-wide Unified Search & e-Discovery
- On Demand Access to Business Critical Data
- Maximize Return on Data with Big Analytics

GridBank Solution

Applications

Protocols

Multi-Tenancy

Global Namespace

GridBank Data Management

Distributed Metadata Repository

Storage Optimization

GridBank File System (GBFS)

Enterprise Object Storage

Media Independent Virtual Storage Pools

GridBank Node

GridBank Solution

GridBank File System for Reduced TCO

Consolidated Infrastructure for Operational Efficiencies

- Eliminates storage silos
- Increases utilization
- Massively scalable to multi-PB

Optimized Price Performance

- Distributed Object Dedupe & compression limits volume growth & footprint
- Flexible & dynamic multi-site features
- Automated, policy-based self-management

Simplified Administration

- Easy to operate & centrally managed
- Fault tolerant & self-healing
- Improved FTE/TB ratio

GridBank Data Management for Reduced Risk

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Replication

Distributed Object Dedupe

Bandwidth Optimized Smart Device Access

Retention & Disposal

Policy-Based Retention Periods

Legal Hold for Litigation Proceedings

Security & Protection

Prevent Unauthorized Access

Encryption

Data Integrity

CRC Self-Healing Model

Tamper-Proof Storage

GridBank MetaBase for Business Agility

Understanding at the Data Layer

- Ingestion & indexing of over 550 types of file format
- Application archiving for Exchange, SharePoint & LOB applications
- Industry-specific file type modules for core verticals
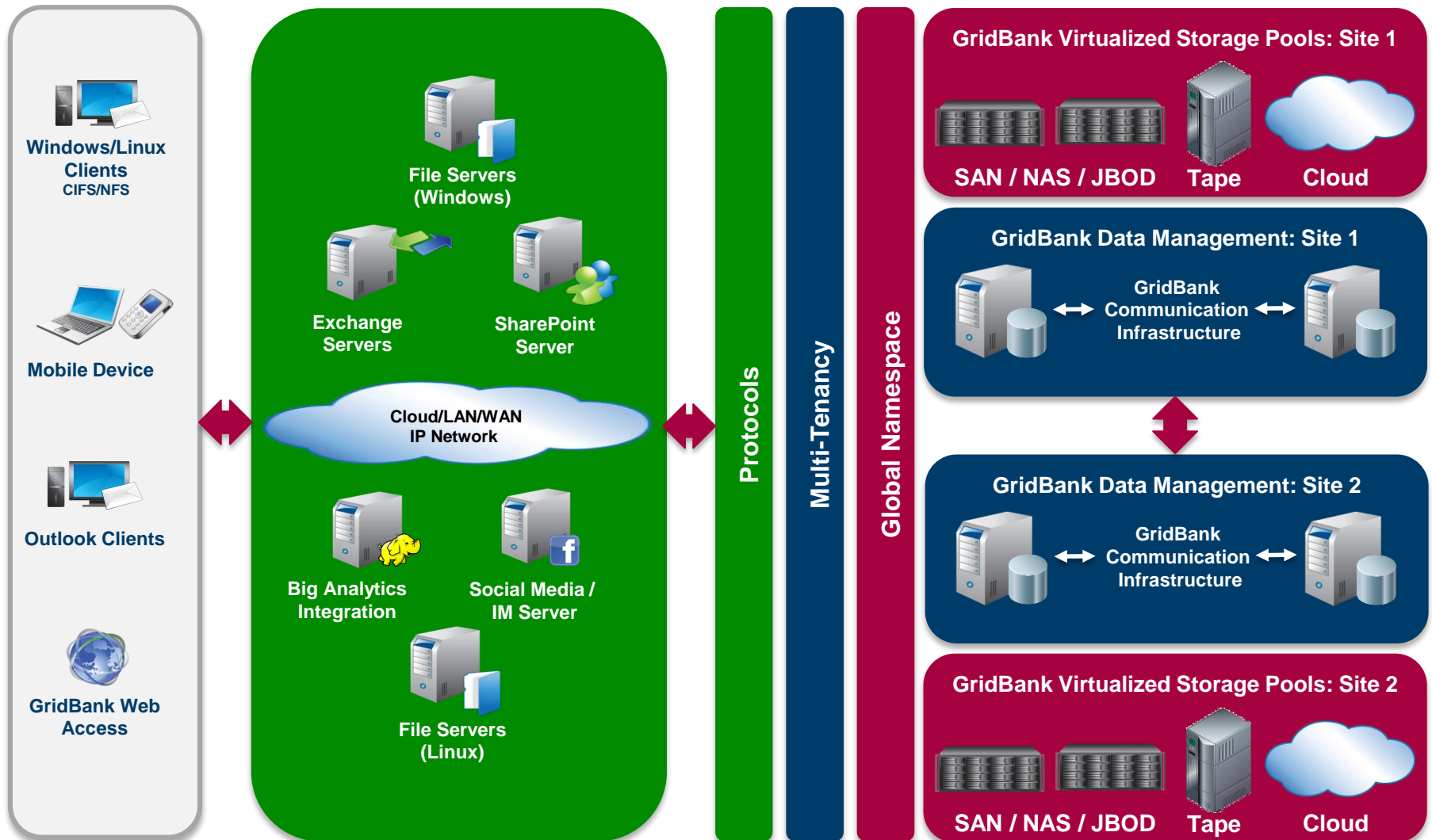
Accelerate Access to Critical Data

- On-demand high availability access to critical information
- Unified search across all consolidated data sources
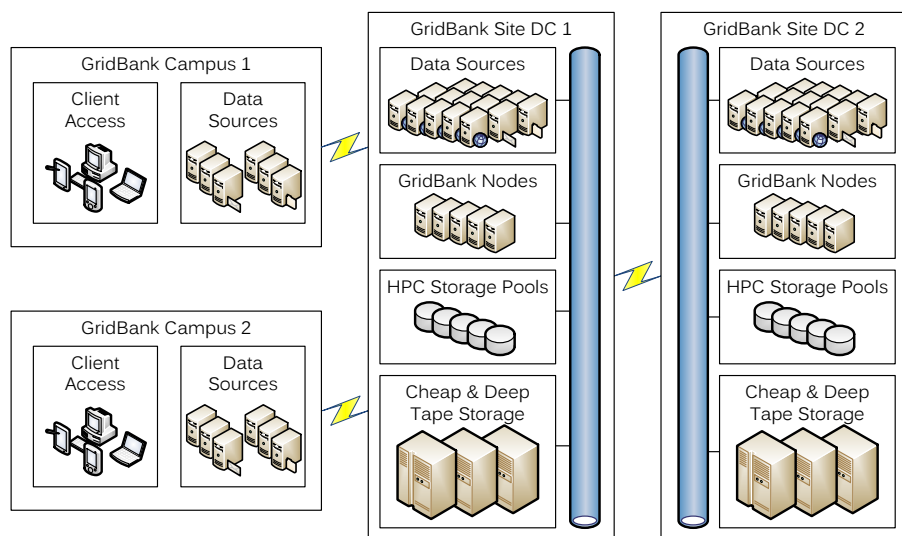- Enhance knowledge worker efficiency with optimized search

Maximize Return on Data

- Big analytics integration framework for insights & decision-making
- Gain flexibility & agility in innovative responses to dynamic markets
- Increasing returns to data volume; more data == more value

GridBank Deployment Diagram

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Windows/Linux Clients CIFS/NFS

Mobile Device

Outlook Clients

GridBank Web Access

File Servers (Windows)

Exchange Servers

SharePoint Server

Cloud/LAN/WAN IP Network

Big Analytics Integration

Social Media / IM Server

File Servers (Linux)

Protocols

Multi-Tenancy

Global Namespace

GridBank Virtualized Storage Pools: Site 1
SAN / NAS / JBOD Tape Cloud

GridBank Data Management: Site 1
GridBank Communication Infrastructure

GridBank Data Management: Site 2
GridBank Communication Infrastructure

GridBank Virtualized Storage Pools: Site 2
SAN / NAS / JBOD Tape Cloud

Education and Research Use Cases

Research University Use Case

- Pioneering HPC University
- Perform Compute on Research Data on Live Store
- Comply with FoIA Public Data Access Mandates
- Archive Completed Projects to Lowest TCO per TB

Teaching University Use Case

- Storage Infrastructure Refresh
- Consolidate Wide Range of Hardware
- Centralized Control & High Availability Access
- Comply with Organizational ILM Policies
- Implement Live & Archive Store

Tarmin Solution

- Unique Solution for Education Market
- HPC Storage, GridBank & Tape Pool Archival
- Cheap & Deep Tape Storage

Awards & Recognitions

Testimonials

"The rapid growth of our company is generating more and more data… GridBank allows us to store and protect our G&G data and create a platform for improving business efficiency while reducing TCO"

• David Edwards, Group Head of Information Systems, Premier Oil, Plc.

"We are very impressed with GridBank and see it as an important part of our strategy for ensuring customers achieve unmatched value from their relationship with bright**solid**"

Richard Higgs, Managing Director, bright**solid** Online Technology

"The object platform industry is just getting started in capturing a bigger piece of the scale-out unstructured data storage… opportunity, which IDC has forecast will be worth $27 billion by 2017 and is… becoming known as the "data-defined storage" market."

• Ashish Nadkarni, Research Director, Storage Systems, IDC

GridBank Benefits:
Education & Research Data

Reduced Total Cost of Ownership

• Higher storage utilization with simplified storage-as-a-service management & administration

Extensible & Scalable

• Across all research data disciplines, applications & locations

Efficient Migration & Replication

• Low bandwidth data migration & replication

Compliance & Information Governance

• Simple & efficient regulatory compliance

Empower Unstructured Data Analytics

• Enable HPC analysis of data repositories

Innovation

• Timely access to research data for research efficiency

GridBank Benefits

Data Defined Storage

- Takes a single, holistic, comprehensive data centric approach
- Consolidates application data across large, distributed locations & cloud
- Provides big data insight & analytics & application integration

Data Consolidation

- Massively Scalable Architecture
- Reduce TCO
- Enhance Operational Efficiencies

Data Management

- Simplify Data Management
- Enforce Compliance
- Reduce Business Risk

Data Value

- Improve Business Agility
- Drive Revenue Growth
- Increase Competitive Advantage

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Thank You!

Questions & Answers

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