



Enabling Connected Data Communities

An Industry Manifesto



Foreword

An Open Letter to Industry

Over our 15+ year history, we have assembled the largest global platform of multi-tenant datacenter capacity¹, while operating the second largest carrier neutral interconnection platform in the world.² We are privileged to serve more than 4000+ of the largest and most innovative companies globally.³

These customers continue to solve the most complex infrastructure, connectivity and workload use cases across network peering, hyperscale, low-latency, HPC/Big Data and artificial intelligence. We witnessed a growing trend among the multi-national customers, each deploying and connecting large private data infrastructure footprints across multiple global sites. This drove us to understand more.

We conducted research, built a global database and cracked the code on how to measure, quantify and forecast the growing intensity of enterprise data creation lifecycle and its gravitational impact on IT infrastructure. We published our findings as the Data Gravity Index™, an annual report to facilitate industry dialogue and assist both our Enterprise and Service Provider Customers as they shift their infrastructure strategies to address challenges presented by data gravity.⁴

Today, we are taking the next step, publishing “Enabling Connected Data Communities,” an industry manifesto for next generation interconnection to address data gravity. It’s a vision, a solution approach and a call to action to remove legacy barriers across the interconnection industry, and tackle data gravity head on.

Digital Realty will take a lead role to help the industry overcome data gravity and enable a new era of open, secure and dynamic connected data communities globally, unlocking new opportunities and value for all industries. To get started, we are updating our PlatformDIGITAL® roadmap, taking specific actions to evolve our interconnection capabilities in support of this effort. Additionally, we are inviting industry participants to engage with us to shape our roadmap and jointly collaborate to build open, secure and dynamic connected data communities globally.

We look forward to you joining us on this journey.

Thank you,
Chris Sharp, CTO

#BeyondCrossConnects

1. 451 Research, Market Forecast, Leased Datacenter Global Providers, 2020. Capacity measured in terms of operational square footage.

2. Synergy Research Group, Second largest carrier neutral interconnection global

3. Digital Realty Trust, Inc. (2021). Form 10-K 2020.

4. Digital Realty Market Intelligence & Analytics, *The Data Gravity Index DGx™*, Vol. 1.5, Dec. 2020

Introduction

Connected Data Community Approach

DIGITAL ECONOMY

The Digital Economy is remaking both private and public enterprises across all industries, transforming how they create and deliver value.

REQUIRES A NEW BUSINESS ARCHITECTURE

To succeed, companies need to operate ubiquitously and on-demand, augmented by real-time intelligence to best serve customers, partners and employees across all channels, business functions and multiple points of business presence.

DATA GRAVITY IS THE OBSTACLE

Data Gravity inhibits workflow performance, raises security concerns, and increases costs, all complicated by regulatory and legacy architecture constraints. With Data Gravity, the laws of physics and IT intersect to provide a proxy for a new age of business architectures that enterprises will be driven to adopt and service providers will be pressed to support.

FORCES A SHIFT TO A DATA-CENTRIC ARCHITECTURE

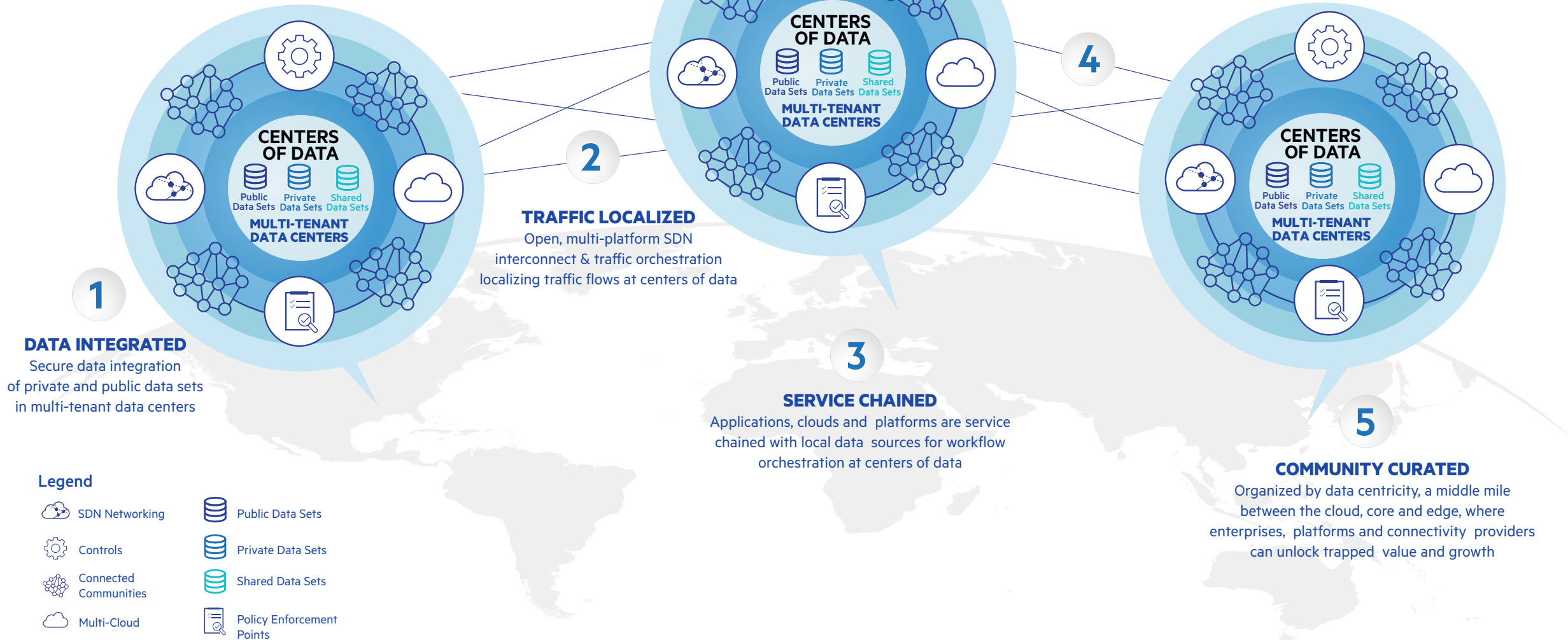
Data Gravity forces a shift to a data-centric architecture, where data is at the center of the architecture and integration is the challenge. Local copies of private, shared and public data sets need to be integrated as part of decentralized workflows which originate and traverse across multiple internal and external platforms, with the ability to support policy enforcement controls, real time analytics and interactive cross-platform orchestration.

NEEDS A CONNECTED DATA COMMUNITY APPROACH

This requires a new approach, one that moves beyond cross connects and traditional interconnection backhaul, giving way to an era of open, pervasively connected data communities colocated at centers of data. Digital Realty will be an industry steward championing the transformation towards a connected data community approach – this is our manifesto.

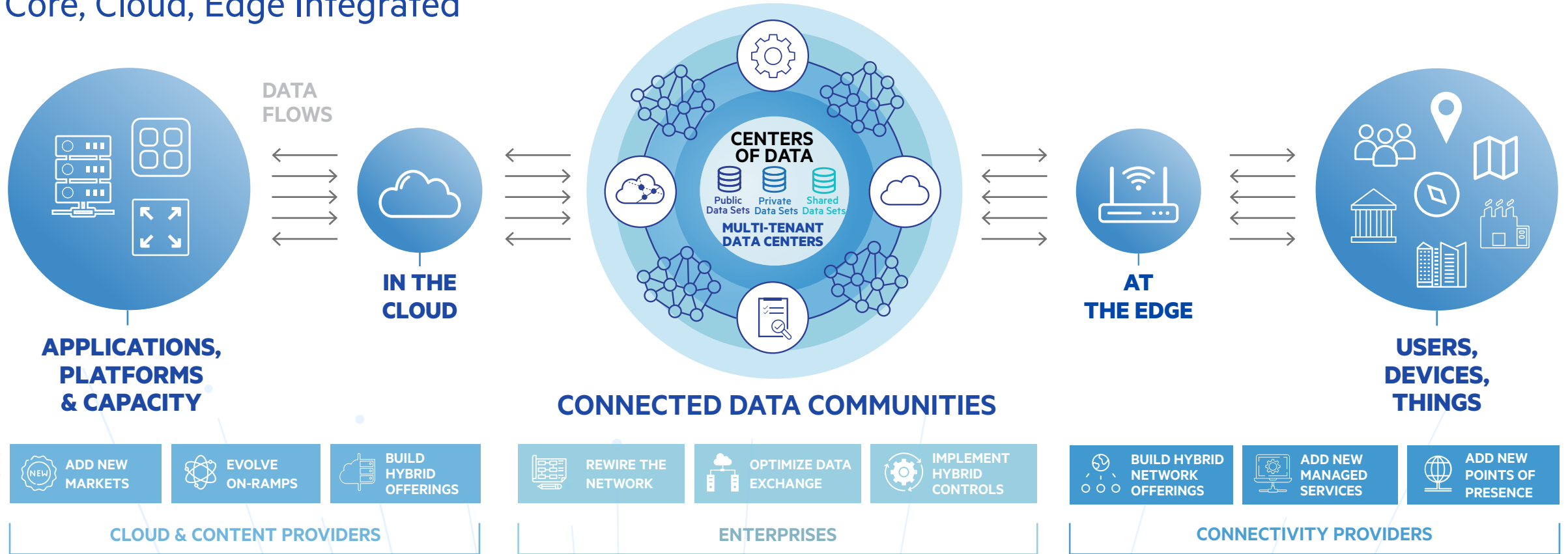
Vision

Steps to Capability Evolution



Architecture

Core, Cloud, Edge Integrated



Connecting Centers of Data

To defy data gravity and enable connected data communities requires the implementation of a data-centric architecture. Putting data at the center of the architecture requires the integration of the core, cloud and edge at centers of data to enable data exchange across multiple platforms, providers and workflow participants. As illustrated, the architecture is organized by use and value chain participant to provide a transformational journey map for industry collaboration.

Capability Roadmap

PlatformDIGITAL® Innovation

Platform
DIGITAL®

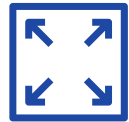


COVERAGE

Deploy where you need



New Markets – expansions in EMEA, APAC and LATAM regions led by customer & partner demand
Core Markets – increasing land banks, adding incremental capacity, increasing ecosystem density

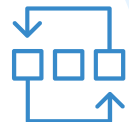


CAPACITY

Host what you need, how you need



High Performance Computing – increasing density options, adding incremental cabling options
Blended Product – blended experience of colocation & mixed configuration deployments, single MSA



CONNECTIVITY

Connect how you need to whom you need



Native Orchestration¹ – add open, SDN-enabled cross platform orchestration with partners
Native Fabric – add native, direct network path option between campuses, create multi-path with partners



CONTROL

Implement and operate the way you need



Enriched APIs – extending direct systems access to customers and partners based on ecosystem priorities
Global Portal – delivering a multi-platform converged interface driven by voice of customer

* Contains information and statements which are based on current plans, expectations, estimates, forecasts and assumptions that are subject to change. No representations or warranties are made by the Company or any of its affiliates regarding any such information, statements or projections, and results are not guaranteed






1. Acquired Pureport Network, February 2021 for native capability development.

Call to Action

Industry Collaboration

We have developed an industry transformation roadmap to guide cross industry collaboration to develop connected data community vision & target state architecture.

INDUSTRY COLLABORATION JOURNEY MAP

	 DATA INTEGRATED	 TRAFFIC LOCALIZED	 SERVICE CHAINED	 POLICIES ENFORCED	 COMMUNITIES CURATED
Vision (at centers of data)	Secure data integration of local copies of private and public data sets	Open, multi-platform SDN interconnect & traffic orchestration	Dynamic service chaining of multi-platform services with local data sources	Policy enforcement & controls placed locally at data ingress/egress	Middle mile between core, cloud, edge unlocking trapped value and growth
Enterprises (areas to collaborate)	Data Residency, Sovereignty, Placement & Policies, Analytics & AI	Network Topology, Segmentation, SDN Interconnect Core to Edge	Service Catalogue Instantiation, Data Workflow Management	Security Controls, Remote Management, Policy Enforcement	Ecosystem prioritization (industry, partners, data & infrastructure providers, etc.)
Platforms (areas to collaborate)	Hybrid Cloud/IT, Data Lakes/Warehouses, iPAAS, Streaming & Analytics	Hybrid Interconnect, Distributed Networking Support, GEO Diversity	Hybrid Workflows, NFV Services, APIs, Usage Management	SASE, Hybrid Security & Infrastructure Controls, Cyber-Physical (OT/IT)	Dynamic Discovery, Industry/GEO Specialization, Nested Community Services
Connectivity (areas to collaborate)	Distributed Data Management, Multi-Platform Data Integration	SDN, SD-WAN, SD-Interconnect, Global Traffic Management, GEO Diversity	Full Stack Workflow Management & Orchestration	Integrated Network & Security Operations, Security Services	Dynamic Discovery, Industry/GEO Specialization, Community Management

ENABLING CONNECTED DATA COMMUNITIES

Engage with Us

Today, Tomorrow & Beyond

1 Collaborate Together

Roadmap Opportunities
Joint Integration/Solutions
Solution Workshops
Data Gravity Insights Briefing
Advisory Role

digitalrealty.com/collaborate

2 Learn More

Develop Data Gravity
Fluency with the Data Gravity
Insights Hub

digitalrealty.com/data-gravity

3 Subscribe

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to date on CTO Blog Series &
Roadmap Activities

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About Digital Realty

Digital Realty supports the world's leading enterprises and service providers by delivering the full spectrum of data center, colocation and interconnection solutions. PlatformDIGITAL®, the company's global data center platform, provides customers a trusted foundation and proven Pervasive Datacenter Architecture (PDx™) solution methodology for scaling digital business and efficiently managing data gravity challenges. Digital Realty's global data center footprint gives customers access to the connected communities that matter to them with 290+ facilities in 49 metros across 24 countries on 6 continents.

To learn more about Digital Realty, please visit digitalrealty.com or follow us on [LinkedIn](#) and [Twitter](#).

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