



PERVASIVE DATACENTER ARCHITECTURE (PDx™)

OPTIMIZING RETAIL DATA EXCHANGE SOLUTION BRIEF

Data-driven digital transformation





Optimizing Retail Data Exchange

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 customers across 23 industries, representing some of the largest and most innovative companies globally.³

These customers continue to solve the most complex infrastructure, connectivity and workflow use cases across technologies like 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 the 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, by publishing our “Pervasive Datacenter Architecture (PDx™) Solution Brief – Optimizing Retail Data Exchange” – a solution strategy for Retail companies to address both industry specific business challenges and overcome data gravity barriers.

The solution brief provides retail business and technology leaders a codified strategy and solution approach to implement data driven digital transformation, obtain competitive advantage and unlock new growth opportunities.

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. Form 10-K 2020, filed March 1, 2021

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

#optimizingretailservicesdataexchange #datagravity #platformdigital #aibasedretail #centersofdata #connecteddatacommunities

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 280+ facilities in 50 metros across 26 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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Strategy Model – Optimizing Retail Data Exchange



INDUSTRY CHALLENGES



Growth & Competition

- Margin pressures continue
- Enabling omni-channel logistics
- Competing for consumer wallet-share



Complexity & Cyber Risk

- Changing consumer preferences
- Managing supply chain disruptions
- Unrelenting cyber threats



Regulations & Compliance

- Regulatory deluge continues
- Shift to data-centric regulations
- Consumer data flow & value capture



Innovation

- Near same-day delivery customer expectations
- Creating dynamic omni-channel experiences
- Enabling real-time intelligence at POS

DATA-DRIVEN BUSINESS STRATEGIES

DATA INFRASTRUCTURE BARRIERS

HOW OPTIMIZING DATA EXCHANGE STRATEGY HELPS

- Consumer data driven insights
- Leveraging location-based data to personalize buying experience
- AI-based personalization engines
-
- Dynamic omni-channel data creation/usage
- Proper data ingress/egress controls
- Being AI/machine learning ready
- Global Retail Data Gravity

- Differentiates buying experience
- Secures data near the point of sale
- Localizes AI-augmented commerce
- Enforces local data compliance

- Conquering complexity with AI
- Implement data security and hybrid-IT controls
- Mitigating risk using AI security solutions
-
- Data synchronization between digital and physical
- Proper data ingress/egress controls
- Being AI/machine learning ready
- Global Retail Data Gravity

- Standardizes security and compliance
- Secures third-party data integration
- Optimizes supply chain to minimize disruptions
- Enforces local data compliance

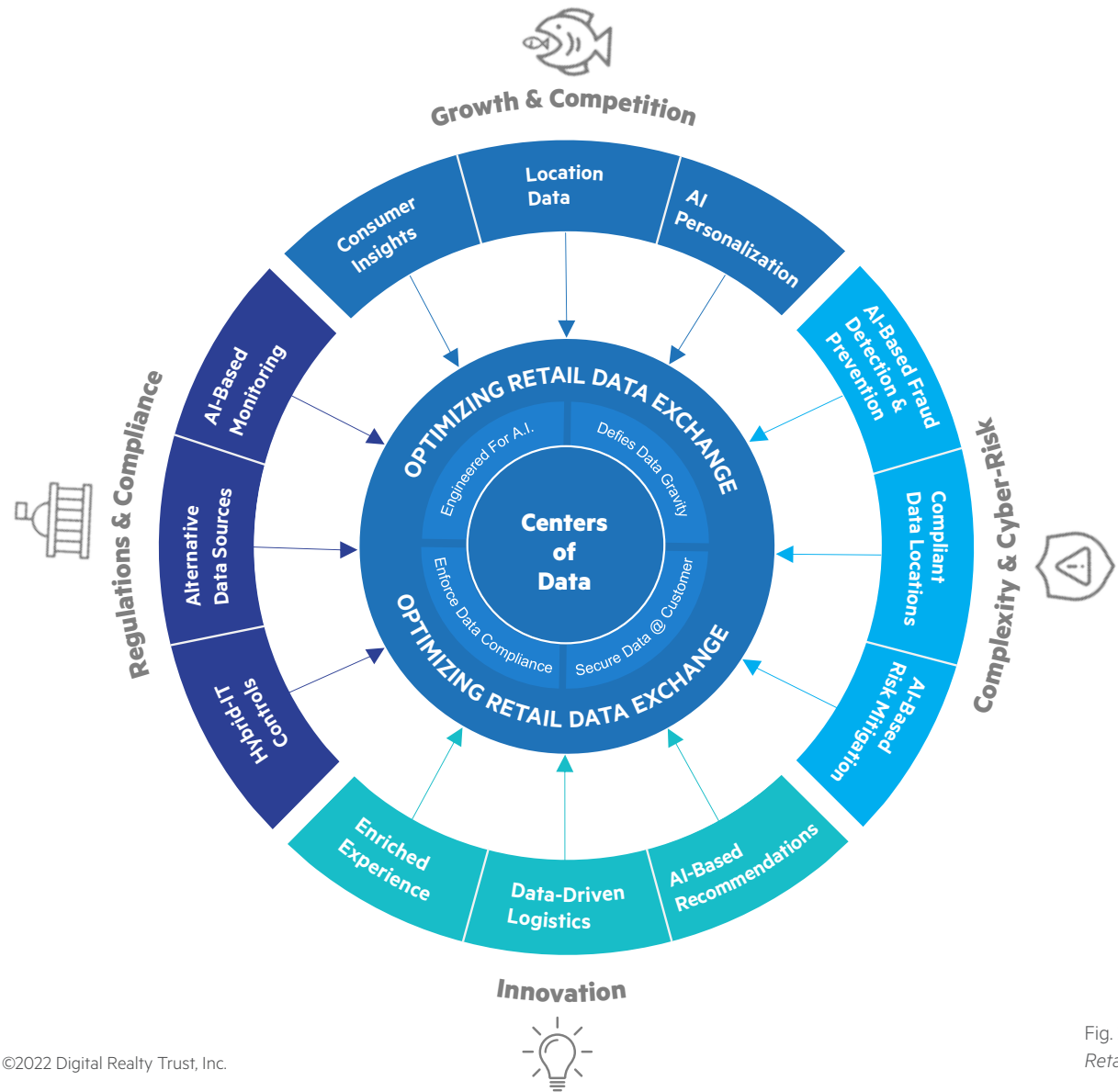
- Implement data security and hybrid-IT controls
- Position data in accordance with regulatory requirements
- AI-based monitoring & reporting
-
- Dynamic omni-channel data creation/usage
- Proper data ingress/egress controls
- Being AI/machine learning ready
- Global Retail Data Gravity

- Ensures data security throughout transaction lifecycle
- Secures third-party data integration
- Ensures performance whilst maintaining data compliance
- Enforces local data compliance

- Enriched consumer experience, digitally and physically
- Enabling data-driven physical/digital logistics
- AI-based personalization and recommendation
-
- Dynamic omni-channel data creation/usage
- Proper data ingress/egress controls
- Being AI/machine learning ready
- Global Retail Data Gravity

- Differentiates consumer experience
- Optimizes physical/digital logistics
- Localizes AI-based capabilities & services
- Enforces local data compliance

Solution Model – Optimizing Retail Data Exchange



PDx™ Solution Model For Optimizing Retail Data Exchange

The digital economy is remaking retail organizations, transforming how they create and deliver value.

To succeed, retail firms require a business platform that operates ubiquitously, and on-demand, augmented by real-time intelligence to best serve customers, partners and employees via digitally-enabled interactions across all channels, business functions and points of business presence.

To enable this business platform requires a data-centric infrastructure architecture designed to:

- Defy data gravity;
- Secure data near the customer;
- Enforce data compliance; and is
- Engineered for artificial intelligence (AI)

When implemented on PlatformDIGITAL®, retail companies can realize their target state architecture, optimize data exchange and achieve unique value including:

- **REDUCE RISK** – with secure data exchange
- **LOWER COSTS** – reduction of bandwidth and duplicated infrastructure
- **GROW REVENUE** – through unbounded data analytic performance



Appendix



Global Data Gravity Intensity Forecast: Retail

GLOBAL
DATA
GRAVITY
INTENSITY

Retail

137%
CAGR
THROUGH 2024

Learn More

datagravityindex.com

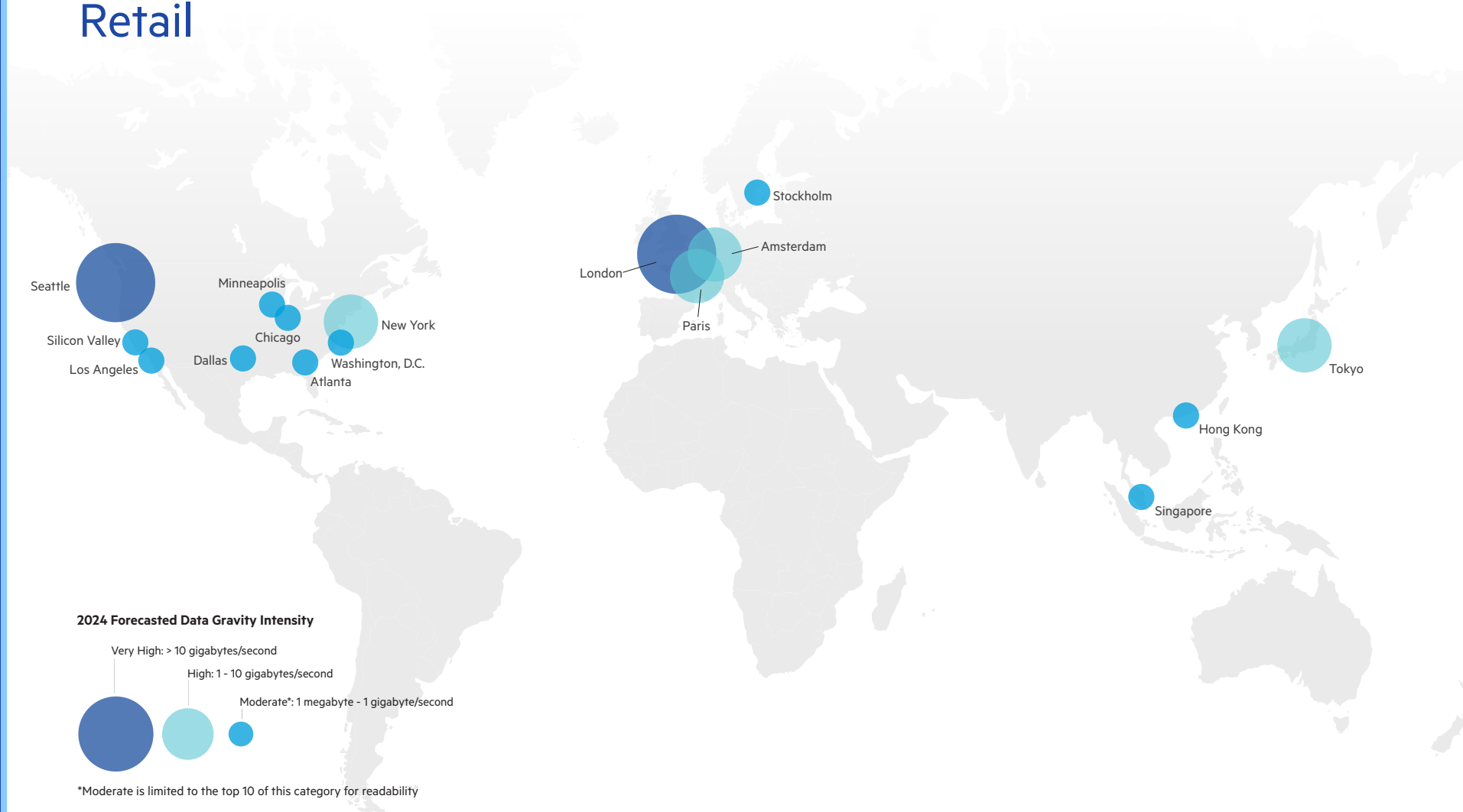


Fig. 26. Data Gravity Index™, Dec. 2020



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