



Data Gravity Identified as Key Megatrend Impacting Enterprise Growth

September 28, 2020

SAN FRANCISCO, Sept. 28, 2020 /PRNewswire/ -- Data gravity, or the propensity for bodies of data to draw an expanding swath of applications and services into closer proximity, has been identified as a key megatrend impacting enterprises and service providers over the next decade, according to recently published research. Data gravity may affect an enterprise's ability to innovate, secure customer experiences, and even deliver financial results on a global scale. The [Data Gravity Index](#)™ measures the creation, aggregation and private exchange of enterprise data and examines its impact on the *Forbes* Global 2000.

Experience the interactive Multichannel News Release here: <https://www.multivu.com/players/English/8774951-digital-realty-data-gravity-index/>

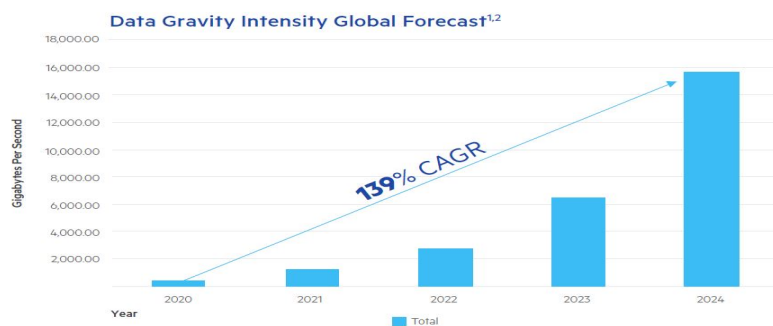


Fig. 8. Data Gravity Index, Sept. 2020

1. Data Gravity Intensity is calculated by the Data Gravity Index Formula: $CDM \times DA \times BWQ / L^2$
2. Data Gravity Intensity is defined by the Data Gravity Index Score. See Methodology for scoring and data.

Leaders at London-based Aon plc, a global professional services firm specializing in financial risk-mitigation products and number 485 on the *Forbes* Global 2000, believe that data gravity, and its impact on macro factors such as enterprise data stewardship and regulatory developments, is a megatrend that will present significant challenges for global businesses. "Understanding data gravity and its impact on our IT infrastructure is a difference-maker for our operations and will only become more important as data continues to serve as the currency of the digital economy," said Munu Gandhi, Aon's VP of Core Infrastructure Services. "As enterprises become more data-intensive, there's a compounding effect on business points of presence, regulatory oversight and increased complexity for compliance and data privacy that IT leaders are now being forced to solve."

Principal Research Analyst Eric Hanselman at [451 Research](#), part of S&P Global Market Intelligence, points to the looming impact of data gravity and the necessary context the "Data Gravity Index" provides. "Data gravity is the idea that data is an anchor that is often hard to move, especially as data volumes grow. If that growth takes place in public or private clouds that are not easily accessible by the enterprise using them, the full value of that data can't be realized, and the enterprise will be trapped into spending exorbitant sums to free it."¹

Customer Experience, Profitability at Stake

"Data is growing at an accelerating rate due to the growth of IoT, AI and social mobile analytics," said Tony Bishop, data center industry pioneer and SVP, Platform, Growth and Marketing at Digital Realty (NYSE: DLR), which backed the study. "There's a good story to tell here. But there's another side to the story, too, with growth resulting in the compounding force of data gravity. Unchecked, data gravity can lead to limited innovation, poor customer and employee experiences, increased costs, information silos, compliance issues, security concerns and slow decision-making for the enterprise. The 'Data Gravity Index' provides quantitative insight to help customers understand the dynamics of data gravity and turn it into a data-centric opportunity for their business."

Digital Realty Chief Technology Officer Chris Sharp added, "Most enterprises and service providers are just at the beginning stages of understanding data gravity's potential impact on their innovation, customer experience, and profitability, but they need to be designing for it now. The study is designed to give CIOs, chief architects, and infrastructure leaders insight into the phenomena causing architecture constraints as well as a blueprint for addressing them."

The term data gravity was coined in a 2010 blog post by Dave McCrory, who led the research behind the Data Gravity Index. The groundbreaking analysis sheds light on implications for the acceleration of enterprise digital transformation spurred by data gravity.

Key findings show:

- **Data Gravity growth is expected to double annually through 2024** as data stewardship drives global enterprises to expand their digital infrastructure capacity to aggregate, store and manage the majority of the world's data.
- **Enterprises are approaching quantum computing levels of data creation, processing and storage.** The *Forbes* Global 2000 enterprises across the 21 metros analyzed are projected to create data at a rate of 1.1 million gigabytes per second by 2024, will be required to add 8.96 exaFLOPS to process new digital workflows, and are expected to increase data storage needs by 15,635 exabytes annually. Data location will become exponentially more important to global enterprises as they endeavor to meet compliance requirements by maintaining local copies of critical data.
- **Data Gravity Intensity is accelerating across all regions.** Data Gravity, as measured in gigabytes per second, is expected to more than double annually across the EMEA, APAC and North America regions through 2024.

The top six metros expected to generate the fastest growth from 2020-2024 include

(in descending order) Singapore, Hong Kong, Dallas, Sydney, Seattle, and Tokyo

- Singapore is a critical business and data hub for global enterprises in the APAC region, given its pro-business policies and diverse connectivity options.
- Hong Kong is an international financial and trade hub and connectivity gateway for global enterprises between APAC and the rest of the world.
- Dallas is a preeminent business hub for global or regional headquarters and provides a connectivity gateway for global enterprises.
- Sydney serves as a global business hub with a significant global enterprise presence, in addition to serving as a rich connectivity gateway.
- Seattle is home to leading global cloud providers as well as a connectivity conduit between North America and the Asia Pacific region.
- Tokyo is one of the largest economies in the world, a business and financial hub for global enterprises and drives a significant volume of data creation.

Data-Centric Infrastructure Required

The effects of data gravity will force strategic IT infrastructure to aggregate and maintain data, whether in public or private clouds, from the core to the edge and across every point of business presence to control centers of data exchange.

"The Data Gravity Index posits that to defy data gravity, organizations must design their infrastructure and networks in a more data-centric fashion, inverting traffic flow and bringing users, networks and clouds to privately hosted enterprise data," said Digital Realty Chief Executive Officer A. William Stein. "The location of enterprise data should be a strategic decision—and a connected community approach is needed to decide where to put it and how to connect it at global points of business presence. We're excited to provide our customers, and the industry at-large, greater insight into this important challenge to help them make strategic decisions that will unleash their digital transformation potential."

To learn more about the "Data Gravity Index" and its findings, please visit DigitalRealty.com/Data-Gravity-Index.

Industry Perspective on the Data Gravity Index

"Yellowbrick Data makes the world's only modern data warehouse for hybrid cloud, and offers unmatched performance, price/performance, and enterprise features for the most demanding and complex business needs. Our customers face the stresses of increasing data volumes and a growing user base, both of which are creating operational complexity. The Data Gravity Index highlights this complexity and provides measures we can use to overcome the challenges that enterprises face."
– Allen Holmes, VP, Strategic Business Development & Alliances, Yellowbrick Data

"With the Data Gravity Index (DGx™), Digital Realty has taken thousands of data points about where data is being stored and processed and boiled them down into one easy-to-understand number. The DGx makes it clearer than ever how important low latency is to emerging markets (e.g., China, India, Brazil) and will serve as an important guide to Zenlayer as we locate new deployments around the world."

– Joe Zhu, founder and CEO, Zenlayer

About the Data Gravity Index

The Data Gravity Index methodology is based on the analysis of thousands of attributes of Global 2000 enterprise companies' presences in each metro, along with variables for each metro, including GDP, population, number of employees, technographics, IT spend, average bandwidth and latency, as well as flows of data. Digital Realty conducted research between August 2019 and August 2020 and drew upon more than a dozen third-party data sources, ranging from the World Economic Forum and United Nations to global consulting and market research firms.

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 47 metros across 22 countries on six continents. To learn more about Digital Realty, please visit digitalrealty.com or follow us on [LinkedIn](#) and [Twitter](#).

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Safe Harbor Statement

This press release contains forward-looking statements which are based on current expectations, forecasts and assumptions that involve risks and uncertainties that could cause actual outcomes and results to differ materially, including statements related to the Data Gravity Index™, Intensity Factor, our expectations around data gravity, data growth and expected global trends. For a list and description of risks and uncertainties, see the reports and other filings by the company with the U.S. Securities and Exchange Commission. The company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

¹ 451 Research, part of S&P Global Market Intelligence, *With PlatformDIGITAL, data drives Digital Realty to new heights*, November 2019

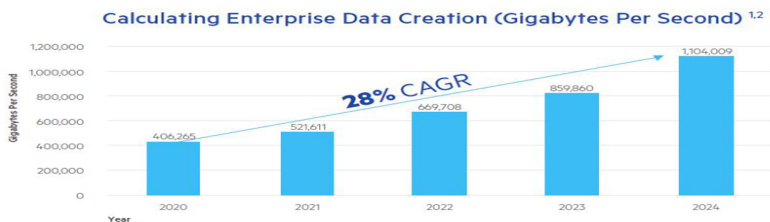


Fig. 13. Data Gravity Index, Sept. 2020

¹ Data creation was calculated by combining data created by both G2000 Enterprise employees and end points.
² See Methodology for scoring and data.

Calculating Enterprise Data Storage Growth (Exabytes)^{1,2}

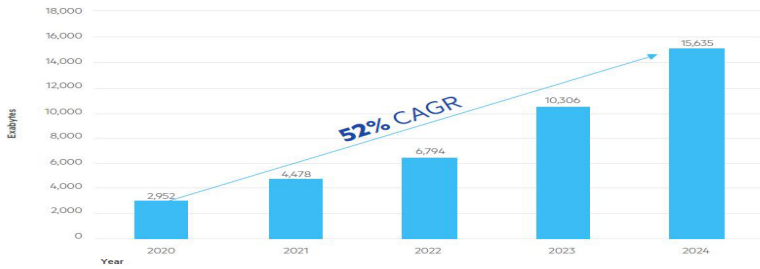


Fig. 15. Data Gravity Index, Sept. 2020

1. Data Storage was calculated by taking the storage capacity, growth and annual rate of deployment of Enterprise storage (HDD, SSD, and Tape) and analyzing across 21 metros.
2. See Methodology for scoring and data.

Data Gravity Intensity Regional Forecast^{1,2}



Fig. 9. Data Gravity Index, Sept. 2020

1. Data Gravity Intensity is calculated across 21 metros using the Data Gravity Index Formula: $CDM \times DA \times BW / L^2$
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Data Gravity Intensity Metro Forecast^{1,2}

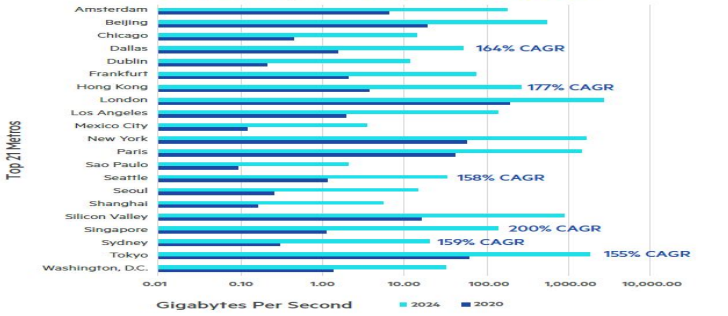


Fig. 10. Data Gravity Index, Sept. 2020

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