



Turning Data into Action

The Evolution of Data and the Case for Information Management and Governance

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Executive Summary

- ▶ **The story of data traces the development of mankind.** As people created new ways to communicate, commerce and arts followed.
- ▶ **Data is not just flat files** — data includes video, voice, Internet of Things (IoT), images, and soon 5G telemetry.
- ▶ **COVID-19 has changed the ways that employees can access data.** At the same time, the constraints of data handling can not be compromised, even as new means to access and then use data are developed.
- ▶ **Enterprises fear that disjointed data systems cause impractical latencies** (at best) and significant security gaps (at worst) in information flow.
- ▶ **The implementation of a formal information management and governance (IM&G) program addresses the data handling challenges** of scope and scale, access and collaboration, and strategic utility.

Towards All-to-All: The Evolution of Data Processing



Information transfer has evolved from the earliest times when people expressed themselves 1:1, either orally or by simple inscription, to multimedia broadcast platforms enabling the current many-to-many situation. Evolution never stops, and we can now argue convincingly that the world of data has moved to a situation of all-to-all.

The transfer of information or data has always been technology driven. From the earliest scribing to hieroglyphics and printing presses, the goal has been not only to get information to more people from a single source (1-to-many) but also to improve accuracy and eventually portability.

There were 400 years between the development of the Gutenberg press, which could copy 3,600 pages, and Samuel Morse's telegraph in the mid-1830s. Thanks to the printed page, information was accurate, and as it was relayed by electricity, data transfer was also close to instantaneous.

Early fax machines could transmit pages (without illustrations) at 18 minutes a page, but it was a point-to-point medium. Broadcasting through radio, television, and later satellite TV enabled information to be sent and received many-to-many.

In parallel development, open frame computers, calculators, and spreadsheets helped make computation both usable and instantaneous. The internet was a game changer in both spheres. Despite initial limits in terms of latency and capacity, the internet has facilitated the long game of all-to-all information.

What does all-to-all mean for enterprise data management and those entrusted with the task?

Effective Data Strategy Addresses Six Major Challenges

As technology has matured, so has data itself. It is no longer *just* information, any more than digital data is simply bits and bytes. Although data processing remains an IT role, it now includes accounting for, analyzing, and optimizing data from every source — sentiment, voice, image — for utility and insight.

What the enterprise needs now is a strategy.

Prepare for more data.

- ✓ As of 2021, 90% of all new data originated within the last two years.
- ✓ From 2020 to 2025, data volume will quadruple to reach 180 zettabytes annually.

Handle and move data while staying compliant.

- ✓ Ensure each touchpoint and decision regarding critical data complies with global, regional, and vertical regulations.

Use data the right way.

- ✓ Anticipate consumer trends using crowdsourced data.
- ✓ Consider data not as a hygiene task but as a value enabler.
- ✓ Understand how data can be used for preventative maintenance and strategic planning.

Empower the remote worker.

- ✓ Emulate workloads, end to end, across hybrid environments.
- ✓ Develop the right tools for application use and collaboration.
- ✓ Create a full help desk function and a secure backup and recovery system.

Manage data access mandates.

- ✓ Enforce who sees what. Contractors must operate within network constrictions.
- ✓ Safeguard personally identifiable information, customer credit card and Social Security numbers, medical history, etc.

Secure data movement.

- ✓ Design a comprehensive data security strategy that encompasses more than just data protection.
- ✓ Secure endpoints, devices, and email across public and private cloud and datacenter alike.

Source: Worldwide Global DataSphere Forecast, 2021–2025: The World Keeps Creating More Data — Now, What Do We Do with It All?, March 2021

COVID-19 Fueled the Exponential Growth of Digital Transformation



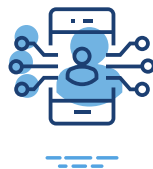
Exceptions are now the rule: Employees are accessing applications in the cloud and beyond the firewall, just as data acquisition, storage, assessment, reporting, and volume have become decentralized.



Digital transformation (DX) requires employers to make encapsulated data available and secure. Access controls must balance access with safety, irrespective of changes driven by cloud, bring your own device, and external data.



DX acknowledges the changing dynamics of data. New use cases and data accessibility are empowering workers, all within a secure and compliant framework.



Successful information management is all-to-all and deeply complex, covering every medium and surface, including on-premises, public cloud, applications-to-users, mobile, IoT, social media, external threat intelligence, and (soon) 5G telemetry.



Motivated by myriad use cases, enterprise information governance juggles cost, regulatory compliance, strategic decision support, and every demand that users ingest, protect, classify, analyze, archive, and dispose of data properly.



Managing the ever-expanding security surface means including the new work-from-anywhere employee model and the rise of public cloud for storage, computing, and application hosting.



Ultimately, an organization must enable its users to access and act on the data they need from anywhere, with any device, in real time.

Manage, Maintain, and Maximize: The Organizational Data Relationship

Controlling the all-to-all world of data is challenging but possible with effective rules. The key is understanding the relationship between data and those who need it, where they deploy it, and how they use that information to best effect.

The organizational relationship with data involves practitioners, power users, end users, and a clear understanding of what the data is there to do.

All-to-all works on three key factors:

Scope and scale

- **Innovate data mining methodology:**
Where is it, what is it, and how much is there?
- **Provide access and collaboration:**
Work with it, protect it, manage it from anywhere.
- **Maximize the benefits:**
Support decision-making, planning, litigation, operational effectiveness, and efficiency.

Access and collaboration

- **Minimize the touchpoints:**
Compliance errors are more likely over multiple hops, so the fewer connectors the better.
- **Simplify access:**
End users cannot effectively use the data if they are negotiating policies or role/rule filters.
- **Confine tasks:**
Employees within a proper data access management structure can access, alter, and transport the data.

Strategic utility

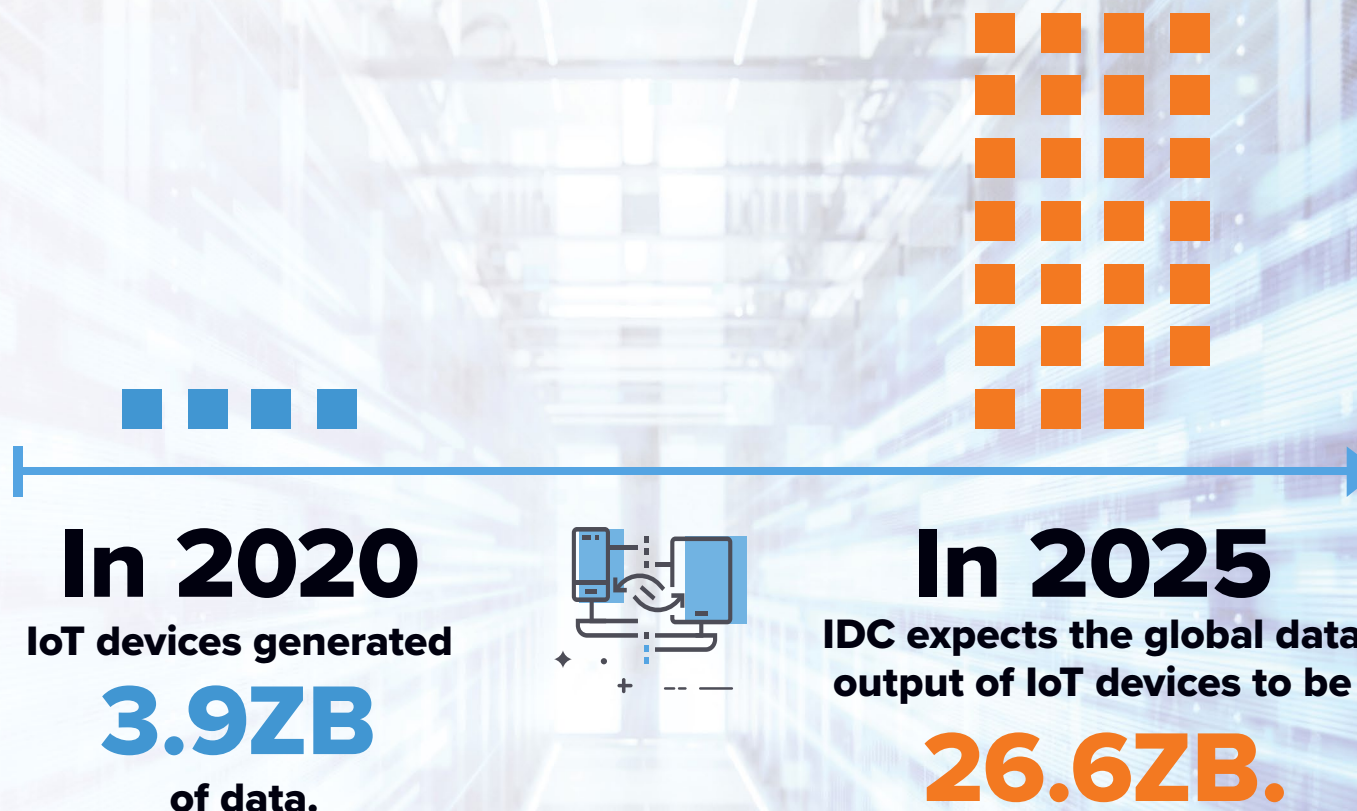
- **Empower employees:**
Presenting data in native languages enables employees to garner insights from data for the right utility.
- **Strengthen compliance through structure:**
The data must adhere natively to regional regulations and vertical industry compliance standards.

Disparate Data Sources, One Shared Utility

Data types are changing; logs and flat files still exist, as do images, voice, video, and mobile.

Data generation sources include data from endpoints, the edge, and core networks. In many cases, traditional firewall usage either hampers agility on one end or simply is not possible to erect in other scenarios.

Without proper indexing and refinement, data loses its usefulness.



Source: Worldwide Global DataSphere Forecast, 2021–2025: The World Keeps Creating More Data — Now, What Do We Do with It All?, March 2021

All-to-All Data Management in a Work-from-Anywhere World

COVID-19 accelerated digital transformation. Suddenly, employees were driven out of branch offices and encouraged to work from home.

Work is what people do, not where they are. Home offices, public Wi-Fi, and different machines all are viable in the new reality of work from anywhere (WFA).

WFA changed nothing about regulation or compliance, but a firewall-heavy security posture is no longer realistic.

IoT devices, Wi-Fi enabled devices, collaboration technology, cloud software as a service (SaaS) appliances, and mobile devices all need to be adapted for insight and ingress/egress.



Continuous collaboration supports basic, data-focused work functions such as email, diaries, contact management, and file sharing; it enables more advanced functions like virtual workspaces, online collaborative file co-editing, total endpoint management, and encryption.

Emphasis is on asset/device management by IT, such as configuration management, full disk encryption, patch management, endpoint security, enterprise messaging, and service desk.

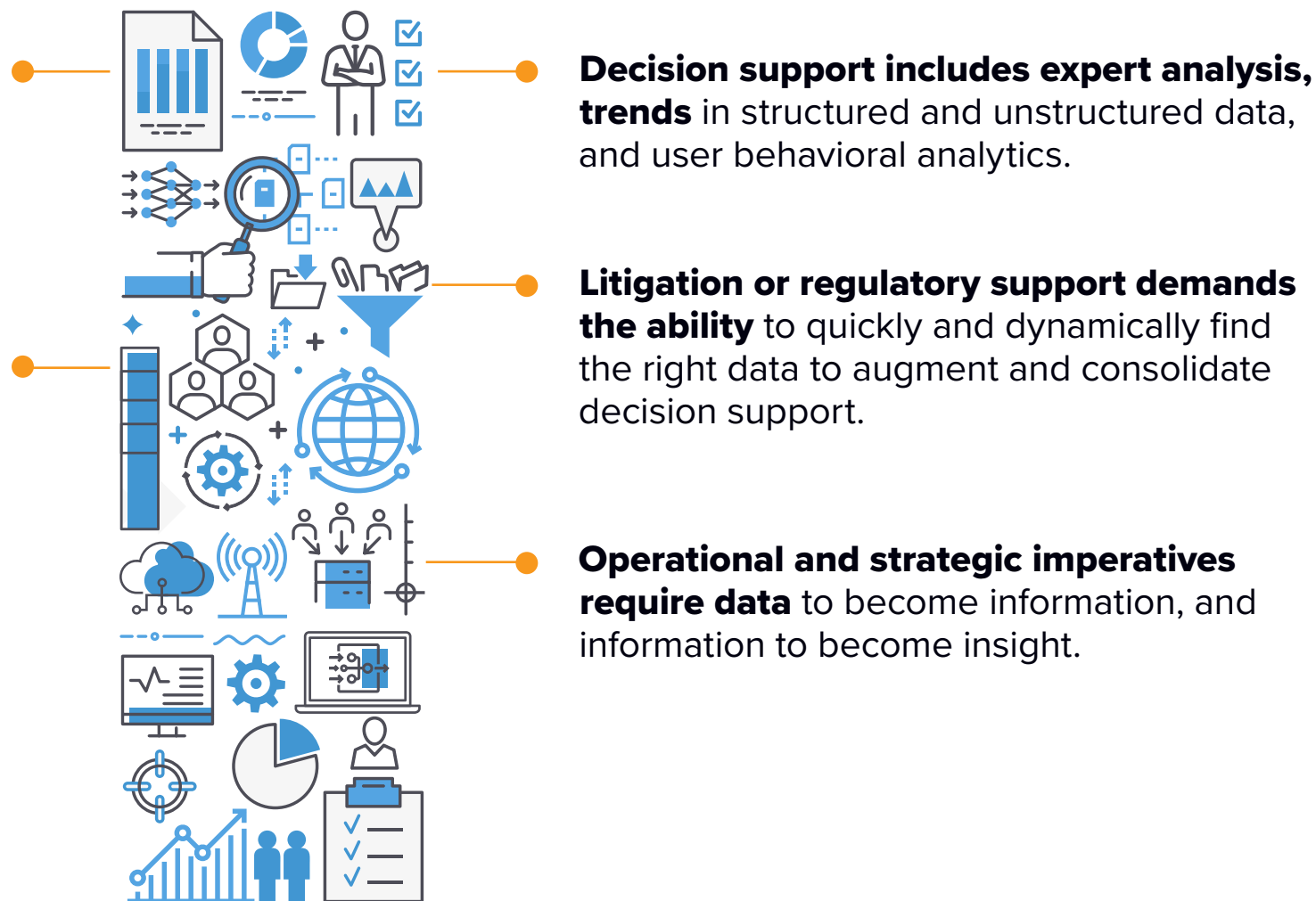
The COVID-19 transformation happened almost instantaneously without a heavily redistributed IT function.

Making Data Functional for Employees

Today's governance strategy must consider tomorrow's critical data sources.

The term data feels like a catchall; it most certainly is not. Data can be used for decision support, strategic planning, litigation support, operational effectiveness, and efficiency.

Efficiency means that insights, decision support, planning, and operational effectiveness happen using a unified approach. An all-to-all strategy encompasses a centralized approach to data, including operational objectives, regulation and compliance, and strategic data presentation for use by employees and customers.



Capabilities of Information Management and Governance

Micro Focus, an enterprise software provider, offers information management and governance (IM&G) solutions designed to bring order, control, and compliance to all-to-all data. A successful information management program maximizes the opportunities to use data constructively, prioritizes the need to know, and manages access.

The following capabilities span the company's solution framework:

Collaboration

Work together securely and seamlessly regardless of location, with instant, secure access to messages, files, printers, internal systems, and corporate applications.

Backup and resiliency

Protect against the data loss that can damage reputations. Ensure secure, compliant backups and swift restoration of all company data from a single management point.

Information archiving

Move away from inefficient cold storage with a contemporary information archiving strategy. Collect and retain social collaboration and electronic communications with enterprise-scale, compliant archives.

Endpoint management and protection

Manage and protect users, data, and devices, supporting patch management, access rules, and permissions.

Secure content management

Balance requirements for collaboration and productivity with control and compliance, through robust enterprise content management.

Advanced analytics

Quickly turn data into insight by using artificial intelligence with critical formats such as sentiment, voice, and video.

Essential Guidance



Successful IM&G is measured both in the productivity of those using it and maximized, tangible data value.



Managing data is changing from an IT cost to a strategic organizational commodity.



The requirement is a secure, flexible, ubiquitous user experience wherever the application or employee is located.



The ideal uses machine learning and artificial intelligence analytics engines to classify, index, store, and then derive intelligent meaning from data.



A robust approach, aligned to the entire data life cycle, will locate, hold, release, analyze, manage, report, archive, dispose, backup, and restore data in the cloud or on-premises.

About the Analyst



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Chris Kissel is a research director in IDC's Security & Trust Products group, responsible for cybersecurity technology analysis, emerging trends, and market share reporting. Chris's primary research area is Cybersecurity Analytics, Intelligence, Response, and Orchestration (AIRO). The major technology groups within this practice are SIEM, device and application vulnerability management, threat analytics, and automation and orchestration platforms. Chris covers the processes that security operation center (SOC) analysts employ to monitor, detect, remediate, and mitigate threat actors attempting to attack a network within a security and vulnerability management and security analytics paradigm.

[More about Christopher Kissel](#)

Message from the Sponsor

An organization's data and people are among their most prized assets which must be leveraged effectively to adapt to change. To do this you need comprehensive technology that's secure, flexible, and holistic. Micro Focus combines proven solutions for data analysis, management, archiving and protection, while ensuring employees can access and collaborate on whatever they need to, wherever they are.

Micro Focus IM&G.

Know your data, empower your people, drive your future.

[Learn more at our website](#)

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