



IT'S TIME TO INVEST IN INTERNAL DATA SHARING

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MIT CISR data sharing research shows that top-performing organizations' internal data sharing is significantly more advanced than that of bottom performers.¹ **Internal data sharing**—the ability to easily exchange data assets enterprise-wide—allows organizations to cost-effectively meet informational needs from new business threats and opportunities. This ability generates payback in the form of greater data monetization returns and a lower cost to serve data assets to the organization's data consumers.

Emergent business threats and opportunities require new information for all kinds of reasons. Consider the influx of opportunities that arise as part of the advancement of AI. As organizations pursue AI opportunities, their AI teams increasingly need novel and cross-domain data. For example, AI models that predict operational failures require

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data about past incidents, but their predictions are more accurate if they also include weather, people, equipment, and usage data. Similarly, models that classify customers into segments require sales history, but they classify more usefully if they additionally leverage data about demo-

graphics, preferences, and online behaviors. When data is owned and managed in organizational pockets it is less accessible, and AI projects relying on the data slow down and become more costly.

Using case examples from Amcor, FEMSA, Fidelity Investments, and Scentre Group,² this briefing illustrates how organizations can achieve advanced internal data sharing.

REQUIREMENTS FOR ADVANCED INTERNAL DATA SHARING

To enable advanced internal data sharing, an organization must satisfy three requirements:

1. Creating **broadly relevant liquid data assets**
2. Becoming proficient in both **data monetization** and **cost-to-serve measurement**
3. Developing a **highly engaged data democracy**

Requirement 1: Broadly Relevant Liquid Data Assets

Data assets that are both liquid³—accurate, secure, relevant, combinable, and available for use—and broadly relevant to people throughout the organization provide easy access to desirable, consistent data for efficiency and value creation. To illustrate:

- Global packaging company Amcor built a **product specification** data asset that captures the complex recipes for making the company's products. Beyond its use in manufacturing, people across Amcor leverage the product spec-

1 Based on findings from the 2022 Internal Data Sharing Survey (n=604). The survey was issued by lead author Dr. Randy Bradley, funded through the Advanced Supply Chain Collaborative (ASCC), which is an initiative of the Global Supply Chain Institute (GSCI) in the Haslam College of Business at The University of Tennessee—Knoxville (UTK). The authors of this briefing trimmed the data set for MIT CISR's analysis to specify respondents with a job level of manager or above and work experience of 6+ years, from companies with >1,000 employees and revenues ≥US\$500 million. In the resulting sample (n=137), which was slanted slightly toward more senior respondents from organizations operating outside North America, top-performing organizations reported significantly higher levels of internal data sharing ($p < .05$) than bottom-performing organizations.

2 In Q1 2023, to create case examples illustrating insights from this research, the authors of this briefing conducted four interviews with a total five executives from Scentre Group, FEMSA, Amcor, and Fidelity Investments. All were members of the MIT CISR Data Research Advisory Board, a community of data and analytics leaders from MIT CISR member organizations who participate in and inform MIT CISR research.

3 For a primer on establishing data liquidity, see B. H. Wixom and G. Piccoli, "Build Data Liquidity to Accelerate Data Monetization," MIT CISR Research Briefing Vol. XXI, No. 5, May 2021, https://c isr.mit.edu/publication/2021_0501_DataLiquidity_WixomPiccoli.

ification data for analyses such as supplier risk, regulatory compliance impact, and sustainability reporting.

- Multinational beverage, retail, and logistics company FEMSA created a **dead net profit (DNP)** data asset that transparently and understandably demonstrates SKU-level profitability for the company's OXXO convenience store chain. DNP is a financial metric that calculates SKU-level revenues and costs, accounting for every business activity, to arrive at a true measure of profit. OXXO is now using the DNP data asset in many areas, such as store management, merchandising, assortment, and operations.
- Financial services company Fidelity Investments built an analytics platform to house data assets organized around priority subject areas such as **customers**, **employees**, and **investible security products** for use in creating value today and in the future. The data assets are available to virtually every function of the company via Fidelity's analytics platform.

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- Scentre Group owns and operates the Westfield shopping centers in Australia and New Zealand. The company combined its retailer customer data with external data about consumer spending to create a **consumer behavior** data asset that articulates consumer spending behavior specific to the company's shopping centers. Today, people across Scentre Group use the consumer behavior data asset in areas such as leasing, center operations, development, and marketing.

In our research, we have observed that large organizations need several years to develop data assets like these. The organizations use a variety of practices in the process, such as master data management and data quality management while manufacturing the data assets, data access control and data stewards to establish secure permissioning, and cloud platforms and standard analytics tools to provision the assets.

For instance, Amcor used several practices in developing its product specification data asset, which the company built to deliver secure data self-service to people company-wide for acceptable use cases. Before creating the data asset, Amcor's R&D unit secured and governed the use of the

company's sensitive, complex product specification data. But responding to data requests from across the company was time-intensive, and when it became too much for the unit to handle, R&D approached Amcor's data unit seeking a solution. To construct the data asset, the data unit established a cloud-based data lake, then curated specification data for the platform, installed a standard reporting tool, and added dimensions to the specification data (such as product cost and sales) to enable new kinds of analyses. Then the data unit defined employee groups with specific data access privileges and developed semiautomated processes to help R&D easily manage membership in those groups. Today approximately one hundred data consumers worldwide access Amcor's product specification data asset, and that number is growing.

Requirement 2: Data Monetization and Cost-to-Serve Measurement

Setting goals for, measuring, and tracking both data monetization—the generation of financial returns from data—and the money saved from reducing the cost to serve data assets demonstrates the value created from data liquidity investments. This helps the organization to direct value creation to ultimately hit its bottom line in desired ways.

For example, throughout the year Fidelity Investments' data organization tracks a subset of its analytics platform use cases under development to assess if each use case is on target to achieve its expected benefits. This allows Fidelity to build a compelling story regarding the analytics platform's contributions to the company's overall firm performance each year. Fidelity's data organization also tracks improvements in serving data assets. As of 2023, Fidelity reported a sixty to eighty percent reduction in the effort required to gather data for new analytics use cases.

Our research shows that organizations with advanced internal data sharing spend significantly less time wrangling data and more time on insight extraction than organizations without advanced sharing.⁴ This leads to more data monetization activity and cost reduction, the latter produced by more cost-effective data sharing processes. Credible measurement of data monetization gains and cost-to-serve savings over time helps people across the organization appreciate the accumulating benefits of data asset reuse, which clarify why internal data sharing matters.

⁴ In the MIT CISR sample from the 2022 Internal Data Sharing Survey, organizations with more mature internal data sharing spent significantly more time ($p < .05$) deriving insights from data than those with less mature internal data sharing.

Requirement 3: A Highly Engaged Data Democracy

When an organization has a highly engaged data democracy, its employees far and wide discover, appreciate, access, and use data assets.⁵ Creating such a data democracy involves adopting practices that help people across the organization understand a data asset's meaning, makeup, and appeal. Practices such as data literacy training, top-down mandates, and the utilization of all manner of persuasion, cajoling, and communication increase data asset awareness and appreciation.

At FEMSA, top management for OXXO needed to take charge to ensure that the single DNP financial metric enabled by the company's dead net profit data asset would succeed. Before FEMSA created the data asset and new metric, each of OXXO's functional areas used its own metric to determine profitability, with little shared understanding of the different metrics. This was a top pain point for management, whose expectation was that switching to a unified metric would introduce transparency and efficiencies.

The functional areas, however, did not accept the new DNP metric right away; the metric needed strong sponsorship from business areas' top management. The data and analytics group, supported by business delegates, held one-on-one meetings with all responsible business leaders to demystify the new DNP metric and get feedback. These leaders adopted the DNP metric because using the new transparent measure would eliminate wasted time and needless frustration caused by debate and confusion over profitability. Ultimately, OXXO's top management backed adoption of the DNP metric by incorporating it into the company's performance management system. As of 2023, DNP has become the key profitability metric for OXXO, allowing the company to measure profitability for multiple business activities and at multiple levels. OXXO's use of the data asset has refocused conversations at the company from data calculation to business opportunities.

In a different approach, Scentre Group engaged the power of its people to uncover the potential of the company's data. Scentre Group has invested heavily in data-specific people, process, and technology and increasingly used data to enable the company's business strategies. The head of Scentre Group's data and analytics unit has been

leading an incremental build-out of select enterprise-level data monetization capabilities that produce data assets for recombination and reuse by people company-wide. To zero in on Scentre Group's most reusable data assets, the data and analytics unit hosted workshops during which multidisciplinary groups of employees ideated ways that they could use a specific data asset, if it were shared, to create value for their unit. The exercise elevated participants' thinking beyond their siloes to appreciate company-wide data assets and the benefits they might produce.

Scentre Group has also helped its people to understand its data. Scentre Group's data group segments shoppers and retailers using the company's consumer behavior data asset, and the company's marketing unit developed user personas from the segments to help the data group bring them to life. The data group actively trained people across the company on the consumer segments to help them understand and appreciate the segments, ultimately building an organizational lingua franca based on them. Notably, new questions about the segments inspired further analysis and use of the data asset, which surfaced important new insights.

A COMMITMENT TO INTERNAL DATA SHARING

Driving internal data sharing at a large organization is not for the faint of heart. It represents big investments and time to build liquid data assets; centralized data management and oversight of decentralized pockets and silos of data across the organization; and strategies that motivate people to shed local perspectives and relinquish power. If you want to persevere, consider the following questions:

- How easily can people access and use organizational data today?
- What would be the payoff of improving the state of the organization's internal data sharing?
- Do your employees grasp that the payoff of shared data is experienced not just globally but also locally?
- How does the organization mitigate power loss for those who participate in internal data sharing?

To successfully drive internal data sharing, demonstrate to your people how the benefits will outweigh the costs. Committing to the effort will generate efficiencies today—but more importantly, by enabling innovation, collaboration, and growth, it will open up the possibilities of tomorrow.

⁵ For more on establishing data liquidity, see I. A. Someh and B. H. Wixom, "Data-Driven Transformation at Microsoft," MIT CISR Research Briefing, Vol. XVII, No. 8, August 2017, https://c isr.mit.edu/publication/2017_0801_DataDrivenTransformation_SomehWixom.

Read a compilation of the full case examples referenced in this briefing from Amcor, FEMSA, Fidelity Investments, and Scentre Group in R. V. Bradley, B. H. Wixom, and C. M. Beath, "Internal Data Sharing: Four Examples," MIT CISR Working Paper No. 459, May 2023, https://c isr.mit.edu/publication/MIT_CISRwp459_DataSharingExamples_BradleyWixomBeath.

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