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## DataCo

Independent Data Organizations Maximizing the Value of Data JULY 2023



## DataCo Point of View

July 2023

## **EDM Council**

#### Abstract

This point of view summarizes the rationale and best practices to establish a DataCo to maximize the value of data.

#### Feedback

The <u>Data Office ROI Working Group</u> of EDM Council welcomes your feedback. Please use the following link to provide your feedback and suggestions. Thank you!

https://app.smartsheet.com/b/form/a363e8f1901e4a0396a1d95a77852d9a

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## Introduction

#### A "DataCo" (Data Company) is an independent organizational construct that maximizes the value of the data of one or more parent organizations.

As the discipline of data management evolves, advanced approaches to maximizing the value of data are maturing. Advanced approaches include, but are not limited to, acquiring data to augment or enrich existing data, defining data products with formal product management, measuring and assigning accountability for return on investment (ROI) for data, and establishing a separate organization dedicated to maximizing the value of data.

The concept of a separate organization, or "DataCo", is the topic of this paper. A DataCo can drive the execution of an organization's most advanced approaches to data management, regardless of its data maturity. Ideally, the construct forcefully incorporates business, financial, legal, privacy, and risk management considerations in ways that drive the organizational change to migrate or sustain its abilities in modern and ever-evolving forms of utilization.

This paper explores establishing a separate organization, a DataCo, outlining the rationale for and potential considerations necessary to maximize the value of data for the parent company.

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#### Establishing a DataCo Operating **Data Management** Ω, Model الىت Maturity DATACO Data Risk and ¥ **Primary** CONSIDERATIONS Compliance **Objectives** 11001 4 Corporate 3 Data 01011 Finance Products

#### Figure 1: DataCo high-level considerations

Establishing a DataCo is a good strategic decision for many reasons, but the highest-level objective of all DataCos is to maximize the value of the parent company's data assets. By creating an independent organization, the parent company or companies can better manage and/or monetize data assets while minimizing potential risks and liabilities. Specifically, a parent company may establish a DataCo to meet one or more of these business objectives:

- Collateralize data
- Monetize data products for external sale
- Develop new products that are very different from the core business
- Assign financial value to data
- Support regulatory compliance
- Separate legal liability from the parent company
- Provide open data to constituents of government agencies
- Share or exchange data with a third party or consortium of consumers

With this in mind, it is important to distinguish a DataCo from the types of organizations for which data is the core business. A DataCo would *not* include the following types of organizations:

- Standalone data brokers or companies that sell data (e.g., Acxiom, CoreLogic, Dun & Bradstreet, Epsilon Data Management, Experian, Refinitiv, S&P Global, Thomson Reuters)
- Standalone data-intensive companies (e.g., Alphabet, Meta, Twitter)

- Technology platforms that are part of a parent organization (e.g., Amazon Web Services (AWS) Data Exchange, The Centers for Medicare & Medicaid Services (CMS) Health Plan Management System (HPMS), the U.S. Department of Health and Human Services (HHS) HealthCare.gov)
- Shared services subsidiaries that include technology and other services

DataCos can take a variety of forms, including joint ventures, subsidiaries, or new companies. Separation from the parent organization, in whichever form, should provide a clear organizational benefit— business, risk, valuation, funding, legal, operations, privacy, sovereignty, compliance, access, or for data exchange. However independently the DataCo operates, it remains closely aligned with the parent company's goals and objectives.

While DataCos present several opportunities, there are also potential drawbacks and challenges, such as the need for additional capital investment, data privacy considerations, and the potential for conflicts with other stakeholders in the parent organization.

## **EDM Council DataCo Analysis**

A DataCo has three defining characteristics (see Figure 2):

- It manages all or a portion of its parent organization(s) data.
- It is an independent organization from its parent organization(s).
- Its key objective is to maximize the value of the data of the parent organization(s).





To better understand the current landscape of DataCos, the EDM Council's Data ROI Working Group analyzed publicly available information about 51 organizations that have created distinctly named constructs focused on leveraging data.

Of these 51 organizations, 20 did not meet the criteria for a DataCo as defined in this paper, although it is entirely possible that a change in corporate structure may cause these entities to fall within our definition in the future:

- Ten of the 20 were technology platforms. For example, PGA TOUR's Shotlink System is a technology platform but not a subsidiary that captures and reports vital information on every shot, by every player, in real time, during tournament competition.<sup>1</sup>
- Six of the 20 were standalone organizations. For example, MX Technologies is a standalone fintech company.<sup>2</sup>
- Four of the 20 were business segments or divisions within the parent company and, therefore, not independent. For example, Meta Platform's Data for Good provides privacy-enabled Facebook data to universities, non-profit organizations, and international institutions to promote social causes,<sup>3</sup> but it is not strictly a DataCo because it is not listed as a subsidiary in Meta's Form 10-K for the fiscal year ended December 31, 2022.<sup>4</sup>

The remaining 31 organizations, while not necessarily representative of all DataCos, illustrate the broad use of this construct across industry, country, and organization type.

Figures 3A and 3B provides sample profiles of DataCos. (The listed organizations may not consider themselves to be DataCos as defined in this paper.)



Figure 3A: DataCo examples – commercial businesses

<sup>&</sup>lt;sup>1</sup> PGA TOUR, "Shotlink," <u>https://shotlink.com/about/history</u>

<sup>&</sup>lt;sup>2</sup> MX Technologies, Inc., "Home," <u>https://www.mx.com</u>

<sup>&</sup>lt;sup>3</sup> Meta, "About Data for Good at Meta," <u>https://dataforgood.facebook.com/dfg/about</u>

<sup>&</sup>lt;sup>4</sup> Meta Platforms. Inc., Form 10-K for fiscal year ending December 31, 2022, <u>https://d18rn0p25nwr6d.cloudfront.net/CIK-0001326801/e574646c-c642-42d9-9229-3892b13aabfb.pdf</u>



#### Figure 3B: DataCo examples – government



Nine industries were represented in the analysis dataset (see Figure 4).

#### Figure 4: DataCo count by industry in EDM Council analysis

Government organizations had the highest number of DataCos, followed by health care, airlines, and information technology and services. The EDM Council Data ROI working group was not able to identify any DataCos in financial services that fit our definition. There are a number of standalone fintechs, such as MX Technologies, but they do not fit our strict DataCo definition. Notwithstanding the above, we anticipate that things may change due to data risk and compliance considerations for financial services as we outline in section 5.



Most of the DataCos in the analysis were located in the United States (see Figure 5).

#### Figure 5: Count of DataCo parent headquarters by country in EDM Council analysis

The most common organization type of DataCos in the analysis was for-profit organizations, followed by government and non-profit organizations (see Figure 6).



Figure 6: Count of DataCos by parent organization type in EDM Council analysis

## **DataCo Considerations**

Figure 7 further decomposes the DataCo considerations.



#### Figure 7: DataCo detailed considerations

The rest of this paper delves into each DataCo consideration in detail.

#### 1. Data Management Maturity

Not all organizations may be ready for a DataCo, but the foundational data management practices established for measuring data ROI will lead organizations to make the determination as to whether and when a DataCo is a good strategic decision.

The chief data officer (CDO) of a large health care organization made the following observation: "Our CEO said that we should defer the DataCo conversation by a year. Our data is a mess, and we need to get our act together before addressing advanced topics like DataCo."

Depending on an organization's level of data maturity, the journey to a DataCo has multiple stages (see Table 1).

Journey to DataCo	Description
Level 1	The company has no defined data domains or business cases.
Level 2	Data domains with data products are defined.
Level 3	Data products are valued, and data ROI is computed.
Level 4	The DataCo has been established.

Table 1: Sample maturity levels for data ROI

## 2. Primary Objectives Met with DataCos

All DataCos share the objective of maximizing the value of the parent organization(s) data; however, there are several specific business objectives for DataCos (see Table 2).

DataCo Objective	Examples
For-profit entities	
Collateralize data	In September 2020, Delta Airlines raised US\$6.5 billion from banks by pledging its SkyMiles loyalty program to address liquidity challenges during COVID-19. <sup>5</sup>
Monetize data products for external sale	Dataworks is FedEx's data-enabled logistics subsidiary, with the goal of applying powerful insights to the rich data produced by the company's logistics network. <sup>6</sup>
Develop new products that differ significantly from the core business	84.51 is Kroger's data analytics subsidiary, which was formed when the retailer acquired Dunnhumby's technology assets in 2015. <sup>7</sup> It appears Kroger has not fully implemented a DataCo because it has data assets also residing in other subsidiaries, such as Kroger Personal Finance. <sup>8</sup>
Receive higher company valuations	Parent organizations may receive higher valuations by virtue of including DataCo subsidiaries on their balance sheets. During COVID-19, United Airlines and American Airlines secured multi-billion-dollar loans by collateralizing their MileagePlus and AAdvantage customer loyalty programs, respectively. Third-party appraisals suggested that their data was worth two to three times more than the market value of the companies themselves. United's customer data was valued at US\$20 billion while its market cap at the time was about US\$9 billion. Similarly, American's data was valued at a minimum of US\$19.5 billion and up to US\$31.5 billion, whereas its own market cap was hovering at less than US\$8 billion. <sup>9</sup>
Assign financial value to data	While not yet publicly announced, several companies are in the process of assigning high-value data assets to a DataCo so that investors can assign a unique value.
Support regulatory compliance	While currently not a key driver of DataCo formation, regulatory compliance may be critical going forward considering the recent banking crisis. For example, Section 166 of the US Dodd-Frank Wall Street Reform and Consumer Protection Act drove foreign banks to create intermediate holding companies (IHCs) that helped the US Federal Reserve better regulate the activities of multiple branches. Before the creation of IHCs, the Federal Reserve needed to supervise each foreign bank branch, an onerous exercise. In a similar manner, regulators may view DataCos as facilitating overall bank supervision.
Separate legal liability from the parent company	DataCos may also be a suitable approach when potential legal liabilities are associated with certain data products that need to be ring-fenced.
Heighten focus on managing data as an actual asset	DataCos may also enable a focus on managing data as an actual asset. This enables a heightened focus and investment in data management, data quality, accessibility, and data infrastructure.
Government entities	
Provide open (easily accessible) data to constituents	Many US government DataCos are part of the US Federal Statistical System, a decentralized network of federal agencies that produce data and official statistics about the country's people, economy, natural resources, and infrastructure (see Appendix B). The federal statistical system is coordinated through the Office of Management and Budget (OMB). <sup>10</sup>
Share or exchange data with a third party or consortium of consumers	Law enforcement DataCos are enumerated in Appendix C.

https://www.dmnews.com/kroger-acquires-dunnhumbys-tech-assets-to-form-8451

<sup>&</sup>lt;sup>5</sup> Rucinski, Tracy; "Delta pledges loyalty program to raise \$6.5 billion," Reuters, 15 September 2020,

https://www.reuters.com/article/delta-air-debt/delta-pledges-loyalty-program-to-raise-6-5-billion-idUSKBN2652ZB

 <sup>&</sup>lt;sup>6</sup> FedEx Dataworks, "Data makes the world work better," <u>https://www.fedex.com/en-us/dataworks.html</u>
 <sup>7</sup> Urbanski, Al; "Kroger Acquires Dunnhumby's Tech Assets to Form 84.51?" DMNews, 28 April 2015,

<sup>&</sup>lt;sup>8</sup> Kroger Form 10-K report for 2022, <u>https://d18rn0p25nwr6d.cloudfront.net/CIK-0000056873/d61364e3-1218-41f2-896a-3bf6cb5b8699.pdf</u>

 <sup>&</sup>lt;sup>9</sup> Laney, Douglas B.; "Your Company's Data May Be Worth More Than Your Company," Forbes, 22 July 2020, <u>https://www.forbes.com/sites/douglaslaney/2020/07/22/your-companys-data-may-be-worth-more-than-your-company/</u>
 <sup>10</sup> Office of Management and Budget (OMB), "Statistical Programs & Standards,"

https://www.whitehouse.gov/omb/information-regulatory-affairs/statistical-programs-standards/

Non-profits	
Share or exchange data with a third party or consortium of consumers	The National Center for Charitable Statistics (NCCS) provides an open data platform for non-profit practitioners, researchers, and policymakers to download and explore data. <sup>11</sup> The NCCS is part of the Urban Institute. <sup>12</sup>

Table 2: DataCo objectives

In the EDM Council DataCo analysis, the majority of DataCos were focused on data monetization, followed by open data and sharing/exchanging data (see Figure 8).



Figure 8: Business objectives of DataCos in EDM Council analysis

#### 3. Data Products

A data product is a named set of data organized to be valuable and accessible to a defined set of users.<sup>13</sup> The parent organization needs to consider the scope of data to be managed by the DataCo. These data products have associated quality and rights that ultimately drive the valuation of the DataCo.

#### 3.1 Scope of Data Products

For the 31 organizations classified as DataCos in the EDM Council DataCo analysis, the most common data product was economic/financial data from government statistics organizations, followed by

<sup>&</sup>lt;sup>11</sup> National Center for Charitable Statistics (NCCS), <u>https://nccs.urban.org/about</u>

<sup>&</sup>lt;sup>12</sup> Urban Institute, <u>https://www.urban.org</u>

<sup>&</sup>lt;sup>13</sup> EDM Council Data Office ROI Playbook Version 1.1, May 2023, <u>https://edmcouncil.org/groups-leadership-forums/data-roi/</u>

logistics, health care, and customer data (see Figure 9). The airline DataCos were also collateralized for fund-raising purposes.



#### Figure 9: Count of primary data product within DataCos

The scope of data managed by the DataCo depends on the primary objectives for establishing the DataCo. Table 3 provides recommendations for the scope of data managed by the DataCo depending on the primary reason for establishing the DataCo.

DataCo Objective	Scope of Data Products Housed in DataCo
Collateralize data	Only data used for collateral
Monetize data products for external sale	Only data needed to monetize data products
Develop new product very different from core business	Only data needed to develop new data products
Assign financial value to data	All data
Support regulatory compliance	All data with regulatory risk
Separate legal liability from the parent company	All data with legal risk
Provide open data to constituents of government agencies	Only data needed to support open sharing of data
Share or exchange data with a third party or consortium	Only data needed to support sharing or exchange

Table 3: Recommendations for scope of data managed by DataCo

Each organization must weigh the advantages and disadvantages of copying and/or moving all or just a set of data to the DataCo (see Table 4).

Scope of Data Copied or Moved to DataCo	Advantages	Disadvantages
All data	<ul> <li>Increases accuracy in measurement of data value because all costs are contained in one organization</li> <li>Provides DataCo with full access to continuously evaluate data for new data products</li> <li>Ensures a single authoritative source and team accountable for managing data</li> <li>May protect parent organization(s) from legal liability related to issues with security, privacy, regulatory compliance, or misuse of data</li> <li>Centralization of data risk may increase ability to effectively manage data risk</li> </ul>	<ul> <li>Expensive to move or copy all data</li> <li>Could discourage DataCo from staying closely aligned with parent</li> <li>May limit parent organization(s) authority over and access to data</li> <li>May encourage parent organization data consumers to create own data source</li> </ul>
Minimum set of data	<ul> <li>Minimizes cost of moving or copying data to DataCo</li> <li>Allows DataCo to focus and prioritize resources on most important or valuable data</li> </ul>	<ul> <li>Could be complicated to segment the minimum set of data from all other data</li> <li>Increases amount of redundant data</li> <li>Could result in conflicting data or insights between parent organization(s) and DataCo</li> <li>Responsibility and accountability could be confusing if some data resides in both parent organization(s) and DataCo</li> </ul>

Table 4: Advantages and disadvantages of moving data to the DataCo

#### 3.2 Data Rights

Data rights refer to the legal and contractual rights of individuals or organizations to control, manage, and use data. These rights can include the right to access, modify, delete, transfer, or protect data as well as the right to control how data is collected, used, and shared.<sup>14</sup>

Data rights can apply to a wide range of data, including personal data (e.g., name, address, social security number), financial data, health data, and other types of sensitive information.

In many cases, data rights are protected by laws and regulations, such as the General Data Protection Regulation (GDPR) in the European Union, the California Privacy Rights Act (CPRA) in the United States, and the Personal Information Protection and Electronic Documents Act (PIPEDA) in Canada.

Data rights have become increasingly important in the digital age as more and more personal information is collected and stored by governments, businesses, and other organizations. The protection

<sup>&</sup>lt;sup>14</sup> Richards, Neil; *Why Privacy Matters,* Oxford University Press, United Kingdom, 2021, https://doi.org/10.1093/oso/9780190939045.001.0001

of data rights is crucial for safeguarding individual privacy, preventing identity theft, and limiting fraud in the digital age while promoting transparency and accountability in data management practices.

A DataCo may be advantageous in managing the complexity of data rights. Data requirements, metadata, and technology configuration are essential components for ensuring all areas of an organization understand the data rights and how to achieve and evidence compliance. A DataCo may provide the right combination of subject matter expertise and the focus and prioritization of resources to ensure robust management of data rights.

Case Study 1 reviews the use of a DataCo to leverage customer lists in a merger situation.

#### Case Study 1: Use of DataCo to Leverage Customers Lists in a Merger Situation

Two companies merge with the intent to use the client list from the first company to generate leads for the more profitable second company. However, some clients from the first company have existing contracts that prevent the sharing of their information for any purpose other than the original intent.

The challenge facing the merged company is how to segregate or combine and tag the subset of first company data that cannot be used for second company objectives. The risk of breaching existing contracts is high and requires collaboration from business data owners, legal, risk, compliance, and technology leadership.

None of these business areas have adequate subject matter expertise to be fully accountable for data rights. Establishing a DataCo to be accountable for managing these data rights is one solution.

There are broadly two categories of data rights:

- Contractual data rights
- Legal data rights

#### 3.2.1 Contractual Data Rights

Organizations may have significant restrictions on the use of data based on contractual language. These contractual data rights may have a notable impact on data valuation. For example, the value of a regional bank's deposit data was significantly cut based on the percentage of customers who had opted out of data sharing (see Table 5).

Driver Name	Driver Description	Driver Value
А	Outstanding deposits	\$5,000,000,000
В	Value of data as a percentage of deposits <sup>15</sup>	4%
C	Value of deposit data (A × B)	\$200,000,000
D	Percentage of customers who opted out of data sharing	50%
E	Percentage of customers for whom bank has data sharing rights (1 – D)	50%
F	Adjusted value of deposit data (C × E)	\$100,000,000

Table 5: Adjusted value of deposit data at a regional bank

<sup>&</sup>lt;sup>15</sup> EDM Council, "New Data ROI Report: Data as an Asset," 14 March 2023, <u>https://edmcouncil.org/announcement/new-data-roi-report-data-as-an-asset</u>

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#### 3.2.2 Legal Data Rights

Various regulations, such as the GDPR, CCPA, and the European Union Data Act, impose rights and obligations regarding the use of personal and non-personal data. This topic is addressed in detail in the section on regulatory compliance.

#### 3.3 Data Quality

According to the EDM Council Data Management Capability Assessment Model (DCAM), data quality is not a process itself but is the net result of a chain of processes across the full data supply chain to ensure that information meets the needs of its intended consumers. Data quality requires an understanding of how data is sourced, defined, transformed, delivered, and consumed.

A key DataCo objective is to extract value from data. The process of converting raw materials into finished goods at a manufacturer is analogous to converting raw data into data products in a DataCo (see Figure 10).



Figure 10: Data quality at a DataCo is similar to manufacturing

The DataCo needs to implement data contracts to enforce minimum data quality thresholds on feeds from the parent company and other organizations. The EDM Council's Cloud Data Management Capabilities Plus (CDMC+) Working Group addresses best practices associated with data marketplaces and data sharing.<sup>16</sup>

The EDM Council offers various options for live, online, and self-paced training for DCAM, CDMC, knowledge graphs, data ethics, data governance, data stewardship, and data literacy. The EDM Council

<sup>&</sup>lt;sup>16</sup> EDM Council, "Cloud Data – CDMC," <u>https://edmcouncil.org/frameworks/cdmc</u>

also offers a number of certifications for DCAM, CDMC, Certified Information Management Professional (CIMP), and Data Literacy Certification (DLC).<sup>17</sup> These training and certification programs provide the underpinnings of a strong data ROI program that supports a network of more than 25,000 data management professionals who constitute the EDM Council's community.<sup>18</sup>

#### 4. Corporate Finance

Parent organizations need to address corporate finance topics, including ownership, legal construct, tax, and valuation.

#### 4.1 Independent Relationship with ParentCo

There are various options for how the DataCo establishes independence from the parent organization(s). For example, a DataCo may be structured as a wholly owned subsidiary, which interacts with various data partners (see Figure 11).



Figure 11: Legal structure for DataCo

<sup>&</sup>lt;sup>17</sup> EDM Council, "Training, Certifications & eLearning," <u>https://edmcouncil.org/training</u>

<sup>&</sup>lt;sup>18</sup> EDM Council, "About EDM Council," <u>https://edmcouncil.org/about</u>

Table 6 describes several DataCo ownership structures.

Ownership Structure	Examples
Wholly owned subsidiary of corporate entity	Arity is Allstate's wholly owned subsidiary focused on telematics and driver insights (see Appendix G).
Partially owned subsidiary of corporate entity	While not publicly announced, there are several instances of multiple companies (ParentCos) contributing valuable data assets such as health care information to a new company (DataCo). In this case, the ownership of the DataCo is shared by the ParentCos as well as by potential investors.
Tracking stock	Parent organizations may create a tracking stock for their DataCos. A tracking stock is a special equity offering issued by a parent company that tracks the financial performance of a particular segment or division. Tracking stocks will trade in the open market separately from the parent company's stock. <sup>19</sup> As of the date of publication, we are not aware of any examples where a parent organization has created a tracking stock for a DataCo.
Joint venture	A joint venture is a business or business activity that two or more people or companies work on together. <sup>20</sup> Blue Health Intelligence (BHI) is an independent licensee of the Blue Cross Blue Shield Association, which is a federation of 34 independent and locally operated Blue Cross Blue Shield companies. <sup>21</sup>
Special purpose vehicle (SPV)	A special purpose vehicle (SPV), also called a special purpose entity (SPE), is a subsidiary created by a parent company to isolate financial risk. Its legal status as a separate company makes its obligations secure even if the parent company goes bankrupt. For this reason, a special purpose vehicle is sometimes called a bankruptcy-remote entity. <sup>22</sup> Delta Air Lines used SkyMiles IP, Ltd., as a DataCo to collateralize its loyalty program to raise money during COVID-19. <sup>23</sup>
Agency within government department	The Bureau of Labor Statistics within the US Department of Labor is an example of a major agency within the US statistical system. (See Appendix B for more government DataCo examples.)

Table 6: DataCo ownership structures

Some organizations report financial results for segments or divisions of the organization that have data management accountability and the objective to maximize the value of data. These divisions are not technically DataCos because they lack independence from the parent organization; however, this approach is valuable because it allows stakeholders and investors to recognize the financial performance of an entity's data. For example, Cboe Global Markets, Inc.'s data and access solutions is a

<sup>&</sup>lt;sup>19</sup> Chen, James; "Tracking Stock: Definition, Benefits, Risks, and Example," Investopedia, 17 April 2022, https://www.investopedia.com/terms/t/trackingstocks.asp

<sup>&</sup>lt;sup>20</sup> Cambridge Dictionary, "Joint Venture," <u>https://dictionary.cambridge.org/dictionary/english/joint-venture</u>

<sup>&</sup>lt;sup>21</sup> Blue Cross Blue Shield Association, "BCBS Companies and Licensees," <u>https://www.bcbs.com/bcbs-companies-and-licensees</u>

<sup>&</sup>lt;sup>22</sup> Hayes, Adam; "What Is a Special Purpose Vehicle (SPV) and Why Companies Form Them," Investopedia, 23 August 2022, https://www.investopedia.com/terms/s/spv.asp

 <sup>&</sup>lt;sup>23</sup> US Securities and Exchange Commission, "Delta Air Lines Term Loan Credit and Guaranty Agreement, September 23, 2020," <a href="https://www.sec.gov/Archives/edgar/data/27904/000168316820003281/delta\_8k-ex1001.htm">https://www.sec.gov/Archives/edgar/data/27904/000168316820003281/delta\_8k-ex1001.htm</a>

separate segment within the company's financial statements but does not appear on the list of subsidiaries.<sup>24</sup>

#### 4.2 Legal Construct

A detailed discussion about the possible legal constructs of DataCos is outside the scope of this paper. As an example, Delta Air Lines used SkyMiles IP, Ltd., SkyMiles Holdings, Ltd., SkyMiles IP Holdings, Ltd., and SkyMiles IP Finance, Ltd., as special purpose vehicles (SPVs) to collateralize its loyalty program to raise money during COVID-19. These SPVs were structured as bankruptcy-remote entities incorporated with limited liability under the laws of the Cayman Islands.<sup>25</sup>

#### **4.3** Tax

A detailed discussion about the tax implications of DataCos is outside the scope of this paper.

#### 4.4 Valuation

The valuation of the DataCo depends in large part on the valuation of the underlying data, with appropriate adjustments for data quality and data rights.

#### 4.4.1 Data Valuation

Creation of a DataCo allows companies and investors to assign an appropriate and agreed-upon financial value to the data. This is achieved by segregating the OpCo ("operating company") from the DataCo ("data company"). This approach is similar to a practice in which retail investors have segregated assets into PropCo ("property company") and OpCo.

Assigning a financial value to data will enable companies to increase visibility to the costs and benefits associated with their data. Measuring data's financial value will encourage or demand ownership for managing the data assets, enable companies to ensure accountability for the continuous increase in the data's value to the company, and help companies quantify and justify investment in data acquisition, data quality, and data analytics.

An organization's value is increasingly less dependent on tangible assets and more about intangibles, data included. Intangible assets are inherently harder to value and typically do not appear on a balance sheet, contributing to a lack of understanding and appreciation among investment professionals. Evidence showing the rise of intangible assets is abundant:<sup>26</sup>

• Sectors that have invested the most in intangibles—more than 12% of their gross value added (GVA, a measure of economic growth)—achieved 28% higher growth than other sectors in GVA, or more than 2.7% per year between 1995 and 2019. The relationship is strongest in knowledge-

<sup>&</sup>lt;sup>24</sup> Cboe Global Markets, "Annual Report 2022," <u>https://otp.tools.investis.com/clients/us/cboe4/SEC/sec-show.aspx?FilingId=16531162&Cik=0001374310&Type=PDF&hasPdf=1</u>

<sup>&</sup>lt;sup>25</sup> US Securities and Exchange Commission, "Delta Air Lines Term Loan Credit and Guaranty Agreement, September 23, 2020," <u>https://www.sec.gov/Archives/edgar/data/27904/000168316820003281/delta\_8k-ex1001.htm</u>

<sup>&</sup>lt;sup>26</sup> EDM Council, "New Data ROI Report: Data as an Asset," 14 March 2023, <u>https://edmcouncil.org/announcement/new-data-roi-report-data-as-an-asset</u>

intensive services, such as financial services, and in innovation-driven services, such as telecommunications, media, and technology.<sup>27</sup>

- As of year-end 2020, 90% of the market value of firms in the S&P 500 consisted of intangible assets. This continues the trend seen since 1975 when intangible assets made up only 17% of the market value of the S&P 500.<sup>28</sup>
- The Coalition for Inclusive Capitalism summed up the ongoing trend toward intangibles, stating, "as business adapts to an increasingly service-based economy—one in which intellectual property and innovation are often key drivers of value—tangible assets comprise less of a company's value than they once did. Indeed, this is a world where a company like AirBnB can become larger than any hotel chain in the world without owning a single property." <sup>29</sup>
- Information-based businesses where data is core to the product<sup>30</sup> enjoy a Q-ratio that is three times greater than the market average.<sup>31</sup> A Q-ratio (also called the Tobin's-Q) is a ratio of a company's market value to the replacement value.<sup>32</sup>

Case Study 2 shows the valuation of data at the UK National Health Service (NHS) based on a published study by EY.<sup>33</sup> As of the publication of this paper, there have been no public announcements about the creation of an NHS DataCo.

#### Case Study 2: Data Valuation at the UK National Health Service

EY estimated that the 55 million patient records held by the UK National Health Service (NHS) may have an indicative market value of several billion pounds to a commercial organization. EY further estimated that the value of the curated NHS data set could be as much as £5 billion per annum and deliver around £4.6 billion of benefit (aggregate value of £9.6 billion per annum) to patients per annum—generated through potential operational savings for the NHS, enhanced patient outcomes, and creation of wider economic benefits to the United Kingdom, generated through big data, artificial intelligence, and personalized medicine.

#### 4.4.2 Data Valuation Adjustments

An overall valuation framework for data is based on the initial valuation as adjusted for data rights and data quality (see Figure 12).

<sup>&</sup>lt;sup>27</sup> McKinsey Global Institute, *Getting Tangible About Intangibles: The Future of Growth and Productivity*?, 16 June 2021, <u>https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/getting-tangible-about-intangibles-the-future-of-growth-and-productivity</u>

<sup>&</sup>lt;sup>28</sup> Ocean Tomo, Intangible Asset Market Value Study, 2020, <u>https://www.oceantomo.com/INTANGIBLE-ASSET-MARKET-VALUE-STUDY</u>

<sup>&</sup>lt;sup>29</sup> Coalition for Inclusive Capitalism, "Embankment Project for Inclusive Capitalism," 2018,

https://coalitionforinclusivecapitalism.com/wp-content/uploads/2021/01/coalition-epic-report.pdf

<sup>&</sup>lt;sup>30</sup> EDM Council, "New Data ROI Report: Data as an Asset," 14 March 2023, <u>https://edmcouncil.org/announcement/new-data-roi-report-data-as-an-asset</u>

<sup>&</sup>lt;sup>31</sup> Laney, Douglas B.; *Infonomics: How to Monetize, Manage, and Measure Information as an Asset for Competitive Advantage,* Bibliomotion, Inc., USA, 2018, <u>https://www.gartner.com/imagesrv/books/pdf/infonomicsFreeChapter.pdf?ac=id</u>

<sup>&</sup>lt;sup>32</sup> Replacement value is commonly estimated by using the balance sheet values of a company's equity and liabilities.

<sup>&</sup>lt;sup>33</sup> EY, *Realising the value of health care data: a framework for the future*, <u>https://assets.ey.com/content/dam/ey-sites/ey-com/en\_gl/topics/life-sciences/life-sciences-pdfs/ey-value-of-health-care-data-v20-final.pdf</u>



Compare to Cost of DataCo

Figure 12: DataCo valuation framework

## 5. Data Risk and Compliance

All the data risk and compliance challenges associated with data management apply to a DataCo; however, there are a few additional data risks to be considered when establishing a DataCo, including:

- An increase in data and technology redundancy if copies of data are managed at both the parent organization(s) and the DataCo
- Conflicting or out-of-sync data, information, and insights between the parent organization(s) and the DataCo
- Higher data management and storage costs if data is managed in both organizations
- Conflicting prioritization of data product development between parent organization(s) and the DataCo
- Disagreements or conflicts regarding data ownership or stewardship
- Potential for disconnects between business requirements of the parent organization(s) and data management and product development at the DataCo
- Parent organization employees creating their own data sources because of lack of access or control over needed data

On the other hand, DataCos may increase a parent organization's ability to manage data risk by:

- Centralizing data management roles and responsibilities (although a federated approach to data ownership is beneficial in many instances)
- Ensuring adequate data management subject matter expertise
- Ensuring adequate investment in data management and data product development by measuring and reporting data ROI
- Increasing visibility to data risks, data issues, and lack of compliance with laws and regulations with data management requirements
- Clearly differentiating between technology risk and data risk

#### **5.1 Industry Regulations**

Several industry regulations may drive the formation of DataCos. Table 7 lists a few examples of relevant banking regulations in the United States.

US Banking Regulation	Potential DataCo Impact
Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank")	Section 166 of Dodd-Frank drove foreign banks to create intermediate holding companies (IHCs) that helped the US Federal Reserve better regulate the activities of multiple branches. Prior to the creation of IHCs, the Federal Reserve needed to supervise each foreign bank branch, which was onerous. Similarly, regulators may view DataCos as facilitating overall bank supervision.
Consumer Financial Protection Bureau (CFPB)	The CFPB is developing regulations to implement section 1033 of Dodd-Frank relating to personal finance data rights. These regulations will stipulate how banks must make available to consumers, upon request, transaction data and other information concerning a consumer financial product or service that the consumer obtains from the covered entity. <sup>34</sup>
Fair Credit Reporting Act (FCRA)	The FCRA may govern the sharing of data across organizations, including between a parent company and its DataCo. The FCRA is intended to ensure consumer reports are accurate and used for permissible purposes. It creates consumer protections and rights and imposes responsibilities on banks as users of consumer reports and entities furnishing information to the consumer reporting agencies. <sup>35</sup>
Gramm-Leach-Bliley Act (GLBA)	Banks covered by the GLBA must tell their customers about their privacy practices and explain to them their right to opt out if they do not want their information shared with third parties. <sup>36</sup> The GLBA may impact data rights in terms of what information a parent organization is permitted to share with its DataCo.

 Table 7: Examples of US banking regulations that may impact DataCos

#### 5.2 Data Privacy

Several data privacy regulations may impact DataCos (see Table 8).

Regulation	Potential DataCo Impact
European Union General Data Protection Regulation (GDPR)	• The value of DataCo information may be potentially
California Privacy Rights Act (CPRA)	haircut if customers have opted out of data sharing.
Additional data privacy regulations are expected to go live in 2023, such as the Colorado Privacy Act (CPA), the Utah Consumer Privacy Act (UCPA), and the Virginia Consumer Data Protection Act (CDPA).	<ul> <li>Non-compliance with data privacy regulations may entail significant fines (e.g., fines under the GDPR may be up to €20 million or up to 4% of annual worldwide revenues).</li> </ul>

 Table 8: Examples of data privacy regulations that may impact DataCos
 Image: Control of the second seco

<sup>&</sup>lt;sup>34</sup> Consumer Financial Protection Bureau, "Required Rulemaking on Personal Financial Data Rights," <u>https://www.consumerfinance.gov/personal-financial-data-rights</u>.

<sup>&</sup>lt;sup>35</sup> American Bankers Association, "Fair Credit Reporting Act (Reg V)," <u>https://www.aba.com/banking-topics/compliance/acts/fair-credit-reporting-act</u>.

<sup>&</sup>lt;sup>36</sup> Federal Trade Commission, "Gramm-Leach-Bliley Act," <u>https://www.ftc.gov/business-guidance/privacy-security/gramm-leach-bliley-act</u>.

#### 5.3 Data Sharing

Regulation or Regulator	Potential DataCo Impact
U.S. Consumer Financial Protection Bureau (CFPB)	The CFPB recently put out a request for information (RFI) on the sharing of data by financial institutions with data brokers. <sup>37</sup>
European Union Data Act	The EU Data Act was proposed in February 2022 and is yet to go into effect. The act covers personal and non-personal data. It will unlock the value of data generated by connected objects in Europe. It will clarify who can create value from such data and under which conditions. It will ensure fairness in the allocation of data value among the actors in the data economy and in their contracts while respecting the legitimate interests of companies and individuals that invest in data products and services.
	The Data Act will give both individuals and businesses more control over their data through a reinforced data portability right, copying or transferring data easily from across different services where the data are generated through smart objects, machines, and devices. For example, a car or machinery owner could choose to share data generated by their use with an insurance company.
	Users of connected products (including consumers, farmers, airlines, construction companies, or building owners) could opt for a less expensive repair and maintenance provider (or maintain and repair themselves) and benefit from lower prices on that market.
	Freedom of contract remains the underlying principle of the Data Act, but small and medium enterprises will now be protected against unfair contractual terms, due to the list of unilaterally imposed contractual clauses that will be deemed unfair. <sup>38</sup>

Several data sharing regulations may impact DataCos (see Table 9).

Table 9: Examples of data privacy regulations that may impact DataCos

#### 5.4 Data Sovereignty

Data sovereignty is a legally enforceable authority that is asserted over data by any entity, including not only the laws imposed by governments and regulators but also the legally binding contractual obligations between data providers and their customers.<sup>39</sup> Data sovereignty pertains to privacy legislation that covers data subject to the laws of the country in which it is physically located. This means the legal rights for people whose personal data is being collected, processed, retained, and or transferred across international borders depend on the location in which their personal data is stored.

There are a growing number of data sovereignty laws in multiple countries—Australia's Privacy Principles (APP), Canada's Canada Anti-Spam Law (CASL) and Personal Information Protected and Electronic (PIPEDA), the European Union's General Data Protection Regulation (GDPR), France's Data Protection Act (DPA), the People's Republic of China's (PRC's) Cybersecurity Law, Russia's Federal Law

<sup>&</sup>lt;sup>37</sup> Consumer Financial Protection Bureau, "Request for Information Regarding Data Brokers and Other Business Practices Involving the Collection and Sale of Consumer Information," <u>https://files.consumerfinance.gov/f/documents/cfpb\_request-for-information\_data-brokers\_2023-3.pdf</u>

<sup>&</sup>lt;sup>38</sup> European Commission, "Data Act – Questions and Answers,"

https://ec.europa.eu/commission/presscorner/detail/en/qanda\_22\_1114

<sup>&</sup>lt;sup>39</sup> EDM Council Data Management Business Glossary, "Data Sovereignty," <u>https://www.edmcportal.org/glossary/data-sovereignty</u>

No. 152-FZ, and the United States' Civil Rights Act of 1964, Fair Credit Reporting Act, California Privacy Rights Act (CPRA), and California Consumer Protection Act (CCPA), to name a few.

# The deputy minister for a large public-sector data management organization made the following observation: "We are pushing our cloud providers to situate their data locally in country. In the unlikely event that our government gets sanctioned by foreign governments, we do not want to be in an unfortunate position where we lose access to our data."

With the complexity of data sovereignty, it is imperative that a DataCo consider and understand the implications of its data assets and their use regarding regulatory compliance, data rights, data risks, and data valuation. Companies using cloud infrastructure must address data sovereignty holistically. Ownership, security, and access to data where it resides in the cloud will continue to be critical as additional sovereignty regulations emerge. DataCos will need to ensure they have strong collaborative support and formalized governance processes in the areas of legal and compliance, privacy, security, IT, risk management, and internal audit. When using third-party cloud providers to store and process data, DataCos will need to take into consideration restraints and implications such as:

- Limitation in data transmissions outside the original country in which data are collected
- Data access points across multiple countries
- Personal rights to people (subjects) accessing their data
- Restrictions in the disclosure of personal data to third parties
- Potential internal and external improper and unethical use of data
- Retention periods of data subjects' data
- Legal requirements regarding data breaches
- Cloud, or hybrid-cloud (cloud and on-prem), data storage strategies
- Choice of geographic location for data based on tax considerations
- Production, backup, and disaster recovery strategies
- Data residency (decision to store data in a specific physical or geographical location) to gain favorable regulatory, privacy, or tax advantages

The EDM Council Cloud Data Management Capabilities (CDMC) framework, component 1 (Governance and Accountability), addresses the management of data sovereignty and cross-border data movement risks. The CDMC framework asks the following questions<sup>40</sup>:

- Are there requirements for managing data sovereignty?
- Have cross-border data movement risks been defined?
- Have controls for both been implemented?

CDMC capability 1.4 (Data Sovereignty and Cross-Border Data Movement are Managed) states that the sovereignty of data in cloud environments must be tracked and used to ensure that the storage and cross-border movement and use of data conform to the relevant jurisdictional requirements.

<sup>&</sup>lt;sup>40</sup> EDM Council Cloud Data Management Capabilities Framework, <u>https://edmcouncil.org/frameworks/cdmc/</u>

Data sovereignty rules can be used to help formulate a governance structure of risk and controls for data sovereignty. The sample rules summarized in Table 10 are based on a company's origin instead of the local company.

Data Sovereignty Rule Type	Potential DataCo Requirements
No-transfer rules	Requirement for data to be kept in specific jurisdictions, including copies made for recovery and infrastructure purposes
Non-personal data restrictions	Restrictions on non-personal data
Outsourcing restrictions	Restrictions on outsourcing of data handling services
Consent restrictions	Data transfers prohibited unless the individual's explicit consent is given
Infrastructure rules	Requirement for data to be stored and processed by specific methods in the named jurisdictions
Local copy rules	Requirement for a local copy of specific information to be maintained in the country of origin (typically, this is contained within the database backups)
Equivalent standards	Allowance for data transfers to a jurisdiction with identical or equivalent data handling rules

Table 10: Impact of data sovereignty rules on DataCos

Based on CDMC guidance, DataCo owners should understand the jurisdictional implications of crossborder data movement and any region-specific storage and usage rules for a particular data set. Policyspecified controls must be applied when establishing cross-border data sharing agreements to support requests to use data from a particular location. With the assistance of the DataCo's legal and compliance departments, regulatory controls can be mapped to data sovereignty standards to help support adherence. Depending on where the DataCo transacts data globally, there may be a need to review data protection and privacy laws from a myriad of countries.

In summary, data stored in a country is subject to the laws and regulations of that jurisdiction. To combat the growing trend of cloud computing, data sovereignty legislation is being enacted to uphold data protection regulations of countries as they look to protect the privacy rights of their citizens and protect their data no matter where it is. If data is transferred to another country, it may be subpoenaed by the local government, which may demand access. DataCos need to proactively address the way in which they compute in the cloud and ensure not only that they have transparency of geolocation/jurisdiction of their data, but also that they have adequate controls in place to manage the security and movement of it to adhere to continually developing regulations and to protect against a potential breach or foreign subpoena.

#### **5.5 Operational Resilience**

Several regulations regarding operational resilience may impact DataCos (see Table 11).

Regulation or Regulator	Potential DataCo Impact
U.S. Federal Deposit Insurance Corporation (FDIC)	The FDIC is an independent US agency charged with maintaining stability and public confidence in the nation's financial system. To accomplish this mission, the FDIC insures deposits; examines and supervises financial institutions for safety, soundness, and

	consumer protection; makes large and complex financial institutions resolvable; and manages receiverships. <sup>41</sup>
Bank of England, UK Financial Conduct Authority, and the UK Prudential Regulation Authority	Improving resilience in the face of operational disruptions. <sup>42</sup>

Table 11: Impact of operational resilience regulations on DataCos

The CDO of a large bank made the following observation: "In the context of the recent banking crisis, having bank assets in a separate DataCo may facilitate orderly transition and resolution by regulators because our data have significant value."

#### 6. Operating Model

Organizations need to consider various aspects of the DataCo operating model, including organization structure, ownership and control of data, and leadership profiles.

#### **6.1 Organization Structure**

There are at least three conceptual models for how the data and data management responsibilities may be structured within the parent organization(s) and the DataCo (see Figure 13).





<sup>&</sup>lt;sup>41</sup> Federal Deposit Insurance Corporation, "About," <u>https://www.fdic.gov/about</u>

<sup>&</sup>lt;sup>42</sup> Bank of England, Financial Conduct Authority; "Operational resilience: Impact tolerances for important business services," March 2021, <u>https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/publication/2021/building-operational-resilience-impact-tolerances-for-important-business-services.pdf</u>

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The organization structure of a DataCo may look very similar to a traditional company, with some nuances (see Figure 14). The DataCo will be led by a leader with general management skills. The DataCo needs to have strong capabilities to support data partnerships and data product management. In addition, the DataCo needs to have shared services functions, such as finance, tax, legal, and human resources. These shared services functions may even be shared with the parent organization.



Figure 14: Organization structure of DataCo

#### 6.2 Ownership and Control of Data

Because many organizations have federated approaches to data, the creation of a DataCo may create the perception that individual departments have lost control over their information. These concerns may be alleviated in multiple ways:

- **Communicate effectively:** Senior management of the parent organization needs to address these concerns by pointing to the broader strategy.
- Move data products judiciously: The parent company should move only the high-value data products into the DataCo. For example, a large retailer moved portions of customer data into its DataCo but left employee information with the parent company.
- Leverage change management: Parent companies should leverage change management approaches. The EDM Council DCAM and CDMC frameworks have detailed guidance on federated approaches to data ownership. The EDM Council offers various options for live, online, and self-paced training for DCAM, CDMC, knowledge graphs, data ethics, data governance, data stewardship, and data literacy. The EDM Council also offers several certifications for DCAM, CDMC, Certified Information Management Professional (CIMP), and Data Literacy Certification (DLC).<sup>43</sup> These training and certification programs provide the underpinnings of a strong data ROI program that supports a network of more than 25,000 data management professionals who constitute the EDM Council's community.<sup>44</sup>

<sup>&</sup>lt;sup>43</sup> EDM Council, "Training, Certifications & eLearning," <u>https://edmcouncil.org/training</u>

<sup>&</sup>lt;sup>44</sup> EDM Council, "About EDM Council," <u>https://edmcouncil.org/about</u>

#### 6.3 Profile of DataCo Leader

The DataCo provides the north star for the career of the Chief Data Officer (CDO). The profile of the leader of the DataCo includes multi-disciplinary skills (see Figure 15).

#### Ideal Profile of DataCo Leader



#### Figure 15: Ideal profile of DataCo leader

Table 12 shows sample profiles for DataCo leaders. Although this information has been gleaned from public sources, the people's names have been omitted.

Parent: Blue Cross Blue Shield Association			
DataCo Name: Blue Health Intelligence (BHI)	DataCo Leader Title: CEO		
Country: United States	Industry: Health Care		
Work Experience: Chief Data and Analytics Officer			
Education: Master of Business Administration, Bachelor's	in Economics		
Parent: European Union			
DataCo Name: Eurostat	DataCo Leader Title: Director-General		
Country: European Union	Industry: Government		
Work Experience: Lengthy experience in government and statistical agencies			
Education: Ph.D. in Economics focused on Statistics and D	Education: Ph.D. in Economics focused on Statistics and Demography		
Parent: FedEx			
DataCo Name: Dataworks	DataCo Leader Title: President and CEO of FedEx Dataworks		
Country: United States	Industry: Logistics		
Work Experience: General management, finance, and marketing			
Education: Bachelor of Science			

Parent: Kroger		
DataCo Name: 84.51	DataCo Leader Title: CIO and Chief Digital Officer at	
	Kroger	
Country: United States	Industry: Retail	
Work Experience: Chief information officer, general management, sales, professional services		
Education: Master of Business Administration		
Parent: U.S. Department of Labor		
DataCo Name: Bureau of Labor Statistics	DataCo Leader Title: Acting Commissioner	
Country: United States	Industry: Government	
Work Experience: Lengthy experience in government, author of numerous articles on employee benefits,		
compensation, and occupational safety and health issues		
Education: Master of Business Administration, Bachelor's in Economics and Art History		

Table 12: Sample profiles of DataCo leaders

## Conclusion

A "DataCo" (Data Company) is an independent organizational construct that maximizes the value of the data of one or more parent organizations. A DataCo can drive the execution of an organization's most advanced approaches to data management, regardless of its data maturity. Establishing a DataCo is a good strategic decision for many reasons, but the highest-level objective of all DataCos is to maximize the value of the parent company's data assets. A parent company may establish a DataCo to meet one or more of these business objectives:

- Collateralize data
- Monetize data products for external sale
- Develop new products that are very different from the core business
- Assign financial value to data
- Support regulatory compliance
- Separate legal liability from the parent company
- Provide open data to constituents of government agencies
- Share or exchange data with a third party or consortium of consumers

## Appendix A: Airline DataCo Profiles

DataCo Profiles		
Parent: American Airlines	DataCo: AAdvantage	
Country: United States	Industry: Airlines	
Description: Airline loyalty program		
Parent: Delta Air Lines	DataCo: SkyMiles	
Country: United States	Industry: Airlines	
Description: Airline loyalty program		
Parent: United Airlines	DataCo: MileagePlus	
Country: United States	Industry: Airlines	
Description: Airline loyalty program		

## Appendix B: Government Statistical DataCo Profiles

DataCo Profiles		
Parent: Country of Canada	DataCo: Statistics Canada	
Country: Canada	Industry: Government	
Description: Produces statistics to understand population, resources, e	conomy, society, and culture. <sup>45</sup>	
Parent: Country of France	DataCo: Institut National de la Statistique et des Etudes Economiques (Insee)	
Country: France	Industry: Government	
Description: Produces statistics for France and coordinates with Eurost	at. <sup>46</sup>	
Parent: Country of Italy	DataCo: Istituto Nazionale di Statistica (Istat)	
Country: Italy	Industry: Government	
Description: Produces statistics for Italy and coordinates with Eurostat	47	
Parent: European Union	DataCo: Eurostat	
Country: European Union	Industry: Government	
<b>Description:</b> Produces European statistics in partnership with national statistical institutes and other national authorities in the EU Member States. <sup>48</sup>		
Parent: UK Statistics Authority	DataCo: Office for National Statistics	
Country: United Kingdom	Industry: Government	
<b>Description:</b> The United Kingdom's largest independent producer of official statistics and its recognized national statistical institute. Responsible for collecting and publishing statistics related to the economy, population and society at national, regional and local levels. Conducts the census in England and Wales every 10 years. <sup>49</sup>		
Parent: US Government	DataCo: Library of Congress	
Country: United States	Industry: Government	
<b>Description:</b> Acts as a research library in Washington, D.C., that serves as the library of the U.S. Congress and the de facto national library of the United States. <sup>50</sup>		
Parent: US Department of Labor	DataCo: Bureau of Labor Statistics	
Country: United States	Industry: Government	
Description: Acts as the principal fact-finding agency in the broad field	of labor economics and statistics. <sup>51</sup>	
Parent: US Department of Commerce	DataCo: Bureau of Economic Analysis	
Country: United States	Industry: Government	
<b>Description:</b> Produces some of the world's most closely watched statistics, including U.S. gross domestic product, state and local numbers, foreign trade, investment statistics, and industry data. <sup>52</sup>		
Parent: US Department of Transportation	DataCo: Bureau of Transportation Statistics	
Country: United States	Industry: Government	
<b>Description:</b> Acts as the preeminent source of U.S. statistics on commercial aviation, multimodal freight activity, and transportation economics and provides context to decision makers and the public for understanding statistics on transportation. <sup>53</sup>		
Parent: US Department of Energy	DataCo: Energy Information Administration	
Country: United States	Industry: Government	
<b>Description:</b> Collects, analyzes, and disseminates independent and imp markets, and public understanding of energy and its interaction with the		

<sup>&</sup>lt;sup>45</sup> Statistics Canada, <u>https://www.statcan.gc.ca/en/start</u>

<sup>&</sup>lt;sup>46</sup> Institut National de la Statistique et des Etudes Economiques, https://www.insee.fr/en/accueil

<sup>&</sup>lt;sup>47</sup> Istituto Nazionale di Statistica, <u>https://www.istat.it</u>

<sup>&</sup>lt;sup>48</sup> Eurostat, <u>https://ec.europa.eu/eurostat/web/main/about-us/who-we-are</u>

<sup>&</sup>lt;sup>49</sup> Office for National Statistics, <u>https://www.ons.gov.uk/aboutus</u>

<sup>&</sup>lt;sup>50</sup> Library of Congress, <u>https://www.loc.gov/</u>

<sup>&</sup>lt;sup>51</sup> U.S. Bureau of Labor Statistics, <u>https://www.bls.gov/bls/about-bls.htm</u>

<sup>&</sup>lt;sup>52</sup> U.S. Bureau of Economic Analysis, "Who We Are," <u>https://www.bea.gov/about/who-we-are</u>

<sup>&</sup>lt;sup>53</sup> U.S. Bureau of Transportation Statistics, "About the Bureau of Transportation Statistics," <u>https://www.bts.gov/about-BTS</u>

<sup>&</sup>lt;sup>54</sup> US Energy Information Administration, "About EIA," <u>https://www.eia.gov/about</u>

## Appendix C: Government Law Enforcement DataCo Profiles

DataCo Profiles		
Parent: Country of Canada Centre of Canada	<b>DataCo:</b> Financial Transactions and Reports Analysis (FINTRAC)	
Country: Canada	Industry: Government	
<b>Description:</b> FINTRAC is Canada's financial intelligence unit. Its mandate is to facilitate the detection, prevention and deterrence of money laundering and the financing of terrorist activities, while ensuring the protection of personal information under its control. <sup>55</sup>		
Parent: Europol	DataCo: European Financial and Economic Crime Centre (EFECC)	
Country: United States	Industry: Government	
<b>Description:</b> EFECC enhances Europol's operational and strategic support by preventing and combating financial and economic crime in the European Union. EFECC promotes the consistent use of financial investigations and asset forfeiture while forging alliances with public and private entities. <sup>56</sup>		
Parent: US Department of Treasury	DataCo: Financial Crimes Enforcement Network (FinCEN)	
Country: United States	Industry: Government	
<b>Description:</b> FinCEN's mission is to safeguard the U.S. financial system from illicit use and combat money laundering and promote national security through the collection, analysis, and dissemination of financial intelligence and strategic use of financial authorities. <sup>57</sup>		

<sup>&</sup>lt;sup>55</sup> Government of Canada, "Financial Transactions and Reports Analysis Centre of Canada," <u>https://fintrac-</u> <u>canafe.canada.ca/intro-eng</u>

<sup>&</sup>lt;sup>56</sup> European Financial and Economic Crime Centre – EFECC, <u>https://www.europol.europa.eu/about-europol/european-financial-and-economic-crime-centre-efecc</u>

<sup>&</sup>lt;sup>57</sup> U.S. Financial Crimes Enforcement Network, "What We Do," <u>https://www.fincen.gov/what-we-do</u>

## Appendix D: Health Care DataCo Profiles

DataCo Profiles		
Parent: Blue Cross Blue Shield Association	DataCo: Blue Health Intelligence (BHI)	
Country: United States	Industry: Health Care	
<b>Description:</b> BHI helps health care organizations gain insights to inform strategic decisions, support value-based care, and advance health equity. <sup>58</sup>		
Parent: Roche	DataCo: Flatiron Health	
Country: European Union	Industry: Health Care	
Description: Flatiron Health was acquired by Roche in 2018	and is focused on cancer-related data sets and research. <sup>59</sup>	
Parent: UnitedHealth Group	DataCo: Optum, Change Healthcare	
Country: United States	Industry: Insurance	
<b>Description:</b> Optum consists of Optum Health, Optum Insight, and Optum Rx. Optum Insight offers data, analytics, research, consulting, technology, and managed services solutions. <sup>60</sup> In October 2022, UnitedHealth Group also completed the acquisition of Change Healthcare into Optum. Change Healthcare provides data and analytics-driven solutions to improve clinical, financial, administrative, and patient engagement outcomes in the U.S. healthcare system. <sup>61</sup>		

<sup>&</sup>lt;sup>58</sup> Blue Health Intelligence, "About BHI," <u>https://bluehealthintelligence.com/about-us</u>

<sup>&</sup>lt;sup>59</sup> Flatiron Health, <u>https://www.roche.com/innovation/structure/flatiron</u>

<sup>&</sup>lt;sup>60</sup> UnitedHealth Group Form 10-K for year ending December 31, 2022,

https://www.unitedhealthgroup.com/content/dam/UHG/PDF/investors/2022/UNH-Q4-2022-Form-10-K.pdf

<sup>&</sup>lt;sup>61</sup> Change Healthcare, "District Court Denies Request to Enjoin Acquisition of Change Healthcare Inc. by UnitedHealth Group Incorporated," 20 September 2022, <u>https://newsroom.changehealthcare.com/press-releases/district-court-denies-request-to-enjoin-acquisition-of-change-he</u>

## Appendix E: Industrial DataCo Profiles

DataCo Profiles	
Parent: FedEx	DataCo: Dataworks
Country: United States	Industry: Logistics
<b>Description:</b> FedEx's data-enabled logistics subsidiary, established with the goal of applying powerful insights to the rich data produced by the company's logistics network. <sup>62</sup>	
Parent: General Electric	DataCo: GE Digital
Country: United States	Industry: Conglomerate
<b>Description:</b> Providing software and internet of things (IoT) services to companies across multiple industries, including manufacturing, utilities, oil and gas, automotive, and pharmaceuticals. <sup>63</sup> GE announced plans to spin out GE Digital along with other power businesses into a new company called GE Vernova. <sup>64</sup>	

<sup>&</sup>lt;sup>62</sup> FedEx, "Data Makes the World Work Better," <u>https://www.fedex.com/en-us/dataworks.html</u>

<sup>&</sup>lt;sup>63</sup> GE Digital, "Putting Industrial Data to Work," <u>https://www.ge.com/digital</u>

<sup>64</sup> GE Vernova, https://www.gevernova.com

## Appendix F: Information Technology and Services DataCo Profiles

DataCo Profiles		
Parent: Fitch	DataCo: dv01	
Country: United States	Industry: Information Services	
<b>Description:</b> Fitch Group announced agreement to acquire dv01, a data and analytics provider to the structured finance market. <sup>65</sup>		
Parent: IBM	DataCo: The Weather Company	
Country: United States	Industry: Information Technology	
<b>Description:</b> The Weather Company combines weather data with science and technology to support consumers and businesses. <sup>66</sup>		
Parent: RELX Group	DataCo: LexisNexis	
Country: United States	Industry: Information Services	
<b>Description:</b> RELX is a global provider of information-based analytics and decision tools for professional and business customers. <sup>67</sup>		

<sup>65</sup> FitchRatings, "Fitch Group Announces Agreement to Acquire dv01," 13 September 2022,

 $<sup>\</sup>underline{https://www.fitchratings.com/research/structured-finance/fitch-group-announces-agreement-to-acquire-dv01-13-09-2022}$ 

<sup>&</sup>lt;sup>66</sup> IBM, The Weather Company, <u>https://www.ibm.com/weather</u>

<sup>67</sup> RELX Group, <u>https://www.relx.com</u>

## Appendix G: Insurance DataCo Profiles

DataCo Profiles	
Parent: Allstate	DataCo: Arity
Country: United States	Industry: Insurance
Description: Leverages mobility, telematics, and driver data to derive behavioral insights.68	
Parent: Verisk Analytics	DataCo: Insurance Services Office (ISO)
Country: United States	Industry: Insurance
<b>Description:</b> Using advanced technologies to collect and analyze billions of records, ISO draws on unique data assets and deep domain expertise to provide innovations that may be integrated into customer workflows. ISO offers predictive analytics and decision support solutions to customers in rating, underwriting, claims, catastrophe, weather risk, and many other fields. <sup>69</sup>	

<sup>&</sup>lt;sup>68</sup> Arity, <u>https://www.arity.com</u>

<sup>&</sup>lt;sup>69</sup> Verisk Analytics, Inc., Form 10-K for fiscal year ending December 31, 2022, <u>https://d18rn0p25nwr6d.cloudfront.net/CIK-0001442145/69eec7ec-9326-44bd-a070-9a5705cb0a88.pdf</u>

## Appendix H: Retail DataCo Profiles

DataCo Profile		
Parent: Kroger	DataCo: 84.51	
Country: United States	Industry: Retail	
<b>Description:</b> Kroger's data analytics subsidiary, which was formed when the retailer acquired Dunnhumby's technology assets in 2015. <sup>70</sup> It appears Kroger has not fully implemented a DataCo because it has data assets also residing in other subsidiaries, such as Kroger Personal Finance. <sup>71</sup>		

 <sup>&</sup>lt;sup>70</sup> Al Urbanski, "Kroger Acquires Dunnhumby's Tech Assets to Form 84.51?" DMNews, 28 April 2015, <u>https://www.dmnews.com/kroger-acquires-dunnhumbys-tech-assets-to-form-8451</u>
 <sup>71</sup> Kroger Form 10-K report for 2022. <u>https://d18rn0p25nwr6d.cloudfront.net/CIK-0000056873/d61364e3-1218-41f2-89</u>

<sup>&</sup>lt;sup>71</sup> Kroger Form 10-K report for 2022, <u>https://d18rn0p25nwr6d.cloudfront.net/CIK-0000056873/d61364e3-1218-41f2-896a-3bf6cb5b8699.pdf</u>

## Appendix I: Research DataCo Profiles

DataCo Profile		
Parent: Urban Institute	DataCo: National Center for Charitable Statistics (NCCS)	
Country: United States	Industry: Research	
Description: The NCCS provides an open data platform for non-profit practitioners, researchers, and policymakers to		
download and explore data. <sup>72</sup> The NCCS is part of the Urban Institute. <sup>73</sup>		

<sup>&</sup>lt;sup>72</sup> National Center for Charitable Statistics, "About," <u>https://nccs.urban.org/about</u>

<sup>&</sup>lt;sup>73</sup> Urban Institute, <u>https://www.urban.org</u>

## Appendix J: Sports DataCo Profiles

DataCo Profiles		
Parent: English Premier League, English Football League, Scottish Professional Football League	DataCo: Football DataCo	
Country: United Kingdom	Industry: Sports	
<b>Description:</b> Represents the data rights of the professional football leagues in England and Scotland. The core elements of its role are to protect, market, and commercialize the rights to official match-related data. <sup>74</sup>		
Parent: UCI WorldTeams (multiple professional cycling teams)	DataCo: Velon	
Country: United Kingdom	Industry: Sports	
<b>Description:</b> Focuses on generating new revenue streams, creating a cohesive race calendar, and introducing new technologies that show what's happening from the rider's perspective (e.g., bike cameras, which were used in the 2014 season). <sup>75</sup>		

<sup>&</sup>lt;sup>74</sup> Football DataCo, <u>https://www.football-dataco.com</u>

<sup>&</sup>lt;sup>75</sup> Wikipedia, "Velon," <u>https://de.wikipedia.org/wiki/Velon</u>