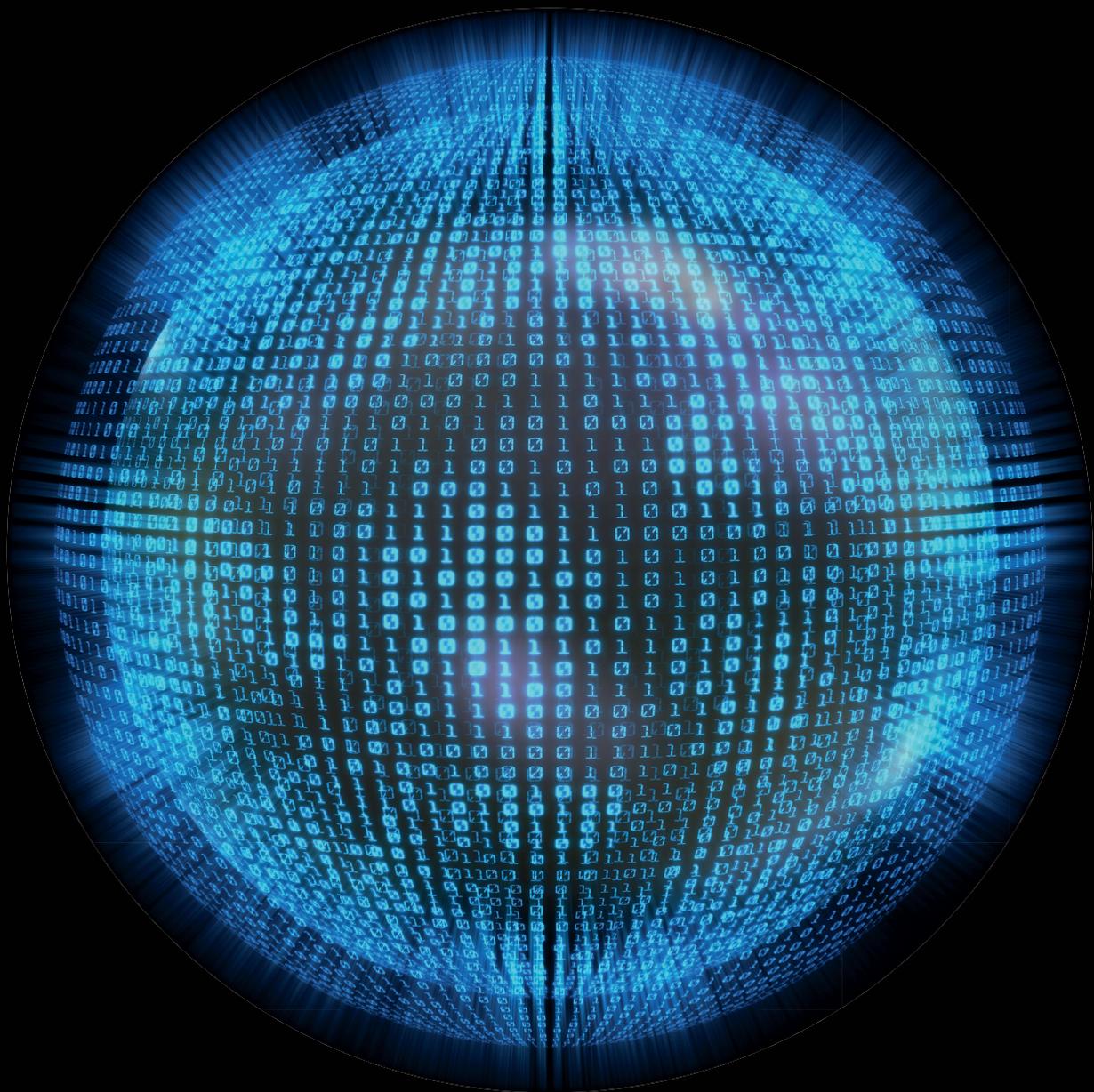


# Deloitte.



**Data valuation:**  
Understanding the value  
of your data assets

# Data: Could it be your most valuable asset?

Increasingly, data assets are the engine driving the total value and growth of modern organizations. As a result, building a framework to discover and realize the potential of your data is critical to increasing the value you provide to shareholders, and to optimizing the future success of your organization.

Many companies, however, fail to understand both the value of their existing data assets and the underlying levers that can increase data value. This can mean, in turn, that they miss out on the competitive advantages and shareholder value that their data assets can generate.

In order to capture and harvest the value of data over time, organizations must first seek clarity on how to value data as an asset, then follow through with a comprehensive data strategy to drive value enhancement.

Whether you're just starting out in developing your framework for data valuation or seeking guidance as you move through the process, Deloitte's experienced Data Valuation practice can work with you to help deliver on the untapped potential of your data assets.

Our innovative ValueD platform merges internal and external data to enable global benchmarking of asset values. Data from thousands of transactions worldwide, across industries and asset types, is collected, anonymized, and combined with other third-party data to help clients unlock hidden value and gain deeper insights. Then, our Data Valuation practice provides clients with clear analysis of selected business financial metrics, presented in streamlined, visual reports—all based on broad and deep datasets.

Working with Deloitte's Data Valuation practice through our Value Discovery Lab, companies can explore opportunities to develop three leading value-driving capabilities that highly valued companies do well:

- Apply a value lens to strategic goals by developing a **value architecture**—a critical blueprint for tying value drivers to strategic objectives and business benefits
- Create a **capital decisioning framework** to generate the highest and best use of investment dollars
- Understand how **communicating effectively and efficiently** can drive value



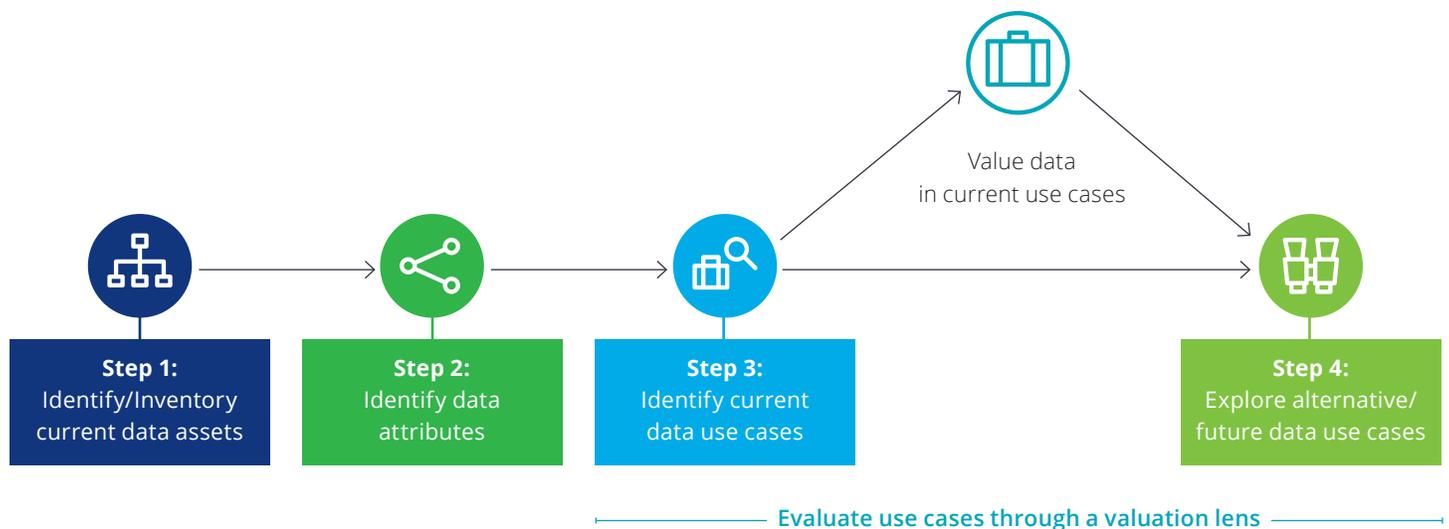
# Valuing data: Building a comprehensive framework

As with valuing other company assets, valuing data is a multi-phased process, as illustrated in the graphic below.

## Answering the following questions can help guide the process:

- What type of data assets do we currently have, and how are we using them?
- Do our data assets offer us alternative ways to grow our business?
- How can our data assets help us increase our margins?
- How can our data assets help us mitigate risks now and in the future?

Once you've identified your existing data assets, the next step is to clarify their current use cases and explore alternative use cases that could further your business growth and development.



# Evaluating use cases through a valuation lens: Growth, returns and risk

As with other assets within a business, in order to understand the value of its data assets, an organization must understand how data impacts enterprise growth, returns and risks. At Deloitte, our Data Valuation practice can help, as we have extensive experience valuing high-growth business assets—including data—along these three pivot points, using time-tested models to focus on key drivers of value.

Deloitte's Data Valuation practitioners can work with your enterprise management teams to uncover the current and future impacts of your data assets on enterprise growth, returns and risk by examining the following questions:



## Growth

- What's the existing enterprise growth story?
- Is your data being utilized to generate revenue?
- What are potential alternative use cases for the data?
- Are there synergies with other assets within the organization?



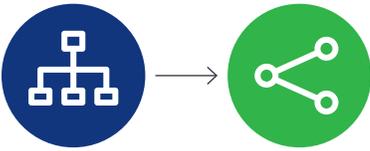
## Returns

- What's the cost to house/maintain the data?
- What are the organizational and system costs associated with the data?
- What are the potential earnings generated from the data?
- Are there third-party commercial revenues associated with the data?
- Does the internal use of the data produce returns?



## Risk

- What are the privacy and data security impacts to the organization (e.g., data generation, storage, access and dissemination)?
- Do the risks outweigh the returns associated with certain types of data?
- Can data be used to reduce the organization's risk by proactively providing insights or to create "defensive value"?
- Can we identify market perceptions of the organization, including data held and retained?



## Steps 1 and 2:

# Identifying current data assets and their attributes

Often the first step in any process is understanding your starting point. For the valuation of data, this first step involves completing an inventory of current data assets and, just as importantly, determining how the organization is currently utilizing its data—if it's being used at all.

In many cases, we find that organizations are hindered in their efforts to effectively monetize their data because they don't understand where all of their data resides. Uncovering all of the data may require systems to update and maintain any registry of the company's data inventory.

Once the data has been identified, management should explore and categorize its key attributes. An understanding of key attributes can help in the development of any use cases to maximize the data's impact on the organizations' growth, profitability and risk.

### Examples of how data is different—and why it matters for data valuation

- Data may be shareable without any loss of value
- The value of data changes with use and with specificity
- Data is perishable, but not depletable
- Although data value increases when combined with other data, "more" is not necessarily "better"
- Data presents unique security challenges

### What's the state of your data?

Attributes that may be used to assess data include:

- **Data quality**  
Relevance, recency, accuracy and type
- **Targetability/depth/selectability**  
For specific data segments
- **Source**  
Governance, collection method, privacy implications
- **Universe/breadth**  
Coverage of audience, trailer data
- **Use case/ROI**  
Substantiated use case
- **Market demand**  
Market and willingness to pay
- **Uniqueness and exclusiveness**  
Availability of similar data

# Valuation methodologies

Data is similar to other intangible assets. While the attributes of any set of data may be unique, traditional valuation approaches—which incorporate growth, profitability and risk elements—can be used, along with a strong understanding of the data’s attributes, to value data. These approaches include:

## The market approach

Today, companies are using advanced analytics to more fully understand their data, and to identify ways to license it to third parties. In addition, within various ecosystems, data exchanges are being developed so market participants can aggregate and trade data assets, and participating companies can exchange data to create even more value for their enterprises. As companies continue to mine their data and develop models to transact in this asset category, these transactions can be used to derive market indications of value. As with other assets, value comparability challenges will exist—but as markets mature and companies identify more ways to transact, Deloitte believes data transactions will be commonly used to value data assets.

## Multi-period excess earnings method (MPEEM)

An income-approach methodology that measures economic benefits by calculating the cash flow attributable to an asset after deducting “contributory asset charges” (CACs), which are appropriate returns for contributory assets used by the business in generating the data asset’s revenue and earnings.

## With-and-without method

A method for estimating the value of data assets by quantifying the impact on cash flows if the data assets needed to be replaced (assuming all of the other assets required to operate the business are in place and have the same productive capacity). The projected revenues, operating expenses and cash flows are calculated in scenarios “with” and “without” the data, and the difference between the cash flows in the two scenarios is used to estimate the data’s value.

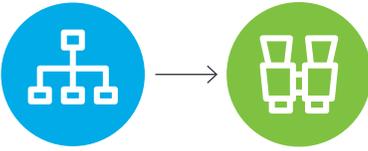
## Relief from royalty method

A method built on the assumption that if the company doesn’t own the data asset, it might be willing to license the data from a hypothetical third party who does. In this method, the company would forgo a certain amount of profitability to license the data from a third party over a certain lifecycle.

## The cost approach

A method that uses the concept of replacement cost as an indicator of value. The premise is that an investor would pay no more for an asset than the amount for which the utility of the asset could be replaced, plus a required profit/return to incent a third party to replace the asset.





## Steps 3 and 4:

# Identifying current and alternative/future use cases

The process of data valuation can uncover new use cases, ranging from new commercial applications to alternative and defensive uses for data. The valuation approaches in each case will be determined by the existing and potential uses of data.

## Use case 1: Internal

The effective use of data can allow businesses to separate themselves from the pack, gaining first-mover advantage to become leaders and disruptors in various ecosystems.

### Example:

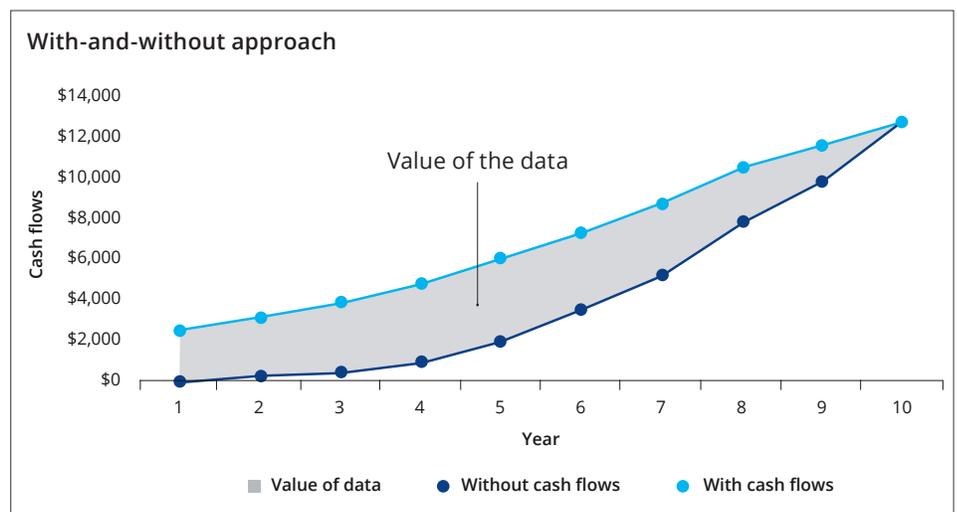
A life insurance company analyzes weekly proprietary mortality claim data, which it packages for internal use by its sister company, a wealth manager. The company then becomes highly profitable using the data in a sales-lead and pricing algorithm.

### Valuation methodology:

When a company uses its data to disrupt a market and gain first-mover advantage, the with-and-without valuation methodology can be deployed to understand the impact of the data on the value of the business. Although this method requires a high degree of discretion, it can be a good approach to help frame the data asset's potential range of values. As with most data valuation methodologies, the process of developing the forecast assumptions and valuation inputs often gives management the best insights. Using this approach, management utilizes the existing business model to develop the "with" scenario: this is the business value with the data asset in place, utilizing its forecast as a marketplace disruptor.

Next, management develops the "without" scenario: a hypothetical second scenario forecasting what a competitor might do to catch up in the marketplace. This forecast assumes all the assets of the company, or a similar competitor, are in place except the data asset, and also makes certain assumptions about required capital expenditures and operating expenses.

Finally, subtracting the values in the "with" model from those in the hypothetical "without" model produces a theoretical value for the data asset.



## Use case 2: Commercial use of existing data

In most commercial use cases, companies realize value from business-to-business transactions related to their collected data.

### Example:

A retail company analyzes and packages its proprietary customer purchasing data, then provides this information to other third parties for a monthly subscription fee. The company has a defined use case, with an external source of revenue and profit that can be discretely identified.

### Valuation methodology:

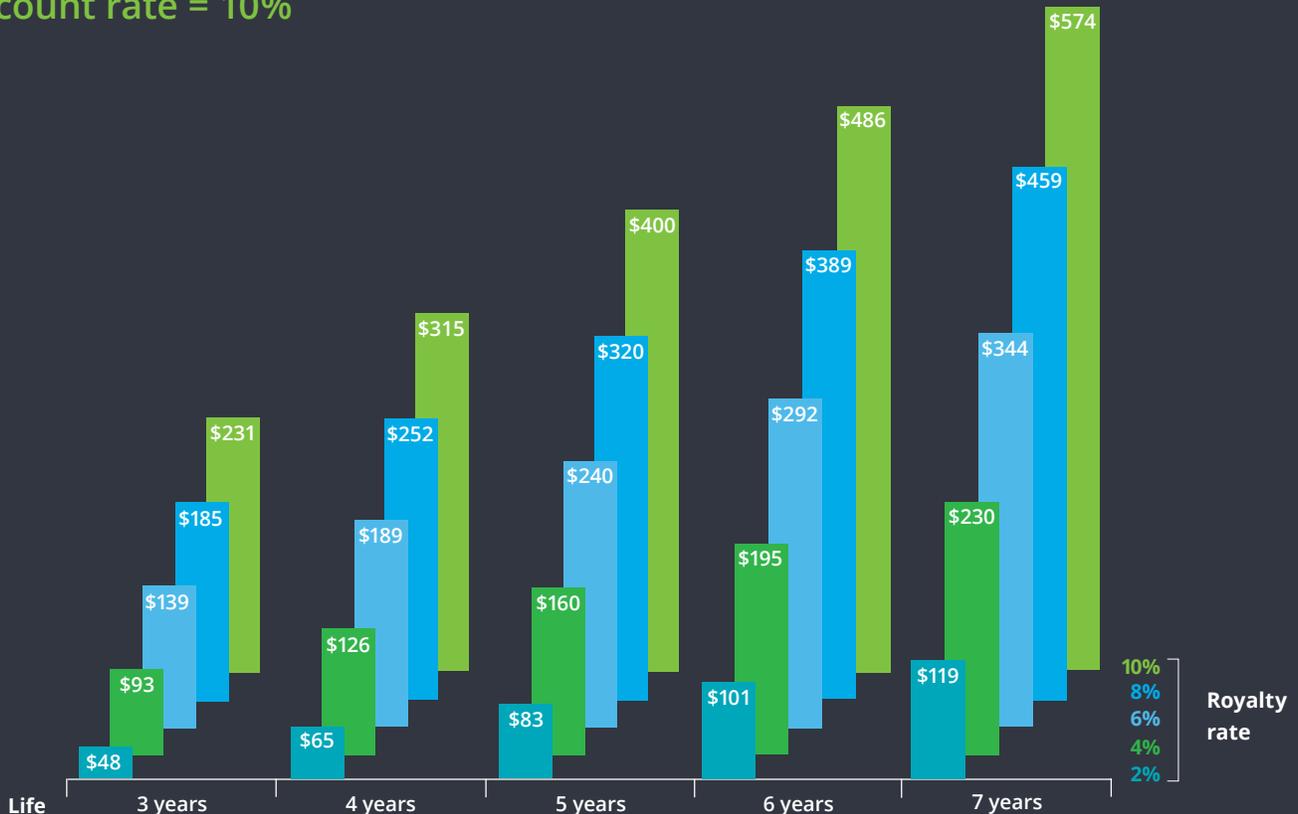
Common valuation methodologies for this approach include the relief from royalty and the with-and-without methods. Using these forward-looking valuation techniques allows the company to independently focus on inputs related to growth, profitability and risk, and to build sensitivity analyses around the various business forecast and valuation inputs. For example, in a relief from royalty model, a company can identify a hypothetical royalty rate it would need to pay a third party for the use of the data, if it didn't own the data but a hypothetical third party did.

This analysis has several key inputs that the company can use to develop a sensitivity analysis to generate insights into the value of the data, including:

- The expected life of the data asset (which can be informed by a thorough understanding of its attributes)
- Revenue growth rates assigned to the royalty rate (including attribute analysis)
- The profitability of the business model using data as a key dependency
- Comparable royalty rates coupled with the discount rate, which measures the future risk of the business model

In this use case, by flexing these key forecast and valuation inputs, a company might potentially identify the following value conclusions and patterns:

Discount rate = 10%



### Use case 3: Alternative/External

Sometimes, while organizations are collecting data for one use, they discover that the same data set is of interest to other businesses—creating an opportunity for a parallel business model to sell that data set externally.

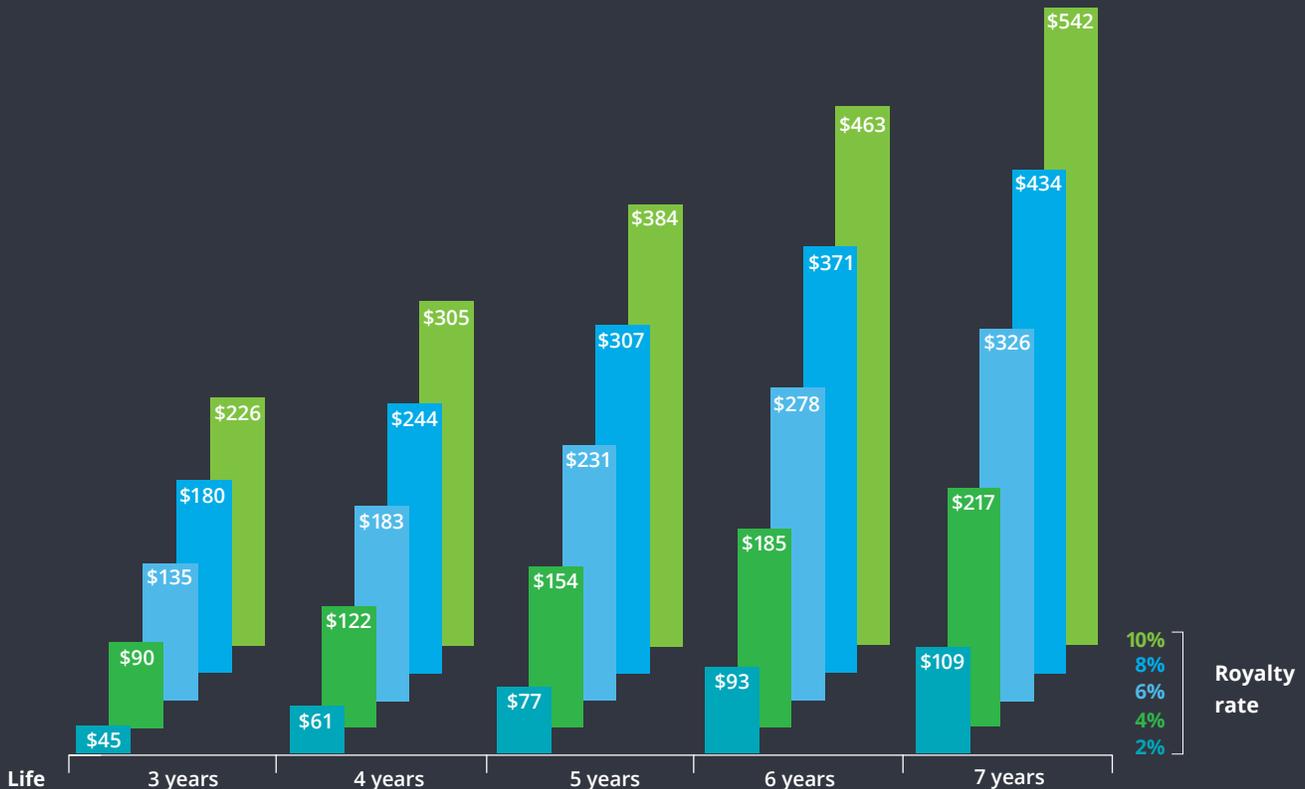
**Example:**

A company that collects and manages agriculture yield data from, and for, farmers identifies that certain farm-equipment manufacturers and lenders are interested in its crop data to better understand potential equipment needs in different geographies, and lending risks associated with farmers borrowing to purchase equipment.

**Valuation methodology:**

The company expands the relief from royalty methodology by adding these new revenue streams to the analysis. Management can then consolidate the new revenue streams into the approach [illustrated below] and use the same life curves, royalty rate and discount rate for this new consolidated revenue. Alternatively, they may perform a completely different relief from royalty modeling forecast for these new revenue streams by changing the life, royalty and discount rate parameters.

Discount rate = 12%



As this hypothetical data set demonstrates, the expected parameters of asset life and expected royalty selection in this use case are more critical to the final value conclusion than the risk/discount rate selection. As a result, a focus on business profitability—which drives the royalty rate selection—as well as an understanding of the data’s remaining useful life would be warranted. Going back and revisiting the data attributes can help pinpoint the accuracy of these inputs.

## Use case 4: Defensive

Some companies collect a large volume of data that allows them to enter new markets more quickly than competitors, or provide better products and services in an existing market—thus allowing them to scale more quickly than their competitors.

### Example:

A company maintains a proprietary database containing a long history of data for a region where it doesn't currently operate, but industry analysts suggest an expansion into the region might be strategically valuable for the industry.

### Valuation methodology:

For a defensive value analysis, if the company is not planning to enter new markets, a cost approach methodology could be utilized to value the data. This analysis would allow the company to use internal data to value the data asset. Using this approach, the objective is to identify the cost to recreate the data using current pricing. Key elements of the cost approach include:

- Salary data for the personnel who aggregate and maintain the data and the systems required to house (or host) the data
- IT system costs
- Regulatory costs
- Profit to recreate the data
- Return on cost over the period required to recreate the data asset



# Moving forward on the process of creating value from your data

Understanding and valuing data is key to defining the process of enhancing shareholder value, and the valuation process can help frame your company's approach to value creation.

To move forward on your data valuation process, this staged approach can help you identify your next steps:

## **Where are we in our data valuation process?**

- What is our current data inventory?
- What is our perspective on the value of our data today?
- How are we using data today to create value for the organization?

## **What's our desired future?**

- What are the levers that could increase the value of our data to our organization?
- What data attributes are key to tapping the potential of our data?
- Could alternative use cases help maximize our data and shareholder value?
- How do we measure the value and ROI of our data?

## **How do we get there?**

- What are the use cases and data attributes our organization should focus on and measure?
- What resources, tools and models should we put in place to monitor value creation?

Deloitte's Data Valuation practice can guide you at each stage of creating value from data. We can help you understand the current value of your data, which attributes may increase the value of your data, and how your data interacts with shareholder value—framing a process that can enhance your knowledge of how data interacts to increase value throughout the organization, and ultimately enhance the value of your organization.



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