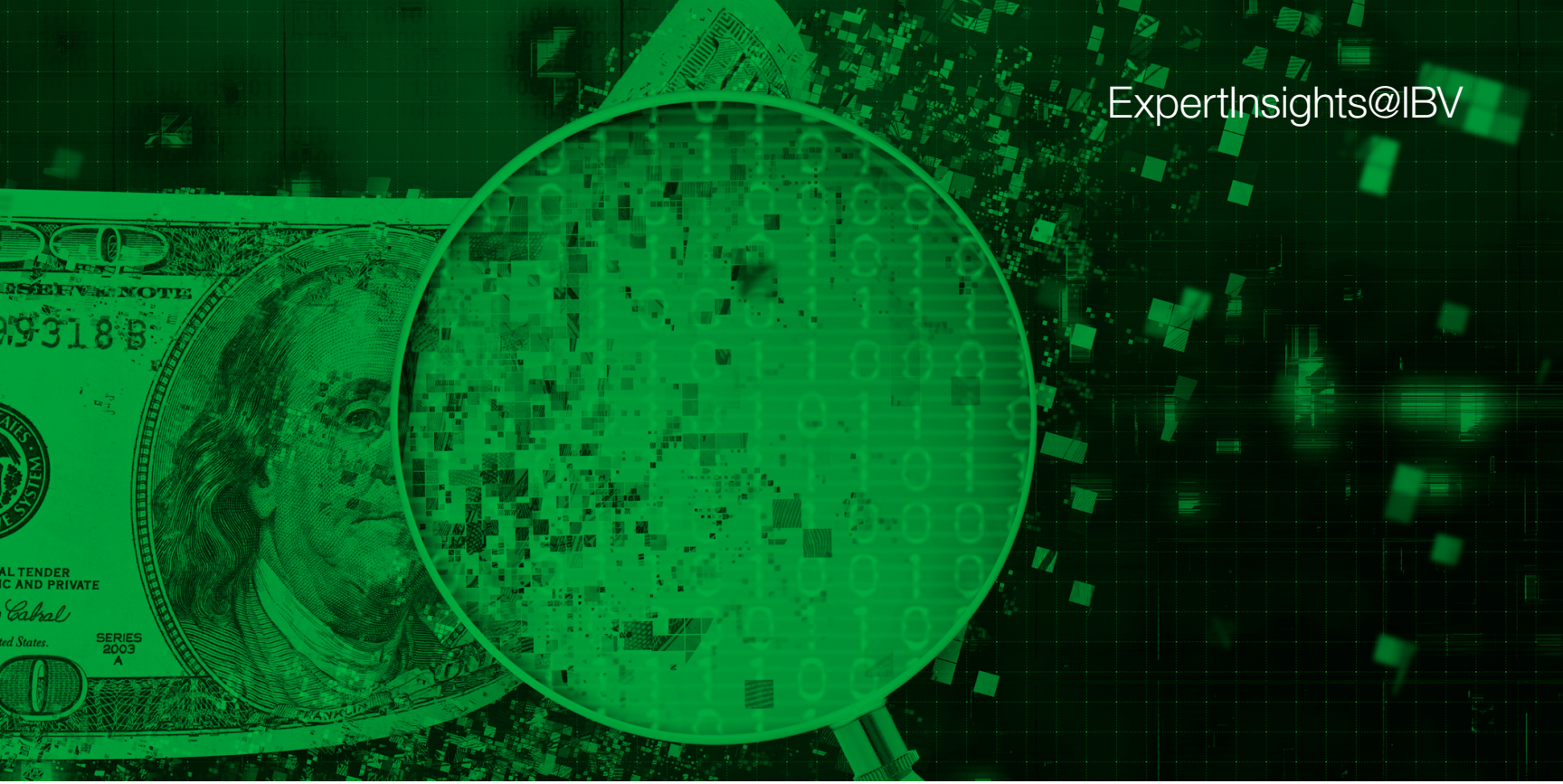


Data-driven dividends

Get more from your data

IBM Institute for Business Value

Data: An untapped resource

Although massive amounts of data are generated every minute of every day, an astonishing amount of that data is wasted. Less than one percent of data is actually used,[1] even though it has tremendous potential value. In much the same way filmmakers may shoot hours of film for every minute you see on screen, vast amounts of data are collected yet never analyzed, let alone monetized. This data is an untapped resource that offers huge opportunities for new products, business models and partnerships. The potential for innovation is tremendous when you stop thinking of data as a side-effect of automation and other digital activities and, instead, view it as a resource with inherent value.

Data is a strategic asset that shouldn't be wasted

Although few organizations have taken full advantage of their data, the rise of analytics technology makes data easier to access and use than ever before. Insight-driven and cognitive systems are a category of technologies that use combinations of algorithmic, natural language processing and machine learning to enable people and machines to interact more naturally. A key aspect of analytics – and deep learning in particular – is that it relies on data, and the more, the better. The greater the volume and sources of data that are included, the more accurate and meaningful the insights will be.

By taking advantage of data, organizations can gain new understanding into environments, customers and the impact of decisions. These insights can give the organization a competitive and strategic advantage if they turn data assets into new or improved products or services. Applying cognitive technology to existing data can unlock the potential for new business models. In fact, in a 2016 IBM Institute for Business Value survey of 6050 global executives conducted in collaboration with Oxford Economics, 62 percent of respondents reported that their organizations derive value from structured and unstructured data.[2] In another IBM Institute for Business Value survey of 1,000 global executives on innovation, this time conducted in collaboration with the Economist Intelligence Unit, 57 percent of them said they are using big data or analytics to source new ideas.[3] Like any resource, data is most powerful when it's harvested in an ethical and sustainable way. The true power of data isn't in the bits and bytes themselves, but in the insights they contain.

Any time data is used productively beyond its original purpose, such as intelligent sensor-enabled buildings governing air conditioning, value is created. Analyzing the data from the building can result in additional knowledge, such as patterns across time.

Tap into existing data

Across multiple industries, companies are leveraging data they already possess to add value, including:

Finance: Credit scoring, partner products, housing valuations and risk profile data.

Telecommunications: Churn prediction, geo-tracking, web-search history and consumer interest information.

Sales and advertising: Ad optimization, purchases and total spending.

Distribution: Route optimization, capacity sharing and fuel cost optimization data.

Industrial: Utility costs, maintenance patterns and downtime avoidance.

Other areas: Customer segmentation, loyalty propensity, life events, next actions and weather data.

When abnormalities are detected, maintenance activities can be triggered before serious damage occurs, such as from a fire or flood, for example. Although temperature sensors may have originally been installed to save on electricity costs, by analyzing the data differently, you can save on maintenance as well.

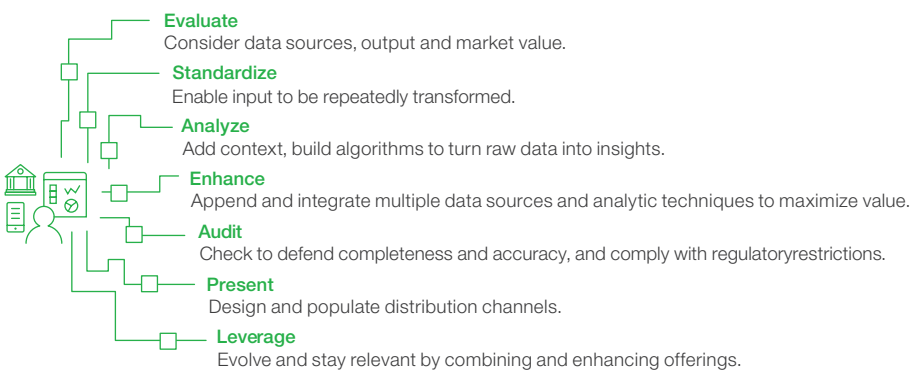
The next step beyond analysis is to capitalize on new opportunities by taking existing data and applying it to new industry or market contexts. In this way, data can move beyond its original purpose to become a product. Taking the building maintenance example one step further, consider the value data could have to maintenance companies. Organizations might be willing to pay for this data because it will enhance their service at lower cost than would otherwise be possible. In this way, data becomes a commodity.

Monetizing and creating value from data

One reason so much data is wasted is because it's unstructured. Unstructured data is often difficult to work with because it's not organized into tidy tables of rows and columns. To extract insights, you need systems that can work with the enormous volume, variety and velocity of unstructured data. Sifting through the irrelevant "noise" requires sophisticated algorithms to enhance and transform data into trustworthy results.

Figure 1

Data monetization needs to follow a process to maintain value, relevancy and integrity



As you look for potential ways to better use data and monetize it, you need to consider its value to customers. Look at the data from every angle. Do you have data that can solve a problem for someone? Could you package and combine it with other data to make it more meaningful or useful?

Does the data include a time element? Maybe you have access to real-time data that would help others who can't access the information as quickly. Even providing a historical view of data can inform analytics or decisions, so it may not be necessary to provide insights in real time. But data should be recent, relevant, integrated, enhanced and presented in ways that provide solutions to customer problems.

Involving prospective customers in data design conversations can help ensure that information solves real business problems and that it's acquired and used in meaningful ways. You also should consider the best way to distribute the data, including:

- Expected longevity: If the data has a short life-span, consider reducing features and simplifying distribution.
- Expected use: Will the consumer use the data asset as a decision point or as input into other processes?
- Expected audience: If an asset is designed for tech-savvy users who will access it frequently, consider creating a mobile interface. Assets that aren't used regularly such as annual reports may only require simple download functionality.

To find ways to better use and monetize data, examine the data from every angle and consider its value to customers.

Monetization models

In our In our 2014 Global Innovation survey, 71 percent of respondents are using big data and analytics to develop new, innovative products and services.[4] But to successfully monetize data, you must understand its worth and the value it can bring customers:

- The data must solve a problem. It doesn't matter how interesting data is; if it doesn't solve a problem, generating demand will be difficult.
- The data can be acquired and used in meaningful ways and not violate security or regulatory covenants.
- The data must be available to customers in a timely fashion, whether real-time or historical, depending on the specific need.
- The data must be demonstrably accurate.

After isolating useful data, to monetize it, you also need to understand the target market. The best monetization model will vary by marketplace. What will the customers of your data need to use insights effectively? Depending on customer needs, you might need to find new ways to add value to existing data. Or you may need to simplify data formats or presentation. Useful data monetization models include:

Single data element

An organization sends a single data element to a customer, such as a coffee vendor sending a special offer when a known customer comes within proximity.

Two or more correlated data points

A data table is used to provide comparison or evaluation. Often data is available for download or sent regularly to consumers through channels such as e-mail. For example, a medical device company might enrich metering devices with data to provide historical reporting and new tools.

Data collection application programming interface

With this type of on-demand service, customers request one or more data points through an online interface. For example, a multinational corporation can provide a service to help companies better understand their consumers.

Report with added insights

Reports can simplify data consumption and can be more useful when packaged with insights from specific experts. For example, a financial services company can aggregate and anonymize its private equity data to benchmark "people like me" comparisons.

Extract the most value from your data

Data monetization is a natural evolution for businesses. By taking advantage of underutilized data resources, organizations can embrace new business opportunities and previously untapped customer groups. However, it's important to align data monetization with an organization's core business. Decisions about your data and your target market will drive business models and their components. Specific actions include:

- Assess available data for market value and monetization feasibility.
- Identify markets aligned to feasible monetization opportunities.
- Consider partnering with other companies that have data that might be combined to generate better insights.
- Create a business plan and operating model to develop products and services based on data to meet evolving customer needs.

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Notes and sources

1 IDC in collaboration with EMC, “The digital universe in 2020: Big data, bigger digital shadows, and biggest growth in the far east.” December 2012. https://www.emc.com/leadership/digital-universe/2012iview/big-data-2020.htm

2 IBM Institute for Business Value Cognitive Computing survey in collaboration with Oxford Economics. 2016 (unpublished data).

3 IBM Institute for Business Value Global Innovation Survey in collaboration with the Economics Intelligence Unit. 2014 (unpublished data).

4 IBM Institute for Business Value Global Innovation Survey in collaboration with the Economics Intelligence Unit. 2014 (unpublished data).