How Well Is Data Fueling Your Company's Digital Revolution?

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coal reservoir of an old steam locomotive

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The Industrial Revolution was fueled by coal, powering the engines of trains and ships and the production of iron needed for infrastructure. Data is playing a similar role in the Digital Revolution, acting as essential fodder for every software application and AI tool currently on the market.

Like coal, value derived from data resources is having a transformative impact on the success of industries and the players within them. Companies that excel at monetizing data by integrating it into their strategy, operations, and culture have been outpacing their peers for years, and this edge will become ever more pronounced as the data economy continues to mature.

Unlike capital or fuel, data is non-depletable. The use of data does not consume it, meaning it can be used, in theory, an infinite number of times. Finally, the value of individual data sets can be multiplied through enrichment and aggregation with other datasets.

The amount of available data has exploded in the past decade, from 12.5 zettabytes worldwide in 2014 to 120 zettabytes in 2023. This, coupled with the evolution of digital analytics tools and AI, means that we're just scratching the surface of how much value it's possible to derive from this resource.

Yet, there are at least a dozen patterns representing ways organizations can better utilize this resource and extract significantly more impact from existing data strategies, including taking a data product approach or spinning off a separate data company.

While 89% of large companies globally have a digital and AI transformation underway, according to McKinsey & Co., they have only captured 31% of the expected revenue lift. Underutilizing available data resources and failing to exploit the potential of data aggregation is one of the main culprits for this disconnect.

Nathan Whigham, Managing Director at Gulp Data, suggests that veteran tech companies illustrate what happens when data resources are utilized more thoroughly, and data is the core asset.

"Brands like Google and Meta have exponentially increased the value of their original product offerings by building a diverse network of apps and services. With 80% of the search engine market share, Google has access to a trove of

information on user behavior. But the most detailed—and therefore valuable—insights come from combining this with activity from other services like Google Maps or YouTube. Likewise, Meta today can analyze data from Facebook, WhatsApp, and Instagram to unlock extremely detailed insights on both trends and individual preferences," he expanded.

Companies should adopt a similar approach both internally and externally. Data derived from internal applications and services must be connected to fuel a cross-company value loop. Next, first-party data sets can be combined with external sources to gain richer insights and offered as a product on data marketplaces.

The future of the data economy is increasingly based on collaborative, intercompany ecosystems that help all parties extract maximum value from available data resources. To get ahead, leaders need to consider which emerging technologies and organizational governance models will support greater long-term collaboration.

The devil is in the detail

As highlighted, the amount of available data has exploded in recent years. And while extracting more value from company data initially lies in building up access to a wide range of data sources, the next layer of value lies in a company's microdata.

Macrodata is needed to build a broader picture of trends and activity, but the most powerful insights come from close attention to detail. Here it's helpful to adopt a 'good data beats opinion' philosophy when it comes to company operations Almost everything can be tested, measured, and improved in real-time thanks to analytic tools.

Analytics software has the power to unlock powerful efficiencies, but only 52% of companies currently invest in the BI tools needed to leverage insights from internal data, let alone use advanced analytics or AI.

Yet the approach lets specific teams and departments test new ideas, transform internal processes, and find proven ways to increase revenue and improve KPIs across the board. When a business is growing, the direction can go in any number of directions. Highly specific insights found within company microdata will help to cut through the noise and guide operational decisions that are rooted in facts.

Data infrastructure is still a cost center for most companies. Leveraging insights from microdata across all business units is another immediate way to derive more value from this resource and recoup the cost of investing in BI tools by improving overall profitability.

Provenance, privacy and trust

Although data isn't a fossil fuel, it has the potential to be equally messy and polluting. A widespread rush to extract value from this resource has contributed to nefarious data collection practices and products that place profits ahead of privacy.

For instance, incorporating 'dirty' datasets into AI tools or software products can create major risks.

Unfortunately, data is often mislabeled, inaccurate, or completely biased. This means companies need to tread carefully when sourcing external data and fully evaluate its quality and provenance to avoid downstream issues.

In addition, it's increasingly important for companies to be transparent about the way data is handled and used. The future of clean data is going to hinge on people having more control over how their data is used, moving away from one-time "consent" policies that form the current standard.

To tackle this issue, time is of the essence. While regulators and policymakers are currently developing guidelines and legislation for the new digital economy, these are complicated changes that will take time to become a reality.

But businesses don’t need to wait for policy changes to adopt good data management practices. Doing so ahead of time will put your company ahead of the curve and showcase to partners and customers that they can trust you to handle data responsibly.

A sustainable data economy

The digital revolution has already transformed the way society runs, and data is the fuel for this engine. Yet the value locked within data is still being underutilized.

Just as coal fueled the engines of winning businesses over a century ago, companies that run their business engines on data today are the ones that are thriving, if not just surviving.