Cursor

Leveraging Organizational Analytics

Unleashing the value of your organization's data.

Synopsys

As organizations strive to compete effectively in a data-driven marketplace, many are viewing "Big Data" as a panacea. But while the promise of data is real, it isn't a solution in and of itself. Organizations of all kinds will realize competitive advantages, not from the data they collect but from what they do to enable themselves to utilize it effectively.

Business Intelligence (BI) platforms that companies use every day are a partial solution, but they also create problems. Organizations utilize them to organize data, but the scope of their implementation is limited and fragmented, forcing them to address limited goals.

Data is aggregated throughout organizations without the benefit of widespread visibility, automated distribution, or support for collaboration and improvement. Detailed knowledge doesn't cross organizational boundaries, and data insights aren't utilized at a strategic level.

The data being created by internal groups often has a single purpose and duplicates work being done elsewhere. Rarely is data shared throughout an organization, and data may be viewed as the "property" of one specific group. Even stakeholders willing to share "their" data may not consider their data to have value for anyone outside their specific functions.

Combating these challenges means adopting a new and innovative approach to data management. Organizations need technologies that provide a supportive framework for data collaboration, support interaction across organizational boundaries, and provide a low-overhead means to propagate a significant level of Data Literacy at all levels of their workforce.

Introduction

Companies are generating and collecting more data than ever before. This is enabled both by a cultural shift toward a greater reliance on data and a technical shift toward more and cheaper data availability.

Data is increasingly seen as a key enabler in making better strategic and financial decisions, as evidenced in studies conducted by the McKinsey Global Institute (MGI) as early as 2011.

Although MGI's analysis cites the strategic importance of "Big Data", it also recognizes the necessity of critical enabling tools and policies to help realize this value, even at this early stage. Per MGI's 2011 report:

> Big data will become a key basis of competition, underpinning new waves of productivity growth, innovation, and consumer surplus—as long as the right policies and enablers are in place.[1]

Implicit in this is the recognition, even very early in the big-data revolution, that the data itself is not the source of value. Rather, insight, and, therein, value, is created through the combination of data, tools and processes, which allow an

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[1]   **McKinsey Global Institute, Big Data: The Next Frontier for Innovation, Competition and Productivity, June 2011**

organization to identify and utilize key insights hidden in their data to further their organizational goals.

Creating a culture that recognizes this value and implementing systems to help realize it is still a challenge for many organizations. As MGI themselves recognized in the 2016 follow up to their original report:

> Many [companies] are struggling to develop talent, business processes, and organizational muscle to capture real value from analytics. This is becoming a matter of urgency, since analytics prowess is increasingly the basis of industry competition, and the leaders are staking out large advantages.[2]

Organizations that get it right can create decisive competitive advantages in their markets. Many companies that are "winning" in today's marketplace are utilizing data-driven insights to fundamentally change and disrupt market segments where they compete.

Think of Stitch Fix, which is using data analytics to collide personal styling and online shopping to disrupt parts of both markets. Earlier examples include Amazon and iTunes, who utilized data analytics while fundamentally changing the sales of books and music and generated hundreds of billions of dollars in market value.

In the past, this level of data utilization has required tech-savvy operators and a precision mindset. But to efficiently harvest value from data will require native means to propagate data collaboration. Enablers need to be inserted as a natural part in an efficient workflow and be unobtrusive to users. Organizations must make data utilization a non-threatening part of their culture and enable collaboration and communication.

The Proliferation of Data

Moore's Law states that computing density will double every 18 months, and this ratio has applied to computer memory since it was first proposed over 50 years ago. The result has been an ever-accelerating proliferation of corporate data.

As with any emerging technological advancement, organizations are struggling to invent better ways to access, organize, and make use of their data. This process is happening in real-time, right before our eyes, and an entire ecosystem of Business Intelligence (BI) software has sprung up to support this effort

But for structural and cultural reasons, organizations find it difficult to realize strategic advantages from the data they collect.

Reasons

Organizations can find it difficult to make use of their data for many reasons, but the most common and most damaging examples are centered around two things: technical challenges, which are inherent in working with large data sets, and organizational challenges that affect widely-ranging aspects of any organization, including data management.

Data Sprawl
Potentially-useful data can emerge from every far-flung corner of an organization, but organizational data is seldom replicated or shared after its creation. By default then, this data often lies scattered throughout an organization, creating a logistical challenge for most stakeholders to access it.

Data sets are hidden in places where stakeholders unfamiliar with the inner-workings of a particular function or organizational structure simply would not think to look for it. Thus the most important data in your organization may be hiding in plain sight, where anyone who knows about it might use it but does not think to share it outside their own circles.

Existing Data Aggregation
Modern companies have broadly adopted Business Intelligence (BI) software and utilize it in a variety of ways. Multiple BI software implementations might be evident within a single organization, and larger companies might have several different instances of BI software, managing data intelligence in different functional areas. These instances are often implemented haphazardly and with different goals by teams largely unaware of each others' operations

In extreme cases, a company may be running up to 5 different instances covering multiple different BI platforms. Each system gives business users efficient access

2   **McKinsey Global Institute, The Age of Analytics: Competing in a Data Driven World, December 2016**

Leveraging Organizational Analytics: Unleashing the value of your organization's data.   Page 3   ◿ Cursor

to a specific set of data, helping users gain insight, but that doesn't necessarily translate to an availability of high-quality data. In effect, companies have traded quality for speed, and the resulting fragmentation of their data analytics often means low quality and duplicated efforts.

Organizational Segmentation

Manipulating and making sense of data is hard to begin with, and many companies also face organizational challenges imposed by their company culture.

Management consultants have long cited Organizational Silos and the disconnect between internal groups as a drain on productivity. The implications for data management create another challenge, when data access is restricted by ideas of ownership and territoriality.

Organizational silos degrade data value, even when teams interpreting their own data needs end up producing data that has significant value to others. In siloed organizations, these teams lack insight about what other groups are doing, so they often duplicate work already being done elsewhere.

Even when one group "gets it right" and produces high-quality data that is both unique and broadly actionable, it doesn't get shared across organizational boundaries. Worse yet, groups routinely neglect to document their processes, so their success becomes institutional knowledge that is specific to individual team members (and is lost when they leave the organization).

Overcoming These Limitations

Although the inherent and organizational limits on utilizing data aren't easy to overcome, it is possible. But organizations that want to make immediate progress will need supporting tools to help them execute.

The quickest way to make progress is to focus on two key concerns, *Enabling Knowledge Sharing* and *Building Data Literacy*.

Data Sharing

Valuable knowledge about managing your data already exists in your organization, but it is scattered among many users and inaccessible to most. The way to overcome this challenge is to provide a widely-

accessible repository where the people who have this knowledge can document it and make it available to be shared.

Data Literacy

The flip side of experts sharing this data is that other users have to be enabled to make use of it. Users throughout an organization need basic data literacy to understand what data is available to them and how to access this data.

Once an organization has implemented the means of data sharing and reached a functional level of data literacy, it needs to give stakeholders across the organization access to data sets. This access should combine the ability to pull from the data and manipulate it for their own use with the responsibility to share their knowledge and experiences about working with the data.

Putting it All Together

Users need to create and automatically add to a set of metadata about their data sets. Which are valuable, and what do they contain? Who is using them, and who can answer questions or collaborate with new users? What data should be used for what purpose, and which data sets should be avoided?

Domain experts need to share their knowledge to make these data sets useful to others. Ideally, they need to provide a business context for what data exists, what it is good for, and what limitations it may have.

Others across the organization become data consumers who can benefit most when they understand the data sets and have an open line of communication to those who can help them use it better.

If stakeholders can utilize organizational data for their specific needs, *re-share* this *enhanced knowledge* back across the organization, and institutionalize the outcome of their work, they create value that others can benefit from too.

When the system works efficiently, the enhancement and improvement of company data becomes a **self-supporting** and a **virtually-crowd-sourced** process.

A Data-Driven Culture

In this "Data-Driven Culture", discovery, knowledge sharing, and collaboration become inherent values within your company culture. This open dialog increases Data Literacy and enables organizations to create value.

Conclusion

If users and stakeholders have access to data across the organization, and they can communicate freely with others who are using it, they can use this data to enable better awareness and better decision-making throughout their organizations.

A key enabler, then for making use of your organization's data will be platforms that can help achieve this transparency of what data exists within any organization and enable access and widespread communication about it.

The resulting level of inherent data-awareness can be a critical factor in enabling disruptive market advances and creating massive market value as a result. This is the next wave in utilizing big data to create growth, and it's a goal that advanced technology companies need to strive to solve for themselves and their customers.

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