BRINGING DATA SCIENCE TO BUSINESS USERS

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Why Data Science Should be Democratized

In today's volatile, fast-changing business environment, it is critical that companies have the best possible analytical capabilities across all lines of business. Organizations need to predict customer demand across rapidly changing channels, ensure they can satisfy those requirements as supply chains and staffing levels fluctuate wildly, and guide business planning decisions based on well-understood, solid evidence. Analytics is vital for managing risk and maximizing opportunities.

Salespeople want to access customer data to understand needs and wants, with guidance on what to recommend as the next best product. Sales leaders need predictive data to help them assign quotas for sales teams. Customer service representations want access to customer satisfaction, call logs, and priorities. Marketing wants data for lead sourcing. Operations need data to reduce supply chain risk and improve distribution.
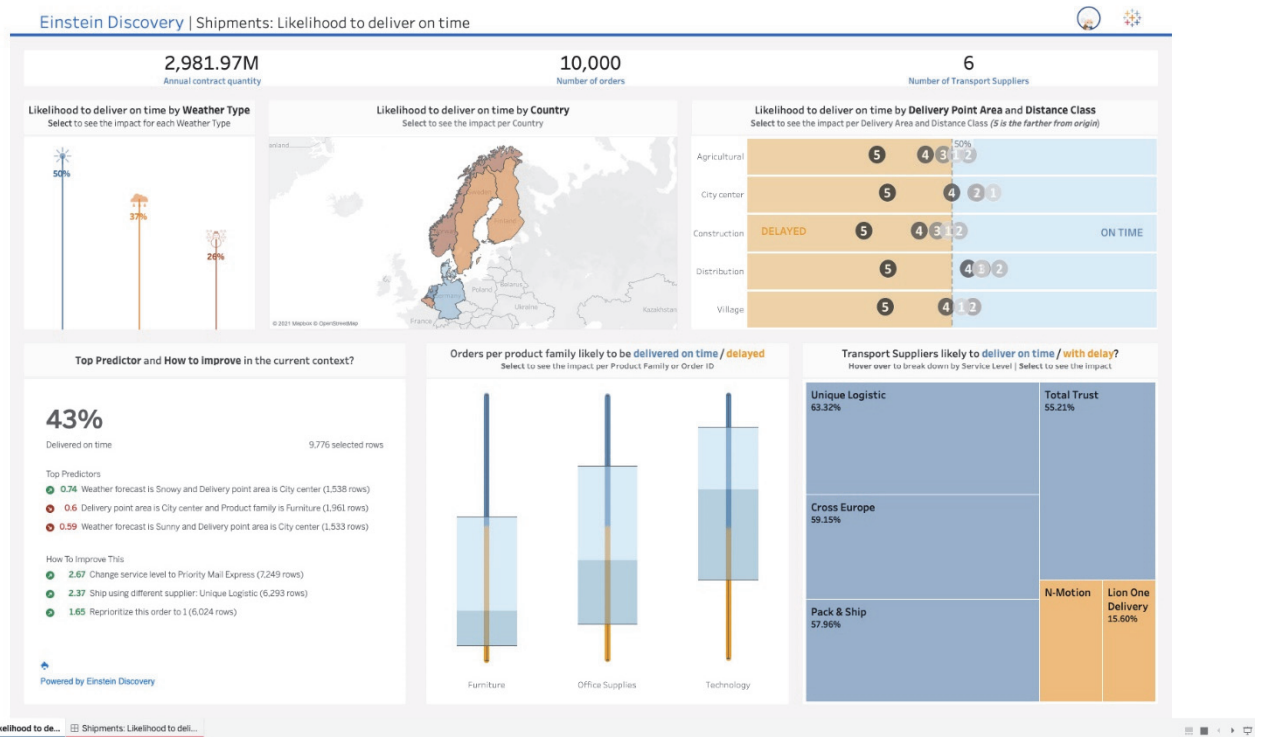
Source: Tableau, 2021

Most enterprises understand the need for better data and improved data literacy — developing employee skills so they can use and understand the business's data assets to create and act on business insights. Yet many companies rely on code-based applications for analytics and machine learning, which requires the user to have both technical and data science skills. AI is out of reach for most people. Consequently, the requirement for code-skilled data science professionals has risen fast.

In most businesses, data analysis is provided via business intelligence reports created by skilled data scientists and analysts. Yet often these prebuilt reports are not flexible enough to answer business questions at the speed required or may lack business insight. Business teams hold domain knowledge that data science teams may not always tap into. At the same time, highly skilled data scientists are often used for ad-hoc requirements, rather than focusing on complex, more mission critical company problems that require rigor and statistical analysis.

Advances in technologies such as the cloud, artificial intelligence/machine learning, and visual analytics mean that the technology exists to allow business users to get desired insights without relying on data scientists. Tableau calls this approach *Business Science*, meaning the use of artificial intelligence and machine learning in analytics products to lower the barrier to using data science techniques, enabling business users and analysts to make smarter decisions faster. This allows businesspeople to interact with dashboards, enabling them to visualize trends and drill down to discover actionable insights at the speed of thought. They can now enhance reports that have been prebuilt by business intelligence analysts by adding their own visualizations and analysis, allowing them to answer their own unique business questions with intelligence.

The Modern Analytics Platform

Modern analytics platforms can democratize data mining and data understanding. Using natural language interfaces, they enable easy, quick, and accurate data query. AI features make the extraction of insight, data patterns, trends, and correlations without writing code, opening a world of possibilities in day-to-day business problem solving.

To successfully implement such an approach and analytical capabilities, it is critical to have the right data in the right place, well-understood by its users. Employees from every corner of the business need access to trusted, governed data across the business. Removing functional, tightly controlled silos drives insights such as a 360-degree view of the customer to target their needs more closely through finer segmentation, to drive cross-sell opportunities, or reduce expensive customer churn.

Consequently, many companies are creating a new data platform for customer and other business data to replace their outdated, hard to manage and often siloed data warehouses. The first step for this is often data modernization and migration to the cloud, to give easier access, agility, and scalability — as well as to leverage the latest tools and effectively outsource non-value–generating activities such as server and database management and data security. An IDC worldwide survey found that over a third of companies classed as digital transformation leaders had implemented an enterprisewide digital platform (five times the figure for non-leaders).

You're Not on Your Own – Tap into the Power of the Ecosystem

All this requires a strategic investment in data culture and technology. This transition to a business-user led approach to analytics at scale is a major cultural transformation, one that many chief data officers (CDOs), CIOs, and chief analytics officers are finding challenging — indeed for many, it is their top priority.

The key to success here is to leverage an ecosystem that has already devised connectors, frameworks and architectures, training, and education assets, and tested them in the field. By taking an ecosystem approach, you can use best-of-breed technologies encompassing data modernization and migration to the cloud, data engineering, data lakes and data warehousing, AI/ML, data analysis and visualization, security, and governance. It is important to ensure that these technologies natively connect and integrate with each other to reduce the cost and complexity of scaling data management and analytics across your organization.

Working with a services company that understands, implements, and integrates the technology stack can also bring you expertise in strategy, use case design, change management, governance, security, and industry know-how to accelerate your data transformation and maximize successful outcomes.

The goal is to use a tightly integrated ecosystem to bring in and extract data from all your systems, provide access to all data, be that on-premises, in your data lake, your CRM, and so on, share that data between different users across your organization, and help your people embrace a data culture.

In companies with a strong data culture, data is prioritized over intuition, anecdotes, or rank. When this mindset is shared by everyone, it creates open discussion where ideas lead to exploration, innovation, and concrete action.

Essential Guidance

- Drive a data culture across the organization by educating business users on the need for evidence-based decision making and providing the tools to support that culture to drive insights at scale.
- Establish a modern data platform to allow cross-enterprise access to data at scale and quality, controlling access and offerings.
- Look to your strategic partners to offer thought leadership, templates, architecture frameworks, and best practices that have been proven in the field to give you a head start in driving your organization towards a data culture across the business.

About the Tableau, Snowflake, and Deloitte Ecosystem

Tableau Business Science is a new class of AI-powered analytics that brings data science capabilities to business domain experts.

Tableau, a Salesforce company, has a simple mission: to help people see and understand data. This is true of our products, and it is true of our ecosystem. Together, Tableau, Snowflake, and Deloitte help our customers transform their businesses by making it easier to modernize and unify data in the cloud, combine it into a single source of truth, and derive fast, actionable insights by implementing agile, self-service analytics capabilities to see and understand data.

Learn more about Tableau Business Science **here**.

About the Analyst

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Philip Carnelley is AVP for Software and Analytics in IDC's European IT Research Group, with over 30 years' experience of working in the IT industry as an analyst, consultant, and applications developer in a variety of industries around Europe.

He leads IDC's European research on analytics and big data software, with a particular focus on their implications for digital business transformation. He is also tasked with consulting, writing, and presenting on broader enterprise software trends and the impact of emerging software technologies in the European region. He is a regular keynote speaker and panelist at industry events.

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