3Cloud

EMBOLDENING ALL USERS TO PLAY A ROLE WITH

MODERN SELF-SERVICE ANALYTICS

Technology is evolving at break-neck speeds, particularly in the data and analytics space. Right now, this space is going through a metamorphosis, and as data tools become more mature, the skills required to implement and manage it will have a lower barrier to entry.

End-users will shift away from complicated coding to low/no-code tools. This change in ease of use and accessibility empowers business users across the organization to become data analysts, where as previously, data visualization has typically needed large IT groups that first extract and store the data, and then more specialists visualize it.

With increased digital prowess among customers, as well as the rapidly changing market conditions and disruptions caused by the Covid-19 pandemic, widespread natural disasters, and rapid shifts in markets, it's vital for organizations to use data and analytics to guide their future moves. Often, this requires a manager or frontline worker needing an in-the-moment insight to make decisions and take immediate action.

The Beginnings of Microsoft's Self-Service Analytics

Microsoft has made a substantial impact in democratizing data within businesses, while gaining a greater market share of the business intelligence space in the last few years. There are two main reasons for their success in this space, cost and ease of use. If you look at a popular visualization software like Tableau, they have typically had a pricing structure similar to BlackBerry did in early 2000s, a costly proprietary on-site server and individual licensing. Microsoft saw an opportunity in the visualization and analytics market, and quickly started improving their Power BI software with significant monthly releases of new features and updates.

Most companies started their analytics journey with limited data visualization software licenses to smaller groups due to the cost of those licenses. These limitations would constantly lead to a backlog of requests. A group of developers would be whipping out dashboards and reports at a faster pace, which also caused the result to be less of a tool for self-data discovery with multiple ways to view data, and instead focused around giving the end-user a report about some KPIs. While these metrics could be used in the short term, the lack of true insights severely limited any potential for innovation and data projections. Additionally, when a KPI is shown without context or the ability to filter or segment, and has a noticeable outlier, there is no information on how or why this occurred. The end-user then must go back to the small group with developer licensing, who already has a backlog of work, to get answers, causing an even more significant backlog.

Microsoft then made the decision to add Power BI to their suite and gave a free trial for 60 days with a nominal monthly subscription fee after that. This addition to their suite provided every corporate Microsoft user and launched a surge of business analysts already hosted in their dashboards. For those who didn't have the funding for a project, they could now start a free trial and explore the tool. Most of these business users already had access to some data, and Microsoft made it a priority to create a simple way to connect to data sources, eliminating yet another hurdle for businesses. By going for a lower price, more extensive user base, and seamlessly integrating into all their other products, including Azure, Microsoft secured themselves as the premier provider of self-service analytics.

Microsoft then took it a step further, Power BI's formula expression language, DAX, is very similar to Excel's formulas, making the learning curve virtually non-existent for new users that had primarily used Excel to analyze their data. The language has a lot of similar syntaxes that can get the users started and many more advanced features.

Data access wasn't a problem because most users started with Power BI trials and had access to their own data. Microsoft also had an ETL tool (Extract, Transform, Load) to help handle data and significant modeling capability while the majority lacked anything beyond basic functionality until more recently. Previously, users wouldn't want to do significant transformations in a visualization tool because they are In-Memory tools, meaning they process data in RAM, on the end user's computer or the company's server. This integration of ETL into a visualization product allowed developers to work with non-perfect data in both quality and structure.

All these benefits led to not only an increase in end-users due to changes in skill requirements, but also many IT groups pivoted to using the full Microsoft stack because all their offerings worked so well together, especially from backend management and security perspective. IT groups could manage their initiatives more holistically using Microsoft Active Directory to control licensing, data source permissions, and down to row-level security for a fraction of the price while giving access to more users.

What Modern Self-Service Analytics Look Like Today

In a 2020 survey by Harvard Business Review Analytic Services, 86% of respondents said that frontline workers in their organizations required better technology to make data-driven decisions in the moment. In the same survey, respondents named self-service analytics as a top technology they'd like to see adopted by 2022 for their workforce.

But what does modern self-service analytics look like from a tools and usage point of view today? Ideally, it highlights the changes businesses need to make to turn independent interactions and data-driven insights into actionable decisions that immediately impact business performance.

> "Given the global impact of Covid-19, everything has been changing so rapidly across industries, the need to quickly see what's happening in your business and pivot in real time has never been more critical. With increasing market volatility due to unstable foreign economies, rising inflation, fed rate hikes, and geopolitics, more companies are finding themselves in never-before-seen situations and the need to quickly adapt has become not only an objective, but the only way to survive."
>
> - Jim Dietrich, Founder & President of 3Cloud

This remains as true for hospitals that need to understand patient outcomes during the pandemic as it is for manufacturers needing to know about unprecedented demand fluctuations and shipping impediments. The critical issue remains, there is an ever-growing need to empower new decision makers with self-service analytics, which is increasingly vital to determining what must be done and how to execute the solution.

Modern self-service analytics should be easy-to-use solutions for nontechnical users that require no coding or rely on IT to set up the data access, queries, visualizations, and preparation necessary for enablement tools. These tools allow users to easily drill down into massive amounts of data that is constantly updated in the cloud. Employees across an organization need an easy way to query data, which isn't feasible with many complex analytics tools that are usually optimized for power users and data analysts. Business users' primary role is not technical, they don't have the time or ability to create reports that get them the data in the format they need. Given this reality, it is increasingly critical that administrators realize they must give their employees accessible and straightforward analytics tools.

With the goal of increasing speed, efficiency, accuracy, and reliability in the insights that frontline workers gain from customer and business data, users can formulate their own data queries and get answers in real time rather than waiting for IT to reply. It is not uncommon for this process to turn into multiple iterations, the more data people have access to, the more questions they think to ask. The ability to take immediate action is also enhanced because employees are seeing the data themselves and can apply their own deep knowledge of the business to gain new insights, empowering them to be fully confident in taking crucial data-driven action.

As with any new initiative, there are always potential risks, and for self-service analytics, that can specifically be the lack of governance, security, or guaranteed and scalable performance. Ultimately, a fully realized modern Business Intelligence (BI) solution should not only have self-service capabilities but empower users at all levels to balance these new self-service analytics with enterprise managed analytics, enable AI and ML augmentation to take BI to the next level, seek to provide predictive analytics for future performance in key metrics, and provide direct ROI through integration with existing business processes and functions.

Overcoming Obstacles During Your Analytics Journey

Despite the advantages of empowering employees across an organization with self-service analytics, there are challenges along the way for many companies. Often, these issues are around organizational and cultural challenges, which are more complicated than the technology itself. According to a January 2021 NewVantage study of 85 respondents at industry-leading businesses, 92% of respondents said the challenges related to self-service analytics have to do with organizational culture, and just 8% said they have to do with the actual technology. Additionally, a Harvard Business Review Analytic Services survey found that a lack of effective management through the transition of changing technology and data ownership was by far the issue according to respondents, with 44% naming it as the top issue they faced.

92% of respondents cite organizational culture as the leading reason for challenges related to self-service analytics.

44% of respondents named lack of effective management through technology transition was the top issue.

8% of respondents cite the actual technology as the leading reason for challenges related to self-service analytics.

This does not have to be the case. Empowering frontline workers with analytics capabilities should ease the burden and reduce delays across an organization by enabling them to take immediate action based on their insights. It is critical for businesses to improve their data literacy, both at a managerial and business user level. Improving data literacy directly correlates with the success of implementing self-service analytics, it requires enhancing business users' capacity to recognize, understand, and react to the data they're producing. They also need to be able to explain their thoughts and actions that resulted from this data.

There are many ways to address data literacy across an organization, such as creating data enablement teams or providing online learning classes or on-site training. Whatever the strategy implemented, the level and frequency of training should correspond to business users' roles and the level of literacy they require. For example, someone in a sales or marketing role would need to analyze data trends and relate them to varying campaigns or sales, while someone in a logistics role will need to use the data to track any supply chain issues and take immediate action to resolve them and optimize existing resources.

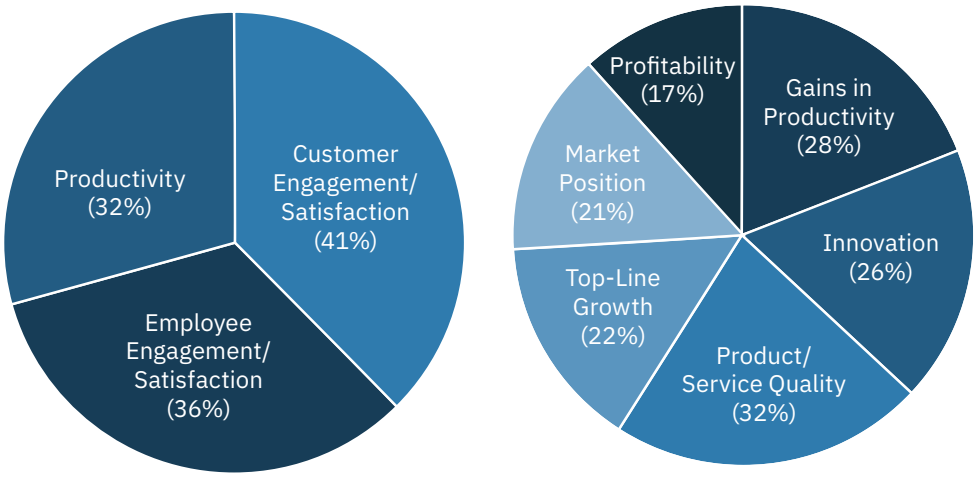
An important component of this is often to shift users' mindsets about using these new tools. Self-service analytics can seem like a daunting task to employees who are already busy doing their regular jobs. Even for teams that are familiar with data and analytics, it can seem easier to send an email rather than find the answers themselves. However, once they understand that the tools are intuitive to use and provide them with a way to immediately and automatically find their own answers, most of the time the technology is eagerly embraced. Creating a truly data-driven culture as opposed to secluded groups of data insights means that companies cannot just equip frontline workers with self-service tools but also empower them to act on what they discover.

Where Do We Go From Here?

Organizations that persevere through these initial challenges and implement self-service and other advanced analytics capabilities will see immediate benefits. Their employees will gain the ability to make faster, more accurate decisions and take actions informed by data. In the Harvard Business Review Analytic Services survey, respondents who stated that they invested in empowering and digitally equipping their frontline workers to make good decisions were significantly more likely to report substantial increases in customer engagement/satisfaction (41%), employee engagement/satisfaction (36%), and product/service quality (32%). They were also more likely to report gains in productivity (28%), innovation (26%), top-line growth (22%), market position (21%), and profitability (17%) from these efforts.

Harvard Business Review Analytic Services Survey

Results of respondents who invested in empowering and digitally equipping frontline workers to make good decisions noted and increase of:



We've reached a point where employees like an analyst or someone on the business side can gain the autonomy to create data projects, all without having to learn to code or put even more strain on IT. With self-service analytics, they can now put data quality and governance measures in place to avoid data chaos and capitalize on their existing BI data pipelines and even turn them into AI data pipelines by creating AI products. By starting with one simple insight or question, they now have the power to use that as a springboard to discover new initiatives.

With the growing prominence of enhanced analytics in self-service analytics platforms, AI services are embedded into them and can deliver new interfaces, insights, and efficiencies into existing analytical workflows. Taking it a step further, this can take the form of mobile self-service analytics using chatbots or automated insight generation, where users can i mport data and produce relevant insights automatically.

The amount of data that's available in today's world has forever changed the way enterprises function in their daily endeavors. The power of analytics is creating a new future worldwide with self-service analytics being the most powerful and accessible tool on the market. Self-service business intelligence tools are quickly replacing traditional dashboards with new capabilities designed to help end-users tell stories with data. We're starting to see more charts, graphs, and heatmaps that can be used to present contextual insights in a way that gets people to focus on outcomes. Graph analytics create visual representations of relationships, changing the way we think about correlations between seemingly disparate data points. The ability to take data once consigned to difficult dense reports and translate it into exciting visuals can make a massive impact across an organization.

With these new capabilities comes a powerful way to add value to B2B sales pitches, giving sales teams the ability to use data to support signing a contract and marketing can now incorporate data-driven storytelling into marketing efforts. Users across the board can now make the case for adding a new product, changing a supply chain strategy, or capitalizing on openings to gain a competitive advantage in their market. Whether you are just starting your self-service analytics journey, facing challenges with adoption, or trying to figure out the next steps for your organization, 3Cloud can help. We are 100% focused on Azure, and the ideal consulting partners for you in your journey through implementing and optimizing self-service analytics across the Microsoft platform. Our all-in expertise means we have the technical know-how to build innovative solutions and solve the most complex business and technology challenges.

Your data estate contains a wealth of information that can add value to your organization. Turn that information into knowledge and that knowledge into wisdom with self-service analytics solutions. Speed up innovation. Put your data to use. Make accurate business decisions. Empower wisdom at scale with immediate actionable insights within weeks rather than months. **With 3Cloud, you are never alone on your journey, we can help democratize data access across your enterprise, while enabling easy governance and a consistent data view to help clarify insights, guide decisions, and identify innovative opportunities for the next phase of your business.**

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