The data revolution is upon us, but it begins with the basics

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The results of 451 Research's inaugural Voice of the Enterprise, Digital Pulse survey highlighted the importance of business intelligence/analytics, machine learning and big data – in that order.

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Any lingering doubt that we are in the midst of a data revolution should have been dispelled by the results of 451 Research's inaugural Voice of the Enterprise (VotE) Digital Pulse survey, which showed that business intelligence (BI)/analytics, machine learning (ML) and big data are the top three IT priorities for 2018. The order in which they were ranked also reminds us that while the 'next big thing' often grabs the attention, many enterprises are still working to successfully implement the basics – which may be a prerequisite for gaining success with more advanced functionality.

THE 451 TAKE

While BI and big data are by no means new, the results of the VotE Digital Pulse survey indicate that we are very much at the early stages of the data revolution. The potential implications of ML/artificial intelligence (AI) have grabbed everyone's attention, and we believe that AI will pervade every aspect of our personal lives, work lives, education and leisure. However, the fact that BI/analytics ranked as the top priority despite being by far the most widely adopted – even among technology conservatives and skeptics – demonstrates that there is still work to be done in adopting and refining the use of more 'basic' analytics functionality before many enterprises can begin to come to grips with more advanced capabilities.

The results of 451 Research's inaugural VotE Digital Pulse survey provided a significant validation of the ongoing importance of data processing and analytics. That perhaps should not have come as a surprise, with the industry having been in the grip of big-data fever in recent years, and currently getting worked up about the potential implications of machine learning and artificial intelligence.

That said, with other emerging technologies such as containers, serverless computing/microservices, blockchain, and edge/fog computing providing stiff competition, the fact that data-processing and analytics technologies delivered a clean sweep of the top three places for IT priorities for 2018 is still remarkable. What is all the more remarkable is that the highest ranked in terms of prioritization –BI/analytics – is not actually 'emerging' at all, as evidenced by the fact that it was by some margin the most widely adopted.

Voice of the Enterprise Digital Pulse: Top IT priorities

Q. Are any of the following items top IT priorities for your organization in 2018? Please select up to 3.
Q. Please describe the level of usage within your organization for each of the following technologies.
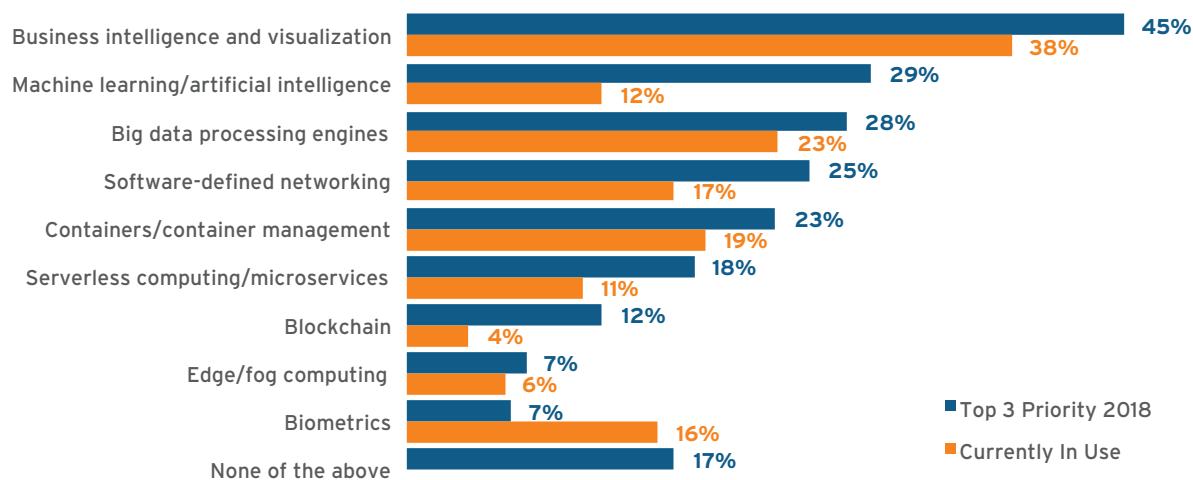
Source: 451 Research, Voice of the Enterprise: Digital Pulse, Budgets and Outlook 2017

EVOLVING ADOPTION OF BUSINESS INTELLIGENCE/ANALYTICS

Slightly more than two-thirds of respondents reported that they already had BI/analytics in use – well ahead of the next most widely adopted (big data at 23%). In fact, no less than 73% of respondents already have BI software in deployment, or are actively planning to do so within the next two years.

Additionally, the results show that BI software was by far the most widely adopted of those on the list by companies that consider themselves late adopters of new technologies, with 30% of skeptics already having it in use. Despite this level of adoption, even among conservatives and skeptics, BI software is the number one IT priority for 2018 by a considerable margin. We believe this tells us a few interesting things about the data and analytics space.

A PATHWAY TO ADVANCED INTELLIGENCE

If we consider that BI is effectively entry-level analytics, big-data processing represents midlevel analytics, and ML/AI is advanced-level analytics, then we see that many organizations are still striving to get the basics right before moving on to more advanced capabilities. This makes sense given that BI/analytics itself continues to evolve. The majority of early BI products were sold to IT department users and enabled them to create reports and dashboards for senior decision-makers and business users.

However, the recent generation of offerings are aimed directly at data analysts, senior decision-makers and business users, providing them with self-service functionality that enables them to create, share, publish and consume reports without the intervention of IT staff. As such, even when enterprises have made significant investments in the software and tools, BI continues to be a priority focus as new functionality is delivered in emerging products and services. We are also noting previous departmental adoption of these self-service tools now translating into strategic company-wide deals, in conjunction with associated data-governance and management investments.

BIG DATA AS A PRECURSOR TO ML/AI

While BI/analytics can be performed on big-data-processing engines, the former is by no means reliant on the latter. There is a potentially much closer relationship between big-data-processing engines and ML/AI, which is illustrated by the finer details of the Digital Pulse survey results.

ML/AI may have ranked slightly higher than big data as a priority for 2018 (29% vs. 28%), but the results indicate that many more respondents are already employing big-data-processing engines (23%) compared with ML/AI (12%). Additionally, a higher proportion of respondents (55%) have big-data-processing engines in use, or are actively planning to do so within the next two years, compared with ML/AI (47%).

However, many of those big-data-processing engine deployments will be put to use crunching the numbers to support the ML/AI workloads that will follow, and the results suggest that many respondents are looking to accelerate rapidly toward that endgame, with 20% of respondents already in discovery or proof of concept with ML/AI projects.