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ENTERPRISES NEED TO PUT IA BEFORE AI

BY CHAD MELEY

A major trend across industry and public sectors is the growing role of artificial intelligence (AI) within an enterprise digital transformation strategy. AI is already providing order of magnitude improvements with traditional enterprise use cases like fraud detection, predictive maintenance, recommendation engines, yield optimization, churn reduction and others. A major capability that separates enterprises stuck in experimentation versus those accelerating an AI initiative is the presence of an information architecture (IA).

AI is particularly good at finding patterns across a wide array of data that previous technology was unable to find. Intuitively, most executives understand that AI requires lots of data and that their organization needs capabilities to harness and process large data sets. Less understood is the amount of data reuse and level of data integration required to sustain a cadence of business outcomes enabled by AI. Every sort of machine intelligence that surrounds us today is narrow AI. Narrow AI operates within a pre-defined range. AI has achieved super-human abilities in performing single complex tasks such as playing chess, making product recommendations and forecasting weather. Narrow AI works within a very limited context and can't generalize to take on tasks beyond its field without significant rewrites and retraining. So you can't expect the same AI algorithm that detects fraud to detect customers at risk of churn. That's the task of a different narrow AI algorithm.

In fact, the level of algorithmic focus required to achieve results is even narrower than just limiting to something like fraud detection. A bank can have dozens of different kinds of fraud it is actively trying to detect and interdict, such as credit card fraud when the card is present, credit card fraud when the card is not present, wire fraud, first-person fraud, check fraud and many more as new digital payment options continue to emerge. And each type of fraud warrants its own narrow AI algorithm.

A successful enterprise AI initiative will spawn hundreds if not thousands of use cases, each supported by a narrowly defined algorithm. Once that's understood and anticipated, it's evident that large enterprises need a common data foundation to scale their AI ambitions.

INFORMATION ARCHITECTURE FOR PERVASIVE DATA INTELLIGENCE

AI will expose enterprises that have only paid lip service to the importance of data or have gone down unstainable paths to managing data. In assessing AI readiness, a good starting point is asking if your organization has a thoughtful or an accidental information architecture.

An accidental information architecture is one that arises when each team — sometimes within the same functional department — has the autonomy to architect information to meet its parochial needs, with little regard to the information needs and strategic ambitions of the broader enterprise.

Symptoms include hundreds of silos of replicated data. These silos incur hidden costs, add to mounting technical debt, restrict agility and pose barriers to operationalizing insights. Left unchecked, these silos can spread exponentially as a result of proliferating vendor tools and easy-to-spin-up cloud offerings.

THERE IS NO "ONE SIZE FITS ALL" FOR EITHER INFORMATION DESIGN OR TECHNOLOGY.

A checklist for a pervasive information architecture comprises elements of design and technology. From a design perspective, not all data is created equal, requiring different service-level agreements, governance and data quality. From a technology view, the resulting platform will need to accommodate a spectrum across the entire price/performance curve, deployment options across public and private cloud and a range of user personas.

Enterprises should consider how the data will be used, reused and shared. The foundation should enable a common set of core data — such as customer, revenue, products — that's shared throughout the enterprise, which prevents the problem of silos that arise to serve a particular function. Users must agree on a common vernacular and definitions and make a shared investment to support each department and its use cases.

For non-core data, less rigor is required. Lighter curation and governance can lead to quicker insights and lower costs from data that is less understood, evolving and experimental. Key, however, for AI to yield breakthrough insights is the ability to still draw correlations across all of your data.

Enterprises need to look at how they address data integration and quality. Doing this effectively can be challenging. It takes effort, negotiation, time, hard work and the right solutions. Ultimately, it's well worth the effort. Many senior-level executives fail to recognize that enterprises are wasting significant resources attacking the problem of data integration and quality at the individual project or department level. This problem becomes shockingly evident when data silos are inventoried and a light is shone on all the various data silos throughout the enterprise. It's not uncommon to find thousands of data silos, each consuming costs for software, processing, storage and people. ■

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