Navigating Digital Options: Not as Complicated as it First Appears

by Amber Lyons and Sean Klein

Digital infrastructure is a fundamental enabler of innovation in large organizations. With the rate of technological change, there is a dizzying array of tools, systems, platforms and vendors, many of which overlap in capability. Sifting through the offerings can be a daunting task for any executive. As a Chief Innovation Officer you will need to cut through the technical jargon and sales-speak to determine what capabilities these tools actually enable.

Stripped of their marketing campaigns, digital enablers aim to improve one or more of the following five areas of innovation; collaboration, productivity, quality and regulatory compliance, knowledge management, and analytics and decision support. Understanding these core capabilities and which ones best address your company’s business needs, will help you navigate the software landscape with ease.

Collaboration

Digital enablers that target collaboration increase the quality and frequency of interactions within organizations, and externally with customers, suppliers and business partners. Internally, these offerings break down functional, geographic and organizational barriers that impede innovation by allowing real-time exchanges of ideas and information. Typical collaboration tools include; design systems, open innovation and crowd sourcing platforms, virtual brainstorming spaces and whiteboards, video conferencing, embedded instant messenger, internal social networks, customer immersion labs, digital focus groups, social voting, and screen sharing capabilities.

Productivity

Digital enablers that improve productivity make us more efficient at getting work done. These tools optimize processes and tasks and often enhance the ability to create and produce. Computer-aided design (CAD) tools and CAD data management systems make up a significant portion of this benefit area by allowing companies to create, control and share design information across platforms, which can accelerate the product design process. When regional requirements call for various versions of a design, operational efficiency can be increased by reusing design data in order to reduce the steps needed to deliver the final product. Other digital enablers that target productivity include project management systems, simulation tools, task automation, rapid prototyping (3D printing and virtual simulation), automated marketing platforms, and integration to enterprise resource planning (ERP) systems.

Quality & Regulatory Compliance

Digital enablers that target quality and regulatory compliance assist with organizing and improving product quality, identifying and mitigating risks, tracking the compliance of parts against common industry standards, and identifying critical product safety issues. For companies operating in highly regulated industries, keeping up with ever-changing quality and regulatory guidelines from FDA, FERC, FAA, HACCP, OMB A-123, AML, Basel II, and Data Retention laws can be a cumbersome task. For companies operating across multiple industries, regulations such as EH&S, FCPA, OSHA and ISO standards present an added layer of complexity. Not only do these regulations have the potential to derail new products or services after significant development resources have been expended, but the consequences for non-compliance can range from hefty fines and brand deterioration to litigation and/or license revocation. Digital offerings that typically address quality and regulatory compliance include Product Lifecycle Management (PLM) and Quality Lifecycle Management (QLM) solutions.

Knowledge Management

Digital enablers that target knowledge management organize, store, manage and maintain the integrity of information. Often, knowledge management offerings promise to provide a “single source of truth” for documentation that allows employees to quickly locate the most up-to-date facts and materials from a single, shared location. These benefits can save significant amounts of time spent searching for the latest versions and locating materials scattered throughout employee workspaces or dispersed throughout file cabinets and personal drives. Additionally, these digital enablers can help combat the loss of knowledge resulting from employee transitions and retirement. Typical knowledge management tools enable the storage and dissemination of information. PLM is the most typical knowledge management solution deployed across industries.

Analytics & Decision Support

Digital enablers provide powerful analytics and decision support benefits that allow business leaders to cut through the noise to make informed and timely decisions. In today’s age we are bombarded with data. Data mining and big data management all carry the potential to revolutionize how we make sense of it all. The best enablers of this type sift through collected data to pull out key metrics and package them into rich and meaningful dashboards. Digital enablers of this type include portfolio and pipeline management systems, advanced supply chain management systems, cost management systems, and real time interactive innovation dashboards that are built with business intelligence solutions.
There is no one size fits all digital infrastructure for managing innovation, but placing importance on digital enablers is a critical requirement to stay relevant in today’s marketplace. Companies that invest in digital infrastructure are 77 percent more likely to outperform their competition. (Barry Jaruzelski, 2013) Therefore, understanding these five capabilities is critical for navigating the barrage of digital offerings that promise to help you deliver improved innovation results.

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