Key Takeaways

Speed of innovation for manufacturers in regulated product industries like automotive, aerospace, and medical devices is quickly becoming a key value driver.

Competitive innovation means accelerating all aspects of the business: agile processes, digital solutions, and creating an ecosystem of partners that can match a manufacturer's speed.

One example of a major lever of acceleration is the "Software Defined Vehicle" in automotive, where cars now contain millions of lines of code, and features and functions are often provided through only software. This requires a major rethinking of how a traditionally hardware focused company operates.

Accenture and PTC are reimaging their partnership to move at this faster pace of innovation.

Manufacturer Challenges

In the fast-paced world of market success, innovation is key. The growing complexity of cyber-physical products demands a fresh approach, requiring a holistic strategy from initial requirements definition through to service delivery. To maintain competitiveness, companies are integrating application lifecycle management (ALM), product lifecycle management (PLM), model-based systems engineering (MBSE), and service lifecycle management (SLM). Transparency, efficiency, and data security are crucial in meeting regulatory standards and optimizing processes.¹

Traditional R&D tools fall short in this dynamic landscape, making an integrated software and electro-mechanical development environment difficult to attain. As products become interconnected "systems of systems," companies seek partners with the right tech and business acumen to deploy innovative solutions, accelerate their pace of innovation, and stay competitive.

The Application Lifecycle Management Imperative

ALM encompasses requirements management, software architecture, systems architecture, computer programming, software testing, software maintenance, change management, continuous integration, and

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project management and release. It is used to monitor and manage development of software-driven applications within and across products.

ALM is often the place product requirements are easiest to manage since much product functionality is now software driven. ALM enables new revenue sources as features are developed independent of the physical product production. ALM solutions help project teams keep track of feature development progress to meet requirements for products and manage customer's expectations.

ALM solutions support and incorporate integrated requirements management, compliance and risk management, collaborative product development, quality assurance and validation, and reporting and analytics.

ALM integrated with PLM as part of a MBSE development environment is essential to deliver new products at the pace of innovation needed for business success. Product upgrades are happening faster thanks to the ability to install new features via software updates without requiring physical product remanufacturing. Often these new features generate new revenue for existing products already in the hands of consumers. ALM enables companies to link requirements to business strategy, ensure products meet customer expectations, and trace the definition, compliance to, and validation of those requirements.

Continuous feature engineering driven by customer demands brings many challenges. All features must be continuously tested as they are developed to ensure a quality product upgrade when only done with software. Furthermore, cloud-based support software can help collect and analyze product usage to improve the customer experience. Integrating product and software development enables linking of features with components and ensures end-to-end product compatibility enabling continuous delivery.

Successfully implementing an effective ALM environment requires the right software technology and implementation partners to help industrial firms navigate this minefield. The ideal ALM independent software vendor-systems integrator (ISV-SI) team composed of companies that are already collaborators with a deep partnership, like Accenture and PTC.

Accenture and PTC

Accenture

Accenture is a global professional services company that helps the world's leading businesses, governments, and other organizations build their digital core, optimize their operations, accelerate revenue growth, and enhance citizen services—creating tangible value at speed and scale. It is a talent and innovation led company with 743,000 people serving clients in more than 120 countries. Technology is at the core of change today, and Accenture is one of the world's leaders in helping drive that change, with strong ecosystem relationships. Accenture combines their strength in technology with breadth and depth of industry experience, functional expertise, and global delivery capability. For more information, visit www.accenture.com.

PTC

PTC (NASDAQ: PTC) is a global software company that helps enable industrial and manufacturing companies to digitally transform how they engineer, manufacture, and service the physical products that the world relies on. PTC has broadened their offerings through acquisition and integration of leading ALM tools and solutions Codebeamer and pure-systems. ServiceMax is the core of PTC's lifecycle service management solution.

• Codebeamer is a comprehensive software lifecycle management solution with all-in-one requirements, risk, and test management capabilities. PTC states that Codebeamer is designed to

help companies reduce time to market by up to 8%, shorten reporting time by as much as 50%, minimize the burden of process configuration by up to 60%, reduce time of audit preparation by up to 40%, and cut the costs of integrating several software tools by as much as 80%.

- pure-systems manages variants of subsystems and software across product lines.
- ServiceMax provides asset field service management capabilities for servicing complex longlifecycle products, including managing information about serviced products, creating and managing work products, and scheduling and dispatching technicians.

Headquartered in Boston, Massachusetts, PTC employs over 7,000 people and supports more than 30,000 customers globally. For more information, visit www.ptc.com.

Accenture-PTC Relationship

Accenture and PTC have had a long, successful strategic relationship. Partners since 2000, Accenture is a Platinum PTC Partner and is PTC's 2023 Global Systems Integrator Partner of the Year. Accenture has over 1,250 personnel world-wide trained and experienced in implementing PTC technologies and solutions.

Accenture has invested—and continues to invest—in working with PTC and creating industry solutions based on their technologies, particularly around Codebeamer. Accenture is building a best-in-class Codebeamer practice with unique assets, a Codebeamer Center of Excellence (CoE) and expecting to scale resources to 300 people by the end of FY24 and to 500 by FY26.

Accenture works at the strategy level with clients, setting the requirements that PLM + ALM + MBSE need to meet. Accenture applies their IT and engineering expertise as companies embrace new operational processes built upon PTC's growing ecosystem, that now spans requirements and application lifecycle management (through Codebeamer and pure-systems), and operations and service (through ServiceMax).

PTC provides the underlying technology platform and functional capabilities required for ALM–PLM integration (e.g., Codebeamer and Windchill) and business digital transformation, and to support product development, production, and service.

PTC, with Accenture's expertise, is well positioned to take advantage of their evolving ALM ecosystem as it integrates with their cloud-based PLM system (i.e., Windchill+). Accenture works with PTC to develop and deploy industry and functional specific solutions built on Codebeamer—it understands how it can be most effectively applied within an enterprise to accelerate its speed of innovation.

Systems are operating beyond individual products increasingly relying on cloud-based services and analyses that provide insights leading to new services and upgrades during its use. Accenture has the breadth of technology expertise to apply PTC tools, while melding products with their operating ecosystem. Both companies are combining and complementing their specialized areas of technology and expertise to jointly create and deliver solutions that enable their customers to significantly improve their pace of innovation.

Accenture has deep expertise in managing and governing the complex three-way relationships (business, technology provider, and solution provider) required for successful business transformation and growth. PTC proactively participates in these activities and shares governance responsibility with Accenture and their joint customers.

Summary

To maintain business success, companies must continually accelerate their pace of innovation. They need to work with partners that have both the technology and business expertise to address the challenges of developing software-driven, complex products and enable complete update and maintenance of those products throughout their service lifecycles.

Companies need to establish environments that will enable them to evolve their business model, products, and services as technology and their customers' demands evolve. They need to establish partnerships with both technology developers and business solution implementors who are working together to deliver solutions (business and technology) that can drive the pace of innovation needed to meet today's and future business challenges.

Accenture and PTC have a long-standing relationship that delivers an effective blend of technology and business domain expertise. Accenture is a leader in domain-focused business strategy and technology implementation. PTC is a leader in delivering comprehensive ALM, PLM, and service solutions. Working together, the Accenture-PTC partnership can enable companies to deploy a product development environment that addresses the increasing software-driven smart, complex products their customers demand at the increasing pace of innovation required for competitive success.

CIMdata recommends that companies include Accenture and PTC in their evaluations of the technology and partners needed to help them create the flexible, adaptable product development and service environments required to accelerate the pace of innovation required for on-going business success and customer satisfaction.

About CIMdata

CIMdata, a global strategic management consulting firm, provides services designed to maximize an enterprise's ability to design, deliver, and support innovative products and services. For more than forty years, CIMdata has provided industrial organizations, providers of digital technologies and services, and investment firms with world-class insight, expertise, and best-practice methods on a broad set of product lifecycle management (PLM) topics and the digital transformation they enable. CIMdata also offers research, subscription services, publications, and education through certificate programs and international conferences. To learn more, visit www.CIMdata.com or email info@CIMdata.com.