accenture

THE DNA TO POWER YOUR FUTURE STRATEGY

Digital continuity for manufacturers

Accenture Industry X

Products are not just physical products anymore. Variability rules in today's rapidly evolving world. Products now include connected "living" products and outcomes-based services driven by innovative business models. Not surprisingly, 79% of executives believe that their industry is increasing the variety of ownership models for their connected products and services.[1]

[1] Accenture Technology Vision 2020 at https://www.accenture.com/us-en/insights/technology/technology-trends-2020

A fundamental shift requires fundamental change

As ownership and consumption models evolve, manufacturers need a new level of speed and agility to innovate at pace with market—and customer—expectations. They need a clear line of sight across the entire design, build and service lifecycle. But most manufacturers do not have this visibility.

Although they have advanced PLM (Product Lifecycle Management), ERP (Enterprise Resource Planning), MOM/MES (Manufacturing Operation Management/Manufacturing Execution System) and asset management systems, manufacturers are missing an end-to-end digital workflow. Silos separate engineering, manufacturing, supply chain and services. Systems and platforms are isolated. Data is disconnected. There is no common language. And today's climate is amplifying these decades-old challenges.

Without end-to-end continuity of the entire lifecycle of a product, manufacturers will continue to leave business value untapped. Because there's no competing in the new industrial era without the ability to pivot wisely and execute with speed and scale.

How can manufacturers shape an integrated, end-to-end architecture to serve their business ambition?

With digital continuity.

Finally: An end-to-end digital product lifecycle

This is why manufacturers today need digital continuity—the single source of truth embedded by design across all product phases. It is the digital thread that runs across the enterprise, from product and service development to delivery and maintenance. It creates the common language and shared data insight that's been missing for so many years. With digital continuity, manufacturers get the technology muscle they need to operationalize the business's product-to-service shift.

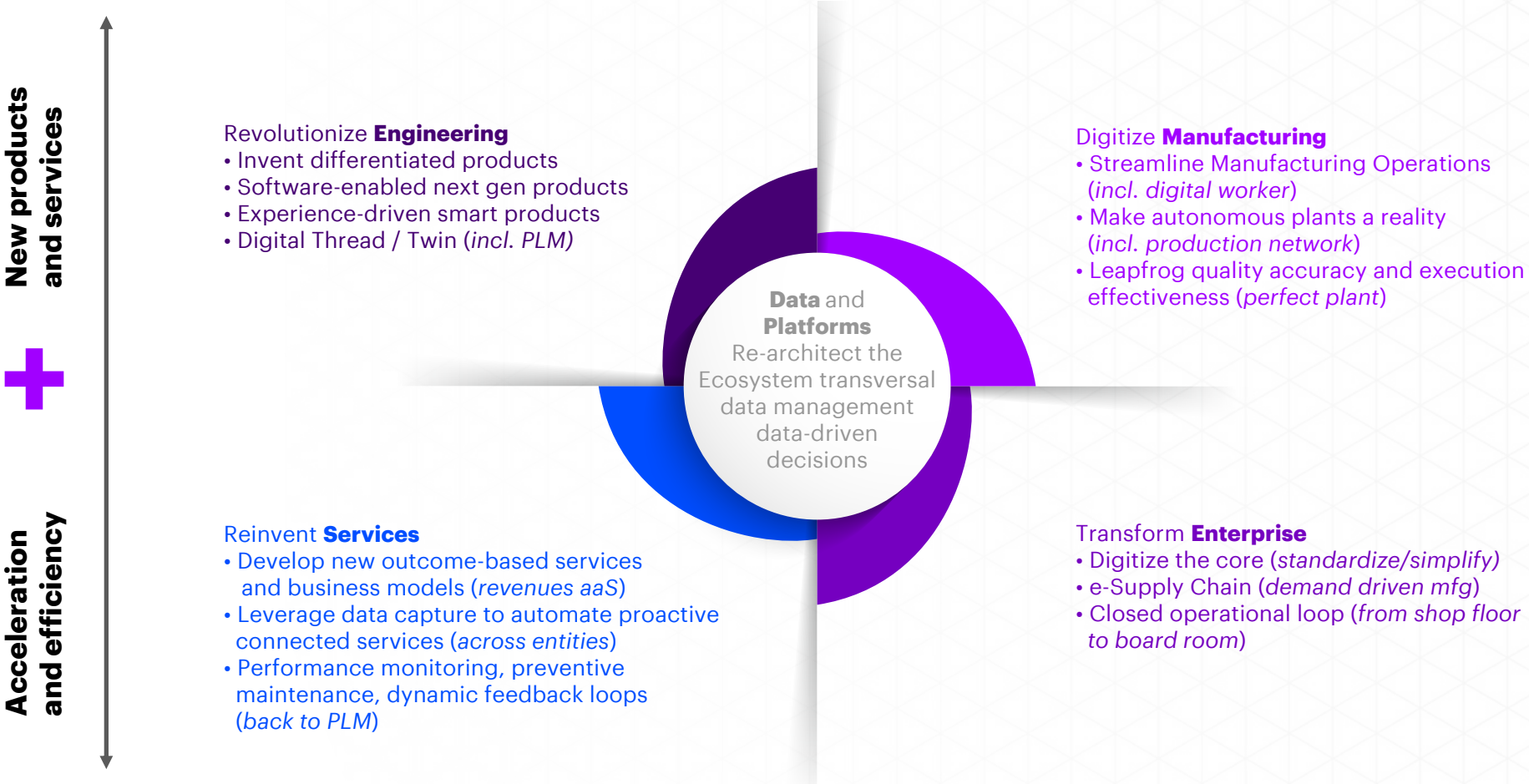
What makes digital continuity possible? It takes an integrated, cloud-based platform such as SAP S/4HANA® that lets manufacturers run automated interfaces and workflows and exchange relevant data across different systems and business areas.

With reliable, data-driven processes and platforms, organizations can:

- **Revolutionize engineering**
- **Digitize manufacturing**
- **Transform the enterprise**
- **Reinvent services**

Improve efficiency, speed to market and scale while powering breakthrough business models.

Drive the next wave of manufacturing operations and innovation with digital continuity



Integrate. Flex. Compete.

Digital continuity empowers manufacturers to become intelligent enterprises that unlock the full value of enterprise digitalization and maximize the ROI of their investments. It is also the lifeblood of every manufacturer's future strategy. This is about more than creating a product or service. It is about cultivating a competitive position. The benefits to the business are clear.

- **Re-architect the ecosystem.** Seamlessly integrate the design, build and service lifecycle to reimagine the manufacturing value chain for a changing world. Break the cycle of pilots and proofs of concept and quickly and cost-effectively scale the best concepts.

- **Flex with changing demands.** Get products and services to market faster, avoid continuous and unnecessary updates, and manage modifications and track and trace changes with ease. Center ways of working around customers and support continuous innovation and feedback loops.

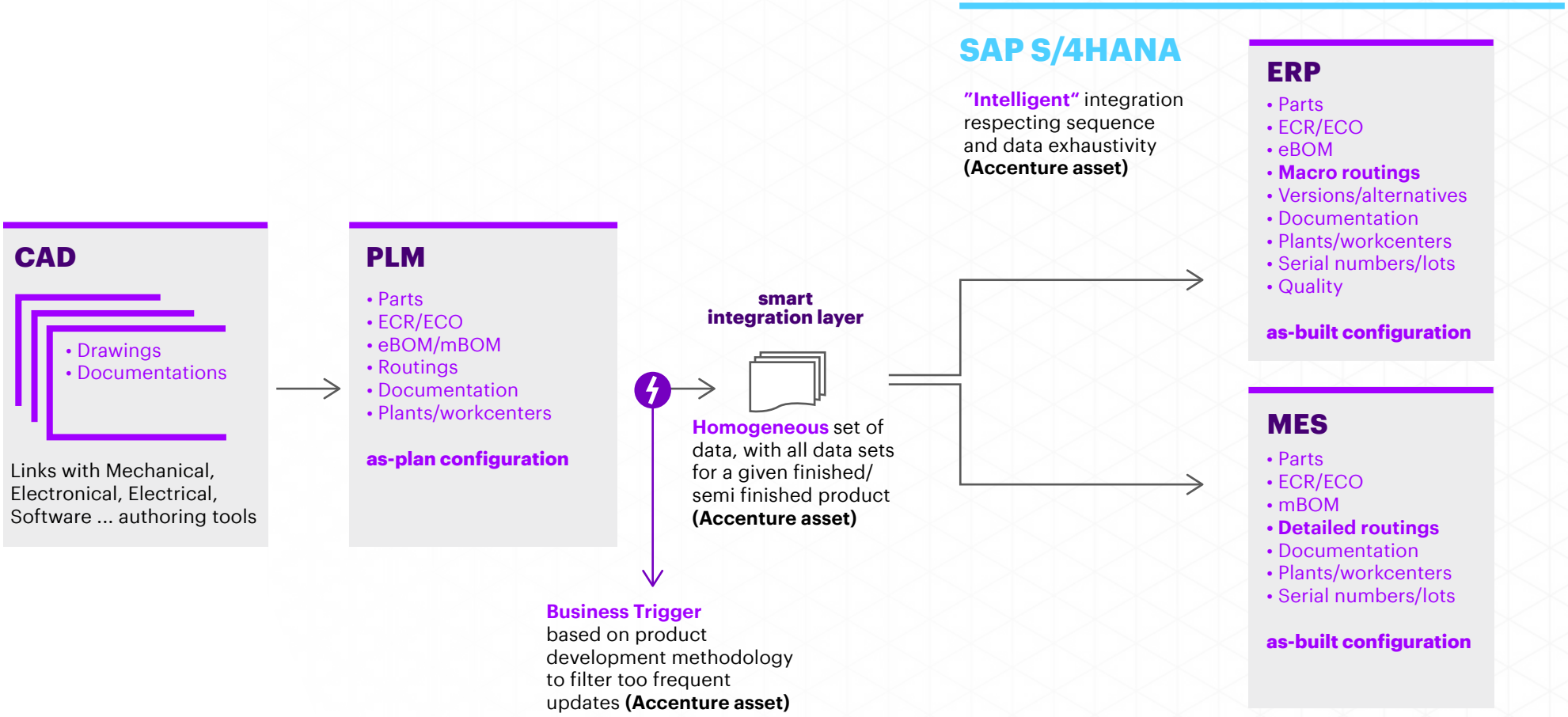
- **Multiply new business value.** Lower the total cost of investments and do more with less by integrating point-to-point solutions. Create new revenue streams through outcomes-based services and business models that support a more profitable and sustainable business.

Bring digital continuity to life

It is no surprise that manufacturers are hungry for benefits like these. But realizing digital continuity can be overwhelming. In a hurry to stay relevant, manufacturers often start with quick, plug-and-play solutions without fully assessing the overall business and technology landscape.

But it does not have to be this way. Accenture provides an end-to-end integration process, tools and expertise to support this complex orchestration and integration. While there are two main options to achieve this end-to-end integration, many variations are possible.

Option 1: Keep your CAD and PLM and integrate them with SAP S/4HANA

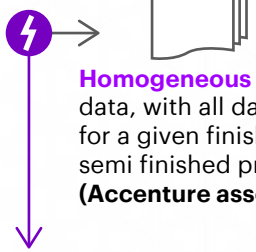


Option 2: Keep your CAD, migrate your PLM to SAP S/4HANA and integrate the rest

CAD

Links with Mechanical, Electronical, Electrical, Software ... authoring tools

smart integration layer



Homogeneous set of data, with all data sets for a given finished/ semi finished product **(Accenture asset)**

Business Trigger based on product development methodology to filter too frequent updates **(Accenture asset)**

"Intelligent" integration respecting sequence and data exhaustivity **(Accenture asset)**

SAP S/4HANA

PLM in ERP

Engineering control center

- Parts
- ECR/ECO
- eBOM/mBOM
- Documentation

ERP

- Parts
- Variant configuration
- ECR/ECO
- eBOM/mBOM
- **Routings**
- Versions/alternatives
- Documentation
- Plants/workcenters
- Serial numbers/lots
- Quality

as-plan configuration
as-built configuration

MES

- Parts
- ECR/ECO
- mBOM
- **Routings**
- Documentation
- Plants/workcenters
- Serial numbers/lots

as-built configuration

Ready for your path to digital continuity? Start with the manufacturing process

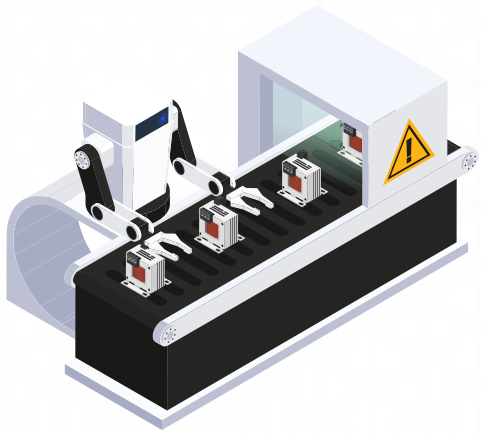
Accenture and SAP have come together to create a straightforward path to digital continuity. Accenture's Industry X and SAP Industry 4.Now Manufacturing Reference Architecture helps manufacturers understand the end-to-end capabilities they need—including use cases—to support digital transformation from engineering to production.

The Manufacturing Reference Architecture provides a "deep dive" into frequently discussed digital transformation use cases so that manufacturers can understand the architectural and business interactions in each.

It caters to different levels of architecture:

- **Business capability and process view.** Provides a complete view of all required business capabilities.
- **Technology framework.** Defines the technical capabilities that are required to support the business functions.
- **Application view.** Overlays all SAP applications that support the respective business and technology capabilities.

The Manufacturing Reference Architecture is a practical tool that reflects real requirements, not tiered, process-driven views. Because it covers all the value chain functions—engineering, manufacturing and production—the Manufacturing Reference Architecture takes away the guesswork and complexity, closing the gap between business and technology. In addition, it creates a common reference to compare technology providers—starting with an in-depth and current view of the SAP technology stack.

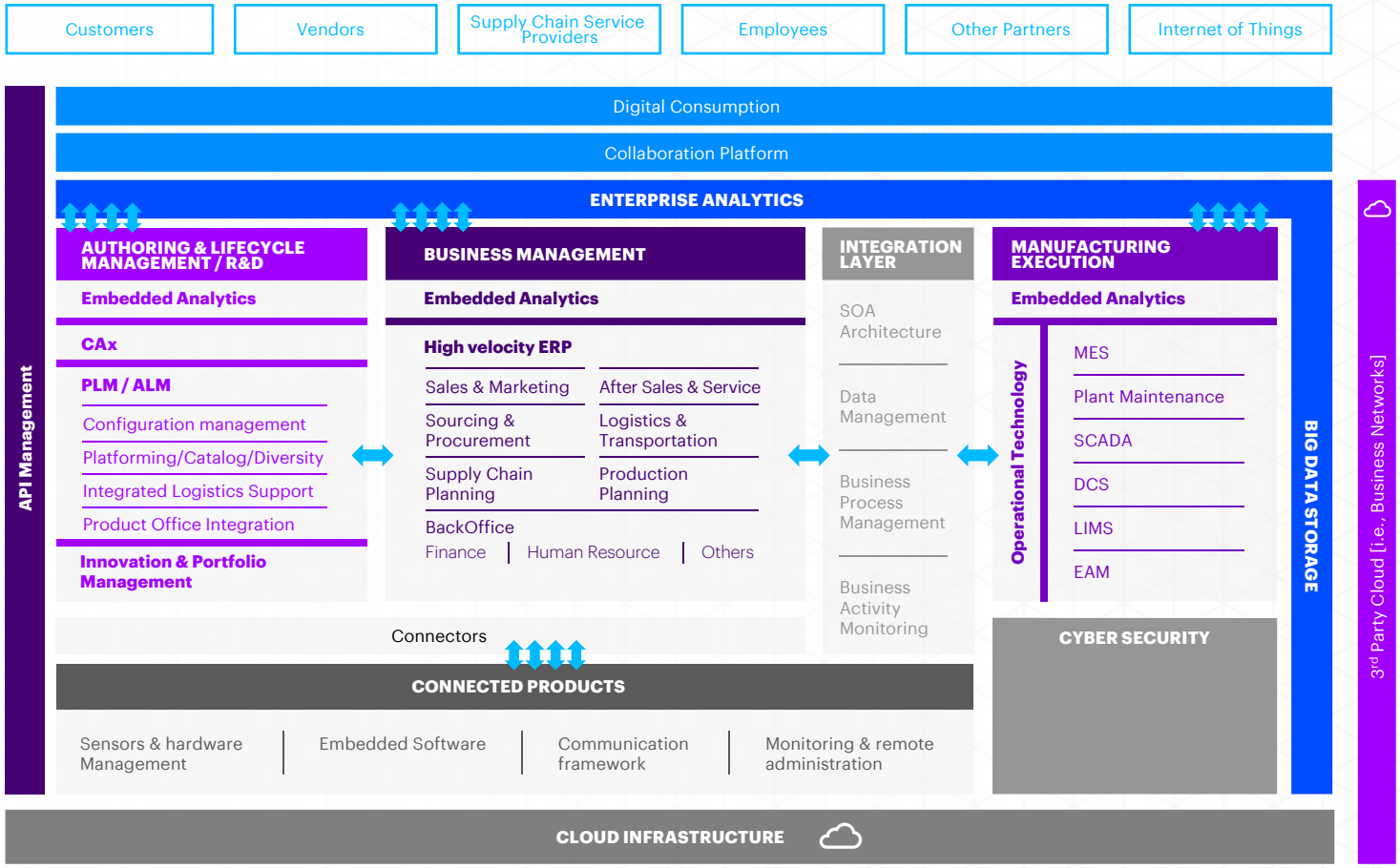


The current version of the Manufacturing Reference Architecture caters to Configure to Order for:

- **Aerospace and defense**
- **Industrial manufacturers**
- **Component manufacturers**

The power of innovation from Accenture and SAP

This Manufacturing Reference Architecture is the first-of-its-kind integrated architecture available in the market today. A strong solution development and delivery partnership that brings manufacturers the best of both worlds—Accenture's industry insight and the SAP S/4HANA engine—makes it possible.



From business ambition to competitive reality

In the new industrial age, responding to high variability is a more than a business priority. It is a matter of survival. But digital continuity is more than a defense against disruption. It is also the foundation of the future. Manufacturers that want to meet compliance requirements and improve competitiveness—by fully exploring the potential of connected workers, connected assets, predictive maintenance, complex configurable products, pay-as-service products and more—need to invest now in the journey. Because digital continuity is how manufacturers turn their business ambitions into competitive reality.

Contact us

Jean-Christophe Ledoux

Managing Director
jean.ledoux@accenture.com

Christophe Mouille

Senior Managing Director
christophe.mouille@accenture.com

Marco Paletti

Managing Director
marco.paletti@accenture.com

About Accenture

Accenture is a leading global professional services company, providing a broad range of services in strategy and consulting, interactive, technology and operations, with digital capabilities across all of these services. We combine unmatched experience and specialized capabilities across more than 40 industries — powered by the world's largest network of Advanced Technology and Intelligent Operations centers. With 513,000 people serving clients in more than 120 countries, Accenture brings continuous innovation to help clients improve their performance and create lasting value across their enterprises.

Visit us at www.accenture.com.

Disclaimer

This document is intended for general informational purposes only and does not take into account the reader's specific circumstances, and may not reflect the most current developments. Accenture disclaims, to the fullest extent permitted by applicable law, any and all liability for the accuracy and completeness of the information in this presentation and for any acts or omissions made based on such information. Accenture does not provide legal, regulatory, audit, or tax advice. Readers are responsible for obtaining such advice from their own legal counsel or other licensed professionals. This document may contain descriptive references to trademarks that may be owned by others. The use of such trademarks herein is not an assertion of ownership of such trademarks by Accenture and is not intended to represent or imply the existence of an association between Accenture and the lawful owners of such trademarks.

Copyright © 2020 Accenture
All rights reserved. Accenture and its logo are registered trademarks.