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ARAS INNOVATOR

PRODUCT SUMMARY

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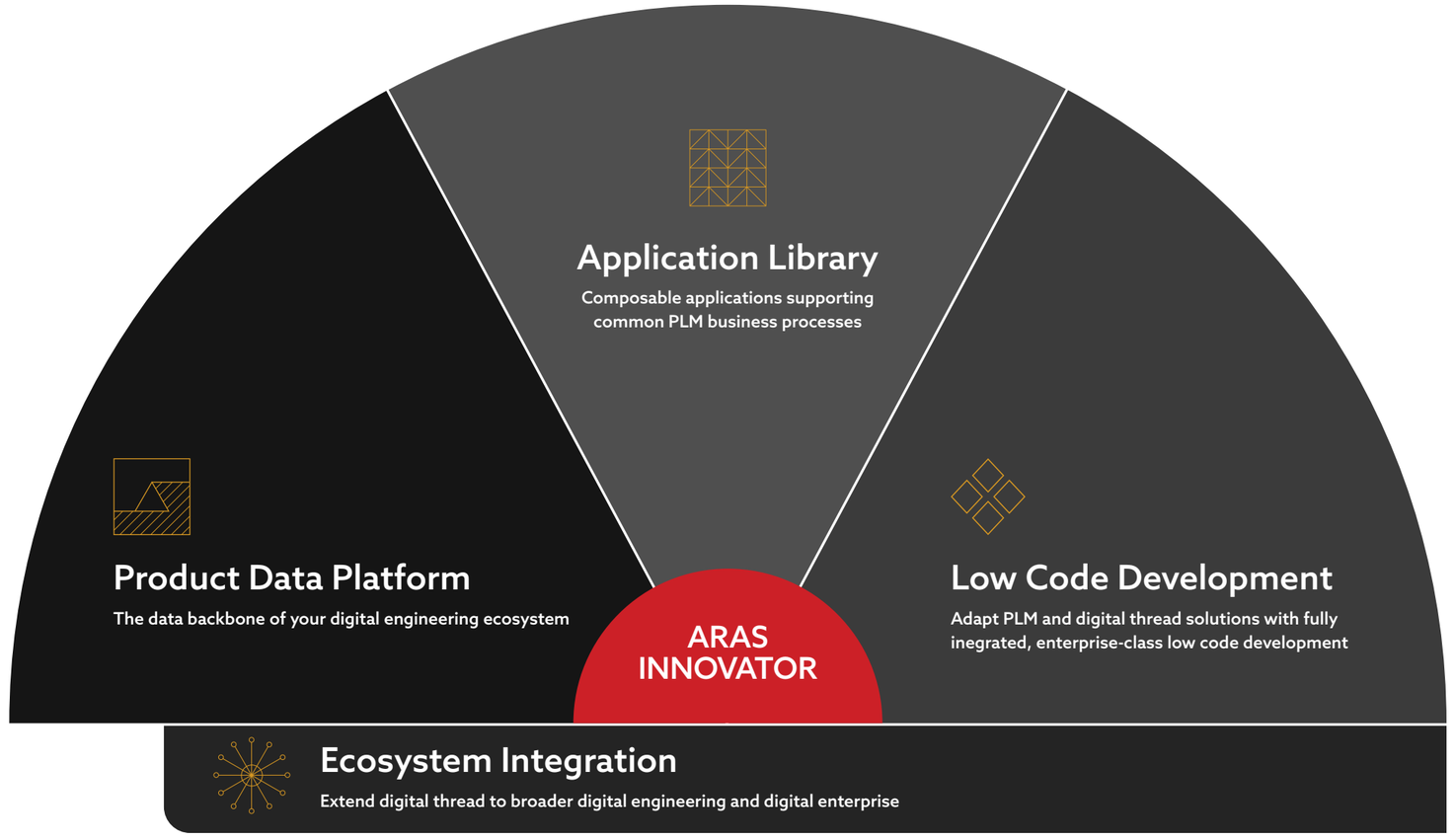
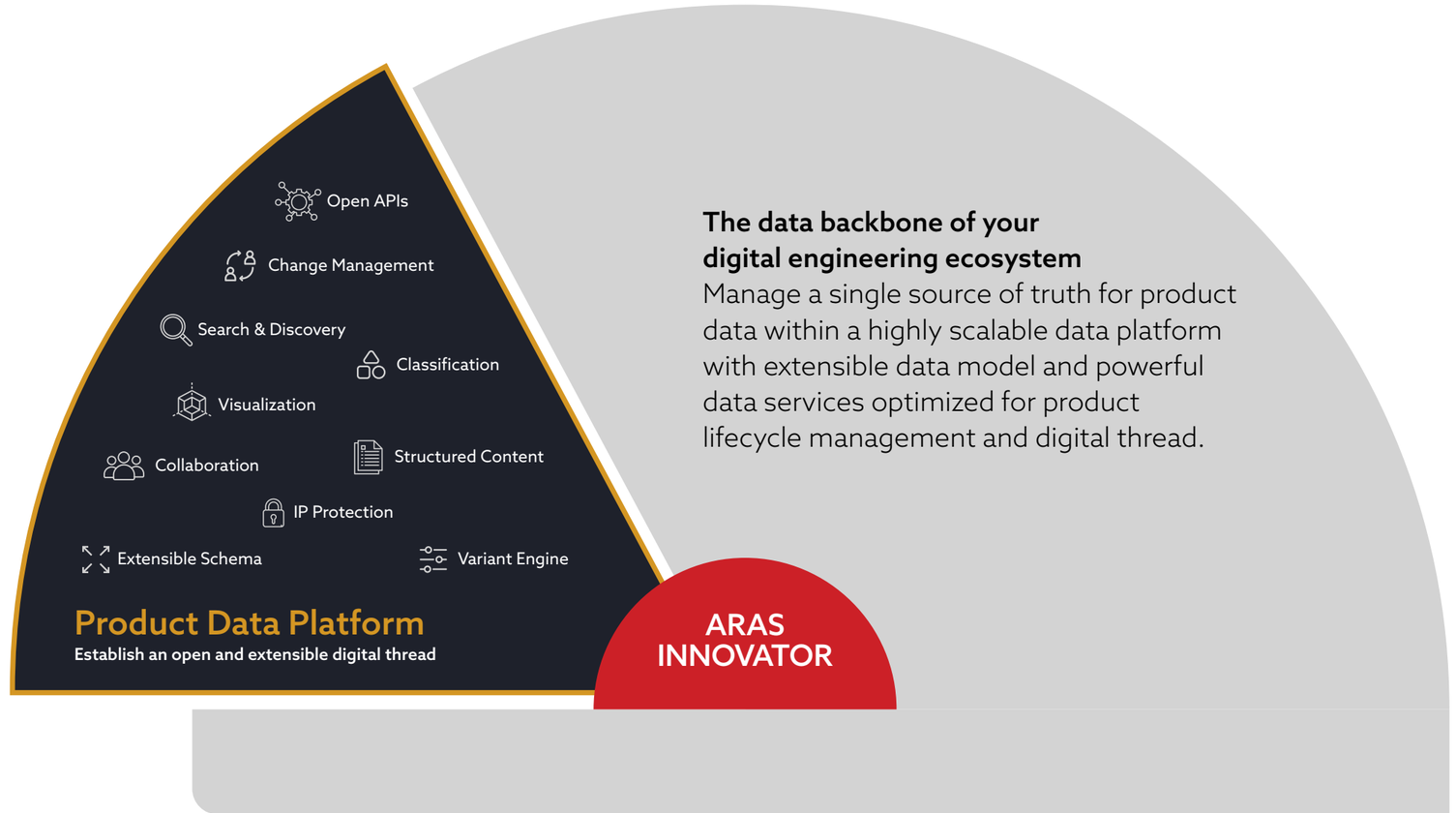
INTRODUCTION TO ARAS INNOVATOR: A MODERN PLM PLATFORM

Aras Innovator® is an open and adaptable PLM and digital thread solution delivered through a community-oriented services ecosystem. It consists of a Product Data Platform, an embedded Low Code Development Environment and an Application Library that are all delivered as an Application Platform as a Service (APaaS) with flexible deployment options.



PRODUCT DATA PLATFORM

The Aras product data platform is designed to support the complexities and scale of the world's most extensive digital thread strategies. With an expandable data model and shared services aligned with PLM, digital thread, and digital enterprise business processes, the platform optimizes the utilization of an organization's product data through Aras' composable applications, low-code capabilities, and integrations.



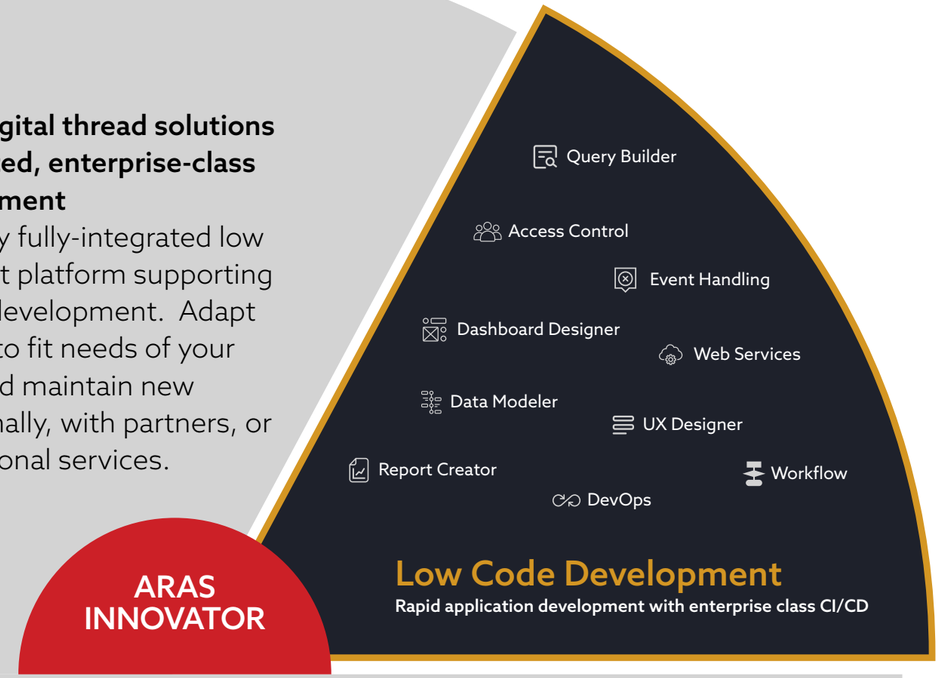
LOW CODE DEVELOPMENT

Aras' low-code development environment allows customers to enhance Aras' composable apps or build new enterprise applications, all on a single platform. The resilient platform provides a secure, upgradeable, scalable environment that quickly adapts to new business requirements.

The embedded development environment enables rapid application development with full continuous integration/continuous deployment (CI/CD) capabilities, including low-code modeling for data, process, UI, and business logic. Additionally, cloud-based DevOps provides tools and automated processes specifically geared toward developing the Aras Innovator environment.

Adapt PLM and digital thread solutions with fully integrated, enterprise-class low code development

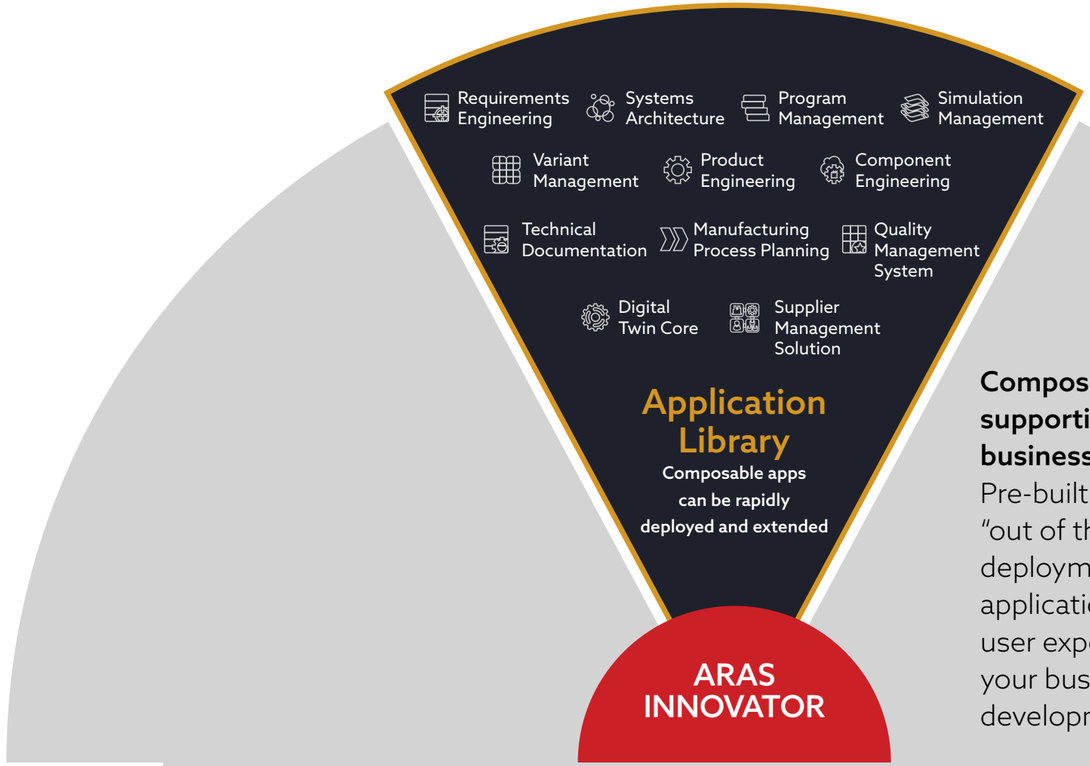
The industry's only fully-integrated low code development platform supporting rapid application development. Adapt Aras applications to fit needs of your business. Build and maintain new applications internally, with partners, or with Aras professional services.



APPLICATION LIBRARY

At Aras, we understand your business needs are unique and constantly evolving. That's why we offer a wide range of applications to support every stage of your product lifecycle, from ideation to end-of-life.

Our composable application approach offers pre-built apps and app building blocks that can be rapidly deployed and extended. With our flexible and adaptable solutions, you can confidently keep pace with your ever-changing business requirements and stay ahead of the competition.



Composable applications supporting common PLM business processes
Pre-built applications available "out of the box" for rapid deployment. Adapt application functionality and user experience to align to your business with low code development platform.

Aras Product Engineering

Provides the core PLM data and process functionality in Aras Innovator, including Parts and BOMs, Documents, CAD models, AML/AVL, and Change items. Multiple configuration and change management options are provided, including the CMII standard. All other Aras applications connect to Product Engineering data and processes, and integrations such as CAD and Microsoft Office connectors leverage its data models to store file content.

CAPABILITIES:

- Integrates multiple requirements methodologies
- Enforces conformance to a requirement type
- Coexists with other requirement authoring tools
- Enables collaborative requirements authoring and revision
- Maintains traceability of requirements across the product lifecycle

Aras Component Engineering

Simplifies commercial component selection, approval, sourcing, and compliance processes. Enables instant access to complete, current technical data, as well as obsolescence and compliance information, on hundreds of millions of components from leading manufacturer worldwide.

CAPABILITIES:

- Electronic component management
- Manage/mitigate supply chain risk
- Find the right components faster
- Increase part reuse and streamline work with preferred manufacturers

Aras Technical Documentation

Enables fast, accurate creation of technical publications like catalogs, maintenance manuals, regulatory filings, and training manuals. The web-based document editor allows referencing content from PLM-managed items like Parts and BOMs, supporting access control, change management, and workflow.

CAPABILITIES:

- Defined by a data schema, which controls types of document content
- Includes both new and reuse of existing content
- Change in referenced content drives change to associated documents
- As referenced content evolves, authors are alerted to documents (and specific content) that are affected

Aras Quality Management System

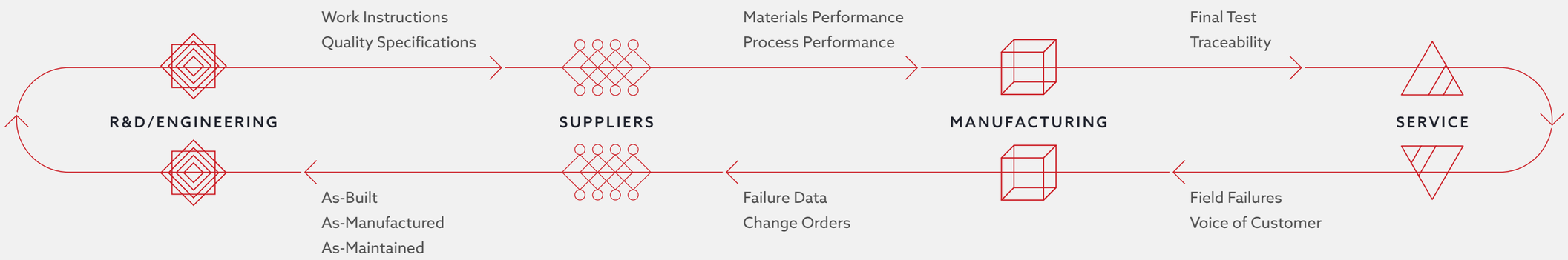
Provides capability for both proactive and reactive quality management. Proactive capabilities include advanced product quality planning (APQP) tools to manage risk, improve quality, and attain environmental, regulatory, safety, medical, and other forms of compliance. The web-based editor allows the creation of quality documents, including DFMEA, PFMEA, Flow Diagrams, and Control Plans, with references to PLM-managed items like Parts and Process Plans.

Reactive capabilities include closed-loop CAPA (Corrective Action/ Preventative Action) data and processes, including Quality Events (PRs, Audits, NCRs), Quality Containment (Purge Notice, Stop Ship), and Quality Analysis (5-Whys, FTA, Fishbone).

CAPABILITIES:

- Eliminates the need to manually collate information across the many systems companies typically maintain for quality information.
- Creates visibility between requirements, quality planning, detailed design, manufacturing quality, and engineering changes.
- Produce updates of quality planning documents
- Design/process failure modes effect analysis (DFEMA/PFMEA)
- Process Control Plan (PCP)
- Process Flow Diagram (PFD)
- Based on Automotive Industry Action Group (AIAG) standards

Powerful Closed-Loop Capabilities



Aras Manufacturing Process Planning

Aras Manufacturing Process Planning (MPP) enables the integrated creation and management of Process Plans, Manufacturing Bill of Materials (MBOM), Resources, and Work Instructions. Allows transforming an MBOM from an Engineering Bill of Material (EBOM) using drag & drop editing and concurrent Process Plan and MBOM authoring while providing real-time EBOM/MBOM reconciliation indicators. It also integrates the authoring of Process Plans with visually rich electronic Work Instructions.

CAPABILITIES:

- Process plan and work instruction authoring
- Version-controlled process plans detailing operations, steps, parts consumed, resources utilized, skills, documents referenced, etc.
- Concurrent authoring of visually rich electronic work instructions
- Version-controlled MBOM derived from EBOM
- Automatic EBOM/MBOM reconciliation
- Plant-specific MBOMs and process plans

Aras Program Management

Enables organizations to manage new product development and engineer-to-order processes for complex projects that require global collaboration. By linking deliverables to project tasks, completion status, and control are significantly enhanced. Projects can then combine as programs to manage the overall product portfolio.

CAPABILITIES:

PROJECT PLANNING

- Activities, milestones, deliverables
- Forward/backward scheduling
- Template management

PROJECT EXECUTION

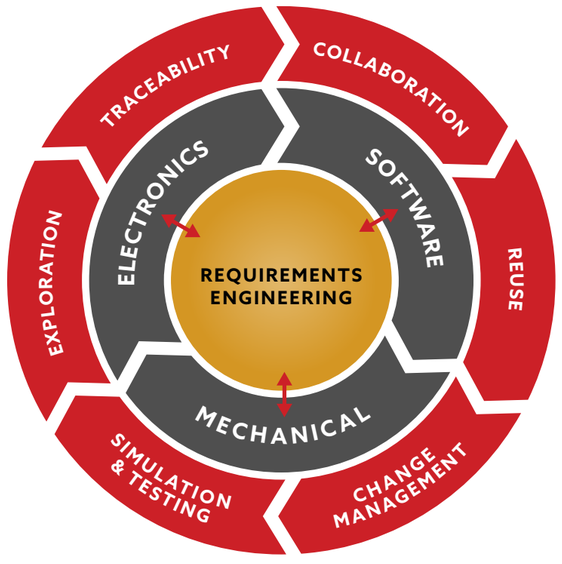
- Real-time project status
- Status of rollups/dashboard views
- Deliverable attachment
- Data integration across Aras Innovator

Aras Requirements Engineering

Provides capability for managing requirement content as a structured set of individual elements of text, pictures, tables, bullets, etc. Content structure can be classification-specific, and each content element can be shared across different requirements. Requirements can be collaborated on, reused across multiple requirements documents, related to each other, and related to other items managed by PLM (ex: Part)—all under version, configuration, change, and lifecycle control.

CAPABILITIES:

- Integrates multiple requirements methodologies
- Enforces conformance to a requirement type
- Coexists with other requirement authoring tools
- Enables collaborative requirements authoring and revision
- Maintains traceability of requirements across the product lifecycle
- Enables virtual verification



Aras Simulation Management

Enables simulation within the context of product data, including parts, Bills of Material, CAD data and documents, quality, requirements, manufacturing, maintenance, repair, and operations data. Simulation domain experts can track all their processes and activities, models, and data using simulation studies, creating a traceable system of record for simulation that is accessible to stakeholders throughout the lifecycle.

CAPABILITIES:

- Create a system of record for simulation inputs and results
- Provide an engineering context & analysis plan
- Offer more engineers access to key results, simulation visuals, and conclusions
- Connect processes and results managed in external SPDM (Simulation Process and Data Management) environments to product requirements and configurations for traceability via a tool-agnostic digital thread

Aras Systems Architecture

Provides capabilities to define and manage a system's architecture, which can be done directly or by connecting to external systems modeling tools. Includes functional and logical breakdown of the system and relationships to Requirements (R) and Parts (P) to span the whole RFLP graph. Provides data management capabilities in terms of revisioning/ versioning and release processes. Graph navigation is enabled for easy graphical tracing and affected items analysis.

CAPABILITIES:

- Map key elements of systems between commonly used best-in-class tools and Aras' data model
- Maintain relationships between model items and items managed by the platform
- Manage model variability that extends to implementation domains
- Version and revision control of the system model and its related items
- Visualize data via interactive table and diagram views specific to user tasks
- Collaboration with downstream designs and third-party suppliers

Aras Digital Twin Core

Provides the foundation for creating and maintaining digital twin representations of actual built products that are instantiated from an originating Engineering BOM. Supports processes involving post-build product configurations, including as-built, as-delivered, and as-serviced.

CAPABILITIES:

- Support the creation and management of physical part BOMs tracking changes over time introduced by new, replacement, and updated parts
- Ensure traceability to the originating engineering part
- Understand and track fleet assets, knowing the location, history, and where-used of any detail components and sub-assemblies
- Creates the foundation to link digital thread data across the lifecycle
- Builds the basis for visualization, simulation, and analytics to improve accuracy, analysis, and decision-making in the field and in next-gen design

Aras Variant Management

Variant management allows managing variability in one place, whether for products, systems, or any other part of the lifecycle. It enables the definition, validation, and resolution of variability with Features Options and Rules using the built-in configurator and facilitates Rules-defined allowed configurations. Provides a means to manage variable components with their associated Assets and their valid Usage Conditions.

The optional Variant Management Extension for Product Engineering enables configurable Breakdown Structures with common and variable content used across products on the same product platform. These structures can be resolved to specific product configurations.

CAPABILITIES:

- Designed to include technical exploration of product platform variants
- Architected with separation of variability logic from breakdown structures
- Features an exceptionally friendly user interface to quickly resolve a variant
- Includes flexible and friendly rule authoring and conflict detection
- Provides selectable scope within the breakdown structure
- Applicable to all RFLP product representations (requirements, functional, architectural, physical)
- Can enable revision-driven comparison of resolved variants
- Build on the Aras platform: digital thread traceability and PLM core services

ADD-ON PRODUCTS

Aras offers several specialty products for customers who require additional functionality in different business-specific areas. Built to work exclusively with Aras Innovator, these products provide customers with the opportunity to further extend the limits of technology in areas where they require additional capabilities.

These products are available at an additional cost.

Aras DevOps

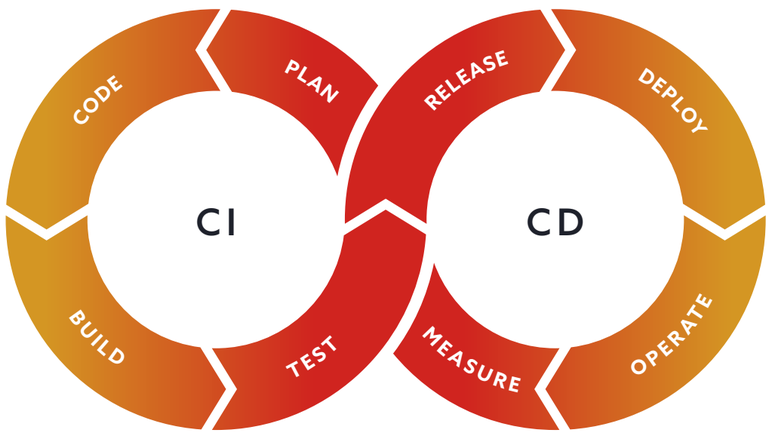
DevOps refers to a change in IT culture that merges software development (Dev) and IT operations (Ops) to improve the software development process within an organization. The objective of a DevOps culture is for the operations and development teams to collaborate across the entire software development lifecycle, from design through support, using a set of lean and agile practices that automate and integrate the processes between them.

The environment consists of the Standard Development Environment (SDE) utilizing Microsoft Azure products, environments to support the pipeline process, and Aras' Test Automation Framework (TAF). Customers and their development partners can access the SDE as part of the continuous integration component in the DevOps framework.

Aras DevOps is available for customer deployed implementations and is included with an Aras Innovator SaaS subscription.

CAPABILITIES:

- Source Code Control system to keep track of all changes
- Automated Build procedure to generate deployment artifacts
- Automated Testing to ensure your software is working correctly with every change/build
- Automated Deployment procedure to reduce/remove manual steps



Aras Supplier Management Solutions

A suite of capabilities that enhance how organizations interact with their suppliers and business partners, allowing for better management of supplier relationships, streamlining processes, enhancing collaboration, and driving efficiency.

CAPABILITIES:

- Extend Aras Innovator functionality with secure Aras Portal
- Aras Portal can display mobile or desktop web interface
- Manage supplier information and contacts and monitor supplier performance with scorecards
- Communicate directly with suppliers through threaded discussions
- Embed customers in business processes with activities and workflows
- Send supplier questionnaires, corrective action requests, and contract negotiations
- Share relevant supplier documents such as CAD/document items

INTEROPERABILITY

Aras provides interoperability solutions to seamlessly integrate applications for complex system requirements. This allows integration with a wide variety of engineering authoring systems, including requirements systems, system engineering, electronic CAD, as well as multi-CAD in the mechanical world. Our focus is on integrating these interdisciplinary engineering systems in a way that will bring all the data from these different disciplines together.

Tool-specific connectors allow the creation of new capabilities that help extend and customize your technology experience. Various connectors are available through our partner network, which leverages our open APIs to build robust integrations.

ARAS MICROSOFT OFFICE CONNECTOR

Easy-to-use solution for document management allows users working in the familiar Microsoft Office environment to create and manage documents under the control of Aras Innovator. Powerful template capabilities based on document classification support process compliance and improved productivity while enforcing security.

DATA FEDERATION SERVICES

Leverage data objects while reducing the need to write custom code. Information extracted from outside systems can be copied or referenced in real time.

- View All Your Data: Processes can easily be shared between systems based on triggers, which enables workflows across various key business systems
- Audit Connections: Standard triggers to ensure timely integration and manipulate data from external sources
- Single Interface: A user-friendly data federation environment enables clarity around the vital connections between core business systems—surpassing old methods of writing custom code

OPEN API

Avoid long-term technical debt API-based integration with external information systems or tools. Modern service-oriented architecture simplifies upgrades to the latest release and ensures compatibility with new services over time.

- Integration & Compatibility: Developers can integrate functionalities from various sources
- Innovation & Expansion: Build new applications, features, or services that lead to a vibrant ecosystem
- Enhanced User Experience: Create feature-rich applications that better meet the needs and preferences of users
- Upward Compatible: Customizations and extensions are guaranteed to be compatible with future releases

ARAS INNOVATOR DEPLOYMENT OPTIONS

As an Application Platform as a Service (APaaS), the Aras Innovator solution can be deployed in various ways without losing capabilities. Aras Innovator is typically deployed as software-as-a-service (SaaS), allowing customers to leverage the world-class security, advanced DevOps capabilities, and expertise of Aras professionals as part of the offering.

If required, customers can own their own deployments within their internal data center or private or hybrid cloud strategy.

ABOUT ARAS

Aras is a leading provider of product lifecycle management solutions. Its technology enables the rapid delivery of flexible solutions built on a powerful digital thread backbone and a low-code development platform. Aras' platform and product lifecycle management applications connect users in all disciplines and functions to critical product data and processes across the lifecycle and throughout the extended supply chain. Visit **www.aras.com** to learn more and follow us on **YouTube**, **X**, **Facebook**, and **LinkedIn**.

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