Managing the Digital Thread Across Global Deployments

Bruce Bookbinder, Product Marketing, Aras

Bruce Bookbinder, Aras Corporation

- **Aras Corporation, Product Marketing Manager**
- **GE Power, Enterprise PLM Strategy, Master Data Management Leader**
- **Avon Products, IT Director; Product Development Applications and R & D**
- **Reader's Digest, Developer, DBA, Technical Trainer**
- **Control Data Corporation, Developer**
- **Kidder Peabody, Developer**

- **Pace University, MS Computer Science**
- **State University of New York, BS Computer Science**

Focus on Digital Thread

72 percent of manufacturing companies surveyed by PwC said they are dramatically increasing their level of digitization and expect to be able to be ranked as digitally advanced by 2020, compared with just 33 percent today. These companies are committing US$907 billion per year — about 5 percent of revenues — toward greater connectivity and smarter factories.

- Industrial Manufacturing Trends 2018-19, By Marian Mueller, Steve Eddy, Reinhard Geissbauer, Barry Jaruzelski

Scope of Digital Transformations

70 percent of respondents in a 2019 McKinsey survey said the scope of their organizations' transformation efforts were "Multiple business units and/or functions" or "Enterprise-wide".

Five moves to make during a digital transformation - McKinsey Digital

What Benefits Are Companies Looking For?

Productivity gains:
Deliver on-time product launches

The ability to rapidly respond to changing customer demands:
Improve product quality and support

Market expansion:
Support new markets, new service business models, create new product offerings

Development of a feedback loop for Next Generation Products:
Lay the foundation for next generation product development. Configuration and operating information can be shared backwards in the lifecycle to enable improved product designs, manufacturing processes and quality tests

Global Enterprise Deployments with Aras

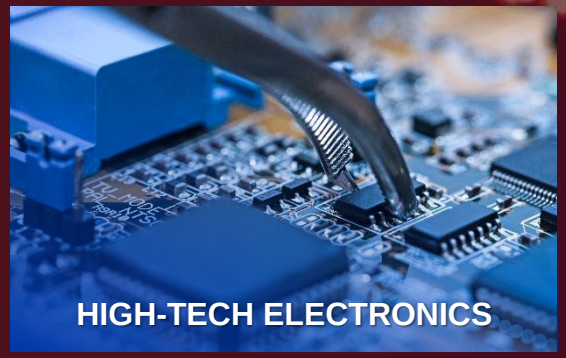
Global Product Data Interoperability Summit | **2019**

COMPLEX PRODUCTS AND PROCESSES

MULTIPLE TEAMS AND TOOLS

DISTRIBUTED GLOBAL PRESENCE

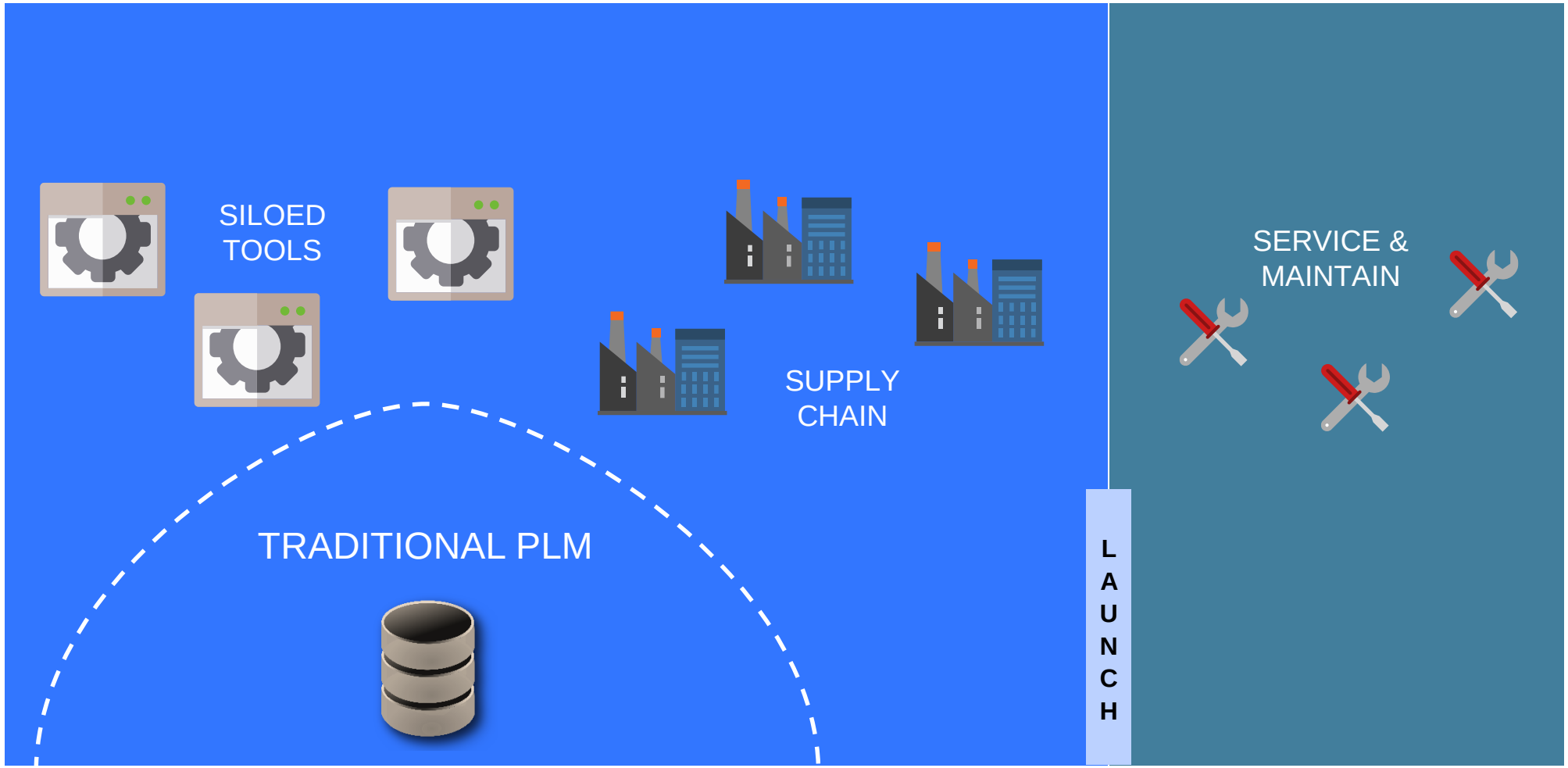
LARGE SUPPLY CHAINS



Traditional PLM

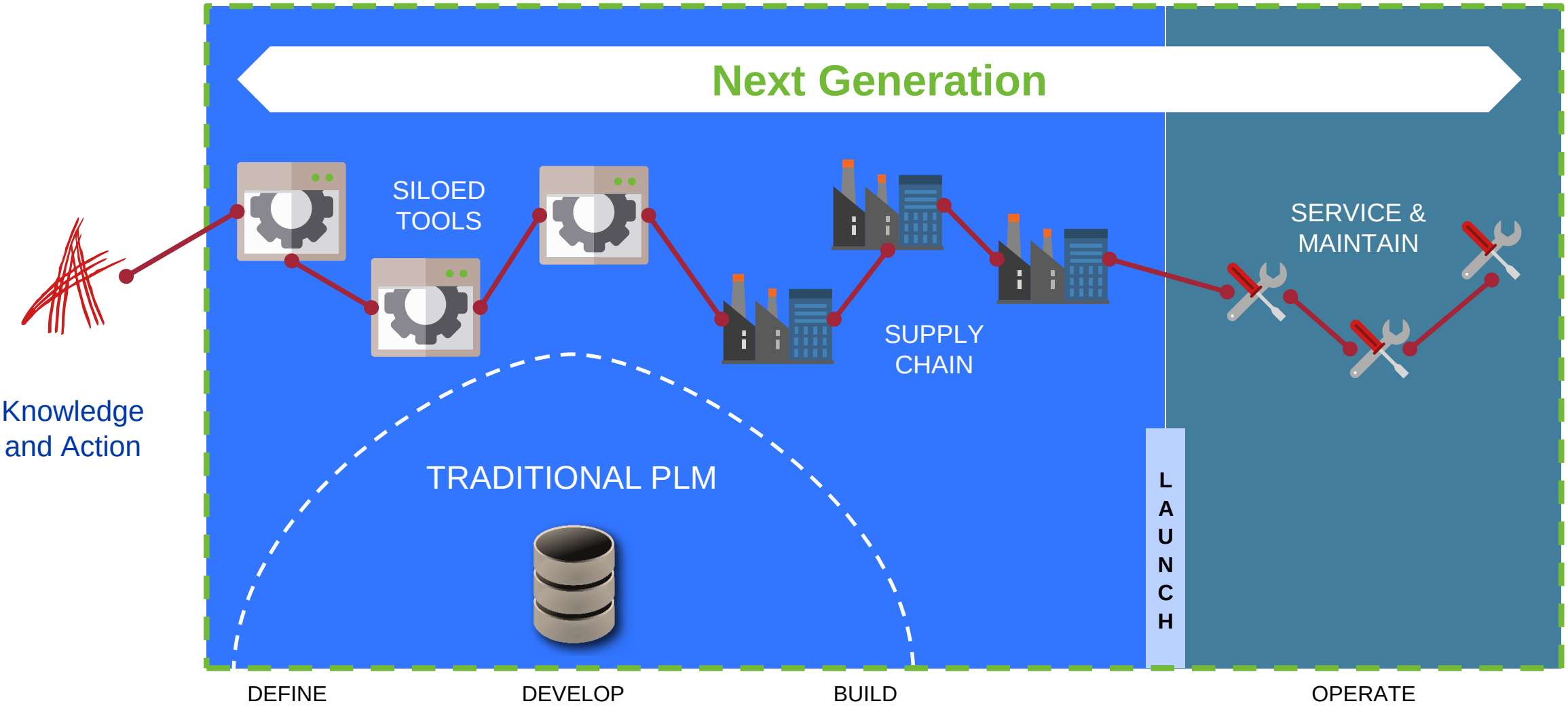
Global Product Data Interoperability Summit | **2019**

Knowledge and Action

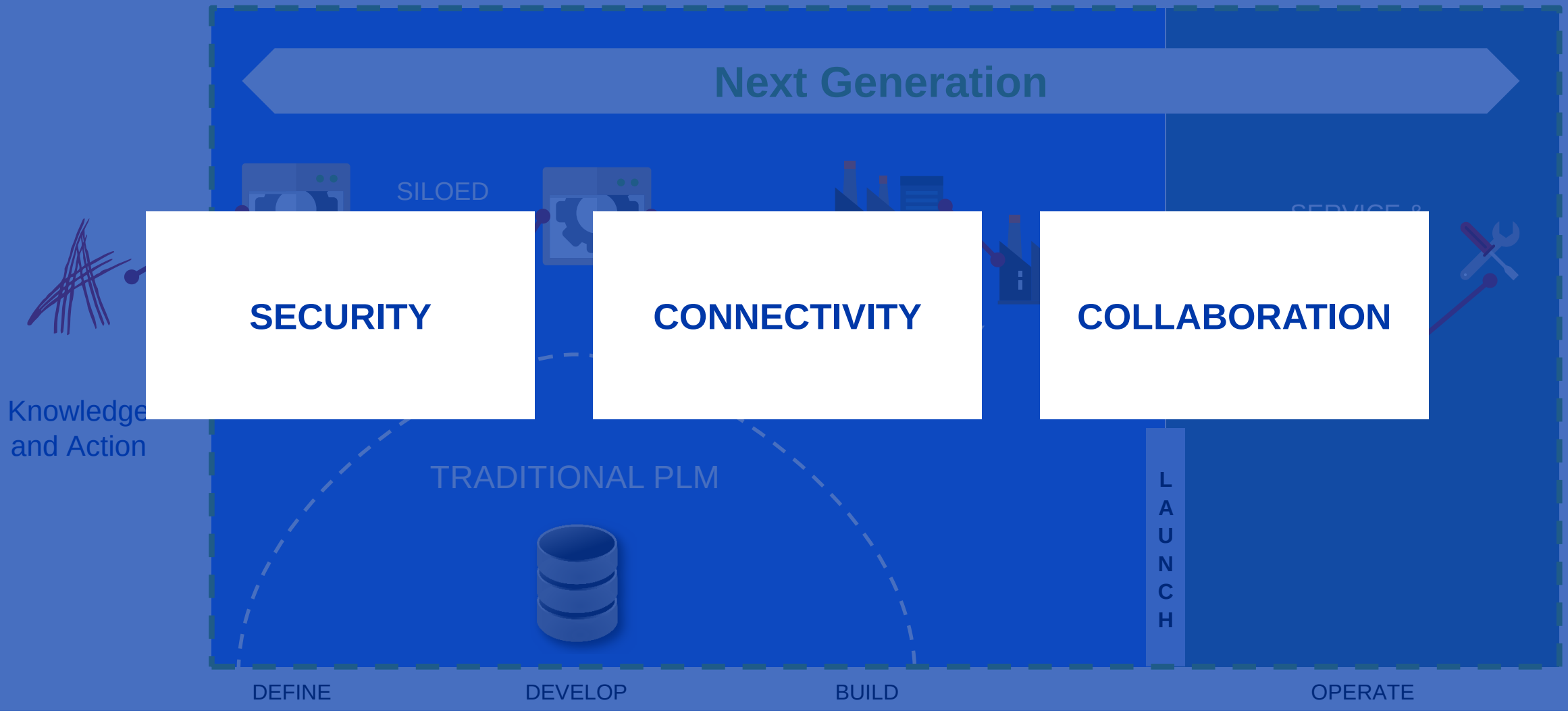


Managing the Digital Thread with Aras

Global Product Data Interoperability Summit | **2019**



Managing the Digital Thread with Aras

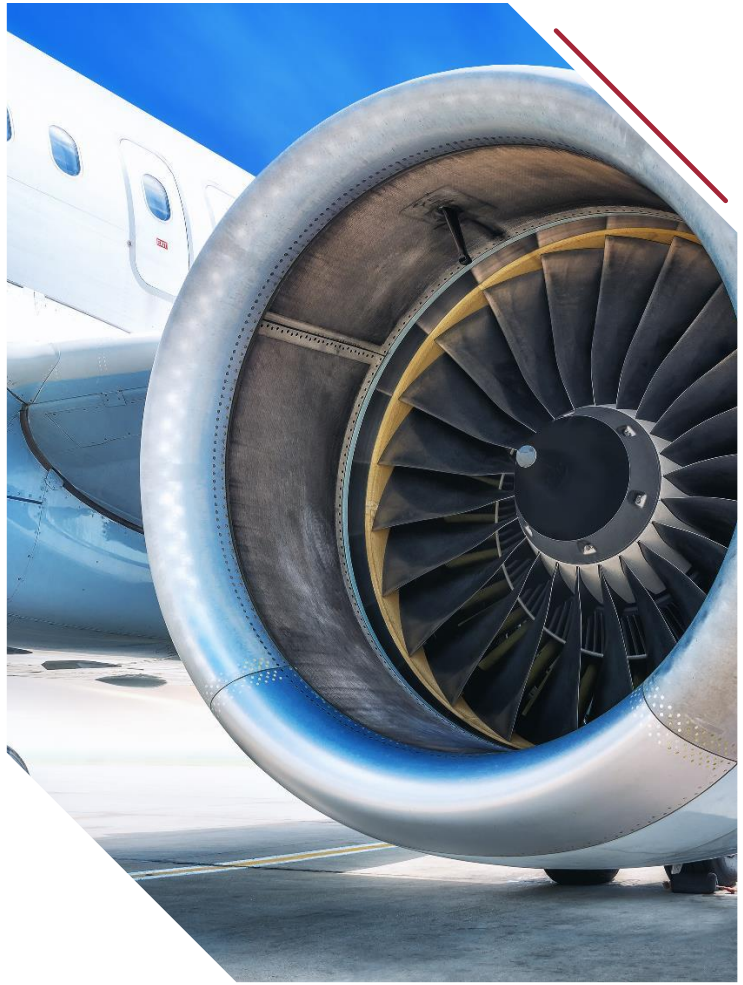


SECURITY

Secure Access for Global Teams: a “Big Three” US Automotive OEM

- **5,000+ engineers: 1 platform**
- **Manage change throughout the lifecycle for all brands**
- **Unified teams across vehicle and propulsion**

- Complex access controls: Users, Programs, Permissions
- Integrate with legacy systems for CAD, PDM
- Complex search, large amounts of data



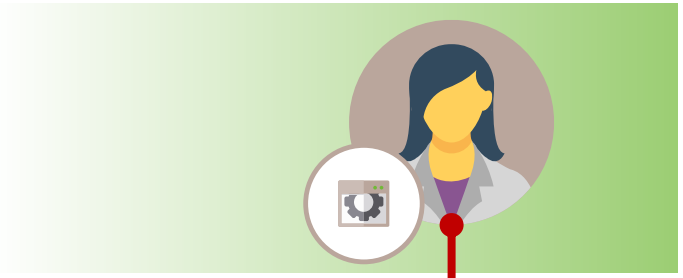
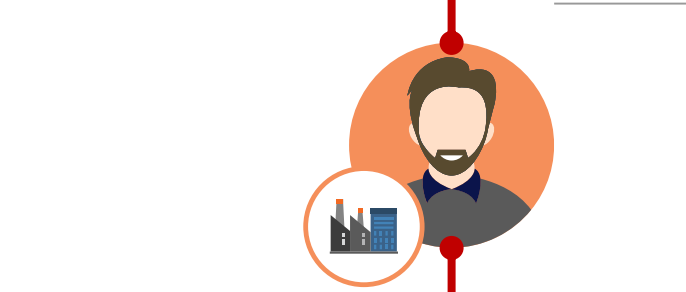
Secure Test Information Management: a Leading European Aerospace OEM

- **30,000 users: engineering, manufacturing, test, quality, and the supply chain**
- **First app: Web-based test information management**
- **Vision: deliver product definition beyond engineering**

- Manage test information across multiple teams and tools
- Provide visibility into test activities for key stakeholders
- Multi-site operation, including the extended enterprise

Security: Role-Based Permissions

aras INNOVATOR

	500 W (80 W / 170 W / 225 W)		
	✓	✓	✓
	✗	✓	✓
	✗	✓	✗

Security: MAC – Mandatory Access Control – Policy

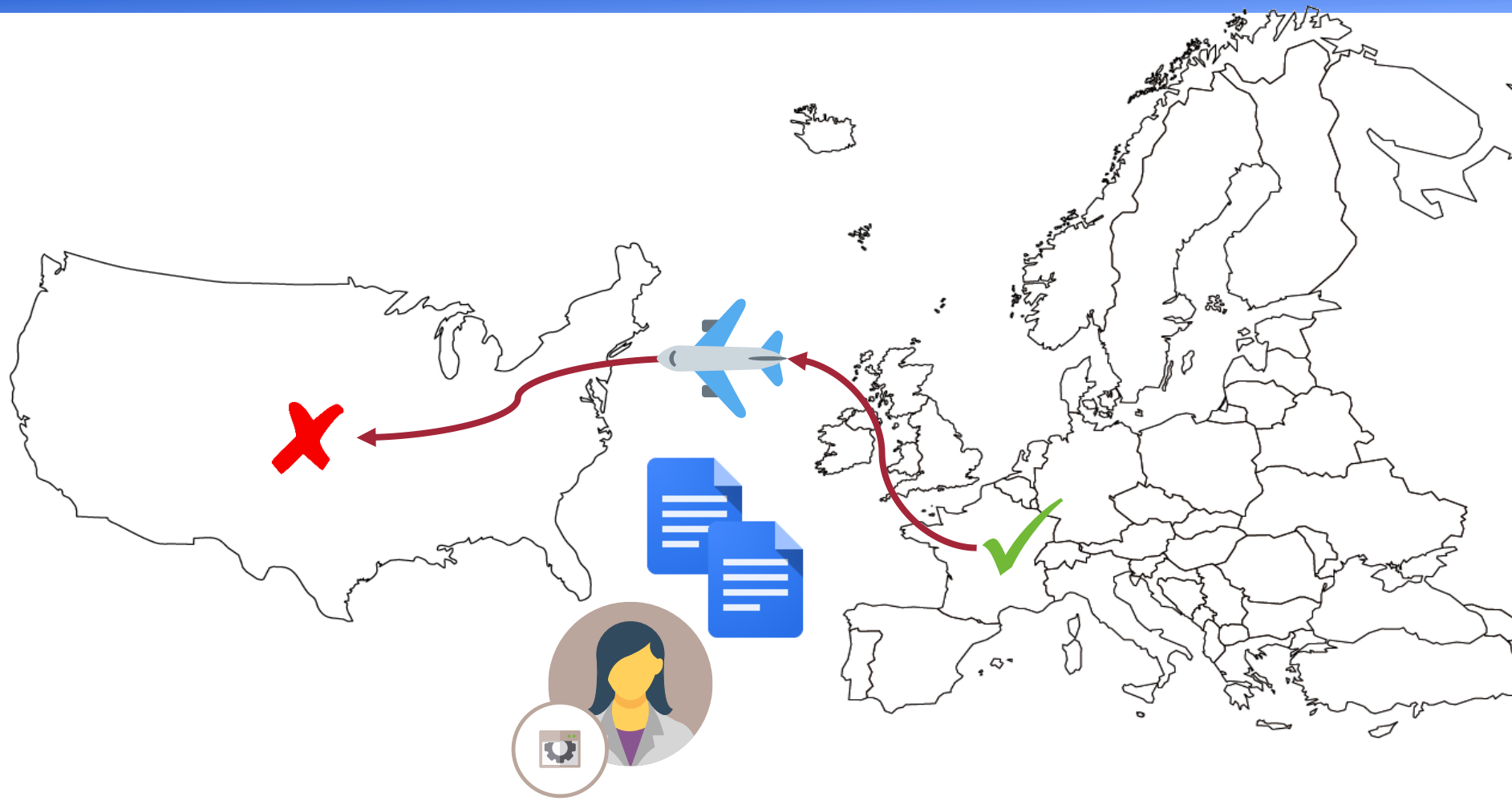
aras INNOVATOR

500 W (80 W / 170 W / 225 W)		
✓	✓	✓
✗	✓	✓
✗	✗	✓

Security: Environment-Based

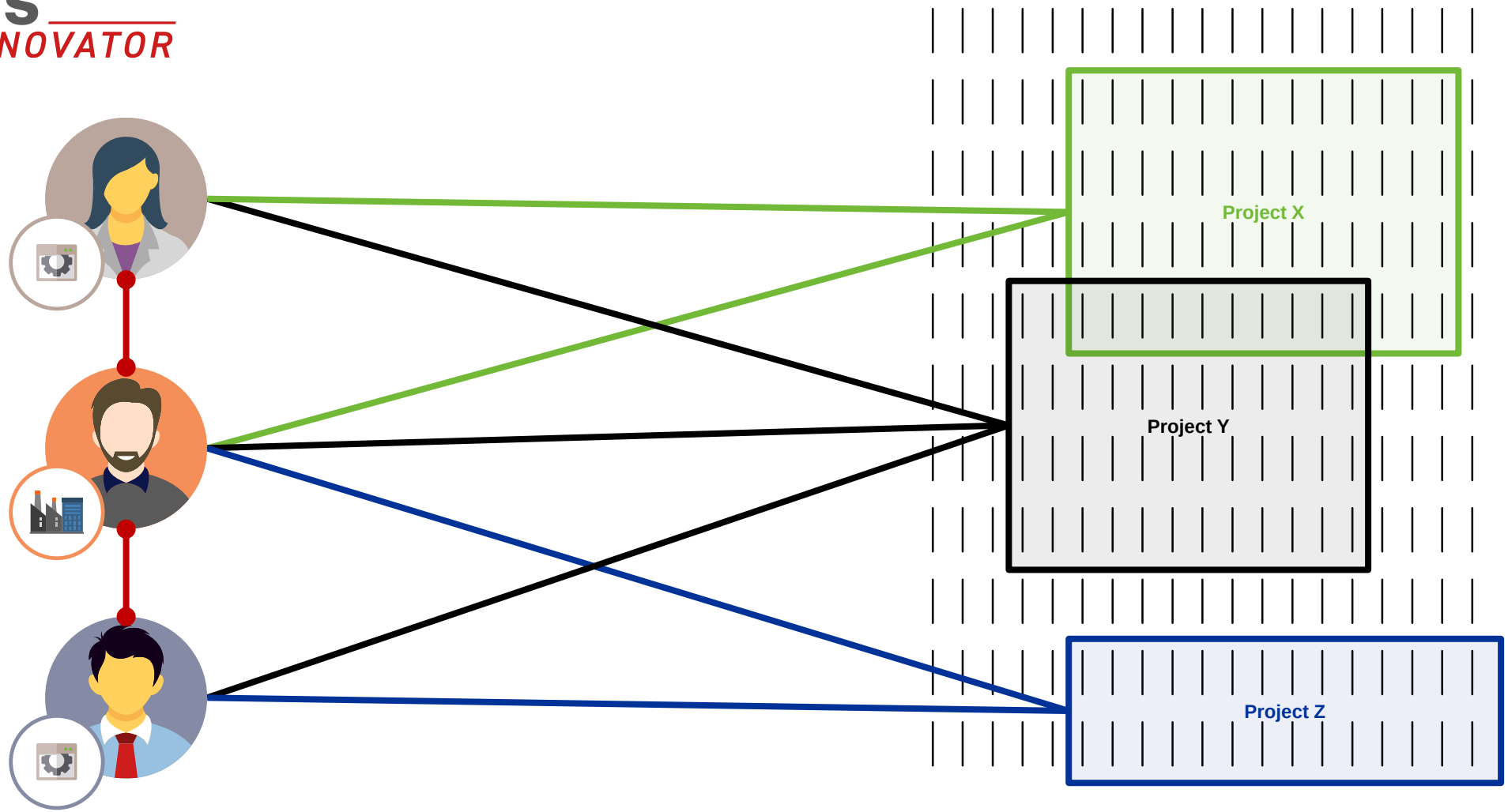
Global Product Data Interoperability Summit | **2019**

aras INNOVATOR



Security: Project-Based (DAC – Domain Access Control)

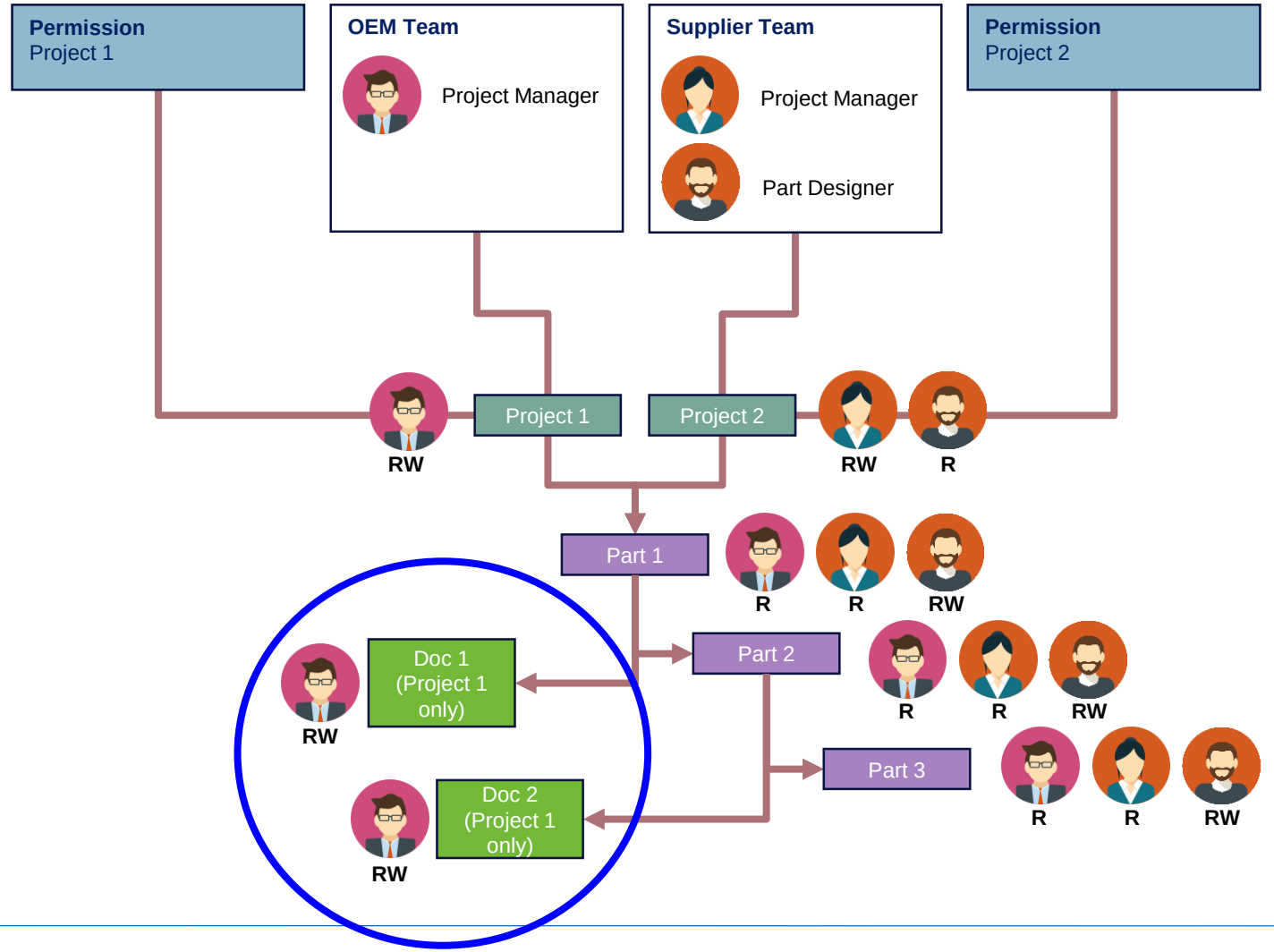
aras INNOVATOR



Security: Sophisticated Collaboration Scenarios

- **Program+Role Permissions**

- **Permissions for Items which are part of a project with users having specific project roles**



CONNECTIVITY

Connected Systems for Quality: a $2B+ US Medical Device Company

- **Fulfill requirements for design history file (DHF), document approvals, change control, and UDI**
- **Manage system proliferation to realize holistic quality**
- **Regulations across the US and China**

- Consolidate and manage product configuration baselines across multiple teams
- “PLM is an important part of the quality system process and solutions architecture”

Connected PLM & QMS: a Japanese High-Tech & Medical Device Provider

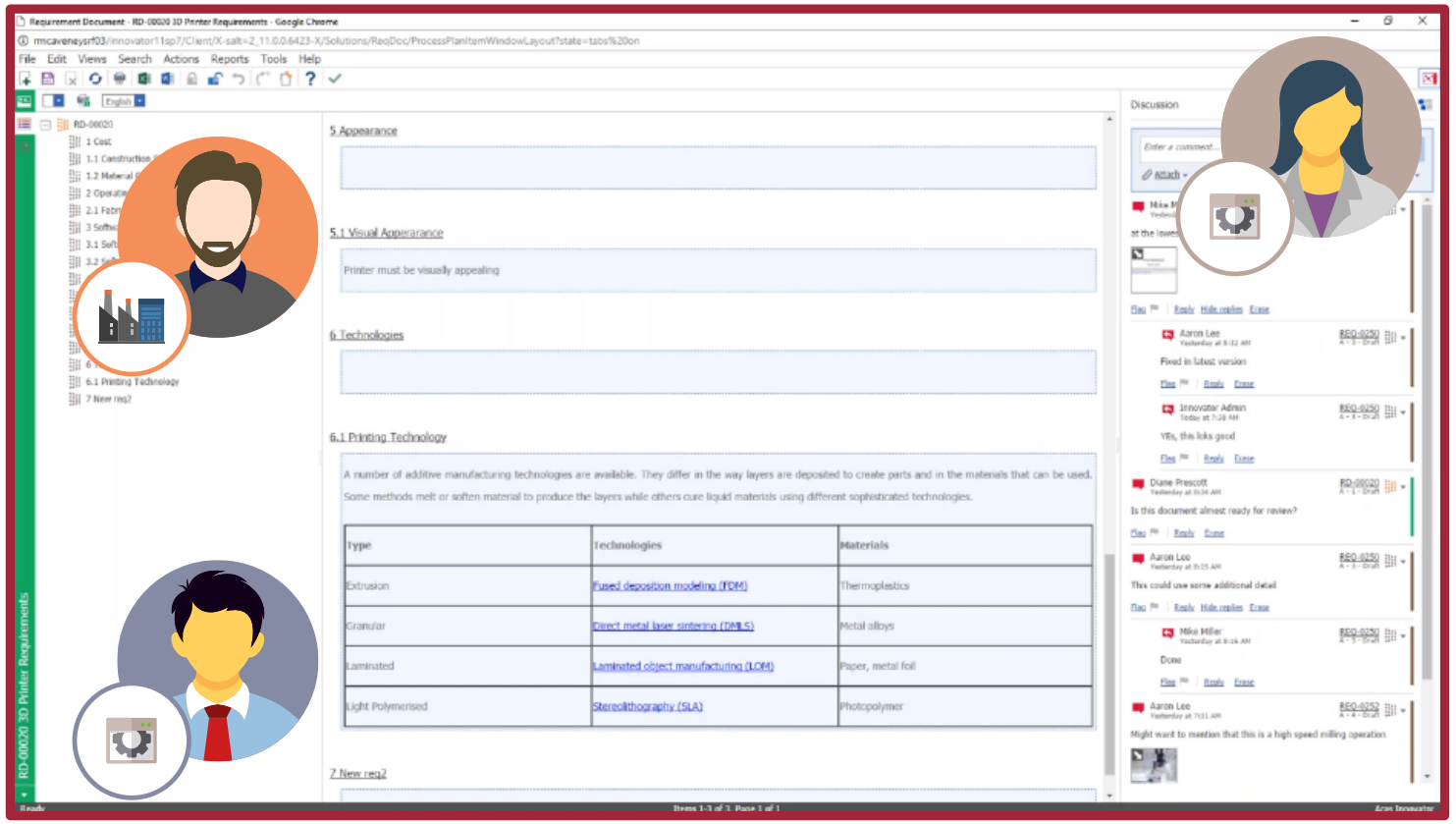
- **One, centralized system for PLM and QMS**
- **Improved compliance and audit-readiness**
- **Expand access for enterprise teams**

- Customizable to meet legacy requirements and new ones
- CAPA, Design Control, Production / process control, Document Control
- Easily output one consolidated PDF for audit purposes

Connectivity: Shared User Interfaces

Global Product Data Interoperability Summit | **2019**

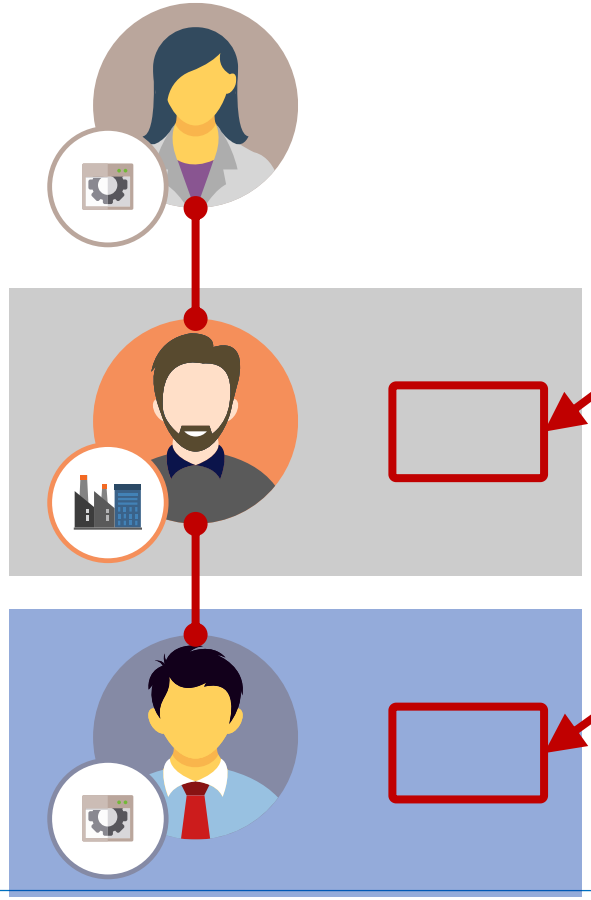
aras INNOVATOR

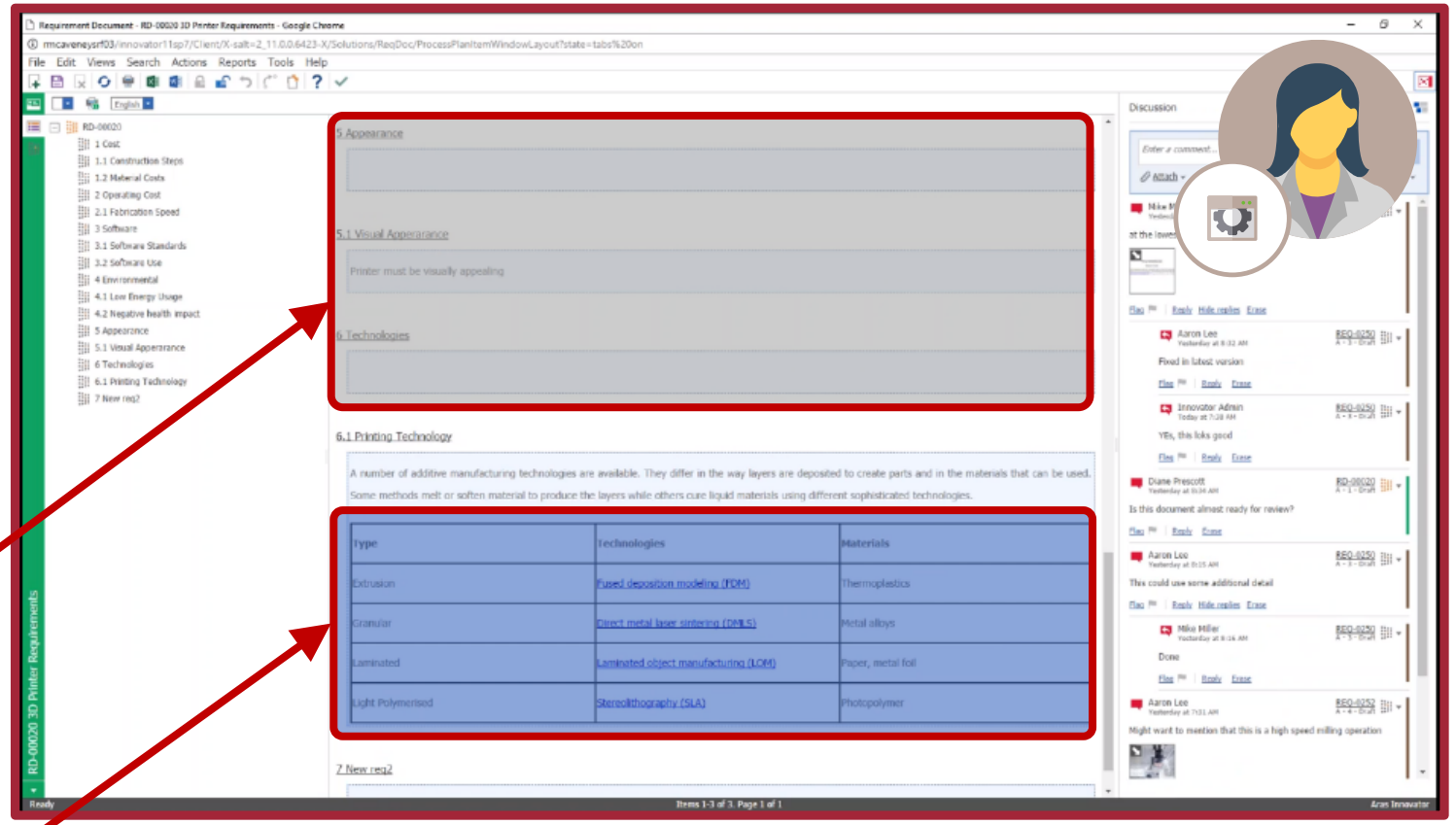


Connectivity: Federated Data

Global Product Data Interoperability Summit | **2019**

aras INNOVATOR

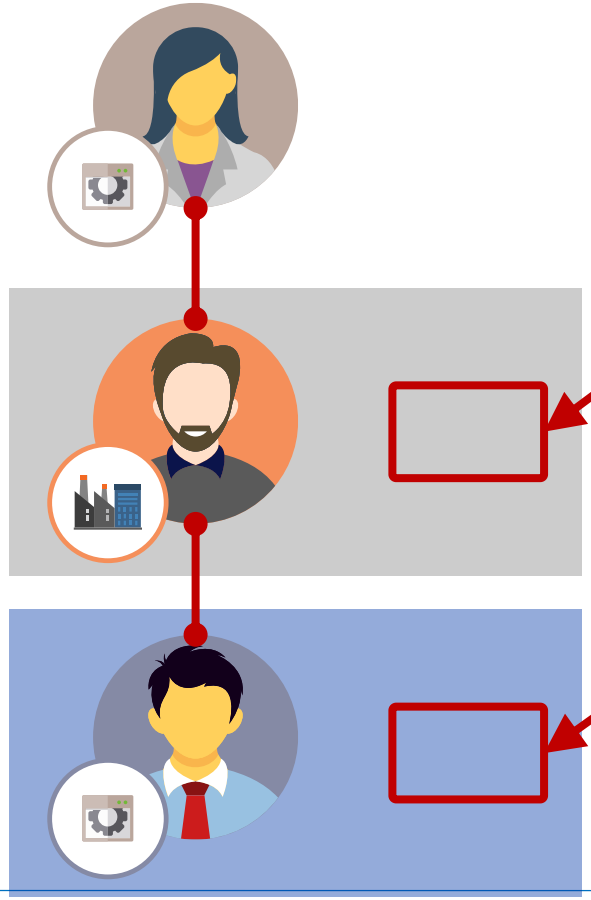


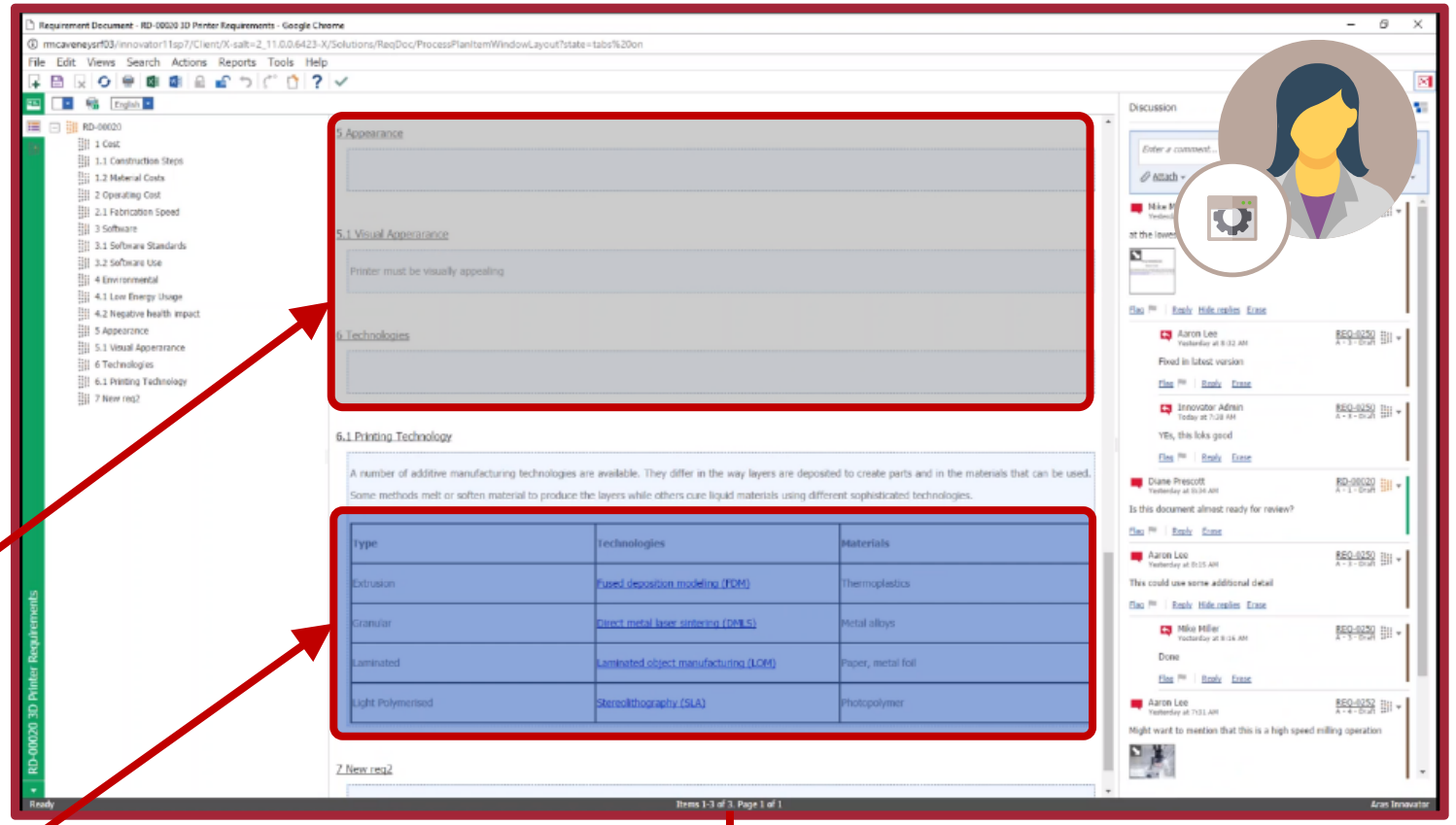


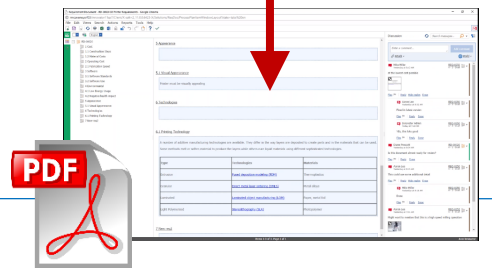
Connectivity: Document Snapshots

Global Product Data Interoperability Summit | **2019**

aras INNOVATOR





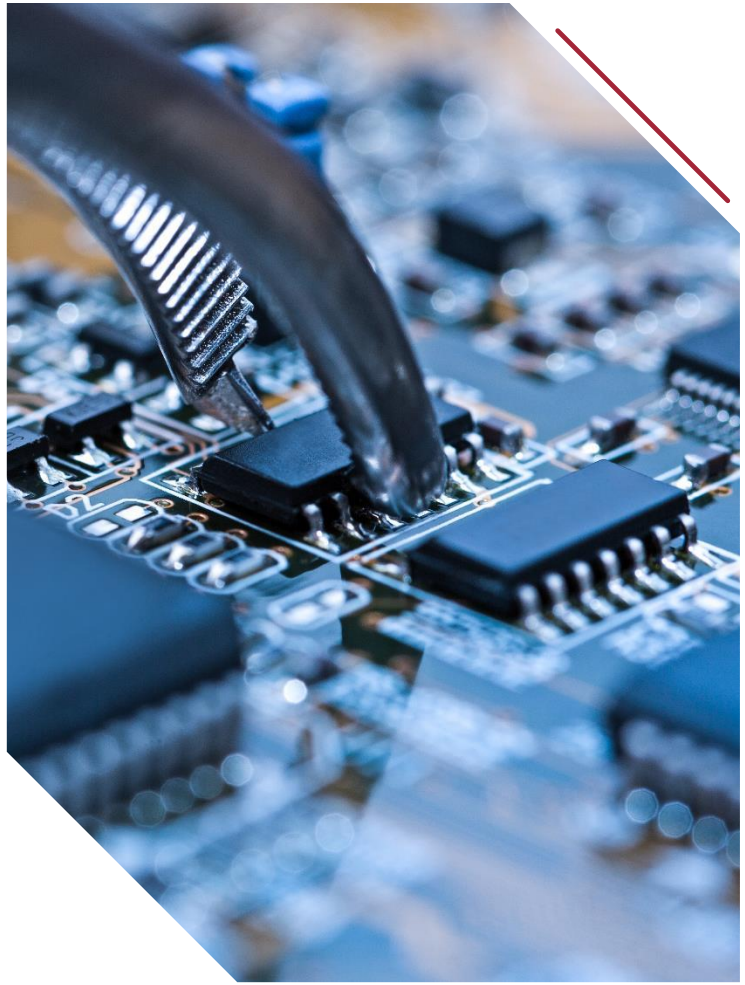


COLLABORATION

Secure Collaboration: a Top Japanese Heavy Industry / Aerospace OEM

- **1,000+ users across multiple companies**
- **Streamline both technical and business processes**
- **Share process innovations across industry groups**

- Support design, development, and production
- Implemented as platform-as-a-service for strategic agility
- Security features enhance business expansion overseas



Collaboration Advances On-Time Delivery: A Global High-Tech OEM

- **Meet growing demand for devices and cloud offerings**
- **Support hardware configuration and design**
- **Advance on-time design handoff to over 90%**

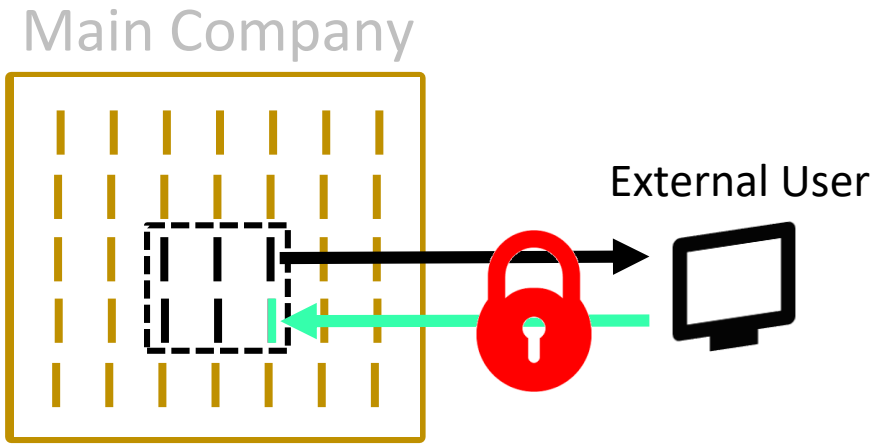
- Manage continuous change and improvements across hardware, tooling, and processes
- Involve more stakeholders in the change process
- Provide for effective communication across teams

Collaboration: Secure Global Collaboration

aras INNOVATOR

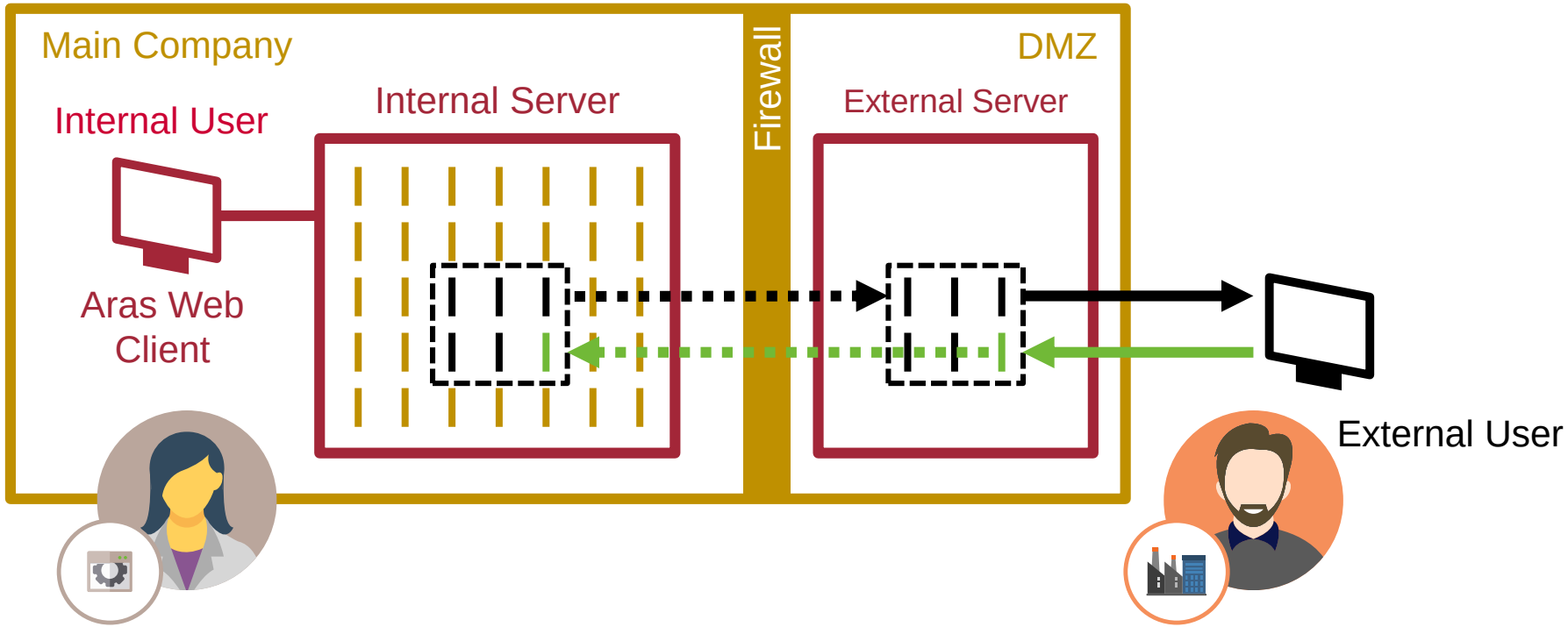
Secure Extended Enterprise Access

- **Connects external partners to engineering data, while providing secure access control for IP**
- **Support multiple architectures for collaboration:**
  - **OEM + Design & Build Partners**
  - **System Suppliers / Design Suppliers**
  - **Build to Print Suppliers & Tooling Suppliers**



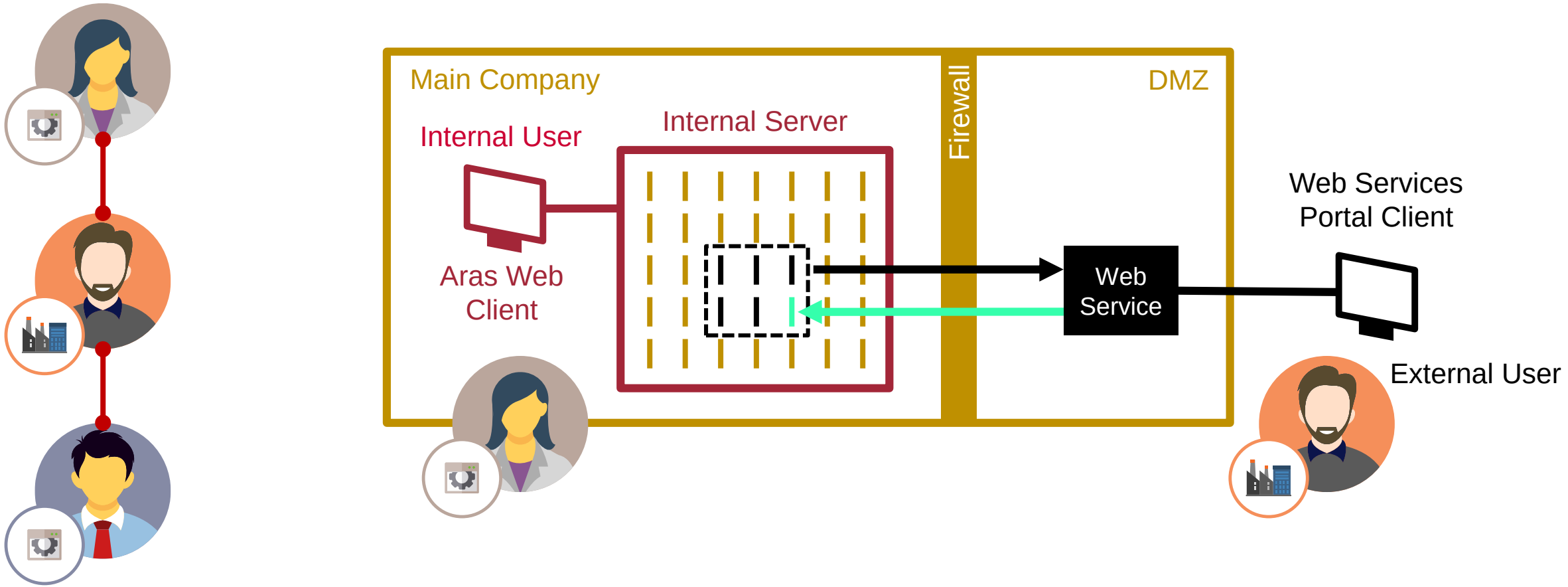
Collaboration: Secure External Access – Data Synchronization

aras INNOVATOR

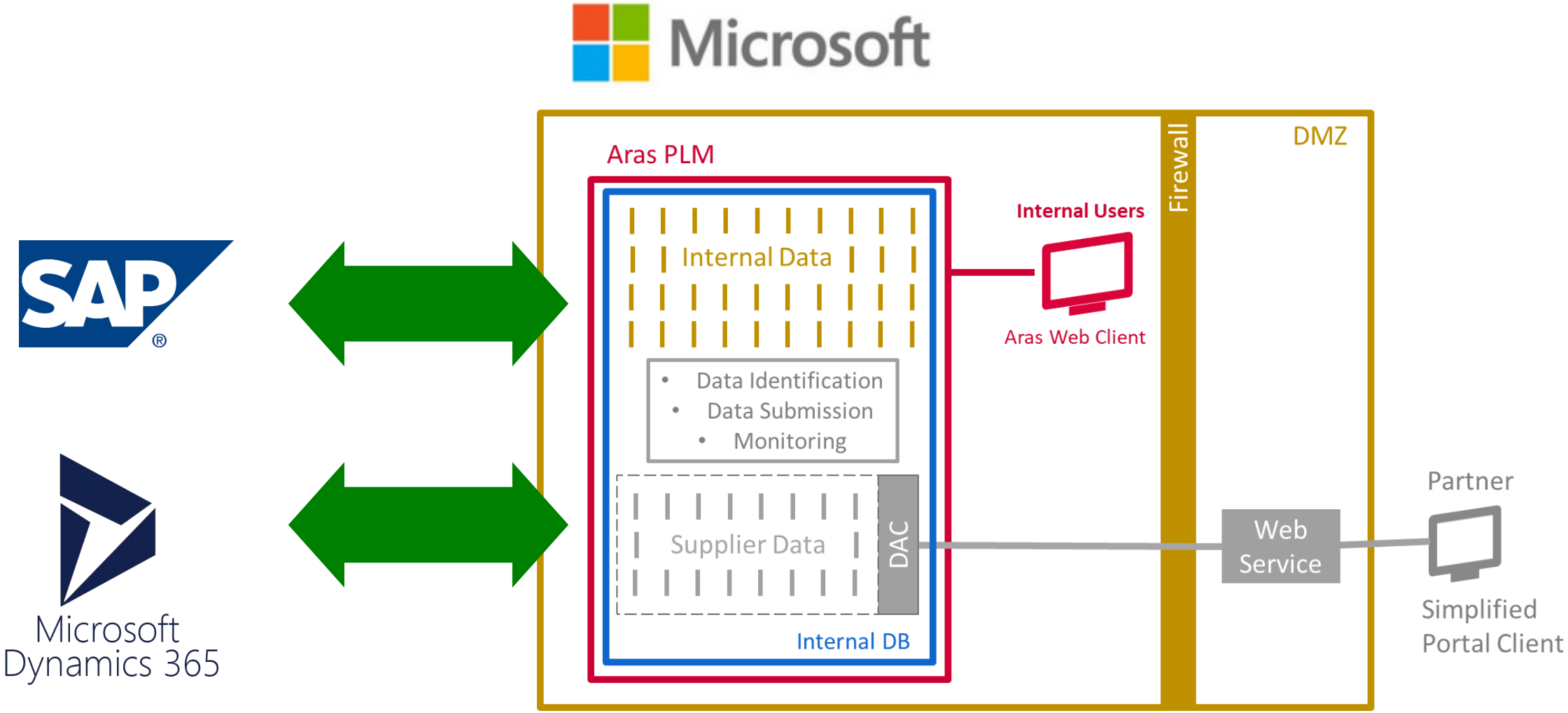


Collaboration: Secure External Access – Web Services

aras INNOVATOR

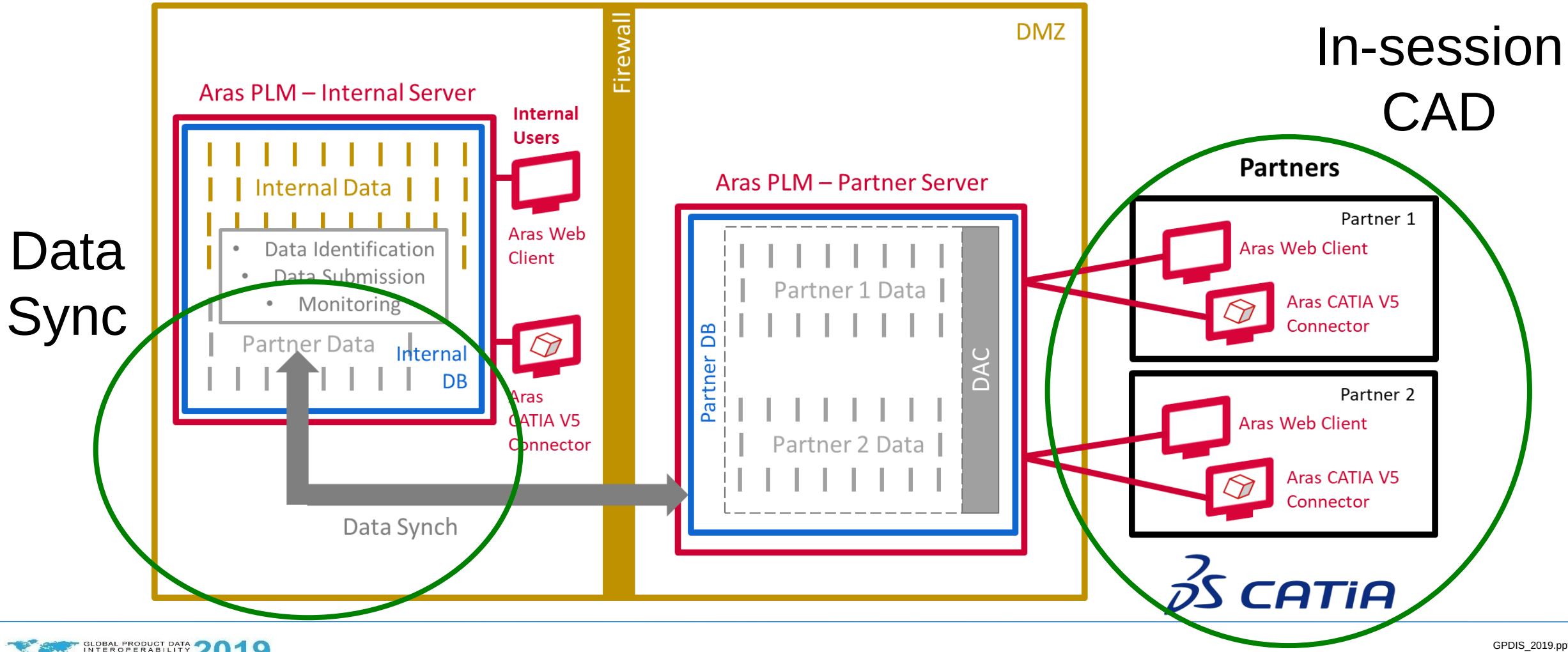


Deployment Example – Microsoft

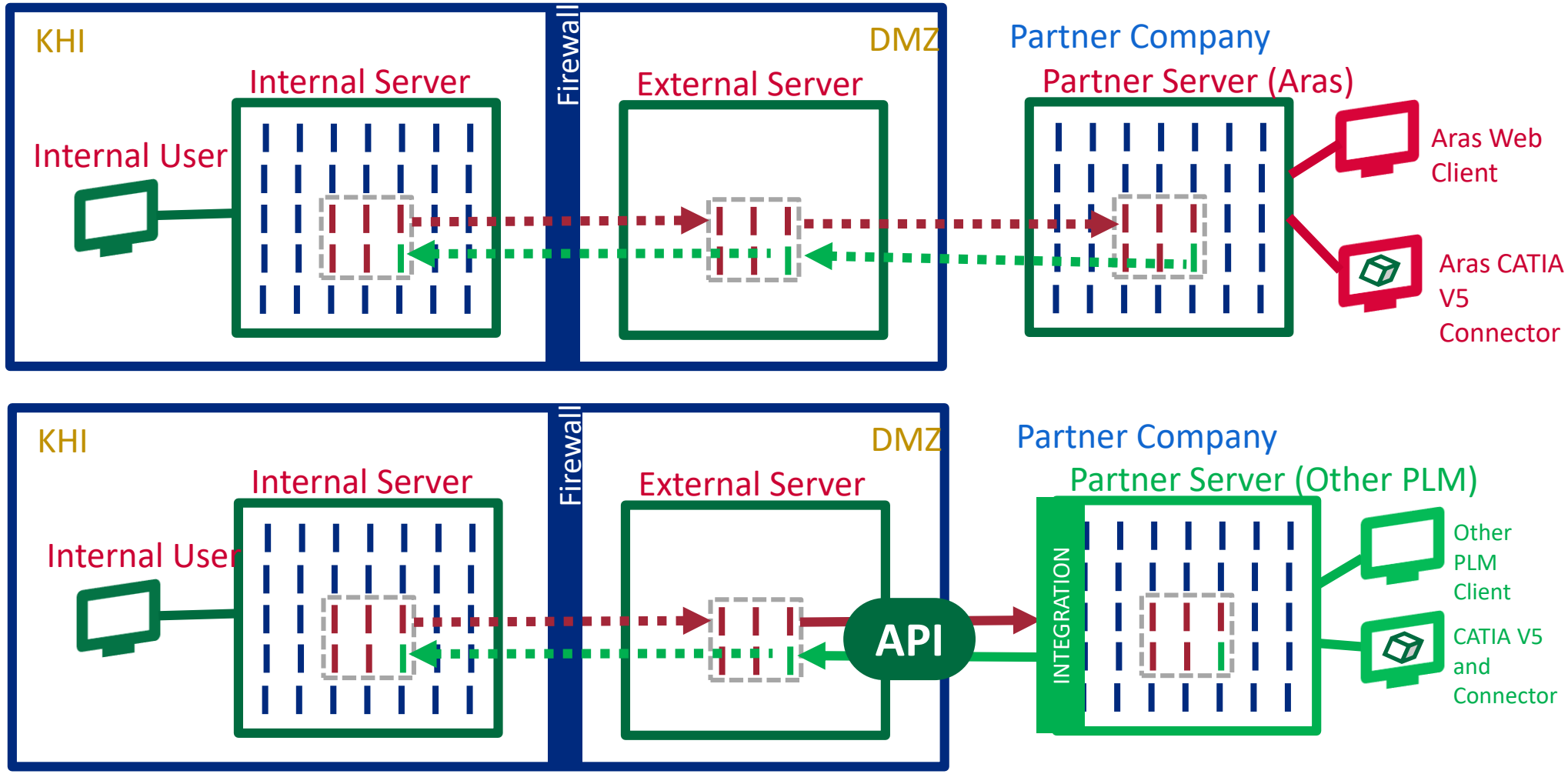


Deployment Example – Kawasaki Aerospace

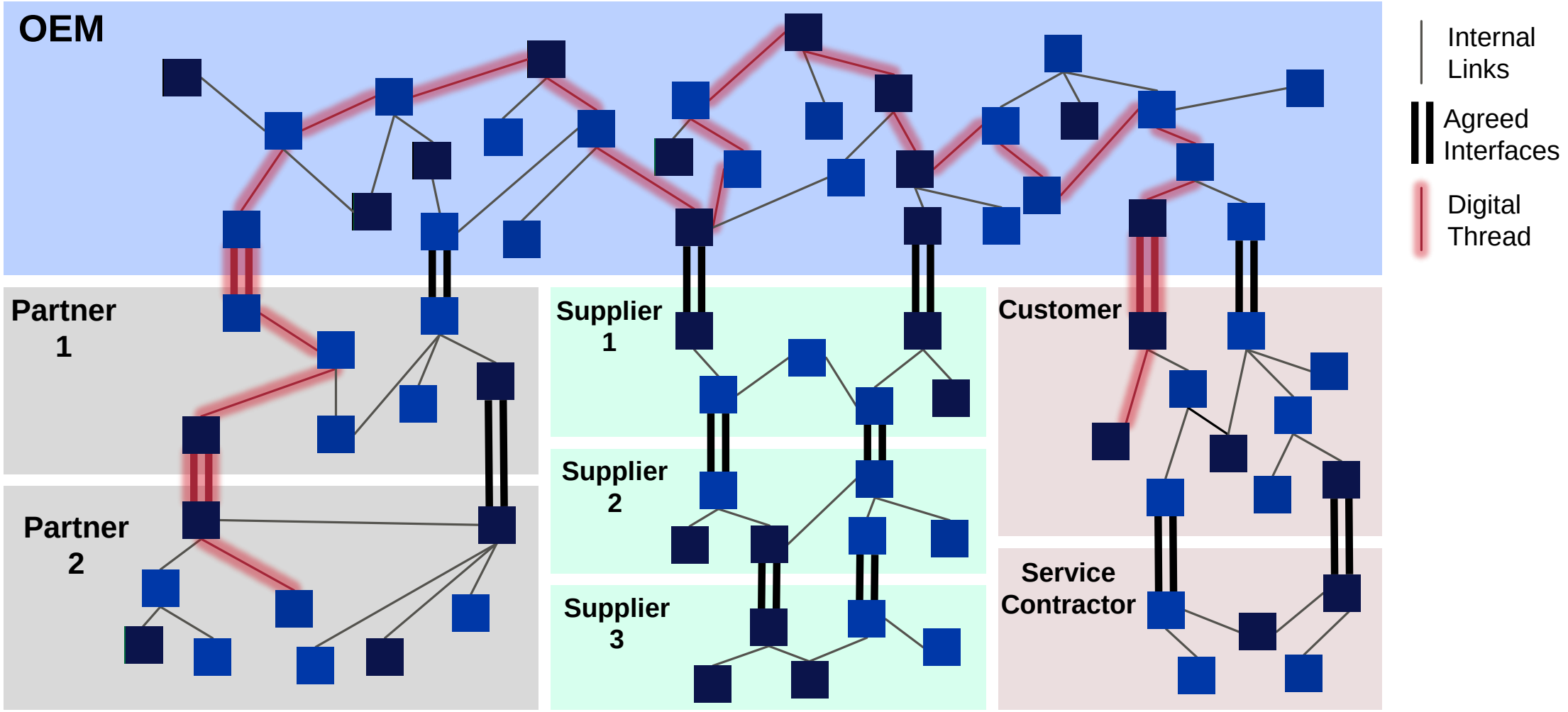
Kawasaki



Next Step – Kawasaki Aerospace



Conclusion: The Enterprise Digital Thread



THANK YOU