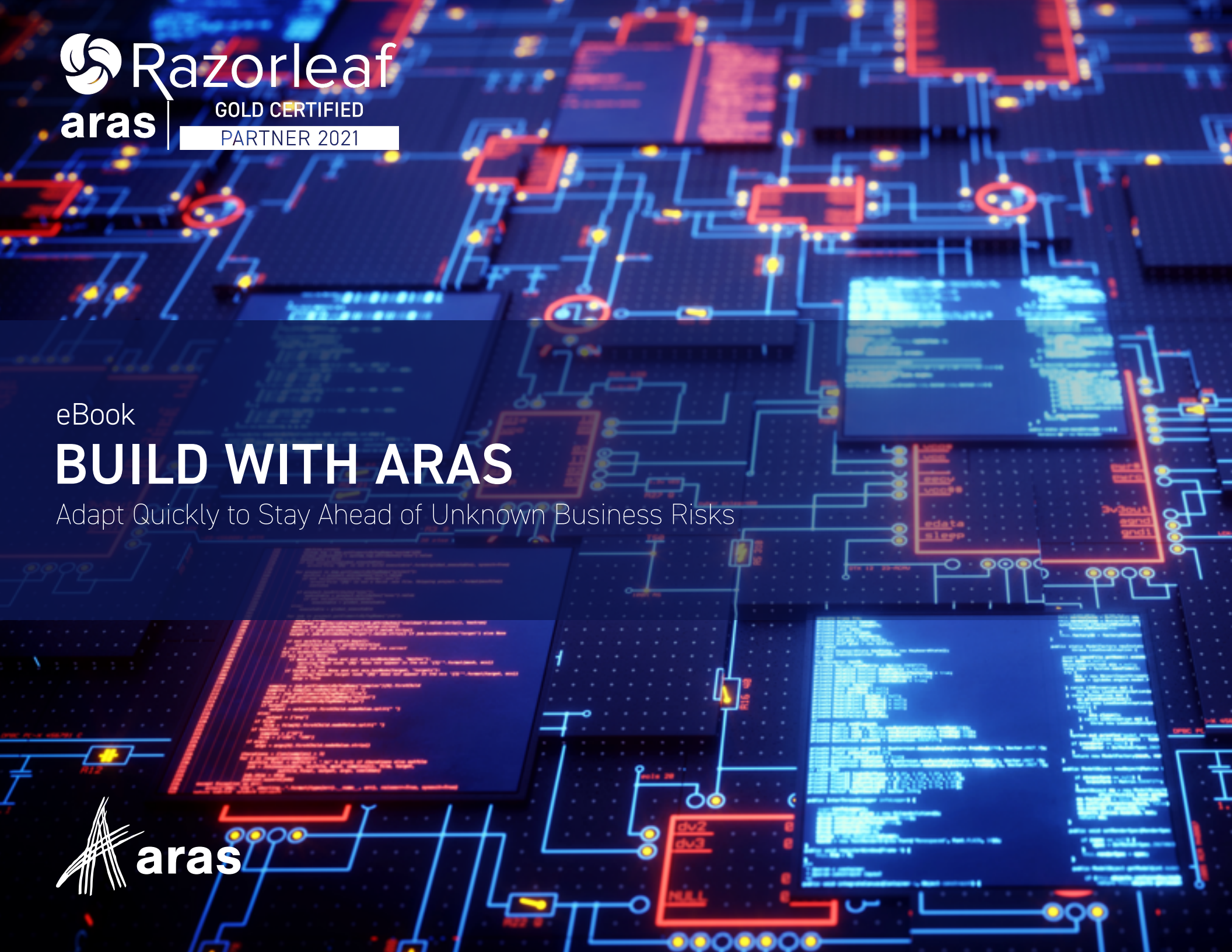

Razorleaf
aras
GOLD CERTIFIED
PARTNER 2021
eBook
BUILD WITH ARAS
Adapt Quickly to Stay Ahead of Unknown Business Risks
aras

TABLE OF CONTENTS

The Changing Ecosystem 3

Overheating Today's Technology *3*

Speed of Change *4*

Supply, Demand, and Costs *4*

Legacy Technology *5*

Functionality Gaps *5*

The Case for Innovation 6

Managing the Repeating Demand Cycle *6*

The IT Shift *6*

What does Building with Aras Mean? 7

Aras' Enterprise Innovation Platform is Bigger than PLM *7*

How Building With Aras Works 8

The Resilient Platform *9*

The Aras Platform Design *10*

Aras' Industrial Low-Code Modeling Engine *10*

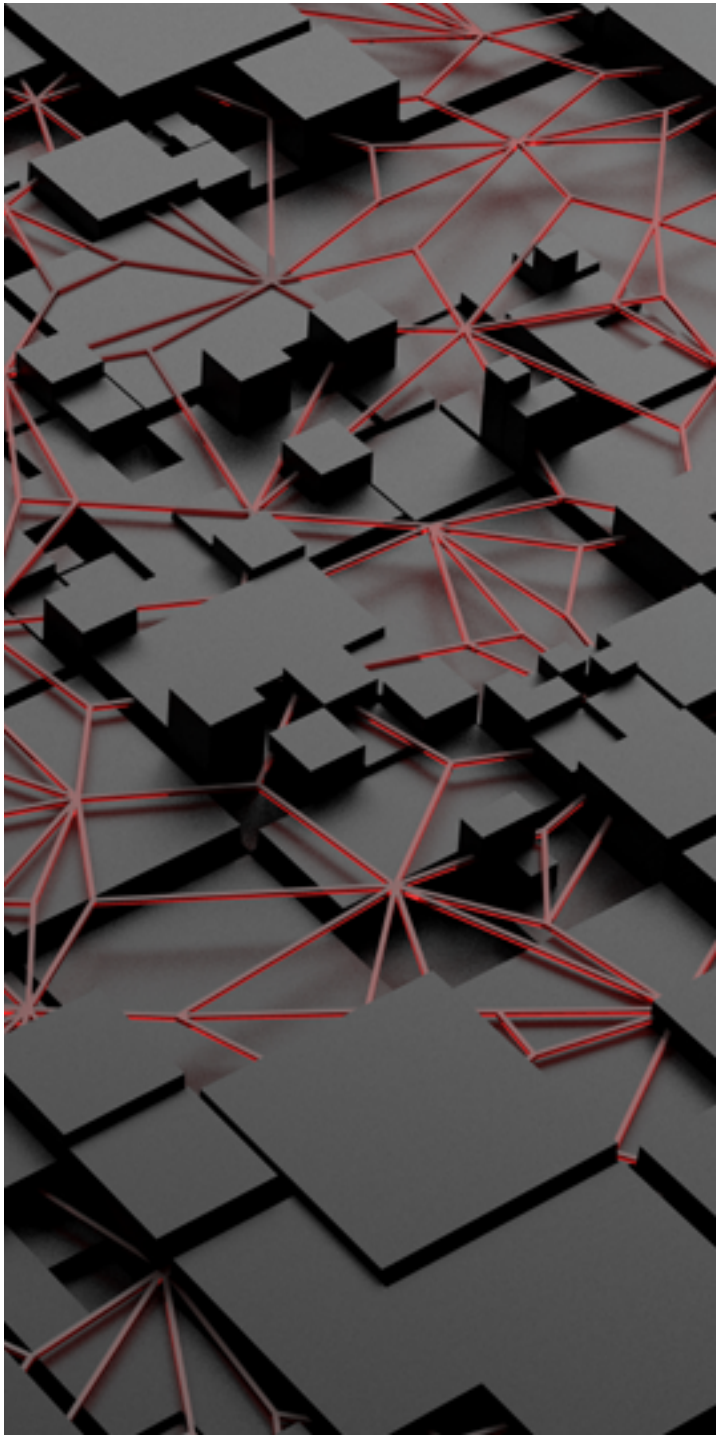
How Does Aras' Industrial Low-Code Modeling Engine Work? *11*

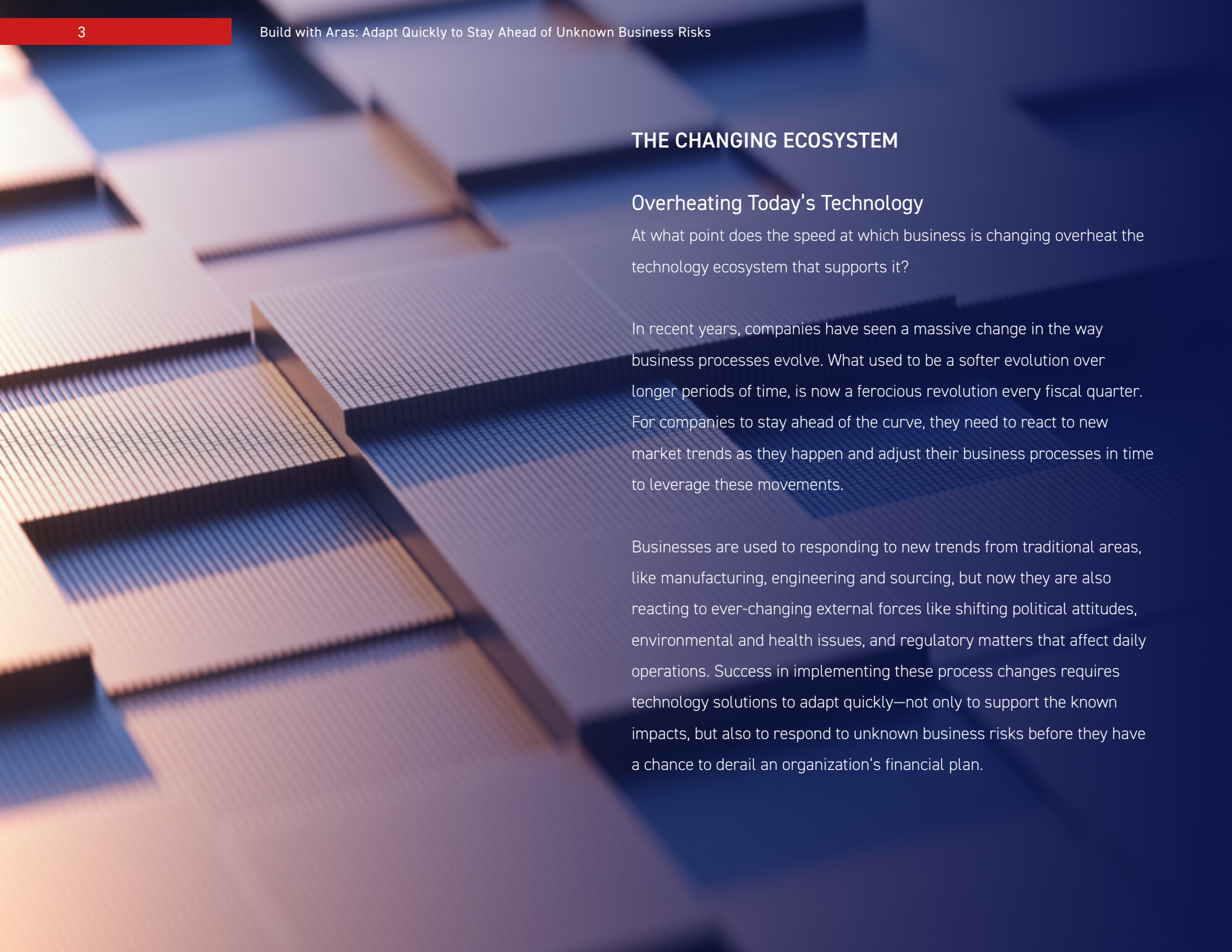
Integration *12*

Creating an Innovation Process Within Your Organization 12

The Benefits of Being Ahead of the Curve 13

Start Your "Build With Aras" 14





THE CHANGING ECOSYSTEM

Overheating Today's Technology

At what point does the speed at which business is changing overheat the technology ecosystem that supports it?

In recent years, companies have seen a massive change in the way business processes evolve. What used to be a softer evolution over longer periods of time, is now a ferocious revolution every fiscal quarter. For companies to stay ahead of the curve, they need to react to new market trends as they happen and adjust their business processes in time to leverage these movements.

Businesses are used to responding to new trends from traditional areas, like manufacturing, engineering and sourcing, but now they are also reacting to ever-changing external forces like shifting political attitudes, environmental and health issues, and regulatory matters that affect daily operations. Success in implementing these process changes requires technology solutions to adapt quickly—not only to support the known impacts, but also to respond to unknown business risks before they have a chance to derail an organization's financial plan.

Speed of Change

It is hard to predict where and when an individual change to a business's operating model may originate but, in today's environment, that really is not important since many changes often erupt at the same time, from many different sources.

While supply chain processes may be forced to change due to strategic shifts in sourcing, or perhaps an urgent health pandemic, businesses need to rapidly adjust the way their operations work. If they cannot make the shift, millions or sometimes billions of dollars are at risk.

Change can come from internal sources when a company streamlines their development processes or externally when governments institute tariffs—directly impacting the way their business operates. Either way, there is limited time for debate because time really is money.

Supply, Demand, and Costs

The high level of digital transformation investments that's expected to be made over the coming years is considerably outpacing the growth of software and system developers, leading to increased wages and competition for talented IT resources*. This situation will inevitably create organizational and financial constraints to implement or change technology solutions. IT management will need to create new project paradigms to manage the costs and timelines of system developments.

* Worldwide spending on the technologies and services that enable the digital transformation of business practices, products, and organizations will reach $2.3 trillion in 2023.
IDC Worldwide Semiannual Digital Transformation Spending Guide

Legacy Technology

Large enterprise applications have taken a secure foothold in application architectures of large companies. In most cases these applications have been heavily customized to meet an organization's specific needs. Unfortunately, this combination has left inflexible systems unable to advance as quickly as the business demands. Software vendors struggle to support multiple emerging trends while heavy customizations and technical debt further complicate the challenges of moving forward with these existing systems.

Functionality Gaps

When new trends develop, there is little time to react. With inflexible systems and limited technical resources available, companies scramble to implement solutions to fill their immediate needs—often without a clear technical strategy in mind.

Building stand-alone applications may create quick and inexpensive results, but the long-term impacts of these systems contribute to inconsistent data quality, growing support costs, detached end-to-end processes, and disconnected user experiences.

These tactical and inexpensive solutions not only have a higher financial cost over time, but inevitably impact the support capacity of the IT organization.

THE CASE FOR INNOVATION

Managing the Repeating Demand Cycle

Organizations are entering a new world where major investments are being made to change business models one year—only to find that they will require yet another major investment the following year to change the same processes. Since this reality has become the new norm, IT organizations have realized that it is simply impossible to stay ahead of the curve using yesterday's technology and methodologies. Investing in inflexible applications that require considerable customizations to support new requirements or waiting for your large software vendors to develop new solutions in their enterprise application for the newest trends are just not going to meet your business' needs.

The IT Shift

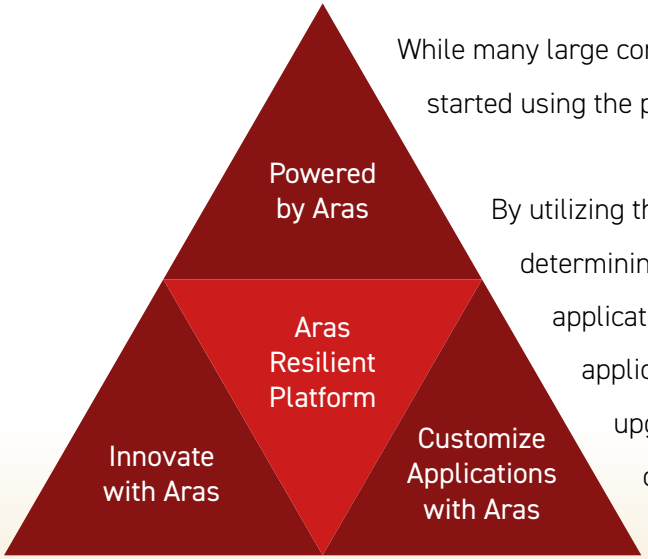
Innovative solutions cannot be created without innovative tools. The center of IT's shift to support the new paradigm focuses on instituting innovative platforms and tools enabling businesses to create innovative processes. Time and cost constraints are pushing developers to use toolsets that facilitate quicker development times and resilient platforms to support future, unknown business and technical requirements without major system redesigns.

These tools give IT departments new options to stay ahead of the curve. They will be able to strategically customize applications quicker than ever through low-code functionality without sacrificing the ability to execute future upgrades in a timely fashion. Additionally, they will not be constrained by their software vendor's schedules to deliver new functionality. They will have the ability to rapidly build innovative applications to support needed functionality not available in their current enterprise environments, rather than waiting for their software vendor to prioritize the effort.

WHAT DOES BUILDING WITH ARAS MEAN?

Aras' Enterprise Innovation Platform is Bigger than PLM

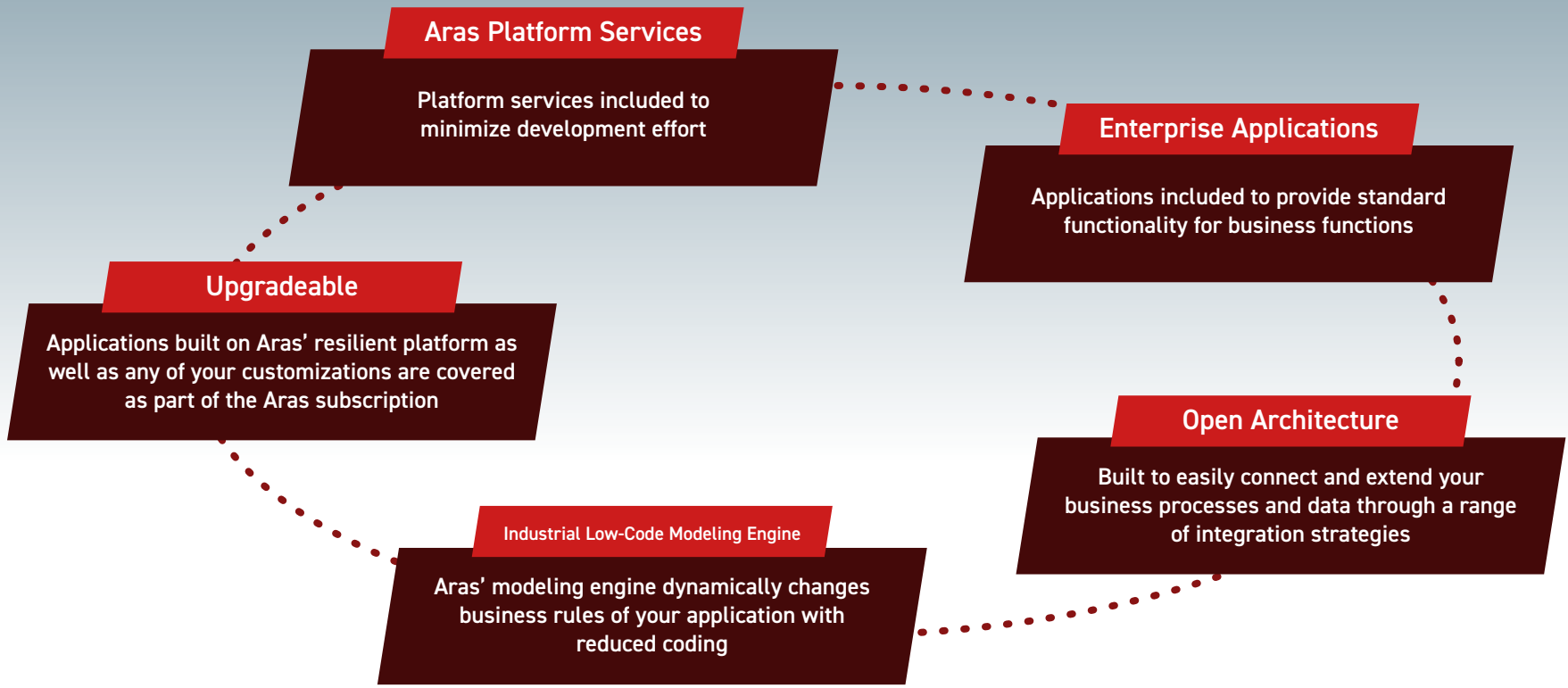
Success in today's fast changing business world requires technology solutions to adapt quickly in response to unknown business risks.



While many large companies use the Aras platform and applications to support PLM functions, some have also started using the platform as an innovative development tool for business processes outside of traditional PLM.

By utilizing the Aras platform for new development, users have options to choose from when determining how to solve today's challenges. Whether the best step forward is to customize an existing application, integrate with another enterprise application, or build a new application to fill an application "gap," the Aras platform will ensure the solution will be strategic, sustainable, and always upgradeable. Technology professionals using the Aras platform also have the support of a large corporate community which helps shape the product's roadmap, contributes solutions, and inspires innovation.

Regardless of the approach an organization uses to meet their business partners' needs, system architects can be confident the Aras platform has the strength to meet the complexity and size of any application, even as it grows in the future. After all, organizations are building their new internal applications on the same platform that a growing number of companies have already used to power their commercial applications.



HOW BUILDING WITH ARAS WORKS

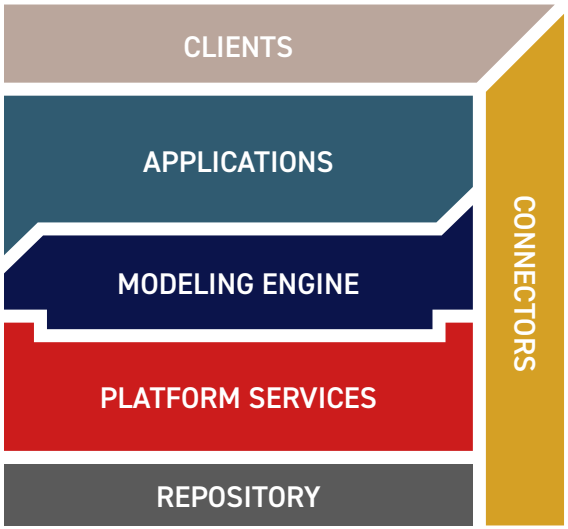
When a company chooses to Build with Aras, it means they are building on top of a resilient platform specifically designed for fast adaptation to change.

By utilizing a combination of the Aras platform services, enterprise applications, and industrial low-code modeling engine in an open architecture, the solution is sustainable, and positioned to move forward quickly. Users who build with Aras will:

- Continue innovating new solutions across your end-to end-process
- Customize functionality to meet specific requirements not currently available in your application architecture
- Integrate data into your company's digital thread, enterprise applications, and external systems
- Know their work is upgradeable by design

The Resilient Platform

To stay relevant in today's business environment, the ability to adapt to business changes is fundamental to the design of product development software. To meet an organization's needs in a new generation of product development software, the platform needs to be so adaptable that it not only supports change, but also encourages it.



The design must include the ability to customize business logic as part of the overall platform but not necessarily based on continued code development. The outcome of system customization cannot add significant effort to future development and testing. It should not multiply the risk of adding bugs, data issues, or, most importantly, technical debt and complexity to the environment. With the high volume of changes implemented into today's systems, the capability of the environment to continually absorb changes and grow cannot decrease over time.

To meet the needs of the next generation of product development, the Aras platform is designed with the following principals:

- **Business process adaptability**
  Reducing cycle time for business process changes without disrupting business operations or strategic initiatives
- **System customizations**
  Customizations without impacting future upgrades or creating crippling technical debt
- **Technical evolution**
  Adapting new and improved technology to legacy systems without extensive redesign efforts
- **Data transparency**
  Accessing and integrating to the data model without dependencies to the native software

The Aras Platform Design

By using the design principles of the resilient platform, Aras developed the following model that drives today's platform and provides the ability to adapt to future technologies.

For more details on the Aras Platform Design, read the white paper.

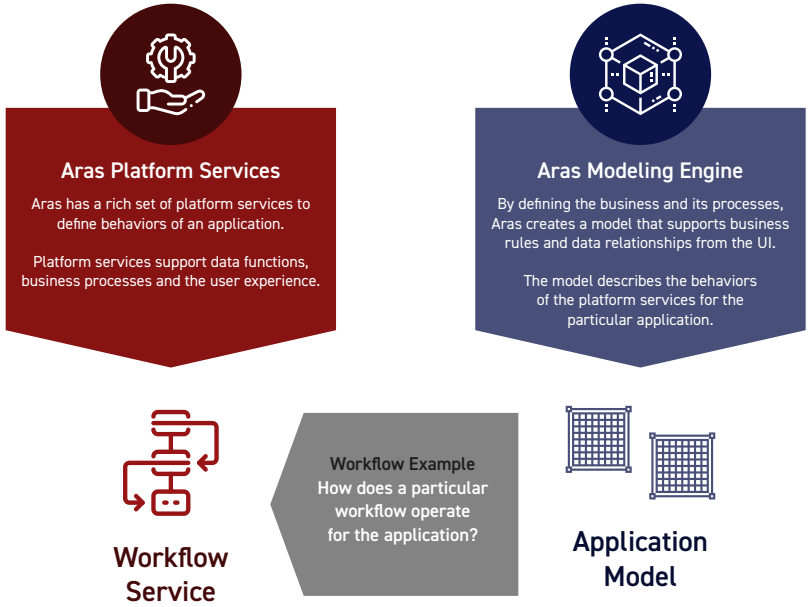
Aras' Industrial Low-Code Modeling Engine

While many companies are using the term "low-code" as a new concept to create applications, it has actually been around for decades. Low-code software development tools are an excellent approach to creating apps that support simple system functions. The catch is, that over time these solutions often create an unwieldy system architecture made up of countless small apps that do not necessarily work well together and will inevitably have limited support. What starts as a quick and inexpensive solution, becomes a complex maze of apps with limited support to upgrade and modify. Furthermore, the long-term issues from inconsistent data, and risks from architecture complexity, create high costs over time.

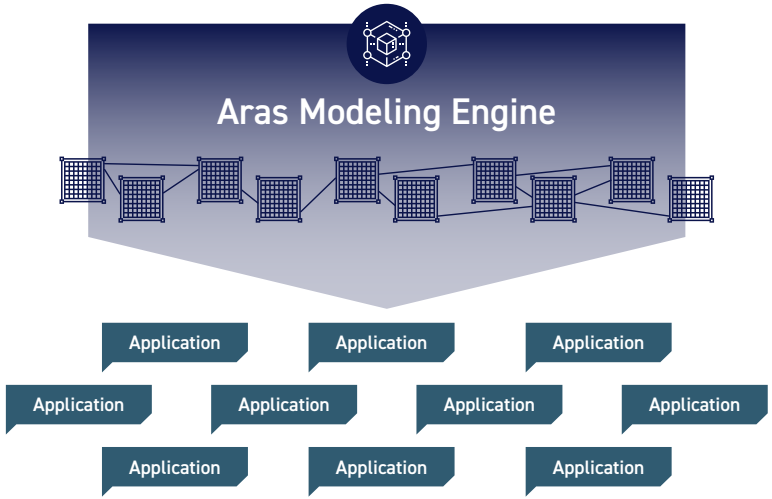
The Aras approach to low-code is different. Aras' industrial low-code modeling engine simply reduces the amount of code necessary to build applications as part of the resilient platform development environment. Since the low-code components are part of the platform, the benefits apply to the suite of enterprise applications across the end-to-end process, ensuring the same consistent security model, deployment tools, and flexibility for every application.

How Does Aras' Industrial Low-Code Modeling Engine Work?

By using a combination of a rich set of platform services and interactive modeling engine, Aras' platform allows users to establish behaviors of an application, with their specific business rules, in the modeling engine's declarative model. These components work together to create a powerful development environment without writing code for most requirements. The defined model is utilized by other applications on top of the platform, ensuring consistent data across the end-to-end process.



As requirements evolve over time, business rules are managed by an administrator or power user through Aras Innovator's front end. When larger efforts require more complex changes to the model, Aras Innovator also manages the schema dynamically, so the capabilities of the modeling engine grow with new demands from the organization.



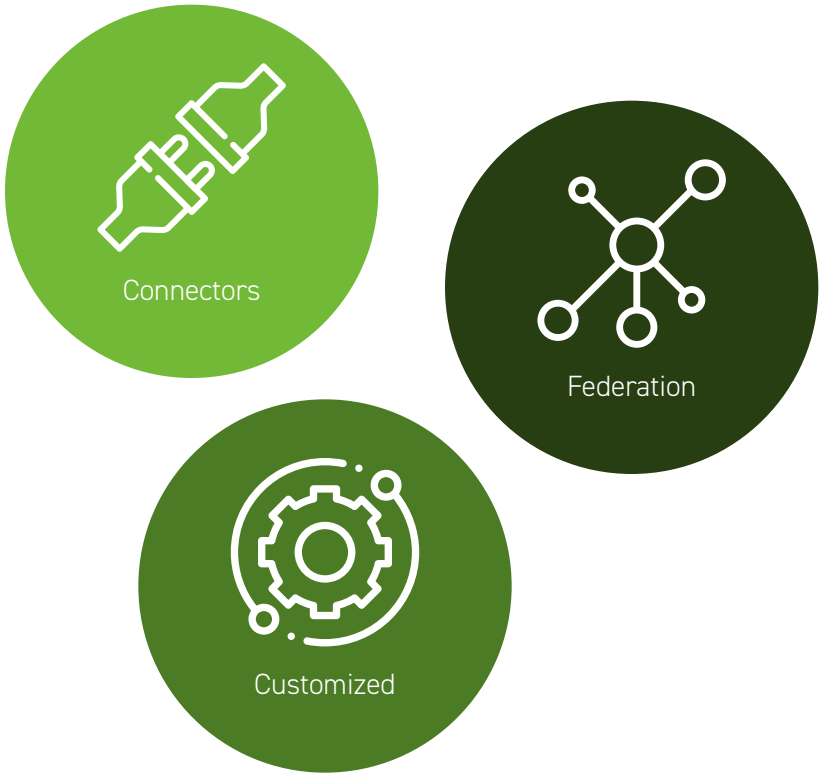
Critical to its platform flexibility, is Aras Innovator's ability to create, modify, and expand the database model across all of its end-to-end applications consistently and dynamically using the user interface.

By creating a single data model across applications, the platform ensures data consistency across the end-to-end applications. As more innovative applications are built across the landscape, data definitions will be reused saving developers time to build and minimizing errors in the development process.

Integration

Critical to building innovative solutions, any new application or business functionality must be consumed seamlessly by other applications, otherwise the new information created has limited value. The Aras platform makes this process easy by supporting an open environment and transparent data model allowing organizations to own their data instead of leaving it captive to an aging technology or a software vendor.

Many of today's enterprise applications keep their data model hidden through complexity or proprietary encryption, making integrations and data migrations more complex than necessary. To support a new generation of data demand, data access cannot be dependent on source applications to utilize information, as many legacy product development systems require.



INNOVATE WITH ARAS

Explore outside the box to develop your concept

VALIDATE WITH ARAS

Share, prove, and refine your concept

CREATE WITH ARAS

Finalize and implement new functionality

CREATING AN INNOVATION PROCESS WITHIN YOUR ORGANIZATION

- Establish a formal innovation program in your company to leverage your employees' progressive thinking.
- Create an internal incubation environment on the Aras Platform to enable the innovation process.
- Develop an end product that is implementation-ready on an open, sustainable, and strategic solution.

THE BENEFITS OF BEING AHEAD OF THE CURVE

Building with Aras creates an efficient environment for application development that focuses on speed and resiliency.

- **Increased Development Velocity** By using Aras' platform services, modeling engine, and applications, new functionality is built using a fraction of the time typically required by an enterprise platform. Faster development speeds reduce your time to implement, and minimizes lost opportunities, by having new functionality available when you need it.
- **Reduced Costs** Increased development speed reduces the time required by high cost developers on your projects, resulting in significant cost savings. Using the modeling engine to manage business rules reduces development, testing, and implementation processes as well as rework resulting from bugs introduced in the coding process.
- **Reduced Risk** Building your functionality in Aras' enterprise innovation platform aligns your data model and processes across the end-to-end process. This will significantly reduce the risk of damaging data integrity issues across business functions. Also, since many business rules are managed through the modeling engine, changes to these rules are inherent to the platform, eliminating manual coding efforts and implementation processes.

START YOUR "BUILD WITH ARAS"

When a company's systems are no longer able to support their business clients' needs, there is rarely just one specific problem to address, but rather multiple issues at play. When this happens, the most serious issue is that it may be too late to simply pivot. Trying to address inflexible, legacy applications, slow moving software partners, and limited funding at the same time leaves organizations with limited options.

If this situation is your reality, you are ready to move forward and focus on building an innovative development environment that will position you to react to today's needs as well as tomorrow's currently unknown requirements.

Your next step is to check out the Aras website to find out more about Build with Aras or simply download the environment for free to start your journey today.

Aras provides a resilient platform for digital industrial applications. Only Aras offers open, low-code technology that enables the rapid delivery of flexible, upgradeable solutions for the engineering, manufacturing, and maintenance of complex products. 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. Headquartered in Andover, MA with major offices throughout the world, Aras supports more than 350 global multinational customers and over 250,000 users. The Aras Innovator platform is freely downloadable. All applications are available at a single subscription rate, which includes all upgrades performed by Aras. Aras customers include Airbus, Audi, GE, GM, Honda, Kawasaki, and Microsoft.

Contact:
Razorleaf Corporation | 3732 Fishcreek Road, Ste 291 | Stow, OH 44224 | 330-676-0022
sales@razorleaf.com | www.razorleaf.com

© 2020 Aras. All rights reserved. This document is for informational purposes only. Aras and Aras Innovator are either registered trademarks or trademarks of Aras Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.
REQ-1090-2003

aras

Razorleaf
aras | GOLD CERTIFIED PARTNER 2021