



How to choose the right integration solution for your manufacturing organization

A practical guide to help manufacturers maximize the ROI of integration



Technology and business management are increasingly intertwined. Siloed systems and legacy infrastructure are a severe handicap in today's business world, and **finding the most efficient, effective integration solution is vital.**

A growing number of enterprises are focusing efforts on transitioning to digital-first operations: using hybrid, multi-cloud, or IoT platforms. In these scenarios, systems integration is more than just a “nice to have” option — it's a basic necessity to guarantee the scalability, reliability, and performance companies seek with their digital transformation plans.

McKinsey Global Institute reports that the [manufacturing industry generates an average of 1.9 petabytes \(or 1,900 terabytes\) each year](#) – more than any other vertical – primarily from supply chains, sourcing, and factory operations, as well as compliance and quality management processes.

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But how do you choose one that will deliver the highest return on investment? Finding the best solutions and technology for your manufacturing business is a challenge that goes far beyond the success of integrations as they relate to data. Integration solutions are often presented as “buy” or “build” options, but the reality is that, regardless of which option you choose, there will be some building involved.

- **Buy:** Using an enterprise integration platform-as-a-service (eiPaaS) solution
- **Build:** Passing on platform-based tools to develop home grown integrations

Let's examine the pros and cons of both options to help you make an informed decision about enterprise integration platform solutions.

Buy vs. Build: what to expect

The decision between building an in-house data integration solution or buying an eiPaaS solution is not as straightforward as it may seem. Many factors must be considered, including your resources, risk sensitivity, and the goals you hope to achieve.

Despite supply chain and workforce challenges, manufacturers are seeing rapid growth as they emerge from the pandemic. Dealing with [workforce shortages and preparing to withstand further disruptions from future crises](#) are top priorities — two issues integration can help address.

WHAT DO YOU NEED TO BUILD YOUR OWN SOLUTION?

Developing and deploying an in-house data integration solution is no small task. But it might seem like the appropriate course of action if integration is key to your business strategy and you can't find a solution that will meet your current needs — and keep up with changing requirements in the future.

To build a data pipeline, your company must be prepared to:

- Connect developers to the data source
- Explore the data to identify trends
- Design data models
- Develop and build a framework
- Build a strategy for updates
- Test connectors and validate data
- Maintain and update the system as needed

To build and maintain an efficient, secure, resilient, and error-free integration, your manufacturing enterprise will need to:

- Build and manage a team to develop, deploy, and maintain the integration
- Acquire and maintain necessary infrastructure, including servers, containers, testing solutions, and more
- Develop training and testing for more challenging processes

- Bear licensing costs as well as monthly and annual fees for the tools needed for development, deployment, and maintenance

The average developer [only spends 32% of their time writing new code](#) or improving existing code, but 35% on code maintenance, testing, and security issues.

WHAT DOES BUYING A DATA INTEGRATION SOLUTION LOOK LIKE?

There are several reasons to consider buying vs. building:

- Solutions available on the market address most or all of your data integration needs
- Building a solution in-house will not provide any significant advantage
- Your organization lacks the resources to make development, deployment, and maintenance an efficient use of your time
- You anticipate that growth or changing requirements will necessitate new integrations or data streams

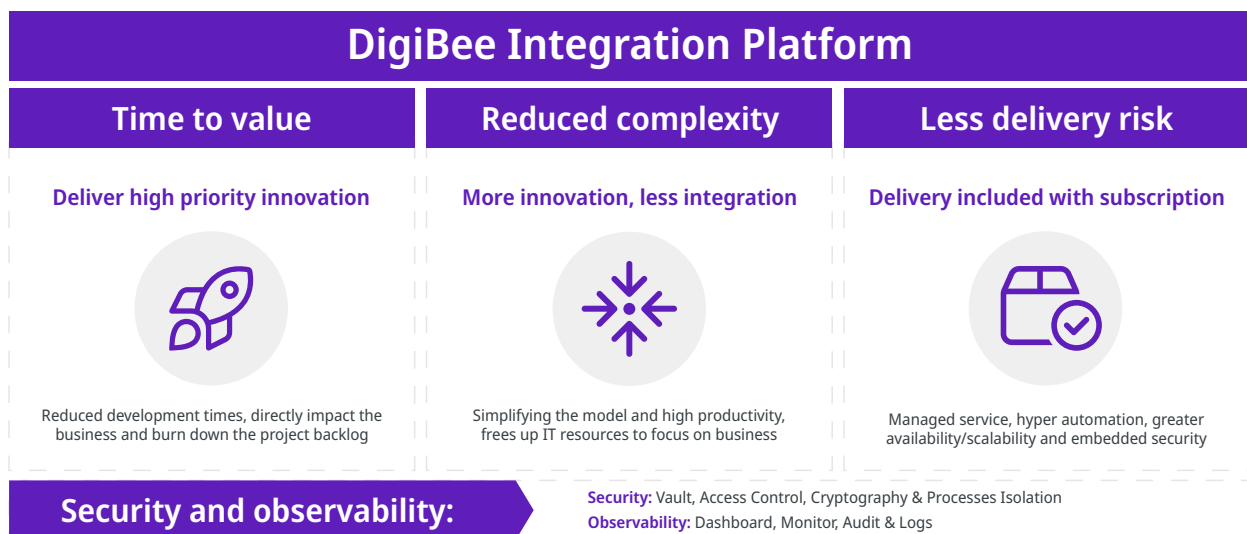


Figure 1.1: DigiBee Integration Platform Model

Consider the following if your company is thinking about purchasing a data integration solution:

67% of manufacturing organizations struggle with sharing essential information between departments, and **21% still share data via fax.**

Sources	<ul style="list-style-type: none">• How many systems do you need to integrate data from?• What type of data do you have?• How often is data updated?• Are there dependencies or overlaps between systems?
Use cases	<ul style="list-style-type: none">• Why are you looking at data integration?• How are you planning to integrate data from various sources?• Will the solution you're considering support the use cases you have in mind?
Resources	<ul style="list-style-type: none">• Does your team have the time and/or skills required to maintain a data integration solution?• How much are you prepared to invest in deployment or maintenance?

Buy vs. Build: pros and cons

Building an in-house solution offers manufacturers a customized, purpose-built enterprise integration system that you maintain total control over. In contrast, a pre-designed eiPaaS built on solutions that have been repeatedly implemented and tested across various industries lowers your project's risk and complexity.

Pros	
Build	Buy
<ul style="list-style-type: none">• Customize and scale based on your company's specific needs• Maintain complete control over your data and solution• Guaranteed connection with existing systems and platforms	<ul style="list-style-type: none">• Reliable, scalable architecture• Reduced security and operations risk• Lower costs and complexity• Faster time-to-market• Frees your team to focus on innovation or preparation for the future

The resources required to build a data integration system can be daunting, but choosing the wrong eiPaaS provider can limit customization and connections to your existing platforms and applications.

Cons	
Build	Buy
<ul style="list-style-type: none">• Requires significant resources to develop, deploy and maintain• Knowledge internalized by a small group of employees creates a single point of failure that threatens business continuity• Increased risk of security breaches, technical problems• Longer time-to-market than external solutions	<ul style="list-style-type: none">• Customizations are dependent on the solutions provider you select• Costs persist for the lifetime of the solution• Solutions may not integrate well with existing platforms or applications

Examine your priorities

Manufacturers list the [top five challenges](#) associated with digital transformation as:

1. Lack of internal IT experts to pursue new technologies
2. Undefined digital transformation strategy
3. Resistance to change among staff
4. Rapidly evolving customer needs
5. Costs associated with a digital transformation project

Ultimately, the decision between build and buy must be based on your organization's specific priorities. There is no one-size-fits-all, right or wrong answer. This checklist can help guide you as you navigate your options.

Organizational objectives and requirements

What is your company trying to achieve with an integration solution? Identifying your business goals can help determine whether it is more reasonable to buy or build your data integration solution.

Time to market

Do you have a critical timeline you need to maintain with your integration project? Ensure you understand time constraints for development and deployment to make an informed decision between building vs. buying.

Total cost of ownership

How much are you prepared to invest upfront in development and deployment? What is your budget for ongoing operations and maintenance? Examine both short- and long-term budgets when comparing build vs. buy integration options.

Human resources

Does your team have the skills/bandwidth required to build and deploy an integration solution? If not, are you prepared to hire a team for the task? What about ongoing support? Make sure you have the staff to support your decision.

Opportunity costs

What is the best use of your team's time? Should your IT experts be working on monitoring and managing integrations, or is their time better spent on proactive analysis and planning for the future? Identify the best use of your teams' time before making a decision — just because you can build your own integration solution, doesn't mean you should.

Data volume and velocity

Will the solution you're investing in today have the capacity to serve you in the future? The volume of data you're dealing with will increase, and demand will shift. Make sure the solution you select has the flexibility and scalability to support your organization going forward.

Security and compliance

Whether building or buying an integration solution, you must ensure it will meet and maintain any security or compliance requirements that apply to your business/industry.

A better enterprise integration solution

Digibee's low-code, cloud-native iPaaS helps manufacturing enterprises eliminate the roadblocks to digital transformation, bridging the gap between legacy systems and new technologies seamlessly and securely. Our time-to-value and intuitive, easy-to-use platform help minimize delays and disruptions during implementation, while our unmatched risk mitigation and infinite scalability set Digibee apart from other enterprise integration solution providers.

Experience the power of Digibee firsthand. Sign up for a proof of concept to see how we can quickly and securely integrate your organization's data, or [request an interactive demonstration](#) of our solution.



Let us show you how Digibee can support your integration strategy