BUILD VS. BUY—
OR IS IT COMPOSE?

When it comes to decision automation,
the once binary choice is now more nuanced.

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Contents

INTRODUCTION

If you're exploring decision automation technology, decision-making is likely deeply ingrained in your products and services. When you rely on complex business logic to drive customer interactions and protect the organization from risk, each outcome causes a ripple effect across multiple departments and processes. Approving a loan, treating a patient, flagging fraudulent activity—in many cases, the impact of decisions is instant.

To meet customer expectations, stay competitive, and keep risk and cost at a minimum, organizations are working to automate the decision-making process for scenarios like these. However, first they must make their most critical decision: build a custom decisioning automation solution, buy one off the shelf, or invest in a low-code platform that allows some of each?

DEFINING DECISION AUTOMATION TERMINOLOGY

To understand which option is best for automating decisions at scale, a few definitions are in order. While decisioning is the general process of weighing the variables around a specific process and making a choice, decision automation is doing it with little to no human intervention.

What is decision automation?

Decision automation is the use of predefined business logic to make business decisions autonomously (sometimes with human-in-the-loop). Often part of a larger software solution, a decision automation tool runs data through predefined rules and scenarios to reach a conclusion almost instantly.

Decision automation can refer to anything from a simple set of business rules to a complex, finely tuned set of models and logic that weighs real-time data from hundreds of sources. When decoupled from a company's internal code base, centralized into a single repository and enhanced with machine learning capabilities, the more sophisticated and user-friendly decision automation solutions are referred to as AI decisioning platforms

What is a decisioning platform?

A decisioning platform is a solution built specifically for the purpose of decision automation. It typically combines business rules and logic on cloud infrastructure that can be connected to an organization's data and applications, automating decisions to improve products and services or reduce risk across business operations.

AI decisioning platforms are advanced software solutions that connect data from legacy and cloud-based applications, third party sources, and partner solutions, then run it through sophisticated, centralized business logic and predictive models to automate decision-making at scale. Their capabilities often include process automation to turn decisions into actions.

Using these definitions, this guide will help you decide how powerful a decisioning solution you need, the pros and cons of building your own, and your options for investing in an off-the-shelf or customizable platform.

A CLASSIC QUESTION WITH A TWIST: BUILD, BUY, OR SOMETHING IN BETWEEN?

In the past, the choice between building custom software or buying a SaaS solution was black and white. Today the prevalence of cloud tools, open source libraries, prebuilt integrations, and low-code platforms offer an option with a little of both—IT teams and their business counterparts can create the perfect fit using composable, modular building blocks and even embed vendor capabilities into their custom software.

Forrester highlighted this fundamental change in their 2021 research paper, *Forget About Build Versus Buy; Your Choice Is Customize Or Compose*. As the title implies, old assumptions about the ease, complexity, and cost of either building customer software or buying off the shelf should be revisited—instead, Forrester outlines a spectrum of options that may include a blend of custom code, low-code components, and integrated cloud-based platforms and microservices.

This perspective rings especially true for decision automation. Companies already maintaining custom software for other key business functions will eventually reach a fork in the road: do they improve decisioning capabilities within an existing solution, rip out and replace the whole tool, or invest in a platform built specifically for high-volume, rapid modeling and decision-making?

Option #1: Building a custom solution

Large enterprises already manage some business logic, either in their own custom software or in siloed applications like Excel. Employees using these rules for things like handling customer interactions, processing applications, or approving claims often must verify data and make a decision manually—to compete, IT may decide to automate it by building a custom decision automation solution.

For companies that only require a simple rules engine or plan on automating a small number of decisions, it may be easy enough to manage in-house. IT can redistribute engineering resources to tackle development, using today's abundant selection of cloud microservices, pay-as-you-go infrastructure, and open source components to keep costs down.

At some point, however, the architecture and maintenance requirements of older, home-grown systems can't support the kind of high-volume data processing, integrations, and flexibility that modern systems need for rapid, dynamic decisioning. Many companies struggle to scale custom solutions once they get too complex, and managing the decision logic itself can quickly drain resources.

And too often, a seemingly simple project grows exponentially when other parts of the organization see its capabilities. This phenomenon is especially true with decision automation, as employees envision its ability to support more parts of the business.

> ***Over budget, over time. Is IT underestimating the cost of custom software?*** *Enterprise IT departments consistently report spending more time and money than expected. One McKinsey study found that, on average, large IT projects run 45% over budget and 7% over time, while delivering 56% less value than predicted. A more recent rollup of statistics shows the trend continuing even as software becomes more composable—only 16% of software projects are completed on time and on budget, and half of them will cost nearly 200% of their original estimates.*

Option #2: Buying a turnkey SaaS solution

Instead of building their own decision automation functionality, IT teams may choose to invest in a turnkey SaaS solution. Once the only viable alternative, this option has its own pros and cons. Many SaaS products are tailored to specific industries and use cases, with little true customization beyond standard security, access, and UI configurations.

The benefits of an off-the-shelf solution are compelling, however. A cloud-native, lightweight decision automation tool that was built for handling large, multi-source datasets will be much more efficient at decision-making than a custom solution bogged down by legacy architecture.

Eventually, though, most enterprise users will run up against the limitations of a turnkey SaaS platform. They will then need to either switch vendors, pay more for custom development or managed services, or fill in the gaps with other software.

Option #3: Customizing on a low-code, composable platform

Today, companies can overcome the limitations of pure build and pure buy with a more flexible approach. Low-code, AI decisioning platforms provide a "buy" option that still allows developers to customize the solution extensively, as well as let subject matter experts manage complex decision logic and machine learning models without needed development skills.

These platforms decouple decision automation from an enterprise's proprietary code, allowing users to update decision logic and improve predictive models without requiring any refactoring or affecting the performance of core systems. Low-code platforms come with a wide variety of prebuilt components that accelerate time-to-market, and IT can step in when a custom integration or complex workflow requires specific development expertise.

> *"In the digital era, software is an expression of the business. Firms can't buy this; they must create it using a blend of customization and composition."*
> *- Forrester*

DEFINING YOUR DECISIONING NEEDS

Forrester recently surveyed 302 U.S.-based decision makers about operationalizing and implementing AI solutions. According to the research, 64% of firms surveyed said it is critical or important that their organization be able to defend and prove the efficacy of their digital decisions.

In practice, your decision automation solution should allow you to do much more than simply defend decisions. It should help you optimize specific processes, make measurable improvements to KPIs, and reduce risk across a number of factors.

Before you decide to build or buy a decision automation solution, discuss the following with stakeholders:

- What does your organization hope to achieve with decision automation, and how will you measure success? For example, reducing risk might be measured by a decrease in fraudulent claims paid out, while improving customer support interactions could be measured by the time it takes to resolve a ticket.
- Which use cases will you focus on? These can include processes like determining eligibility, offering dynamic pricing, approving and paying out claims, programming a support chatbot, or building a customer loyalty program.
- How would you rate the scale and complexity of your business decisions? Estimate how many rules you plan on managing, tools and data sources you'll need to integrate, and ML models you'll maintain.
- How often do you expect to update your decision logic? Changes may stem from evolving compliance requirements, the introduction of new data, or the introduction of new products and services that rely on automated decisions.
- How well are competitors automating decision-making? Are you already behind the curve, or is this an innovation project that can be completed on a more relaxed timeline?
- Which groups, both inside and outside the organization, will rely on this automated business logic? How will changes in their processes or needs affect you?
- Is it critical to be able to defend the efficacy of and show the logic behind your automated decisions? For example, government, healthcare, and financial sectors may have more stringent compliance requirements or require disclosure around approval and denial decisions.
- What kind of development resources and budget do you have? Is building a decision automation solution the best use of their time, or should they be focused elsewhere?
- What worries you most about embarking on a decision automation project? Potential risks include things like technological obsolescence, dependency on vendors, project failure, or unplanned costs.

Once you've had this conversation, you'll be ready to evaluate your options based on the most important factors involved in a decision automation project.

WHAT TO CONSIDER WHEN CHOOSING A DECISION AUTOMATION SOLUTION

As you weigh the pros and cons of building custom software vs. buying a vendor platform, break down your research by the topics included below.

Implementation: timing, complexity, and resources

Implementing a custom decision automation solution takes time. If your target rollout date is flexible and you have a large team of developers ready to deploy and manage a custom solution, you may choose to build. This option is best for companies with relatively simple decision logic and a clearly defined use case that won't change much over time (realistically, however, the pace of AI advancements make this very unlikely) The downside is resource drain—implementation takes many developer hours, and that can mean pulling team members off of other important projects.

On the other hand, an off-the-shelf solution can be deployed in a short time frame with the help of the vendor's onboarding team. It requires commitment to a contract, but no large upfront expenses. Because everything from infrastructure to decisioning logic is decoupled from your in-house software, this option requires almost no engineering resources. However, if your decisioning needs are complex, you'll most likely run up against the limitations of a turnkey solution.

Investing in a low-code decisioning platform provides more flexibility and customization while still requiring very few developer hours to get started. IT connects the platform once to any existing legacy or proprietary software, then line-of-business users do most of the heavy lift of creating decision logic and predictive models without using any code.

Customization

Customization is one area where internally developed, built, and implemented solutions stand out. If your organization has a unique strategy regarding its logic, a home-grown solution may help you to meet your goals. But finding the right talent with AI expertise to build your decision platform can be time-consuming and therefore costly—even more so if your logic is complex or changes often.

However, the advent of low-code platforms makes greater customization of SaaS solutions possible. Instead of buying a turnkey platform designed for a specific industry or process, companies can take composable functionality like ELT, configure/price/quote, and dynamic questionnaires and apply it to their unique use cases.

Many companies need their products to appear fully customized to the customer journey, like in the case of a dynamic loan application on a lender's website. In this case, customization can be achieved by embedding an AI decisioning platform into your in-house solution—decision logic is still decoupled, but integrations and process automation features give customers a seamless experience.

Flexibility and scale

Beyond implementation, consider how your needs and use cases might change over the next several years. The more data, decision logic, and ML models you need to incorporate to automate decision-making, the more obvious the benefits of an AI decisioning platform—subject matter experts can manage business rules without IT, even exploring and fine-tuning predictive models without any need to code.

As Forrester mentioned, custom software is more flexible than it used to be. By connecting cloud-based microservices rather than custom packaged code for most functionality, your in-house IT team can more easily change functionality and manage dependencies. Still, scaling custom software means keeping up with constantly changing business and regulatory needs—this ongoing evolution makes the "build" path seem more daunting.

Scaling decision automation also requires extensive integrations. A composable decisioning platform comes with prebuilt integrations and APIs, reducing the burden on IT and enabling the real-time flow of data from every tool and source needed to make accurate decisions.

"Embedded rule technology provides extensive customization capabilities."
- Craig Bechtle, senior vice-president at MortgageFlex

Total cost of ownership

For many enterprises, the cost of ownership of custom software is prohibitively high. On top of maintenance tasks like managing updates or monitoring and troubleshooting performance, many not-so-obvious expenses add up. Training staff, refactoring, managing integrations, and the opportunity cost of pulling developers from other initiatives all take a toll on profit margins.

Another factor is fluctuating staffing needs. To meet tight deadlines, companies often outsource or rapidly hire developers to tackle refactoring and integration projects that will hurt the business if not done quickly. The costs of hiring on a condensed timeline are considerably higher than normal.

It's costly to manage the decision logic and predictive models without a low-code platform. It's yet another task added to IT's plate and a failure to leverage all of the business expertise non-developers could put to use if they were able to manage these rules directly.

The cost of *not* taking action is perhaps the highest. By failing to update decision logic that drives things like loan approvals and fraud detection, the company becomes susceptible to major losses. In this category, the best option is almost always to invest in an AI decisioning platform.

> *A recent survey from Tidelift shows that developers typically spend 30% of their time on code maintenance, and 25% of that maintenance time on open-source code.*

Security and compliance

The automation of decision-making often comes with the need for transparency and auditability. To meet these requirements with a custom solution, consider how you'll ensure decision logic is free from bias, how you'll explain the reasoning behind automated decisions to customers or third party auditors, and whether you can easily share logs and reports with regulators.

It's also important to factor security into the software development lifecycle. Thanks to well-known services for authentication and access management, secure cloud-based infrastructure options, and open source security services, this is an easier task. However, these are already packaged into enterprise-grade SaaS solutions, so the benefits of managing them yourself are few.

Any decisioning platform you purchase should be SOC 2 Type II compliant, as it shows the vendor is committed to following widely-accepted security standards. An AI decisioning platform will have the added features of explainable ML, which demystifies the variables and weights behind predictive models for full transparency, and bias detection to ensure supervised ML models are free of training bias. This is especially true in areas where equal rights and equal opportunity laws apply, such as college admissions, insurance, and loan applications.

Ease of use for non-developers

Before you can take advantage of the power of automated decisions, it's imperative to establish how the rules will be translated for execution. On the most basic level, a business can rely on subject matter experts (SMEs) to determine and document the logic. If your team decides to take a build approach, developers can translate these rules into code.

If you plan on having multiple groups use your decision solution—especially groups outside the company—ease of use becomes paramount. When IT must author and maintain all rules, debug errors, and provide compliance reports, it becomes tedious for both SMEs and developers. Even if the business wants IT to manage the project, not having to make code-level changes often makes IT's job easier.

If SMEs have access to a low-code authoring tool, they can create and update logic directly. This reduces human error or miscommunication while giving developers back their time. For this reason, an AI decisioning platform wins on the usability front.

Process automation needs

Traditionally, decisioning solutions have focused more on automating the actual decision through a set of business rules (and more recently, predictive models). However, companies are looking to extend automation through the processes that follow each decision—for example, a healthcare chatbot might respond to patient input based on decision logic, book an appointment for them, and securely send forms through a HIPAA-compliant system for them to sign before arrival.

Most companies will struggle to scale process automation in custom software, mostly because of how often workflows and toolsets change. For companies that need to automate many processes across a large, varied tech stack must invest in a more scalable platform.

One option is to buy multiple SaaS tools and cloud services and integrate them with APIs. This solution can work well for smaller, newer companies that don't need to integrate legacy or on-prem solutions—decisions made in a decision automation platform can trigger action in a process automation tool without passing data through older architecture. However, this is more of a workaround and doesn't allow for customization.

The most customizable, scalable AI decisioning platforms include low-code process automation features. Investing in these composable solutions gives business users control over both the automation of decision-making and the workflows that follow.

Metrics and monitoring

Decision automation analytics help you understand whether the models and rules you've built actually lead to the best decisions. Your decisioning solution should make it easy to see the impact of decisions on key metrics, run new scenarios based on historical data, and monitor performance.

Consider the example of an insurance company that makes most claims decisions automatically, but occasionally routes a decision for human review. To understand whether they're sending too many or too few cases to a human in the loop, they must be able to compare numbers across multiple scenarios and see how many routed claims ended up being fraudulent, denied, or approved.

With custom software, analytics are another part of the scope that add to the cost and complexity of the project. While you'll have the freedom to design them from scratch to fit your needs, you'll also have to maintain them along with any integrations and data capabilities that support them.

AI decisioning platforms often come with analytics built in. Their composable nature and flexibility allows you to customize them as needed or embed them into core products with minimal code.

CONCLUSIONS AND TAKE-AWAYS

As you close in on a path to decision automation, the most important point to remember is this: Instead of choosing between build vs. buy, you can embrace composable, modular technologies to combine the best of both worlds.

Low-code AI decisioning platforms enable decision automation at scale, decoupling logic and models from your core codebase while making it possible to integrate or even embed their capabilities into your apps and products. When you want to add particularly complex customizations or connect legacy systems to the platform, IT can allocate resources without overburdening developers.

InRule's AI decisioning platform helps bring your vision for decision automation to life, empowering subject matter experts to manage decision logic and shortening time to market without closing any doors to customization or control.

Aon transforms custom solution with InRule
Leading specialty insurance provider Aon partnered with InRule to reduce development and maintenance costs, using the platform to manage decision logic and embedding it into their custom underwriting software. Read the case study

AI DECISIONING AND PROCESS AUTOMATION WITH INRULE

InRule combines three dynamic, no-code automation capabilities: decisioning, machine learning, and process automation. Use this checklist to explore the platform's features and compare capabilities as you continue your research:

- Centralized business logic, decoupled from your code base
- No-code, intuitive authoring for business rules, decision logic, and models
- Explainable machine learning that demystifies the logic behind each model
- Integrations for CRMs and other business applications
- A well-managed API for connecting custom and legacy systems
- Enterprise-grade security that's SOC2 and HIPAA compliant
- Built-in bias detection designed to mitigate risk
- Onboarding, training, and support to go-live faster and stay productive

InRule was named a leader by Forrester Research in The Forrester Wave™: AI Decisioning Platforms, Q2 2023. Download the report to see why.

To learn more about how these features help you quickly deliver decision automation and use it to drive the success of your business, take a look at our *platform overview* or *request a demo here*.

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InRule Technology

651 W Washington Blvd #500
Chicago, IL 60661
www.inrule.com