The Power of InRule®

*Write, Manage and Execute Business Rules*

InRule® empowers technical and business users to change rules and calculations in applications—with less effort, cost, and risk than programming—to help you keep pace with changing marketplace needs.

InRule has been deployed in hundreds of mission-critical and customer-facing applications in more than 30 countries, saving our customers an average of $830,808* per deployment. When compared to hard coding, managing rules in InRule is not only more cost effective, but also less risky than locking rules in hard code, hidden from key business owners.

**InRule is Designed for Real-World Scenarios**

**INTUITIVE RULE AUTHORING**

**irAuthor®**

irAuthor, InRule’s rule authoring environment, allows technical and non-technical people to use intuitive authoring to quickly and easily write business rules and logic. It’s designed to simplify rule updates, so you can align the logic of core applications with changing marketplace and customer needs—with less effort, cost and risk than programming.

With irAuthor you can express simple or complex rules naturally, using a variety of rule types. You can also configure the rule writing environment to meet the needs of your technical and non-technical users. irAuthor allows you to write rules with an intuitive, menu-driven approach using the business language editor, working in a familiar Microsoft Office-like environment.

```
Language Rule

If
    all of the following are true
        ▶ Employee Level has a value of "Associate", [list value]
        ▶ Seat Type has a value of "First", [list value]
    [add condition]
Then
    add an "Error" message that says "The company does not pay for associates to fly first class."
    [add action]
```

Business Language Authoring is intuitive and easy to use.

---

*Total savings calculated based on average savings of implementation and maintenance as reported by survey respondents, calculated over a 7-year life span, using an 8% discount rate to compensate for the time value of money (TVM). Source: 2017 IUC Annual Survey*
With irAuthor, your users can easily update rules so that you can make changes as quickly as the market demands. irAuthor allows you to:

- Streamline large sets of similarly structured rules with decision tables
- Express calculations and complex conditions with Excel-like syntax expressions
- Have rules perform a wide variety of actions from setting field values to calling web services

Decision Tables allow you to manage complex, nested logic in a way that is easy to read and manage.

**irWord for Business Users**

irWord is an add-in for Microsoft Word that allows you to write and share rules in Microsoft Word. With irWord, keeping requirements documents up-to-date and sharing rules is as easy as sharing Word documents. With irWord you can embed rules into a Word document to share with others. Rules appear as text in the document whether or not irWord is installed.

With irWord you can use irAuthor’s intuitive business language and decision table features within Microsoft Word. Rules can be edited in irWord even if they were created in irAuthor or irStudio (and vice versa).
**irStudio® for Developers**

irStudio is an add-in for Microsoft Visual Studio that enables developers to write rules and integration code without leaving the comfort of Visual Studio.

irStudio allows developers to write rules using irAuthor functionality—including Business Language Authoring, Decision Tables, and customizable Rule Templates—within Visual Studio. Developers can use irStudio to easily change rule applications and integration code.

**Configure Your Authoring Experience**

Developers can also set-up your rule authoring environment using existing resources and configure a rule authoring environment for your specific needs, such as defining specific functions for your users or adding or removing user interface elements like ribbon tabs, buttons and menu items. In addition, developers can:

- Configure the business language editor with custom vocabulary and rule templates that make rule-writing specific to your industry and organization
- Share or restrict parts of a rule application using irCatalog
- Override content controls and replace the navigation bar
- Define the data schemas against which users can write rules—create them manually or import an existing database, XSD, or .Net Assembly
- Define endpoints for accessing resources like .NET libraries, databases and web services
- Embed the WPF controls from irAuthor into custom authoring applications

irAuthor is a fully configurable authoring environment. You can add custom functions, create vocabulary specific to your business, and make rules and data available to users based on roles.
irAuthor makes it simple and straightforward to configure your authoring environment.

Improve Quality with Testing
irVerify®

irVerify enables you to confirm that your rules are executing as expected by testing them with the click of a button. With irVerify, rules can be tested as they are written, letting users know immediately whether they are returning the expected results. irVerify works without the need for a completed application or separate test environment.

A testing tool for rule authors

- Enter data into fields or use saved test case scenarios
- Troubleshoot how values were calculated and rules were evaluated

A debugging tool for power users and developers

irVerify also has powerful capabilities for power users and developers. Developers can view metrics for all aspects of rule execution with the performance statistics report and run detailed rule traces to evaluate execution order and inputs/outputs.
Rule tracing provides a powerful debugging tool for power users and developers.

And a regression tester

With irVerify you can create regression test suites that include assertion, comparison and performance tests. irVerify makes it easy to run regression tests and evaluate them visually. You can also automate regression test runs with irSDK code or Windows PowerShell commands.

Robust Rule Storage and Management

irCatalog®

irCatalog provides centralized management of rules to ensure the integrity of business rules, keep everyone working on the latest version of rules and share common rules across customers, processes or applications.

irCatalog for centralized management of enterprise rules

With irCatalog you can store rules in a central location for access by any authorized user using irAuthor, irWord, or irStudio. irCatalog allows multiple users to work on different parts of the rule base at the same time. irCatalog also enables you to granularly check-out and check-in rulesets, view what changed from one revision of rules to another, and share common data structures, business rules and endpoints between rule applications. You can deploy irCatalog on premise or in the cloud, leveraging Azure SQL Database.

Secure storage and protection

irCatalog enables you to rollback to previous versions of rules with no system downtime and manage role-based permissions to prevent unauthorized rule changes. You can authenticate users against irCatalog credentials or Active Directory (single sign-on) and maintain a record of changes to rules, who made them and when they were made. irCatalog allows you to store rules in a SQL Server, Azure SQL Database, or Oracle database.
Scalable for Real World Requirements

The InRule rule engine is proven to handle complex logic – a number of our customers use InRule daily to process millions of transactions with hundreds of rules. Since 2002, InRule has delivered fast, highly scalable rule execution without sacrificing intuitive rule authoring.

**irServer®: A Production-Tested Rule Engine**

irServer executes rules with a proprietary, forward-chaining algorithm that preserves ease of rule writing. It enables you to scale up or out with a robust rules engine that pulls rules from centralized storage. Rule changes can be hot-deployed with no system downtime. The rule engine can be embedded in web applications, desktop applications or batch processes. With irServer you can:

- Instantiate the rule engine as a .NET object to run in any .NET application
- **Run natively in JavaScript**
- **Execute rules in Microsoft Azure**
- Call the rule engine as a service via a SOAP or REST endpoint for rule execution. These endpoints are useful for executing rules when a service-based approach is preferred or .NET code is not an option. Any technology—such as JavaScript, C#, Java, PHP, Python, Node.js, Android, or iOS—can be used. The REST endpoint, in particular, makes it easy to call rules from JavaScript for web applications that have complex validations or dynamic questionnaires.

One InRule customer uses InRule for claims adjudication and processes a batch of records with an average of 2 million rules in 10 seconds or less. The solution has been scaled to run approximately 10 million transactions per hour.
Integrate with Complex Environments

irSDK®

Use InRule’s SDK, a rich set of APIs, to help you integrate InRule into your Microsoft and non-Microsoft applications.

```csharp
private void CallInRule(Employee e)
{
    try
    {
        var connectionString = ConfigurationManager.ConnectionStrings["RepositoryURI"].ConnectionString;
        //create rule application
        var rulesApp = new CatalogRuleApplicationReference(connectionString, "TravelPortal", "admin", "password");
        //create instance of rule engine
        using (var rulesession = new RuleSession(rulesApp))
        {
            var ent = rulesession.CreateEntity("Employee", e);
            var log = rulesession.ApplyRules();
        }
    } catch (Exception ex) { }
}
```

Call InRule with as few as five lines of code.

irSDK’s extensive APIs were created by developers for developers, so they’re intuitive and easy to use. irSDK also includes sample projects and code examples to accelerate the learning process. With irSDK you can custom tailor InRule to fit into your applications and environments with broad and deep object models.

irSDK includes various NuGet packages that can be hosted on your own NuGet server, providing simplified dependency management.

Via the runtime API, you can pass existing .NET object and XML documents to the rule engine; no translation layer is required. To streamline the creation of rules, you can use irSDK to harvest, capture or import rules from structured files. irSDK also empowers you to:

- Override database and web service endpoints to target different environments;
- Optimize performance and flexibility;
- Configure the authoring experience for your user community;
- Programmatically write, edit, and manage rules. Anything that you can do in irAuthor or irCatalog can also be done programmatically, including creating and modifying rules, promoting rules from one catalog to another or rolling back rules.

About InRule Technology

THE PREMIER BRMS FOR THE MICROSOFT PLATFORM

A Microsoft Certified Gold Partner, InRule Technology has been delivering InRule, the premier .NET Business Rule Management System for the Microsoft platform, since 2002. InRule Technology helps customers turn rules into measureable IT and business results by
The Power of InRule®

making it easy to align the logic of core applications with ever-changing marketplace and customer needs.

PROVEN IN 30+ COUNTRIES SINCE 2002

InRule is trusted by hundreds of organizations in more than 30 countries—in industries including banking and financial services, healthcare, government, insurance and many more—for mission critical and customer-focused systems, saving our customers an average of $830,808* per deployment when compared to hard-coding.

FOCUSED ON CUSTOMER SUCCESS

Our customers will tell you how we helped them succeed with leading technology and peerless support. In fact, 89% of our customers would recommend us to a colleague.

InRule users save time and money and improve quality.

To learn more about InRule or to request a free trial, please visit www.inrule.com.

Alternatively, click on the following URLs to learn more about:

- [InRule for JavaScript](#)
- [InRule for Microsoft Dynamics® CRM](#)
- [InRule for Microsoft Azure](#)

*Total savings calculated based on average savings of implementation and maintenance as reported by survey respondents, calculated over a 7-year life span, using an 8% discount rate to compensate for the time value of money (TVM). Source: 2017 IUC Annual Survey*