

# Business Case: Dynamic Surveys

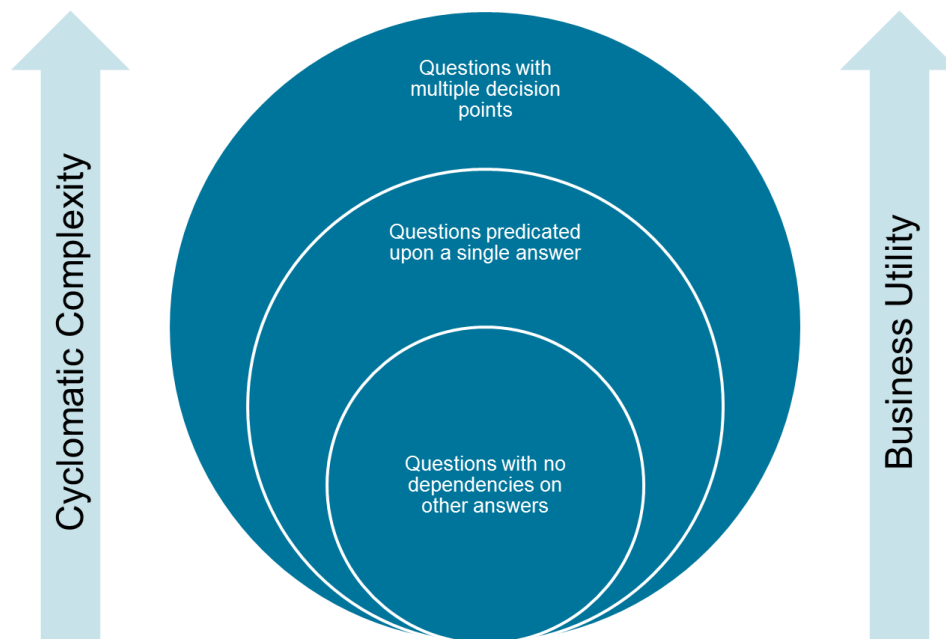
## Problem Overview

One of the greatest challenges that businesses face when they attempt to apply automation to their business processes is that the software engineers and architects responsible for building the systems often do not have very good insight into the needs of the business. Conversely, the business users who know the most about the business' domain and how it works know very little about the software and hardware infrastructure that the business runs on. These gaping holes in people's knowledge very often cause projects to fail as the people involved suffer from breakdowns in communication, coordination, and commitment. There's been much discussion in software industry circles about various tools, practices, and techniques to help mitigate the risk inherent in building

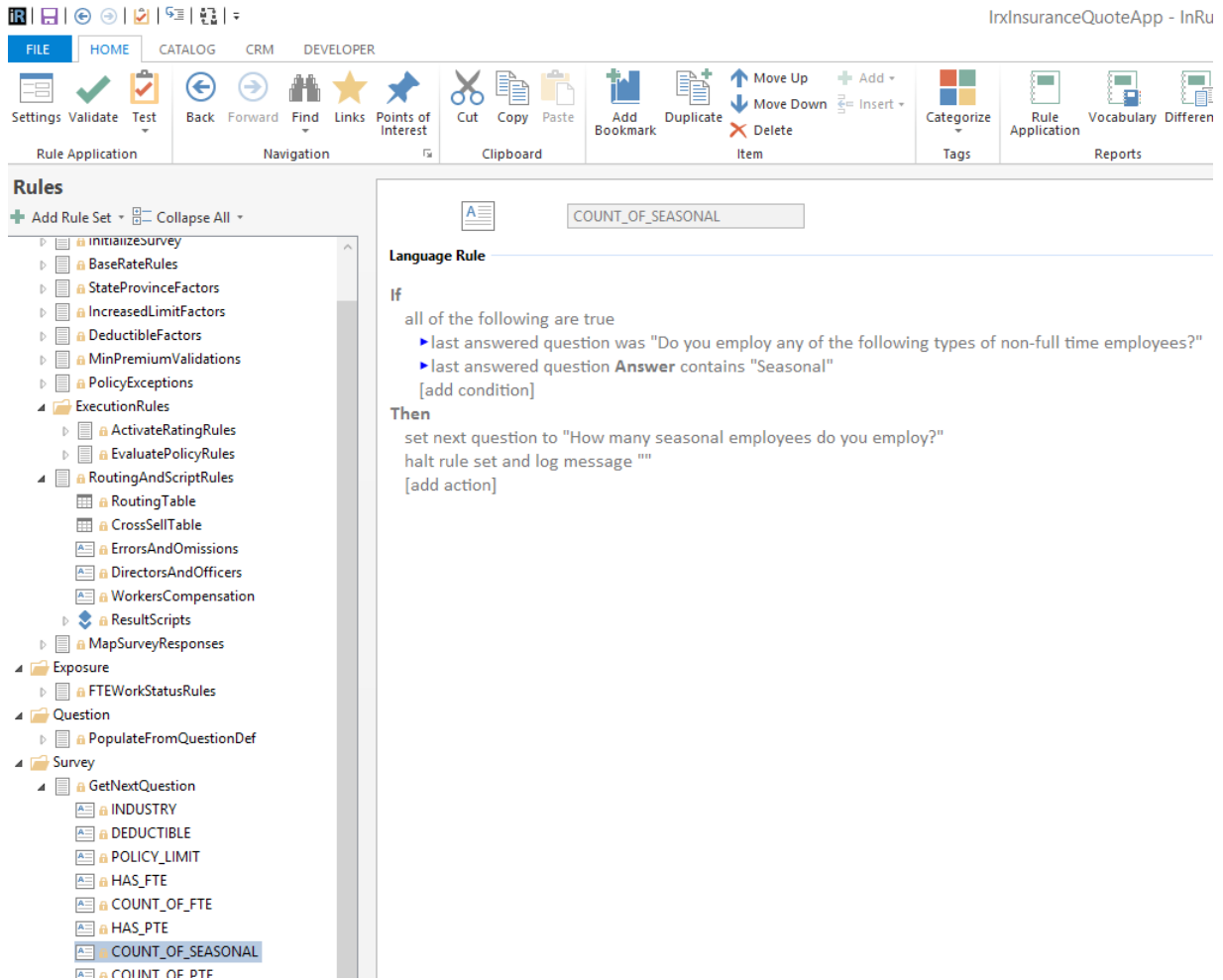
software, but most of the conversation tends to center around engineering, process, and project management concerns. These discussions and tools are quite valuable, but they leave many topics unaddressed because they are focused on addressing the visible manifestations of these problems, not the underlying causes.

## The InRule® Approach

InRule Technology® takes a more pragmatic approach to solving this problem. Our proposition is simple: our product offerings empower business users to directly control the expression of their intent via the authoring of rules. Technical staff are also empowered by this because they are now free to focus on the technical systems in which the rules reside. Allowing people to focus their



» Figure 1 - The complexity of a survey is directly proportional to the business utility it provides. Questions which have no dependencies on other questions/answers have correspondingly less utility and complexity.



» Figure 2 - Rule authors can express survey logic in a concise, readable fashion that reduces ambiguity and increases transparency.

efforts on things they are most capable of doing creates a lot of value with potentially very little effort.

The same concept of empowerment is present as the underlying driver for how Microsoft Dynamics® CRM operates. Dynamics® is an incredibly flexible piece of enterprise software, but with great flexibility comes a concomitant increase in complexity.

## Survey Dynamics

To demonstrate this flexibility, take the concept of a survey or questionnaire. When the questions asked have no correlation to each other, the implementation is quite simple—load a list of questions, render them to the user, collect responses, and store data. Out-of-the-box, this is a scenario that Dynamics is capable of handling nicely; persistence and data management is abstracted and rendered via a rich UI and services layer. Although

Dynamics has built-in process management and business rule authoring tools, these tools are quite limited in their capabilities beyond a very basic questionnaire.

This is unfortunate, because in order to provide meaningful value, a survey must ask meaningful questions. Additionally, a survey which provides meaningful value should also utilize user-provided responses as inputs for deciding what question to ask next. These types of business rules are typically quite volatile, which would traditionally require a developer resource to be available whenever changes are desired in the logic of how the survey functions. Fortunately, there is a better way to approach this problem that doesn't adhere to the traditional, inefficient approach. Customers of the InRule BRMS have available to them, free of charge, a full-featured (with source) integration framework for Microsoft Dynamics® CRM. In conjunction with the irX® for Microsoft Dynamics® CRM extension for irAuthor® (an optional add-on feature with separate licensing), our reference integration framework makes the

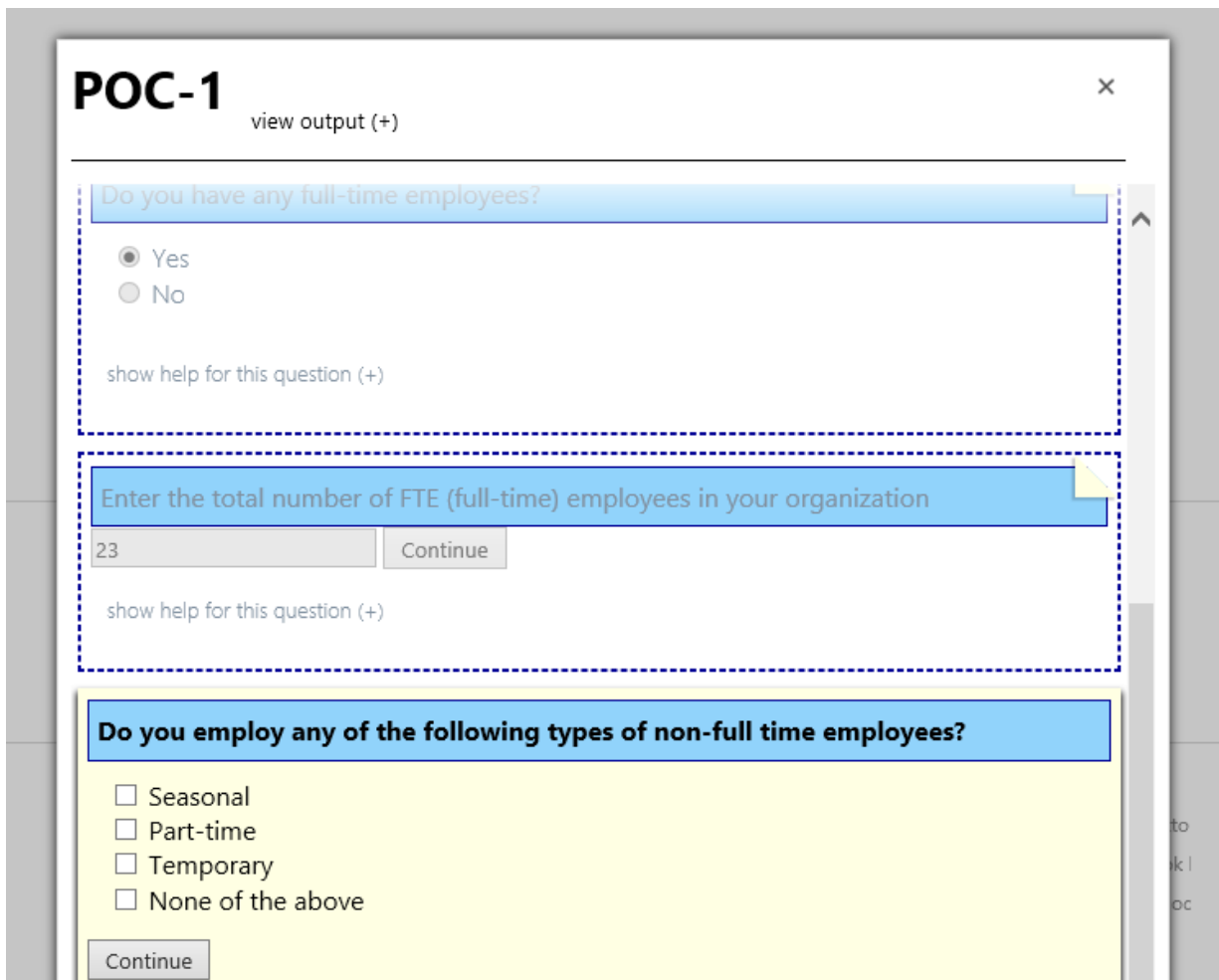
arbitrary invocation of rules from within CRM a no-code exercise. Using this as a foundation, we built a dynamic survey component for Microsoft Dynamics® CRM.

## Rules of the Survey

In the financial services industry, nothing is simple because the world of finance is not a simple place. The rules and processes that govern various aspects of the industry are often difficult to implement, verify, and communicate. There is frequently much data that needs to be collected in order to make a single decision, such as “which product offering best fits customers with X income but Y liabilities, given this list of Z factors.” The level of detail needed is high, which means that the corresponding complexity of any automation implementing these rules is also high

With our dynamic survey framework, business experts can directly express the desired survey logic in a familiar,

readable fashion simply by authoring rules for them in irAuthor. Once rules have been authored and published, a set of web resources in Dynamics render the survey’s UI and broker responses from the user and from the rules engine using the Dynamics JavaScript SDK and KnockoutJS (a client-side presentation framework). Surveys, the set of their possible questions, and such are entities defined in Microsoft Dynamics® CRM and therefore can take advantage of the full suite of benefits provided by CRM, like built-in forms. The Survey entity model is business problem-agnostic; that is, the same survey solution can apply to any business process or problem. This has the benefit of insulating the system from unrelated changes, since the only change to existing entity schema that is needed for our solution is the addition of a single relationship between an appropriate business entity(ies) and the survey model.



The screenshot shows a survey window titled "POC-1" with a close button (X) and a "view output (+)" link. The survey contains three questions:

- Question 1:** "Do you have any full-time employees?" with radio buttons for "Yes" (selected) and "No", and a "show help for this question (+)" link.
- Question 2:** "Enter the total number of FTE (full-time) employees in your organization" with a text input field containing "23" and a "Continue" button, and a "show help for this question (+)" link.
- Question 3:** "Do you employ any of the following types of non-full time employees?" with checkboxes for "Seasonal", "Part-time", "Temporary", and "None of the above", and a "Continue" button.

A standard Microsoft Dynamics CRM entity form is visible in the background.

» Figure 3 - The dynamic survey UI. A standard Microsoft Dynamics® CRM entity form is visible in the background.

## About InRule Technology

InRule Technology enables organizations to make faster, more effective decisions by reducing change cycles and automating business rules. IT and business personnel use InRule's Business Rules Management System (BRMS) to easily put Policy into Practice™, in hours not days, to increase productivity, grow revenues and improve customer service.

More than 300 members of the InRule User Community in 21 countries rely on InRule to reduce development and change cycles by up to 90 percent for their core systems and customer-facing applications. InRule Technology is a Microsoft Certified Gold Partner and has been delivering significant and measurable business and IT results to customers since 2002.