As businesses seek to speed up workflows, bring new products to market and better serve their customers, they need to make decisions at an ever-increasing pace. These aren’t the tough business decisions that require human intuition. Instead, they’re the type of everyday choices guided by rules (and even regulations) that could be made automatically with the right software solution.

Examples of decisions that can be automated include:

- How much a retailer should discount a product for a customer given certain conditions.
- How much an insurer should pay out on a claim depending on circumstances and company policies.
- How to determine eligibility for retirement disbursements.
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While automated decisioning has been around for a while now, the traditional approach of translating policy into programming code has left a gap between the line-of-business policy makers who understand the rules governing the decisions and the programmers who write the automation code. Business policy makers and IT need to collaborate to have the greatest impact on day-to-day business. More often than not, many organizations build their own rules engines from scratch or have developers hard-code decision logic into existing programs.

This is where business rules engines come in. Rather than translating rules into programming code, business rules engines—also called Business Rules Management Systems (BRMS)—can directly automate the business rules without the need for coding. This enables the business people closest to the rules to participate directly in managing the logic. Doctors can manage the rules for clinical decision-making, in the same way that lawyers handle rules for legal advice or that claims handlers address rules for claims adjudication. Managing rules using a business rules engine allows developers to free up their time from interpreting rules to focus on high priority IT projects.

Business rules engines are powerful tools for businesses that deal with ever-changing policy and regulation. There are five reasons why you should think about using a business rules management system in your business.

**Reason 1:**
**Keep up with the pace of change**

Eliminating the translation of rules into code reduces the time it takes to develop and refine business applications. This is especially true for complex rules subject to ever-changing policy and regulations.

Policy and regulatory logic is difficult to manage as code for numerous reasons. Firstly, policy definitions are often ambiguous and incomplete. If a programmer implements logic as specified, there could be bugs in the system due to errors in the specifications. Secondly, it takes considerable time to convert the policy logic into programming code. These problems increase exponentially with an increase in the number of rules, because rules interact with one another in complex ways. For example, if one decision is dependent on the rule prior and the rule prior is implemented incorrectly – the decision can be incorrect which could impact hundreds, even thousands, of decisions.

By allowing business users and analysts to manage the logic, development time can be spent on assuring that the rules meet the business intent.

Chattanooga, Tennessee-based insurer Unum experienced the difference a BRMS can make when it started working with Progress® Corticon®. Unum provides employee benefits programs, such as life insurance and disability insurance, to large employers. According to Unum, “changes that would have taken weeks can be made in days even including all the necessary IT governance and controls. And changes are made with accuracy and confidence now, thanks to the model-driven approach and rule verification built into Corticon.”

As a result, Unum is able to keep up with the pace of change in its business without burdening developers. This allows the company to satisfy current and prospective customers with faster price quotes for new and changed plans.

**Reason 2:**
**Improve efficiency and productivity**

Manual decision-making eats up man-hours. Each decision requires a human to assess a problem against a set of policies which takes time to process. With business rules engines, businesses can spend less time on policy-based decision-making, and more time on work that requires creativity and collaboration.
Progress Corticon has helped customers achieve efficiency and productivity gains. For example, prior to Corticon, the State of Texas required a department staffed with 200 claims adjudicators to keep up with their workers’ compensation claims workload. By using Corticon, Texas is now automating most of claims processing, which include decisions such as how much to pay, whether to review for fraud and whether the submitted data is valid and complete. This level of automation has allowed the State of Texas to speed up the claims process and consolidate its staffing.

In another example, South African manufacturer Columbus Stainless Steel uses Corticon to help improve its manufacturing process. Because the production of stainless steel involves a range of control variables, including chemical compositions, mechanical properties, physical properties and surface finishes, Columbus needed an effective tool to facilitate planning, optimization and execution of the manufacturing process. Corticon is used to determine every step along the production line, giving Columbus the agility to adjust processes quickly under dynamic market conditions. As a result, Columbus has seen a 90% improvement in speed of manufacturing.

**Reason 3: Ensure compliance with policy and regulation**

Business rules management systems enable businesses to capture policy and regulation with automated services that can enforce those rules during every transaction. BRMS can be used for internal policies, such as pricing and discounting, diagnostics, logistics and more. Alternatively, it can be used to comply with industry and government regulations, such as capital requirements in banking or eligibility requirements for government benefits.

Automated business rules not only help ensure that the business is complying, but also provide transparent documentation of the decision-making process, providing a bulletproof audit trail. This improved documentation process has implications for numerous industry verticals.

For example, Corticon is the leading system used to implement rules of the Affordable Care Act, used by almost half the states in the U.S. to address eligibility for healthcare benefits. Corticon is also used by a number of banks to comply with capital requirements regulations, and numerous hospitals use Corticon to maintain compliance with best practices in clinical decision-making.

**Reason 4: Improve customer service**

It’s no surprise that customer service suffers when business decisions take too long. In the past, health insurance companies took an average of two weeks to process new applications for insurance. Today, insurance companies can process applications in a matter of days, or even hours, by using business rules engines, giving them a competitive edge. Customers are happy when the company has smooth and simple customer service interactions. Not only does this improve sales, but it has the added benefit of building brand loyalty right from the start.

The California Association of Realtors demonstrates how business rules engines can support customer service with its special website that helps its members determine what forms they need to close their real estate deals. Previously, the association provided a hotline staffed with lawyers to advise realtors on the required forms. Using Corticon, the association captured the lawyers’ guidance into business rules, which are automated with the Corticon rules engine and delivered via an interactive web site. This new application provides exceptional customer service. It is available 24 hours per day, and provides the best available legal advice.

**Reason 5: Open new revenue opportunities**

Automated decision-making can also open up new revenue opportunities, particularly in today’s web-dominated world. We see fantastic examples of this by way of the financial and insurance markets. Many companies in both verticals depend heavily on branches and brokers to guide customers, and even claims, through certain financial transactions. Now they can offer products virtually through the customers’ browsers instead, as complex applications with multiple variables requiring business decisions can be routed automatically through a business rules engine on the back end.

eBay also uses Corticon to help maintain a safe marketplace for customers. In order to make sure buyers get what they pay for, eBay has thousands of business rules governing when and for how long to withhold payment to provide assurance that the purchased item arrives on time and in the condition promised. These rules involve variables such as product category, seller reputation and geographical locations of the buyer and seller. Corticon processes all of these transactions—over 140 million per day—in order to ensure these policies are enforced consistently with every transaction.
In one example, Vitalbox, a social business enterprise focused on public health, was able to build its Personal Health Program using Corticon, which provides patients with health risk assessments and disease management advice. Corticon was used to create and process rules across numerous factors such as geography, regulations, ethnicity, gender and risk levels. Prior to using Corticon it took six developer hours to create, test and deploy a single rule, making it difficult to scale the business. After deploying Corticon, Vitalbox was able to increase users by 375 percent in just a matter of months.

And in another example, the financial firm Redwood was able to create South Africa’s first online-only credit facility using Corticon. Powering the lending system the facility was based on, by tapping into the Progress® OpenEdge® RDBMS, purchase transactions from multiple online retailers are approved in real-time. Redwood was able to deliver the solution in just four months, from proof-of-concept to deployment.

**Conclusion**

The effective management and automation of business rules provide a number of valuable benefits to organizations. Rules engines can decrease costs, increase revenue, improve compliance and provide better customer experiences. Progress Corticon has helped over 500 companies worldwide achieve these benefits and impact both their top and bottom lines.

To learn more about Progress Corticon, please visit www.progress.com/corticon for additional information.