![Progress®]

DETERMINING ELIGIBILITY WITH PROGRESS® CORTICON®

Challenge

Across industries and departments, organizations make thousands of recurring decisions a day, many of which affect eligibility determination. Failure to manage these decisions effectively and accurately can result in fraud, risk or abuse; delayed benefits to citizens, customers and patients; and revenue loss.

Solution

The Progress® Corticon® Business Rules Management System enables organizations to automate the underlying rules that determine eligibility by separating business rules from application code.

Benefit

Progress Corticon delivers improved agility and faster time to value, freeing IT resources from traditional coding while empowering developers and business analysts to implement and modify rules outside the application, often slashing development and change cycles by as much as 90%.

Determining eligibility for thousands or even millions of people is a tremendous challenge facing organizations and departments across a variety of industries. The Progress® Corticon® Business Rules Management System (BRMS) is enabling these organizations to dramatically simplify the process by automating decision management to achieve greater agility, flexibility and control.

Determining Eligibility in the Wake of Constant Change

Across industries such as insurance, banking, healthcare, government and e-commerce, organizations and departments make thousands of recurring decisions in the course of their daily operations. Many of these decisions affect eligibility determination for products and services like loans, government benefits, healthcare coverage, online purchases and credit approval, for example:

- "Do we deny or approve the claim?"
- "For which of our programs or products—if any—is the customer eligible?"

- "If a person is eligible for one program, does it affect his or her eligibility status for another program?"
- "What level of risk does this person pose to the organization? Based on that risk factor, what products - if any - should we offer?"

For many companies, the majority of these decisions are performed manually by people trained to follow rules via policies and guidelines. But with thousands of decisions being made each day, this method can be costly, time consuming, and often delivers inconsistent results. The consequences can be detrimental to both the business and the customer, resulting in:

- Increased fraud, abuse or credit risk
- Delayed access to eligibility benefits for deserving citizens, clients, or patients
- Revenue loss or overpayments

In addition to the sheer volume of decisions being made, organizations – particularly within highly regulated industries - are also expected to quickly conform to constantly changing rules, policies and regulations. "We don't often have much lead time to react to these changes," explains Shirley Monroe, Chief Technology Officer - Human Services, Insurance and Aging, Commonwealth of Pennsylvania. "For example, our fiscal year ends at the end of this month, and the state has yet to pass a budget. We probably won't see that for another three to four weeks, but we will be expected to respond to any required changes immediately."

Some companies or departments have taken a more automated approach by hard coding business rules directly into their operational applications. However, because changes must be made to the underlying code by IT, most organizations struggle to keep up with the frequency and urgency of the changes that need to be made. "Our business rules were locked up in code," says Julie Gross, Assistant VP of

> "Corticon processed 2.6 million records in 43 minutes for a sustained throughput of over 1,000 decision sets per second. The same process took almost two days on the mainframe in COBOL. This is the level of performance we are seeing across the board with Progress Corticon."
>
> Shirley Monroe, Chief Technology Officer – Human Services Insurance and Aging Commonwealth of Pennsylvania

Business Systems Implementation at Unum – a Fortune 500 leader in disability, group life, long-term care and voluntary benefits. "Changes we needed urgently were taking 12-plus weeks to implement."

Progress Corticon Automates Decision Management, Providing Agility, Flexibility and Greater Control over Eligibility Determination

There is a better way. Organizations around the world are using the Progress Corticon Business Rules Management System (BRMS) to streamline their approach to business rules management and improve the eligibility determination process.

Progress Corticon enables companies to make better decisions, faster by separating business rules from application code. It delivers improved agility and faster time to value, freeing IT resources from traditional coding while empowering developers and business analysts to implement and modify rules outside the application, often slashing development and change cycles by as much as 90%.

As a result, organizations are able to react far more quickly to changes in policies or regulations that could affect the eligibility process. "We add new rules to our system every day based on new studies, protocols, and

regulations," explains Carlos Bassi, CEO and Founder of Vitalbox "[Corticon] has significantly reduced our time to market because we can now develop and deploy a new rule within 10 minutes versus six hours."

The agility to quickly react to change can prevent credit risk, fraud or loss of revenue due to an operational error. "With our old system we ran the risk of sending out incorrect benefit amounts...money in all likelihood we never got back," explains James Weaver, Deputy Chief Information Officer – Human Services, Insurance and Aging, Commonwealth of Pennsylvania. "By automating this process with Progress Corticon we have improved program integrity and achieved cost avoidance."

Most recurring decisions within these highly regulated industries are guided by complex rules with a number of interdependencies. The ability to manage that complexity at a high transaction volume is imperative to the eligibility process. "We have a quarterly Income Eligibility Verification (IEV) batch that must reconcile information across a number of sources...Corticon processed 2.6 million records in 43 minutes for a sustained throughput of over 1,000 decision sets per second," says Monroe.

Business rules automation can greatly improve productivity, enabling organizations to better serve their customers, whether it is providing eligible citizens with the benefits they deserve, approving a customer for a loan, issuing an insurance policy, determining appropriate treatment or healthcare coverage for a patient, or approving an online purchase.

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Progress Corticon Improves the Eligibility Process across Industries

Public Sector

Government organizations are making great strides in automating systems to better serve the needs of millions of constituents and improve the agility and efficiency of public services.

However, legacy systems, constantly changing local and federal regulations, and complex policy can all affect an organization's ability quickly and accurately deliver benefits to deserving citizens.

The Commonwealth of Pennsylvania Department of Human Services (DHS) is using Progress Corticon to automate the rules and logic behind the eligibility determination process within its integrated eligibility system. The department has already automated a number of actions, including non-modified adjusted gross income (MAGI) eligibility rules, and case actions. And by the end of the year it plans to automate the eligibility rules for Temporary Assistance to Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), and MAGI eligibility.

"The flexibility of Progress Corticon and the ability to translate rules into every-day language make it so much easier to use than other solutions or hard coding," says Monroe. "Rules Management has become a more iterative and agile process with Corticon. What once took us weeks now takes days, if not hours."

A number of other states have implemented Corticon as a cornerstone to their Health Information Exchange (HIX) and integrated eligibility systems; some receiving accolades and awards for their success. With Corticon, these state are ensuring they stay up to date with the latest eligibility rules, can maintain a record of what rules were in affect at any given time, and most importantly, ensure eligible citizens receive the benefits they are entitled to while reducing risk and fraud.

Banking

A typical banking organization has over 300 unique business processes, with up to 1,600 unique activities. As many as 70% of those activities involve decisions, for example:

- Whether the bank can verify the identity of a specific customer
- If the bank should approve a loan application
- What product configuration is most appropriate to maximize revenue while minimizing risk

For virtually every distinct banking product, there are different sets of rules for determining eligibility. With Progress Corticon, banks can automate eligibility decisions, applying their business policies and ensuring that product eligibility is determined appropriately and instantly, even for the most complex products.

For example, Singapore-based DBS, a leading financial services group in Asia, and a leading consumer bank in Singapore and Hong Kong, sought to improve its inflexible eligibility determination process by strengthening business rules and building a more automated and fact-based process.

Using Progress Corticon to power the credit rules process required to determine eligibility, the company now has a reliable, accurate, and flexible credit scoring process to support both its consumer and commercial loan activities. With the ability to quickly and accurately assess risk and creditworthiness of individuals and businesses, DBS has not only reduced its own credit risk, but also the amount of funds which once had to be held in reserve to cover unanticipated losses.

"With Progress Corticon we have been able to move at the speed of the market by implementing new rules to reflect new realities when needed," explains Sakthidaran Swamirajan, Vice President, Application Management at DBS.

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Insurance

Similar to the banking industry with hundreds of unique business processes and activities, insurance organizations are constantly making recurring decisions across core business processes like underwriting, claims processing, time to claim settlement, time to quote, and time to market. Decisions like:

- What is the risk of this applicant?
- How much should I reserve against this?
- How does a change of address affect a customer's policies?

By automating the rules that drive eligibility decisions, Progress Corticon is helping insurers improve response times for processes that require calculations, validations and data transformations; and increase consistency of decisions across a high volume of transactions.

For the Tokio Marine and Fire Insurance Co. (HK) Ltd., a member of one of the largest international insurance groups in the world, performance and scalability are critical to serving the needs of its 600,000 users and ensuring customer satisfaction.

Adopting Progress Corticon has enabled the company to automate the business rules within its 401K business support system to provide better customer service, accommodate future growth and improve security and customer information management. As a result, Tokio Marine increased staff

productivity by 20%, reduced user training workloads, simplified management of a 400,000-step process for business users, improved overall system performance and increased accuracy in information sharing and historical records.

Healthcare

Around the globe, healthcare has become a high-stakes sector for innovation. Caught between growing demands for quality medical services from aging populations and push back from the public and private payer communities, healthcare organizations have had to seek better ways to measure, manage and improve processes like eligibility determination.

Unum, a Fortune 500 company and a market leader in disability, group life, long-term care and voluntary benefits, is using Progress Corticon to automate the business rules that the define eligibility determination across thousands of product and service combinations every single day. As a result, Unum has reduced the change cycle time from 40 hours to 15 minutes by empowering business analysts to manage business rules themselves. It now takes just one week from the time a customer's price quote is accepted to the time the policy is issued versus eight weeks previously. And because the company is no longer reliant on IT to mange business rules, business analysts can implement the changes they need at a pace that keeps up with market and customer demands.

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> Rick Klausner, Vice President
> IT Enterprise Architecture, Unum

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A social business enterprise focused on public health in Brazil, Vitalbox is committed to improving individual healthcare while reducing costs through its innovative Personal Health Platform. Using Corticon to automate the business rules management process, the platform creates a personalized assessment of health risks, providing individuals with a health map that calculates the chance of that person developing chronic conditions. The system then determines what treatment a patient may be eligible for based on their status, proposes actions to reduce risks and sends alerts if information is required or actions need to be performed.

"Rules change frequently, based on health ministry guidelines, country, health operator, and so on. It is crucial to have flexibility to create and maintain these rules. Progress Corticon gives us that agility to immediately react to change," explains Bassi of Vitalbox. "[Using Progress Corticon] has significantly reduced our time to market because we can now develop and deploy a new rule in 10 minutes versus six hours. Corticon can easily support our large amounts of dynamic data. And it offers the flexibility and agility around rules creation and management that we needed."

E-commerce

Speed and accuracy are mission critical for today's E-commerce companies. To succeed within this incredibly competitive and dynamic market, E-commerce organizations must be able to respond to a variety of factors, often in real time, such as demographics, online behavior, historical data, financial information, compliance regulations, competitive pressures and more.

With more than $7 billion in electronic transactions for 2.5 million customers and 3,400 supporting merchants, NETELLER is recognized as one of the world's largest independent online money transfer businesses. One of NETELLER's core competencies

is the ability to provide positive proof of identity of online individuals in an effort to eliminate identity theft and fraud. The company uses Corticon to optimize the verification and approval process for new applicants. NETELLER has streamlined the process for fraud detection and eligibility and can now verify and approve individuals that would not have previously made it into the system. By implementing just one rule set to allow verification and approval of these customers, NETELLER has increased revenue by $1.5 million per month.

"Our new system gives us a huge amount of flexibility and greater confidence in the accuracy of our results," says Andy Scott, Chief Security Officer, NETELLER. "Now we are able to verify more applicants, approve more customers at a higher level, which translates directly to more business with more people."

Considered the largest worldwide online marketplace, customers trust eBay.com because it's a safe place to do business. To ensure that buyers get what they paid for, eBay may temporarily withhold payment from sellers for certain transactions until the purchased item arrives on time and in the promised condition. With more than 150-200 million transactions per day, eBay requires a millisecond response from a rule service to ensure a responsive customer experience. Using Corticon for each transaction, eBay rapidly evaluates thousands of business rules to determine if and how much to withhold, which ensures a smooth customer experience.

To take advantage of South Africa's recent economic growth, software provider Redwood created mobicred - South Africa's first online-only revolving credit facility. After a brief once-off online application process, customers are approved within seconds for a specific risk-based facility limit. Corticon is a key component to the system, driving the process of approving or

declining an application, and for those approved, to allocate a spending limit on the account. Because all of this activity must happen in almost real time while the online applicant waits for a decision, speed and flexibility of the rules-based process is paramount to completing the purchasing transaction.

"The ability to quickly modify or add rules is vital to keeping customers happy, especially in a start-up environment where you are constantly making changes," says Peter Versfeld, Chief Information Officer for Redwood. "Today, with Progress Corticon, we can modify a rule in almost real time instead of the hours or days it would take if we were dependent on hard coding."

Take Control of the Eligibility Process with Progress Corticon

Businesses across industries are looking to be more agile and productive when it comes to determining eligibility. To accomplish those goals, organizations must keep up with the velocity of information and thousands of decisions required to run the business. The key to success is flexibility - the ability to quickly adjust to changing business, market and regulation conditions.

Progress Corticon delivers that level of flexibility, giving business analysts the ease and control to create and manage the business rules that ultimately run the business. Corticon's patented "no coding" rules engine is used by many of the world's largest financial services, insurance, healthcare, and ecommerce companies as well as federal and state government organizations to automate their most sophisticated decision processes, reducing development and change cycles by 90%.

Over 500 customers around the world rely on Corticon for automating and executing business rules. Industry leaders like The Commonwealth of Pennsylvania Department of Human Services, DBS Bank, NETELLER, eBay, Unum and Vitalbox have realized significant bottom- and top-line results using Corticon to create, manage and deploy business rules.

To learn more visit progress.com/corticon or call **1-800-477-6473**.

About Progress

Progress (NASDAQ: PRGS) is a global software company that simplifies the development, deployment and management of business applications on-premise or in the cloud, on any platform or device, to any data source, with enhanced performance, minimal IT complexity and low total cost of ownership. Progress can be reached at www.progress.com or 1-781-280-4000.

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