

ACCELERATING TIME- TO-VALUE WITH PROGRESS® OPENEDGE® BPM AND PROGRESS® CORTICON® BRMS

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OVERVIEW

Enterprises of all sizes are forced to adapt quickly to changes in the competitive landscape. Staying ahead of regulatory and customer requirements means that changes to business policies and rules need to be in lockstep. In particular, the cost of non-compliance can be high, but the cost associated with the implementation of changes in business policy can also be significant..

When business rules are embedded in software code, such changes turn agile businesses sluggish. Business analysts struggle to understand software models, while developers try to handle the pressure to rapidly find and adjust logic buried deep inside what could be millions of lines of code. Lost productivity, missed opportunity, and downward profitability can result.

In this technical whitepaper, we'll take a closer look at the business issues faced by a mid-sized enterprise in Europe, which we'll call LN Engineering to protect their privacy. LN Engineering develops, markets and distributes training systems for advanced technical, engineering, and vocational education. Several of their most pressing challenges, outlined in this document, were addressed within the Progress® OpenEdge® platform by leveraging Business Process Management (BPM) along with Progress® Corticon® Business Rules Management System (BRMS) capabilities. **AKIOMA Software KG**, an Independent Software Vendor (ISV) specialized on the Progress OpenEdge platform, performed the technical implementation of the integrated BPM and BRMS solution.

For more information about the full BPM and BRM capabilities within the Progress OpenEdge portfolio, visit [Progress OpenEdge Productivity and Personalization Solutions](#).

BUSINESS CASE

LN Engineering uses business applications built on the Progress OpenEdge platform for several critical functions. In order to differentiate themselves in their market, they require agile solutions that can be procured on a modular basis. Their ISV software partner, AKIOMA, provides them with an advanced CRM solution that is key to daily operations, but LN Engineering, like many businesses, must continually customize the core implementation to remain competitive in their market. Agility and speed are often key factors for staying ahead of their industry peers.

LN Engineering's core business is growing more and more complex every year. Business processes span functional silos across the organization, and speed and accuracy in returning a quotation in response to an inquiry can make or break a new sale. . To be competitive is to be efficient, and efficiency lies

in the ability to safely automate tasks and distribute work effectively across the organization faster, with fewer errors.

LN Engineering wanted to:

- ▶ Develop prescriptive business processes which would distribute work effectively
- ▶ Guide staff through end-to-end processes efficiently
- ▶ Ensure that decision steps were audited and available for scrutiny, both for governance purposes and as a means to optimize their business

From AKIOMA's perspective, it made sense to collaborate and design business processes together with subject matter experts (SMEs) from LN Engineering. AKIOMA knew they could leverage Corticon BRMS to develop and deploy business rules and policy as part of the overall solution.

By lifting business processes from procedural Progress OpenEdge ABL code, and modeling processes visually, AKIOMA could establish "common ground" for discussing and developing a BPM approach to orchestrating LN Engineering's business. Progress OpenEdge BPM also offers the capability to simulate business process execution using workload volume and arrival rates to gain insight into process execution.

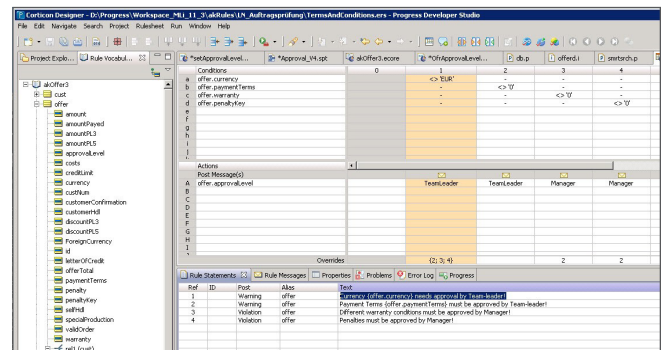


Figure 1. A core BPM flow at LN Engineering

AKIOMA discovered that several important chunks of LN Engineering business logic and rules were effectively "sunk" inside ABL code. Lifting logic from ABL code and re-housing it in Corticon BRMS enabled SMEs from LN Engineering to model logic in an intuitive "spreadsheet style." SMEs could then easily and quickly deploy modified policy without impacting existing business processes.

Progress Corticon BRMS offered ease of use that significantly flattened the learning curve for SMEs at LN Engineering looking to implement key business rules in an externalized BRMS capability. Corticon BRMS also provided a novel way to enable LN Engineering to customize their implementation without waiting on AKIOMA for reworked code with the associated delay of testing and installation on the target infrastructure.

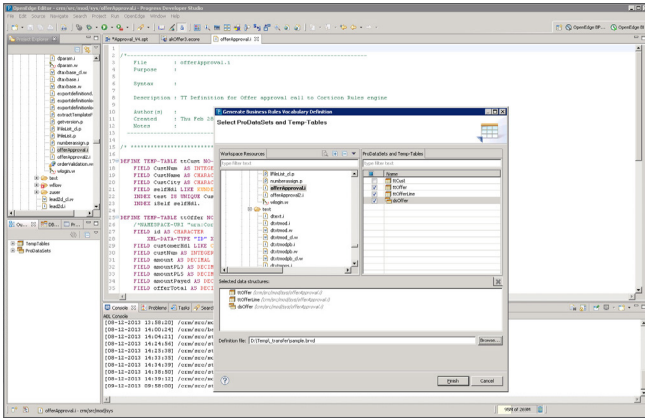


Figure 4. Shared vocabulary for building BRM rule sheets from underlying data structures

This is a major step toward a modular approach to system architecture.

By making business processes and business rules easily customizable as modular components, AKIOMA can now offer customized versions of those components in a controlled fashion. Customizations are now de-coupled from the core capabilities of the system and changes can be applied in a more agile way. Modular components can be tested independently, and are self-documenting.

Finally, Progress OpenEdge BPM and Progress Corticon BRMS inherently support “after-the-fact” forensics. LN Engineering leverages these capabilities for support of both audit and governance questions, like:

- ▶ Why was a particular configuration built and offered at a certain price point?
- ▶ How long on average did it take for non-standard product configurations and pricing to be approved by LoB supervisors?

BUILDING THE FUTURE

CURRENT-STATE, FUTURE-STATE

The Progress OpenEdge-based CRM application deployed at LN Engineering consisted of the following components:

- ▶ Approximately 250 Database tables with 5500+ Fields
- ▶ Largest production Database: 70GB
- ▶ 350+ screens
- ▶ 5000+ Programs Server-Side [Progress]
- ▶ 600 Programs Client-Side [JavaScript, including frameworks and libraries]
- ▶ Approximately 2000 other files [CSS, Images, and so on]

Architecturally, the user interface [UI] is browser-based, and the solution fully leverages the strengths of the Progress OpenEdge Application Server [AppServer] and the integrated Progress OpenEdge database. The application supports advanced CRM functionality in the area of complex offer management administration, containing potentially hundreds of complex, interrelated products with associated pricing models.

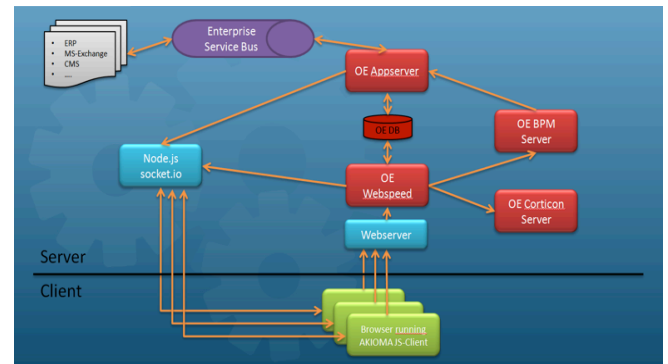


Figure 5. The solution architecture deployed at LN Engineering

STEPS TO AN INTEGRATED SOLUTION

Progress OpenEdge BPM and Progress Corticon BRMS are available as add-on functionality to the core underlying Progress OpenEdge 11.3 platform. From a developer perspective, the integrated solution enables access to the specific design time authoring environments through a corresponding, pre-configured Eclipse perspective.

From an architectural perspective, there is no strict requirement to deploy business logic on the Progress OpenEdge AppServer, but it does offer an advantage in terms of calling compartmentalized code from a BPM work step.

Collaboratively, AKIOMA and LN Engineering began incrementally building out the processes deemed to be most valuable to the business. The Progress Productivity solution authoring process supports developing a business process from various starting points: simple activities dragged on to the canvas, importing from an Excel spreadsheet, and many others. The authoring environment includes Business Process Management Notation [BPMN] symbols that support a standards-based approach. Business Process activities can be layered on to “swim lanes” to indicate how work is performed across functional boundaries. Such an authoring environment helped LN Engineering move from explicit, hard-coded processes to documented workflow business processes separated from application code, enabling buy-in across business departments.

In parallel, AKIOMA began to train SMEs at LN Engineering in using the Corticon BRMS design environment. With a “zero-

coding” approach based on a shared business vocabulary, SMEs were able to model and test business rules and logic in isolation, quickly ramp their skills in modeling rules, and deploy them to the decision service server.

LN Engineering has seen major gains in their ability to respond more quickly to inbound inquiries by using an intelligent work distribution pattern implemented with Progress OpenEdge BPM.

BUILD FREQUENTLY AND EARLY, ITERATE FAST

With a BPM-oriented approach, LN Engineering and AKIOMA were able to implement their first business processes and associated business rules capabilities in mere weeks as opposed to the months or years they would have spent in the past. Collaboratively, they found it simple and efficient to prototype business processes early and involve LoB more closely with the development effort.

In many cases, LN Engineering found use cases which would have been extremely difficult and costly to implement in a traditional code-based system to be easily [that is, declaratively] implemented in Progress OpenEdge BPM. A good example of this capability is support for a use case where an escalation path in a process based on elapsed time is required.

RESULTS

LN Engineering is now actively tracking productivity gains achieved by implementing Progress OpenEdge BPM and Progress Corticon BRMS. They have already seen major gains in their ability to respond more quickly to inbound inquiries by using an intelligent work distribution pattern implemented with Progress OpenEdge BPM.

In addition, the Progress Corticon BRMS capabilities guide staff to create accurate quotations based on configuration rules established in the system. Catching configuration errors early in the Order Management cycle is proving to be a massive benefit in terms of improving quality while reducing cost.

With their Progress OpenEdge BPM Portal, LN Engineering has visibility on workloads moving through the system. Visualizing business performance is opening up opportunities for Business Process Improvement [BPI] that were formerly

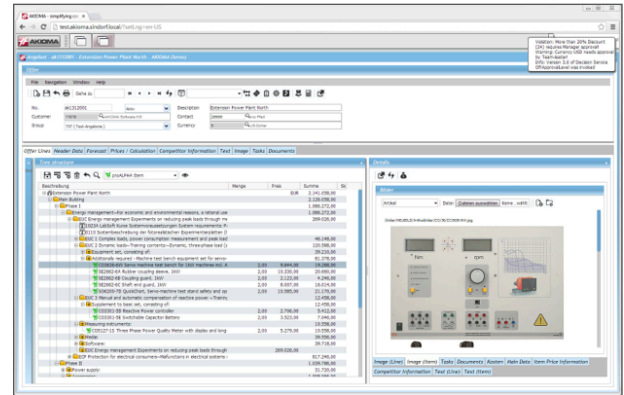


Figure 6. The Order Management UI with real-time notifications for order validity

impossible to identify and execute against. Documented visibility is a “win-win” for the collaborative relationship between LN Engineering and AKIOMA. AKIOMA can rework and optimize business process flow with visual tooling while quickly implementing changes without burrowing into ABL code.

Finally, AKIOMA can hand off policy and business rules to the Business Analyst and LoB SMEs at LN Engineering. Empowered with the Progress Corticon Business Rules Studio, Business Analysts can modify and unit test business rules and safely deploy to a decision service container without affecting the Progress OpenEdge BPM application.

ISV AKIOMA was able to put powerful BRM technology directly into the hands of SMEs at LN Engineering, empowering end users with the controlled capability to modify and deploy decision services without intruding into the software development lifecycle.

CONCLUSION

By refactoring existing business logic and extending their existing Progress OpenEdge solution with Progress OpenEdge BPM and Progress Corticon BRMS, LN Engineering were able to significantly improve the quality of their business processes. Error rates dropped significantly and new ways to distribute work were made possible with a BPM approach.

Architectural challenges around how and where to re-factor business logic were addressed by applying patterns. In fact, AKIOMA discovered several patterns during the lifetime of the project. Lessons learned during this project can be harvested, and possibly shared with others via a Community to accelerate future development projects.

By having a “solution-in-a-box”—a factory-integrated platform—in Progress OpenEdge available, AKIOMA was able to effectively mitigate project risk. With the Progress OpenEdge BPM Portal accessible through a simple browser interface, LN Engineering gained new levels of visibility into the state of the business from an end-to-end process perspective. This capability forms the basis for future opportunities to optimize process flow across business functions.

ISV AKIOMA discovered novel, powerful ways to ease customization of its CRM solution by introducing a BPM layer to an existing application. Furthermore, in the area of potentially volatile business rules and policy, AKIOMA was able to put powerful BRM technology directly into the hands of SMEs at LN Engineering, empowering end users with the controlled capability to modify and deploy decision services without intruding into the software development lifecycle. This is a huge benefit for achieving improved business agility and enhancing the relationship with their business partners and customers.

ABOUT PROGRESS OPENEDGE

Progress OpenEdge is the leading platform for simplifying and streamlining the development, integration, and management

of global business applications. With the Progress OpenEdge product, you can develop dynamic solutions that incorporate business process and integration capabilities securely across multiple platforms and devices. Whether you deploy on-premise, on a mobile device, or in the Cloud, Progress OpenEdge offers a single integrated platform that is 40% more productive and provides a 30% cost savings versus the competition. Over 47,000 businesses in more than 175 countries run on the Progress OpenEdge platform. For more information, please visit www.progress.com/openedge.

ABOUT PROGRESS CORTICON

Progress Corticon is a Business Rules Management System (BRMS) that delivers high-quality, high-fidelity, high-performance automated business decisions. It helps increase the agility of decision change processes, and enables new insights into the connections between individual recurring decisions and business performance. Progress Corticon separates decisions from processes, helping both business and IT users to quickly create or reuse business rules as well as improve, collaborate on, and maintain decision logic. For more information, please visit www.progress.com/corticon.

For further information about the BPM and BRM capabilities within the Progress portfolio, visit [Progress OpenEdge](http://www.progress.com/openedge) Productivity and Personalization Solutions.



ABOUT THE AUTHOR

Since joining Progress in 2007, Gary Calcott has served in a number of technology and management roles, including managing the European Solution Consulting Team. Currently, Gary is a Technical Marketing Manager in the Application Development Platforms Group. A frequent blogger and company spokesperson, Gary’s passion lies in helping Progress Application Partners and direct end users derive maximum benefit from Progress platforms, and thus remain competitive in their respective markets.

PROGRESS SOFTWARE

Progress Software Corporation [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.

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