



Generali

WfMC BPM Excellence 2014 Winner

Generali PPF Holding B.V., Central and Eastern Europe

System Modernization & Operational Transformation Nominated by Bizagi, United Kingdom

1. EXECUTIVE SUMMARY / ABSTRACT

Generali PPF Holding¹ (Generali) is a leading insurance group in Central and Eastern Europe with total assets under management of €14.8 billion and more than 11 million clients.

In 2011-2014, we embarked on “Project Puccini,” a large-scale initiative to significantly boost process visibility, productivity and efficiency in the area of Corporate Risks underwriting² for 10 countries throughout Central and Eastern Europe.

We needed to support the most complex insurance processes in a multi-company, multi-language environment. Potential systems were assessed on their ability to deliver strong case management, analytics and workflow through the whole corporate insurance policies lifecycle.

BPMS was chosen over in-house development and an Out of the Box Policy administration system for the costs saving, functionality and ease of integration.

Following deployment and delivery, Project Puccini has come to life and matured into full policy administration and today, BPM extends beyond Corporate Insurance.

In March 2011, after three months of development, the first version of the company underwriting process was delivered in two member companies. Since then, its scope has widened significantly to include the whole lifecycle of insurance policy and far more complex deployments in our largest member country, Ceska Pojistovna in the Czech Republic. To date, 51 processes have been delivered in 4 countries in 5 languages. Our BPM solution has proven cost-effective, scalable & highly functional, delivering agility within our constantly shifting regulatory environment.

2. OVERVIEW

Generali provides know-how, professional and operational support for insurance companies in 10 countries – Bulgaria, Croatia, Czech Republic, Hungary, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia. The Corporate Insurance departments of all Generali member insurance companies create on average 4,000 insurance offers (quotes) per month, which materialize into over 7,000³ policies per

¹ Generali PPF Holding is joint venture of Generali Group (holds 76% of the joint venture), the 6th biggest insurance company in the world with total assets under management of almost €480 billion and 65 million clients worldwide and PPF Group which is one of the largest investment and finance groups in Central and Eastern Europe.

² Corporate insurance covers 5 Lines of Business (Property, Liability, Engineering, Marine, Special)

³ This figure includes only marine insurance cover policies. Marine insurance declarations (+10 000 pieces) are not counted for as individual insurance policies in this figure.

year. The work involved is complex, based on staff experience, with policies tailor-made for specific clients' needs. Large risks exposure is often covered by the insurance company in partnership with another co-insurers and re-insurers.

Generali PPF Holding Corporate Risks Department initiated Project Puccini in order to provide member companies with a corporate insurance processes support system. The solution needed to support the all the activities of Corporate Risks Department including:

- Underwriting and policy administration processes (including related coin-surance and reinsurance)
- Sales activities planning (Pipeline management)
- Other related areas (Loss Control, Reinsurance Specialists).

Corporate Insurance policies form a specific subset of the overall insurance portfolio. On one hand, these policies consist of complex insurance relationships, with very high level of risk exposure (sums insured) and complex policy administration processes, while on the other, there are relatively small number of policies per year (7 000 of corporate policies compared to 2-3 million of annual retail policies in Generali PPF Holding). Therefore Generali PPF Holding was looking for an agile, robust and cost-effective solution with the best value for money ratio.

Major factors were considered in the solution selection, including: multi company and multi-language features, workflow process management, document management, the ability to create policy and print quote templates, and to provide reports with strong analytical capabilities. Integration with existing assets such as policy administration systems became high priority requirement in Ceska Pojistovna - the biggest Generali member company. All these factors had to be met within a modest budget⁴. The more detailed solution selection is discussed further in Section 9: Technology.

All the above challenges have been addressed by the projects, as explained below. In addition, it enforces high standards and encourages best practice sharing across the business and with member companies⁵.

3. BUSINESS CONTEXT

The corporate risks underwriting process is one of the most complex in the insurance industry. In some cases, we have one or more offers being prepared simultaneously or consecutively, which will end up incorporated into one insurance policy, or conversely, one offer can end up split between multiple insurance policies.

In the area of corporate risk insurance the insurer forms a group of experts with unique know-how to maintain a dedicated client approach. The process itself consists of detailed risk assessments, preparation of tailor made offers and negotiation with brokers, other insurers and re-insurers.

Operations of the Corporate Risks department were mainly “paper-based” with underwriters spending a lot of time accessing policy administration systems internally

⁴ Application development team consisted initially of 3 people and later was strengthened to 6.

⁵ Recently, a new business area of Life Insurance has been added in Generali Czech Republic with medical risks examination process developed and deployed to full production within 3 months.

but lacking real-time access to the data once the case left the department. Duplicate data entry was also a known problem. In addition, question marks over productivity and quality were being raised, due to lack of process visibility.

Initial business requirements were defined as follows:

Workflow support

- Enforce underwriting guidelines (offer & policy preparation, pricing)
- Enable process flexibility and parallel quote preparation

Experience and Facts based Underwriting

- Easy access to previous quotes, quotation history, templates, reports, questionnaires, historical policy data (e.g. loss history)
- Deliver all relevant information from multiple systems from single queries

Pipeline Management

- Support planning and record keeping of the business opportunities
- Provide queries and reports for management on several levels
- Measure/graphically illustrate business performance of individual Brokers

Duplicate Request Management

- Effectively manage duplicate requests (duplicate request to quote for the same client) within each company and across all member companies

It was necessary for the selected solution to offer multi-company and multi-language support as well as integrate with administration systems of other member companies, as the solution needed to be deployed across all member companies in 10 countries.

4. THE KEY INNOVATIONS

Previous “paper” based processes lacked visibility, structure and transparency which put underwriters at risk of not making the right decisions or failing to spot mistakes. Key innovations came with structured processes including case management, tailor-made business features and real time managerial reporting based on structured shared business entities/data model.

Structured Underwriting process including Case Management:

- Automated workflow across several member company departments as well as within Generali Corporate Risks department
- Underwriter manages the underwriting case where he assigns the work, checks progress and obtains specific deliverables for quote preparation
- Real time business context of the case available for all to view e.g. underwriting experience/observations, client, policy and quote documents

Tailor-made business features:

- Use of previous offers – copy quote functionality including copy from current policy administration system
- Automated printouts of quotes, policies, authorization reports, surveys
- Detailed historical policy data
- Business relationship/offer histories with clients and brokers
- Real time data queries providing data both from the new system and from other integrated systems, user’s data sets available to export for analysis.

Managerial Reports and Queries

- Process analytics real time and historical performance
- Business analytics for Sales production, Underwriters production, Policy history, Loss history, Quotation history, Broker history

3.1 Business

All three major groups of stakeholders i.e. shareholders, customers and regulators were impacted positively:

Generali PPF Holding:

Gained the ability to view the process in real time, and to better manage processes according to company standards. Business processes involved are specified on the following page.

Customers, Sales Force and Brokers:

The ability to view, at a glance, all the opportunities in the sales pipeline and to initiate business directly from the process:

- Easy to use, real-time reports
- Integration with the brokers' portal
- Ability to see who has made the same request for the same client

Supervision, audit and compliance:

- Support for referrals' activities from member companies to Generali PPF Holding Underwriters
- BPMS provides detailed activity log making clear who made what, and when



Figure 1: Reports enable sales management to glance all the opportunities in the sales pipeline and to initiate business action directly from the process

Figure 2 – Quote process covers risk evaluation and quote preparation, authorization, issuing quote for the broker/client and finishes with issuing insurance policy

The functions and steps covered by the Underwriting Process include:

Register Request

- Search and define client & Check for duplicity
- Specify broker(s) and brokerage, Line of Business, working team

Prepare Quote

Specify coverage (Risks, limits, sum insured, premium, rates, PML...)
 Outline insured items & define insured locations (address, territory)
 Specify reinsurance and coinsurance structure (shares, fees, roles...)
 Upload & generate XLS/PDF/RTF/HTML documents from templates
 LCE/Risk management workflow: risk grading & reports, site visits, MFL
 Pricing - import of calculations done by MS Excel based pricing tool

Authorize Quote

Self-Authorization & Generali PPF Holding Authorization
 Intra-company authorization according to authority level
 Board of directors override

Issue Quote

- Issue official quotation to client; check delivery and acceptance
- Adjust the quote according to broker/client feedback

Issue Policy

- Specify premium installments calendar
- Specify policy data such as dates, policy number, various attributes
- Modify coverage (automatically transferred from quote)

Process Architecture

We used process design principles based on RIVA method⁶ with BPMN 2.0 as the implementation standard. The RIVA method identifies processes as lifecycles of essential business entities. Our Process Architecture consists of:

Process Entity	Process (Entity life cycle)	Collaborative Processes
Coverage request	Manage Underwriting	Quote, Manage Opportunities, Manage Partner Account
Quote	Quote	Evaluate Quote, Authorize Quote, Issue Quote
Policy	Issue Policy	Quote, Finalize Policy
Insurance Partner	Manage Partner Account	Manage Underwriting, Quote, Finalize Policy
Insurance Opportunity	Manage Opportunities	Manage Underwriting, Manage Partner Account
Product	Prepare Product Quote	Quote
Document	Manage Documents and Communications	Manage Underwriting, Quote, Finalize Policy

⁶ See e.g. the book *Ould, Martyn A.: Business Process Management: A Rigorous Approach.*

BPMN 2.0 allows business needs to be captured and processes to be executed according to desired behavior. The process/application design and implementation consisted of six definition/implementation steps:

- Process maps (51 processes, 713 process elements implemented)
- Data models (218 master entities, 209 parameterizations)
- User interfaces (2300 user forms including sub forms)
- Business Rules (6100 business rules and expressions)
- Participants (21 business roles, 11 user skills, 28 user groups and 27 locations)
- Integrations (12 interfaces)

Maintaining the process lifecycle

We use an agile approach to capture and implement user needs. This enables continuous process improvement and helps to close the user feedback loop. The automated deployment features are used for production deployments on a weekly basis.

Process cloning

During the course of the project we discovered that processes designed for one Generali member company were too complex to adopt for other members. By cloning these processes, reusing the shared data model and localizing the process, we were able to quickly develop tailor made processes that better suited different members. For example, the first bespoke quote preparation processes were produced within the first month of implementation.

Run time adaptability

Using BPMN features such as standalone sub processes triggered by events parallel to main process flow, we are able to provide users with high degree of runtime flexibility. The same applies for the Case Management features described below.

3.2 Case Handling

During implementation, it became obvious that some of the user requirements were hard to handle with a “fixed workflow” approach. These were requirements like:

- Underwriters’ ad-hoc decisions to involve other participants in the case
- Ability to assign several team members to the case and allowing them to work on the same activity at a time of their choice
- Multi-level authorization (=supervising + approving) activities e.g. within an insurance company, within Generali PPF Holding Corporate Risks department, within teams dedicated to a particular insurance line of business

The advantage of the selected BPMS is that it is fully data-centric⁷; business entities and their relationships are defined and stored in common Entity Relationship fashion (we work with MS SQL Server and Oracle). Within this environment, Case Management was implemented via standard BPMN building blocks, such as inclusive gates, signals and standalone sub processes (see figure 3).

Cases handling: before and after

⁷ Data centricity is key feature enabling for case management. See figure 13-3 and its description in the book *Suenson, Keith D.: Mastering the Unpredictable: How Adaptive Case Management Will Revolutionize the Way That Knowledge Workers Get Things Done*

Before the project, the underwriting process was mostly manual: MS Office/email-based. These processes lacked visibility, structure and transparency.

The organization now benefits from process automation, including offer & policy preparation, pricing and business rules (underwriting guidelines) enforcement. BPM captures most of the business logic including case management, which has impacted the following areas:

- **Processes connected across several departments and authorization levels:** The underwriting process is managed through an automated case; items flow across several company departments within a particular member insurance company (Underwriters, Loss Control Engineers, Reinsurance Specialists, and Product Experts) as well as within Generali PPF Holding Corporate Risks department.
- **Support for parallel offer preparation:** offers can now be prepared in parallel via multiple sub processes, each part being prepared by specialized underwriter. Once the quote preparation process is complete and the clients' business requirements have been set up, one or more quotes can be merged into one or more insurance policies. Alternatively, offers can be split into multiple policies (i.e. "policies" sub processes) through automated procedures.
- **Broker portal integration:** This capability is in production in Generali Hungary. Broker staff (1000+ insurance brokers) are able to prepare "Request for Insurance coverage" directly from a web portal integrated with Pipeline Management and Underwriting processes. A quote prepared by the underwriter is delivered directly into the broker's case folder which can then be managed in a fully automated manner - a huge leap from the previous MS-Office/email "Case management".

Case Item	Edit	Task Type	Task Status	Task Requester	Task Assignee	Creation Date	Solution Date	Description	Process ID
7010	Renewal of 2013 policy	GHU_UserDev2	GHU_UserDev2	04.08.2014	04.08.2014	Renewal of 2013 policy	7010		
7011	New Request for Coverage	GHU_UserDev2	GHU_UserDev2	04.08.2014	04.08.2014	New Request for Coverage	7011		

Product List	Delete	Product	Default	Business Line	TSI (Property) or SI e.o. (Liability)	SI aggr. (Liability)
<input type="checkbox"/>		Fire	Yes	Named perils	00.000.000,00	
<input type="checkbox"/>		Burst Pipe		Named perils	0.000.000,00	
<input type="checkbox"/>		Storm		Named perils	25.000.000,00	
<input type="checkbox"/>		Glass		Named perils	0.000.000,00	
<input checked="" type="checkbox"/>		Burglary		Named perils		
<input checked="" type="checkbox"/>		Robbery		Named perils		

Evaluate Quote 3 GSL 1.3

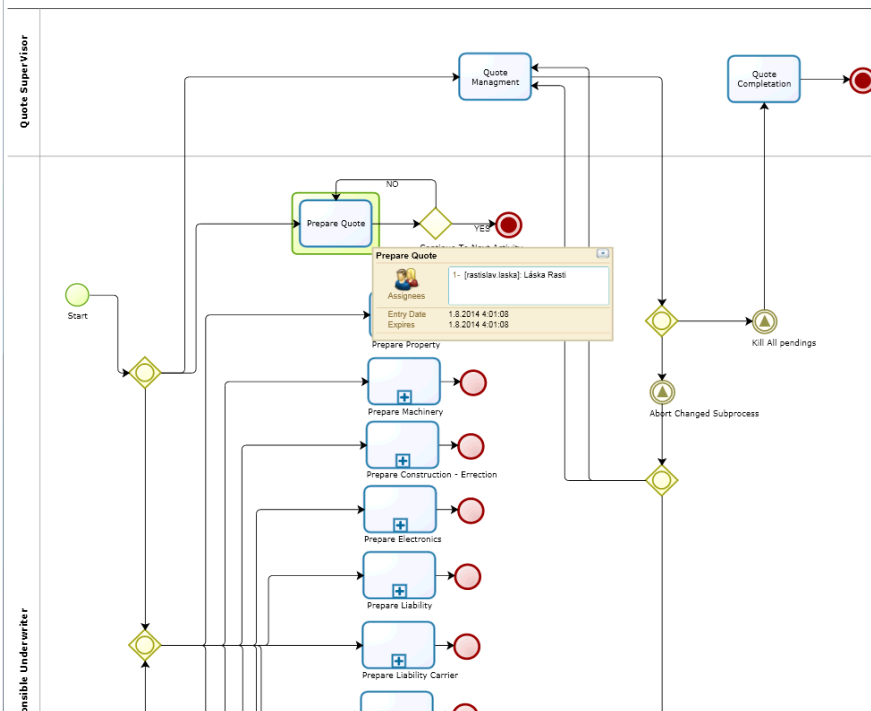


Figure 3: Quote preparation Case Management process. Insurance products can be assigned to dedicated users. Senior underwriter – Case Owner decides to accept selected product quoting delivery and/or finish quoting, if required.

3.3 Organization & Social

Operations

The impact of moving from paper-based systems to automated and efficient processes has made employees more involved and productive.

Prior to implementing BPMS, individual member companies’ practices were mostly local. Now, this information is made available centrally, enabling business people in different countries to learn from each other and share know-how.

BPM Central Team

To support reuse and best practice sharing, we formed a central BPM team consisting of 6 people. This team is responsible for project management, business analysis and application implementation and maintenance.

5. HURDLES OVERCOME

4.1 Management

During the whole course of the project there has been strong management support and commitment.

4.2 Business

The project was delivered alongside daily business activities. This required dedication from business people as in addition to their standard tasks, they also got involved in the project roll-out; creating time pressures on business staff involved.

4.3 Organization Adoption

The project team has adopted an agile approach to get maximum use of business people engagement and to create the best feedback loop for progression.

6. BENEFITS

5.1 Cost Savings / Time Reductions

BPMS has enabled Generali PPF Holding to completely transform manual processes resulting in significant operational risk reduction:

- Workflow automation across company departments as well as within the Generali Underwriters Department.
- Structured processes for pricing, policy preparation and decision making
- Elimination of data entry and duplication into several applications
- **Quote/offer preparation time reduced by 30-40%** in Generali Slovakia
- The most complex policies (50+ coverages, 100+ insured locations) renewal required **more than 1 day** to enter all data. With full integration to the legacy system and with tailor made business logic support the renewal time was cut to **1-3 hours** in Ceska pojistovna.
- Complex offers can now be prepared in parallel; merged and split; all of which improves customer response times
- Real time check for Quote duplicity
- Real time business portfolio snapshot available
- Simple and well-structured business portfolio reporting
- Brokers portal integration in Generali Hungary allows brokers to instigate new business

Cost savings gained specifically as a result of choosing our BPM solution include:

- Reuse, enabling cost-effective deployments into member countries
- Competitive pricing: chosen BPMS initial cost was 50% of competitive offerings; a figure likely to rise to 90% cost savings as more member companies use the platform.

Savings within internal IT department

The nature of the solution means there is far less burden on IT to spend time and money on system maintenance:

- User requirements can be conveyed quickly & process changes made instantly

- Reusable elements mean that processes can be quickly adapted to fit the needs of other member groups, with minimal programming or IT involvement.

5.2 Increased Revenues

Increasing revenue was not the primary goal. However increased revenues are expected to come from enabling underwriters to focus on more value added activities e.g. client support, risk assessment etc. which currently can't be quantified.

5.3 Quality Improvements

Increased productivity: Data duplication eliminated while automation enforced structured processes for pricing, policy preparation and decision making.

Case Management: Implemented case management capabilities allows for business aligned automated process support, such as several levels of authorization.

Compliance & audit: Documents are now tightly tied to the process, making them easy for employees to access and search. The process audit is now fully automated.

Pipeline management: now fully integrated with the Underwriting process. In Generali Hungary, where 95% of corporate business is managed by brokers, the ability to view the pipeline from the online portal brings competitive advantage.

Improved business insights: business data is available in real time which gives more control to employees and allows for better process management and improvements using the out-of-the-box reports and KPI metrics.

Improved access to insurance 'know how': a central knowledge repository provides real-time access to all insurance experience data, as well as a full log of the client/broker business relationship, enabling junior underwriters to benefit from their colleagues' experience. There is also a centralized view of offers history.

7. BEST PRACTICES, LEARNING POINTS AND PITFALLS

6.1 Best Practices and Learning Points

- ✓ *Use BPMS & BPMN to capture business logic including Case Management*
- ✓ *Keep user forms manageable & simple, to avoid complex adjustments later*
- ✓ *Develop dedicated forms for each insurance product to increase user satisfaction*
- ✓ *Take the agile approach rather than Waterfall methodology*
- ✓ *Put the integrated data model at the heart of the process*

6.2 Pitfalls

- ✗ *Don't underestimate the number of people you need to interact with users e.g. to capture requirements and to perform user tests and training.*
- ✗ *Don't invent new processes at the same time when building the application*
- ✗ *Don't assume one process will fit all – the difference in business logic between our companies was only 10-20% yet one process was too complex to manage.*
- ✗ *Consider building dedicated clones of the process while sharing the data model since this will significantly reduce the complexity and simplify management.*

8. COMPETITIVE ADVANTAGES

The immediate competitive advantage comes from the automation of our highly sophisticated business processes. The level of process automation and flexibility we have achieved can't be easily matched by any Out of the Box Insurance solution available. Our typical Time to Market is now below 1 month. Over time, the process

design will evolve for collection and accumulation of underwriting experience within the system as well as developing more tailor made features (e.g. Offers and Policy printout templates) which will significantly help to share best practices among Generali PPF Holding member companies.

9. TECHNOLOGY

We selected Bizagi BPMS to model, automate and execute our business processes.

Infrastructure

The solution is built upon Bizagi BPM Suite Enterprise.NET 9.1.8 running in virtualized cloud environment. The underlying infrastructure is formed by MS Windows 2008 R2 Server, IIS 7.0+.NET 2.0 and MS SQL Server 2008 R2. The layout of the production environment is two 8-core Windows + IIS application servers backed by one SQL server.

Integrations

Our solution is integrated with several other internal IT systems including existing policy administration systems within companies, registry of corporate entities, and database of country addresses. Our project makes use of BPMS integration capabilities including web services, data virtualization/replication, email support, LDAP, Component Library, just to name few:

- Replication and virtualization of data entities enables us to integrate historical insurance policies data into the application
- The historical policies are fed from flat files via SFTP batch job into the source databases
- Consuming various Web Services exposed via participating insurance companies' ESBs
- Java EE component running in JBoss AS 7.1 container connecting to Lotus Notes application via N-RPC/DIIOP interoperability protocol
- Online connection to the national corporate entities registry in particular country via HTTP protocol and XML messages
- Access to third party geocoding (addresses, flood zones) database

Data-centric system

Selected BPMS architecture delivers full data access across applications and processes. This allows us to retain our core business logic and quickly adapt it for the localized needs of member countries. In addition, we also make use of its data virtualization capabilities. Once the external data gets virtualized, that data can be handled as if it was local meaning that users don't need to become pre-occupied with physical data locations. This way data and the process are linked together. It is this data centrality that delivers business agility for the development and allows for case management.

10. THE TECHNOLOGY AND SERVICE PROVIDERS

Selection process

Potential options were assessed on their ability to deliver process support, analytics and workflow through the whole corporate insurance lifecycle. We did not initially pursue BPM as an option. We considered an Out of the Box solution but that did not offer the integration capability, while the in-house solution was expensive to adopt for multi-company and multi-language.

We downloaded Bizagi's modeling and automation tools for free, and found them easy to use. In fact we were using it within the business in just two days. We asked Bizagi to deliver a proof of concept for an underwriting process, which they did in three weeks. Bizagi was half of the price of the other systems we evaluated.

Business Process Management System

Generali PPF Holding selected Bizagi (bizagi.com) for the implementation of the BPM initiative. In Bizagi, most of the common and reoccurring requirements in process automation have been pre-built. These refer to:

- Control and visibility; graphical real-time monitoring (who, what, when, where)
- Alarms and notifications; generated by exceptions to SLAs or non-compliance
- Business data design: enterprise class modeling, reusable across applications and processes
- Performance analysis and reporting; graphical reports with deep insights into operational performance by process and activity
- Process versioning including sub-process, activity forms versions and support for process clone and copy
- Auditing and traceability (who changed what and when);
- Workload routing & balancing; graphical editor to define work allocation rules
- Business rules; graphical design of business vocabularies and policies
- Web Portal; customizable, multiple languages and multiple time zones
- Corporate features: .Net or Java, multi-tenancy, BPMN process engine, long lasting process transactions, enterprise data model, among others).