

# German Pension Fund

Building fast and future-proof microservices based on proven COBOL applications

## Overview

The German Pension Fund is at the heart of the German statutory pension insurance scheme. Employing 61,000 staff across different organizations, the German Pension Fund manages the future pensions of 53 million people and currently pays out pensions to around 21 million people. Many mission-critical processes at the German Pension Fund are powered by complex COBOL business logic.

## Challenge

For the German Pension Fund to deal with queries from millions of clients effectively, finding the right clerk to handle each case is essential. The organization processes up to 10,000 pieces of incoming mail daily and needs to identify which clerk should handle each request. Every day, up to 20,000 employees use

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### PETER PALMREUTHER

Senior Java Developer, Java Competence Center  
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the phone directory, making this a critical system in ensuring organizational efficiency.

Peter Palmreuther, Senior Java Developer, Java Competence Centre at the German Pension Fund, comments: "The crucial lookup feature uses a combination of Java and COBOL. COBOL business logic performs the actual lookup. We needed to reduce response times to support the volume of lookups. The bottleneck was in the communication between COBOL and Java components. Completely re-implementing the existing logic was difficult and not cost-effective. A rewrite would have meant duplicating logic, and doubling testing and maintenance processes."

## Solution

The German Pension Fund found a solution that enabled the COBOL business logic to be reused across platforms. To solve performance challenges, the code is executed directly within the Java Virtual Machine, reducing communication overheads between COBOL and Java.

Peter Palmreuther recalls: "With its ability to compile COBOL code to Java bytecode, Visual COBOL for Eclipse offered exactly what we needed to reuse our proven business logic, combine it with Java and to improve performance."



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## At a Glance

- **Industry**  
Government—Federal
- **Location**  
Berlin, Germany
- **Challenge**  
The German Pension Fund needed to leverage proven COBOL business logic across traditional platforms and within new cutting-edge architectures to improve the performance of critical business functions.
- **Products and Services**  
Visual COBOL for Eclipse  
COBOL Server
- **Results**
  - + Single source codebase across multiple platforms
  - + 70% faster response times for critical Java applications
  - + Provides state-of-the-art web service interface for COBOL applications
  - + Enables more efficient service operations, accelerating business processes

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With the Micro Focus® solution, COBOL code can be deployed to a Java application server. Using standard technology and web services across COBOL and Java has reduced the risk of failure.

Peter Palmreuther notes: “Thanks to Visual COBOL, we can use modern development tools to keep experienced COBOL developers happy. The Micro Focus OO-COBOL extensions and the SmartLinkage feature help Java developers reuse COBOL business logic quickly and easily. We were able to combine reliable COBOL business logic with state-of-the-art web services to provide robust microservices for other applications to consume.”

The close integration of COBOL and Java streamlined the debugging of web services. Peter Palmreuther comments: “I was very pleased with the debugging experience. In a single tool, I could analyze what happens in the COBOL program and get details about the Java web service at runtime. This enables agile development and has made life much easier, helping me deliver the first version rapidly.”

## Results

With the Micro Focus solution, the German Pension Fund can continue to derive long-term business value from existing COBOL application investments. Peter Palmreuther explains: “Visual COBOL allows us to easily build new services that benefit from all the knowledge we’ve poured into the code over many years.”

The German Pension Fund is satisfied with the high-quality tooling and documentation. Peter Palmreuther elaborates: “For someone from a Java background, it’s very easy to work with Visual COBOL for Eclipse. The solution brings useful features to COBOL programming like syntax highlighting, auto-complete suggestions, structural information, and syntax checks. Everything a Java developer is used to is available for COBOL.

“Furthermore, Micro Focus SmartLinkage options make reusing COBOL logic simple. The COBOL compiler automatically generates classes that can be used from Java to integrate the COBOL code with improved type support.”

The German Pension Fund is looking into standardizing development environments across platforms with Visual COBOL, facilitating collaboration between teams.

Peter Palmreuther concludes: “Support from Micro Focus was excellent and the licensing options work well for our use cases, covering thousands of business users.

“By deploying COBOL code into the Java Virtual Machine, we reduced response times by 70 percent compared to the migrated call path. The solution cut runtimes for batch jobs from half an hour to just 10 minutes. The shorter the runtime, the lower the risk of failures, and the easier it becomes to find a window to execute each job.

“With the Micro Focus solution, we gained a robust web service that we can operate with standard tools. We now use COBOL programs flexibly as microservices integrated in a service-oriented architecture to accelerate business processes even further—helping the organization deliver excellent client services.”