MATERNA
Information & Communications

With J2EE and Oracle applications to AWS

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Application and Database Modernization with AWS

During the last couple of decades, many business applications have gradually grown to become rather cumbersome monoliths. This approach to development is no longer suited in an age of maximum flexibility, with 2-week release cycles and constant enhancements. This has made conversion of legacy applications into lightweight, microservice-based systems indispensable for ensuring or restoring an adequate competitive edge for the future.

What we offer:

The ultra hybrid approach

For the conversion, Materna uses an ultra-hybrid approach to migrate the old application. This eliminates the need to first build a cost-intensive parallel system and force a risky big-bang migration, which tends to be overwhelming for those responsible and for the users thereby leading to poorer productivity, which is the opposite of what was intended.

Instead, Materna dismantles the monolith "piece by piece" and isolates individual modules or subsystems, developing them with new technologies, but integrating the new functions for the transition period (until the replacement of the old system is complete) into the system known to the user and, if necessary, even retaining the previous UI design. This enables a gradual modernisation of the system without the user even being aware of the fact that he is accessing either the traditional or the modernised part of the application.

Modern Technologies

J2EE, PL/SQL, Oracle DB and IBM WebSphere used to be popular technologies, but nowadays they no longer provide the flexibility required to support modern continuous development with short release cycles.

Instead, technologies like microservices with Kubernetes, serverless functions and other, typically cloud-based services are the tools of choice and are deployed accordingly by Materna to suit each use case.

A tried-and-tested, iterative approach

We also offer a multi-step, iterative modernisation process. We begin the procedure in a kick-off workshop by establishing the initial parameters and basic epics or requirements. Then, the ongoing product backlog is further refined in close alignment with the application analysis in which we carry out a code review and architecture planning.

Then the main part of the project can begin, namely: the implementation of the initial and, if possible, immediately useable functionalities of the new application, with an iterative procedure that follows the ultra-hybrid approach. Right from the start, every feature that is implemented is able to benefit from the state-of-the-art technologies and rapid release cycles. By following an iterative approach, we can also monitor the success of the chosen implementation and make any necessary adjustments in the early stages.

Many years of experience in traditional and modern software architecture

Our extensive expertise in a wide range of software architectures, from traditional to state-of-the-art, puts us in a position to modernise your systems effectively and reliably. We know our way around historically grown Swing and JavaFX applications, have a solid understanding of Oracle database technologies and are familiar with multi-tier and component-based software architectures based on the J2EE technology stack. We also bring our experience with modern cloud-based technologies and the integration of diverse third-party systems to the table.

Target customers and requirements

Target Customers

“Application and database modernisation" is suitable for any customer whose historically grown, monolithic applications (e.g. legacy J2EE applications linked to an Oracle database) are holding up business success and whose modernisation require new functions to be made available as quickly as possible.

Requirements

We delve into the technical use cases and requirements in collaboration with the customer's technical experts and progressively implement them using the best-fitting technologies.

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