

Liberation from Legacy ERP

A leading UK retailer chose ThoughtWorks to help them put in place the technology they needed to open their first U.S. store successfully. Rather than invest heavily in the old notes, they set up a lightweight web services layer to work with the legacy ERP system, saving a significant contract cost and many months of development effort for the team.



Going global

As one of the UK's largest retailers, this Group has a multitude of outlets across numerous brands. These brands also operate across Europe, the Middle East and Asia as well as in rapidly expanding e-commerce operations.

The Group had set their sights on further overseas expansion and targeted the U.S. as their next major market to tackle. As things progressed toward a flagship opening of the first store, one major technology obstacle loomed. Like many established companies, the Group's supply chain was managed with legacy mainframe applications, and these were proving difficult to adapt to the U.S. expansion. The existing system supported the many UK stores, but required new features to allow the U.S. warehouse and store to be stocked by the Group's Asia suppliers. Changes to the mainframe system would be both expensive and difficult, but there was no time for a complete ERP replacement.

The Group CIO evaluated alternatives, and estimated it would take six months using the existing technology platform to make the necessary changes themselves. With less than six months until the store opening, they were close to signing a deal for the modifications with the mainframe vendor – a very costly deal – when their head of development attended a briefing by ThoughtWorks expert Jim Webber, on “Guerilla SOA”. Instead of replacing a huge and complicated legacy system all at once, or continuing to invest in code which will have to be replaced, Guerilla SOA releases the value of business knowledge locked up in old spaghetti code. It provides a path to build on it in a manner that is fast and supportable, and a way to gradually replace it.

Highlights

- In just 10 weeks ThoughtWorks and the client team delivered critical system changes to allow a U.S. expansion.
- A proven way is now established to replace the legacy code without having to buy an ERP package and endure an expensive and risky super-project.
- The client can continue to add services to the new Java layer, gradually isolating and phasing out the redundant pieces.
- The Agile project approach allowed the team to make steady progress even with significant unknowns at the outset – including which U.S. warehousing supplier would be selected.
- The client's development staff became trained and productive in Java and object-oriented techniques.

Technology

Java, Websphere, DB2

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Improvement by increment, not replacement

The development chief quickly arranged a meeting, since the idea of delivering value incrementally rather than spending millions up front was obviously attractive. The initial meetings led to a two-week assessment by ThoughtWorks of the retailer's specific situation and requirements. The engagement followed Guerilla SOA principles by taking the business vision and using rapid process and capability modeling with the key stakeholders to identify what functions needed to be provided as services. In this case the focus was to allow the U.S. warehouse to integrate into the supply chain via new web services.

The retailer's team was convinced that ThoughtWorks' path was not only technologically and economically appealing, but was actually a lower-risk approach to meet the immediate need of the U.S. launch than the expensive proposition of making the changes directly to the legacy. ThoughtWorks' assessment concluded it could be done using new object-oriented techniques and web services within weeks using the client's existing RPG / DB2 development staff.

The project was given the go-ahead – it would support the U.S. launch, and would also be a proof-of-concept for Guerrilla SOA, which could save huge sums in the long run if proved successful. Now, only ten-weeks remained until the scheduled store opening. If the project didn't work, quite simply the store couldn't open.



New technology + existing staff = future-ready workforce

ThoughtWorks was brought in to manage the project and assist the retailer in building the services and a web front-end to allow the U.S. warehouse to tap into their Asia supply chain. The joint team began with developers and DBAs from the client, led and supported by a ThoughtWorks' team who were all responsible not only for delivering the functionality but also coaching the client team, fast, because they were brand new to JAVA and object-oriented programming, not to mention iterative delivery.

Within two weeks, the team had built enough of the services that the U.S. could begin to try them out. The results, while solid and impressive to the users, were behind plan. Discussions led to agreement that some dedicated training in JAVA and object-oriented principles would be conducted in parallel with development, so a two-week course was instigated, led by an additional ThoughtWorks coach.

A blend of tactics was carried out to make sure productivity would climb, such as the course, ongoing coaching, as well as the team becoming more established and comfortable all contributed to productivity; and the result was remarkable. In the first two weeks of the project, eight function "points" were completed. By the end of the ten weeks, developers completed 50 "points" in a week. "Points" represent chunks of functionality completed only when code is tested and signed off as business-ready.

Transparent progress, built-in quality, on-time delivery

The retailer's users were amazed at the early progress as well as the quality of what was being shown each week. Developers were using Cruise® from ThoughtWorks Studios to do automated builds and deployments and ThoughtWorks' QA analyst built test cases that covered 95% of the new code. The client's management team liked the predictability of the ThoughtWorks' Agile process; it gave huge advantages in reporting, quality and project management over what they were used to.

Within a few short months, right on target, the new services and front-end were live. The first Group store in the U.S. could open – with fully stocked shelves.

“Within a few short weeks we resolved the technology we needed to support our U.S. venture, and now have development staff trained and experienced in the latest JAVA and object programming techniques. We also have proven that we can leverage our legacy system – and gradually replace it without an all-or-nothing project - using Guerrilla SOA.”

CIO

A bright future with Guerilla SOA

In the time-crunch leading up to opening the new U.S. store, the Group found that the Guerilla SOA approach allowed them to avoid an expensive further investment in old technology. Instead they were able to use faster, modern development tools and techniques (JAVA, Object-oriented architecture, Cruise®), at the same time investing in their existing people – a significant morale booster. And further benefits will follow. Additional services can be prioritized for delivery incrementally over the course of a broader program of work and reach a build-out of the target enterprise architecture which will eliminate the mainframe, and its increasing maintenance costs. Then, as changes are needed to business capabilities, they will be reflected in changes in the services themselves. Governance will become transparent, and changes low-risk, enabling constant evolution of the enterprise architecture.

The client's Group CIO commented: “Within a few short weeks we resolved the technology we needed to support our U.S. venture, and now have development staff trained and experienced in the latest JAVA and object programming techniques. We also have proven that we can leverage our legacy system – and gradually replace it without an all-or-nothing project - using Guerrilla SOA.”



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