

Case Study

Commodity Trading and Risk Management Platform

Built a scalable platform with modern UX for domestic & international commodities trading, allowing efficient operation and consistent reporting.

 Adaptive



CTRM Platform

Business need

Our client, a world-class agri-business corporation, has operations spanning the globe, including both domestic and international trade. It has also been growing by acquisition in the recent past.

In this context, the client's goals are manifold:

- Increase visibility and control over risk, profits and losses.
- Identify profitable (and less profitable) centres of activity while growing.
- Promote efficiency; reduce waste and redundancies.
- Reduce the possibility of operational/regulatory mishaps.

The delivery of the CTRM by an Adaptive team enables the following:

- Catering for both domestic and international commodities trading in a single system.
- Allowing for harmonisation of the business processes, especially with regards to stock valuation rules, so generated activity reports are comparable.
- A significant increase in productivity.
- A reduction in operational risk.

The CTRM encompasses the whole lifecycle of traded commodities, from trade capture to invoicing, and including the pricing of goods, logistics, fee management and reporting, amongst other notable features.

Adaptive's solution

Adaptive have worked in conjunction with the client since the project's inception, and in particular helped give the project shape through early involvement of our UX designers – which subsequently helped us partition the project.



We have accompanied the client's transition to an Agile model, which they were less familiar with at the time. Our use of this methodology allowed us to orchestrate a large, distributed team over an extended period of time with sustained velocity, while being able to provide demos, activity reports and indicators on a fortnightly basis.

Frequent opportunities for assessment are a crucial part of steering a sizable project and mitigating risk, and Adaptive have been taking care of managing the team on behalf of the client, offering meaningful visibility and control at a low cost to them.

The application is developed in a modular fashion, so as to maximise throughput. There is a sub-team working on a common technological foundation as well as a common UI component library, so as not to duplicate effort and maintain consistency, and several feature teams.

Modelling the domain using events has made integration costs lower, so we can produce an end-to-end, integrated package only when needed, without the overhead of constantly syncing up changes between functional modules.

Technology-wise, we use event sourcing, which allows us to have a clear, auditable log of records, that we can then exploit for our bitemporal reports – a core value add of the system, necessary for dealing with monthly exercise cutoffs. On the client, we use HTML5, Rx-JS and TypeScript, and the backend is written in C#. Both the client gateway and the event store run in clustered instances, which offers resilience and scalability, and protects against loss of data. We also use elasticsearch to offer a trade blotter that can tap into the whole historical archive, as well as show the latest activity.

Results

To mitigate project risk and deliver value early, a project of this size is delivered incrementally. We have been working with the client to define and deliver those intermediary releases.

Our first release replaced the legacy trade capture front-end with screens based on modern technology and UX design, allowing for much faster, more reliable input of trades – especially multi-legged ones, which are common for this business. This resulted in significant productivity gains for the front office.

We then added features such as pricing and trade mirroring, and conducted migration of thousands of trade positions to the new CTRM.

A third delivery phase will shortly add reporting functionality, and the support for non-physical trades, which will allow the decommissioning of an old, Excel-based solution.

A release next year will include logistics and invoicing, at which point a fully-featured CTRM will be live, although improvements and extensions will keep being released.

Thank you



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The Real-time Trading Experts

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Project delivered with the help of

