Raiffeisen Bank International's Greenfield EDW Programme

A quick overview

In 2011 Raiffeisen Bank International (RBI) chose Teradata for their new enterprise data warehouse (EDW) environment for risk, finance and performance management.

The new environment allowed end-to-end data lineage and governance, ensuring quality, transparency, and traceability.

For the first time, the different departments were able to speak the same language, use the same vocabulary, and identify business definitions – critical processes that help banks comply with increasingly-tight regulations and reporting.

Within six months, RBI created a Business Data Model (BDM) covering 23 areas of business all agreeing on 2,500 initial business definitions for various users.

RBI's Six-Step Agile Development Process

Roadmap – the team creates 'backlogs' (data elements that need to be added to the project) then prioritises and schedules them.

Discovery – discovery teams create a precise story around understanding the requirements.

Agile Factory – standard methodology used to source the data, document the metadata, and create the data lineage, so that it fits into a standardised process.

Continuous integration – having the right sets of tools to facilitate the development cycle (Agile Factory link). Data sources enter, then move into the factory to be modelled and transformed. The outputs go into the relevant subject areas. It's all about making sure that new data added gets put in the right subject areas with the right definitions.

Testing and user acceptance – making sure the data is fit for purpose.

Production (automated) – RBI has four major EDW releases a year. The bank's really happy with the quality and times, and is reducing costs still further through optimisation.

This is a superb example of a well-run data integration project, particularly with regards to business data modelling and the use of very accurate models as part of the on-going development. It builds on itself over time and the bank benefits from all the synergies because it's been done properly – there's no duplication of data, definitions, or anything like that. It's the perfect showcase of how to do it, as much as what's actually been achieved.

Its new Enterprise Data Warehouse helps Raiffeisen Bank International surf the regulatory waves

Operating in more than 15 countries with more than 15 different sets of legislation and regulators, and meeting the ever-increasing number of external regulations just to stay in business (how to get submissions into the right sequence, deriving the right portions of data integration prior to delivery), is one of RBI's biggest challenges. That, and coming up with the heavy investment required to comply with the regulations in the most speedy, efficient way; a way that brings additional internal benefit.

Searching for a better way to cope with this onerous situation led to the decision to build up a new Enterprise Data Warehouse (EDW) from scratch.

Speaking the same language

The bank already had a data warehouse infrastructure in place – a number of local data warehouses in various countries. However, these were considered IT tools, serving a small number of business processes.

Right from the start, the clear objective was to create one source of truth; one place where the finance, accounting, regulatory reporting people, as well as various risk functions, could access a single source of data. RBI wanted a Business Data Model (BDM) that described each and every business data element – at an atomic level – in a business language, agreed and harmonised for all business stakeholders.

Managing the project

The resulting four-and-a-half-year data-integration project was centred on the way business wanted to use data, rather than how IT wanted to store it on the platform.

Three stakeholders – Chief Risk Officer (CRO), Chief Finance Officer (CFO), and Chief Information Officer (CIO) – acted as sponsors of the programme, with a clear understanding that CRO and CFO would take the lead. It was up to the CRO and CFO what to do first in which order, and which processes they wanted to have on the EDW.

A collaborative process

IT oversaw the whole programme management including business analysis and testing, bringing in assets as directed by the CRO and CFO. According to RBI´s Head of Project Management, the project scope wasn't limited to delivering a specific kind of technology though.

"At the end of the day, we wanted a Risk & Finance data warehouse filled with data throughout the complete group; to be able to run our MIS system based on the EDW data; to have regulatory reports created from this data; and to run our risk-weighted asset-calculation process on top of the EDW."

So, with their goals clearly formulated and communicated in a business-like way, it was up to IT to translate them into achievable tasks.

The team adopted certain agile and scrum methodologies for the implementation. Which helped create multi-functional teams where business people, testers, software developers, and business analysts worked on a specific topic, breaking it down into smaller portions.

Why RBI chose Teradata

RBI had to choose whether it wanted to stick with its more-or-less-self-built DW structure and take that into the new data warehouse, or go for something new. Because RBI wanted state-of-the-art technology it opted for a greenfield platform and after comparing all the big players, the bank decided on Teradata. Markus Lochner had this to say on the decision.

"We chose Teradata because Teradata is data warehouse. From the first employee to the CEO, they live and breathe warehouse. It's in their company DNA. We felt that this is the kind of partnership we wanted to enter into and everything has been exactly as expected, with virtually no technical problems that were visible to the business. Being trusted advisers – true partners – we were able to leverage some of the invaluable know-how Teradata had gained with other banking industry warehouses and, together, we came up with the idea of how to approach this business data model thing. We've had a good relationship ever since."

> "Bringing together new customer, product, and profitability insights makes us more aware of the wider opportunities. Like if we make profits with a large customer in one country, we can replicate that situation with the same products and the same customer in a different country. And provide additional services and products, or discontinue products that no longer meet market demands."
>
> – Markus Lochner, Head of Project Management, RBI

"They created an ecosystem where customers have a platform to exchange experiences and best practices. This whole community thing fosters new ideas and approaches, and shares lessons learnt. We like Teradata's whole approach to problem solving."

The results

The bank has made a great start, establishing a very stable, knowledgeable, and capable team around BDM – especially from the business side. "But with all the new data requests coming in, I think it will constantly evolve and get better day-by-day. The lucky thing was the way we integrated this BDM into Teradata's financial services data model and, later on, into the physical data model that we have in the EDW" confessed Markus. "This whole mapping procedure that we're applying is so flexible that making changes in the BDM isn't a problem. This is an additional value because if there's one constant, it's change."

Granular retail data produced by the 15+ countries still needs to be integrated to the appropriate level.

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RBI finished the initial version of the BDM at the beginning of 2012 and, now, it's at version 300. As you see, there has been constant change during this innovation, and flexibility and scalability have been central to the success of the project.

Enhancing the regulator relationship

Regulators were taken with the fact that RBI's proprietary tool, FlowViz, visualises the lineage of the data flowing into the data warehouse (and then being consumed by data consumers).

The regulators want to make sure there's as little manual interaction and procedure from where the data is born to how the data is reported, as possible. They want to keep it as original as possible.

Transparency is their main concern. Consequently, they appreciate the fact that the bank is able to demonstrate how everything works. Of course, RBI didn't really develop FlowViz for the regulators. The bank find it extremely useful for helping business analysts, testers, and business customers, understand how and where the data is coming from, where it's flowing to, and which kind of data and process is involved.

So, the aim is to get product and customer departments to understand exactly what kind of data treasure has been created. And to find ways to leverage this significant investment for their purposes without disrupting the priority regulatory programme.

Four ways of measuring success (ROI)

Operational costs: Data warehouse projects are usually considered an overhead cost rather than a revenue generator. However, the bank was able to turn off its existing central group data warehouse and its old MIS systems, which saved significant operational costs.

Cost distribution: If consumers use data out of the EDW on a regular basis, they pay a fair portion of the EDW operational costs. That doesn't cover the complete operational costs, though. In 2014, Risk & Finance (the two owners) said they'd cover the rest of the yearly cost until the bank had enough data consumers to pay it off. Happily, RBI now has so many data consumers on the warehouse that all the operational costs are covered already. So, Risk and Finance would be paying zero yearly cost in 2016 under this distribution model. And as every additional data consumer (the next is Group Collateral Management) pays their share, other data consumers will pay less.

Human resources: The bank can move some of the very skilled people operating the warehouse into innovation projects. And the more it's able to move

> "We realised we were using the same vocabulary but for completely different things, creating different interpretations of the same situation. Now, talking the same language and using the same business terms with the same definitions, we're deriving different insights."
>
> – Markus Lochner, Head of Project Management, RBI

key employees into innovation, the fewer expensive external consultancies it will have to use. External consultancies were a substantial portion of the four-and-a-half-year investment.

Smarter working: The biggest benefit for RBI has been the major culture shift, with business divisions ditching silo-thinking and starting to understand each other better, cooperate much more, and share resources (in terms of knowhow, data, and distance).

Markus Lochner's project highs

- Getting major attention and sponsorship from board members.

- Seeing a massive change in the way people work together – from business, IT, and different business sides whether internal or external – towards the same goal.

- Seeing the team still working; still committed to delivering through all kinds of adversity.

Top 5 New Learnings

1. Board-level support is essential.

2. How to put together a successful management process of this magnitude (dealing with new regulatory requests, etc.). Then how to translate it into this new BDM language.

3. Co-location. In the first half of 2015, Project ALF (Alien Life Form) was set up to design a new standing organisational model. The new way of working was alien to some. There were hurdles to clear, but now it's understood by everyone in management that co-location pays off – in the beginning co-location was rather more of a change management process.

4. Finding a good way for people to work together in multi-skilled and multi-dimensional teams on an international level, is a core skill for project and change managers. Even if it's deemed to be a project with a scope and timeline, at the end of the day, it's a change management process.

5. Teradata was the right partner to choose for this undertaking.

- Seeing some new functionality or message of value created somewhere, on a quarterly basis.

"The process looks different now because departments have less effort to reconcile data with the other departments. There's much more time to interpret and work with the data to come up with sound business opportunities. I think gaining time and being able to focus resources on the interpretation of data is the biggest change we've seen" admitted Markus Lochner.

Who is Raiffeisen Bank International (RBI)?
One of the leading banking groups in Austria, and Central and Eastern Europe.

Raiffeisen Bank International AG (RBI) regards Austria, where it is a leading corporate and investment bank, as well as Central and Eastern Europe (CEE) as its home markets. Fifteen markets in the region are covered by subsidiary banks. Additionally, the Group comprises numerous other financial services providers, for instance, in the fields of leasing and asset management, as well as mergers and acquisitions.

In total, around 52,700 employees service 14.8 million customers through approximately 2,780 business outlets, the great majority of which are located in CEE.

About Teradata

Teradata is the world's largest company focused on integrated data warehousing, big data analytics and business applications. Our powerful solutions portfolio and database are the foundation on which we've built our leadership position in business intelligence and are designed to address any business or technology need for companies of all sizes.

Only Teradata gives you the ability to integrate your organisation's data, optimise your business processes, and accelerate new insights like never before. The power unleashed from your data brings confidence to your organisation and inspires leaders to think boldly and act decisively for the best decisions possible.

For further information please visit: **www.teradata.com** or contact **teradata.emea@teradata.com**.