

Transforming HSBC's Lending Business

Solidatus' Version Controlled Graph Technology



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Introduction

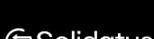
HSBC has revolutionised the Wholesale Lending business under a multimillion-dollar transformation programme that helped us slash credit decisions from months to minutes, reduce fund distribution to customers from months to hours, and comply with evolving regulations and internal risk management controls to safeguard HSBC and its customers.

We achieved these ambitious goals and met key data fabric design principles by addressing a major challenge – fragmented data structure and lack of a highly controlled, end-to-end view of our data estate.

Our innovative project leveraged the power of Solidatus' next-generation version-controlled graph technology to transform HSBC's Wholesale Lending business. We achieved this by understanding and optimising our data infrastructure, employing a common data language to avoid duplication of effort, saving costs, and achieving massive reductions in our manual workload.

Our research revealed that only Solidatus' version-controlled graph technology could meet our data lineage requirements and solve our challenges.

Solidatus serves data-rich, highly regulated companies, like HSBC, by providing an organization-wide, connected governance solution that goes beyond traditional data management offerings. With Solidatus, users can rapidly build enterprise data blueprints that connect their data to the processes that create them, the policies that guide them, and the obligations that regulate them. With more control and a deeper understanding of data use, users reduce risk, improve operational efficiency, and make major time and cost savings.



Addressing our challenges

Within six months of launch, a small business team documented and modelled HSBC's entire wholesale lending book, demonstrating traceability from source to consumption. The team has now successfully modelled 2,000 source tables with 80,000+ fields, and 20,000+ data linkages across 45 source systems used globally. This self-service, single source of truth is available to hundreds of internal users, visualising all data requirements across the lending book. In contrast, with the same sized team, given the complexity and scale of the organisation, traditional solutions would require an estimated 18-24 months and would not provide the same breadth of transparency and capability.

The team is now using this new data-led framework to reduce and refine the data assets published from 10,000 across our credit lending processes to 200, minimising data consistency risks caused by duplicated processes.

By seamlessly ingesting metadata via Solidatus' connectors, HSBC gains complete lending book transparency with dynamic end-to-end lineage visualisation. We can efficiently evaluate change impacts by referencing current, historical, and future data views, substantially reducing manual workload. Additionally, HSBC established a shared data language, eliminating redundant efforts for the bank and its customers, with significant financial benefits.

The rationale of the project and its importance

When HSBC began our multimillion-dollar Wholesale Lending transformation programme, we had the following key outcomes in mind:

- Reducing time to credit decision from months to minutes
- Reducing time to distribute funds to customers from months to hours
- Ensuring compliance with evolving regulations and internal risk management controls to safeguard HSBC and our customers.

Lacking a comprehensive understanding of our data made it impossible to migrate our fragmented data infrastructure and processes to a golden source representing our end-to-end data flows and achieve our ambitious targets.

"At HSBC, we serve millions of customers across 63 countries and territories, with over one million customers utilising \$3.6 trillion in approved credit limits – resulting in a highly complex data infrastructure. With Solidatus, I can visualise the data model for each business outcome, manage the requirements of key stakeholders and provide greater clarity over the intricacies involved in addressing their requests. This new data-led framework plays a major role in HSBC's global strategy."

Sid Mubashar, Head of Wholesale Credit & Lending Data and Monitoring, HSBC

With Solidatus, businesses can create a unified view showing their data's origin, structure, consolidation, quality, and any changes it undergoes throughout its journey. Users can easily integrate metadata from disparate inventories, such as policies, reports, processes, systems, dataflows, risk and controls, to produce a dynamic blueprint that allows them to deliver on fundamental business goals.



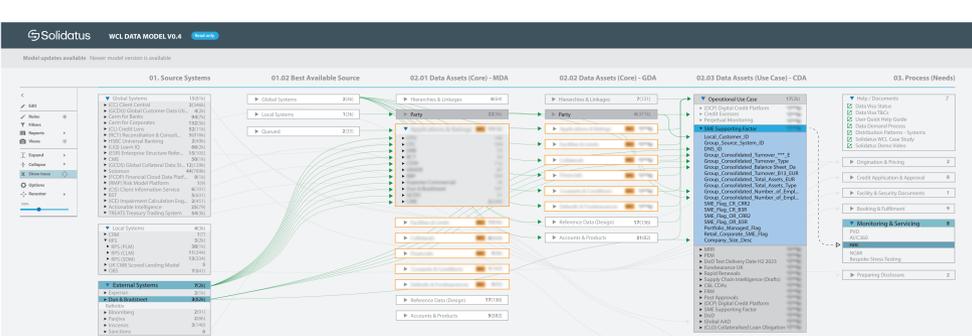
How success came about

After assessing a suite of competitor software, we realized that Solidatus was the only software that met our data lineage requirements and solved our challenges.

The cross-functional HSBC project team worked collaboratively with data experts from Solidatus to develop a consistent and intuitive approach to data documentation and visualisation, with the following key milestones:

- Clear choice of logical data modelling and lineage technologies.
- Proof of concept prioritizing business user experience.
- Iterative and organic build of the data model leveraging subject matter experts from across HSBC; from the front office, risk and finance.
- Distribution of data assets within six months of starting the model build.

The first model we built had a foundational structure of 11 source systems and 200 source tables. Within a few months, the small team of business users rapidly developed and expanded the model, and by May 2023, the Wholesale Lending data lake was fully documented on Solidatus.



Model diagram: Representation of a single lineage flow within the broader data model, providing \$2.4 billion risk-weighted asset capital relief while removing reliance on front office manual data capture.

"HSBC understands the complexities of modern banking better than most – and seeing such a small team deliver such a big impact using Solidatus is extremely powerful. Through modelling their lending book, they've established a scalable and automated solution applicable to various areas like ESG, liquidity calculations, and regulatory purposes – the possibilities are truly endless."

Philip Dutton, CEO, Solidatus

The results have had powerful impacts on our business:

Complete transparency over our lending book

- With a comprehensive understanding of all data requirements across the 45 source systems making up the wholesale lending book, we can identify process gaps and inefficiencies, ensuring consistent data use and improving the customer experience.
- Dynamic visualisation of the data landscape enables us to adapt and scale for incoming regulations across 63 jurisdictions.
- Labelling 20,000+ data linkages by applying 2,000 source tables enriches the model with properties. By tagging data flows and filters, we can detect missing lineage and visualise the cascading effects of data modifications.

Speak a common data language, stop duplication of effort, save costs

- The golden source of information provides 80,000+ fields, making data easily accessible and understandable across all systems and applications.
- Business users, risk and compliance teams, and technology professionals can search the Wholesale lending data estate for information, including business description classifications and data ranges.
- Since its launch, it has eliminated 80 end-user computing (EUCs) by better understanding relevant systems, duplicating, and redundancies. Doing so has empowered our team to propose optimisations in source systems, saving costs by retiring fields, tables or even whole systems.

Solidatus' connectivity leads to massive reductions in manual workload



- Solidatus simplifies metadata capture and visualises deep-level lineage across HSBC's systems streamlining daily maintenance.
- Its lineage-first approach enables active metadata management and connected governance. It is the glue that allows us to interactively control fragmented data sources and processes creating living blueprints that visualise our data flows – both now, historically and for forecasting future states. Its visual capabilities facilitate efficient communication and exploration of impact change scenarios for both business and IT users.
- Solidatus connectors offer powerful automation and extensive integration options with support for over 50 technologies. Instead of simply copying schema and cataloguing systems, they conduct real-time analysis that can provide us with the ability to map the architecture and relationships within HSBC's systems. This capability enables streamlined end-to-end model building, helping HSBC quickly achieve their business goals.
- With over 200,000 transitions governed and maintained, the team can filter and trace using transition properties and effectively visualise users' data requirements.
- It distributes, federates and democratises ongoing maintenance. Solidatus enables us to manage a federated workflow, assigning tasks to subject matter experts where appropriate.

Embedding Solidatus in the broader wholesale lending transformation strategy

- The customer lending lifecycle is modelled and curated in Solidatus. It is linked to a production state, allowing the team to examine process efficiencies and enhance customer experience by reducing the amount of data requests.
- We now have easy access to the HSBC control landscape with a single click. By tagging process steps and indexing them as controls, Wholesale Lending can trace the lineage of control occurrences, improving adherence to global and local compliance standards.
- End-to-end models of the lending book linked to a model of the HSBC corporate entity structure provide a common taxonomy as we atomically discover and align our physical data applying governance and identifying redundant, unused data sets.
- Solidatus' version-controlled graph technology allows the team to visualise change impact scenarios from the current production to multiple future states, which supports advanced analytics and forecasting.

We are immensely proud to highlight our achievements in successfully implementing this programme, empowering HSBC to take control of change in Wholesale Lending data and safely deliver new products to our customers.

By seamlessly ingesting HSBC's next-generation version-controlled graph technology, Solidatus continues to revolutionise the Wholesale Lending business, enabling shorter credit decisions from months to minutes, reduce fund distribution to customers from months to hours, and greater compliance with evolving regulations and internal risk management controls.

This self-service, single source of truth has accelerated the spin-off of multiple other projects, with teams across the Wholesale bank reaping the benefits. We're excited to continue improving the Lending experience for customers and to further leverage the dynamic end-to-end lineage visualisation of the wholesale lending book.

