

# Case study

## Designing + deploying an agile, scalable QIS platform for a leading global bank

### Background



A top investment bank in Europe was looking to build a quantitative investment strategies (QIS) platform to host end-to-end index management across asset classes.

### Challenges



- The existing architecture was monolithic with infrastructure distributed across services/vendors, impairing data flow, calculation accuracy and dissemination timelines
- The bank needed a comprehensive platform capturing data sources, data granularity, asset classes and index calculation across structures, rebalancing needs and methodologies
- The platform should be able to handle consistent quality of high volume and non-structured data

### Our solution



We deployed a five-member team comprising specialist technology consultants and subject matter experts (functional and technical) for 12 months. The team understood workflows, evaluated technical integrations, assessed deployment pipelines and identified lacunae to develop a tailored transformation solution. The plan centred on six work-streams to design, develop and execute the target-state architecture.

Index calculation platform and architecture	Underlying data profiling, sourcing and transformations	Model validation
<ul style="list-style-type: none"> <li>• Reviewed the current architecture/ infrastructure—hardware, software components and deployment architecture.</li> <li>• Defined the platform capabilities needed to meet business objectives and strategies and the additional system requirement to automate workflows</li> <li>• Analysed the current repository management process (e.g. Git), specific workflows or branching strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Redesigned end-to-end data lifecycle process—data processing, cleansing and the golden sourcing process</li> <li>• Automated the solution/ connectors to the existing vendors with an interface model to handle the high volume of data, corporate action sourcing and adjustments</li> </ul>	<ul style="list-style-type: none"> <li>• Designed conceptual, logical, physical data models and entity relationships, and defined core data model attributes</li> <li>• Harmonised attribute nomenclature, data types, derivation logic and valid values across upstream feeds in line with business requirements.</li> </ul>

Index back-testing, calculation and dissemination	Index data governance	Reporting and analytics
<ul style="list-style-type: none"> <li>Redesigned the interface model for data providers, consumers and other teams</li> <li>Reviewed for code quality, reusability and automated readiness, and determined modularisation and containerisation opportunities</li> <li>Redesigned the existing dissemination mechanism (APIs, SFTP, external third-party software) and output modules (packaging) to external vendor and trading systems</li> </ul>	<ul style="list-style-type: none"> <li>Redesigned the workflow, including audit trail, preservation and storage mechanisms</li> <li>Established a data ownership and accountability framework</li> <li>Set up entitlement controls to manage user profile-based access to sensitive information</li> </ul>	<ul style="list-style-type: none"> <li>Built reporting tools and APIs for various use-cases—market data providers, investors, front desk and other stakeholders</li> <li>Designed customised performance analysis and reports</li> <li>Built tailored regulatory reporting templates for asset classes for trade desks to report parameters as per requirements</li> </ul>

## How the bank benefited



**Scalability:** The bank could deploy scalable, modular and future-ready architecture, adaptable to evolving market and regulatory requirements

**Enhanced efficiency:** The platform helped reduce go-to-market for new indices, while improving overall efficiency

**Reliability:** By leveraging our experience and domain knowledge, the bank could mitigate risks and ensure a smooth transformation, resulting in enhanced competitiveness and growth

**Reduced costs:** Transition from an opex-driven to capex-driven structure helped reduce cost and increase the inventory of indices



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