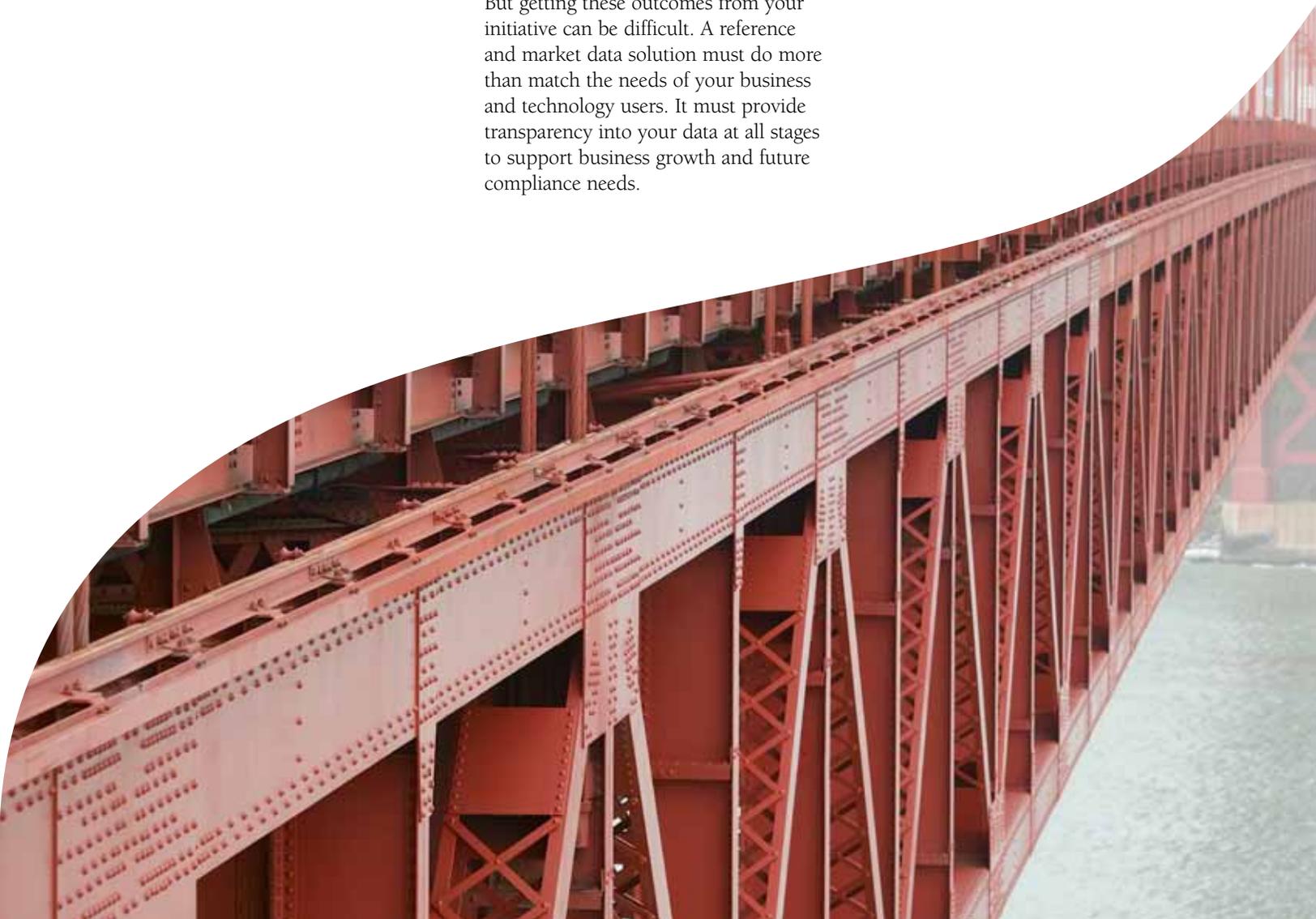


Reference & Market Data Management Solutions

Understanding and rationalizing the use of reference and market data within the enterprise

For financial services organizations considering a reference and market data initiative, the benefits can seem substantial. Lower costs, reduced manual processing, and increased quality are all touted as the outcomes from a successful implementation. But getting these outcomes from your initiative can be difficult. A reference and market data solution must do more than match the needs of your business and technology users. It must provide transparency into your data at all stages to support business growth and future compliance needs.

Capgemini has successfully implemented large scale reference and market data solutions for some of the world's leading financial firms. Our solution provides benefits across five dimensions: data usage, data provisioning, automation, risk, and costs.



8 Things You Need to Know Before Starting a Reference Data Initiative

1. **Upstream Sources.** How is reference data being introduced into the production environment? Who are the data owners and what issues exist?
2. **Integration Layer.** How do the upstream sources (i.e. vendors) introduce their information into the reference data management process?
3. **Data Quality Management.** How do the data owners certify that the data is “fit-for-purpose?” To what degree are non-value added activities (like adjustments and reconciliations) being performed by downstream consumers to mitigate data quality issues?
4. **Data Governance and Stewardship.** How is new reference data introduced? How are changes administered? How are services provided to new downstream consumers?
5. **Data Repositories.** How is data being organized, stored and retained?
6. **Data Distribution Services.** How is the content of a data distribution determined? How do downstream consumers establish their data needs? What is the set of tools by which data distribution requests are handled?
7. **Downstream Consumers.** How are service level agreements established with regard to content and quality with each of the data consumers? Who is using what in terms of product coverage, data characteristics, etc.?
8. **KPI and Change Management.** How are changing business requirements and priorities handled? What is the impact on the Reference Data Management framework?

Automation

Capgemini can help you reduce manual processing by adding characteristics to reference data entities received from one vendor which are electronically available from another (e.g., populating reference data entity from multiple vendor sources).

Risk

We can help you lower global risk exposure by standardizing data to provide additional data parameters to quantitative research analysts for models that support Value-at-Risk, potential credit exposure and large exposure calculations.

Costs

Our reference and market data solution can help lower costs by:

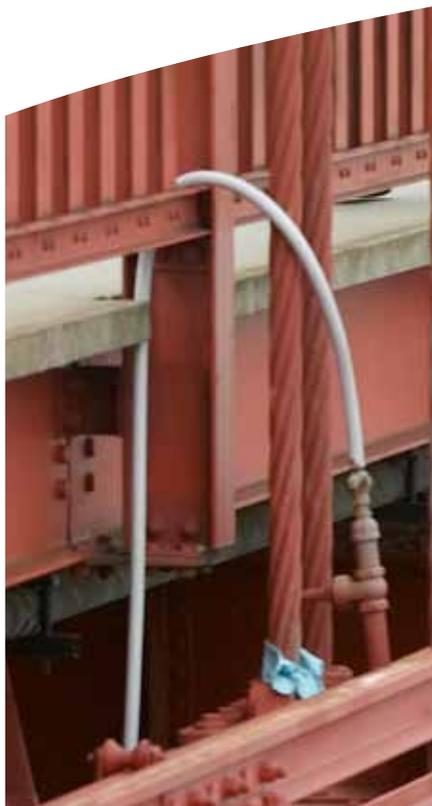
- Providing an audit trail by data vendor which shows how each vendor’s data is used within your organization so you can negotiate data fees based on actual usage
- Identifying data quality issues that require significant manual process to correct
- Utilizing our proven governance and data project review process which can help decrease costs and increase time to market in support of new business initiatives
- Recommending a repeatable process for reference data rationalization so future projects can benefit

Data Usage

Capgemini can help you understand where data is used, how many users have access to it, and how it is distributed both internally and externally.

Data Provisioning

We can recommend an efficient data storage process so your reference data users have a stable environment that is scalable to meet future business needs.



Our Approach to Data Rationalization

Capgemini has a proven track record performing data rationalization engagements for global financial services firms. Our innovative approach starts with collaborative fact-gathering sessions with your reference data consumers. In these sessions, we uncover and validate multi-dimensional information about the current state of your reference data. We perform data collection surveys and follow-up interview sessions to identify future state opportunities while addressing the specific objectives and problem areas across the eight key data management areas: upstream sources; integration layer; data quality management; data governance and stewardship; data repositories; data

distribution services; downstream consumers; and KPI and change management.

Capgemini's Engagement Accelerators

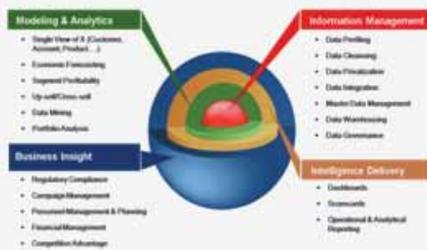
Our unique approach to solving the rationalization of market and reference data includes a taxonomy-driven business dictionary along with an industry standards-supported metadata repository. In order to keep the repository up to date, Capgemini has developed a data governance and stewardship program that integrates with your software development life cycle. In addition, there are a number of Capgemini engagement accelerators for data and systems architecture that can be leveraged immediately.

Capgemini Accelerators for Market Data Reference Frameworks

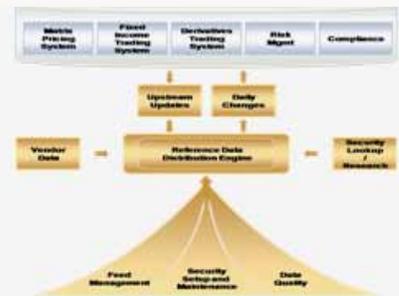
Taxonomy Framework



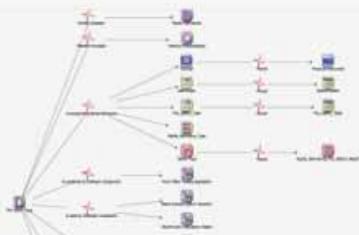
Information Management Blueprints



Data Management and Distribution



Information Lineage Framework



Data Governance Framework



Metadata Framework

Element	Definition	Value	Owner
Market Pricing Systems	Market Pricing Systems	Market Pricing Systems	Market Pricing Systems
Fixed Income Trading Systems			
Derivatives Trading Systems	Derivatives Trading Systems	Derivatives Trading Systems	Derivatives Trading Systems
Risk Report	Risk Report	Risk Report	Risk Report
Compliance	Compliance	Compliance	Compliance
Equities Updates	Equities Updates	Equities Updates	Equities Updates
Equity Changes	Equity Changes	Equity Changes	Equity Changes
Reference Data Distribution Engine			
Vendor Data	Vendor Data	Vendor Data	Vendor Data
Security Lookup / Reference			
Feed Management	Feed Management	Feed Management	Feed Management
Security Setup and Maintenance			
Data Quality	Data Quality	Data Quality	Data Quality

Why Capgemini?

Capgemini has world class experience delivering services to both large global financial services institutions and small regional banks. We provide end-to-end solutions across the full spectrum of consulting, technology and outsourcing powered by our Rightshore® delivery network of centers. Our collaborative approach allows us to find the right solution to meet the unique needs of your organization.

We bring deep domain knowledge in all financial services sectors including banking, capital markets, insurance and payments. Our global network of Accelerated Delivery Centers is ISO9001 certified and our India Rightshore® hubs are assessed across all process modules at CMMi Level 5.

For more information, contact us at financialservices@capgemini.com.

IN PRACTICE: Information as a Shared Service for an investment bank

An investment bank was experiencing accuracy issues with risk reports across departments and geographies which needed to be rationalized and streamlined. Since information was going through many people and departments before it reached the risk team, data was untraceable, unreliable and untrustworthy. Additionally, risk was being calculated across geographies using multiple methodologies and approaches.

The Solution

Capgemini helped our client by executing projects for Equity Market Risk, Product Taxonomy, Book Hierarchy, Read Only Data Quality Metrics, and Client/Issuer/Counterparty Risk. Functioning as a Risk Control resource for the investment bank, we linked business and IT to establish requirements for Risk and delivered projects in business clusters which were executed in 12-16 week cycles.

The Benefits

Our client gained a practical and implementable approach for information rationalization and integration with demonstrable ROI which was supported and sponsored by business stakeholders. We helped address pressing business challenges around Equity Market Risk, Counterparty Risk, Data Quality and Data Governance.



About Capgemini and the Collaborative Business Experience

Capgemini, one of the world's foremost providers of Consulting, Technology and Outsourcing services, has a unique way of working with its clients, called the Collaborative Business Experience.

Backed by over three decades of industry and service experience, the Collaborative Business Experience is designed to help our clients achieve better, faster, more sustainable results through seamless access to our network of world-leading technology partners and collaboration-

focused methods and tools. Capgemini utilizes a global delivery model called Rightshore® which aims to offer the right resources in the right location at competitive cost, helping businesses thrive through the power of collaboration.

Capgemini employs approximately 91,000 people worldwide and reported 2008 global revenues of 8.7 billion euros.

More information about our services, offices and research is available at www.capgemini.com.