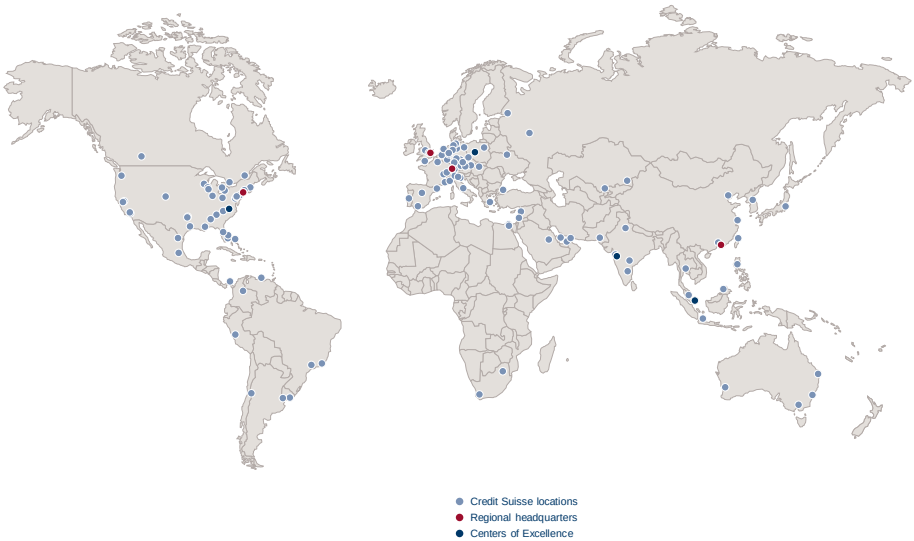
CREDIT SUISSE

Topics

- Organizational Context
- Streetside Order Management and Routing
- Business and IT Driven Change
- Lessons Learned
- Conclusion
- Q & A

Credit Suisse



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Date: 05/19/2010 Slide 3

The Program

Streetside Program

Broker & Client Connectivity	Streetside International	Compliance & Maintenance	Product Enhancements
• Inbound Financial Institutions • Inbound Corporate & Institutional Clients • Outbound Brokers • Markets in Financial Instruments Directive (MiFID)	• European Operating Model (EUROM) • Split Production • Full Singapore Functionality	• Maintenance Releases • Securities Journal • Order Book Reconciliation • COTS Upgrades • Adaptive Maintenance • Optimized Financial Instruments Processing (OFIP)	• eTicket • Advanced Execution Services (AES) • Business Continuity Planning (BCP)

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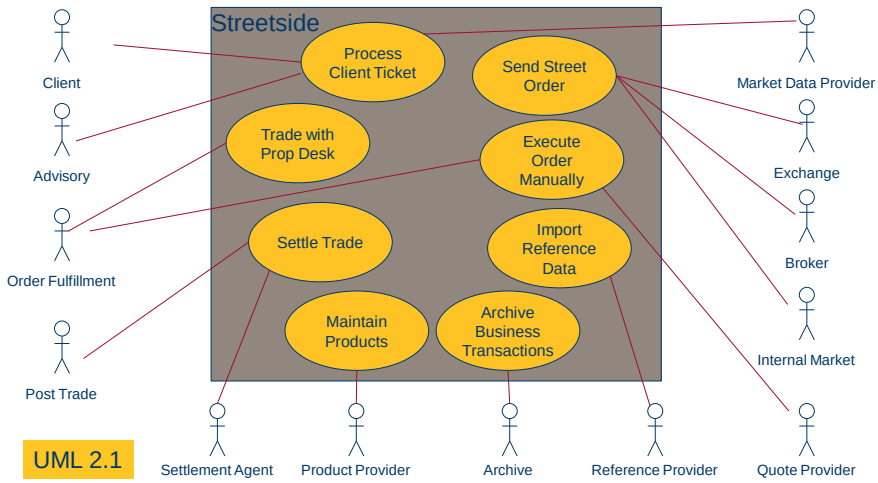
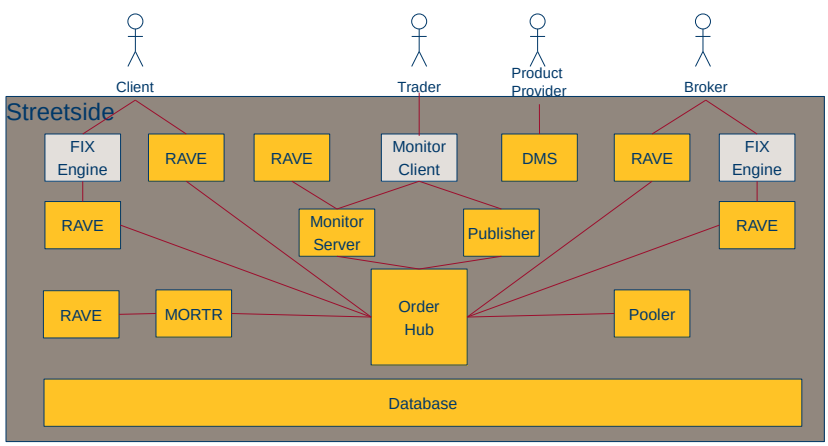
Functional Context



UML 2.1

Communication



UML 2.1

MORTR – Mid Office Router RAVE – Rules and Validation Engine DMS – Data Management Server (RAVE)
All components access database, except FIX Engine and Monitor Client

Starting Point

- Legacy Replacement
- Leveraged existing CS application, AGORA
  - Disaster Recovery (-)
  - Compliance Checking (-)
  - Intraday Reporting (-)
- The original team decided to replace AGORA
  - In memory database with a relational database
  - New software component, the OrderHub.
- High personnel turnover
  - Collaboration, people and technical challenges
- Architectural Changes
  - Missed or partially implemented requirements e.g. throughput, service times, and availability
  - New, changed interfaces in support of pressing functional requirements
- Investment between USD 10-15 M a year

Business and IT Driven Change

Past

- Fixed income
- Derivatives
- New brokers and clients.
- Disaster Recovery (DR/BCP)

- Legacy dependencies
- Rewritten Pooler
- Decommissioned JCopy, TNS
- Reduction of comm. protocols
- Virtualization
- Benchmarking + COTS Logging
- Improved Scalability
- COTS Persistence layer
- Continuous Integration
- CMMI (Level 2 and 3)

Upcoming

- E-Ticket – Better support for telephone based trading activities.
- International location rollouts.
- Integration with Advanced Execution Services (AES)
- Securities Journal + Reporting
- Reconciliation

- Product Line Architecture
- Database & Hardware migration
- Source Configuration Management (SCM) system migration
- Integration: next generation client trading system and settlement system

People build systems

Interpersonal relations
+
Organizational relations

Affect Architecture

Time spent evaluating options …

…is time well spent

- COTS Eval. Methods
- ADD™
- ATAM™
- Tools for
  - Analysis
  - Decision Making
- PLanguage

When producing design documentation …

…focus on important stakeholders.

- Template Documents
- Stakeholder oriented Views
- UML Template Model
- CMMI

Have an architectural road map

- Vision
- Align tactics and strategy
- Reverse failure
- Accommodate change

What's in my roadmap?

Considers stakeholder priorities e.g.:

- Time to market on new features.
- Stability and throughput, then performance.
- Expect maintainability always

Each step consists of:

- Components and connectors view
- Component responsibilities/partitioning
- Important quality attributes - stakeholders.
- Estimates
- Technical dependencies

Example:

I. Single protocol for asynchronous, synchronous communication - for maintainability.
II. Multi instance capable/clusterable components – failover and throughput
III. Commercial rule engine – maintainability, flexibility
IV. Enterprise service bus for features like adaptors, routing – maintainability, scalability.
V. Data access layer – performance through caching, scalability, maintainability.
VI. Domain oriented components – maintainability, performance

Conclusion

Thank you.

- Organizers
- Audience

Q & A

References

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