

Case Study 2 – Implementation of IT systems for commodity markets
“Achieving Competitive Advantage through Effective Use of Technology”

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patsystems
powers trades. builds exchanges. manages risk.

Patsystems

What do we do?

Patsystems delivers tailored solutions, built from modular components, to enhance derivatives trading performance and trade processing.

We work in partnership with our customers to deliver robust systems that align with their business strategies.

Our solutions can range from a plug-and-play module to address a specific issue, to complete high-performance exchange, risk and trading systems with global market access.

Patsystems USPs

- Brand
 - History – J-Trader
 - Listing on LSE AIM providing transparency to investors
 - Global coverage
 - Recognised industry-leading support
 - Independent ; not broker-owned /aligned

- Connectivity/distribution
 - Building communities and networking

- Product silos
 - Straight-Through-Processing
 - Exchange matching engine and back office
 - Pre- and post-trade risk management
 - Choice of front-end screens
 - Substantial knowledge surrounding these products

- API
 - FIX
 - Open API, allows 3rd party vendors access

Patsystems' Solutions; Overview

Trading systems

- Complete professional and retail electronic trading solutions for the electronically traded derivatives and options market

Risk systems

- Global and local risk solutions for both pre and post trade risk monitoring and control

Exchange systems

- Complete matching, clearing and settlement systems for electronic futures exchanges

Exchange Requirements; Overview

Purpose

- Price risk-management mechanism for stakeholders
- Price reference source for both domestic and international trades
- Alternative investment for both domestic and overseas investors

Requirements

- Local practises merged with international standards
- Rapid deployment
- Configurable, scalable systems
- Education and training
- Risk Management

Exchange requirements; Patsystems

- Enabling exchanges to build and maintain a market presence for local economy with a supporting global network
- Supporting domestic physical markets with an international-standard futures market
- Support for cross-section of market participants with differing market adequacies ; real-time, hierarchical risk management for complete exposure management
- Single solution allowing automation of processes – efficiency and understanding
- Mass distribution ; web-deployed trading frontend
- Member autonomy
- Configurability ; session behaviours, matching rules, clearing structure
- Partnership approach

Patsystems' Solutions ; Exchange Systems

Components

- Trading platform (JTrader, Promark, OMS incl. pre-trade risk)
- Patsystems Matching Engine
- JClear, clearing and back office system
- Risk Informer – post-trade risk

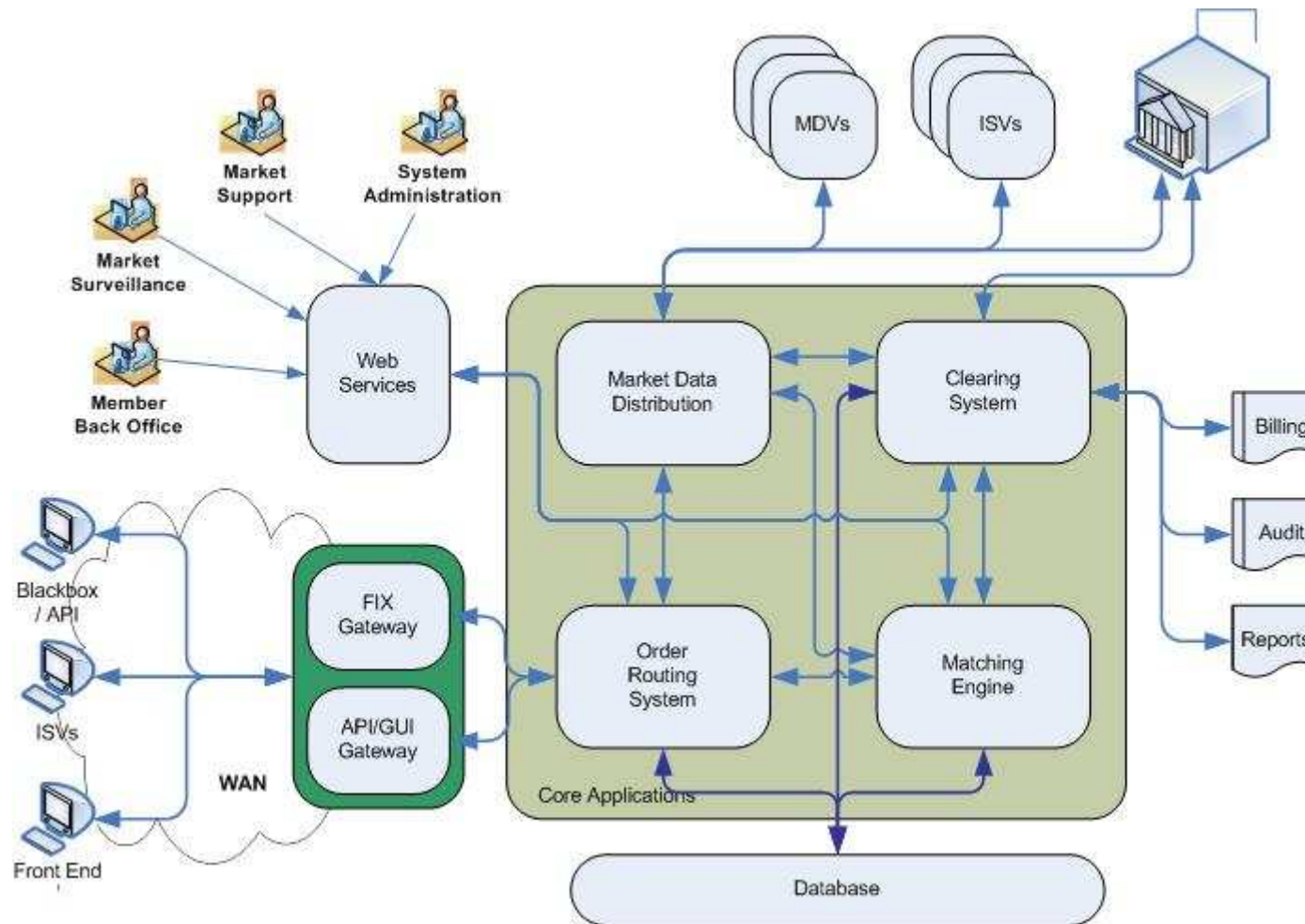
Modular Solution

- end to end solution / modular components
- rapid development and implementation to meet immediate needs
- configurability

Used by five exchanges:

- Tokyo Grain Exchange
- Kansai Commodities Exchange
- Kanmon Commodity Exchange
- Agricultural Futures Exchange of Thailand (AFET)
- National Commodity Exchange Limited (NCEL) in Pakistan

Patsystems' Exchange Solution; Overview



Implementation of IT systems for commodity markets ; achieving competitive advantage through effective use of technology

Implementation process

Vendor Selection

- Initial contact
- Request for Proposal sent to vendors
- Vendor reply
- Shortlist
- Design Workshops
- Parallel Contractual Discussion
- Support and Maintenance
- Team introductions

Project Initiation

- Project Definition Workshops and documentation
- Phasing
- Sign-off of High level Project Plan

Requirements Analysis

- Modular parallel approach
- Training and Documentation
- Detailed planning

Infrastructure Build

- Development/ DR/ Production

Implementation process (cont)

Component Development / Configuration

- Project Management
- Integration
- Testing
- Familiarisation, Member engagement
- Training
- UAT
- Signoff of Phase
- Go-Live

Post Go-Live

- On site project management - embedding of business processes
- Ongoing Support
- Account Management
- Technical Resources

Patsystems' Exchange Solution; Matching Engine

Provides:

- Continuous trading and auction trading
- Real-time price dissemination, order matching and trading
- Open interfaces to back office, risk management and quote vendor systems
- Handles hundreds of orders per second, and can scale to thousands of orders

Enables:

- The provision of proprietary electronic market places for commodities and foreign exchange.
- brokers and clearers to combine proprietary markets with regulated markets, creating products that are client-specific

Matching Engine - Features

Order capture	patsystems J-Trader and Pro-Mark, integration with existing front ends or systems via patsystems open API or FIX
Market types and sessions	Auctions, continuous trading or mixture of both
Order Types	Limit, market, Stops, Stop Limits RFQ, cross, date/time expiry, contingent orders (MOC), take all, indicative price plus synthetic orders held on the trading terminal. Other order types are also available...
Matching algorithms	First-In-First-Out (FIFO), Pro-Rata, Maximum Traded Volume for Opening/Closing Rotation,
Fill constraints	Minimum fill (e.g. All or Nothing), minimum queued balance (e.g. Fill and Kill)
Trading rules	Price/time, rotation, step trade (circuit-breaker), lottery
Price dissemination	Best bid/offer, market depth, with or without member ID, pass throughs

Patsystems' Exchange Solution; J-Clear

Clearing and Delivery ; requirements and configuration most challenging aspect of implementation

- local regulations
- specific practises
- review of multiple models to find best fit

J-Clear

- Initiates specific processes in response to particular events or scenarios, facilitating real-time fill processing
- Enables straight-through processing of trades
- Enables trade registration and multi-level clearing and settlement
- Full range of exchange administration activities
- Harmonises the exchange clearing framework with the existing regulatory requirements
- Customises clearing and settlement processes to meet member needs without code changes

Patsystems' Exchange Solution; J-Clear (cont.)

J-Clear enables the following day-to-day administration functions:

- Member account management
- Offset contract calculation
- Collateral management
- Contract management
- Margin management
- Fee management
- Gross/net position management

Patsystems' Exchange Solution; Risk Informer

- Real-time, post-trade risk management service
- Ability to integrate and implement the latest risk parameter files, including intra-day updates
- Structured presentation of core data, allowing extensive 'slice and dice' analysis
- Real-time monitoring of user-defined limits

Patsystems' Exchange Solution; frontends

Trading ; Promark & J-Trader

- Access to options, futures and equity prices in real-time
- Simple “one-click” order entry and management
- Depth of Market display
- Wide range of Order types (Limit, Market, Icebergs, OCOs...)
- Ability to create and trade inter-market spreads
- Built in Java – easy to distribute over the Internet
- Multi Language based on operating system

Risk Management; System and Risk Administration screens

- Full pre-trade risk management
- Distribution to members
- Permissioning

Back office Reporting Functionality



Q&A

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