DATA STRATEGY
Framework & Knowledge Management

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www.finetik.com
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Agenda

Introduction

Data Strategy  Framework & Concept
               Change Management
               Knowledge Portal
               Summary

Consideration  Reference Data Concept
               Language Concept
               Jurisdiction Concept
               Architecture

Data Strategy  Value Creation
Who we are:

Practitioners in the Financial Information Industry with an average of 18 years experience acquired in exchanges, front - back offices, settlement, data and solution providers around the world.

Who we serve:

Information generators: exchanges, regulatory bodies, associations, institutional
Securities processors: portfolio management, back office, custody or settlement
Solution providers: data-, technology- and service providers, outsourcing utilities
Financial Information Knowledge

**Financial Instruments**
equity, bond, warrant, derivatives, index, forex, interest rate, …

**Corporate Actions**
dividends, rights issues, reorg, m&a, bankruptcy,…

**Symbology & Reference**
securities, company, person, trading, industry... identifiers & schemes…

**Disclosure**
company, management, holdings, portfolio, financial statements...

**Standards & Taxonomies**
industry, accounting, restrictions, investment ...ISO, CFI, SWIFT, XBRL, FIX…

**Market**
quotes, contracts, ratings, custodian, settlement, trading and market regulations …
# Data Management Expertise

<table>
<thead>
<tr>
<th>Data Design</th>
<th>Data Management</th>
<th>Data Architecture</th>
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<tbody>
<tr>
<td>Data Analysis</td>
<td>Organisation</td>
<td>Data Warehousing</td>
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<tr>
<td>Data Modelling</td>
<td>Data Collection</td>
<td>Data Acquisition</td>
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<td>Data Mapping</td>
<td>Operation/Processing</td>
<td>Data Storage</td>
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<td>Feed Integration</td>
<td>3rd Party Management</td>
<td>Data Distribution</td>
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<tr>
<td>User Interface</td>
<td>Change Management</td>
<td>Data Migration</td>
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<td>Data Flows</td>
<td>Knowledge Management</td>
<td>Metadata</td>
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<tr>
<td>Business Rules</td>
<td>Documentation</td>
<td>User Management</td>
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<tr>
<td>Quality Processes</td>
<td>Standards/Taxonomies</td>
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<tr>
<td>User Interface</td>
<td>Support Procedures</td>
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<tr>
<td>Data Flows</td>
<td>Training</td>
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</tbody>
</table>
Global Modelling

140+ countries
80+ address formats
30+ main languages
20+ official Securities/Organisation identifier schemes
210+ major exchanges with multiple market practise
Global Modelling - Challenges

• Language Differences
• Cultural Differences
• Regulatory Differences
• Interest Differences
• Reference Differences
• Common Architecture
Global Modelling - Benefits

Global and Local products
- Tailor made products
- Diversification
- Access to every market
- Ample and wide client base

Global processing of Local business
- Consistent Standards
- Consistent Quality
- Local Coverage
The Challenge

• Politics
• Personality
• Perceptions
• Processes
• Priorities

• Culture
• Management
• Mind set
• Buy in
• Resistance to change
1. What is the company’s orientation

Technology, Product, Service
Management
Staff Culture
Data Management Position
Data Management Issues
Economic Situation
Location
2. Reoriented data groups from a technology to data focus

Results
Ownership (responsibility & authority)
Commitment (quality & productivity)
Know How (keep & expand)
Understanding (data & business)
Networking (one stop contact)
Improved Competitiveness

Pre-condition for New Environment!
3. Review data environment

4. Match data needs with business needs

4.1 Data needs

- Production dB
- Multi-lingual support
- View of Asian financial markets
- Common reference data
- Consolidate all Asian feeds
- Feed corporate & legacy dB
- Simplification of data collection
4. Match data needs with business needs

4.2 Business Needs

DWH to feed products in 9 months
Integration of acquired dB’s / operations
Similar products for multiple countries
Quick reaction to markets and customer needs
5. Build Data Architecture with business priorities

Clear vision, concept and goal
Blue print for data architecture
**Define data framework**
Phasing build according to business needs
Involve data production groups
Keep corporate development in view
6. Be Tactical

Data model
Production database
Multilingual support
Data migration & integration
Multi Feed processor
Single interface location independent
Multiple product out puts (data packaging)
Accessible through intranet
7. Integrate Meta data, Knowledge and Change Management

The only permanence is impermanence!

CHANGE OF...
Market Dynamics
Data Feeds
Source/Target dB
Improvement Processes
Client Needs

AFFECT...
Data Dictionaries
Models
Mappings & Rules
Taxonomies & Procedures
Documents & Libraries
<table>
<thead>
<tr>
<th>Concept</th>
<th>(Vision)</th>
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<tbody>
<tr>
<td>Model</td>
<td>(Design)</td>
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<tr>
<td>Meta Data</td>
<td>(Definition)</td>
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<tr>
<td>Database</td>
<td>(Implementation)</td>
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<tr>
<td>Data Intelligence</td>
<td>(Control)</td>
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<td>Publication</td>
<td>(Training/Promotion)</td>
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<tr>
<td>Usage</td>
<td>(Collection/Distribution)</td>
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<td>Concept</td>
<td>(Vision)</td>
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<tr>
<td>Vision + Idea</td>
<td>Conceptual Definition</td>
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</table>
## Data Framework III

<table>
<thead>
<tr>
<th>Model</th>
<th>(Design)</th>
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<tbody>
<tr>
<td>Requirement Definition</td>
<td>Resource Commitment</td>
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<tr>
<td>Logical Model</td>
<td>Physical Model</td>
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</tbody>
</table>
Data Framework IV

Meta Data (Definition)

- Data Dictionary
- Diagram + Notations
- Naming Standards
- Meta Data Reporting
- Version Control
- Feed (in/out) Mapping
- Feed (in/out) Spec’s
- Data Flows
- Business Rules
- Content Procedures
- Market Procedures
- Operational Procedures
- C. Support Procedures
## Data Framework V

<table>
<thead>
<tr>
<th>Database</th>
<th>(Implementation)</th>
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<tbody>
<tr>
<td>Database Containers</td>
<td>Tech. Operations</td>
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<tr>
<td>Feed (in/out) ETL</td>
<td>Back Up</td>
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<td>Tech. Documents</td>
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<td>Tech. Support Doc.</td>
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<td></td>
<td>Tech. Feed Spec’s</td>
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<td>Feed Methodology</td>
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# Data Framework VI

## Data Intelligence (Control)

<table>
<thead>
<tr>
<th>Data Views + Queries</th>
<th>Data Analysis</th>
<th>Data Quality Reports</th>
<th>Data Mining</th>
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</thead>
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Data Framework VII

<table>
<thead>
<tr>
<th>Publication</th>
<th>(Training / PR)</th>
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</thead>
<tbody>
<tr>
<td>Education “What - Why”</td>
<td>Training “How”</td>
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<tr>
<td>Presentation</td>
<td>Marketing in the Company</td>
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</tbody>
</table>
# Data Framework VIII

## Usage

<table>
<thead>
<tr>
<th>Usage</th>
<th>(Data Collection/Distribution)</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Interface</td>
<td>Feed Interface</td>
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<td></td>
<td>Feed Products</td>
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<td></td>
<td>OLAP</td>
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</tbody>
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Data Framework IX

<table>
<thead>
<tr>
<th>Concept</th>
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Change Management

Logical model

Source to Target mapping + flow

User Interface applications

Physical model

Source + Target model

Business Rules

Document Resource Management

Source + Target model

Standards + References

Change Management

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## Knowledge Portal

### FUNCTION
- Internet
- Meta Data Model
- MS Access dB
- All languages accessible

### CONTENT
- Meta Data
- Change Management
- GUI to maintain data
- eLibrary
- Portal Manager
Knowledge Portal - Benefit

• Highly flexible and expandable meta data model
• In control of information
• Knowledge management
• End-to-end workflow
• Instant impact analysis
• Adapt to changes with minimal resource and maximum results
• Reduce development life cycle
Data Strategy - Summary

1. Company’s orientation
2. Organise data department to focus on data
3. Review data environment
4. Match data needs with business needs
5. Build data architecture with business priorities
6. Be tactical
7. Integrate meta data and change management
Key Considerations

• Reference data concept
• Language concept
• Jurisdiction (feeds / data) concept
• Design ER vs OO
• Clear and simple design of data & architecture
Reference Data Needs

**Must Be** steady and reliable world wide common architecture

Common Context    data asset inventories understanding of content integrate disparate data data deployment and packaging

Controls Processing manual and automated current and historical global and local
Language Concept?
Data / Feed Jurisdiction Concept?

DATA SOURCE A
DSA ID: ABC235hk
Company: ABC Corp.
Address: Wan Chai 1, HK
Phone: 852 9999 8888
WWW: www.abcc.com
Country(Reg.): Bermuda
CEO : Wei Jen Lee
MGMT ID: HKCE03458
Currency: HKD
Revenue: 67 Mio

DATA SOURCE B
DSB ID: HK456789abc.x
Company: ABC Corporation
Address: 1 Wanchai - Hong Kong
Phone: +852 9999 8888
Fax: +852 9999 7777
Country: HK
CEO : Mr Lee
Currency: USD
Total Income: 10 Mio
Total Liability: 5 Mio
Design Considerations

• Data behaves differently in different circumstances
• Markets, data & standards are permanently changing.

• ER relational
• OO relational + behaviour
Compromises

Separate dB for Content and Meta data
Organic expansion on defined Concepts
Focus on practicality instead of presentation
General Considerations

- One Step at a time
- Separate Production and Product dB
- Small interdependent knowledge team
- Don’t be afraid to make decisions
- Step back and let an independent party review your work
- Promote and protect your work
- Keep strictly to the scope
- Spread and transfer the knowledge and ownership
<table>
<thead>
<tr>
<th>Cost Savings</th>
<th>1 dB vs N- fragmented dB</th>
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<tbody>
<tr>
<td></td>
<td>1 browser interface</td>
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<tr>
<td></td>
<td>knowledge retention and pooling</td>
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<tr>
<td></td>
<td>Ease of data collection &amp; access</td>
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<td></td>
<td>Quick respond to change</td>
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<tr>
<td>Business Benefits</td>
<td>Scaleable &amp; expandable content</td>
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<td></td>
<td>Package data for customization</td>
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<tr>
<td></td>
<td>Fast &amp; cheap new products</td>
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</table>
Don’t Forget

- Vision of goal
- Manage expectation
- Understand your data
- Data framework and Concept guide
- Clear policies
- Meta data & knowledge structure
- Subject matter experts into designers
Global Designs for Local Content

Brings enormous benefits to Business and Data Management, but it requires an open mind and willingness to respect and accept diversity.
Thank You

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