Information Centre of Excellence
Harnessing information for competitive advantage
November 2011
Agenda

Background and definition
Building blocks
Putting it together
Background and definition

• The importance of information
• The evolution of Information Management
• Information Centre of Excellence
The velocity of business is increasing

‘According to Gartner vice president and research fellow Roy Schulte, the elapsed time of individual processes at e-businesses around the globe is already beginning to accelerate. Responses to call-center inquiries, for example, have gone from eight hours as of a few years ago down to 10 seconds today; refreshing a data warehouse has accelerated from one month to one hour; and the time it takes to build a custom-made PC has gone from six weeks to 24 hours, to name a few examples. Schulte predicts this acceleration has just begun and that process times will speed up even more, triggering a huge impact on the inner workings of companies large and small. For the strategic CIO, he says, the movement to real time will mean ”increasing the velocity of business processes, and to get this kind of speed the CIO is going to have to rethink how he or she designs computer systems.”‘

Increased speed of business implies the need for increased speed of decision making. It also means that businesses might need to be thinking of analysing events that have not yet happened.
The importance of information

Information is a competitive asset and advantage

In multiple global surveys conducted across industries, one of the differentiators between those who were most negatively impacted by the rapidly changing economic climate and those who were not, was access to accurate, timely, organisation-wide information. Information is a competitive advantage and should be treated for:

- Increased multi-year Net Present Value (NPV);
- Maximised Return On Investment (ROI); and
- Reduced time to market and resulting payback period.
Differentiating between data and information

We all have systems that generate data. But how much sense can we make of it? Plain numbers from a transaction system do not lead to *active insight*. For insight we need information.

*Data ≠ Information*
Desirable characteristics of information

For making the right decision, I should
- Trust the information
- Have confidence in the results

Information is useless unless I
- Receive it on time
- Receive it in the desired frequency

I require information that is
- Suitable to my purpose
- Helpful to derive the right conclusion
Information Analysis

1. Better Insight
2. Time for iteration
3. More confidence on the output
Information Management - Evolution
Delivering information to the enterprise

- Late 1960’s: Model driven DSS
- Early to mid 1980’s: Theory developed
- 1990’s: Spreadsheet based DSS
- 2000’s: Knowledge driven enterprises
- DW, EIS, OLAP, BI

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Quick Definitions

Data Warehouse
- SAP
- DATA WAREHOUSE
  - Reports
  - Dashboard
  - Alerts
  - Analysis

Document Management System
- Files
- User Entry
- External
  - DOCUMENT REPOSITORY
    - (Workflow, Taxonomy)
- Search
Getting the information – some challenges

A Data Warehouse is just a start

Whilst most of us have systems and processes that churn out data at a high frequency, we have noticed the following challenges:

• We often require to collate information from multiple sources
• Most of the effort is manual involving significant use of productive time and effort
• Information requests to the IT team take a long time to process
• Repeat the process the next time the need arises
• Many times we analyse the cause of the issue instead of predicting it

And at the end of the day we are still not sure if the information and insight we have gained is correct in the first place.
iCOE – How it works

Authorisation to access the information requested

Is it there as a report or a screen in one of transactional systems (SAP ERP, Oracle ERP, etc)?

Does the information need to be massaged or synthesized?

Was the information available, and was just provided to the user?

Did we go external, created a quick report, integrated information from various sources?

Timely accurate information provided back to the user

Is there a data warehouse which has the data?

Is there a training issue with the user to find the information?

Information Dictionary - Metadata

Is the data there in emails or other documents of the organisation?

Is the data there with one of the vendors, customers, even the internet?

Is there a training that needs to be given to the user set?

Is the information request repeating to create a new report?
iCOE – How is it different from the traditional thought process

The focus is on getting the information back to the user quickly for the case, and less on building a repeatable report

1. AGILE

One is not limited by the data in the various systems stored in structured form. Any organizational or external data can be the source

2. BOUNDARY LESS

The reports that are the required by the users will get created automatically, and the concern on usage of the DW is not there

3. INCREMENTALLY BUILD SYSTEM
Many organisations are already on the path of implementing a Business Intelligence Competency Centre of sorts. The key components are already present:

1. A collection of Data Marts
2. A presentation layer (SAP BusinessObjects, Cognos etc.)
3. Extraction processes that automate data loading
4. Ad-hoc analysis allowing users to create reports and analyse on the fly
Information Centre of Excellence
Definition, Characteristics and Drivers

Definition
- A separate entity / department reporting to the CIO / CTO of the organization
- Caters to all business needs in the following areas:
  - Subject matter expertise on data and analytics
  - Is the sole authority on data definition and usage

Characteristics
- Well defined business processes and systems
- SLA for maintaining service levels to business within time and cost constraints
- KPI and KRA for guiding its performance

Drivers
- Use of analytics as a means to stay a step ahead of the competition
- Helps the organization treat information as a competitive asset
The Information Maturity Model

Hallmarks of the Information Centre of Excellence

- **LEVEL 1: AWARE**
  - Awareness of problems in data management

- **LEVEL 2: REACTIVE**
  - Action in response to issues; the action being system or department specific

- **LEVEL 3: PROACTIVE**
  - Information Management is part of the IT charter and enterprise management processes

- **LEVEL 4: MANAGED**
  - Proper structure and processes exist for management of enterprise information

- **LEVEL 5: OPTIMIZED**
  - Information management is part of the strategic initiatives as an enabler. Continuous improvement is a key feature

This is a journey
The virtual ICoE is able to get back to business proactively

Large Financial Services group in India

The group has interests across banking, capital markets, life and general insurance, private equity etc. Most of the large business units in the group have set up their own business intelligence teams that are distinct from Business Users and IT and yet can interact very closely with both.

These teams take requests for development of new reports and work on special assignments given by Business users for which there is a charge back.

More importantly, these teams are able to get back to business with their suggestions which are based on their analysis of data.
Benefits

Benefits are both tangible as well as intangible

1. Improved business performance:
   a. Better top line
   b. Reduced costs
2. Ability to predict future areas of concern
3. Improved ability to respond to changes in business environment
4. Ability to drive alignment to business strategy in a more streamlined fashion
5. Better control over information assets
6. Self sustaining and hence delivering better Return on IT investment
Building blocks

- Information architecture
- Data Governance
- Delivery models
- Team
iCOE – What’s inside

Authorisation to access the information requested

Information Request

- A structured data repository – a Data Warehouse
- An unstructured data repository – a document management system
- A helpdesk to receive requests
- Access to the organisation's key systems

Feedback loop to populate the structured and unstructured information repository

Information Dictionary - Metadata

Timely accurate information provided back to the user
Information Request

Authorisation to access the information requested

**iCoE**

harness the Intellectual Property of the Enterprise

Information Dictionary - Metadata

Timely accurate information provided back to the user
**Information Analysis**

1. Better Insight
2. Time for iteration
3. More confidence on the output
4. Lower chance of human error
5. Access to wider information base
6. Leverage Organisational knowledge of analysing information

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**iCoE**

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**Building blocks**
Four way relationship

Governing the usage and management of data:
1. Data Quality
2. Data Management
4. Risk Management

The infrastructure:
1. Data repository
2. Presentation and analytical tools
3. Transformations

Controlling the delivery:
1. SLA for delivery
2. Request and request fulfilment processes
3. Charge back
4. Proactive assignments

Organisation structure:
1. Roles and responsibilities
2. Qualifications
3. Reporting relationships
Information architecture

The Information Architecture consists of the following building blocks:

1. Automated mechanism to extract, transform and then load data into the data repository.

2. A data repository or multiple data repositories each providing data for various business functions.

3. Presentation and analytics tools to provide business users with adequate and relevant insights into business performance and issues.

4. The information architecture also encompasses technology and tools to implement policies around Data Governance.
Information Architecture

Sample
Data Governance structures and procedures are put in place in order to manage the following:

1. **Data Quality**: So that the information being provided is complete, acceptably accurate, timely and relevant.

2. **Data Management**: So that information being updated within the Information Architecture does not affect Data Quality

3. **Risk**: So that information being served from the ICoE is protected from unauthorized use

4. **Changes to Business Processes**: So that the linkage between the business process and the data captured is maintained
Data Governance
Illustrative framework

- Stewardship Process
  - Distribution Request
  - New/changed Master Data Request
  - Quality Improvement Initiative
  - Operations & Quality Monitoring

- Metadata
  - Metadata shopping
  - Impact analysis
  - Operations Monitoring
  - Quality Investigations

- Master Data Management
  - Historical Data Management
  - Storage services
  - Schema services
  - Mapping/alignment Services
  - Hierarchy Management

- Acquisition & Authoring
  - Real-time/Near Batch Change Capture

- Suppliers
  - Authoritative Sources
  - End-user Authoring

- Data Quality
  - Validation Audit, balance & control Quality Tracking

- Administration and Maintenance
  - Change management
  - Security management
  - Operational support
  - Process monitoring
  - Performance management
  - Stewardship Workflow

- Distribution
  - Self-service (pull) interface
  - Publishing (push) interface
  - Messaging-oriented interface

Suppliers → Consumers

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**Data Governance within a iCoE**

1. Change request procedures
   - Management Information Authorization strategy and guidelines
   - Company-wide role based authorization matrix (who can access what type of information based on their role)

2. Authorization BI Strategy
   - Systems controls
   - Access controls
   - Processes controls

3. Data Quality Standards
   - BI integrated control framework:
     - Completeness
     - Timeliness
     - Accuracy

4. Service Level Agreements
   - Business requirements for SLA between business and IT for services including for example:
     - Response times
     - Helpdesk services

5. MI GOVERNANCE ORGANIZATION
   - CENTRAL
     - The Central team will be responsible for:
       - Maintenance of CIL definitions, reports, processes
       - Authorizations matrix
       - Change request coordination and prioritization
       - Central support
   - LOCAL
     - The Local team will be responsible for:
       - First line user support
       - Day-to-day communications to end-users
       - Handling requests from users

Change request processes for CIL environment:
- User rights
- Reports
- Definitions
- Processes
Supported by automated workflow tooling
**iCOE – Delivery Model**

- Authorisation to access the information requested
- Prioritised queuing of Information Requests
- SLA based delivery for various Information types
- Customer Service mind-set
- Managing the risk of information leakage
- Focus on self sustaining the user
- Cost Recovery vs. Profit Center Approach
- Reactive vs Proactive Analysis

**Information Dictionary - Metadata**
Delivery model – Illustrative

Requests for service
- Required
  - Enhancement
  - Support
- Analytics
- Paid assignment

ICoE Toll Gate
- Administration
- Liaison
- Data enrichment
- Effort estimate and charge back

Leadership

Service Delivered

Requests for Service

Service Delivered

People
- Project Manager
- Functional Consultant
- Technical Consultant
- Data Designer
- ETL Analyst
- Infrastructure Analyst
- Quality Manager
- Testing Manager

Process
- Solution Design
- Construction & testing of components
- Implementation of core solution
- Training of business user
- Training of Project Center
- Stabilizing implementation and support
- Enhancement

Technology
- Enterprise Data Warehouse (EDW)
- CRM (Customer Relationship Management)
- CPM Cluster (Data Analytics, Planning, Budgeting, Reporting)
- Web Portal
- Data Quality (Master Data Management)
- Process Integration (BPEM)

Governance

Leveraging existing Set-up

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The team that is responsible for the ICoE has the following characteristics:

1. Is proficient with the tools and technologies of the Information Architecture
2. Is proficient with the business processes and can appreciate the challenges being faced by the business
3. Has a clear and well defined span of control between both technology and functional teams
4. Is capable of utilising its expertise in getting back to business pro-actively with its own analysis of business issues
5. Is focused on working in a Profit Centre approach
Putting it together

- Considerations
- Execution
There is no shortcut to the implementation of the ICoE. The journey is long and to reach managed state would take about 2-3 years if starting from scratch.
Considerations

Commissioning an ICoE requires thought

While any time is a good time to start, the following need to be addressed before embarking on the ICoE journey:

- All relevant business users and departments have been sensitised to the coming of an ICoE
- The IT strategy reflects the coming change from a technology and process perspective
- There is a clear articulation of the information architecture of the organisation and clarity for the next 3-5 years
- The process of evaluation of products and vendors for plugging the gaps in the architecture has been completed or is on track for completion
**Starting from scratch?**

**ASSESSMENT**
- **DEFINE VISION**
  - Clear unambiguous statement of the vision with regards to Information as a competitive asset.
  - Shortest timeframe, most important block
- **BUSINESS USER INPUTS**
  - Get to know the user better
  - Anticipate business user information requirements and current issues
  - High intensity, medium duration
- **STUDY EXISTING ARCHITECTURE**

**DESIGN**
- **DEFINE TECH ARCHITECTURE**
  - Blue sky vision of what the end state will look like
  - Incorporate vision, business user needs, best practices
  - Leverage existing Infra
- **DEFINE TOOL SET**
  - Generate and evaluate tool and technology options
  - Define data governance organization, and its processes
- **DEFINE BI ORGANIZATION**

**IMPLEMENTATION AFTER CREATING A FOUNDATION**
- **CREATE ROADMAP**

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Align to business objective and strategy

**Vision**
- Scalability
  - Enable business growth
- Productivity
  - Institutionalize know-how
  - Measure and improve productivity
- Brand Experience
  - Standardize deliveries
  - Enable Differentiation
- Mgmt Decisions
  - Reporting and Analytics
  - Segment customers

**Objectives**

**Requirements**
- System access at remote areas
- Uniform service levels across locations
  - Online knowledge repository
  - Client contact and interactions log
  - Web-based training apps
  - Marketing campaigns details capture
  - Logistics mgmt
  - Complaints Mgmt
  - Knowledge Base
  - Track ROI for marketing campaigns
  - Sales planning and forecasting
  - Lead Mgmt System
  - Capture channels and customers information
  - Mobile access enabling investor transaction, channel automation and MIS
  - Financial planning tools for portfolio and wealth mgmt services
  - Automate MIS reports
  - Supporting CRM through cross-sell/upsell/NFO (for AMC) analytics
  - Single repository of cleansed data for each of the businesses
  - Tool to enable flexible slice and dice data across desired parameters
  - Intelligence to target customers with right products

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Clearly define the business case and track it

Financial Evaluation (Cost vs. Revenue)

Payback Analysis

Year 0: -9.47
Year 1: 1.78
Year 2: 147.47

Benefits by Objective

Year 1
Year 2
Year 3
Year 4
Year 5
Year 6

Scalability
Productivity
Cost Reduction
Alignment of the relationship between the value chain, strategy imperatives, the knowledge cycle and is necessary to create the business meta data that would be used to form the basis of all information flow across the organisation.
How an ICoE would help?

1. Unified business meta data
2. Published and accepted business transformation logic
3. Automated processes for loading of information
4. Unified information delivery channels
5. Control over the information delivery channels – improves consistency, reduces redundancy, reduces maintenance costs
6. Self service mechanisms allow users to reduce dependency on IT
7. Time freed up for CoE personnel will allow them to focus their efforts on proactively looking for emerging issues and advise business on corrective actions
8. CoE can take up paid assignments from business for analytics on a case to case or continuous basis
Thank you

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