LEAN AND AGILE ENTERPRISE
INFORMATION MANAGEMENT

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Objectives of this presentation

- Traditional evolution of Enterprise Information Management
  - Provide a quick overview on evolution of EIM

- External influence on the market and customers reactions
  - Changes due to the Financial Crisis, how market responds

- Meeting current demands and expectations
  - How SAP looks at a Lean and Agile Enterprise Information Management
“The majority of small data quality software vendors will be acquired by bigger players within the next years”, 2004

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<tr>
<th>Date</th>
<th>Acquisition of</th>
<th>Segment</th>
<th>Buyer</th>
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<td>05/2000</td>
<td>Data Flux</td>
<td>Data Quality</td>
<td>SAS</td>
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<td>03/2002</td>
<td>Vality</td>
<td>Data Cleansing</td>
<td>Ascential</td>
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<td>Avellino</td>
<td>Data Profiling</td>
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<td>06/2005</td>
<td>Ascential</td>
<td>DQ / DI</td>
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<td>Firstlogic</td>
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<td>BI / EIM</td>
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<td>06/2009</td>
<td>AddressDoctor</td>
<td>Address Cleansing</td>
<td>Informatica</td>
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Was this kind of intuition?
Challenges and surrounding conditions that make ideal world tough?

ENTERPRISE INFORMATION MANAGEMENT
NO INSIGHT – Can we trust our data?

Rule of the thumb

I guess something like 200 or 250, roughly.

"Our primary target is in retail, how many accounts does that represent in EMEA?"

Let's be conservative, say 200 and we move on.

Instinct feel decision
How do we do without Insight?

‘Instinct-Feel’ Decisions

- All of the time: 3%
- 75% of the time: 16%
- 50% of the time: 42%
- 25% of the time: 36%
- Never: 3%

“Guts feel”

- > 60% of people
- ≥50% of the time

Aware of bad decisions made due to insufficient information

- Yes: 77%
- No: 23%

77% aware of bad decisions

LOST PRODUCTIVITY – Do we have necessary data available at the fingertip?

I’ll ask Bob to send me their spreadsheet, it should contain some of the info we need and I’ll see if I can collate the rest.

“No, we need the data! I want to know the number of accounts, by country along with revenue and market share for the past 3 years.”

Ok, but we’ll have to take this offline.

Time to execution

Delays
INCREASED COST – Are we working efficient?

Lack of responsiveness

“We don’t have too much time, competition is on our tail. Ask the IT to pull out this report for us asap. And let’s reschedule this meeting for next week. Thanks”

Increased costs
Effects of Inadequate Access to Information

Lost productivity is #1 impact of inadequate access to information.

Need for responsiveness causes much higher costs in environment not meant to be agile by design.

Source: Economist, ‘Enterprise Knowledge Workers Study; November, 2007
Business strategies evolve
… but silos create gap between strategy and execution

Functional silos and non-integrated systems reduce agility and undermine growth
Complex processes create separated silos of Master Data

YOUR VALUE CHAIN

- **SRM**
  - Part: 8975
  - VENDOR: ABC123

- **Logistics**
  - VENDOR: XYZ456

- **ERP**
  - Jane Peters
  - 199, 3rd Street
  - Palo Alto, CA
  - Part: B7521

- **Call Center**
  - Jane Smith
  - 4418 N. Str.
  - Chicago, IL
  - Part: 2574

IT Departments are drowning in complexity

Non-compliant
- Lack of governance
- Not meeting global or local compliance requirements

Expensive
- Maintain data silos
- Additional costs associated with bad data

Inflexible
- Not able to share forecast or planning data with supplier / business partner

Incomplete
- Lack of single view
- Unable to analyze key business metrics

Out of context
- Information not available in context needed for decision
Establish EIM strategy to manage fragmented information

**Information Managed in Silos**

- Each department creates and stores their own data
- Data inconsistencies and errors impact organizational results
- Information management rework and redundancies escalates IT costs

**Enterprise Information Management**

- Formal enterprise-wide information architecture, governance, and reuse
- Information asset readily available, understood, useful and trusted for all users
Data Explosion: A Natural Result of Modern Societies, Businesses and the Internet

10X data growth 2006 - 2011

281 billion gigabytes of digital data created in 2007

93% data stored in digital form

Business IP traffic grows by 35% 2007 to 2012

Increasing demand: Need for Access to all type of data
Automatically analyze unstructured content

Thank you for your recent shipment. I am facing big problems with some of your products. The shelf labels tear too easily, and my customers return them. Can I get a replacement? **This is urgent, please contact me asap**. This is Julie at Sapphire.

**Urgency**
A tool, a project, a change process, …?

ENTERPRISE INFORMATION MANAGEMENT
Enterprise Information Management is a particular field of interest in the Information Technology and Management Consultancy area. It specializes in finding solutions for optimal use of information within organizations, for instance to support decision-making processes or day-to-day operations that require the availability of knowledge. It tries to overcome traditional IT-related barriers to managing information on an enterprise level.
From the Technology side: Puzzle pieces of Information Management

- Data Security
- Master Data Management
- Data Governance
- Information Lifecycle Management
- Data Integration
- Content Management
- Metadata Management
- Data Quality
- Re-active data cleansing
- Common Data Definitions
- Shared Business Vocabulary
- Documentation of DB systems
- Data Modeling

Time
Gartner: Data Integration & Quality Technologies and Markets

- Custom code dominates
- Single-purpose tools
- Market fragmentation
- Tactical deployments

- Custom code remains
- Vendor consolidation around related tools
- Cross-project usage

- Custom code minimized
- Continued tools convergence
- Importance of metadata
- Strategic intent

- No custom code
- Convergence complete
- Service orientation
- Strategic deployments
Overview: Evolution of Information Management

1990s

ETL/DQ Tools
- Single purpose tools
- Environment: tactical projects
- Challenge: inefficiencies, redundancies

Information Management
- Enterprise-wide leverage
- Collaboration with the business
- Environment: strategic deployments
- Challenge: complexity

2000s

Data Integration Suite
- Integrated stack
- Environment: rise of cross project usage
- Challenge: single version of truth

Key Business Drivers
- Globalization
  - Short product cycles
  - Global competition
- Innovation
  - Engine for success
  - Competitive differentiator
  - Culture of flexibility
- Efficiency
  - High number of decisions
  - Increased responsibilities
  - Compliance and transparency

Traditional DI/DQ
- Data integration and data quality primarily responsibility of IT
- Data Integration primarily focused on BI and data warehousing needs
- Mostly tactical projects with little reuse and enterprise-wide standards

2010s

Information Management
- All information (structured and unstructured) is managed as a strategic organizational asset
- Information management involves both business and IT ownership
  - Business defines requirements, monitors and improves information
  - IT supports business requirements and provides greater access to business
- Information governance is key
One of SAP’s perspective on EIM: Bringing together more technology pieces in a bigger landscape
Enterprise Information Management can help you manage information as a strategic asset

Affects all information assets used by an organization

Improves information consistency, transparency for enterprise wide use

Enables operational and analytical initiatives such as:

- Business transaction processing
- Information governance
- Master data management
- Data migration
- Business intelligence
- Performance Management
- Data warehousing
- Data Quality Management
The EIM Foundation is essential for all system landscapes

Adoption Framework
- Information Governance
- Stewardship
- Architecture
- Standards
- Change Management

Information Consumers
- EPM and Analytics
- Business Applications
- Composite Applications and Processes

Information Consumption
- Access to information across the enterprise
- Enterprise Search

Metadata Management
- Data Lineage and Impact Analysis
- Share Common Definition and Models

Information Repositories
- Master Data Management
- Enterprise Data Warehouse
- Enterprise Content Management

Information Provisioning
- Data Integration and Data Quality
- Information Lifecycle Management

User Interfaces

Enterprise Information Management Foundation

Information Services
- MDM Master Data
- EDW Structured Data
- ECM Unstructured Data

EPM & Analytics
- Financial Performance Management
- Operational Performance Management
- Industry & Process Reporting & Analytics

Business Applications

Composite Applications & Processes
What has changed with the Financial Crises?

CHANGING ENVIRONMENT
And then September 2008…
Take action to survive and thrive

“One of the top priorities of senior management during the next five years is managing information as a strategic asset.”

Survey from Gartner/Forbes, Published December 5, 2008
In this global downturn, I need **clarity** to ensure economic survival.

- Uncertain on **what is next**
- Governments **interventing**, but it’s not enough
- Increasing risks: internally & externally. **Lack of visibility** into risk and operations got us into this mess
- Raw materials and energy **costs declining** – this is helping, but not enough
- From crisis comes **increased** regulation and scrutiny – expect more
- Companies must take action now, this is a time for leadership
How do you lead through challenging times?
Focus on the basics, cut costs

- **74%** Will reduce operating costs
- **38%** Will reduce capital investments
- **60%** Had layoffs in 2008, >50% plan layoffs in 2009


Source: CFO magazine global CFO survey Feb 2009
How do you lead through challenging times?
Innovate the business model

- **45%** Will increase productivity
- **40%** Will change their enterprise model to be more collaborative
- **37%** Will restructure
- **36%** Will introduce new Products/Services to gain market share

Question on Economics and EIM: Stop or Continue?

- Stop all investment
- Reduce cost wherever possible
- Focus investment on direct operational income

- Data and Information are still a valuable asset
- Decisions need to be made faster and closer adapted to market

→ “If not now, when then?”
How can organizations react on changing environment and continue being successful?

LEAN & AGILE ENTERPRISE INFORMATION MANAGEMENT
Questions from Market: How to achieve the strategic agility?
Enable insight, efficiency, and flexibility

How can your company help us to develop effective business strategies?  

How can your company help us to navigate through economic challenges?  

How does your company enable us to support the quickly changing needs of the business?
Focus on three business driver for EIM initiatives

Ensure trust in data to be complete, accurate and accessible

Accelerate access to all essential business information

Manage operational information throughout its lifecycle

Increased efficiency from high quality information for BI and operations

Optimized business performance through superior decision making

Enhanced governance and compliance via policy-based data management
Be aware of different dimensions for EIM implementations

Enterprise Information Management

People, process, and technology that controls information management functions across the enterprise

Executive Sponsor

Line of Business

Owners

IT

Data Steward

Define

Manage

Monitor

Data Integration & Quality Management

Data Warehouse Management

Master Data Management

Content & Information Life-Cycle Management

People, process, and technology that controls information management functions across the enterprise.
A general roadmap for Enterprise Information Management

1. Data READINESS
   - Understand what data assets you have and how they are being used
   - Deliver trusted information repeatable and reliably at the right form, to the right place at the right time

2. Data INTEGRATION
   - Integrate
   - Understand

3. Data CONSOLIDATION
   - Consolidate diverse master data landscapes and increase trust and reliability in information
   - Consolidate
   - Integrate
   - Understand

4. Data GOVERNANCE
   - Technology enabling people to implement a repeatable process to manage the use, quality and lifecycle of information
   - Govern
   - Integrate
   - Understand

Value

People & Process Maturity
Phase 1: Understand Content and Usage of your Data

Data Profiling

- Inspecting the data for compliance to business rules
- Comparing heterogeneous data sources
- Discovering any defects
- Measuring their impact on your business
- Communicating business rules to be used in cleansing
- Automated profiling and referential integrity testing
- Scheduled analysis, with threshold notifications
- Trend analysis and continuous monitoring

1. Data READINESS

Understand what data assets you have and how they are being used

Data Profiling & Metadata Management

- Clear Insight into individual systems and processes
- Decide about next data assets and processes / applications
Phase 1: Understand Content and Usage of your Data Metadata Management

- Impact and data lineage analysis
- Create an encyclopedia that translates metadata into business definitions
- Lower your TCO by tracking usage of data and reports

1. Data READINESS

Understand what data assets you have and how they are being used

Data Profiling & Metadata Management

- Clear Insight into individual systems and processes
- Decide about next data assets and processes / applications
Phase 2: Integrate and Timely Deliver your Data from Different Sources to any Data Consumer

2. Data INTEGRATION

Deliver trusted information repeatable and reliably at the right form, to the right place at the right time

Data Migration & Integration

Data Profiling & Metadata Management

Provide a framework, templates, methodology, tools and expertise to migrate legacy data into a target environment.

• Necessary processes established to move data into single target
• Decide about next data assets and processes / applications
Phase 2: Integrate and Timely Deliver your Data from Different Sources to any Data Consumer

Data Integration

• Access, transform, cleanse, and deliver any type of data from anywhere at any frequency
• Establish repeatable processes for moving and transferring the data
• Prepare the separated data and improve the quality of the data

2. Data INTEGRATION

Deliver trusted information repeatable and reliably at the right form, to the right place at the right time

Data Migration & Integration

Data Profiling & Metadata Management

Structured Data

ERP

DW

RDBMS

OLAP

Unstructured Data

Email

Docs

Notes

Web

• Necessary processes established to collect data from multiple sources
• Decide about next data assets and processes / applications
Phase 3: Consolidate Data from Different Sources and Produce Valuable Information Across the Systems

Consolidate and Harmonize Your Master Data
- Extract, load and de-duplicate master data from several systems
- Provide key mapping information and align key data across the entire organization

Build Processes on Consistent Master Data
- Create and maintain master data to support key business process and decision making

Increase Data Quality
- Use single data target as master and propagate back to sources
- Decide about next data assets and processes / applications
Phase 4: Enable Your Employees to Manage Usage, Quality and Complete Lifecycle of your Data

Data Governance

- Govern Data centrally across the enterprise using process-centric applications
- Leverage consolidated data
- Eliminates manual maintenance of data in multiple systems, but allows for controlled de-central adaptations
- Enables compliance and transparency through integrated staging, approval and central audit trail
- Delivers consistent definition, authorization and replication to corporate systems.

- Established all necessary business processes to actively manage your data along the complete production process
Lean and Agile: Navigating your EIM project

- Know where you are
- Define your ultimate EIM target as a vision
- Generate rough path, follow high-level milestones
- Start detail planning for initial step
- Adjust your path when you reach a milestone
Conclusion

- Mature methodologies and tools for establishing an Enterprise-wide Information Management have been developed and proven success at several organizations.
- Adoptions of those “full” models are generated to fit into scalable demands of the market.
- Lean processes and methods allow step by step implementation, focusing initially on the most efficient components.
- Short planning cycles allow flexibility and agility to reach given Milestones quickly with success and continue with the next most important step.

Ready to go ON
Thank You!

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