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Building **Solid** Enterprise **Solutions**



Data Strategy

What you have to build before you start
building your data warehouse

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Monday, December 29, 2008



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What is Business Intelligence?

BI is not about delivering access to a massive repository of data, often unconstrained and overwhelming. BI is about delivering highly relevant, highly valuable applications, reports, and dashboards, designed to maximize the user's ability to gain specific, actionable knowledge from corporate data.

Of course – and this can't be overstated – this requires a culturally-relevant, well-supported governance model and a highly-specialized, flexible data architecture, both optimized for this purpose.



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What is Data Strategy?

The development and maintenance of a single, unified, organization-wide plan for the use of corporate data as a vital asset for strategic and operational decision-making. Investing in a formal data strategy lends much needed intentionality around critical data related issues, such as data quality, metadata, performance, data distribution, organization, ownership, security, privacy, etc.



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Effective Data Strategy

- ✓ Build Strategic Alignment
- ✓ A Single Unified Plan
- ✓ Strategic and Operation Decisions
- ✓ Critical Data Related Issues
- ✓ Wrap-up



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- Ask yourself
 - What will the organization look like if we create and execute an intentional data strategy?
- Or, ask yourself
 - What if we still haven't done so 5-10 years from now?
- Align vision with strategic values of the business
 - Give answers only in the language / currency the business cares about



1. Identify the vision, mission, and strategic goals of the organization
2. Identify the organization's key performance indicators (KPI's)
3. Develop vision for your data
 - What will the world look like someday?
4. Develop mission for your data
 - What will we do (generally) to realize our vision?



5. Formulate your mission into strategic goals
 - What will we do (specifically) to realize our vision and fulfill our mission?
6. Develop quantifiable metrics (critical success factors) to identify and measure success
 - What, when, how will we measure?

Does this process sound familiar?



- Vision:
 - #1 supplier of widgets in North America
- Mission:
 - Increased penetration in medical, industrial and aerospace sectors
- Strategic Goal:
 - Increase market share in medical vertical by 4%
- Key Performance Indicator (KPI):
 - 7 new accounts closed per quarter per rep in the medical vertical in 2009



- Vision:
 - Highly-accurate, real-time visibility for sales reps into their accounts
- Mission:
 - Dashboard, scorecard, competitive intelligence and predictive analytics tools in sales reps' hands
- Strategic Goal:
 - Core attributes of all accounts per sales rep visible in summary and detailed forms on a single screen
- Critical Success Factor:
 - All dashboard data updated every 8 hours



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Not having a data strategy is analogous to allowing each person within each department of your organization to develop their own chart of accounts and use their own numbering scheme.

*- Sid Adelman,
Data Warehousing Expert*



- Must have a data strategy
- Must be organization-wide
 - Multiple data strategies means conflict, unpredictability, and ultimately chaos
 - Cost of meeting business' information needs increases exponentially with number of strategies
 - Whether formally defined strategies or not
 - No such thing as “no strategy”
 - Just means you have N strategies, where N is the number of data stakeholders in your org
 - Information requirements likely (literally) impossible to meet



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Which decisions are you supporting? (1 of 2)

Strategic and
Operational Decision

- What strategic decisions do we want data to help us make?
 - Strategic decisions = ongoing choices about the long-term vision, direction and health of the organization
- What operational decisions do we want data to help us make?
 - Operational decisions = day-to-day tasks supporting the business function at hand



Which decisions are you supporting? (2 of 2)

Strategic and
Operational Decision

- All decisions identified should roll up into the strategic goals of the data strategy
 - By definition, they also roll up into organization's strategic goals and KPI's
- Identifying these decisions is the beginning of requirements gathering
 - For data governance
 - For the data warehouse
 - For BI tools and applications



- The purpose of Enterprise Information Management is to drive business performance
- Your data strategy is your intentional plan for the use of data to serve this function
- Make sure you trace back to your organizational KPI's (Critical!)



- Increase revenue and value
- Reduce cost and complexity
- Ensure survival by mitigating risk and enforcing constraints
 - E.g. – vulnerabilities, compliance, security, privacy, etc

Every initiative, including data-related initiatives, must serve these fundamental drivers.



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Let's walk through a few...

Critical Data Related Issues

- Data Quality
- Metadata
- Performance
- Data Distribution
- Organization
- Ownership
- Security
- Privacy

There are many more,
but this will get us started.



How will we...

- Define “high” and “low” quality data objectively?
- Raise management awareness and support for data quality?
- Determine who is responsible for data quality?
- Identify, evaluate and diagnose data quality problems?
- Determine how timely or fresh must data be? What is “current” data?
- Validate our ETL processes?
- Determine which data to clean? What is our triage plan?
- Evaluate the cost of cleansing data, and determine which efforts are worth it?
- Prioritize cleansing efforts?



How will we...

- Raise management awareness and support for metadata?
- Determine which meta data to capture?
- Assign responsibilities for capturing and maintaining metadata?
- Define business metadata?
- Define technical metadata?
- Capture metadata?
- Use metadata once we have it?
- Identify the tools and systems which generate valuable metadata?
- Choose software/tools to capture/maintain metadata?



How will we...

- Manage performance-related expectations and perception by management and users?
- Address capacity planning of database servers and network infrastructure?
- Define performance metrics?
- Monitor, measure, and report on performance of data retrieval?
- Define, monitor, manage, and expire SLAs?
- Tune performance?
- Determine roles and responsibilities for performance of data access?
- Chose between proactive and reactive models for performance management? When is each appropriate?



How will we...

- Determine users' need for data?
- Define standards for what data to distribute when, where, and to whom?
- Monitor, measure, and report the cost to distribute data?
- Assign responsibility for administration activities related to distributing data?



Who will... (Data Governance Roles)

- Provide strategic leadership? (DGO Chairman)
- Market your data strategy? (Marketing Director)
- Steward your organizations data? (Data Steward)
- Be responsible for data quality? (Data Quality Director)
- Educate users on your data strategy? (User Support and Education Director)
- Handle security? (Security Director)
- Architect data solutions? (Data Architect)
- Administer databases? (DBA)
- Administer data and the data warehouse? (Data Warehouse Manager)



Who will...

- Be subject to which access rights?
 - Create data?
 - View / access data?
 - Change data?
 - Delete data?
 - Copy / move data?
- Determine requirements for performance?
- Determine requirements for availability?
- Determine requirements for maintenance of historic data?



How will we...

- Determine responsibility for security and privacy?
- Create the mechanisms for establishing security and privacy procedures?
- Audit our security policy?
- Address regulatory issues?



- What tools and standards will we use for data modeling?
- How will we use empirical data to test theories?
- How will we achieve the data quality required to meet our goals?
- How will we generate new data we need?
- How will we merge silo'd data sources?
- How will we digitize offline data to be made available for envisioned BI functions?
- How will we maintain an accurate inventory of our data?



- How will we define standards for and incent data sharing?
- What are our goals for BI initiatives and tools built on top of our data strategy?
- How will we deal with disparate data strategies or violations of the data strategy as they arise?
- What will our BI architecture look like?
- What is our policy on redundant data?
- What are our criteria for software selection?
- Will we sell our data, and if so, why and how?
- How will we measure data usage?



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Wrap-up

- Millions of questions to ask yourself
- Allow ample time to ponder them
 - Work as a team
 - Don't let one person dominate, no matter how bright
- Don't wait to get everything figured out to start
- Bring in outside help
 - An expert is worth a thousand meetings
- Don't be intimidated. You can do it!





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