

Data Warehousing Goals, Methods & Procedures for 1KEY Business Intelligence Implementation

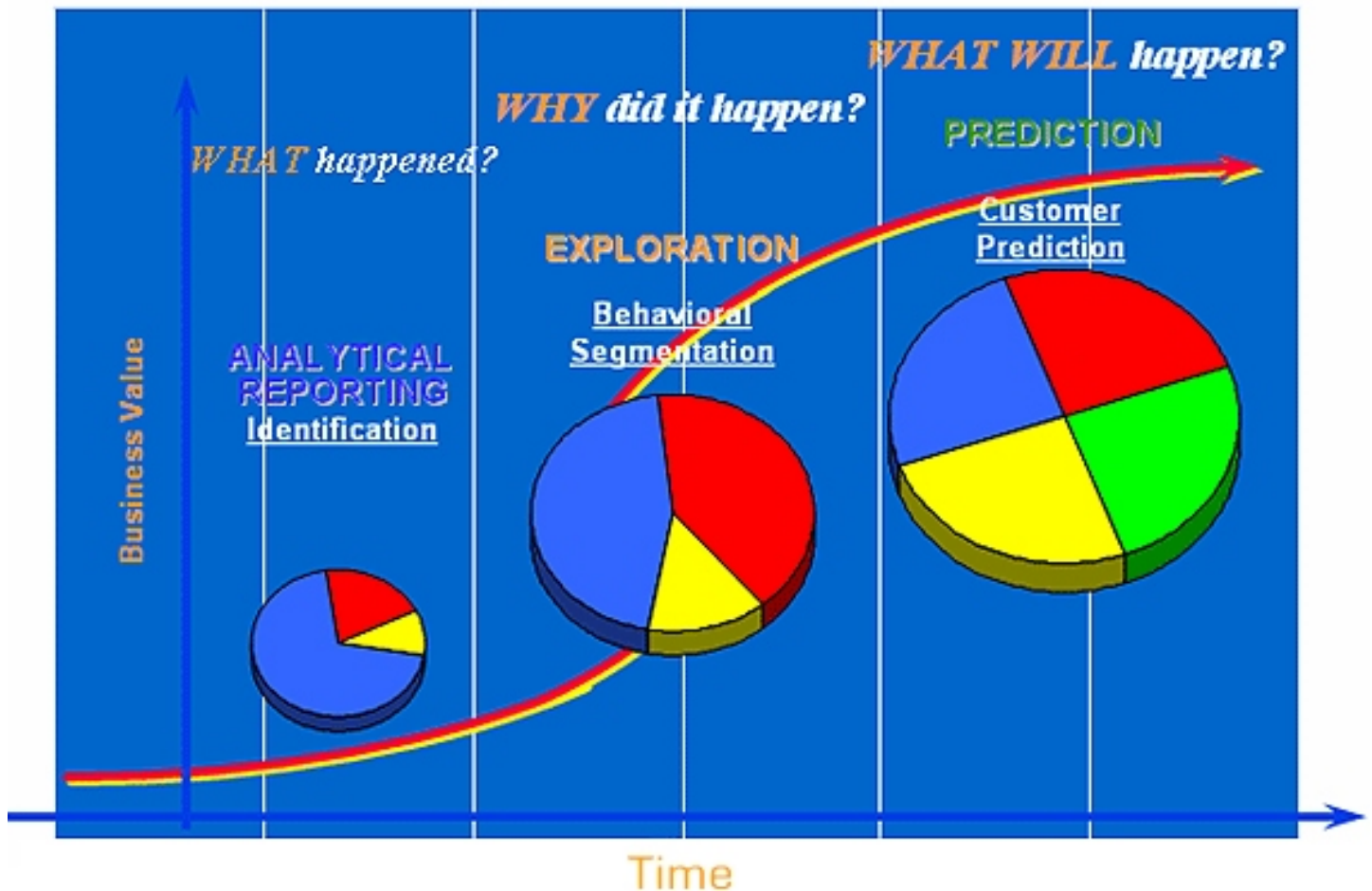
Goals of a Data Warehouse for 1KEY Business Intelligence

- Provide access to corporate or organizational historical data for analysis and decision making
- Offer consistent representation of data across and within the organization
- Enable an "environment" consisting of data and applications that query, analyze and present information in useable formats
- Establish foundation for 1KEY Business Intelligence

1KEY Business Intelligence Data Warehouse - Information Quality & Benefits

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| <ul style="list-style-type: none"> • Quality Characteristic • The right data • With the right completeness • In the right context • With the right accuracy • In the right format • At the right time • At the right place • For the right purpose | <ul style="list-style-type: none"> • Knowledge Worker Benefit • The data I need • All the data I need • Whose meaning I know • I can trust and rely on it • I can use it easily • When I need it • Where I need it • I can accomplish our objectives and delight our customers |
|---|---|

Maturity of Data Warehouse usage



1KEY Business Intelligence Reports Data Quality Dimensions with Data Warehousing

- Free of error or accuracy – at the given degree of precision
- Completeness – no data are missing, covers the entire domain, no missing attributes
- Appropriate amount – expected level of details, and with required aggregations
- Interpretability – with appropriate language, symbols, units etc
- Consistent representation – same across different time and space, same formats everywhere e.g. date (dd/mm/yyyy)
- Concise representation – compactly represented, rounded off to the required level
- Relevance – current or future use
- Timeliness – sufficiently up-to-date for the task at hand
- Reputation – robustness of data capture and processing systems, consistent accuracy, source reputation
- Security – extent to which data are accessible only to authorized personnel
- Accessibility – easily and quickly retrievable Ease of manipulation – further manipulation possible without much difficulty, suitable to automated processing
- Objectivity – free of bias, prejudices and is impartial



1KEY MIS Reports will help in measuring accuracy using Data Warehousing

- Accuracy is most fundamental and important characteristics of data quality, some precision may be defined for continuous data
- Validity of data can be measured electronically, but accuracy can be measured, only with reference to the real world object / event
- Accuracy can be assessed with comparing with

some reference data, but it depends on the reliability of the reference

- Accuracy can be measured by actually comparing a small but statistically valid sample periodically
- There should be no misinterpretation that valid data are necessarily accurate
- In some situations, cross checking with other fields provide a reasonable measure of accuracy by electronic means

Data Warehousing Quality Data Model for 1KEY Reporting

- Create consensus enterprise data definition and data value domains
- Model only data whose value increases over time. Not all operational data should be warehoused
- Maintain base data from which derived and summary warehouse data is calculated. It is impossible to verify that derived data is correct if base data is not retained. This

can result in mistrust of warehouse data and failure to use it

- Use the consensus data definitions to reengineer operational databases as they are redeveloped

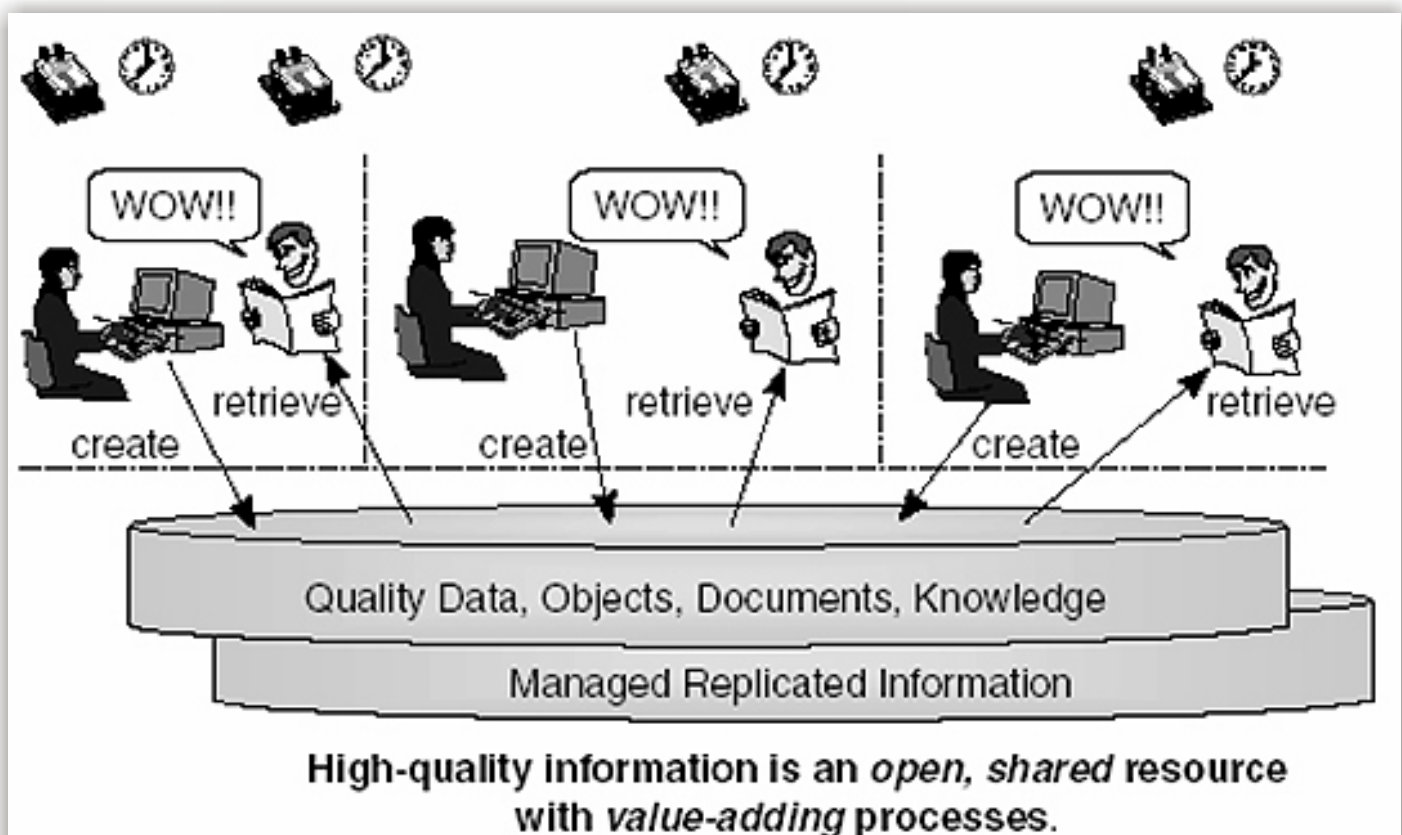
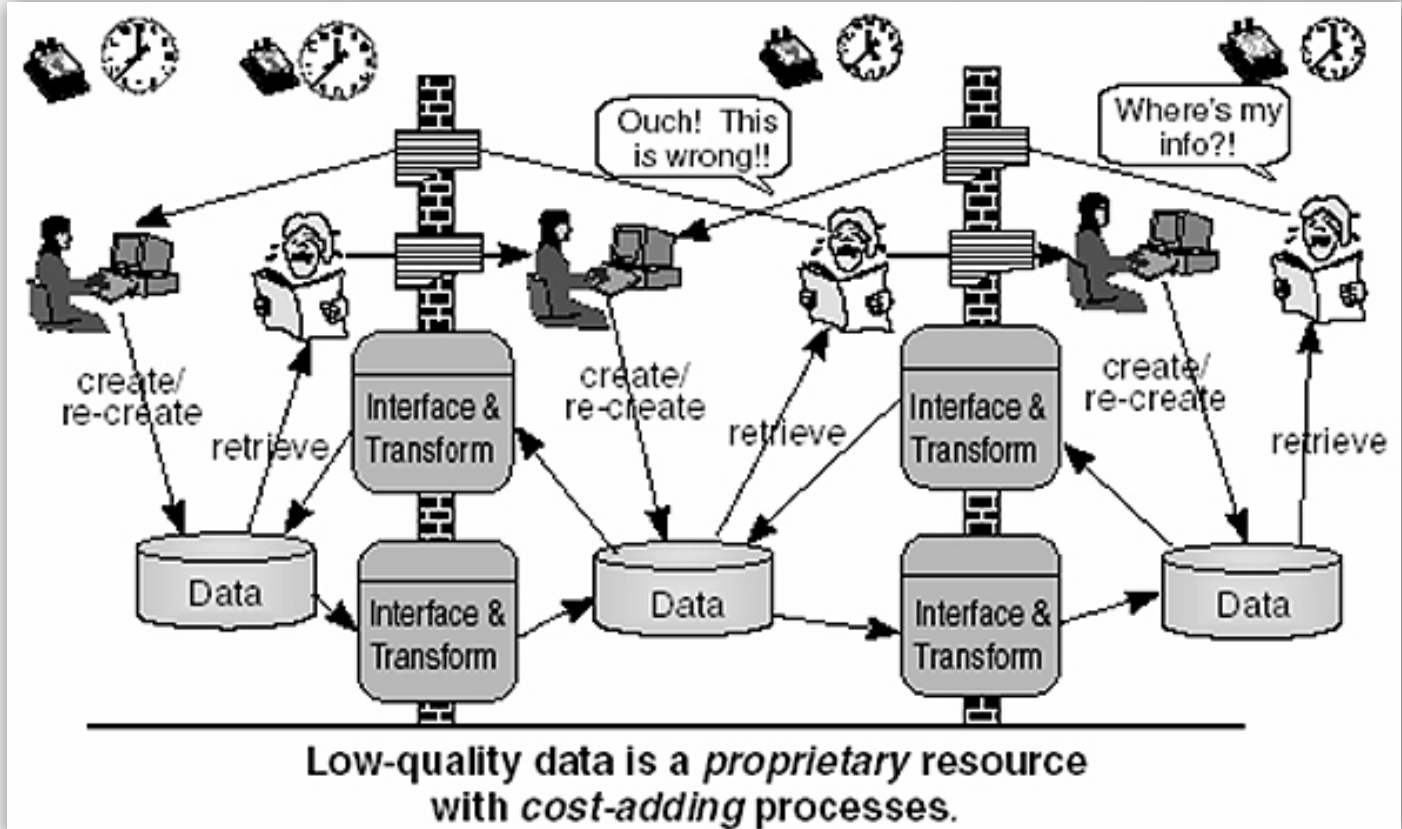
Data Cleansing Process for 1KEY Reporting

- Data cleansing is the process of extracting data in its existing quality state from its most authoritative sources, conditioning or reengineering it to the best possible quality state, and loading into the warehouse
 - Analyze data to discover its real meaning or use
 - Standardize it into atomic attributes
 - Identify potential duplicates
 - Consolidate duplicate occurrences
 - Calculate derived and summary data
 - Load the data into the warehouse

Data Cleansing Procedure for 1KEY Reports Generation

- Start with an important, yet manageable group of data
- Not all data has the same value or quality issues
- Focus on the high payoff data first
- Identify the authoritative source of data from the legacy data sources by data groups
- Analyze and discover the meaning, values and business rules associated with the source data
- Conduct an electronic data audit to analyze conformance to defined business rules
- Conduct a baseline physical data audit to discover the actual level of accuracy of the data
- Automate as much as possible
- Develop transformation rules carefully and test outputs
- Involve knowledge workers and data producers Clean data at its source database if the records are still used





Advantages of Data Warehouse where in reducing the cost of processes and giving accuracy on data published across the enterprise

Data Warehousing Project Status Monitoring Methods on 1KEY Implementation

- Regular status reports submitted by each project team members
- Ongoing updates of the project plan
- Tracking of variances on costs, milestones, started tasks, completed tasks and task durations
- Issue, risk and change management logs
- Developed data warehouse measured against business requirements
- Deployed hardware – 1KEY measured against technical specifications
- Deviations from test plans

1KEY Pilot / Proof of Concept

- The key stakeholders to discuss the merits of a pilot / proof of concept for implementing the 1KEY, prior to the planning of project
- It builds credibility, support and momentum for the data warehouse in the eyes of the stakeholders and the executive management team
- Scope of this concept should be not more than 30 to 45 days
- Deployment of a scaled-down version including data extraction, staging, data verification, cleansing, consolidation and delivery



1KEY Implementation and Success Criteria

- We do not try to implement the entire data warehouse at once
- The project would be break up the functionality to be delivered in different phases
- We will not only deliver something tangible for your users, but we may also flush out issues that can be quickly corrected
- Users are constantly knocking on your door
- The buzz in the hallways mentions the data warehouse, or meetings make reference to it as the source of data
- The data warehouse becomes the heartbeat of the business, where decisions are made from the data intelligence it provides

1KEY Data Warehouse Risk Profiles

- Risk is inherent in any project
- Types of risks:
 - No mission or objectives – enterprise or DW
 - Unknown quality of source data and metadata
 - Lack of appropriate technical skills, new technologies
 - Inadequate budget
 - Lack of supporting software issues
 - Weak or non-existent sponsor, political issues, cultural issues
 - Lack of user support, unrealistic user expectations
 - Architectural and design risks
 - Scope creep and changing requirements
 - Operational system issues
- Our Project Manager must address and resolve all risks for a successful project

Our Risk Mitigation Strategies

- Keeping user and IT management informed of the progress of the project along with reminding them of the expected benefits
- Try to involve the user from the beginning with every step of the implementation process
- Periodic formal and informal communications should be an integral part of every data warehouse project plan
- Monthly presentations to sponsors and end-user representatives that includes:
 - A review of the scope, deliverables of the project and project time line
 - A discussion of any issues that have been difficult to resolve or are behind schedule
 - A review of the coming month's activities and priorities
 - Any contingency plans to make up time and address problems



Our Training Strategy

- How the deployed business intelligence application help advance the strategies and objectives of the business and achieve the defined intangible benefits
- How the application enhances operational processes
- How to leverage the application (e.g., dashboard, report, etc.) to manage an area of responsibility
- What data is available, what it means, why it is important to the business, where it is sourced, how it flows through the architecture and how it is organized and stored for easy access
- Features and functions of the business intelligence tool(s); how to leverage it for reporting and analytics
- The type and number of quality checks being performed in the data warehouse, the business rules being adhered to and why the stakeholder should have confidence in the data being consumed for business analytics and reporting
- Available support options. This covers all tiers: help desk support processes, tips and techniques documentation, FAQ documentation and application help documentation the effectiveness and efficiency of business processes

What should a data warehouse and 1KEY Implementation Cost?

- The size of the database (keep in mind capacity planners must include space for indexes, summaries and working space.)
- The complexity and cleanliness of the data The number of source databases and their characteristics
- The number of users
- The choice of tools
- The network requirements
- Training
- The delta between the required and the available skills

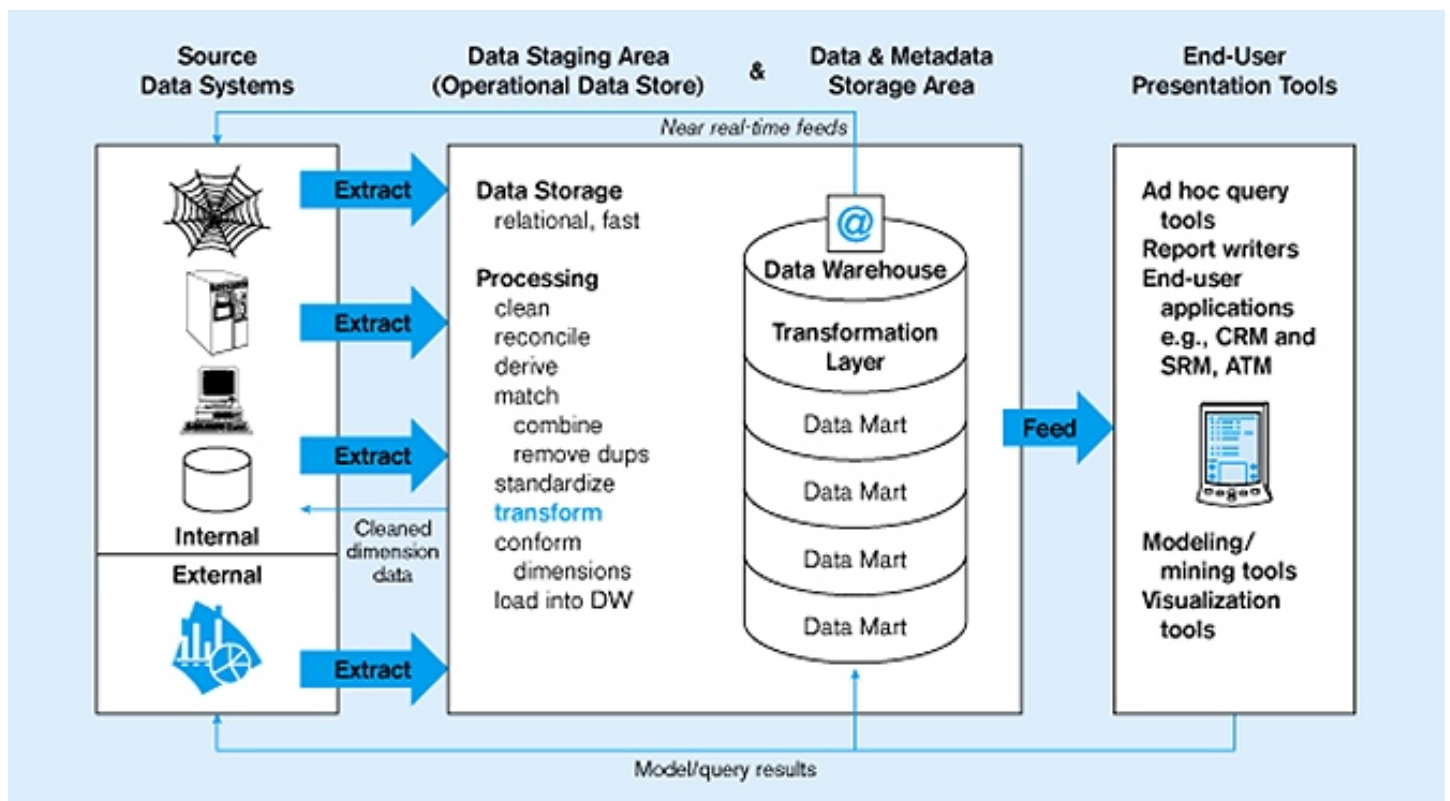


Conclusion

- Information quality requires both data definition and data content quality
- Data presentation quality means knowledge workers can quickly and easily understand both the meaning and the significance of the information and apply it correctly to their work
- Information quality is not an esoteric notion; It directly affects the effectiveness and efficiency of business processes



1KEY Reports can address the above mentioned issues relating to Financial Data Warehouse



Extraction Transformation and Loading of Data Architecture

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