

Managing information technology

Technology



Continental has achieved an ROI of over 1, 000 (\$30 million investment for over \$500 million of increased revenues and cost savings) 4. What did the data warehousing group do right that has led to the successful deployment of (real-time) data warehousing and Bal within Continental? Developed a warehouse architecture that could grow and scale to meet these new realities and operational needs Developed prototypes or demonstration applications to show potential end users, to get them excited about data arousing, and to give them ideas about new applications that could be built (part of an R&D effort to prove the concepts) As stated in a previous discussion question, they linked applications to business strategy initiatives and insured there was business benefits for each application The data warehouse operates consistent with organizational culture; the warehouse provides employees with information and tools that they can use to do a better Job, so they can " go out and change the world. " 5.

What elements of the data warehousing environment at Continental are necessary o support the extensive end-user Bal application development that occurs? Data exist in the data warehouse from sources that are trusted by end users Users have access to and are trained in tools to access and manipulate data Help from data warehousing staff is readily available and friendly Metadata is kept current and is easily accessible by end users via the web Graphics are used, when appropriate, for data display, making it easier for users to understand and interpret the complicated data being presented In many cases, users can run " what- if" scenarios to determine the impact of decisions 6.

Why does Continental believe that a 3rd normal form enterprise data model is important? Lesson Learned #8 addresses this question The comprehensive nature of an enterprise data model naturally results in a INFO data model A INFO model is easier to evolve (as new subject areas are added) without reorganization and changes A INFO data model is easier to administer because it eliminates duplicated data, and hence avoids potential inconsistencies in meaning and value 7. What special issues about data warehouse management (e. G. , data capture and loading for the data warehouse (TTL processes) and query workload balancing) does his case suggest occur for real-time data warehousing? How has Continental addressed these issues? Date and time management is amplified because of the finer granularity of data; although the techniques available to handle date and time stamping are the same for any data warehouse, users in a real- time environment have to be better trained to deal with time in queries and the large volume of data requires qualifications on time be handled as quickly as possible (e. G. , use of active flag quickly identifies the most recent values) Customized views (with indexes, Joins, ND aggregations) significantly improve query performance and reduce the load on the data warehouse With the extensive number of on- line, real-time users, views also provided an extra level of security against access to unauthorized data Data loads come in via many different routes and methods (push-pull, subscribe, queues, trickle-batch, etc. , so generalized components to handle data loading are used to save the effort of starting from scratch to develop each new loading process The large volume of constant data loading means that it is not humanly possible to attach all TTL processes, so automated watchdog applications are used to alert data warehouse staff via pagers when their

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attention is needed for some anomaly Data for loading are put into standardized queues, from which pre-written load utilities pull data for loading into the data warehouse, no matter what the source of the data are. Because there are data loads, tactical queries (preprinted and ad hoc) and strategic queries, each with different patterns of data warehouse use, specific priorities are given to the different types of loads against the warehouse.