



Annams

Consulting

Business Intelligence for High-Tech Manufacturing

- Client** Multi-billion dollar worldwide disk manufacturer, Media Division
- Contact** Director of IS
- Critical Issue** Manufacturing process, of over 100,000 disk drive platters per day, had no controls in place to track defective products and was incapable of troubleshooting QA issues.
- Reasons** Client had a shop floor control system running on an AS/400 system with a testing system running on PCs. The systems were not connected and were unable to share any data.
- Vision** Client believed they could substantially reduce QA problems, especially post-installation and shipment, by monitoring work in process and taking corrective action in real time. By developing a Data Warehouse, they could perform root cause analysis on the entire process while pinpointing specific machine inefficiencies. Additionally, they could identify highly efficient operators, as well as operators potentially requiring additional training.
- Solution** Annams Systems was retained to design and build a Business Intelligence System to include a Data Warehouse as well as web-enabled analytical tools.
- A data model was developed incorporating a Star Schema built on an HP UNIX platform. Oracle was selected for the actual database.
 - Off-the-shelf middleware was custom integrated to allow the AS/400 to pass critical data from the production floor to the Data Warehouse running on the UNIX system.
 - The new Oracle database, developed for the testing system and run on an NT server in a three-tier architecture, also passed data to the Data Warehouse.
 - Using both off-the-shelf reporting tools and custom web interfaces, Annams developed and implemented reporting systems to allow users to instantaneously monitor quality control.

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