



## Data Analysis & Database Design

### BUSINESS BENEFITS

- The database structure is easy to modify and maintain
- The data is easy to modify
- Information is easy to retrieve
- End-user applications are easy to develop and build

### 4 CHECKPOINTS TO ENSURE A GOOD DESIGN STRATEGY

1. Verify function and data interaction to help determine the database physical structure
2. Ensure that standard security requirements (i.e. SOX, PCI) are considered in database security planning strategy
3. Confirm application Maximum Tolerable Outage (MTO) to help you determine database backup & recovery and disaster recovery planning
4. Understand application response time requirements in order to build an adequate database performance strategy

THE PITFALLS OF POOR DATABASE PERFORMANCE, REDUCED SCALABILITY AND WEAK FLEXIBILITY CAN BE AVOIDED WITH THE HELP OF PROPER DATA ANALYSIS AND DATABASE DESIGN.

Even the most complex business data requirements can be integrated using data modeling techniques. Data analysis and the data model itself are effective tools to document the database and 'explain' the business to the application community. In addition, the analysis activity includes a serious data mapping exercise that ensures a successful migration from a legacy database to a new one.

Database Design overviews a series of activities essential for future operations. Careful planning ensures that operations-related activities cannot cause any harm to the application.

### A well designed database is the key to a successfully running application

It has been proven that early investment in the development process of complex databases pays off in the long run. The design phase covers several high impact database related operations:

- **Physical Database Analysis** – reviews function and data interaction and other physical aspects interfacing with the Physical Data Model, before building the actual database
- **Database Backup & Recovery Planning**
- **Database Disaster Recovery Planning** – provides a plan and describe the related technology required to guarantee that the database for 7/24 applications is up at all times. This addresses application MTO.
- **Capacity Planning** – sizes the space, CPU and memory for database related requirements.
- **Database Control & Security Planning** - ensures that industry and company specific security standards are considered.
- **Database Performance Planning** - ensures that application performance requirements for specific workload window (batch) and response time (online) are addressed by the database.

### Our Commitment

At CGI, we believe in implementing technology that transforms our clients' business environments. We understand our clients' business realities and have the know-how and solutions to advance their goals.

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