



# **How to Save Money in IT**

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# Agenda

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- **How to control and understand IT outlays**
  - Investments                      capital
  - Direct costs                      variable component
  - Operating expenses              fixed component
  
- **Principal causes of information system failures**
  
- **Hidden costs and vendor management**

# IT - Segmentation

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- Mission critical applications
- Enterprise resource planning
- Decision support systems
- Office automation and personal productivity
- Infrastructure to support all of the above

# Mission Critical Applications

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- **Why do they exist?**
  - Critical part of the business process.
- **What is their justification?**
  - Capital allocation process/ IRR criteria.
- **24 hrs x 365 days availability.**
  - Firm at risk under operating disruptions.
  - Business process is totally dependent of performance, availability and functionality.
  - Examples.
    - Telco            fraud system, SW, billing, network mgt, C/O.
    - Airline        reservation system.
    - Air traffic    control system.

# Key Challenges

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- **Very specific unique and complex systems.**
- **Design, procurement and implementation require total focus from top management. This responsibility can not be delegated.**
- **Downtime has serious consequences to the enterprise.**
- **Require constant monitoring and maintenance.**
  - Code changes for new requirements, new data inputs and maintenance.
  - Data maintenance.
    - » Data storage limitations and scalability.
    - » Data backups procedures.
    - » Data integrity verification.
  - Security controls and alerts.
    - » Audit trails for internal and external.
    - » Breaks in.
- **Clear map to generate inputs to other applications.**
  - Generate data → move to other systems offline.
- **Disaster and recovery procedures.**
  - Third party firm agreements.

# Organizational Focus

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- **System operator/s.**
  - Internal resource responsible for the operation of the infrastructure and data administrator. Also in charge of executing the operational procedures. Factory foreman.
  
- **System / application administrator.**
  - Internal or external resource responsible for the code life cycle.
    - Code maintenance.
    - New interfaces.
    - Data model.
    - New developments.
  
- **Senior management.**
  - Must understand and approve system's scope, operational conditions, changes and life cycle.

# Enterprise Resource Planning -ERP

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- **Why do they exist?**
  - To provide savings from automating previously human tasks, process changes and from inventory reductions and other factors of production.
  - To help to develop new revenue opportunities.
  - To reduce IT costs.
- **What is their justification?**
  - Capital allocation process.
  - Cost benefit criteria.
  - IRR
- **Examples.**
  - SAP R/3, oracle financials, peoplesoft, JD Edwards.
  - B2B exchanges and extensions.
- **Trends.**
  - Due to integration of networks (intranets) more on line availability is being implemented to cope with JIT ordering and delivering, virtual stock management and logistics management with third party organizations. More MCA requirements are expected from the implementation of B2B exchanges.

# Key Challenges

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- **Huge amount of company's resources have to be allocated before any benefit can be realized.**
  - Management time, \$, organizational focus and time.
- **Implementation process is managed by external consultants. They are masters in increasing the scope of project and implementation time. They know how to create client's faults constantly to increase their revenue (*that is their business*). They create exit barriers that are too high for the client.**
- **There is no guarantee (45%) that even if an ERP System is implemented the users will benefit from the full potential of the application.**
- **Baseline implementations require lots of tradeoffs that result in (55%) no further use of the system.**
- **Top management must stay focused and involved (*definitions, decisions, organizational changes*) for the whole implementation (2-4 years) making the workload unmanageable.**
- **Savings are based on significant process changes that involve personnel changes. Pyramids of Egypt syndrome and resistance to change.**



# Why Organizations Support ERP

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- **Intellectual stimulation.**
  - Hot job market in consulting firms for people with implementation skills. Way out of repetitive jobs.
  - Vendors.
  - Academia and academic courseware in most advance business schools.
- **Need for information integration.**
  - Information in legacy systems with perceived high maintenance cost. Not sexy.
  - Different non compatible data types → flat files, excel, etc.
  - Not user friendly.
  - Lack of local/ distributed data replication.
- **Revenue enhancement benefits.**
  - Improvements in customer service. Integration with CRM.
  - Enhanced availability of data.
  - Better interfaces with WEB apps.
- **Senior management does not understand what are the trade offs with the existing systems and integration needs.**
  - This is one of the most serious issues.

# So, What Is the Conclusion?

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- **It is entirely possible to live with a diverse information environment that combine different applications, data types and operating environments.**
- **A full understanding of senior management of the trade-offs of:**
  - What information.
  - To whom.
  - Where.
  - And how to get it from existing systems.

**is the key for obtaining the benefits of ERP systems with the integration of existing legacy or diverse applications in the enterprise.**

- **An architectural glue that interfaces all systems require a very competent team of:**
  - System analyst, software developer and a good project / operation manager.
- **The project manager must have strong character, high intelligence and business savvy.**
- **AVOID ERP as much as possible.**

# Decision Support Systems

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- **Why do they exist?**
  - DSS are intended to deliver capabilities, not simply to supply information.
  - DSS provide users important unstructured data, using simple end user tools.
  - DSS require action / results oriented users to get from diagnostic to cure immediately.
- **What is their justification.**
  - More subjective, since the actions resulting in analyzing the data and not the information, are the ultimate creator of value.
  - Senior management criteria based on the critical activities identified as value contributors.
    - Churn predictors per service area, per dealer, per price plan, per sales rep.
    - Profitability per customer/product/geography based on several criteria.
    - Benchmarking data.

# Key Challenges

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- **System architecture designed to work off line mission critical applications. CRM feeder.**
- **Very simple, yet comprehensive data model using a robust relational data base.**
- **Security and access control.**
- **Good end user training at all levels.**
- **Intended to work as a replacement of most of the ERP data query cases (65%) of the justification for improved productivity in the use of ERP apps.**
- **Top management involvement and use.**
- **Rationalization.**

# Organizational Focus

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- **Data warehouse owner.**
  - One system engineer, same as ERP integrator, who owns the data model, the data base updates and the basic queries. Help desk facilities to.
- **Trainer and evaluator.**
  - One internal-external owner of the effectiveness of the technology transfer, the adequate use of the data and the progress being made by the enterprise.
- **Senior management must understand the proper allocation of resources to these applications and its relative payout in terms of concrete actions executed by the organization.**
- **Senior management must monitor access and use to avoid fraud and information leaks.**

# Office Automation and Personal Productivity

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- **Most recognizable items.**
  - *Categories.*
    - Personal productivity → intelligent documents.
    - Office productivity → mail and sharing digital documents.
- **There is no solid data that correlates money spent in this area and productivity gains.**
- **Some companies established performance criteria to assign PC resources.**
  - Pcs are provided only if there is a justifiable need of running certain apps.
  - Pool for OA resources like a conference room.
- **Few board members understand the full cost of ownership of a US\$ 1,400 PC.**
  - Range from US\$ 11,500 to 19,000.
- **Lack of policies and control leads to a serious overspend in this area.**

# Infrastructure

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- **IT is a cross departmental expense with different implications.**
- **Cero base budget for IT is done in the best practice IT companies.**
- **Separation of budget per segment.**
- **Policies defined for each segment.**
- **Documented plan for the systems goals and resources and its relative economic return.**
- **The CEO must be heavily involved. 20% of total capital investments is involved here plus the execution of the company's plan.**
- **TRENDS**
  - Predictability of cost over time
  - ASP for specific applications
    - Fixed price contract, Pay per use, Expertise in Apps and support
  - Concentric Networks- Telco next step
    - ASP enabler → Bandwidth, Computer Hosting, Security, Storage, Base SW
  - Full outsource of OA, PCs and help desk for flat rate

# System Failures

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- **Level of complexity**
- **Management understanding of the scope and involvement in the project**
- **Management of the implementation process**
  - Company's leader making the crucial calls
    - Champion
    - Bureaucratic entrepreneur
    - Gatekeeper
  - Avoid management by consensus
    - Lower denominator gets the authority
- **User involvement**



# Hidden Costs

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- **Total cost of ownership.**
  - Annual fees for updates 10-15% of the licenses value.
  - Annual fess for technical support 10 % of the licenses value.
  - Hardware upgrade costs due to increase data and performance requirements.
    - Serious trap since discounts apply to CPU and not to adds on.
- **Maintenance.**
  - Old applications poorly documented require handholding.
    - Not sexy and none wants to do it.
- **Product obsolescence.**
- **Security.**
- **Non committed employees. IT people are not very loyal.**

## Vendor Culture

- **Targets, quotas, fiscal quarters.**
- **Volume agreements- multinational treatment. Central contract management**
- **Contract enforcements and follow up. Third party management.**
- **Outsource facilities and basic infrastructure.**