

Change Faster Than Change – Reengineering Information Technology

Session 200

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Mobilizing Information Technology To

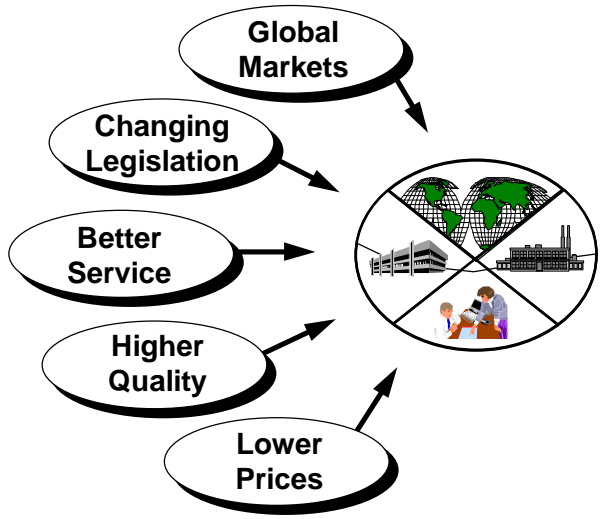


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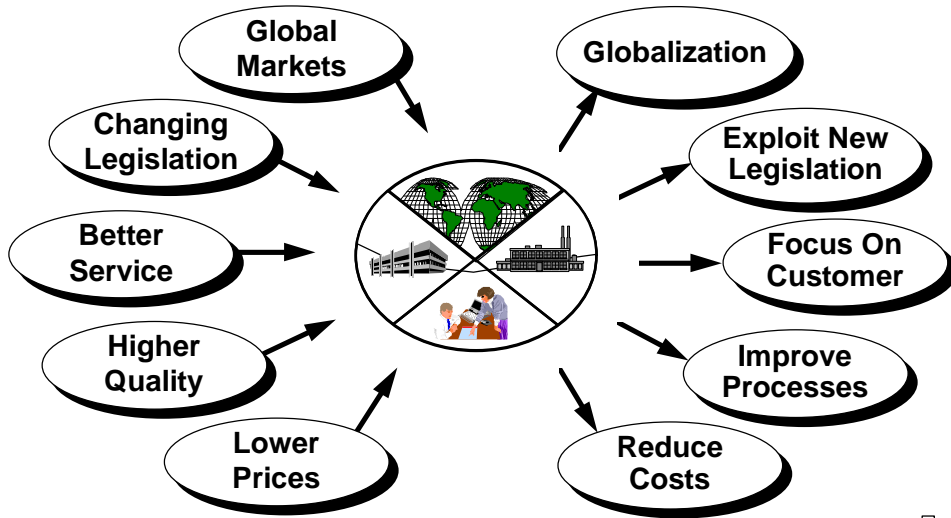
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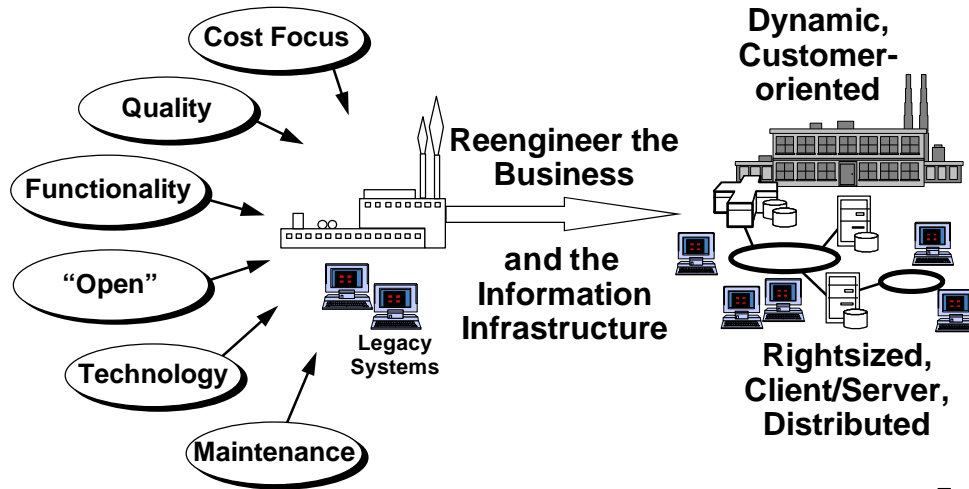
Drivers of Business Change



Responses to Business Drivers

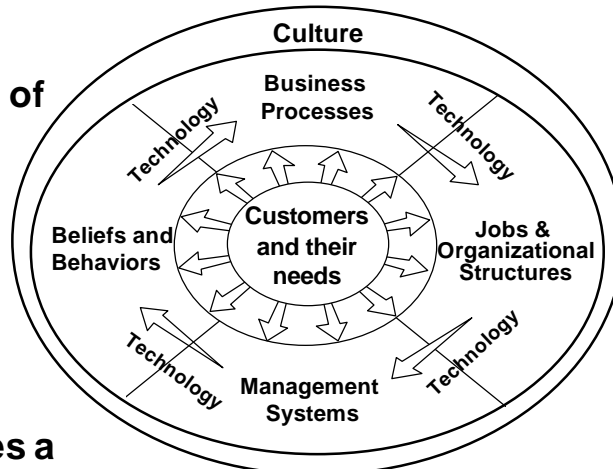


Reengineering to Enable Change



What is Reengineering?

- **Fundamental analysis and radical redesign of business processes and related areas**
- **Align all resources to meet the needs of the customer**
- **Success requires a holistic approach**

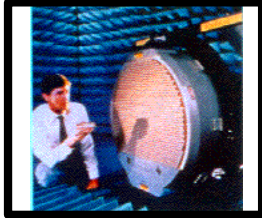


Adapted from Dr. Michael Hammer's Reengineering Diamond

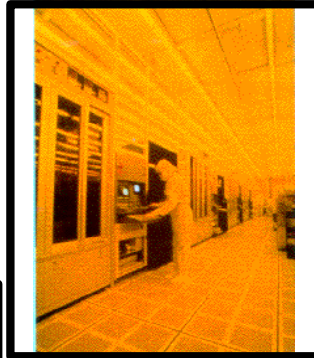


TI as a Case Study

Defense Electronics



Semiconductors



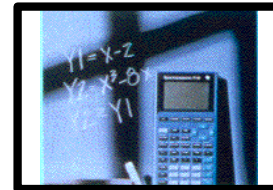
Materials & Controls



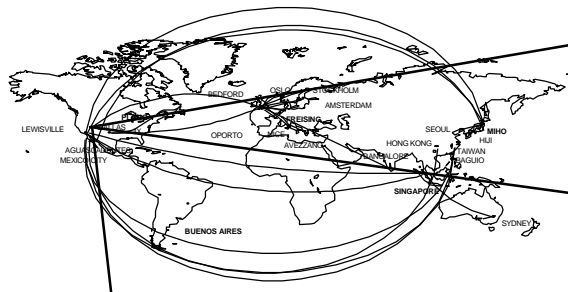
Information Technology



Personal Productivity Products



TI Information Technology



INFORMATION WEEK

**Gold
Week
Award**



1994

- ⇒ **Daily Volume**
- ⇒ **26,000 Batch Jobs**
- ⇒ **9.6 Million Transactions**
- ⇒ **1.3 Million E-Mail Transactions**

- ⇒ **Worldwide Communications Network**
- ⇒ **Global Computing**
- ⇒ **97,000 Terminals (45,000 PCs)**
- ⇒ **Consolidated Mainframe Computers**



Business Demands Placed Upon IT

- Significant reduction in cycle time to deliver IT solutions
- Increased flexibility to change workflows and business rules
- Lower total cost of solution ownership



IT Inhibits Business Change

Peripheral Products Division (PPD) and Consumer Products Division (CPD) were merged to create Personal Productivity Products (PPP). The organizations used separate business systems. A common business system was needed to support the merged organizations.

Business cycle time to resolve organization and people issues and to merge facilities and warehouses:

6 - 9 Months

Time to develop supporting software systems:

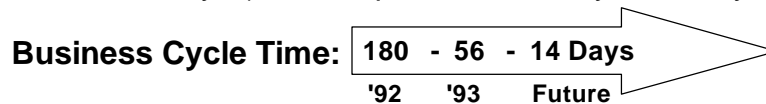
15 - 18 Months



IT Inhibits Business Change

- The SC Business goal is to have more than 50% of its revenue from differentiated products. Drastic decreases in cycle time must be made to meet marketing requirements.
- Reengineering of the SC order fulfillment process reduced the cycle time of this process from 180 days to 56 days. To remain competitive in the future, this cycle time must decrease to 14 days (one competitor is already at 28 days).

Business Cycle Time: 180 - 56 - 14 Days
'92 '93 Future



Time to develop supporting software systems:

~ 3 Years

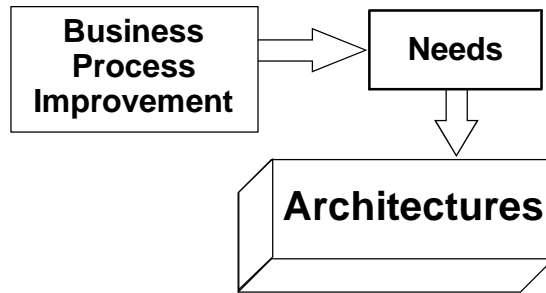


Shifting IT Paradigms

- The old IT paradigm:
 - Business is stable
 - Computing resources are scarce
- The new IT paradigm:
 - Change is fundamental to IT and the business
 - IT use for the end user will get simpler
 - Business complexity will continue to grow



Texas Instruments IT Reengineering Strategy



- Business Process Improvement identifies needs for technological/architectural support
- These needs will drive the characteristics of the architectures



Strategic IT Decisions

- Transition from host-based centralized computing to client/server-based distributed computing
- Solutions driven by business processes
- Provision for reuse through component-based development
- Reuse before buy; buy before build

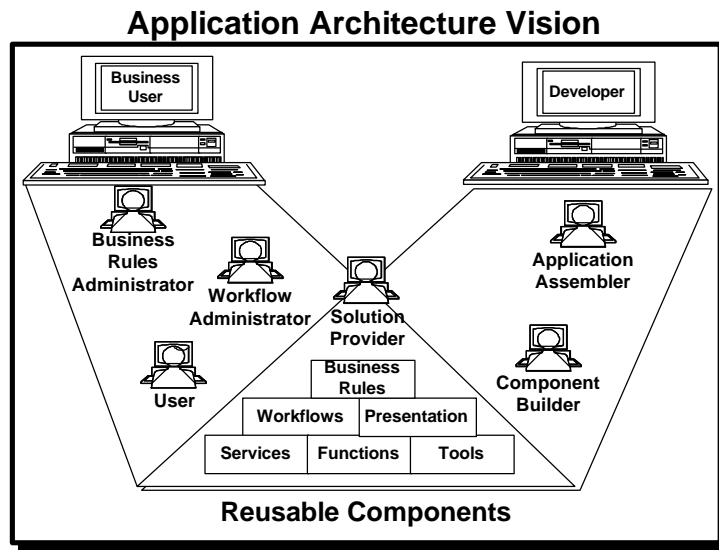


Architecture Design Goals

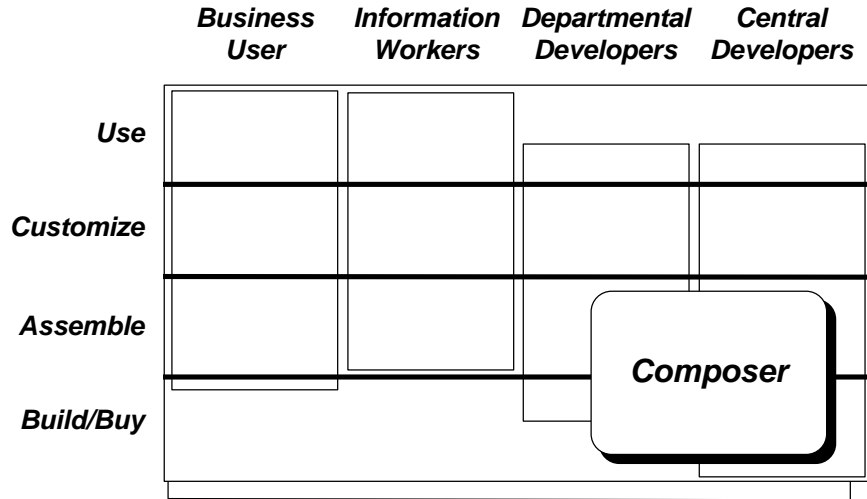
- Application Architecture
 - Rapid assembly of solutions
 - Separation of work flows and business rules from application code
- Technical Architecture
 - Cost-effective use of computer and communication technologies without business disruption



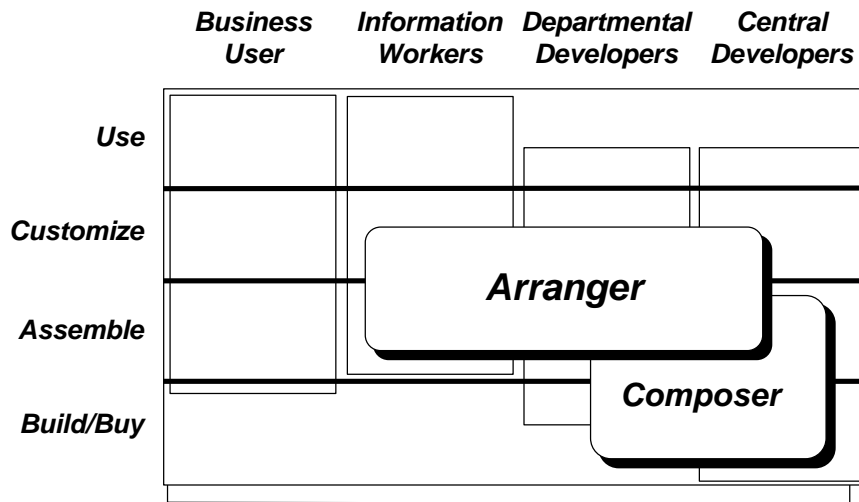
Application Architecture Vision



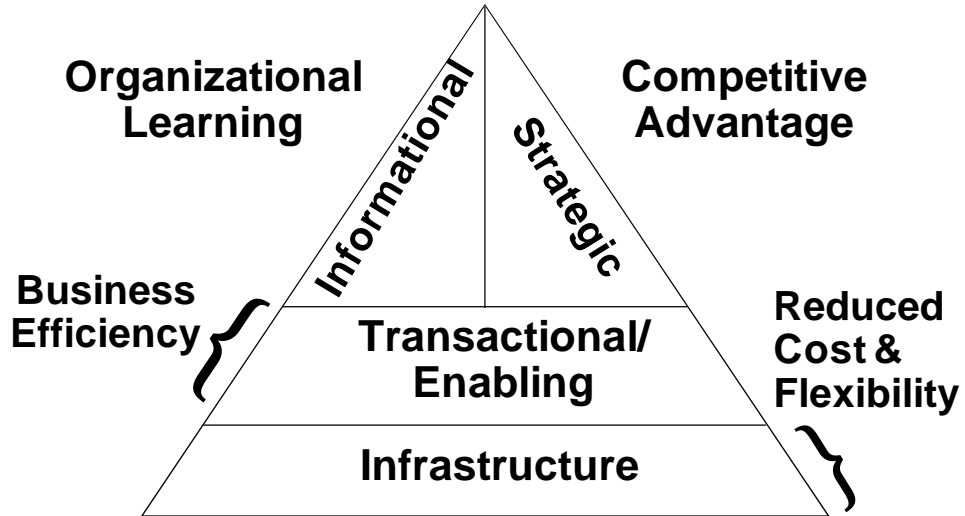
TI Product Overlay



TI Product Overlay



Buy vs. Build

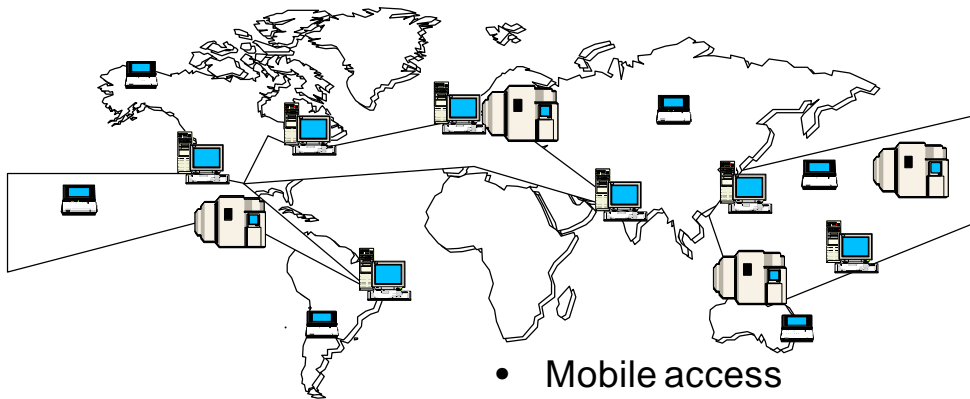


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Technical Architecture Vision



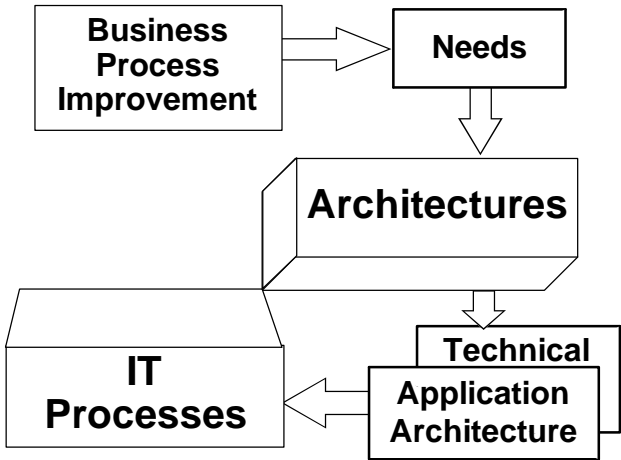
- Customers everywhere
- Networks somewhere
- Business data always
- Mobile access
- Peer to peer
- Managed configurations
- Command center control

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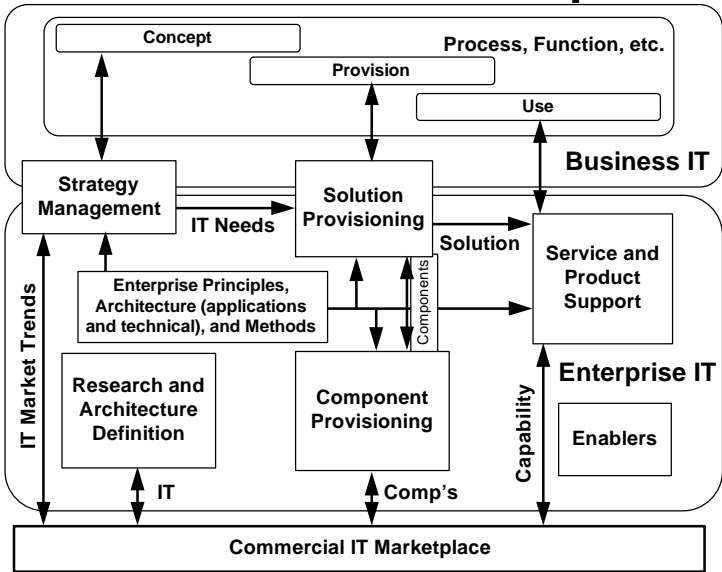
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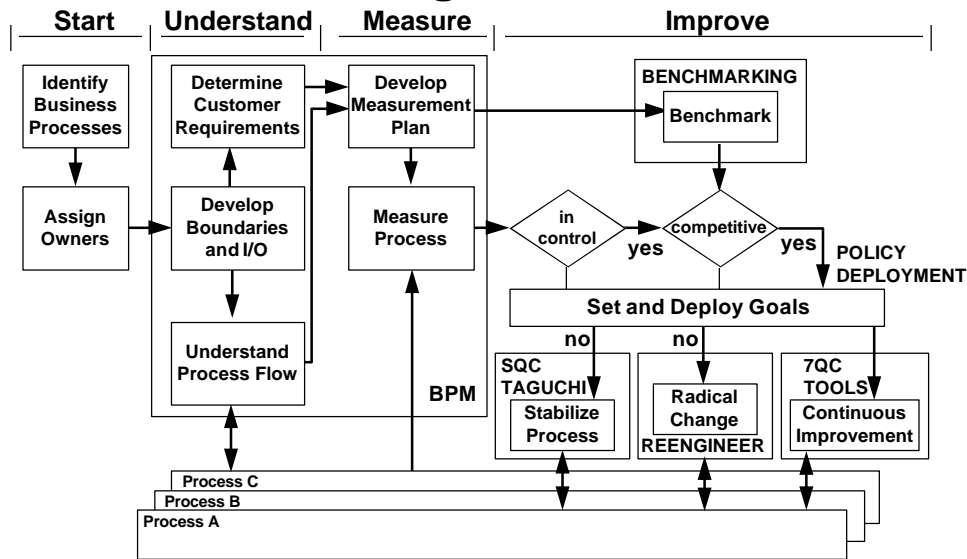
Texas Instruments IT Reengineering Strategy



New IT Process Map



Process Management Framework



IT Metrics

Current IT

Reengineered IT

Lines of code

Cycle time

Function points

**Business disruption
impact**

Cost of development

On-time delivery

System downtime

Customer satisfaction

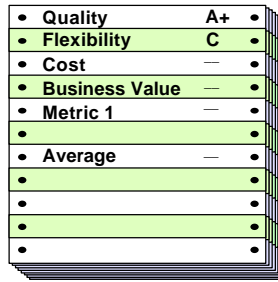
**IT
FOCUS**

**BUSINESS
FOCUS**

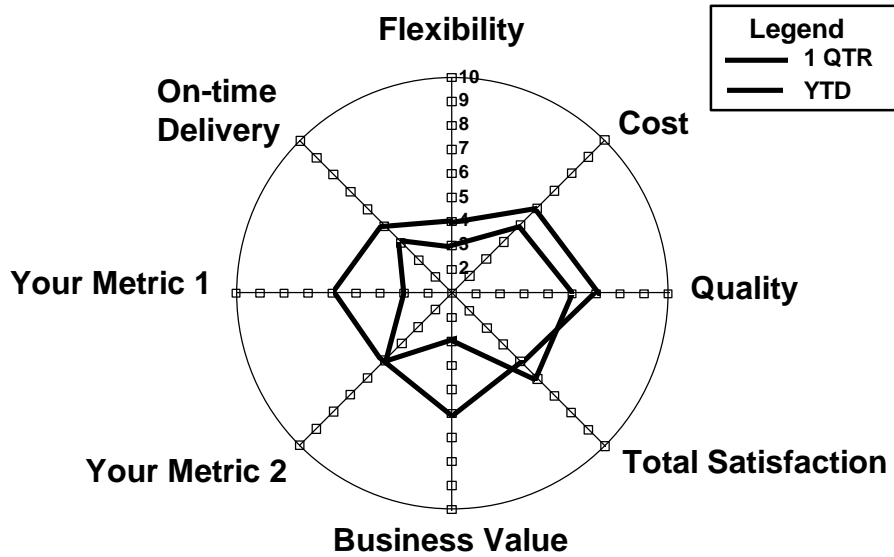


Customer Satisfaction Report Card

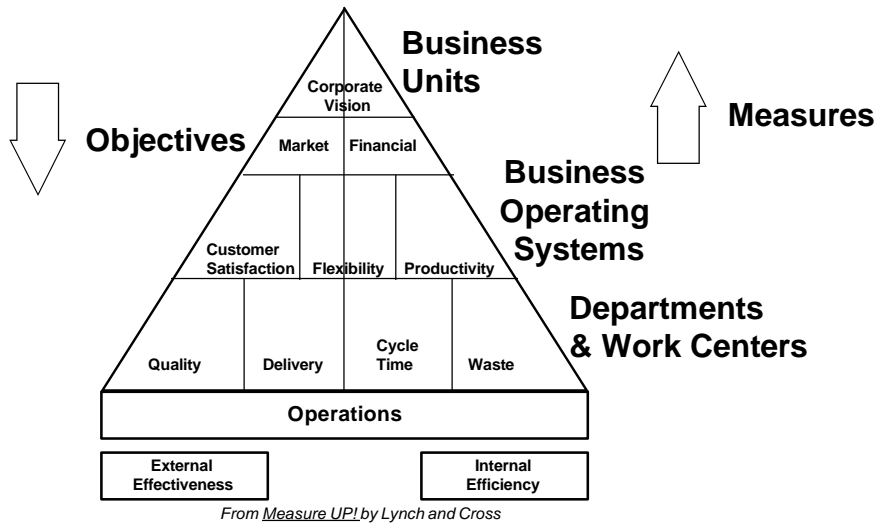
Excellent					Good					Fair			Poor		
A	A-	B+	B	B-	C+	C	C-	D+	D	F					
10	09	08	07	06	05	04	03	02	01	00					
Satisfied					At Risk										



Customer Satisfaction Survey



Performance Pyramid



Solutions Provisioning Desired Attributes

- Customer intimacy
- Respond to business change rapidly
- Focus on reuse
- Give customers what they need
- Be prepared – anticipate needs
- Process can be executed by customer or IT



Solutions Provisioning Redesign Models

- Personal Shopper
 - Knows customer preferences and context
 - Anticipates customer needs
 - Searches catalog; knows market
- Firestation
 - Reacts quickly
 - Constant training and evaluation
- Handyman
 - Right tools for solution; knows how to use them

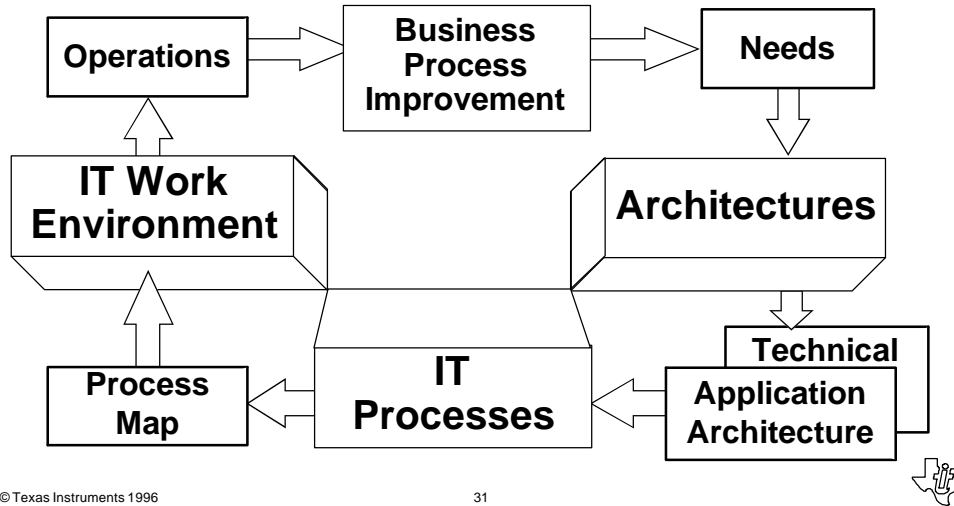


Solutions Provisioning Metrics

- Cycle time
 - Total 18 months to 2 months
 - Need recognition 4 months to 1 week
- Anticipate needs
 - Number of customer profiles
- Assemble components
 - Number of components available



Texas Instruments Reengineering IT Strategy

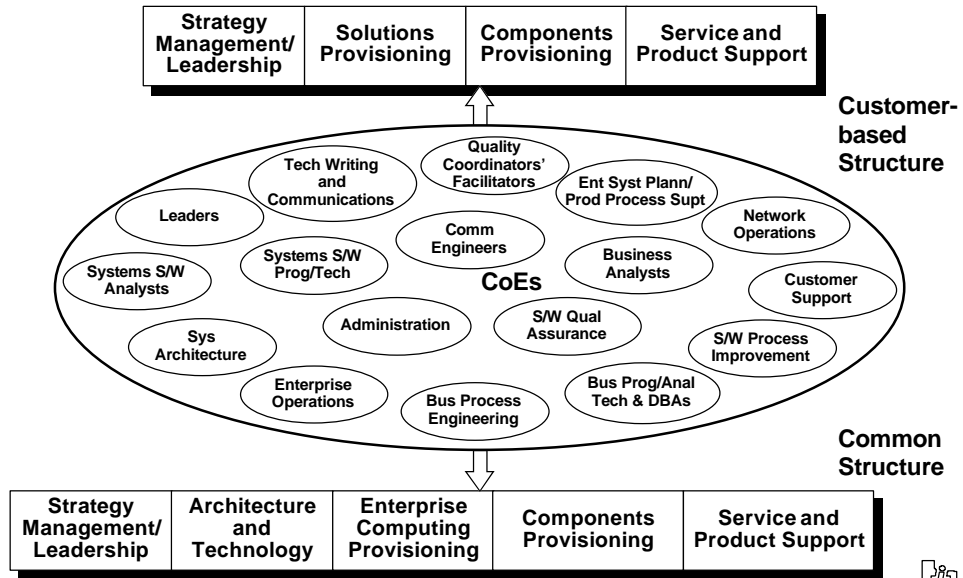


Centers of Excellence

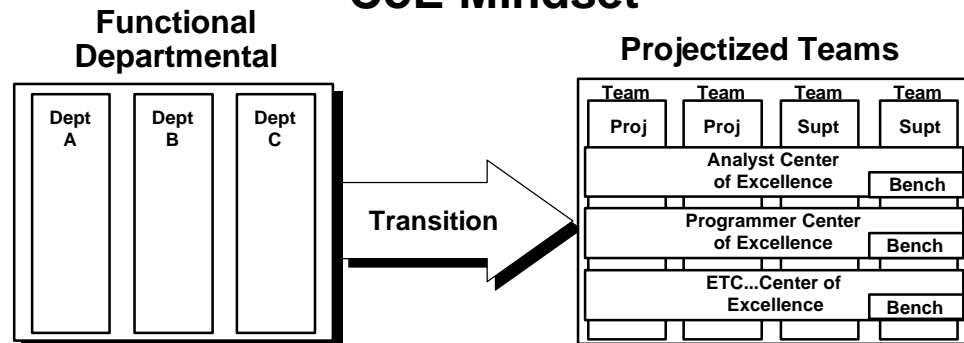
- A Center of Excellence (CoE) is a logical grouping of related disciplines
- A Center of Excellence is an administrative entity focused on the well-being and development of people
- The CoE is where individuals learn the skills and share the knowledge
- A CoE provides resource matching to demand



Candidates IT CoE



CoE Mindset

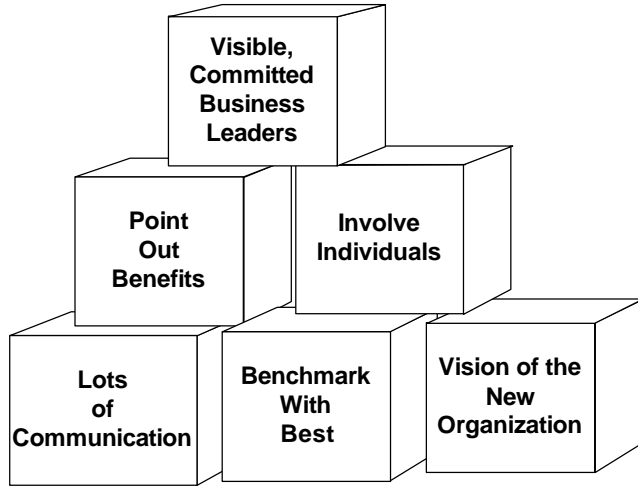


- I work for department manager
- Does not promote resource sharing
- Limits team member mobility
- Loss of focus on either skills or execution

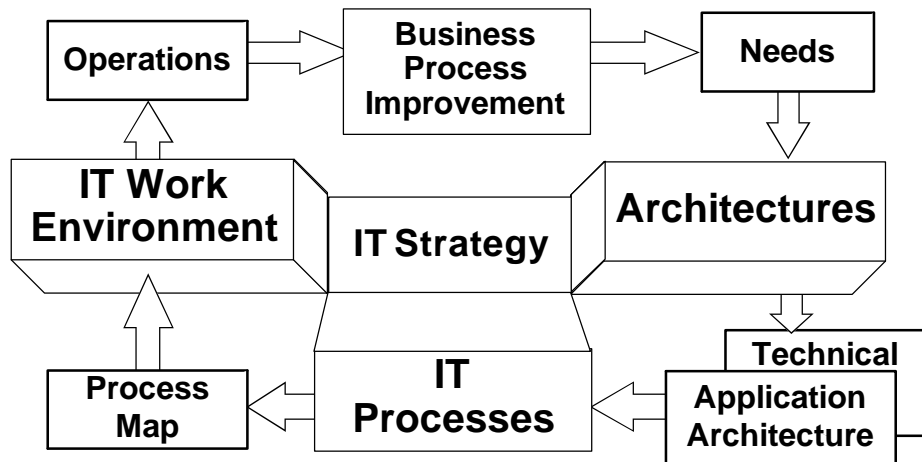
- I work for the customer
- Core structure is the team staffed by CoEs
- Team concentrates on execution
- CoE concentrates on skills
- Bench is where you retool and support process needs until next assignment



CoE Critical Success Factors



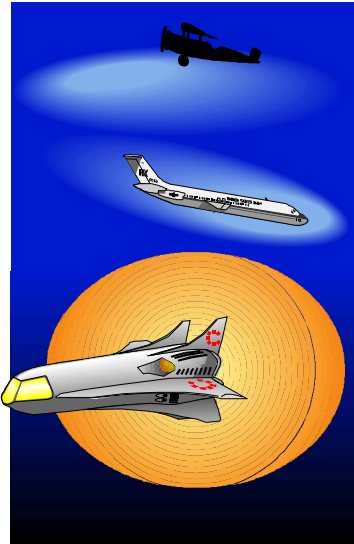
Texas Instruments Reengineering IT Strategy



Change Faster Than Change

“It is not the strongest of the species that survives, nor the most intelligent, but rather the one most responsive to change.”

Charles Darwin



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