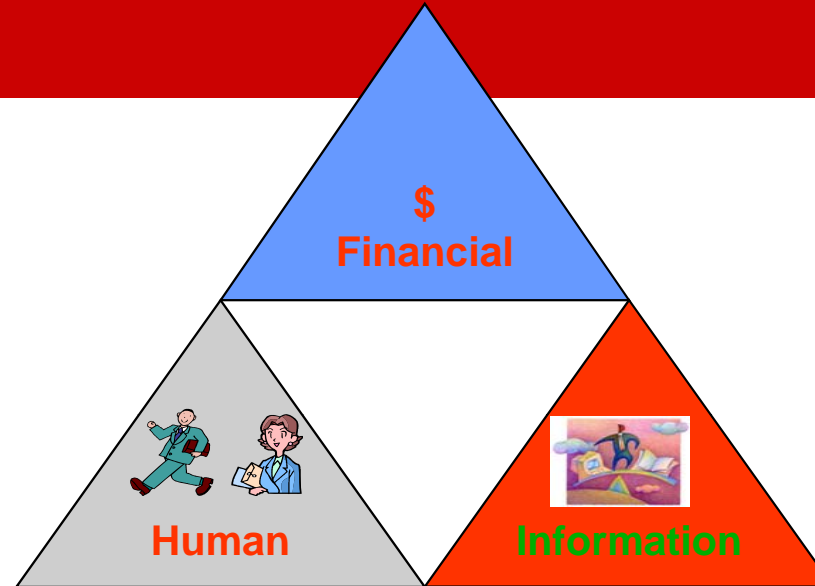


2009/10 IT Training Programme for SMEs



M08 - Information Resources Management and IT Budgeting

Speaker: Lincoln Tso

Agenda

- **Introduction**
- **Management Structure**
- **What is “Resource”**
- **The Primary Resources of Organizations**
- **Managing the Third Resource – *i*R**
 - **Managing *i*R Strategically**
 - **Managing the Finances of *i*R**
 - **Managing the HR of *i*R**
- **An ERP Story (if time available)**

Please introduce yourselves...

- **Name**
- **Your company**
- **Your position**
- **No. of year of working experience**
- **Your experience with IT**
- **What do you expect to get from workshop**

20 Years PC Technology

- **1987 PC**
 - CPU-386 -16 MHz
 - 10 M Harddisk
 - \$10K
- **Today PC**
 - CPU – Core Dual
 - 150G Harddisk
 - \$3.5K
- **Comparison**
 - Speed/Power 300+ times
 - Capacity 15000+ times
 - Cost – 1/3

WOW!

Apply to Automobile Industry

- **1987 vs 2009 PC Comparison**

- **Speed/Power 300+ times**

- **Capacity 15000+ times**

- **Cost –**

WOW! WOW!

- **1987 Car**

- **80 HP**

- **500Km /Tank of gas**

- **2009 Car**

- **24000 HP (Rocket?)**

- **7M Km/Tank of Gas (500 times round the earth!)**

- **MB for VW Price!**

IT Conference in 2007

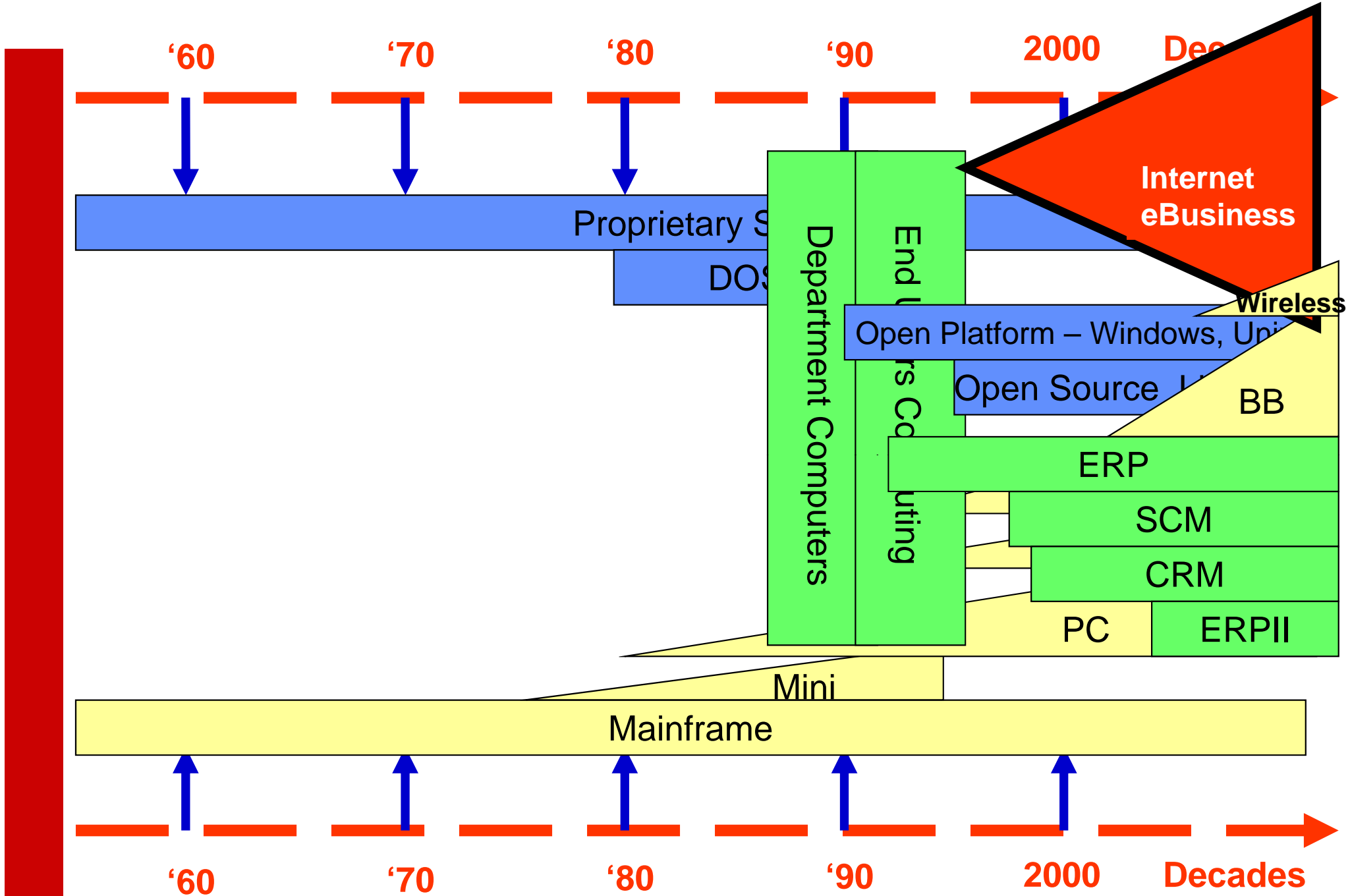
- Keynote Speaker (fr. World Bank)
 - 1975 F1 Race – Changed 4 tires took 20 mins.
 - 2007 F1 Race – Changed 4 tires took 6 secs.
 - Question to IT Professionals

His Challenge:

What has IT accomplished to help the business in the past 20 years?



Why are the perceptions so Different?





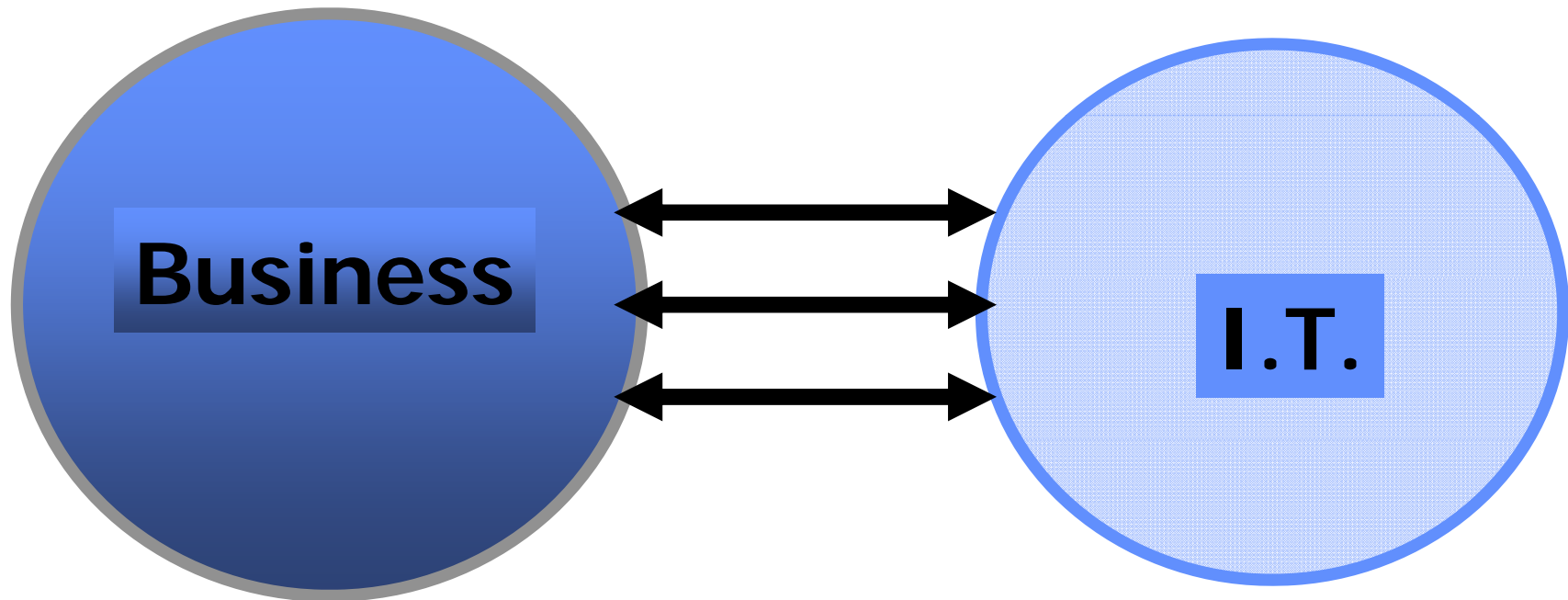
Does anyone notice how many times have I clicked?

Answer

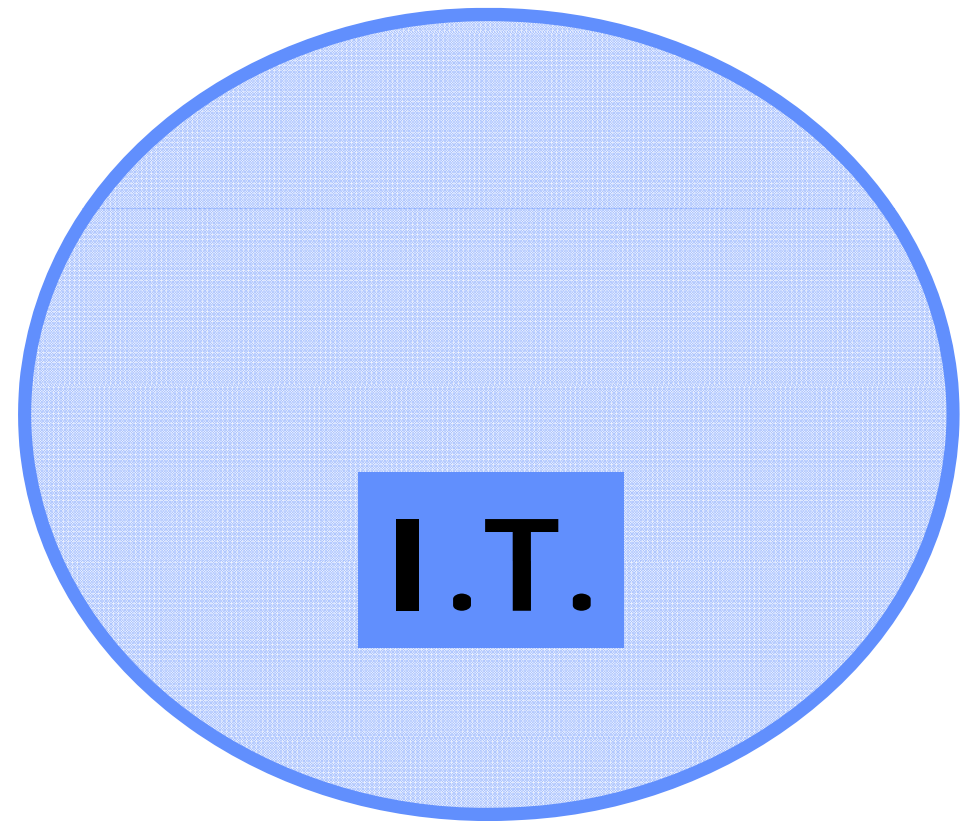
- **16 times, 14 times since the 80's**
- **Major Challenges in Managing IT Average Every 15 months Cause by IT**

**IT Management
Unable to keep up...
Businesses Struggle**

Business & IT Alignment



Total Integration of Business & IT Management



Total Integration of Business & IT Management





**Introducing
Information
The Third RESOURCE**

Dictionary Definitions of “Resource”

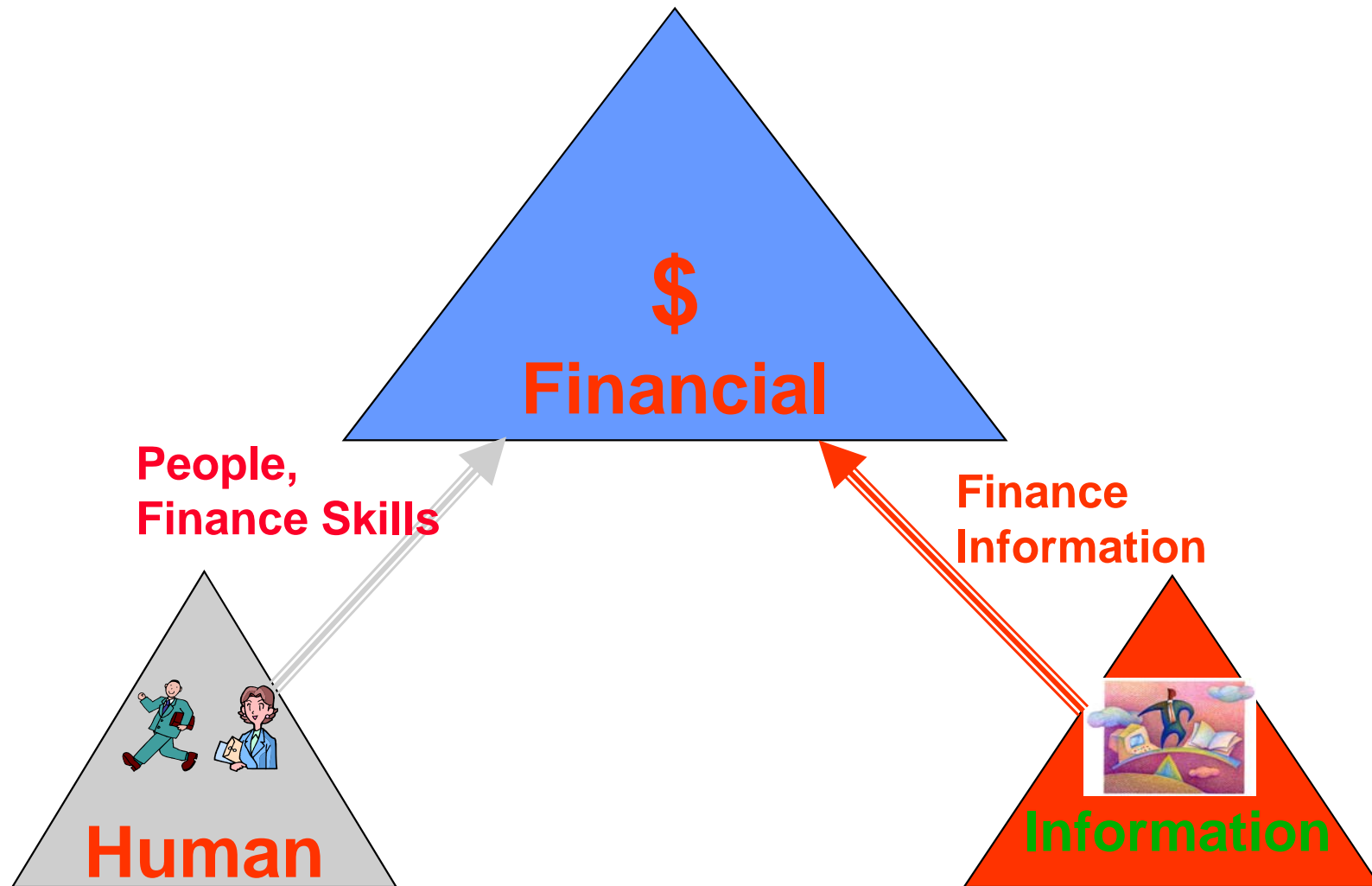
- **Something that can be used for support or help to achieve some goals**
- **An available supply that can be drawn on when needed**

These definitions apply to Resources in Organizations, both commercial and non-commercial

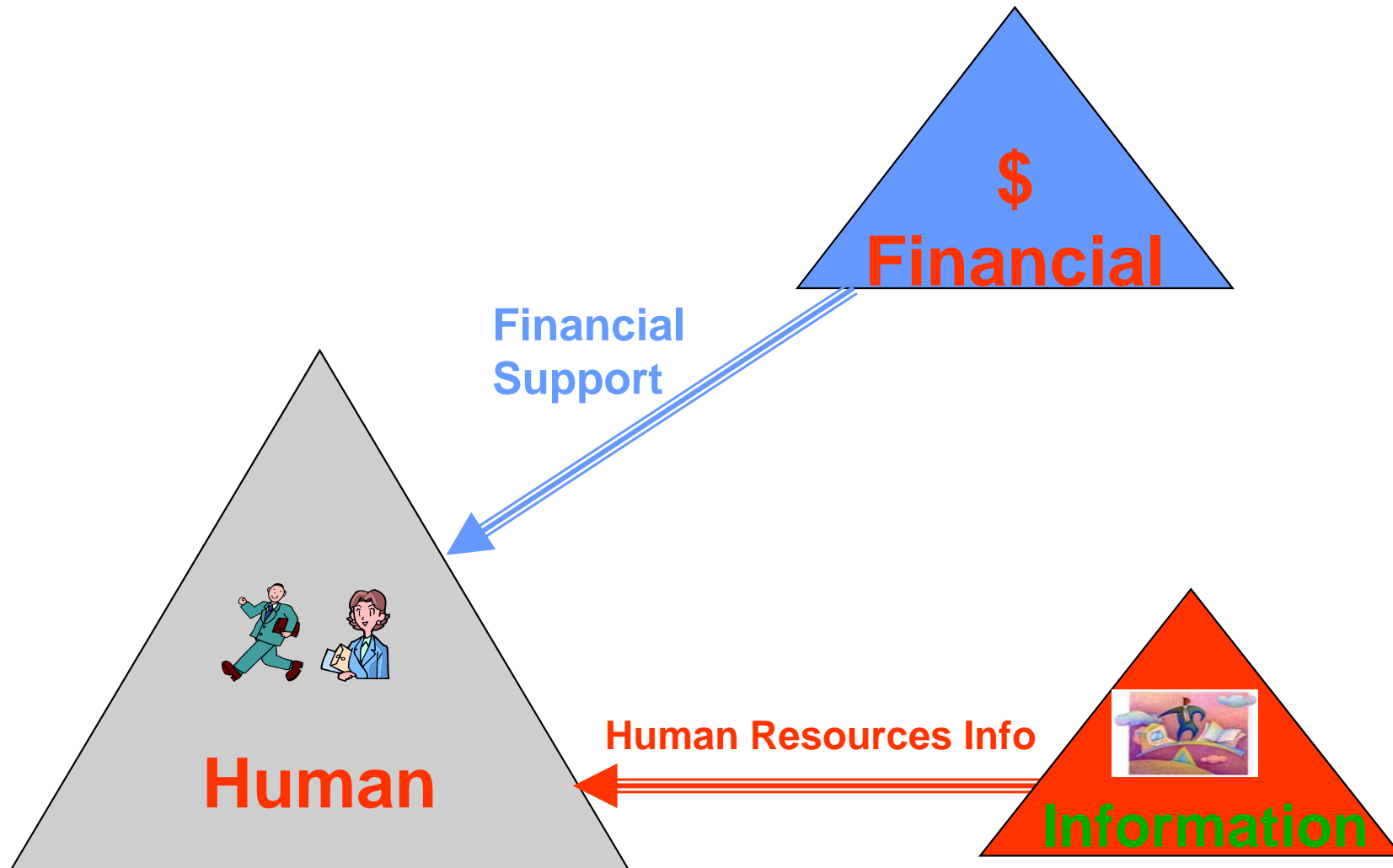
Resources in Organizations

- All organizations possess different resources
- 3 Resources Found in Every Organization
 - 2 commonly-recognized
 - Financial Resource
 - Human Resource
 - The Not-So-Commonly-Recognized Third Resource
 - Information

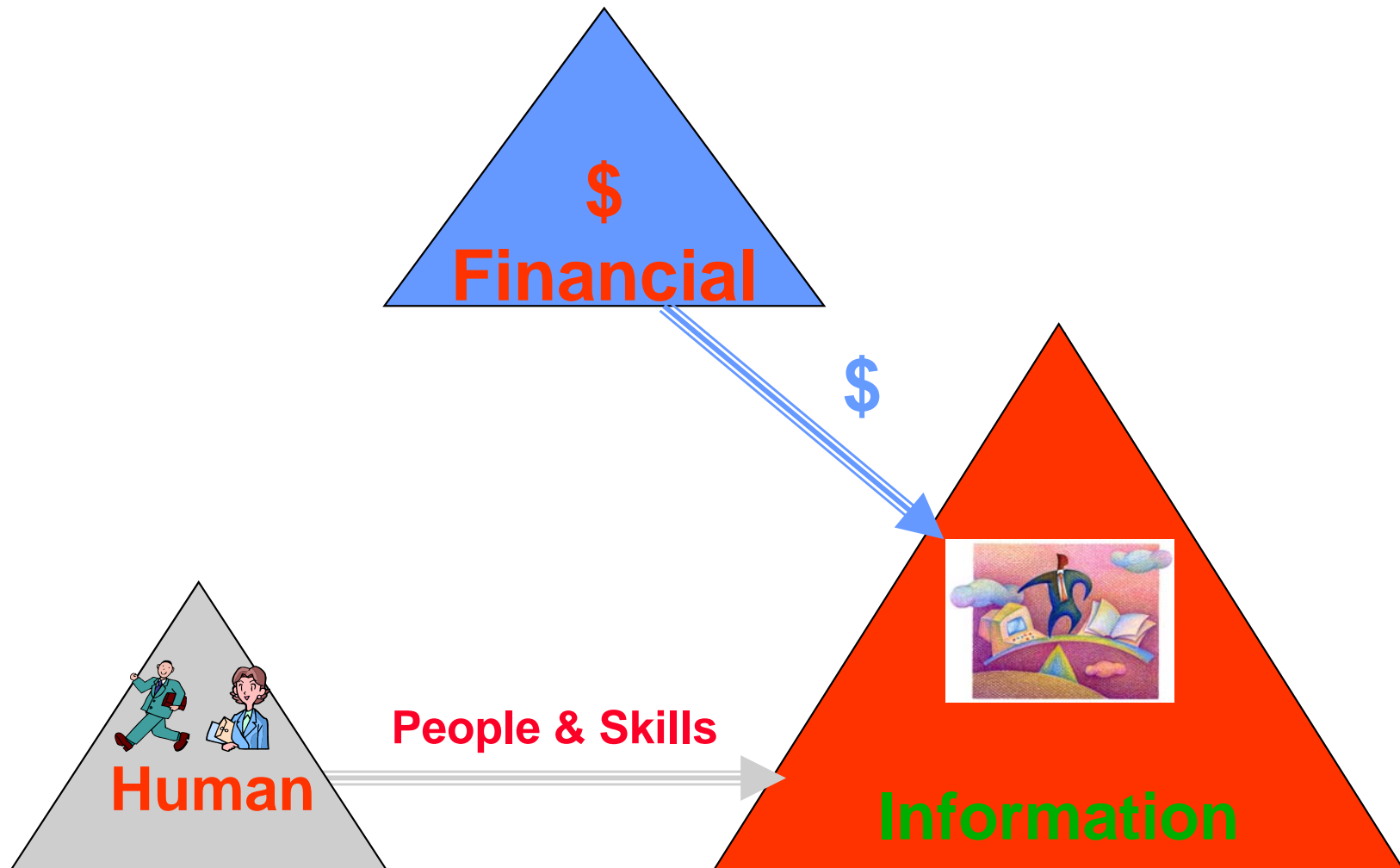
Managing Financial Resources



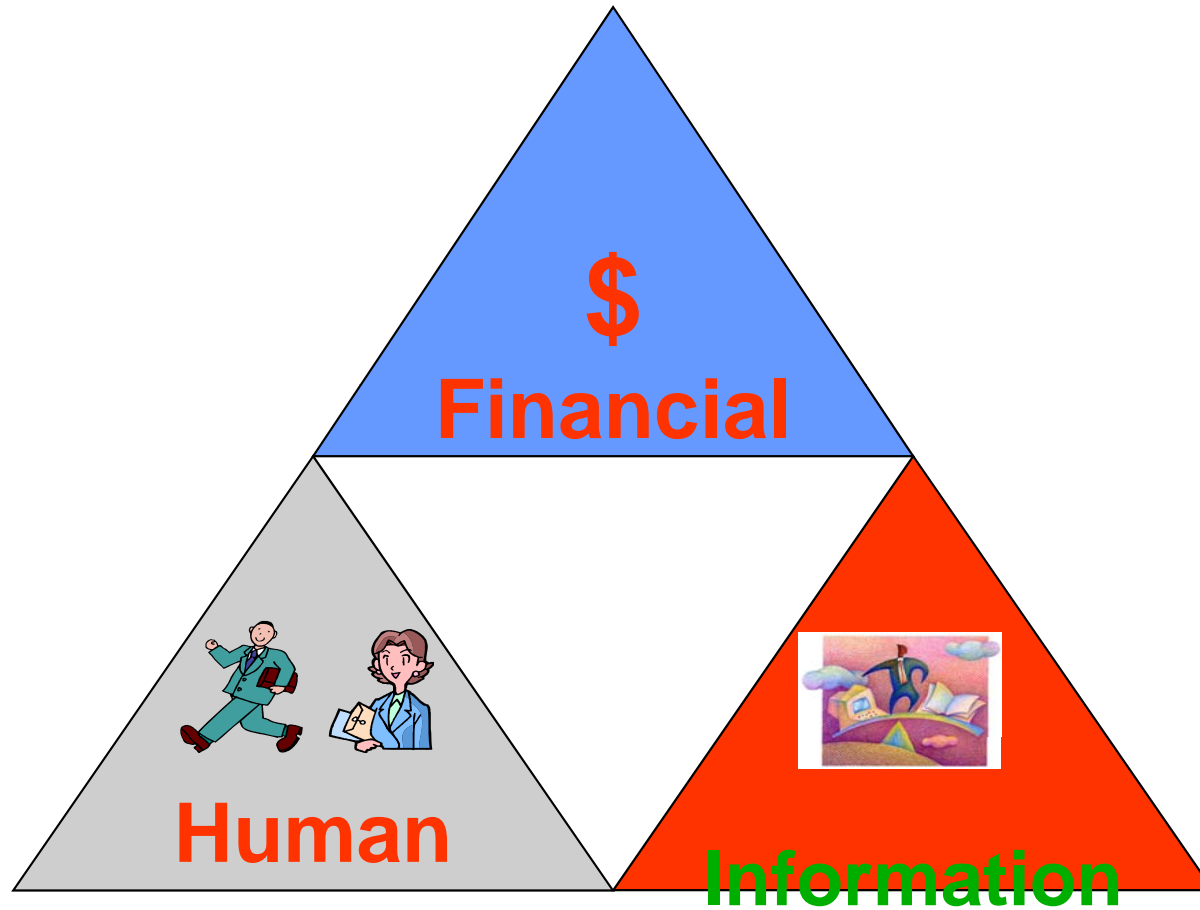
Managing Human Resources



Managing Information Resources



Common Organization Resources



鼎 - Tripod



Tripod with Uneven Legs

stable



un-stable



toppled



Important Things about Resources

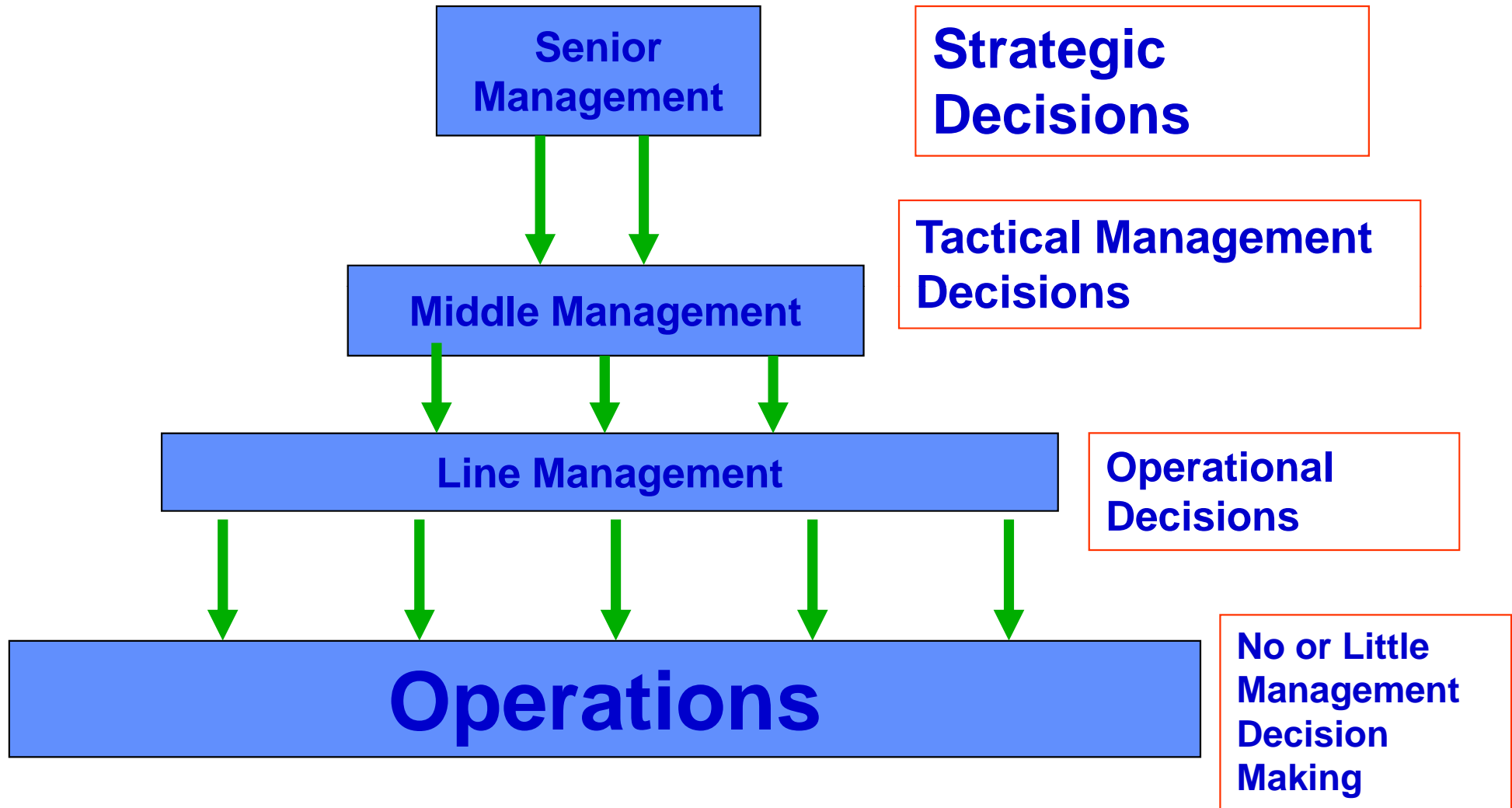
- **Resources are SCARCE**
- **When Resources are scarce, need to ALLOCATE Resources ...**
 - **Business Functions**
 - **Projects**
 - **Campaigns**
 - **Tasks Etc.**

All Resources Need to be Managed

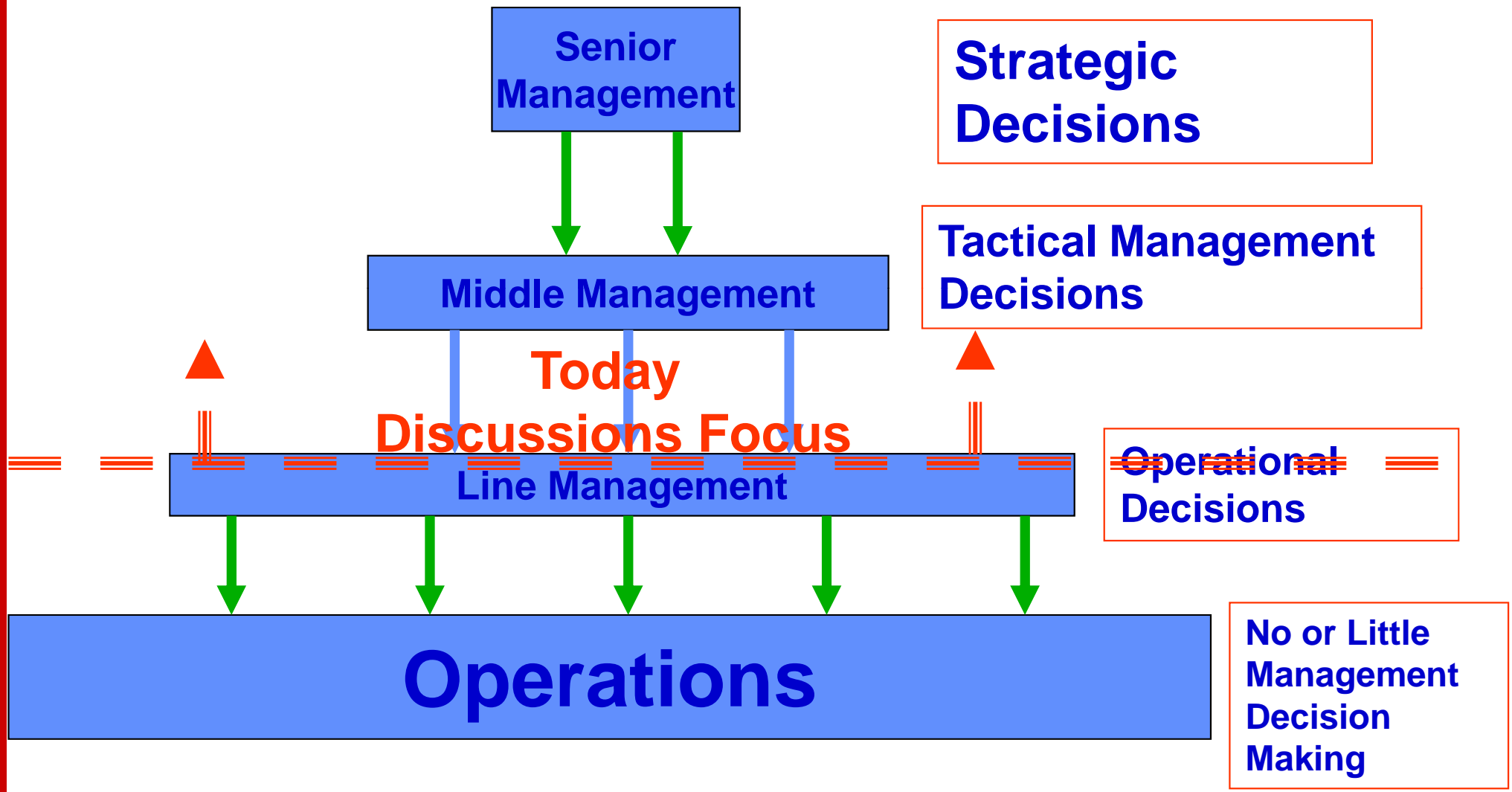
What is Management...

- **Concepts of Management first developed in the late 1800 early 1900, around the time of WWI (Peter Drucker)**
- **Management – making people with different skills to work together for a common goal**
- **From a Practitioner’s Point of View**
 - **Minimizes “Surprises” – Planning**
 - **Ensure plan is executed**
 - Allocate Resources to Achieve Goals**
 - Monitor and Control**

Generic Organization Management Structure

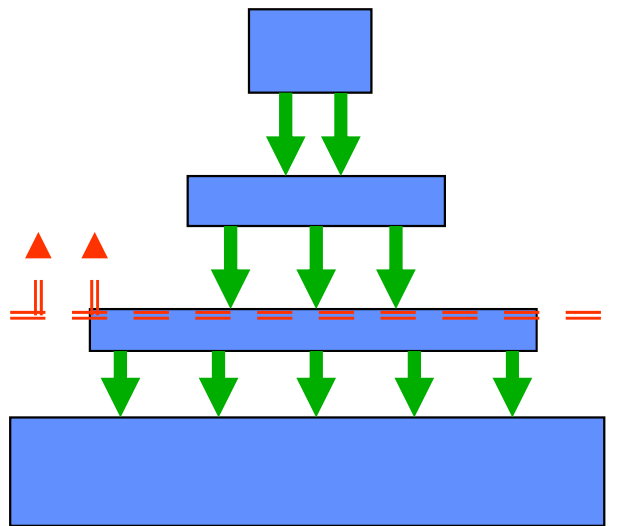


Generic Organization Management Structure



Understanding Information Resources

iR



Primary Uses of Information?

Statutory Requirements

Support Decision Making

Understanding and Categorizing Information

- **Internal & External Information by Source**
 - **Internal Info e.g. Financial info, sales info, inventory info, product info, customer info ... etc.**

Characteristics: own, up-to-date and usually accessible (if required)
 - **External Info e.g. Market, competitors, local & global political ... etc.**

Characteristics: usually not real-time info (news, periodic, trend, as of...), not always accessible, need to collect

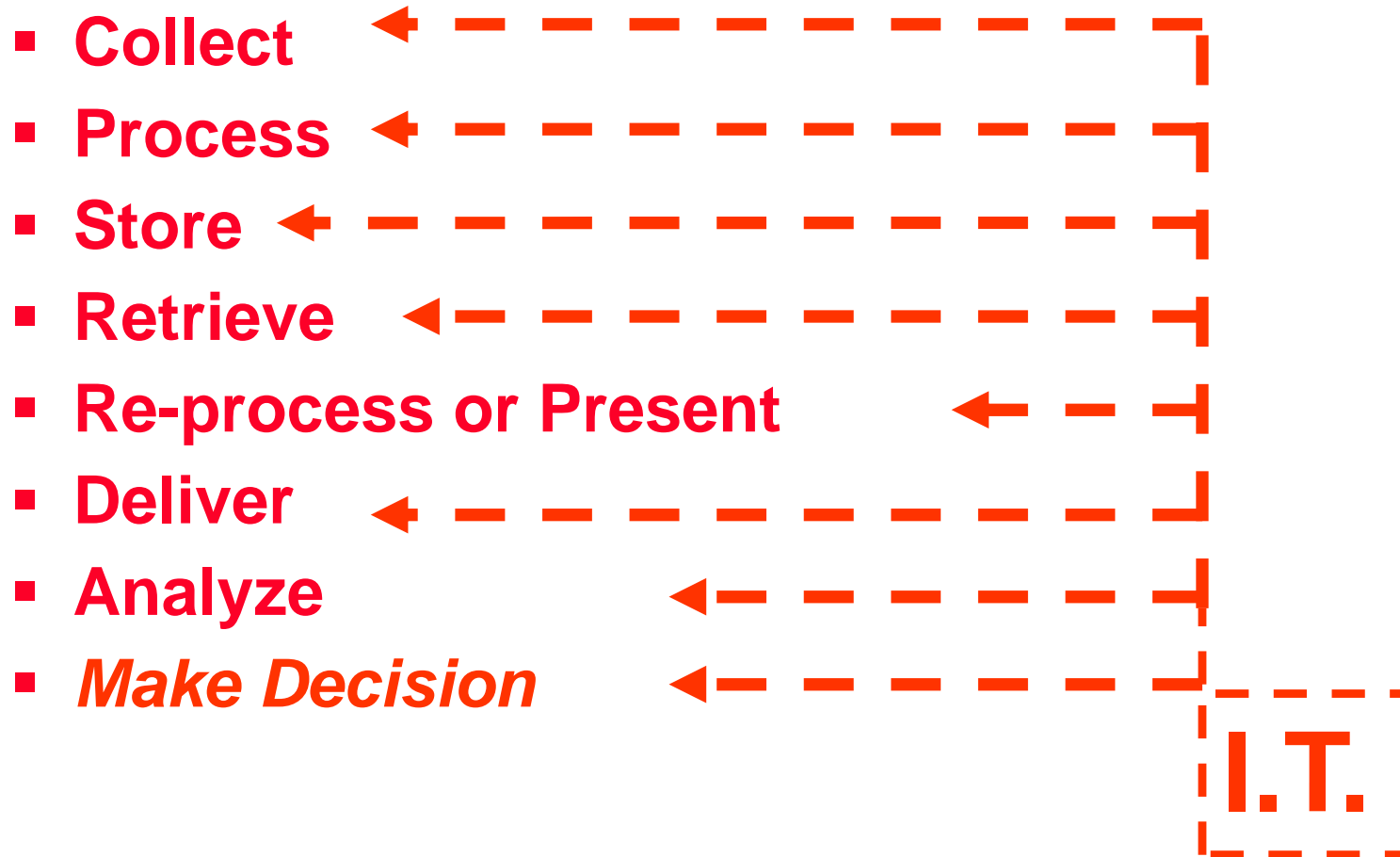
Categorizing Information (cont)

- **Internal & External by Users**
- **Operational & Management Information**
- **Repetitive & ad hoc Information**
- **Information required & Useful (nice to have) Information**
- **Information You Request & “Surprise” Useful Information**

Handling Information

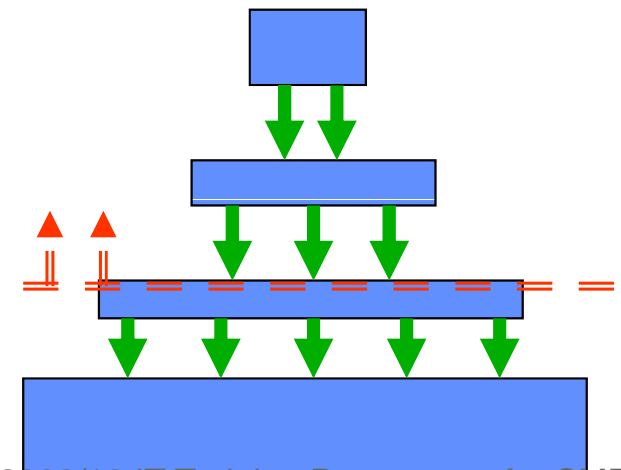
- **Collect** ◀ ≡ ≡ ≡ ≡ ≡ ≡
- **Process**
- **Store**
- **Retrieve**
- **Re-process or Present**
- **Deliver**
- **Analyze** ≡ ≡ ≡ ≡ ≡ ≡
- **Make Decision**

Where is Information Technology?

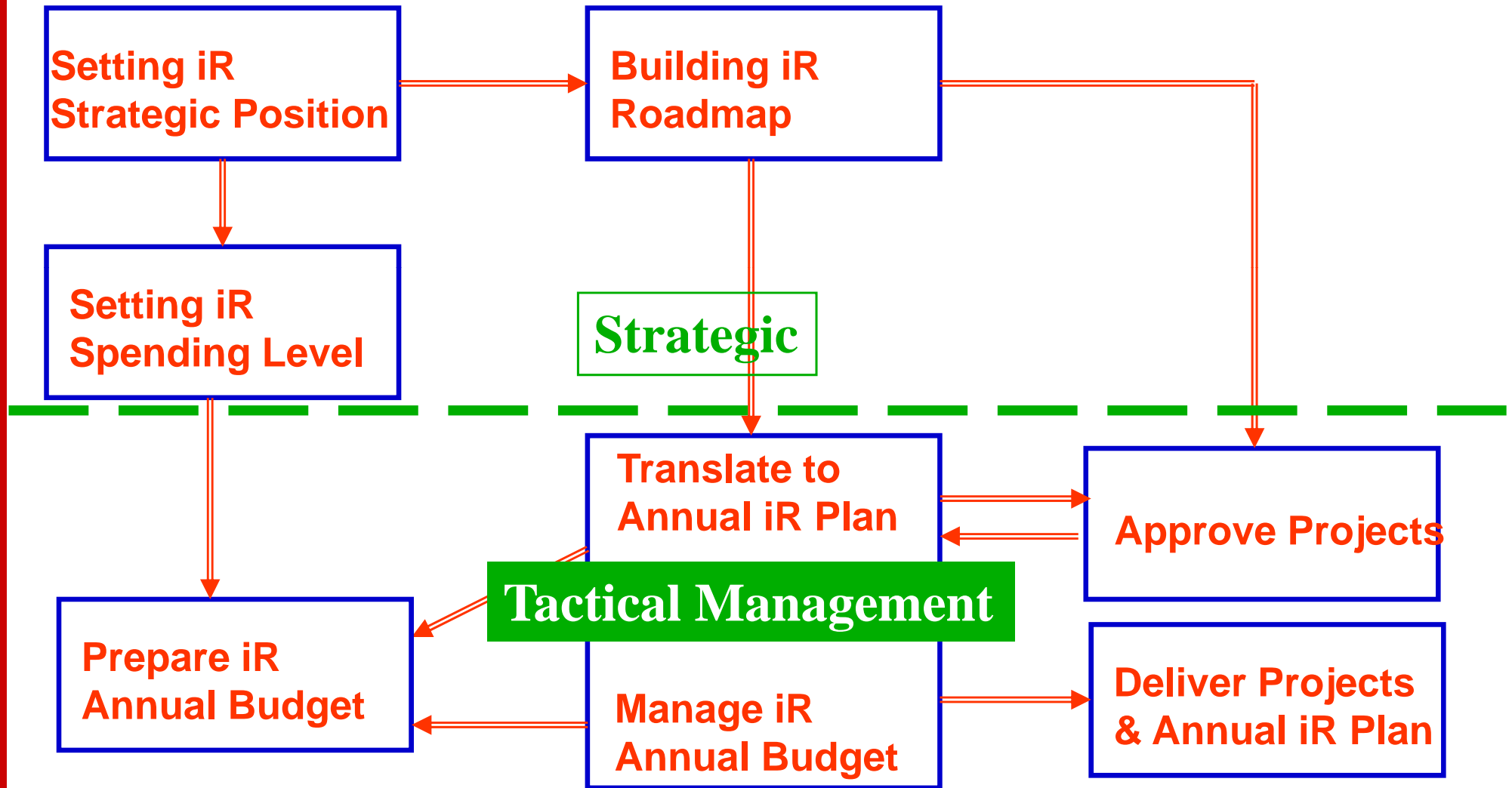


iR Management Framework

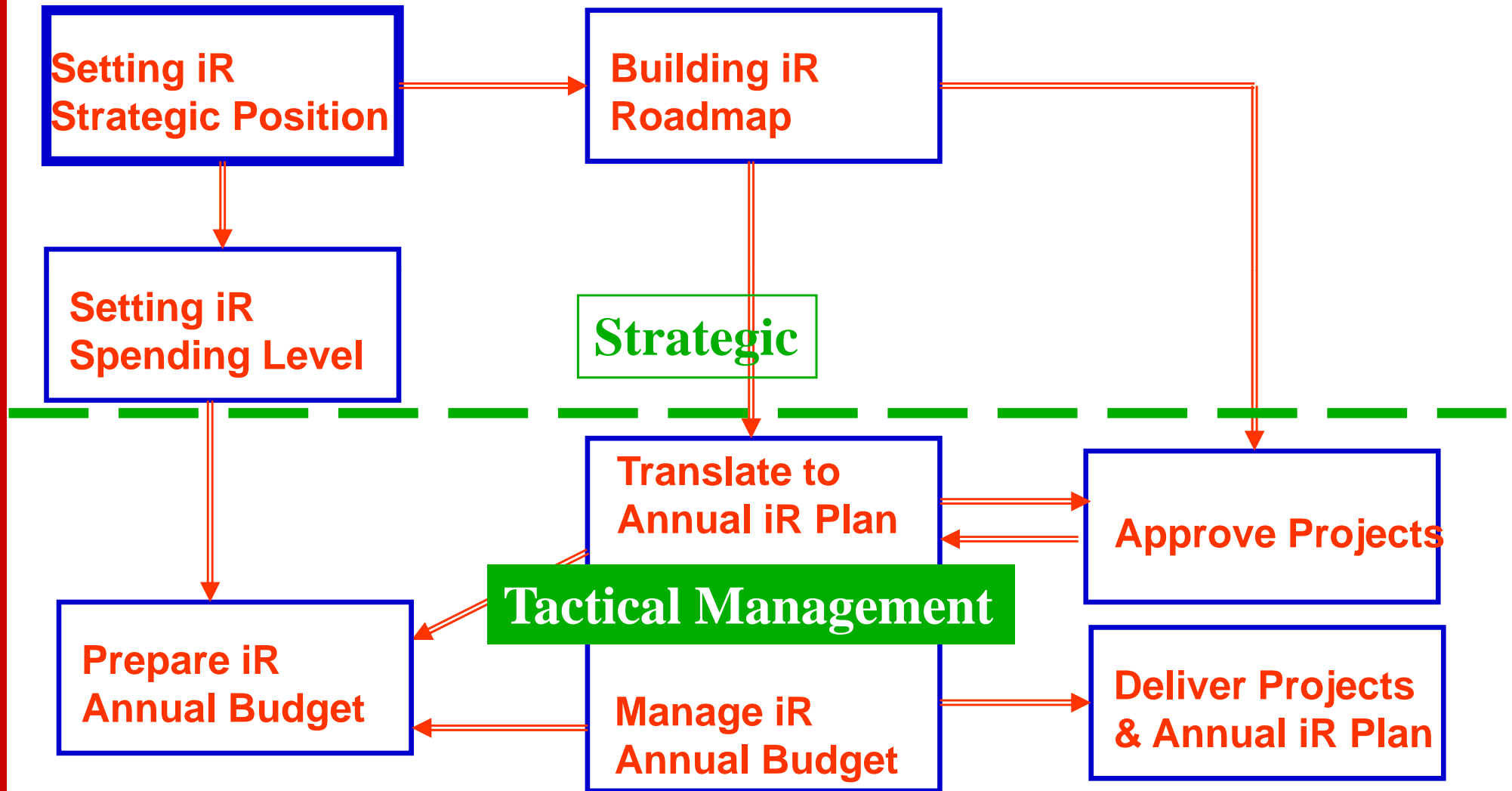
- **Strategic Level**
 - **Setting Business-iR (IT) Strategic Position for the organization**
 - **Building an iR Roadmap**
- **Tactical Management Level**
 - **Building an iR Plan based on the iR Roadmap**
 - **Budgeting**
 - **Managing the HR of iR**



iR Management Processes



iR Management Processes



Creating an iR Strategy Position

- **What is an iR Strategic Position?**
 - **Clear written statement of how organization view information at a strategic level**
 - **Should be Short and Precise**
 - **Guide development and investment in iR**
 - **Create a consistency in the organization in the use of information**
 - **Communication tool**

Building the iR Strategy Position

- **Establish a position for IT, using CLEAR terms like:**
 - **What is iR used for?**
 - **Competitive advantage with IT**
 - **A weapon to attack**
 - **Defensive**
 - **Nice-to-have Innovative**
 - **How Technology fits into Organization**
 - **Innovative**
 - **Must use only proven technology**

What Drives iR Strategic Position

- **Industry**
 - **Industry norm**
 - **Special technology for particular industry**
- **Competitors**
 - **Local and Global competition**
- **Customer expectation**
- **Organization/Corporate Strategy**
- **Organization/Corporate culture**

Statements of iR Position - Examples

“ ... IT is an integral part of our business strategy. We will aggressively use technology as a weapon for competitive advantage over our competitors ...”

“... We will use technology as a defense to our market position. We must be conservative in the use of new technology. We will only use proven technology and products ...”

Communicate, Communicate, Communicate !!!

Managing Human Resources of Information Resources

- **Manage iR HR at Strategic Level**
 - **Based on iR Position**
 - **Organization Design**
 - *Management (Project and General), Technical, Users*
 - **HR Policies – same or different from rest of organization?**
 - *Remuneration Package*
 - *Training*
 - *In-house vs Outsource (complete or partial)*

Managing Human Resources of Information Resources

- **Manage iR HR at Tactical Level**
 - **Skills Required & Shortfall**
 - **Business and Technical skills Matrices**
 - **In-house & contract out**
 - **Staff motivation and retention**
 - **Job enrichment**
 - **Benefits**
 - **Training**
 - **Management Style**
 - **Corporate Culture**
 - **Job allocation**

Information Resources Skills Matrix

Skill Level: 1 to 5 (Blank= N/A, 1= Novice, 5= Expert)

Colour Code: Red= Manager/Skill leader, Green=Asst Mgr/Backup Leader

		IT Staff				Business Staff			
		A	B	C	D	E	F	G	etc.
IT Skills									
Desktop Skills		2	4	3	2				
Network Skills		2	4	1	2				
Database		1	1						
Programming Languages									
Language 1		2	2						
Language 2			1		1				
etc.									
Application Support									
Application A		4	1						
Appl B		2	1						
etc.									
Systems Analytical Skills		3	2						
Project Management		3	1			2			
IT Operations Management				1	1				

Skill Level: 1 to 5 (Blank= N/A, 1= Novice, 5= Expert)

Colour Code: Red= Manager/Skill leader, Green=Asst Mgr/Backup Leader

	IT Staff				Business Staff				
	A	B	C	D	E	F	G	etc.	
Business Skills									
Application Support									
Application A					3	3	2		
Appl B					1		1		
etc.									
IT Management Skills									
Financial Budgeting & Control		1			3				
Staff Management		2			2				
IT Policy Formulation		1							
IT Strategy									

Information Resources Skills Matrix

Skill Level: 1 to 5 (Blank= N/A, 1= Novice, 5= Expert)

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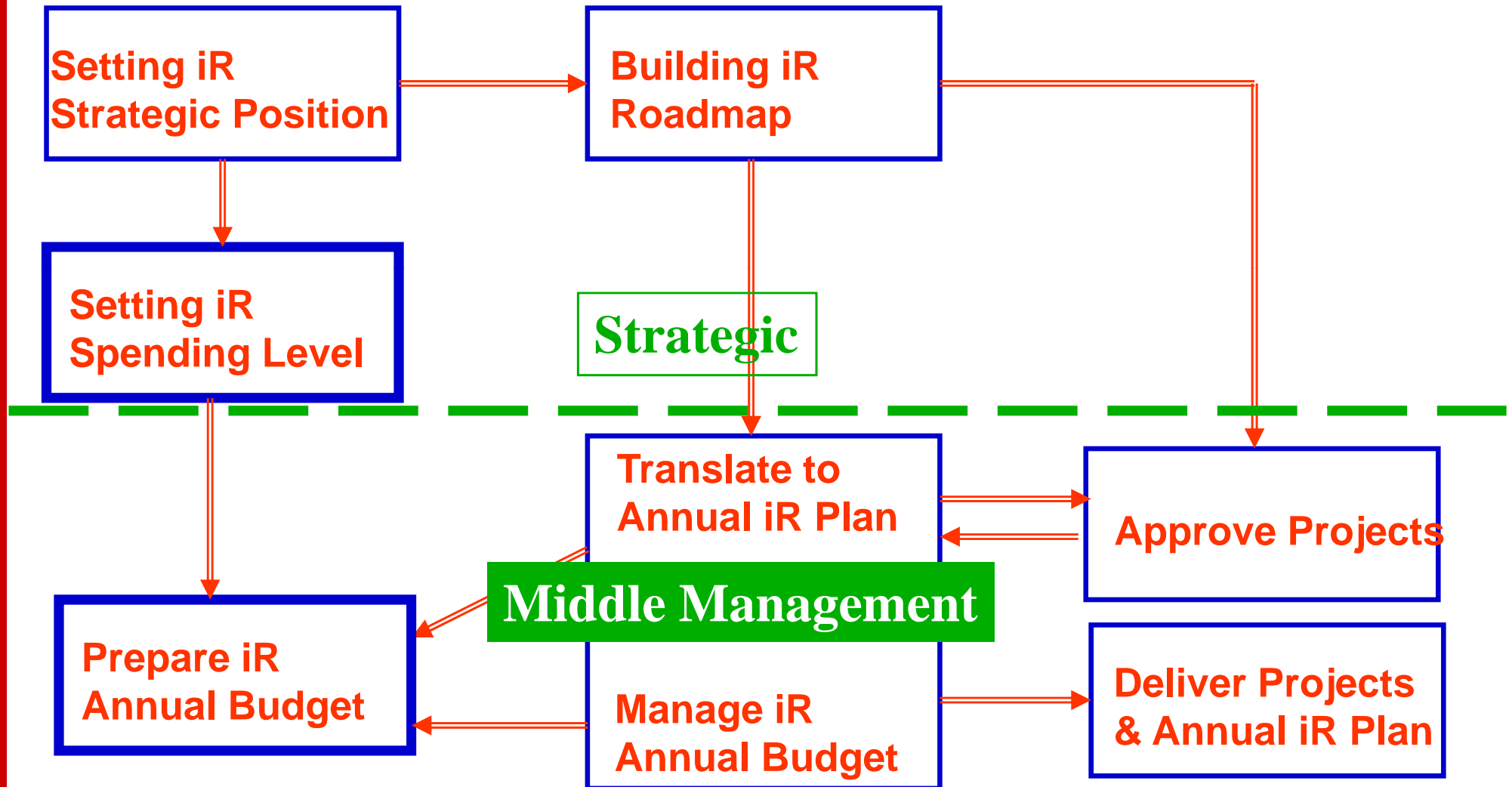
	IT Staff				Business Staff				
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Language 2		1		1					
etc.									
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etc.									
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Project Management	3	1			2				
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	IT Staff				Business Staff				
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Business Skills									
Application Support									
Application A					3	3	2		
Appl B					1		1		
etc.									
IT Management Skills									
Financial Budgeting & Control		1			3				
Staff Management		2			2				
IT Policy Formulation		1							
IT Strategy									

iR Management Processes



Managing the Finances of Information Resources

- **Set a reasonable level of spending on IT based on Business-IT Strategic Positioning**
- **IT Budgeting and Managing it**
 - **Operations Budget and IT Investment Budget**
 - **Allocation of resources on:**
 - Infrastructure**
 - H/W & S/W**
 - HR**
- **Manage IT Investment based on Value to Organization**

How to set an IT Spending Boundary/Limit

- **Previous year(s) spending**
- **Committed spending**
- **Affordability**
- **Benchmarking**
- **Level of Support Expectation/Required**

IT Spending Affordability

- **Top Down - Setting a IT Spending Limit**
 - **Absolute \$ amount - Rigid**
 - Rapidly changing Market Condition**
 - **% of Total Expense**
 - IT improve efficiency UP - Expenses DOWN**
 - Total Expense DOWN --- IT Spending % UP**
 - **% of Total Revenue**
 - IT Spending ties to Business**
 - **How about tie to Net Profit ?**



Management Process

- **Plan**
- **Take Action**
- **Monitor and Control**
- **Corrective Action**
- **Feedback**

Setting the IT Budget

- **Steps to set IT Budget**
 - **Top down Estimates**

Consider last and previous years IT spending

What is considered The RIGHT level of spending?
 - **Grounds up detail budgeting for each “line”**
 - **Review and adjust**

What is IT Spending?

- **Major components**

- **IT Staff Costs**

- **Hardware Costs**

- Maintenance Contracts & Annual License Fees**

- Depreciation**

- **Software Costs**

- Maintenance Contracts & Annual License Fees**

- **Telecom**

- **Occupancy Costs**

- **Consultants and contractors**

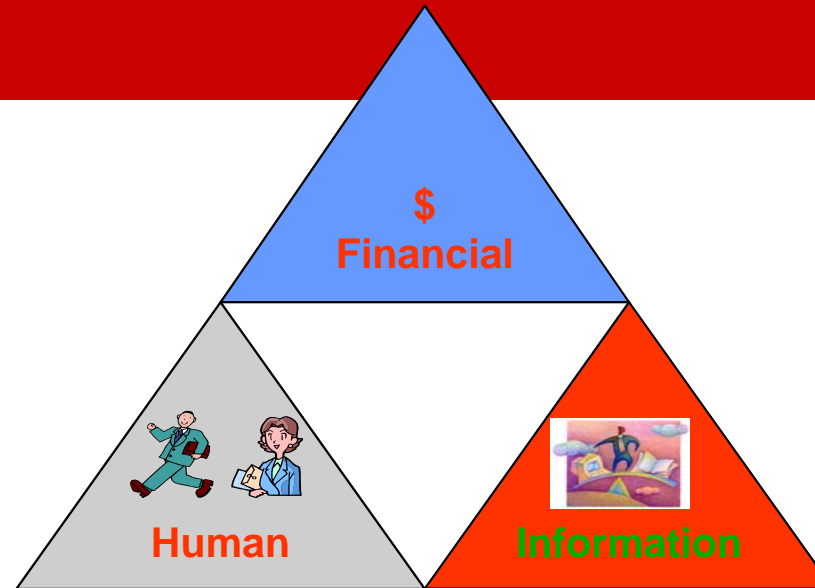
Types of IT Spending

- **Operations**
 - **Data Centre or Server Farm operations**
 - **Desktop support (PC, printer, scanner etc.)**
 - **Network and Infrastructure support**
 - **Application support and maintenance**
- **New projects (to improve business capability)**
 - **Applications**
 - **Infrastructure**

Operation and Capital Budgets

- **Allocate Budget to Operations**
 - **Use Bottom-up approach**
 - Previous Year Spending (on Ops)**
 - Plus new addition from new projects**
 - Minus efficiency gain**
- **Allocate Budget to New Projects**
 - **Use Top-down approach**
 - Total IT Limit minus IT Ops Budget**
 - Each New Project requires JUSTIFICATION**

2009/10 IT Training Programme for SMEs



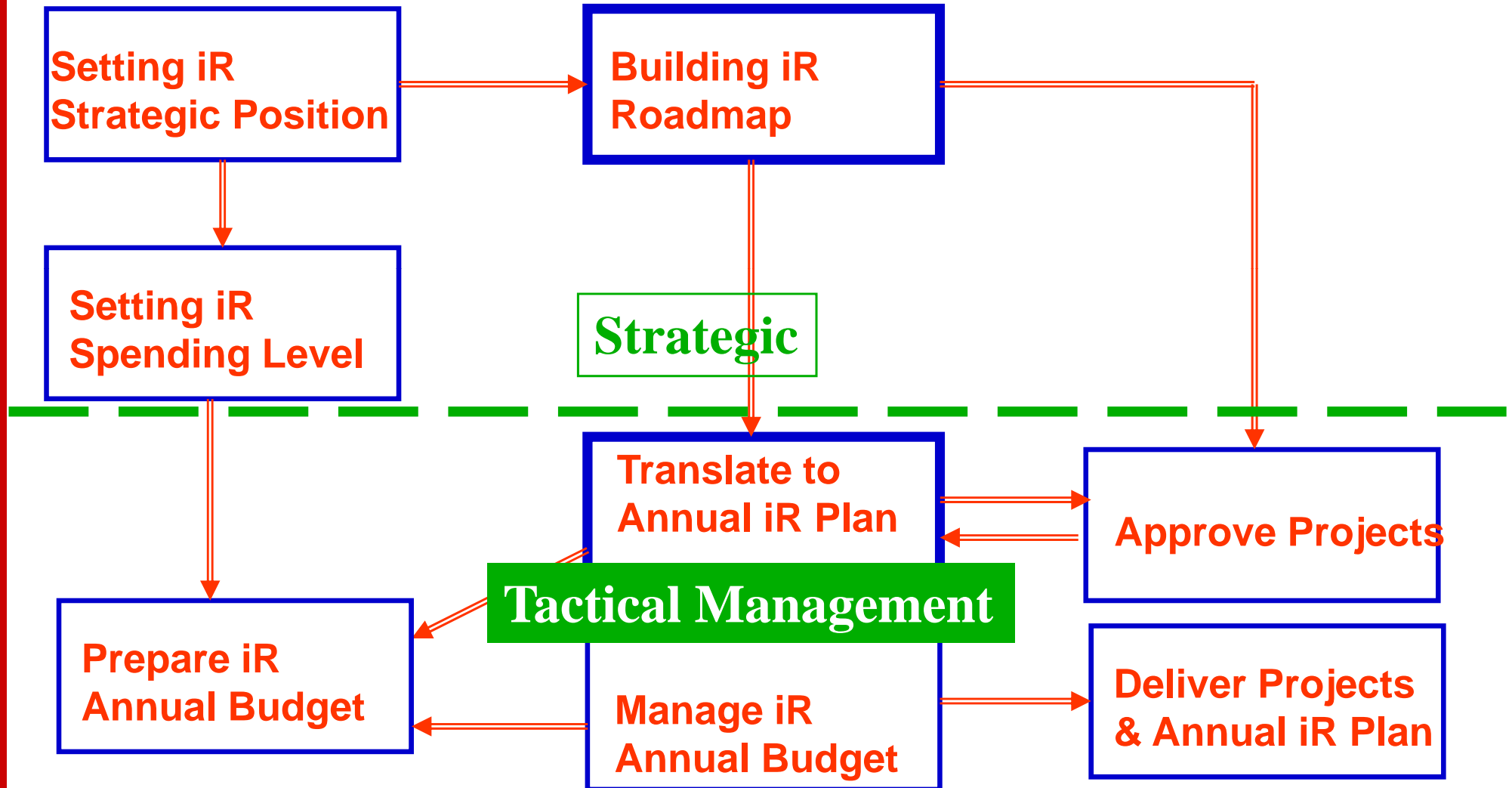
M08 - Information Resources Management and IT Budgeting (Lecture 2)

Speaker: Lincoln Tso



Next Lecture: Building an iR Roadmap

iR Management Processes

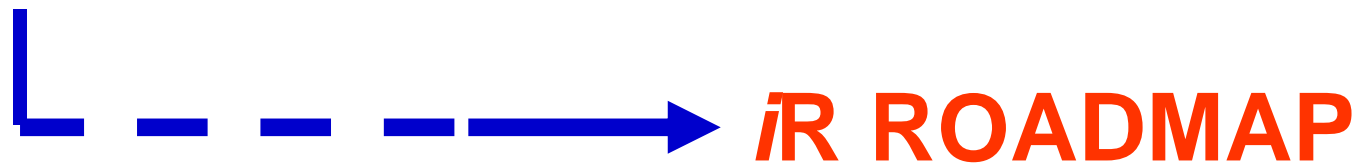




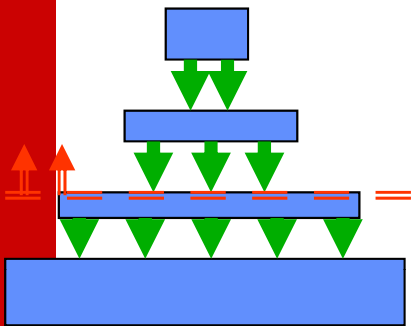
Building an iR Roadmap

Building an *i*R (or any) Roadmap

- Build a Map of your Target Business Operations Model
- Where are you today – Know yourself
- How do you get from today to the Destination and Prioritize, Based on Value to Organization. Evaluate:
 - Information
 - Processes



Prioritize Business Processes



- What are the “Values” of the org?
- How does each business process impact on these “Values”?
- How are these processes supported today?
- How good are the support for these business Processes?



Know Your Business Strategy

Why do Your Customers Buy from You?

What is Your Business Strategy?

**How do you know your business is
Performing WELL?**

EVALUATE your Performance:

Key Performance indicators - KPIs

Key Performance Indicators - KPIs

- **Do you Know what the Organization's Business Strategy is?**
- **What are the KPIs of your Department?**
- **What are the KPIs of the whole Organization?**

Know Your Business Strategy

- **Market share?**
- **Low cost?**
- **High margin?**
- **Customer service?**
- **Innovation and new products?**
- **Distribution**
- **etc.....**

Translate Business Strategy to Key Performance Indicators (KPI)

- **Market share %**
- **Gross margin**
- **Inventory turns**
- **No. of customer complaints**
- **On-time delivery %**
- **Interval between products introduction**
- **Employee turnover rate**
- **etc.....**

The Primary iR Investment Drivers PiIDs

What are most important KPIs?

The TOP 5 - 10 KPIs are...

Tada



The Primary iR Investment Drivers - PiIDs

Building the IT Roadmap

- **Steps to the IT Roadmap**
 - **Understand and document Business Processes**
 - **Understand and document Information Groups**
 - **Map to PIDs**
 - **Produce the Info-Application-Map (IAM)**
 - **Produce the Process-Applications-Map (PAM)**
 - **Evaluate and produce a Traffic Light document**
 - **Translate to IT Roadmap**

Prioritize Your Information Need

- Identify all Major Business Decisions

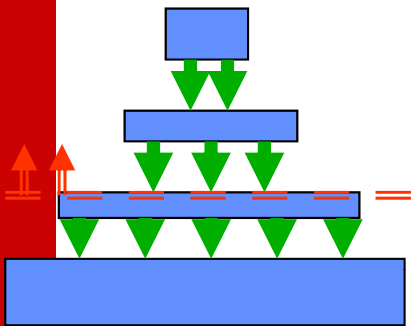
- Examples:

- Level of Raw Materials in Inventory

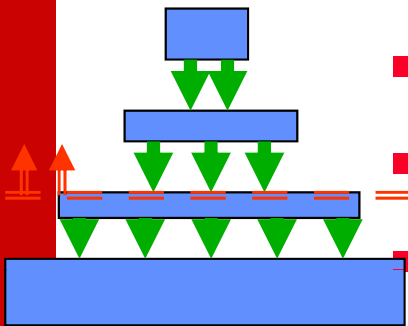
- Buying new machinery

- Pricing decision

-



Prioritize Your Information Need



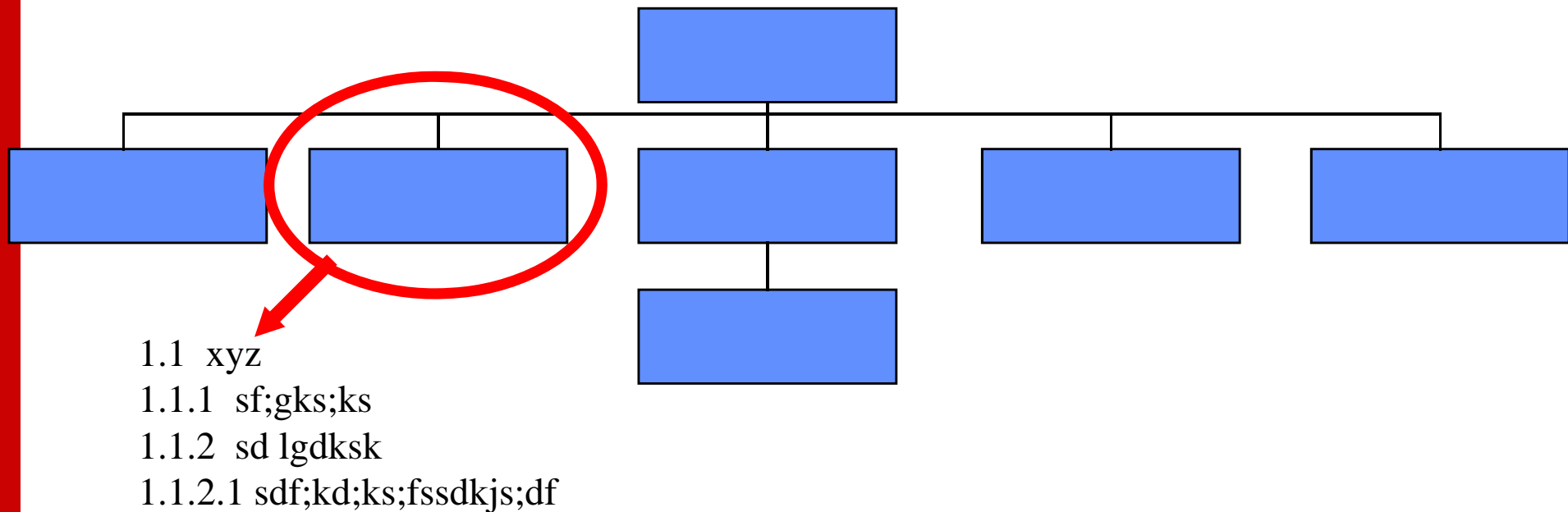
- How does the decision **IMPACT** PiIDs?
- What information is needed?
- What information already in hand?
- How good are they (accuracy, currency & timeliness, presentation)?
- What information **NOT** on hand?
- How easy / difficult to collect them?
- What is the risk of a bad decision with missing information?

What Do You Need to Make a Business Decision?

- **Please Form Groups of 5 for Group Discussion (15 minutes) and Prepare Presentation (3 minutes)**
- **Topics :**
 - **Raw Material Purchase Decision**
 - **Short Term Purchase Order (G1)**
 - **Strategy on Raw Material Order (G2)**
 - **Pricing for a Product into a New market**
 - **An Electronic Product (G3)**
 - **A Financial Product (G4)**

Understand Business Processes

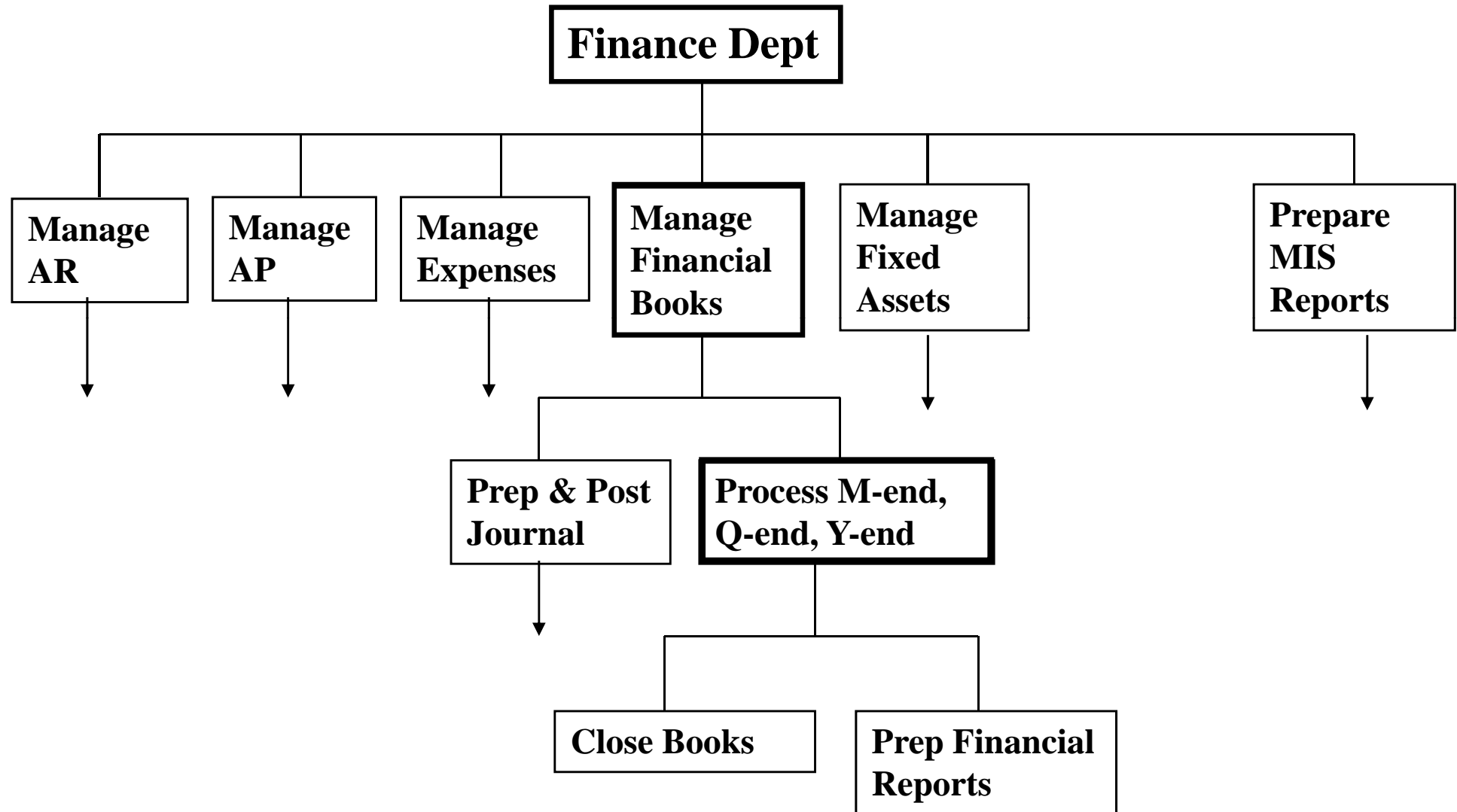
- Use Process Decomposition technique
 - Start from high level Org Chart
 - Decompose max. 3 - 4 levels down





Let's Try to Break Down Business Processes for the Finance Department

Finance Department Process Decomposition



Process Mapping to PiDs

			KPI		
			KPI 1	KPI 2	KPI 3
		Processes			
1		Finance			
1.1		General Ledger	L	L	M
1.2		Accounts Receivable	M	L	L
1.3		Accounts Payable	L	L	M
1.4		Expense control	M	M	L
1.5		Management reporting	M	H	H
1.6		etc.			
2		Sales and Marketing	H	H	H
3		Production	M	M	H
4		Procurement	M	M	L
5		Material Management	M	M	L

Legend: Rating of importance: **L = Low** **M = Medium** **H = High**

Process-Appls-Map (PAM)

		Applications	Support
Processes			
Finance			
General Ledger	GL		G
Accounts Receivable	AR		S
Accounts Payable	AP		G
Expense control			S
Management reporting			S
etc.			
Sales and Marketing	ERP		P
Production	ERP		P
Procurement	ERP		S
Material Management	MM		G

Legend: **G = Good** **S = Satisfactory** **P = Poor**

The Traffic Lights Report

	KPI -Weight	Support	Priority
Processes			
Finance			
General Ledger	L	G	Green
Accounts Receivable	M	S	Yellow
Accounts Payable	L	G	Green
Expense control	M	S	Yellow
Management reporting	M	S	Yellow
etc.			
Sales and Marketing	H	P	Red
Production	M	P	Red
Procurement	M	S	Yellow
Material Management	M	G	Green

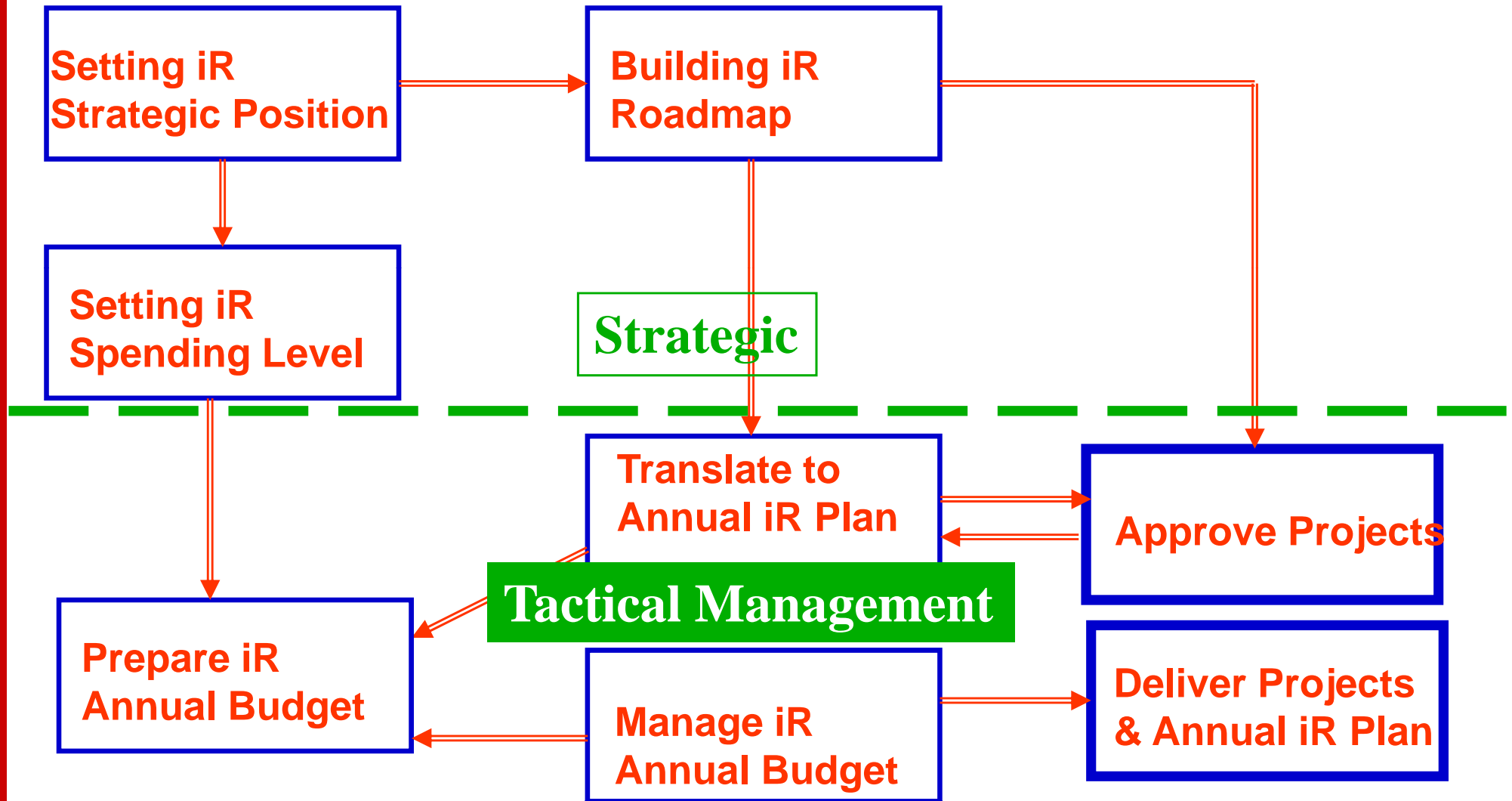
The IT Roadmap/Masterplan

IT Roadmap for XYZ Company								
	Q1 '04	Q2 '04	Q3 '04	Q4 '04	Q1 '05	Q2 '05	Q3 '05	Q4 '05
Sales & Marketing Project	█							
Production Planning Project		█						
eProcurement Project					█			
AR Project						█		
Management Reporting		█						

IT Investment Masterplan

IT Roadmap for XYZ Company								
	Q1 '04	Q2 '04	Q3 '04	Q4 '04	Q1 '05	Q2 '05	Q3 '05	Q4 '05
Sales & Marketing Project	█							
Production Planning Project		█						
eProcurement Project					█			
AR Project						█		
Management Reporting		█						
Project Costs Estimates	\$	\$\$\$	\$\$	\$\$	\$\$	\$\$\$	\$	

iR Management Processes



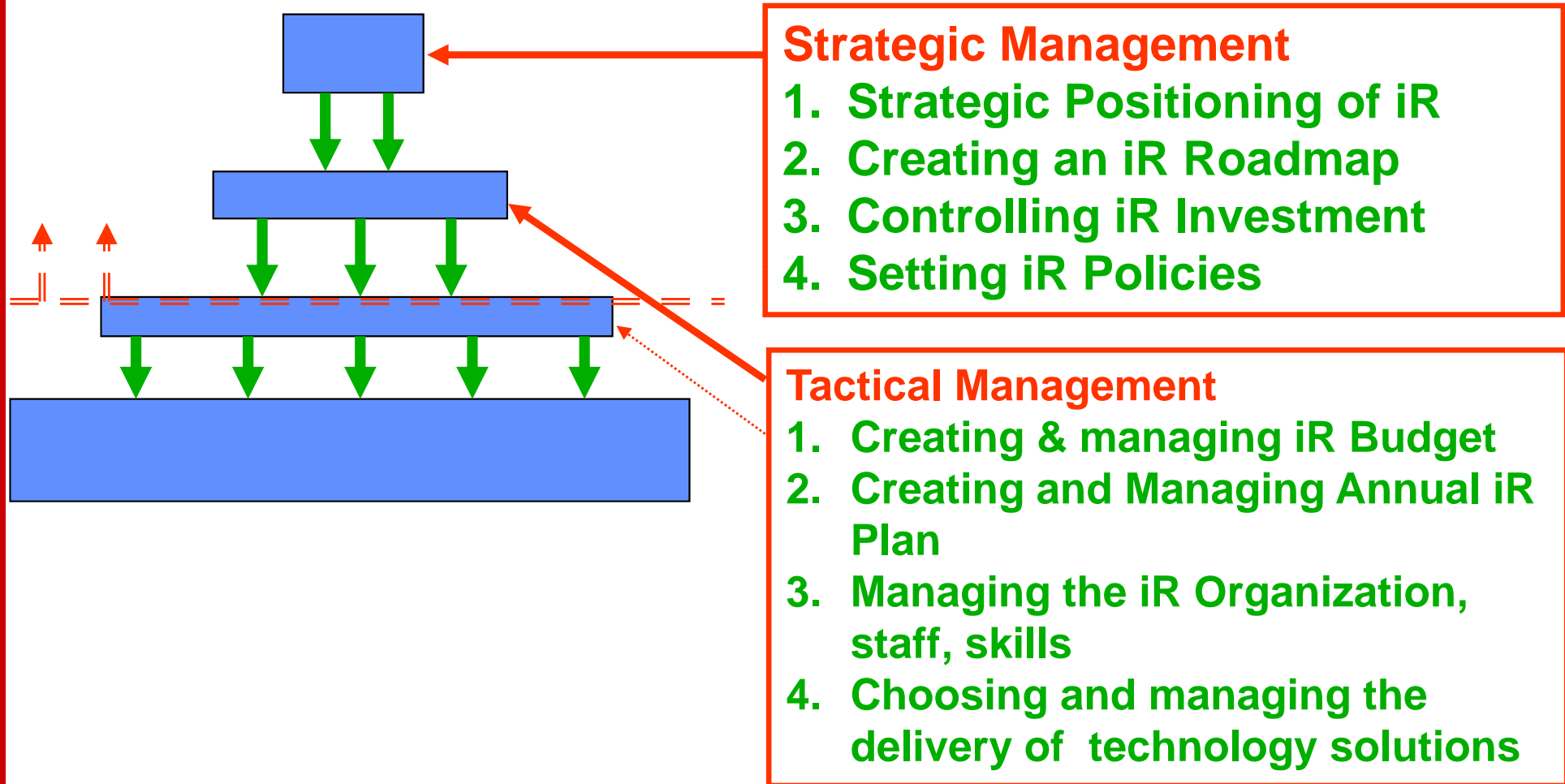
IT Investment Control

- **Set up an IT Investment Committee**
 - **Chair by the “BOSS”**
 - **Business Units and Department Heads**
 - **Monthly / Quarterly meeting**
 - **Review projects budget requests**
 - On Roadmap - Easy Decision**
 - Not on Roadmap - Vigorous
Justification Required**
 - **Periodic/Annual Review and Update of Roadmap**

Recap – What is (*iR*) Information Resources

- **An Organization's *iR* information Resources consist of:**
 - **All information it possesses**
 - **All information it can assess**
 - **Financial Resources allocated to *iR***
 - ***iR* related people & skills**
 - Managing skills
 - Usage skills
 - Supporting skills
- ***iR* Must be MANAGED with Financial and Human Resources at:**
 - **Strategic Level**
 - **Tactical Level**
 - **Operation Level**

Managing Organization information Resources - *iR*





An ERP Story ...

Why ERP?

- **Possible Reasons for Investing in ERP**
 - **New Business with no system**
 - **Major Changes in business, business strategy, business/corporate environment (corporate culture, new challenges, new market, new products or industry...)**
 - **Major gap with current “systems” support**
- **Likely to be a Major Investment in IT**

What is ERP ?

APICS Definition (American Production & Inventory Control Society)

“A method for the effective planning and control of all resources needed to take, make, ship, and account for customer orders in a manufacturing, distribution, or service company”

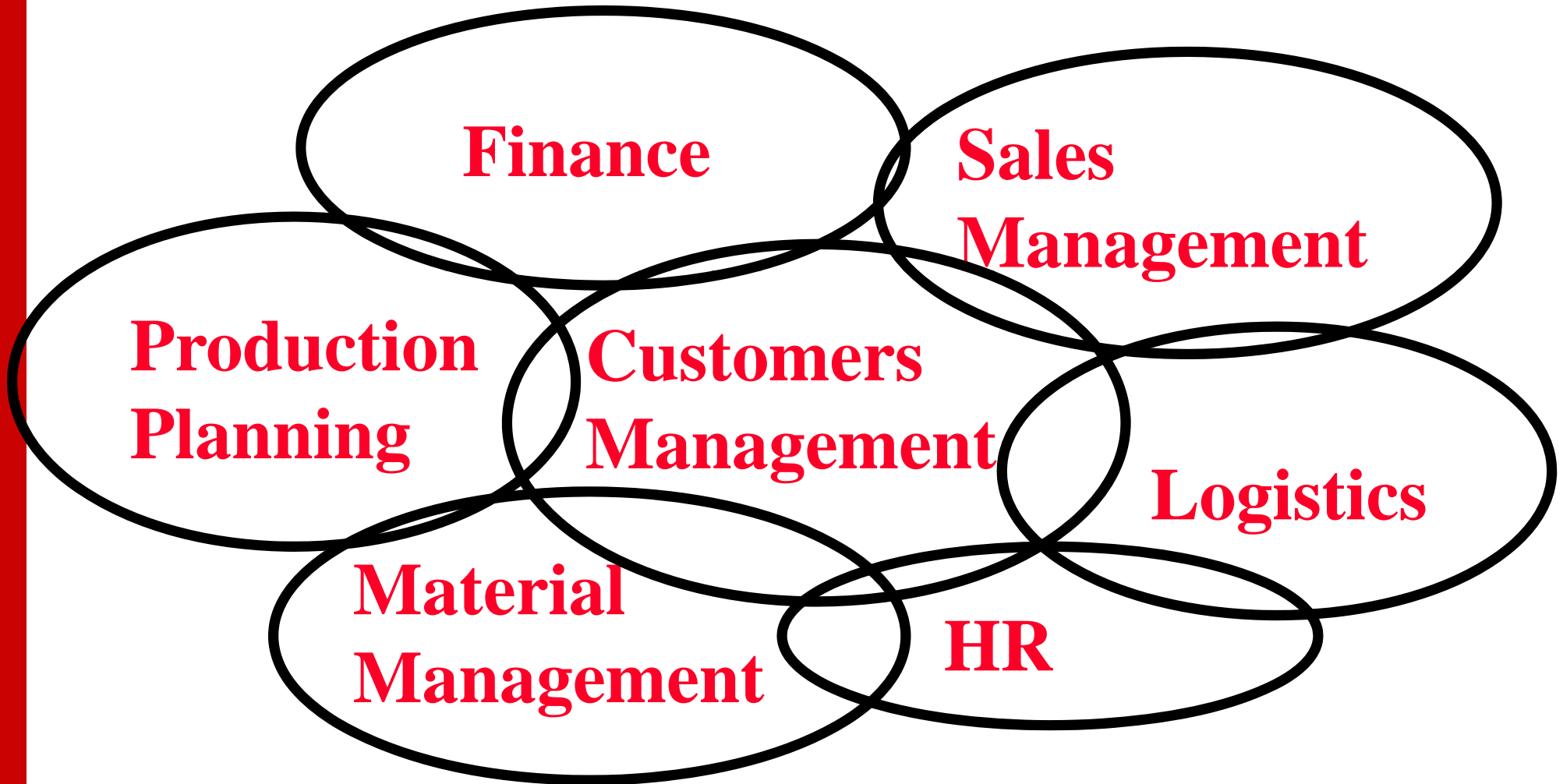
What is an ERP System?

- **An accounting-oriented information system for identifying and planning the enterprise-wide resources needed to take, make, ship, and account for customer orders. An ERP system differs from the typical MRP II system in technical requirements such as graphical user interface, relational database, use of fourth-generation language, and computer-assisted software engineering tools in development, client/server architecture, and open-system portability.**
- **More generally, a method for the effective planning and control of all resources needed to take, make, ship, and account for customer orders in a manufacturing, distribution, or service company**

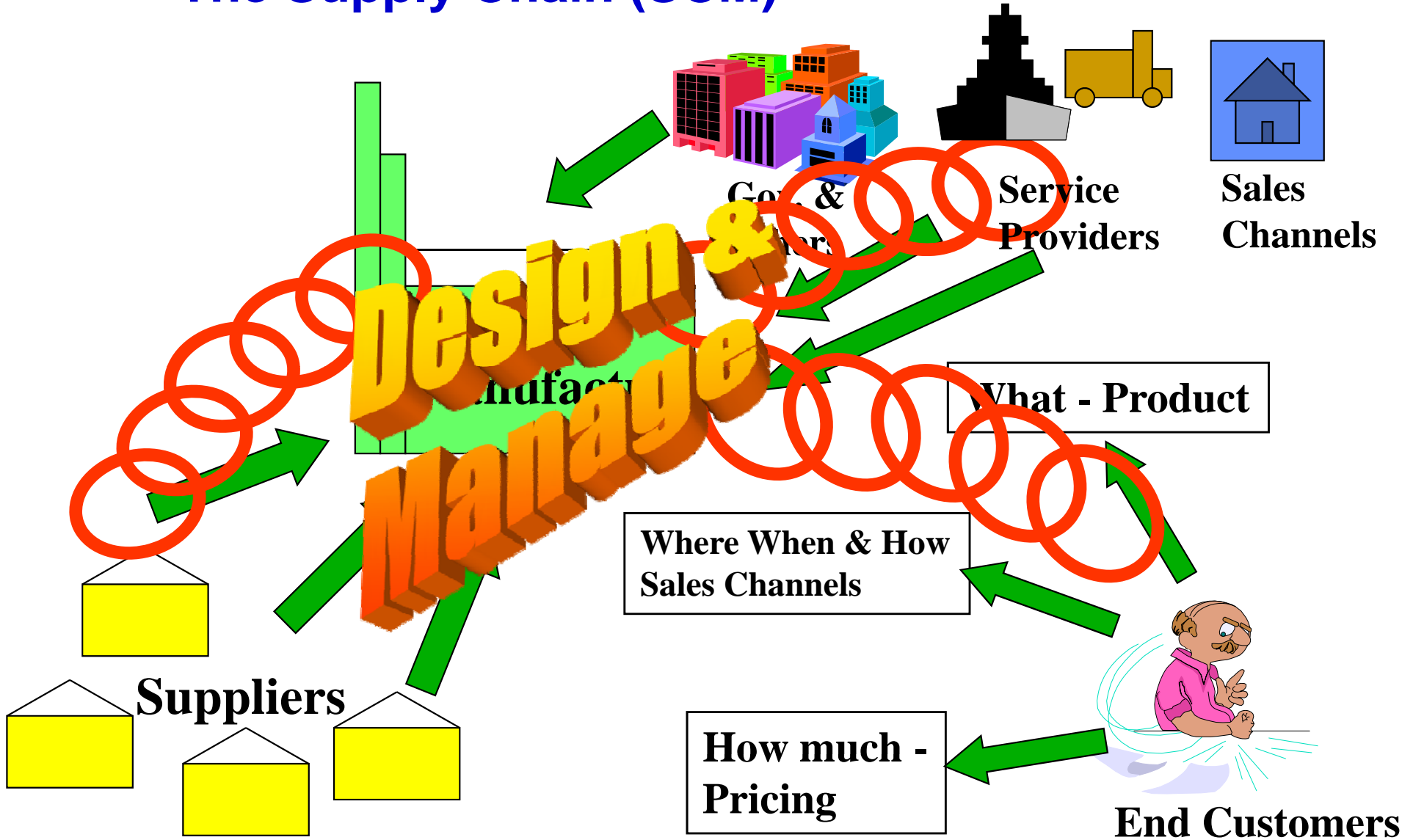
What does it do?



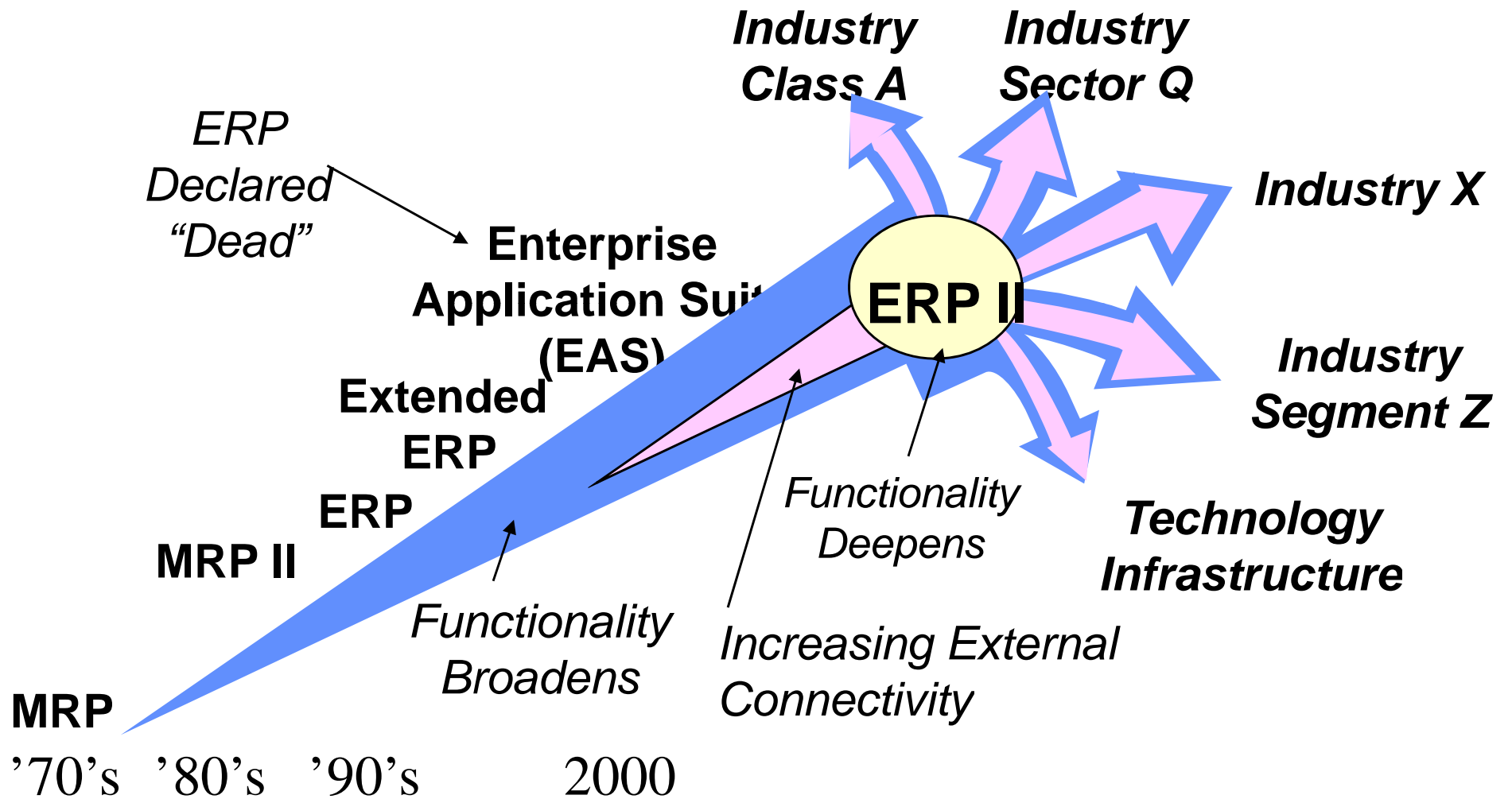
A Typical ERP System



The Supply Chain (SCM)

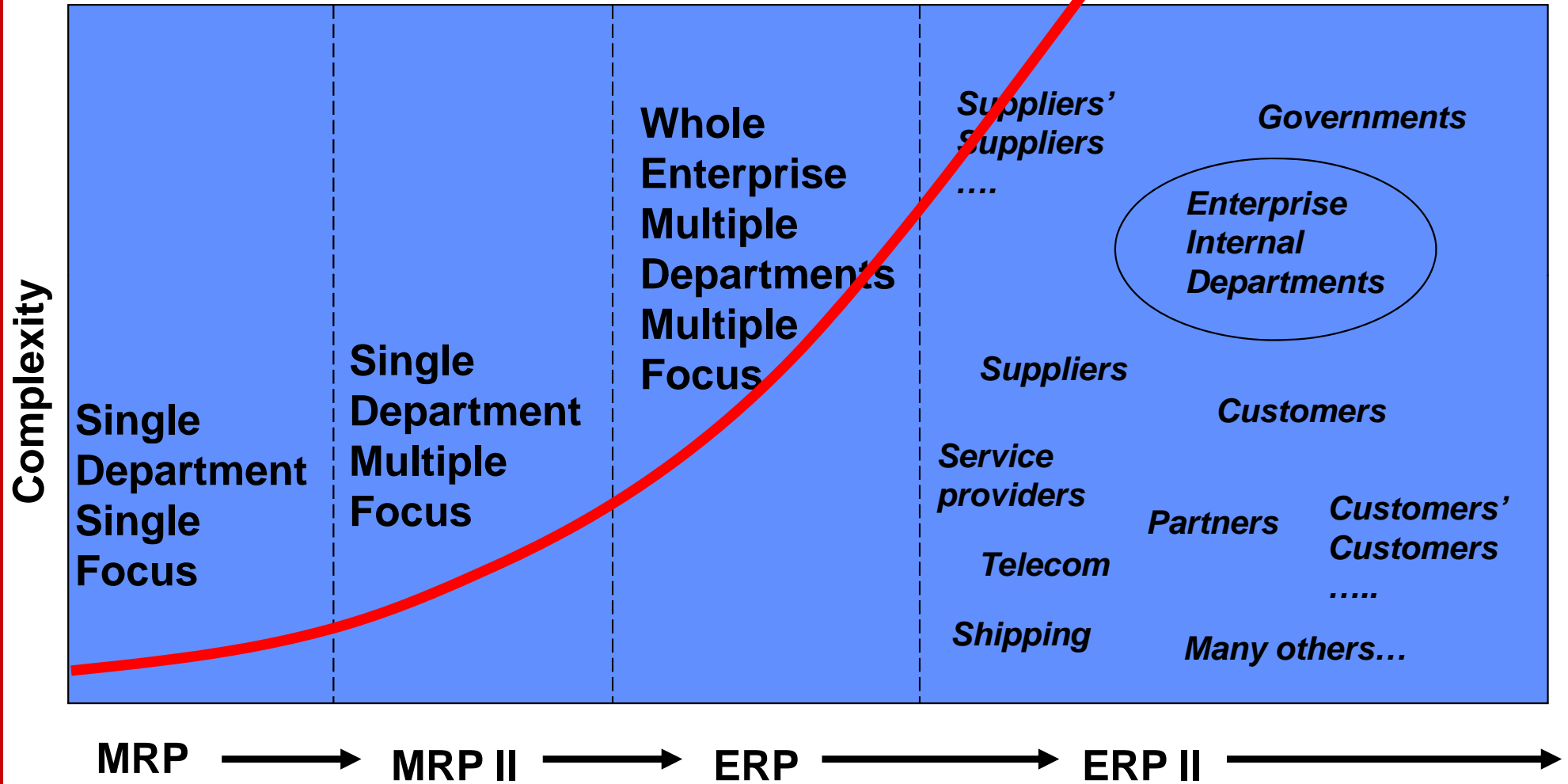


Getting To ERP II

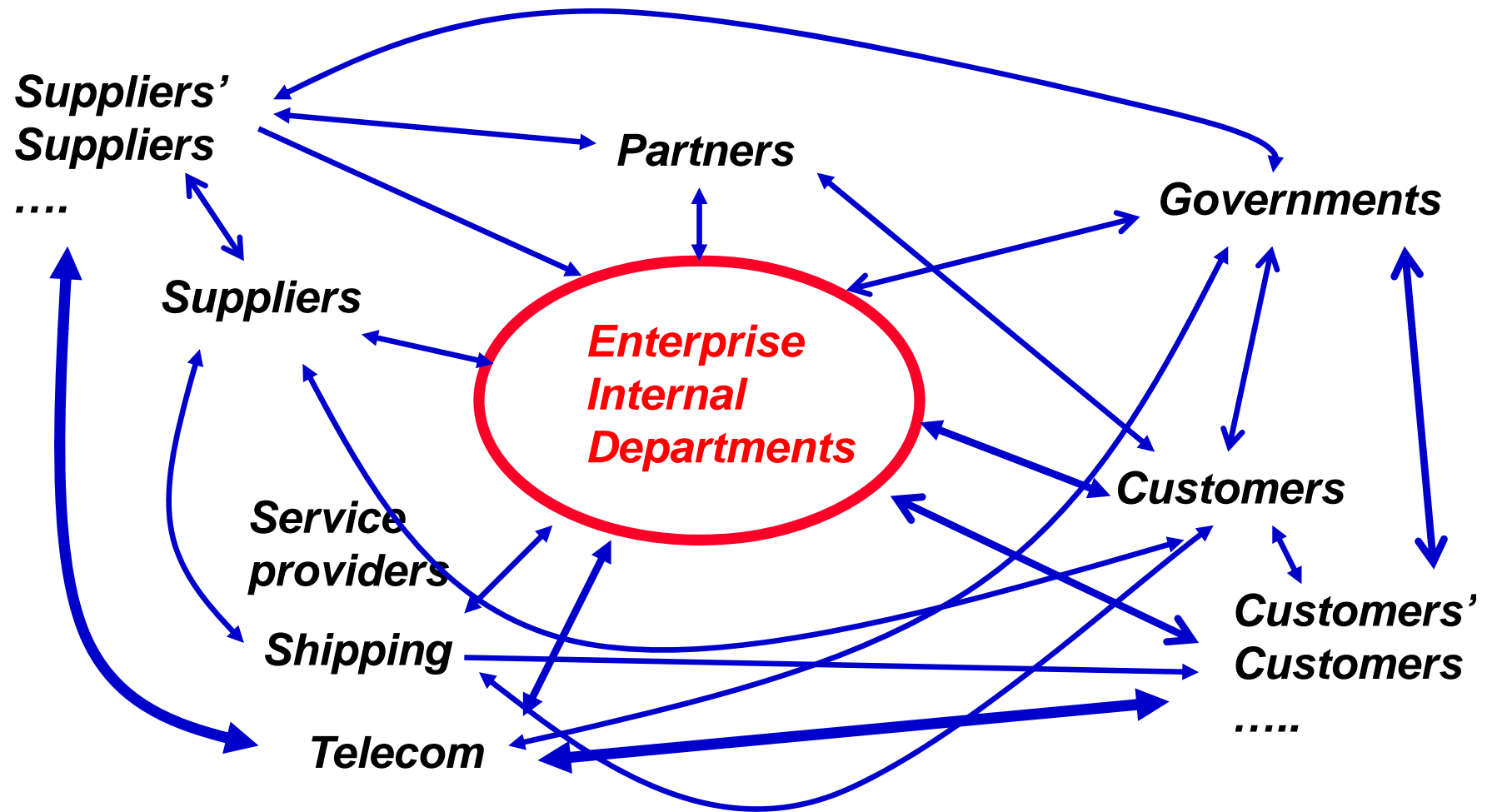


Source = Gartner Group

Project Complexity Curve



The ERP II Maze



I think you've got the picture....

ERP Project (un)Success Stories

- **Some Observations**

- **Claim Victory – 70%**

- **Complete Successful Project < 10%**

- Stopped before implementation**

- Started but failed to complete project – no ERP system**

- Partial completion of project**

- Project stopped after some modules implemented**

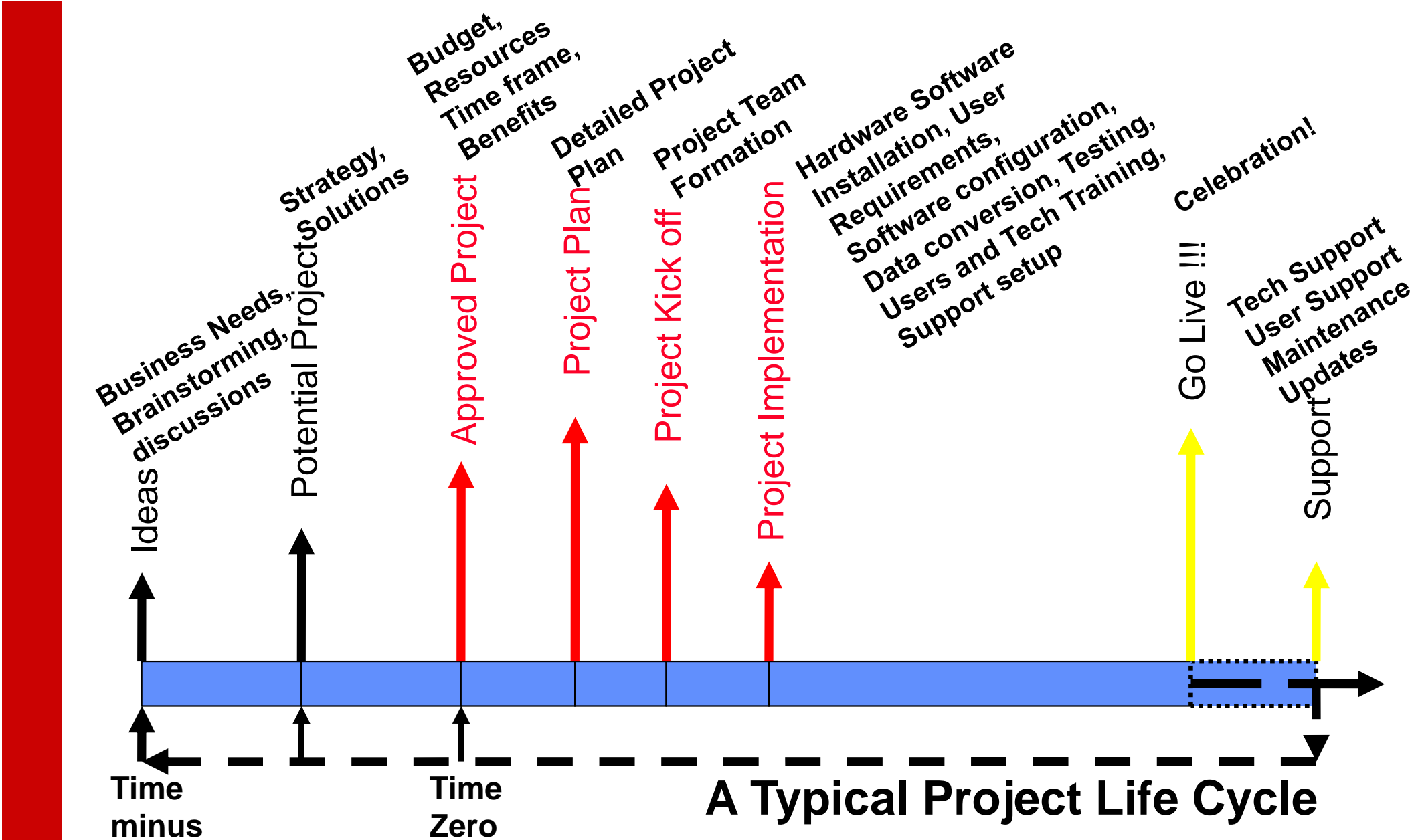
- Project stopped after some divisions/business units/locations implemented**

- Significantly over budget and/or major project delay**

- **System properly used after implementation**

- Initially - 70%**

- 2 years after – <50%**





A True Story.....

**Once upon a
time**

Company Background

- **A Top 3 IT company in the world**
- **Matrix Organization**
 - **by Region: US, Europe, Middle East & Africa, Latin America, Asia Pacific**
 - **by Multiple Business Units**
- **Top management decided to go ERP**
- **Called meeting at HQ invited Regional Executives & IT Directors, >300 attended**
- **Reached “consensus” to go ahead**

3.5 years Later

- **Company US\$50M poorer (this is called transfer of wealth to consultants)**
- **Result:**
 - **One Business Unit completed full implementation in US region**
- **Decision was made to set up a single system, running at HQ, to support worldwide operations**
- **Another 12 months, the Finance modules implemented in Europe for all BU**

Asia Pacific Project

- **Took 6 months after Europe implementation, succeeded to get agreement to implement Finance in AP**
- **AP - 11 countries/locations, 5 time zones**
 - **Aust, NZ, Indonesia, SGP, MLY, Thai, Phil, HKG, TWN, PRC, JPN**
- **AP Implementation Approach – BIG BANG!!!!**

AP Project Organization

- **Project Owner, AP CFO – in SGP**
- **Project Director- in HKG**
- **Project Manager**
 - **Users PM – in Sydney**
 - **Tech PM**
 - Applications PM - in HKG**
 - Infrastructure PM – in SGP**
- **ERP Technical Team – in US (very competent)**
- **ERP Data Centre – in US**
- **Worldwide Project Roll out Manager - EUR**

AP Project Kickoff

- **CFO delegated responsibility to Finance Operations Director (SGP)**
- **First Project Kick off Meeting – telephone conference**
- **Weekly, Monthly project meetings**
 - **At various time: 9 p.m., 5 a.m.,**
- **Initially user requests took minimum 1 week to get response from ERP team**

Work, Work and Work....

- **Organized 2 workshops (2 weeks) with ERP team in US, 15 users to finalize requirements**
- **Design and set up AP infrastructure – linkage to US and backup and COST EFFECTIVE**
- **Major work on preparing data migration, involving data cleansing – GIGO (Garbage in - Garbage Out)**
- **Major work on re-organization and re-engineering of Finance Departments in region**

And More Work Still....

- **1 month of systems testing in US**
- **Established successful testing criteria for each test (over 1000)**
- **1 month User Acceptance Tests in SGP**
 - **Over 100 users + US support team, flew in from different countries at different time**
 - **An administrative nightmare**
- **Followup procedure for unsuccessful tests**
- **Organized Management Acceptance workshop**
- **Setup post implementation support organization**

The Result

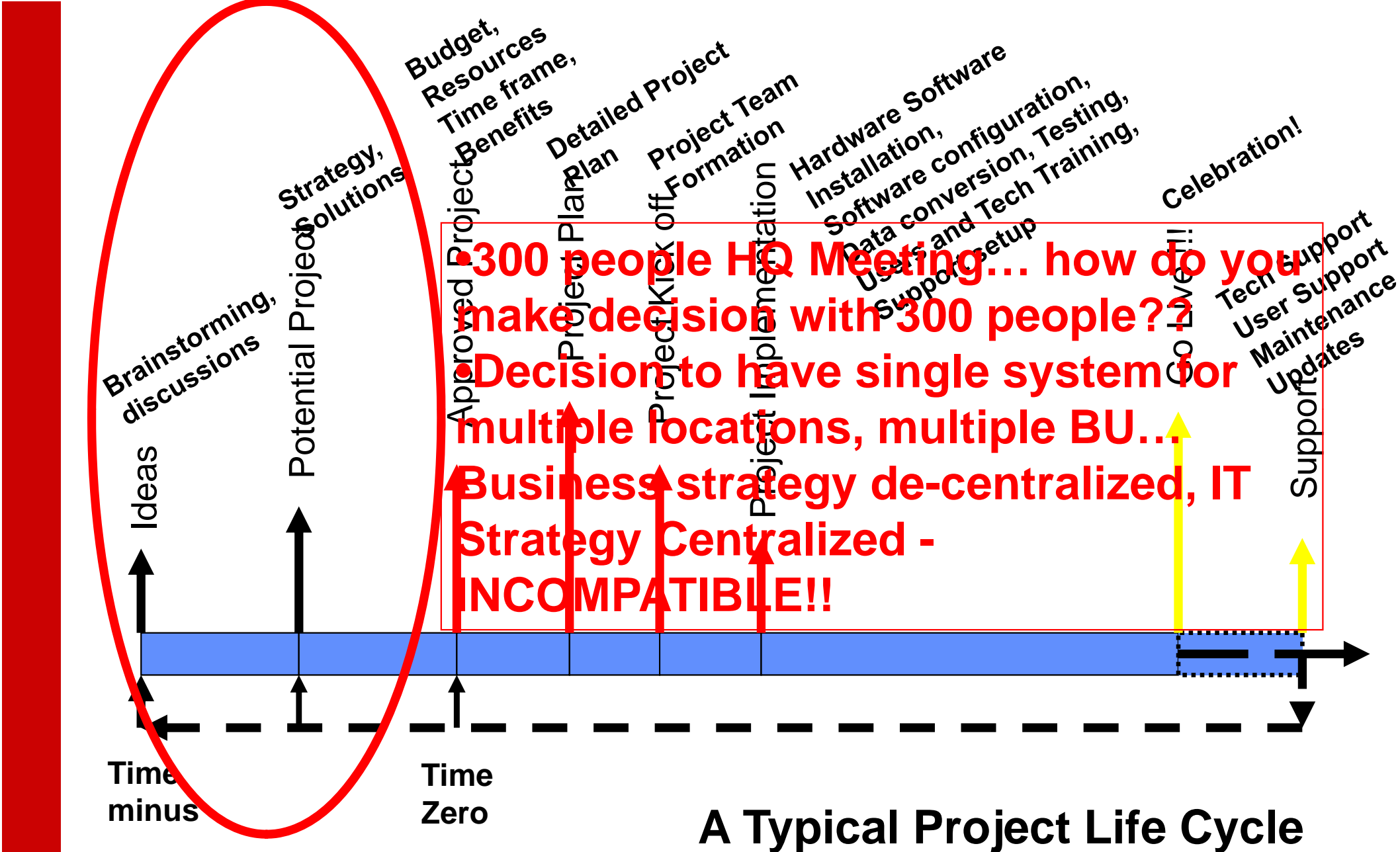
- After 9 months....
- AP Management officially accepted the system
- Declared VICTORY!



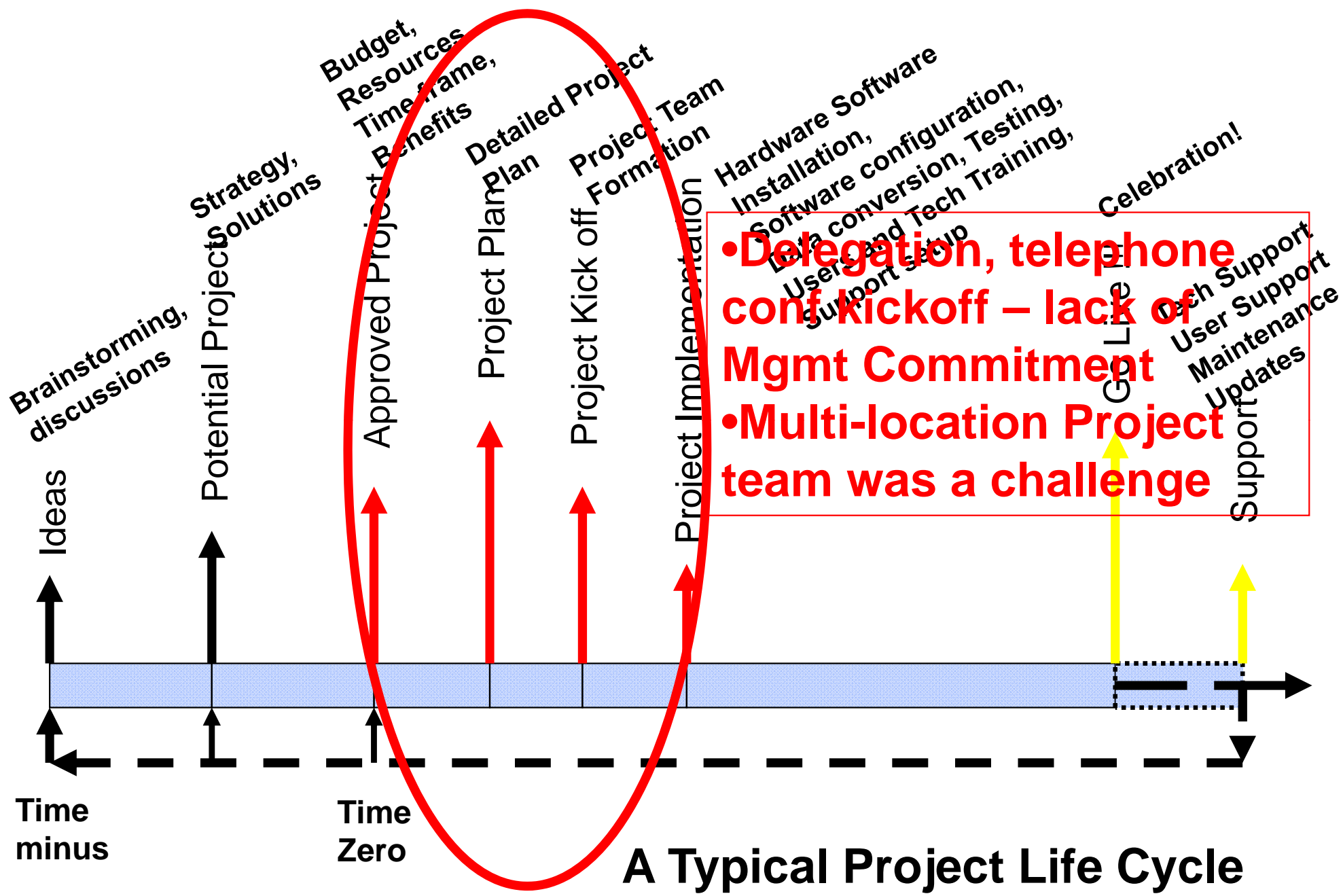
Another 6 months.... the company was taken over by a competitor



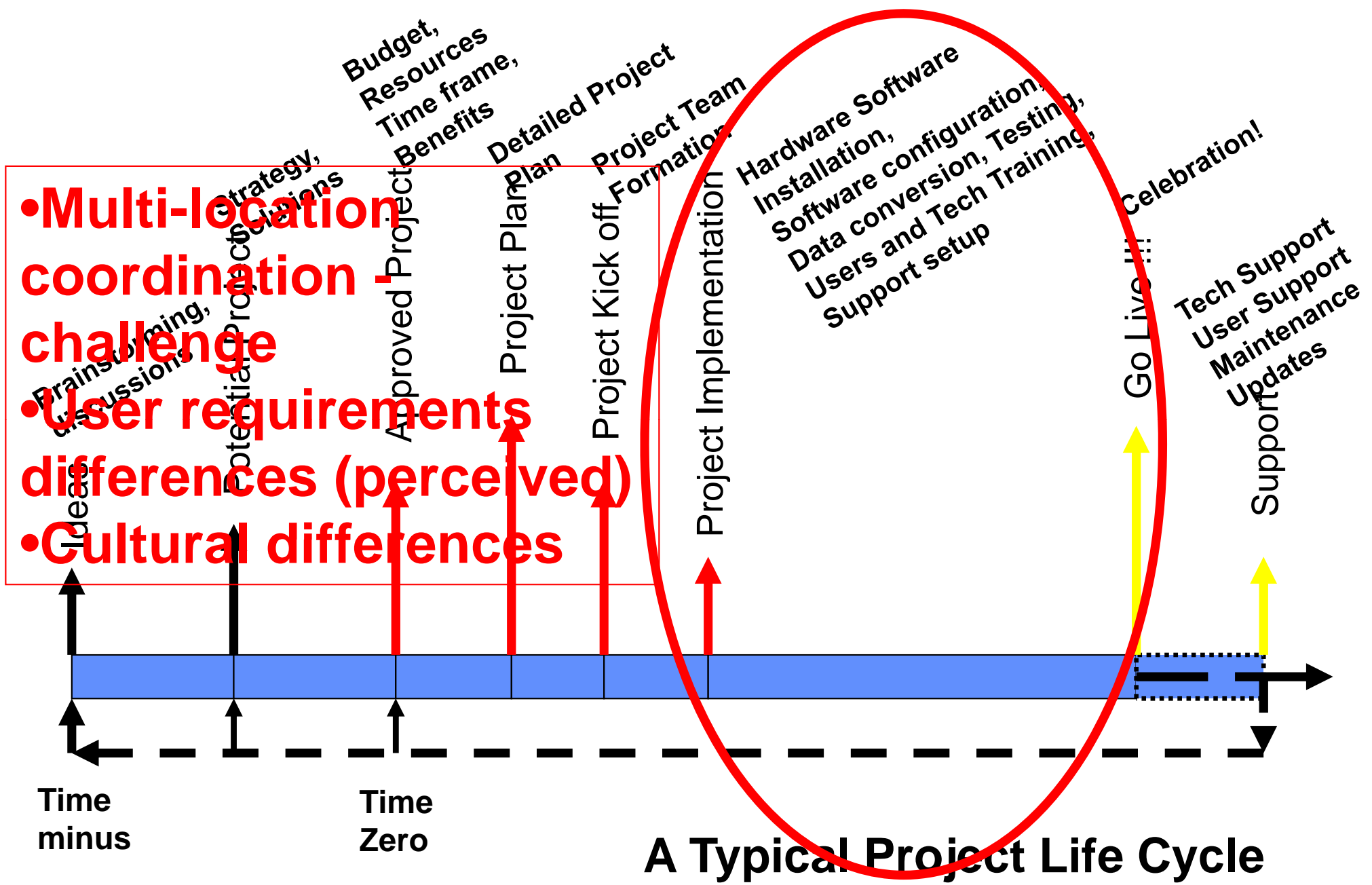
How Can the Project be Done Better?



A Typical Project Life Cycle



- Multi-location coordination challenge
- User requirements differences (perceived)
- Cultural differences



A Typical Project Life Cycle

Lessons Learned

- **Attention to detail, detail and more detail...**
- **Major reasons for project failure is with people**
- **Although competent technical is also very important**
- **AND Require competent ERP skills**
- **Lots of coordination and communication**
- **Must CONTROL and MANAGE project scope**
- **Must manage management expectations**

Thank You!

Q & A

