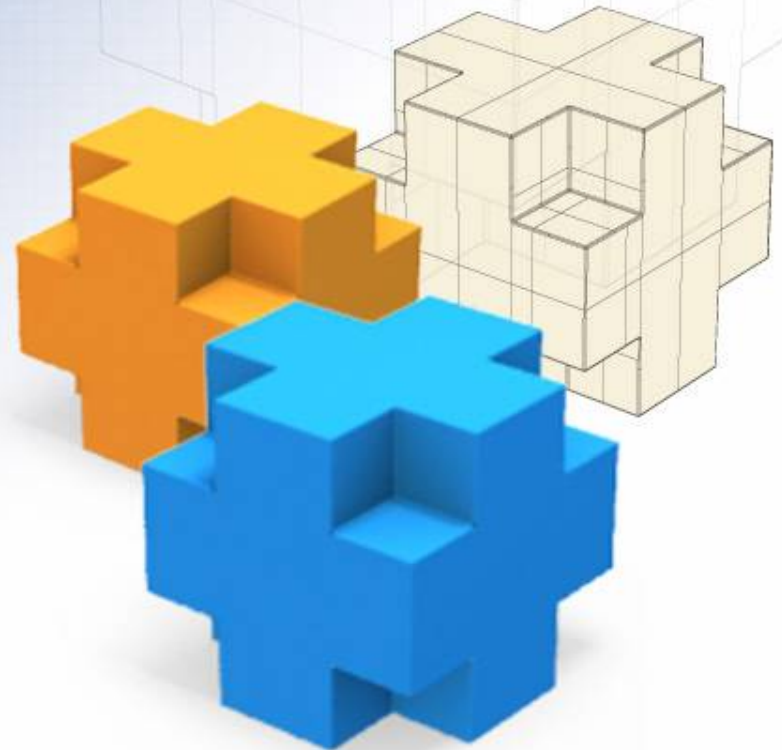


A perspective on IT Projects in the real world.

By: Stewart Pitt



- ❖ Introduction
 - Who am I, What is my background
 - ❖ Before the project
 - ❖ What is an IT project?
 - Project vs Programme
 - ❖ The real world of IT projects
 - ❖ Enterprise Architecture and Projects
 - ❖ A successful project
 - ❖ Managing expectation more important than scope?
 - ❖ Impact of technology adoption
 - ❖ Phasing delivery
 - ❖ Questions
 - ❖ Close
-

Who am I?

- ❖ Who am I?
 - Stewart Pitt (aka vandenBerg-Pitt)
- ❖ Why did I choose IT?
 - The advice of a Year 10 & 11 Math teacher, based on my math and problem solving abilities.
- ❖ Qualifications
 - BA Computing Information Systems (Monash University)
- ❖ Professional and extra curricular associations
 - Current
 - Manhattan Associates Product Council
 - Past
 - Australian Computer Society
 - The Data Management Association
 - IBM Asia Pacific Patent Application Review Panel
- ❖ How has my career progressed?
 - 1984-87 Computer Accounting Services
 - Dispatch Clerk
 - Trainee Operator
 - Senior Operator, Shift Leader
 - 1987-93 ANZ
 - Senior Operator
 - Support Programmer
 - Support Team Leader
 - Senior Analyst Programmer
 - 1993-2003 Independent Consultant
 - Telstra, Application Architect
 - ANZ Bank Senior Analyst
 - Royal and Sun Insurance, Application Architect
 - Pacific Telecom, Portland Oregon USA, Solution Architect
 - Ahold Information Systems, Greenville South Carolina USA
 - IBM Australia, Senior Solutions Architect
 - 2003 – Current Coles Group Limited
 - Enterprise Solutions Architect

Major Projects

❖ Telecommunications

- **AXIS Project 1993 – 1996**
 - Public Switched Telephone Network (PSTN) Service Ordering and Provisioning System
- **Wholesale Data Security**
 - Provide logical separation of Wholesale and Retail services and customers.
- **Operations Support Systems/Services**
 - Enterprise solution design

❖ Financial Services

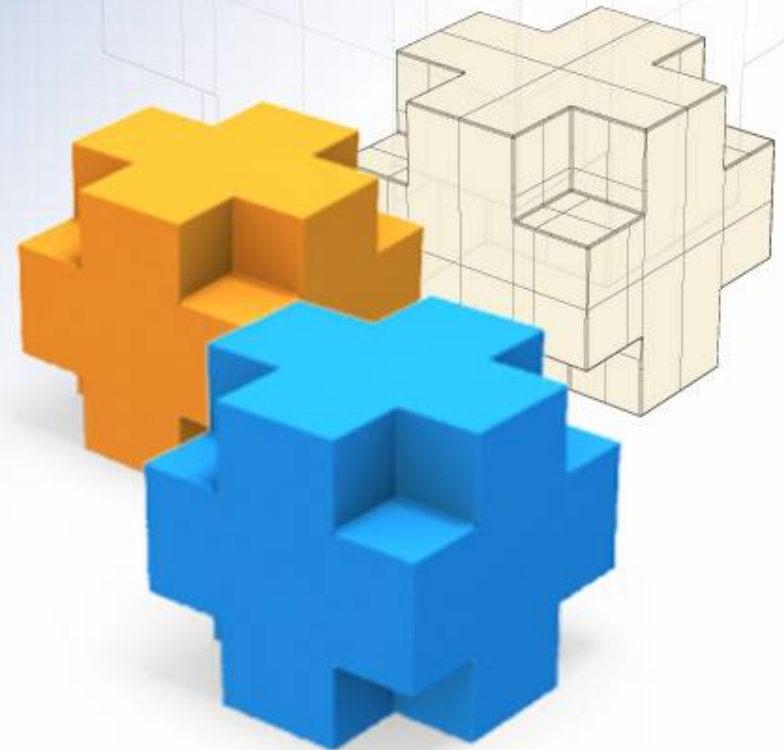
- **Recovery Management System**
 - Management system for Recovery of bad debt post regular collections process.

❖ Retail

- **Tiered Promotions (USA)**
 - Promotions and reward system for registered customers
- **B2B Electronic trading**
 - Paperless trading between retailer and suppliers
 - Supplier recipient create tax invoice
- **Transportation Management**
 - Management of Planning and execution transport operations
 - Carrier recipient create tax invoice

**It all begins before
projects are formed**

IT Portfolio management



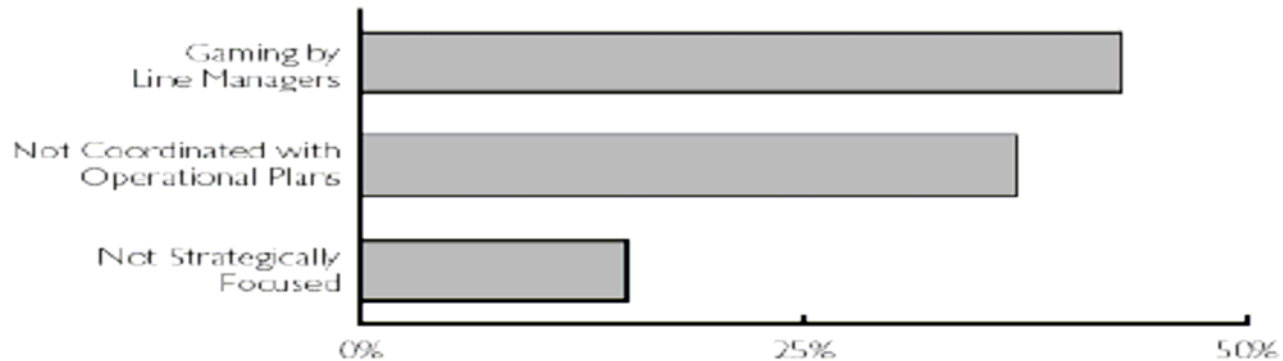
Balancing the IT portfolio and investment

- ❖ The challenges IT faces in balancing investment portfolios include:
 - Understanding project value and creating consensus
 - Keeping pace with evolving business needs
 - Aligning the portfolio with business priorities

Obstructions to Prioritization

FAILURE POINTS IN IT PORTFOLIO PRIORITIZATION

WHAT CFOs CITE AS COMMON CHALLENGES TO EFFECTIVE PORTFOLIO PRIORITIZATION



n = 201.

Source: Working Council for CFOs research

SOURCE: APPLICATIONS EXECUTIVE COUNCIL, "FROM BUSINESS CASE TO BUSINESS VALUE," CORPORATE EXECUTIVE BOARD, 2004.

A sample Portfolio Management Lifecycle

❖ The IT portfolio is never static

- Portfolio is constantly under pressure from changes in:
 - Business objectives
 - Risk profile
 - Industry

	<i>Understanding Business Priorities</i>	<i>Calibrating the Portfolio</i>	<i>Keeping Pace with Change</i>
Common Challenges	<ul style="list-style-type: none">▪ Aligning the IT portfolio with the business' needs▪ Steering the portfolio to add more strategic value▪ Gaining representative business input	<ul style="list-style-type: none">▪ Engaging business leadership▪ Depoliticizing project selection▪ Identifying projects with the highest potential▪ Standardizing business case criteria	<ul style="list-style-type: none">▪ Maintaining project sponsorship through change and providing up-to-date visibility▪ Ensuring the project queue reflects current business objectives▪ Monitoring changes in project risk

What is a project?

In the real world



What is a project?

❖ Programme

■ Noun

- 1 a planned series of events.
- 2 a set of related measures or activities with a long-term aim.

❖ Project

■ Noun

- 1 an enterprise carefully planned to achieve a particular aim.
- 2 a piece of research work by a school or college student.

■ Verb

- 1 estimate or forecast on the basis of present trends.
- 2 plan.
- 3 extend outwards beyond something else; protrude.
- 4 throw or cause to move forward or outward.

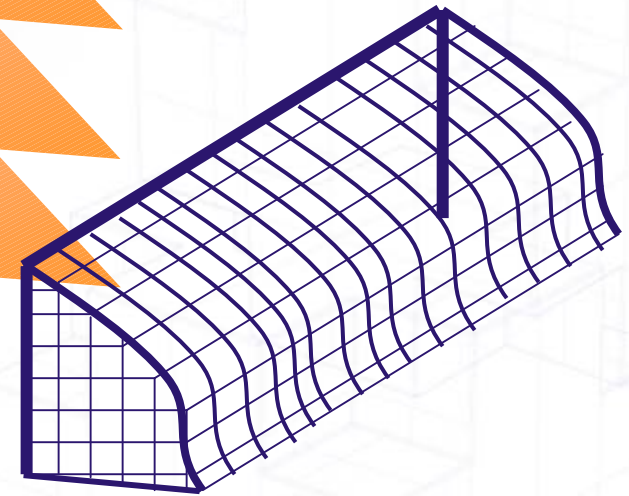
source www.askoxford.com

The Ideal world of IT projects

❖ All team “Shooting” for the same goal



Stakeholders
Sponsor(s)
Impacted Groups
Technology



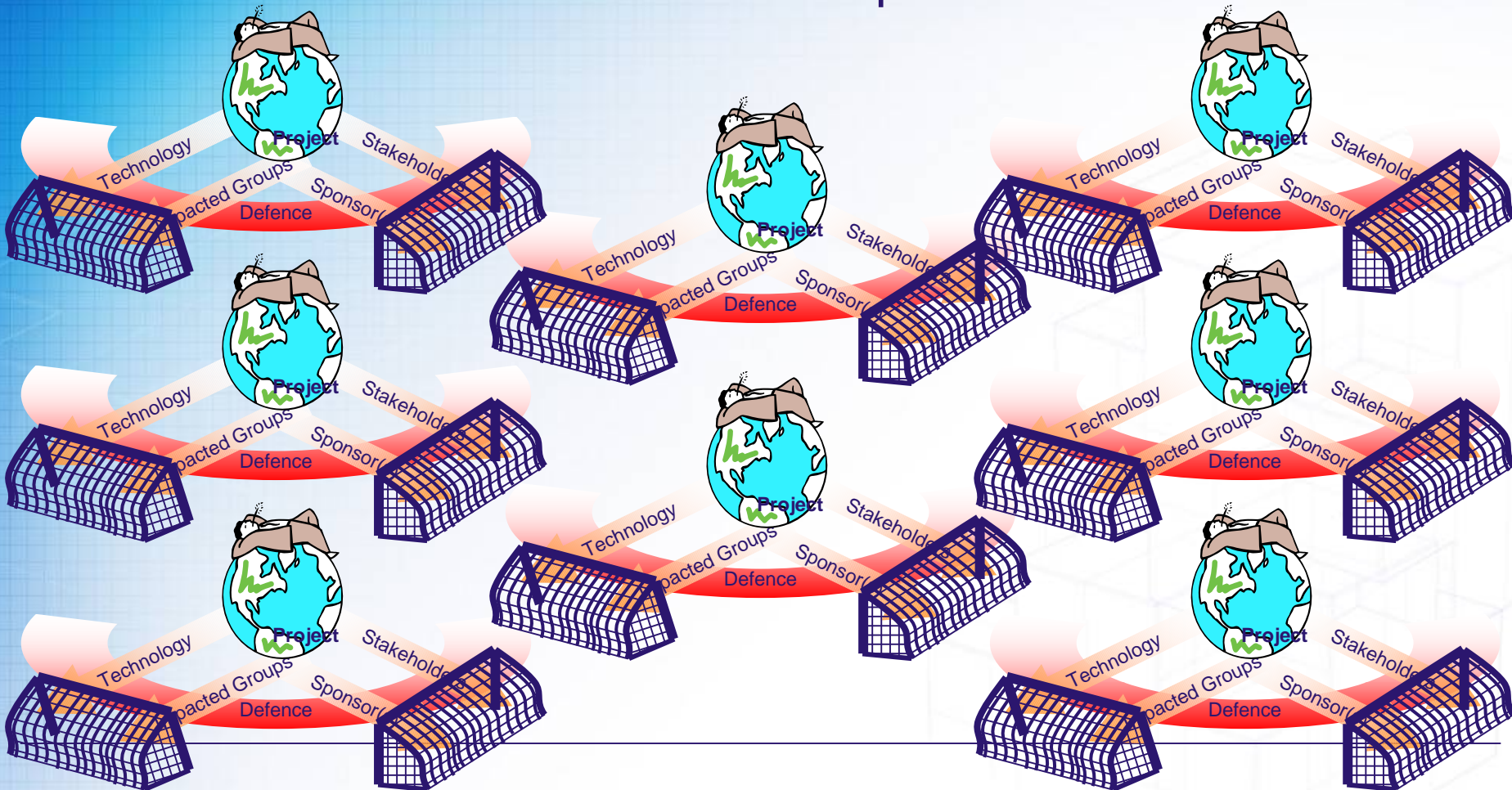
The real world of IT projects

❖ Teams with knowledge and goals



The real real world of IT projects







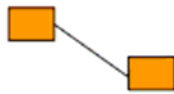




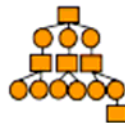
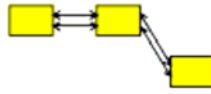

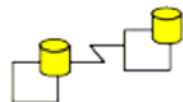


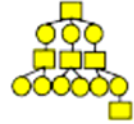
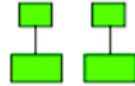
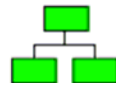
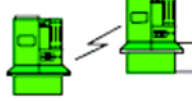









- ❖ Many projects with their own goals
- ❖ Mixed with inter-dependencies



Enterprise Architecture and Projects



The Zachman EA Framework

	DATA <i>What</i>	FUNCTION <i>How</i>	NETWORK <i>Where</i>	PEOPLE <i>Who</i>	TIME <i>When</i>	MOTIVATION <i>Why</i>	
SCOPE (CONTEXTUAL)	List of Things Important to the Business 	List of Processes the Business Performs 	List of Locations in which the Business Operates 	List of Organizations Important to the Business 	List of Events/Cycles Significant to the Business 	List of Business Goals/Strategies 	SCOPE (CONTEXTUAL)
<i>Planner</i>	ENTITY = Class of Business Thing	Process = Class of Business Process	Node = Major Business Location	People = Major Organization Unit	Time = Major Business Event/Cycle	Ends/Means = Major Business Goal/Strategy	<i>Planner</i>
BUSINESS MODEL (CONCEPTUAL)	e.g. Semantic Model 	e.g. Business Process Model 	e.g. Business Logistics System 	e.g. Work Flow Model 	e.g. Master Schedule 	e.g. Business Plan 	BUSINESS MODEL (CONCEPTUAL)
<i>Owner</i>	Ent = Business Entity Rein = Business Relationship	Proc. = Business Process I/O = Business Resources	Node = Business Location Link = Business Linkage	People = Organization Unit Work = Work Product	Time = Business Event Cycle = Business Cycle	End = Business Objective Means = Business Strategy	<i>Owner</i>
SYSTEM MODEL (LOGICAL)	e.g. Logical Data Model 	e.g. Application Architecture 	e.g. Distributed System Architecture 	e.g. Human Interface Architecture 	e.g. Processing Structure 	e.g. Business Rule Model 	SYSTEM MODEL (LOGICAL)
<i>Designer</i>	Ent = Data Entity Rein = Data Relationship	Proc. = Application Function I/O = User Views	Node = I/S Function (Processor, Storage, etc) Link = Line Characteristics	People = Role Work = Deliverable	Time = System Event Cycle = Processing Cycle	End = Structural Assertion Means = Action Assertion	<i>Designer</i>
TECHNOLOGY MODEL (PHYSICAL)	e.g. Physical Data Model 	e.g. System Design 	e.g. Technology Architecture 	e.g. Presentation Architecture 	e.g. Control Structure 	e.g. Rule Design 	TECHNOLOGY MODEL (PHYSICAL)
<i>Builder</i>	Ent = Segment/Table/etc. Rein = Pointer/Key/etc.	Proc. = Computer Function I/O = Data Elements/Sets	Node = Hardware/Systems Software Link = Line Specifications	People = User Work = Screen Format	Time = Execute Cycle = Component Cycle	End = Condition Means = Action	<i>Builder</i>
DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)	e.g. Data Definition 	e.g. Program 	e.g. Network Architecture 	e.g. Security Architecture 	e.g. Timing Definition 	e.g. Rule Specification 	DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)
<i>Sub-Contractor</i>	Ent = Field Rein = Address	Proc. = Language Statement I/O = Control Block	Node = Address Link = Protocol	People = Identity Work = Job	Time = Interrupt Cycle = Machine Cycle	End = Sub-condition Means = Step	<i>Sub-Contractor</i>
FUNCTIONING ENTERPRISE	e.g. DATA	e.g. FUNCTION	e.g. NETWORK	e.g. ORGANIZATION	e.g. SCHEDULE	e.g. STRATEGY	FUNCTIONING ENTERPRISE

Strategic alignment assessment

1

Formulation of Functional Project Queues

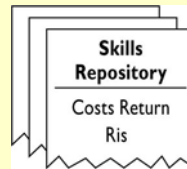
Functional governance committees formulate project queues



2

Business Case Assessment

Standard template used to assess project costs, benefits, and risks



3

Strategy Diagnosis Interviews

Information Management consultants interview functional VPs to gather business strategies



8

Cross-Functional Prioritization

Prioritization occurs semiannually or as required for enterprise projects



4

Strategic Alignment Assessment

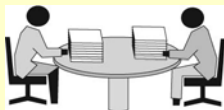
Proposed projects mapped to articulated business strategies

		Functional Strategies					
		A	B	C	D	E	F
Proposed Projects							

7

Baseline Recalibration

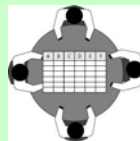
Two Program Management staff gather information on IT spending and project performance for cross-functional prioritization



6

Functional Prioritization

Strategic alignment assessment used to self-prioritize functional project queue



5

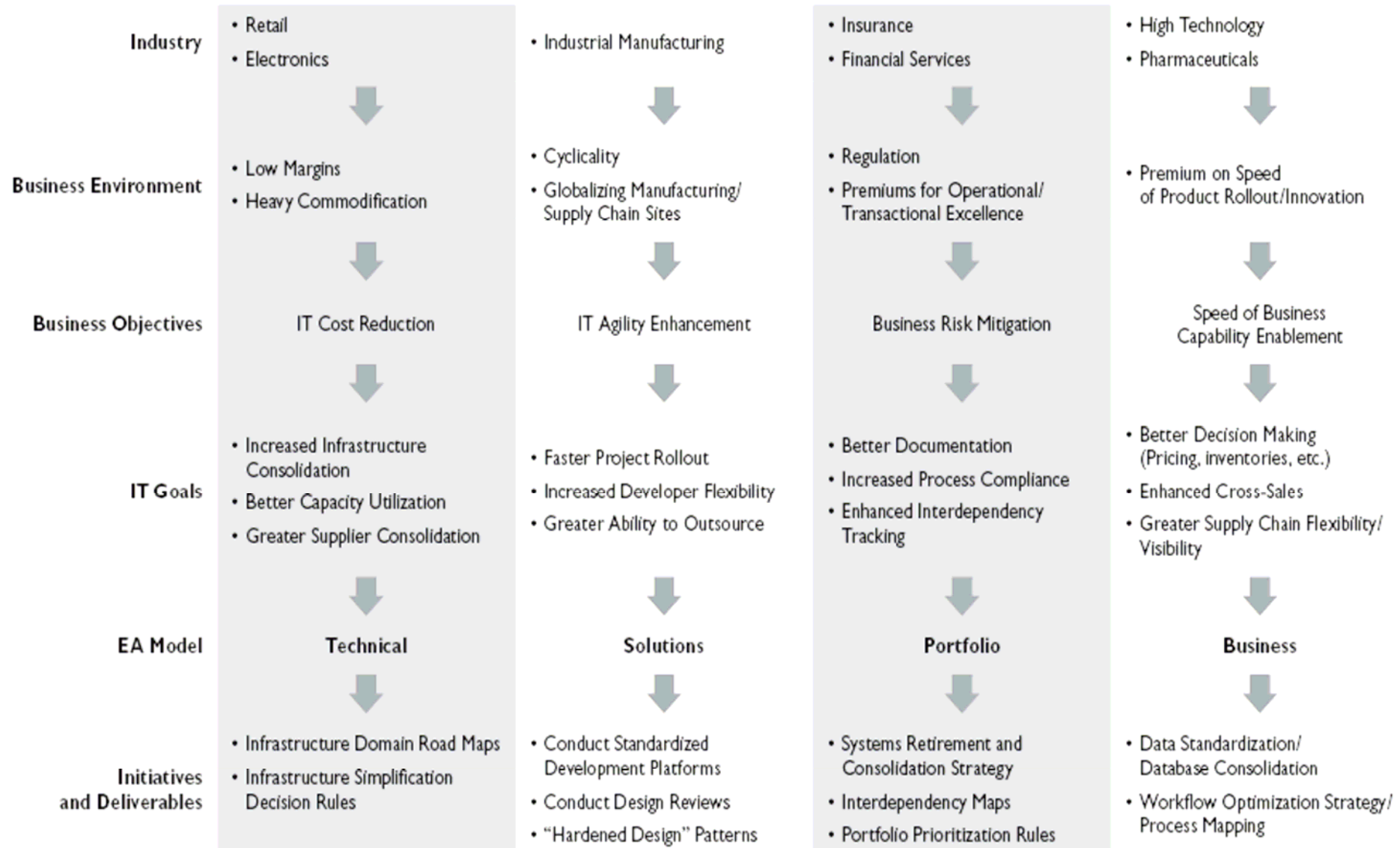
Project Scoring

Projects scored on low/medium/high scale based on contribution to business strategies

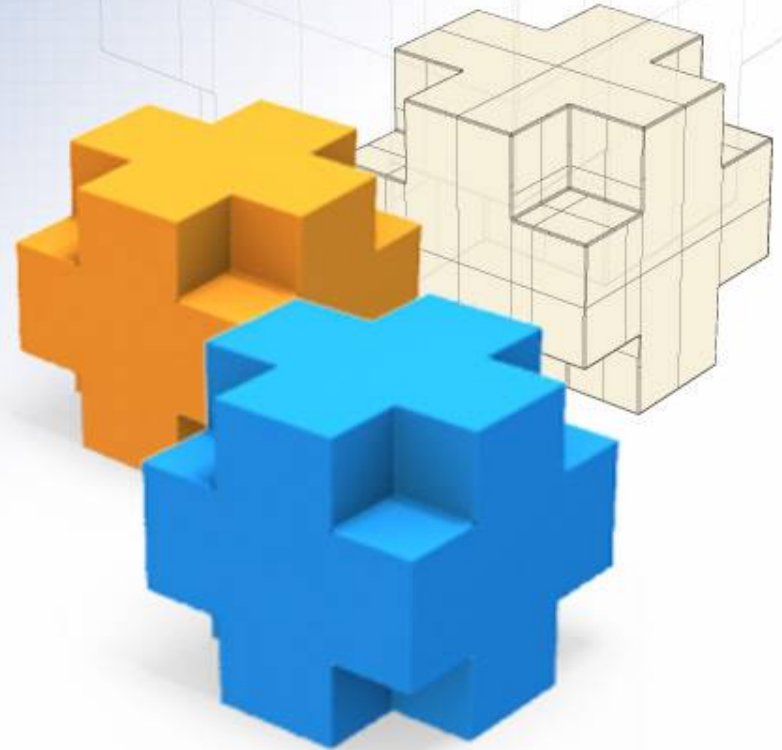
		Functional Strategies					
		A	B	C	D	E	F
Skills Repository		Low	High	High	Medium	Low	Medium

Mapping EA models to business and IT objectives

Mapping EA Models to Business and IT Objectives



Projects gone bad - 1



- ❖ Not an IT project but shows the importance of effective communication.
 - ❖ Scope a new summer range of T-Shirts
 - ❖ The process:
 - Send out a specification to prospective suppliers
 - Receive samples
 - Select supplier
 - Issue order and final specification
 - Supplier manufactures product
 - Goods forwarded to distribution centre
 - ❖ The outcome only 50% of stock arrived.
-

Projects gone bad – 1 cont.

So what happened?

❖ Specification

- Long Sleeve Polo shirt
- Short Sleeve Polo shirt

❖ Samples

- Received and assessed

❖ Order

- X units of Long Sleeve
- X units of Short Sleeve

❖ Delivered

- Goods arrive staff identify short delivery, only 50% delivered
- Goods inspected to find

❖ Sold

- Every unit sold at full price



PO: 123445

X of long sleeve	@ \$
X of short sleeve	@ \$
Refer Page 2	
Total:	\$

Page 1 of 2



❖ What can be learnt from this?

■ Prevention

- Better communication could have prevented this situation.
- Initiator should have requested response to ensure PO directives were understood.

■ Early error detection

- Governance processes and check points could have captured this earlier in the manufacturing process.

❖ How does this apply to IT Projects?

■ IT projects follow a very similar process

- Idea > Specification > Solution Concept > Final Specification > Engage build team > Delivery > Test > User Accept > Implement.
-

A successful project

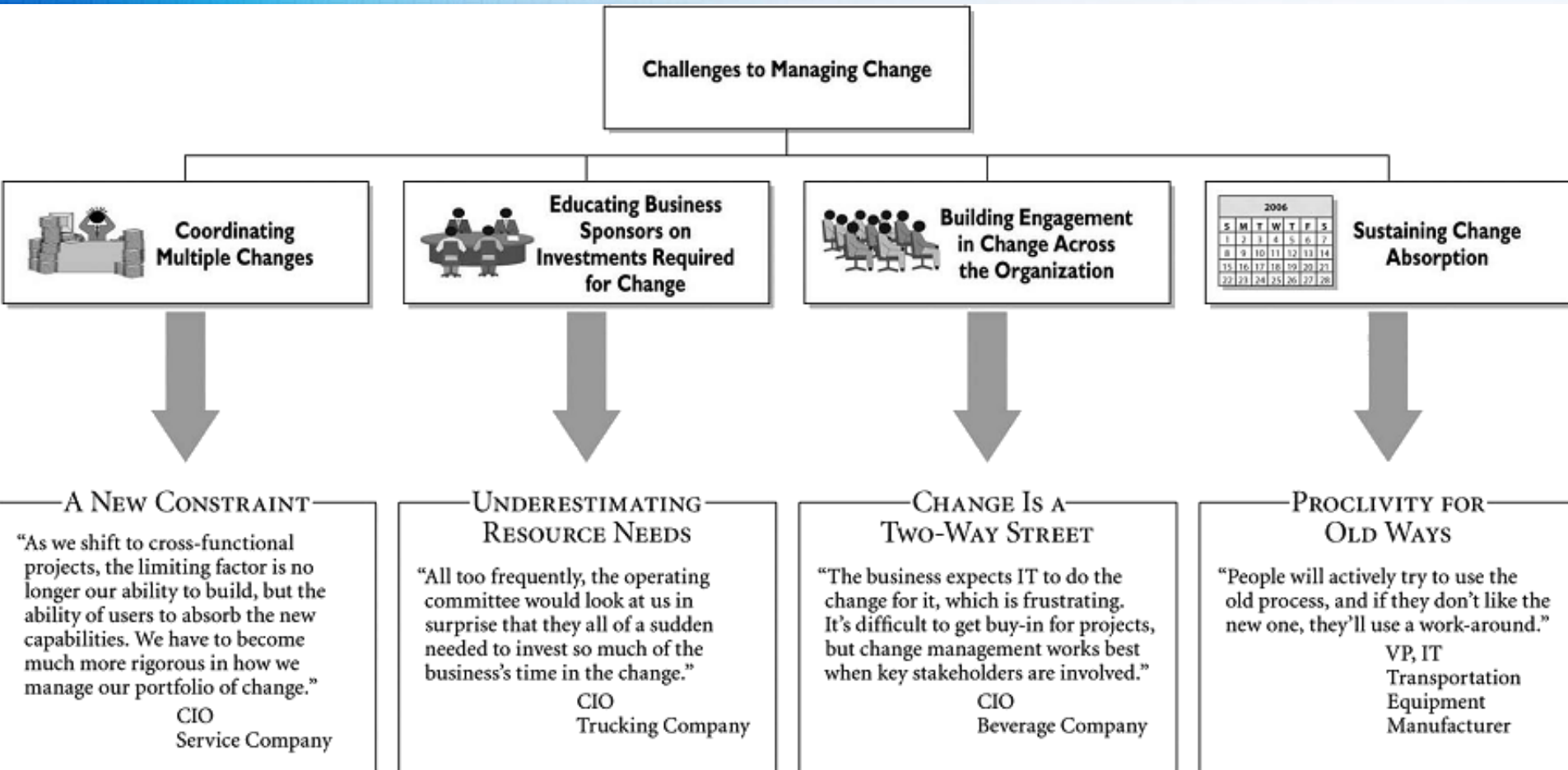
What is it?



What defines a successful project?

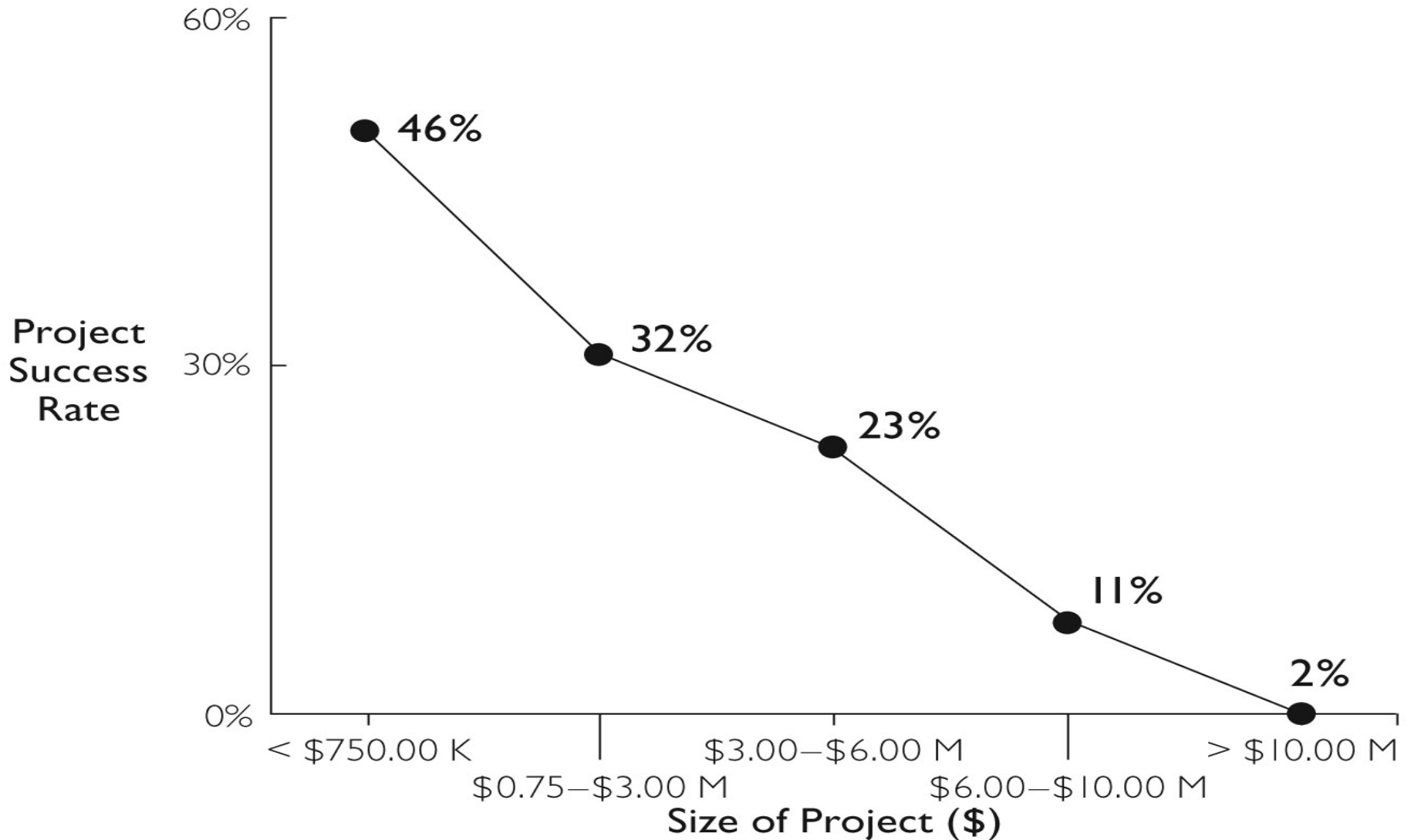
- ❖ On time
- ❖ Within budget?
- ❖ Delivered capability?
- ❖ Return on investment?
- ❖ Great use of technology?
- ❖ Technically elegant?
- ❖ Delivers extensible IT components?
- ❖ Meets all business requirements?
- ❖ Why was the project instigated?
 - Business benefits?
 - Develop new offerings
 - Reduce cost of doing business
 - Improve business capacity
 - Win new customers
 - Keep existing customers
 - Meet regulatory requirements
 - Risk mitigation
 - For the fun of it?
 - In some companies
 - or only at home!

Barriers for a successful change



How bad are we?

Rate of Successful Project Delivery

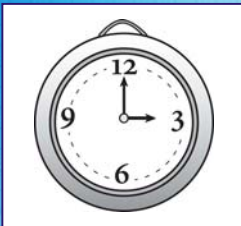


Assessing the risks



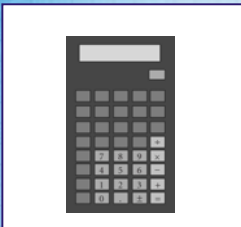
Project Staffing

- Resource availability
- Skills availability
- Availability of experienced staff



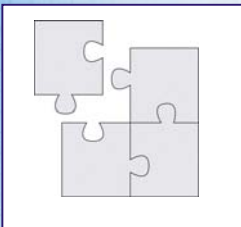
Project Schedule

- Realism of schedule
- Criticality of on-time delivery



Project Scope

- Size and complexity of project
- Measurability of success
- Ability to accommodate scope reduction without loss of critical functionality



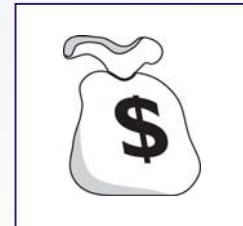
Project Dependencies

- Dependence on other projects
- Dependence on externally developed technologies



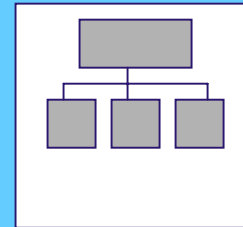
Technological Risk

- Newness of technology to company and world
- Scalability
- Data security and privacy
- Disaster recovery capabilities



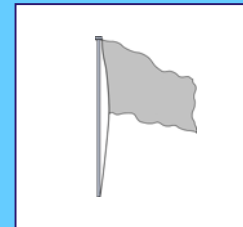
Business Risk

- Business impact of system downtime
- Business impact of lost or improperly released data



Organizational Risk

- Project process repeatability
- Organizational diversity of project team



Political Risk

- Senior management commitment
- Likelihood that funding is jeopardized

So are IT projects really that different?

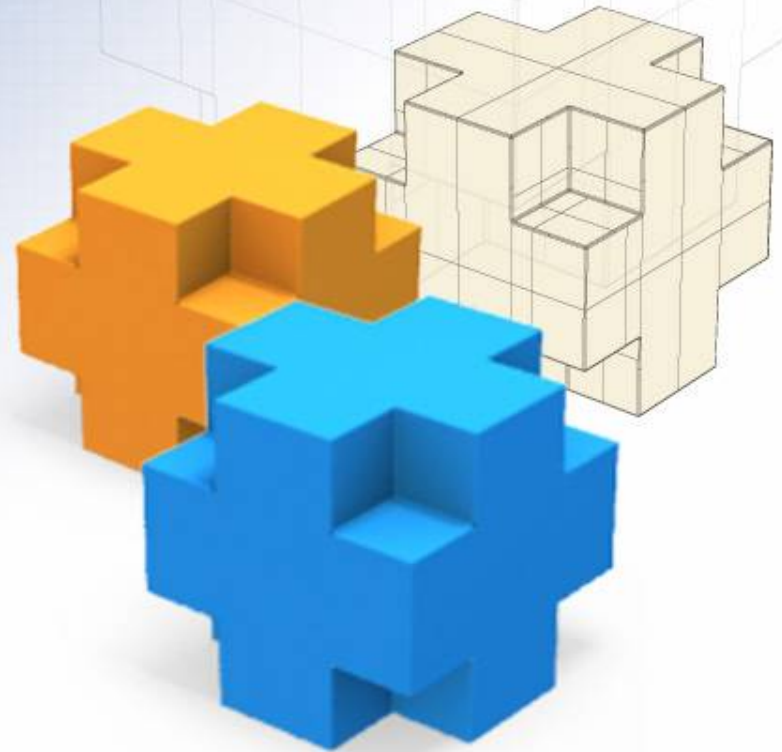
❖ Building a home

- Capture ideas
- Engage a designer
 - Develop concept
- Assess feasibility review design
- Develop technical drawings
 - Soil tests
 - Engineering Specs
 - Working drawings
- Review design
- Go to Market (RFQ)
- Agree Time and Cost
- Begin build
 - Trades perform tasks as per plan
 - Inspections occur as pre regulations
 - Final clean
- Hand over to Owner
- Warranty

❖ Building an IT solution

- Gather requirements
- Engage an Architect
 - Develop conceptual design
- Assess feasibility review design
- Go to Market (RFP)
- Agree time and cost
- Develop detailed specification
 - Functional specifications
 - Technical design
- Revise time and cost
- Begin Build
 - Teams perform tasks as per plan
 - System elements are reviewed against design
 - Elements tests as units
- Begin test
 - System Test
 - Integration test
 - E2E test
 - UAT test
 - QA test
 - Dress rehearsal
- Go-Live
- Warranty

Project success - 1



❖ Project

- Telephone Service ordering and provisioning

❖ Business Environment

- Pending introduction of Industry change to allow competition
- One of 4 major projects in this business
 - Ordering and provisioning engine
 - Billing system
 - Front end ordering systems x 2

❖ Requirement

- To replace the existing application to enable flexibility in the ordering and provisioning of services.
-

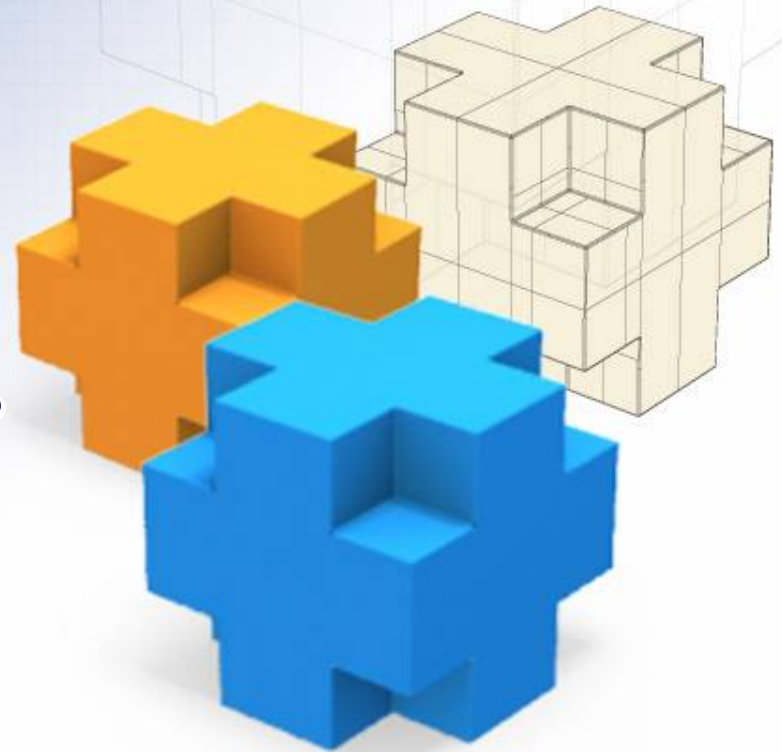
❖ Scope changes

- Project needed to take on the change to allow provisioning of long distance services for other carriers
- Project for ordering engine was moving at a faster pace than the projects for the front ends
 - A scope change was accepted to build a testing tool for order entry
 - Ordering project was ready (up to 12 months) earlier than the front end applications.
 - An additional scope change was accepted to develop the testing tool further for implementation into production.

❖ Outcome

- Project delivered to a revised schedule due to first scope change
 - Business benefits were achieved up 12 months earlier due to the acceptance of the second scope change
-

**Is managing expectation
more important than scope?**



Managed Expectation more important than Scope?

- ❖ Have you ever sold a house at auction?
 - ❖ Are Real Estate agents just good project managers?
 - Plant the seed of a big price
 - Get a contract signed
 - Play down opportunity for good price
 - Auction day convince you to set a lower reserve
 - Any price above the reserve feels like a great outcome.
 - ❖ How do they do it?
 - Right from the start they are managing your expectations
 - ❖ Where do we go wrong?
 - We start with an optimistic goal?
 - And continue to try to meet it even when we realise it is slipping out of reach.
-

Scope and commercial realities

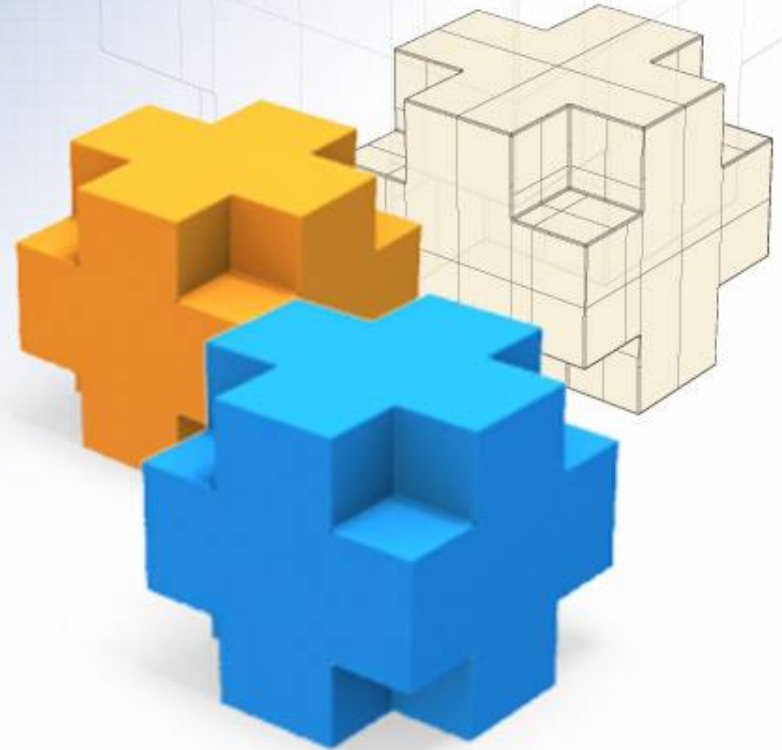
- ❖ When should it be locked?
 - Never!
 - ❖ Why change scope?
 - A project is a journey of evolution
 - Businesses need to be adaptive
 - The world changes
 - Gaps identified
 - ❖ Managing scope
 - Accepting scope changes is normal
 - Assess changes to determine impact and assess with the same criteria you would use to determine the feasibility of a project, Benefit to Cost
-



Projects as a component of programs

- ❖ Rarely is a single project the only IT change that is happening in a business.
 - ❖ Common for independent projects to proceed in parallel
 - ❖ When a business undertakes major change or transformation, many projects are often managed as a program of work.
 - Increases pressure on scope
 - Increases pressure on planning
 - Impacts/changes on one project can cause time and cost impacts on other projects
-

Projects gone bad - 2



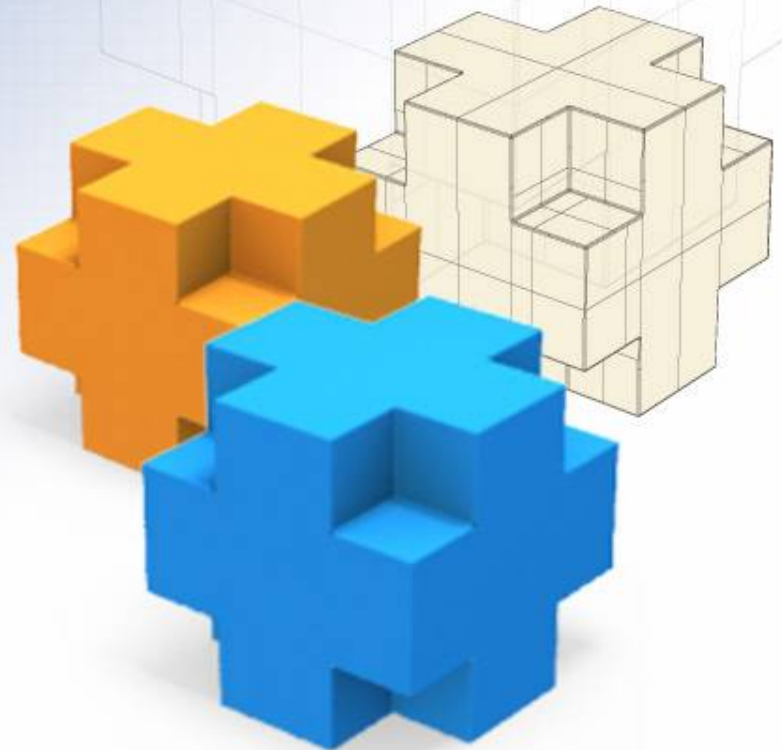
- ❖ Scope
 - Implement security such that Retail and Wholesale service information is logically divided
 - ❖ Project initiated with comprehensive set of requirements
 - All requirements marked as mandatory
 - ❖ Solution impact to IT Portfolio
 - 150 Applications identified as impacted
 - 1 new infrastructure application identified for centralized security control
 - ❖ Solution costed at \$100mil \pm 30%
 - ❖ Solution presented back to the business sponsor
 - Sponsor went a shade of white I have never seen again
 - Sponsor chooses that moment to expose his budget. \$2mil.
-

- ❖ Where to from there?
 - ❖ Project could not be abandoned
 - Government made delivery of the project a condition for the company to continue to trade
 - ❖ Recovering the project
 - Project assessed the solution against scope
 - Aim to determine which components and functions delivered minimum capability to satisfy Government conditions
 - ❖ New project solution
 - Thru the review process it was identified that the requirement to have centralized control accounted for 90% of the cost.
 - The requirement for centralized control was removed from the project. \simeq 20% of requirement.
-

❖ Project success

- Project implemented changes across 150 applications.
 - Satisfied the Governments conditions
 - At 10% of the original solution cost
 - Saving \$90Mil.
-

Impact of technology adoption



Technology adoption impacts to scope

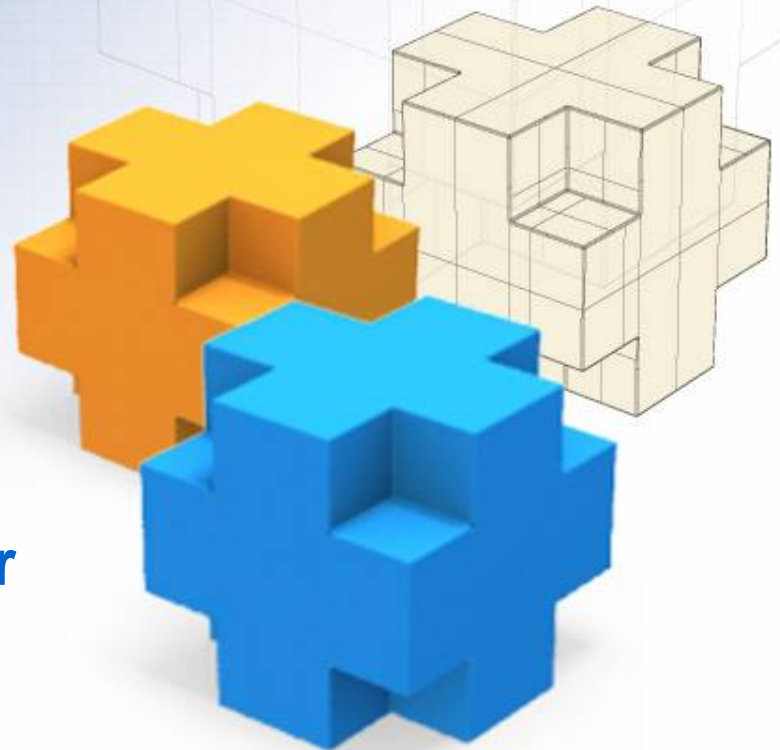
- ❖ A project that introduces new technology to an organisation also brings implied scope elements
 - IT Operational Management processes
 - Integration to IT Operational monitoring tools
 - Development of IT governance processes
 - Training of IT staff
- ❖ Adopting new technology is also a risk to the project scope thru:
 - Discovery of technology capability
 - Design changes as knowledge increases, due to
 - Technical limitations
 - Identification of better approaches

Building competencies with projects

- ❖ The introduction of new applications or technology puts pressure on time and cost of projects.
 - Knowledge grows with the project
 - Early decisions may be challenged as knowledge grows
 - Unexpected difficulties may be encountered.

Project Success - 2

Tiered promotions for US Retailer



❖ Project

- To implement a new promotions system for a supermarkets retailer trading with many brands in the eastern half of USA.

❖ Requirement

- To implement promotion capability for one of the companies many brands to reward customers based on the amount they spent in a single transaction.

❖ Solution

- Original set of requirements assumed a single brand solution.
- IT challenged the project scope, to consider future implementation to all of the company's brands.

❖ Timeframe

- The project was time boxed so the business could launch with a Thanksgiving promotion.
 - 16 weeks to deliver the solution, 12 weeks for IT.
-

❖ What the project delivered

■ Application to:

- Setup Tiered promotions
- Execute Tiered promotions
- Monitor Tiered promotions

■ Infrastructure

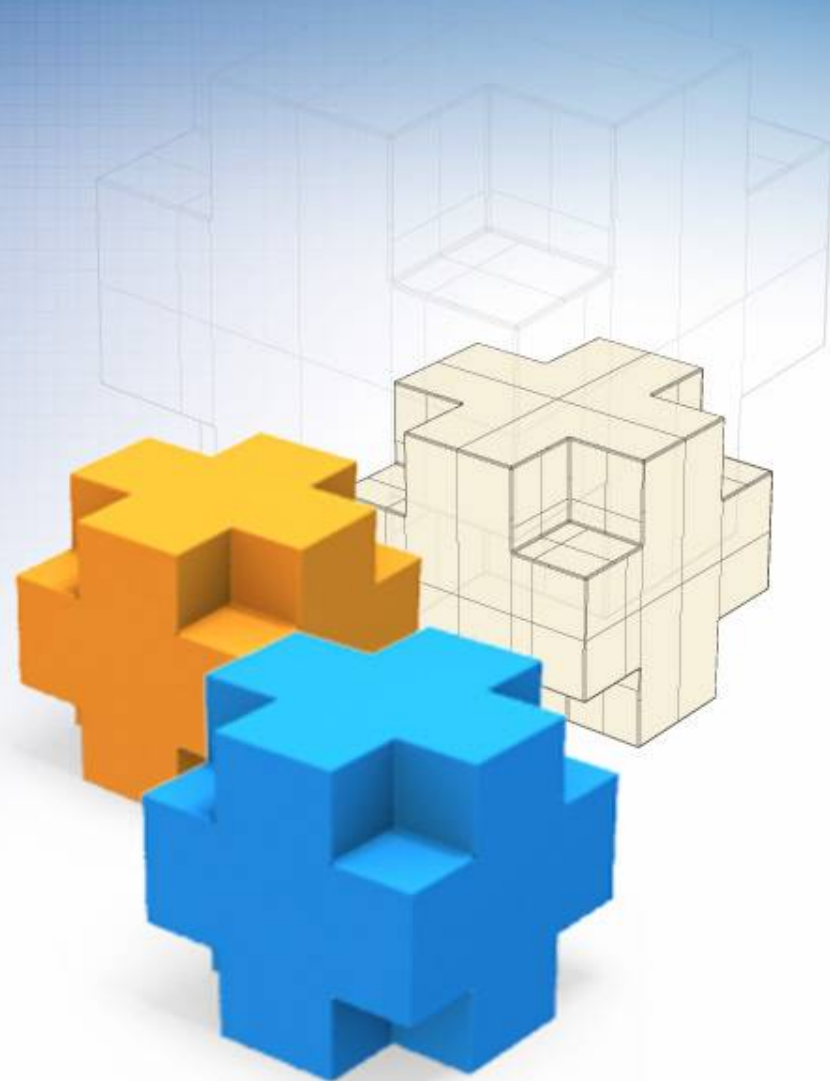
- Management framework for the execution and monitoring of asynchronous on-line transactions.
- A tiered promotion solution that could be extended across all of the company's brands.

■ Code

- Solution that was brand independent
 - Consisting of:
 - 30 Programs
 - Many reusable code components
-

Phasing delivery

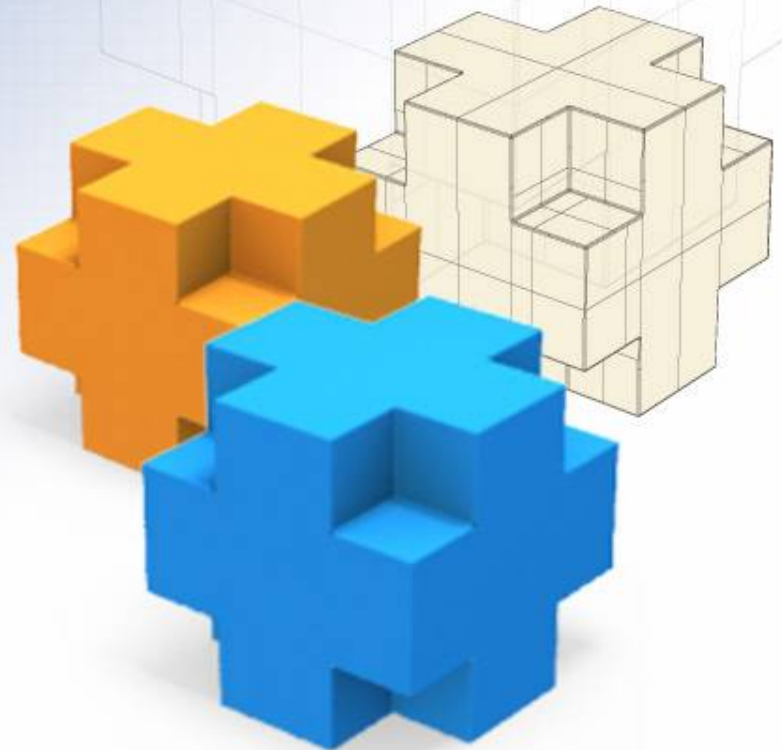
To contain release scope



Phased delivery when and why

- ❖ Bring forward benefits
 - Schedule releases to deliver incremental business benefit
- ❖ Contain risk
 - An effective tool for the management of risk
 - Limit releases to things that are immediately known
- ❖ Deliver what the business is ready for when it is ready
 - Reduces the impact on day to day business operations
 - Data preparation.
 - Rollout of process change
 - Roll out of training
- ❖ Resource constraints
 - Reduces the demands on your IT organisation and reduces risk of increasing head count.
 - Increases the ability to deliver key capability on time

Questions



❖ Contact

- stewart@albertpark.net

❖ Copies of presentation

- www.albertpark.net/presentations/a_perspective_on_IT_Projects_in_the_real_world.pdf
-