

INF700

IT

for

Business and

Management

- Your Name
- Affiliation
- Major/Programme, Year
- Which themes (IT/Business) excite you the most?
- What are your expectations at the end of this course?

Brief Profile and Introduction

Andrew Adjah Sai, CIMA Adv. Dip. MA

Education

- ▶ PhD (Management Science) candidate
- ▶ [Chartered Institute of Management Accountants \(UK\)](#)
*CIMA Advanced Diploma in Management Accounting
- ▶ Masters (Information Systems Management)
Bachelors (Human Resources Management)
Certification: A+[Windows]; N+[Networks and Configurations]

- Research Interests: information technology; technological change; macroeconomic policy and strategy; ecommerce, organizational performance, institutional development, strategic management, change management and business process architecture, business and information systems management, finance and accounting, human resource management and so forth.

Work Experience

- ✓ **Visiting Lecturer, IT for Business & Mgt, EBS**
- ✓ Lecturer/Module Lead [EBS MBA in Digital Society program]- Tallinn & Helsinki
- ✓ Visiting Lecturer [TUT(TalTech), Euro academy, Mainor]
- ✓ **Product Operations Analyst, Twilio**
- ✓ Operations Analyst, Microsoft
- ✓ Senior Auditor, National Audit Office of Ghana
- ✓ Project Manager, FedEx
- ✓ Project Coordinator, AGRIBIZ Ghana
- ✓ Junior Internal Auditor, PMMC Ghana

Course Overview

Syllabus

Objectives of the Course

Understand how effective IT strategies are aligned to overall business strategy

Understand how IT will shape future businesses and be prepared to contribute to enterprise architecture decisions, infrastructure strategies, business application needs, IT investments and prioritization to increase business value

Understand the risks and benefits of IT investments and whether to outsource or use internally generated approaches

Understand how to lead the firm in the appropriate use of IT to achieve enterprise strategy as general managers

Intended Learning Outcomes

A broad knowledge of innovation frameworks to analyze competitive landscapes for emerging IT products and services

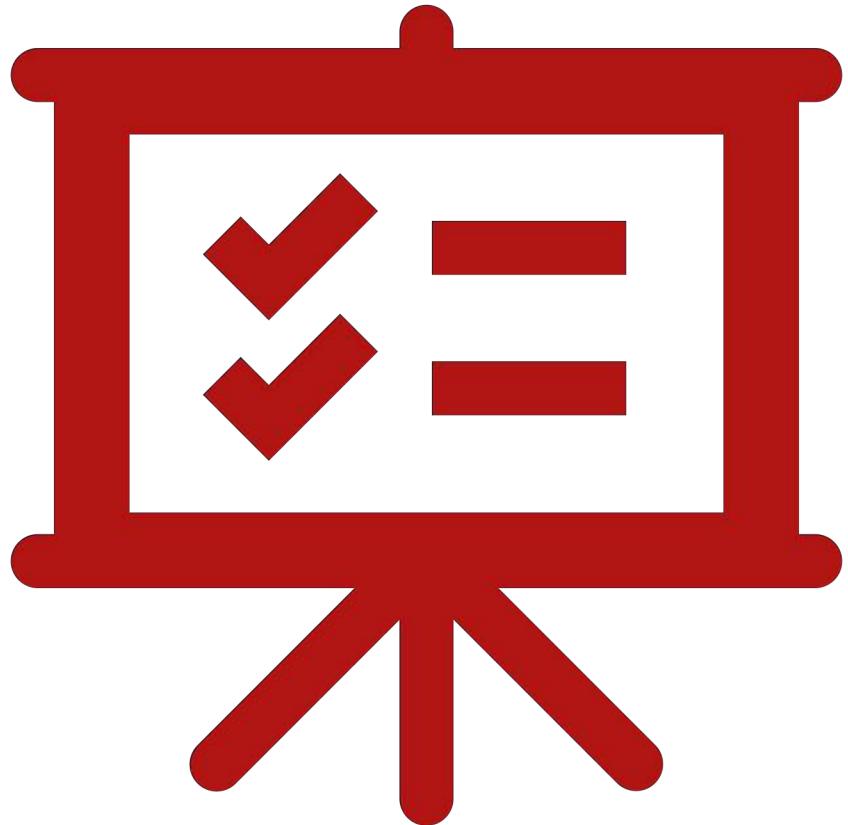
Ability to compare IT governance models in single and multiple contexts

Ability to analyze disruptive potential of technology, assess its transformative impact on standard business practices and formulate appropriate responses for an organization

Proficiency to create a business case for the value of an IT initiative or investment

Ability to identify the components of enterprise information architecture and its strategic role in the organization

Ability to use appropriate tools to analyze datasets, produce results and interpret same.



Module 1

Data, Information and Knowledge

Module 2

Information Systems & Enterprise Strategy

Module 3

IS Infrastructure

Module 4

Business Process Management

Module 5

Information Systems Security

Modules Assignments

What is IT?

What is Business and Management?

IT - “is the use of computers to store, retrieve, transmit, and manipulate data, or **information**, often in the context of a business or other enterprise”

Business - “any activity or enterprise entered into for profit.”

Management - “the process of dealing with or controlling things or people.”

Plan for Today

Part 1- (8:45 – 10:20)

- Ice breaker
- Course Overview

Short Break (10 mins) – (10:20 – 10:30)

Part 2 – (10:30 – 12:00)

- Introduction to BIS
- Data, Information and Knowledge

Lunch Break (45 mins) – (12:00 – 12:45)

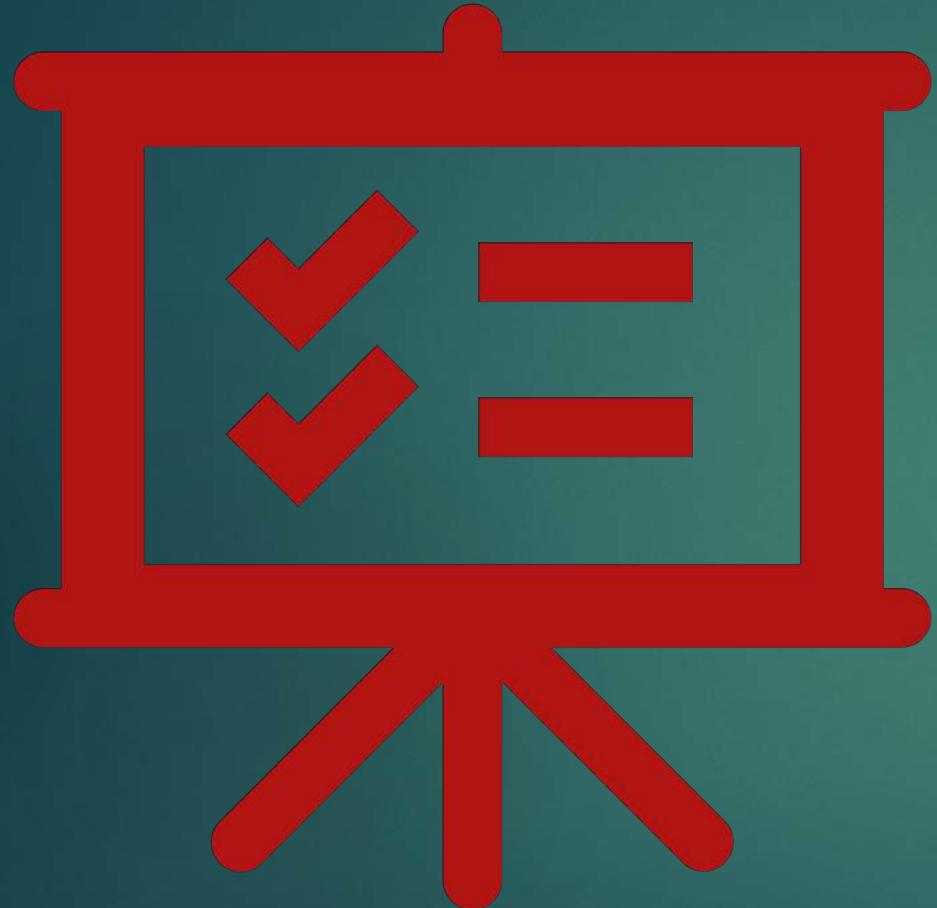
Part 3 – (12:45 – 14:15)

- BIS as Strategy
 - Case Study 1
 - Case Study 2

Short Break (5 mins) 15:45

- BIS Governance & Digital Business Models (15:50 – 16:30)

23.03.2019



Module 1

Data, Information and Knowledge

Module 2

Information Systems & Enterprise
Strategy

Introduction to BIS

PRIMARY CONSTITUENTS OF BIS

What is data?

What is
information?

What is a
system?

What is a
Business
Information
System?

What is BIS?

Data are raw facts or observations that are considered to have little or no value until they have been processed and transformed

e.g., today's date, measurements taken on a production line, a record of a business transaction, such as a visit to a website

Information

Information is data that has been:

- Processed so that they are meaningful**
 - Processed For a purpose**
 - Interpreted and understood by the recipient**
-

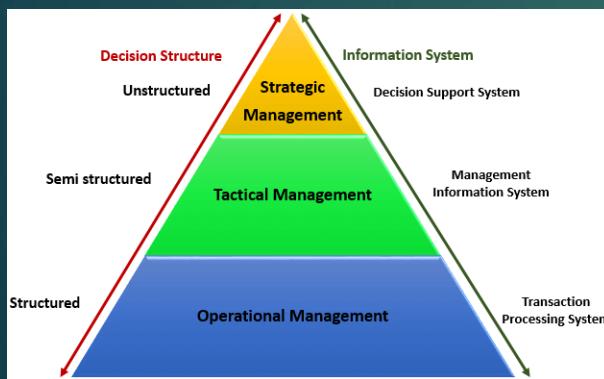
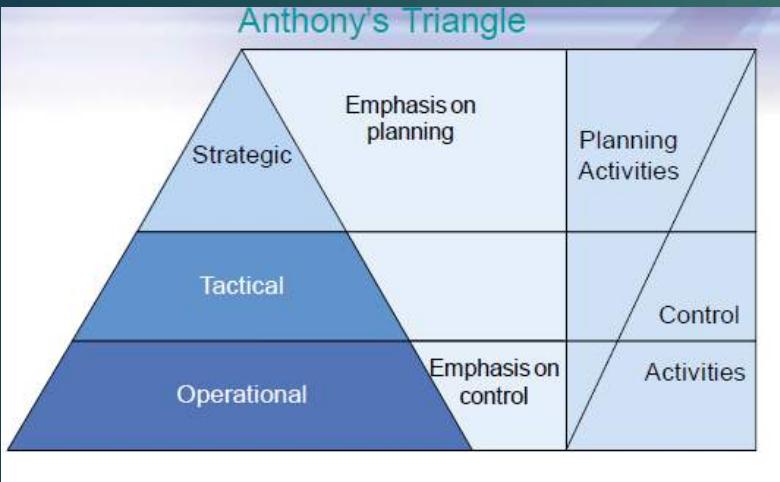
e.g., a bank statement, a sales forecast, a telephone directory, graphs of trends in visitor numbers to a website

Levels of Management: Decisions –making

Management level	Type of decision	Time Scale	Impact on Organisation	Frequency of decisions
Strategic	Unstructured	Long	Large	Infrequent
Tactical	↔	Medium	Medium	↔
Operational	Structured	Short	Small	Frequent



Levels of Management: Information Needs



Management level	Time period	Frequency	Source	Certainty	Scope	Detail
Strategic	Wide	Infrequent	External	Less certain	Wide	Summarized
Tactical	↔	↔	↔	↔	↔	↔
Operational	Narrow	Frequent	Internal	More certain	Narrow	Detailed

Levels of Management, Decisions-making & Information Needs [Examples]



System	Purpose	Features	Example(s)
Transaction Processing system.	Captures and Stores transaction data.	Batch, online Or real time processing.	<ul style="list-style-type: none"> Sales order processing. Accounting system.
Management information system.	Integrated system for supporting operations and decision making.	Data gathered from TPS. Predetermined output format.	<ul style="list-style-type: none"> Databases. Reporting systems.
Enterprise resource planning system	Integration of information across the company.	Commercial software package installed on a Database Management System.	<ul style="list-style-type: none"> Customer relationship Management (CRM). Balanced scorecard performance reporting.
Decision support system.	Present selected / focused information for senior executives.	Highly visual and incorporates internal and external data.	<ul style="list-style-type: none"> Executive performance dashboard'.
Expert system.	Present decision options to 'non-expert' users.	Modify its knowledge database in accordance with its own results.	<ul style="list-style-type: none"> Tax advice. Legal advice. Selection of training methods.
Strategic enterprise management system.	Assists with strategic decision making	Incorporates tools such as ABM.	<ul style="list-style-type: none"> Significant investment decisions. Acquisition decisions.

Organisation-level decisions (Quick Exercise)

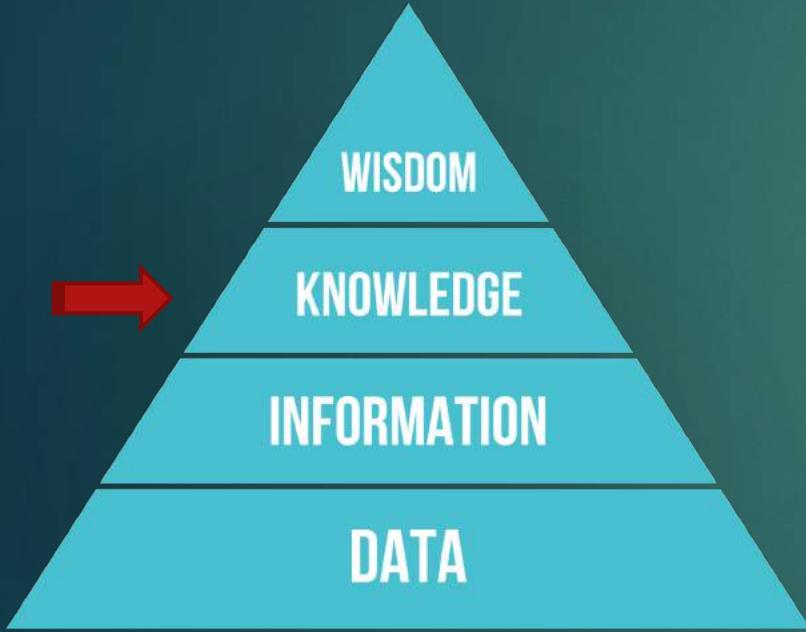
Classify the following:

- by **type** (Structured, semi-structured, unstructured) and
- **organisational level** (strategic, tactical, operational).
- In addition, determine whether or not the decision-making process should be automated, and if possible,
- the name and type of information system to be used.

1. At what level should we set the budget for next year?
2. Does this customer qualify for a discount on a large order?
3. How should we deal with a takeover bid?
4. Should we employ more staff to cope with an urgent order?
5. Should we expand abroad?
6. Should we launch an advertising campaign?
7. Should we take a short-term loan to help our current cash flow position?
8. What new markets should we move into?
9. What should we do about a faulty machine?



Knowledge & KM



What is Knowledge?

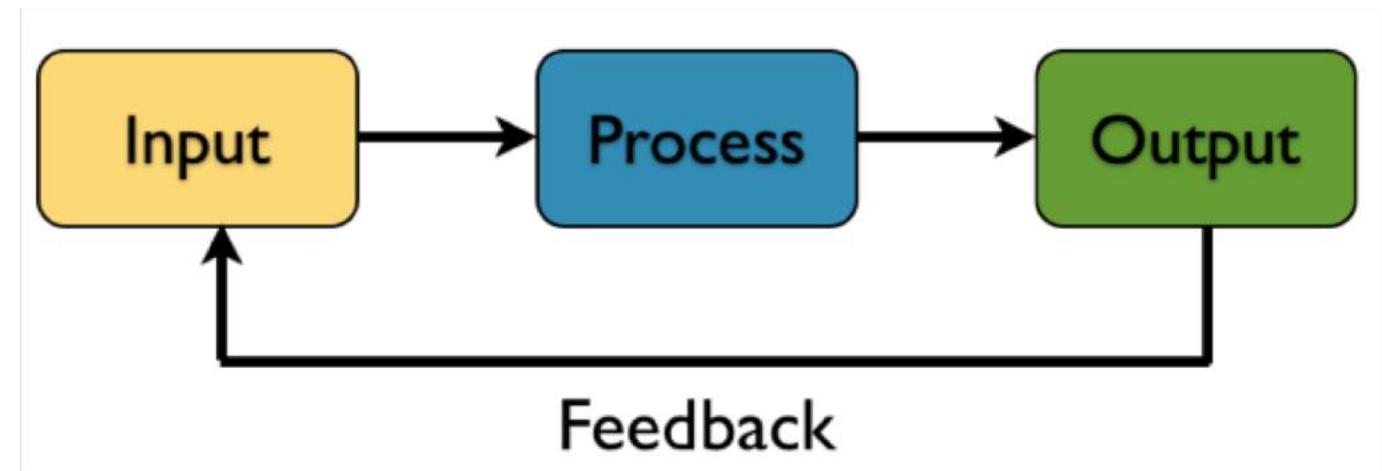
- **Knowledge** – applying managerial experience to problem solving
- **Knowledge Management (KM)** – Techniques and tools for collecting, managing and disseminating knowledge within an organisation

Types of knowledge?

- **Explicit** – knowledge that can be readily expressed and recorded within Information Systems
- **Tacit** – Mainly intangible knowledge that is typically intuitive and not recorded since it is part of the human mind.

A System

A collection of interrelated components that work together towards a collective goal.



Characteristics of Systems?



What is a Business Information System (BIS)?

- ▶ Group of interrelated components that work collectively to carry out input, processing, output, storage and control actions in order to convert data into information products that can be used to support forecasting, planning, control, coordination, decision making and operational activities in a organisation

Main Categories of BIS (old school)

Operations Information Systems	Management Information Systems
Transaction processing systems	Decision support systems
Process control systems	Information reporting systems
Office automation systems	Executive information systems

- ▶ **1. Operations Information Systems** – are generally concerned with
 - ▶ -process control,
 - ▶ -transaction processing,
 - ▶ -communications (internal and external) and
 - ▶ -productivity
- ▶ **2. Management Information Systems** – provide feedback on organisational activities and help to support managerial decision making.

Examples of computer-based information systems

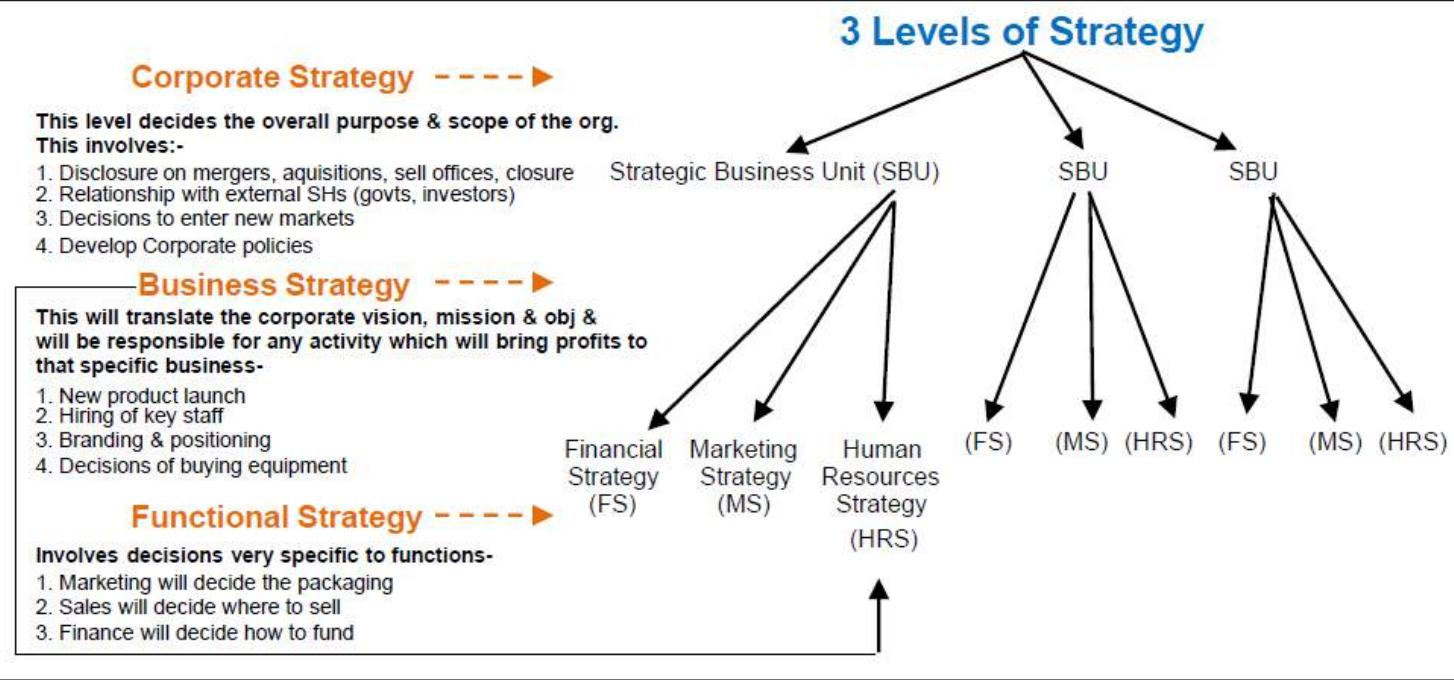
Main Categories of BIS (New school)

- ▶ **Enterprise resource Planning (ERP) software**
 - software system with integrated functions for all major business functions across an organisation such as:
 - ▶ -Production
 - ▶ -Distribution
 - ▶ -Sales
 - ▶ -Finance and
 - ▶ -human resources management, etc.
- ▶ It is normally purchased as an off-the-shelf package which is tailored by a consultant

Introduction to BIS as Strategy

Aligning IT to Business Strategy

- IT-business strategy alignment should consider internal and external opportunities as well as resource requirements.
- Michael Porter, of the Harvard Business School, states that corporations need to incorporate IT into their business strategy formulation rather than focus on IT's operational role.
- Technology strategy and business strategy need to be orchestrated prior to deploying IT.



Levels of Strategy

3 Levels of Strategy – Johnson & Scholes

- Corporate Strategy – Looks at the industries in which the organisation operates. This may mean deciding to leave existing area or enter new ones. This is particularly true if the organisation has a number of divisions
- Business Strategy – looks at how the organisation (or subsidiary/division) competes. This tends to mean either:
 - The division is trying to win customers by being better than rivals in some way (differentiation/focus as strategy)OR,
 - The subsidiary is trying to win customers by being cheaper than rivals (cost leadership).
- 3. Operational Strategy – looks at how resources are used to carry out the strategies noted above

What is Strategy?

Strategy can be defined as:

'the **direction** and **scope** of an organisation over the **long term**, which **achieves advantage** in a **changing environment** through its **configuration of resources and competencies** with the aim of **fulfilling stakeholder expectation**

Simply put, strategy is how an organisation attempts to meet its objectives

Two Approaches to Strategy

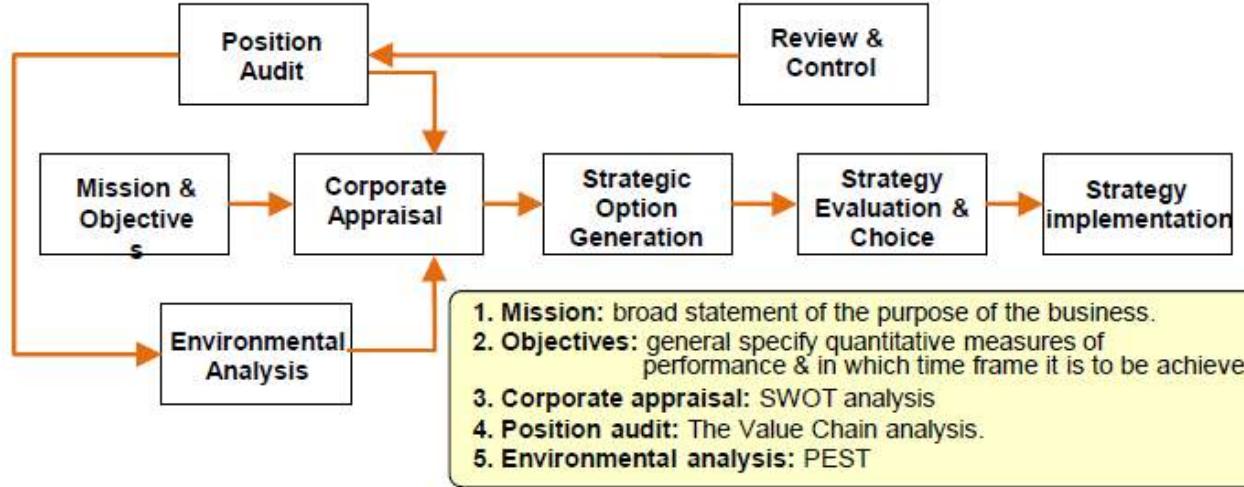
1. Strategic Planning – involves formal analysis of each of the stages in strategic position before a final strategic option is chosen

Used in public sector, justify actions, considers all aspects of biz, proactivity

2. Free-wheeling opportunism – means having no long term strategic plan, in effect, making up the strategy as the organisation goes along

Quick response, etc.

Model for Rational Strategy Process



Old School Approach to Strategy?

More Approaches to Strategy?

1. **Position-based strategy** – organization that is responding to changes in the external environment (reacting to or anticipating opportunities and threats)

2. **Resource-based strategy** – organisation that concentrates on gaining an advantage because of its own strengths. These resources must be:
(1) valuable, (2) rare, (3) imperfectly imitable (tough to imitate), and (4) non-substitutable.

Three Lenses Approach to Developing Strategy?

Strategy as design – driven from the top

Strategy as experience – repeating what worked in the past

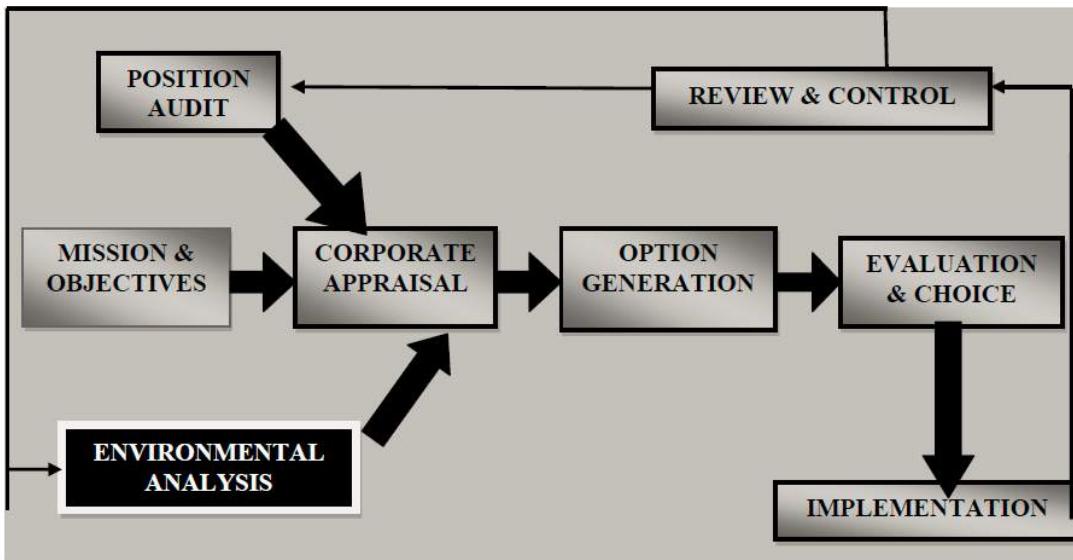
Strategy as ideas – encourage innovation

Environmental scanning

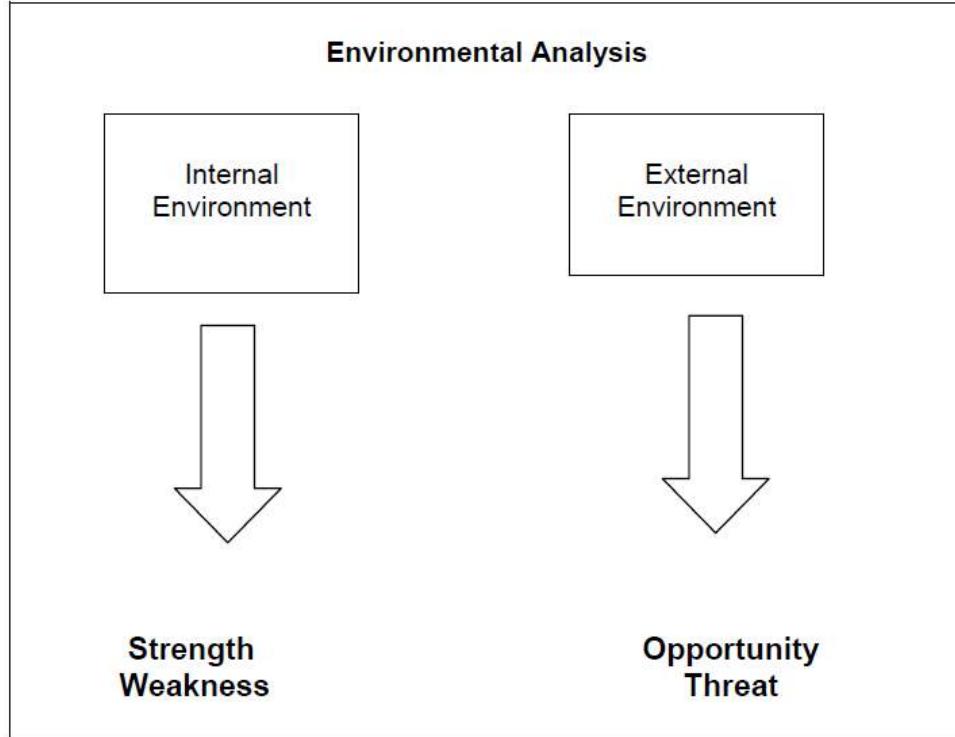


Environmental Analysis

"A study which considers potential environmental effects during the planning phase before an investment is made or an operation started" (CIMA)



Environmental Analysis



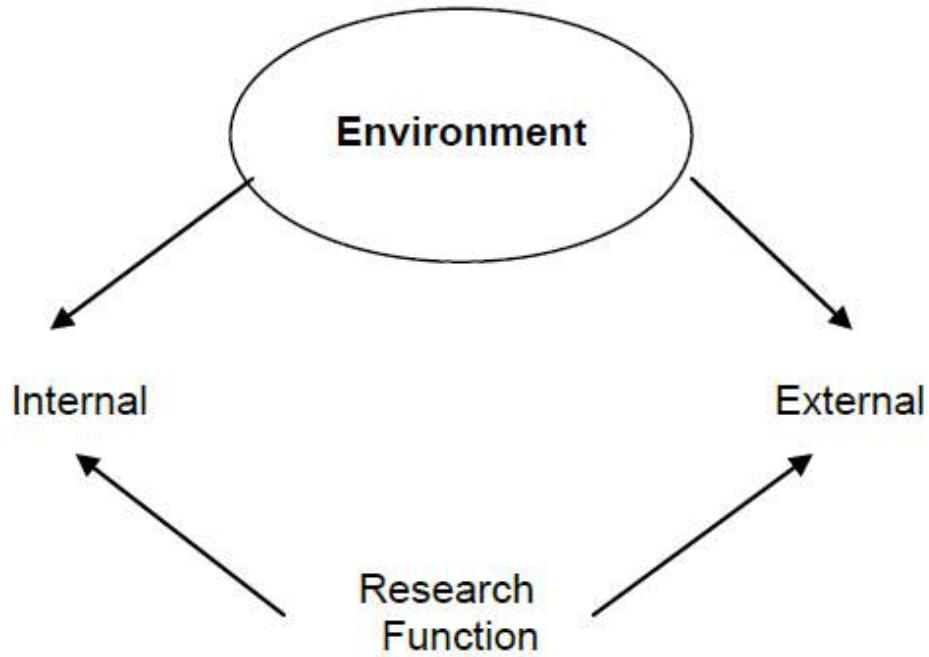
Environmental Analysis

Environmental Analysis

Organisations are strongly affected by their environment – essentially the world around them:

EXTERNAL environmental analysis – looks at the OPPORTUNITIES and THREATS

INTERNAL environmental analysis – looks at the STRENGTHS and WEAKNESSES



Environmental Analysis

Strategic Analysis Tools/Models

SWOT

Corporate Appraisal (SWOT)

		Positive	Negative
		Strengths	Weaknesses
Internal	Strengths	Weaknesses	
	Opportunities	Threats	
External	Opportunities	Threats	

SWOT

SWOT ANALYSIS

aka **Corporate Appraisal**. Combines both internal and external analysis. Strengths & Weaknesses need to:

- be precise
- be internal & specific to the firm
- not be outcomes (e.g., profits)
- not be two sides of the same coin

Internal

Strengths

- Things we are doing well
- Things we are doing that the competition are not
- Major successes

Weaknesses

- Things we are doing badly
- Things we are doing badly (need to correct)
- Major failures

External

Opportunities

- Events or changes in the external environment that can be exploited
- Things likely to go well in the future

Threats

- Events or changes in the external environment we need to protect ourselves from or defend ourselves against
- Things likely to go bad in the future

	Positive		Negative	
Internal	Tech skills Leading brands Dist. channels Cust. loyalty Product quality Scale Management	S	Absence of skills Weak brands Poor distribution Low cust. retention Unreliable prod/svc Sub-scale Management	W
External	Changing customer tastes Mkt. liberalization Tech advances Lower personal tax Changing demogs New distribution ch.	O	Changing customer tastes Mkt. closing Tech advances Increased taxes Changing demogs New distribution ch.	T



3 strategies arising from SWOT:

1. **Matching:** Strengths => Opportunities
2. **Converting:** Threat/Weakness => Opportunity/Strength
3. **Remedying:** minimize or avoid a weakness/threat. Ideally eliminate

The FreshDirect Case-Group Activity

4 Groups (20 minutes)

Each group covers a theme each:

- Strengths
- Weaknesses
- Opportunities
- Threats

The FreshDirect Case

www.andrewsai.com
22/03/2019

The FreshDirect Case - Strategic Positioning FreshDirect Web address

Partnership with suppliers

Dell's struggles as computers, customers, and the product mix changed, all underscore the importance of continually assessing a firm's strategic position among changing market conditions.

There is no guarantee that today's winning strategy will dominate forever

SWOT – FreshDirect-

Matching/Converting

Internal	External
Strengths	Opportunities
<ul style="list-style-type: none"> • web-store front: one-click menus with semi-prepared meals - 'Meals in 4 mins':ability to pull up prior grocery lists • Firm's Iphone app • vast warehouse in lower rent industrial area of queens • next-day deliveries • Short supply chain - Fresh goods selection from warehouse larger than local supermarket • Artificial Intelligence software+some seven miles of fibre-optic cables linking systems and sensors, and supporting everything from banking to verifying orders • benefits to suppliers -no middlemen • no 'slotting fees' by suppliers • 600,00 paying customers • Scale advantages – economies of scale 	<ul style="list-style-type: none"> • High prices of substitute products • limited selection for buyers in brick and mortar stores • time-strapped Manhattanites • area shoppers without cars and keen to avoid traffic jams • web not being only channel to reach customers • apartments in NYC redesigned to receive deliveries of absent customers using secured freezers. • High entry barriers • high switching costs
Weaknesses	Threats
<ul style="list-style-type: none"> • low pricing • capital outlay against revenue stream 	<ul style="list-style-type: none"> • replication of business model • traffic situation and product transportation+supply challenges • suppliers • Short shelf life of food products

PESTEL

PESTEL

P - Political

E - Economic

S - Social

T - Technological

E - Environmental

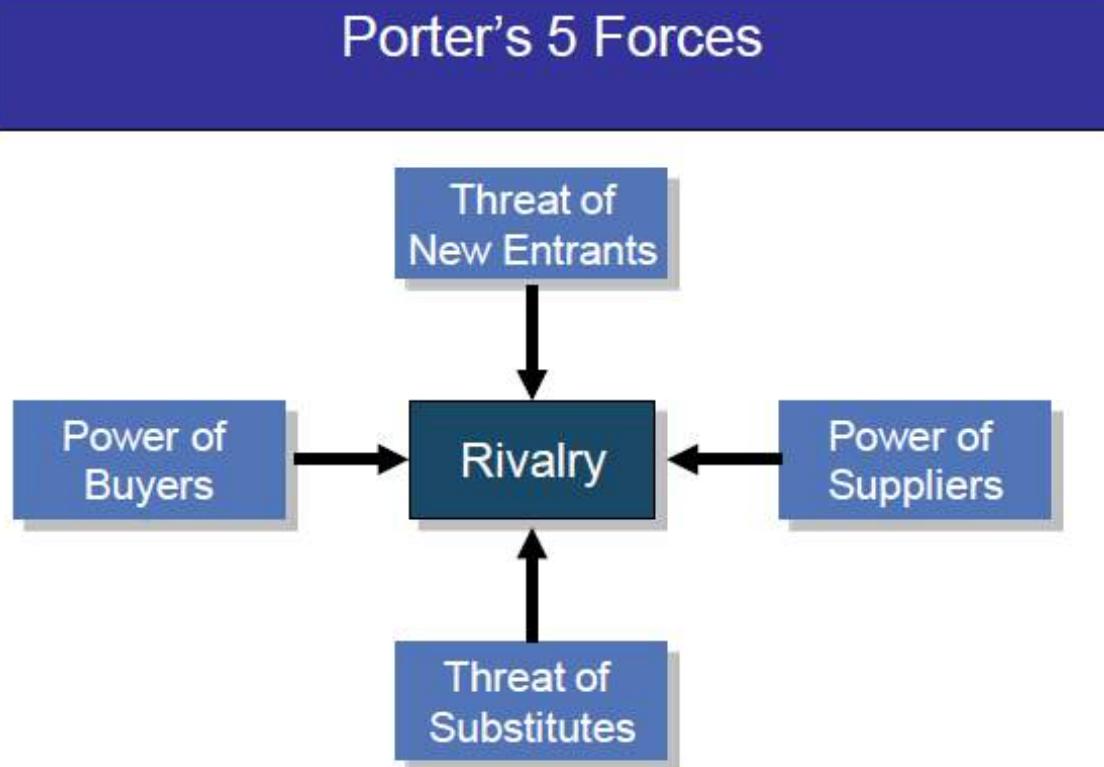
L - Legal



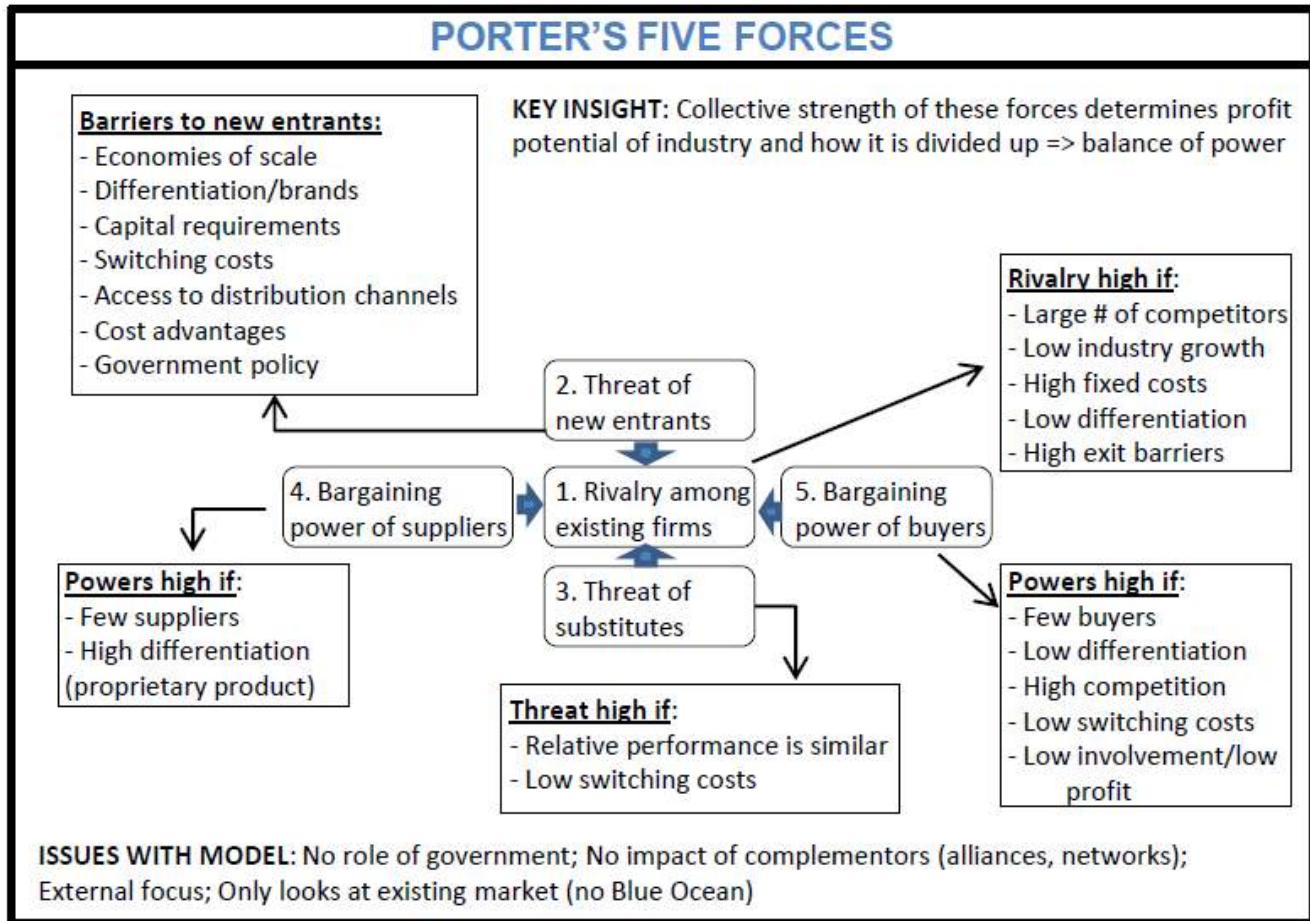
Porter's Five Forces



Porter's 5 Forces



Porter's Five Forces



The FreshDirect Case

The FreshDirect Case - Strategic Positioning
FreshDirect Web address

Partnership with suppliers

1. COMPETITIVE RIVALRY -LOW

- No viable competitors
- Low industry growth
- High fixed costs*- high delivery costs with low margins
- High differentiation -excellent packaging and delivery with convenience.No phy. store
- Low/No competition
- High exit barriers

2. Threat of New Entrants – Low

Barriers to Entry

- Scale advantages – serving 600,000+ customers
- Differentiation – offering fresh farm produce, reputation for delivery
- Capital requirements - the firm spent 75 million dollars building infrastructure before it could serve a single customer
- Access to distribution channels – offering benefits to suppliers. Partnerships with suppliers
- Cost advantages – low cost strategy

3. BARGAINING POWER OF BUYERS – LOW

- Many buyers – large customer base
- High product differentiation – excellent packaging and delivery with convenience
- Low competition
- High switching costs – buying a car, traffic jams and old produce having been on shelf longer

4. Threat of Substitutes –Low

- Store - with old produce
- High switching costs

5. Bargaining power of suppliers - high

- Many suppliers - deals
- Option to switch into client's business – forward integration

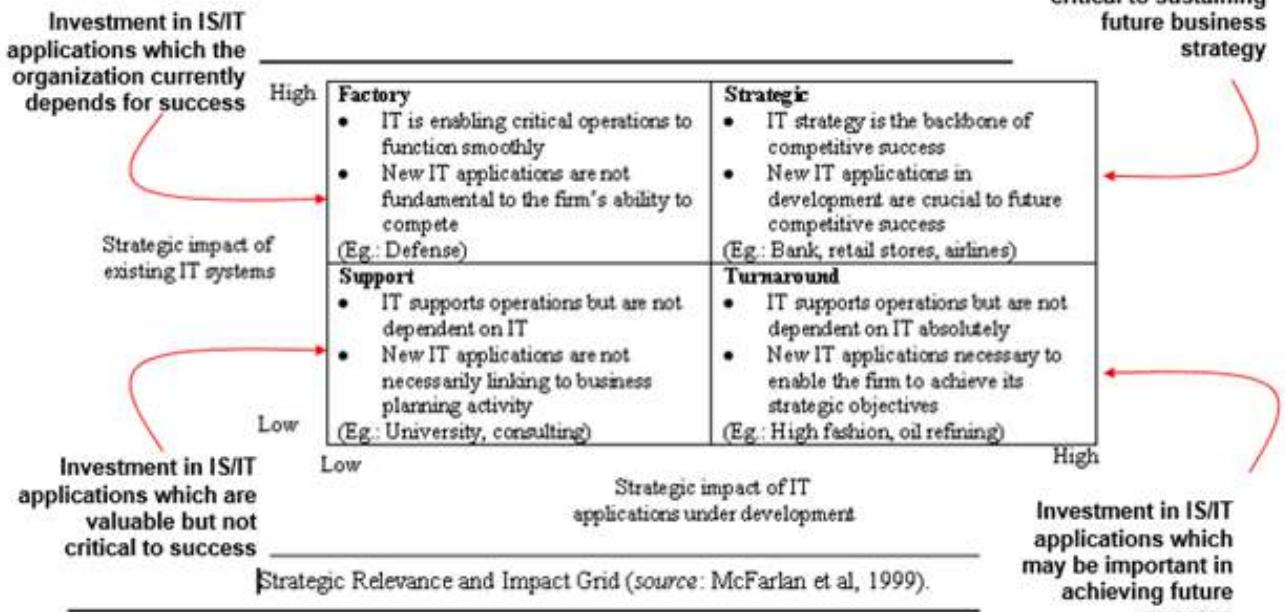
The FreshDirect Case – Solution

Using the Porter's 5 Forces



McFarlan's Strategic Grid

IT Strategic Grid McFarlan



MacFarlan's Grid

MacFarlan's Grid

It is a model used to indicate the strategic importance of information systems to a company now and in the future. It is sometimes referred to as an APPLICATIONS PORTFOLIO model since it assesses the current mix of business information systems within an organisation. It was developed by McFarlan and McKenney (1993)

Strategic segment - indicates that the business depends on both its existing IS and its continued investment in new IS to sustain continued competitive advantage.

Turnaround segment – suggests that while a business in this position does not currently derive significant competitive benefits from its current IS, future investment in this area has the potential to positively affect the business' competitive position

Factory segment – for a business operating in this segment, while depending on its current IS to operate competitively, does not envisage further IS investment having a positive impact on its competitive position

Support segment - does not believe it will derive significant competitive advantage from IS.

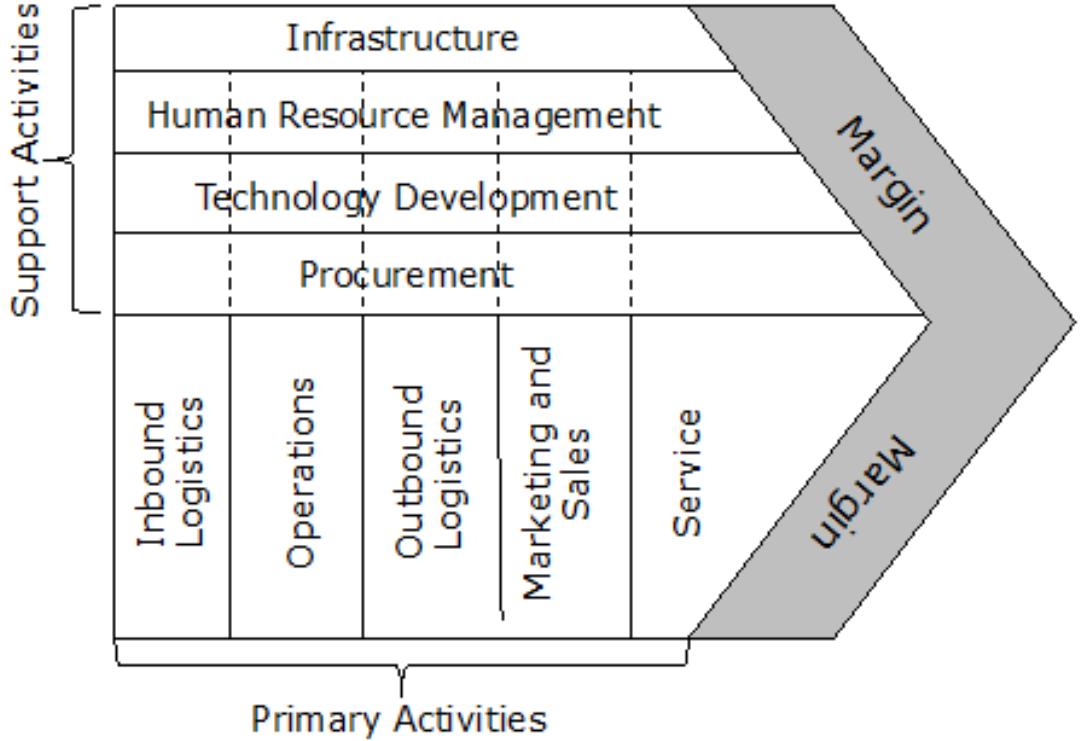
Value Chain – Position Audit

Critical Success Factors (CSFs)

Ansoff's Growth Strategies



Porter's Value Chain



Porter's Value Chain

Michael E. Porter "Competitive Strategy: Techniques for Analyzing Industries and Competitors"

More Approaches to Strategy?

It is an analytical framework for decomposing an organisation into its individual activities and determining the value added at each stage.

Makes a distinction between:

1. **primary activities** – which contribute directly to getting goods and services closer to the customer (physical creation of a product, marketing and delivery to buyers, support and servicing after sales), and

- **Inbound logistics** – receiving, storing and expediting materials to the point of manufacture of the goods or service being produced
- **Operations** – transforming the inputs into finished goods or services
- **Outbound logistics** - storing finished products and distributing goods and services to the customer
- **Marketing and sales** - promotion and sales activities that allow the potential customer to buy the product or service
- **Service** – after-sales service to maintain or enhance product value for the customer

More Approaches to Strategy?

2. **Support activities** - which provide the inputs and infrastructure that allow the primary activities to take place

- **Corporate administration and infrastructure** – This supports the entire value chain and includes general management, legal services, finance, quality management and public relations
- **Human Resource Management** – Activities here includes staff recruitment, training, development, appraisal, promotion and rewarding employees
- **Product Technology/development** - this includes development of the technology of the product or service, the processes that produce it and the processes that ensure the successful management of the organisation. It also includes traditional research and development activities
- **Procurement** - This supports the process of purchasing inputs for all the activities of the value chain. Such inputs might include raw materials, office equipment, product equipment and information systems.



PRIMARY ACTIVITIES VALUE CHAIN ANALYSIS

ACTIVITY	IMPLEMENTATION BY IKEA
Inbound Logistics	<ul style="list-style-type: none">• Distribution of products to the stores from 42 distribution centres.• 10,000 item product line manufactured by over 1,000 suppliers.
Outbound Logistics	<ul style="list-style-type: none">• Preferred method for customer to transport their products themselves.
Operations	<ul style="list-style-type: none">• Operations in more than 40 countries, 208 companies operated stores in 26 countries while remaining stores operated by franchisees• IKEA does not manufacture its own products
Marketing and Sales	<ul style="list-style-type: none">• Targeted at families with lower income, students and singles• Low prices.• Family-friendly store environment.
Services	<ul style="list-style-type: none">• Information provided through catalogues and displays.• Self-help service.• Support Activities• Low number of sales assistants in stores

Using the
Value Chain
Analysis –

IKEA Example

- When we compare FreshDirect's value chain to traditional rivals, there are differences across every element.
- But most importantly, the elements in **FreshDirect's value chain work together to create and reinforce competitive advantages that others cannot easily copy.**
- Incumbents would be straddled between two business models, unable to reap the full advantages of either.
- And late-moving pure-play rivals will struggle, as FreshDirect's **lead time allows** the firm to develop brand, scale, data, and other advantages that newcomers lack

Using the Value Chain Analysis –

FreshDirect

Critical Success Factors

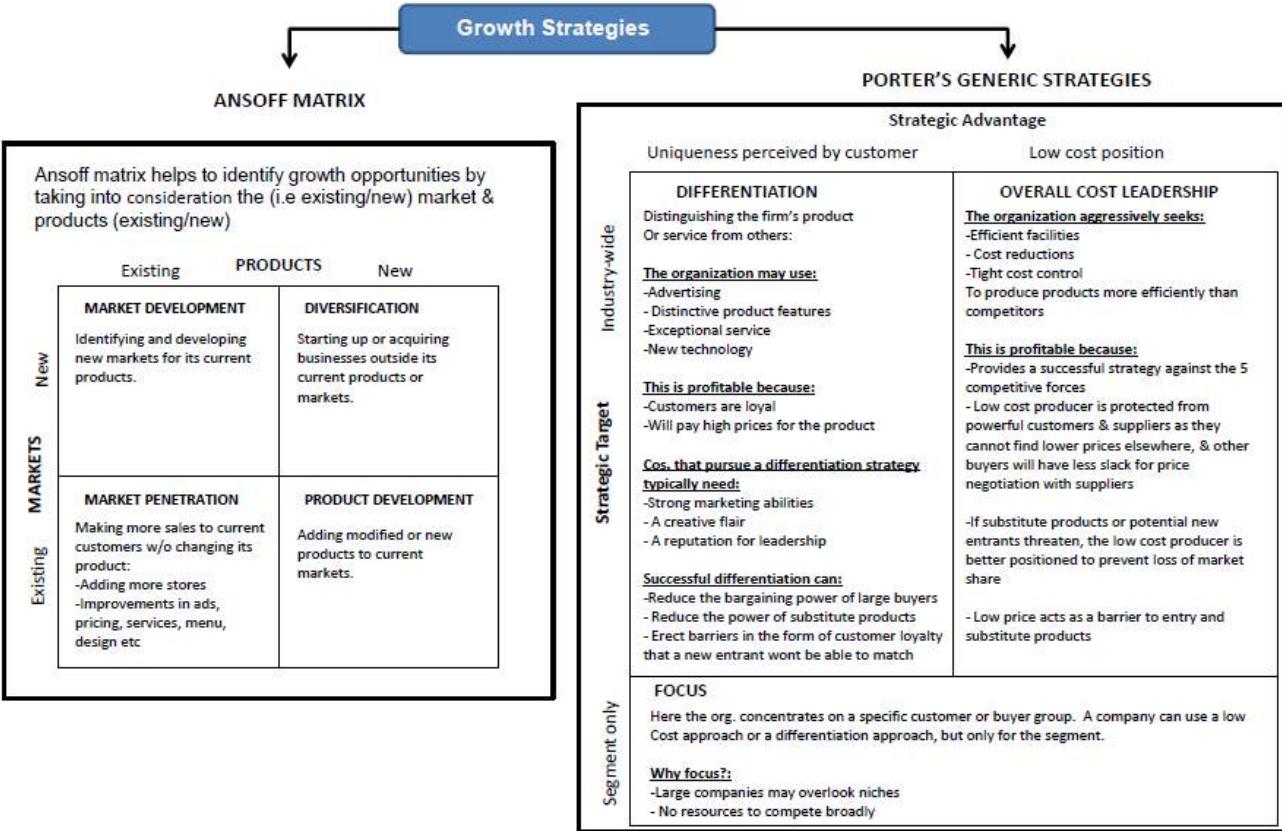


CSFs

Methodology of CSF analysis:

1. Identify CSF for the specific strategy. They recommend to keep list of CSF 6 or <.
2. Identify the underpinning competencies essential to gaining competitive adv in each of the CSFs. This will involve thorough investigation of the activities, skills & processes that deliver superior performance of each.
3. Ensure list of competence is sufficient to give competitive advantage.
4. Identify performance standards that need to be achieved to outperform rivals.
5. Ensure that competitors will not be able to imitate or better the firm's performance of each activity, otherwise it will not be a basis of a secure competitive strategy
6. Monitor competitors & predict the likely impact of their moves in terms of their impact on these CSFs





Ansoff's Matrix & Porter's Generic Strategies

The Walmart Case

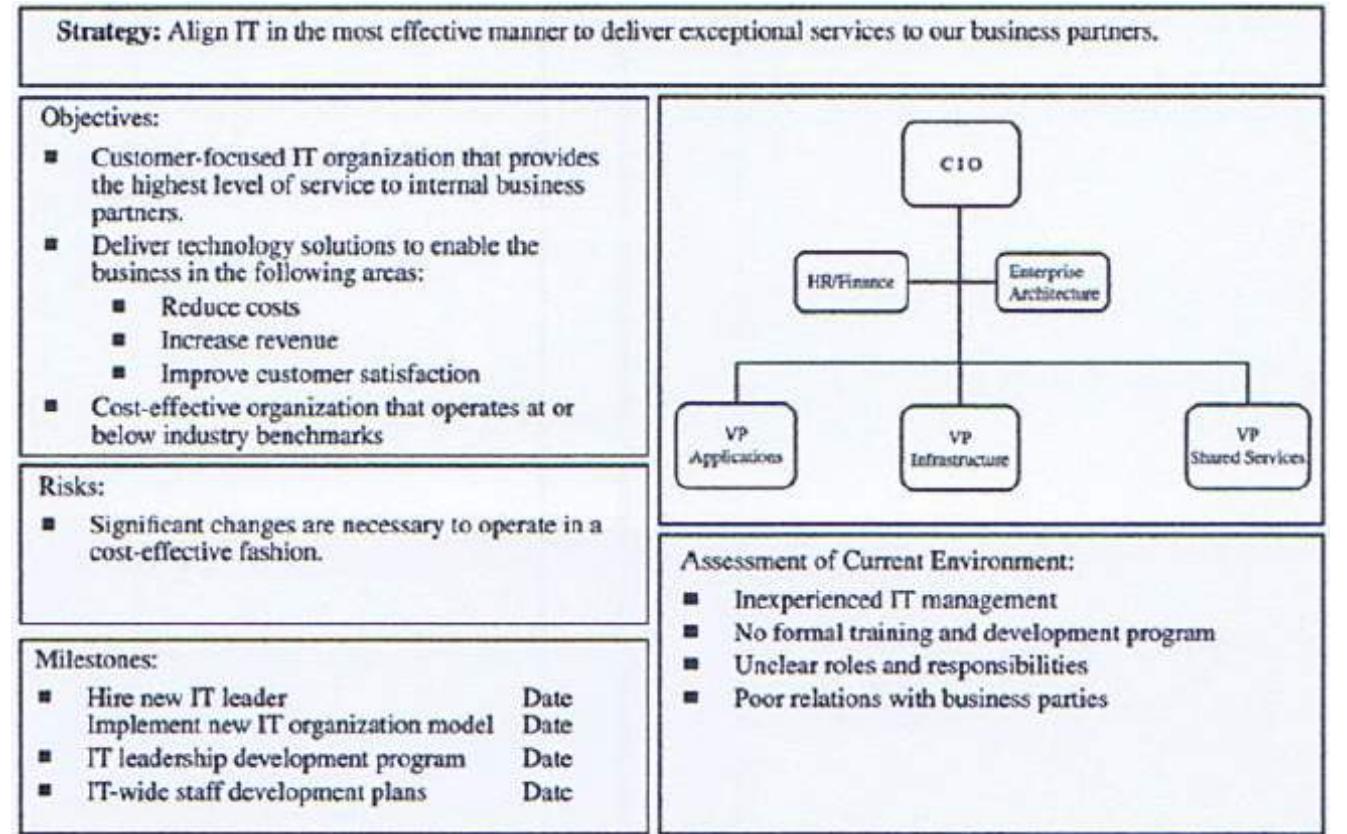
Case Study 2

Information Strategy, Systems & technology

➤ Information Strategy

Companies need to develop a plan to link its business and information strategies and the model here shows how this can be done:

An example of an IT strategy



Information Strategy

Benefits of an Information Systems Strategy:

1. Achieve goal congruence between the IS & corporate objectives
2. Helps create and sustain competitive advantage
3. High levels of expenditure on IS will be more focused
4. Dev. In IT can be exploited at the right time

3. How? IT

Technology used to collect, store, perform apps, provide info:

- Hardware
- Software
- Peripherals
- Networks

1. What? IS

- What info required?
- By whom?
- How provided?
- What data collected?
- How collected?

2. Who? IM

Applications or processes required to turn data into information:

- Applications?
- Sequence?



Strategic Planning Model

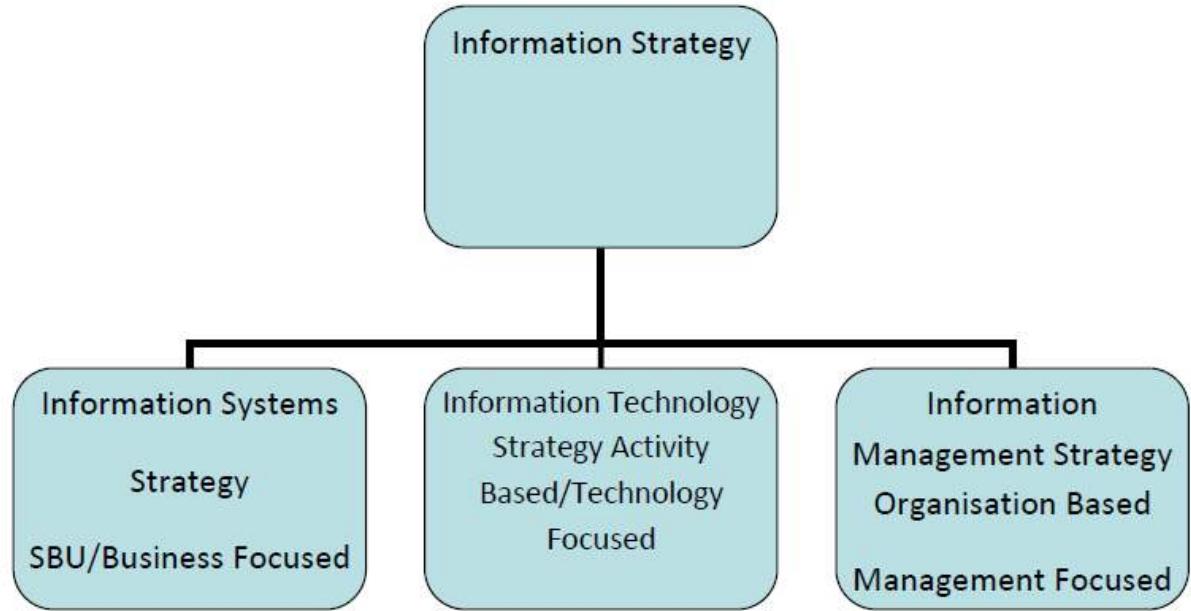
The link between the **corporate strategy** and the **information needs** is often established by considering **Critical Success Factors** (CSFs) for the organisation.

The organisation will need information on the key performance indicators (KPIs) to ensure that the CSFs are being achieved and, as a result, that the business aims are being achieved.

The **information needs** of the organisation **then drive the information strategy** and the information systems created.

Information Strategy in the --- Strategic Planning Model

The Information Strategy is the overall plan a business has to create and develop its information systems. Its broken into 3 parts:



Information Strategy Components

Information Strategy Components

The difference between the three components are summarised below:

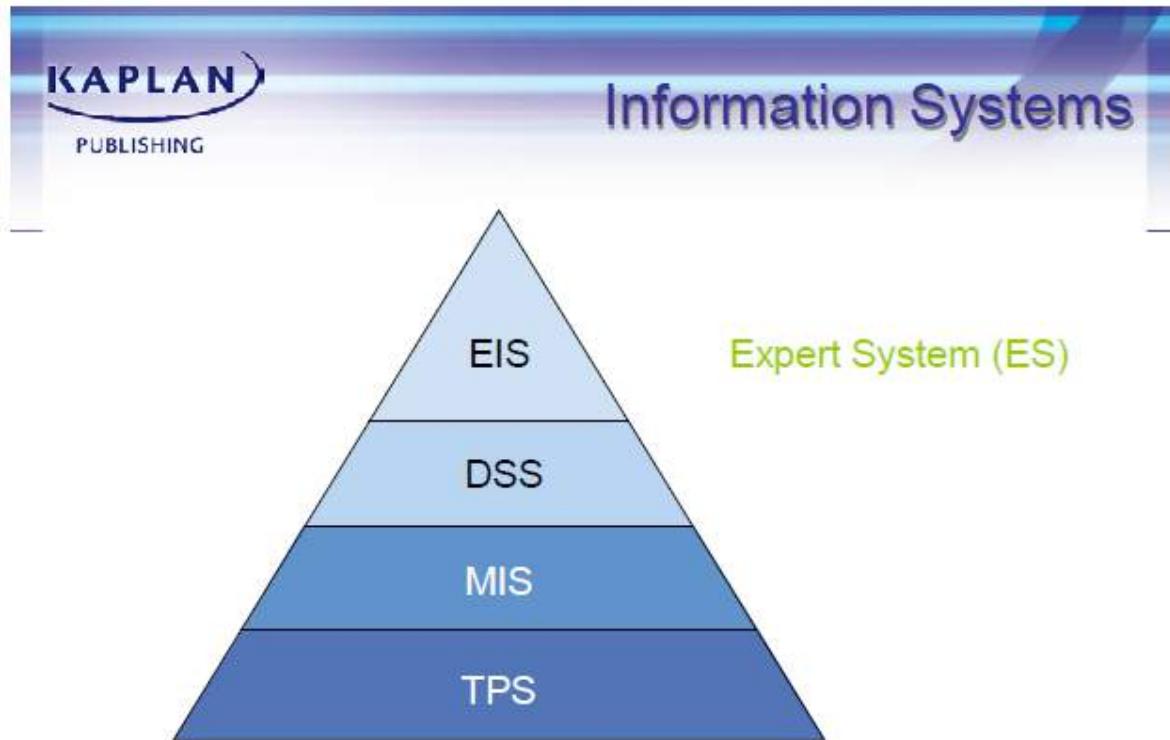
IS Strategy – looks at the way in which information systems in various parts of the organisation are organised.

IT Strategy - looks at the technology infrastructure of the systems

IM Strategy - considers how the systems support management processes

Levels of Management (recap) & BIS

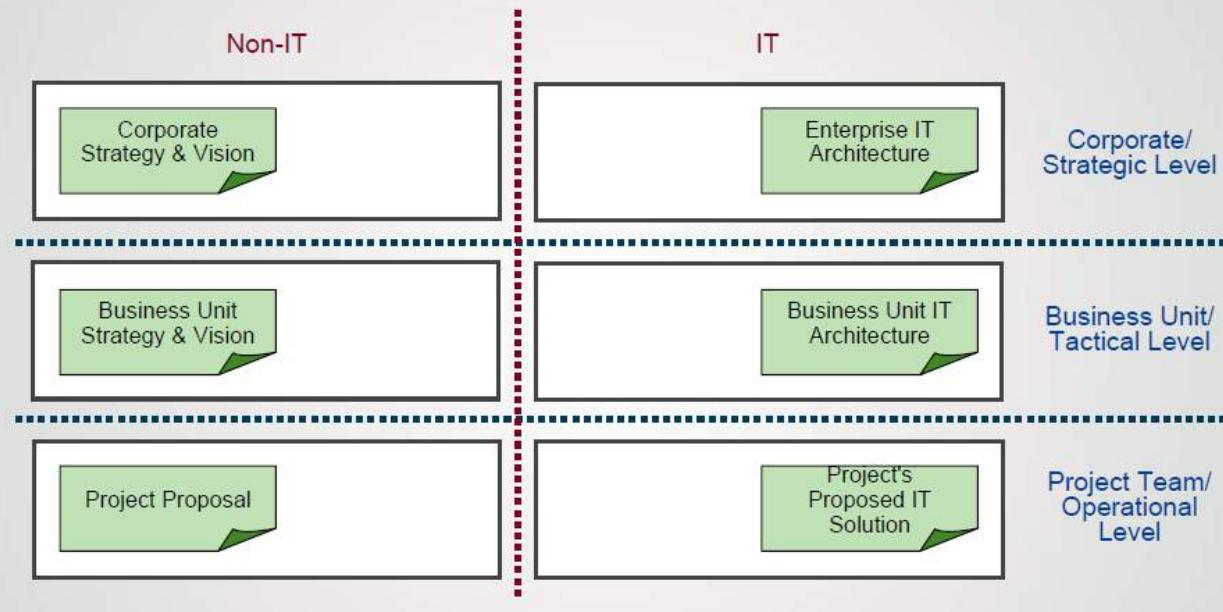
Information Systems Pyramid



IT Governance & Business Operating Models

IT Governance

Governance is challenging to implement because IT decisions are made at multiple organizational levels



The problem with IT

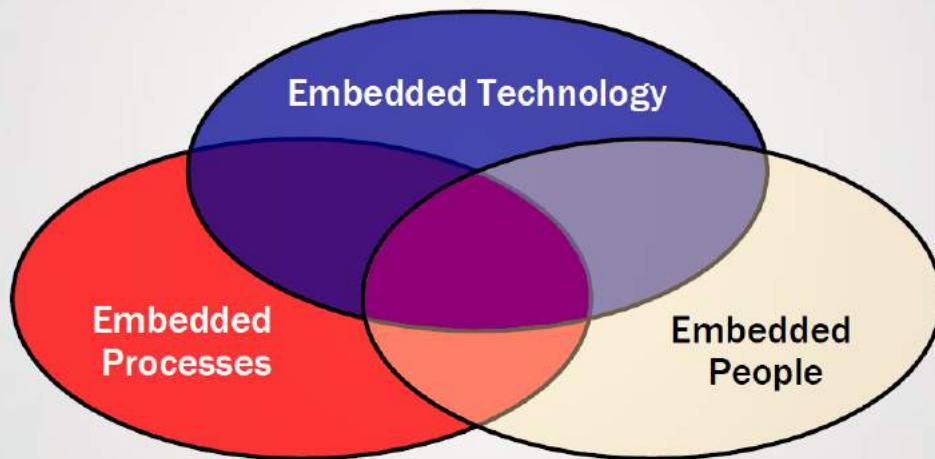


The problem with IT

The problem with IT

The nature of the problem

- IT invariably provides a long-lived solution to an immediate business problem or opportunity and thus becomes an inhibitor rather than enabler of change.



Five key IT decisions need to be governed

Principles for IT	High level statements about how IT is to be used. Driven by business principles (e.g., operating model)
Enterprise Architecture	Organizing logic for data, applications, and infrastructure captured in a set of policies, relationships, and technical choices to achieve desired business and technical standardization and integration
IT Infrastructure Strategies	Strategies for shared IT capability (both technical and human) delivered as reliable services (e.g., network, help desk, shared data)
Business Application Needs	Specifying the business need for purchased or internally developed IT applications
IT Investment and Prioritization	Decisions about how much and where to invest in IT including project approvals and justification techniques

✓ IT Governance –

- Framework for decision rights and accountability to encourage desirable behavior in the use of IT.
- Governance complements organizational structure to enable a firm to meet conflicting objectives.

Making IT an ASSET

Depends on.....

Operating Model

- IT governance and decision making processes
- Development and management of a digitized platform

Integration & Standardisation

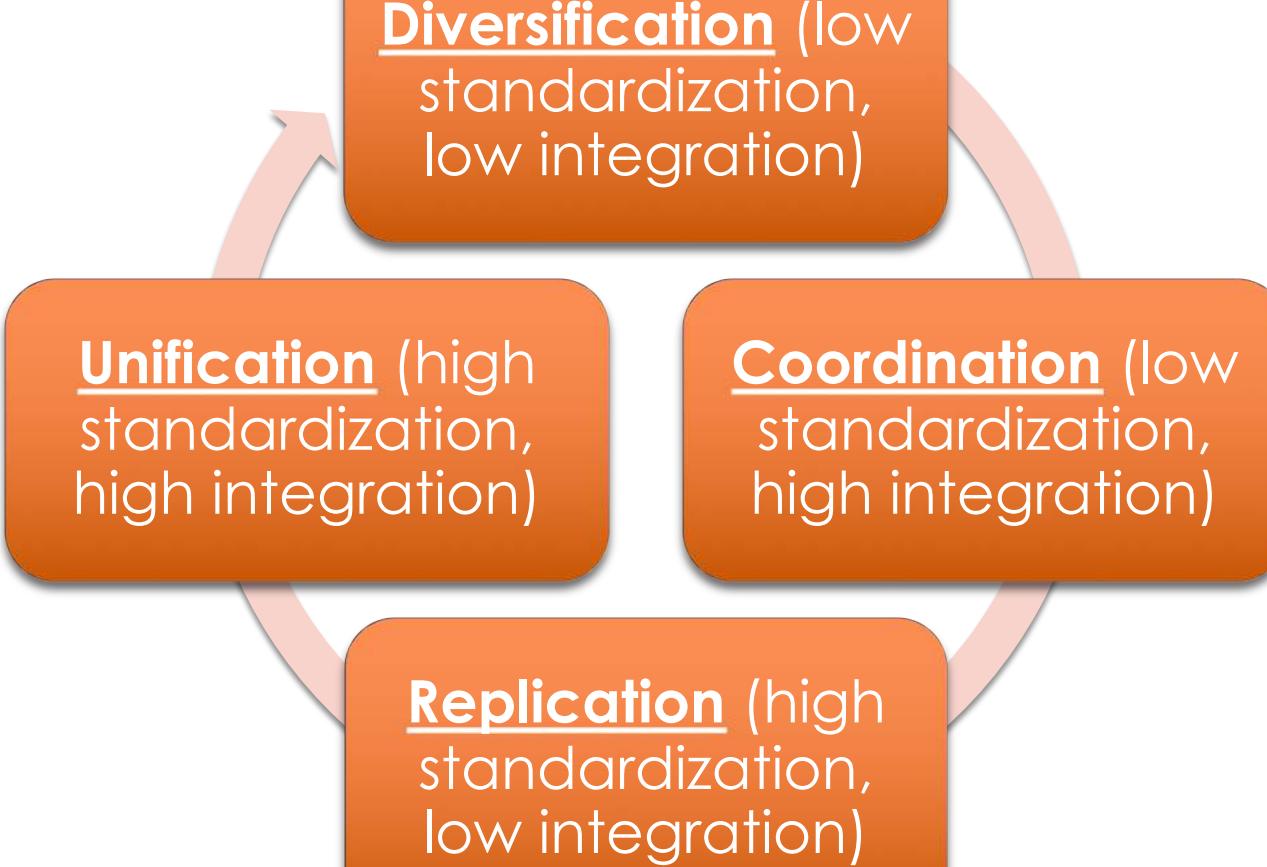
Key
Dimensions
of an
Operating
Model

An
Operating
Model has
two
dimensions:

**Business process
standardisation;**

**Business process
integration**

The four general types of operating models are:



Operating Model –

the desired level of business process integration

and business process standardization

for delivering goods and services to customers. It describes how a firm will profit and grow.

Figure 1: Characteristics of Four Operating Models

Business Process Integration		
High	Coordination <ul style="list-style-type: none">■ Shared customers, products or suppliers■ Impact on other business unit transactions■ Operationally unique business units or functions■ Autonomous business management■ Business unit control over business process design■ Shared customer/supplier/product data■ Consensus processes for designing IT infrastructure services; IT application decisions are made in business units	Unification <ul style="list-style-type: none">■ Customers and suppliers may be local or global■ Globally integrated business processes often with support of enterprise systems■ Business units with similar or overlapping operations■ Centralized management often applying functional/process/business unit matrices■ High-level process owners design standardized process■ Centrally mandated databases■ IT decisions made centrally
Low	Diversification <ul style="list-style-type: none">■ Few, if any, shared customers or suppliers■ Independent transactions■ Operationally unique business units■ Autonomous business management■ Business unit control over business process design■ Few data standards across business units■ Most IT decisions made within business units.	Replication <ul style="list-style-type: none">■ Few, if any, shared customers■ Independent transactions aggregated at a high level■ Operationally similar business units■ Autonomous business unit leaders with limited discretion over processes■ Centralized (or federal) control over business process design■ Standardized data definitions but data locally owned with some aggregation at corporate■ Centrally mandated IT services
	Low	High
Business Process Standardization		

Different Standardization Requirements of the Four Operating Models

Business Process Integration	Business Process Standardization	
	Low	High
High	Coordination <ul style="list-style-type: none">■ Customer and product data■ Shared services■ Infrastructure, portal, and middleware technology	Unification <ul style="list-style-type: none">■ Operational and decision making processes■ Customer and product data■ Shared services■ Infrastructure technology and application systems
Low	Diversification <ul style="list-style-type: none">■ Shared services■ Infrastructure technology	Replication <ul style="list-style-type: none">■ Operational processes■ Shared services■ Infrastructure technology and application systems

Operating Model –

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for delivering goods and services to customers. It describes how a firm will profit and grow.

Different operating models require different IT capabilities

Business Process Integration		
	Low	High
High	<p>Coordination</p> <ul style="list-style-type: none">■ Unique business units with a need to know each other's transactions■ Examples: Commonwealth Bank of Australia, MetLife, Aetna■ Key IT capability: access to shared data, through standard technology interfaces	<p>Unification</p> <ul style="list-style-type: none">■ Single business with global process standards and global data access■ Examples: Southwest Airlines, Dow Chemical, UPS Package Delivery■ Key IT capability: enterprise systems reinforcing standard processes and providing global data access
Low	<p>Diversification</p> <ul style="list-style-type: none">■ Independent business units with different customers and expertise■ Examples: Johnson & Johnson, Pacific Life, ING■ Key IT capability: provide economies of scale without limiting independence	<p>Replication</p> <ul style="list-style-type: none">■ Independent but similar business units sharing best practice■ Examples: Marriott, 7-Eleven Japan, ING DIRECT■ Key IT capability: provide standard infrastructure and application components for global efficiencies

Business Process Standardization

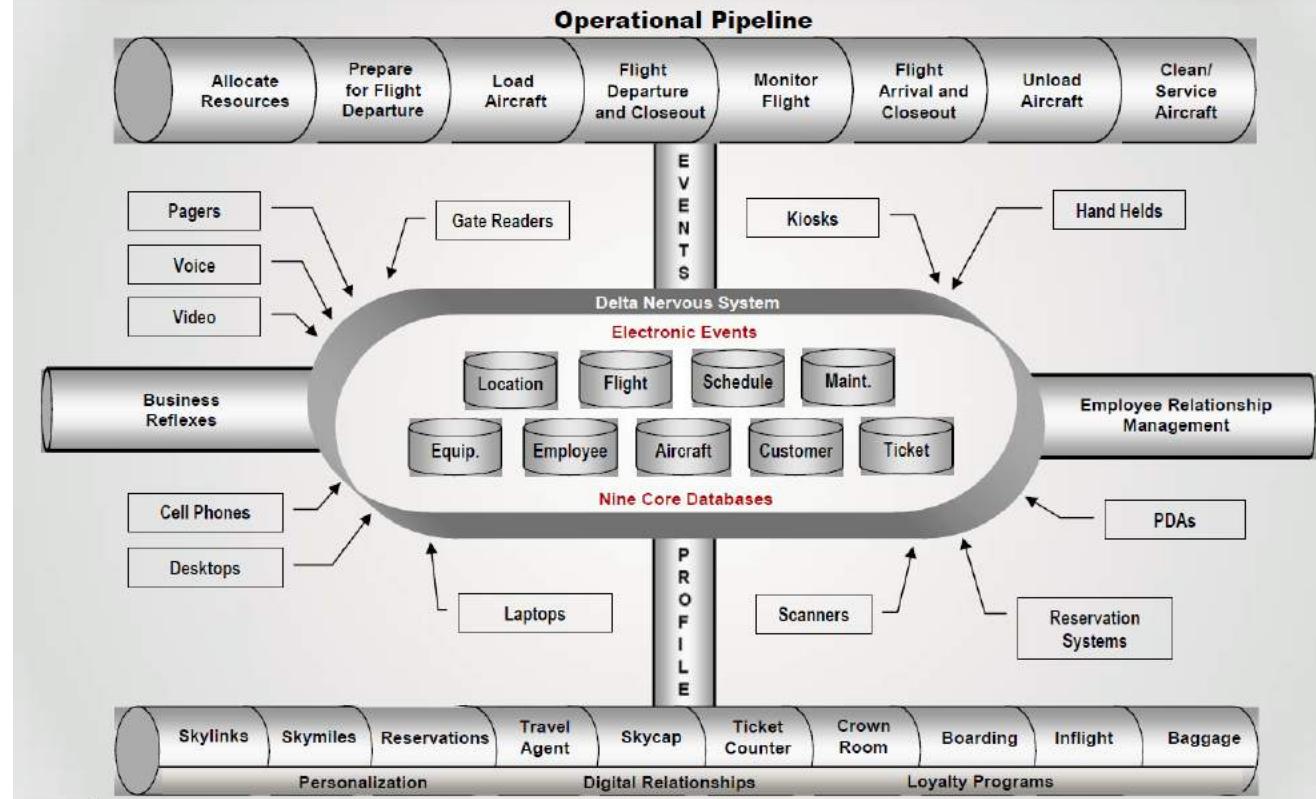
Operating Model –

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Delta's Unification Operating Model



Operating Model –

the desired level of business process integration

and business process standardization

for delivering goods and services to customers. It describes how a firm will profit and grow.

Capabilities provided by Unification Model

1

Scale: supports efficient, reliable global operations

2

End-to-end visibility of business processes

3

Availability of data to provide customer service information and analyse pricing, scheduling, etc.

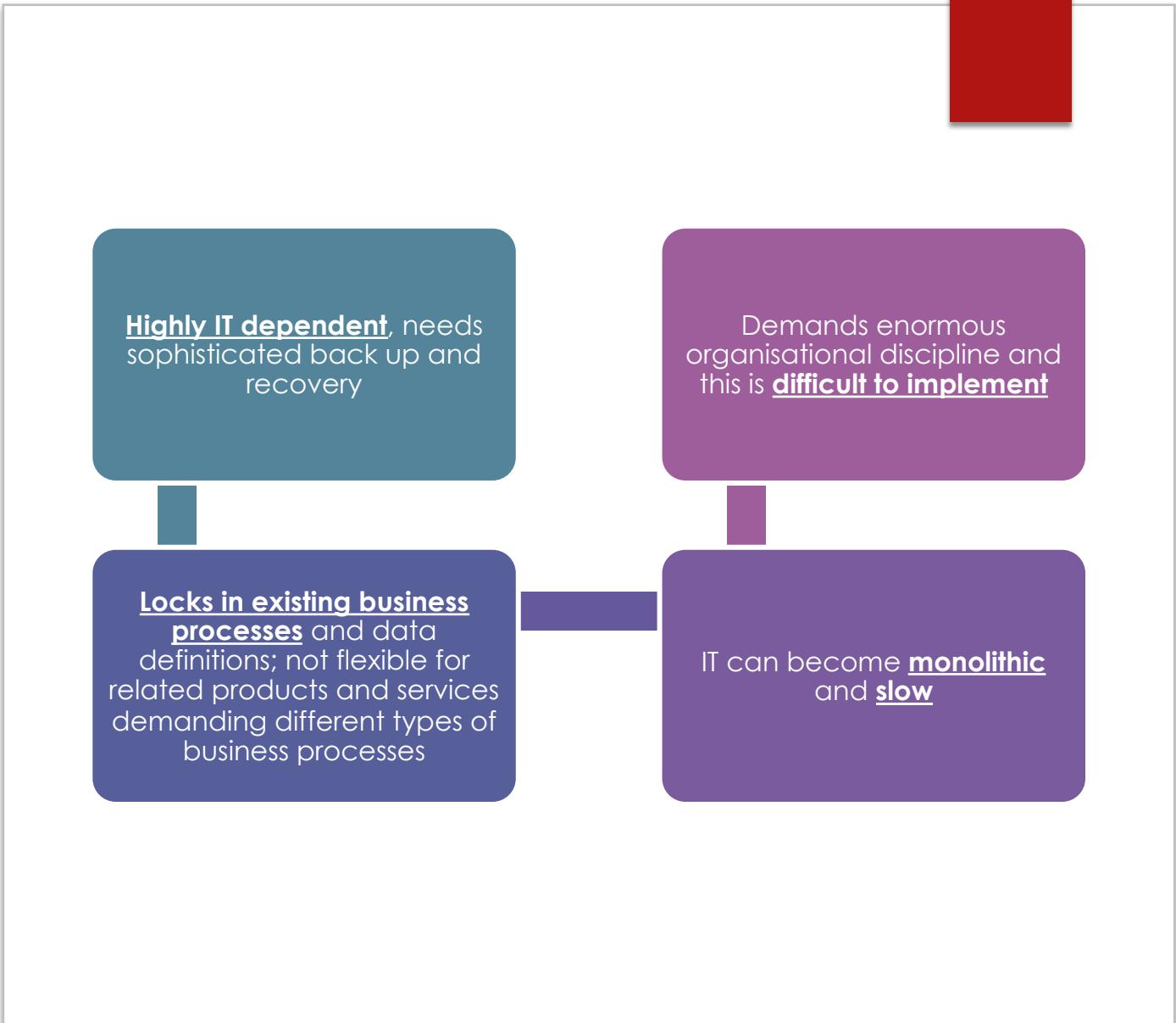
4

Rapid expansion of existing processes to new markets or for related products and services

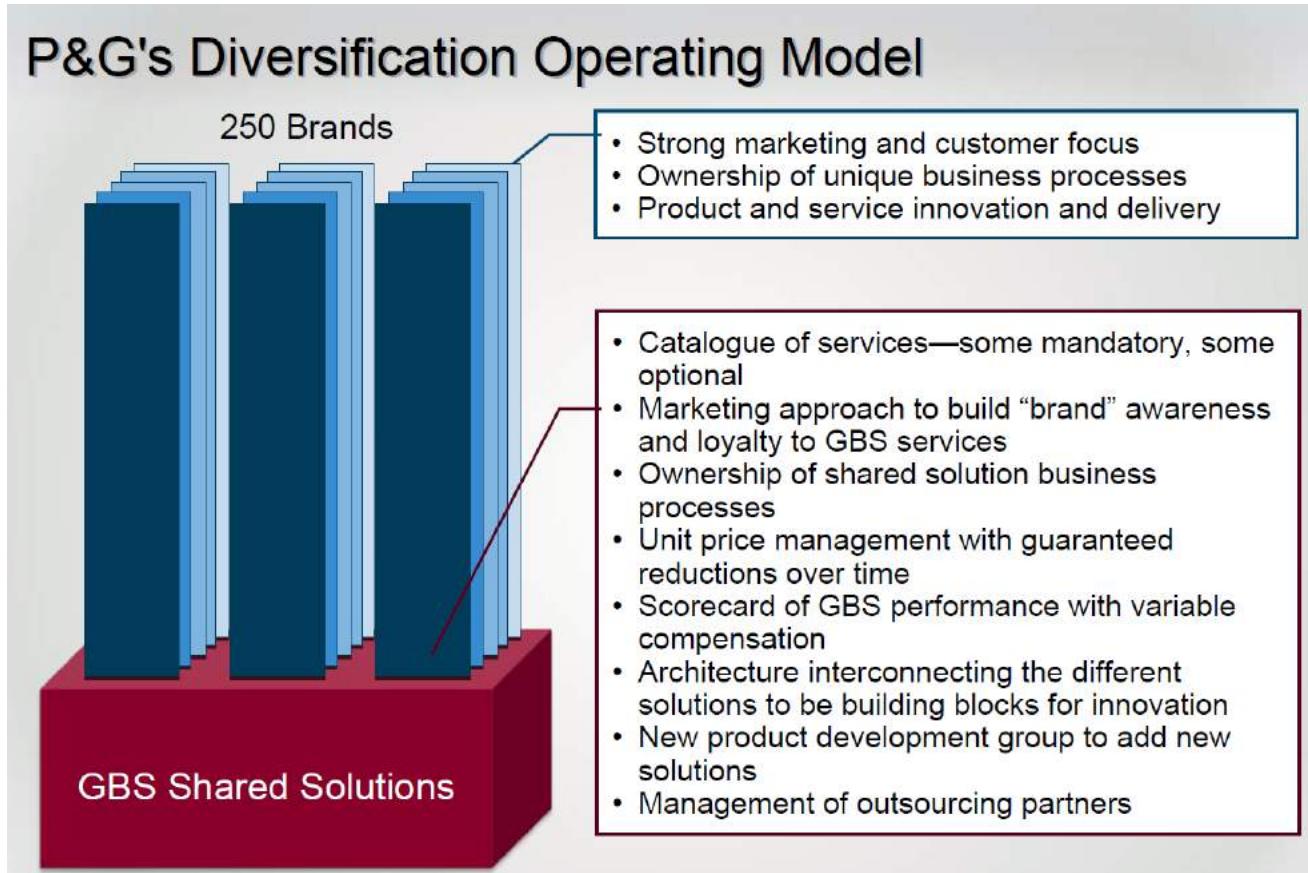
5

supports integration of acquisitions of competitors

Risks and Limitations of Unification Model



Diversification Model



Diversification Model

P & G example

P&G Global Business Services—Employee Services & Solutions

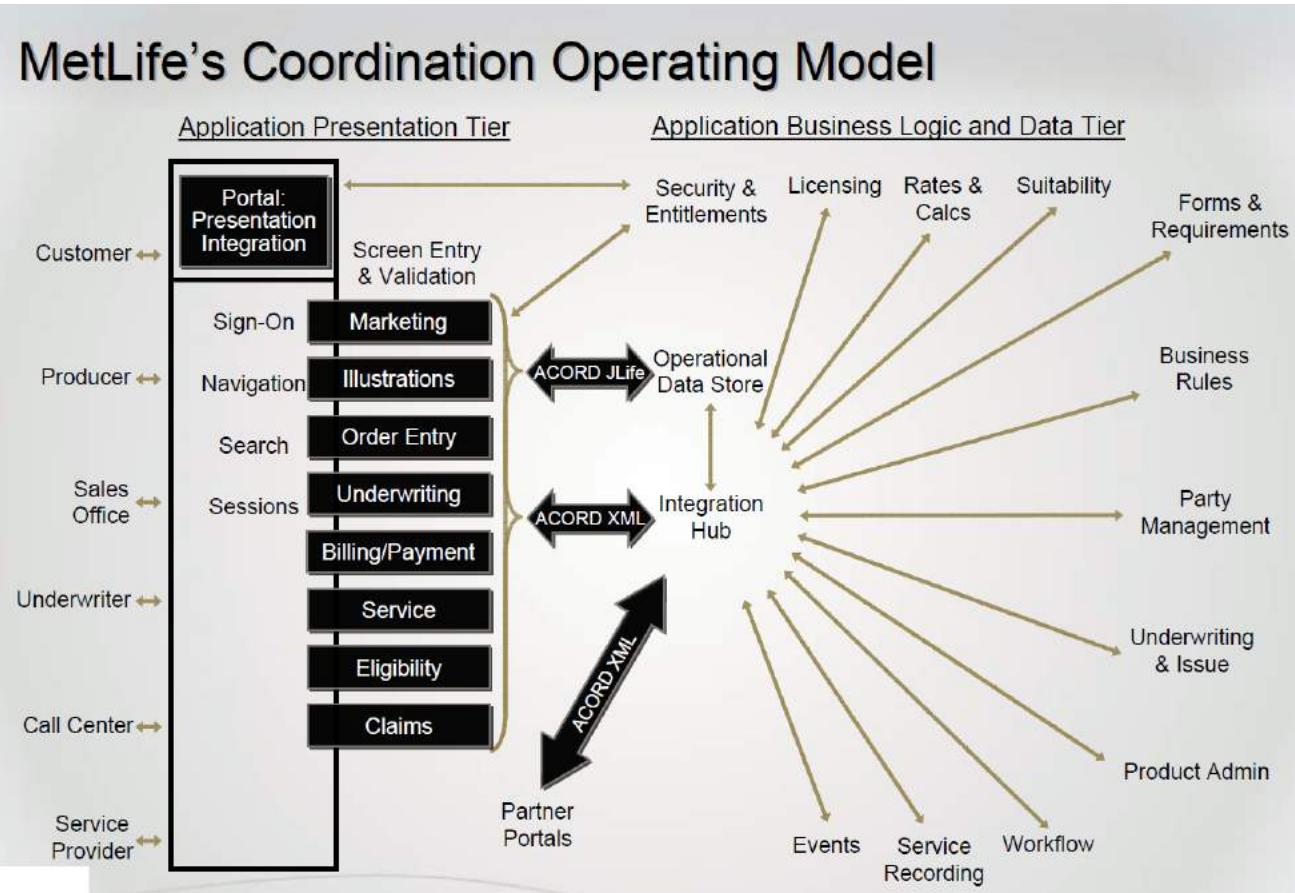
Employee Services	Pay, benefits, policies, career development, work plans
People Management	Compensation planning, relocation, employee management tools
Facilities	Office moves, conveniences: banking, dining, fitness centers, mail & documents
Computers & Communications	PCs, e-mail, mobile phones, Intranet, service support
Meetings	Rooms, technology & scheduling, audio & video conferencing, events
Travel	Booking, expense accounting, credit cards, group meetings

P&G Global Business Services—Business Services & Solutions

Purchases	Strategic sourcing, supplier relationship management, procurement service
Financial Services & Solutions	General ledger, affiliate accounting, product/fixed asset accounting, expense, sales/marketing accounting, purchases-to-payment (include accounts payable), banking, financial reporting
Product Innovation	Bioinformatics systems, product imaging & modeling systems
Supply Network Solutions	Demand planning systems, total order management, physical distance systems
Consumer Solutions	Prime prospect research, CRM systems, advertising & media measurement
Customer Solutions	Shopper intelligence, in-store action planning, trade fund management systems
Initiative Management	Technical package & materials design, package artwork process, portfolio tracking & reporting
Business Performance Solutions	Decision cockpits, market mix modeling, competitive intelligence, ad-hoc business analyses

Coordination Operating Model

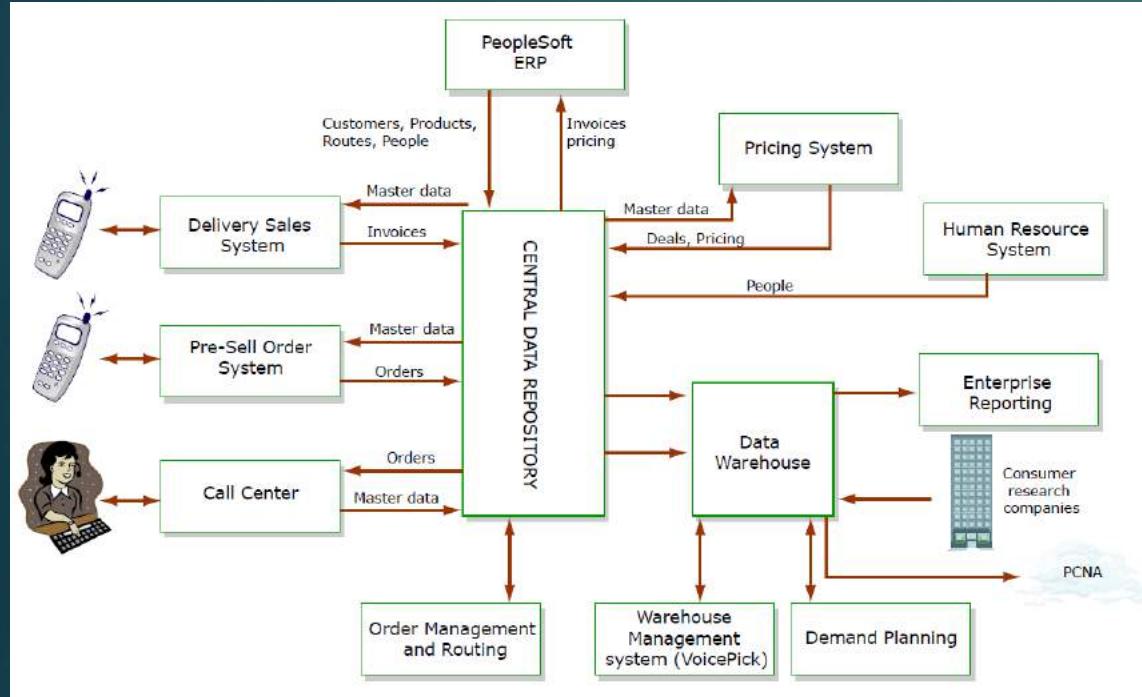
MetLife's example



Coordination Operating Model

Pepsi Americas

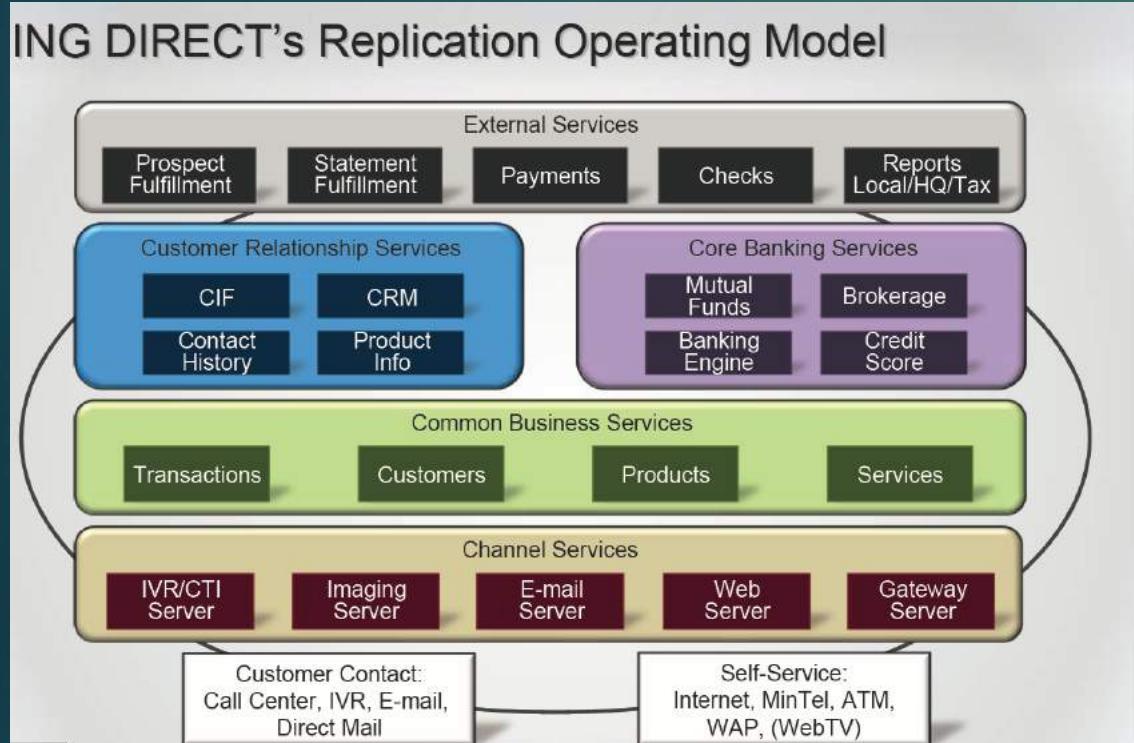
Information backbone
integration

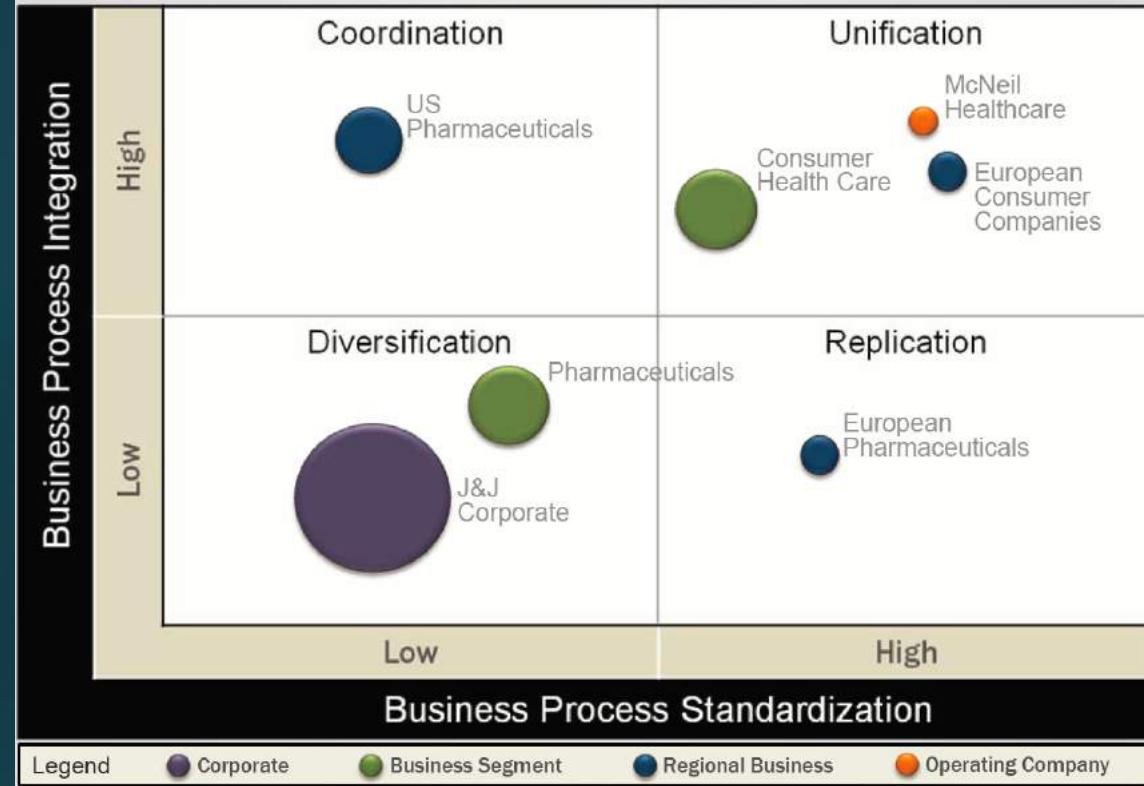


The Coordination Operating Model Platform

- ▶ Focuses on providing data visibility to meet customer needs
 - single face to customer
 - End-to-end business processes
- ▶ Allows customisation of services according to customer needs and encourages local expertise while leveraging global products and services
- ▶ The platform can be extended as firms add markets or products
- ▶ The platform demands disciplined use of data – preservation of data standards; timely input of data
- ▶ As products and services become commodities, can move toward unification; coordination is not a low-cost model
- ▶ Less prone to disruption than unification and replication models

ING Direct's Replication Operating Model





Johnson & johnson's

Multiple Operating Models



Target's Operating Model of One Full- Service bank

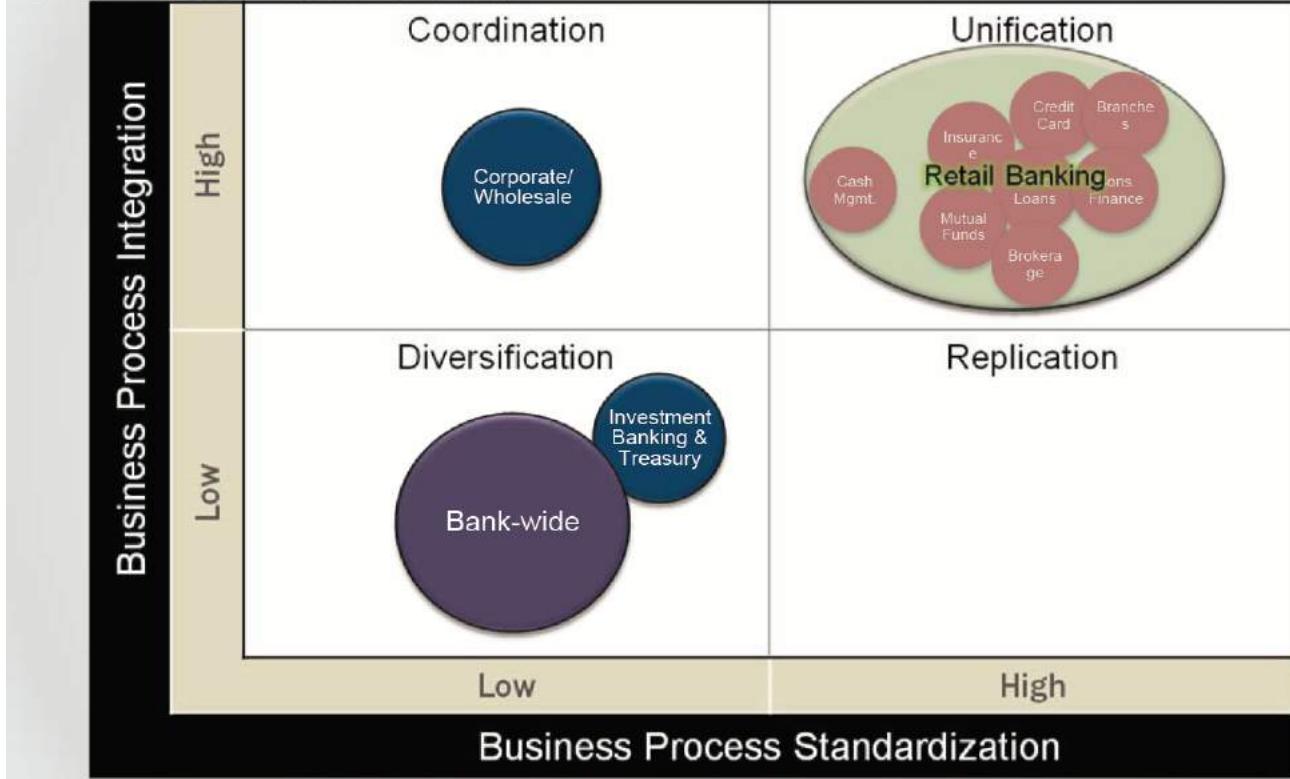
Target Operating Models

Business Process Integration	Business Process Standardization	
	Low	High
High	Coordination ■ 28% of business executives ■ 16% of IT executives	Unification ■ 39% of business executives ■ 57% of IT executives
Low	Diversification ■ 21% of business executives ■ 16 % of IT executives	Replication ■ 12% of business executives ■ 11% of IT executives

Source, Business Executive Percentages: 107 Senior Executives—Attendees of MIT Sloan's "IT for the Non IT Executive Program" December 2007 and April 2008 - typical titles: CEO, CFO, BU Heads, EVP operations, President, CIOs, VP Business Services.

Source, IT Executive Percentages: Survey of 70 IT executives—mostly CIOs and CIO reports from Fortune 500 companies, Spring 2006.

Aspirations of the Retail Banking Head at the Full-Service Bank



Aspirations of
the Retail
head at the
Full-Service
bank

Business Transformation at Toyota Europe

Toyota Europe's Transformation

Performance			Business Changes
Units Sold	Revenue (¥)	Operating Income (¥)	
727,000	1,266B	(9.9B)	<ul style="list-style-type: none">▪ 28 autonomous marketing companies▪ 9 manufacturing facilities
898,000	2,164B	72.5B	<ul style="list-style-type: none">▪ European delivery lead time for vehicles reduced 35%▪ Inventory of spare parts reduced by almost 50%▪ Operating income: 3.5% of sales
1,284,000	3,993B	141B	<ul style="list-style-type: none">▪ Reorganized as Toyota Europe

Toyota Motors Marketing Europe 2002

- Sales growing dramatically:

-384,000 units in 1995

-727,000 units in 2002
• Toyota Europe structured as 28 independently managed country operations

-cars and parts ordered from 9 European manufacturing plants

-All products and spare parts inventories managed within countries

-Little transparency of supply and demand

-different systems and processes in each country

- Operating loss FY 2002 Yen 9.9B



Questions

Links for useful resources

<https://hbr.org/2017/01/a-good-digital-strategy-creates-a-gravitational-pull>

https://www.weforum.org/agenda/2017/01/jack-ma-three-trends-define-future?utm_content=bufferc0a5e&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

<http://www.digitalmind.ee/business-technology-trends-for-2017/>

<https://enterprisersproject.com/article/2016/11/2016-digital-transformation-book-contest>

<https://www.weforum.org/agenda/2016/02/davos-2016-and-the-fourth-industrial-revolution/>

<https://www.weforum.org/agenda/2016/06/top-10-emerging-technologies-2016/>

https://www.weforum.org/agenda/2016/10/2017s-most-in-demand-skills-according-to-linkedin?utm_content=buffer23af8&utm_medium=social&utm_source=facebook.com&utm_campaign=buffer



Next Session:
5/6 April 2019

Information Systems Infrastructure

- Hardware, Software, Networks
- Data Analyses with R, SQL

Business Process Management