

Information Systems and Business Strategy

Value Web:

* web added value.

Internet-enabled Web of cooperating firms

- Customer-driven network of independent firms
- Uses information technology to coordinate value chains of separate firms for collectively producing a product or service

Supporting Activity
عن طريق
Connection
Between A الشركة
B والشركة

Primary Activities
ممكن
بعملها على ان
Product
Primary Activities
بشركة A
من الشركة B

كوني تستهدف customers بأماكن
مختلفة ممكن أوفر Products قيمتها
تنافسية جداً

Information Systems and Business Strategy

The Value Web

different suppliers
from different
areas / places.

Highly
Connected

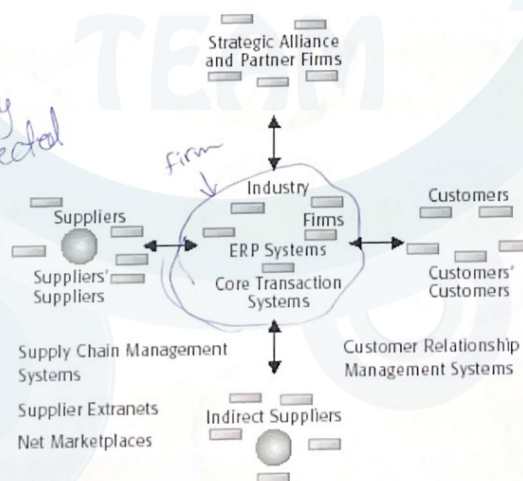


Figure 3-12

Information Systems and Business Strategy

Information Systems Products and Services

Systems that Create Product Differentiation:

* تفهيم اولاء اوجب customers ال Products ال بعلها

- Firms can use IT to develop differentiated products.
- Create brand loyalty by developing new and unique products and services
تنوع بال Prods وال Services
- Product and services not easily duplicated by competitors

Examples: Dell, Orbitz

Information Systems and Business Strategy

Systems that Support Focused Differentiation:

- Uses intensive analysis of customer data to support new ways of contacting and serving the customer
- Enables development of new market niches for specialized products or services
- A niche market is a segment of a larger market that can be defined by its own unique needs, preferences, or identity that makes it different from the market at large.

How does IT & IS support Product differentiation?
عن طريق ال Analysis of the Customer Data.

Information Systems and Business Strategy

Value Chain Model
(Profit Margin)

Porter's Five Forces Model
()

Porter's Five Forces Model

In the larger environment, there are five main forces or threats:

- New market entrants
- Substitute products and services
- Suppliers
- Customers
- Other firms competing directly

تغييرات
في بيئة
غير متوقعة
في بيئة
غير متوقعة

سوق جديد
مباشر

Information Systems and Business Strategy

Porter's Competitive Forces Model

Tech تطور
للشركات
Traveling agencies
Ex: Expedia

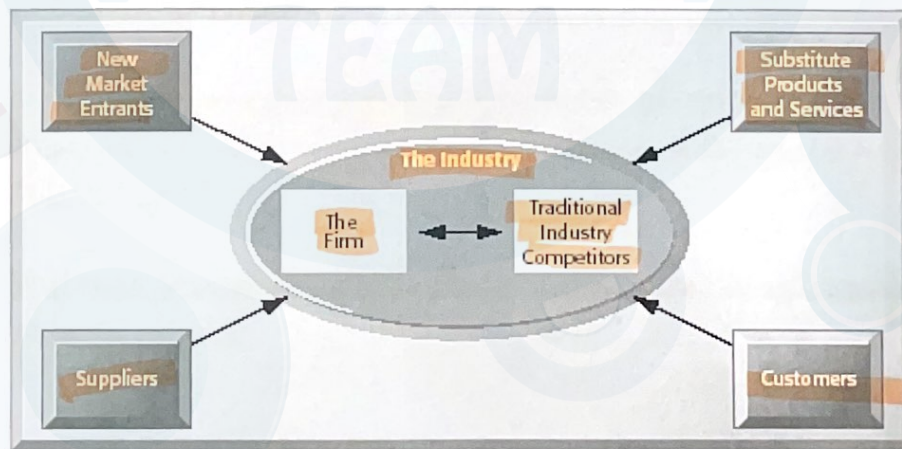


Figure 3-15

Information Systems and Business Strategy

IT and the Internet can greatly change the strength of these competitive forces:

- Encourage new entrants. Example: NetFlix (offers thousands of movies and TV shows for a flat monthly rate) vs. Blockbuster (a pay-per-view video-on-demand service (you rent or buy each title individually))
- Increase customer bargaining power. Example: Expedia.com (travelling agency) and others.

التكنولوجيا صبت في مصلحة العملاء
لكن قللت من القوة
Supplier Power

Information Systems and Business Strategy

IT and the Internet can greatly change the strength of these competitive forces: (Continued)

- Decrease in supplier power. Example: eCampus.com increases the efficiency of used textbook market, reducing publisher profits
- Substitute products. Example: online music lowers value of record stores

Textbooks?
e-books

قدرة على التخزين
أعلى

How is Porter's Value chain Used?

1. To Design a competitive Strategy
2. Identify areas to obtain competitive adv. over competitors for instance.
 - JIT inventory sys could give cost advantage (Inbound logistics).
 - Using Skilled Craftsman could give quality adv. (operations)
 - Outsourcing delivery could help give cost adv. (outbound logistics).
 - Centralised purchasing could give cost adv. (Infrastructure).

2nd video:-

Value chain is a set of activities that an org carries out to create value for its customers.

Porter's Value Chain focuses on systems & how inputs are changed into the outputs purchased by consumers using primary & support activities.

改善

KAIZEN

TEAM

Porter's value chain: Strategic tool or model used for internal analysis of a firm
 How are various activities performed by an organization? Add or don't add value?
 The value chain model. → A model of value activities.

Procure inputs
 Process inputs

<https://www.youtube.com/watch?v=fO4hzG4u3-Q>

Porter's Value Chain. (5:49)

Add value to them
 To generate outputs for customers
 & the Relationship between those activities.

https://www.youtube.com/watch?v=QU3dRhXmC_8

Macdonald's Value chain.

End of Nov
 5/6, 2023
 Rec Lec.
 49:50.

Start Nov 8, 23
 34:05

* الهدف الأساسي لـ IS
 في أي وقت يساعد بتحقيق
 أهداف الشركة إلى أقصى
 سواء على المدى القريب أو
 المدى البعيد

Organizational Strategy

How the IS can affect the Org Strategy
 يعلنون أهداف الشركة على
 المدى المتوسط والبعيد

- Determines organization's goal and objectives
- Developed from organizational structure
- Creates the value chain for organization
- Establishes the structure, features, and functions of information systems

أي الـ IS يساهم في تحقيق أهداف الشركة

هو فعلياً يساهم في عملية إعادة هيكلة جميع الـ Business Process
 إلى بتعملها الشركة لتحقيق الأهداف تبعاً

Business Process
 ↓
 أي ما يساهم بتشكيل
 الـ IS
 أقسام
 التكنولوجيا

الهدف الاساسي لدراسة
is to add competitive strategy.

What Is Competitive Strategy?

- Organization's response to structure of its industry structure:
- The structure of the industry refers to the nature of barriers to entry and competitive dynamics in the industry.
- Four characteristics of industry structure are particularly important to the performance of new firms in the industry:
 - ✓ Capital intensity (ترميز رأس المال)
 - ✓ Advertising intensity,
 - ✓ Concentration,
 - ✓ Average firm size.

عالي ال
Industrial
structure
مقياس
Performance
لأي
firm

Organizational Strategy

- Porter identified four competitive strategies:
 - Cost leadership across industry
 - Cost leadership focused on particular industry segment
 - Differentiation across industry
 - Differentiation focused on particular industry segment
- Porter says goals, objectives, culture, and activities must be consistent with strategy

الهدف تابع
يكون عكسي
to add competitive advantage.

Competitive adv/strategy:

لماذا ال Strategy بشغلين
أكون منتج ب Segment معينة
بال Industry في صناعة معينة بطريقة
تخليق أطلع منتج بال Quality عالية جداً
وبسعر شديد التنافسية.

	Cost	Differentiation
Industry-wide	Lowest cost across the industry	Better product/service across the industry
Focus	Lowest cost within an industry segment	Better product/service within an industry segment

Achieving Competitive Advantage

لخص الاستراتيجية

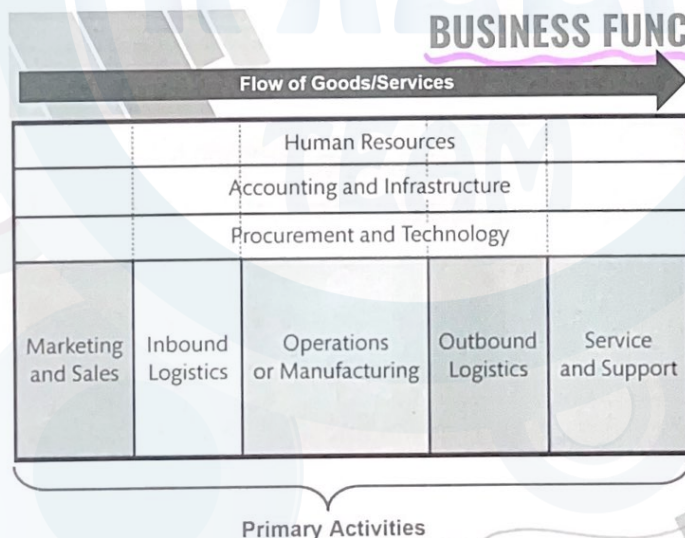
Based on the competitive strategy
التي تجعل Competitive adv.

- Businesses determine competitive strategies
- Create processes to achieve strategies
- Information systems developed to support business processes & optimization of the info
- Help organizations achieve competitive advantage
- Need to avoid creating systems that are unrelated to organization's strategy

عن طريق feedback إلى جعلها Business Process.

حتى لو مؤسسة غير ربحية لازم أبني Competitive strategy

Business Functions



لزم دائماً يجب بهمة الشركة

لزم يتم توفير عبر الاستراتيجيات competitive advantages.

all the activities carried out by the enterprise ⇒

★ **Business Functions:** the activities carried out by an enterprise; the combination of all primary and support activities.

Fundamental Types of Information Systems within Organizations

- Calculation systems
- Functional systems
- Cross-functional systems

I have Info sys.
for specific depts
& IS for cross
departmental IS.
خدمة بالدرجة
الأولى لخدمة
الوظائف
Business functions
All over the
enterprise.

Calculation Systems

- Antiquates system
- Relieved workers of repetitive calculations
- Labor-saving devices
- Produced little information
- Examples: systems that computed payroll and wrote
paychecks; inventory tracking

نظام دفع
الرواتب

الموظف استلم ولا
حسب الراتب

temporarily
Data

Functional Systems

← مفيدة جداً على مستوى
ال Dept ممكن تغير تشكيل
أو تطور ال Dept وتجمع عشر معلومات
عنها

in Single Dept.

- Facilitates work of single department or function
- Functions added to calculation system programs to provide more value
- Islands of automation

ممكن أدمج ال calculation sys
اللي بتشكل ال basic form ال IS
عشان تحليني more info or more values

هون بكين
IS خاصة ب Dept
ممكن

- Work independently from each other
- Effective as independent functions
- Inefficient working in cooperation with other processes across entire business

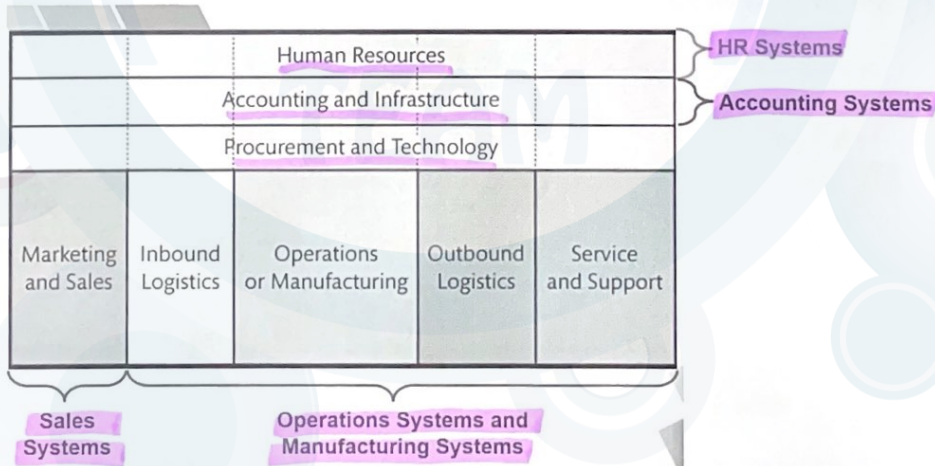
- Examples: human resources; financial reporting

مثلاً بدمج ال
Business process
الخاصة بال HR

HR FR.
دع مبرورتي جزيرة معزولة إذا ما توصلت مع ال other
dept → might have lack of organization & updating of
عدم تنظيم ال Info I have.

* لعب
لدمج أي
Cross-Functional
Process.

Functional Systems



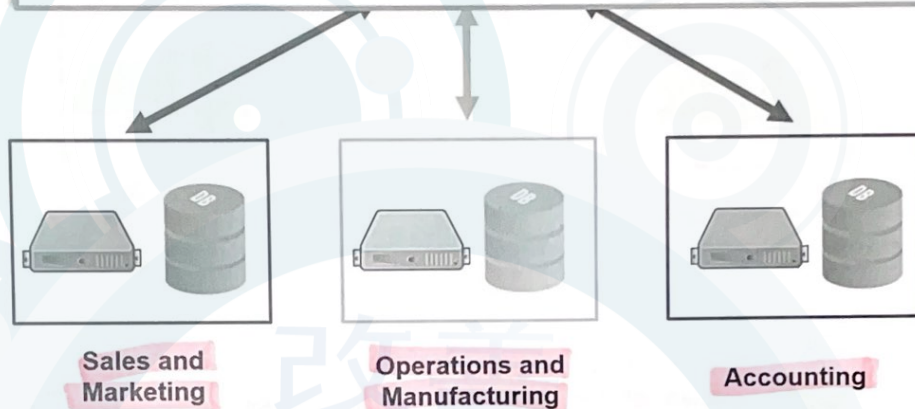
★ **Functional System:** Information systems which facilitate the work of a single department or function. ★

Functional Silos

دے بالی

FUNCTIONAL SILOS

Functional Silos: Isolated systems designed to work independently of one another.



* رج یوں بنی ہوئے ہیں کہ IS ہر Dept کے لئے Business Process کے لئے جدا جدا کے ہیں۔
مثلاً رج صرف عام Business Processes کے لئے Cross-functional departments کے لئے نہیں ہیں۔

Functional Systems

A certain format of the Data.

↓ ہونے کی Functional Info Sys کے لئے

ہر Dept کے لئے اپنے اپنے Business Process کے لئے اپنے اپنے Software کے لئے

Data Integrity Issues:

Order Data

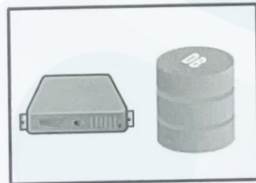
Product	Price
LXZ-0324	\$135.56
LTK-0203	\$38.99

Inventory Data

Product	Price
LXZ324	\$135
LTK203	\$38

Accounting Data

Product	Price
00324-LXZ	\$130.25
00203-ATK	\$39.00



Sales and Marketing

Operations and Manufacturing

Accounting

Integration Software کے لئے Dept کے لئے

Loss of Integrity or Heterogeneity Between Software

Every Software Uses a certain format.

طریقہ کار کے لئے مختلف

Product name کے لئے مختلف

Functional Systems

لما أبنى Info لكل
Dept لخالها المصنوع
حيكون مكلف جدا \$\$\$

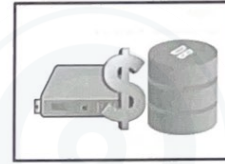
Costly Functional Systems



Sales and
Marketing



Operations and
Manufacturing



Accounting

Functional sys = Based on departments (departmental based)
Cross-functional sys = Based on Process.

Integrated, Cross-Functional Systems

- very helpful
- more efficient
- Higher Integrity between depts strategy of the firm
- Supports the

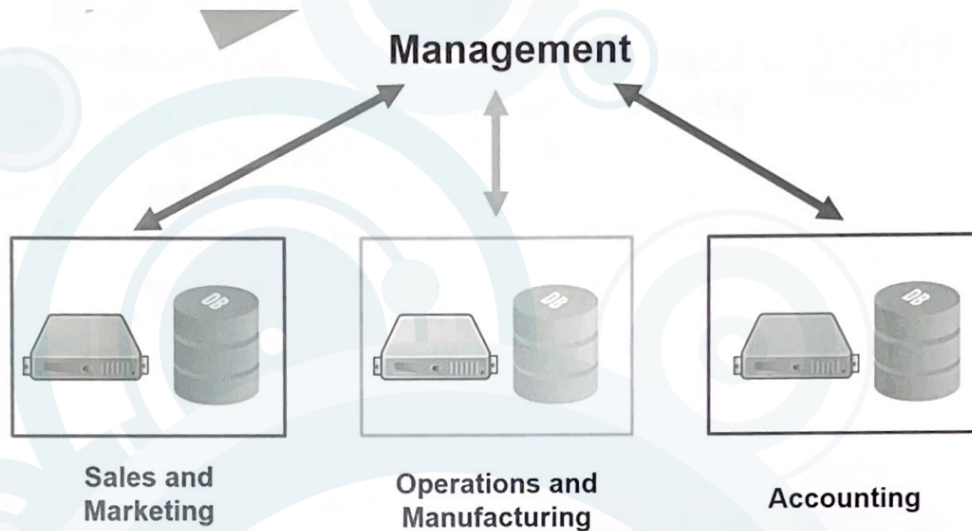
↓
Most Imp
to have
a clear
line of
authority

Functional Silos. للتغلب على

- Cross-department systems operate across departmental boundaries
 - Increased functionality
- Process-based systems support complete business processes
 - Integrated processing systems are more efficient
 - Needs clear line of authority

Integrated, Cross-Functional Systems

نوع من الأنظمة الإدارية يعمل على دمج البيانات الوظيفية (Cross-functional) Sys



Functional Systems Problems

- Systems provide tremendous benefits, but are limited because they operate in isolation
 - Data duplication results from each application having own database
 - Potential lack of data integrity
 - Business processes disjointed across functions
 - Produces lack of integrated enterprise information
 - Limited information available at any one source
 - Inefficient decisions based on limited knowledge
 - Increased costs to organization

لما أبني أكثر من IS وأواجه كل IS ظاهراً بكل dept وأواجه كل المشاكل إلى غير
أكبر رح يكون Not efficient & costly

Cross-Functional Systems and the Value

↓ Process based Chain

أنجز مثال (CRM)
customer relationship
management sys.

حسنا حتى يتقن
Cross-function
بيع نوعي
الmanagement
IS or IS not
I already
have.

- Cross-functional systems designed to overcome problems in functional systems
- Customer relationship management systems (CRM)
 - Integrates all of the primary business activities
 - Makes the organization customer-centric
 - All customer data stored in single database
- Enterprise resource management systems (ERP)
 - Integrates primary value chain activities with human resources and accounting
 - Enterprise-wide systems

جميع عمليات
البيع والشراء إلى
Customer بتعلق
واحد

↓
جميع العمليات
تكون بنفس
Database

أحد أبرز الأمثلة →
لأن
Cross-functional
All over the Enterprise

Business Process Design

□ Porter's idea

- Create integrated, cross-departmental business systems
- * ▪ Do not automate or improve existing systems
- Instead, create new processes: that are cross-departmental.
 - Integrate activities of all departments
 - Across entire value chain

إنشاء sys
جديدة لا أضمن
ولا تعمل آتية

New process = New Info Sys.

Business Processes

حذر منه
بتوسع أكثر
بالمشايير الجاي

عباره عن شبكة من النشاطات والموارد والعمليات

والعمليات

- Network of activities, resources, facilities, and information → business function. بند أمثالي in
- Accomplish a business function
- Implement value chains or portions of value chains

Business Process
المفروض تبرر التكلفة تبعها
لما عن طريق تعطيني خدمة متميزة أو
تعطيني بفعالية متميزة

改善

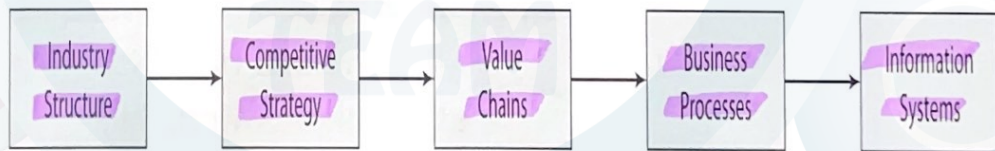
هدفها التغلب على أي
Barriers

من خلال
Competitive Strategy
بدي التي
Business Functions
CS

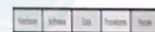
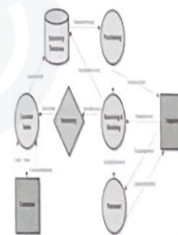
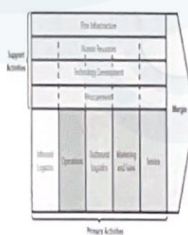
من خلال ال
value chains
بدي
Supported by
Business Process.

Should be
cross-departmental
across all the value
chain
Should be created,
shaped, & optimized
by an Info
sys.

Organizational Strategy Determines Information Systems



Lowest cost across the industry	Better product/service across the industry
Lowest cost within an industry segment	Better product/service within an industry segment



Competitive Advantage via Products

- يا إما بفتح New Products or services بأسعار منافسية
أو بفلور Products or services إلى عذري أو بفتح بجاون قدر الإمكان أمز
- Segment
مجموعة
- ↓
- بجاون أمز
Segment
مجموعة
- الاطفال
(Business Niche)
مثلاً
New Born child wear.
- Organizations gain a competitive advantage by:
 1. Creating new products or services
 2. Enhancing existing products or services
 3. Differentiating their products or services

Competitive Advantage via Business Processes

- Organizations can gain a competitive advantage by implementing business systems

★ Locking in customers

- High switching costs

★ Locking in suppliers

- Making it easy to connect to and work with organization

★ أحد أهم أهداف ال Business Functions

أخلق ثقة مع العملاء و Trust مع ال suppliers

★ نكتشف انه ال Customers & suppliers من ال Valuable Resources of the Firm

لانه عملية خلق ثقة مع ال Customers وعملية الحصول على Trust ال Suppliers

Competitive Advantage via Business Processes, continued

■ Create entry barriers

- Making it expensive for new competition to enter market

كونه ار Competitive adv. سعري بده يكون
Lowest price

■ Establish alliances

- Establish standards
- Promote product awareness

يخلق Barriers w/ competitors.
أسس طبيعي

■ Reducing costs

- Increased profitability

عن طريق تبني معيّنات
Standards
و العمل عملية
Product بار
إلى بتبرجه

改善

KAIZEN

TEAM