

Strategic information systems notes essay sample

[Business](#), [Management](#)



Role

- * Enabler of E-Business
- * Change Agent
- * Enabler of Globalization

Role of IT - Enabler of E-Business

- * Disintermediation

Elimination (by the online sources) of the traditional middleman the intermediary between the seller and the buyer (such as an agent, broker, or reseller), or between the source and the recipient of information (such as an agency, official, or gate keeper). * Reintermediation

Re-emergence of the traditional middleman the intermediary in new forms. For example, portals such as PetroChemNet bring buyers, sellers, traders, and distributors of chemicals together, and mediate as trusted third-parties between parties that are total strangers to one another. * Hypermediation

- * Infomediation

Role of IT - Change Agent

- * Dynamic Stability
- * Enable/inhibit incremental and radical changes

Role of IT - Enabler of Globalization

- * Expands business presence beyond borders
- * IT maintenance of Infrastructure and Technologies

Effect of IT on competition

- * Michael Porter's industry and competitive analysis framework: 1) Industry

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Rivalry, 2) Potential New Entrant, 3) Threats of Substitute Products or Services, 4) Bargaining Power of Supplier, 5) Bargaining Power of Buyers *

Build barriers to entry [P. 72]

* Switching costs [P. 74]

* Change the basis of competition, e. g. transformed business strategy [P.

68] * Change the balance of power in supplier relationships [P. 70] *

Generate new products [P. 75]

Effect of IT on Productivity

* Tangible vs intangible benefits

* Service vs manufacturing sections

* Alignment of IT to strategic goals

Effect of IT on Business Performance [P. 108]

* Drive cost savings [P. 106]

* Revenue growth [P. 109]

* Asset efficiency [P. 112]

Types of Business Information Systems

* Transaction Processing Systems

* Management Information Systems

* Decision Support Systems

* Enterprise Resources Systems

* E-commerce Systems

* Expert Systems

2. Cisco Case Study

(Implementation method, possible problems, successful factors)

Problems

- * No redundancy, reliability, maintainability
- * Decentralization trend
- * Expected company growth

Questions in implementing new system

- * How should ERP decision be made?
- * How should we setup-up the ERP implementation team?
- * How should we select ERP vendor
- * How should we implement ERP?
- * How do we cut over to ERP?
- * What should we do after implementation?
- * Next step?

Obstacles

- * Initial “ No modification” strategy {4. Management of IT Change} *

Undersized technical architecture

- * Immature software
- * Poor testing strategy

Success Factors

- * Put best people on team
- * “ Can-Do” team attitude
- * Well communicated top management commitment

- * Middle management commitment
- * High priority in company
- * Rapid, iterative prototype to build knowledge
- * Purchase equipment on 'promised capability'
- * Tight controls on proposed modifications
- * Strong vendor alliances
- * 'Seasoned', experienced consulting support

3. Organizing IT Function

(IT infrastructure, the components, impacts, organization structure, leadership type)

IT infrastructure

- * Current: Internetwork-Based Computing
- * Moore's Law
- * Metcalf's Law

Components of Internetworked Infrastructure [P. 240 - 250]

- * Processing Systems
- * Network
- * Facilities
- * Key management issues

Business Implications of Internetworks [P. 252 - 256]

- * Real-time infrastructures
- * New model of service delivery

- * Broader exposure to operational threats
- * Managing legacies

Impact of Internetworked Infrastructure on Organization Design * hierarchical controls -> flattened

- * promotes flexibility, creativity and learning
- * Eliminate layers of management
- * Ensure cross-functional, inter-organizational information use

Leadership of the IT Function [P. 423 - 427]

- * Support
- * Factory
- * Turnaround
- * Strategic

4. Management of IT Change

(Aspects to consider for an IT change, difficulties and resolutions, mistakes to avoid) {2. Cisco case}

Managing Change Through IT

1. Unfreezing

- * Motivation for change
- * Impediments
- * 5 phases of positive cycles
- * Negative response to change

2. Change

- * Well-defined objective

- * Communication
- * Plan
- * Stakeholder management
- * Plan for resistance to change
- * **High performing teams

3. Refreezing

- * Institutionalize change
- * Overcome lingering resistance to change

Others

- * 80/20 rules
- * Mistakes in managing change

5. World Bank: Enabling Business and IT Strategies

(Business-IT alignment, planning activities, competitive advantage)

Planning

- * Strategic preparations - Technical
- * IT infrastructure
- * Networks of connectivity
- * Information architecture
- * Business process redesign/reengineering
- * Control costs/expenditures
- * Performance evaluation
- * Strategic preparations - Managerial
- * Organization re-structuring / redesign

- * The role of IT
- * Change Management

Business-IT alignment, Strategy planning activities

1. Obtaining champion/sponsor
2. Forming the team
3. Describing the ' as-is' state, ' to-be' state
4. SWOT Analysis
5. Porter industry profitability analysis {1. IT Management: IT Role, Effect and Types}
6. Ansoff product-market analysis
7. Implementation plan
8. Periodic review

Alignment success summary

Can IT create competitive advantage {1. IT Management: IT Role, Effect and Types} * Cost reduction

- * Operational effectiveness
- * Customer satisfaction
- * New ways to leverage IT
- * Potential benefits to mine

Cloud computing

- * Characteristics
- * Types: Public, community, private, hybrid
- * Service Types: SaaS, PaaS, IaaS
- * Barriers: security, delay, availability; SLA, business model, locking in customers

6. Electronic Commerce

(Business Types, Single market classification)

1. Different business types
2. Origins and Growth of E-commerce
3. Technology Infrastructure {3. Organizing IT Function}
4. The Internet: Technology Background: TCP/IP
5. Internet II: The Future Infrastructure

Traditional Business and E-commerce

Winner-Take-All Category (Single market)

* The market is a natural monopoly - the minimum efficient scale of a firm's operation exceed the mature market's size, or;

*All of the following

* Network effects are strong and positive

* Cross-side network effects

* Same-side network effects

* Multi-homing costs are high

* Network user demand for differentiated platform functionality is limited

7. Citibank: eBusiness Strategy and Investment

(Internet for eBusiness strategy)

Reasons

* Customers: e-Enabled, looked for efficient and streamlined payment process

- * B2B: market requirements changed, payment migrate to the Internet
- * Competition: Bank being disintermediated

Strategy Justification

- * Align with mission/vision {5. World Bank: Enabling Business and IT Strategies}

- * How to bring in values?

- * Can Internet advantage last long: Imitation, Inertia, Suboptimization, change of the game

How the Internet transforms strategy

- * Transaction costs
- * Differentiation
- * Focus
- * Deconstruction of business structure
- * De-averaging competitive advantage

Competitive advantage {5. World Bank: Enabling Business and IT Strategies}

- * Transaction cost reduction
- * Operational effectiveness not advantage because of imitation
- * Strategic positioning

Implement C-T-E strategy

1. Organization of e-Business structure {ref Cisco case}
 2. Implementation strategies of C-T-E
- * Regionalization

- * Internalizing the web
- * Straight-through automation

Implementation Issues (Difficulties)

- * Management of the new business units
- * Integration of e-strategy to the bank's legacy
- * Instillation of an e-culture across Citibank to think in a like-minded fashion
- * Preparation of management for the understanding and support of ebusiness

Maximize the eBusiness benefits (Next)

- * Fundamental benefits: cost savings, operational efficiency, customer satisfaction
- * Potential benefits to mine: more customer satisfaction, new products - cross selling, data mining

8. Amazon

(Disruptive Innovations, valuing business investments)

Disruptive Innovations

Four-step strategy for disruptive technology (Planning)

1. Determine whether the technology is disruptive or sustaining
2. Define the strategic significance of the disruptive technology
3. Locate the initial market for the disruptive technology
4. House the disruptive technology in an independent entity

Business model

- * Diversification

* Business Model Evolution: Enhance, Extend, Expand, Exit * Significant infrastructure investments {cf. 5. cloud computing}

Valuing e-Business Investments

- * Financial appraisal methods
- * Payback period
- * Net present value
- * Average rate of return/Return on Investment
- * Internal rate of return

Inappropriate for e-businesses

Localization Strategy

Samsung's example

- * Charity
- * Localization
- * Education

9. IT Outsourcing [P. 302 - 310]

(outsourcing considerations)

Outsourcing golden rules

- * Low cost
- * Not core business
- * (Strategic partnering)

Cost analysis

- * Vendor search and contracting
- * Transitioning to the vendor

- * Managing the efforts
- * Transitioning after outsourcing
- * Outsourcing ratio & Overhead ratio

Core Business Analysis

Outsourcing Benefits (from Bharti's case)

- * Focus on core areas of product innovation, value added services, marketing, branding and pricing
- * Do not have to maintain excess capacity
- * Rapid growth is possible
- * Risk diversified by involving different vendors

Outsourcing Contract

- * Performance: KPI, flexible, updating
- * Incentives: rewards & penalties...

Governance: trust but verify, monitoring, updating, conflict resolution, exit triggers

Decentralize

[P. 83]

We want to be global and local, big and small, and radically decentralized with centralized reporting and control. If we resolve those contradictions, we create real competitive advantage." [P. 85]

The microcomputer revolution of the 1980s provided tools to decentralize information processing-which helped improve local decision making-but the

technology to support both local and enterprisewide information sharing and communication was inadequate. [P. 93]

During the 1980s and 1990s, the solution adopted by many executives was to decentralize decision making to increasingly more focused and autonomous profit centers or “ self-managing teams.” In so doing, decisions could be made more quickly, but the cost of coordination and control increased and decisions made by local employees and teams often failed to consider the overall goals of the company. [P. 251]

Interne/working Technologies Are Decentralized

Largely due to their Defense Department heritage, which dictated that computer net- works contain no single points of failure, internetworks have no central traffic control point. Computers connected to the network do not need to be defined to a central control authority, as is the case with some networking technologies. [P. 434]

Decentralizing the management of development projects and IT

dcvelopment professionals to business divisions can align the development of new IT applications more quickly and effectively with the needs of senior divisional management. Standardization

[P. 265]

Standardization and technology advances permit specialization by individual firms in value chains, resulting in economies of scale and higher service levels. [P. 431]

Standardization of computing infrastructure also pays dividends by reducing the complexity and cost of maintaining a firm's IT capabilities. Simplification

[P. 216]

This ICT standardization and business process simplification would effectively facilitate the acquisition process and enable faster and smoother integration into the DSM organization. A key consequence of the carve-out strategy was the realization by the business units that standardization on the SAP enterprise system platform (e. g., work processes, data standards, reporting templates) was a critical step towards operational simplification and efficiency. [P. 433]

A centralized policy-based approach to both virtual and physical resources also can further the simplification, standardization, consolidation, and integration of IT services in common use across businesses and regions. At the same time, the ability to easily reuse and reconfigure IT capabilities and assets provides a robust but agile infrastructure platform for rapid future business growth.

Consolidation

[P. 139]

In the global appliance industry, for instance, competitors including Electrolux, General Electric, and Whirlpool have been squeezed by the consolidation of retail channels (the decline of appliance specialty stores, for instance, and the rise of big-box retailers like Best Buy and Home Depot in the United States). Another example is travel agents, who depend on airlines as a key supplier. When the Internet allowed airlines to sell tickets directly to

customers, this significantly increased their power to bargain down agents' commissions.

Centralization

[P. 433]

Similarly, centralization of data management ensures coordination and synchronization of consolidated or physically distributed databases, so that business users, regardless of their location, can access data as needed.

Value Chain

[P. 68]

A streamlined and integrated value chain helped eliminate redundancies, reduce cycle time, and achieve even greater efficiency and productivity.