

Chapter 4: IS/IT Strategic Analysis: Assessing and Understanding The Current Situation

Arrianto Mukti Wibowo, S.Kom, M.Sc.
amwibowo@cs.ui.ac.id

Methodology Revisited

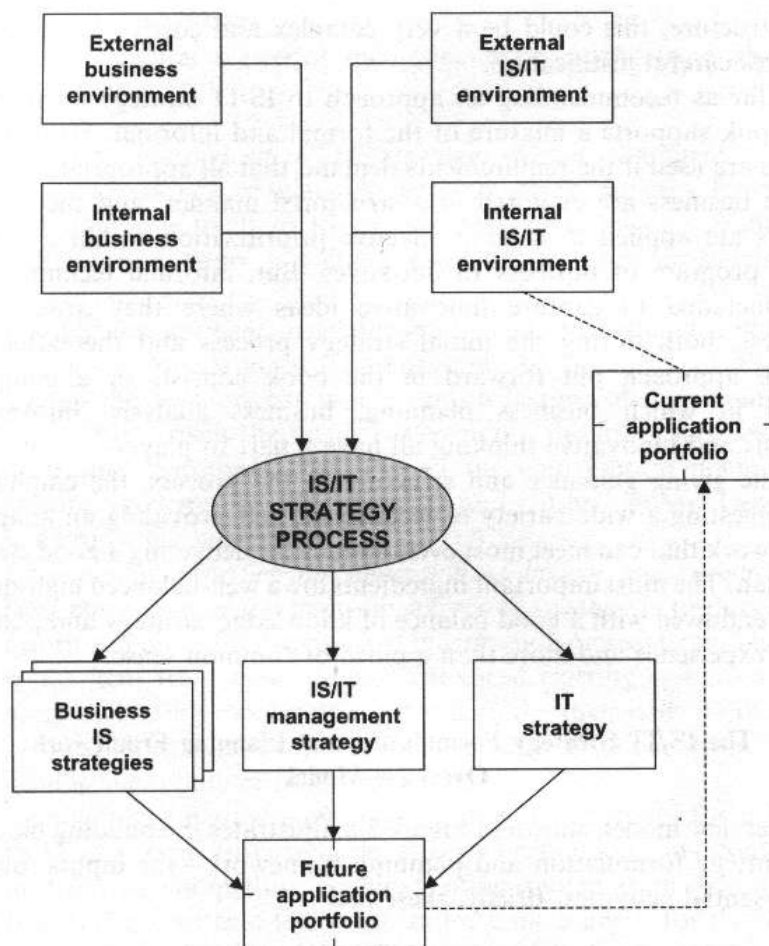


Figure 3.8 The IS/IT strategic model

IT Strategy

Conducted at business unit level

1. Application portofolio management
2. organization of IS / IT, management of resouce & administrative
3. managing the information resource & prvision of information service
4. managing application development
5. managing technology

IS/IT Management Strategy

Common to all business unit / business function

1. IS function: organization, resourcing, authority
2. investment prioritization
3. vendor policies
4. human impact policies
5. IS accounting policies

Business Process Reengineering

Gambaran BPR versi Hammer & Champy (1993)

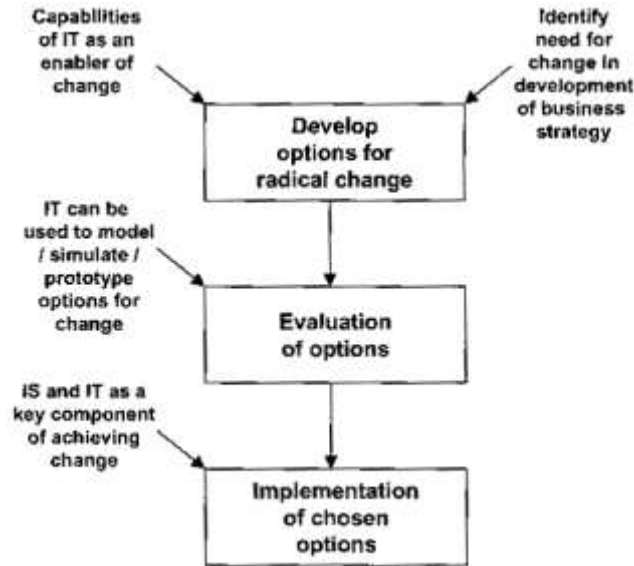
- Beberapa pekerjaan digabung jadi satu
- Staf banyak melakukan decision making
- Delinearisasi: jadi proses tidak harus sekuensial, tapi mungkin ada yang bisa diparelelkan
- Membuat sebuah proses bisnis dengan beberapa versi: penting untuk mass production tetapi memungkinkan customization
- Relokasi pekerjaan ke lokasi yang paling tepat
- Meminimkan kontrol dan pemeriksaan
- Rekonsiliasi diperkecil, bisa dengan cara meminimkan jumlah point of contact
- Melakukan kombinasi sentralisasi dan desentralisasi
- "Single point of contact" untuk customer

Gambaran BPR versi Peppard & Rowland (1995)

| Eliminate | Simplify | Integrate | Automate |
|--------------------|-----------------|------------------|-------------------|
| Overproduction | Forms | Jobs | Dirty activities |
| Waiting time | Procedures | Teams | Difficult |
| Transport | Communication | Customers | activities |
| Processing | Technology | Suppliers | Dangerous |
| Inventory | Problem areas | | activities |
| Defects / Failures | Flows | | Boring activities |
| Duplication | | | Data capture |
| Reformatting | | | Data transfer |
| Inspection | | | Data analysis |
| Reconciling | | | |

Examples!

- Many BPR sprung from thorough understanding of business strategy (why?)
- Many BPR has significant IS/IT element. IS/IT is the enabler of BPR
- Common need of IS strategy & BPR to build a potential business model

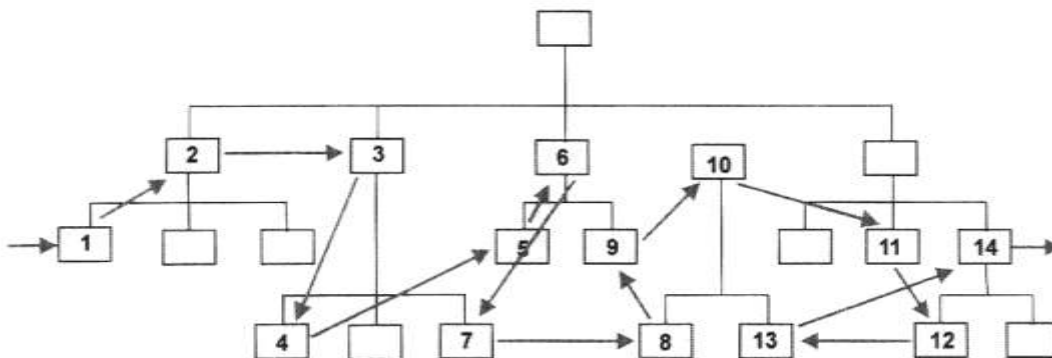


Reconciling IS/IT and BPR

| Questions | BPR | IS/IT Strategy formulation |
|----------------|---|--|
| Formulation | How can we reengineer our business to provide advantage? | How can IS/IT be exploited to provide business advantage (impact) |
| Implementation | How can we improve our process to ensure success of the strategy? | How can IS/IT ensure the success of the business strategy? (alignment) |

Pandangan bahwa yang dilihat bukan “fungsional”, melainkan proses:

Traditional functional structure



Process flow

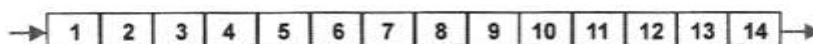


Figure 4.8 Adopting a process orientation

Ada 2 cara melakukan BPR:

1. Clean Sheet Method
2. Systemic Approach

Bagaimana mengidentifikasi proses yang penting?

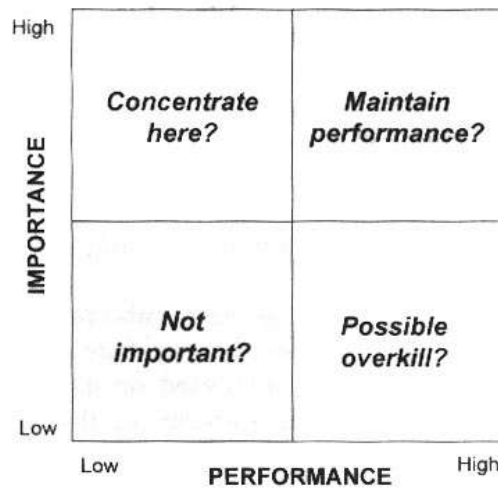


Figure 4.9 The importance-performance matrix

IS Demand: Where do we get it?

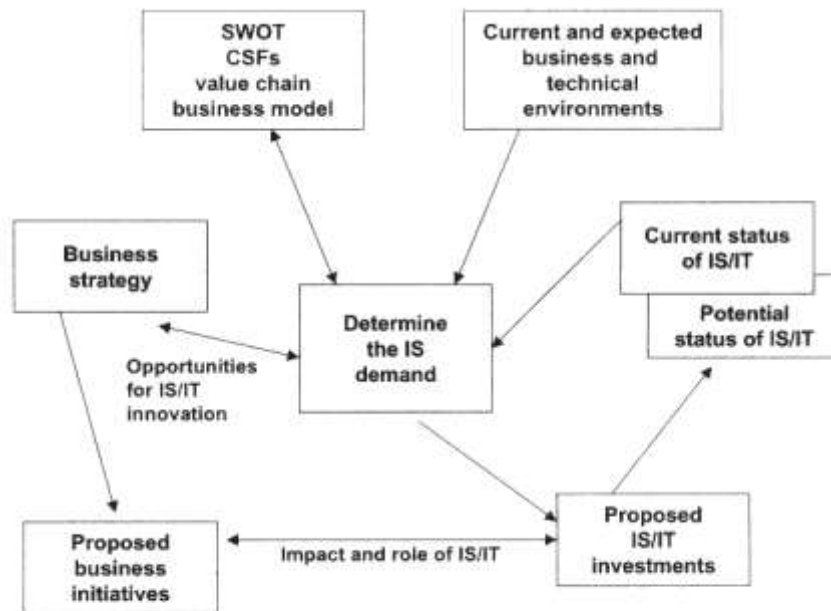


Figure 4.2 Determine the IS demand

Interpreting the Business Strategy

Internal Business Environment

1. Business strategy
2. Current business process
3. Organization environment

Apa isi dari Business Strategy?

1. Misi

What the company does in a long term overall purpose. Example:

“To be the world mobile communication leader, enriching the lives of individuals and business customers in the networked society”

2. Visi

What will the company look like in the future?

3. Objectives

Measurable targets that the organization is setting to move towards its vision.

Characteristics of an objective:

- a. unambiguous & result oriented
- b. measurable, verifiable and not too numerous
- c. relevant, achievable
- d. consistent with higher level objectives

Contoh:

“Reduce manufacturing cost by 10% each year for the next five years”.

Idenya adalah bagaimana menurunkan IS Strategy dari business strategy...!

Business process, Activities & Key Entities

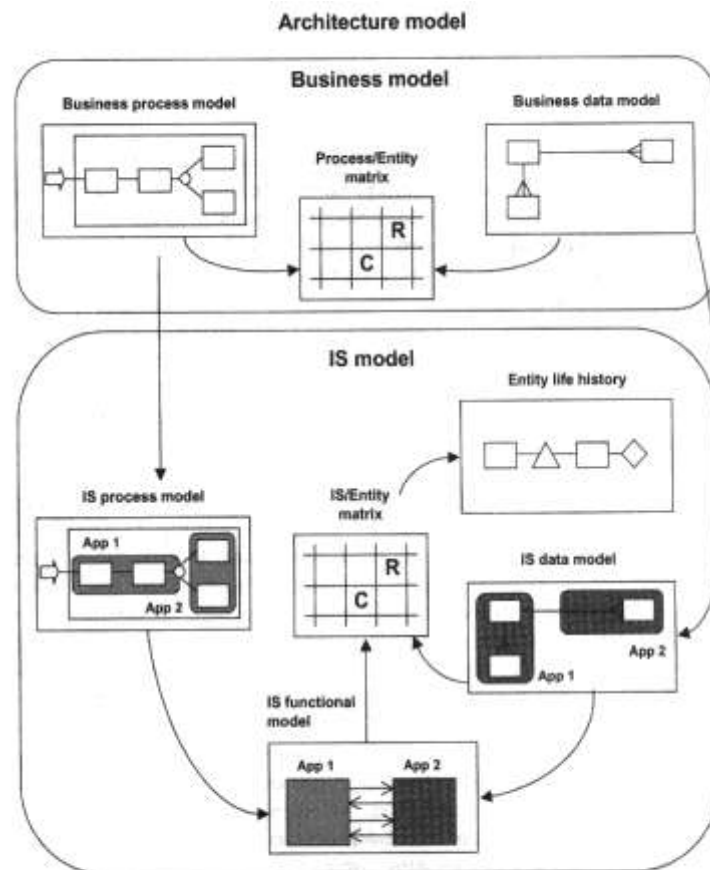


Figure 4.3 An example of an architecture model, comprising a business and an IS model (source: M. Cook, 'Architecture models', working papers, Glaxo Wellcome Operations, 1995)

Dapat dipakai untuk:

- proses mana yang tidak “menyambung”
- letak CSF
- menentukan posisi aplikasi IS
- proses mana yang sudah menggunakan komputer dan mana yang belum
- melihat dimana terjadi redundansi pekerjaan

Yang dapat dilihat adalah:

1. Business process
2. Activities
3. Key entities

IS model mencakup:

1. Process flows
2. functional decomposition diagram
3. entity relationship
4. DFD
5. Activity / entity matriks

Examining the Current IS/IT Environment

Internal IS/IT environment

Mencakup:

- evaluasi portofolio aplikasi
- sumber daya informasi
- evaluasi infrastrukture

Beberapa pertanyaan yang mungkin dibuat dalam menanalisa portofolio saat ini:

1. Aktifitas bisnis apa yang sekarang didukung oleh IT?
2. Apakah proses bisnis utama menggunakan IT?
3. Bagaimana informasi mengalir dalam sistem kerja?
4. Bagaimana SI mendukung strategi bisnis saat ini?
5. Apakah ada problem dan kesenjangan yang muncul?

Selain itu, kita juga harus melihat

- bagaimana kebijakan policy IT terhadap vendor, user,
- organisasi SI: fungsi, ukuran, struktur, tingkatan, ada/tidaknya steering committee, pola anggaran, dsb. (nanti lihat chap.8)

External IS/IT Environment

Tujuanya adalah untuk mendapatkan gambaran mengenai trend teknologi beserta pemanfaatannya. Juga termasuk melihat apa yang dilakukan oleh kompetitor. Bisas juga dengan melihat hasil-hasil survey

Teknik-teknik Analisa Keadaan Sekarang

Teknik untuk membuat IS Demand

| Teknik | Deliverables |
|----------------------------|---|
| Business strategy analysis | Misi, objective.. Ruang lingkup bisnis Prioritas IS requirement utk mendukungnya |
| CSF | Area dimana beberapa aktifitas harus "benar". Pengukuran |
| SWOT | SWOT terhadap internal & external business & IS/IT environment |
| Balance Scorecard | Business objectives & key information requirements Pengukuran |
| Process analysis / BPR | Identification of core business process Opsio-opsi perbaikan proses |
| Organizational modeling | Memberikan gambaran menyeluruh |

| | |
|-------------------------------|--|
| | mengenai lingkungan Sebagai mekanisme untuk menyaring pilihan-pilihan yang mustahil |
| Current portofolio evaluation | Profil aplikasi saat ini Mengukur kontribusi saat ini terhadap strategi bisnis |
| Business modelling | DFD Entity models Object models |

Balanced Scorecard

Diciptakan oleh Kaplan & Norton.

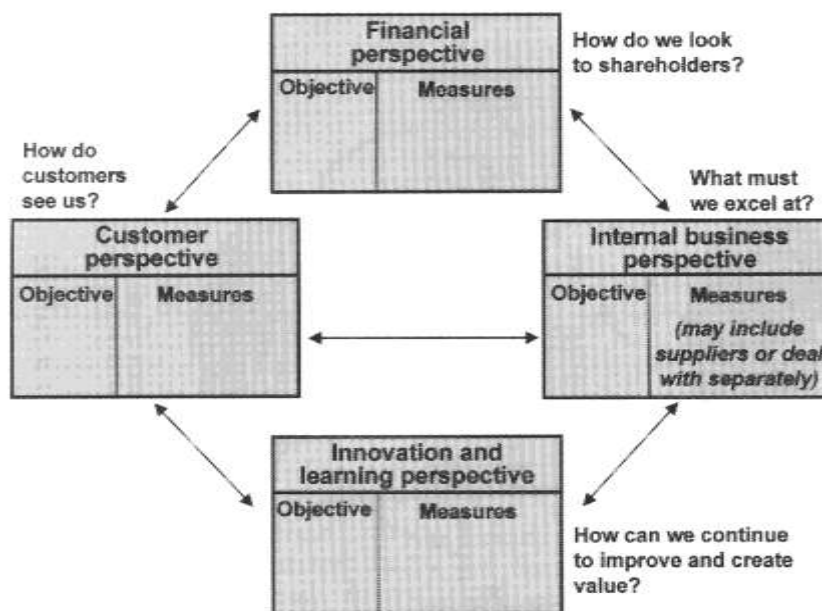


Figure 4.5 Information and the Balanced Scorecard (source: R.S. Kaplan and D.P. Norton, 'Using the Balanced Scorecard as a strategic management system', Harvard Business Review, January-February 1996, 76. Used with permission)

1. Financial: How do we look to our shareholders and those with a financial interest in the organization.
2. Internal business perspective: what do we have to excel at if we are to meet expectations of our employees and trading partners?
3. Customer perspectives: How do our customers perceive us in term of products, service, relationships & value added?
4. Innovation and learning perspective: How do we continue to improve?

Critical Success Factors

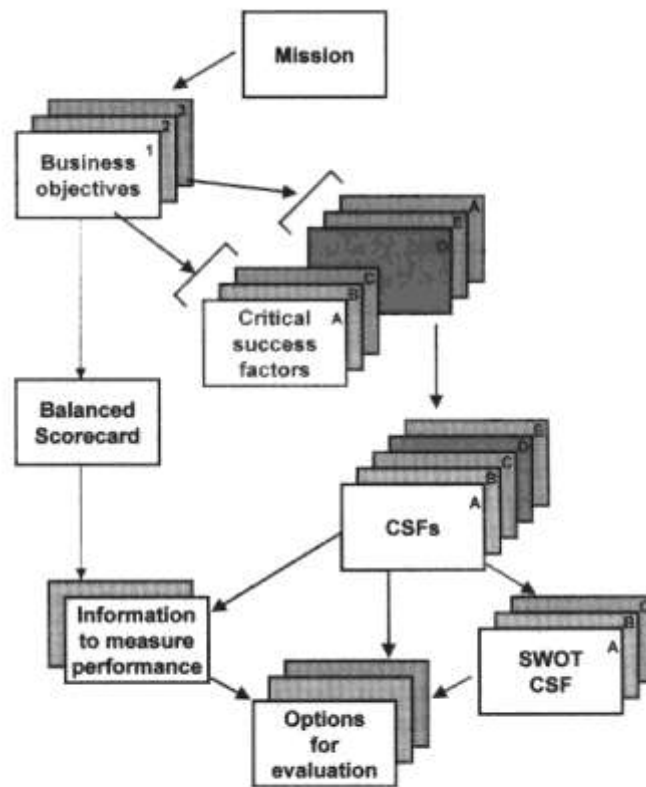


Figure 4.7 Critical success factors basic processes

Kegunaannya:

1. involving top management in IS/IT strategy and gain their commitment
2. develop a consensus view of IS applications
3. linking IS activity to business strategy
4. providing guidance for defining executive information needs

Kelemahannya:

1. CSF tend to be internally focused and analytical, not creative
2. Penentuan CSF menunjukkan gaya setiap manager
3. Tidak terlalu berguna kalau dipakai pada lapisan bawah.

CSF & Balance Scorecard

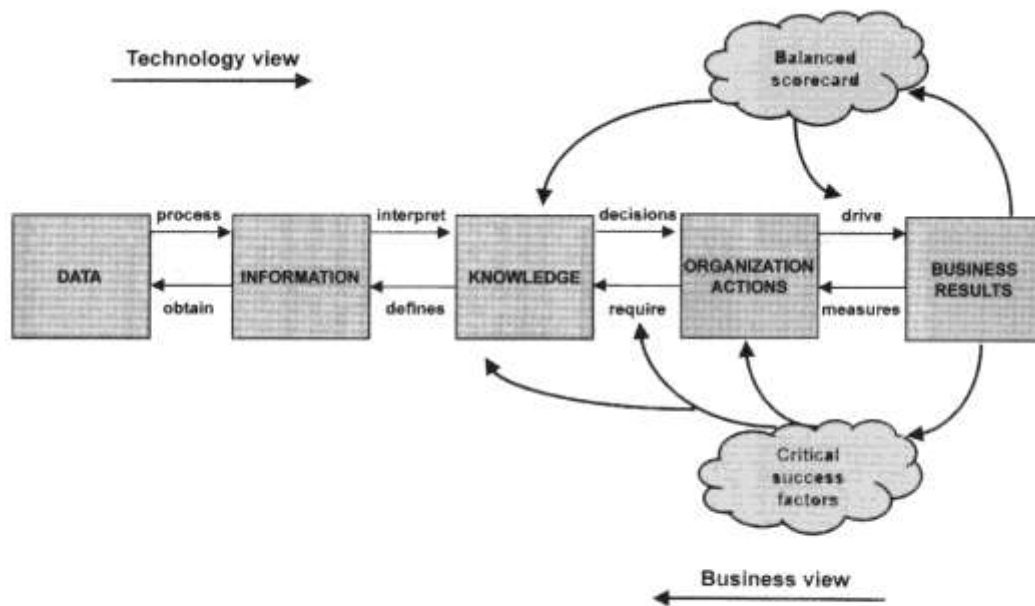


Figure 4.4 Information in context (source: based on the work of N. Venkatraman presented at Cranfield School of Management, February 1996)

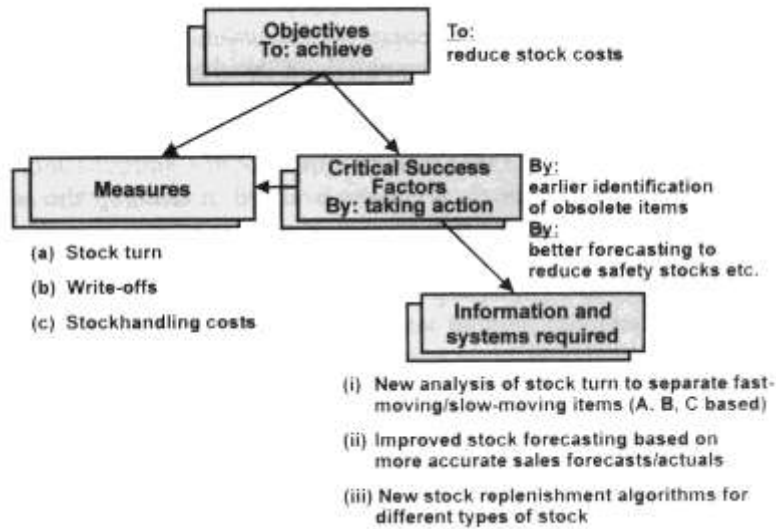
Contoh:

| Objectives | Financial | Measures |
|-------------------------------------|-----------|---|
| - To reduce stock costs | | (a) Stock turn (b) write-offs (c) Stockhandling costs |
| - To increase product profitability | | (a) Product margins (b) Gross profit |

| Objectives | Customer | Measures |
|--------------------------------|----------|--|
| - To increase responsiveness | | (a) Order to delivery lead time (b) Enquiry response time |
| - To be more price competitive | | (a) Benchmarks versus competitor prices (b) Customer value/price perception |

| Objectives | Internal | Measures |
|---|----------|--|
| - To provide fast-track service to best customers | | (a) Reduced lead time to specific customers (b) Customer satisfaction |
| - To remove interface costs/delays with agents | | (a) Cost of rework (b) Number of referrals |

| Objectives | Innovation | Measures |
|--|------------|---|
| - To reduce new product lead times by 30% | | (a) Design to sale time (b) No slack in elapsed time |
| - To find new channel to reach SME customers | | (a) New channel exists (b) Number of options reviewed/tasted |



| Financial perspective | | | |
|-------------------------|--|--|---|
| Objectives | Measure(s) | Action (CSF) | IS Needs |
| - To reduce stock costs | a) Stock turn b) Write offs c) Stockhandling costs | - By earlier identification of obsolete items - By better forecasting to reduce safety stocks | i) New stock turn analysis (ABC) ii) Improved sales and stock forecasting iii) New stock replenishment algorithms |

| Customer perspective | | | |
|------------------------------|--|--|--|
| Objectives | Measure(s) | Action (CSF) | IS Needs |
| - To increase responsiveness | a) Order to delivery lead time b) Enquiry response time | - By identifying causes of all late deliveries - By informing customers in advance of problems - By tracking all enquiries/ progress daily | i) New accurate measure of all order/delivery times ii) Analysis of all types of delivery failure iii) New/dynamic customer/ order monitoring system to instigate action iv) New enquiry recording/ tracking process and system |

Organizational Modeling

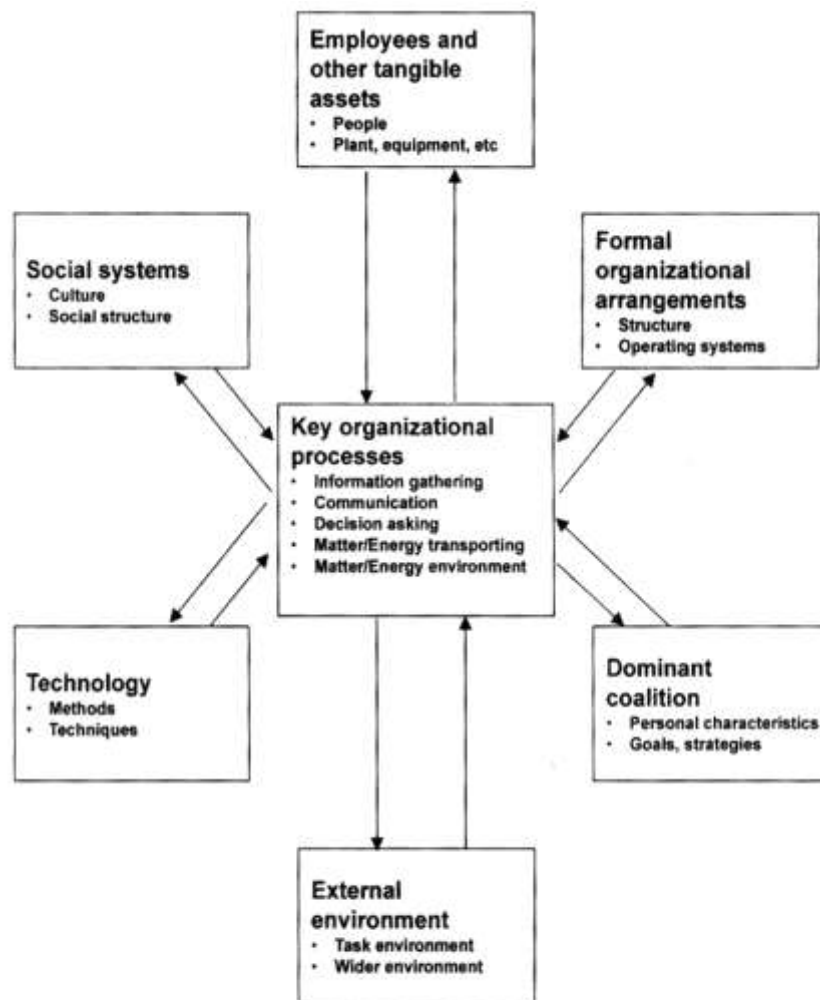


Figure 4.10 The organizational model: environment and culture (source: adapted from J.P. Kotter, Organizational Dynamics: Diagnosis and Intervention, Addison-Wesley, Reading, Massachusetts, 1978)

Contoh pertanyaan yang bisa dikaitkan dengan IT:

A. Extnal environment:

- bagaimana pertumbuhan industrinya?
- Industry value chain?
- Apakah IT bisa dipergunakan untuk meningkatkan switching cost customer?
- Bagaimana customer/supplier/kompetitor menggunakan IT?

B. Formal Organizational arrangements?

- bagaimana kebijakan IT/IS
- bagaimana menentukan strategi setiap SBU?

Dsb... (lihat buku)

Mengapa kita melakukan organizational modelling?

1. Effective filtering system, because we have the "feeling" of the organization

2. If changes are to be made, we could guess how the culture would impade, and we can develop a strategy to change the culture (& change management)