

AMTI

IT Support of Organizational Performance

Antonius Rachmat C, S.Kom, M.Cs



Today

The 5th Wave

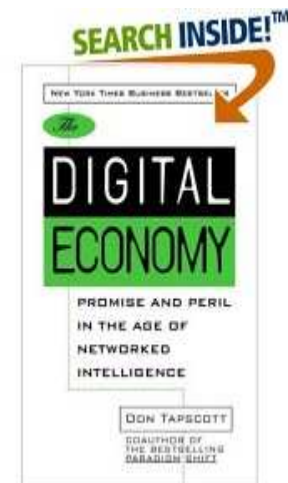
By Rich Tennant



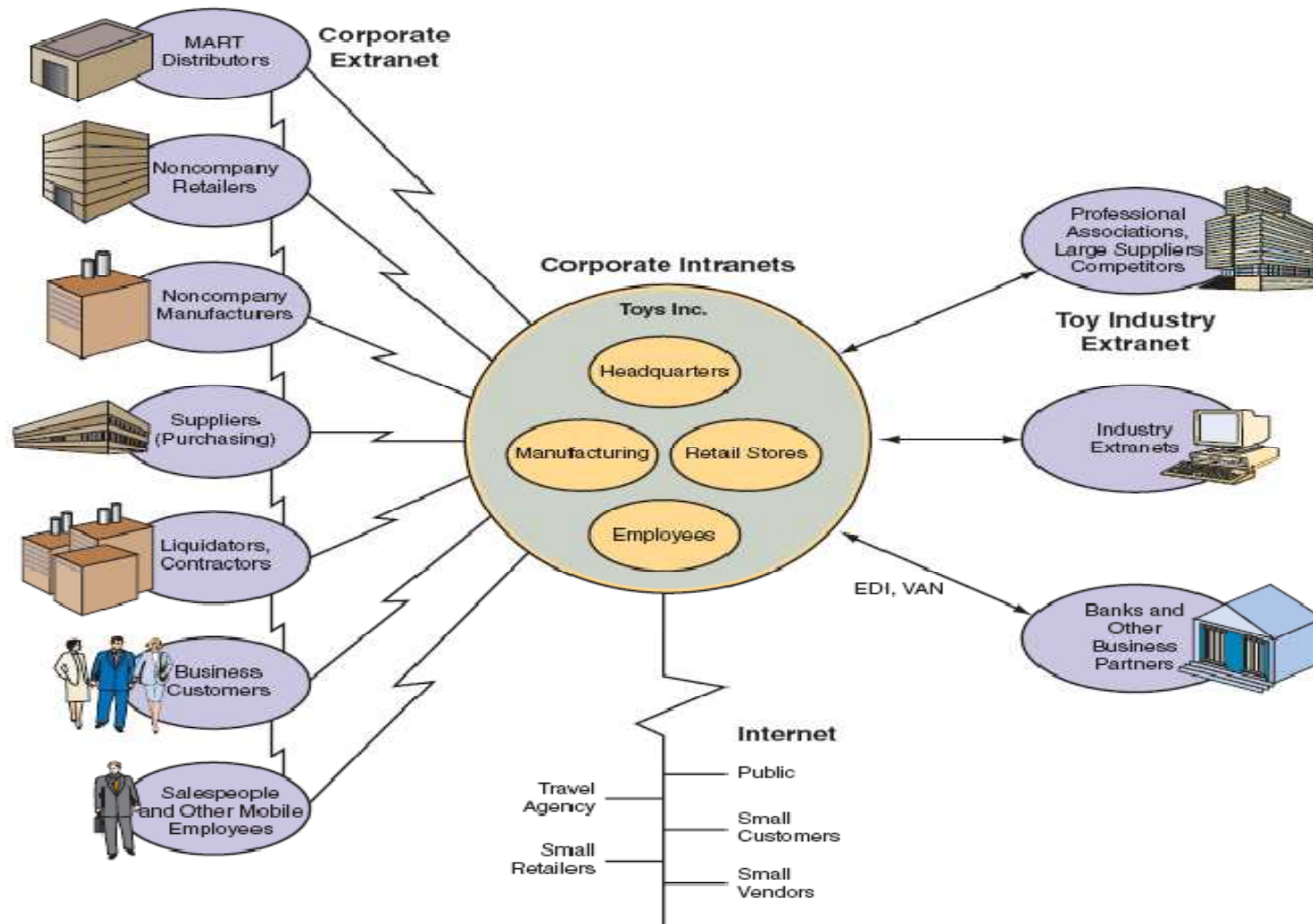
"EXCUSE ME - IS ANYONE HERE NOT TALKING ABOUT THE INTERNET?"

Digital Economy – “New” Economy

- **E-Business:** the use of electronic technologies to transact business
- **Collaboration:** People and Organizations interact, communicate, collaborate, and search for information
 - Wikinomics
- **Information Exchange:** Storing, processing and transmission of information
- Enterprise shifts from **managing IT** resources to ***orchestrating the services and workflows***

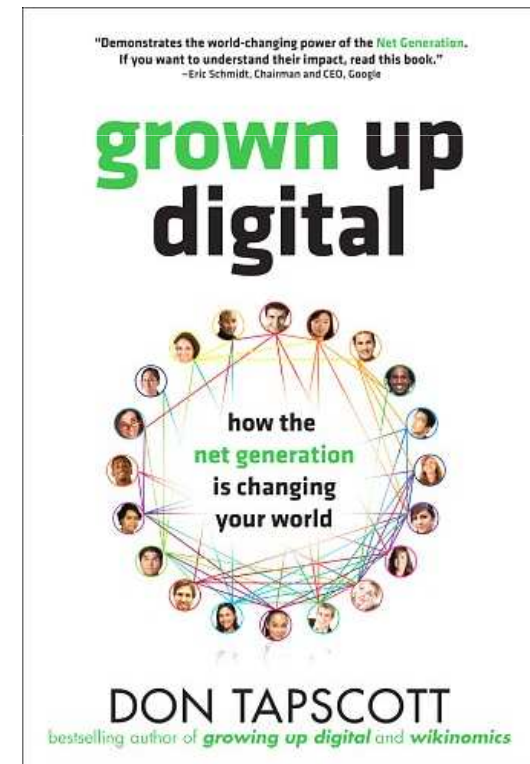


Digital Business



The NET Generation

- Dianggap lebih **bodoh** daripada generasi sebelumnya?
- Net addicted, losing social skill, no time for sport & health?
- No shame?
- Suspicion?
- Thieving?
- Bullying friends online?
- Violence?
- Will be bad employees?



Actually The NETGENS are...

- Kolaboratif
- Mereka **prosumers** – co inovating product and services with producers
- In Education: Student centered learning
- Internet addict

The Norms of NET Gen

- Freedom
- Customize / Personalize
- Technology is like the air
- Need for Speed
- Wants entertainment and play at work
- Collaboration & Relationship
- Innovators

The Old Economy – Taking Photo's

1. Buy film in a store
2. Load your camera
3. Take pictures
4. Take roll of film to store for processing
5. Pickup the film when ready
6. Select specific photos for *enlargement*
7. Mail to family and friends



The New Economy – Taking Photo's

- 1st Generation Digital Photography
 - Some steps were replaced by using a **scanner**, and **emailing**
- 2nd Generation Digital Photography
 - Use a **digital camera**, no film, no processing
- 3rd Generation Digital Photography
 - Your Digital Camera is now in your **mobile phone**, **iPad**, or **netbook** computer.

Business Models

- A **business model** is a method of doing business by which a company can generate **revenue** to sustain itself.
- The model spells out how the company **adds value** to **create a product or service**. (**Value Chain**)
 - **Nokia** makes and sells cell phones
 - A **TV station** provides free broadcasting. Its survival depends on a complex model involving advertisers and content providers
 - **Internet portals**, such as Yahoo, also use a complex business model.

Drivers Forcing Changes In Business Models

Business Pressures

- Environmental, organizational, and technological factors

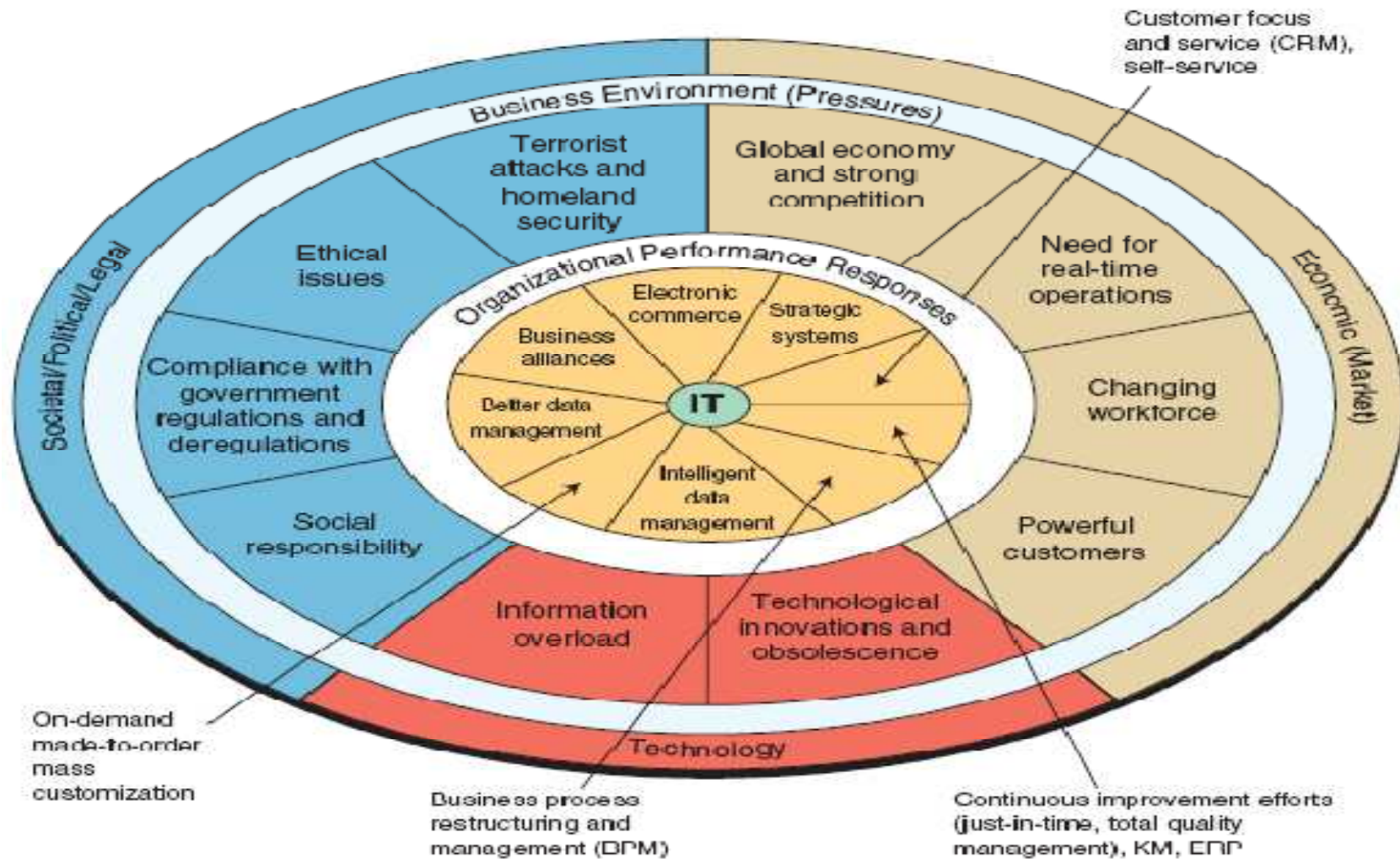
Business Critical Response Activities

- A response can be a **reaction** to a pressure already in existence, an **initiative** intended to **defend** an organization against future pressures, or an **activity** that **exploits** an opportunity created by changing conditions
- The three types of business pressures faced are: **market**, **technology**, and **societal pressures**

Three Types of Business Pressures

- **Market Pressures:**
 - The Global Economy and Strong Competition
 - Powerful Customers
- **Technology Pressures:**
 - Technological Innovation
 - Information Overload
- **Societal Pressures:**
 - Social Responsibility
 - Government Regulation
 - Protection Against Terrorist Attacks
 - Ethical Issues

Business Pressure



Organizational Responses

- **Customer Focus** enable organizations to provide customer service and prevent losing customers to competitors.
 - Customer is a king?
- **Make-to-Order** is a strategy of producing customized products and services
 - House, car
- **Mass Customization** is producing a large quantity of items, but customizing them to fit the desire of each customer
 - Handphone, shirt
- **E-business** and **E-commerce** is the strategy of doing business electronically
 - Bhineka.com, jakartanotebook.com

Doing Business in the Digital Economy

- The **digital economy** is an economy based on digital technologies, including **communication networks** (the Internet, intranets, and extranets), computers, software, and other related technologies
- Also called the *Internet economy*, the *new economy*, or the **Web economy**
- Businesses increasingly perform their basic functions: **buying** and **selling** goods and services, **servicing** customers, and **collaborating** with business partners electronically
- This process is known as **electronic business (E-business)** or **electronic commerce (E-commerce)**

Karakteristik Ekonomi Digital

1. **Knowledge:** pengetahuan SDM
2. **Digitization:** perubahan ke bentuk produk/jasa digital
3. **Virtualization:** dari toko ke situs e-commerce
4. **Molecularization:** perusahaan harus bisa beradaptasi (menyatu)
5. **Internetworking:** setiap perusahaan harus berkolaborasi dan memanfaatkan Internet
6. **Disintermediation:** hilangnya broker / perantara

Karakteristik Ekonomi Digital

7. **Convergence:** menyatukan tiga sektor industri, yaitu: computing, communications, dan content
8. **Innovation:** Innovation becomes the key driver of business success
9. **Presumption:** batas antara produsen dan konsumen kabur
10. **Immediacy:** real time business
11. **Globalization:** Knowledge knows no boundaries, there is only a world of economy
12. **Discordance:** fenomena perubahan struktur sosial dan budaya sebagai dampak konsekuensi logis terjadinya perubahan sejumlah paradigma terkait dengan kehidupan sehari-hari

New Economy vs. Old Economy

- Example #1: **Registering for Classes**
 - **Old Economy:** You would go to the Registrar's Office on campus with a paper registration document
 - **New Economy:** You access your campus website, log into registration site, and electronically register for classes from anywhere

New Economy vs. Old Economy

- Example #2: **Buying and Selling Textbooks**
 - **Old Economy:** You go to the bookstore in person and buy new or sell used books
 - **New Economy:** You go online to the Publisher's Web site or to Web-based services such as Amazon.com to buy or sell books

New Economy vs. Old Economy

- Example #3: **Photography**
 - **Old Economy:** You use a camera with film, which you have to purchase and have developed; you mail copies of pictures.
 - **New Economy:** You can scan photos, make copies and e-mail them. Digital cameras require no film or processing. Digital photography and video integrated into cell phones for immediate viewing

New Economy vs. Old Economy

- Example #4: **Paying for Gasoline**
 - **Old Economy:** You pump your gas and go inside to pay using cash or credit
 - **New Economy:** Insert credit card at pump, receive authorization, pump gas, get receipt, drive away.

New Economy vs. Old Economy

- **Example #5: Paying for Transportation in New York City**
 - **Old Economy:** Use tokens for bus and subway transportation
 - **New Economy:** Bus and subway riders now use MetroCards; contactless cards that have a small radio transmitter that transmit account information to a reader (RFID)

New Economy vs. Old Economy

- Example #6: **Paying for Goods, Checkout**
 - **Old-old Economy:** Customer selects goods, waits in line for the cashier to key in price of items, and then pays in cash
 - **Old Economy:** The clerk swipes the barcode of each item and customer pays in cash, credit, or debit.
 - Information scanned is available for immediate analysis known as ***source-data automation***

New Economy vs. Old Economy

(Ex. #6 Continued)

- Example #6: **Paying for Goods, Checkout continued**
 - **Old Economy:** Shoppers take their items to a self-service kiosk and swipe the barcodes themselves
 - **New Economy:** Wireless technology affixed to each item. Allows you to select items that pass through a scanner, which reads wireless signal, generates a bill, automatically debits your designated account for payment and you leave

New Economy vs. Old Economy

Example	Old	New
Buying and selling textbook	Visit the bookstore	Visit web site for publishers and retailers
Registering for classes	Walk around campus to Departments, Registrar's office, etc.	Access campus web site
Photography	Buy film, use camera, take picture, take it for processing	Use digital camera
Paying for Gasoline	Fill up your car, go inside, pay cash or credit card	Use speed pass token; wave over the sensor and go
Paying for Transportation	Pay cash, metal tokens	Metro cards electronic cards
Paying for goods	Visit store, select item, pay, go	Use self-service kiosks
Supplying commercial photos	Use newspapers, paper, catalog, or online	Use hub-like supply chain with digitized picture

Why Should You Learn about Information Technology (IT)?

- IT is **essential** for work in organizations
- IT will **reduce** the number of middle managers
- IT will **change** the manager's job
- IT impacts employees at **work**
- IT impacts employees' **health** and **safety**
- IT is **used** by **all departments**

Why Should You Learn about IT? (Continued)

- IT **provides** opportunities for people with **disabilities**
- IT provides **quality-of-life improvements**
 - Ex: Improvements in health care

Major IT applications in business

Executive
Support
Systems

5-year sales trend forecasts 5-year operating plan 5-year budget forecasts Profit planning Manpower planning

Management
Information
Systems

Sales management Inventory control Annual budgeting Capital investment analysis Relocation analysis
Sales region analysis Production scheduling Cost analysis Pricing/profitability analysis Contract cost analysis

Knowledge
Worker
Systems

Engineering workstations Word processing Email Web viewing Spreadsheets

Transaction
Processing
Systems

Public web sites Machine control Securities trading Payroll Compensation
Order tracking Plant scheduling Cash management Accounts payable Training & Development
Order processing Material movement control Accounts receivable Employee records

Sales and
Marketing

Manufacturing

Finance

Accounting

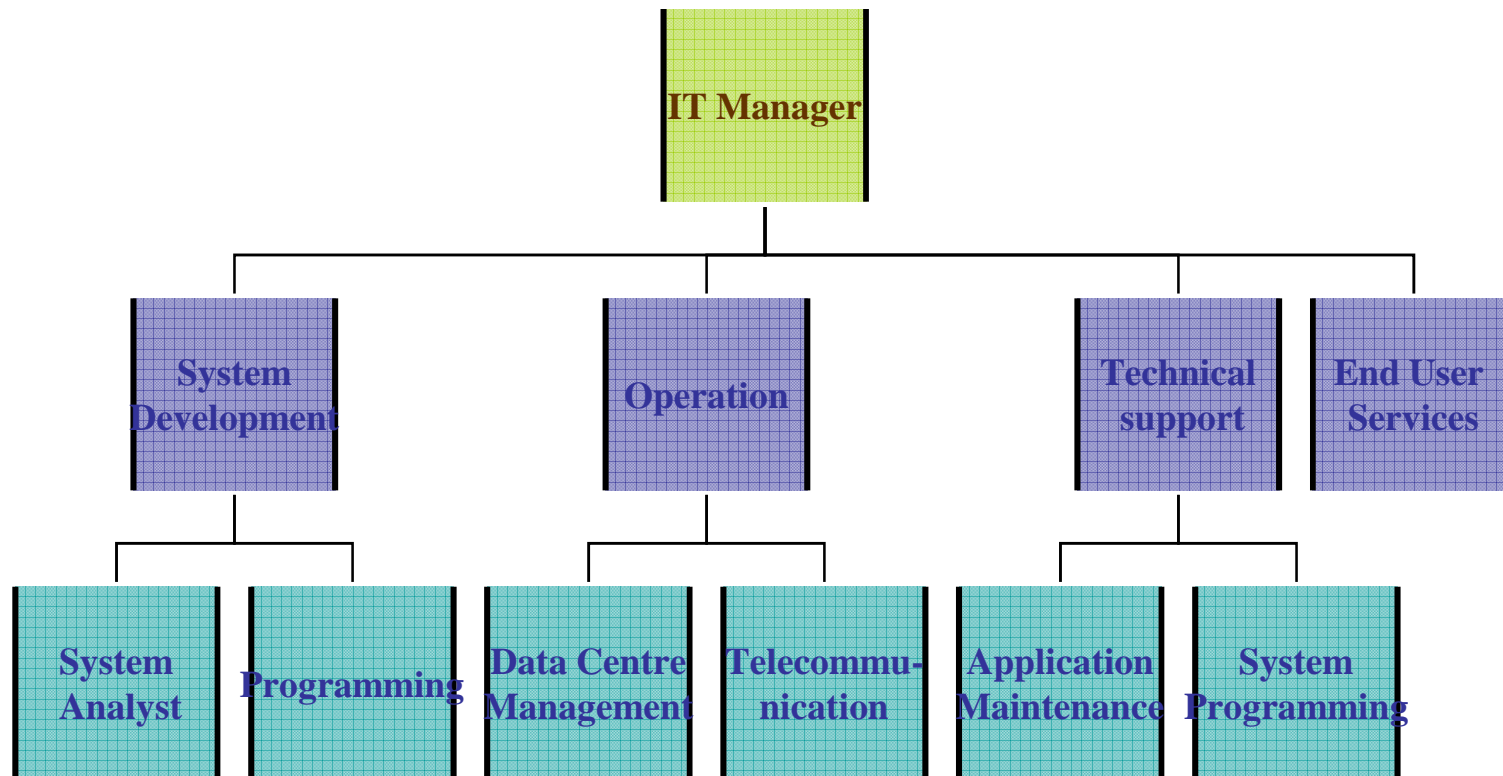
Human
resources

Example Application of business analysis with IT

- Whether to buy?
 - Analyzing costs and benefits
 - Buying early vs. buying late
 - Prediction algorithm
- What to buy?
 - Matching capabilities and needs
 - Compatibility and standards
- How to implement?
 - Needs top management support

Teknologi Informasi dan Organisasi Bisnis

Struktur Organisasi terpusat : Fungsional tradisional



Jabatan IT di perusahaan

Jabatan	Deskripsi Tugas
Kategori : Manajemen Sistem Information	
CIO (Chief Information Officer)	Bertanggung jawab terhadap fungsi layanan informasi dalam perusahaan
Administrator data	Mendefinisian dan mengelola data dalam perusahaan
Manajer proyek SI	Bertanggung jawab terhadap nsebuah proyek pengembangan sistem informasi
Kepala Tim	Mengelola Tim pengembangan atau pemeliharaan
Kategori : Pengembangan Sistem	
Analisis Sistem (systems analyst)	Bertanggung jawab dalam mengali kebutuhan para pemakai dan merancang sistem yang sesuai dengan kebutuhan mereka
Perancang sistem (systems Designer)	Bertugas sebagai perancang sistem yang didasarkan pada hasil spesifikasi sistem analisis
Pemrogram / Analisis (Programmer/ Analyst)	Bertugas sebagai pemograman maupun analisis sistem
Pemrogram aplikasi (Applications Programmer)	Membuat program yang didasarkan oleh hasil analisis sistem atau perancangan sistem dan juga menguji program
Pemrogram pemelihara (Maintenance Programmer)	Pemrogram yang bertugas memperbaiki program program pada sistem yang berjalan

Jabatan IT di perusahaan

Jabatan	Deskripsi Tugas
Katagori : Specialis Teknis	
Pemrogram sistem (systems Programmer)	Bertugas membuat dan memelihara program-program sistem
Spesialis Telekomunikasi	Merancang dan memelihara jaringan telekomunikasi dan juga membuat program-program penunjang telekomunikasi
Spesialis Perangkat Keras (hardware specialist)	Memperbaiki perangkat keras
Administrator basis data (Database administrator / DBA)	Membuat rancangan fisik basis data dan bertanggung jawab terhadap operasi dan kontrol basis data
Katagori : Personal Operasi	
Operator Komuter	Mengoperasikan komputer di pusat data
Juru kontrol	Bertanggung jawab terhadap operasi piranti-piranti penyimpanan eksternal (misal pita magnetik) dan laporan di pusat data
Juru entri data	Bertugas memasukkan data melalui terminal
Pustakawan	Mengarsipkan pita magnetik dan memberikan pita magnetik ke operator

Jabatan IT di perusahaan

Jabatan	Deskripsi Tugas
Kategori : Personil Pusat Informasi	
Spesialis pelatihan	Melatih pemakai akhir
Autor sistem informasi	Bertanggung jawab memastikan bahwa sistem informasi benar-benar memenuhi azas-azas akuntansi dan pengauditan sehingga keamanan data dalam sistem terjamin
Webmaster	Membuat dan memelihara situs Web perusahaan

Computerized Information Systems

- High speed, volume, numerical computation
- Accurate, reliable
- Collaboration
- Automated business
- Can be reached anywhere
- Facilitate work in hazardous environment

NEXT

- Business Process in Information Systems