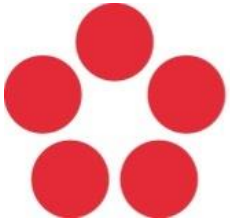

Jihočeská univerzita
v Českých Budějovicích
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in České Budějovice

# Information Systems Strategy and Management

## BUSINESS INFORMATICS EFFECTS AND COSTS CONTROL

EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání

MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

# Breakdown of costs in business informatics

- Breakdown of costs in business informatics
- Activity Based Costing
- Total Cost of Ownership
- Benchmarking

# Breakdown of costs in business informatics

Breakdown of costs per the possibility of ownership assignment or clear identification:

- Direct (easily attributable, have a definite connection to a certain activity - can be entirely attributed to a particular customer),
- indirect
  - absorbed overhead (indirect costs that can be fairly attributed to the customer);
  - non-subsidized overhead (indirect costs that cannot be uniquely attributed to the customer, and their assignment is often based on the forms of percentage surcharge to a certain defined price).

# Breakdown of costs in business informatics

## Cost Type Breakdown:

- Investment (term CAPEX is used)
  - HW according to the individual types of HW resources (servers, terminals, peripherals, routers, switches, cable distribution, spare parts ...)
  - SW (licences, upgrade),
  - services related to HW and SW installations,
  - buildings and work spaces,
- non-investment/operational (term OPEX is used)
  - purchased services (application and infrastructure services, communication services, consultancy/advisory, implementation, integration, prophylaxis, post-warranty service, training, help desk, marketing,
  - people (wages, skills upgrading, insurance, indemnities, ...),
  - buildings and workplaces in the case of rentals,
  - consumables,

# Breakdown of costs in business informatics

## Breakdown of Costs by Asset Type:

- **Technological infrastructure** (acquisition, maintenance, repairs, upgrade, space, energy, maintenance, insurance, operating costs, administration, and administration);
- **Application functionality and performance** (acquisition, implementation, customization, integration, operation, maintenance, upgrade, administration, support, and administration),
- **Data** (acquisition and updating, saving, backups, archiving),
- **Human resources** (acquisition, education, education, employee care, wage costs, insurance, workplace and personal equipment)
- **Ownership risks** (security and reliability costs (prevention), damage elimination costs).

# Breakdown of Costs by IT Lifecycle Stages:

- Acquisition and development:
  - development
  - purchase - contract costs, delivery cost
  - rental - contract costs
  - Implementation and testing
  - related business process changes
- to ensure operation and use:
  - ICT infrastructure operation,
  - applications operation,
  - buildings, energy, consumables, insurance, property administration, etc.,
  - user training.
  - User support (help desk),
  - administration (CIO team, data management, application administration, ...),
- maintenance (extending lifecycle, modifying functionality, increasing performance),

# Breakdown of costs in business informatics

## Activity Based Costing

- Activity Based Costing (ABC) is a method to analyse cost information for the individual services, products in a more detailed breakdown ABC's foundation is a process that measures costs and performance of cost objects, activities, and resources.

## Total Cost of Ownership

- TCO may be considered as a financial estimate calculated to help customers and business managers assess their direct and indirect costs associated with IS/ICT (HW and SW purchase and operation). TCO allows for clear and clear allocation of costs incurred to own and manage ICT infrastructure in a business.

# Breakdown of costs in business informatics

## Benchmarking

- Its basis is the process of re-comparing and measuring a selected company/company with reference organizations, both in a given country and anywhere in the world.

- The objective of benchmarking can be considered to be the acquisition of information that will help the rated companies to adjust/change their assets, so as to improve their performance.

# Total Cost of Ownership

| Benefits | Disadvantages |
|---|---|
| Clear results for staff involved in financial management. | Non-public calculation algorithm. Various consulting companies use various evaluation procedures. |
| Used as another element of a portfolio of indicators when evaluating return on investment. | The use of IT for private purposes during working hours (ICQ, Skype, emails, etc.) is not included. |
| Possibility to take into account the time value of the money affecting the evaluation. | Focus only on costs (does not work with benefits or revenue). |

*Table 13-1 TCO Benefits and Disadvantages -(Voříšek k. , 2015)*

# Evaluation of returns on investments into business informatics

- **Return on Investment**
  - $r_x$ = return (profitability),
  - $Z_r$ = average profit resulting from the investment (assuming the same profit every year for the life of the investment);
  - X = the value with which we want to compare the profit (total capital, sa sts, etc.).

$$r_x = \frac{Z_r}{X}$$

- **Investment Repayment Term**
  - I = investment costs,
  - CF = Cash-Flow from one year's investment (assuming the same CF for e of the investment).

$$PP = \frac{I}{CF}$$

# Evaluation of returns on investments into business informatics

- **Investment Net Present Value Method**
  - CHCF = Net Cash-Flow Value (investment income),
  - I = Capital Expenditure (investment),
  - CF = Cash-Flow (monetary income in the individual life years),
  - $i_{VK}$ = Interest (required return - business discount rate),
  - n = individual years of life,
  - N

One-Time Investment Event

$$NPV = CHCF - I = \sum_{n=1}^{N} \frac{CF}{(1 + i_{VK})^n} - I$$

# Evaluation of returns on investments into business informatics

- **Internal Rate of Return**
  - n = time for flowing CF,
  - t = lifetime years,
  - $i_n$ = lower rate of return,
  - $i_v$ = higher rate of return
  - NPVn = net present value at a higher rate of return
  - NPVn = net present value at a lower rate of

$$IRR \rightarrow \sum_{t=1}^{N} \frac{CF_t}{(1+i)^t} = I \rightarrow i = VVP\ nebo\ IRR = i_n + \frac{\check{C}SH_n}{\check{C}SH_n - \check{C}SH_v} * (i_v - i_n)$$

# Budgeting for Business Informatics Operation and Development

- It is one of the most important and most complex activities realized in the management of the business informatics economy.
- It should be remembered that a budget must not be a permanent document which we will draw up and continue to work with, but that it is a document that will serve us as:
  - communication instrument,
  - motivational instrument,
  - control instrument.

# General budget characteristics

Just as the three levels of enterprise management are distinguished, three basic levels of corporate budgets with a similar time focus are distinguished, namely:

- Strategic (long-term) business informatics budgets.
- Tactical business informatics budgets.
- Business informatics operational budgets

# General budget characteristics

When a budget is compiled, it is necessary to have a clear idea of the company's value objectives, from which the objectives of the individual parts of the business can then be derived.

The business value objectives are primarily defined in:

- Budget balance
- Budget statement
- Budget Cash-Flow