

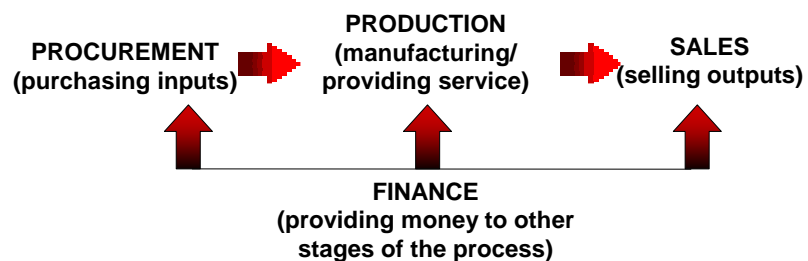
# BUSINESS PROCESS, INPUTS and ASSETS

Lectures October 6th, 2009

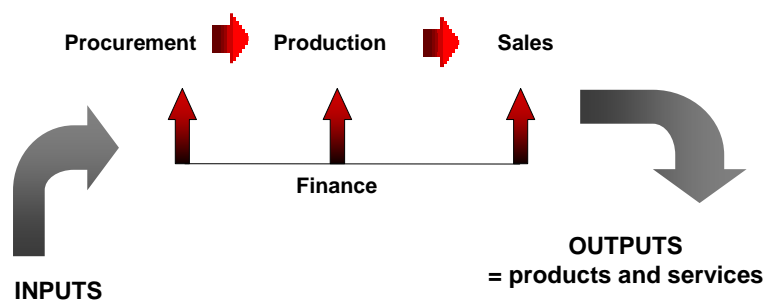
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## BUSINESS PROCESS

- Types of companies:  
by size, by sector, by legal form
- The aim of business:  
profit, growth, market share, existence
- Business process:



## BUSINESS PROCESS



## INPUTS

INPUTS are all “things” that a company needs in order carry out its business:

1. **PROPERTY, PLANT and EQUIPMENT**
2. **RAW MATERIALS**
3. **LABOUR**
4. **SERVICES**

## INPUTS

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### 1. **PROPERTY, PLANT & EQUIPMENT** (we use them to transform raw materials):

- They do not change into products.
- They are used in many processes and have **long lives**.
- They are **gradually used** and their value is thus gradually reduced.
- They keep their form.

## INPUTS

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### 2. **RAW MATERIALS** (items that are processed into products):

- They are transformed into products.
- They are **used in one process** and have **short lives**.
- They are used instantly.
- They lose their form.

## INPUTS

### 3. **LABOUR** (activates other inputs):

**Intellectual** and **manual** work.

**Executive** and **managerial** work.

**Simple** and **complex** work.

### 4. **SERVICES**

**Own** or **outsourced** (e.g. banking services, transport, cleaning and maintenance).

## INPUTS

**Inputs** are first **PURCHASED** (bought) and then **EXPENDED** (used).

Both processes are monitored and reported in the accounting:

the **BALANCE SHEET** (BS) reports what the company owns (what inputs it has **purchased**)

the **INCOME STATEMENT\*** (IS) reports the value of **expended** inputs.

When inputs are purchased, **money of the company is held in the form of these inputs** until they are used up in the production and the products made from/with them are sold to customers, which finally pay for them and the money is returned to the company.

A business is more successful if:

- we purchase less inputs for the same level of business and/or
- we expend less inputs for the same level of business.

\* i.e. the Profit and Loss Statement in British English

## INPUTS

### The difference between **purchasing** and **expending**

- **Timely:** inputs are first purchased, only then they can be expended.
- **Quantitative:** the total expenditure of raw materials in a year is larger than each purchase of them, the total expenditure (depreciation) of property, plant and equipment in a year is smaller than the purchase value of the item when it is bought.
- **Qualitative:** expending is a process (**flow**) that happens in a **period**, purchasing relates to a **stock** of inputs in a certain **moment**.

Income statement → for half-year, year

Balance sheet → for certain day e.g. December 31st, 2009

## ASSETS

**ASSETS** are only those **INPUTS** that are **owned** by the company.

All assets are **property of a company** and are recorded in the balance sheet.  
Not all inputs are also assets!

In **economics**: we talk about physical production and inputs, inputs are typically capital and labour, by capital we mean "physical" capital (property, plant, equipment) and not "financial" capital (equity).

In **accounting**: we talk about property and assets; capital is one of the sources of financing

The **difference between inputs and assets**:

- rented offices (input, but not asset – the rent is in IS, nothing in BS )
- rights (patents, licenses, claims – assets, but not inputs)
- labour (input, but not asset – the cost of labour is in IS, nothing in BS)
- services (input, but not asset – the cost of services is in IS, nothing in BS)

## ASSETS

Two major components of assets are:

1. **FIXED ASSETS** (more than one year in company)
  - Tangible assets that have a long-term usefulness (property, plant & equipment)
  - Intangible assets with long-term value (patents etc.)
2. **CURRENT ASSETS** (up to one year in company)
  - Inventories of raw material, work in progress and finished goods
  - Accounts receivable are claims against customers for products sold
  - Cash
  - Trading securities

## ASSETS

### Balance Sheet

Shows property (Assets) and how this property is financed (Liabilities).  
Simplified scheme:

Assets	Liabilities + Equity
<p><b>A. Fixed assets</b></p> <ul style="list-style-type: none"> <li>- property, plant &amp; equipment</li> <li>- intangible assets (patents etc.)</li> </ul> <p><b>B. Current assets</b></p> <div style="border: 1px solid red; padding: 5px;"> <ul style="list-style-type: none"> <li>- inventories</li> <li>- accounts receivable</li> <li>- cash</li> </ul> </div> <ul style="list-style-type: none"> <li>- trading securities</li> </ul>	<p><b>A. Owners' equity/Capital</b></p> <ul style="list-style-type: none"> <li>- capital</li> <li>- profits from previous years</li> <li>- ...</li> </ul> <p><b>B. Liabilities/Debt</b></p> <ul style="list-style-type: none"> <li>- short-term liabilities</li> <li>- long-term liabilities</li> </ul>

**Assets = Liabilities + Equity**

## ASSETS

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### FIXED ASSETS

#### Property, plant & equipment

Long-term property of a company, their value is carried over gradually to products and services.

Examples:

- land, buildings
- machines and equipment, vehicles, ...

#### Intangibles

Do not have a physical appearance, but have long-term value for a company.

Examples:

- patents
- licences
- trademarks, ...

## ASSETS

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### Value of Property, plant & equipment

**Acquisition (purchasing) expenditure** (invoice price + all expenditure necessary to ready the asset for business use)

**Write-off value** (accumulated depreciation)

**Book value** (acquisition expenditure less accumulated depreciation)

Balance sheet shows the **book value** of property, plant & equipment.

## ASSETS

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### Capacity of Property, plant & equipment

Capacity of production. **How can we report capacity?**

Number of products produced in time unit – **intensive capacity**

Number of time units in a period, when the asset is used or operates – **extensive capacity**

Number of products produced in a period – **integral capacity**  
(product of intensive and extensive)

## ASSETS

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### Example:

A machine that fills bottles can operate 600 hours in a month. It can fill 1,000 bottles per hour. What is the capacity of the machine?

(reported as extensive capacity): \_\_\_\_\_

(reported as intensive capacity): \_\_\_\_\_

(reported as integral capacity): \_\_\_\_\_

## ASSETS

Capacity can also be reported as:

**Technical capacity** (built-in, maximal, operating non-stop – three shifts, Sundays and holidays etc.)

**Available capacity** (actual shifts, stop on Sundays, holidays, for regular maintenance etc. )

**Planned capacity** (consider planned quantities and times of production)

**Actual capacity** (consider actual quantities and times of production)

## ASSETS

**The rate of usage (utilization) of** property, plant and equipment:

**Planned rate of usage** = planned capacity/available capacity

**Actual rate of usage** = actual capacity / available capacity

**The rate of plan realization** = actual rate of usage /  
planned rate of usage

**Why can property, plant and equipment be underutilized ?**

## ASSETS

### OPERATING CURRENT ASSETS

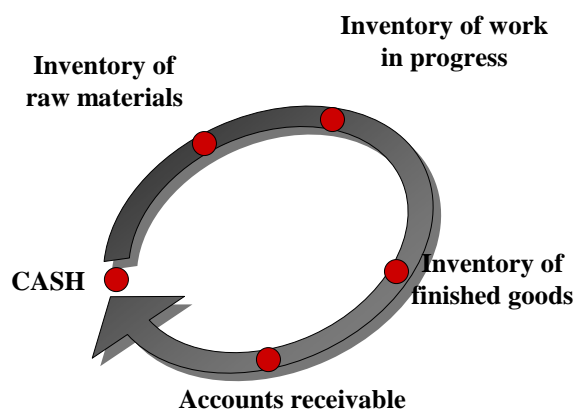
Short-term (up to one year) assets that change form frequently.

Operating current assets include:

- Inventories of raw material, work in progress and finished goods
- Accounts receivables
- Cash

## ASSETS

### Operating current assets cycle



## ASSETS

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### The turnover of operating current assets

The turnover depends on the time needed for operating current assets to change from one form to another. **What affects the turnover?**

## ASSETS

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Turnover can be reported in two ways:

**Turnover ratio** (how many turnovers, cycles) =  
operating expenses less depreciation / average current  
operating assets

**Turnover period** (how long is one cycle) =  
360 days / turnover ratio

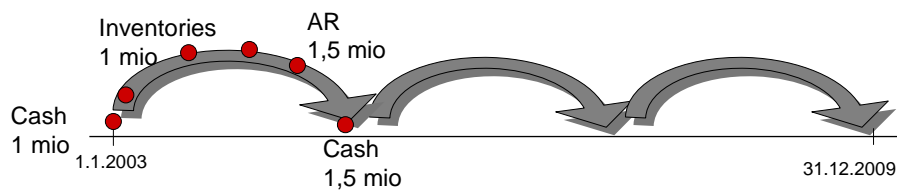
## ASSETS

### Example:

A company purchased EUR 1 mill. of textile (inventory of raw material), which arrived 15 days later in the company. In 2 months, 10 suits are made (inventory of finished goods). In 15 days, a large retailer bought the suits for EUR 1.5 mill., with due payment in 30 days. In these 30 days, our company has accounts receivable (AR) for this amount. When payment is received, EUR 1 mill. cash is again invested in the inventory of textile, while the remaining EUR 0.5 mill is deposited in a bank.

For the purpose of easier exposition, we will neglect depreciation and labour cost when calculating net income (profit).

## ASSETS



Operating expenses less depreciation in a cycle \_\_\_\_\_, in the whole year \_\_\_\_\_

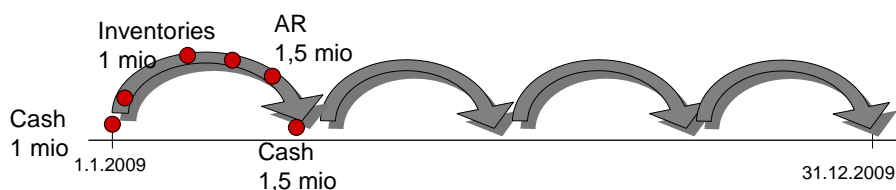
Turnover ratio \_\_\_\_\_.

Turnover period \_\_\_\_\_.

Net income in one cycle \_\_\_\_\_, net income in the whole year \_\_\_\_\_.

Average current operating assets \_\_\_\_\_.

## ASSETS



The company manages to shorten the cycle (less inventories, faster manufacturing, 15-day due payment etc.)

Operating expenses less depreciation in a cycle \_\_\_\_\_, in the whole year \_\_\_\_\_

Turnover ratio \_\_\_\_\_.

Turnover period \_\_\_\_\_.

Net income in one cycle \_\_\_\_\_, net income in the whole year \_\_\_\_\_.

Average current operating assets \_\_\_\_\_.

## ASSETS

Turnover importantly affects **business performance**.

The higher turnover of a certain amount of operating current assets, the greater net income in a period

or

Less operating current assets are needed for the same net income if turnover is faster.

**THUS, the following holds:**

The faster current operating assets turnover (higher coefficient) at a certain level of business activity, the smaller investment in current operating assets is needed and the smaller average current operating assets are held.

## ASSETS

Turnover ratio is useful for planning:

companies calculate the **necessary investment in current operating assets** because they want to know how much money they will need to finance business operations:

**Necessary investment in current operating assets** = planned (operating expenses less depreciation) / turnover ratio

The **necessary investment** depends on the **level of planned business activity** and the **turnover**, **the following holds:**

The higher planned level of business activity at a certain turnover, the larger investment in current operating assets is needed and the larger average current operating assets are held.

The higher turnover at a certain level of planned business activity, the smaller investment in current operating assets is needed and the smaller average current operating assets are held.