

# What's important?

- Measure
- SMART
- Costs
- ROI (Return of investment)



# SMART

- Specific
- Measurable
- Achievable / Attainable
- Relevant
- Time-bound

# Cost benefit analysis

- Tangible / intangible
  - Tangible costs
  - Intangible costs
  - Tangible benefits
  - Intangible benefits
- Goodwill
- Payback period
- Return of Investment (ROI)

# Tangible / Intangible

- Tangible is quantifiable in financial terms
  - *Costs*: Labour, material, overhead, decreased quality and production
  - *Benefits*: Increased revenue or income, increased production or quality, and reduced cost
- Intangible is documented subjectively
  - *Costs*: Customer/employee/vendor dissatisfaction, loss of potential customers
  - *Benefits*: Goodwill and customer/employee/vendor satisfaction

# Goodwill

- Accounting term describing intangible benefit received by an organization when it's customers and investors have a positive feeling or impression of it.
- Not included in the cost/benefit calculation *but*
  - Should be addressed in your case supporting text to justify or support why an alternative wasn't selected
  - May also be referred to in the risk section

# Payback period

- The period from the start of the project until investment costs have been paid by the gain of the project
- E.g.
  - A manual work flow that takes 60 minutes can be robotized to take 5 minutes.
  - The work flow is executed 140000 times each year, taking roughly 74 FTE yearly in cost
  - Cost before change 65 800 000
  - Investment in software, licensing and implementation 20 000 000
  - Payback period is theoretically about 9,5 months
    - 6 months implementation parallel to keeping up manual flow
    - 3,5 months running (without the manual flow parallel)

# Return of Investment

- Measure used to evaluate the efficiency of a number of different investments.
- Divide the profit/saving of an investment by the cost of the investment over time
- Limitations
  - Disregards the factor of time
    - Two projects have an ROI of 50% but the first is completed in 3 years and the second in 5 years.
  - Depending on the variables used
    - Marketing maybe omits costs as maintenance, taxes, sales fees, legal costs etc.
    - Investor might include all the above
    - These two different calculations could lead to two different decisions

# Difference Payback period vs ROI

## ROI and payback: the central questions

ROI: What % annual return do I get on my investment?

Payback: How long does it take to recover the initial investment?

	<u>Year 0</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Project A	(\$1000)	\$400	\$400	\$400	\$400

ROI =  $\$400 / \$1000 = 40\%$  annual return for four years

Payback period = 2.5 years ( $\$400 + \$400 + 50\% * \$400$ )

**With stable annual benefits, ROI = 1 / Payback; Payback = 1 / ROI**