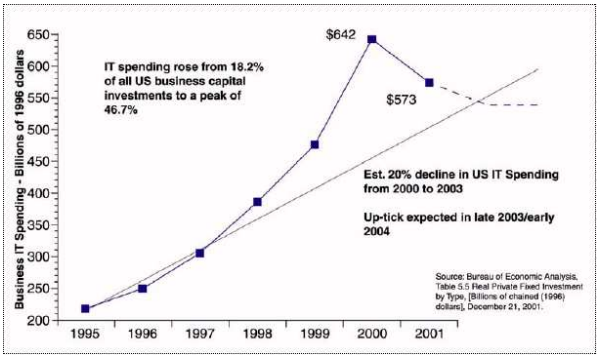
Telindus White Paper

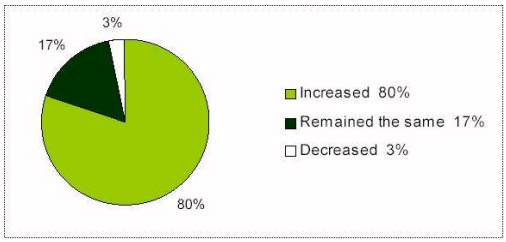
ROI+ approach

1. ROI, TCO or an alternative set of parameters…

1.1. Market context

Due to the **investment slump since 2001** there is a growing demand on **financial analysis** using **Return On Investment** (ROI) or other techniques, as budgets are tighter there are less approved IT projects and one of the only way to select the best ones are to look at their return.





According to Gartner, **C level executives are more and more involved** in the decision process:

- 60% of IT investments are controlled by business or functional managers
- And 40% by IT organizations –source Gartner 2002

1.2. Financial definitions

The **ROI** is defined as being the ratio of the net gain from a proposed project, divided by its total costs. It is expressed as a percentage (also called ROI%). A good ROI analysis must take into account all the costs of a new project as well as all the benefits an organization can expect from it.

The **Total Cost of Ownership** (TCO) is a concept introduced in the late 80s by Bill Kirvin from Gartner group. It was aimed at that time to justify the replacement of high cost centralized systems by decentralized ones and to show that hardware and software are just a part (<15%) of the total costs of owning computers. It is now mainly used to uncover costs issues not to evaluate a new project as it looks at only one side of the equation: the costs. Note that TCO must be carefully used as to get the lowest TCO you better throw away computers (7k€/PC/year) and replace them with pen and paper (1.5k€/year)!

ROI being a percentage **is lacking of absolute value**, e.g. a 500% ROI project will not be considered if on a 2k€ investment (too small), as well as a 1000% ROI project will not if on a 10M€ investment (too high).

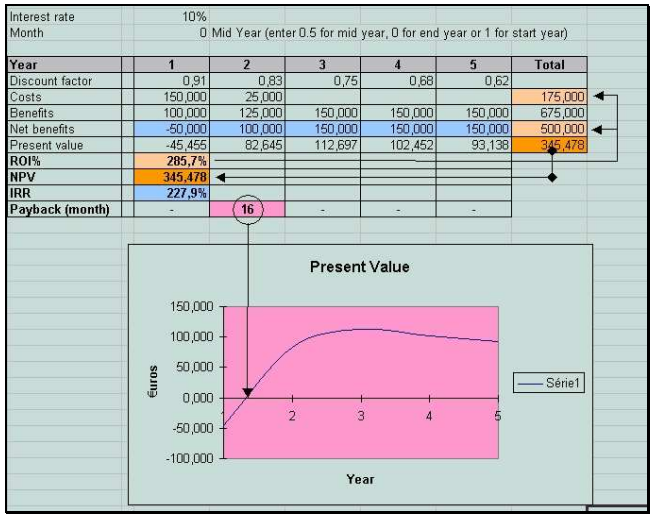
The right financial parameters to be used to convince Finance Managers are the **Net Present Value (NPV)** for a given period of time, the **Internal Rate of Return (IRR)** and the **Payback period**.

The **NPV** is the net Cash Flow discounted in today's value, i.e. the sum of each year Cash Flow discounted by a given interest rate (bank interest incremented by a risk factor), meaning that time value of money is considered (e.g. 100€ in hand today is worth than 100€ in an unknown future).

The **IRR** is the interest rate that nulls the NPV, meaning an interest rate that will be high enough to lower future savings down to the initial spending.

The **Payback period** is defined as the time for the project to provide a positive cumulative cash flow.

The following picture explains those "magic" formulas:



It is a good practice to provide **those three parameters for a given period of 3 to 5 years**, depending on the technology.

2. Telindus ROI+ approach

2.1. ROI generic misunderstandings

ROI is widely used by **ICT people** and most of their suppliers to justify, at the very last minute, the **costs of a technological choice**. This is mainly done in terms of costs and without either the benefits of the technology or the time value of money. In general ICT people are lacking of time, skilled resources or tools to do so.

Financial managers are more concerned by the **Return On Invested Capital (ROIC)** meaning they want to see the business benefits of the investment as well as the value over time of it, expressed in financial terms (NPV, IRR and Payback).

2.2. What is ROI+tm

To conciliate both demands of ICT people and Finance managers Telindus proposes to its customers an **ROI+ tm approach.**

ROI+tm provides a differential ROI analysis between the "as is" situation and the recommended "to be" one. Adding the quantified tangible benefits of the project as well as intangible ones when they can be carefully quantified complements this.

The **ROI+tm** computation is done on a given period of time (3 to 5 years) and the results are expressed by the NPV, IRR and Payback parameters.

2.3. ROI+tm method: building the business case

Statistics are not valid for convincing Finance Managers, they are just good enough to indicate that a project must be considered but no more. To be **compelling an actual business case** must be developed using the **own figures specific to the customer case** otherwise any piece of information can be contested or invalidated.

ROI+tm is based on a method widely used by Telindus at pan-European level. **ROI+tm** is a 4-phase consultancy method.

2.3.1. Phase 1: Perimeter definition

It is a good consultancy practice to start by this phase that allows the customer and Telindus consultant to finalise what will be included in the study:

- **ROI+tm** being a differential ROI, which solution are we comparing, what is the "as is" and what will be the "to be".
- What are the relative costs of each solution, including equipment, labour, and training…
- Which kind of benefits will be applicable in the customer business environment and how can they be quantified,
- Are there any other investments required during the considered time period, such as a phased migration over one or two years, compulsory upgrades of the "as is" solution…

2.3.2. Phase 2: Information gathering

When the perimeter is defined it is the right time to retrieve all the information that will be necessary to quantify costs and business benefits.

This is done through specific questionnaires developed by Telindus for each considered technology solution in the new project.

This phase must not be under-estimated as it is quite often the opportunity to some internal or external people reluctant to the new project or new technology to conceal their own information in order to keep their power in the organization.

2.3.3. **Phase 3: Computation**

Following the numerous business cases that Telindus studied for its European customers an ROI+ spreadsheet tool was developed in order to be able to input data on:

- Generic information:
  - Financial parameters: discount rate, time period for the study (3 to 5 years)
  - Customer specific data: number of employee and burdened salaries for up to 5 personnel profiles, number of sites, square meters…
- Costs relative to the actual situation and to the proposed one:
  - Hardware and software costs
  - Installation and other services
  - Ongoing costs such as maintenance and other services
- Benefits associated to the specific proposed project including:
  - Employee productivity enhancements
  - Network costs reduction (converged network, simplified cabling …)
  - Communication call costs reduction (IP Telephony)
  - Asset loss reduction (Security).

2.3.4. **Phase 4: Result reporting and presentation**

All the detailed computations are done on a monthly basis that allows:

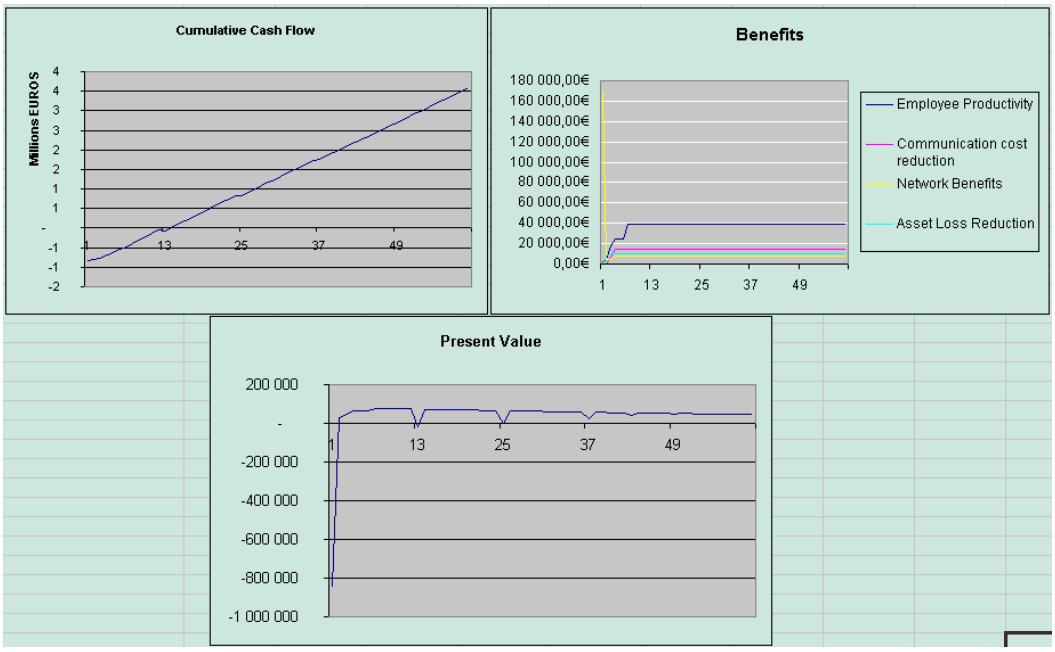
- To more accurately express the different figures
- And to delay some investment costs or benefits by a given number of months.

For easier understanding all the results are yearly summarized in a summary table and associated graphs.

This figure gives an example of a 5-year period study:

Year	1	2	3	4	5
Compared Costs					
Actual	150 000	300 000	150 000	150 000	150 000
Proposed project	710 600	116 800	97 520	162 520	97 520
Difference	560 600	-183 200	-52 480	12 520	-52 480
Benefits					
Employee Productivity	180 794	290 850	290 850	290 850	290 850
Communication cost reduction	134 400	169 800	169 800	169 800	169 800
Single Network	250 375	94 750	94 750	94 750	94 750
Asset Valuation	103 375	114 600	114 600	114 600	114 600
Total Benefits	668 944	670 000	670 000	670 000	670 000
Cash Flow	108 344	853 200	722 480	657 480	722 480
Cumulative Cash Flow	108 344	961 544	1 684 024	2 341 504	3 063 984
Present value	69 927	725 848	543 899	442 817	435 981
NPV	**2 218 473 Euros**				
Payback	**10,4 Months**				
IRR	**252%**				

The following graphs are also provided:



They summarize on a monthly basis:

- The cumulative cash flow of the project, showing the payback period after 10 months (10,4),
- The amount of each benefit over time (employee productivity, communication cost reduction, network benefits and asset loss reduction,
- And the present value over time (note that the sum on the period is the NPV that is given in the summary table.

3. Applicable domains examples

3.1. ROI+tm for IP Telephony

This type of study is specific for taking into account the **technology costs reduction** of:

- Exploiting and managing a **single network** instead of two really different ones,
- **Small remote offices** equipment (with same functionalities as major ones),
- Reporting, billing and call **cost management**,

As well as includes **tangible benefits** of:

- **Cabling and re-cabling**, parameterisation (moves, adds and changes),
- Telephone **calls reduction** (intra-site, from fix to mobiles, for remote workers…),
- Telephone line number reduction,
- Real estate (space optimisation, flexibility, scalability…),
- Employee **productivity enhancements**, both IT people and end users, meaning time optimisation in:
  - Retrieving various origin messages with unified messaging,
  - Dialling through a computer software instead of manually (depending on the number of digit to dial the destination as well as the misdial percentage)
  - Personal assistant, audio and videoconference…

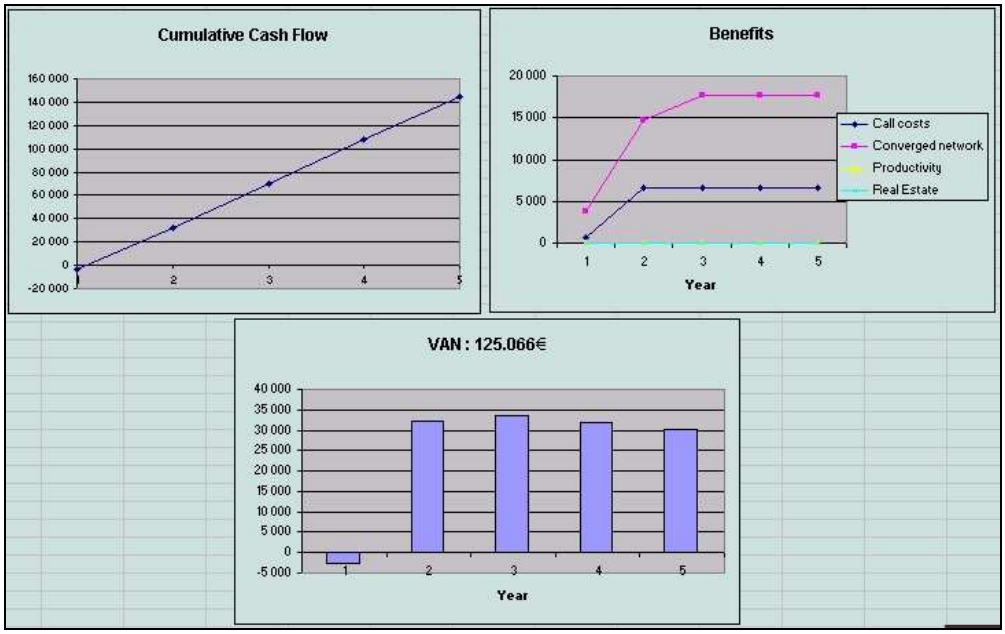
As well as the **intangible benefits** of:

- Global improvement of **customer satisfaction**,
- Employee retention, **geographic flexibility**…

A result example for a Belgium ministry showing an NPV of 125k€ and a payback period of 13 months:

	Year 1	Year 2	Year 3	Year 4	Year 5
Compared costs					
Regular PBX	114 436	17 984	17 984	17 984	17 984
IP Telephony	121 688	4 465	4 465	4 465	4 465
Difference	**7 252**	**-13 519**	**-13 519**	**-13 519**	**-13 519**
Benefits					
Call costs	654	6 539	6 539	6 539	6 539
Converged network	3 756	14 661	17 701	17 701	17 701
Productivity	0	0	0	0	0
Real Estate	0	0	0	0	0
Total Benefits	**4 410**	**21 201**	**24 240**	**24 240**	**24 240**
Cash flow	-2 842	34 720	37 759	37 759	37 759
Present value	-2 773	32 269	33 423	31 831	30 316

NPV	**125 066 Euros**
Payback Period	**13,1 month**
IRR	**1166% %**



3.2. ROI+tm for Security

This type of study is specific for taking into account the various improvements following the deployment of a set of security solutions of a given cost.

That typically includes the effect of:

- An anti-Spam tool on
  - end-user productivity enhancement, gaining time by either not retrieving and reading unexpected mails, nor calling helpdesk,
  - network bandwidth reduction due to traffic of those unexpected mails,
  - storage limitation due to useless messages storage,
  - helpdesk calls reduction.
- An anti-Virus software on productivity of IT personal avoiding to diagnose the problem, fix it and even re-install several machines,
- A given safeguard (e.g. firewalls) to protect a given IT asset of the company (web server, database server, content of the data base…) that will be measured by the Asset Loss Expectancy reduction (note that the ALE is defined as being the Asset Value * Exposure Factor [i.e. Single Loss Expectancy] * Annualised Rate of Occurrence).
- …

3.3. ROI+tm for Wireless LAN

This type of study is specific for taking into account the employee productivity enhancements following the deployment of such a network.

That typically includes the recoverable time spent:

- In meetings, normally without being connected to the network
- In travelling by means of connections such as hot spots in airports, hotels, …

That can also be combined with IP Telephony benefits if wireless phone sets are used.