Research Report – IT barometer 2007

A study on IT and business management's views on the importance of IT in Finnish companies

1. Introduction

Information technology has become an essential competitive tool in the globally networked economy. The annual IT barometer, commissioned by the Finnish Information Processing Association (FIPA), charts the importance of IT for Finnish companies. The barometer discusses how Finnish companies regard the utilization of IT, what kinds of changes will be taking place and what kind of IT competence the companies demand in the future.

The IT barometer also measures the differences of opinion between corporate and IT management in Finnish companies and determines which issues cause the biggest differences. The study also discusses current trends such as outsourcing.

The barometer is carried out annually; it functions as a general tool for measuring the IT industry. The answers have been converted into eight key figures which represent the current state of the field numerically. The key figures include IT costs as a percentage of turnover and the number of companies that consider it difficult to find IT experts. With these figures, and the IT index derived from them, it is easy to measure and follow the utilization of information technology and changes in the investment climate.

1.1. Research Data

The IT barometer was conducted as an online survey. Members of the target group were extracted from meXt Oy's Zama database. Participants received an email with a link to the survey. The survey was sent to representatives of operative, IT, and information management of Finnish companies with more than 500 employees. A round of phone calls was made to motivate those who did not respond to the invitation. The survey form consisted of both structured and open-ended questions. The total number of questions was 19.

PR consultancy Conexio and FIPA planned the study together and compiled the survey form. meXt was in charge of the technical implementation. Conexio analyzed the results and prepared the research report.

A total of 176 respondents participated in the survey, meaning that the response rate was 10 per cent. The margin of error is not greater than 7.4 per cent at a 95 per cent confidence interval.

The following chart shows the positions of the respondents:

Respondent position

- CIO or IT management
- Other business management
- Other

n = 176
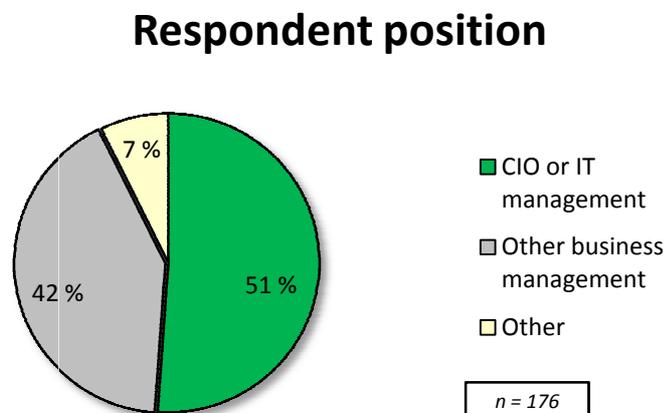
A total of 176 respondents from organizations with more than 500 employees: 91 respondents from IT / CIO, 74 from business management

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1.2. Summary

The first IT barometer revealed several surprising facts but also reinforced some current views. One of the key findings was the difference of opinion between business and IT management. IT management is aware of the practical challenges and thus approaches IT from an operative level, whereas business management feels that IT holds a more strategic position. The new innovations and the competitive advantage IT enables are considered significantly more important by business management than by IT management.

The key findings were:

- Finnish companies spend 4.5 per cent of their turnover on information technology, and some increase is to be expected in the future.

- The organizations are trying to transition IT into a more strategic role. The respondents hope that in the future IT professionals will be able to use technology to develop new innovations and combine technical competence with business skills.

- The importance of information technology as a competitive tool will continue to increase.

- It is regarded as highly important to be able to utilize IT efficiently for innovating and for developing new business operations. More personnel will be needed for this task in the future.

- The views of the IT unit are not taken into consideration by the executive group: 59 per cent of the companies surveyed said that IT strategy is an essential part of their business development; however, the IT manager is a member of the executive group in only 30 per cent of the companies.

- Outsourcing and the strategic role of IT go hand in hand. Outsourcing is most common in companies that value IT's potential to create new business.

- IT outsourcing will increase further. Business management favors outsourcing more (54%) than IT management (37%).

- However, outsourcing is not without its challenges: 41 per cent of the companies that outsource most of their IT feel that the outcome of the projects is not as expected; the corresponding figure is 19 per cent among companies that utilize in-house IT.

- In most Finnish companies IT has been either completely or partially outsourced: only 30 per cent carry out all IT projects in-house.

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2. Key Figures in the IT Barometer

The results of the IT barometer have been condensed into key figures and then calculated into an IT index which is a numeric representation of how Finnish companies utilize IT. The key figures and the IT index facilitate comparison with future studies.

December 2007	Value
Current IT costs as a percentage of turnover	4.45%
IT costs as a percentage of turnover after three years	4.84%
The impact of IT-based innovations on turnover last year	4.27%
Costs saved by improving performance through IT as a percentage of turnover	4.54%
Organizations that consider it difficult to find IT experts for their needs	52%
Organizations that effectively utilize IT to develop their business processes	71%
Organizations in which IT creates added value by enabling the development of new innovations and businesses	72%
Organizations that develop IT as a strategic resource	68%
IT index 2007	**100**

The key figures for 2007 are listed in the above table. A key finding is that Finnish companies spent 4.5 per cent of their turnover on information technology. The companies are expecting the percentage of IT costs to increase next year. The figures also show that costs saved by increasing IT efficiency are equivalent to the investments into it.
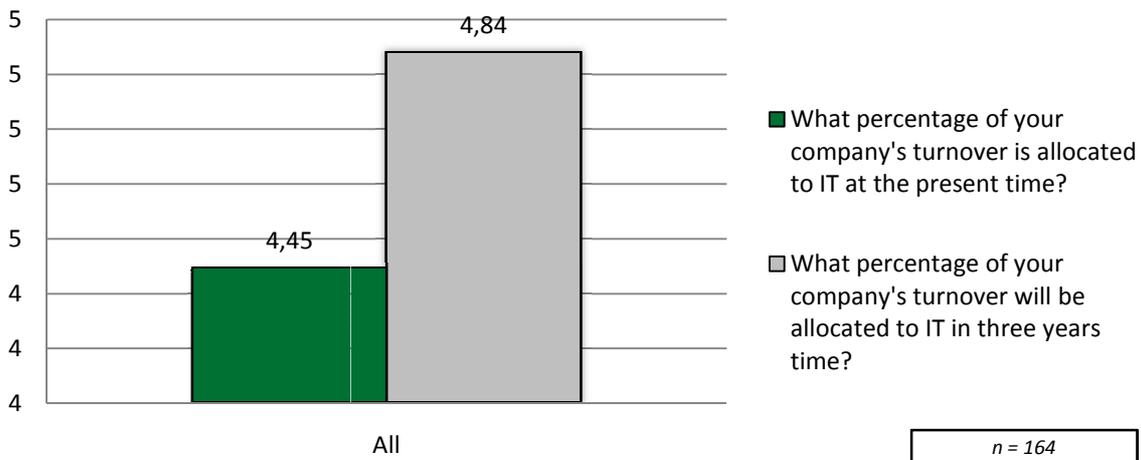
3. IT's Impact on Costs and Turnover

3.1. IT Costs as a Percentage of Turnover

- ☐ The percentage of IT costs will decrease
- ☐ The percentage of IT costs will increase
- ☐ The percentage of IT costs will remain the same

n = 164
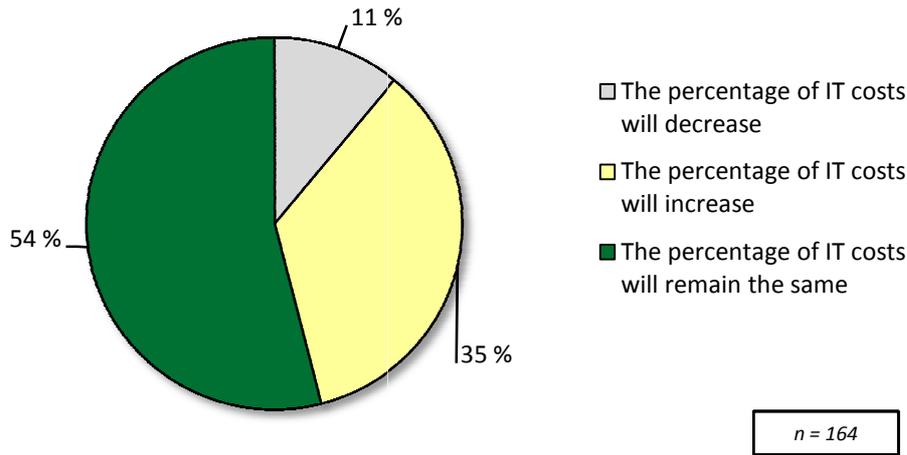
*The companies' views on how the percentage of IT costs will change during the following three years.*

The study determined what the percentage of turnover allocated to IT is and how the amount is likely to change in the future. The responses show that the companies believe IT costs will increase to a certain extent during the next three years.

IT costs as a percentage of turnover

- ☐ What percentage of your company's turnover is allocated to IT at the present time?
- ☐ What percentage of your company's turnover will be allocated to IT in three years time?

n = 164

The percentage of turnover allocated to IT at the present time and in three years time.

3.2. **IT's Impact on Company Turnover**

### IT's Impact on the Company's Turnover
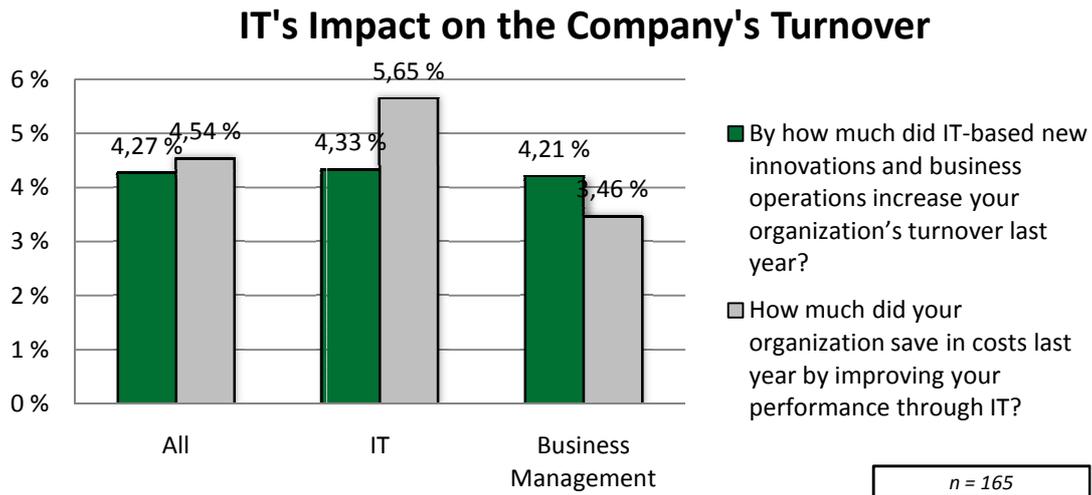
The effect of IT on company turnover.

In addition to the costs, the study also examined by how much IT increases turnover through new innovations and the costs that can be saved by improving the company's performance through IT. The cost savings and the increases in turnover show that investing in IT produces positive results.

IT increased the companies' turnover by approximately 4.3% and saved approximately 4.5% in costs. IT-related cost savings are considered to be less significant by business management than by IT and information management.

4. IT's Impact on Company Competitiveness
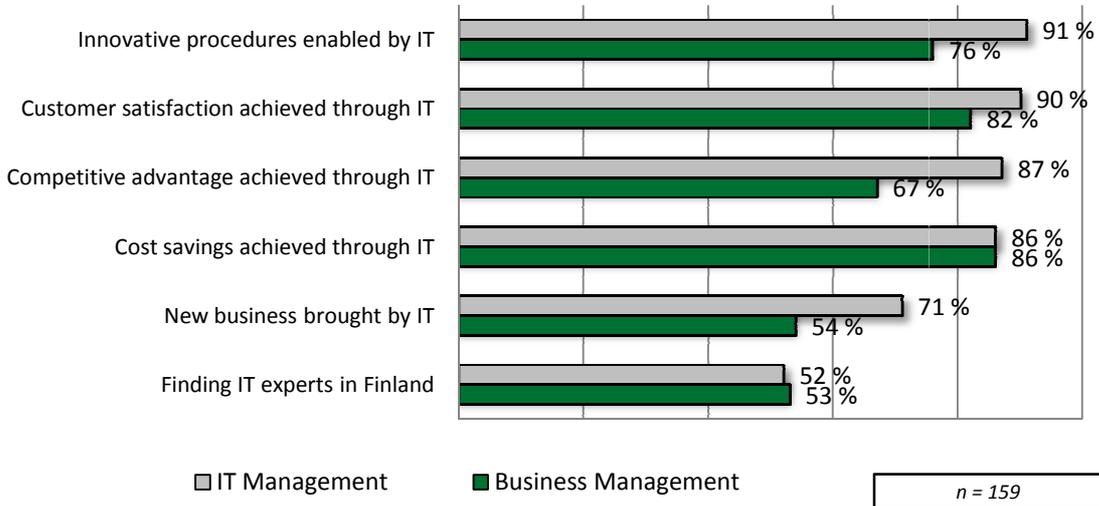
The importance of different factors for the success of the company (the percentage of respondents who regard the factor as important for the success of the company).

The study examined how IT affects the competitiveness of companies. The results were positive: Finnish companies seem to regard IT as a significant factor for competitiveness. The views of IT management and business management differ substantially. IT management's view on utilizing IT is more operative than business management's view. Compared to IT management, business management positions IT in a more strategic role and regards the innovative procedures that IT enables as significantly more important. Business management also puts more emphasis on competitive advantages and new procedures which are likely to increase turnover.

Statement: IT's role as a competitive tool will increase in the future
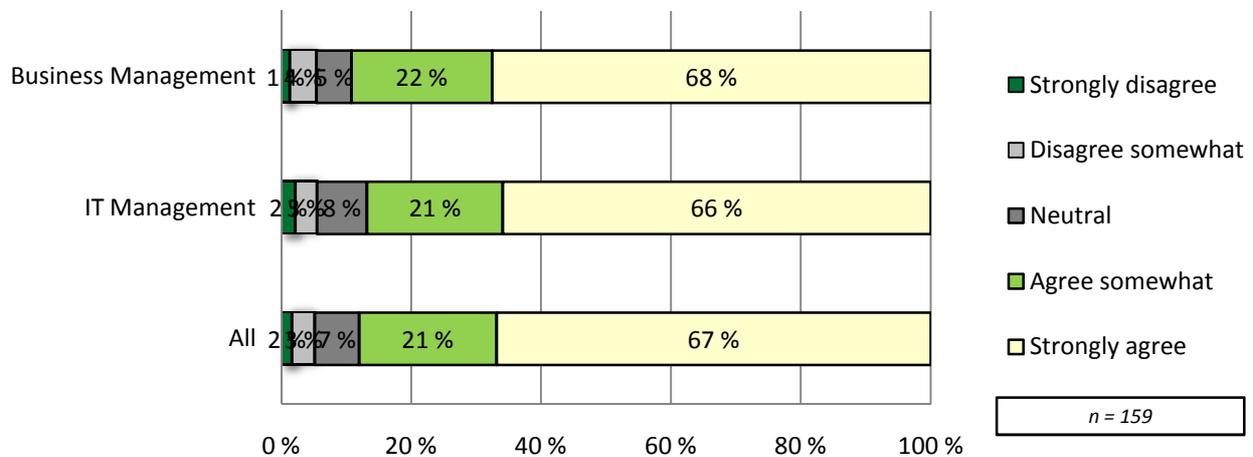
IT and business management are almost unanimous in their view that IT's role as a competitive tool will increase in the future.

4.1. Important Areas of IT Competence

IT and business management were also asked to define, in their own words, which fields of IT competence will be important in the future for their company's success. The fields which were **ranked as the most important** were as follows:

- **Enterprise resource planning (ERP) projects** remain an important part of companies' IT. Every eighth respondent mentioned ERP projects as an important factor for their company's success. Business process competence is one of the most important fields in ERP.

- ERP projects involve more than just updating current systems, since **integration competence** was named the most common field of competence. Integration no longer refers to integration into a company system: integrating partners into the supply chain and integration through open interfaces were mentioned several times in the responses. Many companies ranked service-oriented architecture high in the list of competencies.

- Many companies also demand expertise on **enterprise architecture** which can be flexibly expanded and extended across the industry.

- **Customer relationship management** competence was almost equally important. Currently, many companies are focusing on improving their customer relationship management.

- **Self-service and electronic services** will also have an important role. Many companies demand competence in these fields.

- Companies also demanded **purchasing competence** – in the future, organizations will need more competence in risk-free and flexible purchasing in multi-supplier environments.

5. *Organizations' Ability to Utilize IT and the Demand for Different Competences*

The study examined how organizations are able to utilize IT and what kind of competence they demand. The responses are illustrated as a diamond diagram, where the outer frame represents the "agree" option and the inner frame represents the "disagree" option. The diagram helps to identify problem areas and demands.

Importance of IT competences
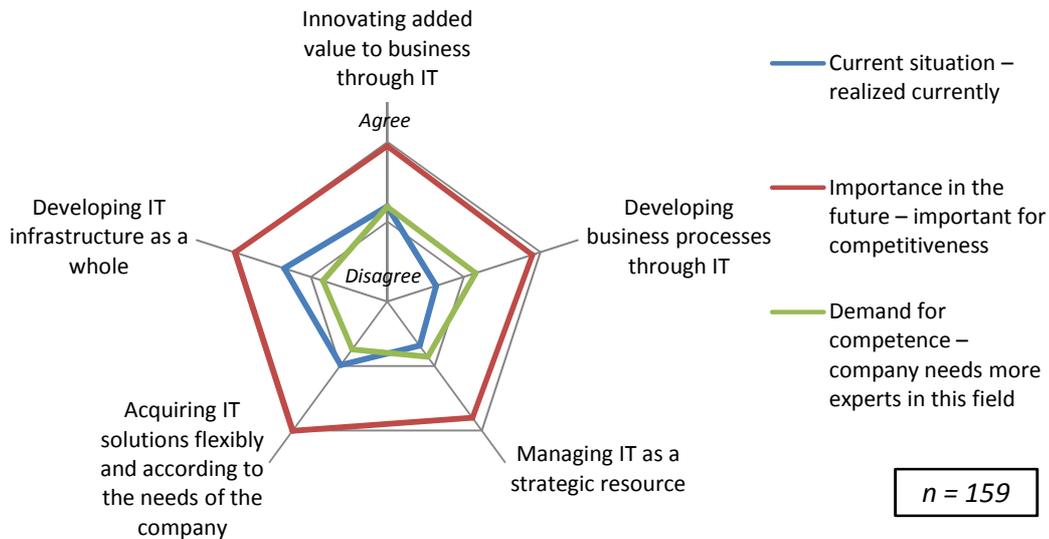
In the future, companies will need various kinds of IT competence, particularly expertise in purchasing, developing infrastructure as a whole, and utilizing IT for innovation. Experts are mostly needed for developing business processes and innovating new business possibilities.
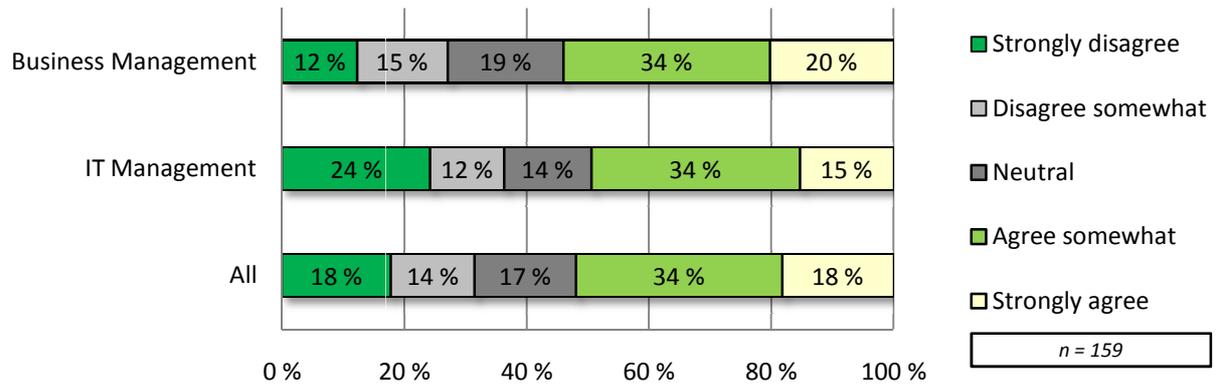
Competence in acquiring IT solutions
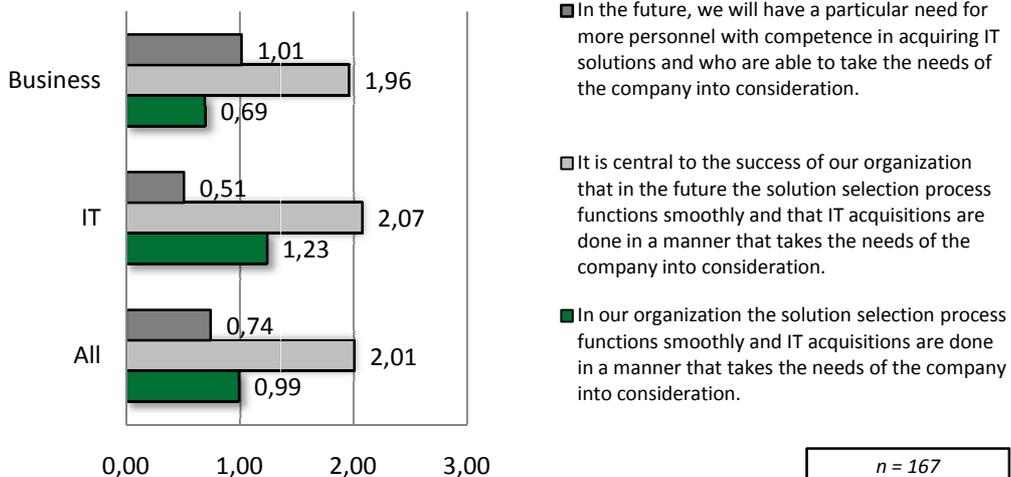
The companies' demand for competence in IT solution acquisition (scale -3…+3, where -3 means "Strongly disagree" and +3 means "Strongly agree").

5.1. Finding IT Experts in Finland

STATEMENT: It is difficult to find IT experts in Finland to meet the needs of our organization

|	Strongly disagree	Disagree somewhat	Neutral	Agree somewhat	Strongly agree
Business Management	12 %	15 %	19 %	34 %	20 %
IT Management	24 %	12 %	14 %	34 %	15 %
All	18 %	14 %	17 %	34 %	18 %

n = 159

The study also examined how companies find IT experts for their needs in Finland. The situation is quite problematic: IT is often regarded as a key factor for success, but lack of experts may limit the success of a company. A total of 52 per cent of the respondents considered it hard to find IT experts in Finland. Business management finds it harder than IT management.

6. Success of IT Projects

IT barometer examined how IT projects succeed in Finnish companies and whether business and IT management agree on their outcome. Respondents were asked to state whether the outcomes of IT projects correspond to the agreed plans and whether projects are realized within schedule and budget.

STATEMENT: Outcome of IT projects correspond to plans
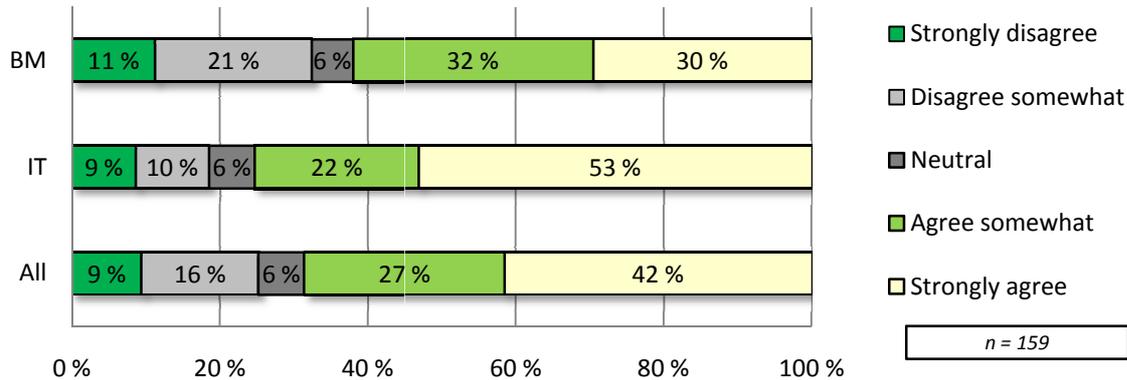
The respondents' view on whether the outcomes of projects match the agreed plans.

The results clearly show that business and IT management have different views on whether the projects succeed. For example, 69 per cent of business management respondents feel that IT projects do not stay within schedule. The corresponding figure among IT management respondents is 42 per cent. The results are similar in questions regarding the budget or the outcomes of projects, and they show an obvious gap between business and IT management.

STATEMENT: IT projects stay within schedule
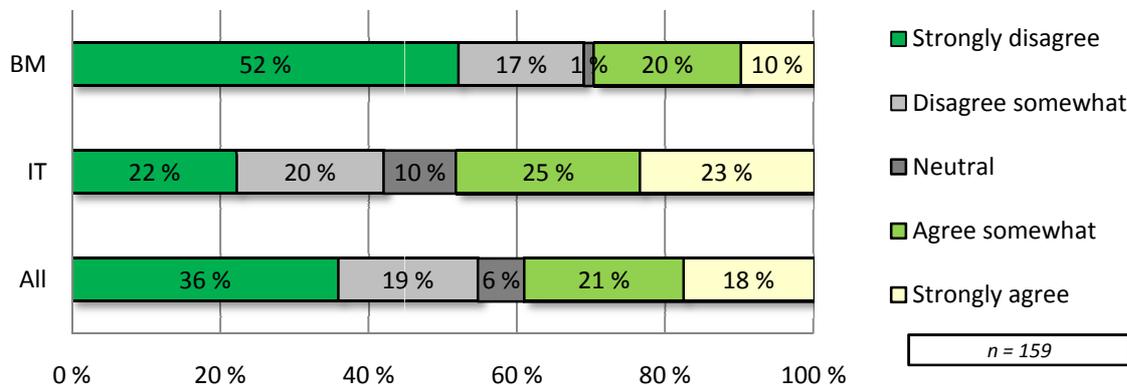
The perception among respondents on whether IT projects are realized within schedule.

STATEMENT: IT projects stay on budget
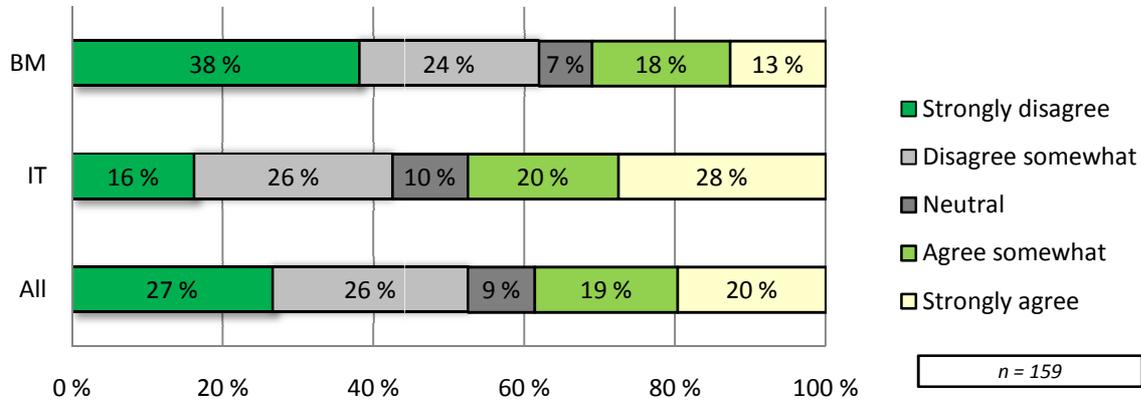
The perception among respondents on whether IT projects are realized within budget.

Overall, the responses create an alarming image of the success of IT projects. Less than 40 per cent of the respondents feel that IT projects stay within both budget and schedule. The results are very similar to those from corresponding international surveys.
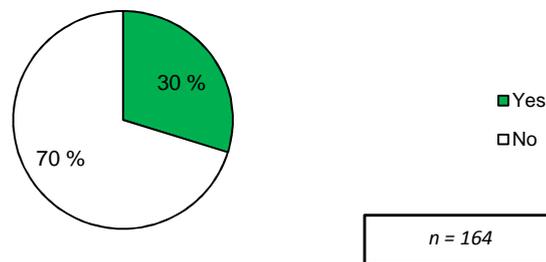
7. Role of IT Management

The study also examined the role of the IT manager: whether he/she is a member of the executive group, to whom he/she reports, and how his/her position affects the company's priorities.

CIO or IT manager part of the executive group

The percentage of companies where the IT or information manager is part of the executive group.

The results show that the IT manager's role is very small in relation to the overall significance of IT. The Information or IT manager is a member of the executive group in only 30 per cent of the companies, even though 59 per cent regarded IT strategy as an essential factor in business development.

Is IT strategy an essential factor in your company's business development?

The distribution of companies that regard IT strategy as an essential factor in business development.

The relation between IT's strategic role and IT manager's position in executive group
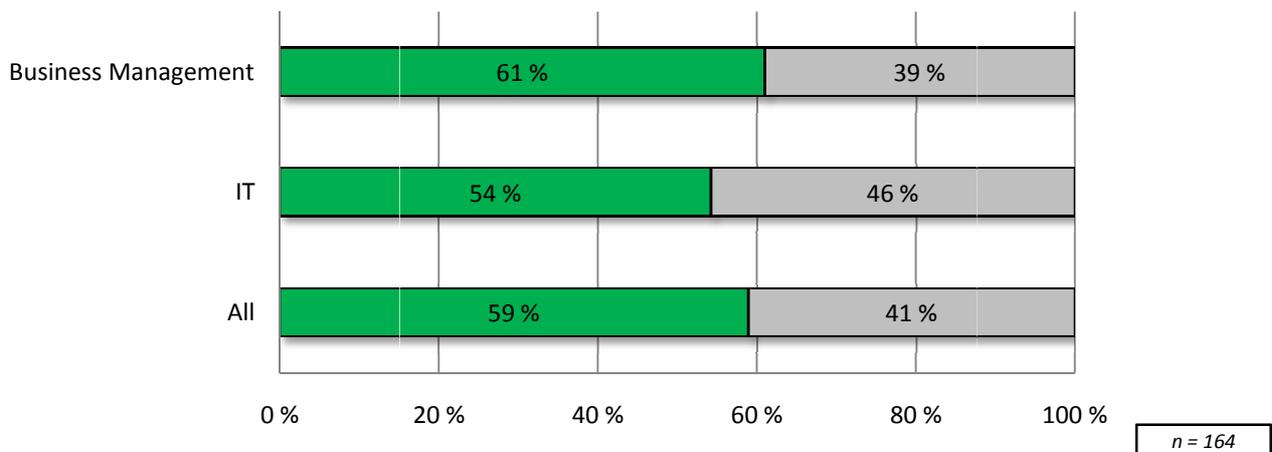## *(percentage of companies where IT manager is a part of the executive group)*

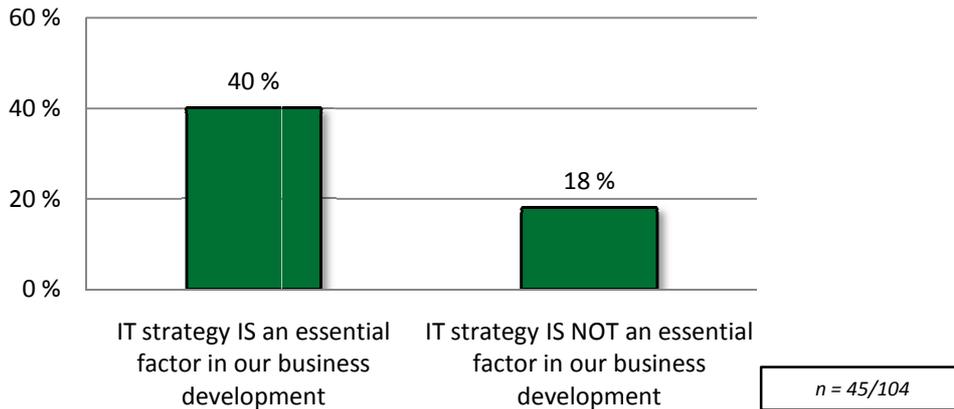*The percentage of companies that have their IT or information manager in the executive group.*

The IT or information manager is more likely to be a member of the executive group in companies that recognize IT strategy as an essential factor for the success of the company. The IT or information manager is a member of the executive group in 40 per cent of the companies that regard IT strategy as an essential factor for business development. The IT manager's participation in the executive group is a clear investment in IT, but it does not mean that the company is aiming to keep IT functions in-house; indeed, the opposite is the case. IT managers who are members of the executive group are more likely to outsource IT functions.

What percentage of IT functions has been outsourced?
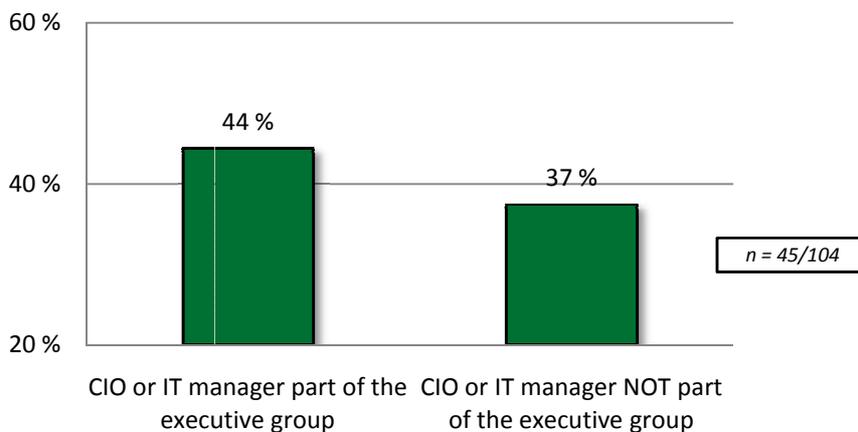
The average outsourcing percentage in companies: comparison according to whether the IT manager is a member of the executive group or not.

7.1. **To Whom Does the IT Manager Report?**
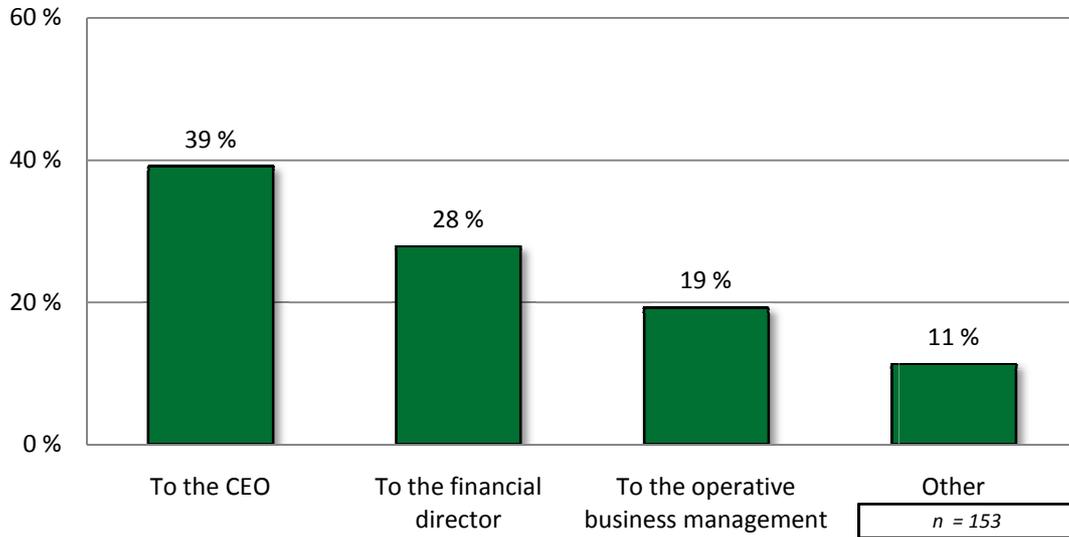
The role of the IT manager: to whom the IT manager reports

The study also examined to whom the IT manager reports. In 39 per cent of the companies the IT manager reports directly to the CEO and in 28 per cent to the financial director. IT strategy has a more essential role in business development in companies that have their IT manager in the executive group.

Is IT strategy an essential factor in your company's business development?

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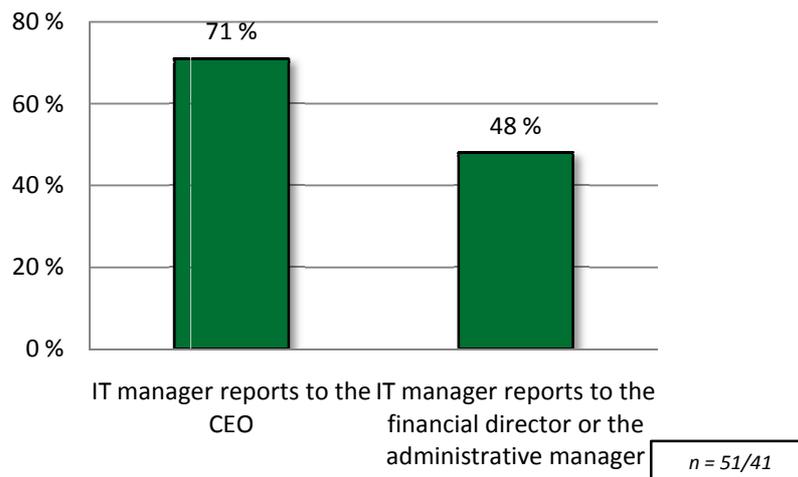
The relationship between IT manager's reports and the strategic role of IT – to whom does the IT manager report. The percentage of companies that regard IT strategy as an essential factor in business development.

The effect the IT or information manager's role has on the factors which are regarded as important for the company's success

Factor	IT or information manager part of the executive group	IT or information manager NOT part of the executive group
Finding IT experts in Finland	0,62	0,32
New business brought by IT	1,07	0,49
Innovative procedures enabled by IT	1,40	1,10
Competitive advantage achieved through IT	1,35	0,99
Customer satisfaction achieved through IT	1,55	1,36
Cost savings achieved through IT	1,34	1,11

Not important   Important

Scale -2…+2, where -2 means "Not important" and +2 means "Very important"

☐ IT or information manager part of the executive group

■ IT or information manager NOT part of the executive group

n = 45/104

When the IT or information manager is a member of the executive group, the company often has a better view of the new possibilities provided by IT. In particular, new business possibilities are emphasized. IT is also regarded as more important.

8. Outsourcing

What percentage of your company's IT functions has been outsourced?
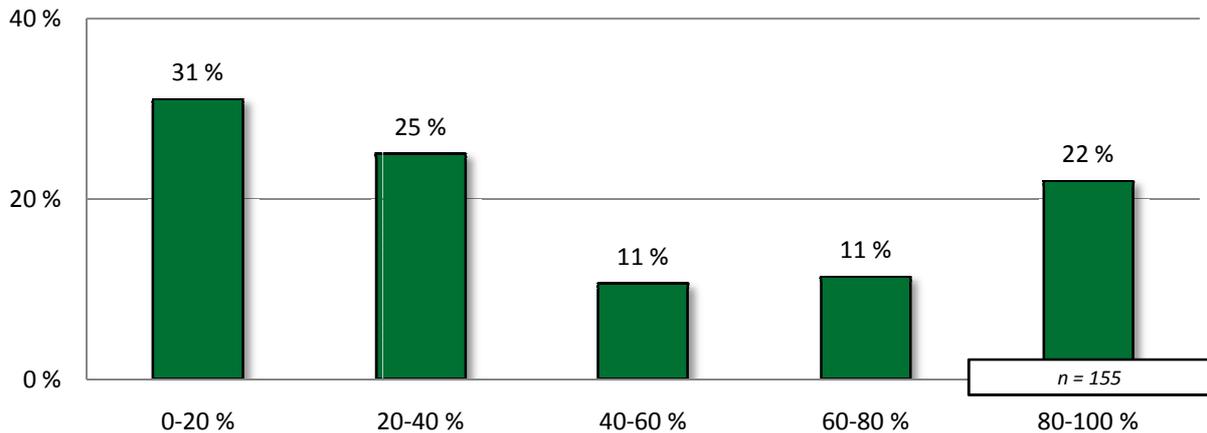
The percentage of company's IT outsourced.

The study examined outsourcing and its effects in Finnish companies. On average, 39 per cent of IT has been outsourced in Finnish companies and one third (33%) of the companies outsource at least two thirds of their IT functions. Approximately one third (31%) of the companies do not outsource their IT functions to any great extent (0-20 %).

STATEMENT: Our company aims at outsourcing as much of our IT functions as possible
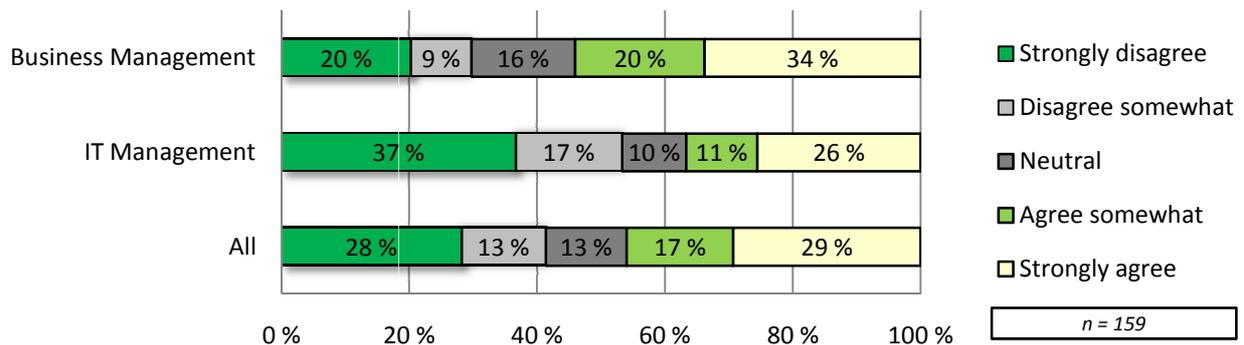
Attitude towards outsourcing.

The study shows that the outsourcing trend continues. Approximately two thirds of the companies have so far outsourced less than 60 per cent of their IT, but the responses suggest that this situation may change quite rapidly. Almost half of the companies state that their aim is to outsource as much as possible.

Outsourcing creates a clear gap between operational and IT management. 37 per cent of IT management is of the opinion that as much as possible should be outsourced, whereas the corresponding figure among operational management is 54 per cent.

The effect of outsourcing on attitudes towards IT

When examining the difference between companies that outsource most of their IT functions and those with in-house IT, it is evident that the companies that outsource consider it challenging to find IT experts in Finland. This differentiates them from companies with in-house IT.

8.1. Impacts of Outsourcing

The outcomes of IT projects are usually consistent with plans
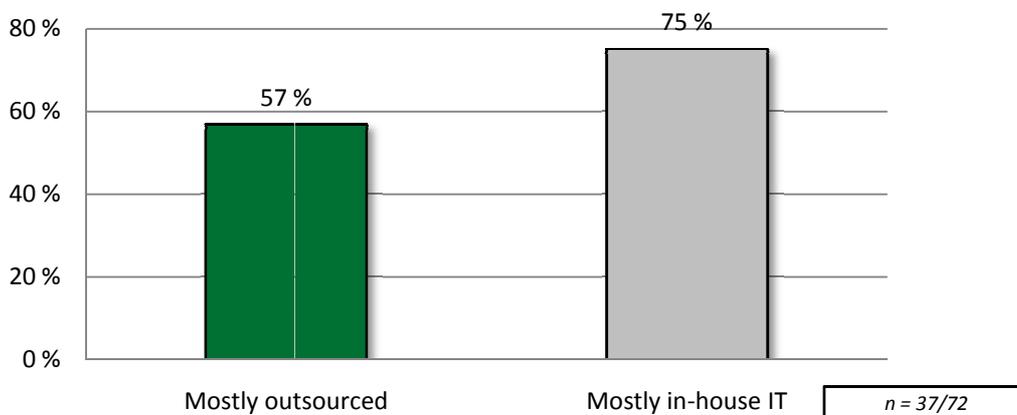
Attitude among the companies towards the statement "The outcomes of IT projects are usually consistent with plans."

The study examined the impact of outsourcing on the outcomes of IT projects. The results show a significant distinction: in companies that outsource most of their IT, projects are less successful than in companies with in-house IT; the results refer to the schedule, budget, and outcomes of the projects. Deficiencies in the outcomes are slightly more common than exceeding the deadline or the budget.

IT projects stay within the agreed budgets
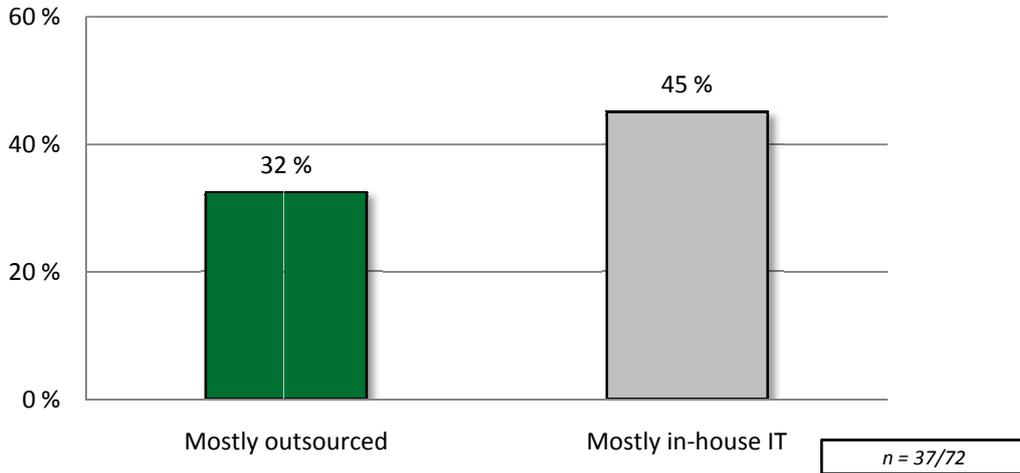
Attitude among the companies towards the statement "IT projects stay within the agreed budget."

Outsourcing appears to cause difficulties with budget and schedule as well. IT projects stay on budget and on schedule better in companies that mostly use in-house IT.

IT projects stay within schedule

Attitude among the companies towards the statement "IT projects stay within schedule."
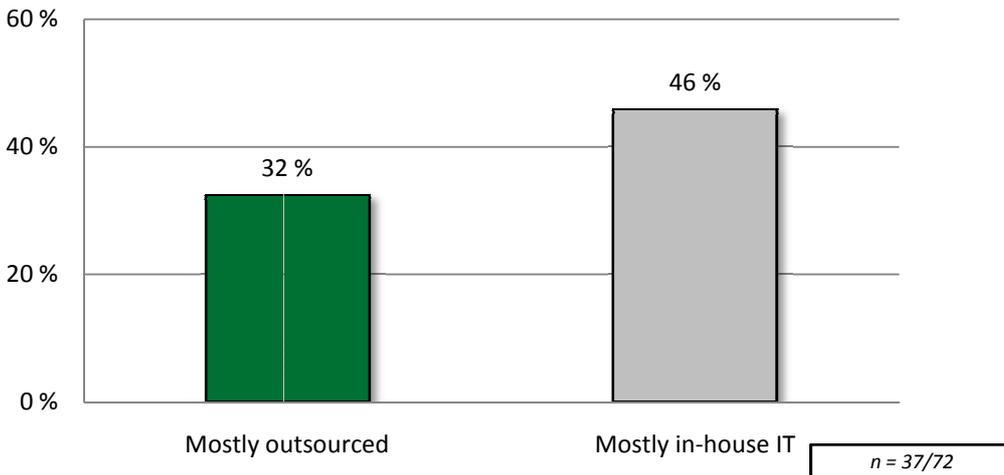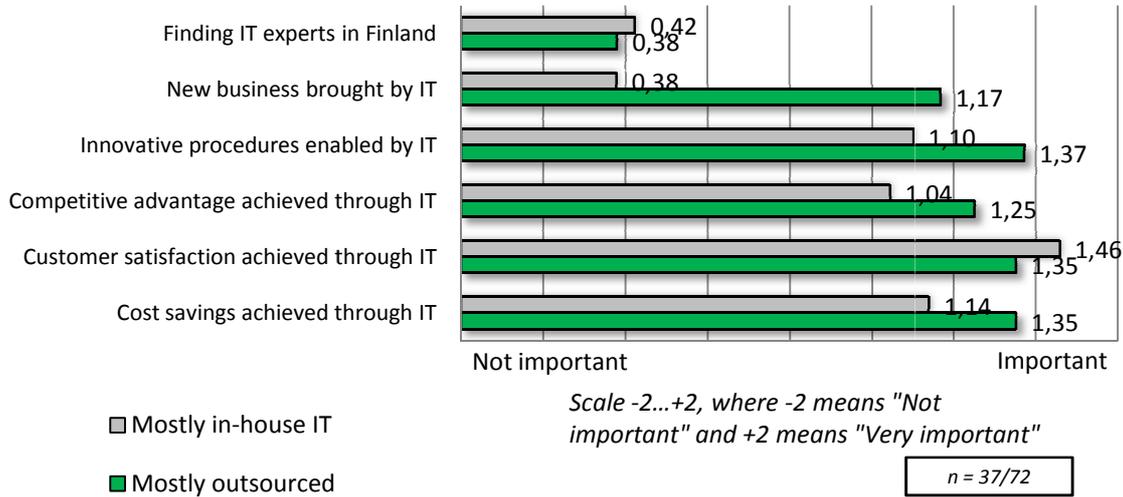
The impact of outsourcing on fields which are important for the company's success

Finding IT experts in Finland	0,42 / 0,38
New business brought by IT	0,38 / 1,17
Innovative procedures enabled by IT	1,10 / 1,37
Competitive advantage achieved through IT	1,04 / 1,25
Customer satisfaction achieved through IT	1,46 / 1,35
Cost savings achieved through IT	1,14 / 1,35

Not important   Important

Scale -2…+2, where -2 means "Not important" and +2 means "Very important"

□ Mostly in-house IT

■ Mostly outsourced

n = 37/72

The lack of experts is stated as the most common reason for outsourcing. However, expertise was not given a central role. The difference between companies that outsource most of their IT functions and those with in-house IT is that new business enabled by IT has a very central role in the companies that outsource. This is perhaps because outsourcing forces the companies to change their management strategies and to examine their organization as a whole. Companies that outsource more see their IT from a distance and from a more strategic perspective, whereas companies with in-house IT see IT from an operative level and invest more, for example into customer satisfaction. When the companies were asked whether IT strategy is an essential part of their business development, the percentages were nearly the same.

Is IT strategy an essential factor for your company's business development?

Mostly outsourced	60 %
Mostly in-house IT	64 %

n = 37/72
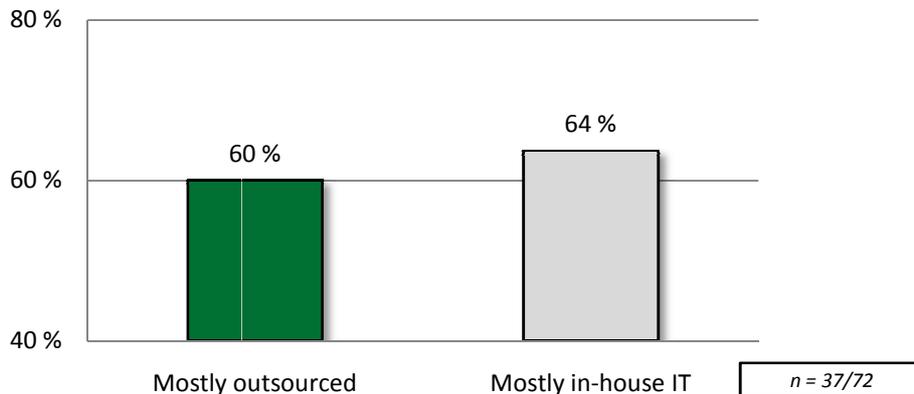
9. *Which Department Develops the Best Ideas for Applying IT?*

The study also tried to examine which department develops the best ideas for applying IT. The respondents felt that the best ideas are developed in coordination between IT and general management. The question highlighted another discrepancy between IT management and other management. A quarter of business management respondents feel that the best ideas are developed in business management and the rest in cooperation between IT and business management. No one within business management feels that the most productive ideas come from the IT department.

Which department develops the best and the most profitable ideas for applying IT?

- ■ Usually business management
- □ Usually IT management
- □ Usually cooperation between business and IT management

n = 159
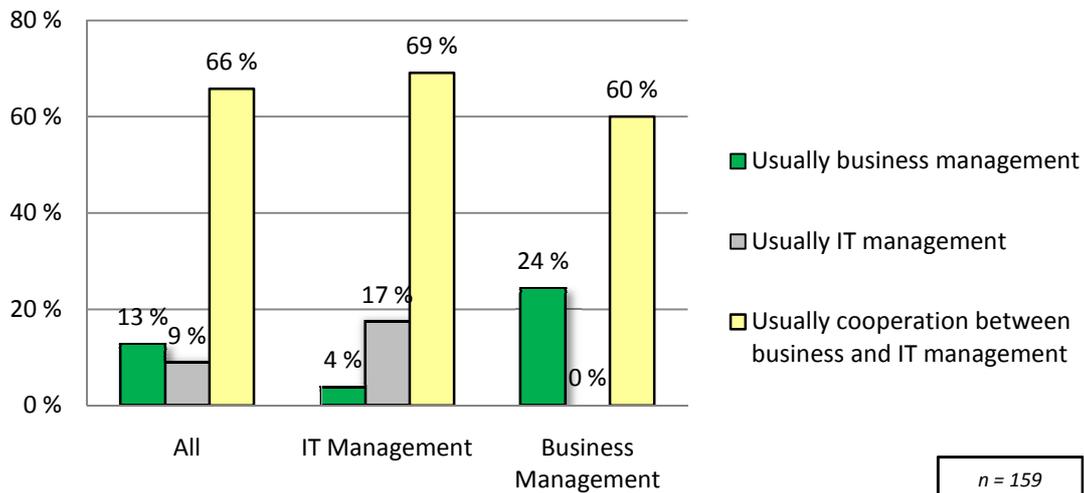
Research Questions

1. **What is your position in the organization?**

I represent IT or information management	
I represent other business management	
Other, please specify	

2. **Please estimate how the following statements apply to your organization.** *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

	-3	-2	-1	0	+1	+2	+3
Our company aims at outsourcing as much of our IT functions as possible.							
IT's role as a competitive tool will continue to increase in the future.							
In our organization, IT and business operations work together towards realizing our strategic goals.							
It is difficult to find IT experts in Finland for the needs of our organization.							

IT'S ABILITY TO SERVE THE COMPANY AND THE DEMAND FOR EXPERTISE

In the following questions please estimate how well IT advances your organization's business in different fields. *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

3. **IT's ability to innovate and produce added value for business**
   Please estimate how the following statements apply to your organization. *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

	-3	-2	-1	0	+1	+2	+3
IT creates added value by enabling the development of new innovations and businesses.							
It is very important for our organization's success that we are able to efficiently utilize IT for innovation and for developing new business.							
In the future, we will have a particular need for more personnel with experience in utilizing IT for innovation and for developing new business.							

4. **Developing business processes**
   Please estimate how the following statements apply to your organization. *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

	-3	-2	-1	0	+1	+2	+3
Our organization can effectively utilize IT for developing our business							

processes.							
It is very important for our organization's success that we are able to further develop our business processes using IT.							
In the future, we will have a particular need for more personnel with experience in using IT for developing business processes.							

5. **Strategic IT management**
   Please estimate how the following statements apply to your organization. *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

	-3	-2	-1	0	+1	+2	+3
Our organization manages and develops IT as a strategic resource.							
It is very important for our organization's success that we manage and develop IT as a strategic resource.							
In the future, we will have a particular need for more personnel with experience in strategic IT management.							

6. **Selecting IT solutions**
   Please estimate how the following statements apply to your organization. *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

	-3	-2	-1	0	+1	+2	+3
In our organization, the solution selection process functions smoothly and IT acquisitions are done in a manner which takes the needs of the company into consideration.							
It is central to the organization's success that in the future the solution selection process functions smoothly and that IT acquisitions are done in a manner which takes the needs of the company into consideration.							
In the future, we will have a particular need for more personnel with experience in acquiring IT solutions and who can take the needs of the company into consideration.							

7. **Managing and developing IT infrastructure**
   Please estimate how the following statements apply to your organization. *Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.*

	-3	-2	-1	0	+1	+2	+3
Our organization develops IT infrastructure as a whole.							
It is very important for the organization's success that in the future we are able to develop our IT infrastructure as a whole.							
In the future, we will have a particular need for more personnel with experience in developing IT infrastructure as a whole.							

APPLYING IT IN THE COMPANY

8. **How would you grade (4–10) the application of IT in your company?**

9. **Please estimate which department develops the best and the most profitable ideas for applying IT?**

The most profitable ideas for applying IT are usually developed in business management.	
The most profitable ideas for applying IT are usually developed in IT management.	
The most profitable ideas for applying IT are usually developed in cooperation between business and IT management.	
The most profitable ideas for applying IT are usually developed somewhere else (please specify where).	

10. **Please estimate how successful your organization's IT projects are.**
   Indicate your answer on a scale where -3) Strongly disagree, -2) Disagree, -1) Disagree somewhat, 0) Neutral/unsure +1) Agree somewhat, +2) Agree, +3) Strongly agree.

	-3	-2	-1	0	+1	+2	+3
The outcomes of IT projects are usually consistent with plans.							
IT projects stay within schedule.							
IT projects stay within budget.							

11. **Please estimate, in percentages, the impact of IT on your organization's business.**

By how much did IT-based new innovations and businesses increase your organization's turnover last year?	
How much did improved performance enabled by IT save you in costs last year?	

THE FUTURE

12. **Please describe in your own words which competence areas will be of particular importance for your company during the next three to five years?**

13. **How important will the following factors be for your company's success in the future?** *Indicate your answer on a scale where*
   -2) not important, -1) of little importance, 0) somewhat important, +1) important +2) very important

	-2	-1	0	+1	+2
Cost savings achieved through IT					
Customer satisfaction achieved through IT					
Competitive advantage achieved through IT					
Innovative procedures enabled by IT					
New profitable areas of business enabled by IT					
Finding IT experts in Finland					

Background questions

14. **In your company, is the IT or information manager a member of the executive group?**

   ☐ Yes   ☐ No   ☐ Unsure

15. **Is IT strategy an essential factor in your company's business development?**

☐ Yes ☐ No ☐ Unsure

16. **To whom does the IT manager report in your company?**

To the CEO	
To the financial director	
To the operative business management	
To someone else (please specify)	

17. **Please estimate your company's IT costs as a percentage of turnover.**

☐

18. **Please estimate what your company's IT costs will be in three years' time as percentage of turnover.**

☐

19. **Please estimate what percentage of your company's IT functions have been outsourced .**

☐

General information

Name	
Company	
E-mail	