

## ST-Pool Survey report – Detail results

# Sustainable Competitive Advantages in Industrial Service Business

Key words: **Competitive advantages, Enablers, Service economy, Service industry business, Sustainable**

RESEARCH SUMMARY

13.6.2018

---

AAPPO KONTU, PHD STUDENT, VAASA UNIVERSITY

ROOPE SEPPÄLÄ, PRO GRADU MASTER'S THESIS, VAASA UNIVERSITY

JUSSI KANTOLA, PROFESSOR, VAASA UNIVERSITY

HANNU VANHARANTA, PROFESSOR, VAASA UNIVERSITY

# Content

	page
1. Introduction	4
2. Problem formulation and research objectives	5
3. Research strategy	9
- Sustainable competitive advantage analysis methods	
- VRIO and Value chain models	
- Financial analysis models	
4. Research questions	16
5. Data and information collection methods	17
- Financial data collection, annual reports, other public data	
- Customer, service company and industrial service business questionnaires	
- In-depth interviews of service companies and customers	

# Content

6.	Results of empirical studies	18
	- Customer survey	19
	- Industrial service business survey	24
	- Industrial service company survey	31
	- Quantitative analysis by financial and annual reports	
	- Qualitative analysis by questionnaires and in-depth interviews	
7.	Discussions and conclusions	42
	7.1 Assessments of research results	
	Quantitative analysis	
	Qualitative analysis	
	7.2 Assessments of research questions	45
	7.3 Sustainable Competitive Advantage and how?	48
8.	Remarks and observations	49
9.	Future research	50
	References	51
	Appendices	52

# 1. Introduction

The Industrial service business in Finland has developed and grown in last 20 years remarkably because of following main reasons:

- Joining to EU bring new regulation requirements – separation network business from other electrical utility businesses as energy sales, production and related services – each of them concentrated to their own core businesses. Respective changes occurred in telecom utilities too.
- Most of utilities outsourced service functions to the their fully or partly owned service company and opened gradually their service purchasing to other market players too
- Business drivers in these different businesses (network asset management, energy sales, power production, industrial services) are very much different in operational, financial as well as management point of views

**Based on this transformation a new and rather larger service industry has born during last 20 years, annual turn over few billion euros and many new service companies have been founded.**

The new service business model and industry transformation have dramatically changed the relative companies' structures and competence needs. These service companies have carried out and met many changes during this transformation – start up phase-, growth-, consolidation- and lower service price challenges, many new domestic and international players, lower profits, needs of flexible resources etc.

No theoretical and university level researches are available of the industrial service business transformation and how to create sustainable competitive advantages to service providers.

## 2. Problem formulation and research objectives

1(4)

The study concentrates in the service business transformation in selected utility and process industries, when they have outsourced their service functions. These industries are:

- Electrical and telecom utilities, outsourcing of networks construction and maintenance services
- Process industry, outsourcing of Industrial Operation and Maintenance (O&M) services

The aim of this study:

- to evaluate both **service companies`** (service providers) and **customers`** (buyers, outsourcers, utilities) perspectives on the sustainable competitive advantages in service business after outsourcings and
- to find a scientific framework of a developing of the sustainable competitive advantage and success enablers in industrial service business

## 2. Problem formulation and research objectives

2(4)

### Key Data comparisons of case study companies:

#### Customer - Electrical network company

- Revenues and personnel stabile
- Revenues/person big, 1.300-500t€/person
- EBITDA 30-60%
- Balance sheet big/strong - weak

#### Service company

- Revenues and personnel up – down, flexibility needed
- Revenues/person small av. 170t€/person
- EBITDA 0-10%
- Balance sheet – weak, small

Conclusion: Business drivers totally different

**Can you find win-win position - how?**

## 2. Problem formulation and research objectives 3(4)

**In this research we are also interested, what and how different service business changes and developments have influenced to it such as:**

- What have been original objectives and how they have changed later?
- Can we create win-win position jointly with customers and service companies and how?
- What competence development plans and actions have been done?
- Authorities' roles
- Ownership changes
- Internet of things (IoT) and digitalisation
- Service Company as the part of the Energy group – views

## 2. Problem formulation and research objectives 4(4)

**Following items, views and challenges are rather commonly discussed inside this industry:**

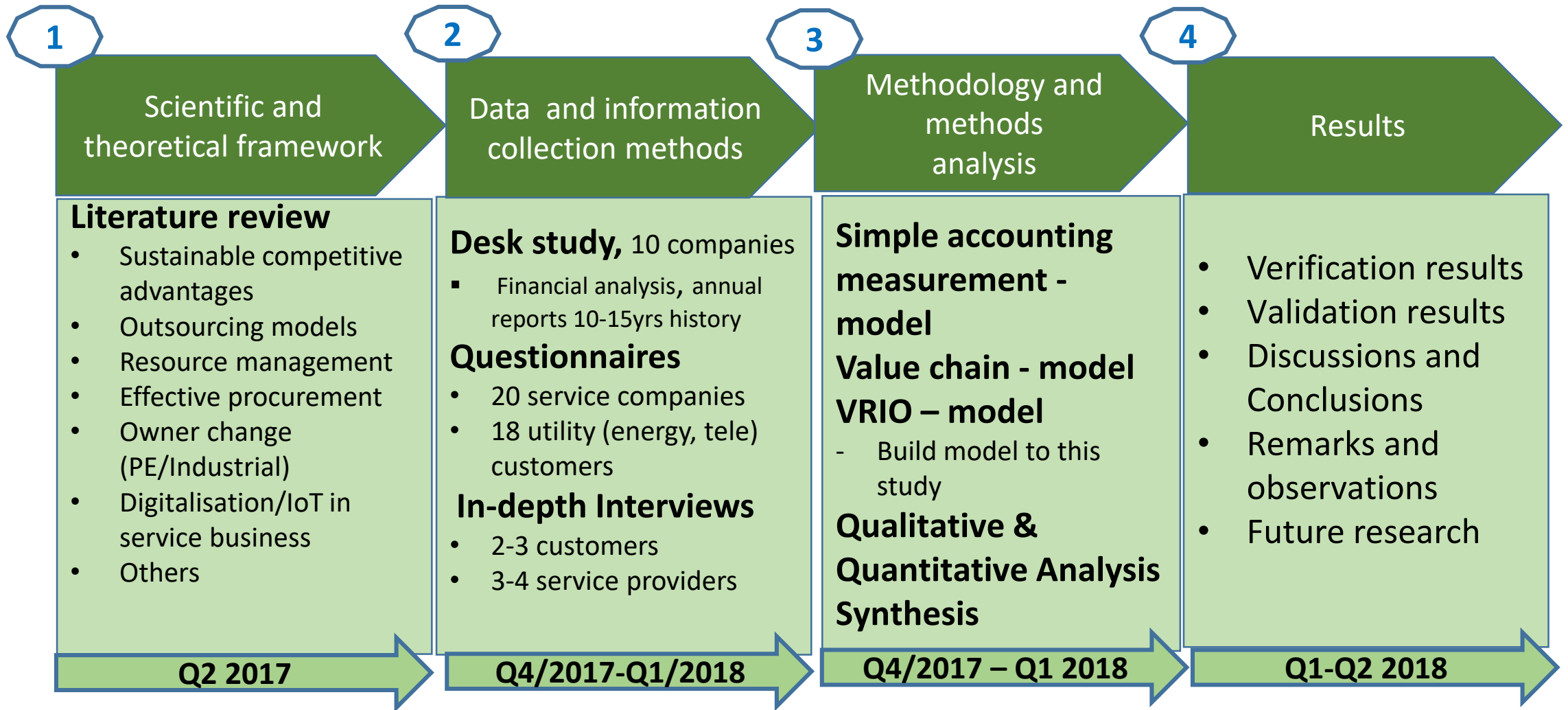
- No clear strategy and business model used when transforming the “customer – service company” - business model
- Customers’/buyers’ power is very strong and service companies have to approve and live with these challenges
- Competitive advantage views were not in high managerial priority - short term targets, if any and not sustainable
- No new or very few business models were developed during outsourcing services and afterwards
- Not systematically created new business models, products and proposals to customers
- Service companies’ differentiation plans and actions from competitors are not in high priority
- Key success tools of Service Company are:
  - Efficient work flow management
  - Flexible work force
  - Customer proximity and excellency
  - “Light” balance sheet

These items have also studied and answers will be given in the survey.



# 3. Research strategy

1(7)



# Definitions of Competitiveness

2(7)

Edmonds (2000):

For a firm, competitiveness is the ability to produce the right goods and services of the right quality, at the right price, at the right time. It means meeting customers' needs more efficiently and more effectively than other firms do.

Feuer&Chaharbaghi (1994):

Competitiveness is constantly changing feature, and therefore presently a competitive firm may not be competitive in five years' time. The best description for competitiveness could be **the firm's ability to get customers to choose just the company's products instead of competing products.**

**To ensure firm's future competitiveness, firms must also be competitive on their stakeholders' point of view as the firm's objectives and financing are strongly based on the company's attractiveness in the eyes of the stakeholders**

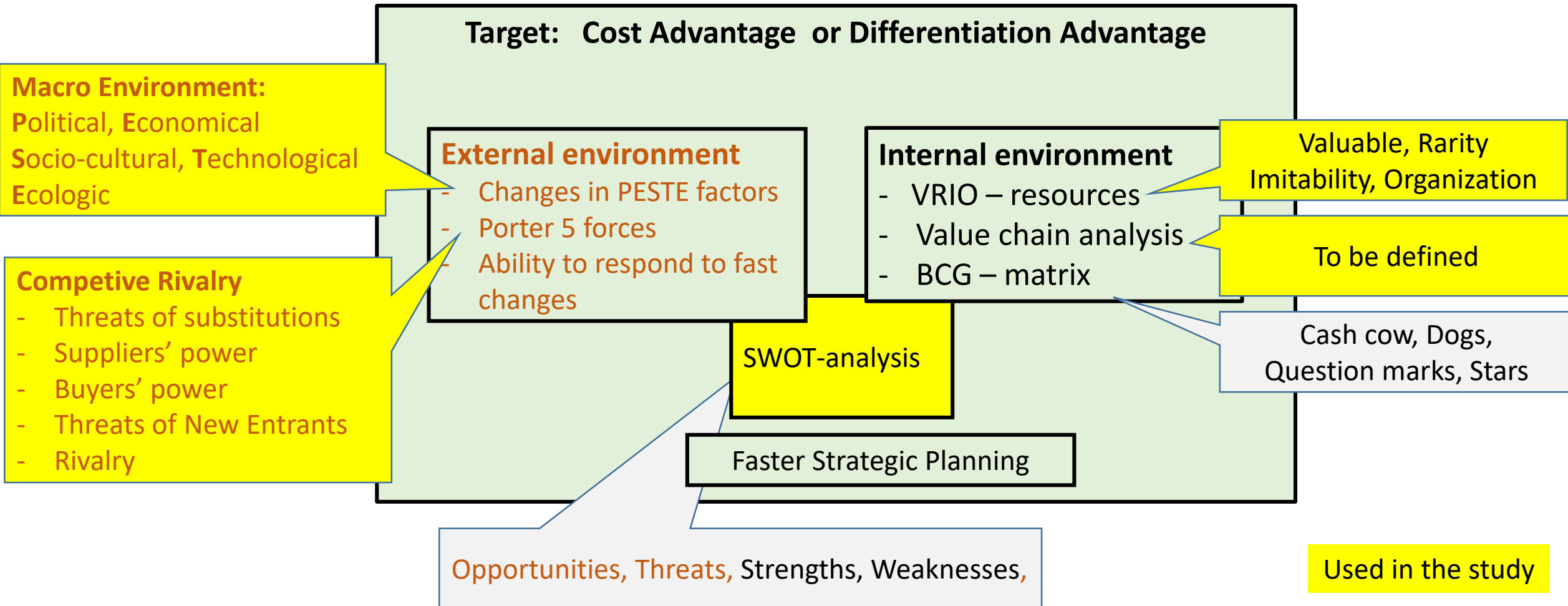
Porter (1985):

You have competitive advantage, if your profitability is sustainably higher than that of your rivals – to understand whether that advantage comes from higher prices, lower costs or combination of both.

# 3. Research strategy

3(7)

## Sustainable Competitive Advantage business analysis methods



## How to Identify VRIO resources?

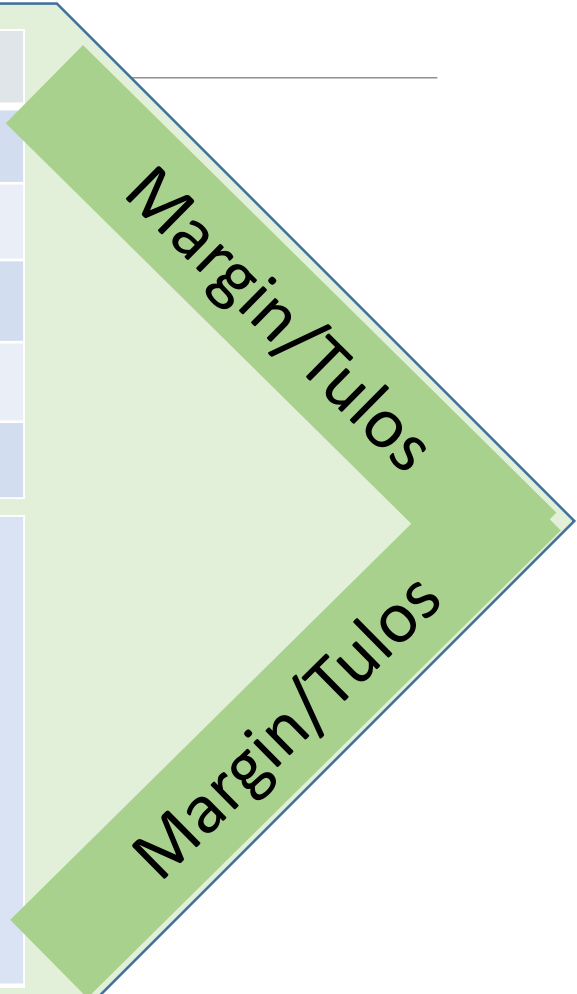
Step 1	Identify VRIO resources	Cost and differentiation advantages VRIO questions, Value chain, SWOT
Step 2	Find out, if your company is organized to exploit these resources	Is your strategy effective, effective motivation and reward system, do you have the excellent mng and control systems
Step 3	Protect your resources	By all possible means, top mng has to be aware of such VRIO resources, which can lower the costs ad/or differentiate products or services. Ideas how to make it more costly to imitate?
Step 4	Constantly review VRIO resources and capabilities	The value of resources changes over the time – review is needed constantly

# 3. Research strategy

5(7)

## Value Chain - Arvoketjuanalyysi

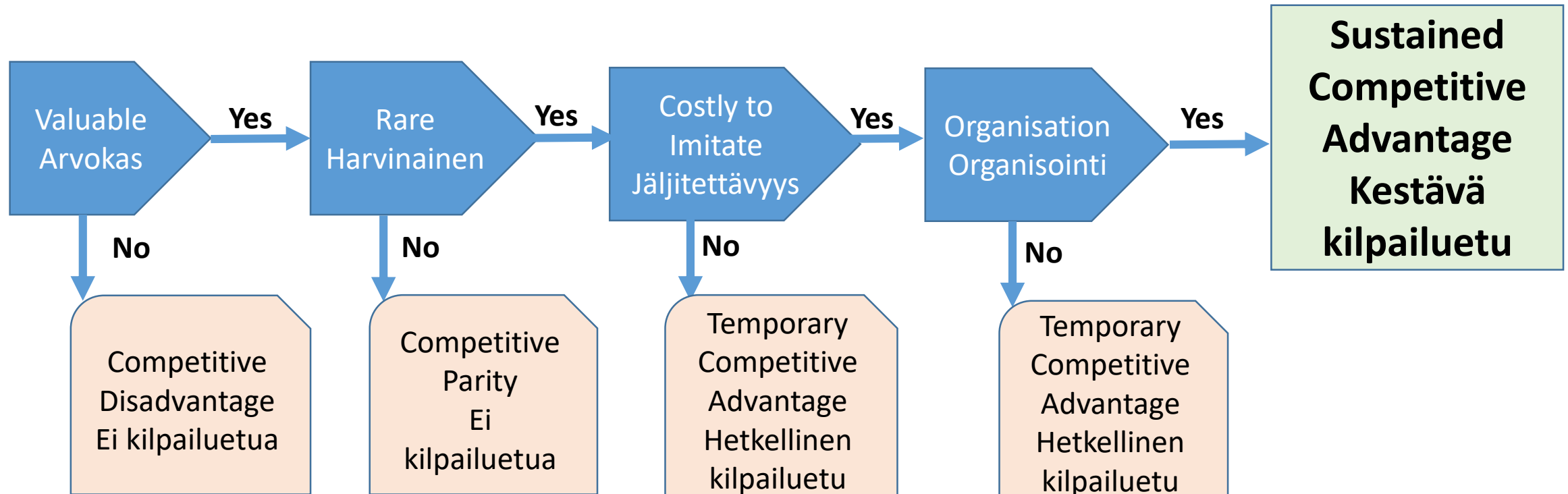
Example



Owners and finanacial structure/Omistajat, rahoitusfakenne
Group structure/Kopnsernirakenna
HR-management/incentives, contracts/HR johtaminen, sopimukset
Technology/Teknologia
Procurement/Hankintatoimi
PR/Brand/Maine, yrityskuva

Marketing/ Markkinointi Sales/ Myynti	Engineering/ Suunnittelu	Construction/ Rakentaminen Project mng/ Projektinjohto Work force mng/Resurssien ohjaus	Logistics/ Logistiikka Subcontracting/ Alihankkijat	O&M/ Käyttö ja kunnossapito
--	-----------------------------	---	--	-----------------------------------

## VRIO framework/VRIO työkalu



# VRIO – resources and model

	Question of	Description	Functions
<b>V</b>	Value	Is the resource or capability to understand business opportunities and threats – exploit or mitigate	Technical changes Demographic changes Cultural changes Economic climate Specific international events Legal or political condition
<b>R</b>	Rarity	Absolutely unic resource or capability	Short in time and persistence over time First-mover advantage
<b>I</b>	Imitability	Innovative companies can gain long-term competitive advantage. Costly to imitate	Patents, social complexity, unic historical conditions, causal ambiguity
<b>O</b>	Organization	Organized to Capture Value, how to organize	Reporting structure, mng control system, compensation policy, processes, culture

## 4. Research questions

- Question 1:** How have industrial service companies performed during the past 10 years based on financial data?
- Question 2:** What have impacted on the performance of each company during the past 10 years based on publicly available data?
- Question 3:** What are the means and tools to create sustainable competitive advantages and enablers in industrial service business?
- Question 4:** Is there a conflict in sustainable business targets between service companies and customers (service users)?
- Question 5:** Can you find win-win position both to service companies' and their customers' businesses and how?



# 5. Data and information collection methods

## Performance and impact analysis 2006-2016

- Financial data, annual reports and other public data collection of 10 industrial service companies

**Customer survey**, > 70% of electrical network customers, TO 850M€, 800 employees, 35% telecom network customers

- Questionnaires to 15 electrical and 3 telecom network companies, 3 individuals (Energy Industry, Energy Authority, a consultant), totally 25 answerers
- In-depth interviews, 3 electrical utilities

## Industrial Service Business survey

- Questionnaires to 18 industrial service companies, 4 individuals (Finnish Energy, consulting companies)

**Industrial Service Company survey**, totally revenues 1.500milj€, 8.600 employees, >70% of the industry

- Questionnaires to 19 service companies (electrical, telecom, district heating, industry, ICT), 18 answers
- In-depth interviews, 4 services companies (electrical, telecom, district heating, industry, ICT services)

# 6. Results of empirical studies

6.1 Customer survey

6.2 Industrial service business survey

6.3 Industrial service company survey

- Financial analysis, annual and other public reports
- Functional analysis by questionnaires and deep interviews

# 6.1 Customer survey

**Target:** By customer questionnaires and deep interviews have surveyed Industrial Service Business development after yr 2000 and in future

## Questionnaires, total number of repliers 22

- 14 electrical network utilities, (more than 70% of customers), 14 company replies by 17 CEOs/executive directors
- 3 teleoperators, 2 answers (1 big, one medium size), 4 persons
- 3 individuals presenting Energy authority, Finnish Energy, consultant companies
- Selected Customer electrical network companies, key data (2015)
  - total revenues 850 milj.€ (13 electrical distribution utilities)
  - total personnel 800 (13 electrical distribution utilities)
  - Revenues/person 1milj.€
  - EBITDA 30-60%
  - Profit 25%
- Outsourcings 1995-2017, set by step, network construction/maintenance, all outsourced
  - in the beginning (11/14) to fully or partly owned service company
  - after 5 yrs to 2-5 service providers, after 10 yrs to 3-30 service companies

**In-depth interviews. 3 network companies** (1 large, 1 country side, 1 regional city area company)

## 6.1 Customer Survey results (Questionnaires, Interviews)

Service outsourcing created remarkable and immediate efficiency improvement/cost cut, in 5-10yrs 20 – 50% in all companies – in future the market works – price levels still lowering. See point 6.1.1

Customers, network companies are very satisfied to outsourcings - improved (from 2,5/5 to 4/5).

See point 6.1.2

Larger service packages to service providers in future – new business models are under an interest too /alliance, networking – digitalisation in core enabler  
See point 6.1.3

Created and developed rather well operating service market – many competitors.  
Authorities in key role – created efficiency - not many claims against them. See appendix 6.1.4

Most important evaluation criteria to service providers are price (80-90%), quality, competence, safety, reliability but local, Finnish, solvency, language are minor important.

See appendix 6.1.5

Network companies do not see remarkable risks in service providers – the market works.

See appendix 6.1.6

Service companies part of Energy group – restricts service market development – both in customer and service providers side – clearly.

See appendix 6.1.7

**Conclusion: Rather well operating service market created in electrical (and telecom) network business in 15 yrs.**

## 6.1.1 Outsourcing targets and achievements

### Targets:

- Cost cut (10/17)
- Quality (4/17)

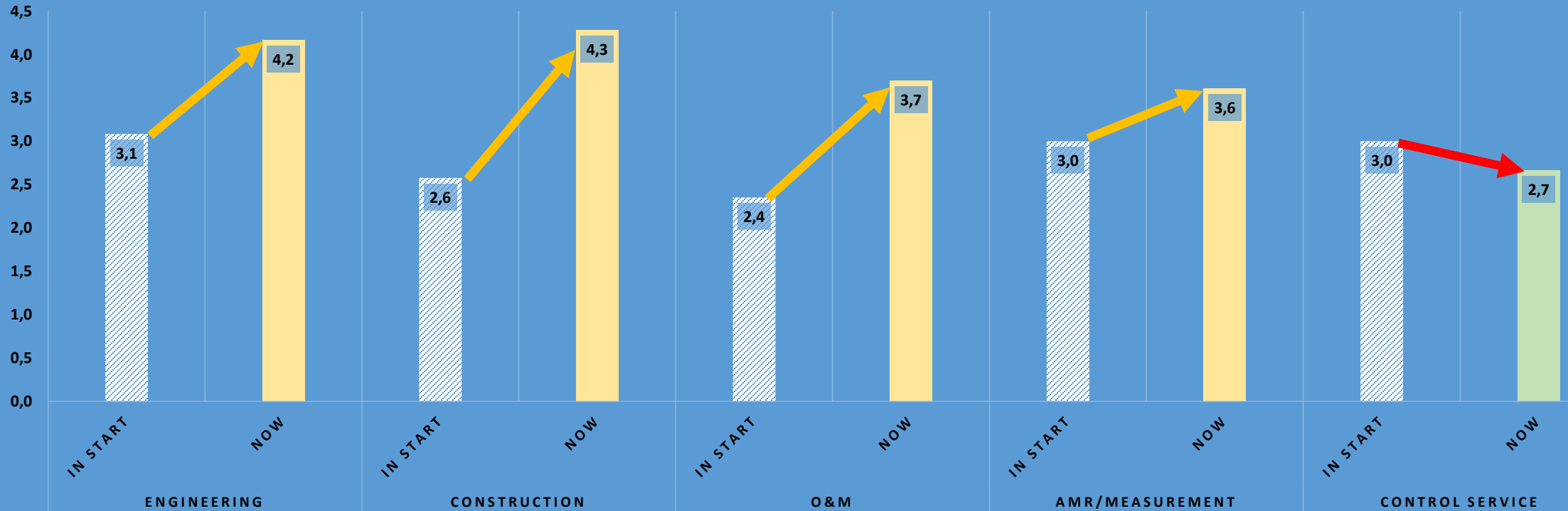
### Achievements:

- After 1. year cost savings 5-20%
- After 5-10 yrs cost savings 20 – 40%
- After 10 yrs costs do not increase or lowered still 5-10%

**Conclusion : Remarkable and immediate efficiency improvement/cost cut, in 5-10yrs 20 – 50% in all companies, expected to lower in future too**

**Comments:** Fixed cost to removable, reach regulator's target level, create market players and service market, efficiency to investments

**6.1.2 SATISFACTION WITH OUTSOURCING**  
**13 ANSWERS (11 ELECTRIC, 2 TELE)**  
**5=VERY SATISFIED 3=NORMAL 1=UNSATISFIED**



**Conclusion: Network companies very satisfied to outsourcing – improved but not new services developed**

**Comments: No alternatives any more, many service providers, competition works, bad quality in AMR**

## 6.1.3. Future service models and needs

Question	Yes	No	Comments
Outsourced services increase (14)	15	0	
Service contract length get longer (15)	10	6	
Bigger service packages (14)	15	2	In future less unit prices, more asset management roles
More networking service models (12)	15	0	
Financial packages included (15)	8	7	Today not available, regulation model guarantee funding
Life cycle solutions/model (14)	10	4	
Alliance model (12)	8	5	
IoT/more digitalization (15)	16	0	Creates opportunities, Data hub will change grid operators
Consolidation of network companies (14)	9	4	Regulation do not support this, operative co-operation, efficiency, competence requirements, data hub can drive consolidation.

**Conclusion:** More business opportunities to service companies, bigger service packages, digitalization, new business models, more networking DSOs concentrate to asset management/strategic planning

## 6.2 Industrial Service Business Survey

**Target:** By questionnaires have been surveyed Industrial Service Business development after yr 2000 and in future

- Questionnaires to 18 industrial service companies, 18 answers, 17 CEOs/exc. Directors, 1 board member
- 4 individuals presenting Finnish Energy and consultant companies
- Service Business Outsourcings 1995-2017, step by step



## 6.2 Industrial Service Business Survey results

Industry believes in future to the growth, bigger service packages, networking, digi/IoT, consolidation, internationalisation – market is open but tight, low margins – more openness and flexibility needed.  
See point 6.2.1

Service market created and it works, new players, hard competition, consolidations, new service needs, too many players, buyers' power too strong, more openness to the market – but market works – no dramatical needs to change  
See point 6.2.2 and appendix 6.2.3

By the cost efficiency, differentiation, new innovative services, the cost efficiency and the customer proximity you can create sustainable competitive advantages.  
See point 6.2.3

By taking care of critical competences, customer survey and work safety you will keep the sustainable competence.  
See point 6.2.4

Critical success enablers are continuous business development, engaging management/personnel, profitability – not a growth, not learning from competitors, not internationalisation.  
See appendix 6.2.5

Employers' change of a workforce happens often – but have not dramatical influenced to companies.  
See appendix 6.2.6

Service company as a part of the energy group is clearly disadvantage to the service industry market.  
See appendix 6.2.7

Most recommended service company owners are management, PE and public – municipalities less favourable.  
See appendix 6.2.8

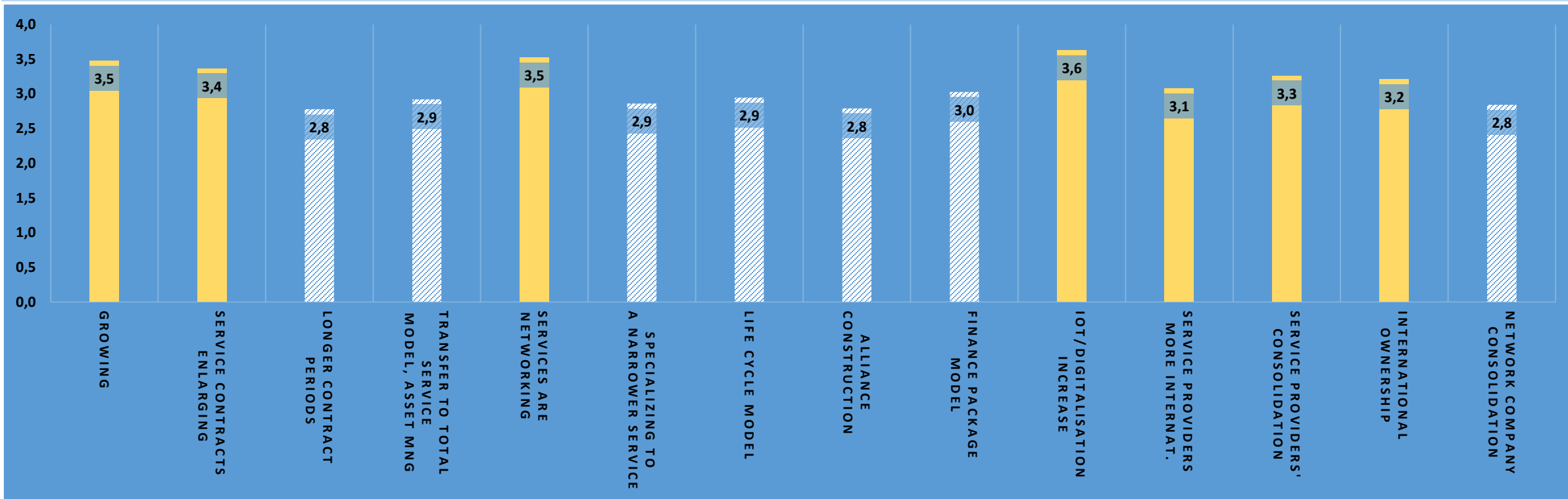
**Conclusion:** Market created and developed; market growth, bigger contracts in future; profitability and competition challenges continue

## 6.2.1 Industrial Service Business Market development during yrs 2000 - 2017

Before yr 2010	Yrs 2010-2014	Yrs 2015 - 2017	Conclusions
Separation networks to own company	Tight competition	Hard competition More new players	<ul style="list-style-type: none"> <li>➤ Market created and developed</li> <li>➤ Remarkable growth in market volumes</li> <li>➤ Bigger contracts/service packages</li> <li>➤ Profitability challenge continuously</li> <li>➤ Hard competition continuously</li> </ul>
Oursourcings	New players	Growth in services	
Service market developing	Profitability challenge	Growth in digitalisation	
Competition started	Weather proof networks – new investments	Consolidation, internationalisation	
International competition	Bigger volumes – more efficiency	Bigger contract packages	
Growth	Industrial outsourcings	Customers' ownership changes	
Stabile		Cash flow/profitability more important	

## 6.2.1 Industrial service business development in coming 3-5 yrs

Scale: 4-fully agree, 3-agree, 1-fully disagree

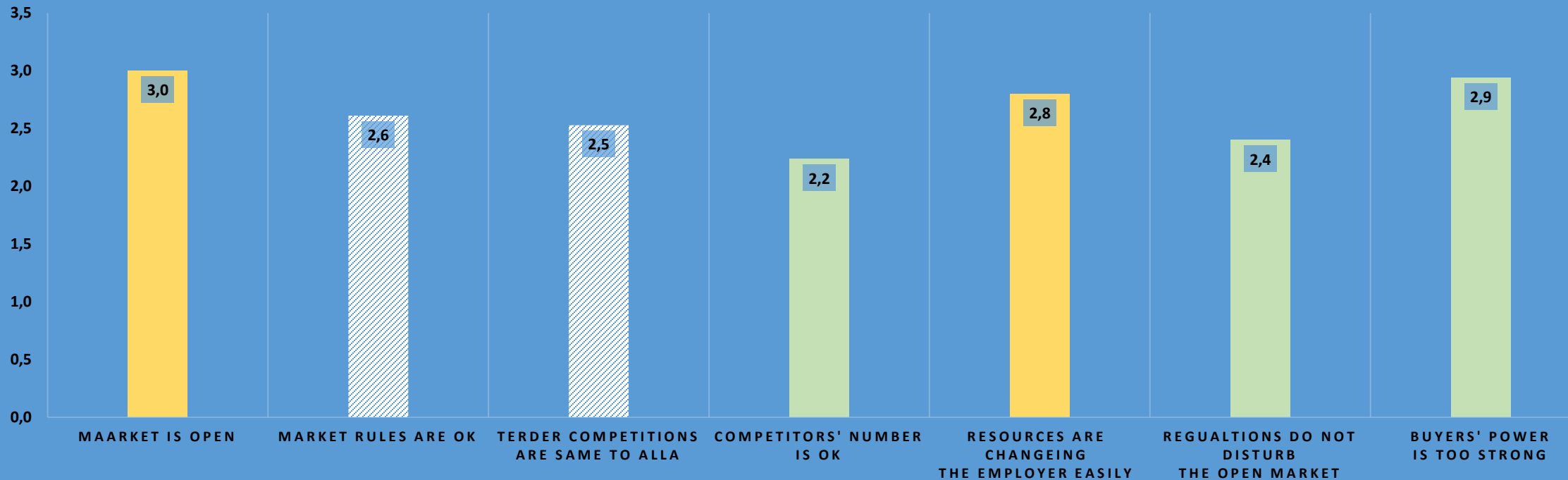


**Conclusion:** Industry believes the growth, bigger packages, networking, digitalisation, consolidation, internationalisation, some new business models

Comments: small deviations

## 6.2.2 Industrial service business and how it works?

Scale: 4-fully agree, 3-agree, 1-fully disagree

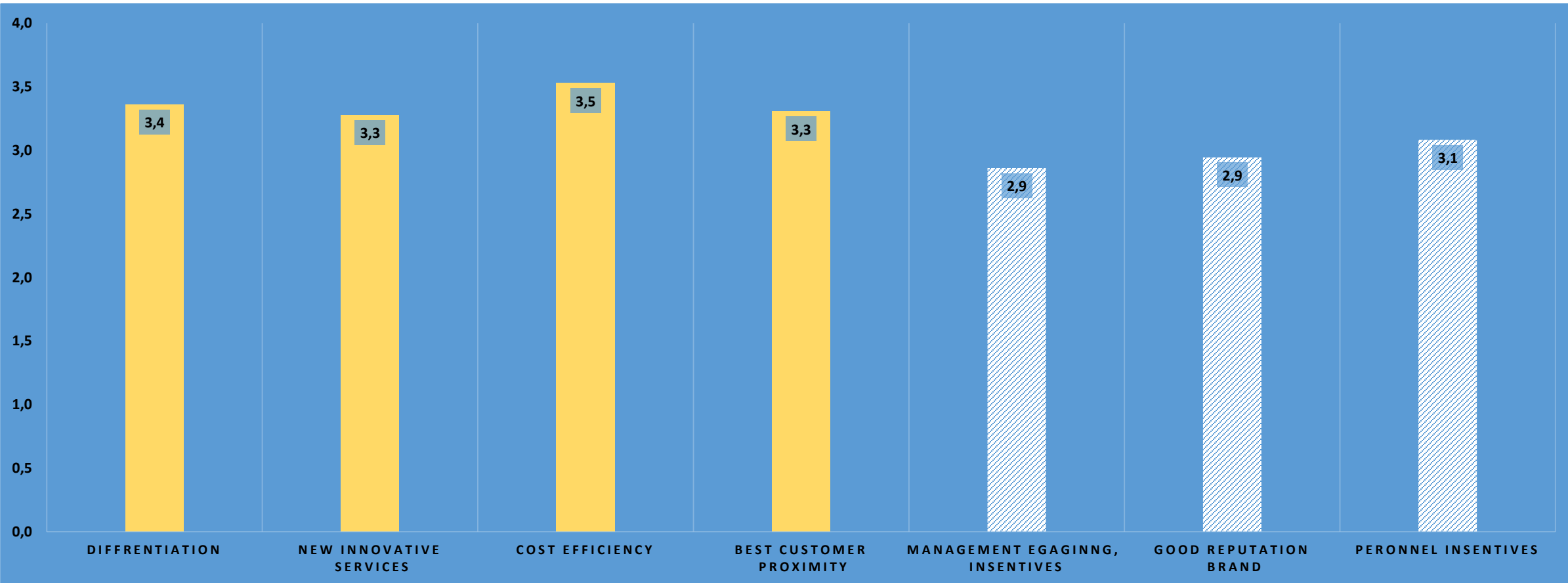


**Conclusion:** Market is open, too many competitors, buyers' power too strong

**Comments:** Big deviating opinions on regulators influence (1,02) to the market as well as buyers' power (1,06)

## 6.2.3 What creates sustainable competitive advantage in Industrial Service Company

Scale: 4-fully agree, 3-agree, 1-fully disagree

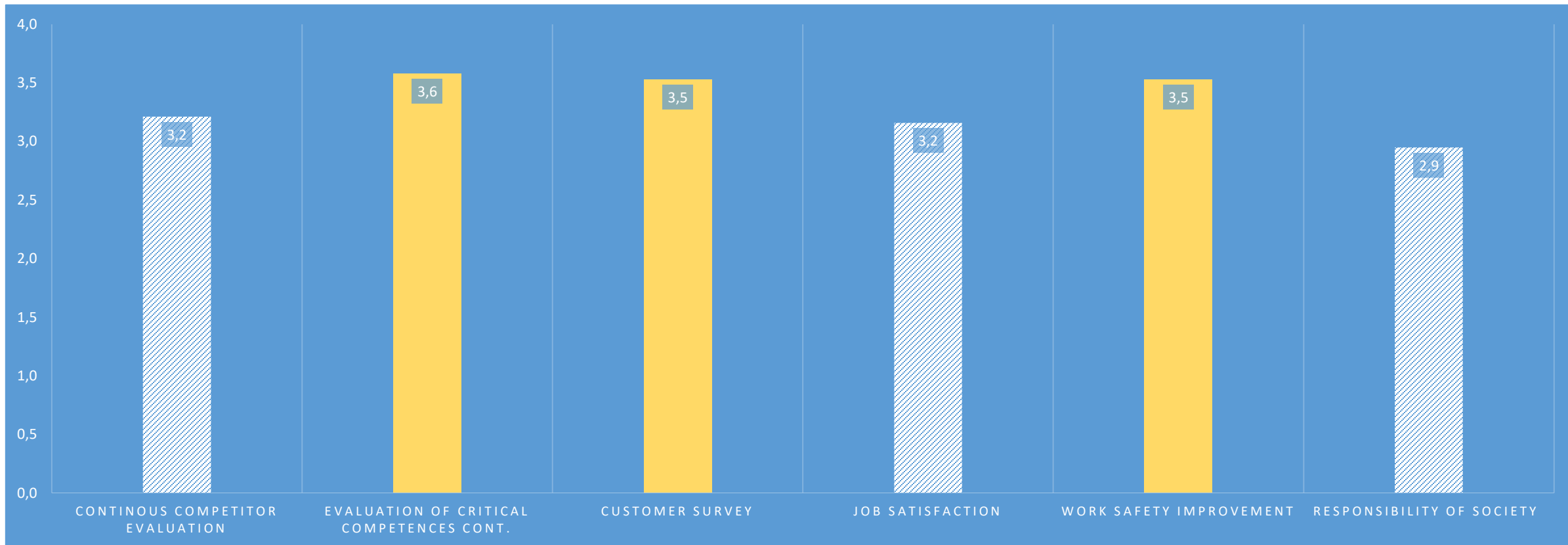


**Conclusion:** Cost efficiency, differentiation, new innovative services, customer proximity best tools

**Comments:** 1 service provider did not believe in new innovative services, reputation and customer proximity

## 6.2.4 How to take care of Sustainable Competitiveness in Industrial Service company

Scale: 4-fully agree, 3-agree, 1-fully disagree



**Conclusion:** Evaluation of critical competences, customer survey, work safety most important, responsibility of society lowest

**Comments:** Not big difference between these attributes, deviation of answers small

## 6.3 Industrial Service Company Survey

**Target:** By Financial and annual report analysis and Industrial Service company questionnaires and interviews have been surveyed their performances, experiences and future views on Industrial Service business development after yr 2000 and future trends as well as their customer behaviours

### 6.3.1 Financial and annual report analysis

- Totally 10 Industrial Service companies were analysed financially during yrs 2006-2016
- Companies were grouped to “International”, 3 pcs and “Finnish” companies, 7 pcs
- From annual reports and other public information were studied to find out the reasons to financial figure changes, an example of the company remarks and analysis has presented in the appendix 6.3.1.
- In analysis “Simple Accounting Measurement” used, size/growth/profitability (EBITDA)

### 6.3.2 Functional analysis by questionnaires and deep interviews

- Questionnaires to 19 industrial service companies, 18 answers, 17 CEOs/exc. Directors, 1 board member and to 4 individuals presenting Energy Industry and consultant companies
- In-depth interviews with 4 Industrial Service companies, 3 CEOs and 1 Executive director; one international and one national multi service company, one regional and one “city regional” mainly electrical network service company

## 6.3.1 Financial and annual report analysis of service companies yrs 2006-2016

The industrial service business has grown, but the growth rate has been decreasing – flat during last 5 yrs. The average annual change in revenue: sample 5,6 %; international 9,6 %; Finnish 4,9 %.

See point 6.3.1.1 and appendix 6.3.1.3

The industrial service business has grown due to 1) outsourcing of services increased; 2) mergers and acquisition; 3) customers investments; 4) wider offerings. The growth rate decreased due to 1) fierce price competition; 2) divestments; 3) less mergers and acquisitions.

The industrial service business has been profitable (without 2012) but fluctuating. The profitability decreased in international companies and in Finnish companies it has been stable. The average annual EBITDA-%: sample 4,9 %; international 3,5 %; Finnish 5,6 %. See point 6.3.1.2

The industrial service business profitability has decreased and fluctuated due to 1) fierce price competition; 2) new entrants; 3) buyers strong bargaining power; 4) poor project management; 5) raw material prices.

Macro environment impacts: 1) EU directives; 2) economic shocks; 3) raw material prices; 4) technological development; 5) severe weather conditions → weather proof network → underground cabling.

Industry environment impacts: 1) supplier bankruptcy and price changes; 2) substitute products; 3) fierce price competition; 4) new entrants; 5) buyer's strong bargaining power.

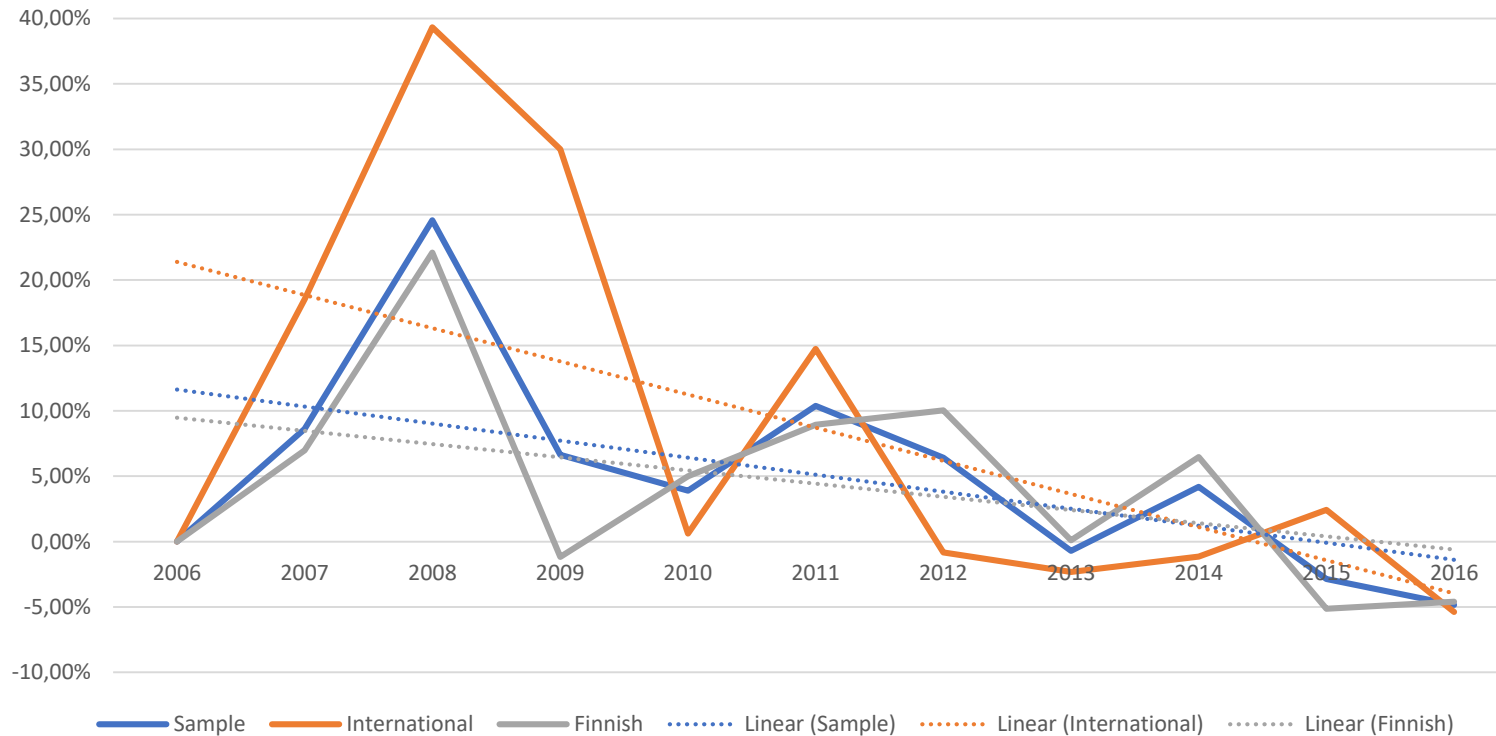
Firm internal environment impacts: 1) mergers, acquisitions and divestments; 2) integration; 3) employees; 4) negative cash flow; 5) project management; 6) procurement; 7) continuous development; 8) balance of portfolio offering.

**Conclusion :** Studied service companies have lost their growth and profitability decreased → increased competition and new competitors are main reasons.

Ref.1



## 6.3.1.1 Industrial Service Company survey results – Growth yrs 2006-2016



### AVERAGE ANNUAL CHANGE IN REVENUE

SAMPLE

**5,6%**

INTERNATIONAL

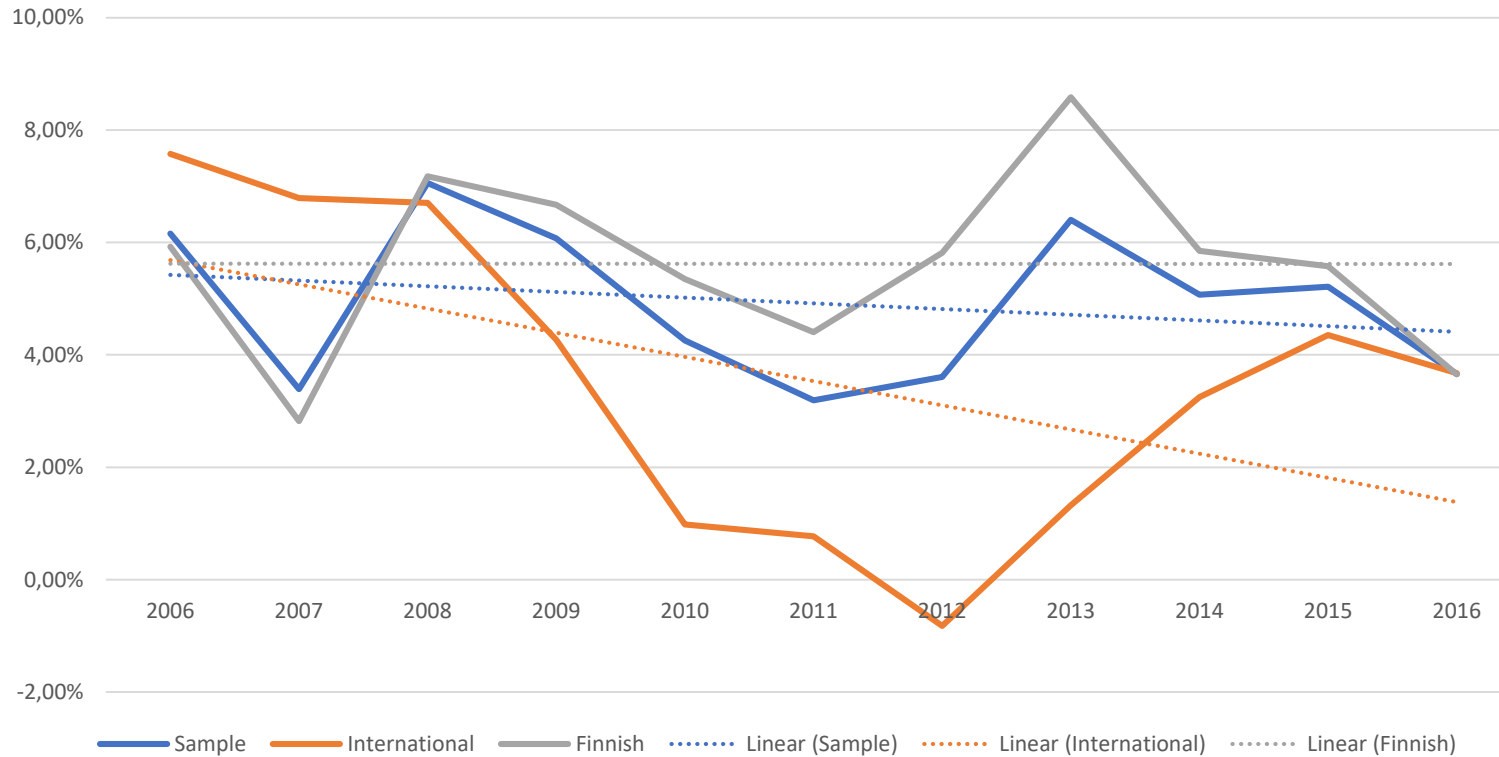
**9,6%**

FINNISH

**4,9%**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Amount of companies	0	7	7	8	8	8	9	9	10	10	10
Sample	-	8,63 %	24,57 %	6,63 %	3,90 %	10,39 %	6,42 %	-0,70 %	4,19 %	-2,86 %	-4,83 %
International	-	18,52 %	39,33 %	30,01 %	0,62 %	14,75 %	-0,83 %	-2,32 %	-1,15 %	2,43 %	-5,38 %
Finnish	-	6,98 %	22,11 %	-1,17 %	4,99 %	8,94 %	10,05 %	0,11 %	6,48 %	-5,13 %	-4,60 %

## 6.3.1.2 Industrial Service Company survey results – Profitability yrs 2006-2016



**AVERAGE ANNUAL  
EBITDA-%**

SAMPLE

**4,9%**

INTERNATIONAL

**3,5%**

FINNISH

**5,6%**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Amount of companies</b>	7	7	8	8	8	9	9	10	10	10	10
<b>Sample</b>	6,16 %	3,39 %	7,06 %	6,07 %	4,26 %	3,19 %	3,60 %	6,40 %	5,07 %	5,21 %	3,66 %
<b>International</b>	7,58 %	6,79 %	6,70 %	4,27 %	0,98 %	0,77 %	-0,82 %	1,32 %	3,25 %	4,35 %	3,67 %
<b>Finnish</b>	5,92 %	2,82 %	7,17 %	6,67 %	5,35 %	4,40 %	5,82 %	8,58 %	5,85 %	5,58 %	3,65 %

## 6.3.2 Industrial Service Company Survey – Company collection

- Selected Service companies founded 1996 -2016
- Studied companies key data, summary

Sales/millions	Number of companies	Personnel	Number of companies	Services	Number of companies	Ownership	Number of companies
<b>Total 1.500</b>	<b>Total 20</b>	<b>Total 8600</b>	<b>Total 20</b>	Electr./tele	6	PE/mng	7
➤ >100	5	>1000	3	Electr./tele/DH	4	Public	2
➤ 50-100	3	500-1000	3	El./tele/Ind/ICT	1	2-3 EnGr	4
➤ 20-50	4	200-500	2	Electrical	5	1 EnGr	3
➤ 10-20	4	100-200	4	Industry	3	IndGr	2
➤ <10	4	<100	8	ICT	1	Mng	1

PE=private equity, EnGr=Energy Group, IndGr=Industry Group, Mng=Management

**Conclusion:** Constellation of the surveyed service companies is very versatile, diverse and give a wide window to industrial service companies and the industry

## 6.3.2 Functional analysis by questionnaires and deep interviews of service companies

Management is not satisfied on EBITDA development, but better to an efficiency and a competitiveness. Lay-off process works properly and is used widely – “work hour bank” too. See appendix 6.3.2.5

Service companies efficiency improvement has been 2-3%/yr, totally 10-30% in 10yrs, in future too.

See appendix 6.3.2.6

Strategy process is in use by all companies; the board and personnel is connected to this. Targets not achieved, mainly. Balance Score Card (BSC) system is used in all companies.

Market created. All has growth targets in Finland, also the growth expectations by new services and M&A.

See appendix 6.3.2.7

Project management; resource management, mng. systems and procurement are critical competences- unanimously. Owned installation resources distributed opinions. See appendix 6.3.2.8

SWOT, unit costs, customer surveys and developing competences are main tools to explore critical success factors – value chain, BCG-matrix and VRIO model not used.

See point 6.3.2.1

Profit review, contract audit with customer and tender audits most favourable tools to achieve competitive advantage – new service thinking not in high priority. See point 6.3.2.2

Taking care of key competences, profitability, customer proximity and new services are critical in developing competitiveness - not following competitors and not internationalization.

See point 6.3.2.3

Very, very low investments to the business and service development – totally <5M€/yr in 19 service companies.

See point 6.3.2.4

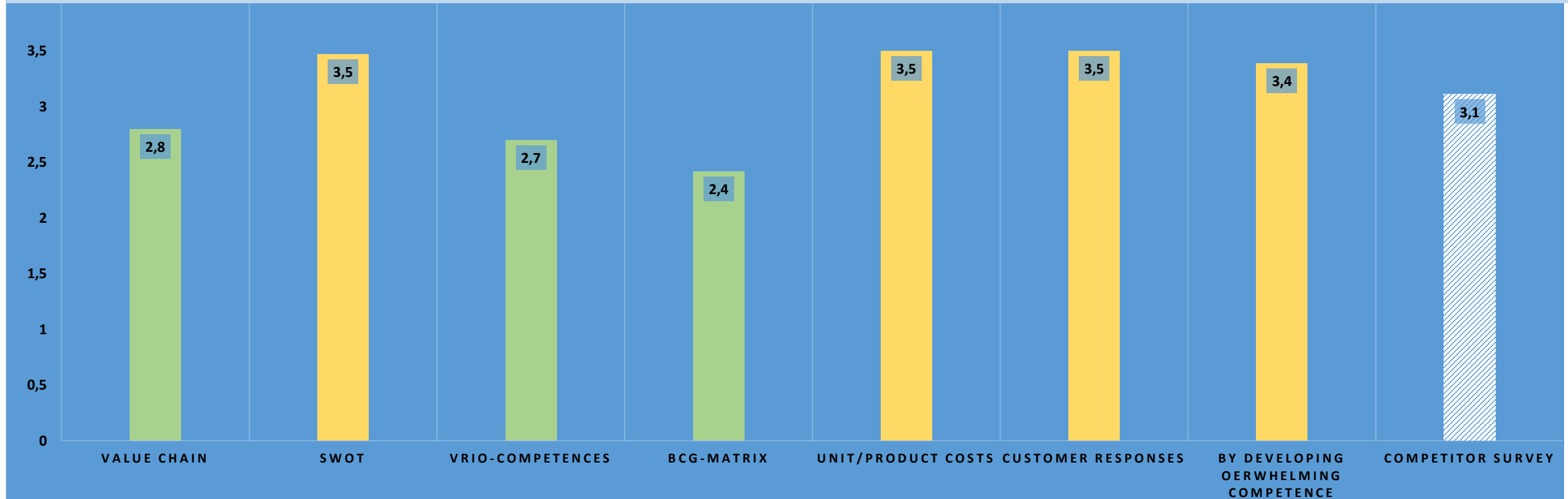
How to keep key resources are company positive reputation/ brand and incentive system unanimously, promotion, trainings too – not through more engaged work contracts. See appendix 6.3.2.9

**Conclusion:** Competitive advantage and systematic taking care of critical resources not in a high priority, limited new service development resources, no differentiation plans.

### 6.3.2.1 How to sort out and explore critical success factors in the service company

(18 answers)

Scale: 4-fully agree, 3-agree, 1-fully disagree



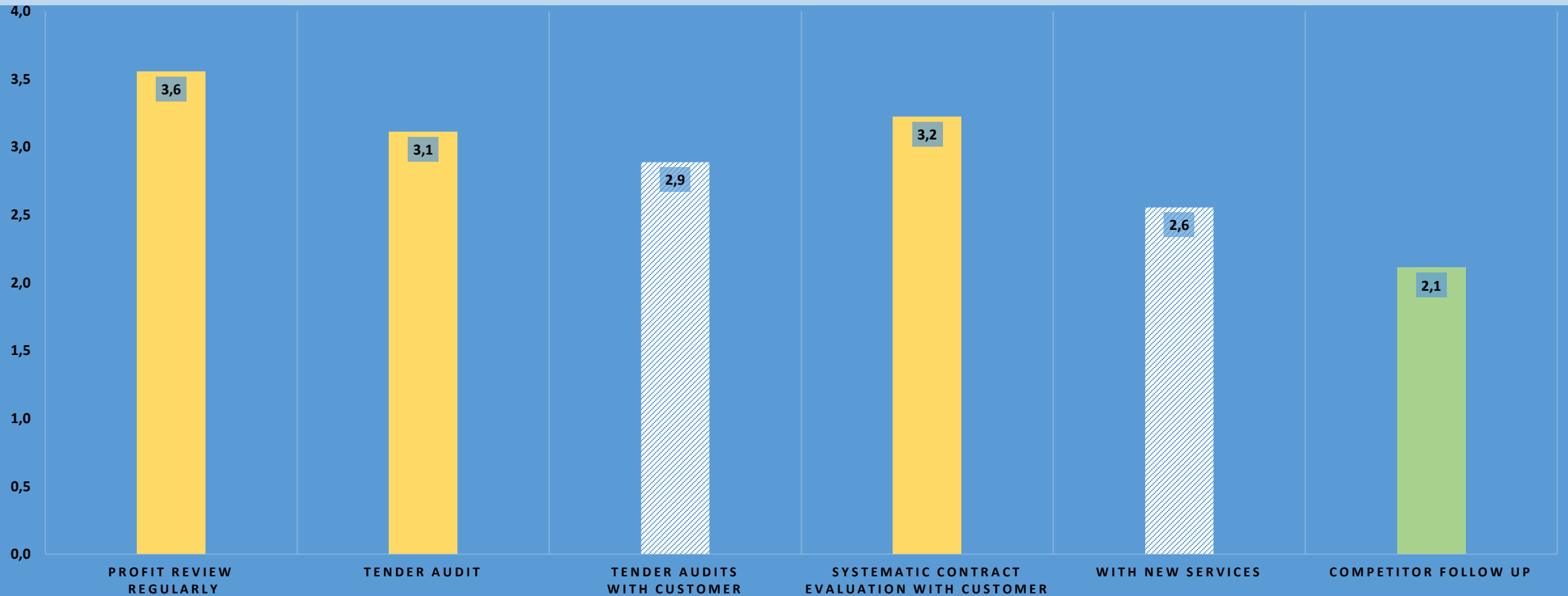
**Conclusion:** SWOT, unit costs, customer responses and by developing competences are main tools, value chain less

Value chain, BCG-matrix and VRIO model are not known so well

**Comments:** Very basic tools are used in sorting out critical success factors

## 6.3.2.2 Best tools and means to achieve competitive advantages (18 answers)

Scale: 4-fully agree, 3-agree, 1-fully disagree

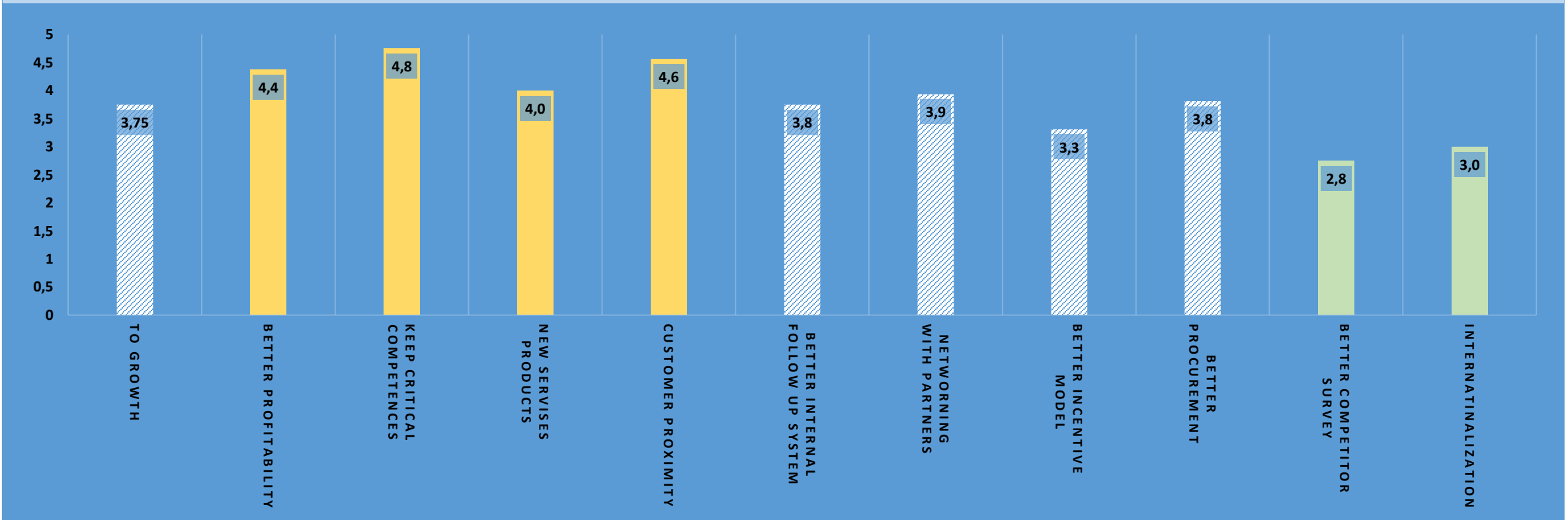


**Conclusion:** Profit review, contract audit with customer and tender audits most favourable, but not customer follow ups and not believe in the influence of new services

**Comments:** New service thinking is not in high priority

### 6.3.2.3 What are the future means to develop a sustainable competitiveness in your company (16 answers)

Scale: 5-very important, 4-important, 3-good, 2-minor effect, 1-no important



**Conclusion:** Taking care of key competences, profitability, customer proximity and new services are critical – not following competitors and not internationalization

**Comments:** What are the actions and tools to materialized these?

## 6.3.2.4 How companies have developed service competences (18 answers)

- Digitalization/IoT actions are active in many companies (5/18) – a lot of an efficiency improvement potential
- AMR related added value services, solar energy, work methods
- Customers are normally connected to new service development projects (14/18) – not too often – innovation incentive do not work
- Continuously operative process development tasks are on going (9/12)
  - IoT/digitalization, work force management, transparency in available data
- Public procurement rules limit develop alternative proposals
- Investments to new services very marginal in all companies, 0,1 – 1M€/yr (10 answers)
- Only few trade marks, none patents?

**Conclusion :** Companies have not seen motivation or resources to invest in business development

**Comments:** Is this the reason, why the service business has not developed – no service differentiation and bad cost efficiency. Do companies have business development capabilities and/or views?



## 7. Discussions and Conclusions

7.1 Assessments of research results  
Quantitative analysis

Qualitative analysis

7.2 Assessment of research questions

7.3 Sustainable Competitive Advantage and how?

# 7.1 Assessment of research results

Qualitative analysis	
Findings in nut shell	Remarks and Conclusions
Strategy process is widely used as well as BSC and monthly profit follow up systems – profitable growth targets	Targets (growth, profit) have not achieved – mostly.
New competitors have taken a market share in the growing market.	Has the older service companies' agility capabilities too slow to make needed efficiency actions?
Municipality owned service companies' growth have been very limited during 20 years with low profitability	Is it owners' strategy? The mother energy company has been the biggest customer.
Remarkable efficiency improvements in customers' services achieved – in service companies too but they are lower	Service prices and profits have lowered – profitability challenges to service companies, strong buyers' power still and will continue
Very limited resources and investments on service development and new services – mainly price competition in tenders	No differentiation, very limited business development – some ideas in utilizing more a digitalisation/IoT in new services

# 7.1 Assessment of research results

Quantitative analysis	
Findings in nut shell	Remarks and Conclusions
Customers are very satisfied with outsourcings.	No plans to insource respective services. More outsourcing and larger service packages will come. Customer more in land lord/asset owner roles.
Market created – many new competitors, international too.	Authorities (EV) have been in key role - the main driver – the open market will continue.
Most recommended owners of service companies are management, private equity and public, less municipal	Connections to municipal mother company restrict the market based business.
Few trademarks, none patents in service companies	New development investments very low.
Critical competences have not been systematically defined, followed, developed and taken care.	Resources are easily moving and leaving.
No systematic Competitive advantage business processes.	By using in business plan process simple accounting-, SWOT-, Value Chain- and VRIO-models can create sustainable Competitiveness.
Customer proximity not very deep, not known partners total value chains.	Much to do in creating more added value to partners – a value chain of the total process.

## 7.2 Assessments of research questions

1(3)

**Question 1:** How have industrial service companies performed during the past 10 years based on financial data?

- Most of the studied companies have grown but the growth rate has decreased although the market growth has been very high during last 5 years.
- The average annual change in revenue: sample 5,6 %; international 9,6 %; Finnish 4,9 %.
- Profitability of the companies has fluctuated and decreased.
- The average annual EBITDA-%: sample 4,9 %; international 3,5 %; Finnish 5,6 %.

**Question 2:** What have impacted on the performance of each company during the past 10 years based on publicly available data?

- Fierce price competition → mainly cost leadership, no differentiation strategies
- Customers have outsourced more services and increased investments – market growth.
- High amount of mergers, acquisitions and divestments.
- Many new entrants, project management, raw material prices.

## 7.2 Assessments of research questions

2(3)

**Question 3:** What are the means and tools to create sustainable competitive advantages and enablers in industrial service business?

- Cost efficiency, differentiation, new innovative services, business models are preferred tools.
- More new investments on new service models and products are needed.
- More openness, trust and transparency, total value chain of services.
- Analysing systematically core competences, develop and protect them, VRIO model proper tool for that.

**Question 4:** Is there a conflict in sustainable business targets between service companies and customers (service users)?

- In financial targets some conflict always based on market position, but to both profitability is critical – have to achieve.
- No conflict in operative and quality targets.
- Tendering processes too stiff – development needs.

## 7.2 Assessments of research questions

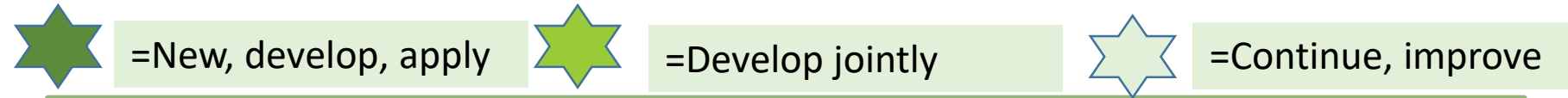
3(3)

**Question 5:** Can you find win-win position both to service companies' and their customers' businesses and how?

- Proximity, trust, openness, partnership
- Tendering process development mutually
- Procurement process development
- Total value chain understanding of both parties.

# 7.3 Sustainable Competitive Advantage in Industrial Service Company and how?

## Process chart



## 8. Other remarks and observations

1(3)

Enough liquidity/solvency resources by owners needed. Project guarantees, cash control.

Owners' changes have had minor influences to businesses  
More market thinking created.

Service companies joining to Energy Group is restricting service market development, still there is some captive market.

Disturbance Resource reservation system/contracts needs to discuss and improve customer-service companies' co-operation.

Innovation Incentive do not create a motivation to new service development.

In digitalisation/IoT big business waiting to improve processes and services but limited resources and investments.

Both customers and service companies are expecting more business consolidations.

Project and service business have different business models and drivers. Some service companies have selected where to concentrate. Can you make both?



# 9. Future research

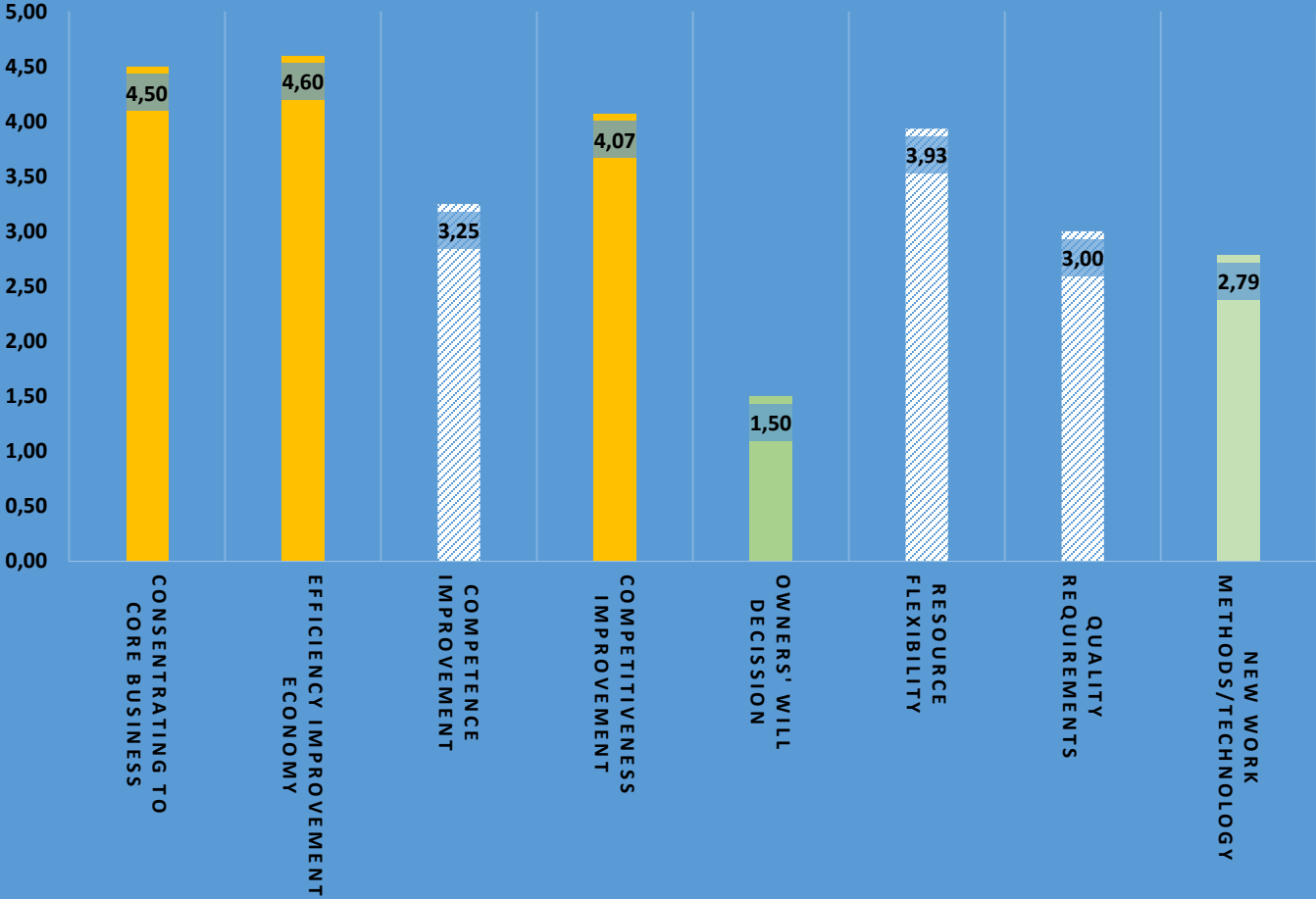
Following future research programs are proposed:

1. To build up the work tool/model/system to the sustainable competitive advantage in service business
2. Personnel participation and activation to the critical competence development
3. Promotion of digitalisation in industrial service business development
4. Total value chain development service provider – network customer – win-win target
5. Service innovation development in industrial service businesses– motivation, obstacles, promotion
6. In-depth research of project and service business drivers and differences.
7. Various owner groups' (municipal, private equity, public, management) strategic targets in the Industrial service business and invested company.

# 10. References

1. Balance Consulting/Valor Partners financial reports, annual reports, other public data of surveyed companies (10)
2. Barney J, 1991, Firm resources and sustained competitive advantage
3. Barney J, 2010, VIRO Framework in strategic management and competitive advantage
4. Edmonds T, 2000, Regional competitiveness & the role of the knowledge economy
5. Feurer R, Chaharbaghi K, 1994, Defining competitiveness: a holistic approach
6. Grant R, 2010 Contemporary strategy analysis
7. Henderson B, 1970, BCG/Boston – matrix – stars, cash cows, dogs, question marks
8. Humphrey A, 1960, SWOT analysis – strengths/weaknesses/opportunities/threats
9. Ikäheimo S, Laitinen E, Laitinen T, Puttonen V, 2011, Laskentatoimi ja rahoitus
10. Industrial service business survey – questionnaires (24), replies (24)
11. Industrial service company survey – questionnaires (19), replies (18), in-depth interviews (4)
12. Industrial service customer survey – questionnaires (21), replies (25), in-depth interviews (3)
13. Järventausta P, 2009, Ostopalvelujen käyttö verkkoliiketoiminnassa, TTY, LTY, VTT
14. Makkonen H, Olkkonen R, Partanen J, Tahvanainen K, 2012, Palvelusuhteiden ja verkostojen johtaminen jakeluverkkotoiminnassa, PAVE-hankkeen loppuraportti, LTY, TKK, TY
15. Porter ME, 1980, Competitive strategy
16. Porter ME, 1985, Competitive advantage: creating and sustaining superior performance
17. Porter ME, 2008, The five competitive forces that shape strategy
18. Seppälä R, 2018, pro gradu thesis, The performance analysis of an infrastructure service industry, Vaasa university
19. Walsh, Philip R. (2005). Dealing with the uncertainties of environmental change by adding scenario planning to the strategy reformulation equation

6.1.1 WHY OUTSOURCING – REASONS



Comments

- Strategic Drivers are different in asset owner and service provider businesses
- Strategy choice
- Concentrating to modern technology
- Industry foresight and structure has changed
- Regulation as the driver, more in future too, limits to regulated businesses

Conclusions: Concentrating to core, efficiency improvement, competitiveness improvement  
**Not owners will**, no to get new work methods/technology – very unanimous, small deviation.

## 6.1.4(a) How customer - service provider processes have developed

- Asset management is the core process, Grid value development regulates today
- New competences needed – training and learning
- Working by unit prices – service providers can manage their work routines
- International players have created new services
- Public procurement rules are regulating procurement processes
- Service contracts and terms are co-operation drivers between customer - service operator, not a partnership
- Market created and it works, many service providers

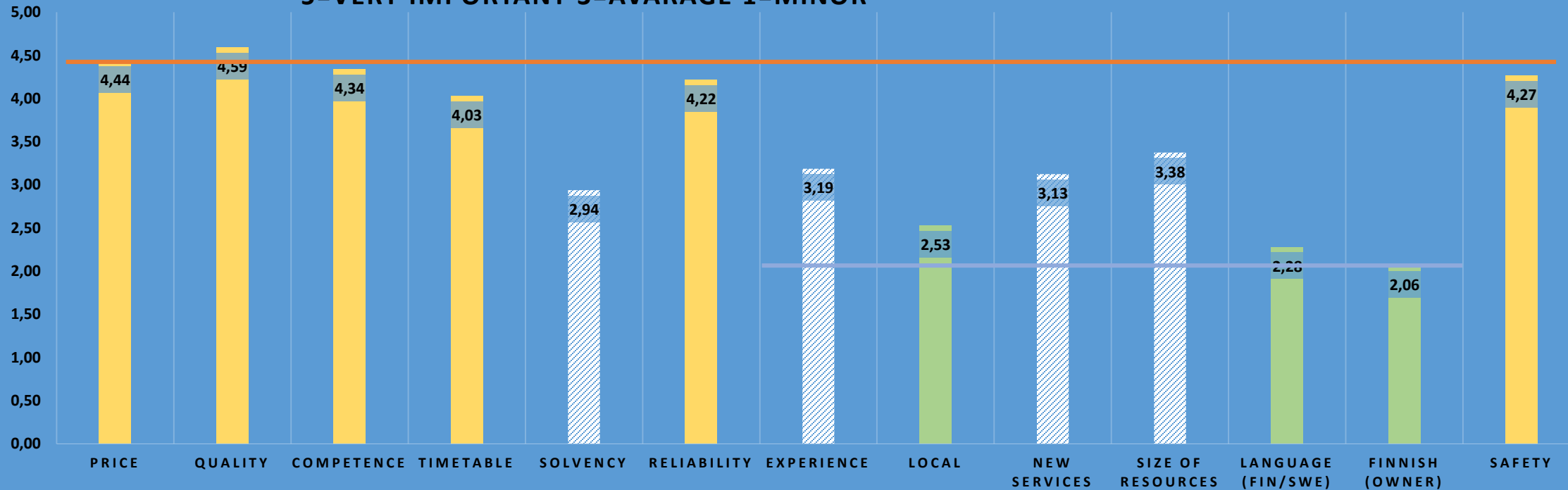
**Conclusion :** The roles have developed and focused and are very much market driven today.

## 6.1.3(b) Authority's role and its influence

- Weather proof network requirements by EV have increased radically investments, regulates fully operations in network company
- Investment efficiency and comparison by regulator (EV) create efficiency, unit prices
- Requirement of co-construction (tele - electrical network)
- Network companies have to understand their critical role in society, take active actions
- Incentives by EV regulation have some influence too
- Not very much claimed – regulations can not be too controlling
- Will become stronger (EV, KTM) as well as environmental and land use legislation
- Other authorities (ELY, museovirasto, etc.) have some but minor influence

**Conclusion** : Big, big role - Created efficiency

**6.1.5 EVALUATION CRITERIA OF SERVICE COMPANIES**  
**15 ANSWERS (13 ELECTRICAL, 2 TELE)**  
**5=VERY IMPORTANT 3=AVERAGE 1=MINOR**



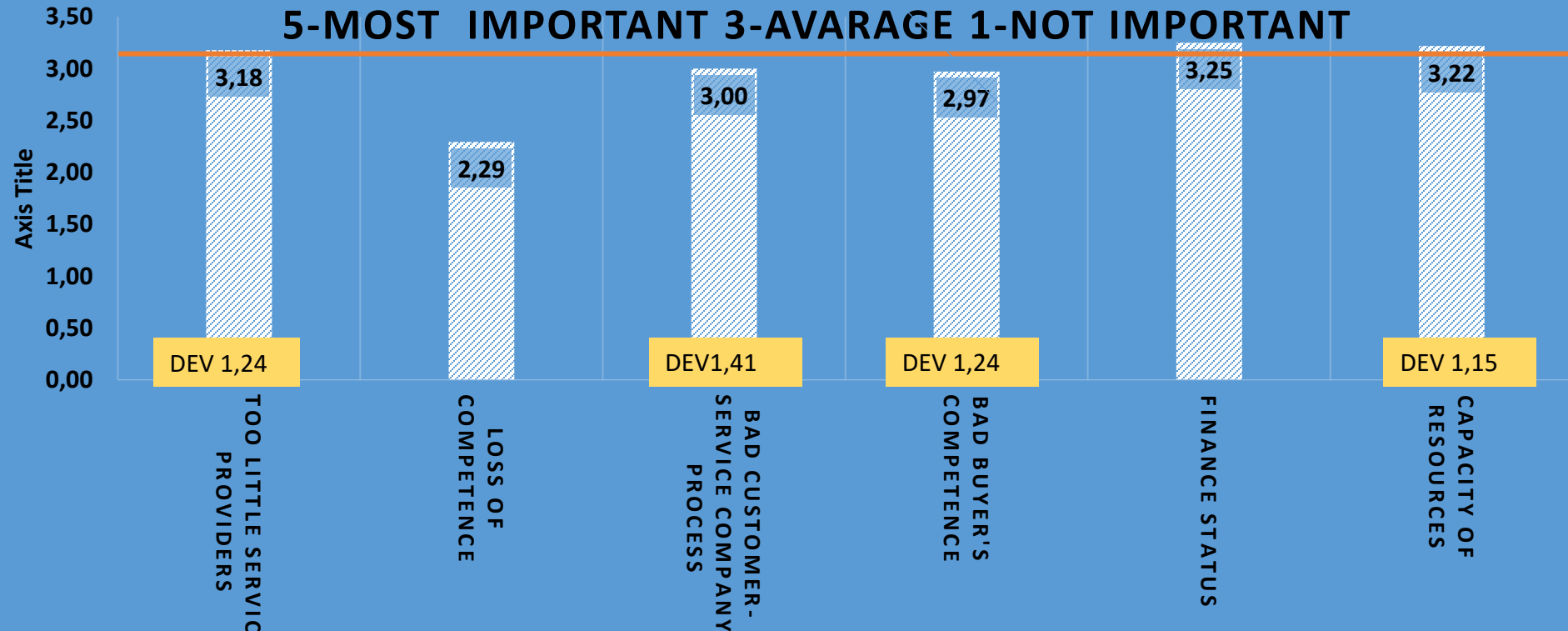
**Conclusion:** price, quality, competence, safety, reliability most valued,  
 local, Finnish, solvency, language minor criteria,

**Comments:** Deviations small, safety on/off, flexibility important, new service not very important,  
 service company owners long term engagement.

### 6.1.6 SERVICE PROVIDER RISKS, 5=MAX, 1=MIN

16 ANSWERS (14 ELECTRICAL, 2 TELE)

5-MOST IMPORTANT 3-AVARAGE 1-NOT IMPORTANT



**Conclusion :**Network owners do not see remarkable risks of service providers

Comments: But deviation of answers were larger in buyer-service provider processes, amount of service providers partly because of regional background. Network companies are also responsible of service providers' wellness and future. Risk of competence decreasing, experts retiring. Not systematically evaluate and control SPs risks – Larger contracts can increase risk levels.

## 6.1.7 Service company part of energy group - comments

Influence to customer-service provider model	Same managers in administration of service company and group level
Not real open competition (7/10)	Independence risk, conflicts difficult to solve (3/8)
The definition of roles are important	Not support developing of real customer-service provider process
Restrict real development, efficiency efforts	No influence (2/8)
No transparent to the authority – internal supports	Can develop both parties – in the best
Decision power/authority by the owner – actually	Not working properly – experienced, evidence
Not working properly – experienced, evidence	Risk of unhealthy operations
Group CEO is in key role, how the model works	
Service company create growth potential to Group	
Advantage to the Group in large network disturbances	

**Conclusion :** Restrict open, real competition and business development.



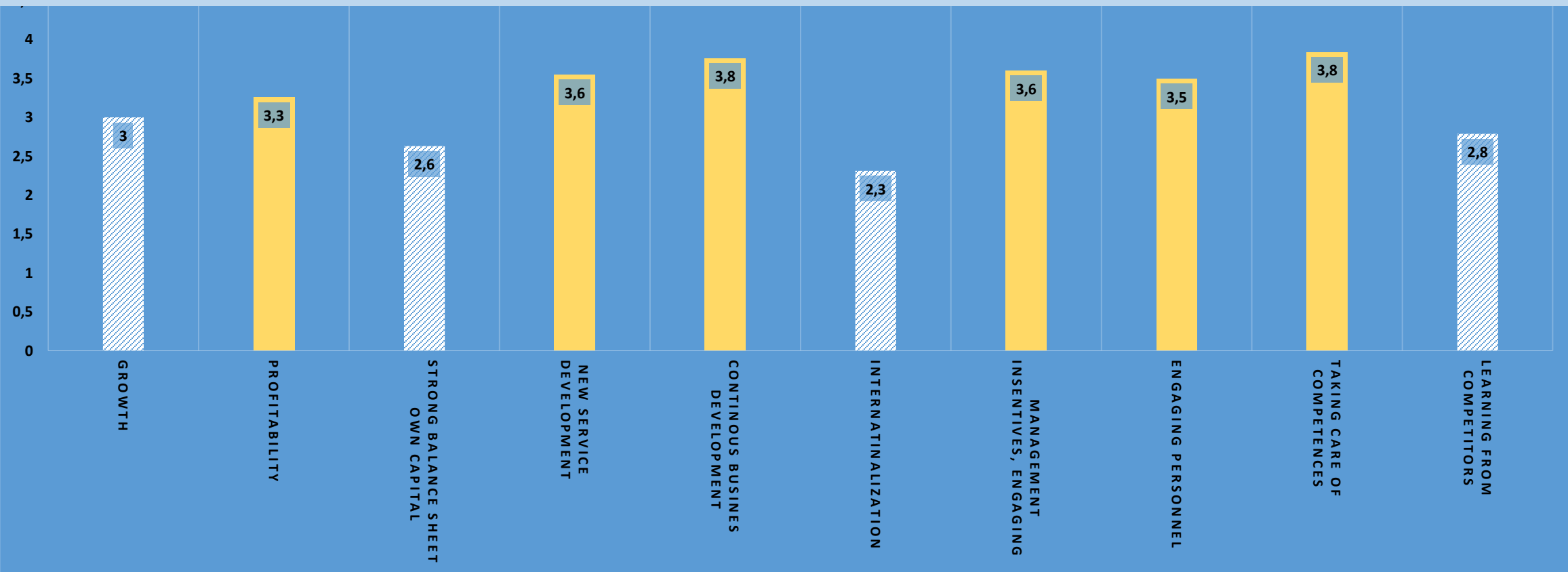
## 6.2.2 How to improve service market functionalities and activities (12 answers)

- Open more captive market – less customer owned service companies (3/12)
- In collective work contracts more flexibility for work force mobility
- More standardization
- More total process thinking – both in customers' and service providers' side
- Industrial service business makes 0-result in spite investment volumes are highest ever – difficult to solve
- Market is working properly today already

**Conclusion :** More openness to the market – not dramatical needs to changes.

## 6.2.5 Critical success enablers to Industrial service companies – improve efficiency, differentiation to competitors

Scale: 4-fully agree, 3-agree, 1-fully disagree



**Conclusion:** New service and continuous business development, engaging management and personnel and profitability.

**Comments:** Learning from competitors, internationalization, own capital and growth less important.

## 6.2.6 Work force changing the employer – influences (15 answers)

How often?	Disadvantages – what?	What actions ?
Yes, very often (13/15)	Not much (8/14)	New recruitments
When the contractor changes	Can be positive too – new resources, competences hired	Personnel motivation and engaging
Local work force changes	Pressure to wage rise	
The best are changing mostly (1)		

**Conclusion :** Happens often – influences , not dramatical, restricted

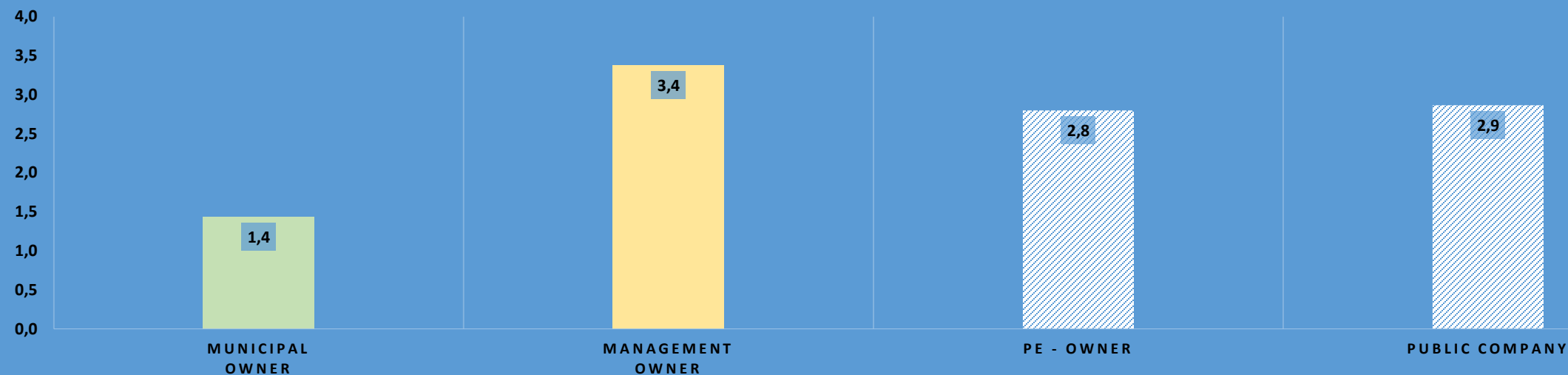
## 6.2.7 Service company joined to Energy Group – Does it has an influence to open service market (16 answers)

- Yes – disadvantage (10/16)
- Not necessarily, not any more, service contract fair (5/16)
- Yes if selling surplus, extra resources with low margins
- In energy group service company is support fuction
- Amount of service companies in energy group has decreased
- If service company can put costs to “ the garbage account” of the group- not good for market
- Are billing prices in the group market based?

**Conclusion : This service company position is disadvantage to the market.**

## 6.2.8 Who are the owners of the service company – does it matter?

Scale: 4-fully agree, 3-agree, 1-fully disagree

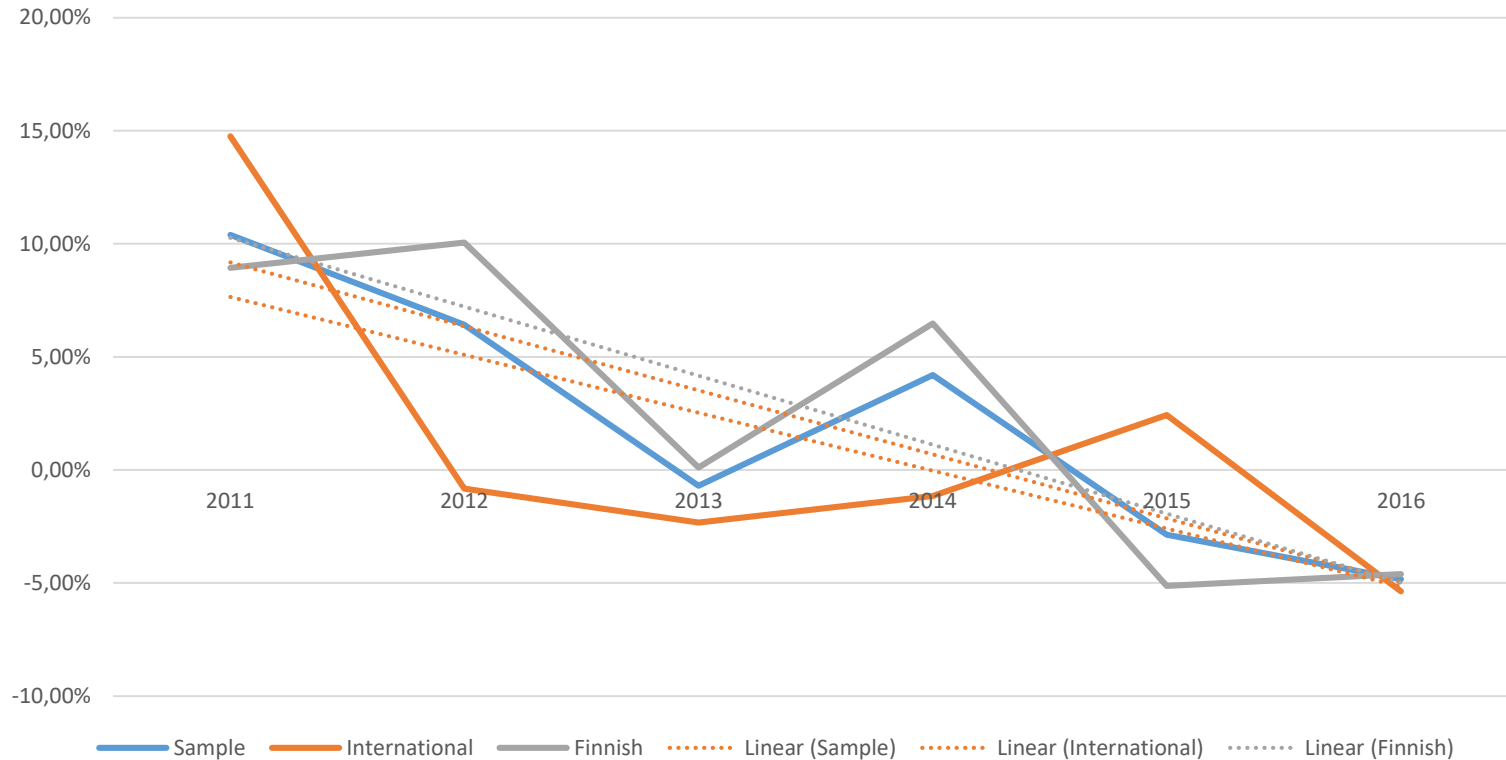


**Conclusion:** Management ownership is most favourable – municipal owner lowest

**Comments:** Did not asked, how the management ownership shall be arranged.

## 6.3.1.3 Industrial Service Company survey results – Growth yrs 2012 - 2016

Appendix 6.3.1



### AVERAGE ANNUAL CHANGE IN REVENUE

SAMPLE

**0,4%**

INTERNATIONAL

**-1,5%**

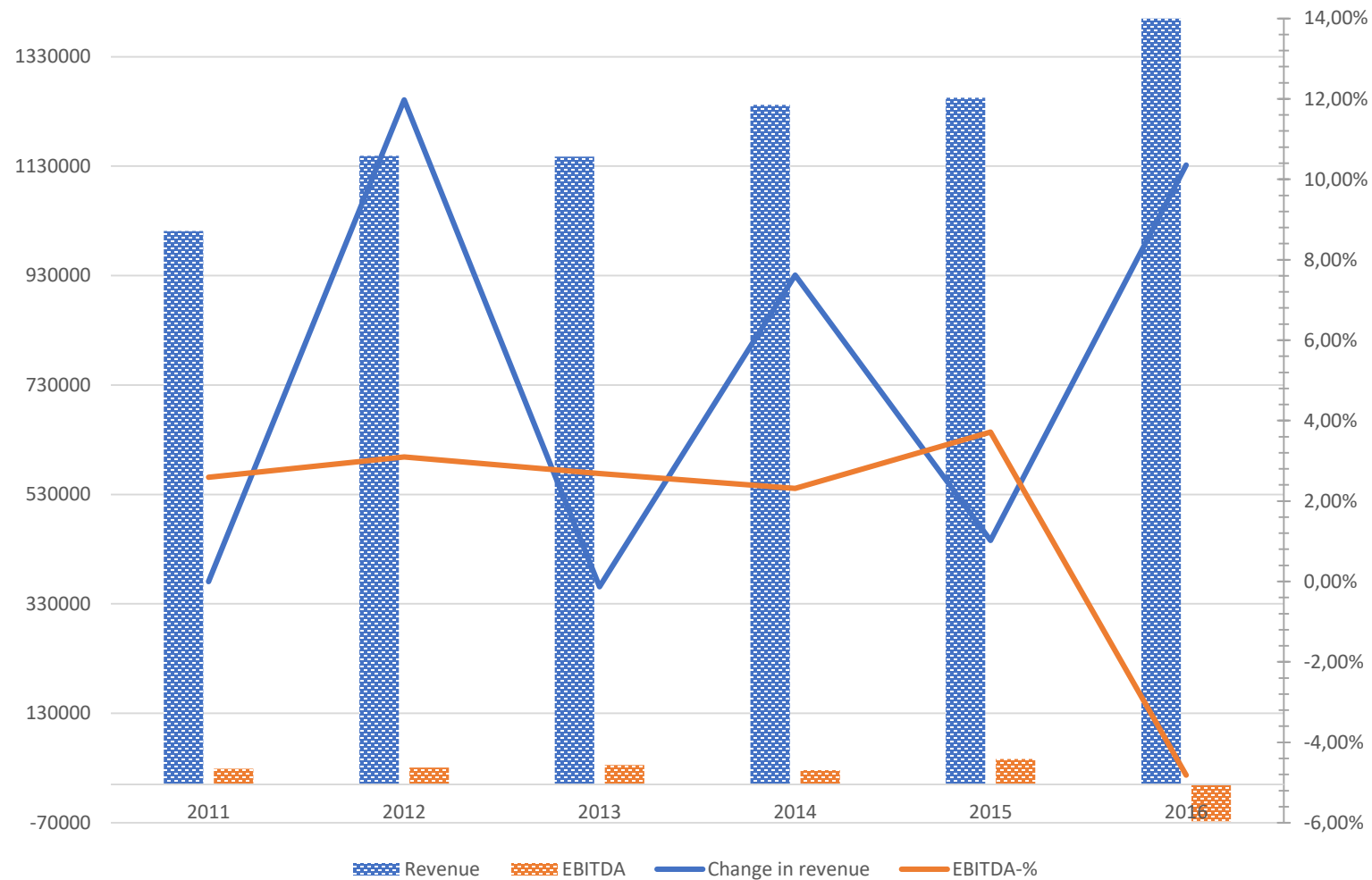
FINNISH

**1,4%**

	2012	2013	2014	2015	2016
Amount of companies	9	9	10	10	10
Sample	6,42 %	-0,70 %	4,19 %	-2,86 %	-4,83 %
International	-0,83 %	-2,32 %	-1,15 %	2,43 %	-5,38 %
Finnish	10,05 %	0,11 %	6,48 %	-5,13 %	-4,60 %

Ref.1

## 6.3.1.4 Industrial Service Company survey results - Company B Growth/Profitability



Example

# COMPANY B

COMPOUND  
ANNUAL GROWTH OF REVENUE

**6,7%**

AVERAGE ANNUAL EBITDA-%

**1,6%**

Ref.1

## 6.3.1.4 Industrial Service Company survey results - Company B annual report analysis

2011	2012	2013	2014	2015	2016
<ul style="list-style-type: none"> <li>The company made new market entries and won new customer contracts, and improved operational efficiency and cash position.</li> <li>The company's growth in revenue was achieved organically with positive contributions from most areas and geographies.</li> <li>The operating result stayed at a stable level as the company has made important structural improvements in recent years and this has helped us to perform practically in all market conditions.</li> </ul>	<ul style="list-style-type: none"> <li>The company's revenue increased due to organic growth coupled with new market openings in the UK and Ukraine.</li> <li>Steady improvement of operating result and liquidity were achieved by means of systematic development of company's operational model. The operating result included costs of closing down of unprofitable business operations.</li> </ul>	<ul style="list-style-type: none"> <li>The company continued its positive improvement focusing on operating result, rather than growth of revenue.</li> <li>The company's capability to offer major turnkey projects is well supported by its specialized engineering company with 200 employees.</li> <li>A new power transmission and distribution unit was opened in Germany.</li> <li>A new joint venture company with telecom operator will start operations in the beginning of 2015.</li> <li>The company sold part of its business and 39 employees shifted company.</li> </ul>	<ul style="list-style-type: none"> <li>The company's revenue increased purely due to organic growth.</li> <li>The company's operating result slightly decreased due to changes in mix of maintenance and projects of a business line.</li> </ul>	<ul style="list-style-type: none"> <li>The company's revenue growth was driven by the successful completion of acquisitions in Germany and Norway, as well as healthy organic growth.</li> <li>The company's operating result also continued to improve.</li> <li>The company signed new framework agreements with all of the largest telecom operators to construct fibre and mobile networks.</li> <li>The company conducted the second largest acquisition, consolidating a joint venture with Norwegian telecom operator.</li> <li>The company made another strategic acquisition within rail business in Norway.</li> <li>The company acquired a power transmission business in Germany.</li> </ul>	<ul style="list-style-type: none"> <li>The company recruited a new president and CEO.</li> <li>The company's revenue increased due to previous business transactions and organic growth within the power and communication segments.</li> <li>The company's operating result damaged due to the deficiencies of project business as some projects had too aggressive historical revenue recognition in certain projects.</li> <li>The company will concentrate its operations on the healthy core business equivalent to 85% of revenue and with stable profitability. The core businesses are within power and communication in the Nordics, Poland and Germany.</li> <li>The company discontinues its unprofitable operations in the UK and will continue to divest other businesses on next year.</li> <li>The negative operating result lead to danger company's long-term financing needs.</li> </ul>

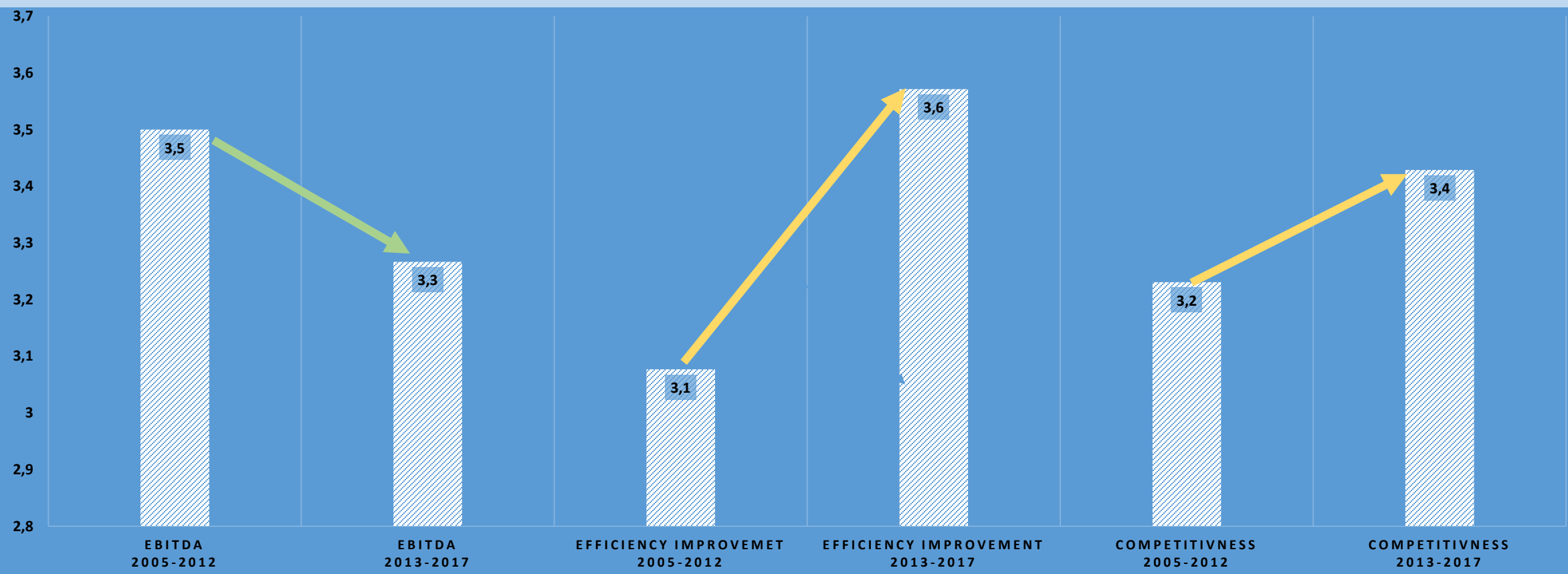
Example

Ref.1



## 6.3.2.5 Have the company achieved the targets (14 answers)

Scale: 5-very well, 3-reasonably, 1-badly



**Conclusion:** Management is not very satisfied on EBITDA development, but better to an efficiency and a competitiveness actions, harder competition

**Comments:** Deviations of answers are large in 2005-2012, but later 2013-2017 more unanimous

## 6.3.2.6 Efficiency improvement during last 3-10 yrs (13 answers)

Service	Last 3-5 yrs	Last 5-10yrs
Electrical network	>15% (4/10) 5-10% (6/10)	>15% (6/10) 10-15% (4/10)
Tele network	>15% (4/8) 5-10% (3/8) <5% (1/8)	>15% (6/9) 5-10% (2/9) <5% (1/9)
Other (IND, ICT)	>15% (1/3) 10-15% (2/3)	

**Conclusion :** During last 10 yrs efficiency improvement has been totally 10 -30%, on average annually 2-3% in industrial service companies, some potential in future too (more than inflation), some owner's requirement and the market drives too.

**Comments:** Measured by unit prices; better procurement, tendering processes and resource management.

## 6.3.2.7(a) How the service company targets have changed (17 answers)

<p>Before 2010 (6 answers)</p>	<ul style="list-style-type: none"> <li>➤ Many service companies founded</li> <li>➤ Industrial service market created</li> <li>➤ Outsourcings, M&amp;A</li> <li>➤ Internationalization</li> <li>➤ Technical competences in core</li> </ul>
<p>2010-2014 (6 answers)</p>	<ul style="list-style-type: none"> <li>➤ From growth to profitability</li> <li>➤ Transforming to service company</li> </ul>
<p>Last 3 years (16 answers)</p>	<ul style="list-style-type: none"> <li>➤ Profitable growth (5/16), cash flow</li> <li>➤ Growth (3/16)</li> <li>➤ More concentrating to customer's targets</li> <li>➤ Growth with new services</li> <li>➤ From competitive capability to competitive advantage</li> <li>➤ More competition and competitors</li> </ul>

**Conclusion :** Service market and industrial service companies have been created, growth targets – but now the profitability in core.

**Comments:** Not much new service thinking and not either sustainable competitiveness.

## 6.3.2.7(b) How do you evaluate the competitiveness of your service company compare to competitors (16 answers)

Service	Number of companies					
	Electr. netw. construction	Electr. netw. engineering	Electr, netw. O&M	Tele network construction	Tele network engineering	Tele network O&M
Best nr.1	3	-	3	4	1	3
Nr 2-4	10	10	7	6	6	3
Nr 5-	1	3	3	3	4	6

Nr 2-4 = as good as your main competitors

Nr 5 - = worsen than your main competitors

**Conclusion :** Very realistic evaluations – market and customer learnings.

**Comments:** Something new engineering competences should develop in electrical network– what?  
Some companies follow competitors systematically – not all.

## 6.3.2.7(c) Future development targets in next 3-5 years

(18 answers)

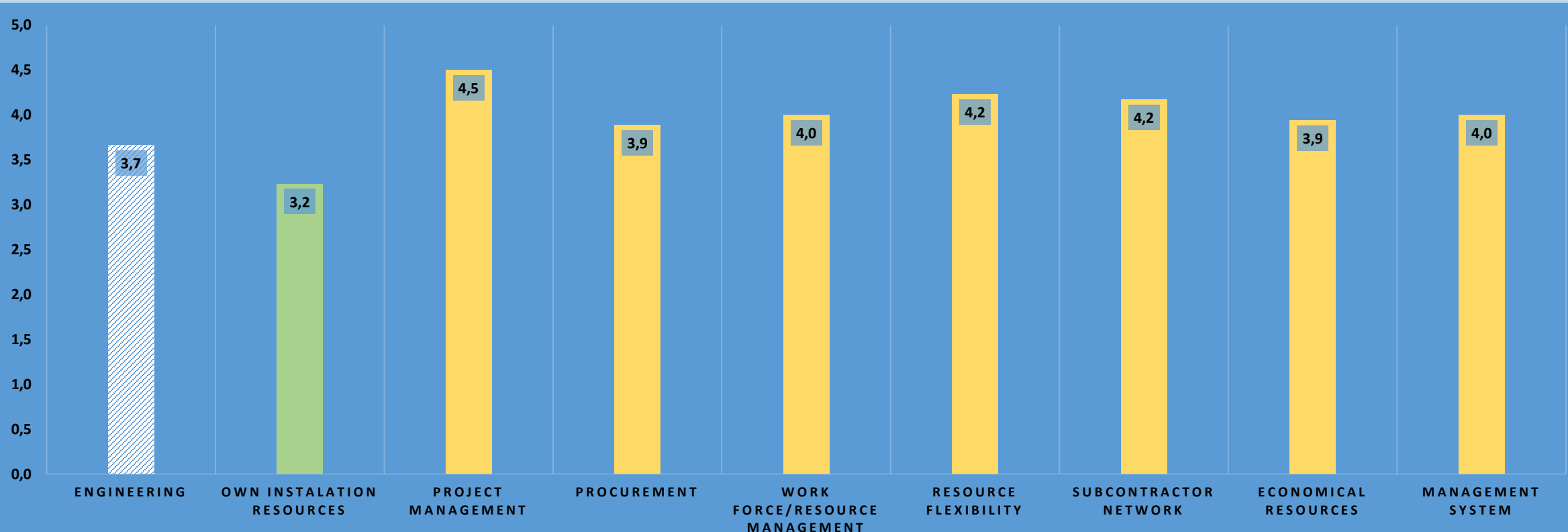
- All wants to grow, >15% (10/14), 5-10% (4/14)
- Growth also with new services/products 5-15% (17/18)
- Every one has the target to improve the profitability by 5-15% (18/18)
- Most players see the growth in Finland >5% (13/18), but some (5/18) will not grow
- Few companies (6/16) want to grow outside of Finland in Baltic Sea Rim
- Growth through M&A (5-15%) is on the agenda by many (13/16)
- Not much differentiation targets in services

**Conclusion :** Companies want to grow in home market organically or by new services or M&A.

**Comments:** But in most of these companies the balance sheet is very weak.

## 6.3.2.8 What are critical competences and resources (18 answers)

Scale: 5-most important, 3-important, 1-not important

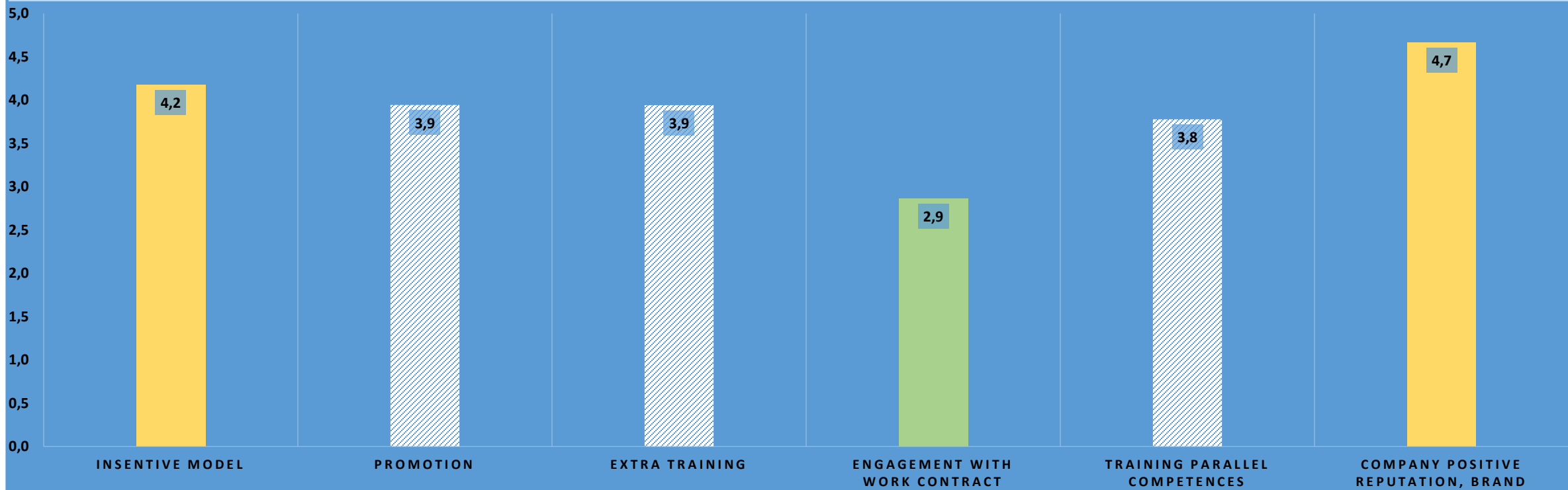


**Conclusion:** Project management; resource-/subcontractor-/work force- management, mng. systems and procurement are critical – unanimously. Economical resources critical enabler in growth including project securities.

**Comments:** Large deviation in the need of “own installation resources”.

## 6.3.2.9 How the company takes care of critical resources, who create efficiency and difficult to copy (17 answers)

Scale: 5-most important, 3-important, 1-not important



**Conclusion:** Company positive reputation/brand and incentive system key means – unanimously, promotion, trainings too – not through more engaged work contracts. Who – CEO, management, project managers, owner’s face etc.

**Comments:** Positive customer responses are motivating too.

## VRIO RESOURCE ANALYSIS

### Example Company ABC

1(2)

Aappo Kontu 13.6.2018

Attribute Resurssi/osaaminen	Valuable Arvokas	Rare Harvinainen	Imitable Jäljitettävyyys	Organsation Organisaatio	Imploication Notes Päätelmä, kommentti
Market/business understanding Markkinoiden ymmärrys	YES	YES	NO	YES	First mover advantage Temporary Competitive advantage
Project management Projektijohtaminen	YES	YES	NO	YES	Project management, lean
Procurement Hankintatoimi	YES	NO			Competitive parity
Work force management Resurssien ohjaus	YES	No	No	Yes	Not special management tools Competitive parity
Flexibility in resources Työvoimajoustot	YES	No			
Subcontracting management Alihankkijoiden johtaminen	YES	YES	YES	YES	<b>Sustainable competitive advantage</b> Long term connections to subcontractors
Financial resourses Taloudelliset resurssit	YES	YES Profit ++	NO	YES	Temporary Competitive advantage



## VRIO Resource ANALYSIS

### Example Company ABC

2(2)

Aappo Kontu 13.6.2018

Attribute Resurssi/osaaminen	Valuable Arvokas	Rare Harvinainen	Imitable Jäljitettävyyys	Organisation Organisaatio	Implication Notes Päätelmä, kommentti
Management system/tools Johtamisjärjestelmät	YES	NO	NO	YES	Competitive parity Lean organisation
Engineering system Suunnittelujärjestelmät	YES	NO	NO	NO	Competitive disadvantage Not most important
Detail engineering competence Erikoissuunnittelu	YES	NO	NO	NO	Competitive disadvantage Not most important
Own installation resources Omat asennusresurssit	YES In project	NO	NO	NO	Competitive disadvantage
Company Brand/Reputation Yhtiön brandi/maine	YES	YES	YES	YES	<b>Sustainable competitive advantage</b> Take years to build up
Innovation system Innovatiojärjestelmä	YES	NO	NO	NO	<b>Competitive disadvantage</b> Not invested at all
Other Muuta					