

Knowledge Requirements of Small and Medium Enterprises on ICT Professionals

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Introduction

- Importance of ICT in the Czech economy in last period.
- Massive investments into ICT.
- Grow in ICT – influence on GDP.
- Investment into education – especially education in ICT – investments into future.
- Requirements on education – in general.

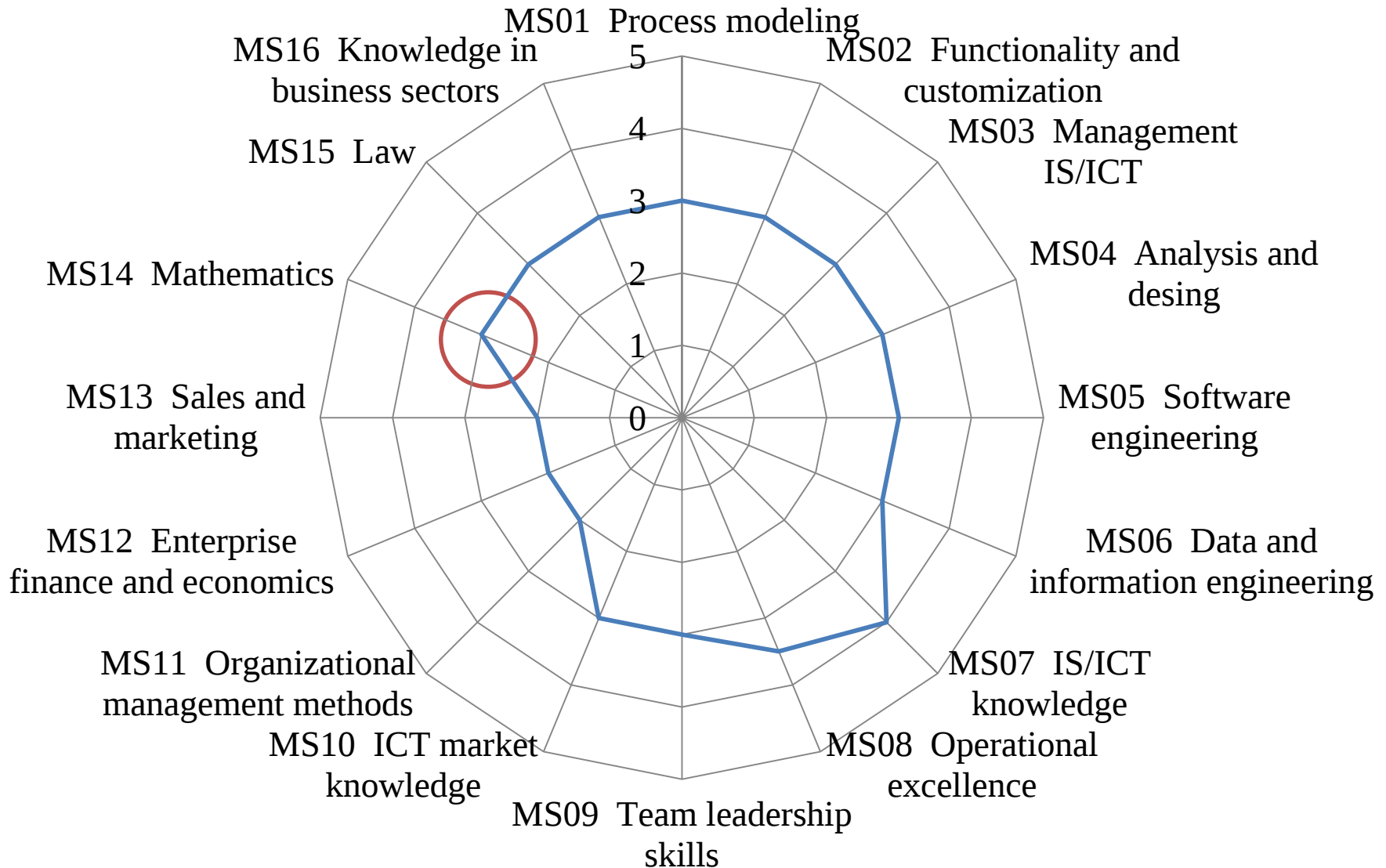
Aim of the Presentation

- **The aim of this paper is to describe and to analyze SMEs' expectations on knowledge and skills that should have ICT professionals on labor market in order to be attractive for this market segment.**

Methodology

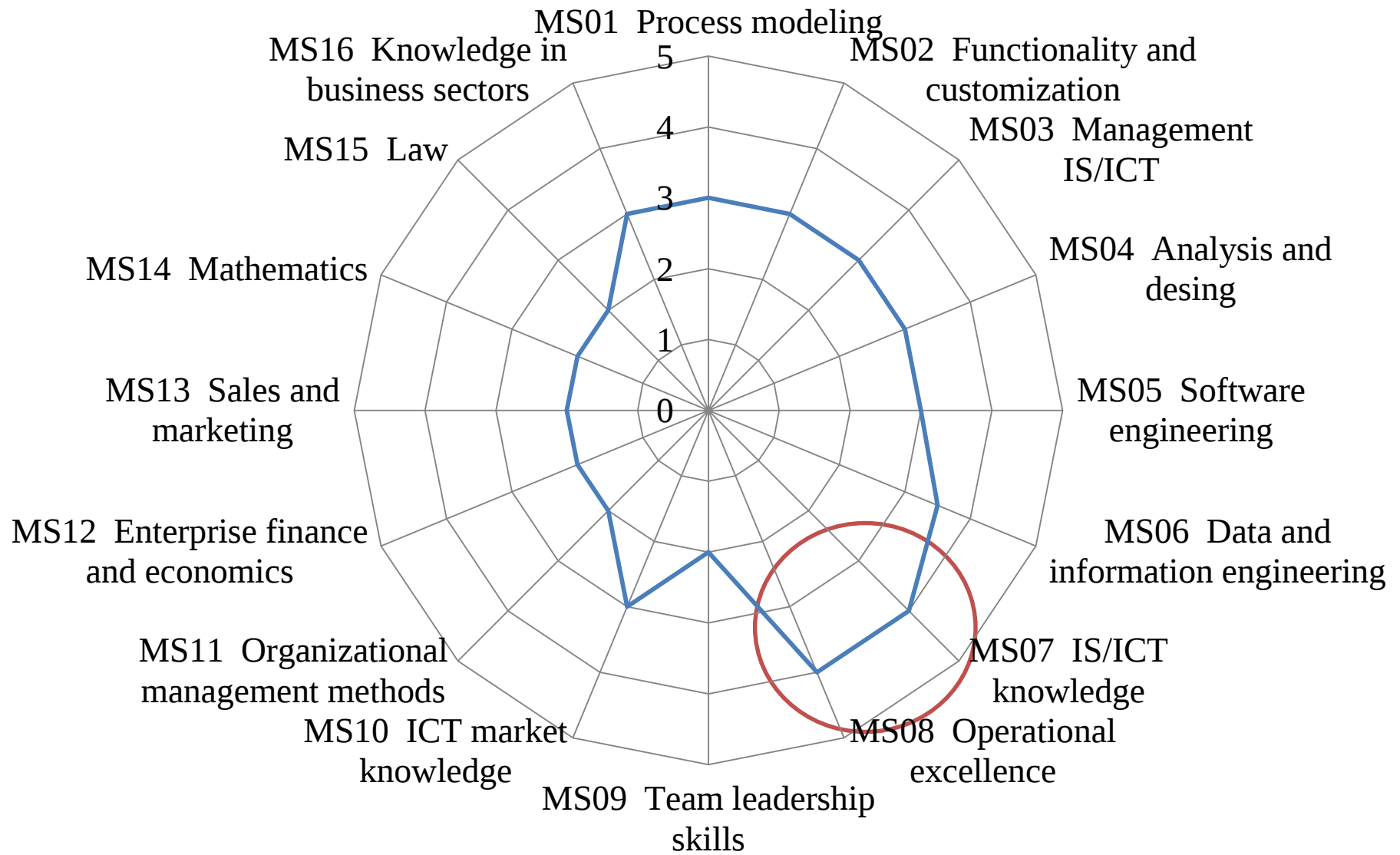
- **Year: 2011** – 1011 economic subjects
- **Roles: 7** - **Administrator** of Applications and of ICT Infrastructure, **IS Architect**, **Business Process Analyst/Designer**, **Dealer** - Business Person in ICT Products and Services, **Developer**, IS/ICT Development and **Operation Manager** and **Lector** in ICT
- **Skill categories: 16**
- **Knowledge levels: 6**
- **Small** – up to 49, **medium** 50- 249
- 3 types of sectors
 - **MIT** (agriculture, hunting, forestry, fishing, mining, quarrying, textile industries, leather and footwear, wood, of wood and cork industries, construction),
 - **SIT** - trade companies, public administrations, food, beverages, tobacco industries, oil companies, fuel producing sectors, transport and storage, hotels , restaurants,
 - **VIT** - finance institutions – banks, insurance companies, telecommunication corporations, subjects providing ICT services, post services, electricity, gas and water supply
- Job Classification – KZAM, ISCO88, ISCO08, ISCO11

Small Enterprises up to 49 employees - MIT Sector



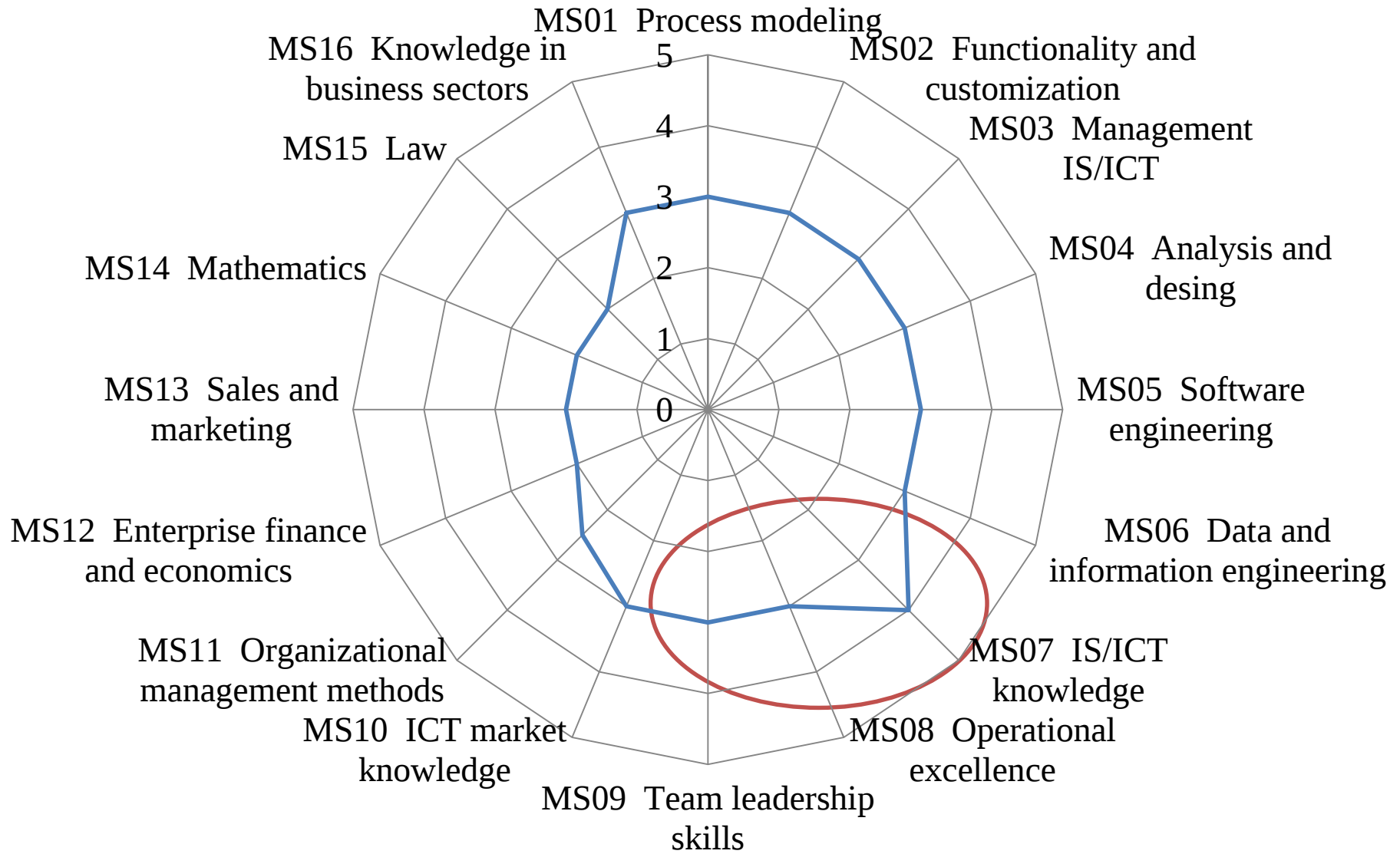
Small Enterprises up to 49 employees

- SIT Sector



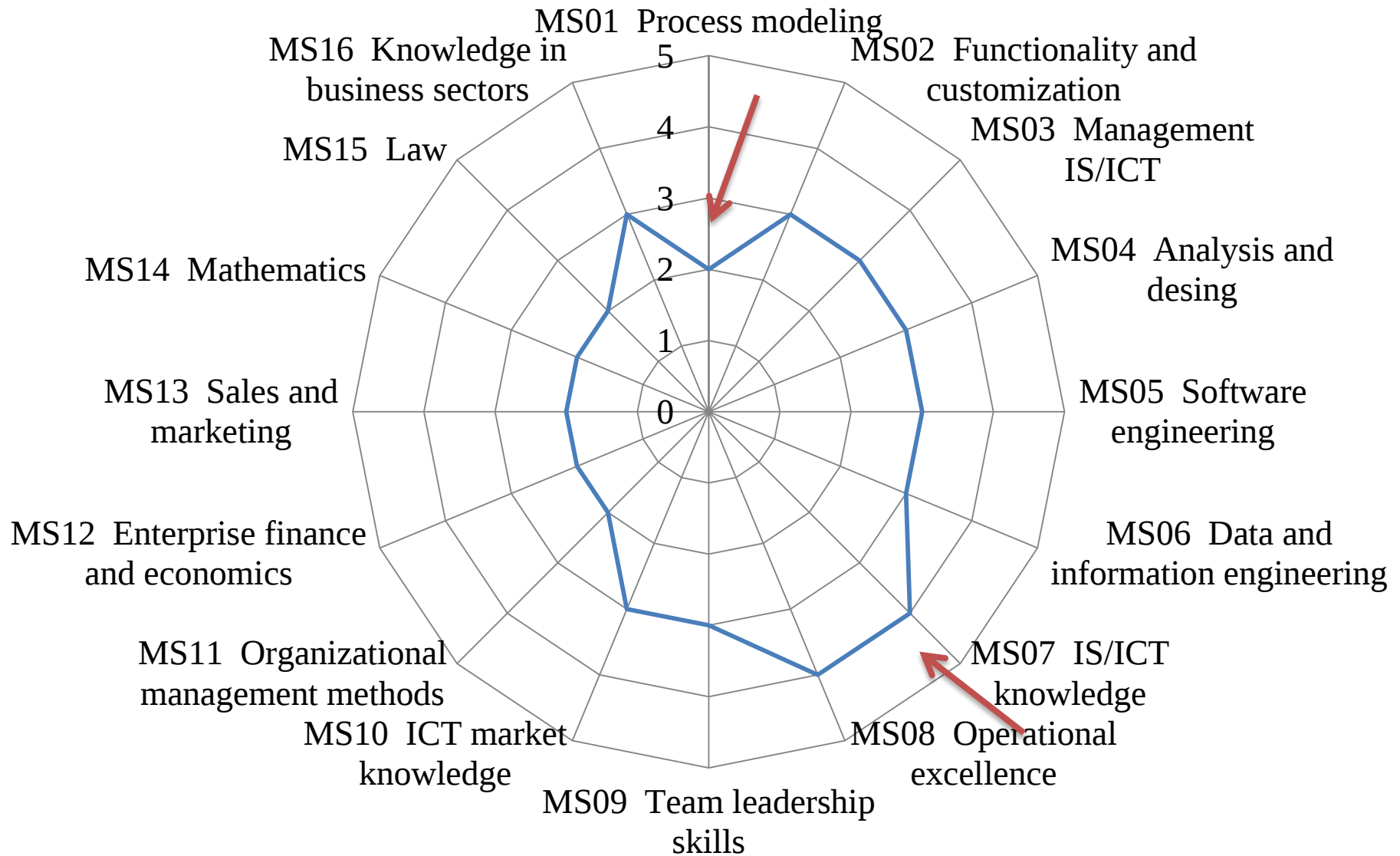
Small Enterprises up to 49 employees

- VIT Sector



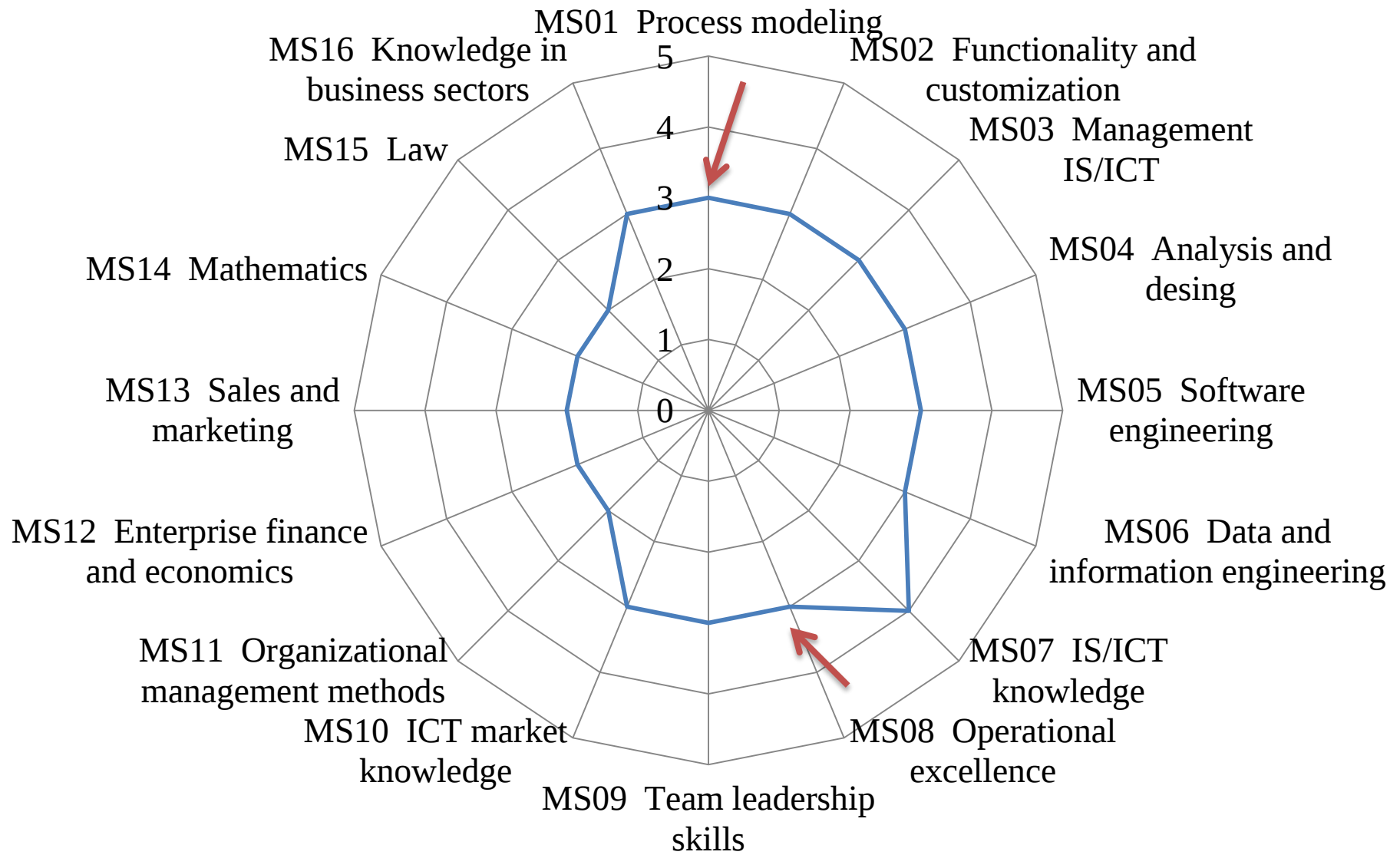
Medium enterprises 50-249 employees

- MIT Sector



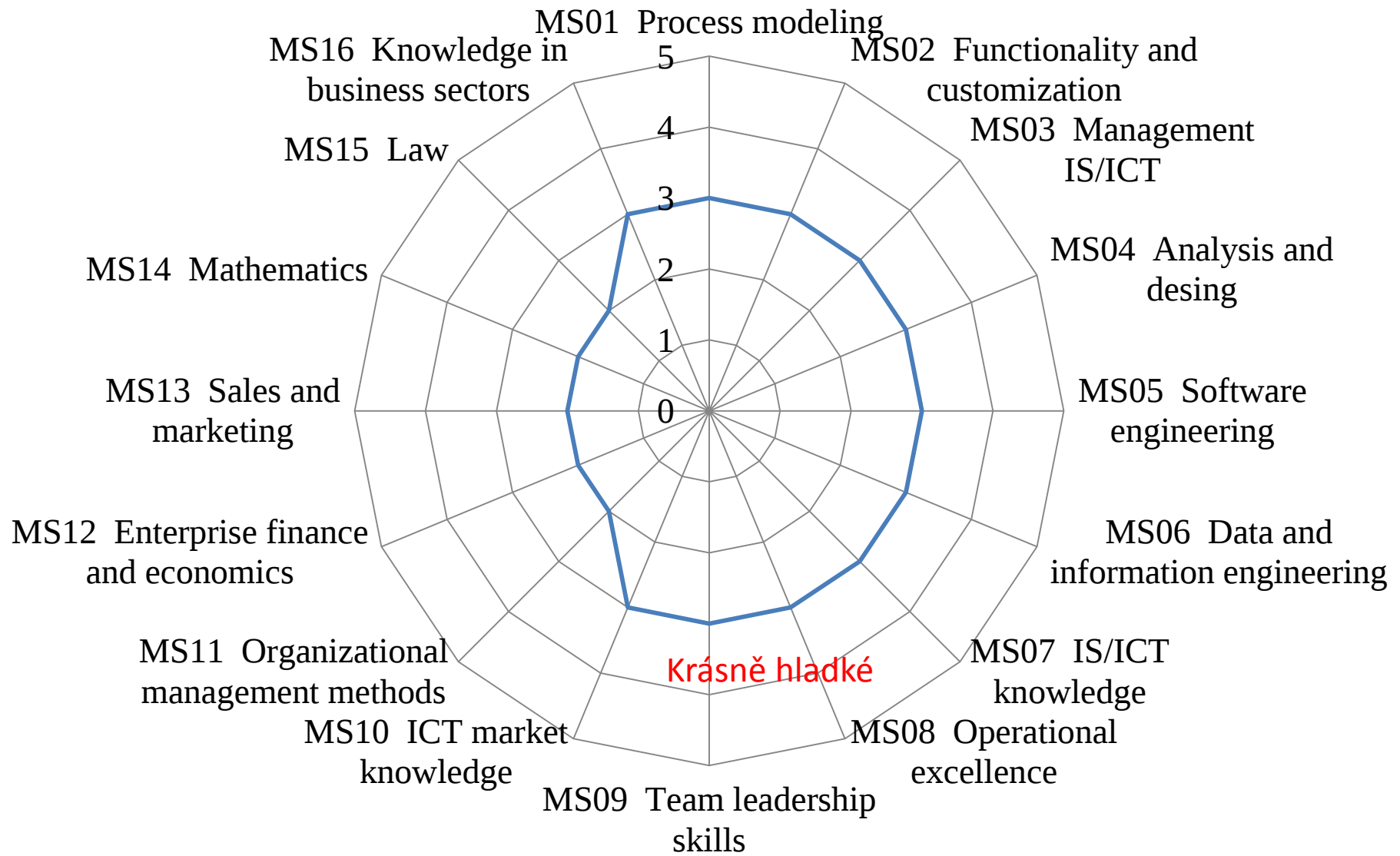
Medium enterprises 50-249 employees

- SIT Sector



Medium enterprises 50-249 employees

- VIT Sector



Change in Knowledge Requirements between SE and ME in MIT

	Avg (Small)	Avg (Medium)	Change	Median (Small)	Median (Medium)	Change
MS01	2,56	2,41	↓	3,00	2,00	↓
MS02	3,00	2,66	↓	3,00	3,00	→
MS03	2,91	2,84	↓	3,00	3,00	→
MS04	3,00	2,89	↓	3,00	3,00	→
MS05	2,83	2,73	↓	3,00	3,00	→
MS06	2,88	2,84	↓	3,00	3,00	→
MS07	3,60	3,44	↓	4,00	4,00	→
MS08	3,46	3,20	↓	3,50	4,00	↑
MS09	2,32	2,46	↑	3,00	3,00	→
MS10	2,72	3,00	↑	3,00	3,00	→
MS11	2,16	2,35	↑	2,00	2,00	→
MS12	2,12	2,21	↑	2,00	2,00	→
MS13	2,12	2,06	↓	2,00	2,00	→
MS14	2,38	2,43	↑	3,00	2,00	↓
MS15	2,48	2,33	↓	3,00	2,00	↓
MS16	2,96	2,83	↓	3,00	3,00	→

Change in Knowledge Requirements between SE and ME in SIT

	Avg (Small)	Avg (Medium)	Change	Median (Small)	Median (Medium)	Change
MS01	2,68	2,74	↑	3,00	3,00	→
MS02	2,71	3,12	↑	3,00	3,00	→
MS03	2,92	2,87	↓	3,00	3,00	→
MS04	2,64	3,06	↑	3,00	3,00	→
MS05	2,64	2,76	↑	3,00	3,00	→
MS06	2,96	2,99	↑	3,50	3,00	↓
MS07	3,36	3,57	↑	4,00	4,00	→
MS08	3,38	3,34	↓	4,00	3,00	↑
MS09	2,58	2,73	↑	2,00	3,00	↑
MS10	3,04	2,82	↓	3,00	3,00	→
MS11	2,20	2,38	↑	2,00	2,00	→
MS12	2,60	2,19	↓	2,00	2,00	→
MS13	2,24	2,09	↓	2,00	2,00	→
MS14	2,24	2,39	↑	2,00	2,00	→
MS15	2,32	2,11	↓	2,00	2,00	→
MS16	2,84	2,82	↓	3,00	3,00	→

Change in Knowledge Requirements between SE and ME in VIT

	Avg (Small)	Avg (Medium)	Change	Median (Small)	Median (Medium)	Change
MS01	2,55	2,47	↓	3,00	3,00	→
MS02	3,03	2,98	↓	3,00	3,00	→
MS03	2,99	2,84	↓	3,00	3,00	→
MS04	3,15	2,97	↓	3,00	3,00	→
MS05	2,65	2,65	→	3,00	3,00	→
MS06	3,04	2,85	↓	3,00	3,00	→
MS07	3,42	3,41	↓	4,00	3,00	↓
MS08	3,29	3,21	↓	3,00	3,00	→
MS09	2,72	2,73	↑	3,00	3,00	→
MS10	2,69	2,70	↑	3,00	3,00	→
MS11	2,40	2,13	↓	2,50	2,00	↓
MS12	1,91	1,95	↑	2,00	2,00	→
MS13	1,90	1,75	↓	2,00	2,00	→
MS14	2,31	1,96	↓	2,00	2,00	→
MS15	1,99	2,15	↑	2,00	2,00	→
MS16	3,18	2,81	↓	3,00	3,00	→

Conclusions

- no basic differences between requirements on ICT and “non-ICT” knowledge and skills for SMEs according to the sector of the economy
- larger requirements on ICT knowledge **by small enterprises**; on the other hand medium enterprises have higher requirements on “**non-ICT**” knowledge
- Higher requirements on ICT knowledge for small business units mirror necessity to solve **all ICT related** problems with **lower number of** employees.
- higher requirements on “non-ICT” knowledge for medium business units **reflect needs of the team work**

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