IMPETUS Public Opinion Survey on Ethical Issues of Smart City Technologies

TIEMS Virtual Annual Conference 6th to 10th December 2021

09th December 2021, 10:35 – 11:00 h
IMPETUS Day - Session 11

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New Emergency Management in a Resilience Era Facing Health, Climate and Energy Challenges

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RESEARCH

SINTEF — Institut Mines-Télécom — UNÎMES — UNIVERSITÀ DEGLI STUDI DI PADOVA — cini consorzio interuniversitario nazionale per l'informatica

INDUSTRY & SMEs

SIMAVI Software Imagination & Vision — THALES — CINEDIT INTELLIGENT VIDEO ANALYTICS MADE IN SWITZERLAND — SIXGILL — INSIKT INTELLIGENCE — UniSMART Fondazione Università di Padova — XM CYBER

NGOs

Entrepreneurship Development Centre for BIOTECHNOLOGY and MEDICINE — ISP — STIME

CITIES

Oslo

Local conditions and requirements
Security in Smart Cities: Perception by Stakeholders

FOCUS GROUPS

PUBLIC PERCEPTION SURVEY

WEB SURVEY

Personnel, officials and managers in:
- the City of Oslo (OSL)
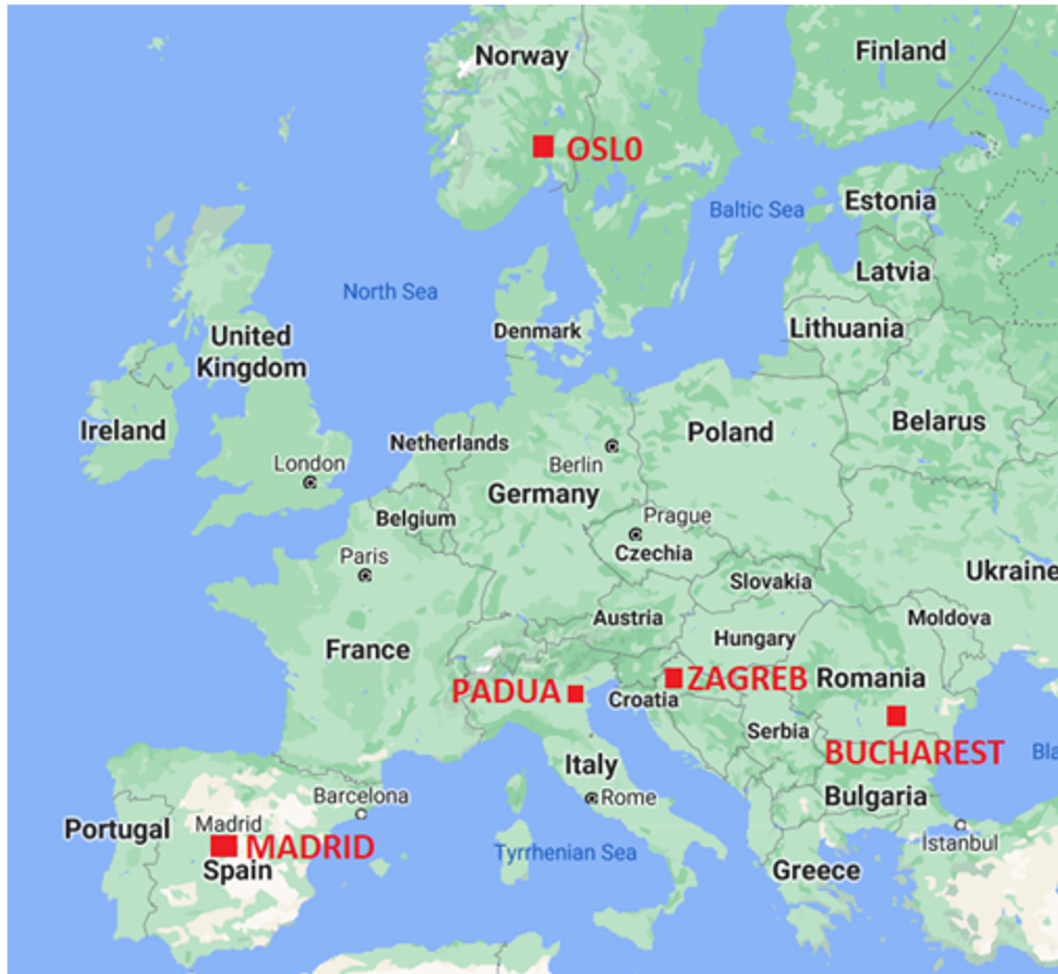- the City of Padua (CPAD)
- emergency and security organizations
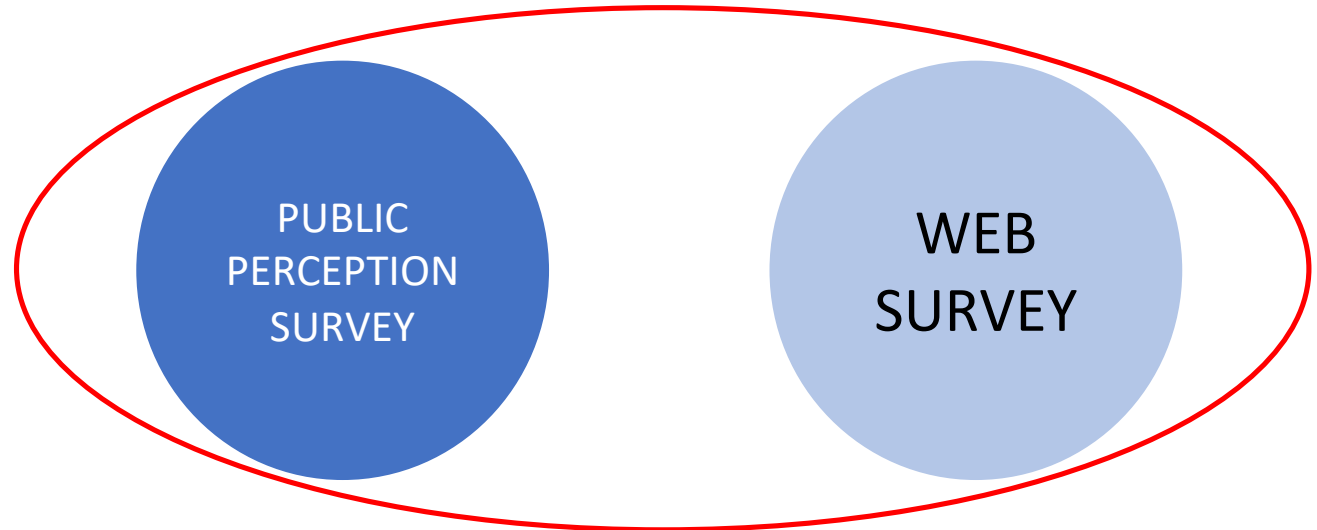
- General public – structured sample of citizens

- General public – convenience sample of citizens

Public Perception Survey

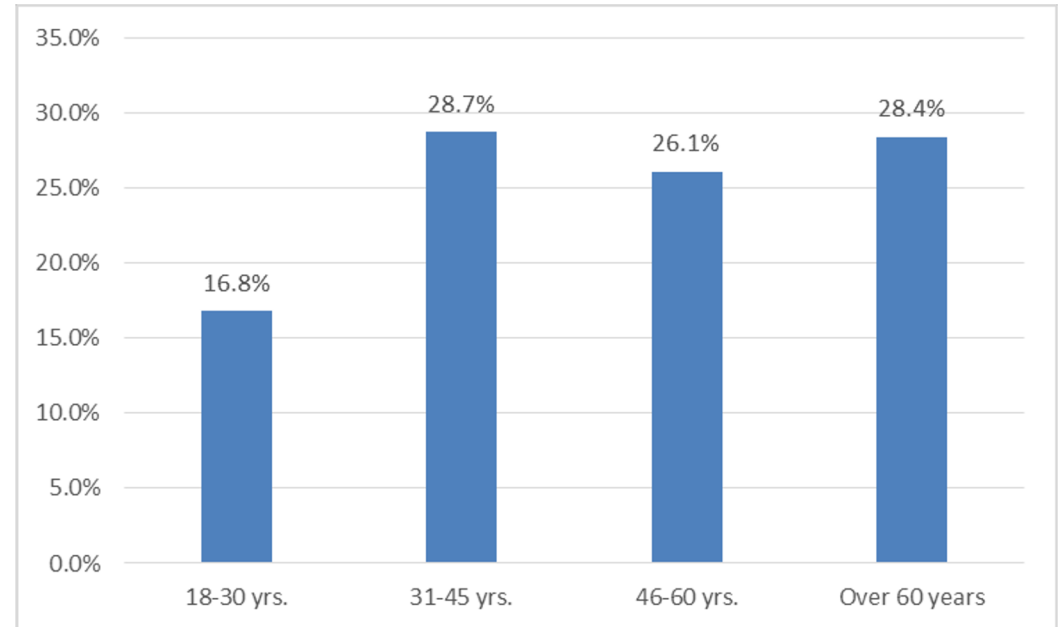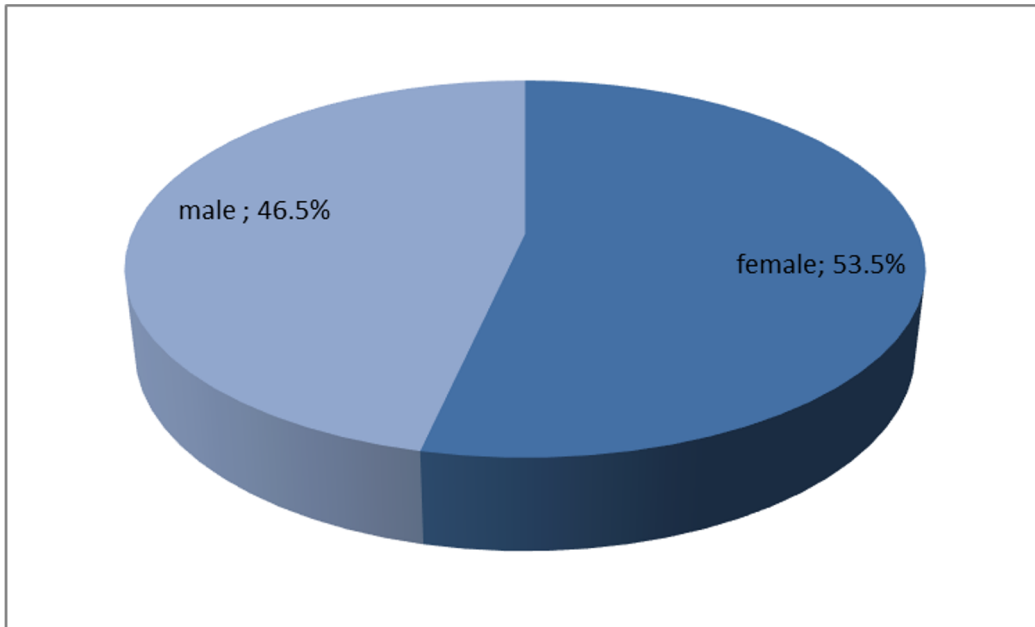**What do citizens know / want/ need / worry about?** re Smart City solutions

How ?

CATI

5x cca 500

Public Perception Survey

GENDER & AGE distribution

male ; 46.5%

female; 53.5%

	18-30 yrs.	31-45 yrs.	46-60 yrs.	Over 60 years
	16.8%	28.7%	26.1%	28.4%

Public Perception Survey

What did we actually want to determine?

- Do citizens know what *Smart Cities* (SC) are?

- What is their opinion on SC technology in general
(safety and security in public spaces included)?

- Are they thinking about / worried about
the possibility of unethical use of SC technology?

Public Perception Survey

Padua, Italy

*https://www.dorms.com/Italy/Padova

Public Perception Survey - Padua, Italy

Summary	Padua	EU average	Comments
Familiarity with the concept of Smart Cities	cca 83%	cca 80%	No need for education :)
Necessity to use Smart Cities technology			
- public transportation	51%	76%	
- waste management	54%	76%	
- energy efficiency and management	47%	69%	
- smart management of healthcare	**84%**	74%	
- security	**67%**	**58%**	
- warning systems for high air pollution, danger of floods, landslides, earthquakes	**43%**	75%	
Trends in using Smart Cities technology	cca 65%	62%	*improved
Worries about the increasing level of digital skills needed for Smart Cities service	cca 8%	cca 20%	

Public Perception Survey - Padua, Italy

Summary	Padua	EU average	Comments
General perception of safety	cca 65%	cca 60%	
Recent change in the level of security	**46%**	18%	*improved
Violation of privacy rights and identity thefts			
- identity theft or attempted identity theft	2%	cca 10%	
- withdrawal of money from your account from an unknown source	2%	cca 10%	
- violation of privacy rights	9%	cca 20%	
- use of your personal data for unnecessary or unwanted purposes	**73%**	cca 50%	
Concern about misuse of personal information	least concerned		
Concern over the misuse of the data collected by the Smart Cities services	**7%**	42%	

Public Perception Survey

Oslo, Norway

*Oslo's Opera House, © Pavel Dudek / Alamy Stock Photo

Public Perception Survey: Oslo, Norway

Summary	Oslo	EU average	Comments
Familiarity with the concept of Smart Cities	**cca 50%**	cca 80%	*50% never heard about it
Necessity to use Smart Cities technology			
- public transportation	**80%**	76%	
- waste management	75%	76%	
- energy efficiency and management	62%	69%	
- smart management of healthcare	64%	74%	
- security	**44%**	**58%**	
- warning systems for high air pollution, danger of floods, landslides, earthquakes	**83%**	75%	
Trends in using Smart Cities technology	cca 70%	62%	*improved
Worries about the increasing level of digital skills needed for Smart Cities service	cca 15%	cca 20%	

Public Perception Survey: Oslo, Norway

Summary	Oslo	EU average	Comments
General perception of safety	cca 80%	cca 60%	
Recent change in the level of security	71%	60%	no change
Violation of privacy rights and identity thefts			
- identity theft or attempted identity theft	15%	cca 10%	
- withdrawal of money from your account from an unknown source	17%	cca 10%	
- violation of privacy rights	21%	cca 20%	
- use of your personal data for unnecessary or unwanted purposes	44%	cca 50%	
Concern about misuse of personal information	somewhat worried		
Concern over the misuse of the data collected by the Smart Cities services	32%	42%	

WEB survey

IMPETUS

0%

SMART CITY

Author: BSGStudio

- convenience sample of the citizens who decided to participated in the research
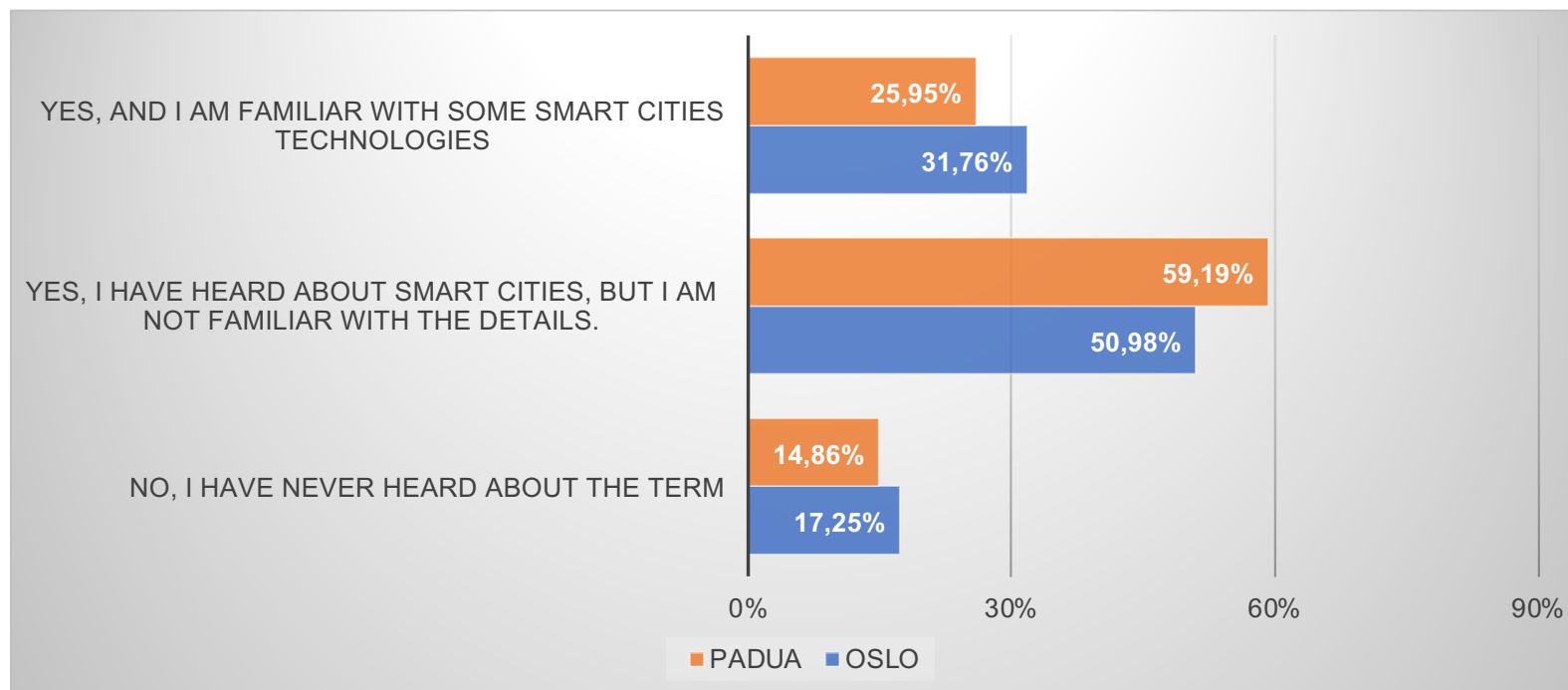
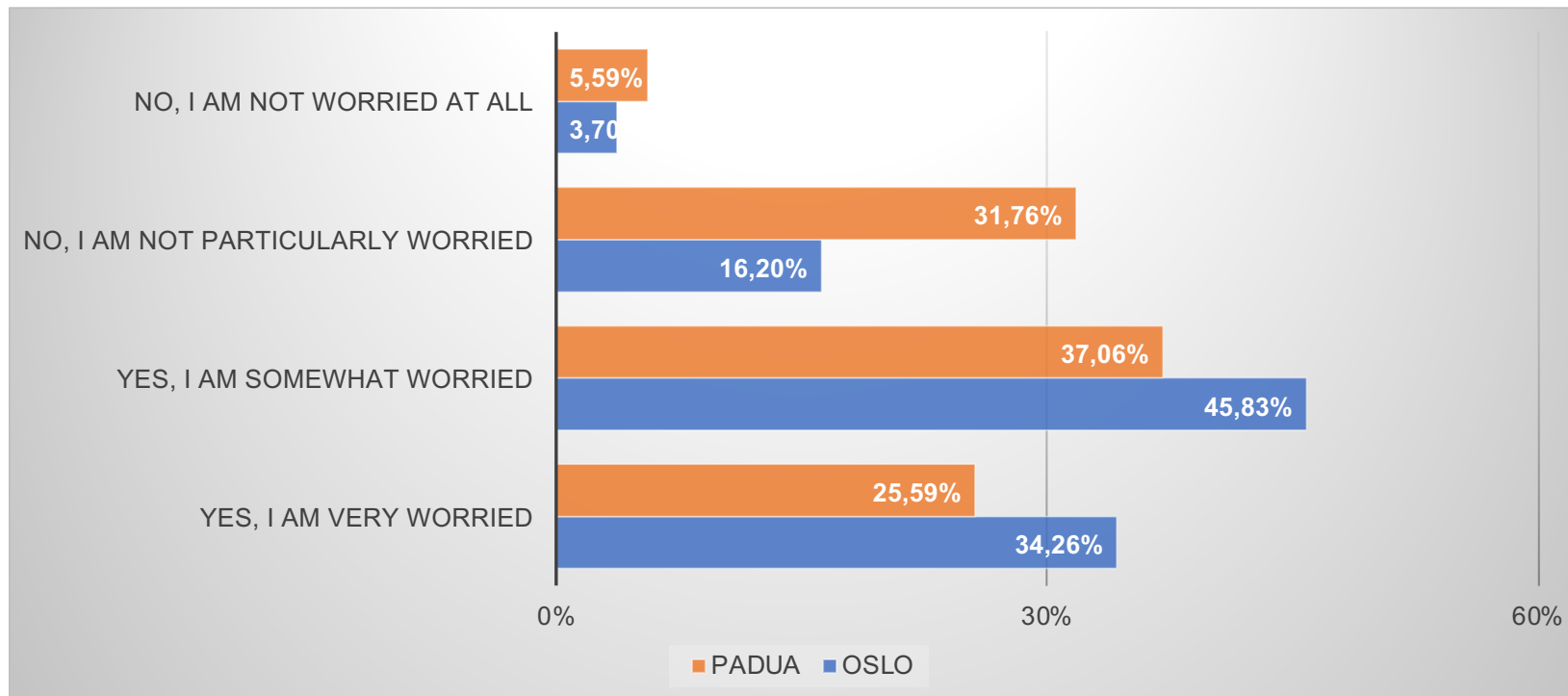# WEB survey: Results

No. of participants:

Padua: 370   **Oslo: 255**
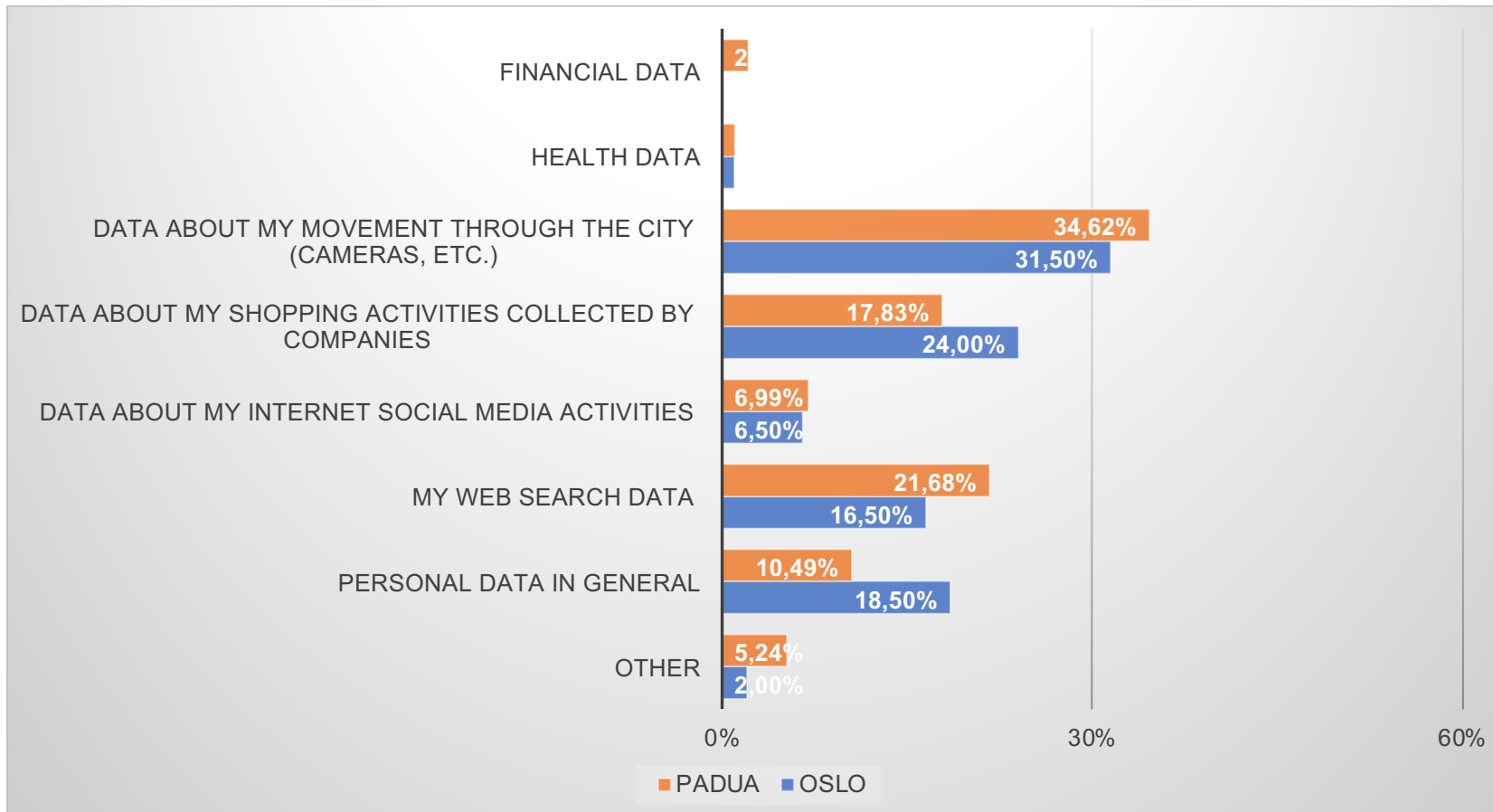
Familiarity with the concept of *Smart Cities*

	PADUA	OSLO
YES, AND I AM FAMILIAR WITH SOME SMART CITIES TECHNOLOGIES	25,95%	31,76%
YES, I HAVE HEARD ABOUT SMART CITIES, BUT I AM NOT FAMILIAR WITH THE DETAILS.	59,19%	50,98%
NO, I HAVE NEVER HEARD ABOUT THE TERM	14,86%	17,25%

WEB survey

Level of worry about the level of collected digital data

Category	PADUA	OSLO
NO, I AM NOT WORRIED AT ALL	5,59%	3,70
NO, I AM NOT PARTICULARLY WORRIED	31,76%	16,20%
YES, I AM SOMEWHAT WORRIED	37,06%	45,83%
YES, I AM VERY WORRIED	25,59%	34,26%

WEB survey

Level of worry about particular type of data

Chart: Level of worry about particular type of data — PADUA (orange) and OSLO (blue)

- FINANCIAL DATA: 2 (PADUA)
- HEALTH DATA
- DATA ABOUT MY MOVEMENT THROUGH THE CITY (CAMERAS, ETC.): 34,62% (PADUA), 31,50% (OSLO)
- DATA ABOUT MY SHOPPING ACTIVITIES COLLECTED BY COMPANIES: 17,83% (PADUA), 24,00% (OSLO)
- DATA ABOUT MY INTERNET SOCIAL MEDIA ACTIVITIES: 6,99% (PADUA), 6,50% (OSLO)
- MY WEB SEARCH DATA: 21,68% (PADUA), 16,50% (OSLO)
- PERSONAL DATA IN GENERAL: 10,49% (PADUA), 18,50% (OSLO)
- OTHER: 5,24% (PADUA), 2,00% (OSLO)

■ PADUA ■ OSLO

WEB survey

Social media hate speech/riots detection tools
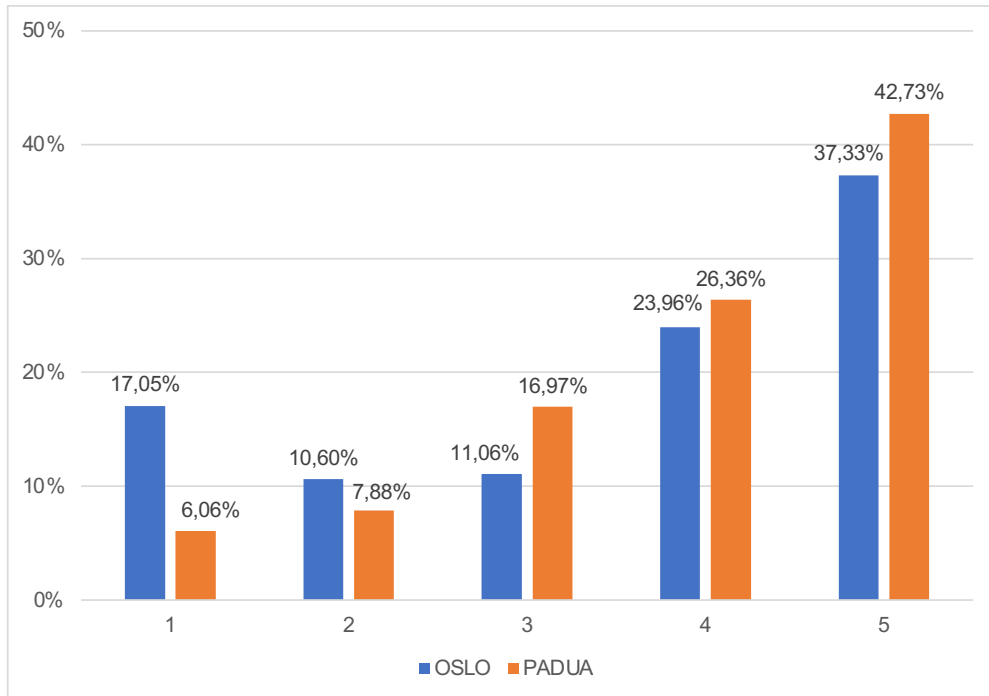
USEFULNESS
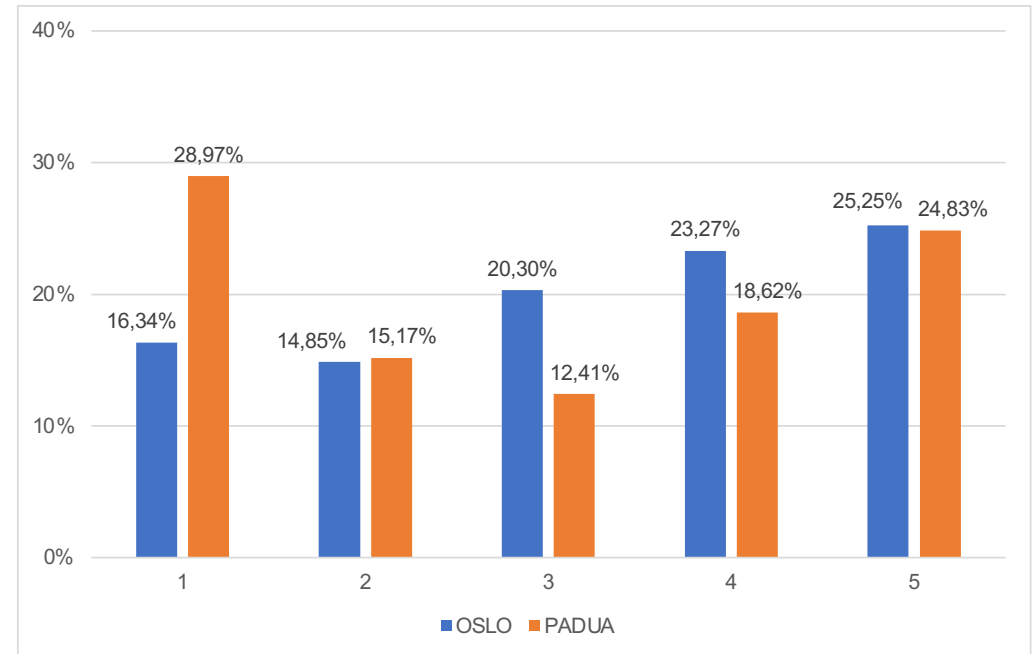
LEVEL of WORRY

WEB survey

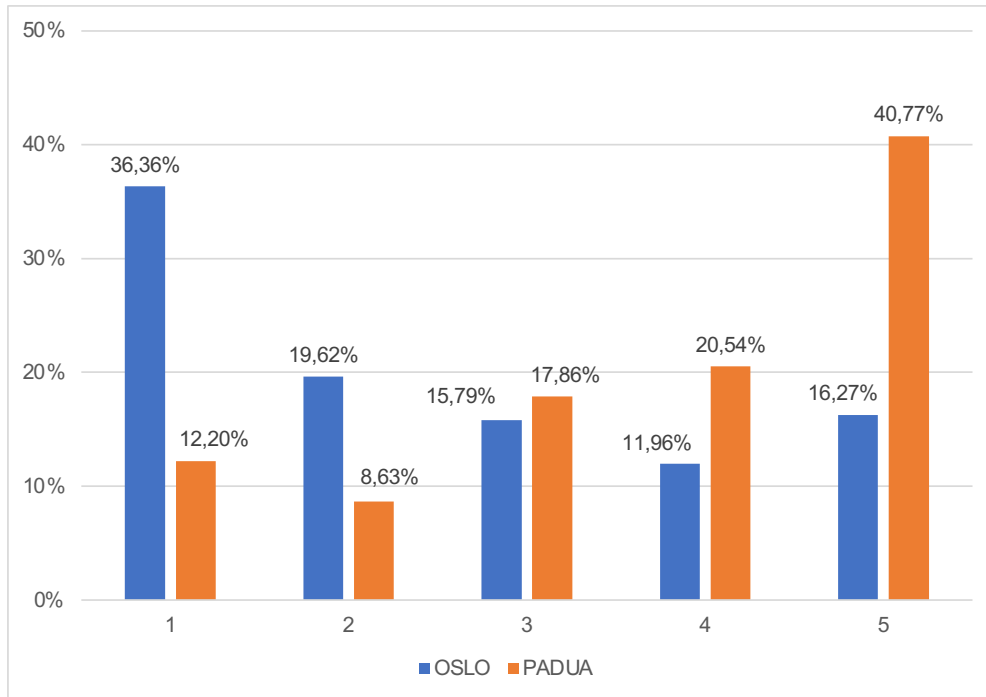## Cameras to detect guns
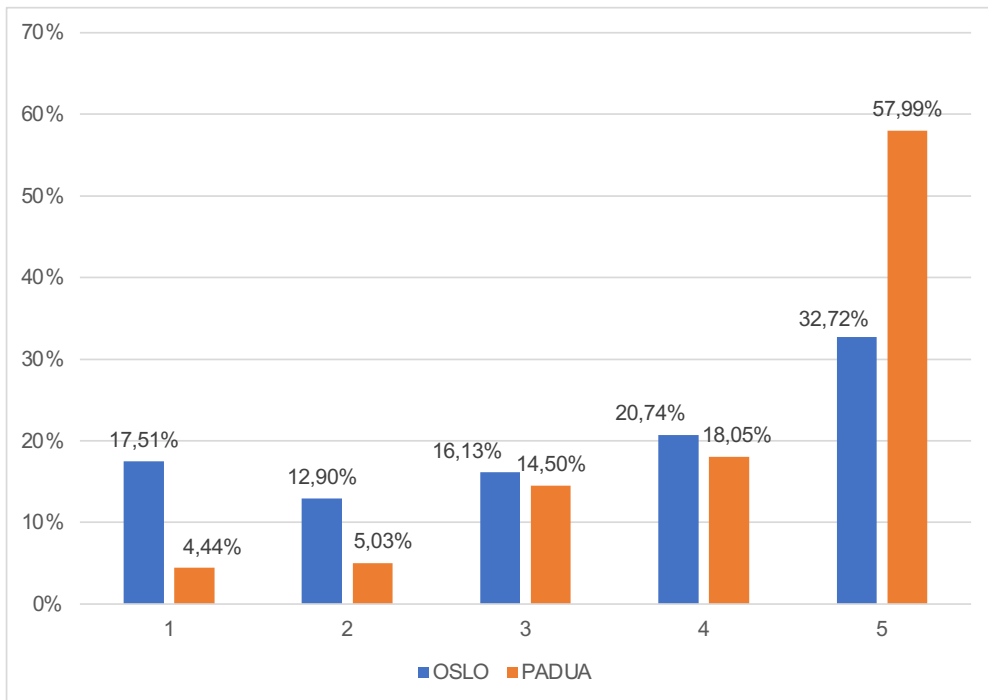
USEFULNESS
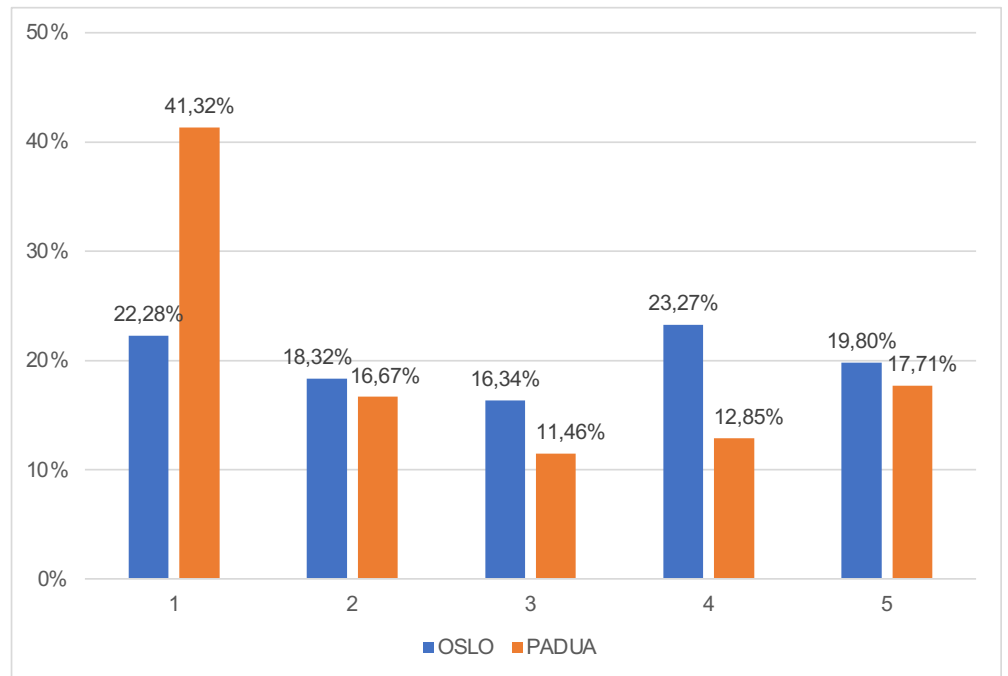
LEVEL of WORRY
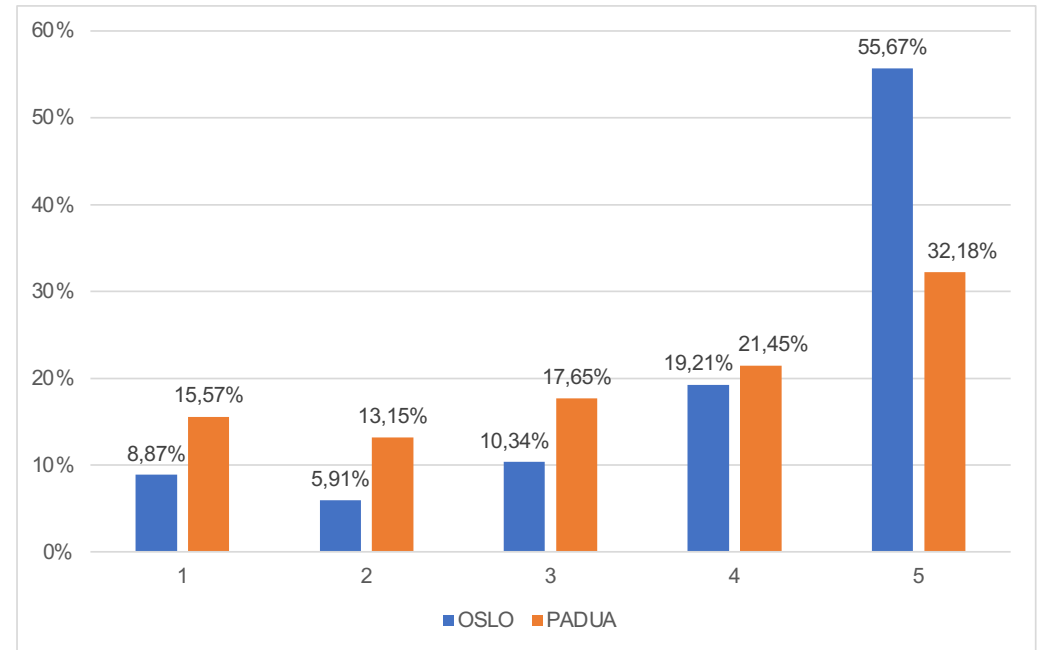
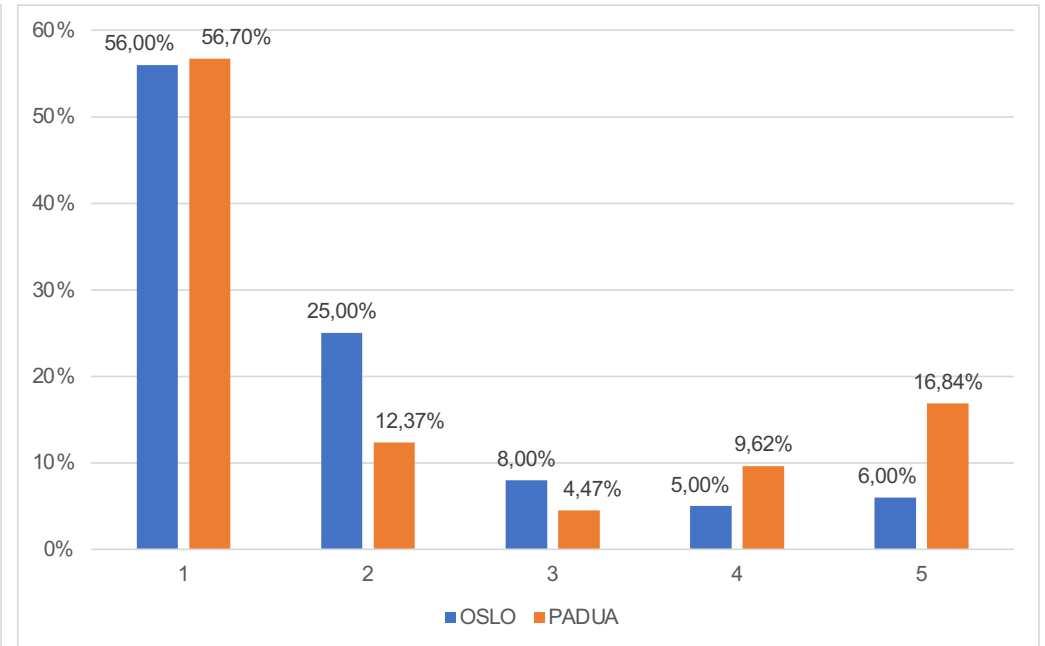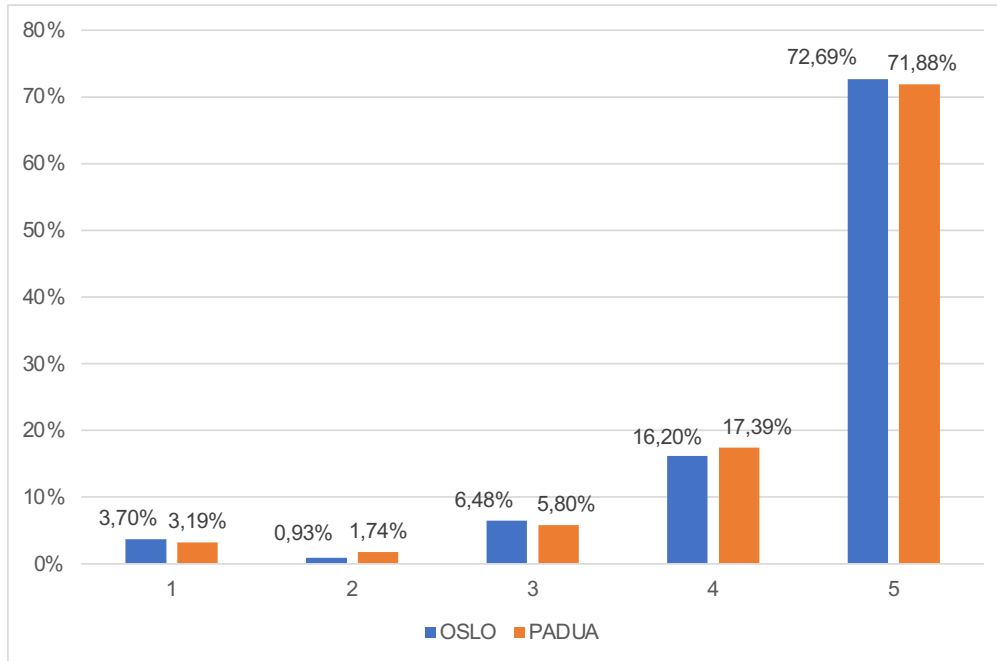# WEB survey

Cameras with face recognition sensors

USEFULNESS

LEVEL of WORRY

WEB survey

Usefulness of tools for detection of toxic gasses, chemical poisons and disease-causing microbs in the air of indoor public spaces
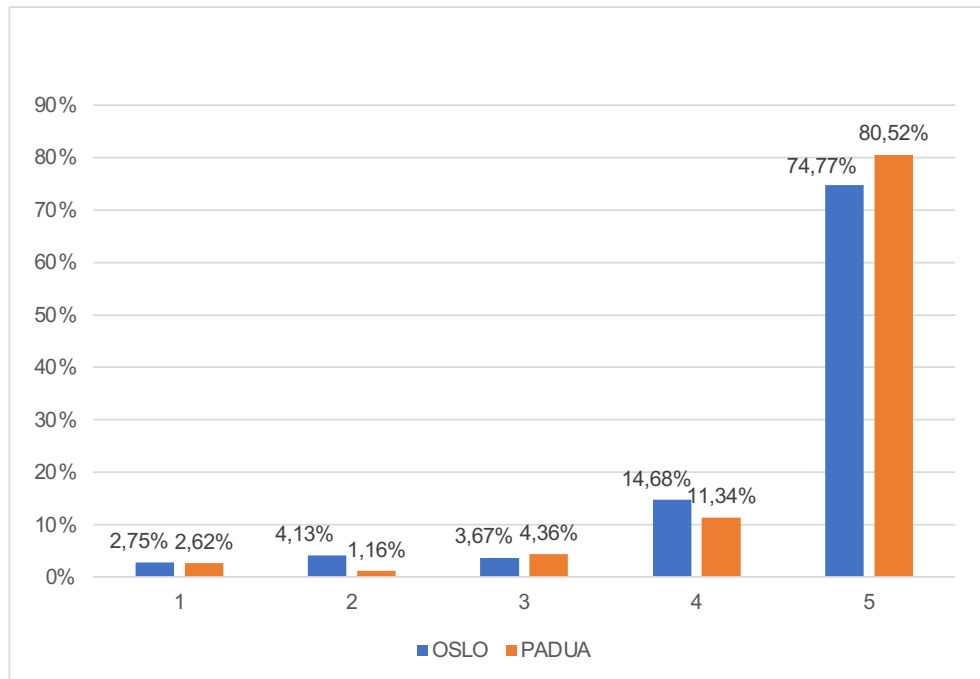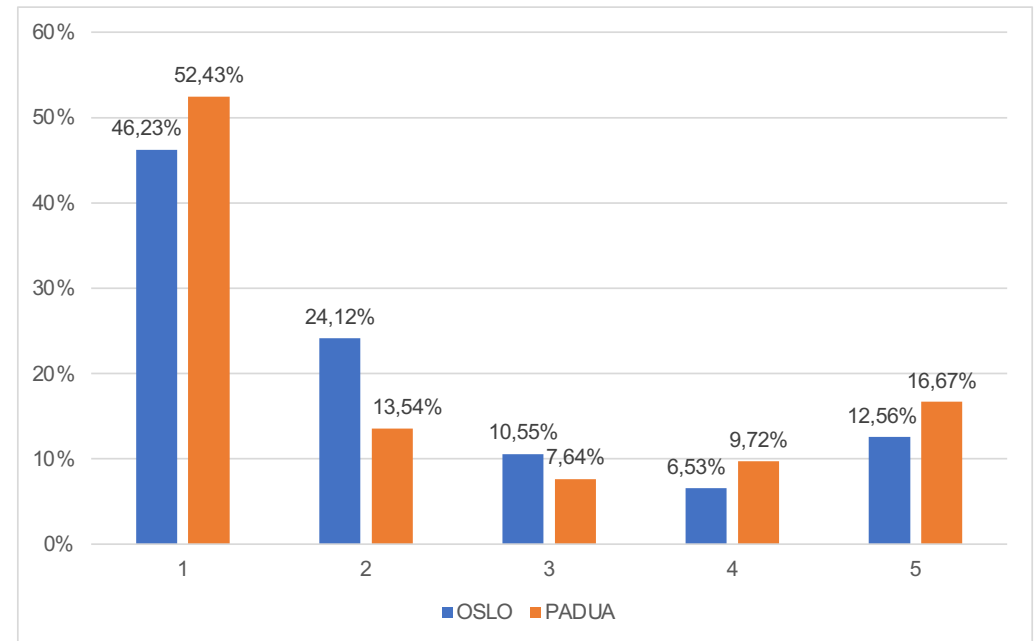

USEFULNESS

LEVEL of WORRY

WEB survey

Computer programs enabling the police, ambulance and firefighters to arrive to the point of the detected incident of violence faster
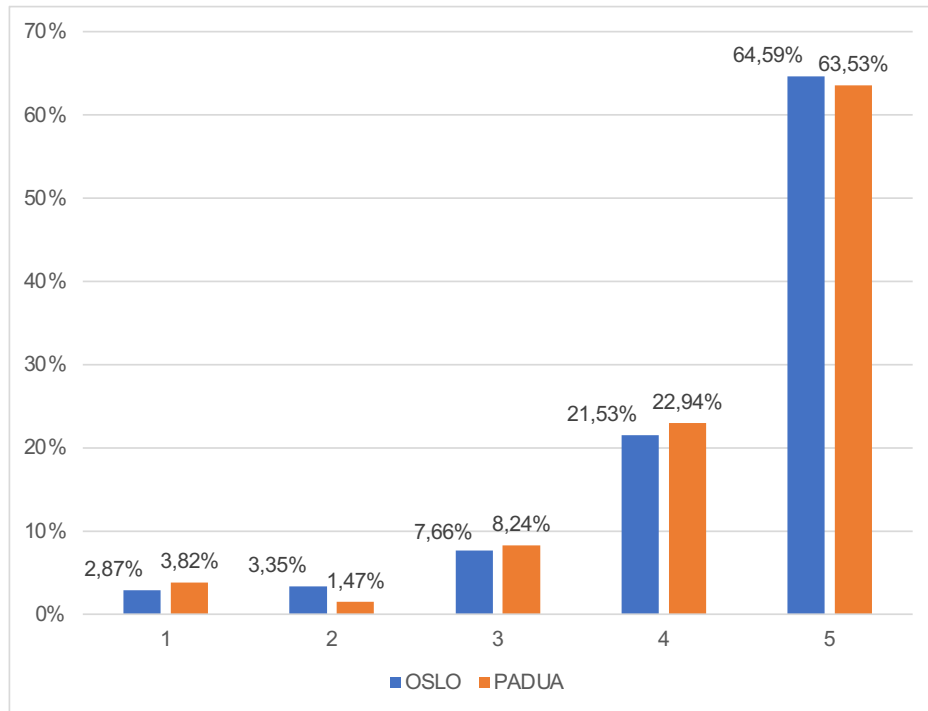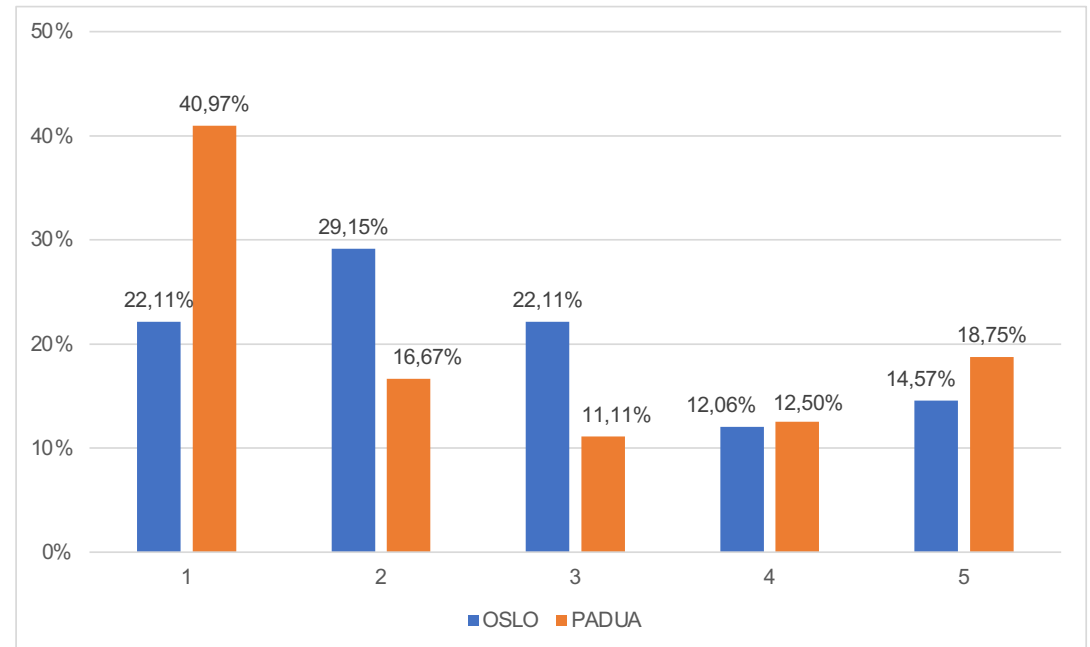

USEFULNESS

LEVEL of WORRY

WEB survey

Detection of attempts (successful or not) by malicious users to accesses confidential government documents or systems

USEFULNESS

LEVEL of WORRY

New Emergency Management in a Resilience Era Facing Health, Climate and Energy Challenges

Coffee break + time to give your opinion!! :)

impetus-project.eu

Thank you very much
for your attention,
your questions and comments,
for filling in the <u>IMPETUS web survey</u>
and sharing the link with your colleagues.

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The IMPETUS Consortium

RESEARCH

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SINTEF

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UNÎMES
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UNIVERSITÀ DEGLI STUDI DI PADOVA
University of Padova

cini
National Inter-university Consortium for Informatics

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Software Imagination & Vision
SIMAVI

CINEDIT
INTELLIGENT VIDEO ANALYTICS | MADE IN SWITZERLAND
CINEDIT

INSIKT
INTELLIGENCE
Insikt intelligence

XM CYBER
XM Cyber

THALES
Thales Nederland

SIXGILL
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Tartu Biotechnology Park

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CITIES

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