

# GDPR: Trusting the use of your personal location data

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# Our approach to the impact assessment



# T.6.1-Pre-normative analysis and assessment of legal impact

- Task T6.1 analyzes the regulatory framework that will characterize the development of tomorrow's Smart City market understanding how it fits with the solutions proposed in ESPRESSO. The scope is both at EU as well as local level focusing on the pilots studies in Rotterdam and Tartu.
- Leader: HIT, Other Partners: PwC
- Deliverable D6.1: The report provides an **analysis of potential legal/regulatory frameworks** likely to be introduced as result of technical evolution, societal trends or potential changes or extensions of these.
- D6.1: Delivered in June 2017



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# T.6.1- Outcomes (1/3)

- Key role played by EU legal frameworks\***: the adoption at EU level of different regulations and directives is providing the EU with some key tools to address a wide range of topics and to also generate several benefits for everyone. As an example, the adoption of the GDPR is estimated to produce € 2,3 billions of savings for businesses at EU level every year.

	Topics			
	Privacy by design	Certifications	Security	Data Ownership
Data Protection Directive (1995)			✓	✓
ePrivacy Directive (2002)		✓	✓	
GDPR (May 2018)	✓	✓	✓	✓

\*NIS Directive (July 2016), Cybersecurity Package (September 2017)

# T.6.1- Outcomes (2/3)

- **Importance of the Data Protection Directive for paving the way to the introduction of the GDPR:** adopted in 1995 it helped regulating the processing of personal data within the European Union. The following costs and benefits resulted from the adoption of the directive:



Average costs of approx € 2.200 sustained by companies in order to be compliant.



Increased trust as one of the main benefits.



Promotion of good practices in data management as another important benefit.

- **Contribution of the ePrivacy Directive to enhance the EU telecom and electronic communication regulatory framework:** the Directive entered into force in 2002. It was updated in 2009 in order to provide clearer rules on the rights of customers in relation to privacy and confidentiality of on-line communications. The following costs and benefits resulted from the adoption of the directive:



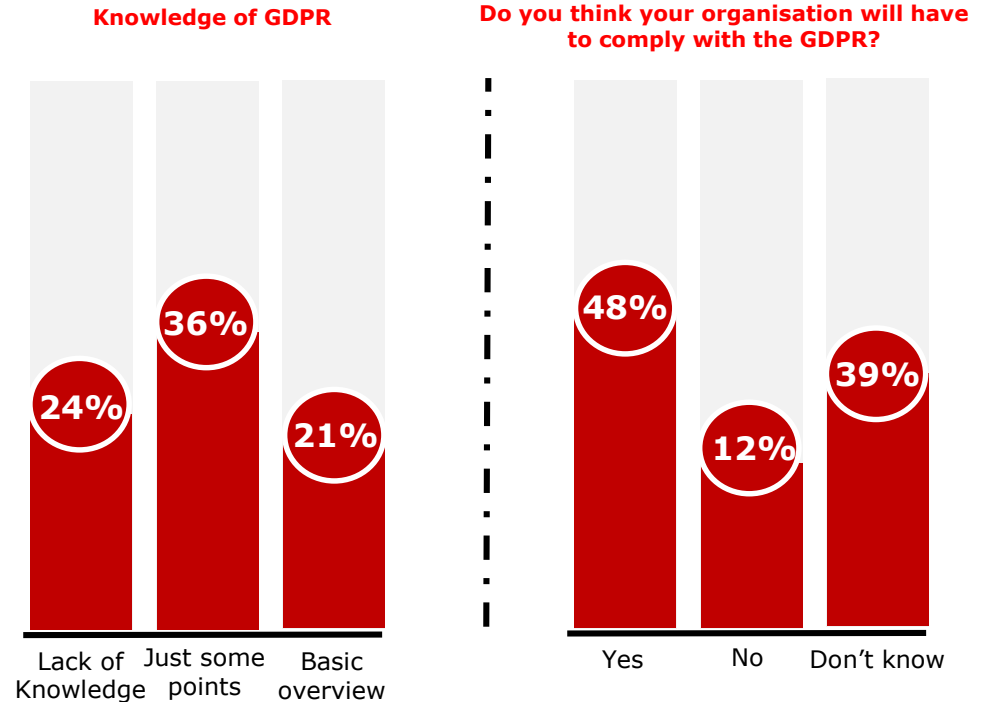
Compliance costs mostly related to the rules on security, commercial communication and «cookie» consent provision.



Ensured privacy protection for citizens and for legal persons as the primary benefit.

# T.6.1- Outcomes (3/3)

- **Partial lack of awareness of GDPR in Europe:** according to the results from the survey the majority of stakeholders has few incomplete information on the regulation which is supposed to enter into force in May 2018. A consistent share of respondents has also a complete lack of knowledge about the Directive. However, most of them think that their organisation will have to comply with it in the future. Only a minor share thinks that his/her organisation won't have to comply with it.



- **Transitory phase from old regulations to new ones in Pilot Cities :** use cases are aware and preparing for the upcoming GDPR by designing actual actions for mandatory implementations of potential changes in internal processes and procedures. Old procedures will have to be redesigned and aligned with the new regulation's constraints.

# T.6.2 & T.6.3 - Assessing the social and economic impacts

- Task 6.2 and 6.3 analyzed the social and economic impacts of Smart City solutions based on standards, by focusing both on the initiatives being deployed throughout the “pilot cities” of Rotterdam and Tartu as well as on other similar initiatives implemented in Europe and elsewhere. Both tasks highlighted the consequences from the society and economy as a whole by taking into considerations:
  - tangible impacts: in terms of cost and Co2 reductions, energy savings, etc.
  - intangible impacts: in terms of enhanced quality of life, creation of an innovative environment, increased economic competitiveness, etc.

Similarly to T.6.1 evidence collected from a stakeholders survey was also used in order to support the results. Furthermore, in order to assess the economic impacts at EU28 wide level in-depth projections were also conducted on some of the initiatives deployed throughout the pilot cities.

- Leader: PwC, Other Partners: HIT, FRAUNHOFER, UNIKL
- Deliverables D6.2 and D6.3: The reports provided an assessment of **social and economic/business impacts of the actions proposed.**
- D6.2 and D6.3: Delivered in December 2017

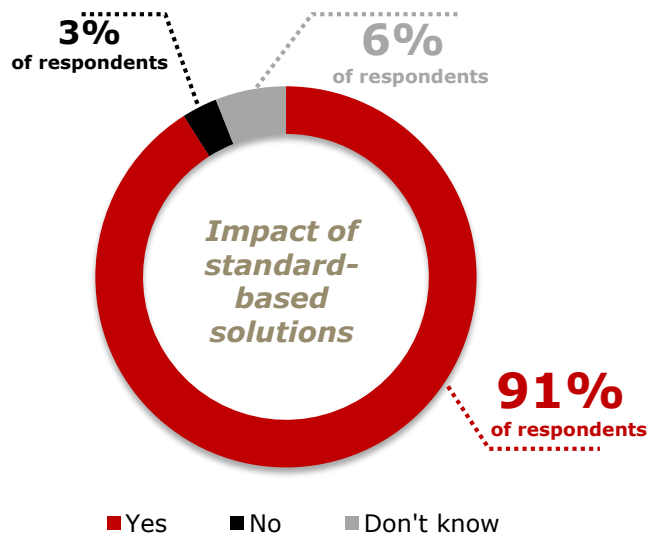


# T.6.2 & T.6.3 – Outcomes (1/5)

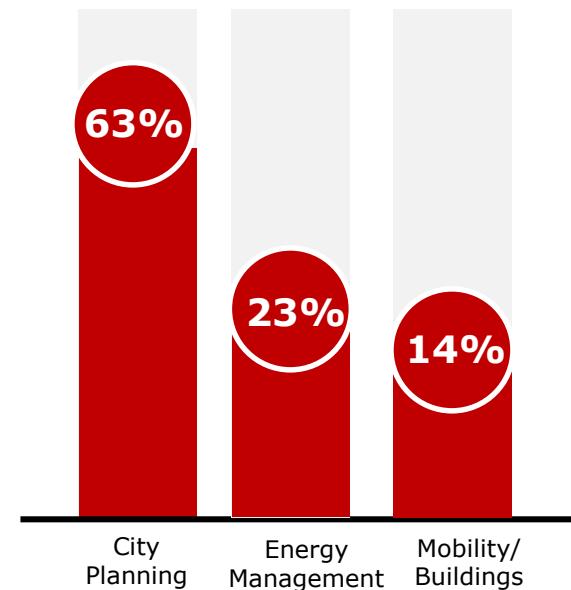
The analysis conducted underpinned the following impacts and evidences.

- **Key importance of standards:** according to results from the stakeholders consultation, Smart Cities initiatives based on standards have a higher impact than specific, context related initiatives. City Planning followed by Energy Management and Mobility are the primary domains for the use of standards in Smart Cities. This is also aligned to the topics of the ESPRESSO's pilots.

**Do standard-based Smart Cities solutions have a higher impact than specific context related ones?**



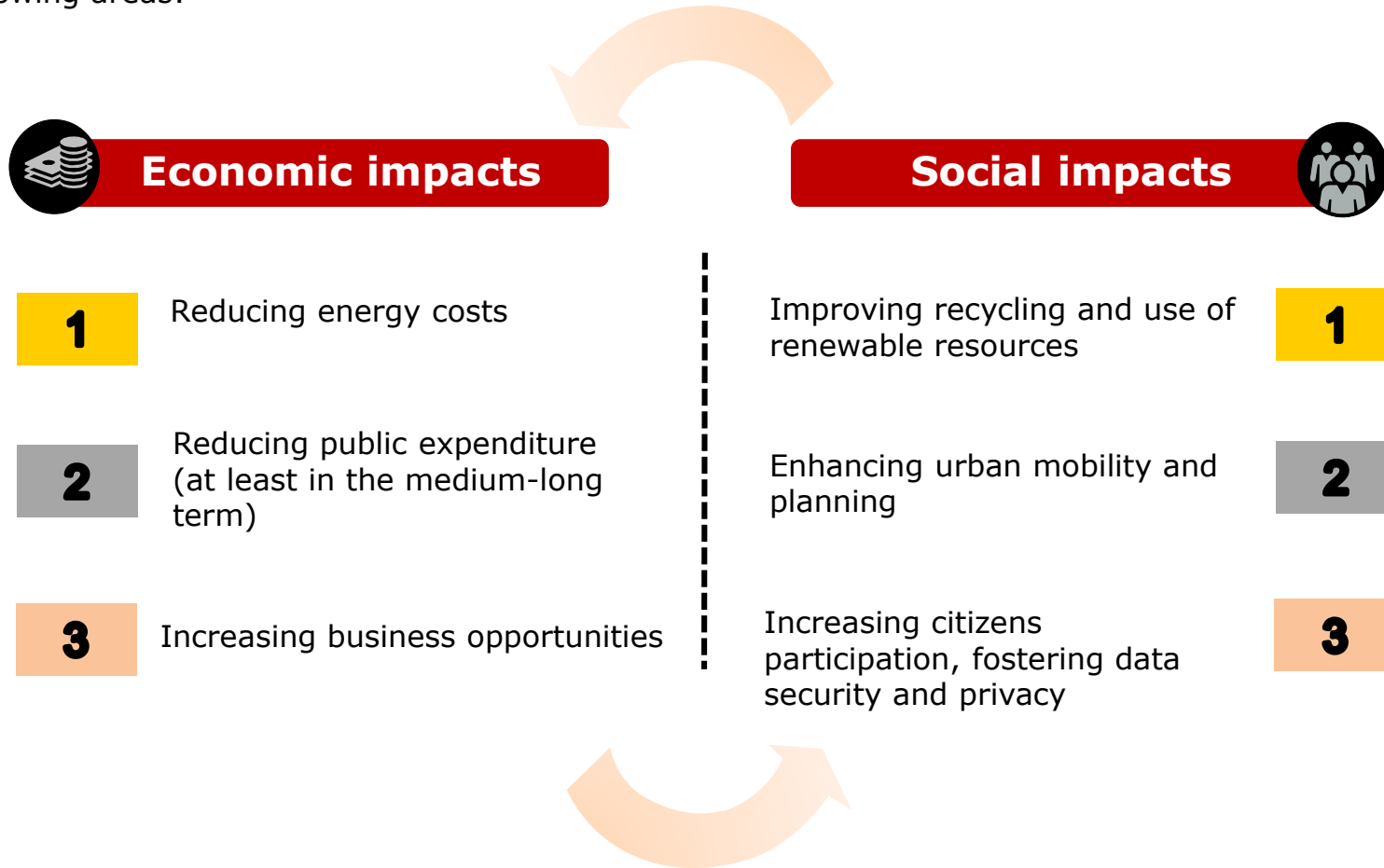
**Key domains where use of standard based Smart Cities solutions has greater impact**





# T.6.2 & T.6.3 – Outcomes (2/5)

Furthermore, according to participants to the consultations carried out, the highest economic and social impacts resulting from the use of standards in the context of SC solutions, can be recorded in the following areas:



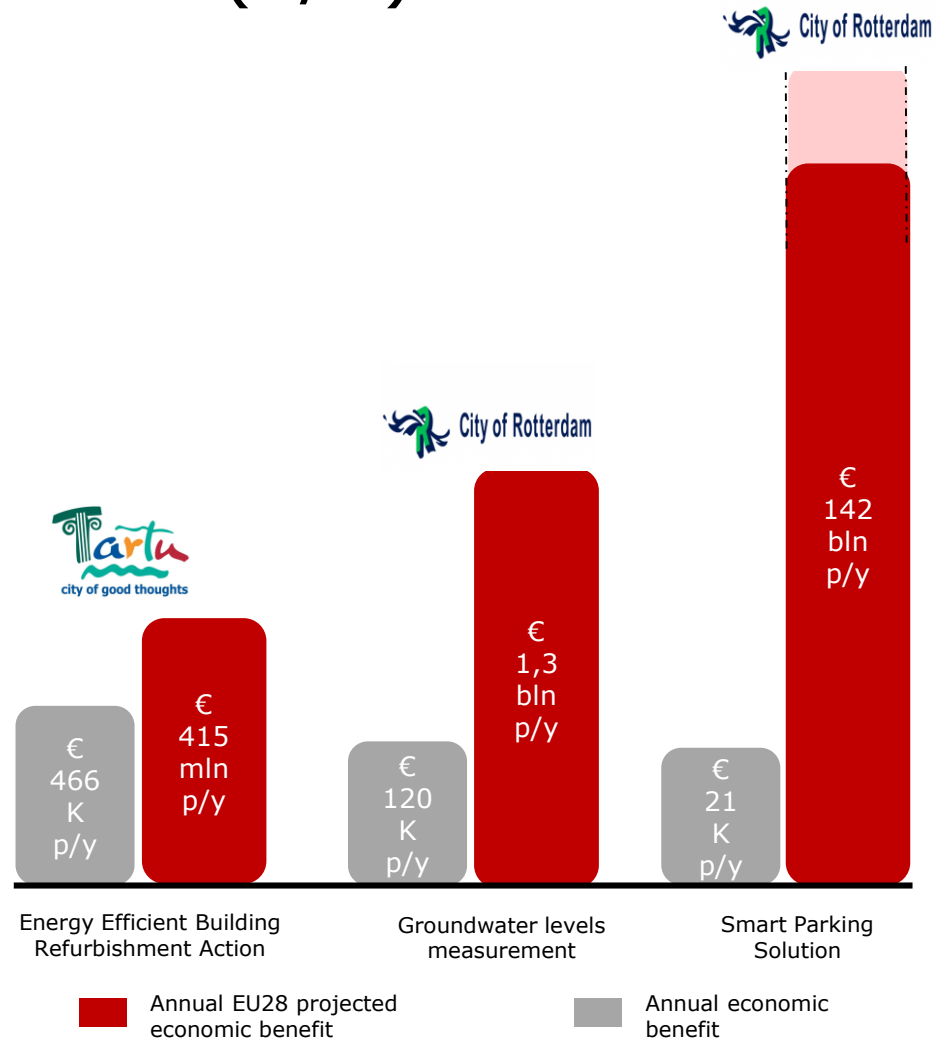
# T.6.2 & T.6.3 – Outcomes (3/5)

■ **Potential to generate savings:**

Smart Cities solutions also generate economic savings (i.e €1,1 mln annual electricity saving generated by the Oslo sensor based street lighting project). However, as it was the case for the ESPRESSO use cases high initial costs necessary to set-up the solution need to be taken into consideration along with long payback periods.

■ **Relevant economic benefits EU wide:**

Smart Cities solutions have the potential to generate high economic benefits if implemented in similar realities across the EU. The benefits are also amplified by the use of open standards which boost scalability and replicability.

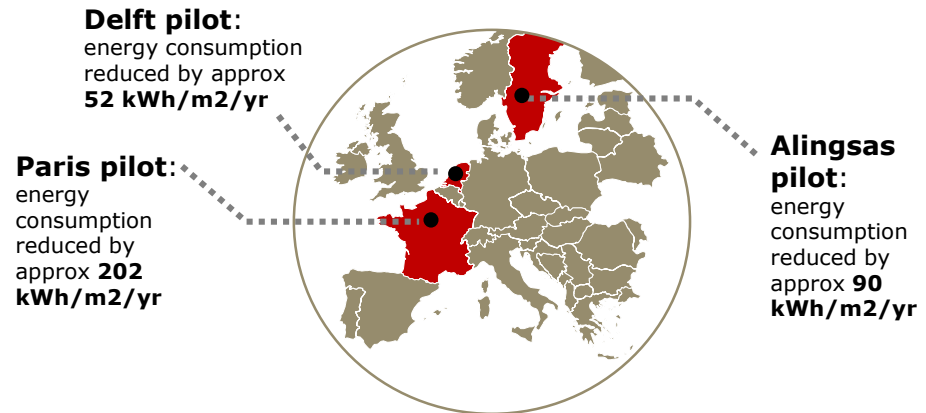


# T.6.2 & T.6.3 – Outcomes (4/5)

■ **Benefits in terms of lock-in reduction:** €1.1 billion are lost in the public sector yearly due to lack of competition consequence of being “locked-in”. The adoption of standard based Smart Cities solution contributes to reducing lock-in and to open up the market to multiple actors that could benefit economically from the adoption of similar solutions.



■ **Benefits in terms of reduction of the environmental footprint:** Smart cities solutions play a key role in reducing the environmental footprint of modern urban areas across the EU. As an example the following environmental benefits were achieved by the “Beem-up” project which involved the implementation of a solution similar to the one adopted by the Tartu’s “Energy Efficient Building Refurbishment” Action.



# T.6.2 & T.6.3 – Outcomes (5/5)

- **Key role of standard based 3D Models applied to city platform:** some of their key implications from a societal and economic point of view are:



## Economic impacts

- **Urban Planning:** analysis of traffic flows and pedestrian patterns; savings for the public administration. Lower costs also for businesses using the system.
- **Disaster Management:** support in the assessment of damages. Savings in terms of reconstruction time and costs.
- **Tourism:** city marketing for tourism promotion. Economic boost for businesses and professionals engaged in the tourism industry.
- **Re-use of Open Data and Public Sector Information:** economic benefits for businesses reusing data & information (estimated cost savings of €1.7 bln at EU28 level for the public sector, 25.000 Open Data jobs will be created in the EU by 2020).



## Social impacts

- **Urban Planning:** assessment of natural phenomena, simulate noise, heat and floods in order to improve city planning and liveability in urban areas.
- **Disaster Management:** support in the assessment of critical events and coordination of rescue operations.
- **Environmental Open Data:** Help reducing CO2 emissions (according to a report from the French Senate air pollution cause 42.000-45.000 premature deaths only in France and costs €101,3 bln annually), improve waste management, increase empowerment of civil servants, enhanced effectiveness and efficiency.

# Recommendations and lessons learned for cities from the impact assessment

