

(Extract from draft ETSI Technical Report)

## 10 Recommendations to standardization

### 10.1 Some major issues to address

Using the survey results and other outreach, including participation in conferences and relevant meetings, we can identify a number of major standardization issues that need to be addressed. The recommendations below have been proposed based on these issues; the “organisational” aspects of these are considered in more depth in **Annex A**.

The major issues are as follows:

- **Cities do not know standardization**  
Yes, there are exceptions, but these are very few. How can cities be given sensible information about standardization and participation without over-saturating them with information they will not be able to assimilate?
- **Cities cannot participate in standardization**  
On the whole they have no resource. Chicken-and-egg: standards-makers will not be interested to provide useful deliverables if cities are not present. How can SDOs capture city requirements and involve them without undue participation burdens?
- **Standardization is incoherent**  
Standardization is a bewildering maze for cities. Even if in Europe there’s a sector forum, not many people outside a narrow circle are aware of it. And internationally, each of the main SDOs has an activity on smart city standards issues, but collaboration is limited. How can standardization present a more coherent image?
- **Services are not designed for citizens**  
In most cases, services are not “designed” as such. Digital services tend to be a “hodge-podge” of upgrades to non-digital services, with resulting differences in approach and incompatibilities. Citizens receiving services are often the last element thought about.
- **Services are not accessible for citizens**  
Smart Cities do not generally support independent living of people with disabilities or other accessibility needs. Some efforts have been made in the health sector for improving quality of life and independent living of people with disabilities, but overall further focus is required on the accessibility of smart city services.

Whilst there is gradual improvement in physical accessibility – for example in transport - building/street accessibility still needs a lot of work. Use of digital support, for example for people to call for specialised transport facilities, needs to be more widespread.

In terms of digital services themselves, the specific needs of people with particular accessibility issues are not necessarily considered. Just as one example, if there are interactive screens to seek a service, are these accessible for people with visual problems?

- **A better approach to citizen data is needed**

Whilst of course in Europe we now have the GDPR to give better protection, and standards aspects of data protection and privacy are being given attention, the value of properly protected citizen data for cities themselves is not yet addressed - how can citizens' interests be better served if the cities don't have a coherent set of data on the use of their services?

## 10.2 Individual recommendations

### 10.2.1 Introduction to recommendations

Recommendations related to smart city standardization have to take into account a variety of actors and situations. Amongst those in charge, within the city organisation(s), of dealing with the citizens and their needs, a large number of different stakeholders is involved, with very different operational roles and responsibilities (e.g., front office, back office, technology development, integration and support teams, security enablement and enforcement, training).

As such, adoption and adherence to standards is not a solution in itself but, in order to be effective, has to take into account the stakeholders addressed by the recommendation as well as the technological background and the business processes involved.

This translates into different kinds – and levels - of recommendations that are grouped in the remainder of the clause into three categories that have a growing proximity with standardization itself:

- **Guidance.** These recommendations relate to the high-level approach that smart cities could adopt in order to deal with a number of citizens requirements. They are, in particular, suggesting the development of guidelines in destination of the smart cities at large as well as more specific ones addressing particular topics (e.g., safety and security);
- **Codes of Conduct.** These recommendations are suggesting, for smart cities, precise approaches to the development of solutions for specific issues (e.g., design and delivery of services). The proposed Codes of Conduct are more binding than guidelines addressed in the previous paragraph;
- **Standards.** These recommendations are addressing the standardisation system. They are defining new work items that Standards Developments Organisations could potentially integrate to their standards development plans.

## 10.2.2 Guidance

### **Recommendation 1:**

Ensure physical presence in management of city services, to support all user needs, but in particular those of vulnerable categories (sub-clause 5.2).

### **Recommendation 2:**

Draw up guidance material for smart cities to help them implement the proposed standard for service design and delivery (ex-Recommendations 3 and 9) (sub-clauses 5.4, 5.5.2, 6.1 and 6.2)

### **Recommendation 3:**

Prepare a Local Digital Economy and Society Index (DESI) for smart cities, which supports the cities to develop an outcome-based approach to city services, focused on improving outcomes for citizens (sub-clause 5.5.2).

### **Recommendation 4:**

Provide guidance for cities, oriented towards protection of the citizen, on cyber-security measures to be implemented across the city, and for individual services (sub-clauses 5.7.2 and 5.7.5)

### **Recommendation 5:**

Provide guidance to city personnel who have legitimate access to city services and technology, to protect citizen cyber security, including staff training and a code of good practice for management (sub-clause 5.7.3)

### **Recommendation 6:**

Review physical security arrangements by cities in the context of the vulnerabilities these create for city services, and the requirements to ensure the safety and security of citizens (sub-clause 5.7.4)

## 10.2.3 Codes of conduct

### **Recommendation 7:**

Draw up dedicated standardized guidance for cities concerning service complaint and redress procedures, aligned as far as possible with the EU's ADR principles (sub-clause 5.3)

**Recommendation 8:**

Provide standardized codes of conduct to help smart cities ensure correct design and delivery of citizen services, including a transparent and open declaration of the ethical approach taken (sub-clauses 5.4 and 6)

**Recommendation 5:**

Provide guidance to city personnel who have legitimate access to city services and technology, to protect citizen cyber security, including staff training and a code of good practice for management (sub-clause 5.7.3)

## 10.2.4 Standards

**Recommendation 7:**

Draw up dedicated standardized guidance for cities concerning service complaint and redress procedures, aligned as far as possible with the EU's ADR principles (sub-clause 5.3)

**Recommendation 9:**

Study the potential security difficulties for citizens arising from future over-dependency on ultra-fast 5G transmissions to manage and control apparatus in the city environment (sub-clause 5.7.2)

**Recommendation 10:**

Review physical security arrangements by cities in the context of the vulnerabilities these create for city services, and the requirements to ensure the safety and security of citizens (sub-clause 5.7.4)

**Recommendation 11:**

Explore a standardized approach to citizen uses for and requirements from the data spectrum (sub-clause 5.8)

**Recommendation 12:**

Standardize the basic elements of citizen-oriented service design, to provide clear and easy-to-use electronic interfaces, with background supporting information easily available, ensure human interface possibilities are always there (in whatever form) as back-up and avoid digital divide issues, by providing special interfaces designed for the less able, and support provided for these persons (sub-clauses 6.1 and 6.2)

**Recommendation 13:**

Explore a standardised approach to citizen participation without the accompanying privacy and security concerns, utilising shared data rather than open data (sub-clause 6.5)