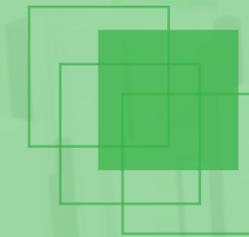# CITYkeys Experience

Recommendations from cities to cities

Foreword

The aim of this task is to highlight and share with city representatives the benefits of the developed framework; share the insights gained during the project; draw attention to the potential areas for the framework's application; and identify the strengths and present shortcommings, while sharing the knowledge of city representatives.

The CITYkeys Performance Measurement Framework is a holistic framework for monitoring, measuring and comparing the performance and implementation of smart city solutions and projects in European cities. It aims to support the cities in their decision making processes and to promote the exchange of knowledge and experiences.

The final stage of the project has been dedicated to collecting the cities' experience, views and recommendations, derived from their participation in the project. This infomation has been used to draft this handbook for city representatives, along with recommendations for the deployment of the Performance Measurement Framework. The aim is to highlight and share with city representatives (among them CITYkeys partners and follower cities) the benefits of the developed framework; share the insights gained during the project; draw attention to the potential areas the framework's application; and identify the strengths and shortcomings.

1

Methodology: Survey and interviews

FOCUS AND PURPOSE

This handbook is meant to serve as a reference document, which looks at performance measurement through the eyes of cities. It aims to:

- Capture the experience, lessons learned and perspectives of the partner and follower cities involved in the CITYkeys project;

- Promote the sharing of the approaches, information and experience among cities and experts interested in performance measurement;

- Lay out key recommendations for the application of the Performance Measurement Framework;

- Identify the framework's strengths, shortcomings, as well as the steps needed to unlock the full potential of performance measurement;

- Chart out recommended paths for the development and integration of performance measurement tools and systems.

One of the key requirements for the CITYkeys Performance Measurement Framework was that it had to be applicable in different urban contexts

One of the key requirements for the CITYkeys Performance Measurement Framework was that it had to be applicable in different urban contexts. The intended users of the framework are cities. Accordingly, a survey and a series of interviews were designed and conducted in order to collect and process the cities' relevant expectations and concerns and to identify the framework's most likely users and possible areas of application.

Since the participating cities have had different levels of exposure to the project, the representatives of partner cities Rotterdam, Tampere, Vienna, Zagreb and Zaragoza were interviewed more thoroughly than those of the follower cities. The latter have received a less detailed survey, which elicited 38 responses. In addition to the survey and the interviews, a half-day workshop was held in Vienna to facilitate a focused and detailed discussion of the role performance measurement systems play in smart city projects.

The authors of this handbook took a diversified approach to accessing and consolidating the required information. They took into consideration the cities' different levels of involvement, exposure and familiarity with the CITYkeys project, as well as their unique and divergent potentials and ambitions.

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2

Key questions and answers

Based on the responses of the city representatives, the following section sums up the recommendations for the potential application of the performance framework

Who can benefit from using the CITYkeys Performance Measurement Framework?

The survey and the interviews have identified the following potential beneficiaries:

- mayors' offices
- high-level city managers
- organisations supporting and consulting cities in shaping local policies
- municipal departments in charge of smart city management
- smart city managers
- municipal programme managers
- knowledge management departments and units
- civil servants and experts working for a project or developing projects
- managers of public buildings and institutions
- project managers

Which decision making processes can be supported by the CITYkeys Performance Measurement Framework?

Most respondents identified decision making processes at project level as being the most likely to benefit from the application of this framework. However, some cities, among them Tampere, considered support for strategic decision making a priority. The survey respondents and interviewees identified the following decision making processes:

- strategic decisions
- performance-based budgeting
- translating strategic goals into actionable intiatives
- checking the performance of individual projects against district-level development plans
- linking sectoral 'silos'

What purpose can the CITYkeys Performance Measurement Framework serve?

The framework could be used for a variety of purposes. It can be used:

- as a support system during the agenda setting process and to focus discussion
- for comparison and motivation purposes
- for identifying tasks that could be performed better and more efficiently
- for benchmarking differences and similarities
- for sharing the information and data between the cities in order to learn from each other
- as a reference framework during the operational management of different projects
- for measuring performance during ex ante and ex post evaluations
- at operational level, in the context of district development
- for establishing a stronger connection between district development and individual projects
- for the assessment of the level to which projects meet the goals set at the beginning
- to support stakeholder collaboration
- to facilitate and inspire the learning process
- for city internal self-assessment
- for an independent (external) assessment/evaluation
- as a flexible tool on social networks such as LinkedIn, even via smartphones
- to promote a change in mind-set
- to support the development of new approaches to city services by making data accessible and usable

What does your city need to be able to use the CITYkeys Performance Measurement System?

In order to unlock the full potential and benefits of performance measurement, your city must meet the following conditions/have the following measures and procedures in place:

- strong political support to enable true capacity-building and cross-sectoral collaboration
- a clear overall vision on what we want to achieve
- decision by the smart city manager(s) to employ the framework
- determination to work together on interdisciplinary, cross-sectoral issues
- presence of organised 'back-ends' that ensure efficient communication and information flow

- availability and accessibility of data

- narrowing down complex sets of indicators to key indicators, which can be easily integrated and used in daily life

- good coordination between the different offices and presence of a central IT hub

- sorting out the competition between the tools that bare already in place and new tools

- the ability to interpret and to address the growing flows of data

- ability to translate data into 'useful' information

- ownership of the CITYkeys Performance Measurement Framework from day one

- willingness and ability to co-create

The findings of the survey show that different city representatives have varied perceptions of the potential usability of the CITYkeys framework. This indicates that depending on the different stages of development that cities are in, different entry points for the use of CITYkeys framework are possible. These findings expose the flexibility of CITYkeys framework and the great range of areas that it can be applied in.

3

Survey results in short

Summary of survey results

The survey elicited 38 responses. Most of these came from public (city) stakeholders, representing a broad range of departments and positions within city and metropolitan administrations, ranging from public innovation and technical and environmental assistance to European project office. Responses were also sent by research and technology institutions and consulting firms, as well as by European organisations, such as the Brussels Regional Informatics Centre.

The survey questions, addressed to potential users of the CITYkeys Performance Measurement Framework, aimed to investigate the extent to which the framework is already being considered for application.

It is important to note that the respondents differed in their levels of exposure to, and familiarity with, the framework, having less detailed knowledge than others.

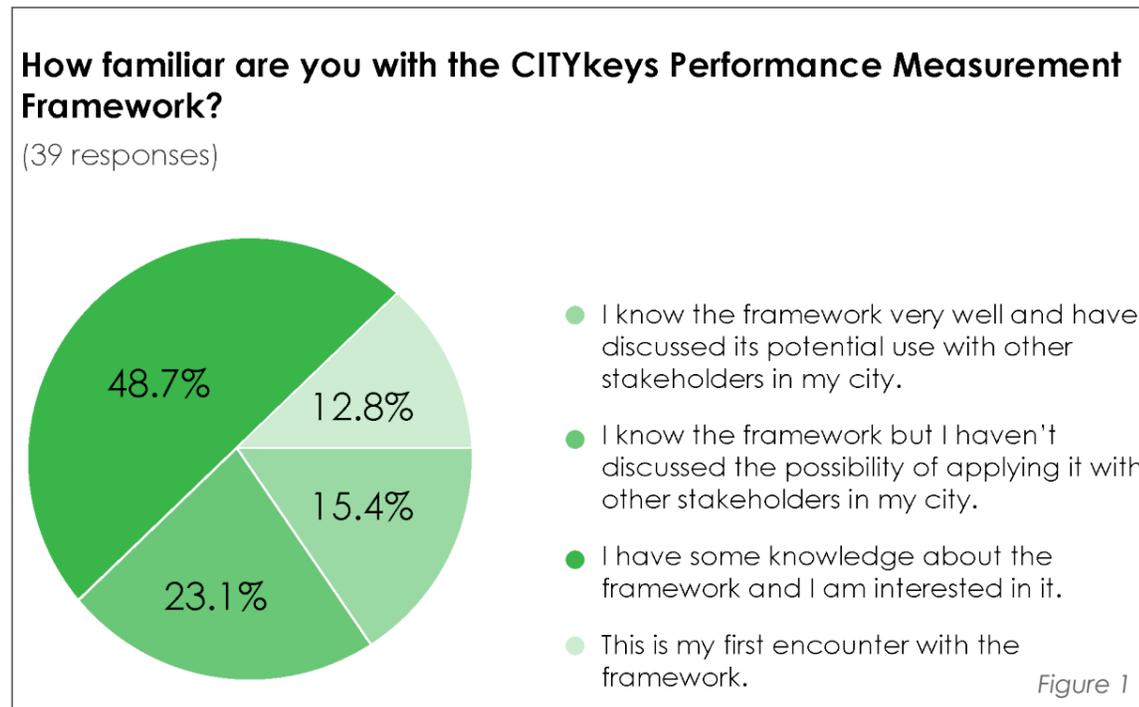The following section sums up the survey's findings.

Most of the survey questions were multiple choice, and space was provided for additional comments at the end of the survey.
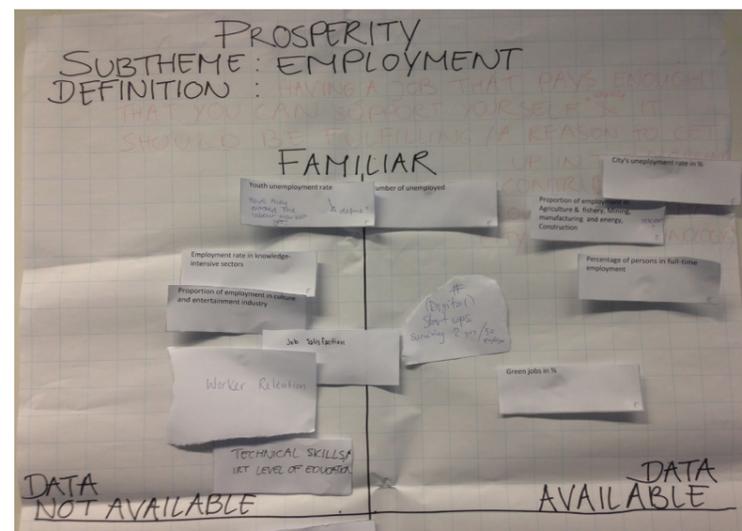
Level of familiarity with the CITYkeys Performance Measurement Framework

Most respondents (Figure 1) had medium level familiarity with the CITYkeys Performance Measurement Framework, but were interested in receiving more information about it.

How familiar are you with the CITYkeys Performance Measurement Framework?
(39 responses)

- I know the framework very well and have discussed its potential use with other stakeholders in my city.
- I know the framework but I haven't discussed the possibility of applying it with other stakeholders in my city.
- I have some knowledge about the framework and I am interested in it.
- This is my first encounter with the framework.

Figure 1

Extent to which the framework can be applied

According to most of the respondents, the CITYkeys framework is most likely to be applied as a support framework to be consulted in different contexts when required. As a second preference, two options were selected equally often: a) the application of the framework in the context of European projects and activities, and b) as a main framework for monitoring smart city development activities. (Figure 2)

To what extent could the CITYkeys framework be used in your city?
(39 responses)

- In addition to the existing (city-own) monitoring frameworks
- As the main framework for monitoring of Smart City development
- Mostly in the context of European projects and activities
- As a support framework, to be consulted in different contexts when required
- We won't use it because we have a different system in place
- Other

Figure 2
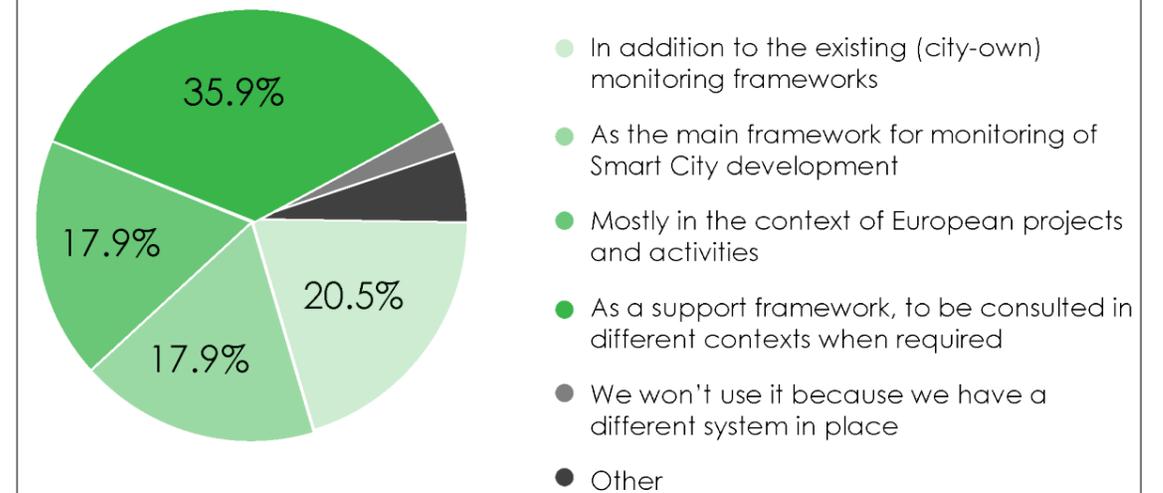
Potential beneficiaries of the application of the CITYkeys framework

High-level city managers were identified as the most likely users and beneficiaries, followed by urban planners, civil servants, and district managers and development coordinators. (Figure 3)
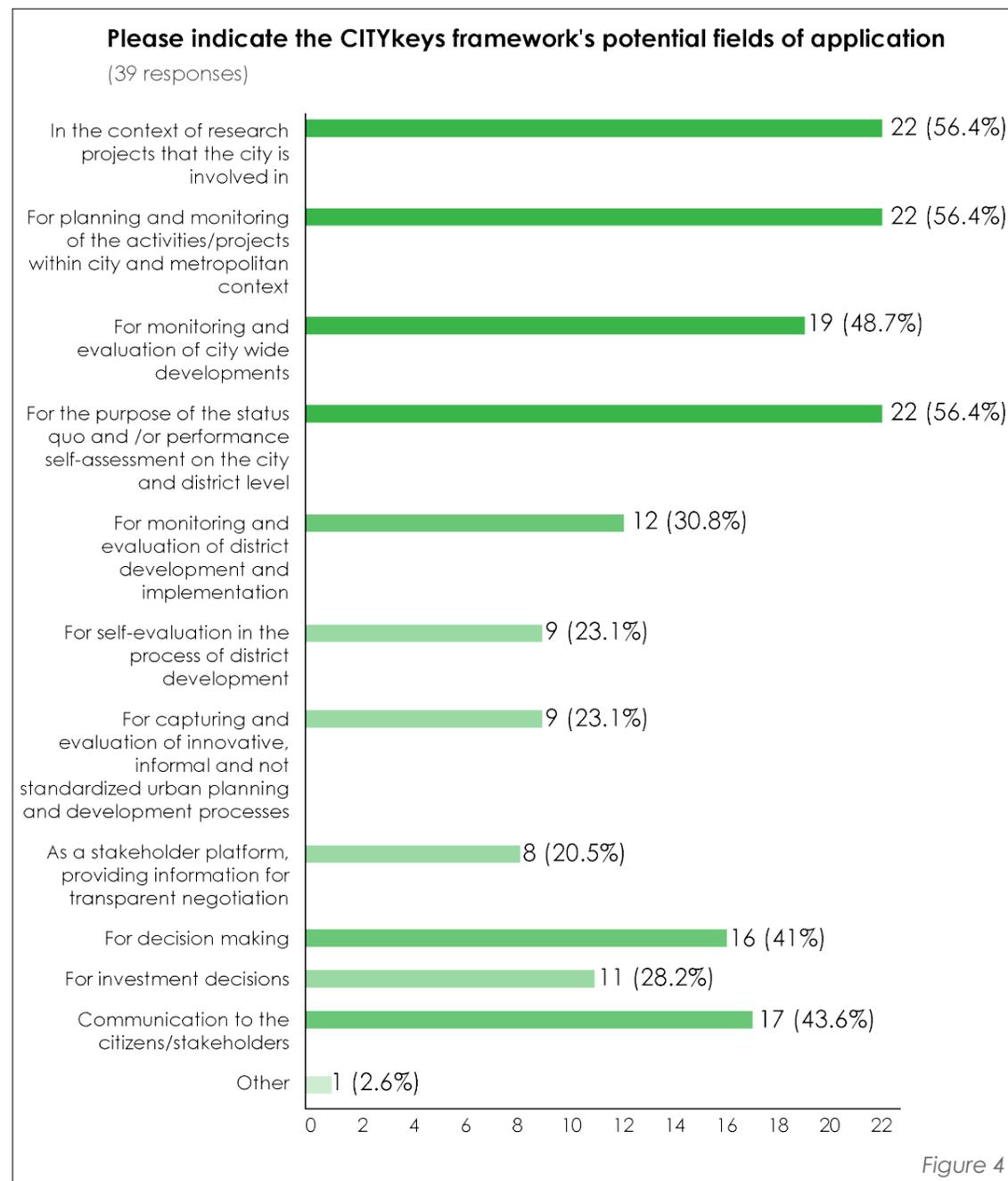
Please indicate the potential stakeholders in your city, who could benefit from the application of the CITYkeys framework
(39 responses)

Figure 3
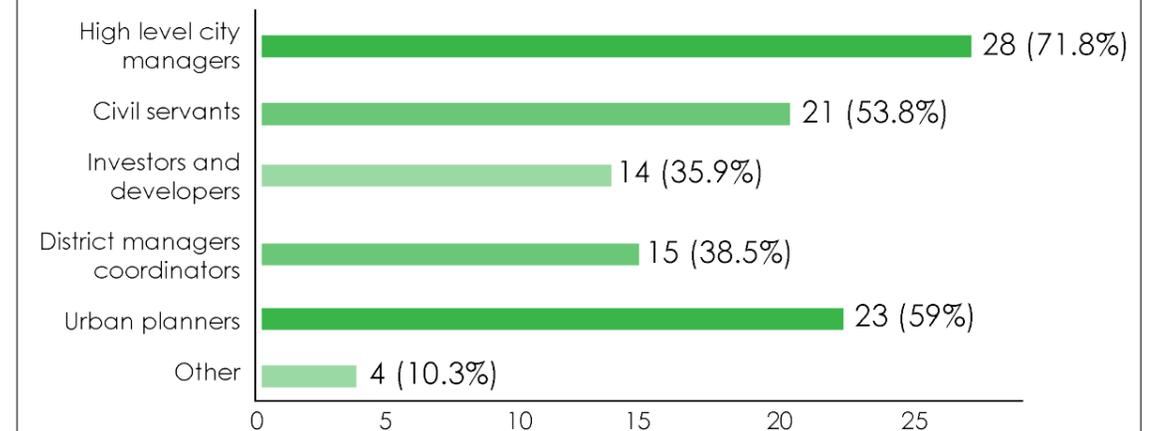
Potential fields of application of the CITYkeys framework

Three fields were named most often: a) in the context of research projects that the city is involved in; b) for planning and monitoring municipal and metropolitan activities; and c) for self-assessment of the status quo and/or the performance of the city and its districts. (Figure 4)

Please indicate the CITYkeys framework's potential fields of application

(39 responses)

Field	Value
In the context of research projects that the city is involved in	22 (56.4%)
For planning and monitoring of the activities/projects within city and metropolitan context	22 (56.4%)
For monitoring and evaluation of city wide developments	19 (48.7%)
For the purpose of the status quo and /or performance self-assessment on the city and district level	22 (56.4%)
For monitoring and evaluation of district development and implementation	12 (30.8%)
For self-evaluation in the process of district development	9 (23.1%)
For capturing and evaluation of innovative, informal and not standardized urban planning and development processes	9 (23.1%)
As a stakeholder platform, providing information for transparent negotiation	8 (20.5%)
For decision making	16 (41%)
For investment decisions	11 (28.2%)
Communication to the citizens/stakeholders	17 (43.6%)
Other	1 (2.6%)

Figure 4

What City-level decision making processes could be supported by the information generated with the CITYkeys framework?

The respondents identified a wide range of options. These included:

High level decision making processes and smart city development

- The processes of strategic measure setting based on data and information
- High level decision making
- Smart city planning decisions
- City-level decision making concerning future smart city projects
- In the context of city strategy framework development
- In order to define and prioritise smart projects and budget allocations
- Decision making in the fields of planning, mobility and energy
- Decision making in the context of implementation of the new city vision
- Supporting informed decisions on strategic development and urban improvement
- Decision making in urban planning processes
- Ensuring that urban regeneration embraces the advantages of smart city thinking and technological applications
- Strategic decision making in the field of waste management

Public policy

- Public policy decision making
- Social policy decision making

Budgetary and human resource related decisions

- Decisions concerning budget planning
- Decisions and measurement of HR effort per undertaken project
- Decisions about future Investments

Processes of negotiation, communication and participation

- In the process of negotiation and communication with different stakeholders, also serving as an instrument of persuasion
- Supporting the management process of citizen participation in public consultations
- Supporting decision making in urban planning and participation processes
- In the process of awareness raising in relation to sustainable development

Specific sectoral and measure related decision making processes

- The application of the CITYkeys framework can enable the measurement of the effects that certain measures would have (e.g. policy, technological investments). This pre-assessment could enable a timely taking into account of the effects on the market (supply) while considering further procurement procedures
- In selection processes of the adapted projects / considering technological solutions that ensure alignment with the key performance indicators (KPIs) chosen by the city / region
- Decisions on energy consumption (e.g. electricity and waste fleet fuels)
- The framework can be supportive as a general background for decisions and serve as a tool for comparison purposes

What district-level decision making processes can be supported by the application of CITYkeys framework?

The decision making processes at district level contain a variety of views that overlap with the city-level decision making processes (e.g. support of budgetary planning, mobility and energy-related decision making processes):

Budgetary and human resource-related decisions

- Budgetary planning processes
- For the timely and accurate involvement of the suitable personnel in project management, and for the quantification of the expected results in smart city projects
- For decisions on individual policies and investments
- Identification of new opportunities (business, energy transition, etc)

Impact assessment

- Measuring the impact of different scenarios
- Measuring the quality of the results in energy efficiency, environment, etc.

Communication and engagement

- Supporting the awareness raising process for citizen engagement
- Supporting interventions in social programmes

Policy and urban planning-related decisions

- Setting (policy) boundary conditions - minimum sustainability performance - for area/real estate development overarching building scale
- Evaluation of aspects not yet integrated in planning processes
- All district development projects/processes that require accountability
- District planning processes for energy efficiency and environmental sustainability
- In the process of urban district development
- Informed decision making processes on service delivery and development

Selection and comparison of the smart city projects

- Decisions about future smart city projects at district level

Sectoral and technological decision making processes

- Selection of technologies and implementation plans
- Supporting the processes of mobility and energy-related district planning
- Supporting the process of validation of district heating KPIs

Usefulness of the CITYkeys framework in a local context

Over half of the respondents considered the CITYkeys Performance Measurement Framework useful in certain cases only, adding that the framework is generally useful and relevant in their local context. (Figure 5)

Please rate the usefullness and relevance of the CITYkeys framework in the context of the decision making processes within your city

(39 responses)

- Very useful (in general)
- Useful (in general)
- Useful only in some cases
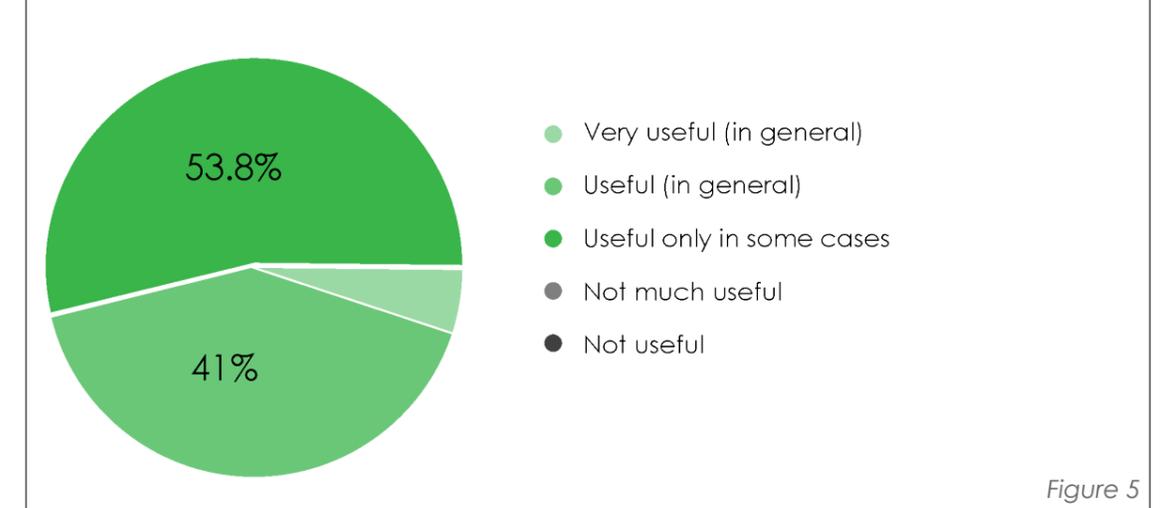- Not much useful
- Not useful

53.8%

41%

Figure 5

Main barriers to the framework's application

The respondents identified the following barriers to the application of the CITYkeys Performance Measurement Framework:

Complexity and time

- Complex and time-consuming to use
- The framework is too 'heavy' to be applied in full. It offers a sufficient set of KPIs, but contains too many checkboxes. Useful as a planning support tool and for stimulating dialogue (and decision making) between stakeholders
- The length of decision making processes and time needed for data updates
- Complexity of the framework (and its presentation) can complicate alignment processes

Local contextual and cultural resistance

- Knowledge of it, internal cultural resistance
- Adoption by stakeholders of a single methodology
- Resistance to change and to acceptance of the framework
- Lack of awareness
- Not a priority for local councils to implement it

Organisational

- Lack of coordination
- Cross-sectoral input required (from different departments)

Data availability

- Lack of complete sets of data in certain cases
- Provision of resources to collect data
- Availability of data

Competing frameworks

- One of many KPI systems, but the first for smart cities
- Knowing and understanding the framework in light of the existence of several similar frameworks
- Ongoing use of other types of indicators.

Motivation, funding and human resources

- Access for funding of such applications
- Political decisions driven by other motives
- Resources, especially human resources

Conflicting interests and views

- Different viewpoint of various stakeholders

Perception

- It is not my city. It is an EU project. Some of its parameters pertain to industrial issues (waste, heat), which do not appear in the CITYkeys project

## Key opportunities are seen in the following areas

- Enabling interaction with other tools such as sustainability indicators, to find the right - accurate and up to date - information, needed to communicate about smart city projects and to project results. Keeping the focus on what we really want to achieve
- It is a great opportunity for co-analysing CITYkeys data in a network of cities
- Framework application can provide visibility to smart projects
- Application of the CITYkeys framework can help stakeholders to close knowledge gaps and to receive informed support
- This framework could add value to the delivery of the regional City Deal programme (Edinburgh), providing insight and analysis to aid decision making and monitoring
- This framework could increase the quality of already existing indicators used for measuring city projects and urban pilots

Main drivers of the framework's application

Cities' needs

- Need for strategic management
- Need for a standardized approach
- High ambitions (healthy urban living / sustainable redevelopment / CO2 targets)
- Required investments - someone needs to take responsibility for investing in key infrastructure required in the city
- Need for cost benefit analyses of smart city projects
- Comparing KPI-based measurements across cities
- Communication and (city) marketing
- Possibility to learn from other cities
- Demand for replication of projects
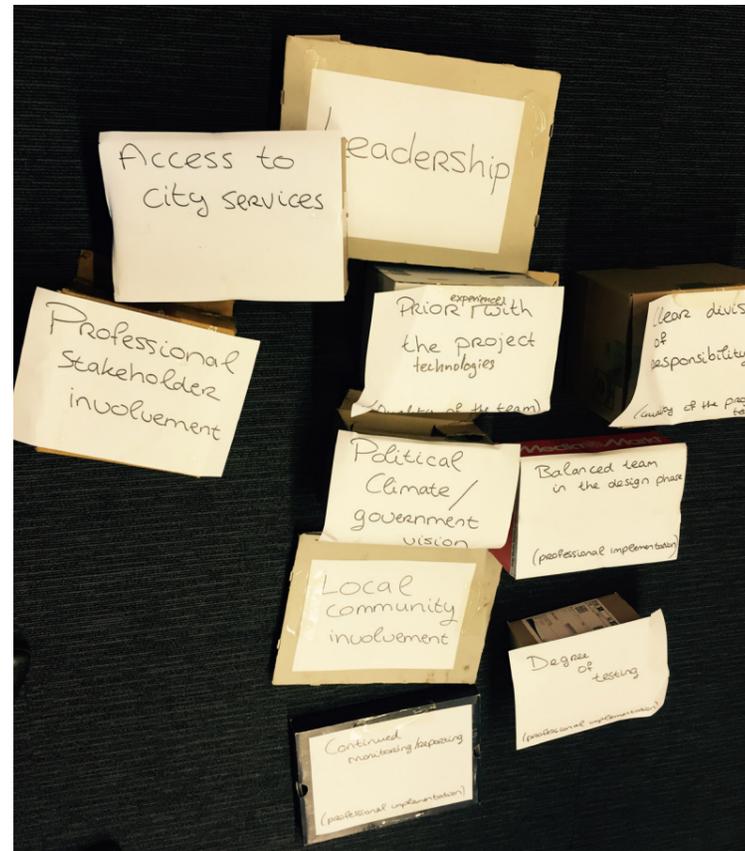
Needs and interests of relevant stakeholder groups

- The Agenda 21 Local Forum, the two departments of ICT and Environment, the local university
- Need for government and industry engagement
- Interest by ICT developers, innovation and research institutions and the municipality
- Need for stakeholders with different backgrounds to 'speak the same language' regarding timelines, potential benefits etc.: cross-sectoral cooperation
- Presence of political will

Features of the CITYkeys framework itself

- Enabling practical application
- Making the framework simple
- Simplicity and ease of application are keys to the framework's wide acceptance
- Being a ready-made and easy to use tool that defines critical problems

Delivering added value through the application of the CITYkeys framework

The respondent identified the following added values:

Performance measurement and impact assessment

- A new holistic tool for the assessment of the city's performance (provided data is available)
- It serves the purpose of inspiration and overview
- It enables a better understanding of the city's needs and performance
- The framework application can enable evidence-based policy setting and policies assessment
- It can be as a structured performance management tool to increase public understanding and encourage participation
- It enables the measurement of the impact that specific policies and projects have
- It enables the monitoring and measurement of the success of smart city strategic plans
- A tool that allows the comparison of already existing strategies
- It enhances stakeholder support and improves planning due to provision of information
- It supports evidence-based policy development and the evaluation of processes and projects
- The framework provides KPIs that can be shared
- It enables better planning, and facilitates the assessment of the status quo for different purposes. It opens up a new understanding of urban problems, new ways to coordinate urban technologies, supporting new forms of urban governance and organisation

Learning from other cities

- Keeping track of own performance while benchmarking with other cities
- If standardised, it could be used for benchmarking
- Enables comparison with other major cities
- Supports the learning from other cities and enables the setting of priorities for new initiatives
- Enables comparison with other evaluation frameworks

Support to develop new business models

- It could provide a key tool for identifying and agreeing upon new (potential) business models
- It helps to identify potential business opportunities, and supports the ongoing development of smart cities programmes
- It supports the development of data for use

Based on sound methodology

- The CITYkeys framework is a complete and precise tool based on sound methodology. It is flexible and allows stakeholders to choose diverse indicators based on individual city specifications and data availability
- The framework can be applied in order to adopt rules and measurements that have proven their validity across European cities, which can result in comparable values and identification of measures that need improvement

Potential application of CITYkeys framework at city level

A few cases for specific application of the framework have been identified by the CITYkeys partner cities Tampere and Zaragoza, which are described in the following section.

Over the last six years, the Mobility Department of the City Hall has pursued an ambitious plan to foster green mobility through a new axial tramway that has significantly reduced the number of vehicles entering the city centre. The city has also planned and built several kilometres of new bike lanes.

Attaining a healthy mobility mix requires the presence of a truly intermodal network. CITYkeys gave the Smart City Department of Zaragoza a good opportunity to start a dialogue with the Mobility Department about mobility indicators. According to CITYkeys data, the combined use of bicycles and tramways is still rare, and a particular indicator reveals the reason: the 'Access to vehicle sharing solutions for city travel' KPI, which demonstrates the accessibility of the public bike system in a city, is relatively low, especially along certain parts of the tramway network, and the business model of the public bike network does not support new extensions.

As a result, the city's Mobility and Smart City Departments have launched a public contest targeting entrepreneurs and cooperatives active in the bicycle sector. As part of this process, they were invited to participate in the co-creation of a new service, BiciSur, which aims to provide secure parking facilities for bikes at certain tramway stops (starting in the southern neighbourhoods).

The city has received numerous proposals to address the BiciSur Challenge. Since one key requirement was the creation of a physical co-creation workshop, complete with the data-based identification of a gap in the city's mobility policy, many of these proposals came from the local innovation ecosystem. The contest has contributed to the city's efforts to align its actions with the citizens' needs.

Tampere uses the CITYkeys performance measurement framework predominantly at strategic level. The city's aim is to track the progress of its smart city projects at municipal level. Incorporating smart city issues in the Tampere's municipal development strategy is an important step in this process. The next strategy will be drafted following the scheduled 2017 municipal elections. The results gained through the CITYkeys framework will feed into that process.

The analysis of the indicators collected is even more important than that of the data themselves. Working with such complex sets of information requires the reconciliation of different points of view. The related project meetings must be properly organised to enable the participants to discuss the issues and learn from each other. The relevant data should be analysed within the network.

Potential application of CITYkeys framework at EU level

The CITYkeys framework is a valuable tool for cities interested in networking and exchanging best practices across national borders. Our experience shows that the availability of an open and transparent framework significantly increases the efficiency of urban decision making processes across Europe.

Knowledge sharing: A performance measurement framework can provide a snapshot of a city: it can highlight the areas where it is doing better than the average, and can equally flag the unsolved problems. Such a snapshot can help municipal leaders identify other cities in a similar boat. The CITYkeys framework is an efficient enhancer for knowledge sharing.

Replication of projects: A holistic framework of key performance indicators (KPIs) can provide a quick, visual overview of the project results and can help identify the areas where the project will be most beneficial for the city (environment, mobility, economic development, etc.). KPIs are a great tool for presenting and comparing projects across borders. The CITYkeys framework enables the replication of projects, as well as the comparison of approaches and results.

Project finance: In an era of increasingly complex when 'integrated' projects that have an impact on multiple functions of a city, project financing needs new tools to compare and select the best-suited solutions. This is true both in the local context – when a single city has to choose from a number of alternatives– and in the European context – when an international organisation or financing institution has to select projects that meet its objectives or match its potential.

Joint procurement: Based on the European Commission's and the member states' legislative efforts, many cities are experimenting with 'joint procurement' or participating in joint innovation procurement schemes. CITYkeys can offer valuable help when a common solution or product that might have different results in each participating city is selected and procured.

Smart city index: The CITYkeys proposals for building a smart city index can help cities across Europe identify other cities that are close to their level of smart development or focus on the same areas of development. Decisions on collaboration, participation in project consortia and experimentation can be greatly enhanced if such tools are made available to cities.

Potential application of CITYkeys tool

The KPI tool developed within the CITYkeys framework encourages and supports cities in their daily indicator-based target setting and monitoring activities. By providing a platform with a common set of quantifiable indicators, it is also expected to help cities improve their data collection practices and stimulate cross-departmental collaboration. All this will make city-level data management and reporting easier. The tool's automatic dataset reading functionality should also encourage cities to store performance data in machine readable formats and as open data, which in the future would help them automate their data collection processes and analyses.

During the planning phase, the project targets can be evaluated using CITYkeys KPIs, and the decision on whether to start a project can be made based on the projected benefits. During the implementation phase, the results can be monitored using the same KPIs, which can assist city managers in steering their project portfolio. Different city departments can also store and assess their data using the same set of KPIs, which will make it easier for city managers to evaluate and report on their projects' progress. The tool makes it easier to collect, store and report on data. Data visualisation enables better tracking of performance.

Cities can use this tool in the following decision making situations:

- comparing, evaluating and deciding on project proposals
- annual monitoring and assessment of progress of ongoing projects
- post-project evaluation
- annual city level target setting and monitoring
- defining quantifiable targets for smart city strategies and monitoring annual progress
- reporting on project and city level targets and achievements with quantified performance measures and visualisations

4

Conclusions

The interviewees and the survey respondents perceived the framework as useful in diverse fields of urban activities. Its flexibility has been recognised as an added value

The entire process of development of such frameworks is about learning that should be continued in the cities and throughout Europe, e.g. in the European Innovation Partnership on Smart Cities and Communities (EIP SCC)

The CITYkeys project to develop a performance measurement framework has been successful in that:

- a prototype of the framework is available and accessible for all interested users
- it has been developed and tested jointly by municipalities and city network representatives, i.e. the scientific partners in the project
- a prototype tool has also been developed to demonstrate the possibility of 'transforming' the framework into an IT application
- potential business cases and models for smart city performance measurement have been assessed by researchers, city representatives and local SMEs. The first set of business models has been developed.

The framework is now available and ready for deployment in cities and at EU level. The project partners would like to share the following recommendations.

Recommendations from cities to cities

- Embrace flexibility and change the mindset
- Establish clear targets, vision and strategy first, in order to fully exploit the framework's benefits
- Adjust the framework to your local context, requirements and conditions
- Link performance measurement with the existing processes and information/data streams as well as with the interests of the local stakeholders
- Involve and engage the local actors and establish synergetic relationships among them
- Create cross-sectoral links and communication
- Consider using the framework for benchmarking, to learn from each other, and to understand what we can do better, rather than for ranking cities

Drawbacks and potentials

- The complexity of the systems/models needs to grow together with the understanding of the model: step by step

- Taking into account the very different starting points that cities are at. Many cities already have a system in place, which only lacks a few linking elements, while other cities are at the very start of the entire performance measurement process. Individual cities are rooted in different local framework conditions and undergoing different stages of development that require more specific and tailored performance measurement systems.

- To work jointly towards a shared data 'place', where different layers, such as district heating and energy savings, can be integrated.

- Using such a framework for infusion of new impulses and inspirations: there is not only one single way and approach to the application of performance measurement systems, but much rather many optional routes that can be taken.

"

Most importantly we do need a lot of cooperation, communication and collaboration effort between different systems and political will and support, enabling a true capacity building concerning joint work on cross-sectoral challenges and sets of information.

In this context however, the municipal capacity as well as time have to be taken into account. Most likely, we would consider only the main indicators as found in the CITYkeys project. I think this collaboration is a good starting point for the future. Although, it will not be an easy path, since numerous barriers do still exist. We should see this undertaking as a learning process and also remember that the starting points of tackling the existing challenges are different in each city!

Sanja Malnar Neralic, Zagreb, Croatia

"

CITYkeys could support the process of agenda setting and raising (a better focused) discussion. However, this process is very much depending on the existing ability and the perspective from which the available information is being interpreted. Before generating more and more information, we do need to focus on the process innovation. Smart city is more than a 100 implemented smart meters.

Much rather it is the making of connections through the silos: this is the essence of smart cities: where and how you make clever connections between processes, projects and activities: 1+1 = 3. In that sense, a smart project is really something else than what a smart city is.

Replicability can only exist once the first cities are enthusiastic on what is there and the 'back ends' concerning the process of implementation of such framework are organized. The key message towards EU is that an open mind-set and understanding about underlying local process is required, if we are to achieve outcomes that have any impact. 'Being in control' suggests being able to deliver what was promised.

'Reality is a process', including the projects that you did not expect happen, we have to remain flexible. Being smart is giving yourself some freedom in why, what, how and when do you want to achieve something.

Roland van der Heijden, Rotterdam, The Netherlands

"

In order to draw the full benefit from such a Framework clear targets need to be established. Having a clear vision and a strategy is essential. At this point a more general reflection on the topic of Smart City is necessary. For the time being, the Smart City branding is focused on the outside image, yet local multiple urgent social issues as well a challenging situation concerning employment and energy poverty are pressing. In this context as well, CITYkeys Framework could support the open government strategy by providing information in the context of participatory activities. Within our 'Open Government Strategy' Smart City is just one element.

Daniel Sarasa Funes, Zaragoza, Spain

> Smart city performance measurement frameworks could be used for various purposes, for instance, during the process of project initiation, for communication purposes or to evaluate projects in order to benefit from the lessons learnt. To ensure a useful measurement framework, it is essential to define its purpose and target group at the beginning. At the same time the measurement framework needs to be applicable to the practices of the cities and therefore the cities' structures and processes need to be taken into account.
>
> In the European context this is rather challenging since the understanding of smart city and the cities' requirements regarding performance measurement vary. It requires a lot of alignment efforts between different stakeholders in the first place: in order to achieve useful results, placing the cities and its citizens into the core of attention is the key in this context.
>
> *Ina Homeier und Eva Pangerl, Vienna, Austria*

> Our intention in Tampere is to support and enable a multi-professional analysis of data and information and to organize the data and decision management accordingly. It is also important to collect information in addition to what is already being collected. In this context, cross-sectoral and interdisciplinary work is absolutely necessary. The prerequisite for this is the ability to link the indicators from different fields and domains. Coordination of these activities in the case of Tampere is performed by the Knowledge Management Department/Unit.
>
> *Elli Kotakorpi, Tampere, Finland*

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