PROSPECT

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#H2020PROSPECT

Needs assessment of local and regional authorities

in implementing projects related to sustainable and climate action plans with innovative financing schemes

INTRODUCTION

The aim of PROSPECT is to enable peer to peer learning in regional and local authorities (municipalities, cities, energy agencies, provinces, regions) to finance and implement Sustainable Energy and Climate Action Plans (SECAP). The learning empowers them to make use of good practices of their peers when developing financing schemes for their plans. PROSPECT addresses the needs of regional and local authorities (referred as *authorities*) through developing a complete peer to peer learning programme. The learning process is focused on how different sustainable energy projects have been successfully financed. Peer to peer learning involves sharing information and experience from each other through mentoring activities, work shadowing, and study visits, among other methods. The learning programme is divided into five thematic areas/ modules that include development of financing for:

1) Public buildings
2) Private buildings
3) Public lighting
4) Transport (private and public)
5) Cross sectoral

This document is short version of Deliverable 2.5 which has a detailed update of initial findings, based on the lessons learnt during the PROSPECT project (running between 2017 and 2020), of a needs assessment, provides an overview of the needs and findings of public authorities, and comes up with conclusions and recommendations for the future.

ABOUT THIS DOCUMENT:

This document is a structured according to the main types of needs we have observed among public authorities.

- The first part is about the thematic areas which we often call 'modules'. There are also handbooks prepared for each of them.
- The second part is about the framework conditions which we have been divided into three areas: financial, legal, and capacity-related.
- The third part is about the financing schemes. PROSPECT aims at learning about innovative financing schemes. There is an introduction of each of these and then the key findings are presented.

At the beginning of each part, there is a 1) reference/ quote about the initial findings (2017) and then 2) the questions we extracted and tried to answer and 3) key findings.

METHODOLOGY:

After the preparation of the 'Initial report' (2017), applications to the learning programme started. For this update, not only have the applications been analysed with the support of the early needs assessment, but these applications, in a bottom-up way, have also provided useful inputs to the final report (D2.5). It includes the interests from the candidate mentees expressed in their applications, and the type of thematic area and financing schemes offered by mentors. The information given by the mentees in their qualitative answers in their applications to the PROSPECT learning programme have been used for the content. Each mentor and mentee participating in the learning programme, have been asked to fill in a benchmark survey with very detailed and complex questions. The benchmark survey results have been analysed in more detail in other deliverables of the project. In this report, we focus only on the qualitative answers to questions which may relate to potential needs. Finally, based on the main findings of the 'Initial report' (2017), a survey was put together in beginning of 2020 to ask cities and regions to validate and update on their needs. The online survey ran for a month between March and April 2020.

For more details please visit PROSPECT D.2.5 Needs assessment (June 2020).

Photos from the study visits of the PROSPECT learning programme
See more: https://h2020prospect.eu/library/mentorscorner

PART 1- THEMATIC AREAS

The five thematic areas covered by the SECAPs: 1) public buildings, 2) private buildings, 3) public lighting, 4) transport and 5) cross-sectoral (i.e. climate adaptation, renewable production).

"Local authorities preferred to direct their sustainable and climate investments towards public buildings and public lighting, but these areas represent only 2.2% of total municipal CO2 emissions. Conversely, the desire to place such investments in the areas of private buildings and in transport is very low, while the latter alone accounts for 30% of energy consumption throughout the European Union. The lack of desire to invest in certain areas largely correlates with the perceived difficulty of doing so but is heavily out of sync with the efficacy of such measures in tackling climate change."

Deliverable 2.1: Report on Needs Assessment October, 2017 p. vii

Which investment area has been proven to be most popular in terms of supply (mentors' offers) and demand (mentees' interests)?

What are the lessons we can learn and recommendations for the future?

Both in terms of supply (mentors' offers) and demand (mentees' interests) two thematic areas, public buildings and public lighting, have proven to be most popular, and the authorities had most experience with these areas. Nevertheless, in both cases, participants reported difficulties and had many questions (e.g. choice of technologies is not that straightforward even for lighting). Cross-cutting smart cities were also highlighted as a popular choice in the latest 2020 survey. Private buildings and transport were indicated to be very difficult areas that authorities have less experience with. Surprisingly, private buildings came out as the third most supplied area by the mentors. This shows that there are difficulties, but the authorities have implemented projects and are ready to share and learn.

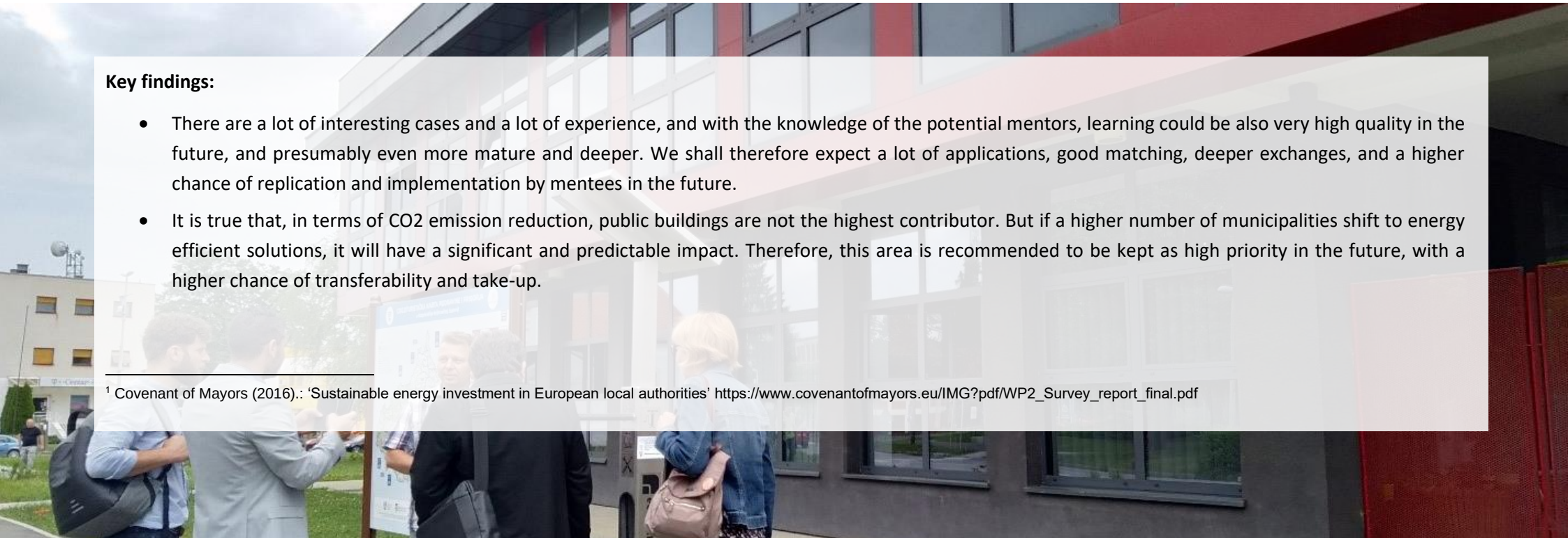
In transport, finding a mentor has proven to be a challenge but there was a high demand. The cross-sectoral investments are perceived to be very difficult and only few mentors were available but there was a high demand to learn about these types of projects. The variety of cross-cutting projects is broad and therefore matching is more of a challenge. Some key findings and recommendations are that public buildings and public lighting are priority areas as they have a high supply, high demand, and chance for large-scale replication. On private buildings it is important to consider that a specific exchange is required, social housing is not the same as residential buildings. In transport, more open learning for many, combined with a smaller group of those who wish to implement a project in the same category of a mentor would be the best strategy. On cross-sectoral, leaving it open and collecting good practices from mentors is a key to know what can be relevant for potential replication.

Deliverable 2.5: Needs assessment, June 2020

PUBLIC BUILDINGS

This area covers buildings and facilities owned, managed, or controlled by public authorities. Facilities refer to energy consuming entities that are not buildings, such as wastewater treatment plants. In the case of public buildings, as outlined in the Covenant of Mayors guidebook on How to develop a Sustainable Energy Action Plan (2010)[1], it is expected that "local authorities will adopt exemplary measures in their own buildings".

- **Popularity**: Most popular: It is traditionally most demanded and perceived somewhat difficult but manageable amongst public authorities.
- **Supply**: The highest number of candidate mentors could be obtained in this field, which shows that municipalities and regions work intensively and are ready to share their examples of successful projects.
- **Demand**: There was a very high demand and a good mix of regions, provinces, cities, energy agencies and smaller municipalities which could accommodate the different type of mentees well.
- **Difficulty:** It is perceived as difficult. However, the level of difficulty reported is lower than in other cases and this information is more precise as this investment area is the one in which the authorities seem to have the second most experience.
- **Additional information**: In the area of public buildings there are many types of decisions, different models, and solutions. It may be less challenging, but it is still very necessary to have peer to peer exchange and capacity building in this area.



Key findings:

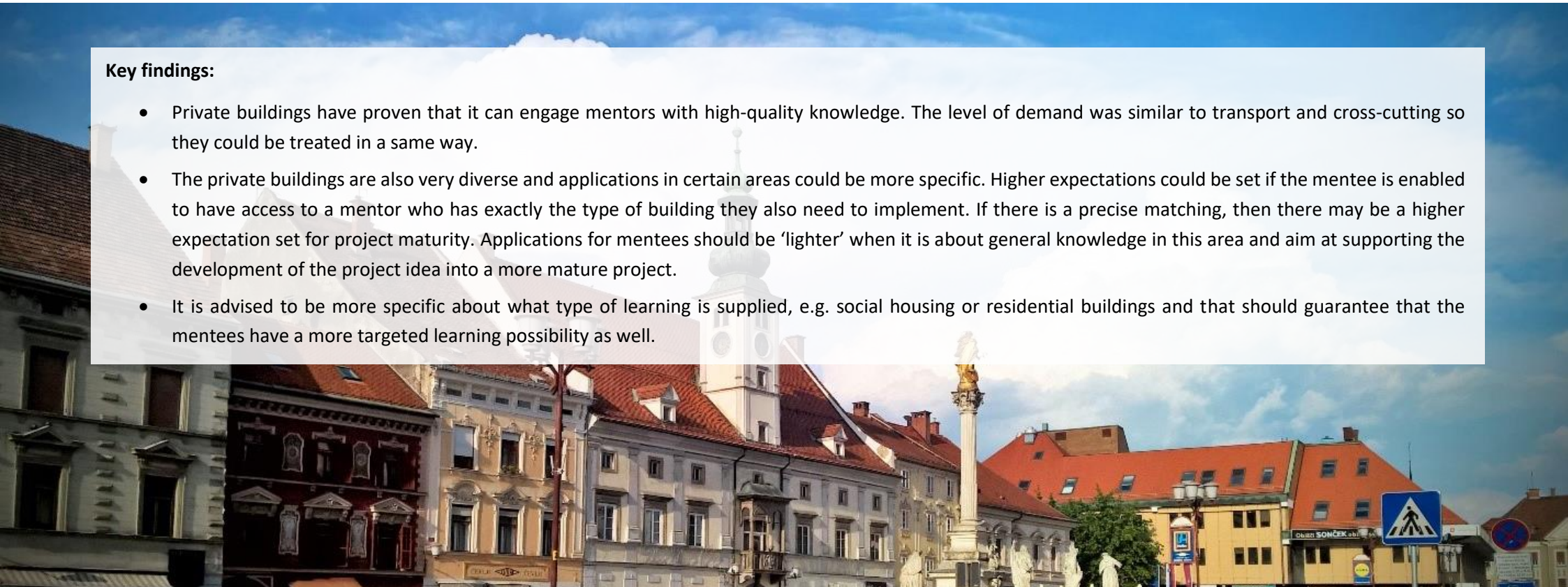
- There are a lot of interesting cases and a lot of experience, and with the knowledge of the potential mentors, learning could be also very high quality in the future, and presumably even more mature and deeper. We shall therefore expect a lot of applications, good matching, deeper exchanges, and a higher chance of replication and implementation by mentees in the future.
- It is true that, in terms of CO2 emission reduction, public buildings are not the highest contributor. But if a higher number of municipalities shift to energy efficient solutions, it will have a significant and predictable impact. Therefore, this area is recommended to be kept as high priority in the future, with a higher chance of transferability and take-up.

[1] Covenant of Mayors (2016).: 'Sustainable energy investment in European local authorities' https://www.covenantofmayors.eu/IMG?pdf/WP2_Survey_report_final.pdf

PRIVATE BUILDINGS

This area covers buildings owned, managed, or controlled by private individuals or corporations. These refer primarily to the buildings in the tertiary sector (services), such as private companies, banks, commercial and retail activities, etc. and residential buildings, including social housing.

- **Popularity**: More popular than expected, but it is very broad as it goes from private companies, to private housing and social housing.
- **Supply**: We expected that this thematic area may lack mentors as private buildings was the area where authorities reported having no experience in the highest number, but it came out as the third most supplied by the PROSPECT mentors.
- **Demand**: Quite popular amongst the candidate mentees.
- **Difficulty**: Perceived to be very difficult.
- **Additional information**: High willingness to share and learn. They consider this area important even if it is challenging. Specific questions were related to residential retrofit, bundling of private building projects for a better chance for financing, and how to manage the properties occupied by low income residents. Some good exchanges happened on multiple single-family houses, which also seems to be an important focus of their investments.



Key findings:

- Private buildings have proven that it can engage mentors with high-quality knowledge. The level of demand was similar to transport and cross-cutting so they could be treated in a same way.
- The private buildings are also very diverse and applications in certain areas could be more specific. Higher expectations could be set if the mentee is enabled to have access to a mentor who has exactly the type of building they also need to implement. If there is a precise matching, then there may be a higher expectation set for project maturity. Applications for mentees should be ‘lighter’ when it is about general knowledge in this area and aim at supporting the development of the project idea into a more mature project.
- It is advised to be more specific about what type of learning is supplied, e.g. social housing or residential buildings and that should guarantee that the mentees have a more targeted learning possibility as well.

TRANSPORT

This covers the provision of and management of mass transit systems by public authorities.

- **Popularity**: Moderately popular.
- **Supply**: Finding a mentor has proven to be a challenge.
- **Demand**: Mentee applicants were numerous with very concrete questions. It is a highly demanded area with a need to collect more and more successful projects and share back the lessons learnt with those who plan to implement similar types of projects.
- **Difficulty**: Perceived very difficult and a relatively low number of projects exist. Transport was ranked second most difficult, and a high number of local and regional authorities reported having no experience.
- **Additional information**: This area often involves technological innovations. Grants exist but are often not sufficient. Collaboration with the private sector is crucial but is often challenging, due to the existing procurement rules. Creative solutions, how grants and innovative financing can be brought together, and how the private sector should be correctly engaged are questions often put on the table. It is a highly demanded area with a need to collect more and more successful projects and share back the lessons learnt with those who plan to implement similar types of projects. Our observation was that the mentors (see Tartu and Valladolid) were either involved in smart cities projects (which cover not only mobility but are more cross-sectorial and therefore also include data management or other solutions) or cities like London with specific transport budget line and very developed strategy. More and more cities and regions are developing SUMPs (Sustainable Urban Mobility Plans), and SECAPs need to be linked those so impact can be better measured. The latest survey (2020) also confirmed a high interest in transport investments, therefore it is an area to keep eye on.

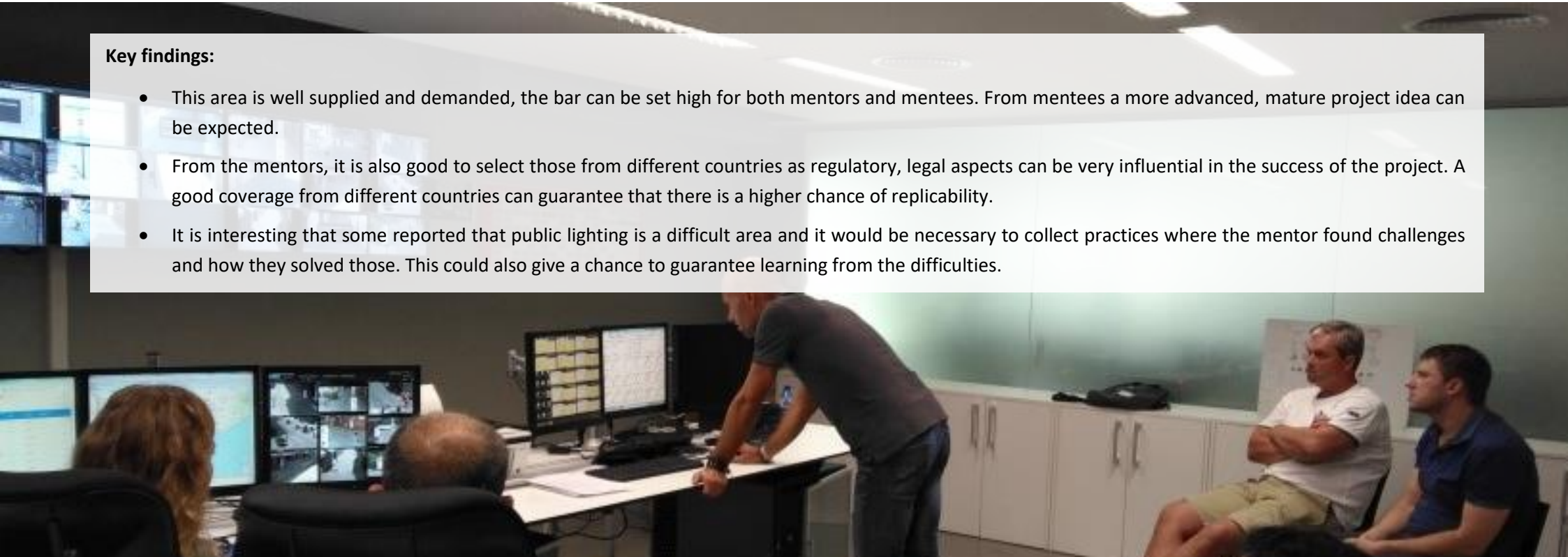
Key findings:

- Specific engagement for transport mentors is necessary with concrete ideas of what type of projects are eligible. In this case for instance, a mix of funding and financing, a stronger link with existing smart cities initiatives or specific transport projects can be a good idea. In the second half of PROSPECT, this was done and brought success.
- A larger group of mentees could be offered a more general learning possibility on e.g. working with the private sector, how to manage the questions on technology and its costs etc.
- A smaller group of mentees with a very similar profile and project idea as a mentor could be expected to apply with a more mature project idea replicate/ implement on the same area within a realistic timeframe.
- There is a significant difference for the role of smaller municipalities, cities or regions. It is advised to take different type of mentors so mentees can be better matched.

PUBLIC LIGHTING

This area covers the provision of public lighting (e.g. street lighting and traffic lights) owned or operated by public authorities, while non-municipal public lighting is covered under the private buildings area.

- **Popularity:** Very popular.
- **Supply:** Second most supplied area by mentors.
- **Demand:** Most demanded by candidate mentees in the PROSPECT projects over the four learning cycles.
- **Difficulty:** In the early phase of the project, no specific need or barrier was mentioned, and public authorities all reported that they have experience with this area. This signals a good chance for replication and it seems to be a straightforward investment. However, candidate mentees have indicated a lot of questions on the choice of technologies and how to make best decisions, including in the management of lighting.
- **Additional information:** On the ground some questions emerged, as electricity prices are very diverse and expected savings can have a significant impact on e.g. ESCO contracts and related rates. This shows that even if this area is perceived to be easy, there are many questions and doubts which need to be supported via peer to peer exchanges.



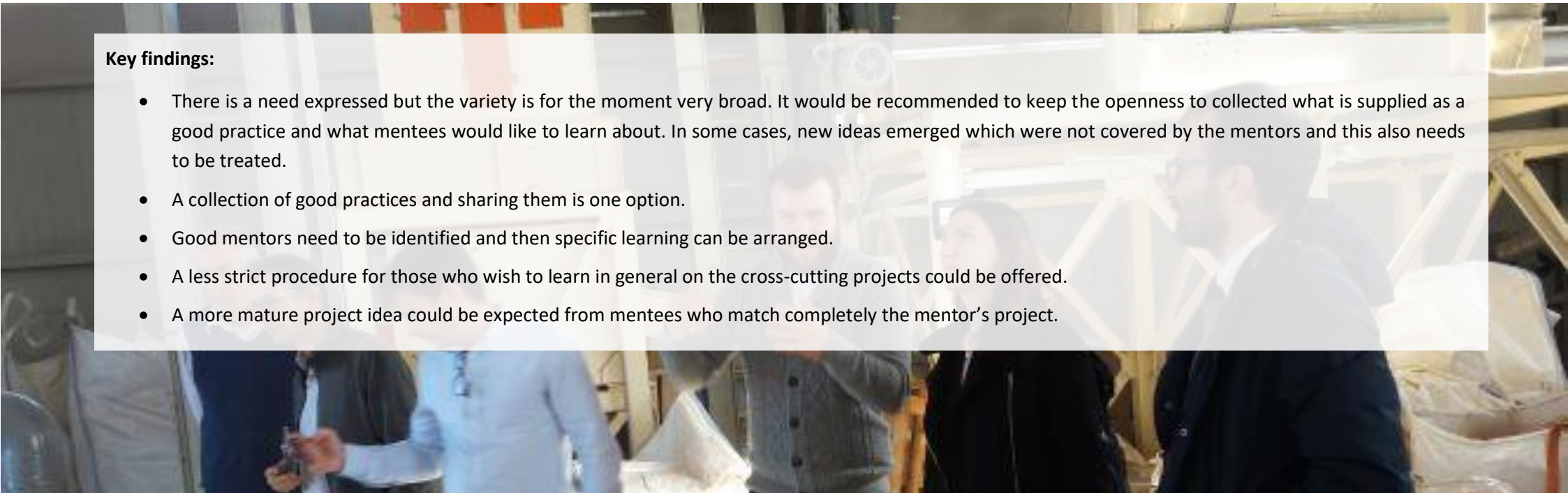
Key findings:

- This area is well supplied and demanded, the bar can be set high for both mentors and mentees. From mentees a more advanced, mature project idea can be expected.
- From the mentors, it is also good to select those from different countries as regulatory, legal aspects can be very influential in the success of the project. A good coverage from different countries can guarantee that there is a higher chance of replicability.
- It is interesting that some reported that public lighting is a difficult area and it would be necessary to collect practices where the mentor found challenges and how they solved those. This could also give a chance to guarantee learning from the difficulties.

CROSS-SECTORAL

This area covers all other cross-sectoral energy efficiency investments, for example those related to climate change adaptation or to the production of renewable energy. This includes local electricity and heat/cold production to satisfy consumption needs, as well as those interventions falling under two or more thematic areas. Consequently, investments in cross-sectoral activities may carry higher complexity than in other areas.

- **Popularity**: Moderately popular.
- **Supply**: Low level of supply, only few mentors applied.
- **Demand**: The demand was a similar level to transport or private buildings. The latest survey (2020) showed a very high interest in areas of a cross-cutting nature such as smart cities.
- **Difficulty**: Perceived to be very difficult. A high number of local and regional authorities reported having no experience.
- **Additional information**: Some other ideas worth mentioning that came from the participants of the different surveys were about these areas in particular: 1) reduction of road accidents; 2) increasing green areas/corridors and climate change adaptation; 3) measures to combine mitigation and adaptation (as well as energy-water-food nexus); 4) biomass; 5) heating systems; 6) energy poverty; 7) financing of intelligent water metering. This shows that in some cases there is a concrete project idea, but it is not clear how it could be funded or financed and whether there is experience which could be taken as good practice. Going even beyond this, transferability and replicability have many aspects and criteria to consider which makes it not always that straightforward.



Key findings:

- There is a need expressed but the variety is for the moment very broad. It would be recommended to keep the openness to collected what is supplied as a good practice and what mentees would like to learn about. In some cases, new ideas emerged which were not covered by the mentors and this also needs to be treated.
- A collection of good practices and sharing them is one option.
- Good mentors need to be identified and then specific learning can be arranged.
- A less strict procedure for those who wish to learn in general on the cross-cutting projects could be offered.
- A more mature project idea could be expected from mentees who match completely the mentor’s project.

PART 2- FRAMEWORK CONDITIONS: FINANCIAL

"Firstly, local authorities' budgets are not sufficient to meet sustainable energy and climate goals. Grant funding, upon which local authorities are already heavily reliant, is not sufficient to close the gap and the private sector is unwilling to offer loans with sufficient flexibility, or sufficiently low interest rates. Because banks consider these projects too small to be attractive for investment, project scalability and bundling are important barriers to overcome and a great difficulty for local authorities. PROSPECT needs to enhance collaboration with the private sector and increase multi-level collaboration."

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Do local authorities need higher budgets to meet climate goals? Do public bodies report that their own budget is too low for implementing SECAP related projects? Are they exploiting the budget which is allocated? Are there any other matters highlighted?

Do public bodies have issues with debt? Do public bodies report issues with debts or default on debts, is there any conclusion we can make on their capacity have debts which are often necessary for innovative financing? Are there any other financial indicators playing a role, e.g. nominal lending rate, taxes on corporations or any others? Are higher grant amounts needed? Do public bodies report that the different funds received from EU, national and regional level are not sufficient? Are they using the existing funds? Are there any other issues and therefore recommendations we can give?

Does the private sector need to introduce new types of loans? Is multilevel collaboration important to be tackled?

It has been confirmed that local and regional authorities need higher budgets to meet climate targets. The budget at hand is reported to be between 2-10%. The deeper issue is that it is rather an exception than a rule for a local or regional authority to have a dedicated budget for implementing their SECAPs. There is a high risk that there will be no budget to implement these types of projects unless there is a strategic change. In cases where there is a dedicated budget, the exploitation is excellent. Based on the participating authorities, we could state that most of them are creditworthy but other elements may play significant role whether the municipality/region may take credit. All sorts of questions related to the financial context of the country are also highly relevant: 1) What is the willingness from local banks to give loans to them? 2) What is the local financial market like in the country? What is the degree of government intervention (national, regional)? What is the level of interest rates? The interest rate has an impact on investment willingness, as, if interest rates are high, the savings may not cover the loans.

Therefore, one of the recommendations is to consider a tailor-made intervention package at EU level for those countries' authorities where this type of issue exists. It may be true that the municipalities and regions are waiting for grants but, at the EU level, it is important to carefully select the intervention and grant types, so they do not compete in some countries (e.g. Austria, Sweden) with the market but rather 'push and pull' at the right places. Hybrid solutions, a combination of financing and funding, could also be considered. VAT may play an important role. This needs further analysis, together with country-specific financial profiling of municipalities and regions. To sum up, instead of higher grants, a targeted and hybrid support would be more practical, in close collaboration with the private sector and investors.

Deliverable 2.5: Needs assessment, June 2020

DEBT SITUATION:	Most participants in this survey have appropriate financing capacities. This capacity also depends of course on the circumstances of the local financial market in each country. “What is the willingness to give loans by local banks?” “What is the level of interest rates?” “What is the degree of government intervention?” Only a very small minority of the participants have experienced default on debt. Most participating municipalities participating in PROSPECT are creditworthy and have the capacity to finance future investments. In order to guarantee the investments, there was a suggestion that the EU and the national governments propose legal ways to minimize the debt indicators for municipalities/regions when linked to SECAP investments. This obviously does not indicate what others, who have not applied to PROSPECT, may experience but it is positive that the only a very small percentage of participating authorities reported this issue.
CITY BUDGET:	The authorities (municipalities, cities and regions), as first step, need to become more aware of the importance of having a specific budget, and collect more precise calculations and guarantee access to them as a high percentage could not even provide answer to the question. In general, we can also state that the budget local and regional authorities have is not sufficient to implement sustainability and energy projects, as it is reported between 2-10%. There are interesting good practices on special support programmes such as the one from Upper Austria. These need to be shared with other local and regional authorities who can learn from these examples. In addition, solutions in combination with funding (ERDF or other grants) also need to be collected as good practices.
BUDGET EXPLOITATION:	It is rather an exception than a rule for local and regional authorities to have a dedicated budget for the implementation of their SECAPs. One of the reasons mentioned is the difficulty to identify them as they are often transversal. This also shows that municipalities, cities, and regions need to become more strategic about how to plan their budgets on this matter. They often rely on grants and if there is no grant then there is high risk that there will be no budget to implement a project related to sustainability and climate. When they had an allocated budget, the exploitation is reported to be excellent. There are also some other aspects which may hinder the exploitation which are linked to the administrative burden (see also legal needs) coming from delays in the tendering, national or EU funding. There are also issues with the estimated and actual budget and costs. To translate this to needs, local and regional authorities need to work with different calculation methods (especially in case of projects with a longer period) and need guarantees of timely payment from EU or national bodies. Procedures need improvement as well and some practical examples, good practice sharing can help them to face situations when e.g. the municipalities have similar cases for cultural heritage buildings energy retrofits.
AVAILABLE EXTERNAL FUNDS:	Local authorities (within the EU) are in most cases still looking and waiting for grants from higher authorities (EU, national, regional) in their decisions related to energy saving projects. The fact that they are used to working with or are only relying on e.g. EU funds means

that they do not search for alternative financing schemes. In some cases, market offered loans may not be feasible due to high interest rates. In two categories we can observe a different trend but very different type of local and regional authorities 1) non-EU countries who have access to EIB and other types of loans, 2) Local and regional authorities from countries with excellent credit ratings where interest rates are low. This needs to be considered when the EU support the take-up of financing schemes: local and regional authorities may come from a very different market environment.

BANK LENDING RATE:

For most of the participating municipalities in this survey, the level of interest rates is not really an issue. In only a small number of the participating countries were high interest rates reported. It is recommended that further analysis is done on this aspect as this seems to be a crucial factor for those local and regional authorities who come from those countries. It is important that the analysis looks at the ecosystem of national and local banks, and levels of government and the EU should then define a special intervention package for those countries who need this kind of bridging subsidy type. This could be from the European Investment Bank or the EBRD, needed for municipalities in the countries with high interest rates. Countries which do not belong to the eurozone (Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden) may also need a different type of treatment as the market perceives them differently.

CORPORATE TAX:

The level of corporation taxes do not have a significant influence on the decision of municipalities whether or not they should invest in energy saving projects but it influences the decision if they work with a local company which may have a higher corporate tax or with a one from abroad which can offer more competitive prices due to the fact that the levels of company tax may be lower. VAT can be an important element and should be examined further. High VAT cost which appear on the electricity bill every month can motivate the municipality to invest in energy saving projects. For instance, in Belgium VAT is 21% on new buildings and 6% on old building renovation which means that after the renovation the VAT to be paid is one-third of the VAT on a new build. This can be an important factor in decisions. Furthermore, some governments give a tax reduction and that can also be a motivating factor to invest in energy efficiency projects.

COOPERATION:

Collaboration with private sector needs to be significantly improved. Local and regional authorities may need to have guidance and good practices on how to work better with the private sector, as one-third of the respondents reported no collaboration. With non-traditional private sectors there is collaboration, especially with ESCOs, cooperatives and local banks. The collaborations are rather exceptional than used by many. Sharing good examples of good collaborations would be of use. There is, however, excellent collaboration amongst the different levels of government and with the European level, across public administrations. Still, based on the findings, it appears that some procedures and guidance would be appreciated by the local and regional bodies.

FRAMEWORK CONDITIONS: LEGAL

"Burdensome regulations and complex administrative procedures create legal barriers for public and private sector investment. The latter is held back by unpredictability these regulations cause. For the former, budgeting regulations create difficulties, especially matching budget cycles with investment cycles. This can be particularly harmful to investments related to sustainability and climate. For example, the EU Stability and Growth Pact, and similar regulations at national level, limit investments that have long-term pay back periods, which is a typical characteristic of sustainable energy and climate projects."

Deliverable 2.1: Report on Needs Assessment, October 2017 p. vii

Administrative procedures need to be simplified at local/ regional level ?

Regulations need to be more reliable/ predictable in order to have private sector investment?

Budget cycles and investment cycles need to be harmonised

Specific regulations for new innovative projects (e.g. EPC, third party financing) at national level can have a positive impact. Public procurement rules need to be revised at EU, national and regional levels as they create obstacle for the implementation of energy efficiency projects. Collaboration with the private sector needs to be significantly improved and local and regional authorities need guidance for this. Regulations need to be more reliable and administrative procedures need to be simplified. It would be optimal if budget cycles and investment cycles would be harmonised.

Deliverable 2.5: Needs assessment, June 2020

PUBLIC PROCUREMENT:

Specific regulations for new innovative projects (e.g. EPC, third party financing) can be helpful at national level. They can speed up otherwise complicated procedures.

Public procurement procedures were not facilitating but rather inhibiting, delaying and complexifying energy projects, and often leading to procurement only based on price, instead of based on quality (e.g. environmental or energy saving criteria). This can be treated at EU, national and regional levels as public procurement rules are defined at these levels.

It would be good for municipalities (especially for small towns) to receive practical guidelines from the higher authorities (EU, national, regional) how to start and manage such projects.

OWNERSHIP ISSUES:

Local and regional authorities (municipalities, cities, and regions) need a legal framework regulating possible conflicts with private owners and a presence of a good registration system of properties. Good practices on how the ownership issues have been managed by local and regional authorities can be of interest for sharing.

PERMITS:

Most local governments need support from national or regional governments (depending on the countries' legislation and whose competence it is) to simplify the process to obtain construction and renovation permits. Challenges reported were related to delays, bureaucracy or being expensive or having other constraints (e.g. heritage, environmental).

FRAMEWORK CONDITIONS: CAPACITY

"In terms of capacity barriers and needs, a lack of information on financing is most prevalent.

Deliverable 2.1: Report on Needs Assessment, October 2017 p. vii

Do public bodies have personnel to investigate available funding and financing?

Do public bodies have capacity in general to support the administration of this type of projects?

Local and regional authorities lack capacity (40% of the participants reported this issue). In most cases the local and regional authorities find ways to establish the necessary administrative capacity for their projects (20% reported this being difficult). Good practices on how to manage this are useful but specific financial support would be useful to cover complementary personnel needed to implement projects, for outsourcing certain tasks or revising organisational structures. Peer to peer training, matchmaking with investors and webinars, general training and workshops would all also be appreciated in the future.

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PERSONNEL CAPACITY:

A high number, almost 40%, of local and regional authorities lack capacity i.e. do not have enough or not sufficiently skilled, trained personnel. It is useful to remind ourselves that the sample came from participants who participated in PROSPECT, therefore there may be others who did not have enough capacity even to join such a project due to lack of personnel.

ADMINISTRATIVE CAPACITY:

Local and regional authorities in most cases find ways to establish the necessary administrative capacity for their projects. There are interesting cases such as appointment of a manager, expert team, or creation of an agency. Since around 20% of the local and regional authorities reported that they do not have any capacity, 1) solutions, good practices, or other ways to improve capacity are a strong need and of high importance; 2) This may also require support from the EU or national/ regional governments.

OUTSOURCING:

More financial support through funding or subsidies to finance:

- Complementary personnel needed to implement the project
- Specific training for these personnel (technical and in project management)
- The adaptation of internal structures or for the creation of a new structure (e.g. a specialised agency)
- The necessary outsourcing of certain tasks

INNOVATIVE FINANCING SCHEMES

"Local authorities tend to have very little experience with, and a high interest in learning about, innovative financing mechanisms, such as third-party financing and public and private bonds. Their lack of knowledge about the implementation of such instruments leads them to rely on their own limited means. The implication of this for the PROSPECT learning programme is that it must cover as many financing mechanisms as possible, strengthening specialist expertise. PROSPECT must also emphasise the potential of green bonds and citizen finance (such as crowdfunding) as interest in such schemes was very low relative to their potential benefit."

Deliverable 2.1: Report on Needs Assessment, October 2017 p. vii

Is there any reason why, in case of EPC and citizen finance, the projects in some cases seem to be easy and in other cases very difficult? What shall be the approach for learning?

With bonds there seems to be least experience. Interest seem to be divided. What are the lessons we can learn from participation in the PROSPECT programme?

A high percentage of authorities reported no experience with financing schemes. The most popular is EPC and this is also the most known amongst them. EPC may be difficult and therefore exchange on this scheme is highly relevant with a potentially high replicability. Citizen finance seemed to be supplied and demanded as second most popular which was unexpected as at the initial phase of the project it was reported to be difficult and interest seemed to be low. Third party financing was also much demanded and how to work with the private sector. There was a significant interest in combination of grants with financing and how to make scalable and sustainable choices. Green bonds are also demanded, and revolving, and municipal funds were of interest as well. Overall, in those areas it was less easy to find suitable mentors. Funding from other private sources, such as ELENA was also popular with some new types of models such as public private partnership (PPP), re-use of fines and Assen Service Costs-model (ASC).

The mentors sometimes offered new solutions, so it is important to keep the space for these to be presented at different forums in the future open as much as possible as well. This also resonates with the finding of the need to collect good practices and give an opportunity to mentees for a general training on the schemes and specific training on the ones they wish to implement. The process at the mentee level often starts not with the financing scheme but rather with thematic area as they wish to implement a project. It is easier to know what needs to be done than to choose which financing scheme or solution fits the realities of the municipality or region best. Local authorities' needs and barriers to sustainable energy and climate investments can be classified into three main frameworks: financial, legal, and capacity.

Deliverable 2.5: Needs assessment, June 2020

Energy Performance Contracting	Energy Performance Contracting (EPC) is a contractual arrangement between a client (for example a municipality) and a service provider, a so-called 'Energy Service Company' (ESCO). Typically, the ESCO finances and implements energy efficiency investments. The difference between EPC and other types of financing schemes are the contractually guaranteed energy savings and consequences for the ESCO if these are not achieved.
Revolving funds	A fund established to finance a continuing cycle of investments through initial amounts received from its shareholders, creditors or donors and later on through amounts received from reimbursements of provided funding or loans to projects. These recovered funds become available for further reinvestment in other projects under a similar scope (e.g. revolving funds for sustainable energy will use the recovered funds to finance new sustainable energy projects).
Guarantee funds	These are loan guarantees provided to lenders which serve as buffers against first losses of non-payment by the borrowers. A mechanism whereby public funding facilitates/triggers investment.
Green bonds	Local government (or their agencies) can issue green bonds to fund their sustainable energy and climate projects. A green bond can operate like a normal bond, which is a debt that will be paid back, depending on the characteristics of the bond, with interest. These can be made attractive via tax-exemptions.

From the financing schemes, EPC often ranked as the most popular, but this also shows that there is knowledge amongst the local and regional authorities about this scheme. The experience is high but there were also many who had no experience, so it was a good scheme to exchange about. The level of prior knowledge and maturity, however, has a huge impact for this scheme. Therefore, it is advised different learning opportunities and process should be organised for those who decide to use this scheme and wish learn about implementation and those who are not so advanced and are open to exploring other schemes. In the survey (2020) the participants indicated interest in municipal and green bonds, so a general preparatory webinar or workshop may help to understand better which type of bond could be most appropriate.

Soft loans	Soft loan schemes are loans below market rates and with longer payback periods derived from public or private funding to facilitate energy efficiency investments.
Third party financing	Refers solely to debt financing. The project financing comes from a third party which is not the user or customer, usually a financial institution or other investor, or the ESCO.

Third party financing was also demanded, and mentees especially often asked how to work with ESCOs. It is not easy to present an alternative solution to the political level and often savings need to be calculated and data needs to be collected, and for this a lot of prior conditions need to be met.

Citizen finance	Crowdfunding involves an open call, mostly through the internet, for the provision of financial resources either in the form of a donation or in exchange for some form of reward and/or voting rights. This can happen in combination with energy cooperatives, which are business models based on shared ownership and democratic decision-making procedures.

Citizen finance came out higher in ranking than expected based on the 'Initial report' (2017). This shows that there are good mentors and that mentees are interested in this, so there is a possibility to share more on this subject. It is also quite broad, so some more details in the application process may help to make a match which is specific and a webinar or workshop involving more general technical knowledge sharing across the different citizens finance solutions could support the exchange.

Funding from financial institutions	Refers to different public financial institutions and their instruments, such as European Structural and Investment Funds, European Funding Programmes, Project Development Assistance (PDA) and financial institutions' instruments, such as municipal loans.
Funding from other private sources	Refers to funding from the private sector and investors that are not financial institutions.

Combination of private and public financing, combination of grants/subsidies and finance and PPP is also something to be considered as a scheme to add. There was a significant interest in learning more about how funds can be combined with financing and how a public body can make sustainable and scalable choices. This is a very relevant area, especially when we talk about new technologies or complex initiatives, e.g. cross-cutting smart cities projects. It also relates very much back to the essential need of local and regional authorities to renew their relationship with the private sector and build solutions which work in the long term together. This aspect has been covered under the framework needs, as legal aspects such as public procurement culture also play an important role.

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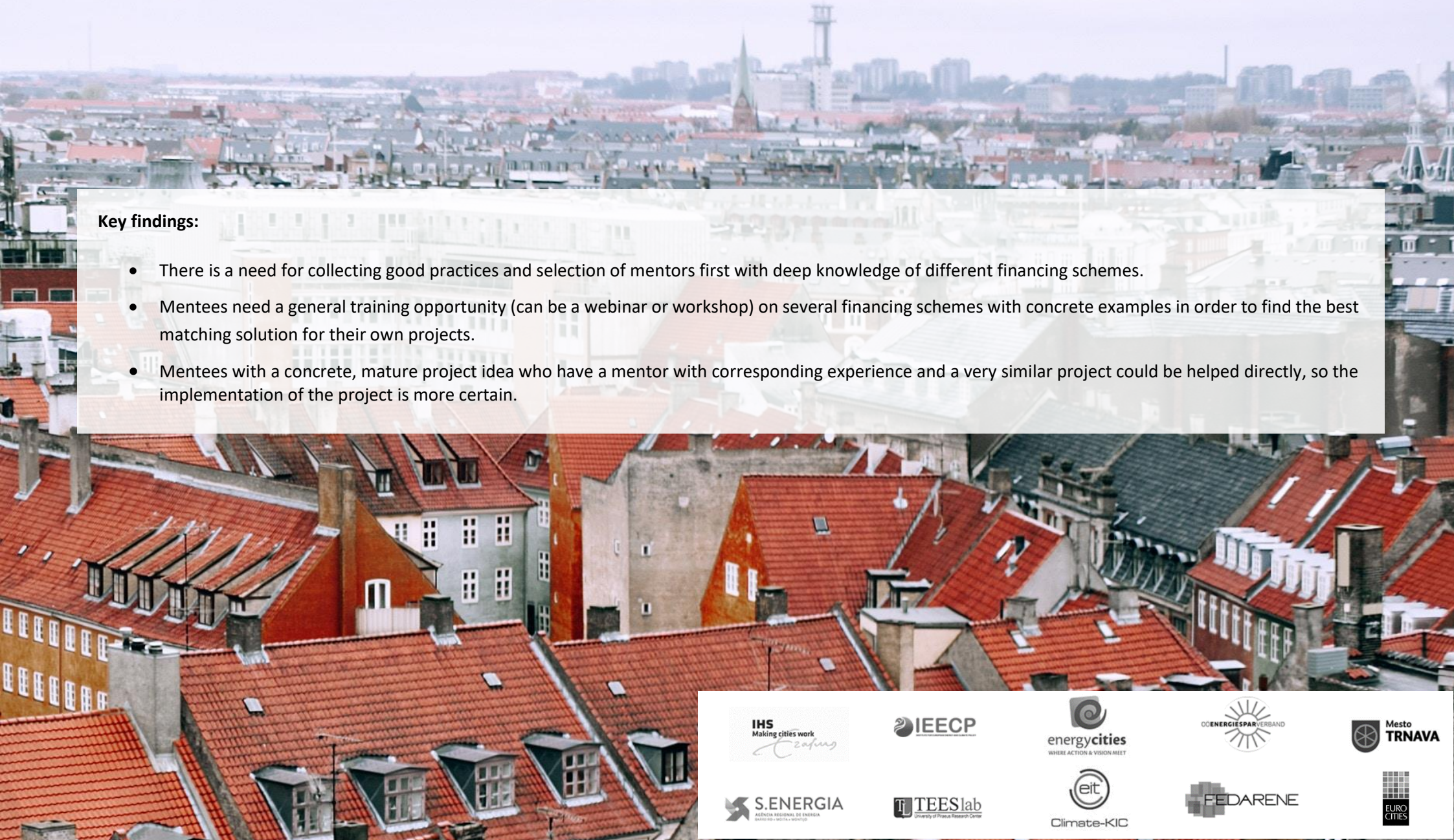

Key findings:

- There is a need for collecting good practices and selection of mentors first with deep knowledge of different financing schemes.
- Mentees need a general training opportunity (can be a webinar or workshop) on several financing schemes with concrete examples in order to find the best matching solution for their own projects.
- Mentees with a concrete, mature project idea who have a mentor with corresponding experience and a very similar project could be helped directly, so the implementation of the project is more certain.