PROJECT FINAL REPORT

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Final publishable summary report

Most global challenges have arisen directly or indirectly because of urbanisation. Cities suffer from internal and external challenges and are probably the number one contributor of greenhouse gasses (directly and indirectly). Cities are growing in size and scale globally. Most humans live in cities, and many more are highly influenced by or dependent upon cities and urban growth. From today, almost all children born on Earth will be urbanised at some stage in their lives – the city will play a key role in their personal development, education, employment, the technology they use, and the geopolitical politics of where they live. The cities of the future will not be used for the same reasons for which they were originally constructed and technology will guide and perhaps define future city growth. Throughout the process of change, of new growth, urban communities will be continually challenged to respond. This is where resilience comes into the picture. Resilience is the ability of people to respond to change and to find opportunity in it. The most resilient cities will be those where their populations are the most adaptable and creative; where consensus and co-design will overcome the pervasive and complex challenges of climate change, population change and migration, economic unease, and social and political transformation. Thus there is a need for a step change in how humans make and maintain cities.

At the heart of the TURAS project there was a desire to create working links between different agencies involved in city-making, with communities at the centre. The project consists of nine academic partners, eleven local authority / municipality partners, and eight small or medium enterprise (SME) partners. The project partners were just the starting point for reaching out and engaging in new and meaningful ways with wider communities and devise co-created transition strategies that encourage active engagement with end users and local stakeholders. TURAS is the acronym for 'Transitioning towards Urban Resilience and Sustainability'. It is also the Gaelic word for 'journey', or more precisely a journey of exploration or renewal, which in this case is a reexamination of how we make and manage resilience in our cities, towns and neighbourhoods. The project was designed to explore the ways that urban communities and city-makers can make cities more resilient and in the process making living in cities more sustainable. It was a journey of exploration. A great many people devoted a great deal of time and energy to the TURAS project.

In terms of impact, TURAS has devised 83 novel procedures, guidelines, innovations and processes that will enable communities to transition to a more resilient future. These tools and innovations are freely available on the TURAS website and are in the process of being transferred to the Oppla market place for use beyond the end of the project. TURAS has directly supported the start-up and growth of new spin-off companies and existing SMEs involved in the project. These spin-offs and SMEs will ensure the ongoing exploitation and further development of TURAS results while simultaneously contributing to sustainable and socially responsible employment growth and innovation in the EU economy. For example, Helix Pflanzen GMBH (Germany) has scaling up its international operations significantly to offer nature-based solutions to a wider market as a direct result of TURAS. The project has also seen two new SMEs spinning off as separate entities. Osmos focuses on procedures for the co-creation and co-design of nature-based solutions and other solutions in urban areas based on TURAS results. Space Engagers has received EC assistance in the form of the common booster programme, €40,000 from Organicity, and winning €100.000 from the Irish Social Innovation Fund and Google technical mentorship. This new SME co-creates an online mechanism for community engagement and collaboration with respect to unused urban spaces.

Although the EU investment in TURAS has ended, the next step of the journey has already begun and with unwavering commitment from the partners, communities and companies, we look forward to a better future.

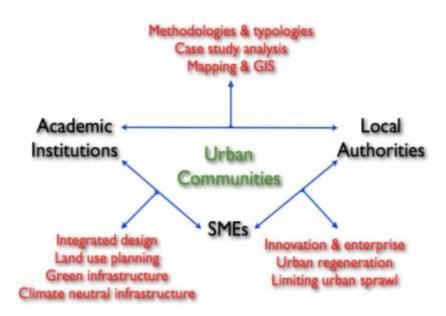
Summary description (25 pages)

Cities are growing in size and scale globally. From today, almost all children born on Earth will be urbanised at some stage in their lives – the city will play a key role in their personal development, education, employment, the technology they use, and the geopolitical politics of where they live. The cities of the future will not be used for the same reasons for which they were originally constructed. Cities once built for defence, for trade, for religious worship and so on will all change to become centres of multi-functional and multi-cultural integration. Technology will guide and perhaps define city growth. Throughout the process of change, of new growth, urban communities will be continually challenged to respond. This is where resilience comes into the picture. Resilience is the ability of people to respond to change and to find opportunity in it. The most resilient cities will be those where their populations are the most adaptable and creative; where consensus and co-design will overcome the pervasive and complex challenges of climate change, population change and migration, economic disturbance, and social and political transformation.

TURAS is the acronym for the European Union funded project 'Transitioning towards Urban Resilience and Sustainability'. TURAS is also the Gaelic word for 'journey', or more precisely a journey of exploration or renewal, which in this case is a re-examination of how we build resilience in our cities, towns and neighbourhoods. The TURAS project was designed to bring together academic researchers, local authorities, and SMEs in collaboration with urban communities-ofinterest and neighbourhoods to research, develop, demonstrate and disseminate strategies and scenarios to enable European cities and their rural interfaces to transition towards vitally-needed resilience. To ensure maximum co-creation potential the project devised an innovative, though untested, multiple twinning approach bringing together decision makers in local authorities with SMEs and academics to ensure meaningful results and real change are implemented over the duration of the project and after. Eleven local authorities or local development agencies were involved as key actors and partners in the project. They were central to a successful project like TURAS because they oriented all research and development from the outset towards the most significant sustainability and resilience challenges facing their cities. Nine leading academic research institutions and eight SMEs worked with these public sector bodies helping them to build resilience strategies through proposing new visions, feasibility strategies, spatial scenarios and guidance tools to help cities address complex, wicked challenges.

Figure 1 illustrates the unique twinning approach of the TURAS project. This twinning approach was one of the innovative ideas of the original TURAS proposal in 2010. At the time, there was a requirement in FP7 proposals for only a small number of SMEs. Ambitiously, TURAS involved one-third SMEs and it also consists of another third non-academic partners. TURAS was the first Framework project in the societal challenge arena to have a minority of academics. This was considered by the proposal evaluators to be a risky approach, and especially as a non-academic was proposed as work package leader. The first innovation to emerge from TURAS was to influence the nature of current Horizon 2020 proposals, and before the DG changed its name to include 'innovation', TURAS was already aiming at devising and scaling out innovations. Indeed, the twinning structure of the TURAS project (figure 1) is now a requirement of most Horizon societal challenge calls. TURAS has pioneered this twinning approach and demonstrated that is has a high degree of utility in the modern research and innovation arena.

Figure 1: Research typology of the TURAS twinning concept illustrating three expertise couplets and their respective areas of speciality (red). Central to the concept are urban communities in the form of local neighbourhoods or districts.



Over the five year duration of the project, the feasibility of these approaches was researched within all work packages, and tested in selected case study neighbourhoods of the participating cities and new measures to enable adaptive governance, collaborative decision-making, and behavioural change towards resilient and sustainable European cities have been developed. The impact of these new approaches was measured and results compared between participating cities. After the research period, a final set of strategies and tools were developed for demonstration, dissemination and scaling out to other cities. SMEs were highly involved in all work packages of the project. The cities represented in TURAS are representative of European regions in terms of size, geographical location and sustainability challenges. They include six European capital cities: Brussels, Dublin, London, Rome, Sofia, Ljubljana and other cities representing regional capitals and smaller cities including Nottingham, Málaga¹, Rotterdam, Stuttgart, and Aalborg. In total, eleven European countries were represented in the project with the other member states represented through the High Level Advisory Board (HLAB) and the pan-European networks of dissemination partners EBN (representing 240 members in the 27 EU member states and in eleven other countries) and Climate Alliance (representing 1,500 European local authorities in 17 countries). In addition, the project was joined by an academic, local authority and SME from Taiwan. TURAS was an ambitious and broad reaching project that brought together community stakeholders² at all levels, local industry and local authorities with researchers and visionaries from many disciplines in order to achieve a real and lasting transition towards more sustainable and resilient city-making. This was supported by innovative ICT infrastructure and a new approach to underlying communication processes, thematically adapted and integrating all relevant stakeholders.

TURAS began by developing a framework and process for developing and using a geospatial information and communication technology (ICT) infrastructure at sub-city / neighbourhood scale, featuring relevant contextual as well as project-specific data. In the next phase, case study data were

¹ As discussed in earlier reports to the Commission, Málaga was brought on board because the original Spanish city partner, Sevilla Global, went bankrupt and was forced to leave the project. Málaga was selected because it had similar issues and climate challenges as Seville, and an existing TURAS SME is located there (thus fostering accelerated engagement in the project).

² 'Community stakeholders' is used to describe those who have a contribution to make or have a significant role to play

² 'Community stakeholders' is used to describe those who have a contribution to make or have a significant role to play in the collaborative processes necessary in the TURAS project.

used to develop and test new approaches to build increased urban resilience and reduce the urban ecological footprint of each participating city. Diagram 1 illustrates the connectivity of the different approaches to building urban resilience, which TURAS developed and how the work packages interact together. The final phase of TURAS involved the demonstration, dissemination and exploitation of results.

Diagram 1: Typology illustrating the six principal RTD work packages of the TURAS Project. All six are interconnected and interreliant with each other, and the ultimate focus was to establish mechanisms for building resilience into urban planning and design through integrated transition strategies (Work Package 7).

The scientific and technical objectives of TURAS are directly related to the FP7 topic Sustainable and Resilient Green Cities under Area 6.2.1.5 of the call FP7-ENV-2011. The stated aim of this call topic "is to develop positive transition strategies and scenarios to enable cities (and their rural interface) to meet these combined "grand challenges" by reducing their urban ecological footprint, via the innovative development of: public



and private green infrastructure (i.e.: green walls and green roofs) and spaces, organic materials/products and green processes – inspired by nature (i.e.: biomimicry)³; rehabilitation of ecosystem services and urban biodiversity, urban/industrial regeneration, land use planning and creative design; shortcircuit economies (increased reliance on local goods and services), improved climate-neutral infrastructure for sustainable waste, water, energy and transport management, while also fostering greater equity and social cohesion, and mitigating negative environmental impacts. The strategies must also limit urban sprawl to privilege compact and polycentric approaches, so as to reduce transport and energy costs, retain valuable agricultural land and natural areas, and protect landscape value, while limiting the negative effects of densification (i.e.: increased vulnerability to risk, noise, stress, safety)."

This final report for the TURAS project focuses on the main results and innovations that have been derived from the five-year journey of research and demonstration. Since the project has been evaluated three times earlier in its lifetime, three periodic reports exist charting the minutiae of research and demonstration from years one to four. It is not possible to replicate these reports in this, the final report, because space is limited. However, it is the purpose of this report to outline the main contributions of TURAS to research and innovation with respect to 'Sustainable and Resilient Green Cities', as was the original challenge.

³ In the intervening time, this has been refined into 'nature-based solutions' and is currently a prime research and innovation priority in Horizon 2020 societal challenges 5 and 6, as well as the cross-cutting challenges.

Description of the main S & T results (25 pages)

Work Package 1

Work package 1 was the foundation for the TURAS project and created a web interface for public to access the data and tools that are used and developed within other work packages. The data available provided insights on urban economy, energy, sprawl, green infrastructure, regeneration and urban design. This package sought first to facilitate communication and interaction amongst project partners (academic, local authority, SME and the wider community) in addressing the project challenges. Internet-based tools were developed for implementation in the project case study areas

Figure 1 Space Engagers online tool for mapping underused space, now being used by leading homeless charity in Dublin



within the TURAS cities and urban regions. This new interface was a key functioning part of the TURAS project website, and was accessible to the public for testing and validation on an ongoing basis. The webbased G-ICT tool was linked to the local authorities' websites in those cities or urban regions and was developed in close cooperation with the other TURAS work packages, based on their local case study context and methodological approaches. This work package was divided into two stages. Stage 1 was the development of a WebGIS database with general as well as specific case study data. Stage 2 was the provision of tools to support much better community engagement. This resulted in a

live WebGIS for most of the TURAS case study cities as well as an interactive 'geowiki', where the public and urban communities were invited to upload their own information. The work package 1 research team, together with Future Analytics and the University of Taichung with SkyEyes (both in Taiwan), worked with other work packages to further develop these tools. These include a crowd-sourced web mapping application for vacant sites, a 'geotimeline' for community capacity and a Twitter geospatial analytics dashboard for green infrastructure. A final output was the 'Resilience Dashboard; a multifunctional dashboard where the tools and data are integrated to support smart resilience planning and decision-making. This work package produced two deliverables (1.1 and 1.2).

Work Package 2

Work package 2 aimed to enable cities to reduce their urban ecological footprint through better implementation of public and private green infrastructure, using organic materials and/or products and green processes that are inspired by nature⁴. This can lead to the rehabilitation of damaged urban ecosystem services and boost urban biodiversity. This was a very complex work package initially it focussed on the development of the urban green infrastructure model for Rome. The work package then began started some complex experiments. The Barking Riverside brownfield landscaping and green roof experimental facilities were established and are still being monitored. In Stuttgart, a novel experiment to see how natural features can create 'Urban Comfort Zones' led to experiments in 'green wall' technology experiment being carried out, that ultimately resulted in the 'urban green living room'. This is an 'urban comfort zone' living experiment that investigates a novel system of creating 3-D green wall systems that not only provide urban comfort, air pollution, noise pollution and biodiversity benefits, but also provide pocket-park inspired social spaces for local communities.

⁴ This was originally termed 'biomimicry' in the call text, but in the intervening years the term nature-based solutions has become a more accurate and utilitarian phrasing.

TURAS has provided an opportunity to showcase and monitor the benefits of this innovative way to design urban green infrastructure. It has also provided an opportunity for the designers and constructors to work with academia in 3-D virtual environments to see the designs in their urban context before installation. Towards the end of the project, this Figure 2 Extinct Streaked Bombardier concept was repackaged as a mobile demonstrator of the new technology - the 'mobile green living room' - which toured European cities in the summer of 2016. The work package prepared green infrastructure guidelines for local authorities, which are now being used by city planners and designers to promote better urban resilience. In addition, the package established design principles for a novel green roof experiment, which received a commendation in the 2012 Integrated Habitats Design Competition. Furthermore, a unique 'beetle bump' was built on the grounds of the University of East London. This was

Beetle rehomed on UEL Beetle Bump



shortlisted for the prestigious Times Higher Education Award. During the project timeline, the London Queen Elizabeth Olympic Park offered areas for future collaboration and experimentation. All of the work package outputs have been successfully completed, the results of which have been reported in Deliverable 2.3. The work package continues to expand on the TURAS findings through PhD and postdoctoral researchers, and also to expand connections to policy-makers and planers in the case study area and in London as a whole. Helix's Green Living Room video was awarded a gold medal at the Deauville Green Awards Film Festival 2015.

Work Package 3

Figure 3 Communities co-design first neighbourhood park in the Liberties area of **Dublin in 100 years**



Work package 3 had as its goal the aim of developing transition strategies and scenarios to enable cities to improve planning. To address urban industrial regeneration challenges requires the incorporation of creative design. There is a large amount of information, much of it hidden away in reports and old documents, so much of the operation of the work package was devoted to building research capacity among the partners. It has also carefully selected differing sites and urban issues, necessitating numerous visits and communications with sometimes difficult to access urban authorities. The extensive and comprehensive literature review yielded information necessary for the integration of resilience into mainstream planning and design. Many similarities between cities were

discovered and there have also been some disconnects identified between policies and actions, which is a prime motivator for this work package. This work package produced Deliverable 3.4. This is a series of spatial scenarios for urban neighbourhoods. A detailed literature review revealed that innovation in the area of adaptive governance, collaborative decision-making, and techniques promoting behavioural change to encourage local authorities and citizens to implement and develop community resilience, was strongly represented in grey literature as well as anecdotal sources. It was clear that much of the recording of these activities is reflected not in the academic literature, but on a variety of city and regional local authority webpages, and / or contained within in-house, unpublished reports (thus unavailable to city communities and researchers alike). Case study analysis emerged as a core research strategy for capturing innovation that is not (currently) documented in the peer review literature. A compendium of case studies relevant to the individual tasks was then assembled. A critical aim of this work package is not merely to produce and discuss abstract, intangible concepts, but to provide practical tools for operationalising these themes. An example of this is the project carried out by landscape architecture students in the Dublin case study area of

Pelletstown. This resulted in a travelling exhibition (see photographs 18 and 19), a professionally created web video and a book.

Work Package 4

Work package 4 sought to create visions, feasible strategies, spatial scenarios and guidance tools that will enable adaptive governance, collaborative decision-making, and behavioural change. The goal was to seek to contribute to improved climate change resilient city planning and climate-neutral infrastructure, throughout the TURAS project network and in a wider European context. Within work package 4 various aspects of city planning and infrastructure are addressed in a number of case-study cities, notably: Rotterdam (flood risk and urban services), Ljubljana (transport and water management), London (green roofs), Seville (integrated solid waste management), and Aalborg (energy). The activities in the various cities and on the various themes came together in an overall report setting out recommendations for strategic urban planning for European cities. The work package produced Deliverable 4.5, which provided a joint analytical-policy framework for strategic urban planning, brought together the research activities that were carried out, provided valuable insights into the hands-on process of strategic urban planning and concluded with recommendations to guide strategic urban planning. This synthesis was the culmination of the multi-disciplinary research team in work package 4. Several methodologies and tools were developed with the goal of aiding strategic urban planning over the course of the reporting period. Many of these support policy formulation by allowing a-priori assessment of measures to become more resilient in the face of future development and uncertainties. Such tools include a GIS database to support planning of energy for heating (the HEAT Atlas), a GIS model to assess the potential for green roofs, models to estimate direct and indirect consequences of extreme flooding, and a model to estimate the provisioning of ecosystem services in urban settings. Some practical measures have also been developed or monitored. These include the WebGIS platform for micro-communications with stakeholders and citizens on transport issues and the monitoring at the multi-purpose reservoir near Podutik (including green ecosystem technologies). These activities (development of methodologies, platforms and monitoring) also contributed to the raising of awareness of specific issues in partner cities and meeting of various stakeholders over the course of the activities (also non-TURAS stakeholders). The municipal stress test on climate change has been designed for specifically this purpose and awareness for sustainability issues in urban settings is also raised by the development of a recreational/learning path at the Podutik reservoir.

Work Package 5

Work package 5 was aimed at improving the understanding of urban growth and to propose regulations, recommendations and guidelines on managing urban sprawl. This would see the compact city approach being favoured leading to a reduction in transport and energy costs, whilst retaining green belt and natural areas, while limiting the negative effects of densification. One of the main findings was that the scale of urban sprawl in the Eastern European cities that were studied is lesser than that of similar cities in Western Europe. However, this trend is steadily changing with a turn towards sprawl in Eastern European cities. As a consequence of the work in work package 5, TURAS research and modelling has been accepted by the planning authorities in the city of Sofia, and has resulted in new policies being discussed and formulated. Work package 5 produced Deliverable 5.6. The partners in this work package made serious efforts to facilitate the adoption of the regulations that were aimed at promoting compact, polycentric urban forms. This resulted in several productive meetings with the Urban Planning Directorate of Sofia Metropolitan Municipality, which were attended by several suburban districts administrators leading to a new policy being devised. These meetings discussed the policy proposals in detail and served as basis for further development of the system of regulations. A report was then prepared on the monitoring and analysis of urban development, migration and trends (showing population dynamics and land cover change for three TURAS cities: Belgrade, Rome and Sofia). The work package leaders featured on a Bulgarian TV news feature on the workings of the TURAS project and benefits of EU research

projects. It is clear that the participation of Varna Free University as a work package leader of the TURAS project has led to a building of capacity to participate in Horizon 2020.

Work Package 6

Work package 6 was designed to address the question: how can we help businesses to help urban communities become more resilient? It was aimed at researching, developing and demonstrating the impact of different approaches to supporting short-circuit economies and increased reliance on local goods and services and to integrate these different approaches into a holistic approach to the development of short-circuit economies at local level. Following an early re-evaluation to the DoW the package partners consulted experts and rethought the design of the work package. During this process it appeared that the term 'Short Circuit Economies' was not sufficiently relevant to reflect the projects led by each local authority partners, because it covers only activities linked to food systems. The term 'Sustainable and Resilient Economic Activity Locally' (SREAL) was coined as more appropriate to encompass the different initiatives that were developed by the public authority partners in the work package, with the aim of transitioning towards economic resilience and the local challenges that this entails. The term was proposed in Deliverable 6.7. This enabled resources to be strategically reallocated away from the previous tasks that were no longer addressing the state of the art in this area (e.g. Ecodesign, Cleantechs and Product Service Systems). The new description of tasks was reshaped for the local authorities and the academic partners to operate within a coherent framework of collaboration. The work package academic partners were given a new task of conducting research on two new topics that could enlighten the case studies. These topics are 'Adaptive Governance', addressed by UEL, and 'Economic Resilience'. A new academic partner from the Department of Applied Economics (Dulbea) of the Free University of Brussels (VULB) was added to work on the second topic of 'economic resilience'. Work package 6 produced a database of inspiring Product-Service-Systems (PSS) business models. Case studies areas and sectors were identified in Rome and another TURAS partner, BicLazio, developed incubator model to support urban agriculture businesses and creative/cultural industries (iAgri). The different outputs of work package 6 are described in <u>Deliverable 6.9</u> and <u>Deliverable 6.8</u>. An important development that grew out of the methodologies created and tested during the work package 6 research has become a spin-off company. Called OSMOS, it will tap into the knowledge built during the TURAS research to offer an empowerment service for communities and local authorities that want to engage in the transition towards a place-based economy system. It has already helped community actors - local administrations, civil society organisations, elected officials, members of a local business community - to apply system thinking in order to develop a common vision of what a local sustainable economy could look like in their specific socio-economic, geographical and cultural context. TURAS created a video to illustrate the OSMOS process.

Work package 7

As a cross-cutting package, the aim of work package 7 was the preparation of an integrated transition approach combining the outcomes of the work packages 2 to 6, and the development of a methodology for guiding European cities through the creation of their own transition strategies based on TURAS outcomes. The package 7 did not officially kick off until year three of the project, but during the first three years a lot of conceptual planning and general discussions took place, especially with devoted time during all steering committee meetings as well as at all AGMs. Numerous bilateral meetings were also convened. This has resulted in the identification of potential barriers to achieving an integrated transition strategy and some new and unique thinking for bridging these barriers. This consultation process was facilitated by the TURAS local authorities and public institution partners, in close co-operation and consultation with the work package lead team in the University of Stuttgart, resulting in several draft ITS documents. These documents were circulated through the TURAS office site and all partners were asked for, and many provided, feedback and constructive criticism. The work package leaders, working closely with the entire steering committee and especially work package 8, produced Deliverable 7.10 as a draft ITS. This was then superseded by Deliverable 7.11

where the ITS is fully explained. This strategy is now the main outward-facing aspect of the TURAS legacy website and will be moved to the Oppla platform in the coming weeks.

Work Package 8

Work package 8 was dedicated to dissemination and outward communication. The main activities of this work package and the impact generated are summarised in the next section on Potential Impact: and main dissemination activities and exploitation of results.

Work Package 9

Work package 9 was responsible for the management and reporting to the European Commission. UCD invited key thinkers and activists worldwide to participate in steering TURAS along its journey. Members of his High Level Advisory Board (HLAB) gave TURAS external advice and, in some cases, working with individual work packages to overcome difficult areas of research. UCD was awarded first place in the Champions of European Research Award, by Enterprise Ireland, presented by the President of Ireland for the TURAS project. UCD consulted widely with companion and complimentary FP7 projects (e.g. ARTS, GLAMOURS, GreenSurge, OPERAs, OpenNess to name but a few), and was involved in disseminating to the wider academic and public arena. The highlight was the sponsorship by TURAS of the AESOP/ACSP global conference in July 2013. The management of the consortium was arranged around monthly steering committee conference calls, 6 monthly steering committee meetings and annual consortium meetings. The project did not always run smoothly. Having commenced at the height of the collapse of the economies of several European countries, and progressing through a period of austerity (which placed restrictions on the activities of some partners and well as additional expense on others), the project lost three partners due to liquidation. Additional partners were recruited and all tasks were performed on time and within budget. Many of the annual meetings were co-located with other events, and in the last years of the project all events coincided with a TURAS public dissemination event.

TURAS has created a decision-maker toolkit for assisting in transitioning in city-making. This toolkit is located on the main website, which has now been adapted (in its legacy format) to be a one-stop show for all stakeholders. There are four locations, each 'tagged' with key words to interface with the other three. The first location consists of integrated transition strategies. This is a step-by-



stem "how to" process giving examples from the TURAS case studies and research projects, from start to 'achieving transition' status. The second location contains the TURAS tools. This section has 33 tools for achieving the transition towards resilience. Each of these 33 tools has the potential for scaling into stand-alone endeavours, and as such two have become companies. It is possible for some of these tools to be conflated into one offering and so other companies may arise over time. To give examples of how transitioning has been tested in the TURAS cities, the third website location shows the TURAS place-based strategies. Within these cities, some pilots demonstrations (pilots) are offered as part of the fourth website location. In this report it is not appropriate to go through each of the TURAS pages, rather it is best to experience the interconnectedness of the website in real time.

Potential Impact: The potential impact (including the socio-economic impact and the wider societal implications of the project so far) and the main dissemination activities and exploitation of results (not more than 10 pages)

Potential impact

As part of the preparations for the final partner meeting of the TURAS project in September 2016, partners were asked to prepare an impact statement reflecting on the project outcomes and longer term benefits and impacts. A summary of these impacts is presented in a final impact video available here.

The original call text of ENV.2011.2.1.5-1 Sustainable and Resilient Green Cities stated the expected impact as follows: "Provision of visions, feasible strategies, spatial scenarios and guidance tools that would enable adaptive governance, collaborative decision-making, and behavioural change towards resilient and sustainable European cities. The results of research in this topic should clearly be of interest and potential benefit to SMEs, and will create a beneficial economic impact to the sector concerned. A strong participation of SMEs in the project itself should help contribute to the realisation of that impact."

Visions, feasible strategies, spatial scenarios and guidance tools that would enable adaptive governance, collaborative decision-making, and behavioural change towards resilient and sustainable European cities.

As detailed in the previous section, TURAS has delivered strongly at both individual work package level (work packages 1 to 6) and in terms of the Integrated Transition Strategies (work package 7) on the development of strategies and tools to support cities in using collaborative new approaches to develop and implement strategies to build more resilient and sustainable European cities. The unique 'twinning' approach of TURAS has ensured a higher impact and sustainability of results: the outcomes of work packages 1 to 7 were not developed by academics and piloted on a once off basis by local authority partners. The solutions emerging from TURAS were co-designed from the outset by academic partners working on a collaborative basis with local authorities and wider stakeholder communities. This approach ensured the higher relevancy of results, the development of guidance documents and tools in a format easily understood and useable by end-users and most importantly the ownership and sustainability of these outcomes by end users leading to their seamless integration into the policies and practices of all local authority partners involved in TURAS. The exploitation and dissemination activities undertaken by all partners ensured the wider impact of this project and the ongoing collaboration with Oppla ensures the continued dissemination of project results into the future.

The potential benefit to SMEs, creating a beneficial economic impact to the sector concerned.

TURAS has had a strong impact on the SME involved in the project and has also led to the emergence of two new spin-off companies thus creating significant beneficial economic impact. The impact of the project for SMEs involved and the new emerging SMEs is summarised hereafter:

Osmos

Osmos is a new spin-off SME that exploits the results of the collaborative processes devised, tested and validated in TURAS in particular those developed in work package 3 and work package 6. This SME provides meaningful stakeholder based vision creation services on the design and implementation of a range of themes such as nature-based solutions, the circular economy, transitional use of urban development and local economy. Osmos uses a dialogue process that brings participants together in a constructive way an example of which can be seen in their video of one of the events. This SME has attracted interest from many cities, and has been instrumental in the

Comment [MC1]: Insert link to video

establishment of new urban resilience projects in Brussels (BE), Manziana (IT), Rome (IT). Having received validation from clients, Osmos is now a full SME and a partner on the recently successful CONNECTING Horizon 2020 project (SCC-02-2016) where they will support more than 20 other cities in Europe and globally to use collaborative approaches (emerging from TURAS) to plan nature based strategies. TURAS created a promotional video for Osmos here.

Comment [MC2]: Osmos video



Semeo

Osmos infographic on their transversal planning methodology.

Space Engagers

a



This new start up is a spin-off built upon the success of the Reusing Dublin crowd sourced web mapping platform. Reusing Dublin stemmed from the integration of the research from work package 1 and work package 3. This platform, which enables citizens to map underused and vacant spaces highlighted large numbers of vacant sites in addition to the official records. The platform facilitated the generation of crowd sourced data and citizen engagement on the issue of

underutilised spaces. Reusing Dublin is currently being operated by the Peter McVerry Trust (PMVT) – an NGO who assist homeless people with accommodation and support. They are using the platform to raise awareness of and gather data on vacant properties in private ownership with potential to address the housing crisis.

Space Engagers has received support from the EU Common Booster programme and has just been awarded significant seed funding and technical mentoring from Social Innovation Fund Ireland, the

Irish Government and Google.org (€100,000). It was also awarded funding by the Horizon 2020 project Organicity (€45,000), to engage citizens in mapping underused spaces and instigating co-creation / co-design processes on those spaces in Aarhus, Denmark. Space Engagers supports more informed and effective decisions for social and environmental change, by engaging citizens in building awareness of local issues and generating distributed knowledge through

"TURAS, thank you for believing in me, thank you for educating me, thank you for supporting me, thank you for the friendships you have bestowed on me, thank you for the experiences you have provided me but most of all thank you for providing me the confidence and knowledge to follow my dreams."

Aoife Corcoran, Space Engagers

online mapping platforms. Currently it is an SME on two Horizon 2020 bids (SCC-02-2017, CULT-COOP-) and an Interreg proposal.

Helix

Expanding their business to encompass the emerging field of providing nature-based solutions for building urban resilience, Helix has grown it's business and changed its business model in the light of new orders and requests in different green infrastructure projects. Currently, Helix is exploring offers of interest from cities in Asia and in USA. In addition to the scaling up of the SME, Helix also devised, in conjunction with several TURAS partners, the mobile green living room road show, a scaled-down version of the green living room in Ludwigsburg. The mobile green living room roadshow toured Europe in the summer of 2016 having been invited by 9 cites to be co-located with

Figure 5 Green Living Room, Ludwigsburg, Germany



project CONNECTING.

local sustainability events. Helix is planning an even larger tour in 2017 and the first dates are already confirmed. There is also interest from cities to buy several of the Mobile Green Livingroom as the 'mascot' for their own urban green infrastructure activities and to make them more visible on city markets and squares. More information can be seen in this video, and in visiting the popular Mobile Green Living Room Facebook page that accompanied the tour, as well as here. As a result of their innovation activities, Helix is now a partner on the 'innovating cities through nature-based solutions' Horizon 2020

Dermot Foley Landscape Architects

DFLA is an established SME that has been successful in international bids for new nature-based solutions and co-creation processes in the last few years. DFLA have drawn upon their experiences on working in work package 6 and on the collaborative processes in the Pelletstown case study area on a project in Kingstown University, London. Here they established, with the participation of the client, a full cradle-to-cradle approach to the demolishing of an old building and its replacement with a new library that has nature-based solutions and fully recycle materials as a core design concept (see here for more information). Dermot Foley also used his experiences with TURAS case studies, as well as the opportunities that TURAS offered for learning and student engagement, to create a student project, exhibition and book.

Bioazul

This SME specialising in waste management, has scaled up their client offering by drawing on ideas and examples from work package 4 and the use of nature-based solutions for wastewater management. The project has had a significant impact for this SME enabling them to collaborate with the main actors in the waste management sectors in the city of Malaga. Furthermore it led directly to collaboration with Promalaga, another TURAS partners focused on fostering the

economic development of Malaga city and supporting entrepreneurs, technological innovation and international investment. Together Bioazul and Promalaga made an analysis of the city from the economical point of view and to develop an integrated strategy for the local transition production model. Outside Spain, Bioazul has worked

"Projects like TURAS are the driving force to cover the increasing demand of sustainability for our cities."

Pilar Zapata Aranda, Bioazul

with TURAS spin-off Osmos in the urban metabolism analysis of Brussels <u>Crown Barracks using the transversal planning</u> approach and the two SMES plan to collaborate further in similar projects in the future. This SME is also participating in the CONNECTING project and has signalled that the TURAS project has greatly assisted them in scaling up their business (see here)

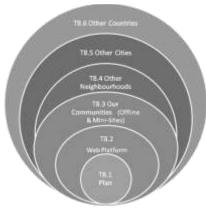
Pracsis, Zotoi and Cicio

Originally part of the SME Pracsis, several smaller ICT SMEs (Zotoi and Cicio) have spun-off from Pracsis using the back office element of the TURAS site as a basis for new business development. The innovative TURAS website structure has now been further developed and subsequent iterations are being used in several Horizon 2020 projects. In the final year of the project, Zotoi collaborated on a mutually beneficial software testing project with TURAS whereby Zotoi tested new event management software concept with several urban cities partnering in the TURAS project. TURAS benefited by having free access to new event management software. Zotoi benefited from end user feedback on early versions of new software. These practical collaborations will contribute to improved innovation and growth of new ICT companies.

Main dissemination activities and exploitation of results

A plan for dissemination and exploitation (Deliverable 8.14) was developed at the start of the project and updated regularly throughout the project to reflect the evolving messages, activities and outcomes of the project. Dissemination and exploitation activities were planned at multiple levels

Figure 6 Overview of TURAS Dissemination Strategy



from local to international and extensive activities were undertaken throughout the project at all levels as shown in the figure below from Deliverable 8.14.

In summary, the main dissemination activities included the development of an interactive web platform (Task 8.2) which supported both internal collaboration between partners (work package discussions, information gathering and storage, reporting) and communication about the project to the general public in particular in the case study cities. Initially, the package saw the completion of interactive 'mini-sites' the TURAS European cities (which are also linked to the web GIS from work package 1). These were accessible from the home page of the TURAS site which was regularly updated with partner editorials, news and event items. As the project progressed more and more information was produced and disseminated. In order to

communicate and report in a more informal manner the many community and city level events which were taking place in partner cities as part of T8.3 and T8.4, a highly popular blogging mechanism was added in the demonstration phase of the TURAS project and to date there have been nearly 80 blogs. These blogs made the website content more appealing and accessible to a range of target audiences in particular community stakeholders and helped to keep the content continually up to date. Social media such as Twitter was used extensively during the demonstration phase to highlight dissemination activities as they happened – for example the Mobile Green Living room roadshow moving from city to city. A large number of short videos were created for individual partners to speak about their work and how TURAS has impacted their fields of expertise as well as their institution.



In the final months of the project, WP7 and WP8 partners collaborated closely on the design and implementation of a web interface presenting the 83 project outcomes (Integrated Transition Strategies, tools, Place based strategies and pilots) in a user-friendly format for uptake and exploitation by non-partner cities. These project results are highly visible on the home page of the TURAS website which has been revised into a static website format to be maintained for at least 2 years after the project ends. Work is ongoing to transition the 83 TURAS outcomes to the Oppla marketplace and case study database to ensure the ongoing sustainability and exploitation of project outcomes.

While the web platform was important as a communication tool, the TURAS dissemination strategy placed even more emphasis on offline communication activities – engaging various stakeholders directly in a wide range of community and city-wide dissemination events captured and reported in the online blogs (T8.3 and T8.4). T8.5 and T8.6 sought to disseminate and engage non partner cities in exploiting TURAS results through a coordinated programme of events. Three highlights from T8.5 and T8.6 were as follows:

- 1. the TURAS sponsorship of <u>AESOP/ACSP conference July 2013</u> the theme of which was "Planning for Resilient Cities and Regions" addressing both the implications for research and practice.
- 2. the "Green Living Room" dissemination activities including the opening of the green living room showcase in Ludwigsburg in April 2014, the 2015 Deauville award for the Green Living Room video and finally the extensive media (tv, press and online) coverage of the Green Living Room mobile roadshow which captured public interest as it visited 8 European cities in the summer of 2016 (starting in Bonn (ICLEI Resilient Cities Conference), Frankfurt, London, Antwerp, Brussels (Mobility Week), Ljubljana (Mobility Week), Zagreb, Krems (Climate Alliance Annual Conferences) before returning home to permanent residency in Stuttgart.
- 3. The local authority dissemination and outreach activities (presented in Deliverable 8.15) which constructively leveraged local authority experience to communicate to peers the lessons learnt from TURAS, the benefits of participation and the opportunities for other cities to exploit the results. Novel presentation formats such as 'pitch battles' were introduced at these events to engage target audiences in better understanding project outcomes.

Conclusion

In keeping with the rest of the project, TURAS adopted an innovative approach to dissemination, communication and exploitation of results which evolved continually throughout the project. In addition to traditional communications via publications, conferences and websites, TURAS embraced social media and blogging to present up to date information in an easily accessible format for all audiences. When it came to communities, which from the outset were at the heart of the TURAS approach, TURAS went further still – going offline and off road and engaging everyone from children to the elderly in community centred dissemination activities. In quantitative terms, it is difficult to measure the impact of such activities but in qualitative terms, the pictures from these events speak for themselves.

Use and dissemination of foreground

Section A (public)

		TEMPLATE A1: LIST OF SCIENTIF	IC (PEER REVIEWED) PUBLICATIONS, ST.	ARTING WITH THE	E MOST IMPORTAN	IT ONES		
No.	Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Year of publication	Relevant pages	Permanent identifiers (if available)	Is/Will open access provided to this publication? ⁵
1	Microsatellite analysis reveals the spatial dynamics of Bombus humilis and Bombus sylvarum	Connop, S., Hill, T. O. M., Steer, J., Shaw, P,	Insect Conservation and Diversity	Volume 4(3)	Wiley	2011	212-221	Doi: 10.1111/j.175 2- 4598.2010.00 116.x	Yes
2	The role of dietary breadth in national bumblebee (<i>Bombus</i>) declines: Simple correlation?	Connop, S., Hill, T., Steer, J., Shaw, P	Biological Conservation	Volume 143(11)	Elsevier	2011	2739-2746	http://dx.doi.or g/10.1016/j.bi ocon.2010.07. 021	Yes
3	Barking Riverside: office landscaping for biodiversity	Connop, S., Lindsay, R., Freeman, J., Kadas, G	Essex Naturalist	Volume 28		2011	49-67		Yes
4	Directions in green roof research: A bibliometric study	Blank, L., Vasl, A., Levy, S., Grant, G., Kadas, G., Dafni, A. Blaustein, L.	Building and Environment	Volume 66	Elsevier	2013	23-28	http://dx.doi.or g/10.1016/j.bu ildenv.2013.0 4.017	Yes
5	Transitioning to resilience and sustainability in urban communities	Collier, M. J., Nedović- Budić, Z., Aerts, J., Connop, S., Foley, D., Foley, K., Newport, D., McQuaid, S., Slaev, A., Verburg, P.	Cities	Volume 32	Elsevier	2013	21-28.	http://dx.doi.or g/10.1016/j.citi es.2013.03.01 0	Yes
6	Factors of urban sprawl in Bulgaria	Slaev, A.D., Nikiforov, I.,	SPATIUM International Review	Volume 29		2013	22-29		No

⁵ All publications will be made freely available on the authors' institutional repository when copyright and permission is granted. In addition, all papers are on the authors' ResearchGate pages

7	New in town? On resilience and "Resilient Cities"	Stumpp, EM.	Cities	Volume 32	Elsevier	2013	164-166	http://dx.doi.or g/10.1016/j.citi es.2013.01.00 3	Yes
8	Evaluating flood resilience strategies for coastal mega-cities	Aerts J.C.J.H., W.J.W. Botzen, K. Emanuel, N. Lin, Moel, H. de, E. Michel-Kerjan	Science	Volume 344	Science	2014	473-475	Doi:10.1126/s cience.12482 22	No
9	Evaluating the effect of flood damage-reducing measures: a case study of the un-embanked area of Rotterdam, the Netherlands	de Moel, H., Vliet, M. van & Aerts, J.C.J.H.	Regional Environmental Change	Volume 14(3)	Springer	2014	895-908	Doi:10.1007/s 10113-013- 0420-z	Yes
10	Increasing flood exposure in the Netherlands: implications for risk financing	Jongman, B., Koks, E. E., Husby, T.G., Ward, P.J.	Natural Hazards and Earth System Science	Volume 14(5)	Copernicus	2014	1245-1255	Doi:10.5194/n hess-14-1245- 2014	Yes
11	Population dynamics and land cover changes of urban areas	Krunic, N., Maksin, M., Milijic, S., Bakic, O.,Đurđevic, J,	SPATIUM International Review	Volume 31	De Gruyter	2014	22-29		No
12	Manipulating soil microbial communities in extensive green roof substrates	Molineux, C., Connop, S. Gange, A.	Science of the Total Environment	Volume 493	Elsevier	2014	632-638	http://dx.doi.or g/10.1016/j.sci totenv.2014.0 6.045	Yes
13	Specific issues of urban sprawl in Bulgaria	Slaev, A.D., Kovachev, A.	Journal of European Spatial Research & Policy	Volume 21(2)	ProQuest	2014	155-169		Yes
14	2015. Diversity in the suburbs: Socio-spatial segregation and mix in post-socialist Sofia	Daskalova, D., & Slaev, A.D.,	Habitat International	Volume 50	Elsevier	2015	42-50	http://dx.doi.or g/10.1016/j.ha bitatint.2015.0 7.007	Yes
15	Flood risk assessments at different spatial scales	de Moel, H., Jongman, B., Kreibich, H., Merz, B., Penning-Rowsell, E., Ward, P. J.	Mitigation and Adaptation Strategies for Global Change)	Volume 20(6)	Springer	2015	865-890	Doi: 10.1007/s110 27-015-9654- z	Yes
16	Quantifying urban ecosystem services based on high-resolution data of urban green space: an assessment for Rotterdam, the	Derkzen, M.L., van Teeffelen, A.J.A., & Verburg, P.H.	Journal of Applied Ecology	Volume 52	Wiley	2015	1020-1032	Doi: 10.1111/1365- 2664.12469	Yes

	Netherlands								
17	Integrated direct and indirect flood risk modelling: development and sensitivity analysis	Koks E.E., Bockarjova M., De Moel H., Aerts J.C.J.H.	Risk Analysis	Volume 35(5)	Wiley	2015	882-900	Doi:10.1111/ri sa.12300	Yes
18	Using recycled aggregates in green roof substrates for plant diversity	Molineux, C. J., Gange, A. C., Connop, S. P. & Newport, D. J.	Ecological Engineering	Volume 82	Elsevier	2015	596-604	http://dx.doi.or g/10.1016/j.ec oleng.2015.05 _036	Yes
19	Are microbial communities in green roof substrates comparable to those in post-industrial sites? A preliminary study	Molineux, C.J., Gange, A.C., Connop, S.P. & Newport, D.J.	Urban Ecosystems	Volume 18(4)	Springer	2015	1245-1260	Doi: 10.1007/s112 52-015-0450- z	Yes
20	Optimum community energy storage system for PV energy time- shift	Parra, D., Gillott, M., Norman, S. A., & Walker, G. S.	Applied Energy	Volume 137	Elsevier	2015	576-587	http://dx.doi.or g/10.1016/j.ap energy.2014.0 8.060	Yes
21	Green infrastructure and urban resilience in Central Europe: a solution for environmental and spatial challenges in the inner-city of Ljubljana, Slovenia	Pichler-Milanovič, N., Foški, M.	Urbani izziv	Volume 26		2015			
22	Development of South-Eastern Europe: The Role of Industrial Policy	Zeković S. & Vujošević M.	American Journal of Economics	Volume 1(5)	AIS	2015	445-459		Yes
23	Spatial regularization, planning instruments and urban land market in a post-socialist society: the case of Belgrade	Zeković S., Vujošević, M., & Maričić T.	Habitat International,	Volume 48	Elsevier	2015	65-78	http://dx.doi.or g/10.1016/j.ha bitatint.2015.0 3.010	Yes
24	Planning and land policy tools for limiting urban sprawl: example of Belgrade	Zeković S., Vujošević, M., Bolay, J.C., Cvetinovic, M., Živanović-Miljković, J. & Maricic T.	SPATIUM International Review	Volume 33	De Gruyter	2015	69-75	Doi:10.2298/S PAT1533069Z	Yes
25	Combining hazard, exposure and social vulnerability to provide lessons for flood risk management	Koks E.E., Jongman, B., Husby, T.G., Botzen, W.J.W.	Environmental Science & Policy	Volume 47	Elsevier	2015	42-52	http://dx.doi.or g/10.1016/j.en vsci.2014.10.0 13	Yes

26	Renaturing cities using a regionally- focused biodiversity-led multifunctional benefits approach to urban green infrastructure	Connop, S., Vandergert, P., Eisenberg, B., Collier, M. J., Nash, C., Clough, J., Newport, D.	Environmental Science & Policy	Volume 62	Elsevier	2016	99-111	http://dx.doi.or g/10.1016/j.en vsci.2016.01.0	Yes
27	Operationalizing urban resilience through a framework for adaptive co-management and design: five experiments in urban planning practice and policy	Crowe, P. R., Foley, K., Collier, M. J.	Environmental Science & Policy	Volume 62	Elsevier	2016	112-119	http://dx.doi.or g/10.1016/j.en vsci.2016.04.0 07	Yes
28	Stuck in the middle with you: the role of bridging organisations in urban regeneration	Kampelmann, S., Van Hollebeke, S., Vandergert, P.	Ecological Economics	Volume 129	Elsevier	2016	82-93	http://dx.doi.or g/10.1016/j.ec olecon.2016.0 6.005	Yes
29	Regional disaster impact analysis: comparing input–output and computable general equilibrium models	Koks, E. E., Carrera, L., Jonkeren, O., Aerts, J. C. J. H., Husby, T. G., Thissen, M., Standardi, G., and Mysiak, J.	Nat. Hazards Earth Syst. Sci.	Volume 16	Copernicus	2016	1911-1924		Yes
30	A Multiregional Impact Assessment Model for disaster analysis	Koks. E.E. & Thissen, M.	Economic Systems Research	Volume 28(4)	Taylor & Francis	2016	429-449	http://dx.doi.or g/10.1080/095 35314.2016.1 232701	Yes
31	Initial insights on the biodiversity potential of biosolar roofs: A London Olympic Park green roof case study	Nash, C., Clough, J., Gedge, D., Lindsay, R. Newport, D., Ciupala, M. A. & Connop, S.	Israel Journal of Ecology & Evolution	Volume 62	Taylor & Francis	2016	74-87	http://dx.doi.or g/10.1080/156 59801.2015.1 045791	Yes
32	Measuring urban form at community scale: case study of Dublin, Ireland	Nedovic-Budic, Z., Knaap, G. J., Shahumyan, H., Williams, B., Slaev, A.	Cities	Volume 55	Elsevier	2016	148-164	http://dx.doi.or g/10.1016/j.citi es.2016.02.01 4	Yes
33	Integration of Photovoltaic Panels and Green Roofs: Review and Predictions of Effects on Electricity Production and Plant Communities	Schindler, B., Kadas, G., Pearlmutter, D. Blaustein, L.	Israel Journal of Ecology and Evolution: Green Roof Special	Volume 62	Taylor & Francis	2016	68-73	http://dx.doi.or g/10.1080/156 59801.2015.1 048617	Yes

			Edition.						
34	Property Rights and Methods of Nomocratic Planning	Slaev, A.D.	Planning Theory	Volume 15(1)	Sage	2016	23-41	Doi: 10.1177/1473 09521558374 9	Yes
35	Blending adaptive governance and institutional theory to explore urban resilience and sustainability strategies in the Rome metropolitan area, Italy	Vandergert, P., Kampelmann, S., Collier, M.	Journal of Urban Sustainable Development	Volume 8	Taylor & Francis	2016	126-143	http://dx.doi.or g/10.1080/194 63138.2015.1 102726	Yes
36	Green infrastructure for urban climate adaptation: How do residents' views on climate impacts and green infrastructure shape adaptation preferences?	Derkzen, ML, AJA van Teeffelen, and P Verburg	Landscape and Urban Planning	Volume 157	Elsevier	2017	106-130	http://dx.doi.or g/10.1016/j.la ndurbplan.201 6.05.027	Yes
37	Types of planning and property rights	Slaev, A.D.	Planning Theory		Sage	In press		Doi: 10.1177/1473 09521454065 1	Yes
38	A century of vacant sites mapping: motivation, process and use in Dublin, Edinburgh and Philadelphia	Crowe, P. Foley, K	Journal of Urban Design, Special Edition: 'Urban Design in an Age of Recession'		Elsevier	In review			Yes
39	Do photovoltaic panels and green roofs have a truly symbiotic relationship? A London Olympic Park case study revealing the role of PVs in green roof habitat niche enhancement	Nash, C., Clough, J., Gedge, D. Connop, S.	Israel Journal of Ecology and Evolution: Green Roof Special Edition		Taylor & Francis	In review			Yes
40	Invertebrate community composition on Thames Gateway green roofs and brownfield sites	Nash, C., Kadas, G., Connop, S.	Journal of Insect Conservation and Diversity		Wiley	In review			Yes

41	Urban transformation with TURAS open innovations; opportunities for building resilience	Collier, M.J. et al	Current Opinion in Environmental Sustainability	Elsevier	In review		Yes
42							

Other publications

Books:

Forestry, not Forest. This book illustrates student work for the demonstration site at Pelletstown.

Book chapter:

Atmanagara, J. (2013) Vielfalt der Planungskulturen – Auswirkungen auf strategische Planungsprozesse zur Energiewende und Klimaanpassung in Baden-Württemberg. In: Gailing, L. & Leibenath, M.: Neue Energielandschaften - Neue Perspektiven der Landschaftsforschung, S. 185 - 203, Berlin. Pichler-Milanovič, N. (2014) Confronting Suburbanization in Ljubljana: From "Urbanization of the Countryside" to Urban Sprawl. In: Stanilov, K. and Sykora, L. (eds), 2014, Confronting Suburbanisation – Urban decentralisation in Postsocialist Central and Eastern Europe, Chichester, Oxford: Wiley Blackwell.

TEMPLATE A2: LIST OF DISSEMINATION ACTIVITIES

In reporting period reports 1, 2, and 3 the project conference presentations and other dissemination activities were reported in detail. To do so again would occupy a large number of subsequent pages.

List of conference presentations

Oral presentations:

- Alvarez, L., Rodrigues, L., Borsi, K., & Gillott, M. (2015). "A bifocal-ecological approach for enhancing social resilience in neighbourhoods". In:
 AIARG 2015 Systems Thinking and the City: New practices and connections, Fourth Annual Meeting, 30th-31st January. University College Dublin.
 Ireland.
- Barking Riverside partners. Creating Resilient Cities: How to future proof our cities. London, September 2014.
- Berardi, L. and Salvemini, S. From sprawl to green infrastructure: the SDI as opportunity. INSPIRE conference, Aalborg, 16th-20th June, 2014.
- Berardi, L. Design handbook on Urban Green Infrastructure: a challenge of the TURAS project. INSPIRE conference 2013, Florence 23rd-27th June.
- Borsi, K., Alvarez, L., Rodrigues, L., & Gillott, M., (2015). "Community resilience and social equity for the sustainable development of disadvantaged neighbourhoods". In: AR 2015 Architecture and Resilience at the Human Scale. 10th 12th September, Sheffield, UK.
- Cities of the Future summer workshop. Faculty of Civil and Geodetic Engineering in Ljubljana, Slovenia, 9th-10th June 2014,
- Climate Alliance Annual Conference in Luxemburg, May 2014.
- Clough, J. (2015) Greening local neighbourhoods: practicing what you preach. UEL research conference, June, London, UK
- Collier, M.J. High level TURAS participation (panel member) at Third International Science and Policy Conference on the resilience of social & ecological systems, Montpellier, France 4th-8th May 2014.
- Conference of the Society of Risk Analysis. Baltimore, US, 9th-10th December, 2013.
- Connop, S. (2015) presented 'TURAS applying theory into practice' at Innovate UK Horizon 2020 Nature Based Solutions stakeholder workshop (September)
- Connop, S. BASE London 2013, 11th July 2013, University of East London, UK.
- Connop, S. Buglife Brownfield Conference, Lincolnshire, UK, 31st October 2013.
- Corcoran, A. (CIG) Conference of Irish Geographers, UCD, May 2014.
- Corcoran, A. & Nedovic-Budic, Z. (2015) Computers in Urban Planning and Urban Management (CUPUM). "Reusing Dublin": A crowd sourced web mapping application to support the reuse of underutilized spaces in Dublin. Boston, 7th-10th July.
- Corcoran, A. & Nedovic-Budic, Z. (2015) IGU –Urban Geography Commission Conference. A crowd sourced web mapping application to support the reuse of underutilised spaces in Dublin, Ireland, 9th-16th August.
- Corcoran, A. INSPIRE Conference 2013, Florence, 23rd-27th June 2013.
- Crowe, P. AIARG Emerging Research Conference, January 2014, Belfast.
- Crowe, P. Resilience in Urban and Regional Development, Berlin, 27th-28th March 2014.

- Crowe, P. & Foley, K. (2014). "Vacant Sites Mapping: Motivation, process and use". In: 2nd International Conference on Urban Sustainability and Resilience (USAR), 3rd-5th November, University College London, UK.
- Crowe, P. AESOP/ACSP Joint Congress 2013: Planning for Resilient Cities and Regions, 15th-19th July 2013, Dublin.
- Crowe, P. Architecture and Design, Scotland 2014: 'Design Skills Symposium' 2014.
- Crowe, P., Foley, K. & Corcoran, A. (2015) Building Adaptive Capacity to Change: A century of mapping underused spaces in Dublin. Urban Ecologies Conference, 17th-19th June, Toronto, Canada.
- Crowe, P., Foley, K. & Corcoran, A. (2015). Creating a Template for Change: A century of mapping underused spaces in Dublin. AR 2015 Architecture and Resilience at the Human Scale. 10th-12th September, University of Sheffield, UK.
- De Moel, H. (2014) Delta's in Times of Change II, Rotterdam, 24th-26th September.
- Eco-innovation Forum, Hannover, Germany 7/04 Hannover Messe, Hannover, Germany, April 2014.
- Foley, D. Forestry, not Forest: Teaching Tools for Urban Design on Vacant Sites. Oral presentation: ECLAS Landscape: a place of cultivation. Porto, September 2014.
- Foley, K, Crowe, P., Foley, D. Collier, M. Varghese, J., O'Connor, D. and Farrelly, M. TURAS Conference symposium (several oral presentations), TURAS Integrated Planning Model: Resilience 2014: Resilience and Development: Mobilizing for Transformation Montpelier, 4th-8th May 2014.
- Foley, K. (2015) Developing community resilience through active landscape engagement. In: AR 2015 Architecture and Resilience at the Human Scale. 10th-12th September, Sheffield, UK.
- Foley, K. 2nd International Conference on Urban Sustainability and Resilience (USAR). University College London, UK 3rd-5th November 2014.
- Foley, K. ECLAS Landscape: a place of cultivation, 2014, Porto.
- Foley, K. Public seminar on TURAS, University of Westminster, London, January 2014.
- Foley, K. RESPAG 2nd International Scientific Conference, 2013.
- Connop, S. Global Sustainability Institute Research Conference, Anglia Ruskin University, May 2013.
- Connop, S. Green Infrastructure and GIS: AMFM Conference. September 2013.
- Van den Abeele, P. Greenov Sustainable Renovation conference, EU sustainable energy week, Brussels, June 2013.
- Müller, H. (2014) Citizens information event: Nachhaltigkeitstag in Baden Württember; at the 'Green Living Room' Ludwigsburg. In cooperation with Stadt Ludwigsburg, Verband Region Stuttgart, Universität Stuttgart, TURAS, Ludwig Schönle Architekte.
- Müller, H. (2014) GaLaBau International Trade Fair for Urban Green and Open Spaces, 17th-20th September.
- Müller, H. (2015) Green Living Room and other TURAS, European Green Week and Exhibition, Brussels.
- Van den Abeele, P. Innovation convention, Brussels, March, 2014.
- International Conference on Vertical Farming and Urban Agriculture, Nottingham, September 2014.
- Kampelmann, S. (2015) <u>Curating complexity: a participatory approach for real-world system transitions</u>, 51st ISOCARP Congress, 19th-23rd October, Netherlands and Belgium
- Kampelmann, S. (2015) Stuck in the middle with you: mediation between bottom-up and top-down approaches in urban regeneration policies, 11th International Conference of the European Society for Ecological Economics (ESEE), 30th June 3rd July, University of Leeds.
- Van den Abeele, P. (2014) KARIM Responsible Innovation, Brussels, October.

- Kovachev, A., & Slaev, A.D. (2015) The Balance between Planning and the Market in the Current Practice of Spatial Development in Bulgaria.
 Proceedings of the Seventh International Scientific Conference "Architecture, Civil Engineering Modernity". Varna: Varna Free University. 28th-30th May.
- Müller, H. & Bahsitta, M. (2014) The Green Living Room. Gründach Forum (4 conferences in Mainau, Munich, Hannover and Berlin), October.
- Nash, C. & Connop, S. (2014) Mosaic approach to urban green infrastructure. Poster presented at the Amateur Entomological Society and British Ecological Society's Annual Conservation Conference, London, UK.
- Nedovic-Budic, Z. & Corcoran, A. (2015) Association of American Geographers, Annual Meeting. GICT design for urban resilience, 21st-25th April, Chicago, USA.
- Nedovic-Budic, Z. & Corcoran, A. (2015) GICT design for urban resilience. Association of European Schools of Planning (AESOP), 13th-16th July, Prague.
- Nedovič-Budič, Z. Spatial Planning and Environmental Assessment for Decision Making in Europe, Eco2Arm Summer School, Budapest, July 2014.
- Nedovič-Budič, Z. Urban Resilience: Framework for Integrated Transition Strategies. Urban and Environmental Planning and Management, La Plata, Argentina, 16th-19th September, 2014.
- Newport, D. Fostering innovative dialogue between researchers and stakeholders to meet future challenges: Land, Soil, Desertification, Urban and Community-Based Environmental Management, DG Environment, Brussels, 11th-12th June 2014.
- Nikiforov, I and Slaev, A.D. Factors of Urban Sprawl in Bulgaria: RESPAG 2nd International Scientific Conference, Belgrade, 22nd-23rd May, 2013.
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- Owczarek, K.: Assessment of the Use of Recycled Materials to Enhance Green Roof Performance. Nurturing Tomorrow's Innovators Student Showcase & Employment Fair, University of East London.
- Göllsdorf, K., Möller, H., Collier M.J: Green Walls for Clean Air. AESOP/ACSP Joint Congress 2013: Planning for Resilient Cities and Regions, 15th-19th July 2013, Dublin (see illustration 33b).

- Berardi, L. Design handbook on Urban Green Infrastructure: a challenge of the TURAS project. INSPIRE conference 2013, Florence 23rd-27th June.
- Rome and Resiliency. C40 Rockefeller Foundation Conference, London, 4th-5th June 2014.
- Pichler-Milanovič, N. AESOP/ACSP Joint Congress 2013: Planning for Resilient Cities and Regions, Dublin, 15th-19th July 2013 (see illustration 34a).
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Dissemination outside Europe

- Presentation of TURAS to a Georgian delegation, BIC Lazio 13th May, 2013.
- Presentation of the TURAS project to high level delegation from the Government of China, May 26th, 2013.
- Presentation of TURAS to South Korean delegation at the symposium 19th June 2014 at UL FGG in Ljubljana and study visit of foreign professors in Slovenia.
- Presentation of TURAS to Taiwanese delegation, EBN Congress, Lleida, 26th June 2014.
- Presentation to Florida Atlantic University, February 2014.

Media

- Dublin's People newspaper. July 8th 2015: Reclaiming Dublin City.
- Online article: LovinDublin. August 2nd 2015: Help to Transform Our City with a brilliant new website called Reusing Dublin.
- Online article: Dublin Buzz: June 23rd 2015. Identifying the Underused Spaces in our City with Reusing Dublin.
- Online article: July 31st 2015: What If?
- Connop, S., Clough, J, Carneiro, M A, & Borland, T. (2015) Report on water attenuation performance of green roof in the Ruislip Depot. London: University of East London.
- London Borough of Tower Hamlets (2014) <u>SUDS Guidance</u>: London Borough of Tower Hamlets.
- Connop, S. & Clough, J. (2015) Novel urban greening project in collaboration with Aquaten © water retention membrane.
- Helix Pflanzen (2015) Press release Ludwigsburger Kreiszeitung 18.4 Saisonstart für die kleine Stadtoase was published by Ludwigsburger Kreiszeitung newspaper.

- Helix Pflanzen (2015) Press release Gärtnern in der 3. Dimension Reutlinger General-Anzeiger was published by Reutlinger General-Anzeiger Newspaper with a special edition for Garden Life - a private customer garden fair.
- Helix Pflanzen (2015) DEGA GARTENBAU magazine for horticultural producers and marketers
- Helix Pflanzen (2015) Press release "Green Week: Grüne Wände für Brüssels" by Bietigheimer Zeitung newspaper.
- Helix Pflanzen (online article) published in <u>Ulmer</u> a German publishing house for horticultural and agricultural books, magazines and homepages.
- Helix Pflanzen (online article) for German Sustainability Activity Days, part of European Sustainable Development Week.
- Helix Pflanzen (2015) Press release "Stresstest für die Stadtoase" published by Ludwigsburger Kreiszeitung newspaper.
- Helix Pflanzen (online article) on Gabot.de an internet portal for professional horticulture.
- Abdulla, Z. & Rodrigues, L., (2015). Climate Resilience at the Trent Basin Regeneration Site. (unpublished): University of Nottingham.
- University of Nottingham (10th November 2014) 'Smart Energy Community at the Meadows'
- University of Nottingham (12th November 2014) 'Urban Agriculture: Closing the Loop in Nottingham'
- University of Nottingham (11th March 2015) 'Nottingham City Council invests in Blueprint to boost city regeneration'
- University of Nottingham (15th March 2015) 'Urban farming trials at the University of Nottingham'
- University of Nottingham (9th July 2015) 'Trent Basin: A Catalyst for Change is on Site!'
- University of Nottingham (29th July 2015) 'Strengthening Community Identity through Custom Build'
- University of Nottingham (10th August 2015) 'The Island Site: Testing TURAS Strategies'.
- Corcoran, A. Radio Interview: Dublin City FM (29th April 2015): Reusing Dublin.
- Nedovic-Budic, Z. (May 1st 2015) Workshop Where Science and Practice Meet: Approach and Lessons from TURAS Project. New Zealand Ministry of Business, Innovation & Employment

Collaborative planning and community driven actions

- 21st October 2014: Location: Dublin, "Temporary Cities" workshop' participation by TURAS partner DCC.
- 25th October 2014: Location: Nottingham; A community focus group was undertaken at the Pavilion Community Centre, Nottingham and moderated by TURAS partners UoN/UCD
- 30th October 2014: Location: Nottingham; Community focus groups were undertaken at the Meadows Community Centre, and at St Georges Church and moderated by TURAS partners UoN/UCD
- 5th November 2014: Location: Dublin, Presentation of TURAS to Masters students from Queens University Belfast. TURAS partner DCC.
- 26th November 2014: Location: Dublin, Presentation at "Hidden Rooms" event (a Dublin Future-Thinking project to stimulate collaborative efforts that will deliver innovative solutions to city issues.) TURAS partner DCC.
- 11th December 2014; Location: Dublin; Inaugural "Connect the Dots" event held in Grangegorman Dublin with 80 invited guests. TURAS partner DCC.
- 14th January 2015: Conference "Resilient Cities: Novel tools for local authorities" Location: Brussels, "Resilient Cities: Novel tools for local authorities" was hosted by Brussels Environment in cooperation with EBN, the European Business and Innovation Centre Network. At this event, local authority TURAS partners from Dublin, Stuttgart, London, Rome, Brussels, Sofia and Rotterdam showcased some of the outcomes from

- TURAS and explore together with the audience the potential to share their experience and outcomes in other interested cities. VRS presented the TURAS demonstration site "Green Living Room Ludwigsburg" during a pitch. TURAS partners VRS/DCC/LBBD.
- 5th March 2015: Location: Dublin, Dublin Food Co-op, Connect the Dots: Pot Luck Supper. One of a structured series of events to facilitate the development of a collaborative network to address the issue of prevailing vacant space in Dublin. It identifies and brings together diverse stakeholders in an iterative series of events that aim to encourage dialogue, build connections, share knowledge, and spur collaboration. TURAS partners DCC/UCD
- 23rd March 2015: SEAP-ALPS Final Conference, Location: Munich, During the SEAP-ALPS final conference in Munich a poster exhibition about TURAS and several project outcomes was presented. TURAS partner VRS.
- March 28th 2015: Location: Dublin, Hugh Lane Gallery, Phoenix Rising Exhibition. Presentation and participation on a panel for a seminar on a public exhibition at Dublin City Gallery The Hugh Lane called Phoenix Rising. Part of an art installation by Vagabond Reviews called Scientia Civitatis: Missing Titles. TURAS contribution was called 'Beyond Neoliberalism: The communal and co-operative city', focussing on the thinking of Patrick Geddes (1854-1932) on social-ecological systems and the city. TURAS partner UCD.
- 15 April 2015.Location: Dublin, ULSARA (Upper Leeson Street Area Residents Association) AGM guest speaker. 'Patrick Geddes in Dublin: Civic engagement and vacant sites'. TURAS partner UCD.
- 17th April 2015: Location: Dublin, D-Light Studio, N Great Clarence studio, Connect the Dots: one of a series of creative/experimental interventions to help those interested in activating vacant space to learn about each other and from each other to connect, pool knowledge, share resources, and collaborate. Launch of Re-using Dublin. TURAS partners DCC/UCD.
- 30th May 2015: Location: Dublin, Dublin Castle Conference. Connect the Dots In association with Bloom Fringe Festival, an Urban Planning Picnic & an Interactive Public Exhibition. We will be further developing our four main visions addressing the challenges of reusing space with the following topics: 1) Support Network / Coalition, 2) Information Collection & Dissemination, 3) Liaising & Advising Mechanism, 4) Policy, Legislation, Regulation. TURAS partner DCC/UCD.
- 12th June 2015: Location: Dublin, Presentation about "re-using Dublin" to students from the University of Dayton, Ohio. TURAS Partners UCD/DCC
- 20th June 2015: Location: Dublin, 'Recycling Dublin' A Reusing Dublin civic engagement event that involved a guided cycle around underused spaces in the north inner city. TURAS partner UCD.
- 20th July 2015: Location: Portland Community Centre Nottingham, A community engagement event regarding the installation of battery energy storage in the Meadows community was held on the 20th of July 2015, in the Portland Community Centre, in the Meadows, Nottingham. TURAS partner UoN.
- 22nd July 2015: Location: Dublin Crescent Park. Pelletstown, First Community Event. Bio-diversity day. A community engagement event to explore the potential for aesthetic and subjective research strategies to engage otherwise disinterested or disconnected communities in issues around urban/ecological sustainability. TURAS partners UCD/DCC/DFLA.
- 25th July 2015: Location: Dublin, 'Re-walking Dublin' A Reusing Dublin civic engagement event that involved 2 guided walks around underused spaces in the north inner city. TURAS partner UCD.
- 1st / 2nd August 2015: Location: Barking London, Open House Circus weekend. TURAS Stand at Open House Circus weekend to Promote TURAS, Green Infrastructure, its tools and demonstration sites. TURAS partner IFS.

- 5th August 2015: Location: Nottingham, Nottingham TURAS partners produced a historic map analysis of the Meadows community in Nottingham. This document visually displays the evolution of the Meadows community over the period from 1861 to 2014, and infers findings and conclusions based on the analyses. TURAS partner UoN.
- 20th August 2015: Location: Nottingham, A questionnaire was produced in order to gauge the views, attitudes, and opinions of the Meadows community in relation to energy storage. This questionnaire examines the attitudes, opinions and energy behaviours of the residents. It will be administered to members of the Meadows community who have signed up to the SENSIBLE project. TURAS partner UoN.
- 2nd-4th September 2015: Location Manchester, UK., World Symposium on Climate Change Adaptation (WSCCA), Manchester: VRS' Presentation the Stuttgart Region's Climate protection and adaption strategy which will include also the TURAS demonstration site Green Living Room Ludwigsburg (Title: Strategies for Climate Change Adaptation in metropolitan areas: Initiating, coordinating and supporting local activities the approach of Stuttgart Region, Germany). TURAS partner VRS.
- 17th September 2015: Location Dublin: Goethe Institute, Connect the Dots; "Access to Space"; one of a series of creative/experimental interventions to help those interested in activating vacant space to learn about each other and from each other to connect, pool knowledge, share resources, and collaborate. TURAS partners DCC/UCD.
- 17th September 2015: Location: University of Speyer, Germany, Lecture to Chinese administration officers on Climate & Energy Change in Stuttgart including the green living room. TURAS partner VRS.
- 24th September 2015: Location: Stuttgart, German Green roofs Association FFB, Presentation "Adaption to climate Change Pilot project Green Living Room Ludwigsburg-European Research project TURAS". TURAS partner VRS.

Section B (Confidential or public: confidential information to be marked clearly)
Part B1
Not applicable

Part B2
Not applicable.
All project outcomes have been made publicly available from the project website

3.1 Report on societal implications

Replies to the following questions will assist the Commission to obtain statistics and indicators on societal and socio-economic issues addressed by projects. The questions are arranged in a number of key themes. As well as producing certain statistics, the replies will also help identify those projects that have shown a real engagement with wider societal issues, and thereby identify interesting approaches to these issues and best practices. The replies for individual projects will not be made public.

Title of Project: TURAS (Transitioning to Urban Resilience and Sustainability Name and Title of Coordinator: Dr. Marcus Collier, Senior Research Fello B Ethics I. Did your project undergo an Ethics Review (and/or Screening)? • If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final project reports? Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final Project Reports under the Section 3.2.2 'Work Progress and Achievements' 2. Please indicate whether your project involved any of the following issues (tick box): RESEARCH ON HUMANS Did the project involve children? Did the project involve patients? NO Did the project involve patients? NO Did the project involve dulut healthy volunteers? Did the project involve Human penetic material? NO Did the project involve Human bloogical samples? Did the project involve Human act a collection? RESEARCH ON HUMAN EMBROY/FOETUS Did the project involve Human Embryos? Did the project involve Human Embryos? Did the project involve Human Embryos? Did the project involve Human Embryosic Stem Cells (hESCs)? NO Did the project on human Embryonic Stem Cells involve derivation of cells from Embryos? NO Did the project involve Human Embryonic Stem Cells involve the derivation of cells from Embryos? NO Did the project involve processing of genetic information or personal data (eg. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)? Did the project involve research on animals? Did the project involve research on animals? Did the project involve research on animals? Were those animals transgenic farm animals? Were those animals transgenic farm animals? Were those animals non-human primates?	A General Information (completed	automatically when Grant Agreement number is	entered.
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Were those animals non-human primates? NO		5!	
Were those difficulty from remain primates.			
	 Were those animals non-human primates? RESEARCH INVOLVING DEVELOPING COUNTRIES 		NU

Did the project involve the use of local resources (genetic, animal, plant of the project involve the use of local resources).	? NO					
Was the project of benefit to local community (capacity building, access to healthcare, education etc)?						
DUAL USE						
Research having direct military use	NO					
Research having the potential for terrorist abuse	NO					

C Workforce Statistics

3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis)⁶.

Type of Position	Number of Women	Number of Men
Scientific Coordinator	3	1
Work package leaders	5	4
Experienced researchers (i.e. PhD holders)	28	30
PhD Students	16	11
Total	94	105

4. How many additional researchers (in companies and universities) were recruited specifically for this project?	50	
Of which, indicate the number of men:	15	

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⁶ NOTE: This calculation is based on the number of people that were directly or centrally involved in TURAS research AND dissemination. It does not take into account people that were involved prior to the kick-off (and were partly responsible for the proposal) nor does it take into account people who have arrived into the project close to or at the end of the project. These figures are a calculation based on personal enquiry, as we did not request or require any TURAS participant to divulge any personal information, such as educational status or gender, to us. In the case where maternity replacements were recruited the new recruit was included in these calculations.

D	Gender A	spects				
5.	Did you	carry out speci	fic Gender Equality Actions un	der the project?	O X	Yes No
6.	Which of		nctions did you carry out (NON) ment an equal opportunity policy	Not at all Ver		y ?
		Set targets to achi Organise conferer	eve a gender balance in the workforce aces and workshops on gender e work-life balance	00000		
7.	Was ther	e a gender dim	ension associated with the resea or example, consumers, users, patient			
	×	No				
E	Synergi	es with Scien	ce Education			
8.			Students in all academic partner involved at different levels of at TURAS case study areas and de project work. Other used them for comparative work	petitions or joint projects (under- to post-graduate ssociation. Some partners emonstration sites for field for dissertation work. Still	e) were used l work a others	
9.	Did the p booklets,		There were several iterations of back office) as well as the linke using Dublin and other beta site and a book is currently in the first	the project website (included city-viewer sites (includes). Numerous videos were	ding the	;
F	Interdis	ciplinarity				
10.	Which di	Main discipline (h	st below) are involved in your paighlighted below as THIS: ine (highlighted as THIS)	project?		
G	Engagin	ng with Civil	society and policy makers			
11a		ur project enga nity? (if 'No', go	nge with societal actors beyond to Question 14)	the research	×	Yes No

11b		d you engage with cit patients' groups etc.)		/ juries) or organised civil s	society					
	0	No								
	×	Yes- in determining wha	t research should be perforn	ned						
	×	Yes - in implementing th	_							
	×	Yes, in communicating /	disseminating / using the rea	sults of the project						
11c	the dialo	gue with citizens and	involve actors whose i organised civil societ npany, science museu		x 0	Yes No				
12.	12. Did you engage with government / public bodies or policy makers (including international organisations)									
	O No									
	X Yes- in framing the research agenda									
	X Yes - in implementing the research agenda									
	×	Yes, in communicating /	disseminating / using the re-	sults of the project						
13a	Will the project generate outputs (expertise or scientific advice) which could be used by policy makers? X Yes – as a primary objective (please indicate areas below-multiple answers possible) X Yes – as a secondary objective (please indicate areas below - multiple answer possible) No									
13b	If Yes, in	which fields? HIGH	LIGHTED							
Agricu Audiov Budget Compe Consur Culture Custon	visual and Medi t etition <mark>mers</mark> e	Enter Envir Exter Exter Fisher	ement	Human rights Information Society Institutional affairs Internal Market Justice, freedom and security Public Health Regional Policy Research and Innovation						

13c If Yes, at which level?					
X Local / regional levels					
 X Local / regional levels X National level 					
× European level					
X International level					
H Use and dissemination					
14. How many Articles were published/accepte reviewed journals?	ed for pu	ıblica	tion in peer-	42	
To how many of these is open access ⁷ provided?				ALI	_
How many of these are published in open access journ	nals?			0	
How many of these are published in open repositories	?			ALI	_
To how many of these is open access not provide	ed?			0	
Please check all applicable reasons for not providing of	=				
□ publisher's licensing agreement would not permit publishing in a repository □ no suitable repository available □ no suitable open access journal available □ no funds available to publish in an open access journal □ lack of time and resources □ lack of information on open access □ other ⁸ :					
15. How many new patent applications ('priority filings') have been made? ("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).					0
16. Indicate how many of the following Intellect			Trademark		0
Property Rights were applied for (give numeach box).	nber in		Registered design		0
			Other		0
17. How many spin-off companies were created of the project?	d / are p	lanne	ed as a direct res	ult	2
Indicate the approximate numb	per of addi	itional	jobs in these compa	nies:	12
18. Please indicate whether your project has a potential impact on employment, i with the situation before your project: × Increase in employment, or × Safeguard employment, or □ Decrease in employment, □ Difficult to estimate / not possible to quantify					rises
19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (FTE = one person working fulltime for a year) jobs: × Difficult to estimate / not possible to quantify – we estimate between 42 and 48 (but this is a hearsay calculation)					Indicate figure:

Open Access is defined as free of charge access for anyone via Internet.
 For instance: classification for security project.

Ι	M	Iedia and Communic	ation to t	he gen	eral public	
20.	0. As part of the project, were any of the beneficiaries professionals in communication or media relations?					
		× Yes	O No)		
21.		s part of the project, have a aining / advice to improve c × Yes	•	on with t	ved professional media / communication the general public?	
22		hich of the following have be general public, or have re			icate information about your project to ject?	
	×	Press Release		×	Coverage in specialist press	
	×	Media briefing			Coverage in general (non-specialist) press	
	×	TV coverage / report		×	Coverage in national press	
	×	Radio coverage / report		×	Coverage in international press	
	×	Brochures /posters / flyers		×	Website for the general public / internet	
	×	DVD /Film /Multimedia		×	Event targeting general public (festival, conference, exhibition, science café)	
23	23 In which languages are the information products for the general public produced?					
	× ×	Language of the coordinator Other language(s) locally		×	English	

Question F-10: Classification of Scientific Disciplines according to the Frascati Manual 2002 (Proposed Standard Practice for Surveys on Research and Experimental Development, OECD 2002):

FIELDS OF SCIENCE AND TECHNOLOGY

1. NATURAL SCIENCES

- 1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]
- 1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)
- 1.3 Chemical sciences (chemistry, other allied subjects)
- 1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)
- 1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

2 ENGINEERING AND TECHNOLOGY

- 2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)
- 2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]
- 2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

3. MEDICAL SCIENCES

- Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohaematology, clinical chemistry, clinical microbiology, pathology)
- 3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)
- 3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

4. AGRICULTURAL SCIENCES

- 4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)
- 4.2 Veterinary medicine

5. SOCIAL SCIENCES

- 5.1 Psychology
- 5.2 Economics
- 5.3 Educational sciences (education and training and other allied subjects)
- Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary, methodological and historical S1T activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

6. Humanities

- 6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)
- 6.2 Languages and literature (ancient and modern)
- 6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other S1T activities relating to the subjects in this group]

FINAL REPORT ON THE DISTRIBUTION OF THE EUROPEAN UNION FINANCIAL CONTRIBUTION

This report shall be submitted to the Commission within 30 days after receipt of the final payment of the European Union financial contribution.

Report on the distribution of the European Union financial contribution between beneficiaries

Name of beneficiary	Final amount of EU contribution per beneficiary
	in Euros
1.	
2.	
n	
Total	

Appendix 1 TURAS Participants 2011 – 2016

TURAS Participants 2011 – 2016 Name Partner				
1.	Modesta Hoyuela	Aalborg University Dept. of Planning and Development		F X
2.	Bernd Möller	Aalborg University Dept. of Planning and Development	X	
3.		Aalborg University Dept. of Planning and Development	X	
	Michelle Hegarty	Barking Riverside Ltd	<u>-</u>	X
5.		Barking Riverside Ltd	X	
	Andrea Belloni	Bic Lazio Spa	1-	X
	Mariella Iunnissi	Bic Lazio Spa.		X
	Labruna Raffaella	Bic Lazio Spa.		X
	Luca Polizzano	Bic Lazio Spa.	X	
	Pilar Zapata Aranda	Bioazul S.L.	<u>-</u>	X
	Catherine Vanderstichelen	Brussels Environment		X
	Griet van Kelecom	Brussels Environment		X
	Adrian Hill	Brussels Environment	X	
	Patrick Van Den Abeele	Brussels Environment	X	
	Steven Demen	Brussels Environment	X	
	Christiane Kretschmer	Climate Alliance - Klima-Buendnis - Alianza Del Clima E.V.	- 1	X
	Svenja Schuchmann	Climate Alliance - Klima-Buendnis - Alianza Del Clima E.V.		X
	Andreas Kress	Climate Alliance - Klima-Buendnis - Alianza Del Clima E.V.	X	
	Mairin O'Cuireann	Dermot Foley Landscape Architects Ltd.	- 1	X
	Philip J Doran	Dermot Foley Landscape Architects Ltd.	X	21
	Dermot Foley	Dermot Foley Landscape Architects Ltd.	X	
	Maryann Harris	Dublin City Council	21	X
	Rayanna Mendonça	Dublin City Council		X
	Larissa Carla Souza Paiva	Dublin City Council		X
	Johanna Varghese	Dublin City Council		X
	Myles Farrell	Dublin City Council	X	21
	Dick Gleeson	Dublin City Council	X	
	Peter Leonard	Dublin City Council	X	
	John O'Hara	Dublin City Council	X	
	Mark Bennett	Dublin City Council	X	
	Shushanik Asmaryan	EcoArm2ERA Project	<u>-</u>	X
	Lilit Khachatryan	EcoArm2ERA Project		X
_	Lilit Sahakyan	EcoArm2ERA Project		X
	Marta Gomez	European BIC Network		X
	Siobhan McQuaid	European BIC Network		X
	Michael Keogh	European BIC Network	X	
	Philippe Vanrie	European BIC Network	X	
	María José Valenzuela -	External collaborator	1	X
	Asociación Comerciantes			
	Centro Histórico			
39.	Fióna and Anne - Dublin	External collaborator		X
40	Writers' Forum	Estamal callaborator		T 7
	Siobhan Maher	External collaborator		X
41.	Marion Courtois - Policy advisor	External collaborator		X
42	Tsvetanka Tsenova -	External collaborator		X
-	Practitioner in urban planning			

42	F ' D ' C '		1	T 7
43.	Francoise Bonnet - Secretary General ACR+	External collaborator		X
44.	Alessio Telloni - Università Agraria di Manziana	External collaborator		X
45.	Rafael Ventura - University of Málaga	External collaborator		X
46.	Maia Myteva - Urban planner doing a PhD on urban agriculture	External collaborator		X
47.	Yordan Kirkov - Architect member of the Chamber of Architects	External collaborator	X	
48.	Alberto Castillo - Asociación de Vecinos de Málaga	External collaborator	X	
49.	Matej Grošelj - Avantcar Ljubljana car sharing scheme	External collaborator	X	
50.	Alex Sweeting - Barking Riverside resident	External collaborator	X	
51.	Volunteer - Code for Irland	External collaborator	X	X
52.	Guido Prola - Community member	External collaborator	X	
53.	Raven Corvus	External collaborator	X	
54.	City of Ludwigsburg - Department for Sustainable Urban Development	External collaborator	X	X
55.	Volunteer - Dublin Community Growers	External collaborator	X	X
	Dries Vanneste - ENTRAKT SPRL	External collaborator	X	
57.	Marko Fatur - Head of Municipal Infrastructure Department in LUZ	External collaborator	X	
58.	Nick Ebbs - Igloo Blueprint	External collaborator	X	
	Michael Kaethler - KU Leuven University	External collaborator	X	
60.	Ahmed Aboutaleb - Mayor of Rotterdam City	External collaborator	X	
61.	Julian Marsh - MOZES	External collaborator	X	
62.	Arnoud Molenaar - Program manager Rotterdam Climate Proof	External collaborator	X	
63.	Harolds Cross - Village Community	External collaborator	X	X
64.	Lissy Nijhuis	Gemeente Rotterdam		X
65.	Nick van Barneveld	Gemeente Rotterdam	X	
	Daphne (Yu-Chen) Lai	GIS Research Center Feng Chia University		X
	Joshua (Chih-Yuan) Chien	GIS Research Center Feng Chia University	X	
	Anja Dittmann	Helix Pflanzen GmbH		X
	Juliane Petersohn	Helix Pflanzen GmbH		X
	Hans Müller	Helix Pflanzen GmbH	X	
	Jonathan Müller	Helix Pflanzen GmbH	X	
	Benjamin Strietter	Helix Pflanzen GmbH	X	
	Leonie Pearson	High Level Advisory Board		X
74.	Craig Applegath	High Level Advisory Board	X	

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116.	Stoyan Chohadzhiev	Municipality of Sofia	X	
117.	Zlatko Terziev	Municipality of Sofia	X	
118.	Sam Blackburn	Nottingham Development Enterprise	X	
119.	Neil Horsley	Nottingham Development Enterprise	X	
120.	Sara Ambrogiani	Pracsis Sprl.		X
121.	Mauro Cicio	Pracsis Sprl.	X	
122.	Bernhard von Mach	Pracsis Sprl.	X	
123.	Isabel Villamor	PROMÁLAGA		X
124.	Mariano Moran	PROMÁLAGA	X	
125.	Lilijana Madjar	Regionalna Razvojna Agencija Ljubljanske Urbane Regije		X
126.	Maša Šorn	Regionalna Razvojna Agencija Ljubljanske Urbane Regije		X
127.	Gaja Trbižan	Regionalna Razvojna Agencija Ljubljanske Urbane Regije		X
128.	Matej Gojčič	Regionalna Razvojna Agencija Ljubljanske Urbane Regije	X	
129.	Silvia Dannibale	Roma Capitale (Comune di Roma)		X
130.	Claudio Baffioni	Roma Capitale (Comune di Roma)	X	
131.	Beatrix Real Heredia	Sevilla Globale		X
132.	Pablo Fernandez Moniz	Sevilla Globale	X	
133.	Pedro Maestre Sánchez	Sevilla Globale	X	
134.	Laura Berardi	Università Degli Studi di Roma la Sapienza		X
135.	Roberto Cherubini	Università Degli Studi di Roma la Sapienza	X	
136.	Mauro Salvemini	Università Degli Studi di Roma la Sapienza	X	
137.	Jenny Atmanagara	Universität Stuttgart		X
138.	Cecilia Chiesa	Universität Stuttgart		X
139.	Dorothy Estrada	Universität Stuttgart		X
140.	Julia Hartmann	Universität Stuttgart		X
141.	Eva-Maria Stumpp	Universität Stuttgart		X
142.	Bernd Eisenberg	Universität Stuttgart	X	
143.	Stephan Kampelmann	Universität Stuttgart	X	
144.	Hans-Georg Schwarz-	Universität Stuttgart	X	
	Raumer			
145.	Johanne Kessen	Universität Stuttgart	X	
146.	Roisin Byrne	University College Dublin		X
147.	Emily Conway	University College Dublin		X
148.	Aoife Corcoran	University College Dublin		X
149.	Louise Dunne	University College Dublin		X
150.	Karen Foley	University College Dublin		X
151.	Marion Jammet	University College Dublin		X
152.	Wang Jinxuan	University College Dublin		X
153.	Tatiane Lima	University College Dublin		X
154.	Anita McKeown	University College Dublin		X
155.	Zorica Nedović Budić	University College Dublin		X
156.	Viviana Pappalardo	University College Dublin		X
157.	Giulia Trombino	University College Dublin		X
158.	David Alemany	University College Dublin	X	
159.	Nolan Alexander	University College Dublin	X	<u> </u>
160.	Marcus Collier	University College Dublin	X	
161.	Philip Crowe	University College Dublin	X	<u> </u>
162.	Daniel Pontes	University College Dublin	X	

163.	Davi Souza	University College Dublin	X	
164.	Naheed Khan	University of East London		X
165.	Daiva Raguckiene	University of East London		X
166.	Stephanie Sandland	University of East London		X
167.	Julia Simpson	University of East London		X
168.	N Tatchell	University of East London		X
169.	Paula Vandergert	University of East London		X
170.	Stuart Connop	University of East London	X	
171.	Jochen Eckart	University of East London	X	
172.	Allan J. Brimicombe	University of East London	X	
173.	Martin Longstaff	University of East London	X	
174.	Darryl Newport	University of East London	X	
175.	Laura Alvarez	University of Nottingham		X
176.	Katharina Borsi	University of Nottingham		X
177.	Lorna Kiamba	University of Nottingham		X
178.	Lucelia Rodrigues	University of Nottingham		X
179.	Mark Gillot	University of Nottingham	X	
180.	Krystallia Kamvasinou	University of Westminster		X
181.	Tjaša Griessler Bulc	Univerza v Ljubljani		X
182.	Mojca Foški	Univerza v Ljubljani		X
183.	Aleksandra Krivograd	Univerza v Ljubljani		X
	menčič			
184.	Nataša Pichler - Milanović	Univerza v Ljubljani		X
185.	Darja Šemrov	Univerza v Ljubljani		X
186.	Alma Zavodnik Lamovšek	Univerza v Ljubljani		X
187.	Natasa Milanovic	Univerza v Ljubljani		X
188.	Robert Rijavec	Univerza v Ljubljani	X	
189.	Boika Kadreva	Varna Free University		X
190.	Petar Nikolov	Varna Free University	X	
191.	Aleksandar Slaev	Varna Free University	X	
192.	Lyubenov Yordan	Varna Free University	X	
193.	Christine Baumgärtner	Verband Region Stuttgart		X
194.	Silvia Weidenbacher	Verband Region Stuttgart		X
195. Dire	Thomas Kiwitt - Managing ector and Head of Planning	Verband Region Stuttgart	X	