Since the beginning of April 2018 World Bank dedicated $91.54 million budget for the Sustainable Cities II Project in Turkey. With this funding, economic, societal, financial and environmental condition will be fostered by providing enhanced services to municipalities in the cities. Generally the some part of the budget was spent on construction renewal, water and wastewater systems. Also semi government companies like Turk Telekom and Innova has broadband fiber infrastructure in every city in Turkey, it could act as an integrator for U.S. companies while reaching out to Turkish municipalities.

With technological advancement and increase in people demand and interest, the market share of smart environment has grown especially among construction companies. According to given surveys in Turkey, using smart technologies in municipalities has been increased by 47%. In global era, at least 80% of construction will include at least one IOT based technologies. According to given results, global IOT smart building market will reach 51,44B$ globally by 2023. At least 33% of buildings and constructions will be advanced with AI based technologies. 5G and real time data analytics accompanied with IOT will play major roles in smart building systems

***Table 3: Expected impact on the competitive position of IT collaborates***

|  |  |  |
| --- | --- | --- |
|  | I-DELTA’s impact on competitiveness | Exploitation measures |
| Materna | * recognition of DLT & ML (specialist) consultant * extension of Materna’s current digitalisation business * valorisation of the I-DELTA SW prototypes as precursor of a new potential product and related operator’s business | * targeted dissemination of the re­sults of the I-DELTA demonstrator. * close contacts to the Materna Government Business line, particularly to the branch developing the ATLAS customs SW * liaison with the Materna daughter company cbs, taking care of Materna’s logistics and supply chain IT support business |
| Henkel | * Implementation of the latest digitization technology to establish a (data driven) framework for processing real-time, secure, transparent, auditable and compliant tax/customs related business transactions, resulting in significant cost savings * increased transparency and reduction of failures in the fulfilment of Henkel´s business processes, e.g. corporate tax handling, which supports the managing of its compliance obligations * better coordination and alignment with third parties: Continuous insights for tax authorities / customs, business entities and external/internal auditors * Increasing digitization and networking: the possibility of cost-effective control is driving the digitization of other (cross-company) processes as well. Gained experience within I-DELTA will accelerate Henkel´s digitalisation strategy | * Implementing the DLT/ML Platform and technology resulting from the I-DELTA demonstrator in Henkel´s logistics - and supply chain processes * Providing business - and logistics partners with the I-DELTA innovations and results to improve their business processes as well. This will lead to an “oil spread” scenario and speed up the implementation of DLT/ML technology within the EU. |
| Mavennet | * Recognition as blockchain infrastructure partner in I-DELTA consortium * Extension of Mavennet’s core platform offerings * Exposure to European market | * Extended platform modules for new business cases * New modules to be licensed across North America & Europe in similar value chains * Expand relationships with consortium partners and their networks to devise and deploy solutions for new use cases |

**Plan for the Exploitation and Dissemination of Results (PEDR)**

PEDR covers the activities which are (1) dissemination, (2) exploitation and (3) communication. Dissemination activities in OWE project will encompass sharing know-how and experiences with all stakeholder to boost and raise the people’s awareness. Each work package related results (products (material, prototype, software, algorithms, …),services (training, advise) ,knowledge (policy, recommendations, data, methodolog) need to be handed over based on stake-holder type. All activities to be performed at explotation stage in OWE will be used for commercial and policy purpose to tackle economic and societal obstacles.Explotation will cover all the following activities, further internal research, collaborative research, internal product development, internal service creation, licensing, assignment, joint venture, spin off and standardisation According to each consortium, a plan will be prepared. Planning will be relied on the tasks determined according to plan schedule will engage in all commercialization activities such as attending the meetings, expanding networks, publishing journal and brochures, seeking new collaborations, presenting the project at trade fairs.. Marketing activities will take place to evaluate industries views’ and comments against the project. The tasks such as patent search and business development will be maintained through all project lifecycle.

***Table 4: PEDR objectives***

|  |  |
| --- | --- |
| Stakeholder group | PEDR objective |
| Smart Buildings Manufacturers | Increase acceptance of DLT innovations by involving users and customers in the development process (formulation of requirements). Increase attractiveness of DLT for DLT users and customers by informing about e.g. reduced congestion level and increased service quality of involved transactions. |
| Smart Buildings Distributors/Traders/Wholesalers |  |
| Smart Buildings Subcomponent Manufacturers |  |
| Industry Association |  |
| Downstream Vendors |  |
| Research and development facilities | Raise awareness about problem situation and the demand for further R&D activities. Boost scientific discussions and exchange between different research institutions and projects. Improve the overall quality of education by integrating new topics into the curricula. |
| Authorities and policy makers | Raise awareness about the problem situation and the demand for new directives and regulations. Boost discussions on new funding opportunities for DLT-related innovations. |
| Not DLT-based interest groups | Increase acceptance of DLT operations and innovations by involving member of these interest groups into the formulation of requirements. Improve compatibility between DLT interests and those of not DLT-based interest groups. |
| Investors | Raise awareness about the project results and attract investors to the demand-driven market-ready technological innovations. |
| Technology companies | Marketing of technological innovations and of technology companies. By increased visibility of project results, allow economic growth of technology companies or the foundation of start-ups, due to demand-driven market-ready products. Enable technology companies to develop new business models. |

Dissemination activities encompass sharing know-how and experiences with all stakeholder.

The benefits of PEDR objectives can be categorized into four main items:

1. The global business network will be extended. Our project can motivate other groups to carry out more research and development based projects.
2. Municipalities can be motivated to allocate more budgets on smart technologies and IOT based applications.
3. The interest rate of people working in construction and trading companies can increase against AI- and machine learning based systems.
4. Adding smart features in buildings will make people’s life easier and comfortable, as well as the security and safety in the environment can be ensured leading to increase their life span.

I-DELTA will use different dissemination channels to address the targeted stakeholders.

***Table 5: Dissemination channels for I-DELTA stakeholder groups***

The PEDR consists of overarching channels such as workshops targeting stakeholders, interested academic groups and companies, presentations at international conferences, press releases and blog posts and the development of a new network including several interested stakeholders and parts of the scientific community. The selection of scientific journals and renowned magazines to publish represent a broad spectrum to reach and require a significant effort of the interested/responsible parties.

***Table 6: Concrete dissemination measures***

|  |  |  |
| --- | --- | --- |
| Type | Planned activities | Interest as dissemination channel |
| Project website | Website goes online soon after the start of the project | Access of project information, news, and results to the public via the internet. |
| Social Media | Launch of Twitter, Facebook, LinkedIn, YouTube accounts | The final choice depends on which communities shall be reached. |
| ITEA Events | Participation to the Annual ITEA Events | Information of the ITEA community on the existence of the project, promote its results. |
| Edge Computing Related Scientific Events | Participation at annual IEEE Blockchain and Brains conference. | Conference and networking event; getting in contact with research community. |
| AI Related Scientific Events | Blockchain summit | Conference and networking event; getting in contact with research community. |
| DLT Related Scientific Events | Participation at annual IEEE Industrial Cyber-Physical Systems | Conference and networking event; getting in contact with research community. |
| DLT Related Scientific Events | Participation at annual IEEE Globcom | Conference and networking event; getting in contact with research community. |
| (Scientific) journals | Special Section on Edge computing , IoT and AI in IEEE Transaction on Industrial Informatics, Self organized by the consortium. | Taking attractions of new researchers in the community, and disseminate the high qualified results of the I-Delta. |

The fundament for the use of I-DELTA results after the end of the project is the project’s market-orientation. All innovations developed within the project are driven by the end users individual demand. However, the overall aim of I-DELTA’s exploitation strategy (part of the PEDR) is to ensure that mid- to long-term exploitation of project results beyond the partners of the consortium is possible and by this increasing the project’s overall impact. Thus, the exploitation strategy includes the following main pillars:

1. Dissemination activities to
   1. raise awareness about problem situation, I-DELTA and project results
   2. increase innovativeness of project end users and foster economically sustainable development and growth
   3. boost discussions on new funding opportunities and further research activities; research results usable as input for policy-making
2. Guidelines to ensure transferability of project results to other end users and potential customers.
3. Involvement of relevant stakeholders to increase acceptance of innovations and accelerate implementation
4. Standardisation and use of OSSW (see below)
5. The global business network will be extended. Our production can motivate other groups to carry out more research and development based projects. Municipalities can be motivated to allocate more budgets on smart technologies and IOT based applications.
6. The interest rate of people working in construction and trading companies can increase against AI- and machine learning based systems.
7. Adding smart features in buildings will make people’s life easier and comfortable, as well as the security and safety in the environment can be ensured leading to increase their life span.