FP7-SMARTCITIES-2013

STREETLIFE

Steering towards Green and Perceptive Mobility of the Future

WP9 - DISSEMINATION AND EXPLOITATION

D9.4 – Factsheet on Technical Architecture Part A Pilot Sites

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Author: Frank Behrendt (BPWT)

Partner: BPWT

Contributors: All Partners

Editor: Frank Behrendt (BPWT)

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Internal Reviewers: Silke Cuno (Fraunhofer), Guiseppe Valetto (FBK)

EXECUTIVE SUMMARY

The deliverable D9.4 Factsheet on Technical Architecture is divided into two parts. STREETLIFE adopts a process that includes two iterations of research and development, in order to achieve the best possible solutions. This document, Part A Pilot Sites, describes the evaluation results generated by the pilot trials in Berlin, Rovereto and Tampere during the first iteration. It will be used as a dissemination tool to inform the public.

Part B Technical Architecture follows in March 2016 and will describe the final technical architecture of the STREETLIFE solutions after the second iteration of the project.

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Steering Towards Green and
Perceptive Mobility of the Future

STREETLIFE Pilot Sites

Sustainable Urban Mobility Solutions

The STREETLIFE project develops a multimodal urban mobility information system that supports citizens in their urban mobility needs and promotes sustainable transport alternatives.

STREETLIFE delivers mobile apps that provide multimodal personalised routing. Real-time data is integrated and the various transportation modes available in a smart city are considered. Sophisticated user interfaces based on Mixed Reality techniques and gamification approaches engage people towards green mobility.

Traffic management centres and city administrations get advanced ICT solutions to understand the traffic-induced carbon emission conditions and to influence them by means of effective control tools.

Berlin (Germany), Rovereto (Italy) and Tampere (Finland) constitute the three pilot cities in which the STREETLIFE technologies and solutions are tested and evaluated. Each city focuses on specific aspects of the system depending on their individual sustainable urban mobility priorities.

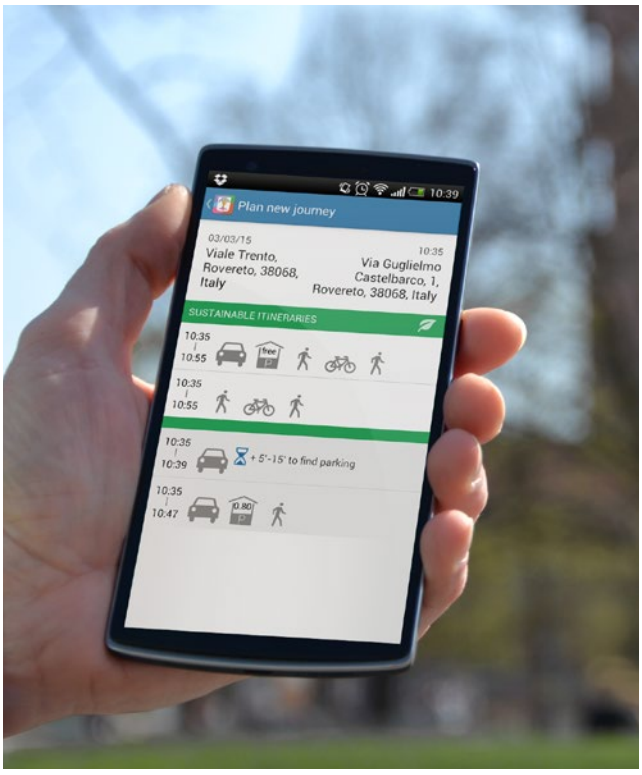
STREETLIFE adopts a process that includes two iterations of research and development, in order to achieve the best possible solutions. Core STREETLIFE functionality and tools were developed in a first iteration which ended in March 2015. The second iteration will enhance and extend the STREETLIFE solutions on the basis of the evaluation results generated by the pilot trials during the first iteration.

The pilot trials of the first iteration started in October 2014 after one year of intensive work on the system components and included controlled experiments with limited groups of volunteer users, as well as experiments with the general public. Data was collected until February 2015 and evaluated afterwards to show the effects that the STREETLIFE technologies had on each pilot site. This data represented the basis of the evaluation on the acceptance and effectiveness of the STREETLIFE technologies.

The start of the pilot experiments within the second iteration is scheduled for October 2015. They are mainly devoted to the assessment of the impact of the STREETLIFE solutions on the three main project objectives, that is, the reduction of carbon emissions, the improvement of urban traffic, and the change of the citizens' mobility habits and behaviours.

ING. MARCO CATTANI
Director, Trentino Mobilità spa

> Developing both useful apps for citizens and tools for city managers can give a great boost to urban mobility efficiency, also for small towns as Rovereto. That's why we believe in STREETLIFE as a project capable to achieve significant results.



Berlin

The main emphasis of the Berlin Pilot is safe bicycle routing. Several trip planning apps are already available for the Berlin transportation system but none of them addresses the need of cyclists for safe bike routing recommendations. The pilot integrates existing software assets by the Berlin traffic information centre like a real-time route planner for public transport, walking, bike and car. On the part of the backend systems, the so-called City Intelligence Platform stores and manages routing data and profiles of users. Multimodal trip proposals are generated on each request and sent to the user.

Two apps have been evaluated in the first pilot experiments from October to December 2014. A route planner app has been developed by STREETLIFE while an existing app has been used to track users' itineraries. Routing and position data were generated with these tools for a group of friendly users. A user acceptance survey was administered as a third source of data for evaluation. The main goals of the first iteration were a technical assessment and evaluation of the users' acceptance and the usability of the STREETLIFE route planner app as a tool for multimodal trip planning.

> Safe bike routing is an essential need

The Berlin pilot will leverage the lesson learned from this evaluation to improve and adapt the system accordingly. A larger-scale user group will be recruited to accurately estimate the change in modal split to greener modes of transport. An Emission Control Panel for mobility managers will complete the Berlin portfolio of STREETLIFE services. It will provide advanced forecasting techniques to determine the modal split for upcoming events in the city.

Rovereto

The Rovereto Pilot is interested in the investigation of Park & Ride for commuters and for special events, as well as in bike sharing. The pilot field-tested several apps during the first iteration, which has been conducted during the months of November and December 2014.

> Green Games encourage people to change their mobility

A special, STREETLIFE-enhanced version of the Android ViaggiaRovereto app, together with an integrated bike sharing app, was released, and used for itinerary planning. Pilot trials included an in-depth experiment with a restricted focus group, as well as an open experiment with tourists and the general public. Specific attention was paid to the support of the Rovereto Christmas Market by facilitating the trip planning for visitors to that event. This version of the ViaggiaRovereto app was promoted actively and counted 223 new users in the Rovereto region in the month of December.

STREETLIFE provided also an app to traffic aides in the City of Rovereto, who monitor traffic conditions on the ground, deliver parking tickets, etc. They used the app to collect crowd-sensed data about parking availability and occupancy in parking lots and on the streets.

In the last phase of the pilot trials, gamification was introduced in the ViaggiaRovereto app as a means to promote, incentivize and reward sustainable urban mobility choices among users.

The evaluation of the Rovereto pilot positively assessed the potential of the STREETLIFE technologies to change the citizens' mobility behaviours and to cause a shift towards greener means of transportation.

Tampere

The Tampere Pilot focuses on a personalised multi-modal real-time journey planner (including Park & Ride) that takes into account real-time deviation of buses. STREETLIFE integrated heterogeneous information sources which include direct and indirect data about the traffic situation. An Open API has also been developed to allow third parties to access the journey planner service.

Tampere is also investigating advanced user interfaces in order to estimate which impact a mixed reality app can have on the users and their daily mobility and commuting practices.

> Users want reliable mobile services in modern app design

The pilot trials started in October 2014 with a small Focus Test Group followed in November by a public pilot with more than 4.200 users of the Tampere region.

The main question for the evaluation in Tampere has been whether the users are willing to use the journey planner frequently and to change their mobility behaviour. It is furthermore an interesting aspect whether the STREETLIFE solutions on multimodal real-time routing and Park & Ride can provide a promising service development path for the city to make public transport more attractive as an alternative to private cars. The first findings of the Tampere pilot show that most people use the mobile access of the service, which means that service availability via mobile devices is essential. Although STREETLIFE is a research project, the users compare the test service to polished apps in app stores. A modern and ergonomic design of the app is therefore quite important to keep users committed to, and engaged in, the services. The City of Tampere has identified a clear potential of the STREETLIFE technologies to affect people's travel habits.

Contact

Project Coordinator
Silke Cuno
Fraunhofer FOKUS
silke.cuno@fokus.fraunhofer.de

Scientific Coordinator
Marco Pistore
Fondazione Bruno Kessler
pistore@fbk.eu

www.streetlife-project.eu

Partners

Aalto University
Berlin Partner for Business and Technology
CAIRE URBANISTICA
CGI
German Research Center for Artificial Intelligence
DLR
Fraunhofer FOKUS
FONDAZIONE BRUNO KESSLER
Comune di Rovereto
SIEMENS
THE CITY OF TAMPERE
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