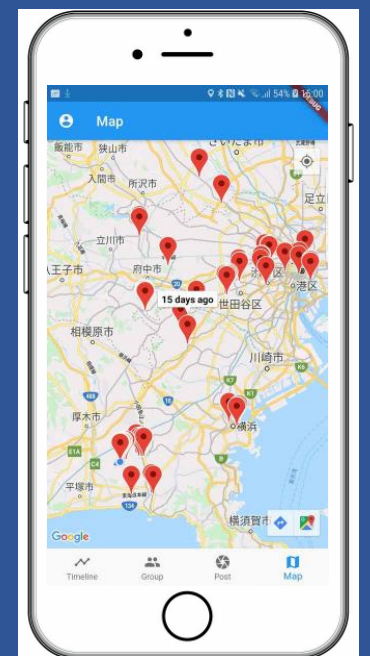
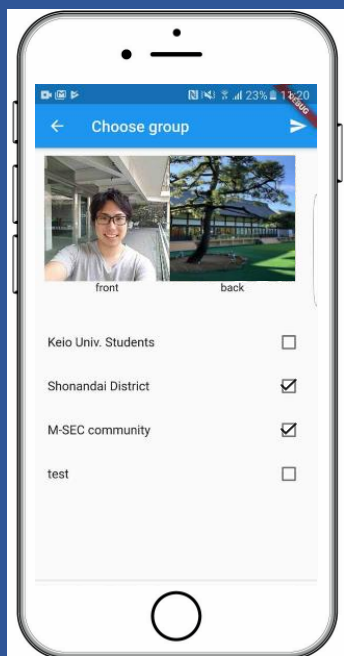




M-Sec

SECURE AFFECTIVE PARTICIPATORY SENSING OF CITY EVENTS (CROSSBORDER)

SHARING FUN BY “SMILE”



This pilot explores the possibility of secure sharing on citizen's affective information and information on the city, by using various types of technologies, such as mobile participatory sensing, edge-(mobile)-side computation for privacy protection, secure data sharing of sensed information.

More specifically, we develop a privacy-protected mobile participatory sensing platform “SmileCityReport” in which citizens can sense and share information on their neighbourhood (city) with corresponding affective status information attached, and where such sensed information will be shared (1) securely among the citizen's community and (2) publicly with an appropriated privacy-protection mechanism.

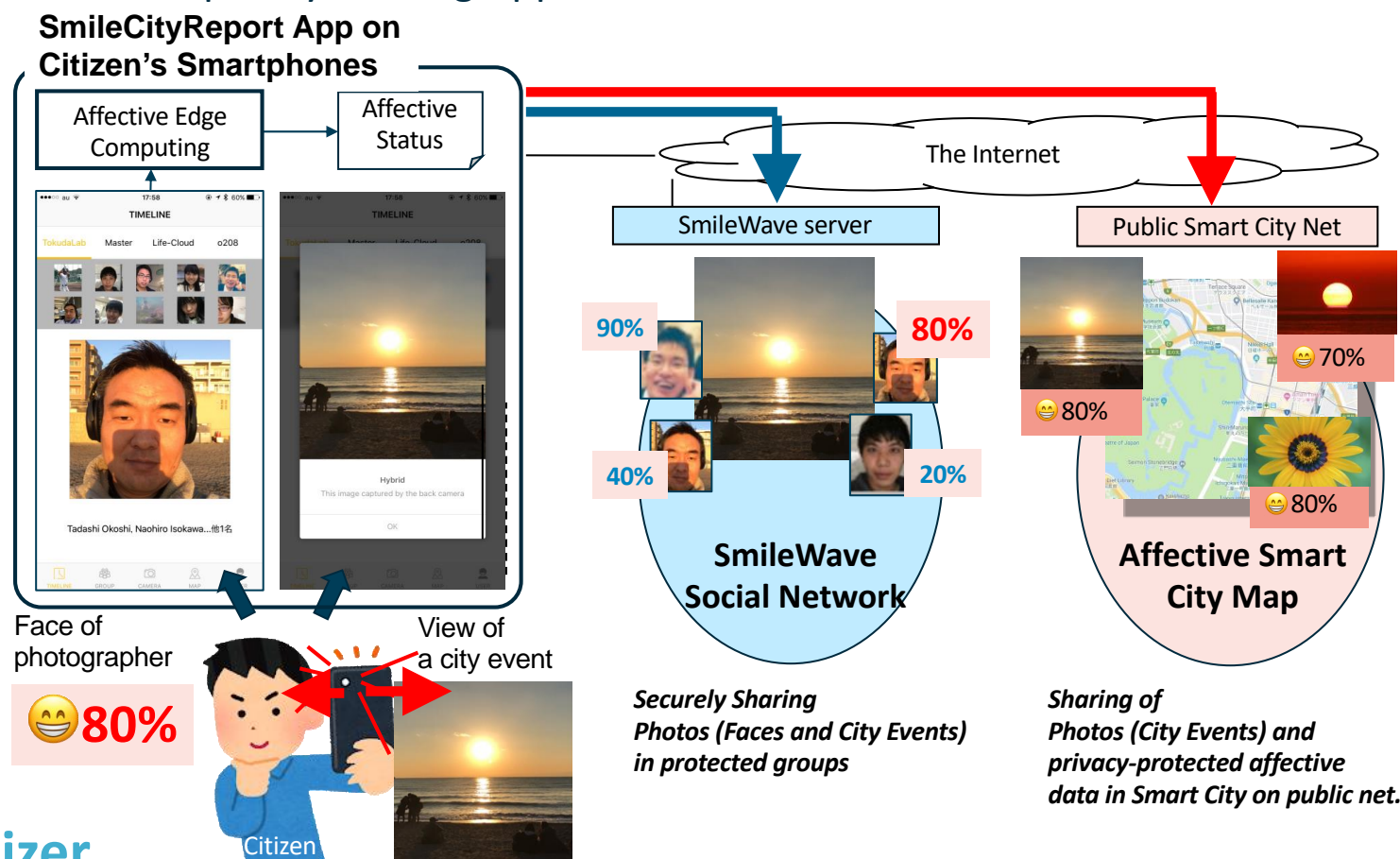
A smartphone application of this system will be distributed to citizens. When the citizens, during their daily lives, find notable happenings in the city (e.g., a crack on the road, a beautiful flower blooming, a touristic city spot, etc., depending on the theme specified) they take a photo of that by using the application. The application simultaneously captures the photo of the event and the user's face by using 2 cameras on the smartphone simultaneously. Inside the application's “community” where appropriated admission/access control is implemented, the user can share the photos (both of the event and the user's face) with other community members.

SECURE AFFECTIVE PARTICIPATORY SENSING OF CITY EVENTS (CROSSBORDER)

SHARING FUN WITH “SMILE” PHOTO BY USING “SMILE CITY REPORT” APPS
CITY EVENTS, RECOMMENDED RESTAURANT, SPECIAL MENU, NICE SPOT, ...
PRIVACY INFORMATION IS PROTECTED BY “GANonymizer”

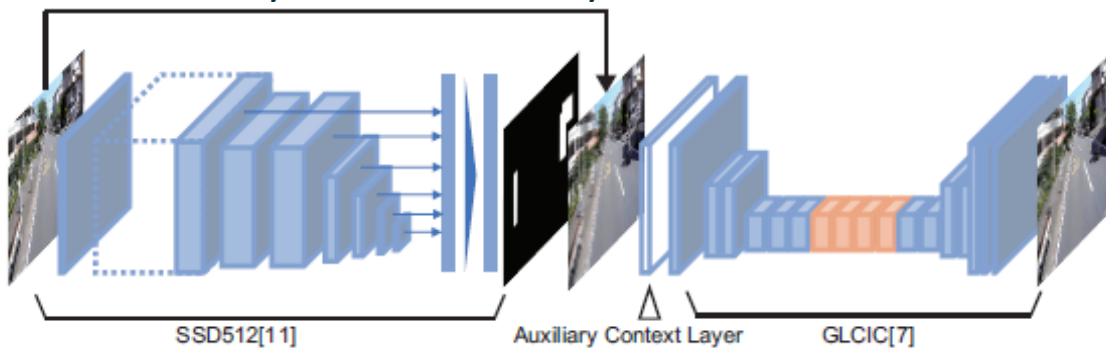
SmileCityReport

Hyper Connected Participatory Sensing Application



GANonymizer

Automatically Remove Privacy data from various video data



M-SEC AS A SOLUTION TO THE GREAT CHALLENGE IN PRIVACY & SECURITY

• Secure Data Exchanging Platform “Secure SOXFire”

In this use case, the participatory sensing data from the smartphone apps “SmileCityReport” is input, and **Secure SOXFire**, which is a secure data distribution platform, is used as a secure data distribution core for smart cities.

• Privacy Protection Processing

By avoiding uploading image data which might be including privacy data to the marketplace as much as possible, advanced image processing including deep learning can be processed within secure side without unnecessary uploading of privacy data to the marketplace. In this use case, the **GANonymizer**, which automatically remove the privacy related image by using 2 deep learning processings

• Multi-Layerd Security

The IoT devices (sensors), the cloud system (servers of a sensor data exchange platform), and applications consuming sensor data streams included in the mobile sensing platform are extended with **Multi-Layerd security** mechanisms.

• Blockchain-ready system

The data generated by the whole service, properly encrypted, is complemented by blockchain-related features available to users through the web application.

• A Marketplace to monetize anonymous data

Data that is not personal or sensitive is sent automatically to the M-Sec Marketplace prepared to provide a secure IoT data exchange environment. This Marketplace includes a Trust&Reputation component capable to evaluate the actual content being shared.

UNIQUE VALUE PROPOSITION



Flexible Sensor Network Everything as a sensor



Friendly (no technical skills required)



Scalable



System Resilience



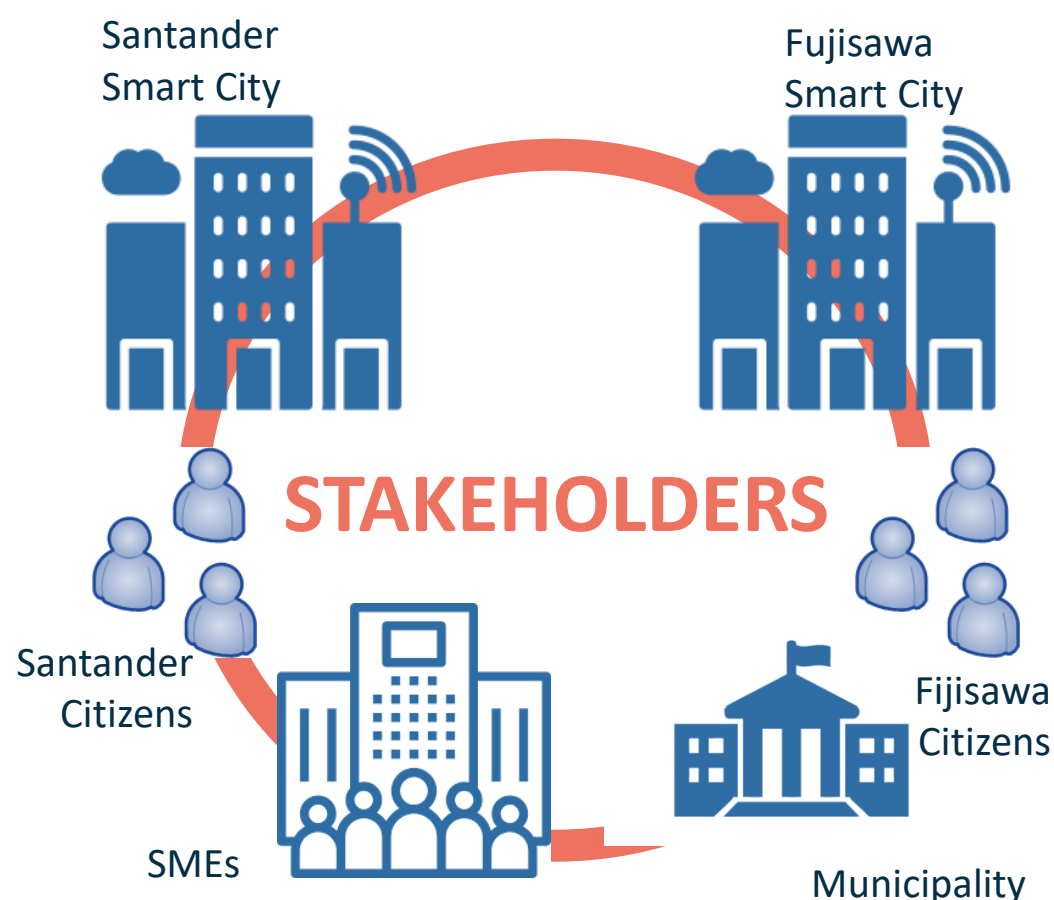
End to End Security

FOR WHOM MAY BE USEFUL?

Are you an **IoT Provider** and want to partner to expand your business?

Are you the **Municipal Service** and want to provide innovative secure solutions for citizens?

Are you a **citizen** and want to know more about how these types of solutions can help on your daily life?



PILOT TESTIMONY

Fujisawa Jazz Meeting (6th Nov. 2020)

We actually tried using Smile City Report at a Jazz event held in Fujisawa City. Five themes have been set as common themes, including information on Jazz event venues, information on recommended restaurants, and the degree of congestion that is of concern in the COVID-19 environment.

Icon	Default Theme	Posted Pictures by Citizn Users
 Main Venue	What is the main venue like?	
 Street Venue	What does the street venue like?	
 Anxious artist	Anxious artist	
 Nice restaurant, recommended menu	Nice restaurant, recommended menu	
 Congestion situation	Congestion situation	

ABOUT M-SEC

The M-Sec project is jointly funded by the European Union's Horizon 2020 research and innovation programme (contract No 814917) and by the Commissioned Research of National Institute of Information and Communications Technology (NICT), JAPAN (contract No. 19501).

The M-Sec consortium is a strong partnership of leading European and Japanese universities and research centers as well as companies in the area of Big Data, IoT, Cloud Computing, Blockchain and all of them have an extensive experience in smart city related projects.

The overall M-Sec consortium is made of 12 partners, 6 from 4 different European countries (France, Spain, Greece, Ireland) and 6 from Japan.

One of the main results of the project is based on providing a set of components that provide security and integrity of data traffic, end to end, from the device to the Cloud and to the application in a secure and transparent way, with a modular approach for the IoT and Smart City domain.