



Alliance for
Internet of Things
Innovation

AIO TI

SIGNATURE EVENT

IoT and Edge computing : Societal Impact and
Opportunities for the Green Digital Twin
Transition

27
Sep | Brussels

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AIOTI Signature Event • 27 September 2022

Session 1: IoT and Crisis Preparedness

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Indicative benefits of IoT in Disaster Management

- IoT can not prevent disasters from happening, but it can help identify life-threatening hazards, alert authorities, and assist in saving lives, resources, and money.
- Disaster Risk Management can benefit from IoT as it helps to improve mitigation, preparedness, response, and recovery. It minimizes the risks and impact of disasters and can transform disaster management from a reactive approach to a proactive approach.
- IoT as an integral part of Early Warning Systems can play a significant role in hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities, systems, and processes that enables individuals, communities, governments, businesses, and others to take timely action to reduce disaster risks in advance of hazardous events.
- Real-time information availability together with real-time analytics and edge computing associated with IoT can be a game-changer in planning for prevention and response to natural or man-made disasters. Agencies can leverage on IoT data and transform it to actionable intelligence for faster and better-informed decisions.
- IoT helps to improve First Responders health, safety, situational awareness and operations. It can significantly improve search and rescue missions and monitoring of post-disaster conditions.
- IoT can help citizens, volunteers and local communities to better prepare for and react to disasters, improve their risk perception and awareness and foster the development of novel training and education strategies.

Indicative benefits of IoT in Public Safety

- IoT and IoT enabled Smart Cities, can drastically extend the limits and scope of traditional public safety services and provide new means and intelligence for improved situation awareness, prevention, mitigation, response and recovery supporting automated notifications, actuation, optimum knowledge sharing, improved decision making and advanced interactions with citizens, public safety agencies and first responders.
- IoT can help in early identification of security threats, and optimize prevention and intervention strategies based on AI and forecasting
- IoT can facilitate Public Safety Agencies to manage resources more efficient and improve safety of first responders
- IoT can facilitate the dynamic adaptation to incidents based on real-time analytics and prevent the escalation of critical incidents
- IoT enables the extension of current alert and notification mechanism to citizens (mass notification, personalized and geofenced notifications)
- IoT can help in increasing accessibility to emergency services for vulnerable groups and people with disabilities
- IoT can accelerate the development of Next Generation Emergency calls and services

Considerations and Challenges

- Reliability, Accuracy and Quality of data and AI enabled decision making - Trustworthiness
- Certification, Standards, Best Practices of IoT devices, platforms, applications and services
- Interoperability (technical, semantic, organizational)
- Scalability, modularity, flexibility
- IoT connectivity, control, management and orchestration
- Cost, Business models, data ownership
- Risk Control Option and Risk Reduction
- Cyber Security
- Societal acceptance
- Ethics and Privacy Concerns

Indicative relevant H2020 and HE projects in which ICCS is participating:

- INGENIOUS, CURSOR, NIGHTINGALE, S4ALLCities, RISKPACC, SafePASS, Healthy Sailing ...