Exchange Accurate and Trusted Data Achieve Robust Communications and Operations Control Anywhere Anytime

30 Minutes are enough for a disaster to **create havoc**, cause **communication infrastructure overolad** and **cost peoples lifes**.

30 Minutes are enough to built **data models**, **orchestrate information channels and responders** explore situational **scenarios** and **save peoples lifes**

We offer closed loop secure communication products, AI powered solutions and services that deliver pre- , peri- and post- operational support for the creation and deployment of robust data models. Our middleware solutions offer real time data manipulation of any type with augmented data cleaning and aggregation methods and tools.

Services:

CLOUD COMPUTING AND XaaS:
Design, deployment and maintenance of cloud computing infrastructure, Optimised resource provisioning in Infrastructure-as-a-Service architecture, Platform or Software as-a-Service for quick implementation and instantiation of cloud services.

PRIVACY, SECURITY & DATA PROTECTION:
Cybersecurity Gap Analysis, Virtualised Cybersecurity, Privacy Impact Assessment, Privacy-by-design architectures, ethical and legal compliance of project activities, including compliance to the new General Data Protection Regulation (GDPR).

SOFTWARE DEVELOPMENT:
5G security, wireless network security, machine learning applications, software quality assurance, data analysis and visualization

SYSTEMS & NETWORKS ENGINEERING:
Design, implementation and integration in communication systems and network technologies.
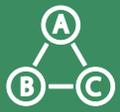
EiGHTBELLS
Independent Research & Consultancy

Closed Loop Communications
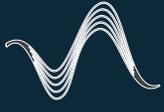
Orchestrated Analytics

Situational Awareness

Natural disasters and their appropriate and timely management introduce high operational load due to the necessity to orchestrate a large number of people that have to communicate under harsh conditions.

The sudden increase in data flow upon an event is able to create havoc as information is poorly filtered and propagated with high rates and through multiple communication channels.

Additional bottlenecks are introduced when channels get overloaded and information flows from various sources with large time delays.

Such situations create Information gaps and information clutter that result in great reduction of situational awareness among different stakeholders. As the situation evolves it usually result in higher burden for situation managers and sometimes higher human losses.

Emergency decisions are based on intuition and experience of personel while it should be based on data and quantifiable information of existing sensors and real time analytics. Pre, peri and post situational awareness and analysis can be a game changer under such conditions and major efforts in the R&D field focus on such issues.

Emerging technologies in the field of data sensors, drones, AR, data fusion technologies, AI and alternative secure communications can rationalize decision making and save citizen lifes.

AI - CCC

Xbello CGCS

Networks

Stakeholders

Eight Bells Data Fusion Mechanism

The first major issue in this pipeline that we address in our solution is the provision of a data fusion mechanism that is responsible for gathering, processing, synchronizing and deliver the actual data or AI aggregated versions of them to the situation managers in the Control and Command Center (CCC). At a further extend crucial data may be monitored pre operationally from a number of trusted sensors and information sources as well and bypass the initial information gathering elimination lead in times. Already existing models and can be analyzed pre operationally and factored in rapidly while post operational analysis will assess models performance and provide data based insights for strategic planning in similar situations. Real time performace on trusted servers will safeguard operations at unsurpassed accuracy of operations and response times.

Eight Bells Closed Group Communications System (CGCS)

The second major issue that we address is the establishment of a robust closed group communication system that is able to acquire and transmit data in a bidirectional way between the first responders and the command center. Such a Closed Group Communication System has the ability of delivering broadcasted messages and give directions or allow communication amongst certain user groups even over BYOD environments as a trusted platform service. The transmission of voice, image, video and text messaging, panic button functionality and geolocation services combined with integrated information delivery between two endpoints (responders and command and control center) can change fundamentally the situational management in disaster areas.