



MobileLab

***“Detecting Micro Crime”***

**TRANSMITTING  
HEALTHCARE DATA,  
NOT THE DISEASE!**

# 01 OVERVIEW

The aim of the EMP development was to establish a complex, mobile, and scalable healthcare ecosystem, powered by a highly protected satellite communication network, to monitor and to diagnose epidemiological hotspots in order to prevent the emergence and spreading of possible local, regional or global epidemiological outbreaks. By using EMP, our Partners are in the position to:

- » make local healthcare situations transparent,
- » identify and diagnose possible epidemiological or other live threatening healthcare developments,
- » develop an intervention plan,
- » treat and to repel the healthcare threat
- » evaluate samples without the necessity to physically export them from the affected areas.

Thanks to the advanced technologies used in EMP, essential results - which contain significant information from commercial and state security point of view - can be accessed immediately. These days international epidemiological data on human and animal epidemics are highly valuable and prospective (dynamically growing, not saturated). The most valuable data are the morbidity indexes of BSL 1-2 groups (internationally classified) as well as respiratory infections (various influenza viruses, RSV infection, avian influenza, etc.), hepatitis infections, gastro enteral infections (various types of enterovirus, rotaviruses, caliciviruses). The embed PCR “Polymerase chain reaction” technology can be used to detect particularly dangerous BSL 3-4 (human and animal) infectious diseases (eg, anthrax, cholera, ebola, typhoid) to avoid crisis's, like the ones provoked by the latest massive epidemics:

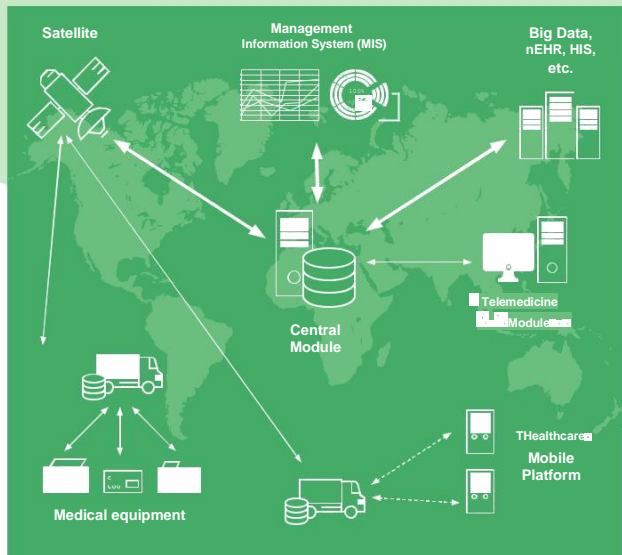
- » Atypical SARS outbreaks in China in 2003
- » An outbreak of avian influenza in Asia in 2005-2006
- » 2009 swine flu epidemic
- » 2012 - 2013 Saudi Arabia and 2015 South Korean MERS epidemic or in
- » 2014 the West African ebola epidemic
- » 2016 in Zika epidemic in South America
- » 2016 - 2018 Yemen Cholera outbreak
- » 2018 DR Congo ebola outbreak
- » 2019 COVID-19



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# 02 HOW IT WORKS

The state of the art laboratory equipments, the modular based SW package managed by the core Healthcare Mobile Platform and powered by a secure and enhanced satellite communication system, the compact and robust laboratory container designed to fully adapt to any kind of environment and the special expertise and know-how shaped & continuously shape EMP.



## 2.1 LABORATORY EQUIPMENTS

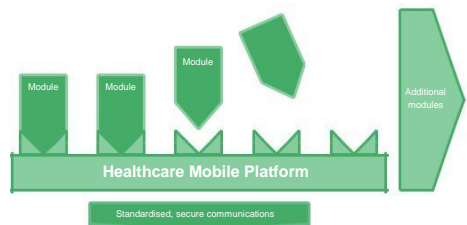
Our philosophy is to always use the latest and most reliable technologies to be able to identify all the relevant diseases. Reflectance Photometers, Hematology analyzers, CRP's and PCR's are just a few of the equipments used within EMP. The Polymerase chain reaction (PCR) is a technique used in molecular biology to amplify a single copy or a few copies of a segment of DNA across several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence.



## 2.2 SOFTWARE

Thanks to its modular based setup EMP always fully complies with the healthcare tasks defined by the user. While developing and selecting the best possible technologies, the focus was on delivering software components that not only match the client needs, but also are flexible enough to match the constantly changing environment and are also able to adapt to the latest trends. Thanks to this approach we can not only easily add new functionalities but also the teaching and introducing of the system is very simple, as only a configuration of the preferred modules is actually necessary. The below listed systems, SW modules and components are available within EMP:

- » Electronic Medical Record (EMR)
- » Patient Registration module
- » Laboratory modul
- » Telemedicine Module, (Tele consulting)  
Online Modul (supporting the hospitals  
without any HIS or HIS connection)
- » Sport medicine Module
- » Imaging Diagnostic Module
- » EMP Control Center



## 2.3 COMMUNICATION

The Communication module is an essential part of EMP as it not only connects the several parts sun-systems but it also ensures real time communication with any 3rd party all around the world, through the embed satellite communication platform.



The highly sophisticated satellite communication platform ensures a secure and stable connection from any geographical position on the globe 24/7. The Satellite system works as a separate module, which connects to the communications management module, through an auto adjustable antenna that amplifies the data transmission signal in geographical areas where cellular communication is weak or not available.

## 2.4 CONTAINER

The usage of containers (Standard 40-foot HIGH-CUBE Container) is essential due to their robust and secure setup, flexibility in terms of design and last but not least the short operation and transport time, as it can be deployed in emergency areas very fast. It not only protects the stuff equipments and instruments from the various environmental threats, but it also fulfills the relevant requirements of high tech labs. While respecting the logistic requirements in terms of its physical sizes, the 40-foot standard container size allows for fast and safe transport on the road, water and air. Thanks to these attributes, it can be operational eminently.