# MEDICATION

## Smart Medical Platform System Integration
## Minimizing Medical Errors

**Consortium**

spark works

**Sector**

HEALTH

**Duration**

**12** MONTHS

**Challenge**

Medication errors within clinical environments represent a serious public health problem and pose a threat to patient safety. In such a challenging working environment with long working hours, it is perhaps not surprising that human errors lead to wrong dosages, inaccurate timings and sometimes even mixed up medication. The MEDICATION Experiment delivers an IoT-based solution that addresses the problem at the systemic level, potentially reducing up to 2/3 of medication errors by automating the matching process of patients, prescriptions, health records and medical treatment. Our product is ready to be used in the first 5 hospitals in South-East Europe, and we have conducted a cost-benefit analysis of the benefits.

**DIATOMIC Support**

DIATOMIC services and funding were critical to achieving the successful implementation of our Experiment. Using the guidelines provided by our coaches as well as their support, we executed our idea identifying the strengths and weaknesses of our project. Through DIATOMIC, we got access to advanced infrastructure, expertise, as well as technical and business support. Attending webinars helped us find solutions to overcome challenges and guided us in setting and reaching our goals by offering business tips, advice and strategies. DIATOMIC provided us with access to knowledge, development and experimentation resources through different webinars and offered us technological training and resources.

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## Timeline

The MEDICATION Experiment is organized into 5 Work Packages. WP1 manages the project activities and coordination between the partners. WP2 identifies the system requirements and provides a detailed design of the system. In Month 2 we submitted the deliverable D1: "MEDICATION design". WP3 undertakes the implementation, integration and testing of the MEDICATION system, while WP4 is responsible for the project's experimentation actions, handling both pilot preparation and validation activities. In Month 9 we produced the deliverable D2 regarding the development of the experiment. Finally, WP5 will undertake the project impact creation activities, including the project results marketing where we will develop the deliverable D3 that covers all market activities.

## Stakeholders

MEDICATION use in the real-word environment:
Proof of Concept in Hospitals in South-Eastern Europe:
*   HYGEIA Group
*   IASO Group
*   City Clinic
*   Mediterranean Hospital of Cyprus
*   BIO-MEDICA

## End Users

The MEDICATION solution helps doctors and nurses give medication to patients safely and efficiently.

The end-users of MEDICATION will be both public and private hospitals, doctors and medical experts

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## Key Results

The overall objective of MEDICATION is to provide a holistic solution to the hospital medication domain and offer error-free hospital medication processes, along with direct and indirect cost savings. Moreover, the MEDICATION system promotes new business models for hospitals, claiming and proving error-proof procedures in medical activities from patients' admission to long term hospitalization. Finally, MEDICATION promotes commercial exploitation, demonstrating its pilot results to existing and new business contacts.

KPI 1: In-hospital drugs' stocktaking time < 35% of current process time
KPI 2: Delay for identification of patient location < 60% of current process time
KPI 3: Efficiency of drugs' distribution <40% of the current process
KPI 4: Cost reduction of drugs' distribution <25% of the current process
KPI 5: Medical personnel training time <60% of the current training time
KPI 6: Number of B2B partners to promote MEDICATION results > 5

## Impact

The healthcare sector is highly complex, and the medical care delivery ecosystem is under increasing pressures due to rising costs, patient expectations, as well as regulatory oversight. These pressures and the inherent nature of the industry itself make innovation in healthcare more complicated. We need high level expertise to unlock the health care market. Our project aims to create a Smart Hospital Medical Information System (HMIS), which will significantly contribute to reducing the number of mistakes at hospitals, providing a huge societal impact on the lives of European citizens. Moreover, MEDICATION is expected to provide remarkable economic impact by significantly reducing the hospital drugs' stocktaking and distribution time as well as associated costs. Moreover, it will bring Smart AME and IoT systems in the hospitals, opening the door for further exploitation of state-of-the-art IoT in the domain of health.

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