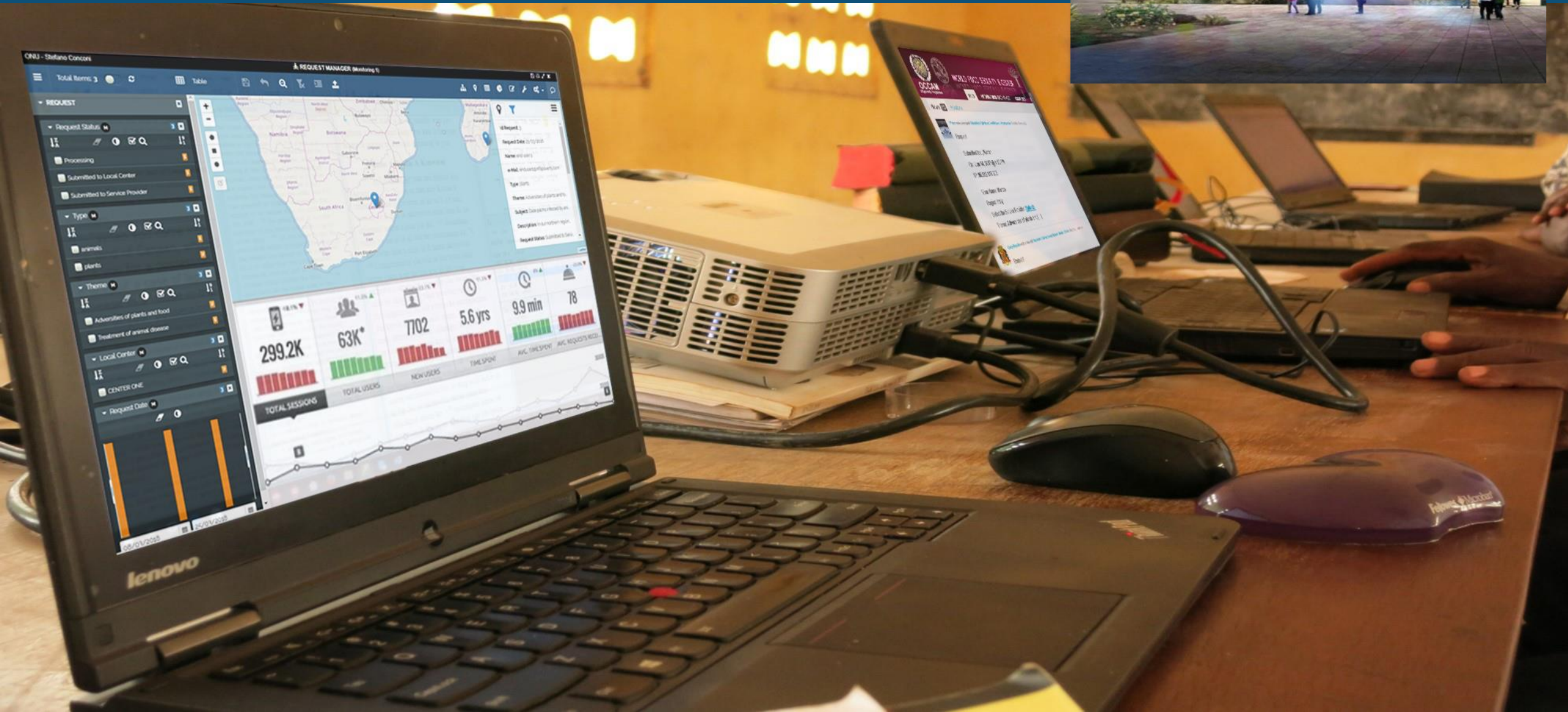


Plant Disease Diagnostic: *PlantDiag*

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The PlantDiag Project



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How to extract value and promote
growth through the digitalization
of extra systems processes:
the PlantDiag project

Plant Disease Management Project: PlantDiag

The "Plant Disease Diagnosis" (PlantDiag) Platform aims to address the challenges related to efficient and effective disease diagnosis and pathogen detection in plants.

This project encourages collaboration among institutions and experts across countries, leveraging hardware/software cloud infrastructure and online web-mobile services.

The foundation of the PlantDiag Platform is the eLegere Platform, where we will design and configure web database structures and smart application modules.

These modules will facilitate a workflow process connecting service providers (research centers, universities, laboratories) to deliver services to service users (ICT villages, governments, institutions in underdeveloped countries).

PlantDiag

Key Features



The PlantDiag Platform, through innovative services and technologies, supports countries in developing rapid and efficient food security and safety policies.

Key Features of PlantDiag:

- Streamlines the workflow from disease detection to diagnosis, including best-practice recommendations.
- Integrates traditional and innovative knowledge and resources.
- Provides services to end users, districts, national institutions, and centers of excellence across the globe.

PlantDiag: Diagram



| PlantDiag: Disease Report

SERVICE USERS

Service users are institutions and communities, situated in Countries in need of help. By joining the project, they will benefit from the skills and the technologies of the Center, receiving adequate support.

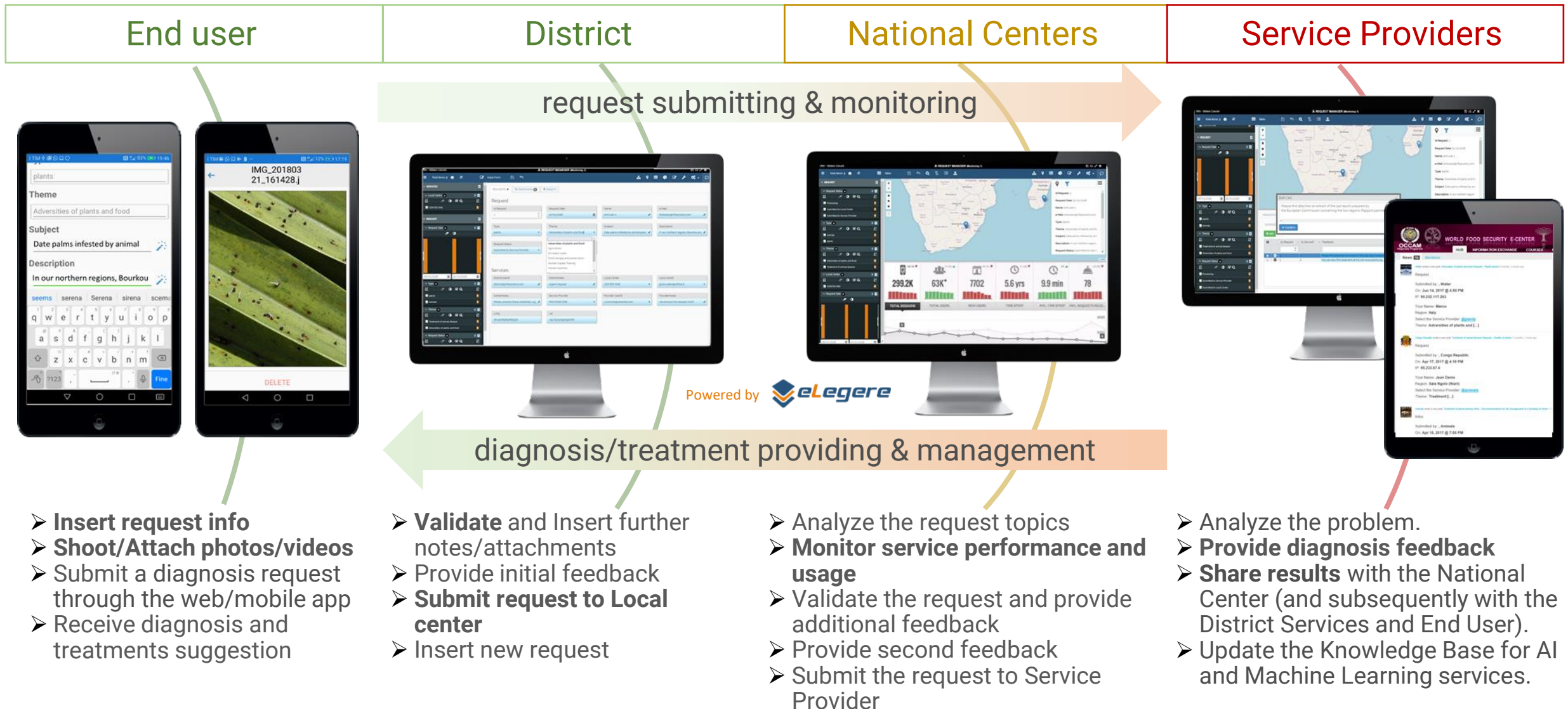


SERVICE PROVIDERS

Digital service providers, such as Specialized laboratories, research Centers, Universities, International Organizations associated, are equipped to evaluate emerging issues from different users, and to offer the best solutions.



| How it Works: Service Request Workflow



| PlantDiag: Technologies



The PlantDiag system harnesses **cutting-edge technologies**, including Internet of Things (IoT), Wearable Technologies, and Mobile Devices.

It collects data and employs advanced data processing techniques such as Artificial Intelligence (AI), Machine Learning, and Predictive Analytics.

PlantDiag: Tools for Digital Solutions

Internet of Things (IoT)

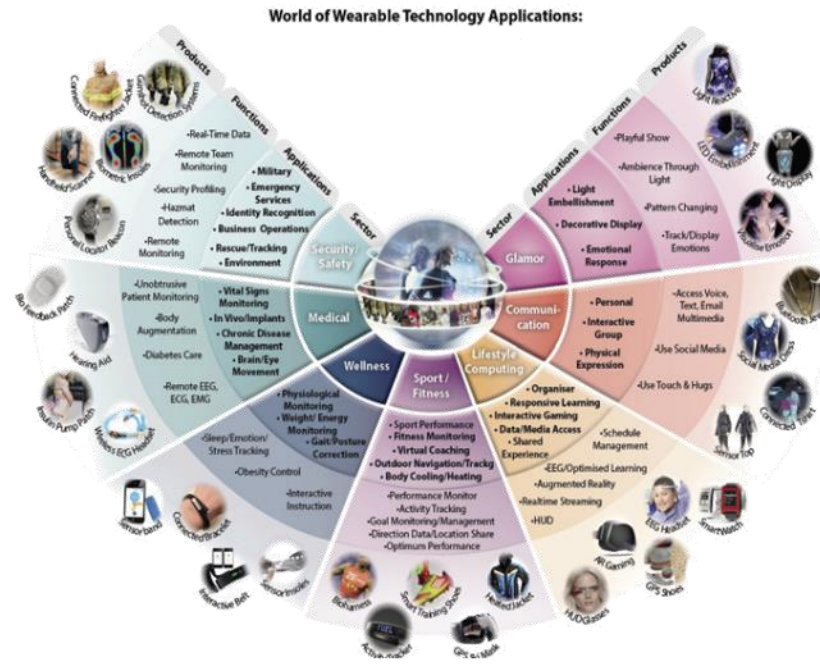
embedded software, sensors and network connectivity **enable physical devices and objects to collect and exchange data**

Wearable Technologies

devices able to processing and transfer high volumes of data at low production costs, thanks also to **new frontier of wireless networking**

Mobile Devices

laptops, tablets and **smartphones** equipped with camera, **GPS, RFI** and other **sensors** allow people to collect and share data anywhere

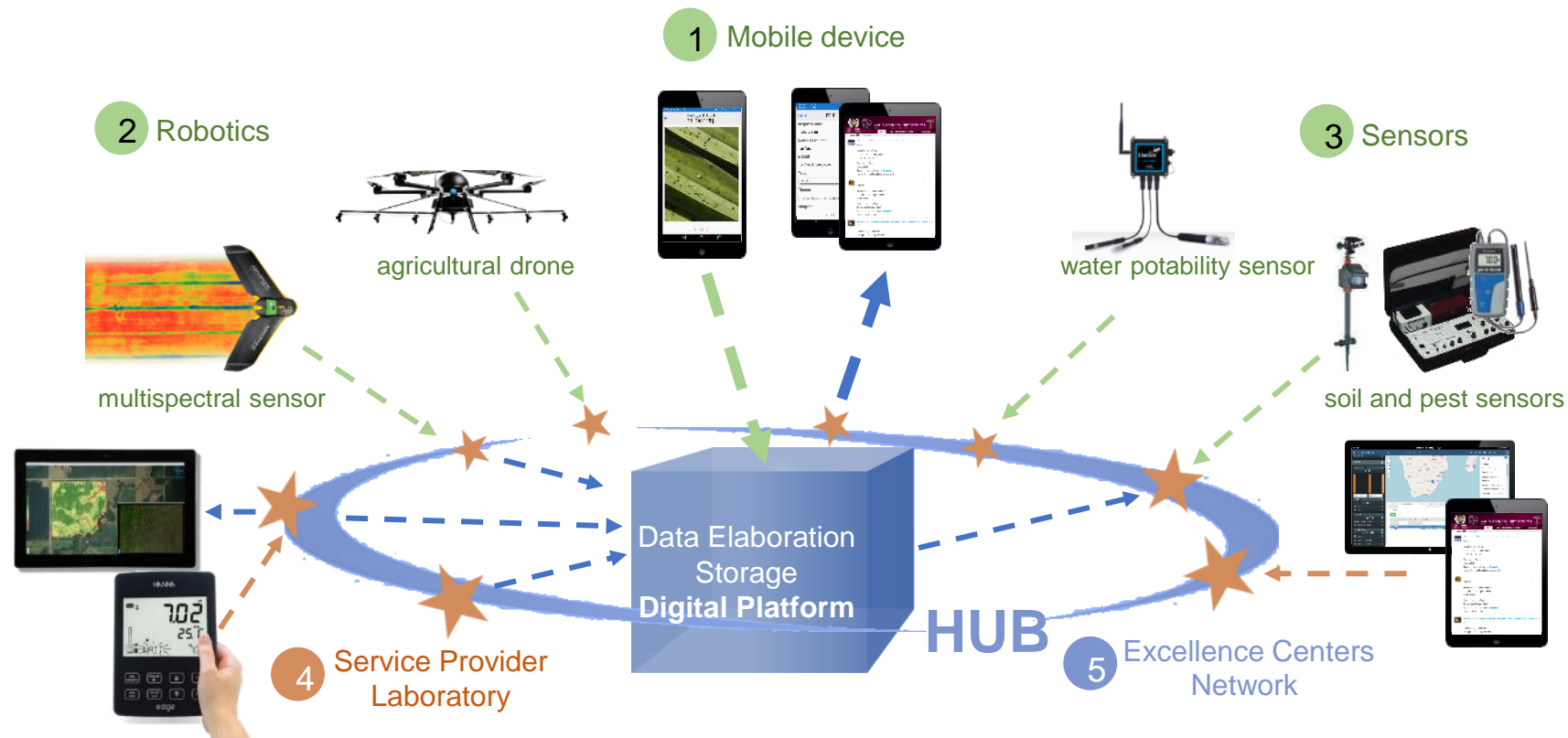


The **PlantDiag System** collects **real-time data** coming from these new digital technologies and integrates advanced data processing/analytics tools & cloud application services (**BigData, Artificial Intelligence, Predictive Analytics** and **Smart Contracts**) to implement **better life conditions** in poor, disadvantage and underserved areas.

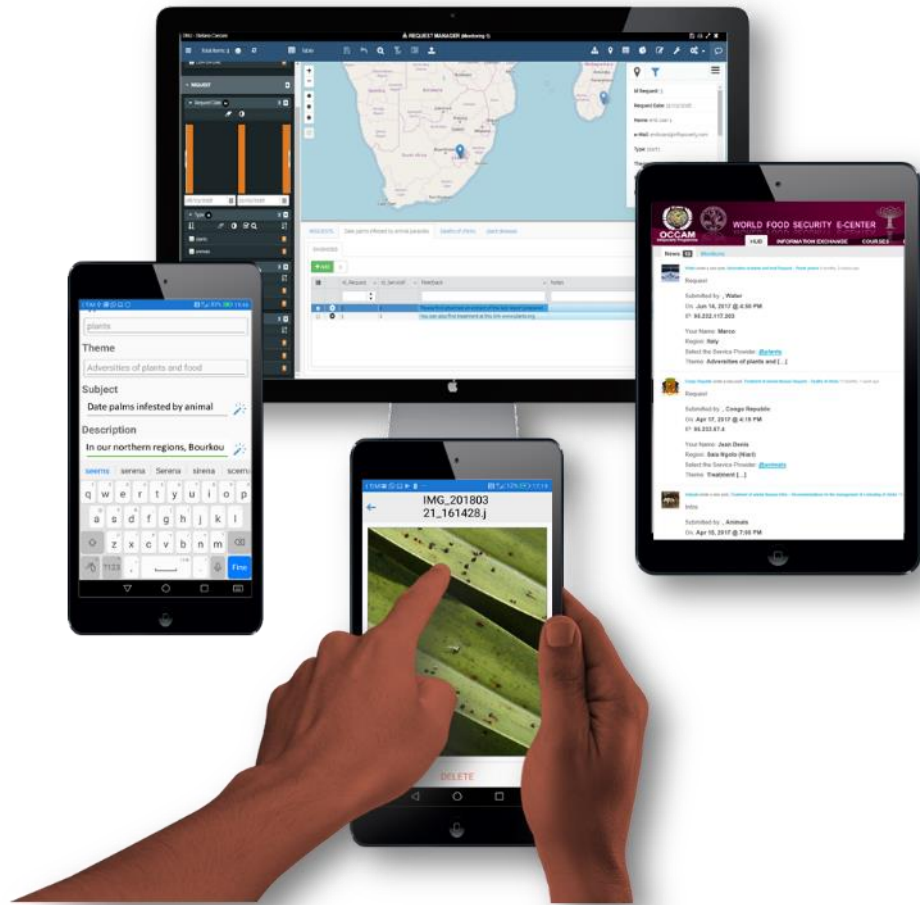
PlantDiag HUB

The **PlantDiag HUB** is at the core of the Global Platform.

Its aim is to connect the **Service Providers** (research centers, universities, laboratories, **Excellence Centers Network**) which could deliver directly the support requested by the **Service Users** (ICT Villages, institutions of underdeveloped countries and governments) with additional information coming from **Sensors**, and **Robotics**.



PlantDiag HUB: Key Features



- **Desktop & Mobile** smart user experience
- **Smart input** by image/text/voice recognition and Geolocation



- **Profiled users** with secure web access
- User access **auditing** and **data history tracking**



- **Web DBs** to store data/metadata, media and documents
- Georeferenced data entry and **geo-visual data navigation**



- **Centralize** data collection, validation and sharing
- User **permission & restriction** on visibility, editing and export
- Workflow **notification engine**



- **Integration** and synchronization with **external data sources**
- **Interoperate** with external operative/analytics tools & services
- **Scalable** in functionalities and operational modules



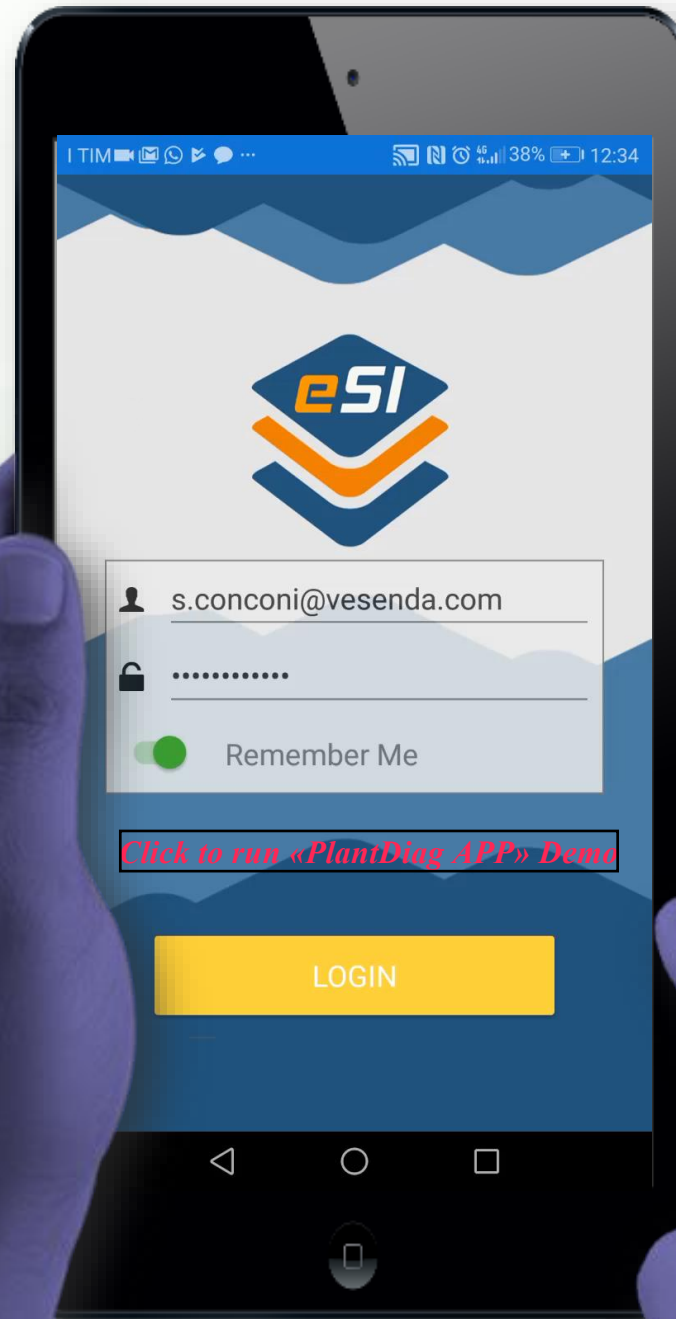
- Integrated with World Food & Health Security e-Center **IOT** and **AI services**

Powered by 

- **Vesenda's** innovative Smart Operational Process Management **Web/Mobile Platform**

END USERS

Submit service requests by **Mobile Smart APP**



The PlatDiag HUB benefits from the capabilities of the innovative **Smart Operation Process Management** platform: **eLegere**



Data **Collection, Validation** and **Sharing** processes can be managed:

- **on the field** by end users (mobile)
- **at district/local centers** by service users (web/mobile)
- **worldwide** by service providers (web/mobile)

Districts, National Centers & Service Providers manage end users submitted requests

Welcome x

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Sunday, 8 April 2018, 09:55 AM

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Click to run «PlantDiag DESKTOP» Demo

Vesenda - Smart Intelligence - v. 2.0.1.317

powered by eLegere

PlantDiag: Expected Impact

- Offers **tools and solutions** to conserve and enhance natural resources in specific agro-systems.
- Identifies **methods** for improving soil conditions and increasing farm income sustainably.
- Enables **scalability and transferability** to other areas and countries.
- Enhances **food security and safety policies**.

PlantDiag: Advantages

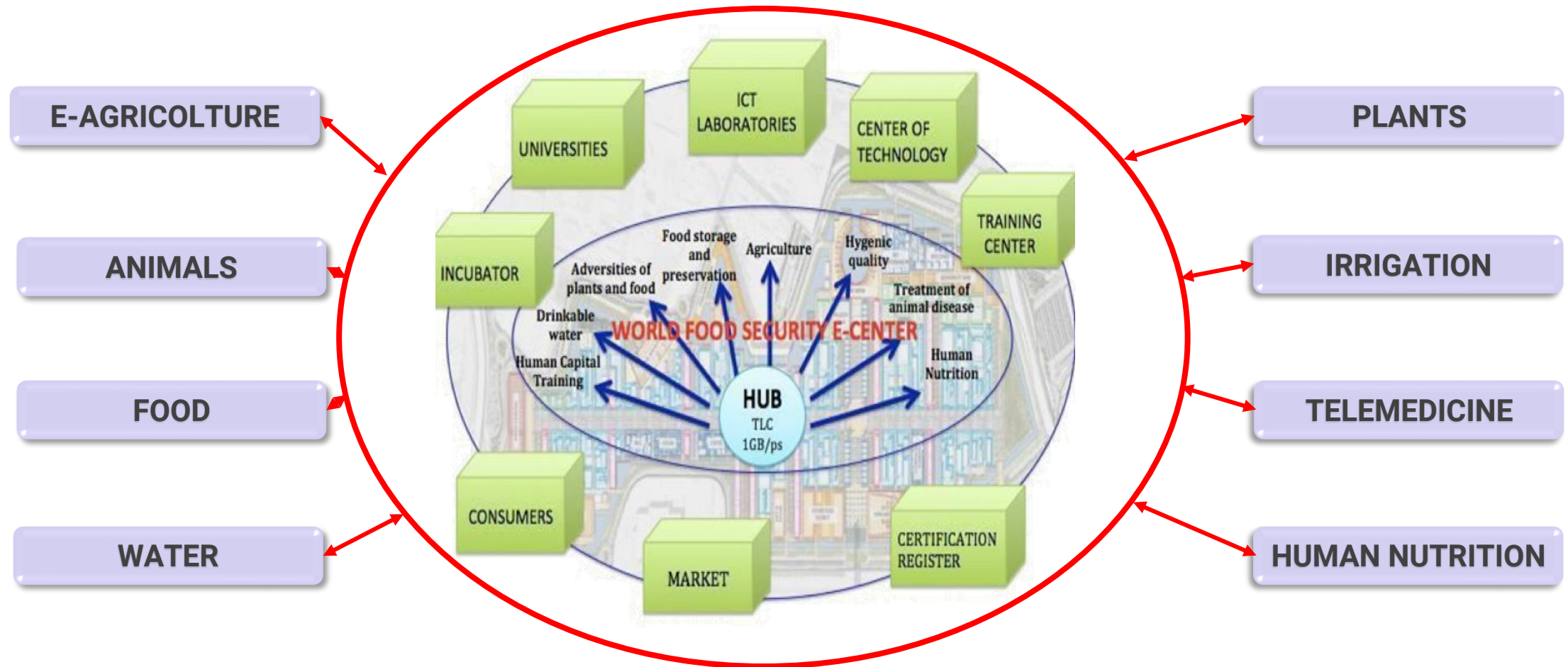
- Supports **desktop, tablet, and mobile** devices via web.
- Offers secure user profiles with **data history tracking**.
- Utilizes a **web-based database** with **georeferenced data navigation**.
- Facilitates **centralized data** collection, validation, sharing, and workflow management.
- Integrates with **external data sources and IoT**.
- Ensures interoperability with **IoT and intelligence services**.

| PlantDiag: Future Steps

Future steps for the PlantDiag Project include:

- 1. Integration of databases and web services for intelligent plant disease recognition based on field photographs.***
 - Identification of best practices for image capture.
 - Evaluation of technologies like "Microsoft Azure Cognitive Services."
 - Consideration of machine learning and artificial intelligence.
- 2. Development of devices for detecting and diagnosing plant issues.***
 - Management of external devices and IoT sensors.
 - Creation of a PlantDiag application module for analysis results.
 - Possible communication between detection devices and mobile devices.
 - Integration of results into the support request verification process

PlantDiag: Application Fields



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