

# Partnership for Traceability and Authenticity of Mediterranean Food (Med food TTHubs): Case Study of Egypt & Tunisia

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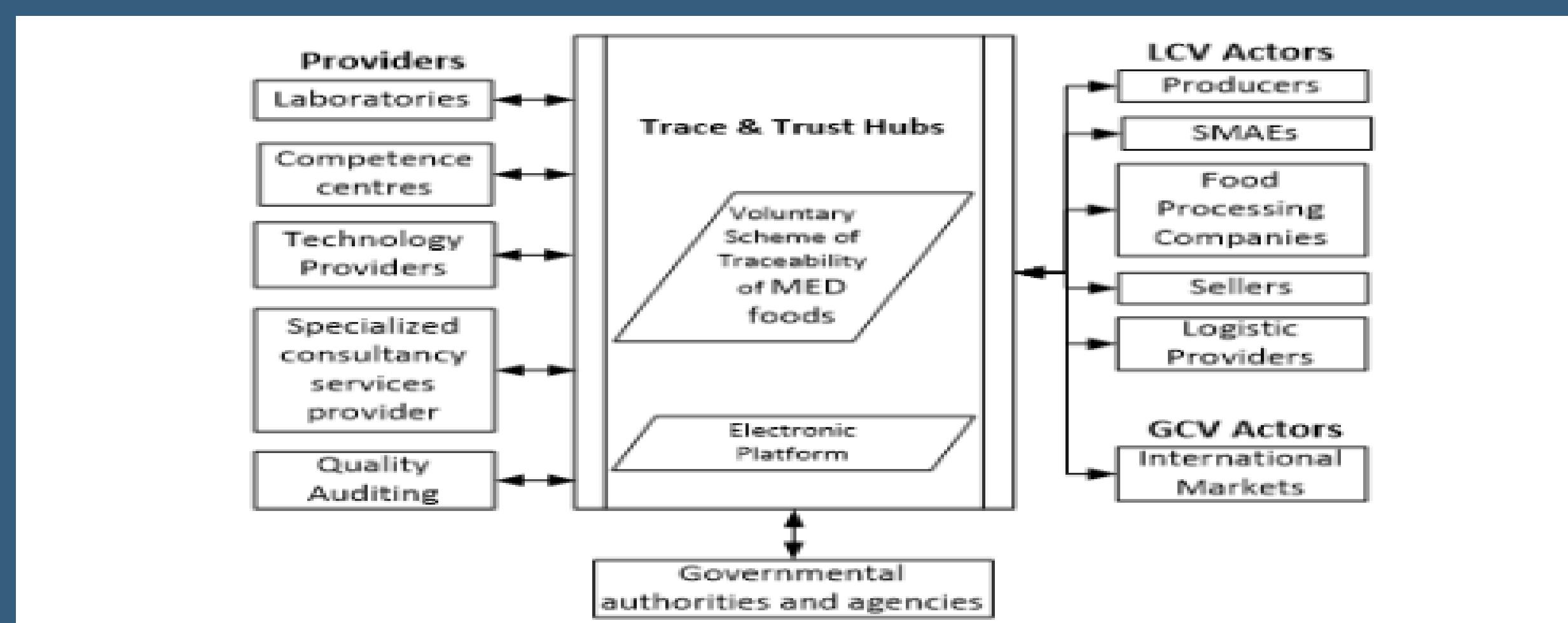
## INTRODUCTION

Along with the improvement of living standards and the growing public health issues related to alimentation, concerns about both the safety and quality of food continue to escalate in the African continent. Thus, increasingly, more and more players in the food sector are demanding for traceability procedures to ascertain the origin of agri-food products, ingredients and their attributes, from the farm through food processing, retail to the consumer. Against this backdrop, two African Higher Education Institutions: the Higher School of Engineers of Mjeb El Bab (University of Jendouba, Tunisia) and the Arab Academy for Science, Technology & Maritime Transport (Alexandria, Egypt) integrated a partnership gathering several other Mediterranean universities, research groups and private sector entities in the framework of a Partnership for Research and Innovation in the Mediterranean area (PRIMA) project which started in 2020. The project entitled "Trace & Trust Hubs for MED food"



## OBJECTIVE AND SPECIFIC OBJECTIVES

- To implement full transparency concerning the traceability and authenticity in the food supply sector, MED Food TTHubs taps into cutting edge technologies and "Internet of Things" (IoT) solutions and builds on standardised approaches to food production processes and location identification, transparent monitoring procedures and innovative business partnerships.
- SO1: To map needs and requirements related to traceability and authenticity control system in the involved countries
  - SO2: To implement a traceability model based on blockchain technology able to reduce the food fraud vulnerabilities, to shorten the supply chains and to decrease the commercialization costs
  - SO3: To develop a Web-based Platform divided in modules
  - SO4: To explore the role of a third-party certification body for applying the "Voluntary Scheme of Traceability (VST) of MED foods" as a future standard for traceability and authentication
  - SO5: To train selected key local stakeholders and end-users for testing the new control system developed (mock-ups)
  - SO6: To demonstrate usefulness and applicability at local level, through pilot operations in the selected countries
  - SO7: To disseminate project results to business and research communities, to consumers and to European and South countries policy decision-makers through leaflets, websites, workshops, scientific papers.
  - SO8: To set up model exploitation groups (in 7 project countries) for activating business



## METHODOLOGY

The proposed Voluntary Scheme of Traceability of MED foods will be supported by a dedicated web-based platform, which will encompass a number of modules. The web-based platform will be designed and developed to facilitate the operation of the Trace & Trust Hubs focusing on three axes: i. Sharing of information across the supply chain, up to the consumer; ii. Support the documentation of traceability and authenticity, and iii. Support the effective provision of more trustful processes for certification and quality control. The web-based platform will act as the cell in which several modules will be developed to cover appropriately the three aforementioned axes



Fig. 2: Med Food TTHubs Partners & Products

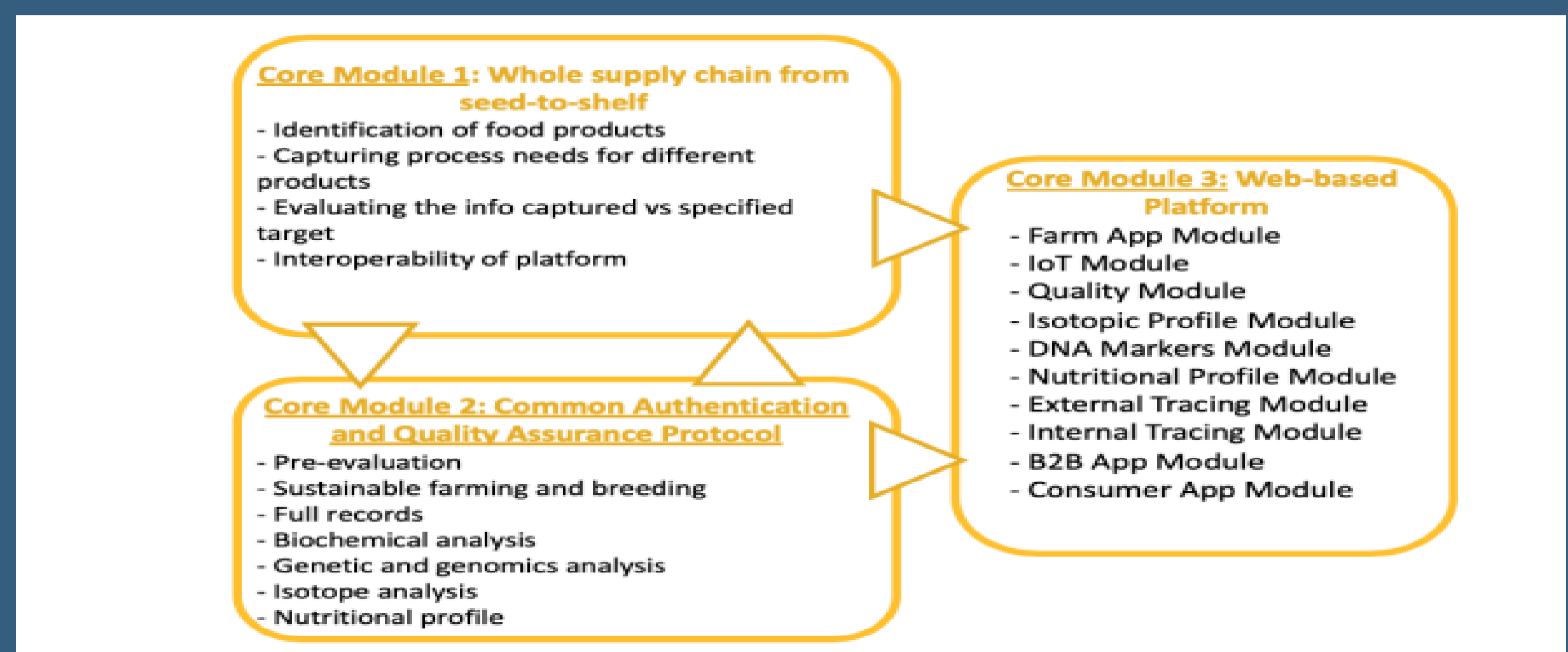
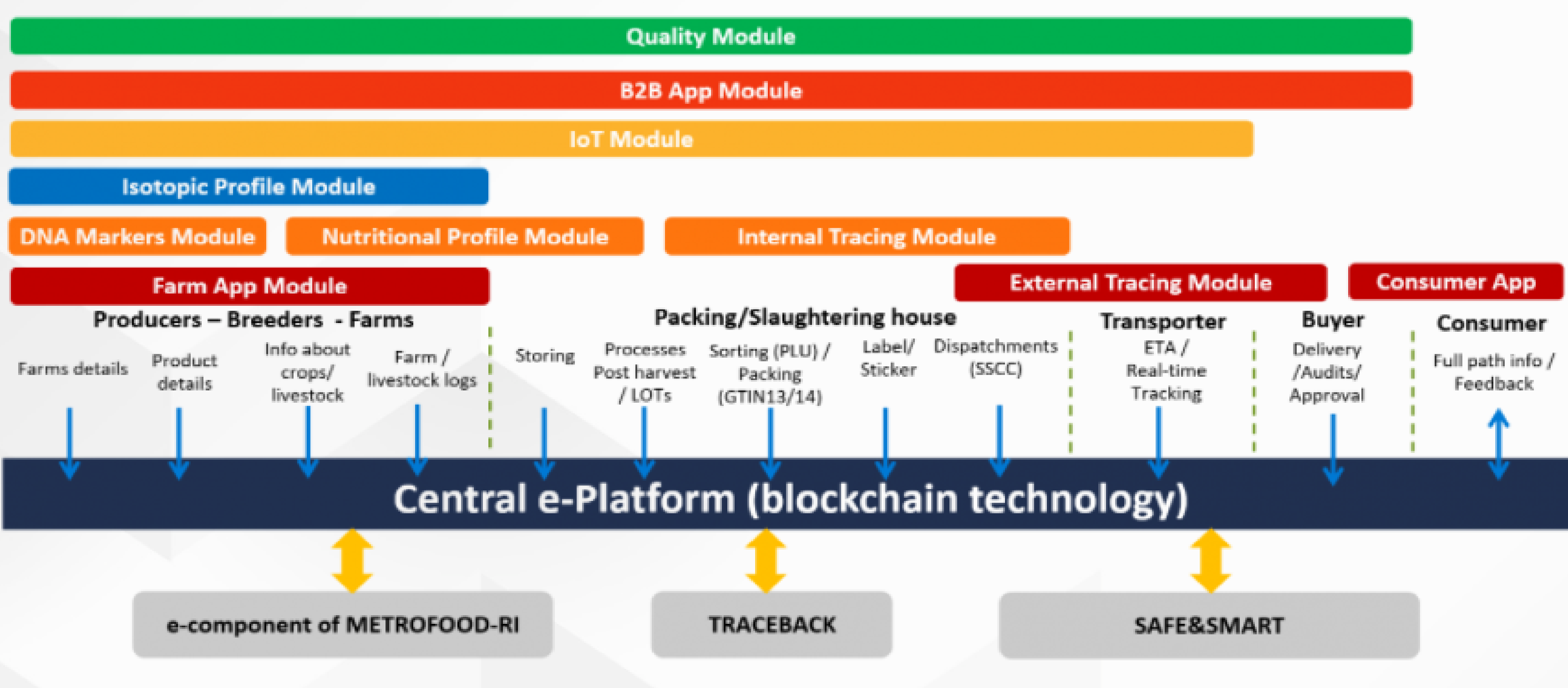


Fig. 3: The general structure of the TTHubs and overall approach of core Modules



## RESULTS AND DISCUSSION

The protocols that will be developed under Med Food TTHubs and the usage of the e-Platform will actively support the food industry in addressing both the demand for food security and food origin. The medium to long term expected impact of Med Food TTHubs can be summarised as:

- i. Increasing companies' interest in food safety and sustainable development.
- ii. Promoting the usage of quality and authentication certificates for raw materials as a competitive advantage
- iii. Providing full transparency and documentation for the origin of the products and their overall characteristics.
- iv. Providing access to information concerning the production processes and the transport.
- v. Supporting end-to-end tracking with GS1 standards for more effective re-call management.
- vi. Utilization of information on best practices for their integration into the marketing of the company's products and for improving companies' reputation.
- vii. Fully documented coverage of even the most stringent requirements of major retailers abroad as well as food safety legislation. Companies will therefore increase their consumer's share and increase their revenues.

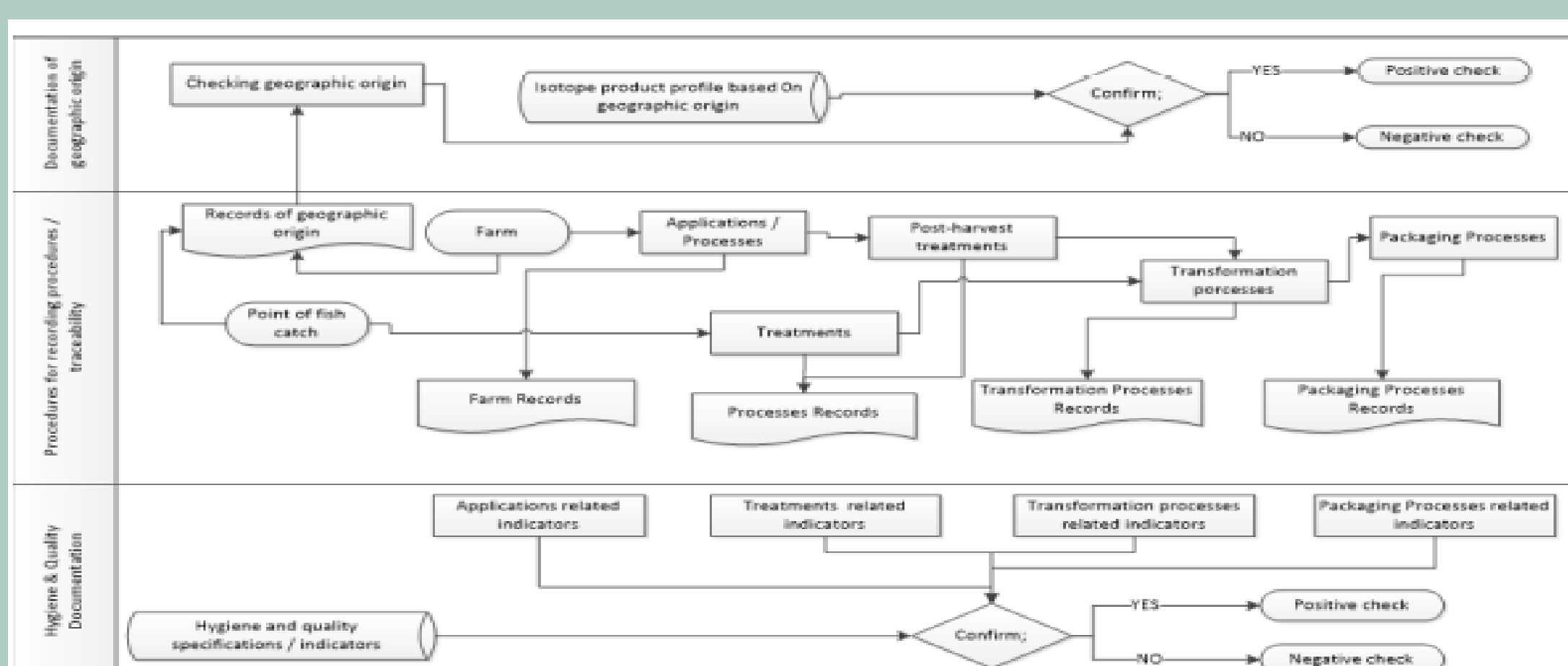


Fig. 4: MED Food TTHubs e-platform

Technology	Original Project/Partner	Starting TRL	Ending TRL
Farm App Module	GP/CERTH	5	7
IoT Module	GP	6	7
Quality Module	UoP	5	7
Isotopic Profile Module	UoP	5	7
DNA Markers Module	CERTH	5	7
Nutritional Profile Module	UPM	6	7
External Tracing Module	ENG/TCA	6	7
Internal Tracing Module	ENG/TCA	6	7
B2B App Module	GP	6	7
Consumer App Module	GP	6	7

Table 1: Med Food TT-Hubs project's Innovation potential.

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