

ΠΟΙΟΤΗΤΑ

- Digital transformation applications for product and indoor air quality assurance



Scope

01

Product Quality Control

Machine Vision

02

Product Quality Control

Spectrophotometer

03

04

Indoor air quality control

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Expected Results

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Expected Benefits

01

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The 4th Industrial Revolution is characterized by the wide and focused design for each case application of Information, Communication and Electronics technologies in the industry. Production systems that already have computer technology expanded by network connection have a digital footprint on the Internet so that they can 'talk' to each other. In the domestic market, there is no single system, covering a set of basic applications, for the monitoring of the Means and the Process of production of a company, which will manage the entire volume of information. This means that neither the decision-making process is efficient and safe for the management, nor are conditions created for more efficient production and/or reduction of its costs.

Scope

Trying to fill this gap, SEEMS has developed the corporate aRTi-D Solution, a comprehensive and highly innovative digital platform (hardware and software), based on Industrial Internet of Things (IIoT) and Artificial Intelligence (AI) technologies for support for the Transition of Manufacturing Industries to DM. Based on experience, trends in the wider market with the advent of digital technology, the high interest of manufacturing industries to modernize to remain competitive, this project aims to develop two important new systems by expanding the functionality, which already provides SEEMS today through the aRTi-D Solution. This will be achieved through the design and development of Automatic Product Quality Control System and Indoor Production Air Quality Control System.

Scope

The proposed investment will significantly support the strongest entry into the market of a modern Digital Solution, which ensures the health of employees, simplifies the process of automatic quality control and generally modernizes the way the Industry operates, increasing its efficiency, reducing its costs and prospects of extroversion with competitiveness as the main weapon.

02

Product Quality Control

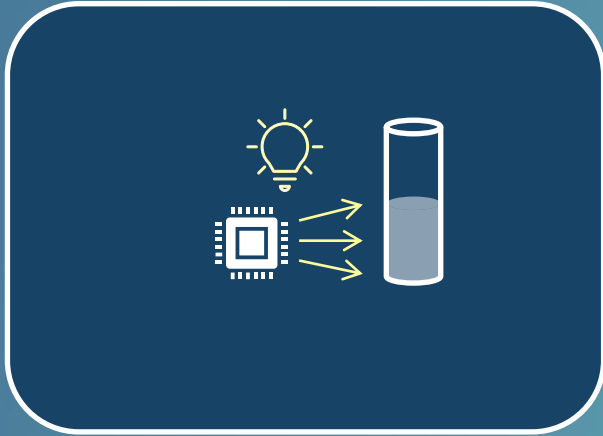
Machine Vision



03

Product Quality Control

Spectrophotometer



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Indoor air quality control



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Expected Results



With the proposed investment, two new high-interest intelligent systems (Hardware and Software) will be designed and developed in the aRTi-D™ Solution:

A. An innovative quality assurance system based on a combined image analysis by camera and spectrophotometer using deep learning neural networks for more reliable quality control results.

B. It will have developed an innovative indoor air quality assurance system using TN algorithms for the detection of pollutants, the evaluation of the performance of existing ventilation systems and the possibility of immediate intervention.

With the integration and operation of the above systems, SEEMS will own a modern and highly integrated corporate product of the latest digital technology, which will continue to be available in the wider market, with serious expectations of adoption by manufacturing companies, to support their transition in Digital Transformation.

Expected Results



Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

06

Expected Benefits

Increasing the efficiency of the industry:

With the adoption of the proposed investment, the manufacturing industry will modernize its operation and will achieve a 10-20% increase in its efficiency, while reducing production costs and improving the quality of products and productivity.

Environmental Protection:

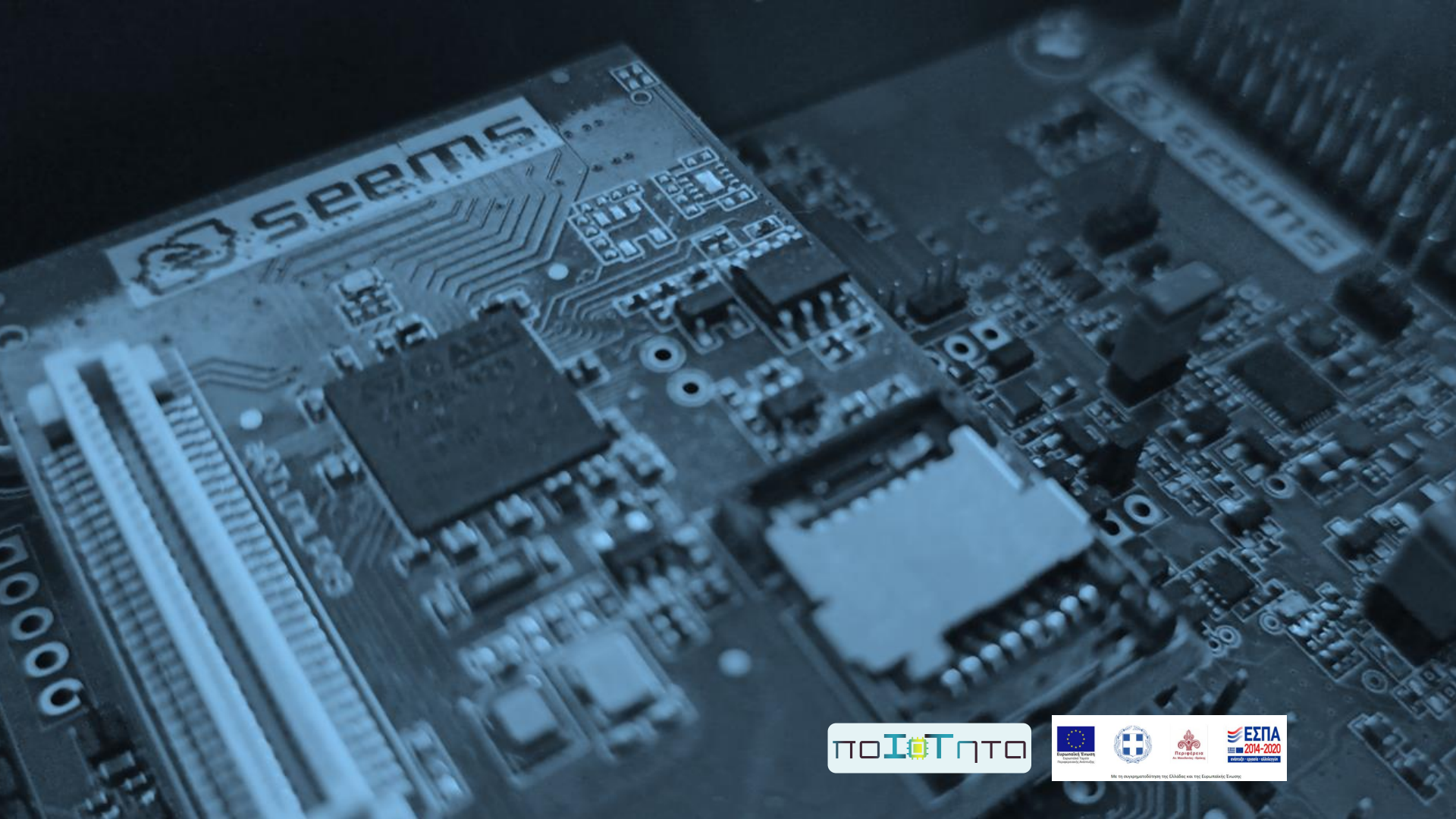
The proposed investment leads to best production practices by reducing the number of defective products (discarded) and the carbon dioxide footprint, with the immediate effect of protecting the environment.

Workers' Health:

The system for monitoring - control internal gaseous pollutants that will be developed will ensure a clean and controlled internal working environment, reducing health problems (asthma, allergies, etc.) associated with poor air quality in the workplace.

Expected Benefits





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