

Impact of Collaborative Projects

Illustrations from PENTA projects

Patrick Cogez, Technical Director, AENEAS



Create impact
by collaborative
Innovation!
For an autonomous and
sustainable Europe

2022

24-25 November, Amsterdam

Organised by:
AENEAS, EPoSS & Inside

Σeureka and the Penta Cluster

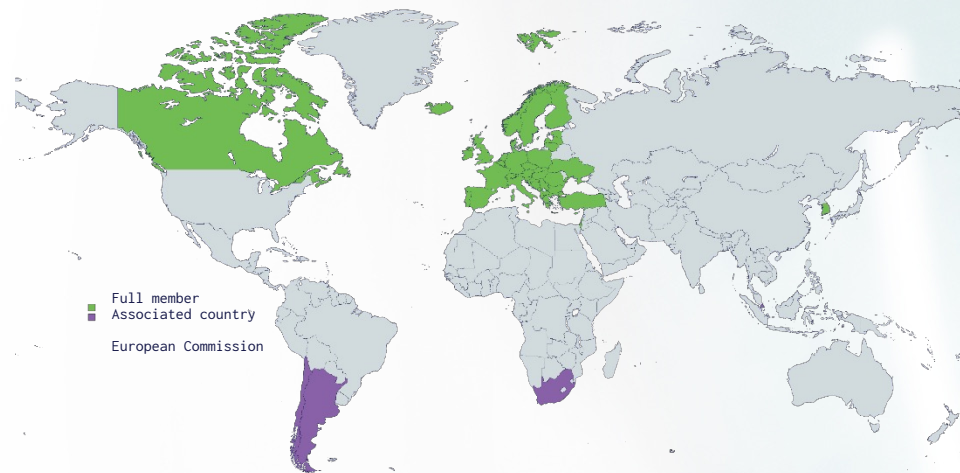
- Eureka is the world biggest public network with more than 47 member countries for **international cooperation in RD&I** , launched in 1985

- **Clusters** are a joint initiative between Public Authorities and private organisations (Large and small companies, RTOs and universities)

- AENEAS operates **PENTA**, **Euripides** and **Xecs** Clusters

PENTA achievements:

- 6 Calls
- 34 projects
- 406 beneficiaries
- 24 countries involved
- 385 Mio€ public-private investment



Innovation through Collaboration

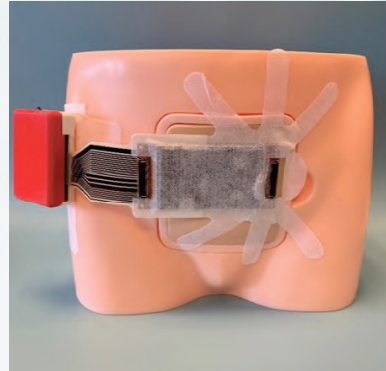


World's first smart, wearable ultrasound patch for diagnosis and health monitoring at home



Copyright KOB.
From public Ulimpia movie

Chronic wound
monitoring



Copyright Novioscan.
From public Ulimpia movie

Bladder
monitoring



Copyright NewLife proposal
Taken from the NewLife FPP

Remote non-invasive solutions for ensuring
the health of mothers and babies

Innovation through Collaboration



Education

Smallest Electrochemical
Gas Sensor worldwide



Involving 10 PhD Students



Copyright ECSense



Miniaturized multiplexed
e-nose sensor

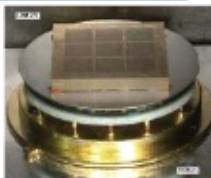
The fast and reliable
detection of explosives
chemical and fire **lead**
application smoke & gas
detection

Indoor air quality
monitoring **lead**
application smart
home, air purification
& smoke detection

Airborne pathogen
detector

Lead application
food processing

**SENSOR
TECHNOLOGIES**
sensitive, selective,
low power & low cost



Copyright TU Eindhoven

Mid-infrared filter array on
top of a detector array



Business creation



AI and privacy-enhancing technologies to enhance internet interoperability, resiliency and security for business and industry



Copyright Philips

Healthcare



Copyright Engie

Energy
communities



©2020 Cloud&Heat Technologies GmbH

Cloud
infrastructure

Business creation



Job Creation

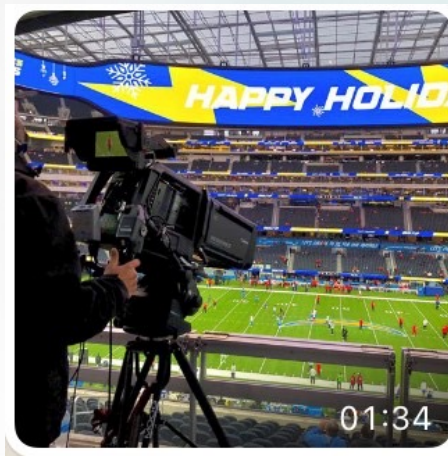


Improving imaging building blocks



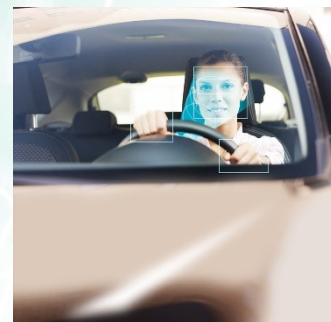
Digital Pathology

Live Television Production



Precision Agriculture

In-car safety



Job Creation



We are going to watch ultra HD in broadcast

Value Chain Creation

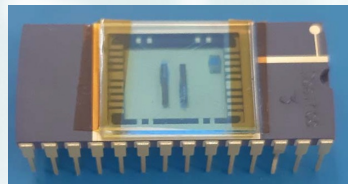


Copyright ON Semiconductor Technology BV

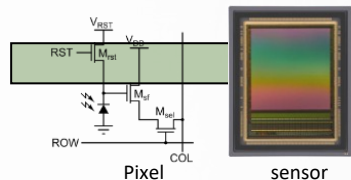


Silicon demonstrators

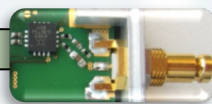
Technologies and building blocks for CMOS image sensors, image sensor interface standards, video processing, video compression and transmission



Copyright Caeleste CVBA



Processing & compression



Hardware & Interface



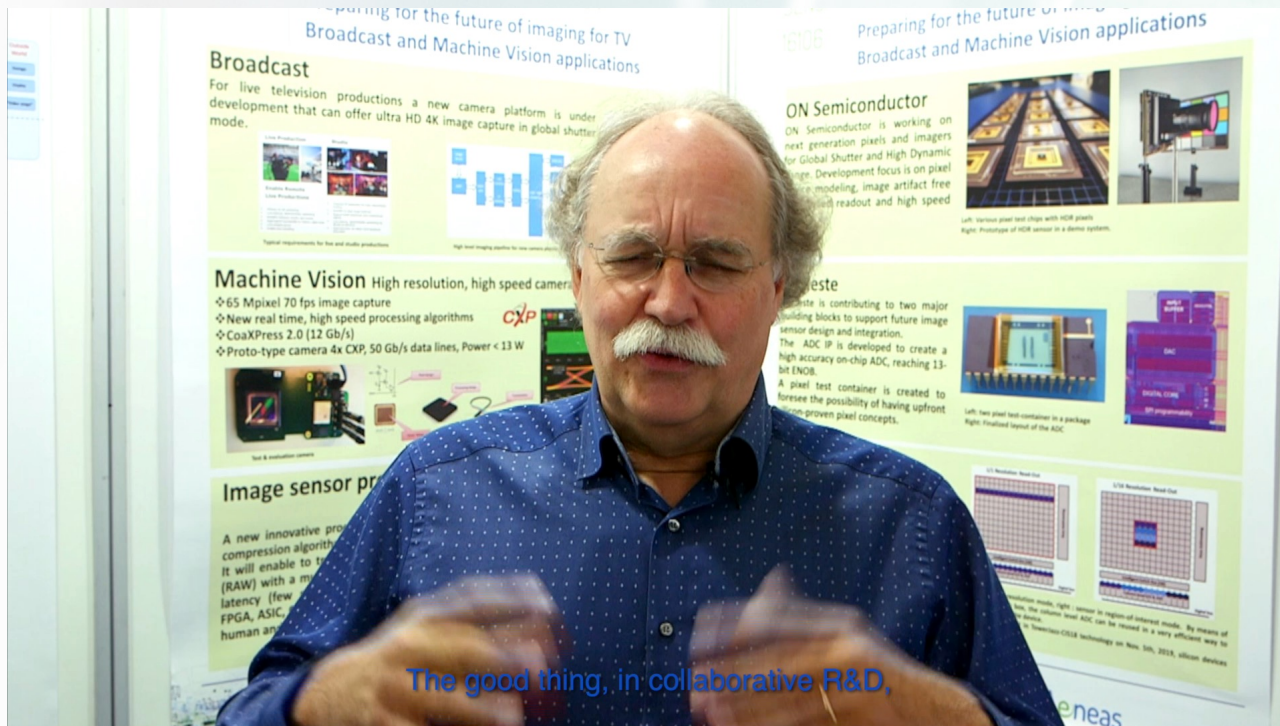
Machine vision camera

Machine vision



Copyright Caeleste CVBA

**Broadcast: 4K global shutter camera
(integration time 1ms, no distortion of
arms of rotating fan)**



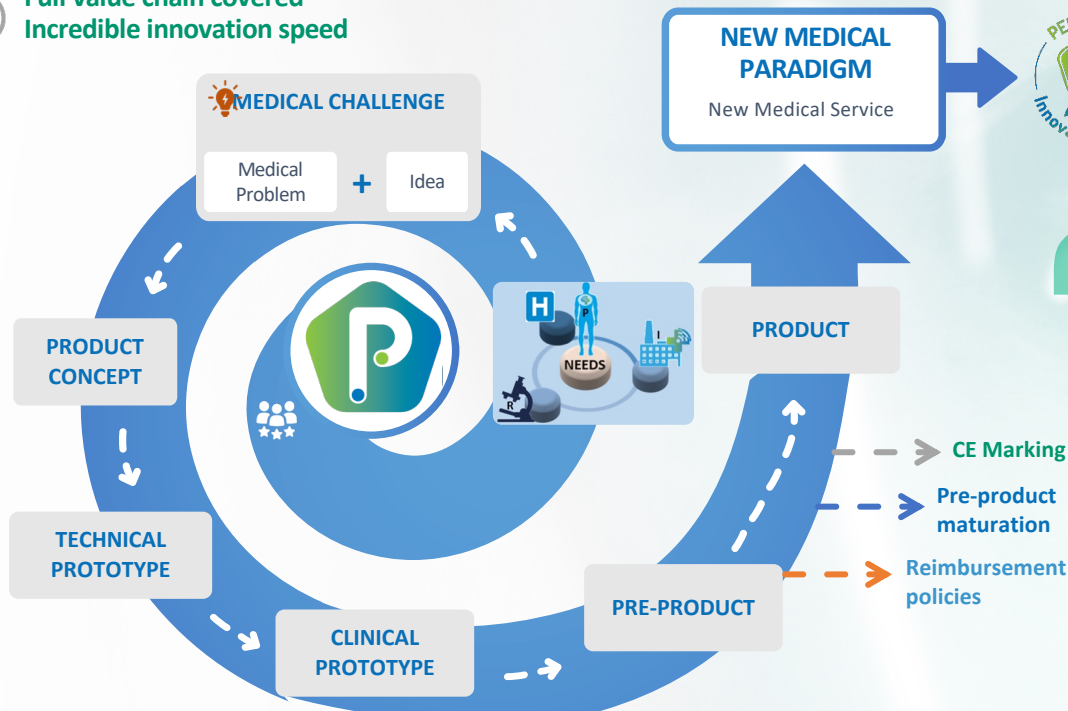
Addressing societal needs



Secured & EneRgy EfficieNt hEalth-care solutions using IoT technologies



Full value chain covered
Incredible innovation speed



Several further developments
are ongoing with great SOCIETAL
and ECONOMIC IMPACT



Providing reliable and secure medical solutions that support hospitals by ensuring continuity of care for patients at home, is essential. PENTA has allowed to bring together a broad multi-disciplinary consortium into a single objective: Introducing connectivity into medical practices.



Armand Castillejo, STMicroelectronics
SERENE-IoT Project Leader

ECS 2022
Create impact by collaborative Innovation!



Thank you for your kind attention.

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