



Bay Zoltán
Nonprofit Ltd.
for Applied Research

INNOVATION
PARTNERSHIP



- **Bay Zoltán Nonprofit Ltd. for Applied Research**
- **Division for SMART Systems (BAY-SMART)**
- **László Árvai, Dezső Vass, Dénes Perényi**



bay®



ENGINEERING DIVISION (BAY-ENG)

KNOWLEDGE MANAGEMENT
CENTRE

DIVISION FOR SMART SYSTEMS
(BAY-SMART)

DIVISION FOR BIOTECHNOLOGY
(BAY-BIO)



Bay Zoltán Nonprofit Ltd. for Applied Research

- Year of foundation: 1993
- State-owned but financially not supported by the state budget
- Total number of employees: approx. 200 people
- Annual sales: HUF 2 billion (€ 6 000 000)
- Assets: HUF 2.7 billion (€ 8 000 000)



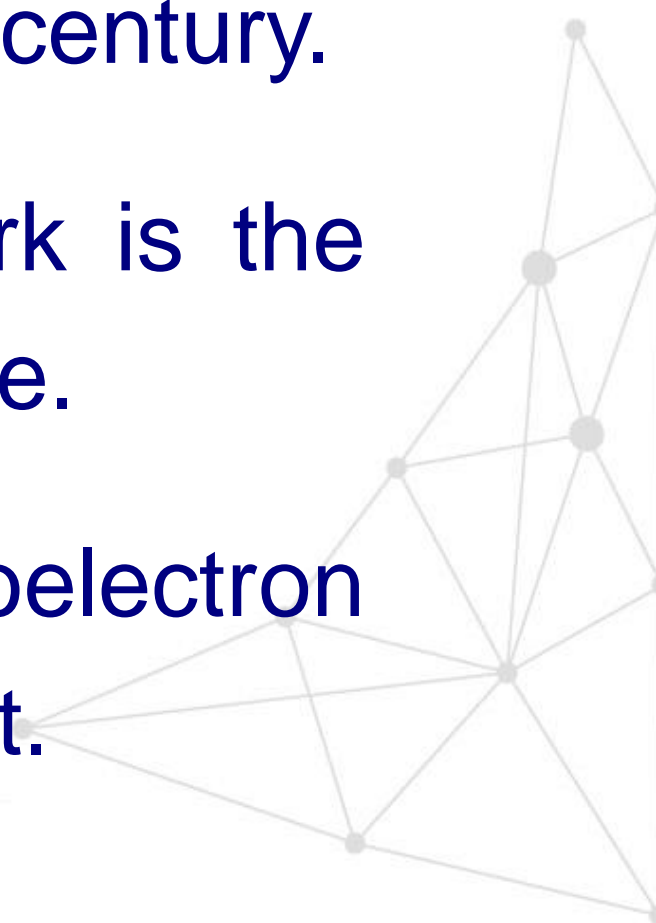
Zoltán Bay

Lajos Zoltán Bay (Born in Gyulavári, July 24th, 1900 - deceased in Washington, October 4th, 1992) was a Hungarian physicist, member of the Hungarian Academy of Sciences.

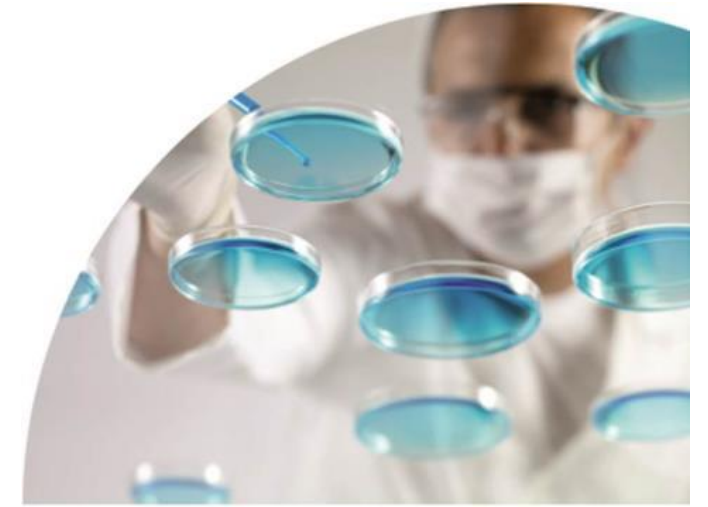
He is one of the world's leading scientists and inventors of the 20th century.

One of the most significant achievements of his pioneering work is the foundation of the emergence of radar astronomy as a new discipline.

His name is associated with the Moon Radar experiment, the photoelectron multiplier and the definition of the meter based on the speed of light.



Organizational Structure



- Engineering Division (BAY-ENG) – Budapest, Miskolc
- Division for SMART Systems (BAY-SMART) – Miskolc, Budapest
- Division for Biotechnology (BAY-BIO) – Szeged
- Knowledge Management Center (BAY-TMK) – Budapest



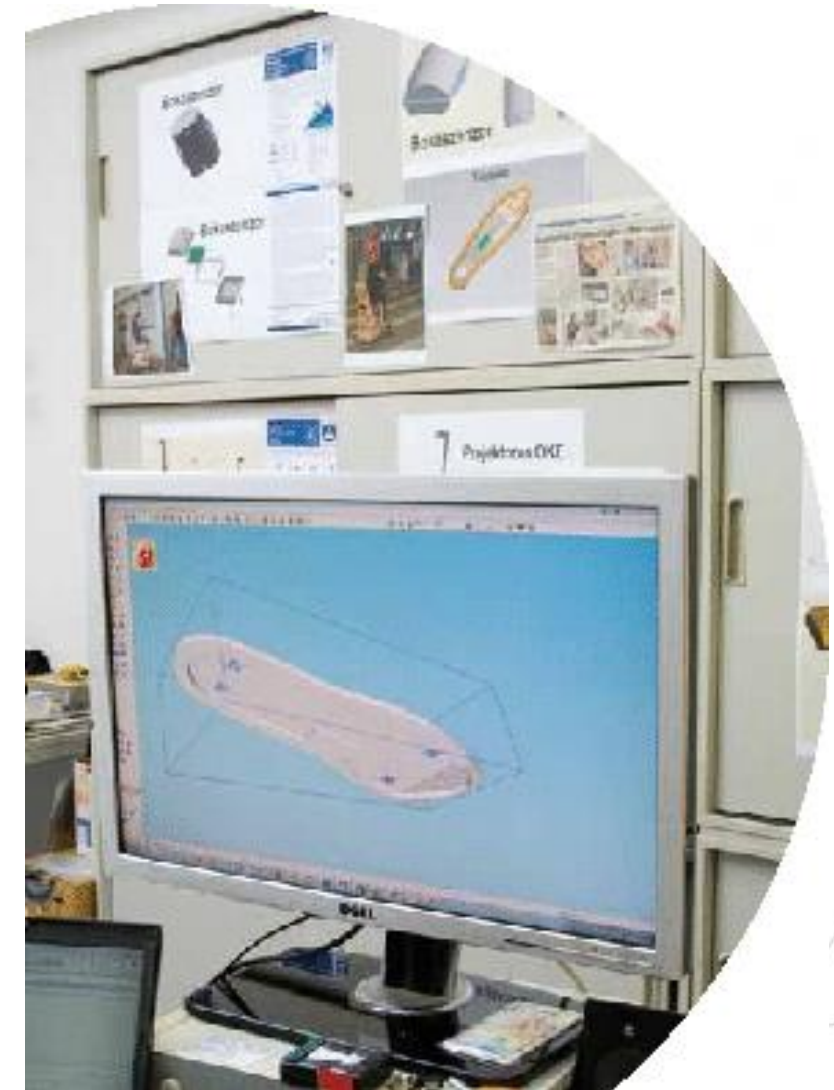
Scientific Fields of BZN

- Material science
- Biotechnology
- Infocommunication
- Mechatronics
- Energetics
- Environmental protection
- Logistics
- Structural integrity, operation safety
- Industrial engineering support services to manufacturing processes



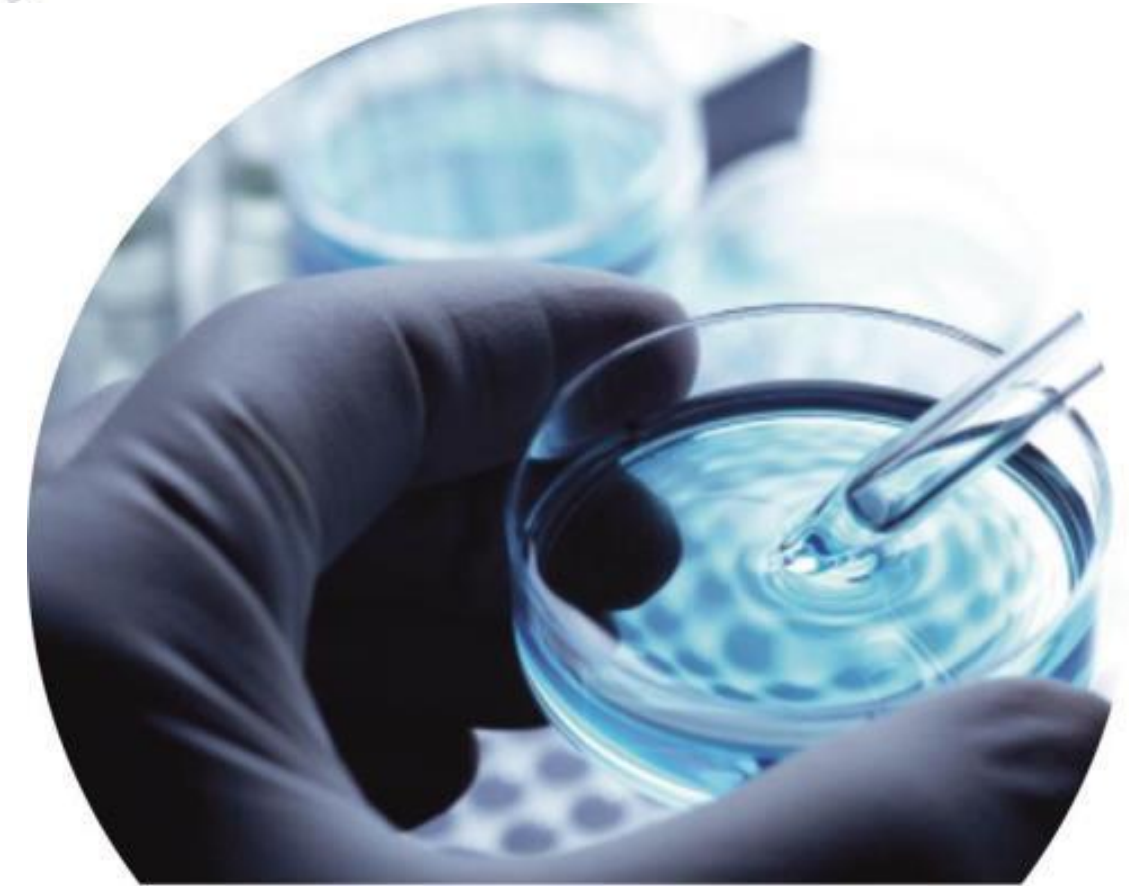
The Smart System Division (BAY-SMART)

- The Bay Zoltan Nonprofit Ltd for Applied Research is a leading applied research institution of Hungary, with its Division for SMART Systems (BAY-SMART) operating in the Hungarian cities of Budapest and Miskolc.
- The Division for SMART Systems (BAY-SMART) is active in the following fields of R&D and engineering services related to intelligent systems:
 - Health and Well-Being
 - AAL technologies
 - e-Health, m-Health, Smart Health
 - Telemedicine
 - Efficient Energy Use and Production
 - Building energetics expertize
 - Energy consumption monitoring and decision support expertise
 - Complex renewable based systems



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- Health and Well-Being
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The Smart System Division (BAY-SMART)

- Intelligent Systems
 - Smart City
 - Sensor-based transportation system development
 - Electronic payment solutions
 - Public transport development
- Electrically driven systems
 - e-Bike
 - e-Car
 - e-Fly
- Sensor Development
 - Development of biotechnology research supporting lab and onsite measurement systems



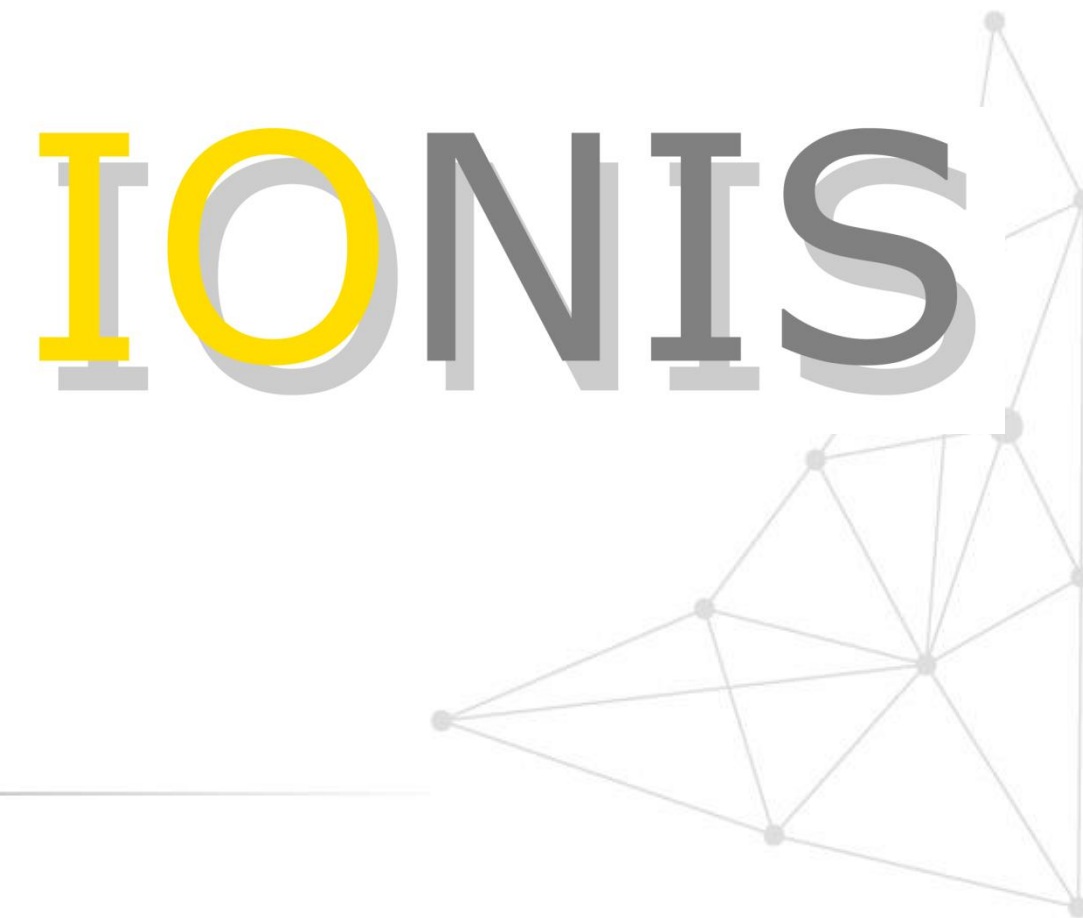
H2020 and AAL Partners of BZN



AAL IONIS - Indoor and outdoor NITICSplus solution for dementia challenges - 2018-2020

Partners:

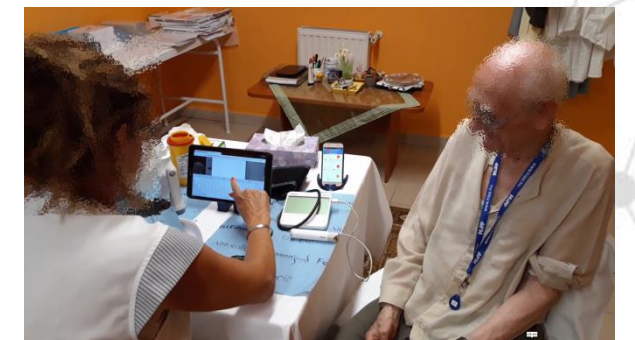
1. Coordinator: ECLEXYS Sagl (EXYS), SME, Switzerland
2. Centrul IT pentru Stiinta si Tehnologie (CITST), End-user/SME, Romania
3. University POLITEHNICA of Bucharest (UPB), University, Romania
4. IZRIIS Institute (IZRIIS), End-user, Slovenia
5. Alzheimer Slovenia - Spominčica (ASLO), End-user, Slovenia
6. Warsaw University of Technology (WUT), University, Poland
7. Department of Geriatrics Warsaw (DGW), End-user, Poland
8. Bay Zoltan Nonprofit Ltd. (BZN), R&D, Hungary
9. MESZEGYI (MSI), End-user, Hungary
10. Softic Ltd. (Softic), SME, Hungary



AAL IONIS - Indoor and outdoor NITICSplus solution for dementia challenges - 2018-2020

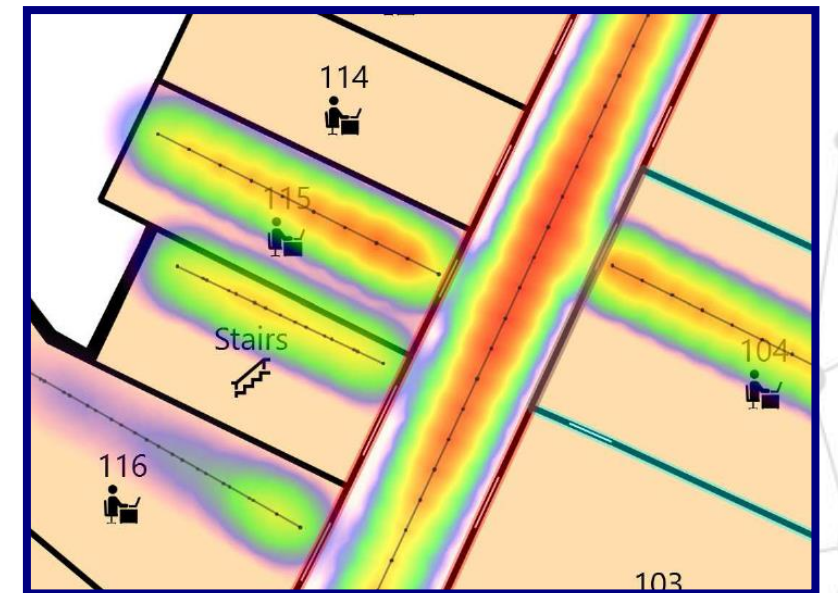
Strategic objectives of IONIS are:

- Exploit existing AAL solutions that are already in the consortium together with new technologies in building a modular platform that can compensate in an adaptive way for mild to moderate dementia associated deficiencies such as memory problems and cognitive decline.
- Support people with dementia to be more confident and feel more positive both indoor and outdoor.
- Avoid isolation and help people with dementia to sustain their optimal level of activity and mobility for as long as possible, as well as enhance their individual sense of confidence, autonomy, competence, security and safety.
- Reduce stress and burden for informal caregivers through timely alerts issued by the platform or triggered by users.



AAL IONIS - Indoor and outdoor NITICSplus solution for dementia challenges - 2018-2020

- Ensure communication and information between informal caregivers and professionals to help the former in their caregiving activities.
- Involve service providers (social services, insurance companies, rehabilitation centers, etc.) who can obtain valuable information regarding behavioral patterns and needs of people with dementia and their caregivers in order to improve the services they offer to this category of customers. This will support and/or enable improved services for the dementia sufferers.
- Ensure a 70-75% user satisfaction (for both primary and secondary users) from the users in the pilots.



Official web-site of the project: <http://ionis.eclexys.com>

Social media: www.facebook.com/ionissolution

... and the Elderly People





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THANK YOU
FOR YOUR ATTENTION!