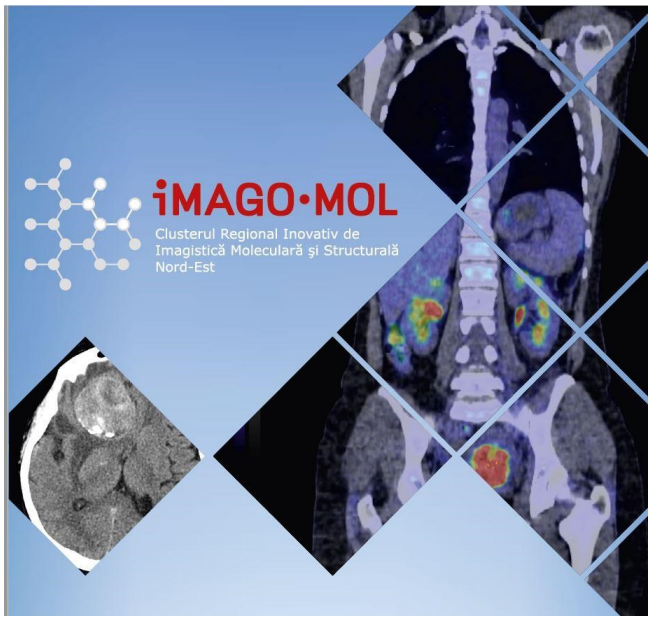


THE NORTH-EAST REGIONAL INNOVATIVE MOLECULAR AND STRUCTURAL IMAGING CLUSTER (IMAGO-MOL)

IMAGO-MOL CLUSTER'S DEVELOPMENT STRATEGY 2021-2027

SILVER Cluster Management Excellence
DEDICATED TO CLUSTER EXCELLENCE

Content

1. General Presentation

1.1. Brief description of the cluster (name, territory, predominant sector of activity)

The North-East Regional Innovative Molecular and Structural Imaging Cluster (IMAGO-MOL) is the first cluster created in Romania in the field of health, particularly important for the development prospects of this sector in the North-East Region. The technological information and communications sector is also essential in supporting the development of advanced imaging.

Medical imaging is a recent scientific specialty that brings together a wide variety of sciences in order to study how images of organs or tissues are formed, recorded, transmitted, analyzed, processed, perceived and stored, through different techniques, with the aim of being used to diagnose diseases.

Diagnostic imaging is considered by the WHO (World Health Organization) and the EHT (Department of Essential Health Technologies) as an essential health technology.

The IMAGO-MOL cluster is based in the University of Medicine and Pharmacy GR.T POPA Iași building, a founding member and an academic institution that has made a major contribution to national and international medical education and science.

Given the fact that the Municipality of Iași is the main university and medical center of the North-East Region, most of the founding members and associates are based in this locality.

In the context of the need for the unitary development of the health sector, the cluster's expansion process targets all the counties of the region, thus, until now, the IMAGO MOL Cluster has associated with high-tech SMEs members from the counties of Suceava, Botoșani and Neamț.

In addition, from the perspective of the geographical area covered and the degree of integration of the cluster in it, the IMAGO-MOL Cluster has 54 members who are concentrated in the North-East region, but also in the Bucharest-Ilfov, West and North-West regions.

From an institutional point of view, the Imago-Mol Cluster has 54 members who are concentrated in the North-East region, but also in the Bucharest-Ilfov, West and North-West regions (8 members). From an institutional point of view, the cluster includes 4 universities from Iași, 2 research and development institutes, 2 facilitators: the North-East Regional Development Agency which established a Regional Contact Point of the IMAGO-MOL Cluster and the Iași Scientific and Technological Park, 2 representatives of local public authorities: Iași County Council and Iași City Hall, 5 non-governmental associations, 7 public/private hospital units from Iași and Suceava, 32 SMEs and startups in the field of medical and IT services from almost all counties of the region, but also from the Bucharest-Ilfov, West and North-West regions.

1.2. Cluster History; actions taken and projects implemented; national and international partnerships; territorial relevance

The idea of establishing the cluster dates back to 2009, when the project "Advanced, interdisciplinary and integrated medical imaging through the creation of a Network of Regional Clusters and Development Strategies at the European level" (AMI 4 Europe) started, with a view to its financing by European Commission through Framework Program 7 – Regions of Knowledge. The project was declared the winner and started its implementation on October 1, 2010, with a duration of 37 months and a total budget of 2,649,565 Euros.

The project consortium was formed by the project coordinator, the Madrid Network Association from Spain and 20 partners from 6 countries, as follows: Madrid Platforma de la Salud y el Bienestar (Spain), Asociación Madrid Plataforma de la Biotecnologia (Spain), Pharmapolis Klaszter Kft. (Hungary), BIOMETI (Germany), University Tor Vergata (Italy) University of Medicine and Pharmacy GR.T POPA IASI (Romania), Medicinski fakultet Universita u Banjaluci (Bosnia and Herzegovina), Hospital Clinico San Carlos (Spain), County Emergency Hospital "SF. SPIRIDON" IASI (Romania), Zdravstvena instituta Opšta Bolnica Prijedor (Bosnia and Herzegovina), Filas (Italy), INNOVA ESZAK (Hungary), Agencija za Ekonomiski Razvoj Opstine Prijedor (Bosnia and Herzegovina), Xpertia Soluciones Integrales (Spain), Andango (Spain), Abadia (Spain), Advanced Computer System (Italy), Romsoft (Romania), Europrojekt Centar (Bosnia and Herzegovina), Investitions und Forderbank Niedersachsen (Germany year).

The objective of AMI-4Europe was to define and develop the concept of the "new generation" of integrated disciplines related to the field of Medical Imaging, such as nanomedicine, pharmacology, biotechnologies for health and ICT.

For political and strategic decision-makers, researchers, SMEs, as well as doctors who want to contribute to defining the new concept of Advanced Medical Imaging, AMI 4 Europe is the European project that brought together all the key actors in order to develop, coordinate and integrate the newly defined value chain related to advanced, interdisciplinary and integrated medical imaging at European level. Thus, AMI 4 Europe implemented **the first European Platform for Medical Imaging** to create the common framework to promote policies, technologies and research results in the targeted sector.

The most important activities of the AMI 4 Europe project were the following:

- Analysis of the value chain related to the medical imaging sector in Europe;
- Identification of scientific and non-scientific key actors, programs, initiatives, regional policies and strategies;
- Realization of regional competitiveness analysis, socio-economic analysis and SWOT in the field of Advanced Medical Imaging;
- Development of a Common Action Plan in the field of Advanced Medical Imaging at the European level;
- Running mentoring activities of the 2 newly created clusters in the North-East Region and in Bosnia and Herzegovina and their formal and legal establishment;
- Holding workshops and round tables in order to identify the future development of medical imaging;
- The organization of three European conferences that will guarantee the exchange of ideas and needs between researchers, political decision-makers and key actors and will conceptually promote "Advanced, interdisciplinary and integrated medical imaging";
- Carrying out international dissemination activities.

The benefits of the project were:

- The European platform for medical imaging to report information on the current state of:

- technological transfer between research and the economic environment;
- tools and technologies for health care systems;
- strategies and policies for the health of European citizens.

- Creation of two clusters in medical imaging in the North-East Region and in Bosnia Herzegovina.

In this context, the North East Regional Innovative Molecular and Structural Imaging Cluster (IMAGO-MOL) was established as a legal entity on September 7, 2012, in accordance with the provisions of Government

Ordinance no. 26/2000 regarding associations and foundations, having as members founders of the Northeast Regional Development Agency, University of Medicine and Pharmacy "Gr. T. Popa" Iasi, County Emergency Hospital "St. Spiridon" Iasi, Romsoft SRL Iasi (partners within the AMI 4 Europe project) and the Regional Institute of Oncology Iasi.

1.3. Implemented projects and actions taken

IMAGO-MOL is a non-governmental, non-profit, apolitical entity, the goal being to support the increase of the scientific competitiveness of the cluster members, as well as the competitiveness of the region in the targeted field, by developing a cooperation framework based on the diversification and optimization of the use of Medical Imaging in innovative way, a framework designed to improve the efficiency, quality, productivity and visibility of the medical imaging sector in the North-East Region.

The scientific objectives of the Northeast Regional Innovative Molecular and Structural Imaging Cluster (IMAGO-MOL) are:

- initiation and development of in vivo and in vitro medical studies, fundamental and applied. The studies follow physiological and pathological medical aspects through molecular, functional (eg scintigraphy) and structural imaging methods with adequate resolution (X-ray CT, MRI, ultrasound, etc.).
- development of a competitive molecular and structural medical imaging platform in the context of national and international imaging.

The expansion of the supplier chain through the accession of small and medium-sized enterprises active in the field of health and IT continued in the period 2013-2021 with the accession of members: **Clinica de Diagnostic Phoenix SRL, Centrul Medical Micromedica SRL Piatra Neamţ, SC Scan Expert SRL, SC Optim Diagnostic SRL Botoşani, Tissuegnostics Romania SRL Iasi, SC Cromatec SRL, SC Medimagis SRL Iasi, SC Coramed SRL Suceava, SC Shopfit Online SRL Iasi, Clinica Sf. Lucia Bucharest, SC Acces Investments SRL, SC Pixel Data SRL Cluj-Napoca, SC Center of Euroclinic Oncology (Victoria Hospital), SC Intelelectro SRL, Atelierul de Idei – TrainIC, Sincromed (ITR SINCRO SRL), Strongbytes SRL, Xvision (Mindfullytech SRL), Gamagim SRL, Thinslices Development, SenticLab SRL, Ed Implantologie SRL, DUK-TECH SRL , Cebis International SRL, Synaptiq Technologies Srl, LUX-RO S.R.L, Virtuality Expert SRL, Skyer Medical Imaging SRL, Arkona Holding SRL, CGM Software, Kinetoexpress SRL.**

In order to fulfill its duties, the North-East Regional Innovative Molecular and Structural Imaging Cluster (IMAGO-MOL) collaborates with the central and local public administration authorities of the North-East Region, institutions, bodies, commercial companies, research institutes, universities and other persons legal and physical entities from the country and abroad interested in the development of medical imaging.

From its establishment until now, we recall the following actions implemented by the North-East Regional Innovative Molecular and Structural Imaging Cluster (IMAGO-MOL):

- The IMAGO-MOL conference was organized in Iasi, between October 29-31, 2012 and was attended by partners and representatives of similar clusters from Spain, Italy, Germany, Bosnia-Herzegovina, officials of Iasi county, representatives of the medical and university world from North-East Region; they presented both examples and experiences of good practice in the medical imaging sector as well as the region's vision on the priorities and further development of the IMAGO-MOL cluster.
- National Pain Congress 2013, Iasi, Hotel Traian, between May 30 and June 1, 2013, national interdisciplinary event addressed equally to doctors and pharmacists. The theme of the Congress was Visceral Pain, 2013 being declared the year of the fight against visceral pain by the International Association for the Study of Pain (IASP). More than 200 participants were present at the event, along with famous personalities from Romanian and international medicine and pharmacology,

which gave the congress both exceptional informational value and a significant application component. The Congress thus aims to improve the management and therapy of pain in Romanian patients through an efficient and interdisciplinary collaboration in current medical practice. The congress papers were published in full in the Medico-Chirurgicala Journal (indexed BDI), in a dedicated supplement.Simpozionul National IMAGO-MOL – Imagistica biomedicala in Regiunea de Nord-Est: Trecut, Prezent si Viitor. Clusterul IMAGO MOL si-a propus ca discutiile, schimburile de idei ocazionate de acest simpozion sa se concretizeze intr-un plan de actiune si colaborare pentru etapa urmatoare, pentru o mai buna constientizare, cunoastere si valorificare a sectorului de Imagistica Medicala Avansata. La eveniment au participat personalitati ale vietii medicale, reprezentanti ai autoritatilor locale si nationale din domeniul medical si din alte domenii interesate de colaborare, precum si reprezentanti ai mass-media

- Promotion of the IMAGO MOL Cluster within the OPEN DAYS European event, held in Brussels, between October 7-10, 2013
- Writing and submitting the first project of the IMAGO-MOL Cluster within the Sectoral Operational Program "Increasing Economic Competitiveness", October 2013
- The IMAGO-MOL cluster designated as the most innovative cluster in Romania according to the Competitiveness Analysis of Clusters in Romania - ClusteRO, 2013
- Launching conference of the POS CCE project of the IMAGO-MOL Cluster, June 11, 2014, Iasi
- The IMAGO-MOL cluster, partner in organizing the International Summer School in Medical Imaging, August 4, 2014, Iasi
- The IMAGO-MOL cluster became a member of the Association of Clusters from Romania CLUSTERO, 2014
- Horizon 2020 Project Generation Seminar, November 21, 2014, Piatra-Neamţ
- Public Award for Innovation at the Medica Gala organized by the Romanian College of Physicians, 2014
- Horizon 2020 Project Generation Seminar, March 3, 2015, Iasi
- Cluster Management Course, March 4 – 7, 2015, Piatra-Neamţ
- Technological audits of IMAGO-MOL member SMEs, March 30 – April 3, 2015
- Participation in the Zone ITC Fair, March 18 – 20, 2015, Utrecht, the Netherlands
- Promotion of the IMAGO-MOL Cluster at the Romania-Belgium Economic Mission, May 6-8, 2015, Brussels
- Awarding of the "Promising Young Scientist in Nuclear Medicine" prize during the "Nuclear Medicine Days" 2016 - 2017
- Obtaining ESCA recertification - bronze medal - 2016
- Launching conference of the CEX-IMAG project and the establishment of the Working Group for the Strategic CDI Agenda of the IMAGO-MOL Cluster, July 4, 2018, Iasi
- Session of the Working Group for the CDI Strategic Agenda of the IMAGO-MOL Cluster, September 27, 2018, Iasi
- Session of the Working Group for the CDI Strategic Agenda of the IMAGO-MOL Cluster, November 1, 2018, Iasi
- Cluster 2 Cluster mentoring event, Debrecen, Hungary, Pharmapolis Cluster, November 22, 2018, Iasi
- Session of the Working Group for the CDI Strategic Agenda of the IMAGO-MOL Cluster, December 12, 2018, Iasi
- Project generation seminar, December 12-13, 2018, Iasi
- USMED System Event – teleradiology solution in the North-East Region, April 10, 2019, Iasi
- Entrepreneurship workshop in the medical field, February 22, 2019, Iasi

- Co-organizer Bridging Romanian Healthcare Clusters – Healthcare Brokerage Event, 2nd Edition, April 18, 2019, Iasi
- Session of the Working Group for the CDI Strategic Agenda of the IMAGO-MOL Cluster, May 22, 2019, Iasi
- Participation in the European Conference of Clusters, Bucharest, May 14-16, 2019
- Webinar - event presenting the sources of financing available in the field of nuclear medicine, June 9, 2019
- Organization of "Healthcare innovation and entrepreneurship workshop", together with RubikHub and Freshbloood, Iasi, July 11, 2019
- Project generation session, September 26, 2019, Iasi
- "Assistant applications for recognizing the early signs of stroke" workshop, October 28, 2019
- Visit of the ESCA delegation in order to obtain the Silver certification, October 29, 2019
- World Stroke Day - Symposium "Diagnosis and interdisciplinary management of patients with acute stroke", October 29, 2019, UMF Iasi
- Outward mentoring session (C2C mission), 20 – 22 November 2019, Lyon, Cluster Canceropole Rhone Alpes
- Session of the Working Group for the CDI Strategic Agenda of the IMAGO-MOL Cluster, December 12, 2019
- Matchmaking event, "Let's join our scientific forces", event to identify common research topics for bachelor's/dissertation works, with applicability in medicine, December 13, 2019
- Participation in the REVERT project kick-off meeting, Rome, Italy, January 30 - 31, 2020
- Organization of Hack4Life, Be a Stroke hero, hackathon dedicated to the development of an application for rapid recognition of stroke (stroke) and an alerting program, stroke registration to emergency units in the region, February 15, 2020
- organization of solidarity campaign "Together to protect medical personnel in the fight against COVID-19!", March 2020
- ambassador nomination within the Digi-B-Cube project, financed by the Horizon 2020 program, |INNOSUP, the coordinator of the consortium being the Oslo Cancer Cluster.
- involvement and active participation in the activities supported by the European Commission through the European Cluster Alliance within the Connect, Save, Solve campaign, launched in the context of the COVID-19 pandemic.
- Organization and support of the scientific conference "Artificial intelligence: applications and implications for the benefit of personalized medicine", August 19, 2020.Organizarea workshopului “Scrierea unei propuneri de finantare”, 19 noiembrie 2020.
- Organization of the workshop "Writing a scientific project proposal (non-refundable funding)", March 3, 2021.
- Organization of the workshop "Writing a scientific project proposal (non-refundable funding)", March 3, 2021.
- The IMAGO MOL cluster, an example of good practice at the European level in the Euronews report on the Business Planet show, March 12, 2021.
- Presentation support during the Summer School within the BrainTwin project at TUIASI, July 29, 2021.
- Presentation support in the workshop "Improving private/public collaboration in uptake of innovation in AHA", organized by the Slovenian Innovation Hub, September 9, 2021
- The IMAGO-MOL cluster participated in the meeting of the Vanguard Initiative, organized on October 20, 2021 and presented the TRACE-MED project, selected as a "demo case" within the Smart Health pilot project.

- The IMAGO-MOL cluster participated in the second edition of the Hellenic Biocluster Forum - "The life sciences innovation landscape in Greece. Shaping a dynamic vision for the industry", which took place between November 4 and 5 in a hybrid format, and presented the MEDIC-NEST project.
- The internationalization actions of the IMAGO-MOL Cluster were highlighted during the annual IURC (International Urban and Regional Cooperation) event, which took place on November 23, 2021.
- The IMAGO-MOL cluster was invited to present the organization's success story at the PHARMAPOLIS TEN13 International Conference, an event organized in a hybrid format between November 22-24, 2021, by the PHARMAPOLIS Cluster from Hungary and the Hajdú-Bihar Chamber of Commerce.

1.4. Relationships and bonds of the IMAGO-MOL Cluster

From the point of view of membership and involvement in organizations, networks and relevant partnerships from the country and abroad, the IMAGO-MOL Cluster:

- is a member of the Association of Clusters in Romania, CLUSTERO;
- is a member of the Consortium of clusters from the North-East Region;
- was selected to be part of the partnership structures established for the elaboration of the Operational Programs 2021-2027 respectively, OP Health, OP Smart Growth and Digitalization, OP Regional;
- is actively involved in the consultation and review process of RIS3Nord-Est, the Strategy for I ntelligent Specialisation;
- is registered on the European platform of clusters, European Cluster Collaboration Platform, in order to benefit from specific networking tools (identification of potential partners and opportunities), the development of transnational cooperation projects inside and outside Europe, the development of new chains of value and accessing up-to-date information relevant to the development of clusters;
- actively participates in the Thematic Partnership for Personalized Medicine within the European Platform for Industrial Modernization S3P4PM;
- actively participates in the Smart Health pilot of the Vanguard Initiative, the TRACE MED project being selected as a demo case.

1.5. The cluster's international level of presence, both in terms of the market and the already established international collaborations

The collaborations that the IMAGO-MOL Cluster has established with international partners through the consortia established for the development of various projects or for the realization of experience exchanges, determine the geographical area of the market on which the cluster acts, in accordance with its specificity as an innovation cluster, oriented towards research development innovation activities in the field of health.

Imago-Mol benefits from a European visibility since its establishment in 2012 within the **AMI4Europe** project, financed by the European Commission through the 7th Framework Program – Regions of Knowledge. The project consortium was formed by the project coordinator, the Madrid Network Association from Spain and 20 partners from 6 countries: Spain, Germany, Hungary, Italy, Bosnia and Herzegovina and Romania, Madrid Plataforma de la Salud y el Bienestar (Spain), Asociación Madrid Plataforma de la Biotecnologia (Spain), Pharmapolis Klaszter Kft. (Hungary), BIOMETI (Germany), University Tor Vergata (Italy) University of Medicine and Pharmacy GR.T POPA IASI (Romania), Medicinski fakultet Universitat u Banjaluci (Bosnia and Herzegovina), Hospital Clinico San Carlos (Spain), County Emergency

Hospital "SF. SPIRIDON" IASI (Romania), Opšta Bolnica Prijedor (Bosnia and Herzegovina), Filas (Italy), INNOVA ESZAK (Hungary), Agencija za Ekonomiski Razvoj Opstine Prijedor (Bosnia and Herzegovina), Xpertia Soluciones Integrales (Spain), Andango (Spain), Abadia (Spain), Advanced Computer System (Italy), Romsoft (Romania), Europrojekt Centar (Bosnia and Herzegovina na), Investitions und Forderbank Niedersachsen (Germany).

The IMAGO-MOL cluster implements the project **The targeted therapy for adVanced colorEctal cancer patients (REVERT)**, within the Horizon 2020 program topic "Systems approaches for the discovery of combinatorial therapies for complex disorders", call code SC1-BHC-02-2019, in partnership with 14 partners from Italy, Spain, Sweden, Germany, Luxembourg and Romania, being coordinated by San Raffaele Roma SRL, partners being: Azienda Ulss 4 Veneto Orientale (Italy), Malmo University (Sweden), Genxpro Gmbh (Germany), Federal Institute For Materials Research And Testing (Germany), Umea University (Sweden), Biovariance Gmbh (Sweden), Fundacion Universitaria San Antonio (Spain), Instituto Murciano De Investigaciones Biosanitarias – Hospital Universitario Santa Lucia (Es), Luxembourg Institute Of Health, Olomedia Srl (Italy), University Of Rome Tor Vergata (Italy).

The IMAGO-MOL cluster is the coordinator of the **Precision MEDICine Clusters integrating Digital Technologies for New EcoSystems in HealThcare (MEDIC-NEST)** project, financed by the European Cluster Excellence Program COS-CLUSTER-2020-3-03, for which the activities started on February 1, 2022. The partner clusters are: Medvia from Belgium, Hellenic Biocluster from Greece and Biotecyl (Cluster De Salud De Castilla Y Leon) from Spain. The overall objective of the MEDIC-NEST project is to strengthen the excellence of cluster management and to facilitate strategic partnerships, as well as exchanges between clusters and ecosystems specializing in precision medicine in Europe.

The IMAGO-MOL cluster coordinates **the "Inter-regional platform for new radiotracers development in personalized medicine (TRACE-MED)"** project, facilitated by the North-East Regional Development Agency and beneficiary of the consultancy within the Technical Assistance Facility (TAF), an instrument of The European platform for intelligent specialization (S3P-Industry). The project trains the members of the "Grigore T. Popa" UMF cluster in Iasi, the "Sf Spiridon" Emergency County Clinical Hospital in Iasi, the "Petru Poni" Institute of Macromolecular Chemistry, as well as national collaborators , respectively the National Institute for Physics and Nuclear Engineering "Horia Hulubei". To these are added partners from the European Platform for Intelligent Specialization in the field of Personalized Medicine (S3P4PM): Clust-ER Industrie della Salute e del Benessere from the Emilia Romagna region with its member Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori, Slovenian Innovation Hub together with University Clinical Center Ljubljana and Josef Stefan Institute from Ljubljana. The National Center For Nuclear Research, Polatom, Radioisotope Center in Poland is also part of the S3 P4PM consortium.

IMAGO-MOL Cluster is partner in project **SECURE(Strengthening the European Chain of sUpply for next generation medical RadionuclidEs)**, a HORIZON EURATOM funded project. The project consortium includes 18 partners from Poland, Italy, France, Belgium, the Netherlands, Hungary, Slovenia, the Czech Republic, Romania and the UK, being coordinated by the National Center for Nuclear Research in Poland. The SECURE project aims to make a major contribution to the sustainability of medical isotope production and its safe application in Europe. It is focusing on promising developments in the design of irradiation targets, and production routes for existing and new isotopes in nuclear therapy and diagnostics.

At the Cluster2Cluster cooperation level, IMAGO-MOL collaborates with Canceropole Lyon Auvergne Rhône-Alpes, CLARA (France), the Pharmapolis Cluster from Hungary, BioLAGO e.V. the health network (Germany), Hellenic BioCluster (HBio) (Greece), Medvia (Belgium), OuluHealth (Finland), Secpho (Spain), RTD Cluster (Bosnia-Herzegovina), bioPmed / Bioindustry Park (Italy), Health City Medellin (Colombia).

Cooperation in collaboration protocols was formalized with some of them, namely Cancerople Rhone Alpes,

Pharmapolis Cluster from Hungary, Medellin City Health Cluster, Federación Española de Empresas de Tecnología Sanitaria (FENIN) from Spain).

Also, IMAGO-MOL was an ambassador within the Digi-B-Cube project, financed by the INNOSUP program and collaborates with OSLO Cancer Institute and Secpho Cluster from Spain.

The member companies of the IMAGO-MOL Cluster that export services/products are present on the following international markets: Western Europe, especially Austria, Germany and France, respectively North America.

1.6. Cluster Management (The cluster management entity) – the methods of establishment, the services offered to members, the management structure & the specific commitments undertaken by members

The Management Entity of the **North-East Regional Innovative Molecular and Structural Imaging Cluster (IMAGO-MOL)** has in its composition all the founding and associated members, according to the decision of the General Assembly of October 15, 2013.

The organizational structure and governing bodies of the association are:

- The General Assembly of the Cluster;
- Board of Directors;
- The censor.

The General Assembly of the Cluster is the supreme governing body, made up of all the founding and associated members. The members of the association will appoint their representatives in the General Assembly. The General Assembly can function if the majority of the members of the association are present and take decisions by the vote of the simple majority of the members.
The duties of the Cluster General Assembly refer to:

- Approval of the strategy and general objectives of the Cluster;
- Approval of the annual income and expenditure budget and the annual financial statements;
- Approval of the Organization and Functioning Regulation;
- Modification of the constitutive act, the statute and the Organization and Functioning Regulation;
- Change of headquarters;
- Approval of the annual activity program;
- Election and revocation of the members of the Board of Directors;
- Mandate of the Board of Directors in the representation and administration of the association;
- Election and revocation of the Censor;
- Confirming new members as well as excluding some members from the cluster;
- Approve the establishment of work points, branches, affiliation to other organizations, the establishment of federations together with other associations and other similar organizations; approves cooperation and association with other organizations in the country and abroad.
- Approve the organizational chart, salary scale and human resources policy of the Cluster;
- Dissolution and liquidation of the association, as well as determining the destination of the remaining assets after liquidation;

The Board of Directors ensures the implementation of the decisions of the General Assembly of the Cluster and is composed of: President, members and secretary.
In exercising its powers, the Board of Directors:

- Carry out the decisions of the General Assembly
- Coordinates and leads the current activity of the cluster to achieve the proposed goal
- Administers the movable and immovable assets and funds of the association
- Present to the General Assembly the activity report for the previous period, the execution of the income and expenditure budget, the accounting balance sheet, the draft income and expenditure budget and the project of activities for the following period,
- Concludes legal documents in the name and on behalf of the association;
- Make proposals regarding the admission or exclusion of members;
- Proposes the organizational chart, salary scale and personnel policy of the association and submits them to the approval of the General Assembly;
- Can decide on the formation of an operational technical apparatus in order to carry out the current activities of the cluster;
- Represents the association in relation to third parties;
- Performs any other duties stipulated in the Statute or established by the General Assembly of the association.

The **services** offered by the IMAGO MOL Cluster are the following:

- Development of a competitive molecular and structural medical imaging platform in the context of national and international imaging, according to the scientific objectives of the cluster
- Development of a provider platform in the field of medical imaging in the North-East Region
- Initiating projects of interest to cluster members
- Identification of sources of non-reimbursable financing that could be accessed by the cluster and its members
- Development of projects for obtaining funds with non-reimbursable financing
- Increasing the visibility of the cluster and the services offered by the associated members, both nationally and internationally
- Supporting the creation of work teams in research and development on different fields of interest for the members of the association and strengthening the transfer system of the basic research results to the members of the cluster
- Representation of cluster members at domestic and international level
- The conclusion of partnerships in common areas of work with other clusters in the country and abroad with the same or related fields of activity, for the realization of a transfer of expertise, the development of joint projects
- Facilitating the participation of members associated in the cluster at local, regional, national and international fairs and exhibitions
- Organization of continuous training programs for the staff of the cluster's member organizations, as well as for other interested target groups
- Ensuring support services for a technological transfer of research results
- Information actions for research-development in the field of medical imaging and technological transfer (case studies, newsletter, articles in important magazines in the field, web pages, infodesk, organization of advisory events and dissemination of scientific results)
- Lobbying actions in the field of health and IT at the level of local, county and national public institutions

1.7. Introduction of the members

FACILITATORS

The Northeast Regional Development Agency is a non-profit, non-governmental, public utility organization that was established in 1999 by Law 151/1998 on regional development in Romania, with subsequent amendments.

ADR Nord-Est offers, at the regional level, free services in the following areas:

Management of the Regional Operational Program:

● Organization of information campaigns for ROP through regional conferences, seminars, workshops
● Providing guidance and counseling to potential beneficiaries and beneficiaries of POR financing
● Receiving and registering funding requests, analyzing the administrative compliance and eligibility of funding requests
● Organization of technical and financial evaluation sessions, with the support of independent evaluators
● Informing the beneficiaries about all their obligations after signing the financing contracts
● Conducting field visits to verify projects and conclude financing contracts with beneficiaries
● Monitoring the implementation of approved projects and receiving payment requests from beneficiaries and checking the accuracy and correctness of the expenses incurred

Regional Planning and Programming:

● Elaboration/update of the North-East Regional Development Plan and other regional planning and programming documents
● Regional planning and programming for the period 2021-2027
● Supporting local public authorities in the North-East Region in order to develop relevant, mature and impactful projects
● Coordination of the regional partnership on specific topics

External Cooperation:

● Selection of interested regional partners and preparation of documentation in order to request funding through international projects/programs to meet the identified needs
● Providing information to potential external investors
● Establishing and developing cooperative relations with external partners
● Participation in the activities of the coordination structure for the Joint Operational Program Romania-Ukraine-Republic of Moldova

Regional Promotion:

● Representation of the North-East Region through the Brussels North-East ADR Office and its promotion as an animator of economic development, as a promoter of innovation and sustainable development
● Promotion of organizations from the North-East Region in the national and international economic environment through inclusion in databases, web pages, brochures, newsletters and representation at fairs and exhibitions
● Facilitating participation in information and training activities offered by national and international partner organizations of the North-East ADR
● Organization of economic missions, seminars, conferences and information days, at the request of partners

The North-East Regional Study Center (CRS).

● Carrying out professional training activities by providing ANC certified courses and specialized training in the field of regional development
● Providing an integrated executive management program

Business Development

● Development of priority economic sectors
● Development of the entrepreneurial ecosystem that will lead to an increase in the number of innovative and competitive startups
● Attracting private investments that support the development of the region

● Expanding the operations of local companies at the international level and increasing the degree of competitiveness and innovation

The Scientific and Technological Park "TEHNOPOLIS" Iași was established for the purpose of using the results of research activity, applying advanced technologies in the economy and increasing the participation of higher education institutions in the process of economic-social development through science and technology. The priority areas of development of the Scientific and Technological Park "TEHNOPOLIS" Iași are: - Information Technology - Audio-visual - Biotechnologies - Food industry.

The park offers two buildings, NUCLEUS with a total built space of over 9,000 m.p. and DUPLEX with a total built space of 1,200 m.p.

Also, the Park offers 6 plots of land with sizes varying between 3,900 - 4,800 m.p., with all utilities brought to the plot.

Facilities:

Desks with different surfaces

• Production
• Constructions on plots of land that are exempt from paying taxes
• Conferences and exhibitions
• Business incubation for start-up companies, thus supporting entrepreneurial initiatives
• Research and development: environmental assessment laboratories, cryogenics, biotechnologies
• Business consulting: legal, financial, accessing European funds, finding new partners
• Interior space for receiving customers

Basic services:

• consultancy and legal, managerial, specialized technical assistance
• finding partners for projects
• investment banking
• brokerage (securities, inventions and innovations
•quality management
•environment protection
•intelectual property
• standardizations
• entrepreneurial training
• European information center
•business incubator
• advocacy center

UNIVERSITIES

The "Grigore T. Popa" University of Medicine and Pharmacy in Iași is a public institution of state higher medical education, with legal personality, non-profit, public interest, apolitical.

The university has the following objectives:

● the training of highly trained specialists, performing in relation to the national and international level;

● the continuous updating and improvement of the training of specialists, through various forms of postgraduate education;

● quality management of initial and continuous training educational services offered by the university;

● optimization of fundamental and applied scientific research activities, for raising the quality level, increasing competitiveness and affirming the performances of the Iași medical school and for the continuous improvement of medical assistance;
● promotion of international cooperation relations, integration into the European medical education system, by achieving structure, quality and efficiency standards;
● promoting deontology and bioethics, defending the values of democracy, respecting the fundamental rights and freedoms of the individual in the rule of law;
● ensuring the appropriate material base for all these activities, as well as adequate working conditions for all members of the academic community.

EDUCATIONAL OFFER

● degree programs on the following specializations:
✔ Health field
✔ Field of Applied Engineering Sciences
● accredited master's programs
✔ Medicine field
✔ The field of Dental Medicine
✔ Field of applied engineering sciences
● PhD programs
● Residency programs

RESEARCH CENTERS

Advanced Research Center - Development in Experimental Medicine - CEMEX
Methodological Center for Medical Research and Evidence-Based Medicine
Renal, Cardiovascular and Geriatric Pathology Research Unit
Simulation and Training Center in Surgery
Center for Training and Research in Tissue Engineering and Regenerative Medicine
Oncogenetics Platform
Interdisciplinary Molecular Medicine Platform
Research and Development Center for Medical Devices -
DentSim and Robodent Simulation Center
Regional Center for Diagnosis, Counseling and Monitoring of Children with Obesity (CRDCMCO) -
Biomedical Research Center and CHRONEX-RD Foundation -
Research Center in Bioengineering and Medical Biotechnologies -
Laboratory of Ceramic and Metal Biomaterials
Physics and Biophysics Research and Education Laboratory (P&B-EduResLab)
Research Unit for Medicinal Chemistry, Food and Environmental Chemistry -
Pharmaceutical Sciences Research Unit

"Alexandru Ioan Cuza" University in Iasi is the oldest higher education institution in Romania continuing, since 1860, a tradition of excellence and innovation in education and research. With over 24,000 students and over 700 teaching staff, the university enjoys an important national and international prestige, having collaborations with over 500 universities from abroad.

Educational offer:
Bachelor's, master's, doctorate, postdoctoral studies with the following specializations: Faculty of Biology, Faculty of Chemistry, Faculty of Law, Faculty of Economics and Business Administration, Faculty of Physical Education and Sports, Faculty of Philosophy and Social - Political Sciences, Faculty of Physics, Faculty of Geography and Geology, Faculty of Informatics, Faculty of History, Faculty of Letters, Faculty of Mathematics, Faculty of Psychology and Educational Sciences, Faculty of Orthodox Theology, Faculty of Roman-Catholic Theology

Research structures:
• Department of Interdisciplinary Research - Science -
• Center for studies in environmental science for the North-East development region CERNESIM
• RAMTECH Center (Research Center on Advanced Materials and Technologies)
• ARHEOINVEST Center
• MOLECULAR BIOPHYSICS AND MEDICAL PHYSICS research group, MATHEMATICAL MODELS IN BIOLOGY
• CELLULAR AND MOLECULAR BIOLOGY research group
• Interdisciplinary Socio-Human Department

"Gheorghe Asachi" Technical University from Iasi is an advanced research and education university. Its mission is to carry out specific activities for the creation, innovative valorization of knowledge and its transfer to society in the fundamental fields - Engineering Sciences, Architecture and Urbanism -, as well as in interdisciplinary and complementary fields, in the local community, at the regional, national and national levels. international.

Educational offer

Bachelor's, master's, doctorate, postdoctorate university studies in the following faculties:
● Architecture "G.M. Cantacuzino"
● Automation and Computers
● Chemical Engineering and Environmental Protection "Cristofor Simionescu"
● Constructions and Installations
● Machine Construction and Industrial Management
● Electronics, Telecommunications and Information Technology
● Hydrotechnics, Geodesy and Environmental Engineering
● Electrical, Energy and Applied Informatics Engineering
● Mechanics
● Materials Science and Engineering
● Industrial Design and Business Management

Research structures:
● The research center in architecture and urban planning
● Research centers within the Faculty of Automation and Computers
o Systems Engineering and Information Technology
o Smart equipment and software
o Automation and Technical Informatics
o Cloud technologies, Big Data applications and the Internet of Things
● POLYTECH Research and Technological Transfer Center
● Research centers within the Faculty of Construction and Installations
● Research centers within the Faculty of Electronics, Telecommunications and Information Technology
o CERFS – Research center in intelligent systems and applied electronics
o PRODATA – Research center for signal processing and communications
o MODSIMNANO – Research center for modeling and simulation in nanoelectronics
● Research centers within the Faculty of Electrical, Energy and Applied Informatics Engineering:
o ENERGY
o Metrology, Measurement Systems and Innovative Materials research center – METROS
o Energy conversion systems and motion control research center -
● Research centers Faculty of Mechanics

o Road Safety Research Center
o Mechanical and Mechatronics Engineering Research Center

The University of Life Sciences "Ion Ionescu de la Brad" is an institution specialized in agronomic and veterinary medical higher education, with scope at national and European level, having as its fundamental mission the training of engineers specialized in agronomy, horticulture, agricultural biotechnologies, engineering and management in agriculture and rural development, food engineering, environmental engineering, animal husbandry, bachelors in biology and veterinary doctors**.**

The academic offer is defined by accredited faculties, fields of study with professional impact both in Romania and abroad, quality in education, performance in scientific research, European mobility, successful careers, ultra-modern study facilities and conditions.

USV Iasi offers the following specializations within the four faculties:

● Faculty of Agriculture

Specializations: Agriculture, Mountainology, Exploitation of machines and installations for agriculture and the food industry, Engineering and management of agricultural businesses, Technology of processing agricultural products, Consumer and environmental protection, Biology;

● Faculty of Horticulture

Specializations: Horticulture, Landscaping, Environmental Engineering, Agricultural Biotechnologies;

● Faculty of Animal Science

Specializations: Animal husbandry, Fish farming and aquaculture, Engineering and management in public food and agritourism, Control and expertise of food products;

● Faculty of Veterinary Medicine

Specialization: Veterinary Medicine, Veterinary Medicine (English).

Research structures:

● Agronomic Research Center
● Horticultural Research Center
● Animal Research Center
● Veterinary Medical Research Center
● Iasi Oenology Laboratory
● Chemical analysis laboratory for plants and soil (AGROLAB)
● The feed quality control laboratory
● The laboratory for the expertise, certification and control of genetically modified organisms and obtained agro-food products (LECOM)
● Research Institute for Agriculture and Environment
● Laboratory for quality control of meat and meat products (Rediu Farm)
● Laboratory for quality control of milk and milk products (Rediu Farm)

MEDICAL ESTABLISHMENT

Emergency County Hospital "St. Spiridon" Iasi is the largest hospital in Moldova, over 250 years old, which is both a medical care, education and research facility.

The hospital has the following structure: 20 clinical wards, the emergency reception unit, the Specialty Outpatient Clinic, the Pediatric Dentistry Outpatient Clinic, the Adult Dentistry Outpatient Clinic.

MEDICAL SERVICES OFFERED:

● continuous hospitalization with the specialties: cardiology, vascular surgery, general surgery, oral and maxillofacial surgery, plastic surgery and reconstructive microsurgery, orthopedics-traumatology,

internal medicine, dermatovenerology, diabetes, nutrition and metabolic diseases, endocrinology, immunology and allergology, hematology, anesthesia and intensive care, gastroenterology, ENT, ophthalmology, day hospitalization, clinical medical services
- paraclinical medical services
- laboratory analyses
- radiology-medical imaging
- recovery-rehabilitation services
- radiotherapy services

Clinical medical services in the ambulatory integrated with the specialties: internal medicine, cardiology, gastroenterology, general surgery, orthopedics and traumatology, plastic surgery and reconstructive microsurgery, vascular surgery, thoracic surgery, neurosurgery, pulmonology, obstetrics-gynecology, pediatrics, neurology, psychiatry, psychiatry pediatrics, dermatovenerology, ENT, ophthalmology, endocrinology, rheumatology, oral and maxillofacial surgery, geriatrics and gerontology
Urology, hematology, immunology and allergology, occupational medicine, radiotherapy laboratory, functional exploration laboratory, audiology department.

The Iași Regional Oncology Institute, a 300-bed health facility, was established by Government Decision no. 583/13.03.2009 and has been in effect since March 25, 2012.

The spaces of this unit are part of the functional requirements of a healthcare unit with an oncology profile, according to the legal regulations in force, so as to offer the population of all counties of Moldova what is necessary: efficiency, increasing the quality of the medical act, increasing accessibility to complete services and achieving an integrated, multidisciplinary medical system of specialties for all neoplastic locations.
The organizational structure of the Regional Oncology Institute includes:
Clinical departments, of which:
- Department of Surgery I
  - Gynecology-oncology department
  - Department of urology
- Department of Surgery II
  - Department of plastic surgery, microsurgery and reconstructive surgery
  - Department of thoracic surgery
- Medical oncology department
  - Department of Pneumology
- Hematology section
  - Hematopoietic Stem Cell Transplantation Department
- Radiotherapy department
- Palliative care department
- A.T.I. Department, with Blood Transfusion Unit
- Day hospitalization
- Outpatient clinic integrated with offices in the specialties: medical oncology, general surgery, gynecology (gynecological-oncology), plastic surgery, hematology, internal medicine, cardiology. gastroenterology, ENT, psychology/psychotherapy, physical therapy room.
- **Center for Fundamental Research and Experimental Development in Translational Medicine - TRANSCEND**

"Prof. Dr. Nicolae Oblu" Iasi Clinical Emergency Hospital is a public health unit whose fame, due to a history of over 30 years, is confirmed and enriched by current performances.

The hospital provides the entire range of services belonging to the specialties: neurosurgery, neurology and ophthalmology, in the ambulatory system, day and inpatient admissions - for all categories of specific morbidities.

The hospital was founded on 11.11.1972 by Prof. Dr. Nicolae Oblu. The initial name of the institution was Clinical Hospital no. 3 Go out. Since August 2002, the name of the unit has been "Sf. Treime" Iasi Emergency Clinical Hospital. And since November 2007, the name of the hospital is "Prof. Dr. Nicolae Oblu" Emergency Clinical Hospital Iasi.

The hospital is a university clinic with the specialties of neurosurgery, neurology, ophthalmology, neuro-ophthalmology, anesthesia - intensive care, radiology - neuroimaging, functional explorations, medical analyses, pathological anatomy, as well as specialized teams of vascular neurosurgery, spinal neurosurgery and neuro-ophthalmology.

The Suceava County Hospital is the most representative health unit in the county and unique in the municipality of Suceava with a hotel capacity of 1279 beds, which represents 35% of the total beds in the county, providing specialized medical assistance in 23 wards with different medical profiles for a population around 250,000 inhabitants and over 30% of the county's territory.

The hospital medical services that health consumers benefit from are provided in 23 wards and 6 compartments, some of which have a unique medical profile in the county, namely the specialties: gastroenterology, urology, ophthalmology, medical oncology, etc.

The wards include 30 departments where assistance is provided in specific medical specialties, of which 9 departments are unique medical specialties in the county, respectively: endocrinology, hematology, neurosurgery, vascular surgery, plastic surgery, thoracic surgery, child neuropsychiatry, HIV/AIDS , maxillofacial surgery.

The provision of medical services is provided continuously, in this sense, 21 emergency lines are organized in 14 different medical specialties.

The technical platform of the hospital is provided by laboratories (functional explorations, pathological anatomy, radiology with computer tomography) as well as a central transfusion point, sterilization section, separate operating room, D.D.D. point, closed circuit pharmacy and oxygen distribution station.

The Medical Imaging department is equipped with state-of-the-art equipment: CT, digital Rx radiology equipment, distributed by the Ministry of Health.

On the first level of the hospital, a space of 116 square meters is rented, where a state-of-the-art, high-performance MRI machine is installed and put into operation.

The Emergency Reception Unit is functionally structured and equipped according to the regulations in force. It has a separate Radiological Imaging Department.

The organizational structure of the hospital has an A.T.I. section, with 40 beds, which has adequate equipment for current requirements, through the World Bank program.

IT departments are organized in the sections with potential major risk. in the specialties of diabetes, cardiology, obstetrics-gynecology, neonatology.

The Clinical Hospital of Pneumophthisiology is the most important territorial center for diagnosis, monitoring and treatment of patients with respiratory diseases.

Currently, the Hospital operates with three sections in the main building: Pneumology Section I, Thoracic Surgery section, ATI, Day Diagnostic Center - Paşcanu section II, Tudor Vladimirescu Section III with the Pediatrics section, Section IV of Dr. Clunet and the TB dispensary.
Within the Pneumology I Clinic, a scientific, didactic and therapeutic activity comparable to European academic standards is carried out, both medical students and resident doctors being trained in the unit. Within the department, multicenter clinical studies in the field of respiratory diseases are ongoing.
Made up of elite professionals, the medical team within the Pneumology Consultation Room provides 24-hour security, acting promptly and efficiently in receiving emergencies. Specialized ambulatory medical care is provided within the two integrated Pneumology and Thoracic Surgery Outpatient Clinics. Within the 3rd Pneumology Section, the Polysomnography Laboratory operates where patients with suspected sleep apnea are investigated and treated. Also within this section, there is also a Pediatric Department where trained and competent medical personnel ensure the diagnosis and treatment of a very wide range of respiratory ailments, including tuberculosis, from newborns to older children.
The hospital has a modern Bronchial Endoscopy platform, structured on three levels: the diagnostic endoscopy room (for current examinations), the videoendoscopy room and the interventional bronchoscopy room, dedicated to examinations performed by rigid bronchoscopy, with general anesthesia (bulky foreign bodies, stenoses tracheal, tracheal/bronchial tumor resections, placement of stents, etc.).
The Thoracic Surgery Clinic has two operating rooms equipped with the latest generation equipment, modern surgical equipment, two complete thoracoscopic instrument trolleys and instruments suitable for thoracic surgery. The Anesthesia and Intensive Care Department serves both the Thoracic Surgery Clinic and the Pulmonology Departments.
The "Cantacuzino-Paşcanu" Hospital, currently known as the II Department, has acquired a reputation and a tradition both in the medical world and among the patients of Iaşi County and the entire area of Moldova, which is primarily due to its competence doctors but also the diligence and dedication of the entire medical staff. The team of specialists mainly deals with the treatment of pulmonary tuberculosis but also with the treatment of other pulmonary diseases.
Section IV "Dr. Clunet", by its positioning on the Bucium hill, in the middle of nature, far from the stress and noise of the city, has become a real sanatorium, a place where the long-term recovery of patients with chronic respiratory ailments is possible.
The TBC dispensary provides quality medical services to a territory with a population of over 900,000 inhabitants, being responsible for the application and monitoring of the National Program for the Prevention and Combating of Tuberculosis in Iasi County.
The Pneumology Clinic has a new material base, according to Western standards, and a dynamic academic staff, trained 100% abroad. These represent unique resources both in Moldova and in Romania for medical research at the European level.
Currently, the university staff of the clinic participates in the implementation of multicenter studies in the field of respiratory diseases.

"Elena Doamna" Hospital is a university clinical hospital specializing in Obstetrics and Gynecology that serves the entire population of Moldova. The hospital offers continuous inpatient and day medical services, as well as specialist consultations through outpatient offices.

Medical services:

● Genito-mammary and obstetric conditions

In the 25 beds of the gynecology department, benign or malignant medical or surgical gynecological conditions can be treated, such as uterine fibroids, ovarian cysts, cervical polyps, endometriosis, genital cancer, breast tumors.

● Contraception and infertility

This reproductive pathology, as well as contraceptive and family planning measures, is a concern of our specialists, as the first reproductive health clinic in Moldova (since 1995) operates within the hospital.

● Pregnancy and childbirth

The supervision of the progress of the pregnancy, as well as the assistance of normal and pathological birth, can be carried out in the 53 beds of the obstetrics section, where the patients will benefit from a modern monitoring of the progress of the pregnancy (3D and 4D ultrasound, cardiotocography, etc.).

● Didactics and research

Within the hospital, there is a research unit (3 doctors) who have developed projects with beneficial applicability to the hospital. At the same time, the hospital is a university education base (students of the Faculty of Medicine), pre- and post-graduate (students of post-secondary schools, specialist resident doctors).

METROPOLITAN OF MOLDOVA AND BUCOVINA, ARCHISHOP OF IAȘI, PROVIDENCE – HOSPITAL AND POLYCLINIC

The polyclinic was inaugurated under the name "Diagnosis and Treatment Center", in October 2000, in the presence of P.F. Teoctist Patriarch of Romania, H.S. Bartholomew I of Constantinople, I.P.S. Daniel of Moldavia and Bucovina and other Romanian hierarchs.

In 2008, Providencia Hospital opened its doors, the first within the Church, with a structure approved by the Ministry of Health.

Specialties within the polyclinic and hospital: allergology, cardiology, general surgery, diabetes, nutrition, metabolic diseases, endocrinology, gastroenterology, clinical homeopathy, family medicine, laboratory medicine, internal medicine, occupational medicine, nephrology, neurology, pediatric neurology , o.r.l., obstetrics - gynecology, ophthalmology, orthopedics and traumatology, pediatrics, pneumophthisiology, psychiatry, psychology, radiology-ultrasound-mammography, medical recovery, physical medicine and balneology, rheumatology, dentistry, urology

PUBLIC ADMINISTRATION

The Iasi County Council is the authority of the Local Public Administration, which coordinates the activity of the local Councils and the Municipal Council in order to ensure the good performance of the public services of the county.

Competences of the Iași County Council:

- coordinates the activity of the local Councils;
- organizes and manages the public services of the county;
- provides support and technical, legal or other assistance to local Councils;
- analyzes the proposals related to environmental protection promoted by cities and municipalities;
- approve the county budget;
- establishes the general orientation regarding the organization and urban development of the cities in the county;
- coordinates the public and private domain of the county;
- ensure the construction, maintenance and modernization of county roads;
- establish fees and taxes for the entire county;
- performs works and services for the county in association with other public institutions;
- cooperate with other foreign partners for the purposes listed above.

Iași City Hall is the executive public entity within the UAT Iași Municipality that carries out its activity based on the provisions of Law no. 215/2001 rep., with subsequent amendments and additions, based

on the principles of local autonomy, decentralization of public services, eligibility of local administration authorities, legality and consultation of citizens in solving local problems.

The City Hall of Iasi, as a member of the Association of Municipalities in Romania, has as its vision the permanent satisfaction of customers (individuals and legal entities), of employees, appreciated as collaborators and of civil society, aiming to become a regional and national leader.

Among its objectives is to provide citizens with easy access to medical services and to support research and innovation in the medical field.

The Iași City Hall has the Clinical Hospital "Dr. C. I. Parhon" and the Clinical Recovery Hospital from Iasi.

RESEARCH ORGANIZATIONS

The Institute of Macromolecular Chemistry "Petru Poni" Iași is an institute of excellence of the Romanian Academy. Founded in February 1949, the institute has a tradition of over fifty years in fundamental and applied research, in the field of organic and inorganic chemistry, chemistry and physics of polymers.

Departments:

- Laboratory 1. Advanced research center for bionanoconjugates and biopolymers
- Laboratory 2. Polyaddition and photochemistry
- Laboratory 3. Polycondensation and thermostable polymers
- Laboratory 4. Functional polymers
- Laboratory 5. Natural polymers, bioactive and biocompatible materials
- Laboratory 6. Inorganic polymers, hybrids and complex systems
- Laboratory 7. Electroactive polymers and plasma chemistry
- Laboratory 8. Physical chemistry of polymers
- Laboratory 9. Physics of polymers and polymer materials
- Laboratory 10. Applied research and technological transfer laboratory

Works that can be performed:

- physical and chemical analyses: NMR spectra, IR and UV-Visible absorption spectra, TG, DSC and TO (thermo-optical) thermograms, GPC chromatograms, X-ray diffractograms, dosages of elements and functional groups; the results can be provided in primary form or interpreted;
- identification of unitary substances, especially of organic nature;
- identifications and dosages of major components from mixtures of organic substances;
- identification of materials based on polymers;
- training of people to carry out the analyzes from the first line;
- collaborations for solving problems regarding the chemical structure within projects/themes/contracts of scientific research, technological development or design.

The Romanian Academy, Iaşi Branch is a public institution with legal personality under public law and represents the form of territorial organization of the activity of the Romanian Academy.

Institutes of the Iași Branch

- Institute of Archaeology
- Institute of Economic and Social Research "Gh. fairies"
- Institute of Romanian Philology "A. Philippides"
- Institute of Theoretical Informatics
- Institute of History "A. D. Xenopol"

- Institute of Mathematics "O. Mayer"
- "Olga Necrasov" Anthropological Research Center
- Biomedical Research Center
- Research Center for Oenology
- Center for European History and Civilization
- The Geography team

Institute of Theoretical Informatics

- its mission is to contribute to the enrichment of knowledge in the field of informatics and related fields (information technology, communications, electronics, cognitive sciences, systems theory, applied mathematics), carrying out research relevant to national culture and science.

Research directions and themes

- Development of algorithms, methods and linguistic resources for natural language processing;
- Development of formal models and methods for concurrent and distributed systems, mobile agents, reversible computation;
- The development of algorithms and methods of voice signal analysis with applications in the modeling of prosodic elements and the identification of emotions transmitted through the voice;
- Development of methods and algorithms for motion analysis and structural analysis of video sequences from a scene;
- Development of methods, algorithms and techniques for analyzing, processing, filtering, segmenting and compressing images and signals;
- Natural and biologically inspired optimization algorithms with applications in image processing;
- Development of algorithms and methods for editing linguistic atlases and dialect texts;
- Analysis and modeling of complex interaction using process algebras;
- Development of computational models inspired by molecular biology;
- Computability, complexity, causality in membrane systems with multiset rewriting;
- Development of formal models and methods for concurrent and distributed systems, mobile agents;
- systems with fuzzy logic and neural networks.

SMEs

RomSoft is a company founded in 2011, which started its activity by developing software for hematology medical clinics.

Its main services are:

• Customized software applications & testing

Services tailored to project complexity, collaboration model or application type (either client-server, web or mobile). The testing team provides outsourcing services to companies looking to improve their software testing and QA processes. Techniques include black box/white box testing, exploratory testing, scripted and automated testing.

• Research & development projects

With applications in telemedicine, e-health or mHealth, it is involved in the development of acquisition solutions, where it contributes all the necessary software solutions for the acquisition, processing and transmission of data, doctor/patient interface, prediction systems, etc.

• Co-sourcing & Out-tasking

• Consulting services dedicated to software startups as well as developed companies that want to develop their processes.

Scanexpert SRL is a medical company specialized in high-performance medical imaging - computer tomography and nuclear magnetic resonance.

The company started its activity in 2009, by opening the first computer tomography (CT) imaging center in the ambulatory of the Romanian Municipal Hospital.

Over time, the company developed its activity by opening new centers:

- Pașcani – CT,
- Iasi – Magnetic Resonance (MRI),
- Brasov.

In Iași, in the premises of CF Clinical Hospital, the company owns one of the best performing MRI machines in Moldova, the Siemens Avanto 1.5 T, which, thanks to its hardware and software, allows performing both routine and special MRI investigations (breast , heart, tractography, diffusion, perfusion, cholangiography, etc.), having contractual relations with CAS Iasi, as well as with other hospital units in the city and county.

In Brașov, with the high-performance Siemens Somaton 64-slice equipment, CT examination of the heart was possible. Here, Scan Expert performs tomographic imaging investigations on the anatomical segments: skull, cervical region, thorax, abdomen, pelvis, extremities as well as special investigations, which are our main activity, because they open new paths in the investigation of the human body such as: non-invasive CT coronary angiography , Non-invasive CT angiography, Non-invasive CT phlebography, Virtual bronchoscopy, Evaluation of pulmonary nodules, Non-invasive CT colonoscopy, CT entero, CT urography.

Optim Diagnostic SRL from Botoșani, owned by Scanexpert SRL, owns an MRI machine in the Mavromati Botoșani County Hospital and specializes in performing high-performance Magnetic Resonance (MRI) imaging investigations, having contractual relations with the County Hospital. Botoșani Emergency Department, with CAS Botoșani, CASA OPSNAJ, as well as with other hospital units in the county.

The MICROMEDICA Medical Center has become a recognized name on the market of medical services in Piatra Neamț. Due to the high degree of technique and the activity of the entire staff, based on professionalism and a high quality standard of the medical act, it has become the center with the best addressability among outpatient medical service providers.

Main services:

- Medical imaging
  - ✔ General radiology | General ultrasound
  - ✔ Dental radiology | Senology
  - ✔ MRI | CT
  - ✔ DXA osteodensitometry
- Medical analysis laboratory
- Medical offices for different specialties

Micromedica Centers: Piatra Neamț - headquarters, Roman, Bacău, Târgu Neamț, Bicaz

The CORAMED Suceava Polyclinic offers reliable medical services, with specialized staff and modern, state-of-the-art equipment.
It offers medical consultations in the fields of cardiology, pediatric surgery & orthopedics, vascular surgery, ultrasound, endocrinology, gastroenterology, obstetrics/gynecology, pediatrics, medical rehabilitation, rheumatology, urology, collections, analyses, ultrasounds, on-demand and scheduled injectable treatments.
It offers day hospitalization services in contract with CAS for the specialties: cardiology, endocrinology, gastroenterology, diabetes, nutritional and metabolic diseases.
The CoraMed Polyclinic is equipped with a collection office for medical laboratory tests, as well as a treatment room.

EUROCLINIC ONCOLOGY CENTER (VICTORIA HOSPITAL) has a hospital structure, consisting of consulting rooms, outpatient treatment room, day hospitalization, continuous hospitalization, closed circuit pharmacy.
Services offered:
● diagnosis of solid tumors
● medical oncology treatments - solid tumors - (chemotherapy, hormone therapy, immunotherapy, TARGET therapies) - settled through the National Oncology Program
● non-invasive external locoregional hyperthermia treatments - EHY 2000 device
● monitoring and periodic checks for cancer patients
● symptomatic treatments, cancer pain treatment
● hyperthermia treatments
Victoria Hospital is one of the strongest clinical research centers in the field of cancer in Romania. Having actively participated since 2001 in over 80 phase II and III clinical studies (with therapeutic benefit for patients), Victoria Hospital has close collaborations with large multinational pharmaceutical companies, these collaborations often being completed by publishing various studies at international congresses, the publication of articles in prestigious journals or even the approval of many innovative drugs in oncology by the FDA or EMEA.
Victoria Hospital has had and has collaborations with numerous pharmaceutical companies, such as: Hoffman la Roche, Fresenius, Bristol Mzers Squibb, Lilly, Pfizer, Teva, Boehringer Ingelheim, Avigenix, Merk, Sonus Pharm., Mayne-Pliva Pharm., BioGenerix , Johnson&Johnson, Sanofi-Aventis, Glaxo-Smithkline, Grunenthal, Synta Pharm., Amgen, Bayer Healthcare AG, Sandoz AG, Gennentech, MediGene, Hexal AG, Eisai, Sosei, Onyx, etc.
Clinical studies at the Victoria Hospital center are carried out under the supervision of the National Medicines Agency of Romania, the National Ethics Commission of the Romanian Academy and other international bodies (FDA, EMEA).

MEDimagis radiodiagnostic center offers the following services:
2D digital radiographs
CBCT
Volumetric tomography with different examination fields (field of view = FOV), on electronic media (CD) with the visualization software included.
ultrasound

Lucia Clinic SRL is currently ROYAL HOSPITAL BUCHAREST. ROYAL HOSPITAL BUCHAREST is a private hospital whose particularity lies in its ultra-specialization in gynecological surgery and pathological breast surgery.

The range of surgical interventions is diverse, allowed by the skills of the operating doctors (vaginal surgery, breast surgery, laparoscopy, hysteroscopy, gynecology oncology), being able to perform the most difficult interventions in the genital and breast sphere (myomectomies, radical hysterectomies, ovariectomies, cystectomies, tumorectomies, simple mastectomies or radical mastectomies with simultaneous, bilateral breast implant, etc.), but also in the field of urology, general surgery and aesthetic surgery.
The private hospital also provides outpatient medical services, for specialties such as: obstetrics-gynecology, senology, urology, cardiology, general surgery, aesthetic surgery, dermatology, endocrinology, psychology, dentistry and family medicine, providing the medical team with the equipment necessary for diagnosis complete list of conditions in these specialties.

SincroMed is a Radio-Imaging DIAGNOSTIC HUB established in Cluj-Napoca at the end of 2018. It exclusively offers remote solutions, through teleradiology, for interpretation, drafting medical bulletins and patient diagnosis based on medical imaging examinations received from the hospital or clinic of origin.
Provides radio-imaging expertise for the following types of examinations:
- X-rays (RX);
- Computed Tomographic (CT) images;
- Magnetic Resonance Images (MR);

TISSUEGNOSTICS ROMANIA SRL is the Eastern European branch of TISSUEGNOSTICS GMBH, which offers customized medical equipment and software solutions, efficient in the field of biomedical imaging and image analysis.

Its offer of products and services includes hardware solutions, software and special applications.

Cromatec Plus SRL was founded in 1998, with 100% Romanian capital, with as its object of activity the commercialization of laboratory equipment, including consumables and the provision of installation, commissioning and maintenance services, as well as the training of user personnel.
Due to the close relations that the company has with the beneficiaries of the delivered equipment, it frequently participates in different projects or research themes by developing specific methods, analyzes and monitoring which, together with the service and training services offered, contribute greatly to the success these programs.
Fast delivery and installation, competent training and consultancy, prompt and professional service ensure the parameters of efficiency and profitability so necessary and current in a modern laboratory.

Pixel Data SRL is a medical software company that offers the following services :

- applications for hospitals

The applications intended for hospitals are complex multimodular HIS type applications that allow the monitoring and optimization of workflows from patient registration to discharge. At the same time, the recording of all the operations monitored by applications in various departments and the consumables used in the medical act allows the provision of detailed reports, useful for management decisions.

- applications for polyclinics

The organization and operation of polyclinics requires, as a basic requirement for an IT application intended for these institutions, the scheduling of visits for each office. Thus, the presence of high-performance appointment management facilities associated with basic functions regarding patient registration and visit records for each practice are found in the core of the applications developed by PIXELDATA for polyclinics.

- cabinet applications

The specificity of the activity in individual medical offices (family doctors or specialist doctors) means that the medical applications intended for this segment are mainly focused on patient records and solving the legislative requirements associated with their consultations. Another specific aspect of this kind of applications is the low installation and operation costs, the applications being created to run optimally even on older or less performing hardware systems.

Intelectro Iasi SRL is an innovative enterprise, with the main activity of research and development, accredited by ANCS in 2010. It was created as an innovative spin-off of the Technical University "Gheorghe Asachi" from Iasi, which brings to fruition the patentable results of research projects - ongoing development within the ICU.

The company specializes in design/research/development in the following fields:

- radio frequency
- electrical and electronic measurements
- electrical and electronic engineering

The company has very good experience and the necessary equipment for performing measurements in the dielectric/electromagnetic field, as well as CEM / DES/IEM tests up to 20 GHz (including the analysis of nano-structures and chemical bonds).

Atelierul de Idei-TrainIC is a company that offers consulting services in the field of innovation:

- Realization of workshops and their facilitation
- Consultancy in innovation processes within companies using the Forth Innovation methodology
- Consulting in the field of business innovation, in the fields of banking, energy and health

Strongbytes.ai is a digital product development and software development services company, with a focus on data and artificial intelligence / machine learning, in various industries (medical, financial, security, automotive and others).

They are also the founders of the Codecamp.ro and NDRconf.ai technology conferences, which annually bring together over 15,000 technology experts, but also from other fields, both from the country and abroad. They are active in the startup/entrepreneurial

ecosystem at European level and founded the TBNR.ac accelerator with private investment fund. They are also involved in consulting at the level of the European Commission, the latest project to which they contribute being the Intelligent Cities Challenge, through which they developed the digital strategy of the city of Iași. They are founding members of the Digital Innovation Hub in the Moldova region.

XVision is a medtech startup founded in 2018 in Timisoara that developed an application for the analysis of lung radiographs using artificial intelligence algorithms, thus developing a platform that helps radiologists in this process. The app is currently being used by hospitals across the country.

The Phoenix Clinic was created in 2006, in Bucharest, by doctor Nicolae Bolog, together with a team of doctors and technicians with extensive experience in diagnostic imaging (Magnetic Resonance and Computer Tomography). The radiology service in the hospital institution where these doctors trained and perfected, under the coordination of Dr. Nicolae Bolog, soon became one of excellence in medical services.
In order to facilitate the addressability of patients to diagnostic imaging services, Clinica Phoenix expanded its activity by opening regional centers in Mediaș, Piatra Neamț, Cluj-Napoca and Deva, centers taken over by one of the leaders in the market of diagnostic imaging and nuclear medicine services.

SHOPFIT ONLINE SRL is a company from Iasi that offers website design services, online stores.

GAMAGIM SRL is a software company that offers the following services: web services: personalized web design, online stores, websites with dynamic content (CMS) and software solutions: customized software applications, CRM applications, SAAS applications - Software as a service.

ACCES PROJECT INVESTMENTS SRL is a company from Iasi that offers management consulting, training and coaching services

Thinslices Development SRL offers digital product development and software development services, with a focus on the development of applications for start-ups, in various industries (medical, financial, security, automotive and others).

During the 10 years of operation, it has completed approximately 150 projects in almost all the countries of Western Europe and North America. In 2019, as part of a strategic partnership, team members founded the software engineering center of Hindawi Iasi. Hindawi (www.hindawi.com) is one of the best-known publishers of scientific journals based on the open science model.

Sentic Lab is an applied research company based in Iasi (Romania). Thanks to a talented team of computer scientists, engineers and scientific consultants from the academic world, it develops innovative medical diagnostic software. It collaborates with the Alexandru Ioan Cuza University in Iasi, which promotes excellence and innovation in the fields of education and research.

Ed Implantologie SRL is an implantology and oral surgery clinic led by specialist doctor Eliza Drăgan. She finished her studies at the University of Medicine "Gr. T. Popa" from Iași in 2011. In 2012, he started specializing in Dento-Alveolar Surgery, and in 2014 he obtained the title of specialist in Dento-Alveolar Surgery. In 2016, he obtained the title of Doctor of Medical Sciences. Research field: "The contribution of sectional imaging and pharmacological agents in sinus augmentation interventions". He participated in research projects in the field of Implantology and Oral Surgery, published numerous articles in international magazines and is a speaker at conferences dedicated to implantology.

Duk-Tech is a company with 100% Romanian capital, specialized in providing software development services. Throughout the more than 12 years of experience, the company has collaborated and continues to collaborate with partners from Romania and abroad (Holland, England, France, Belgium, USA), being involved in the development of eCommerce projects, ERP applications, web portals information, online reservation systems, online casino, applications including GIS systems, social networks, NLP integration, survey and evaluation systems.

CEBIS International is a global full-service contract research organization (CRO) headquartered in Switzerland, providing clinical stage, regulatory and market entry support to biotech, pharmaceutical, medical device and nutraceutical companies in already 29 countries. CEBIS headquarters are located in Lugano, Switzerland. CEBIS offers attractive benchmark-based and shared-risk models and aims for long-term partnerships.

CEBIS has two major business units - the Clinical and Regulatory Services (CRS) Unit and the Patient Support Programs (PSP) Unit. The CRS unit covers medical writing, regulatory affairs, monitoring, data management, biostatistics and publishing, working closely with pharmaceutical, biotech and medical device companies. On the other hand, the PSP Unit focuses on medication adherence and technology-based interventions

Synaptic Technologies SRL is a start-up from Cluj Napoca that proposes solutions based on artificial intelligence to improve the quality of medical services. Services offered:

Custom database analysis

Synaptiq takes anonymous data and turns it into meaningful results. We work with our users throughout the process to ensure the analysis is relevant. We are committed to providing clear and in-depth information.

Rigorous testing

Once the team finishes the initial review, we perform several quality checks. After testing, we deliver the results to our customers along with a process certification.

Certified quality

Synaptiq's goal is to provide customers with high-quality visual analytics. Regardless of the type of data, we pride ourselves on delivering professional results.

The Lux-Ro diagnostic center is located in Botoșani and is dedicated to its goal, that of putting health first. At the Lux-Ro Diagnostic Center you can benefit from consultations in medical specialties such as: pediatrics, cardiology, gynecology, surgery, internal medicine, gastroenterology, psychology, psychiatry, neurology, neurosurgery, ENT, urology, nephrology, physiotherapy, dermatology -venereal, endocrinology, nutritional diseases and ophthalmology, etc.

VRtuality Entertainment, Events and Education, the first dedicated space in the Moldova area for both entertainment and education through virtual reality.
Virtual reality (an expression derived from English from Virtual Reality or VR) refers to artificial environments created on the computer that provide a simulation of reality so successful that the user can have the impression of an almost real physical presence, both in certain real places and and in imaginary places.
Virtual reality or immersive reality combines technology and experimental design to create life-like artificial environments using a
computer, which offers the user the possibility to play, study and explore or gives him the opportunity to experience new sensations.
VRtuality Entertainment, Escape Room, Events and Education offers you the perfect place and setting for unlimited discoveries regardless of your area of interest.

Skyer Medical Imaging is a provider of IT systems for radiology and medical imaging (PACS, RIS, teleradiology, patient portal), with 15 years of experience in the field and a portfolio of over 50 installations in Romania and the Republic of Moldova. Developed with state-of-the-art web technologies, our solutions fully integrate the workflow of an imaging center: patient scheduling and registration, long-term image archiving, advanced visualization for diagnosis, automated patient CD/DVD burning, image printing paper, writing results and distributing them online together with DICOM images to medical specialists and patients.
The solutions are offered both in the cloud version, with a monthly subscription (Software-as-a-Service), and in the version with the purchase and installation of a local server, at the client's premises.
The products are CE certified as medical devices and Skyer Medical Imaging S.R.L. has an Operating Permit issued by the Ministry of Health for the import, distribution and service of PACS systems, image processing and diagnostic software and DICOM medical monitors.

SC ARKONA HOLDING SRL is a company that organizes events dedicated to the medical field online and offline. They make available to clients: studio; high quality audio; HD video; set of studio lights; filming with multiple professional cameras; chroma key; teleprompter; create web page for the event; create registration page; create youtube trailer; create design for ppt presentation. And event identity; participant follow-up study; analytical report; complete promotion before and after the webinar (email, facebook, website, etc.); assistance during the webinar; posting the webinar on our and the client's website by providing content; meeting room; kitchen; airport transfer.

NGO'S

HUMANITARIAN ASSOCIATION - CODRIN - PROTECT CHILDREN WHO WILL REMAIN ONLY CHILDREN was established in 2003, the purpose of the organization is to combat social marginalization, poverty and suffering, to encourage the development of the human person in the community, through solidarity and social commitment; to fight for the improvement of the quality of life; to defend human rights and

democratic values, in the spirit of partnership dialogue through various activities and actions dedicated to people at risk of exclusion as a result of social problems, health, privacy, etc.

The main fields of activity through which the association seeks to fulfill its purpose are those in the sphere of social assistance, community assistance and development, medical, medical-preventive, education, organizational development, activities dedicated to youth and environmental activities.

Currently, long-term projects and actions are underway:

• The home care project through the service contract with the Neamț Health Insurance House and the Health Insurance House of the National Security Public Order and the Bucharest Judicial Authorities, a program that provides funds for our humanitarian actions.

• Carrying out humanitarian actions in homes for the elderly and children: Roznov Home, St. Pantelimon Home, Paltin Monastery Home, Bogdănești Monastery Home, Împreuna Social Center as well as Piatra Neamț County Hospital – Pediatric Department, Bicaz City Hospital – Pediatric Department.

For the permanently run programs, it holds the following accreditations:

• social service providers - accreditation through the Ministry of Labour, Family, Social Protection and the Elderly

• providers of organizing training programs regarding the acquisition of fundamental notions of hygiene by approval issued by the Ministry of Health and the Ministry of Education, Research, Youth

• home care providers

The Create Change Association started its activity in 2019, its purpose being to support the development of creative industries (research, innovation and development in fields such as robotics, artificial intelligence, digitization, civic tech).

Activities carried out so far:

● Supporting the local artificial intelligence community in Iași - https://iasi.ai

● Smart City platform development in partnership with Iași City Hall - https://iasismartcity.ro, which received the award for civic involvement in the Romanian Smart City Industry Awards - 4th edition (2019)

The organization has experience in the field **of Technology, supporting the development of creative industries through research, innovation and development initiatives in fields such as robotics, artificial intelligence, digitization, civic tech.**

The Coalition of Organizations of Patients with Chronic Diseases from Romania - COPAC was established in 2008, as an organization that aims to promote and protect the rights of patients with chronic diseases. COPAC's mission is to support patients and patient organizations to act unitedly and effectively to defend and promote patients' rights.

The objectives of the association are the following:

● COPAC is taking steps to acquire the status of dialogue partner with decision-making rights in legislative and administrative forums at national and local level (the Health Commissions of the Parliament and the Government of Romania, the National Health Insurance House and the County Health Insurance Houses, as well and in institutions with a special regime, hospitals that run national programs, etc.).

● Supporting the interests of patients with chronic conditions before the competent state bodies, with proposals regarding the initiation and/or modification of the legislative framework at central and local level

● Improving access to information for patients with chronic diseases;

● Affiliation to similar international organizations

- ● Monitoring the implementation and development of national programs

TO BE COMPLETED WITH NEW 2022 MEMBERS

1.8. Analysis of the economic indicators tied to the companies that are members of the cluster

Aggregated cluster quantitative indicators - 2020

Indicator	UM	Valoare
Fiscal Value	RON	4.300.831,62
No. businesses	Nr.	26
Exports	EUR	6.316.151,03
No. Staff	Nr.	579
CDI expenses	RON	1.426.000
Companies that have introduced process invovation	Nr.	10
Companies that have introduced product innovation	Nr.	10
Enterprises that innovate in partnership	Nr.	3
Patents (Trademarks, industrial desgins, etc)	Nr.	1

Quantitative indicators member companies that carried out economic activities in 2020

Nr.	Member company name	CAEN	No. Staff 2020	Fiscal Value 2020
1.	Romsoft SRL Iasi	Custom software creation activities (customer-oriented software)	100	17.115.913
2.	MICROMEDICA SRL	Other activities related to human health	56	12.739.488
3.	Clinica de Diagnostic Phoenix SRL	Specialized medical assistance activities	31	3.891.267
4.	Scan Expert SRL	Specialized medical assistance activities	45	9.834.686
5.	Optim Diagnostic SRL	Other activities related to human health	8	350.995
6.	Tissuegnostics Romania SRL	Custom software creation activities (customer-oriented software)	13	1.975.589
7.	Coramed SV SRL	Specialized medical assistance activities	23	1.062.441
8.	Clinica Sf. Lucia Clinic SRL	Hospital assistance activities	47	15.728.899
9.	Acces Project Investments SRL	Retail trade of other new goods, in specialized stores	1	17.922
10.	Medimagis SRL	Other activities related to human health	6	810.794
11.	Cromatec Plus SRL	Non-specialized wholesale trade	23	15.086.131
12.	Pixel Data SRL	Custom software creation activities (customer-oriented software)	35	8.058.286
13.	Centrul de Oncologie-Euroclinic SRL	Specialized medical assistance activities	26	4.626.842

14.	INTELELECTRO SRL	Research-development in other natural sciences and engineering	9	358.476
15.	ITR SINCRO SRL	Specialized medical assistance activities	1	694.137
16.	Atelierul de Idei TRAIN-IC S.R.L.	Other forms of education.	1	99.843
17.	Strongbytes Consulting SRL	IT consultancy activities	10	3.466.945
18.	Mindfully Technologies SRL	Data processing, web page management and related activities	7	89.880
19.	Gamagim SRL	Custom software creation activities (customer-oriented software)	1	341.575
20.	Thinslices Development SRL	IT consultancy activities	50	11.654.395
21.	SenticLab SRL	Custom software creation activities (customer-oriented software)	6	1.364.278
22.	DUK-TECH SRL	Custom software creation activities (customer-oriented software)	27	4.466.742
23.	Cebis International SRL	Other activities related to human health	34	13.978.442
24.	LUX-RO S.R.L	Specialized medical assistance activities	16	2867710
25.	Skyer Medical Imaging SRL	Wholesale of computers, peripheral equipment and software	1	1176358
26.	Arkona Holding SRL	Organizational activities of exhibitions, fairs and congresses	2	254000

2. Regional sectoral analysis

Due to its specificity, the IMAGO MOL Cluster is trans-sectoral, representing the application of research, development and innovation services in medicine through the use of specific ICT tools. At a general level, its evolution must be seen in the context of the evolution of research, development and innovation in the health and ICT services sector in Romania, both of which are "high skills - high tech" fields.

According to the Report on the European Innovation Scoreboard published by the European Commission in June 2021, Romania is classified as an emerging innovator, with performance improving by 4.1% compared to 2014, this increase being the lowest percentage increase at the level of the Union European.

From the point of view of research and innovation development, the national research system suffers from chronic underfunding in accordance with the low intensity of R&D expenditure as a whole (0.5% in 2017 compared to the EU average of 2.7%) relative to GDP. Achieving the 3% target set by the Lisbon Strategy, as well as by the Europe 2020 Strategy, is currently extremely far away, with a considerable increase in the private sector's contribution to research and development expenditure being necessary in the future.

Furthermore, in the North-East Region, the existing level of 0.2% is much lower than the national value, representing almost half of it (0.5%). Research and development expenses (current prices) are on an increasing trend, the value recorded in the region in 2019 – 331,434 thousand lei, being higher by 72% compared to 2018 and by 115% compared to 2017.

In the period 2017-2019, at the regional level there is a slight increase both in the number of researchers (7%), and in the total number of employees in the research - development activity (6%), although at the national level there is, per total, a slight decrease (-1.8%).

The medical field is intensive in terms of research-development-innovation activities, occupying about 10% of the number of scientific researchers at the national level. In contrast, research and development expenses in the medical sector were 198,438 thousand lei in 2018, representing 10.28% of the total.

In the latest Report on the regional competitiveness index 2019, the North-East Region appears with a level of 9.05 (out of a maximum of 100 points), increasing by 3 p.p. compared to 2016, a value that places the region in 257th place (out of the 268 regions taken into account), six positions lower than in 2016. In relation to this value
the region ranks only before the South-East region, but at a great distance from the Bucharest-Ilfov Region (55.92 points) and the West (20.90 points). The situation at the regional level in 2019 is in stagnation compared to the years 2016, 2013 and 2010 - in relation to the information provided in the previous reports.
Analyzing the three sub-indices it is found for the year 2019 that the lowest scores are for the basic dimension with 3.2 points and the innovation dimension, while a relatively better score is for the efficiency dimension of 36.6 points. Health appears with a better score – 32.1 points, while macroeconomic stability is 65.9 points.

The low level of competitiveness of the North-East Region is the result of multiple factors: low labor productivity, insufficient innovation and technological transfer activities, the existence of an insufficiently exploited research and development sector.

In the region, the existing active enterprises have a reduced labor productivity, lower than the national average by 30%. The low level of productivity is due, on the one hand, to the modest contribution made by research, technological development and innovation, and, on the other hand, to the low transfer and implementation of results by the productive sector.

Analyzing the results of the statistical research, it is found that in the period 2016-2018, the North-East Region has a high share of the number of innovative enterprises in total enterprises, of 13.6%, a value in relation to which the region ranks 3rd, after the regions Bucharest- Ilfov, North-West. At the same time, the percentage is almost 4 p.p. higher than the national value and by 10 p.p. lower than the community average value (23.9%).

In the region, in the period 2016-2018, the total number of innovative enterprises totals 436 units - in terms of absolute value, the region ranks 3rd after the Bucharest-Ilfov and North-West regions.
Analyzing the situation according to the type of innovation, it is found that 48% of them launched both a new product and a new process, 36% a new process, and 16% a new product.

The health sector

The health care system in the region is characterized by the difficult transition from centralism to local autonomy, privatization and competition. Thus, the reform of the last years tried to fundamentally change the health system with the aim of unitarily reconstructing the legislative and organizational framework, introducing social health insurance and diversifying the mechanisms for generating financial resources, at the same time as the center of gravity was shifted of health services to ambulatory care. It aimed to stimulate privatization in various forms, introduce competition between providers, but also decentralize the health system, by increasing the role of local authorities, professional associations, financing institutions, communities, etc.

In addition, the COVID-19 pandemic has a considerable impact on the access of Romanian patients to medical services and on the quality of these services. The effect will lead to the deterioration of the health of the sick and increase the pressure on an already overburdened medical system.

The COVID-19 pandemic represented a considerable challenge even for the most advanced medical systems in the world. A World Health Organization study of 155 countries found that medical services for non-communicable diseases were partially or completely disrupted around the world, with poor and developing countries most affected.

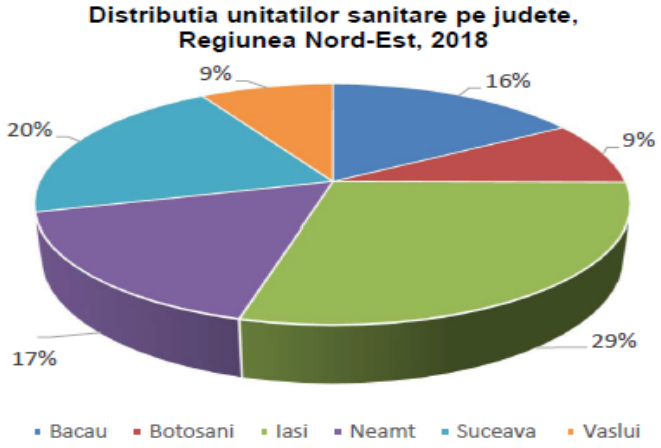
53% of participating countries reported disruptions to medical services for treating high blood pressure, 49% for diabetes and its complications, 42% for cancer and 31% for cardiovascular emergencies. Screening campaigns (for example those for breast cancer or cervical cancer) were postponed in 50% of the countries participating in the study.

Thus, the diagnostic imaging considered by the WHO (World Health Organization) and by the EHT (Department of Essential Health Technologies) as an essential technology in the field of Health, becomes even more important in the context of the COVID-19 pandemic.

Compared to European countries, in Romania the equipment in the field of medical imaging is insufficient, especially in the state hospital units, and an important financial and logistical effort is needed to approach the European level of medical imaging.

The North-East region ranks second (after Bucharest-Ilfov) in terms of the number of health facilities (hospitals, polyclinics, medical dispensaries, TB sanatoriums, etc.), holding 14.8% of the total of health facilities at national level (2018). The total number of health facilities in the North-East Region was 9,117 in 2018, an increase of almost 11% compared to 2012.

In the North-East Region, the health infrastructure is based on both public and private units, which in 2018 were distributed in the territory according to the following graph:



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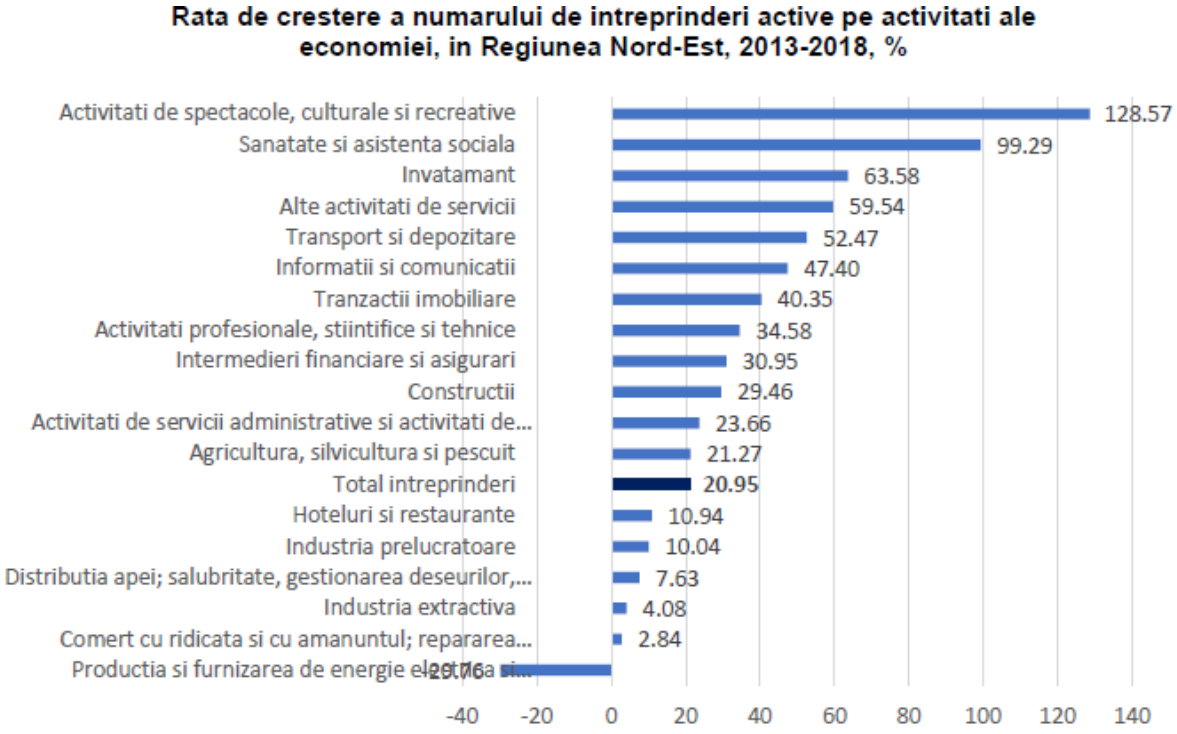
The best situation is the presence in Iași County (it has 31% of the total number of existing health facilities at the regional level), the large number of health facilities and diversified in different specializations (neuro-surgery, infectious diseases, emergencies, psychiatry, etc.) being due both to the large population of this county, and to the fact that the city of Iași is a traditional medical university center - where the Faculty of Medicine and Pharmacy, the University Hospital and research centers in this field operate.



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The number of regional companies related to the Health and social assistance sector is 1,724 local units in 2017, and analyzing the growth rate of the number of enterprises it is noted that the Health and social assistance sector has the highest growth rate of 99.29%, at the level of 2018 in relation to the situation recorded in 2013.

Technical feature

Regarding the endowment with radiology and medical imaging equipment, we note that there is a lack in the North-East region of SPECT CT machines, which causes patients to travel and additional expenses, to extend the time for the diagnosis and the appropriate adjustment of the treatment. At the same time, there are also very few devices with Gamma radiation (2) and devices for crushing kidney stones-lithotriptor - LSI devices (3). Considering the share of heart diseases and their mention among the main causes of death among the population of the area, we believe that there is an acute lack of digital angiography devices (DSA devices) and Gamma radiation devices in other counties in the region outside of Iasi county.

Accessibility of medical services. Market demand.

According to the only available study that analyzes the market for imaging services, the Market Study of the Health and Medical Imaging Sector, carried out by the Regional Directorate of Statistics in 2015, 80.1% of health facilities in the North-East development region, which did the object of the study and declared the number of patients, they provided medical radiology and medical imaging services for a number of patients, of which 56.0% came from the urban environment, and 44.0% came from the rural environment. It is observed that the rural population particularly requests these medical investigation services. Considering the low incomes of the population and the rather advanced average age, the proximity of the centers offering the respective services and the low price become very important aspects in the access and consumption of these services.
The fact that the varied endowment with equipment in the field is somewhat polarized, these being found in a wider range in the counties of Suceava and Iași, we can speak of a reduced accessibility of the population to these types of investigation services and assistance in medical intervention.

In recent times, considering the changes regarding morbidity but also the technological evolution that led to the appearance on the market of new types of equipment (less radiating or without radiation), an increase in the number of tomographies and ultrasounds is observed, while radiographs records a downward slope. A significant increase, maintaining a national and even international trend, occurs in the case of investigations carried out with MRI technology, very effective from a cost-benefit point of view.

Medical staff

In 2018, the North-East region has 12.9% of all doctors in the country, unevenly distributed among the counties of the region (43.3% of doctors are in Iași County and only 8.1% in Vaslui County). The largest number of people with average health training (16.3%) work in the North-East region. In the last 5 years, the number of the population returning to a medico-sanitary setting (public and private sector) has decreased for doctors, dentists and pharmacists, but has increased slightly for the average health staff.

The Northeast region ranks third among the eight development regions in terms of the number of doctors specializing in medical radiology-imaging compared to their number registered at the national level. However, in relation to the number of specialists returning per 100,000 inhabitants, the region is among the last places (5 specialists / 100,000 inhabitants). At the regional level, Iași county had twice the regional average and Neamț county was the only county still reaching the regional average in 2018 (5 specialists/100,000 inhabitants).

There is, within the specialized medical offices - radiology and medical imaging - an important share (over 20%) of medical assistants specialized in the field of radiology and medical imaging.

Information and communication technology in the health system

According to the only available study that analyzes the market for imaging services, Market Study of the Health and Medical Imaging Sector, carried out by the Regional Directorate of Statistics in 2015, there is a relatively small number of servers in the region, but a sufficiently large number of personal and portable computers. At the same time, approximately 65% of the health facilities analyzed have a local network. Almost three-quarters of the units have an electronic patient record system, while only 5% have an integrated medical departmental information management system. In general, there was rather an interest in investments in software products, and most investments in IT products were made in the counties of Iasi and Suceava. There is still a particular interest in the development of own IT infrastructure and the purchase of specialized software.

Only 36% of the responding medical units have a digital medical image archiving and communication system (PACS). Among the existing systems, most allow remote access (network or web), and for 60% of cases, the PACS system is integrated into the RIS/clinical IT system. Among the units that do not have a PACS system, only 11.0% expressed their intention to purchase such a system in the next period.

Less use of Internet connection: 57.1% of responses indicate that the selected facility uses the Internet and/or existing connection for medical documentation. For 1.5% of cases, the Internet is used for sending/receiving medical information to/from institutions or other medical units, and for 0.8%, it is used for connecting to an external medical database or for telemedicine. 16.5% of respondents use the Internet for medical documentation+transmitting/receiving medical information to/from institutions or other medical units.

3. The Population's Health Status

In connection with the situation of the health infrastructure, it is necessary to present data related to the state of health of the population, which reflect the impact that the precarious situation of the health system has on the population, all projects of the IMAGO-MOL Cluster being designed for the ultimate benefit of patients from the North-East Region.

According to the statistical data of the INS in 2017, the average life expectancy in the North-East Region is 75.42 years (79.25 for women and 71.81 for men) very close to the national average of 75.73 years, but among the lowest compared to other development regions.

Regiunea de dezvoltare	Total	Masculin	Feminin
Regiunea NORD-VEST	75.49	72.21	78.8
Regiunea CENTRU	76.25	72.97	79.58
Regiunea NORD-EST	**75.42**	**71.81**	**79.25**
Regiunea SUD-EST	75.17	71.37	79.18
Regiunea SUD-MUNTENIA	75.23	71.65	78.93
Regiunea BUCURESTI - ILFOV	77.56	74.33	80.48
Regiunea SUD-VEST OLTENIA	75.66	72.38	79.05
Regiunea VEST	75.53	72.38	78.67

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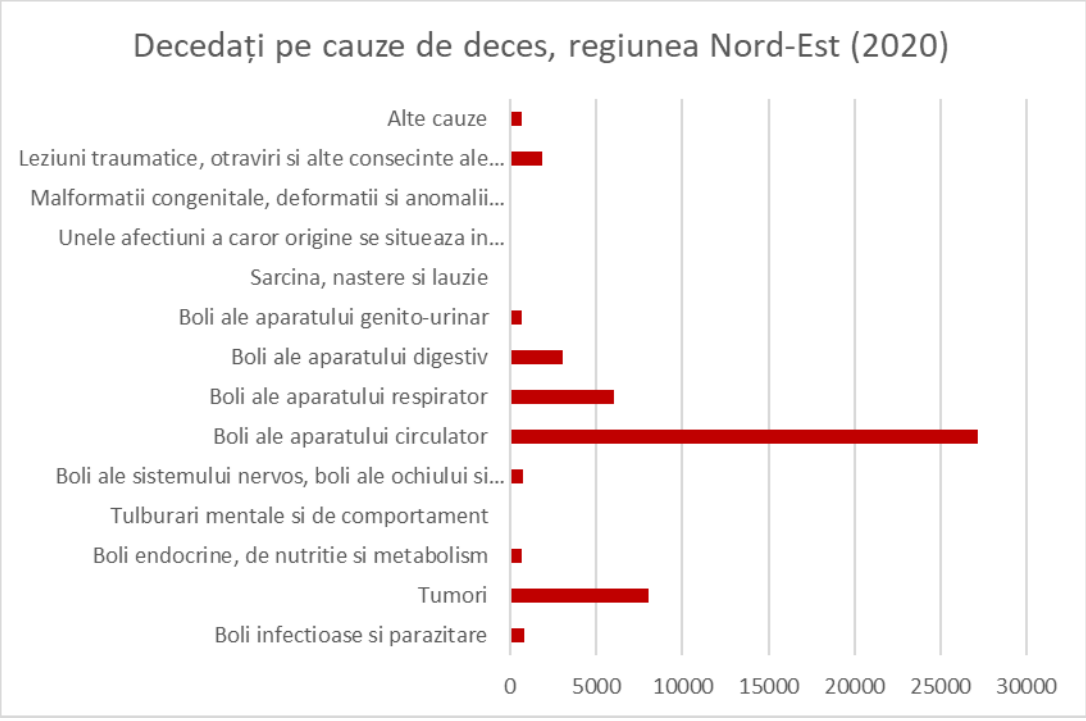
From the point of view of the causes of death in the North-East region, it can be observed that the main cause of death is represented by diseases of the circulatory system, on the 2nd place is the mortality from tumors, and on the 3rd place is the diseases of the respiratory system.



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Moreover, the North-East region is in the first place among the regions of development in terms of mortality from tumors and diseases of the digestive system, from traumatic injuries, poisoning and other consequences of external causes, as well as from infectious and parasitic diseases. It also ranks second among developing regions in the number of deaths from diseases of the circulatory system and diseases of the respiratory system.

From the point of view of mortality due to diseases of the circulatory system, the data for the year 2020 places Suceava county in 1st place in the North-East region, followed by Bacău and Iași counties.

From the point of view of mortality from tumors, statistical data place Iași county on the 1st place in the North-East region, followed by Bacău county and Suceava county.

Mortality due to diseases of the digestive system is the highest in Bacău county, followed by Iași and Neamț, and diseases of the respiratory system cause the most deaths in Suceava, Iași and Bacău counties.

The number of deaths from tuberculosis is the highest in Neamț County, followed by Bacău County and Suceava County.

Regiunea de dezvoltare	Rata mortalitatii infantile
TOTAL	6.6
Regiunea NORD-VEST	6.7
Regiunea CENTRU	6.9
Regiunea NORD-EST	**6.7**
Bacau	*7*
Botosani	*11.5*
Iasi	*5.8*
Neamt	*5.3*
Suceava	*6.7*
Vaslui	*5.1*
Regiunea SUD-EST	7.8
Regiunea SUD-MUNTENIA	6.7
Regiunea BUCURESTI - ILFOV	4.6
Regiunea SUD-VEST OLTENIA	6.8
Regiunea VEST	7.2

Infant mortality at the level of the region is 6.7, close to the national average of 6.6, but a very high level is noted in Botoșani county of 11.5, double that of Vaslui, Neamț and Iași counties.

Considering all the elements presented above, it can be stated that in the North-East Region there is an unsatisfactory evolution of the health sector, including in the field of medical imaging, compared to the current situation at European level, and the provision of new medical equipment and modern and disease prevention actions are absolutely vital to improve the current situation, in order to achieve the objective of providing the population with adequate conditions for the prevention and treatment of diseases, thus contributing to a better state of health of the population.

4. The SWOT analysis of the health system in the Northeast Region

SWOT Analysis	
Strengths	**Weaknesses**
Regional aspects: ● The large number and diversity of hospital units, clinics, outpatient clinics, dispensaries. According to INSSE statistical data, the North-East region has: statistical data in territorial profile at the level of 2020: ● 72 hospitals (of which 49 public and 23 private) ● 16 specialized outpatient clinics (of which 4 public and 12 private) ● 48 outpatient clinics integrated into the hospital (of which 45 public and 3 private) ● 25 public medical dispensaries ● Increasing the number of private diagnostic clinics (including MRI, CT units) ● Increasing the turnover of SMEs active in the field of health and social assistance (from 625 million lei in 2016 to 1158 million lei in 2019) ● The very strong development of the IT sector at the level of the region (in 2019 there were a number of 2342 SMEs on CAEN J class, up 20% compared to 2016; they had a number of 16506 employees and produced 3572 million of lei turnover), the Northeast region is ranked 4th in the country from the perspective of these considerations ● Adequate number of non-scientific actors in the North-East Region in the medical imaging sector ● Accessing Structural Funds or other types of financing in order to carry out modernizations, consolidations and equipment for outpatient clinics/hospitals/wards National aspects with regional impact: ● The number of people who smoke daily is in line with the EU average, ● The obesity rate among adults is the lowest in Europe ● Romania establishes strategic objectives in the National Health Strategy in the field of public health and medical assistance services and is supported by the development of eight regional plans, to reorganize medical services and direct investments towards disadvantaged areas	Regional aspects: ● The low level of the standard of living contributes to unfavorable medical statistics related to the increased incidence of contagious and chronic diseases ● High level of deaths due to tumor causes, being in 2020 on the 1st place among the regions, with a number of 8,042 deaths, respectively on the 2nd place after the South-Muntenia region, due to causes of diseases of the circulatory system (27,151 deaths); ● Low number of doctors, 2.37 doctors per 1000 inhabitants, below the national average of 3.09 and well below the EU average of 3.5; ● The lowest rate of GDP / capita in the regions of Romania - regional GDP / capita is 26,921 lei, representing 62.8% of the national value (2017) ● High unemployment rate - 5.01% in the North East Region (according to ANOFM data on October 31, 2018), compared to 3.33% nationally - we are in 2nd place in the country after the South-West region. ● Public sanitary units still operate in old, generally unmodernized buildings ● An unsatisfactory level is still maintained from the point of view of medical facilities National aspects with regional impact: ● Inadequate funding for the health sector from public and private sources and the low level of health expenditure per capita. Romania continues to be in last place in the European Union in terms of the resources allocated for health. Health spending in Romania, according to the 2019 Country Report, is the lowest in the EU both per capita (EUR 1,029, the EU average being EUR 2,884) and as a percentage of GDP (5% compared to 9.8 % in the EU). ● In the EU-28, according to the 2019 Country Report, Romania still has high rates regarding: - Infant mortality: 6.7 deaths per thousand births, being in 2nd place, after Malta, in 2017, above the EU average of 3.6, but constantly decreasing - Life expectancy at birth (75.42 years in 2017, being among the last places, along with Bulgaria, Latvia and Lithuania). Although it increased by 4 years between 2000 and 2017, it remains 6 years below the EU average. The difference between women and men is 7.2 years in favor of women, but much higher than the EU average - 5.6 years.

● The significant improvement of the salary level in health	- Antimicrobial resistance (AMR) represents a major threat to public health. Romania has some of the highest levels of antimicrobial resistance in the EU
Opportunities	**Threats**
● A good academic tradition through the three university centers that carry out scientific and applied research activities. ● The existence of the basic infrastructure for research, development, innovation and technological transfer: 79 units recognized by the national authority ● The provision of health services has been decentralized, autonomy is granted to institutions with competencies in health and medical assistance. The ownership of the public health institutions was transferred to the local authorities. ● Implementation of the private health insurance system ● Collaboration projects in international projects, ensuring the transfer of know-how and the potential to create groups in the medical sector	● The constant decrease in the number of students (according to INSSE, the number of students registered for the bachelor's degree decreased from 72,856 in 2010 to 51,554 in 2017) in the North-East region; ● Unstable legislative framework, due to several reforms in the health sector; ● The migration of qualified labor to other regions and countries; ● Unequal access to health services, low levels of medical assistance facilities and awareness in rural areas.

5. The SWOT analysis of the IMAGO-MOL cluster

The organizational SWOT analysis was carried out on the basis of a questionnaire applied to the cluster members in 2018 and was debated in the meetings of the Working Group, and its summary can be found below. Thus, the problems as well as the opportunities were identified both at the organizational level and at the level of the field in which the cluster operates.

Strengths	**Weaknesses**
● Involved and proactive management, management by professionals in the field ● Experience in writing and implementing projects with national and European funding ● Heterogeneity of group members' expertise ● Interdisciplinarity ● The provenance of many members from the clinical segment, thus bringing into focus the main problems that should be solved from the perspective of the final beneficiary: the patient ● It is the only Cluster in the country dedicated to imaging ● Create links between research and education partners ● Develop research, development and innovation projects ● Large number of CDI units with value researchers ● Access to important medical databases ● Cohesion in developing research projects on topics of common interest ● The outstanding quality and rich experience in research activities of the members of the cluster ● Assumed vision of the development perspectives of the IMAGO-MOL Cluster ● Support for identifying national/international project calls ● Facilitating the development of projects and partnerships for the benefit of members ● Availability of cluster members for dialogue ● Previous successful collaborations leading to stronger relationships between cluster members	● Communication between cluster members mainly takes place during meetings ● Insufficiency of own staff employed ● Absence of a cluster database containing information/literature specific to the field of molecular and structural imaging ● Small number of companies as members of the cluster ● Insufficient interaction with industry ● Lack of a common research infrastructure ● The difficulty of mobilizing a sufficiently large number of researchers around some research topics in the field of medical imaging ● Lack of an IT infrastructure capable of storing and processing large volumes of data ● Legislative difficulties related to the acquisition/storage/processing of personal data, respectively the approval of IT products/hardware in the medical field.
Opportunities	**Threats**
● Availability of financing sources; ● Support from the Northeast Regional Development Agency in the clustering process; ● Development of the private medical system; ● Strong development of the IT segment, especially in Iasi.	● Absence of a dedicated national policy for the development of clusters, in general, and particular problem for medical clusters. ● Limited own financial resources ● Lack of continuity of funds

6. The Mission, Vision and Targets. The strategic direction of action

Mission

The mission of the IMAGO-MOL Cluster is to support the growth of the scientific competitiveness of the cluster members, as well as the competitiveness of the North East Region in the targeted field, by developing a cooperation framework based on the diversification and optimization of the use of medical imaging in an innovative way, a framework aimed at improving efficiency , the quality, productivity and visibility of these members.

Vision

The IMAGO-MOL cluster is a cluster of excellence at European level, in the field of structural, functional and molecular imaging, based on innovation and internationalization, to meet the challenges of the future in this field of medicine.

Strategic directions of action

DS 1 – The development of research-development-innovation activities through the realization of collaborative projects

• Realization of joint CDI projects (Regional system of teleAVC; antimicrobial resistance; development of medical software, through the collaboration between the 3 main actors: hospital - data provider, university - algorithm development, economic agent - application development; use of type applications machine learning, artificial intelligence and/or Big Data in order to develop software/hardware solutions, to improve imaging analysis in biomedical research);

• Creation of a common research infrastructure:

- Partnership between the members of the IMAGO-MOL Cluster in order to establish a center of excellence (diagnosis and treatment) - Nuclear Theranostic Center - focused on the interdisciplinary and complete management of patients;

- Development of an infrastructure project for the implementation of the regional PACS network (USMED 2).

• Creation of a database to more easily transmit information between/to the cluster members and to contain data on: the incidence of different types of diseases that can be investigated through molecular imaging; biomarkers of different diseases; updating the database about biomarkers that can be useful for molecular and structural imaging.

DS 2 - Strengthening the institutional capacity of the IMAGO MOL Cluster, through knowledge and internal networking, as well as by attracting new members from the academic environment, public and private medical service providers, as well as from the medical industry and that of new technologies

• Attracting new members in order to expand the chain of suppliers;

• Promoting health and health education:

- Educational programs to increase the capacity to identify and recognize stroke by the population;

- Promotion of participation in screening programs.

DS 3 – Increasing the level of training and specific skills at the level of cluster members through training activities and exchange of experience

• Supporting researchers (training, participation in other scientific events) in order to develop new directions, for example the use of new radiolabeled particles/new radioactive isotopes in preclinical research;

• The specialization of local researchers in the field of radiochemistry and nuclear physics in order to benefit from the existing local infrastructure for the production of radioactive isotopes and radiotracers;

• Organization of courses, trainings, workshops by inviting renowned speakers in the field on the subject of pathological anatomy and correspondence imaging, recognition of early signs of stroke (Face Arm Speech test) by dispatchers and ambulance staff, UPU, doctors by family.

DS 4 – Increasing the visibility of the cluster through the development and implementation of promotion activities and
branding

• Updating and expanding the cluster website, to increase the visibility of its members and facilitate the access of cluster members to CDI projects with foreign partners (medical research institutions, educational institutions);
• Promoting the cluster by participating in international scientific symposia and conferences;
• Participation in fairs, exhibitions and economic missions - dissemination of promotional materials for IMAGO-MOL and members;
• Realization of an Expansion and Internationalization Strategy of the Imago-Mol Cluster

DS 5 – Lobby and advocacy in the field of policies aimed at the development of the medical imaging and related sector
• Proposal to improve public policies in the field of medical imaging and related;
• Health strategies for imaging evaluation (PET CT) and treatment control in cardiovascular diseases.

7. Priority research projects

Teme de cercetare	Obiective	Colaboratori
The role of telemedicine in streamlining the workflow in stroke centers in the North East Region of Romania.	● Prospective study of cerebral ischemic strokes diagnosed and treated by thrombolysis. ● Realization and implementation of imaging evaluation protocols in the North-East region of Romania.	Radiology, Neurology, UPU, SMURD, Interventional Imaging,ROMSOFT, PIXEL DATA
Creation of an integrated management system of clinical-paraclinical data in the case of brain tumor pathology.	● CT scans, MRI, MRI spectra, radioisotopes in brain tumors. ● Imaging evaluation of the results of RT, surgical and oncological treatment at intervals of 1-5 years.	Sp. Prof. Dr. N. Oblu, Radiology, Neurology, Neurosurgery, Nuclear Medicine, Oncology
Implementation of an integrated clinical-paraclinical data management system in the case of cranio-maxillo-facial traumatic emergencies	● CT, MRI, CBCT diagnostic explorations in cranio-maxillo-facial trauma ● Realization of post-treatment imaging evaluation protocols.	Neurosurgery, BMF, ENT, Ophthalmology, Radiology, Neurology, Psychiatry, Forensic Medicine
Development of an integrated management system of clinical-paraclinical data in the case of neurological pathology of the newborn.	● Prospective study of imaging, spectroscopic and metabolic changes through Spectro-NMR analyzes of CSF, urine, etc. in newborns with neurological disorders ● Realization and implementation of evaluation protocols in the NE region of Romania. ● Metabolomics by MRI	Neonatology (prof. Stamatin Maria), Radiology (prof. D. Haba), Nuclear Medicine, Biochemistry, Inst. "Petru Poni" of the Romanian Academy
Creation of an integrated management system for patients with degenerative cerebro-medullary pathology.	● Prospective study of cerebro-medullary degenerative changes. ● Methods of quantifying cerebral degeneration using software that analyzes the scans: CT, MRI or PETCT. ● Metabolomics by MRI	Radiology, Neurology, Psychiatry, Univ. Technica Gh. Asachi., Romsoft SRL, Inst. "Petru Poni" of the Romanian Academy ,(Dr Calin Deleanu, Ing Chim Alina Nicolescu)
Advanced solutions for viewing medical images to improve diagnosis and monitor the effect of treatments	● methods of (semi-)automatic alignment of the medical images of the same patient based on the information associated with the spatial and temporal relationships between the relevant objects ● methods of viewing multi-modal medical images	Surgery, Thoracic surgery, Endocrinology, Oncology, Neurology, Hematology, Gastroenterology, Dermatology Radiology, Nuclear medicine Univ. Al.I.Cuza, Univ. Tehnica Gh. Asachi, Romsoft SRL

Retrieval of medical images based on content	● automatic extraction of features (color, shape, texture) associated with medical images or regions of interest from them ● defining an indexing scheme for the efficient search of information in databases with medical images ● methods of providing relevant feedback in the retrieval system	Nuclear medicine, Biochemistry, Hematology, Biophysics Inst. Petru Poni Univ. Tehnica Gh. Asachi
Semantic retrieval of images in medical databases	● semantic modeling of the information contained in the medical images ● visual and computational mechanisms for associating semantic synonyms corresponding to visual anomalies for different pathologies ● the hierarchical representation of the features of the regions of interest present in the medical images ● calculating the similarity between images or regions of interest	Nuclear medicine, Radiology Univ. Al.I.Cuza, Univ. Tehnica Gh. Asachi, Romsoft SRL
Simulation of neurosurgical procedures	● simulation of tissue deformation in the case of neurosurgical interventions ● simulation of performing intracranial biopsies ● the development of visualization techniques to increase the safety of neurosurgical procedures	Surgery, Neurosurgery, Neurology, Radiology, Univ. Al.I.Cuza, Univ. Tehnica Gh. Asachi, Romsoft SRL
In vitro and in vivo study of some biophysical characteristics of radiopharmaceuticals	● Study of 99mTc isonitriles ● The study of other vector molecules labeled with 99mTc ● The study of nanoderivatives labeled with 99mTc	Nuclear medicine, Pharmacology, Biochemistry, Hematology, Biophysics, Inst. Petru Poni
Analytical study of planar scintigraphic images, SPECT and compared/fused with echo/CT/MRI images	● Study of processing parameters of scintigraphic images ● The study of some physical parameters of the fused images	Nuclear medicine, Radiology Univ. Al.I.Cuza, Univ. Technique Gh. Asachi, Romsoft SRL
The usefulness of radiotracers labeled with 99mTc for the evaluation of different tumor types	● The utility of isonitriles in the imaging diagnosis of some neoplasms. ● The usefulness of isonitriles in imaging diagnosis of thymomas ●Explorations with radioisotopes in neuroendocrine tumors ● The role of scintigraphy in the study of thyroid nodules	Surgery, Thoracic surgery, Endocrinology, Oncology, Neurology, Hematology, Gastroenterology, Dermatology Radiology, Nuclear medicine
The utility of isonitriles labeled with 99mTc for the non-invasive evaluation of the Pgp protein and the character of multidrug resistance	● Pre-chemo/hormone therapy evaluation ● Post-chemo/hormone therapy evaluation	Nuclear medicine, Radiology Endocrinology, Surgery, Thoracic surgery, Oncology, HematologyUniv.

		Tehnica Gh. Asachi., Romsoft SRL
The study of some biological structures through physical and biophysical methods	FTIR (IR spectroscopy) in the structural and dynamic study of some biomolecules and biomembranes	Internal medicine, Surgery, Biochemistry, Hematology, Biophysics Inst. Petru Poni
Regional teleAVC system	The development of an integrated computer system, which follows the information flow with the patient with stroke pathology at the center, located in the therapeutic window. The computer system will monitor the increase in the efficiency of the management of stroke cases.	Clinical Emergency Hospital "Prof. N.Oblu" Iasi Iasi County Council PixelData SRL, Romsoft
Innovative pilot project for the implementation of an evidence-based prevention strategy in the field of combating antimicrobial resistance in the pediatric population in the Northeast region	Development of an innovative approach to the MDR problem based on the molecular characterization of the strains isolated from the pediatric population in the North-East region, of a software application regarding the circulating MDR strains and their resistance profile, including a rapid alert system for the doctors involved in case management and generation of a map of microbial resistance"	UMF Grigore T. Popa Iasi, Sf Maria Children's Hospital in Iasi, Norwegian partner: SINTEF AS
Translational studies for the correlation of PET imaging and biochemical markers and the evaluation of a possible preventive therapy before the irreversible onset of Alzheimer's disease (AD)	Identification of personalized biochemical and imaging markers of correlation for Mild Cognitive Impairment (MCI) versus Alzheimer's disease (AD) through translational animal model and patient studies	UMF Grigore T.Popa Iasi, UAIC
The Big Medical Data platform for the analysis of the incident of primary/secondary cancer after the Chernobyl event and the use of Artificial Intelligence for prediction and improving the quality of life	The development of a Big Data platform with retrospective information collected from post-Chernobyl oncology patients (1986-2019) and based on it a sophisticated AI tool to be prospectively applied to patients with primary cancer in order to improve the quality of life, as well as through addressing the incidence of multiple metachronous cancers	UMF Grigore T.Popa from Iasi, UAIC, ROMSOFT SRL, Academia Romana – Iasi branch
Big Data Platform for Quality of Life Analysis of Patients with Neuroendocrine Tumors	The development and implementation of a High Performance Big Data Digital Platform regarding neuroendocrine tumors, which will be a comprehensive model for the analysis of clinical data in order to develop a patient-centered strategy in the fight against neuroendocrine tumors	UMF Grigore T.Popa from Iasi, UAIC, ROMSOFT SRL, UTI, Euroclinic SRL
Pilot project for training in Interventional Radiology using 3D Printing models	Development of 3D printed didactic materials for learning vascular and non-vascular interventional radiology techniques	UMF Grigore T.Popa from Iasi, Sf Spiridon Iasi Emergency Hospital, "Sfantul Ioan" County Hospital Suceava

Center of excellence (diagnosis and treatment) - Nuclear Theranostic Center - focused on interdisciplinary and complete patient management	The development of a Center of Excellence in translational imaging research with the development of interconnection software applications	SCAN EXPERT SRL PIXELDATA SRL ROMSOFT SRL UMF Grigore T.Popa din Iasi
Regional Center of Excellence in Personalized Endocrinology and Teragnostics	Creating the first pole of excellence in hybrid imaging for endocrine and metabolic diseases in the Northeast region and optimizing the parameters and diagnostic and treatment guidelines for endocrine and metabolic diseases	UMF Grigore T.Popa from Iasi, Euroclinic SRL
Development of an infrastructure project for the implementation of the regional PACS network (USMED 2)	Development of a scalable system for management and storage of imaging data for the North-East region that can be used by public and private clinics based on a subscription, to replace the existence of a PACS at the institution level	Public-private partnership (CJ Iasi - public and private hospitals)
Translational research project for the synthesis and characterization of new radiopharmaceuticals in the context of personalized medicine	● Identification and characterization of optimal phenotypic markers for the development of radiotracers; ● The development of new radiotracers for diagnosis, in the first phase, and, subsequently, for therapy in the context of theranostics	UMF Grigore T.Popa from Iasi, IRO Iasi, „Petru Poni" Institute from Iasi
Research project on the influence of environmental factors and possible correlations with imaging markers in glioblastoma precision medicine	● Retro-prospective study regarding the identification/quantification of radiation/nanoparticle contamination from the external and/or professional environment in the occurrence/evolution of glioblastomas ● Establishing optimal morpho-functional imaging parameters for the evolutionary evaluation of the impact of these factors	UMF Grigore T.Popa Iasi , Sp. Prof. Dr. N. Oblu
Creation of a database to more easily transmit information between/to the cluster members and to contain data on: the incidence of different types of conditions that can be investigated through molecular imaging; biomarkers of different diseases; updating the database about biomarkers that can be useful for molecular and structural imaging	● digital inventory of conditions with major implication of diagnostic/teragnostic imaging ● the inclusion of this database in the already implemented USMED system ● its periodic updating in relation to external developments ● continuous verification of its accessibility on the digital platforms of the cluster members	UMF Grigore T.Popa Iasi, Euroclinic SRL

8. Implementation plan of the IMAGO_MOL Cluster Strategy 2021-2027

Strategic directions of action	Project/activity title	Objective	Person in charge/ Responsible	Estimated budget	Funding sources	Implementation interval
DS 1 – The development of research-development-innovation activities through the realization of collaborative projects, with the generation of IMAGO-MOL branded products and services	**Proiecte de infrastructura de cercetare comune**					
	Regional Center of Excellence for Personalized Diagnosis and Artificial Intelligence in Medicine and Imaging (MEDIMAG-IA)	The general objective of the project is to improve the scientific and economic competitiveness of the members of the IMAGO-MOL Cluster through intelligent specialization in the field of health, namely early diagnosis, personalized treatment, monitoring and prognosis in oncology, with the use of new Artificial Intelligence technologies.	Prof. Univ. dr. Cipriana Stefanescu, UMF IASI Spitalul Sf Spiridon Prof Adrian Iftene, UAIC Prof Iulian Ciocoiu, TUIASI Mindfully Stefan Iarca, Technologies SRL (XVision)	1.500.000 euro	POC Innovation Clusters	2022-2024
	Partnership between the members of the IMAGO-MOL Cluster in order to establish a center of excellence (diagnosis and treatment) - Nuclear Theranostic Center - focused on the interdisciplinary and complete management of patients;	The development of a Center of Excellence in translational imaging research with the development of interconnection software applications	Gabriel Valet, SCAN EXPERT Alin Cordos, PIXELDATA Lucian Nita, ROMSOFT Prof. Univ. dr. Cipriana Stefanescu UMF IASI	5.000.000 euro	Structural Funds 2021 - 2027	2023 - 2025
	Regional Center of Excellence in Personalized Endocrinology and Teragnostics	Creating the first pole of excellence in hybrid imaging for endocrine and metabolic diseases in the NE region and optimizing parameters and	Prof. Univ. dr. Cipriana Stefanescu UMF IASI Prof. Univ. dr. Cristina Preda, UMF IASI	5.000.000 euro	Structural Funds 2021 - 2027	2023 - 2025

		diagnostic and treatment guidelines for endocrine and metabolic diseases	Conf. Univ. dr. Constantin Volovat, Euroclinic SRL			
	Regional PACS network (USMED 2)	Development of a scalable system for management and storage of imaging data for the North-East region that can be used by public and private clinics based on a subscription, to replace the existence of a PACS at the institution level	Parteneriat public – privat (CJ Iasi – spitale publice si private) Sef lucrari dr. Vasile Fotea	4.000.000 euro	European funds Local funds	2024 - 2026
	Realization of joint CDI projects					
	Regional teleAVC system	The development of an integrated computer system, which follows the informational flow with the patient with stroke pathology at the center, located in the therapeutic window. The computer system will monitor the increase in the efficiency of the management of stroke cases.	Spitalul Clinic de Urgenta "Prof. N.Oblu", Iasi Prof. univ. dr. Danisia Haba, Conf. Dr. Cuiureanu Dan, sef l. dr. Diana Hodorog, sef l. dr. Fipil Carmen (medic primar Balut Cristina, Danciu Ina, Diana Halit, Cucos Liliana, membri in echipa de implementare) Consiliul Judetean Iasi Alin Cordos, PixelData Lucian Nita, ROMSOFT	2.000.000 euro	European funds/ national budget	2023 -2025
	Research project on the influence of environmental factors and possible correlations with imaging markers in glioblastoma precision medicine	- - Retro-prospective study regarding the identification/quantification of radiation/nanoparticl	Prof.dr. Danisia Haba UMF IASI - Colaborare cu Univ. Grenoble, Franta - student doctorand	2.000.000 euro	European Funds	2021-2024

		e contamination from the external and/or professional environment in the occurrence/evolution of glioblastomas - - Establishing optimal morpho-functional imaging parameters for the evolutionary evaluation of the impact of these factors - - Involvement of doctoral students coordinated in co-supervision				
	Creation of a database to more easily transmit information between/to cluster members and containing data on: the incidence of different types of conditions that can be investigated by molecular imaging; biomarkers of different diseases; updating the database of biomarkers that may be useful for molecular and structural imaging.	- the digital inventory of conditions with a major implication of diagnostic/teragnostic imaging - the inclusion of this database in the already implemented USMED system - its periodic updating in relation to external developments - the continuous verification of its accessibility on the digital platforms of the cluster members	Conf.dr. Delia Ciobanu, UMF IASI Sef Lucrari dr. Constantin Volovat	500.000 euro	European Funds	2021-2026
	Translational research project for the synthesis and characterization of new	- Identification and characterization of optimal	Prof. Univ. dr. Cipriana Stefanescu UMF IASI	2.000.000 euro	European Funds	2021 - 2025

	radiopharmaceuticals in the context of personalized medicine	phenotypic markers for the development of radiotracers; - The development of new radiotracers for diagnosis, in the first phase, and, subsequently, for therapy in the context of theranostics	Dr. Mariana Pinteala, Institutul „Petru Poni" din Iasi Institutul Regional de Oncologie		Banking sources	
	Innovative pilot project for the implementation of an evidence-based prevention strategy in the field of combating antimicrobial resistance in the pediatric population in the Northeast region	Development of an innovative approach to the MDR problem based on the molecular characterization of the strains isolated from the pediatric population in the North-East region, of a software application regarding the circulating MDR strains and their resistance profile, including a rapid alert system for the doctors involved in case management and generation of a map of microbial resistance"	Prof. Dr. Doina Azoicai, UMF Grigore T.Popa din Iasi Conf. Univ. dr. Carmen Panzaru, UMF Grigore T.Popa, Spitalul de Copii Sf Maria din Iasi Partener norvegian: SINTEF AS	1.300.000 euro	Norwegian funds	2022 -2023
	Translational studies for the correlation of PET imaging and biochemical markers and the evaluation of a possible preventive therapy before the irreversible onset of Alzheimer's disease (AD)	Identification of personalized biochemical and imaging markers of correlation for Mild Cognitive Impairment (MCI) versus Alzheimer's disease (AD) through translational animal model and patient studies	Medic drd. Roxana Iacob, UMF Grigore T.Popa Prof. Univ. dr. Cipriana Stefanescu, Laurentiu Agrigoroaie, UMF Grigore T.Popa – CEMEX Iasi Sef lucrari Oana Cioanca - UMF Grigore T.Popa Prof.univ. dr. Mihai Hritcu, UAIC Iasi	650.000 eur	JPND	2021 -2023

	The Big Medical Data platform for the analysis of the incident of primary/secondary cancer after the Chernobyl event and the use of Artificial Intelligence for prediction and improving the quality of life	The development of a Big Data platform with retrospective information collected from post-Chernobyl oncology patients (1986-2019) and based on it a sophisticated AI tool to be prospectively applied to patients with primary cancer in order to improve the quality of life, as well as through addressing the incidence of multiple metachronous cancers	Prof. Univ. dr. Cipriana Stefanescu Prof. Univ. dr. Adrian Iftene, UAIC Iasi Sef lucrari, Paul Herghelegiu, UTI Mihaela Luca, Academia Romana – filiala Iasi Lucian Nita - Romsoft	5.000.000 euro	Horizon 2020/ Horizon Europe	2022 - 2024
	Big Data Platform for Quality of Life Analysis of Patients with Neuroendocrine Tumors	The development and implementation of a High Performance Big Data Digital Platform regarding neuroendocrine tumors, which will be a comprehensive model for the analysis of clinical data in order to develop a patient-centered strategy in the fight against neuroendocrine tumors	Drd. Cati Stolniceanu, UMF IASI Prof. Univ. dr. Cipriana Stefanescu, UMF IASI Medic drd. Cati Stolniceanu, UMF IASI Prof. Univ. dr. Adrian Iftene, UAIC Iasi Prof. Univ. dr. Adrian Iftene, UAIC Iasi Sef lucrari, Paul Herghelegiu, UTI Mihaela Luca, Academia Romana – filiala Iasi Lucian Nita – Romsoft Dr. Constantin Volovat, Euroclinic SRL	5.000.000 euro	Horizon Europe	2022 - 2024
	Software based on artificial intelligence that automates the process of outlining the organs at risk,	Development of the Mediq Software - software based on artificial intelligence - which outlines CT/MRI images	SYNAPTIQ TECHNOLOGIES SRL Dragos Vasile Duse	500 000 EUR	Horizon Europe I3	2021 - 2024

	during the development of the treatment plan within radiotherapy	objectively and with increased accuracy Obtaining a considerable amount of clinical data for the purpose of training artificial intelligence Testing the solution in the specialized environment Establishing partnerships with the aim of penetrating the national/international market	Săbău Roxana Arina			
	Pilot project for training in Interventional Radiology using 3D Printing models	The development of 3D printed didactic materials for learning vascular and non-vascular interventional radiology techniques	Sef lucrari dr. Vasile Fotea, UMF IASI/Spitalul de Urgenta Sf Spiridon Iasi Conf. Univ. dr. Corina Lupascu Ursulescu, UMF IASI/Spitalul de Urgenta Sf Spiridon Iasi Dr Emanuel Gavriliuc (Spital Judetean „Sfantul Ioan" Suceava)	10.000 euro	Internal grants UMF Iasi	2022 - 2024
DS 2 - Intarirea capacitatii institutionale a Clusterului IMAGO MOL, prin cunoastere	Attracting new members in order to expand the supplier chain	Increasing the value chain within the IMAGO-MOL cluster through periodic campaigns to attract new members (at least 2 per year)	Carmen Mihai, manager inovare Alina Capitanu, vicepresedinte Cluster IMAGO-MOL	-	-	continuously

si networking intern, precum si prin atragerea de noi membri din mediul academic, furnizori de servicii medicale publici si privati, precum si din industria medicala si cea a noilor tehnologii	Health promotion and health education: ● Educational programs to increase the capacity to identify and recognize stroke by the population: → Holding conferences with family doctors, neurologists, radiologists, emergency medicine doctors, ambulatory doctors, on the subject of diagnosis and interdisciplinary management of stroke → Holding hackathon-type events for the development of an application for recognizing early signs of stroke → → Holding symposia on post-stroke recovery	Increasing the degree of information about the early signs of stroke among patients, doctors, the general public Development of an application on mobile devices for recognizing the signs of stroke Recognition of early signs of stroke (Face Arm Speech test) by dispatchers and ambulance staff, UPU, family doctors	Prof.Univ.dr. Danisia Haba, Spital Oblu, Medimagis Carmen Mihai, manager inovare Alina Capitanu, vicepresedinte Cluster IMAGO-MOL	10.000 euro	Own sources Sponsors	continuously
DS 3 - Cresterea nivelului de pregatire si a competentelor specifice la nivelul membrilor clusterului prin activitati de formare si schimb de experienta	**Supporting researchers (training, participation in other scientific events) in order to develop new directions, for example the use of new radiolabeled particles/new radioactive isotopes in preclinical research;** **Specializing local researchers in the field of radiochemistry and nuclear physics to benefit from the existing local infrastructure for the production of radioactive isotopes and radiotracers;** Organizarea de cursuri, instruiri, workshop-uri prin invitarea de speakeri consacrați în domeniu pe tematica anatomiei patologice si a imagisticii in corespondenta	Improving the level of knowledge and skills of researchers in the fields of specialization Co-participatory education of students/residents regarding the impact of the involvement of medical clusters in the development of IT and AI technology with medical applications and imaging in precision medicine	Carmen Mihai, manager inovare Alina Capitanu, vicepresedinte Cluster IMAGO-MOL Prof.dr. Cipriana Stefanescu, Presedinte Consiliu Stiintific IMAGO-MOL	NA	Own sources European Funds	continuously

DS 5 Cresterea vizibilitatii clusterului prin dezvoltarea si implementarea de activitati de promovare si branding	The organization of courses, trainings, workshops by inviting established speakers in the field on the subject of pathological anatomy and imaging in correspondence Permanent updating and expansion of the cluster website, to increase the visibility of its members and facilitate the access of cluster members to CDI projects with foreign partners (medical research institutions, educational institutions) Development of an information exchange space and posts of relevant information in Google Drive for cluster members The inclusion of a link to the website of the IMAGO-Mol Cluster from the members' websites Creation of a monthly newsletter informing and promoting the activities carried out by the cluster members and by the cluster management team Promotion of actions through the social media page of the Cluster Making leaflets and brochures	Ensuring the visibility of the actions organized by the cluster and its members	Carmen Mihai, manager inovare Alina Capitanu, vicepresedinte Cluster IMAGO-MOL	1.000 eur/anual	Own Sources	continuously
	Promoting the cluster by participating in international scientific symposia and conferences by giving presentations	Increasing the visibility of the cluster in the development of the imaging, medical sector	Carmen Mihai, manager inovare	5.000 euro/anual	Own sources	continuously

	The awarding of the PROMISING YOUNG SCIENTIST IN NUCLEAR MEDICINE award by the cluster within the Annual Nuclear Medicine Conferences		Alina Capitanu, vicepresedinte Cluster IMAGO-MOL			
	Participation in C2C, B2B events, fairs, exhibitions and economic missions - dissemination of promotional materials for IMAGO-MOL and members	Promotion of members' activities, identification of potential collaboration partners	Carmen Mihai, manager inovare Alina Capitanu, vicepresedinte Cluster IMAGO-MOL	10.000 euro/anual	Own sources	continuously
DS 4 Lobby si advocacy in domeniul politicilor destinate dezvoltarii sectorului de imagistica medicala si conex	Proposals to improve public policies in the field of medical imaging and related	-Analysis of the current place of imaging investigations in the current diagnostic guidelines for various diseases - Proposals to modify the national guidelines in correlation with the evolution of the European guidelines	Carmen Mihai, manager inovare Alina Capitanu, vicepresedinte Cluster IMAGO-MOL Prof.dr. Cipriana Stefanescu, UMF IASI	Probono	NA	continuously
	Health strategies for imaging evaluation (PET/SPECT/CT, echo) and treatment control in cardiovascular diseases	- Analysis of the current place of imaging investigations in the current diagnostic guidelines for cardiovascular diseases - Proposals to modify the national guidelines in correlation with the evolution of the European guidelines	Prof.dr. Antoniu Petris, UMF IASI Prof.dr. Cipriana Stefanescu, , UMF IASI	Probono	NA	continuously

9. Monitorization and Indicators

General Objective	Objectively verifiable indicators	2021	2027	Milestones (2024)	Sources of verification
Supporting the increase in the scientific competitiveness of the cluster, as well as the competitiveness of the North East Region in the targeted field, by developing a cooperation framework based on the diversification and optimization of the use of medical imaging in an innovative way, a framework aimed at improving the efficiency, quality, productivity and visibility of the members	Number of CDI projects	**2**	**5**	**3**	Cluster Reports
Strategic directions	**Objectively verifiable indicators**	**2021**	**2027**	**Milestones (2024)**	**Sources of verification**
DS 1 The development of research-development-innovation activities through the realization of collaborative projects	Center for translational research, personalized diagnosis and AI	**0**	**1**	**0**	Cluster Reports Consultant reports Social Media channels
	New products as a result of the creation of the necessary infrastructure for the exchange and transfer of knowledge	**2**	**3**	**2**	
DS 2 Strengthening the institutional capacity of the IMAGO MOL Cluster, through knowledge and internal networking, as well as by attracting new members from the academic environment, public and private medical service providers, as well as from the medical and new technology industries	Meetings of the Working Groups for the monitoring and revision of the strategic documents of the IMAGO-MOL Cluster	**3**	**6**	**5**	
	implementation of the data protection standard (GDPR)	**0**	**1**	**0**	
	Campaign to expand the cluster in order to attract new members,	**2**	**3**	**3**	
	Analysis of the value chain in the field of personalized medicine	**0**	**1**	**0**	
	Obtaining ESCA Gold certification	**0**	**1**	**1**	
DS3 Increasing the level of training and specific skills of cluster members through training activities and exchange of experience	Realization of a series of trainings in physical/virtual format in the field of using AI in the medical field	**0**	**4**	**3**	Cluster reports Consultatnt reports
	Organization of project generation seminars	**3**	**6**	**5**	

	Carrying out innovation audits for 10 SME members of the cluster	**10**	**10**	**20**	Social Media Channels
DS4 Increasing the visibility of the cluster by developing and implementing promotional and branding activities	Carrying out physical and virtual C2C missions	**3**	**5**	**4**	
	Actions to stimulate the regional MedTech community (hackathon, regional medtech conference)	**2**	**4**	**3**	
DS5 Lobby and advocacy in the field of policies aimed at the development of the medical imaging and related sector	Proposals to improve public policies in the field of medical imaging and related	**1**	**3**	**2**	

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