STRATEGIC INNOVATIVE CLUSTER for the Smart Specialized Field of Mechatronics «MECHATREC»
«MECHATREC» STRATEGIC INNOVATIVE CLUSTER:

- As founded as an associative entity - cluster - in 2010 (based on the National Scientific Cluster "MICRONANOMECATRONICA");
- Is a member of CLUSTERO - the National Cluster Association in Romania since 2011;
- It brings together a mix of "top down" and "bottom up" approaches.
- It has obtained the European Bronze label in Excellence Management.
- It included 144 entities (100 industry members, 22 catalysts, 13 R&D entities and 9 authorities).
«MECHATREC» STRATEGIC INNOVATIVE CLUSTER

Brand:

«MECHATRONICS FOR THE FUTURE!»

INNOVATIVE STRATEGIC CLUSTER
for the Intelligent Specialized Field of Mechatronics
«MECHATREC»
GENERAL OBJECTIVE of «MECHATREC» STRATEGIC INNOVATIVE CLUSTER

☑ Developing the institutional capacity of the MECHATREC Cluster, improving competitiveness both for the Bucharest-Ilfov Region and the national and international SME members, and improving the internationally competitive position of both the cluster and its members;

☑ Attracting public-private investments in the Bucharest-Ilfov region and other regions of Romania and increasing the number of employees in the innovative research, industry and business sector in the region and in Romania.
SPECIFIC OBJECTIVES of «MECHATREC» STRATEGIC INNOVATIVE CLUSTER

- Concentrating resources on key priorities and creating opportunities for developing the institutional capacity of the MECHATREC Cluster, as well as enhancing the competitiveness of both regional and national and international SME members;
- Increasing the volume of investments made by cluster companies;
- Growth in exports by high-tech manufacturing / manufacturing SMEs based on the intensive use of knowledge of smart cluster domains;
- Increasing intelligent professional skills in advanced areas;
- Increasing work productivity and employment in the cluster;
- Increasing trade relations between cluster members and development regions in Romania;
- The development of cross-sectoral, national and international networks for the Mechatrec Cluster and other clusters in Romania and the EU.
The main ACTIVITIES of «MECHATREC» STRATEGIC INNOVATIVE CLUSTER focus on:

- **Research - Development - Innovation** for the creation and development of innovative smart high-tech products and technologies;
- **Intelligent fabrication**, collaboration between entities and support of commercial activities;
- **Information communication, promotion, branding and public relations**;
- **Consistent technological transfer and implementation** by capitalizing and valorising the results of RDI activities;
- **Training, qualification and skill development of human resources**, both within the cluster and beyond;
- **Internal and international cooperation of SMEs** and competent units of the cluster and other clusters in Romania and the EU;
- **Networking and internationalization, exchange of best practices**.
Market offer of «MECHATREC» STRATEGIC INNOVATIVE CLUSTER

• SMART CYBER-MIX-MECHATRONIC PRODUCTS & SYSTEMS:

- Mechatronic equipment, systems, devices and other mechatronic / integrated / intelligent tools and cyber-mix-mechatronic intelligent tools for industrial and automotive applications (auto, neutronics, hydronic, agrotronic, energetic, medtronic, etc.)
- Micro-nanomechronic and micro-nanomechronic intelligent mix-cyber applications with the use of lasers in civil, aerospace, military, etc.;
- Micro and nano scale intelligent mechatronic / integrated / adaptive and cyber-mix-mechatronic devices for medical, biomedical, environmental applications, etc.;
- Intelligent industrial robots based on mechatronic / integrated / adaptive and / or cyber-mix-mechatronic principles for general and specialized applications;
- Medical, biomedical equipment, devices and machines;
- Systems, equipment and components for hydronics and neutronics;
- Systems, equipment and components for hot technologies;
- Equipment for environmental control and monitoring;
- Components and specialized software for industrial applications.
Market offer of «MECHATREC»
STRATEGIC INNOVATIVE CLUSTER

- Intelligent and innovative mechatronic / integrated / adaptive and cyber-mix-mechatronic technologies for industrial and laboratory applications;
- Intelligent and innovative and cyber-mix-mechatronic specialized mechatronic / integrated / adaptive technologies for measuring, control, calibration, adjustment and testing in industrial processes in intelligent manufacturing lines and in laboratories;
- Unconventional intelligent and innovative technologies: fast prototyping, for alternative energy sources, specialized for hot and cold processes (deposition of biocompatible materials, laser processing, etc.)
- Transfer intelligent and innovative results of RDI activity.
Market offer of «MECHATREC» STRATEGIC INNOVATIVE CLUSTER

• **High-Tech services for:**
  - Commissioning, testing, calibration, maintenance, mechatronic / integrated / adaptive and / or cyber-mix-mechatronic intelligent equipment and systems, industrial and specialized laboratories;
  - Characterization of micro-nanostructured, intelligent and targeted properties, obtained and exploited by innovative high-tech mix-mechatronic and cyber-mix-mechatronic technologies;
  - Training / training / evaluation / attestation of specialized personnel with medium and high qualifications, in the mechatronic / integrated / adaptive, cyber-mix-mechatronic domains, etc .;
  - Monitoring and environmental control;
  - Testing-laboratory and industrial testing;
  - Technical consultancy, analyses, synthesis and strategies, etc .;
  - Editing and promoting technical, scientific and commercial materials;
  - Enrolment in the Regonica platform for international promotion;

• **COLLABORATIONS for:**
  - Exploiting RDI results, disseminating and transferring knowledge, smart technologies and products, and specialized technical assistance;
  - Designing projects in intelligent high-tech areas, strategies, market studies, development and feasibility, etc. In the framework of the National RDI Program (PNCDI III), the European Horizon 2020 Program, the Program with Romanian and Foreign Business Agents, etc .;
  - Creating consortia for the development of RDI project proposals and their implementation in national and international programs;
  - Creating domestic and international investment partnerships and consortia.
«MECHATREC» STRATEGIC INNOVATIVE CLUSTER has concluded COLLABORATION PROTOCOLS with the following bodies:

- **21 clusters and competitiveness poles at national and international level:**
  - Magurele High-Tech Cluster "MHTC";
  - Competitiveness pole for the Mechatronics Industry «INDMECATRON», Bucharest;
  - Competitiveness pole for the agricultural industry "INDAGRO POL", Bucharest;
  - Cluster «BIOGASINO», Bucharest;
  - Automotive South West Oltenia Pole Cluster, Craiova;
  - Innovative Cluster "ETREC", Sacele;
  - The "Transylvanian Mechanical Engineering" Innovations Cluster, Sf. Gheorghe;
  - Innovative Biomass "Green Energy", Sf. Gheorghe;
  - Innovation and Technology Cluster «ALT Brasov»;
  - Cluster "ROVEST - Green House of the Danube", Brasov;
  - The iTech Transilvania Cluster by ARIES Transilvania, Cluj Napoca;
  - The PrelMet Transylvania Metals Cluster, Cugir;
  - Cluster for Health "ROHEALTH Association", Bucharest;
  - The Mechatronic Cluster in Austria;
  - Plastic Cluster LOWE, Austria;
  - Cluster 55, Sweden;
  - MECHATREC Cluster, Belgium; Hungary;
  - FUTURA INTERNATIONAL Cluster, Hungary;
  - Creative Industries Cluster - KVIK in Vojvodina, Serbia;
  - Omnipack First Hungarian Packaging Technology Cluster, Dorog, Hungary;
  - "LaBioChimMach DZZD" Cluster, Sofia, Bulgaria;

- **7 chambers of commerce and industry:**
  - CCIR - Chamber of Commerce and Industry of Romania;
  - CCIB - Chamber of Commerce and Industry of Bucharest;
  - CCIJ Calarasi - Chamber of Commerce and Industry of Calarasi County;
  - CCIJ Covasna - Chamber of Commerce and Industry of Covasna County;
  - CCI Dolj - Chamber of Commerce and Industry of Dolj county;
  - CCI Prahova - Chamber of Commerce and Industry of Prahova County;
  - CCI Brasov - Chamber of Commerce and Industry of Brasov County;

- **4 Regional Development Agencies:**
  - Regional Development Agency Bucharest - Ilfov;
  - South-Muntenia Regional Development Agency;
  - South-West Regional Development Agency Oltenia;
  - Regional Development Agency Alba Iulia;
R-D-I PROGRAMMES:
Accessed by «MECHATREC» Strategic Innovative Cluster:

- National
- International
### List of projects run by APROMECA:

<table>
<thead>
<tr>
<th>No. of crt.</th>
<th>Name of the Project / Partners / Programme</th>
<th>(Eligible value for APROMECA) / Total Project Value</th>
<th>Running period:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Development of education for the viability of the labour market through the smart vectors Mechatronics and Integronics (M&amp;I) - POSDRU/90/2.1/S/62144 LEAD PARTNER: INCDMTM</td>
<td>(817,018 lei) / 6,650,566 lei</td>
<td>02.08.2010 – 01.08.2013</td>
</tr>
<tr>
<td>2</td>
<td>Through practice you have a feature - POSDRU/161/2.1/G/141251 LEAD PARTNER: APROMECA Partners: INCDMTM ; UPB; Univ. Lumina;</td>
<td>(540,195,95 lei) / 2,162,883.35 lei</td>
<td>24.04.2014 – 24.10.2015</td>
</tr>
</tbody>
</table>

TOTAL (Eligible value APROMECA) / Total value in projects (2.245,653,95 lei) / 9.716,335,35 lei
## List of project proposals submitted by APROMECA

<table>
<thead>
<tr>
<th>No.</th>
<th>Project name / Partners /</th>
<th>Programme</th>
<th>(APROMECA eligible value) / Total project value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excellence Centre for CDI in Design, Execution and Control of Precision Gears with Evolutionary Dentition”, Acronym: CERD LEAD PARTNER: APROMECA – EMC Cluster MECHATREC</td>
<td>POC 2015 Programme Section B Submitted on: 18.08.2015</td>
<td>(9,629,489.67 lei) / 16,797,549.94 lei</td>
</tr>
<tr>
<td>2</td>
<td>“The Danube Regional Cluster in the field of Intelligent Specialization of Integrated Applied Mechatronics”, Acronym: MRC-DR LEAD PARTNER: APROMECA – EMC Cluster MECHATREC 11 Partners in 5 countries: 1 DE, 4 RO, 3 BG, 1 Slovenia &amp; 2 Serbia</td>
<td>Transnational Danube Programme / INTERREG Submitted on: 03.11.2015</td>
<td>(370,000 Euros = 1,665,000 lei) / 2,400,000 Euros = 10,800,000 lei</td>
</tr>
<tr>
<td>3</td>
<td>“CYBER-MECATRONIC COMPLEX SYSTEMS TO ENHANCE ENERGY EFFICIENCY IN THE SMART CITY” - Acronym CYBER-CITY LEAD PARTNER: APROMECA – RO + 7 Partners in 3 countries: 3 RO, 2 HU &amp; 2 DE</td>
<td>H2020-INNOSUP-01-2016-2017 / Submitted on: 06.04.2016</td>
<td>(550,000 Euro = 2,475,000 lei) / 4,350,000 Euro = 19,575,000 lei</td>
</tr>
<tr>
<td>4</td>
<td>“A NEW VALUABLE INDUSTRIAL CHAIN USING COMPLEX MULTIAPLICATIVE CYBER - MIX-MECHATRONIC SYSTEMS” Acronym: CYBER-MIXMECHATRON SYS LEAD PARTNER: APROMECA – RO + 7 Partners in 3 countries: 3 RO, 2 DE &amp; 2 HU</td>
<td>H2020-INNOSUP-01-2016-2017 / Submitted on: 06.04.2016</td>
<td>(600,000 Euro = 2,700,000 lei) / 4,500,000 Euro = 20,250,000 lei</td>
</tr>
</tbody>
</table>

TOTAL (APROMECA eligible value) / Total project value: (2,245,653,95 lei) / 9,716,335,35 lei
List of project proposals submitted by APROMECA

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<tr>
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</tr>
</thead>
</table>
| 5   | The internship, a step towards a job  
LEAD PARTNER: APROMECA  
4 Partners:  
- Univ. of Tg Jiu;  
- Univ. of Ovidius C-ta;  
- Naval Univ. C-ta  
- INDICE Consulting | POCU programme  
– Internships  
Submitted on:  
01.02.2017 | (509,444.78 lei) / 2,092,190.95 lei |
| 6   | Towards a job, based on an internship  
LEAD PARTNER: APROMECA  
3 Partners:  
- Univ. Valahia of Targoviste;  
- Univ. Danubius of Galati;  
- INDICE Consulting | POCU Programme  
– Internships  
Submitted on:  
01.02.2017 | (651,174.37 lei) / 2,085,891.26 lei |
| 7   | “Increasing the capacity of NGOs and social partners to formulate alternative public policies in the field of research, innovation and education”  
LEAD PARTNER: APROMECA  
Partner UVT | POCA/111/1/1/ Programme  
Submitted on:  
27.04.2017 | (717,759.53 lei) / 999,581.48 lei |

TOTAL (APROMECA eligible value) / Total project value: (2,245,653,95 lei) / 9,716,335,35 lei
DEVELOPMENT PROSPECTS

• Attracting new members by means of interrelation with the members of CLUSTERO Association;
• Enhancing partnerships, collaborations and relationships in order to optimize value chains, smart products and smart manufacturing.

Thank you for your kind attention:

Manager of the Innovative Cluster «MECHATREC»
Prof. Univ. Dr. Eng. EurEng. Dr. h.c. Gheorghe GHEORGHE