



**MISKOLCI**  
EGYETEM  
UNIVERSITY OF MISKOLC

# Higher Education Industry Cooperation Centre MISKOLC



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MISKOLCI EGYETEM. A TUDÁS ÉS KÖZÖSSÉG CAMPUSA.

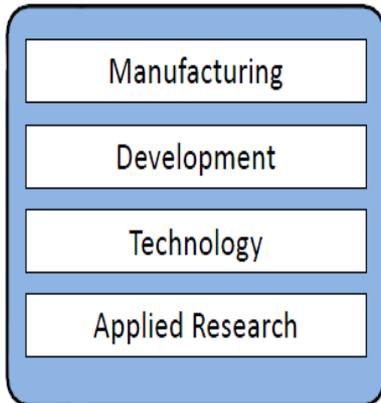




# Introduction

## Paradigm Shift in the 21<sup>st</sup> Century

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PAST



# HEICC MISKOLC



**NKFI ALAP** **GINOP**

GINOP: Gazdaságfejlesztési és Innovációs Operatív Program  
NKFI Alap: Nemzeti Kutatási, Fejlesztési és Innovációs Alap



**MISKOLCI**  
EGYETEM  
UNIVERSITY OF MISKOLC



Local GDP 33%  
Local Export 41%



**BOSCH**

Életre tervezve  
Local GDP 33%  
Local Export 41%



ÉPÍTÉSÜGYI  
MINŐSÉGELENŐRZŐ  
INNOVÁCIÓS NKFT.



# Roles within the Projects and their Associated Tasks

| Concrete tasks   |  | Project 1      | 2   | 3   |
|--|--|----------------|-----|-----|
|    | Planning and carrying out isocyanate test runs   | –              | Uni |     |
|  | Developing analytical laboratory support   | Uni            |     |     |
|  | Developing products for the automotive industry  | Uni            |     |     |
| <br> | Modernizing the development of starter motor and generator applications  | –              | –   | Uni |
|  | Creating the European Test and Competency Centre   | Uni            | –   | –   |
|  | Developing key components of a new-generation air conditioning blower module                                     | Uni            |     |     |
|    | Developing innovative, environment-friendly polymer-based insulating materials and their production technologies | BC, Uni        |     |     |
|  | Developing LCA-based innovative, environment-friendly concrete structural elements, recycling base               | BC, BOSCH, Uni |     |     |
|  | Carrying out materials and materials technology research for smart building operation systems                    | BOSCH, Uni     |     |     |



# Goal: Sustainable and Flexible Technology Transfer and Operation

## Business Side

- ✓ Further developing already strong sectors in the region, in accordance with county and city objectives
- ✓ Creating at least 26 new jobs in RDI
- ✓ Sharing equipment and tasks among partners becomes possible
- ✓ New procedures, tested prototypes, market-ready product, patents

## Scientific Side

- ✓ New laboratory network fosters a cooperative orientation (no longer isolated)
- ✓ Active participation of MSc & PhD students, young researchers (Training through research)
- ✓ Significant number of high-quality publications
- ✓ International cooperation and market-oriented solutions

## Organizational and HR side

- ✓ Concentrates resources to reach 'critical mass'
- ✓ Avoids duplicated efforts and activities
- ✓ Partners have a visible presence on campus
- ✓ One-stop shop



# Organization of the HEICC MISKOLC



## Higher Education Industrial Cooperation Centre

### Leader

|  |  |  |  |   |  |                                     |
|--|--|--|--|---|--|-------------------------------------|
| <p><b>New industrial partners</b></p>        | <p><b>Research units formed with industrial partners</b></p> |  | <p><b>Project 1</b><br/>Advanced materials &amp; their investigation</p>   | <p><b>Project 2</b><br/>Modern materials technologies</p> | <p><b>Project 3</b><br/>Smart control &amp; automation</p> | <p><b>Tech. Transfer unit</b></p>   |
| <p><b>Newly established laboratories</b></p> | <p><b>European Test and Competency Center (BOSCH)</b></p>    |  | <p><b>Isocyanate test lab</b></p> <p><b>Analytical lab</b></p> <p><b>Material investigation lab</b></p> <p><b>Machining centre (CNC etc)</b></p> <p><b>Lab &amp; workshop infrastructure</b></p> |   |  | <p><b>Uni services utilized</b></p> |



# A University Serving Local Industry

- Through providing an educated workforce and programs tailored to the regional labor market
- Through effective knowledge transfer and research, development, and innovation to strengthen competitiveness of local industries
- The university helps attract investment (and thus job creation) in the region



## But In Practice

- Academic research institutes are working primary on basic research and use their RI to this end.
- A space for knowledge transfer through personal connections for the university and its former students
- How to improve technology transfer from universities to industry?



# Workforce Development Initiatives

- Hope to invite researchers from other countries to form research groups
- Provides real, attractive options to young researchers, in the region
- Through RDI programs the university is able to involve young researchers and students in solving real problems, giving them experience and making them better prepared to work in/with industry – both the regional workforce and the university's own workforce
- Such RDI projects may help strengthen the practical side of education in the university, indirectly benefitting all students (=future workers)





# Research and Innovation Efforts at the University of Miskolc



Close industrial relations

## Centers of Excellence

- Sustainable Natural Resource Management
- Applied Materials Science and Nanotechnology
- Mechatronics and Logistics
- Innovative Engineering Design and Technologies
- Social Innovation

**1735**  
year established



Selmecebánya

**85**  
hectare area



**more than**  
**9000**  
students



unique campus

**13**  
education area



Excellent University Recognition

**7**  
faculties



**2500**



dorm spaces

**1**  
institute

