

ESIF fundings for competitiveness in research at EU and global levels

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Presentation outline

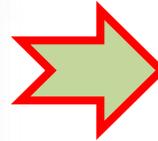
- Brief company overview and history
- Research center growth through ESIF projects
- Outcomes of the center development
 - Facilities
 - Employment
 - Collaborative research with industry
 - International research projects - ESIF (VAVPII, OP VpK...), Horizon 2020, EUREKA – Metallurgy Europe
 - Upcoming and Future calls and challenges
- Conclusions

COMTES FHT - overview

- Private research institute for metallurgy
- Non-profit organization
- Founded in December 2000

2000-2004

2004-2007



2007 - 2012





Czech

CERTIFICATE

Certification Body Management System No. 3053
TUV SUD Czech s.r.o.

certifies that



COMTES FHT a.s.
Průmyslová 995
CZ – 334 41 Dobřany
Ident. No.: 26316919

has established and applies
a Quality Management System for

**research and development, testing, measurement, analyses,
advisory activity and verification in the field of mechanical
engineering technology and materials**

An audit was performed, Report No. **07.317.530**

Proof has been furnished that the requirements
according to

ČSN EN ISO 9001:2009

are fulfilled. The certificate is valid until **21.08.2017**

Certificate Registration No. **07.315.801**




Prague, 21.08.2014



Research center growth through ESIF projects

Projects

- **OP Enterprise and Innovations**

- ***EA 4.2PT01/007 – Research Institute of Forming Technologies*** (2007-2012, MPO/EA)

Amount of support	– state budget	39 006 000 CZK
Total eligible costs		66 201 000 CZK

- ***4.1 IN03/085 - Production of nanostructured materials for medical applications***
(2009-2010, MPO) – not stated in IS R and D (www.isvav.cz)

Total eligible costs		15 000 000 CZK
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- ***2.2 ITP03/795 – ERP system implementation and improvement of IT infrastructure*** (2011, MPO) – not stated in IS R and D (www.isvav.cz)

Total eligible costs		2 000 000 CZK
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Projects

■ OP Research and Development for Innovations

- ***ED2.1.00/03.0077 - West-Bohemian Centre of Materials and Metallurgy*** (2011-2014, MSM/ED)

Amount of support	– state budget	52 422 000 CZK
Total eligible costs		349 484 000 CZK

- ***ED2.1.00/19.0375 - WBCMM centre reserach capacity development*** (2015-2015, MSM/ED)

Amount of support	– state budget	5 447 000 CZK
Total eligible costs		36 315 000 CZK

- ***ED3.1.00/14.0309 - Development of pre-seed activities in COMTES FHT*** (2014-2015, MSM/ED)

Amount of support	– state budget	4 202 000 CZK
Total eligible costs		28 016 000 CZK

Projects

■ OP Education for Competitiveness

- ***EE2.3.20.0038 – Creation of an international team of scientists and participation in scientific networks in the sphere of nanotechnology and unconventional forming material*** (2011-2014, MSM/EE) – COMTES as a partner of the project

Amount of support	– state budget	19 447 000 CZK
Total eligible costs		19 447 000 CZK

- ***EE2.3.35.0048 - Popularization of research and development of metallurgical materials, and their results*** (2012-2014, MSM/EE) – consortium of 7 members, COMTES as a beneficiary

Amount of support	– state budget	14 775 000 CZK
Total eligible costs		14 775 000 CZK

- ***EE2.3.45.0012 - The research teaching and popularization of research and development in mechanical engineering*** (2014-2015, MSM/EE) – consortium of 9 members, COMTES as a beneficiary

Amount of support	– state budget	15 891 000 CZK
Total eligible costs		15 891 000 CZK

- ***EE2.4.17.0052 – Reinforcing cooperation between universities, research institutes and industrial partners in Pilsener Region*** (2011-2014, MSM/EE)
- consortium of 6 members - not stated in IS R and D (www.isvav.cz), project total el. costs are not available



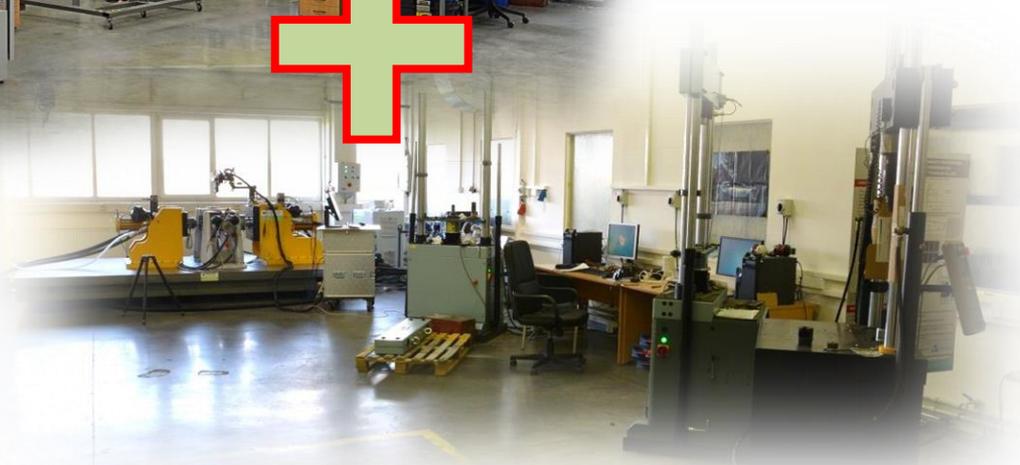
2013 - now



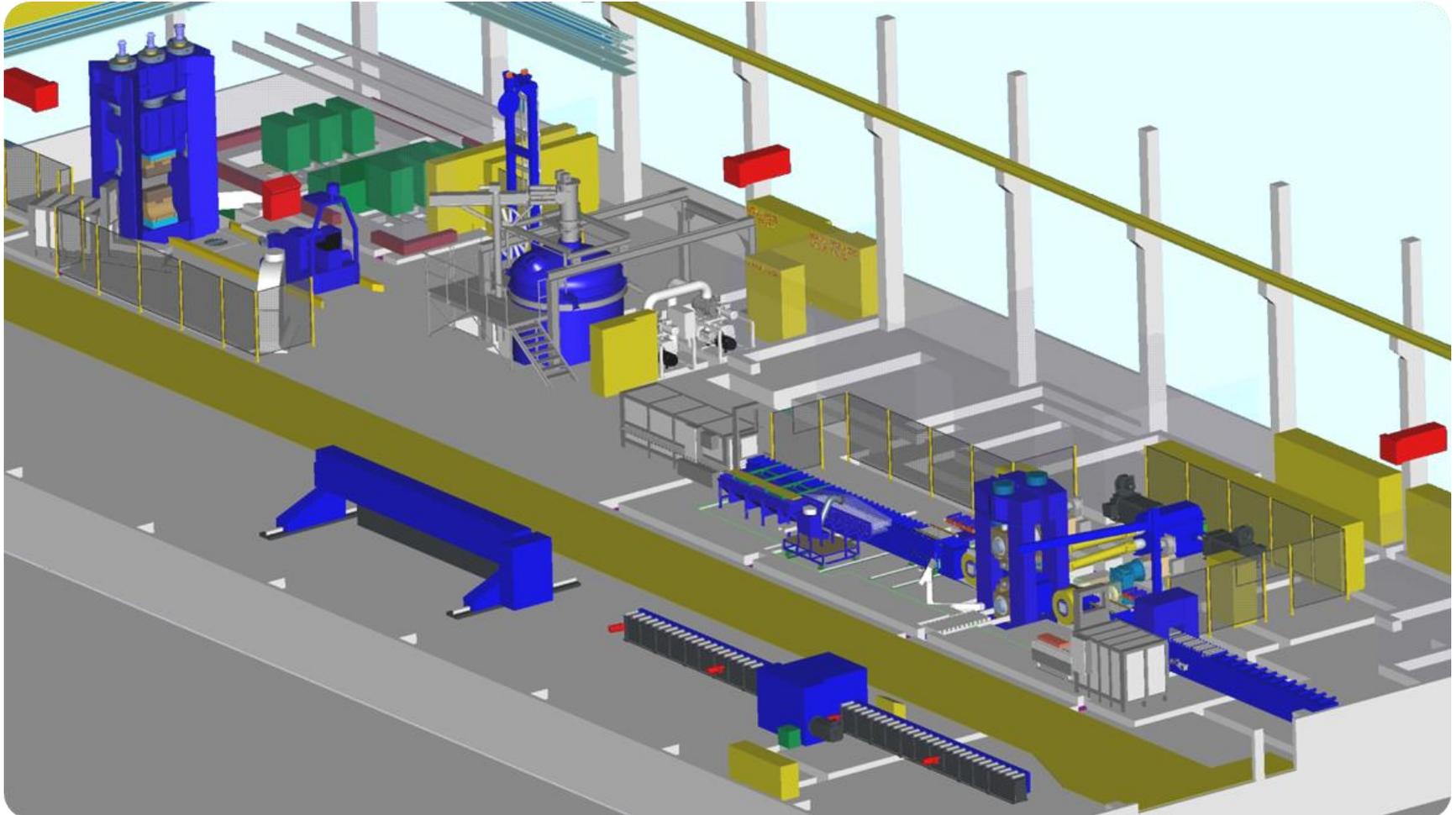
Till 2013



2013 - now



New metallurgy laboratory







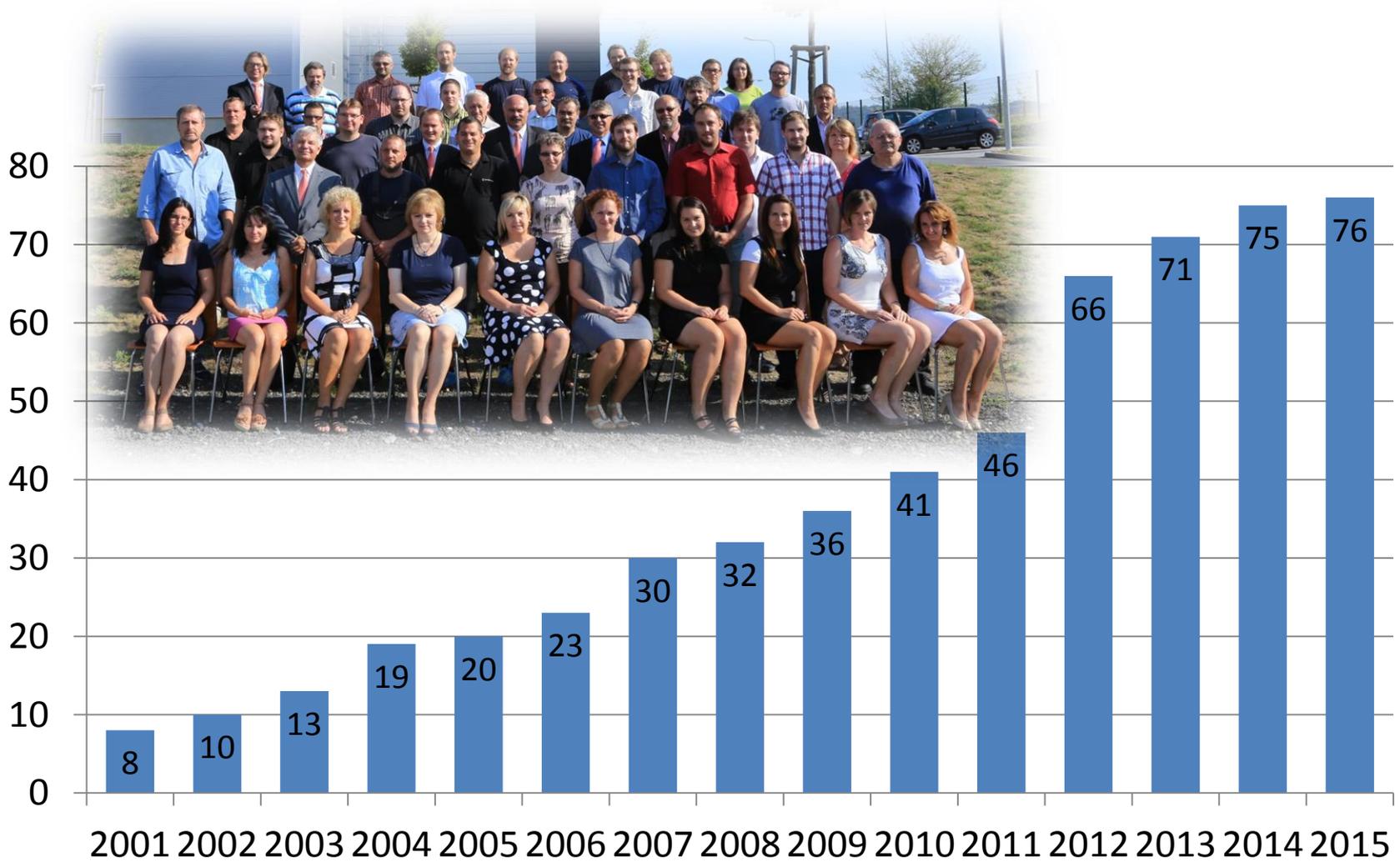
Damascus Steel by COMTES FHT

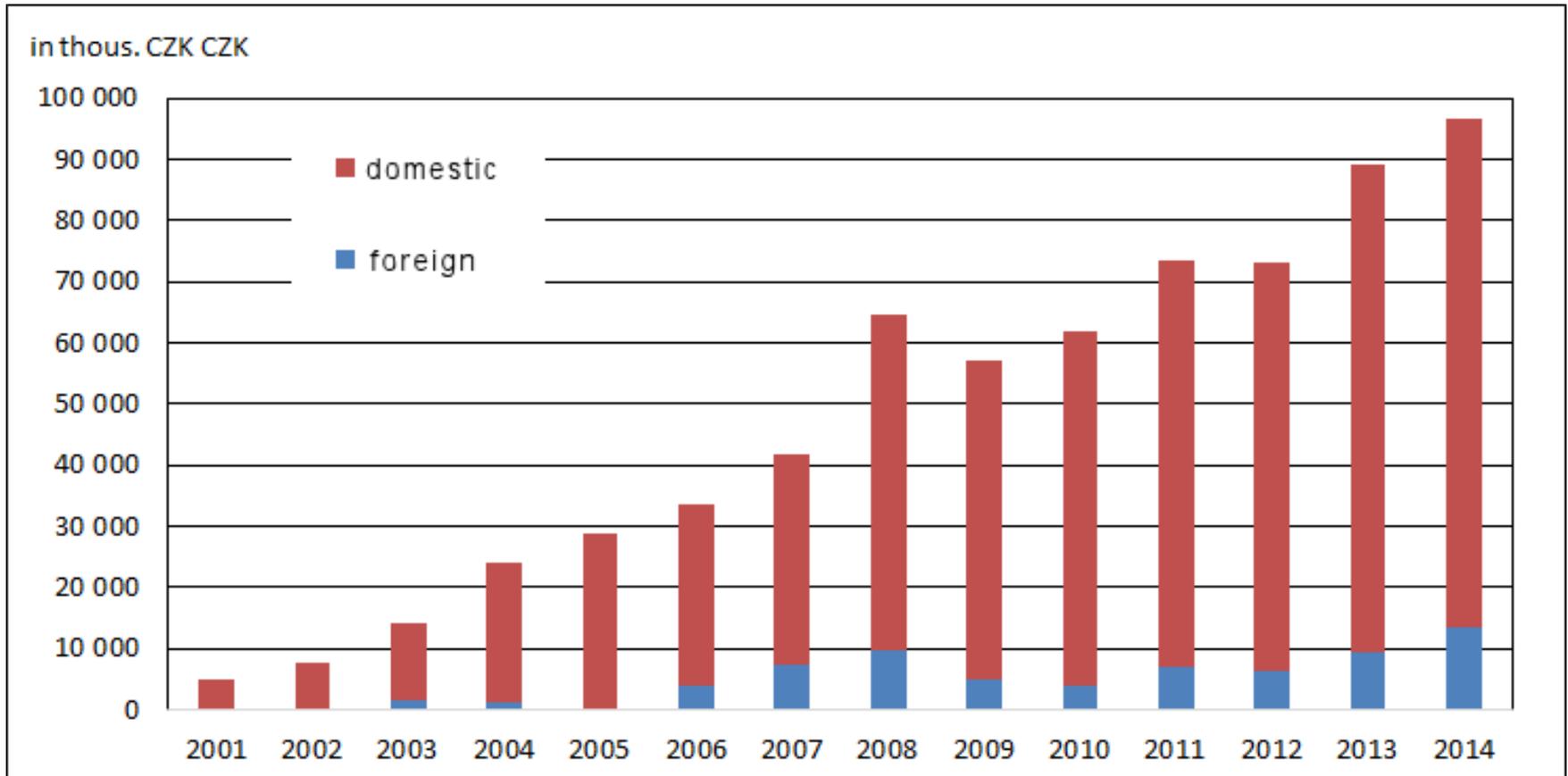
Fusion of Tradition and Innovation in Metallurgy

Around 200 BC, damascus steel was developed in Middle East and the first swords and knives were made of this material. At that time, damascus steel was the best available weapon material, reputed to be hard, tough and capable of being ground and burnished to make an extremely sharp edge. From today's point of view, damascus steel was probably the first metal-based composite.

More than 2000 years later, engineers at COMTES FHT made damascus steel using the most recent technology of precision rolling and forging. Their steel – similarly to the historical damascus steel – combines an extremely high hardness and wear resistance with proper toughness and excellent sharpenability. Thanks to the modern technologies used, the steel contains no inner defects and its pattern is very fine and regular.

This knife of COMTES FHT damascus steel was made for you by the knife master Mr. Daniel Hacker. Enjoy it!







Industrial partners Collaborative reserach



Doosan Škoda Power



International Research projects:

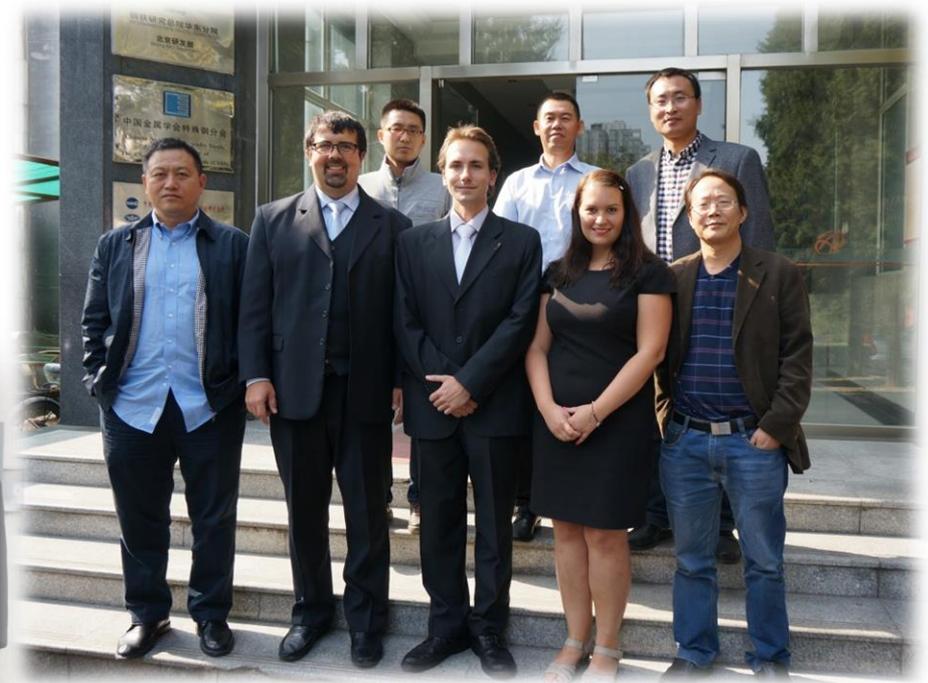
- EERA projects - 2x
- RFCS projects - 3x
- Horizon 2020 projects - 2x
- KONTAKT II projects - 1x
- TACR Delta projects - 2x
- EUREKA network projects - 2x
- EUREKA cluster projects - 2x in preparation

Metallurgy Europe at European Space Agency, NL

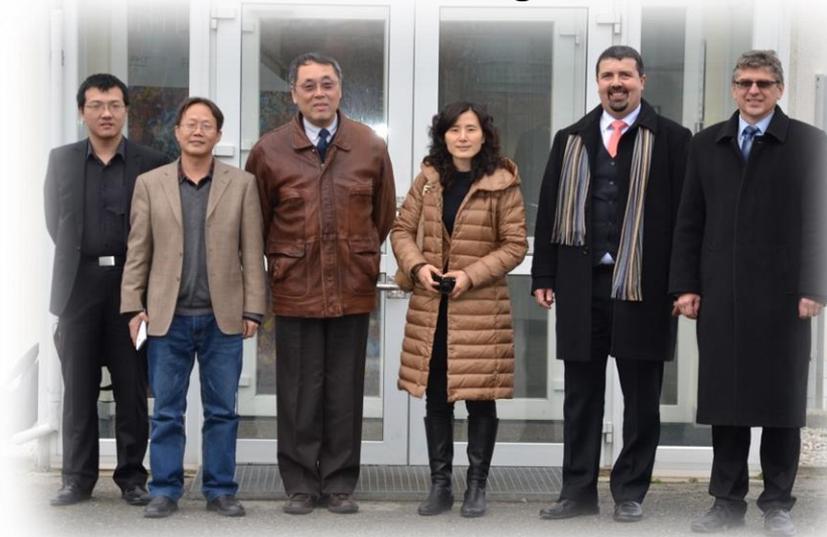




SRIM Shanghai



CISRI Beijing



Chinese official representatives

Future outlook

OP Enterprise and innovations for competitiveness

In preparation:

- 9 projects APPLICATIONS,
- 1 project COOPERATION – clusters,
- 1 project SERVICES OF INFRASTRUCTURES

OP Research, development and education

- Submitted 1 project EXCELLENT RESEARCH TEAMS
- In preparation 1 project EXCELLENT RESEARCH

Submitted project

EXCELLENT RESEARCH TEAMS

Bulk nanomaterials

Vacuum casting furnace



Gas atomizer



Additive manufacturing system

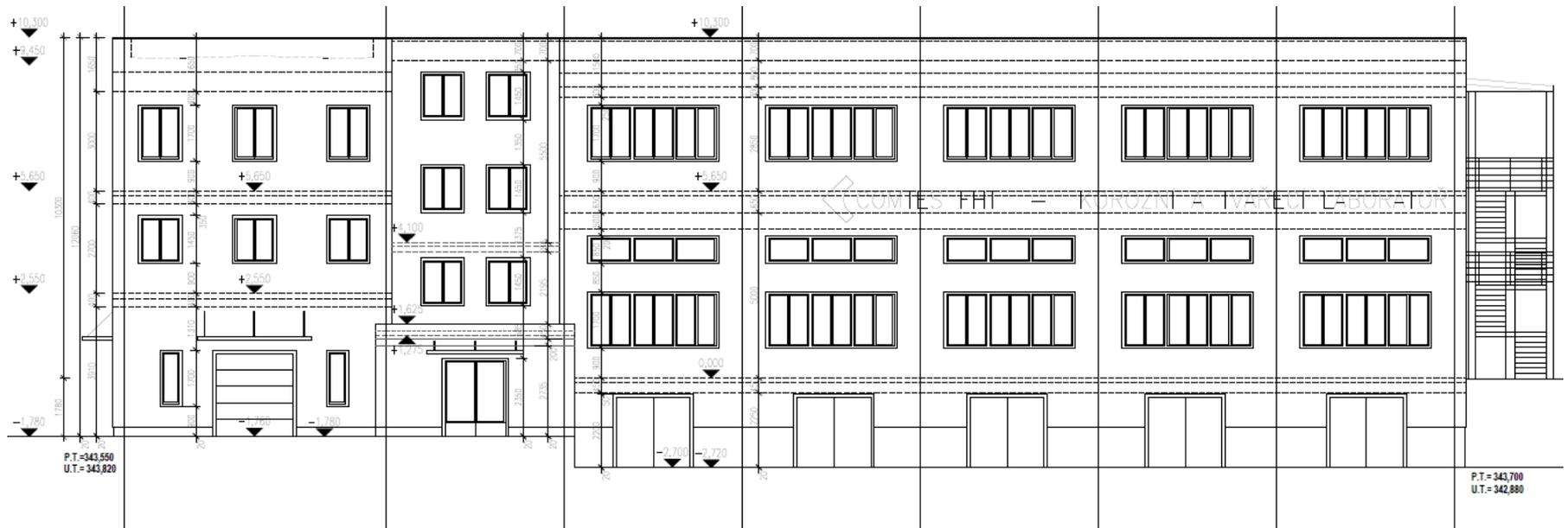


- Ti, Al, Mg ...alloys

Prepared project

**Excellent Research in Advanced
Metal Forming and Metallurgy of
Corrosion Resistive Materials**

Extension of current research capacities



Prepared project

**„Science and Technology Park
in Dobřany“**



Conclusions

- ESIF funding has significantly increased:
 - Research capacities
 - Employment
 - International recognition of the Czech research



- Higher involvement in international research projects
- Higher volume of national and international collaborative research

Top Innovation, Complex services in metallic materials



This is COMTES FHT a.s.

Thank you for your attention