

NCP_WIDE.NET



SPREADING EXCELLENCE
AND WIDENING PARTICIPATION
SUCCESS STORIES



CENTRE FOR FUNCTIONAL AND SURFACE FUNCTIONALISED GLASS

Mid-way through the Horizon 2020 project funded from the Teaming call the FunGlass has already succeeded to increase Slovakia's research and innovation capacity and is beginning to be recognized nationally and internationally as a Centre of Excellence on glass research. The main accomplishments of the project thus relate to:

- Investments into recruitment and research exchanges that provide Centre with critical mass of researchers and allow exemplary collaboration with advanced partners of the project. To this end the Centre has established four new research departments (each mentored by advanced partner) and thus tripled its personal capacity by recruiting researchers and doctoral students from around the world (14 countries representing four continents). FunGlass researchers accelerate their professional growth via training stays with advance partners in Jena, Erlangen, Padua and Madrid by being exposed to the best practices in operating research infrastructure. These stays also serve as "launching pads" for collaboration on joint research publications and proposals for competitive grants.

- Enhanced research excellence is evidenced by considerable increase of scientific publications in cited journals and conference proceedings. The scientific programme of the new Centre is regularly scrutinised not only by its Scientific Board (advanced partners) but also by International Advisory Board (accomplished scientists outside of EU) and Industrial Board (leading national as well as European glass producers). This allows Centre to identify on continuous basis cutting-edge R&I activities, with advanced partners taking lead in selected areas.

- Intensive world-class training activities for PhD students include access to 1-year internships with FunGlass partners at their home site under the supervision of world leading scientists, short-term training internships (up to 3 months) at

various research institutions in EU, visiting scientists programme with on-site workshops, semi-annual off-site three-day FunGlass school with complementary skills training as well as English competence programme focusing on academic writing skills.

- Excellent financial and resource management – implementation of the management system for advanced research facilities of the Centre and creation of a dedicated administrative unit are two factors that allowed Centre to successfully manage its transformation/ exponential personal growth and at the same time pursue new opportunities that triggered approximately €13 million of additional funding since the kick-off of the project.



*Prof. Dušan Galusek,
coordinator of the teaming
project FunGlass.
Project Colletion.*

The Centre currently operates with healthy operating surpluses and has already secured funding to fully finance its expanding operations in the horizon of next three years. It has also secured more than €10 million of funding for major investments into its advanced research facilities. The Centre also succeeded to integrate new staff into existing local R&D funding programmes. Starting 2021, the Centre's management will actively pursue opportunities to secure new major funding. By 2023, the Centre is expected to achieve level of scientific excellence that will be matched by only a few other institutes in the Central European region. The Centre should be transformed into a competitive and qualified



FunGlass Scientific Board (from left): prof. Alicia Durán (CSIC Madrid), prof. Dušan Galusek (TNUAD – FunGlass director), prof. Aldo R. Boccaccini (FAU Erlangen), prof. Lothar Wondraczek (FSU Jena), prof. Enrico Bernardo (UNIPD Padua)

candidate for funding under the following schemes: Marie Skłodowska-Curie Actions (in particular Innovative Training Networks programme), European Research Council grants, and other Horizon Europe calls. In an effort to build up a top-level, self-sustainable European research institution with diversified funding portfolio the Centre focuses on following key factors: research topics (quality and prospective value of Centre's research agenda), cooperation with industry (development of bilateral relationships – research grant partnerships, contractual research, buyer-seller relationship), and joint research efforts with advanced Teaming partners (in particular submission of joint grant proposals).

Representatives of the Centre at various forums (workshops, presentations of best practices...) openly share FunGlass experience with the implementation of structural changes that have wider implications with respect to the objectives of the EU's efforts to spread research excellence and widen participation across low-performing regions. In particular:

- Decision making autonomy of the Centre is combined with active engagement of advanced partners: The main decision-making and supervisory body of the Centre is Scientific Board into which each advanced partner of the project appoints one representative. Decision-making powers of the members of the Scientific Board and their active engagement have proved to be crucial factors in enabling the transfer of their know-how, in particular in the Centre's scientific agenda, building its personal capacity (recruitment) and enhancing its doctoral programme (PhD

topics and curriculum).

- Advisory boards contributions: active communication with advisory board members brings in new perspective in development of research agenda and industrial partnerships via established International Advisory Board (six leading non-EU based researchers in the field nominated by Scientific Board) and Industrial Board (representatives of major glass producers in the region).
- Brain drain reversal: Research institutions in Central and Eastern Europe have been adversely affected by a brain drain that has been triggered as a side effect of the transformation processes that began after the fall of Communism and continues to this day. Soon after the launch of the project, the regional talent resources proved to be insufficient and the FunGlass team had to learn how to face the challenges of global talent competition. To this end, it was necessary to emulate the proven talent management strategies used by the leading European research institutions (especially in terms of adapting to the influx of talent from abroad) and thus reverse the brain drain into a brain gain.

The enhanced professional and qualified personal capacities of the Centre developed through the implementation of the H2020 project FunGlass helped to secure additional funding from competitive national grants in the scheme of European Regional Development Fund (ERDF) and other national scientific agencies. Over the past 3 years the Centre has submitted almost 40 projects in international and national calls out of which 18 were successful, triggering more than €13 million of additional funding.

Among the most significant success belongs 3 projects funded from the ERDF national scheme. The implementation of projects concerns the procurement of advanced research infrastructure, which should be promptly fully utilised thanks to the recently increased personnel capacity of the Centre. The amount allocated for infrastructure investments reaches €10 million while a further €2 million is allocated to finance the personal capacities and operations (consumables, travel).

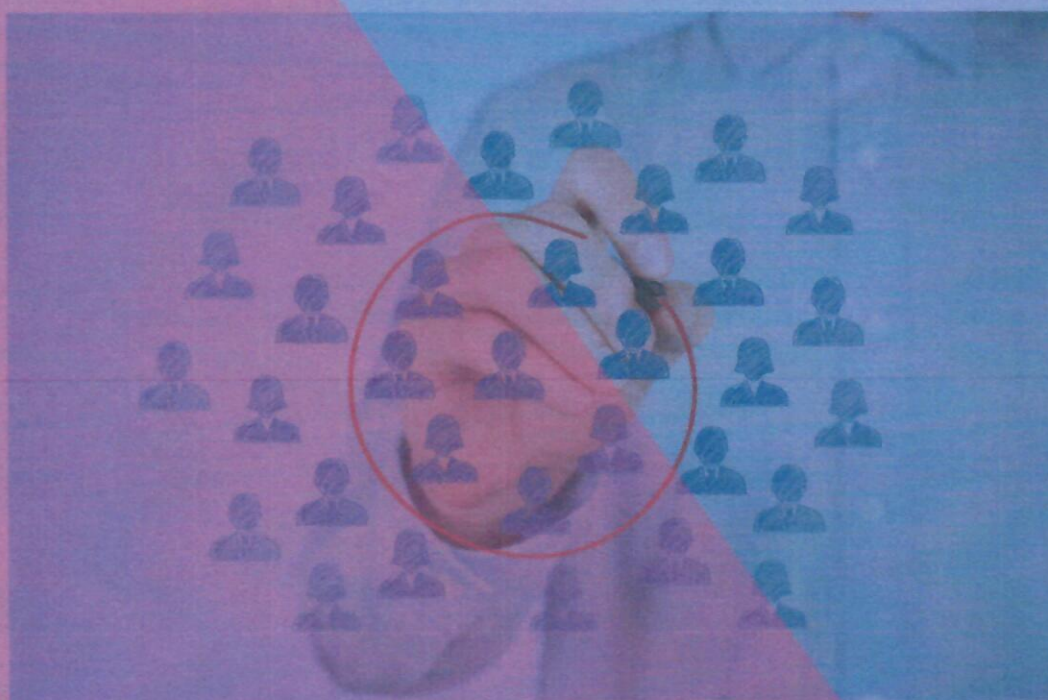
From the financial perspective the FunGlass business plan was outperformed in terms of additional funding triggered from the national grants. Currently, the main challenge turns out to be the ambition to successfully implement

approved projects and to fully utilize secured financial resources (in terms of research infrastructure procurement as well as recruitment of new researchers/doctoral students). This, in turn, will further enhance the FunGlass's efforts to become an internationally recognized Centre of excellence.

The Centre strives to boost public understanding of science and technology and increased appreciation of collaboration schemes in the context of European research landscape. To this

end, the efforts of the Centre has been recently recognized at the following prime-time annual awards extensively covered by national media in Slovakia: Scientist of the Year 2019 (president of Slovakia Ms. Caputova presented prof. Galusek with the „Personality of International Cooperation“ award), Science and Technology Awards 2019 (Ministry of Education recognized FunGlass as “Scientific team of the year”), Crystal Wing 2017 (prof. Galusek has been one of the three short-listed nominees in the field of Science).

FACTS AND FIGURES	
Project Name	Centre for Functional and Surface Functionalised Glass
Project Acronym	FunGlass
Project ID	739566
Project contact	Dušan Galusek, prof., DSc. dusan.galusek@tnuni.sk
Coordinator	Alexander Dubček University of Trenčín (Slovakia)
All Participants in Project	<ol style="list-style-type: none"> 1. Friedrich-Alexander Universität Erlangen-Nürnberg (Germany) 2. Friedrich-Schiller-Universität Jena (Germany) 3. Consejo Superior de Investigaciones Científicas (Spain) 4. Università degli Studi di Padova (Italy)
Start Day – End Day	01/03/2017 – 29/02/2024
Instrument Funding	Teaming
Call for Proposal	WIDESPREAD-01-2016-2017 - Teaming Phase 2
Project Website	www.funglass.eu
EC Financial Contribution / Overall budget	€ 15.000.000 / € 25.525.854
Project Keywords	Functional glass, surface functionalisation, centre of excellence, training, industrial collaboration, self-sustainability, academic autonomy
Area	Materials science (glass and ceramics, biomaterials, glass processing, functional glass, coatings)



This publication presents a selection of 15 of the most successful projects from Spreading Excellence and Widening Participation Programme. They have provided excellent research and new infrastructures, knowledge, and solutions that will allow us to tackle some of the biggest societal challenges that we face today. Furthermore, by linking up the best European scientists in their respective fields, these projects are facilitating new research networks that will last after the end of the projects, helping to reduce disparities in research and innovation performance, fragmentation and the duplication of effort in European research. All of them contribute to reinforce the European Research Area and National and Regional research initiatives. The NCP_WIDE.NET consortium is grateful to the coordinators of the featured projects for their invaluable assistance in the production of this publication.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 639034.