HORIZON-2020 HORIZON EUROPE





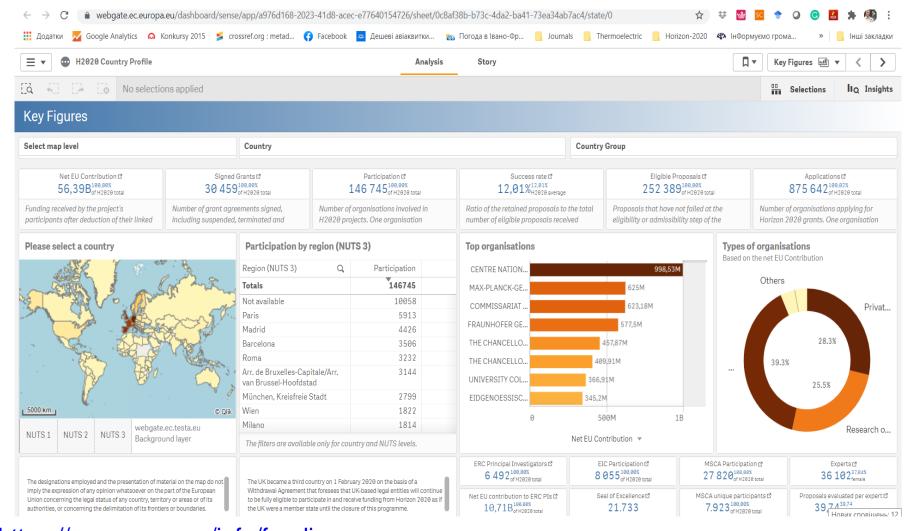


«Last calls in H2020»

NCP 'Nanotechnologies, advanced materials, biotechnology, advanced manufacturing and processing' H2020 Program in Ukraine Vasyl Stefanyk Precarpathian National University

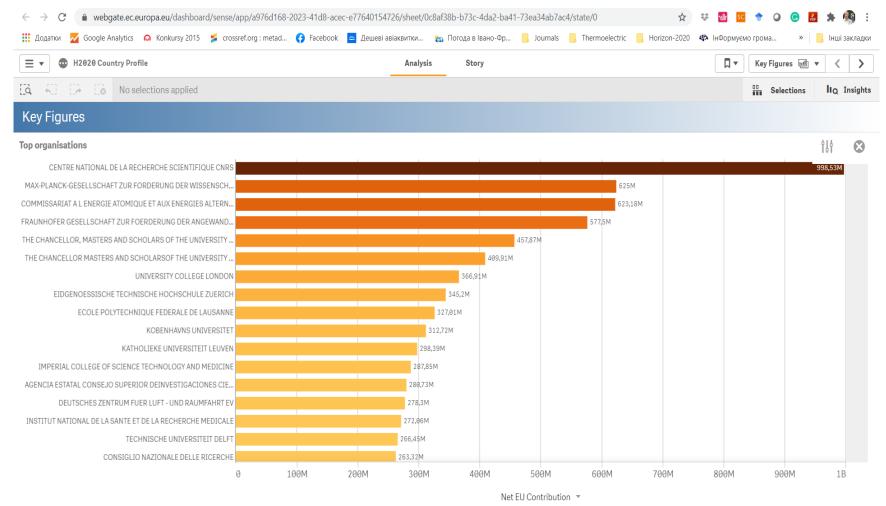
Lyubomyr Nykyruy

Horizon 2020. General information



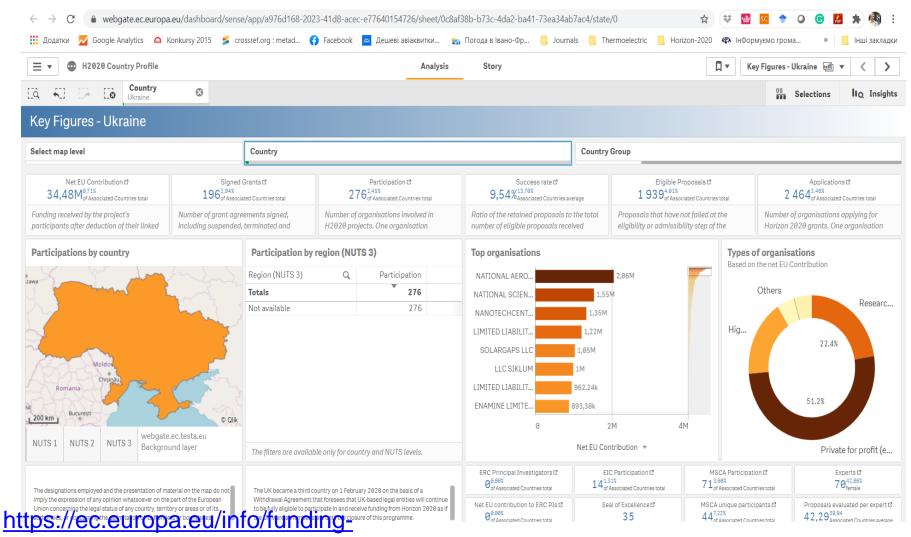
https://ec.europa.eu/info/fundingtenders/opportunities/portal/screen/opportunities/horizon-dashboard

Horizon 2020. General information: top participants



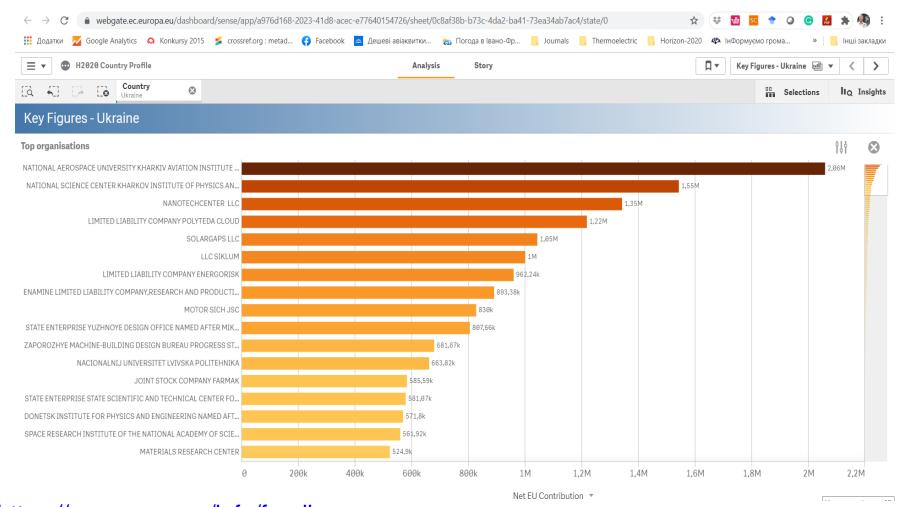
https://ec.europa.eu/info/fundingtenders/opportunities/portal/screen/opportunities/horizon-dashboard

Horizon 2020. Participation of Ukrainian organizations



tenders/opportunities/portal/screen/opportunities/horizon-dashboard

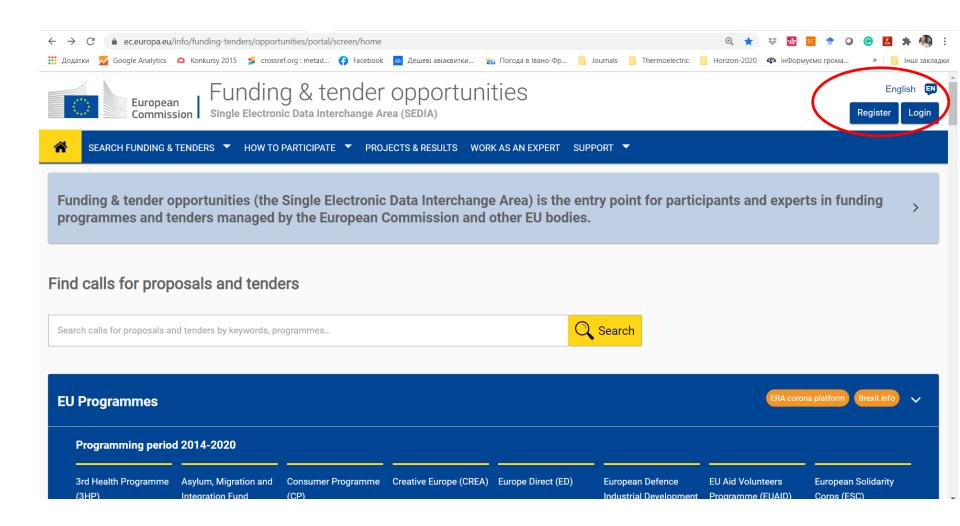
Horizon 2020. Participation of Ukrainian organizations



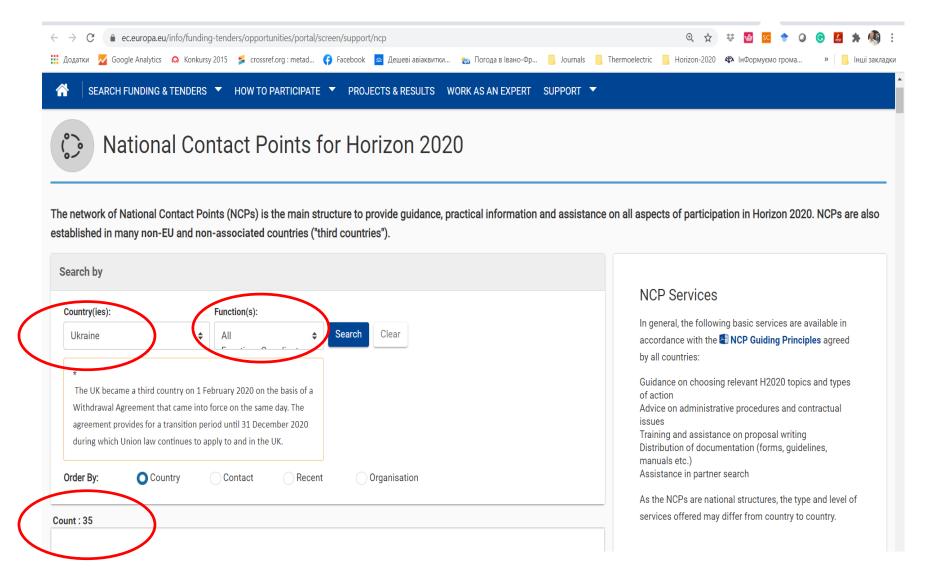
https://ec.europa.eu/info/fundingtenders/opportunities/portal/screen/opportunities/horizon-dashboard

Horizon 2020. Participant portal

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home



Horizon 2020. General information: NCP system



Horizon 2020. General information: NCP system

Ukraine's NCP

Nanotechnologies, advanced materials, biotechnology, advanced manufacturing and processing

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Person of contact: Lyubomyr Nykyruy

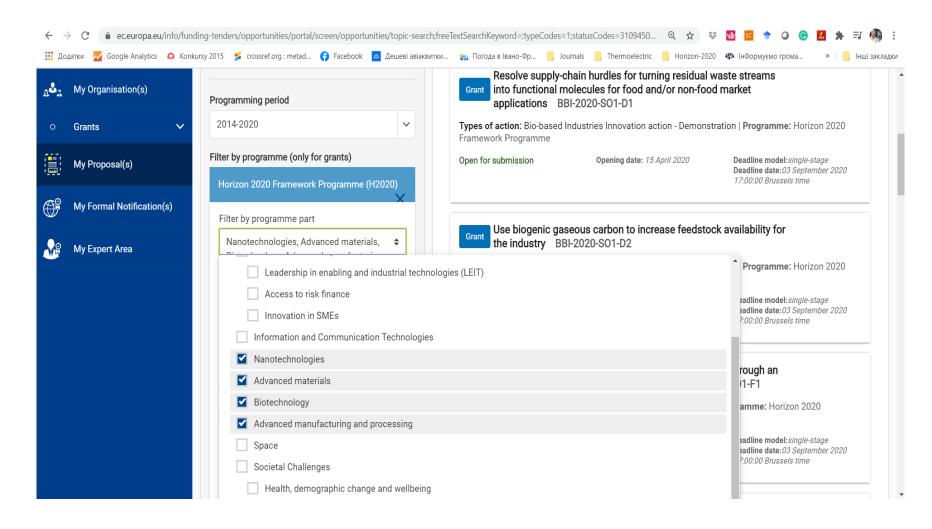
Contact: lyubomyr.Nykyruy@pnu.edu.ua

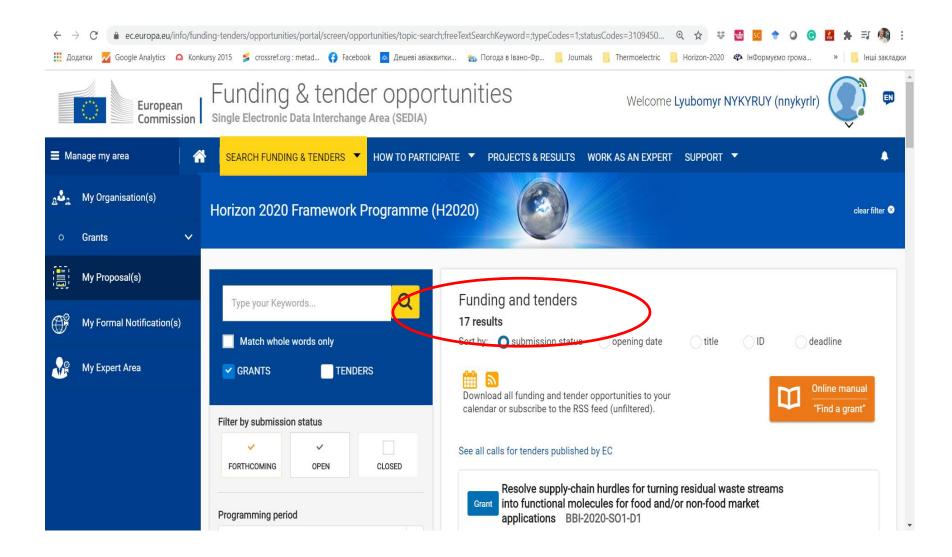
Organisation: Vasyl Stefanyk Precarpathian National University

57 Shevchenko St.- 76018 Ivano-Frankivsk | Ukraine

Website: https://ncp.pnu.edu.ua

https://ec.europa.eu/info/fundingtenders/opportunities/portal/screen/opportunities/topicsearch





Resolve supply-chain hurdles for turning residual waste streams into functional molecules for food and/or non-food market applications BBI-2020-SO1-D1

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

Use biogenic gaseous carbon to increase feedstock availability for the industry BBI-2020-SO1-D2

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

Valorise the organic fraction of municipal solid waste through an integrated biorefinery at commercial level BBI-2020-SO1-F1

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

Turn lignin into materials and chemicals for high-end applications BBI-2020-SO1-F2

Deadline model:single-stage; Deadline date:03 September 2020 17:00:00 Brussels time

Produce food ingredients with high nutritional value from aquatic sources BBI-2020-SO1-F3

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

<u>Upscale the production of bio-based platform molecules for larger market applications</u> BBI-2020-SO2-D3

Deadline model:single-stage; Deadline date:03 September 2020 17:00:00 Brussels time

<u>Use enabling technologies to improve feedstock availability and sustainability for the bio-based industry</u> BBI-2020-SO2-R1

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

<u>Develop integral fractionation of lignocellulose to produce components for high-value applications</u> BBI-2020-SO2-R2

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

Develop bio-based solutions to recycle composites BBI-2020-SO2-R3

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

Extract bioactive compounds from new, under-exploited and/or recalcitrant residual bio-based streams for high-value applications BBI-2020-SO2-R4

Deadline model: single-stage; Deadline date: 03 September 2020 17:00:00 Brussels time

<u>Demonstrate superior bio-based packaging solutions with minimal environmental damage</u> BBI-

2020-SO3-D4

Deadline model: single-stage

Deadline date: 03 September 2020 17:00:00 Brussels time

Improve the sustainability of coatings BBI-2020-SO3-R5

Deadline model: single-stage

Deadline date: 03 September 2020 17:00:00 Brussels time

Help start-ups and spin-offs to gain access to finance BBI-2020-SO4-S1

Deadline model: single-stage

Deadline date: 03 September 2020 17:00:00 Brussels time

Provide insight on emerging technologies for bio-based value chains BBI-2020-SO4-S

Deadline model: single-stage

Deadline date: 03 September 2020 17:00:00 Brussels time

Create and interlink bio-based education centres to meet industry's needs of skills and

competences BBI-2020-SO4-S3

Deadline model: single-stage

Deadline date: 03 September 2020 17:00:00 Brussels time

Expand circular economy to include the underexploited circular bioeconomy BBI-2020-SO4-S4

Deadline model: single-stage

Deadline date: 03 September 2020 17:00:00 Brussels time

EIC Horizon Prize for 'Innovative Batteries for eVehicles' Batteries-EICPrize-2018

Deadline model: single-stage

Deadline date: 17 December 2020 17:00:00 Brussels time

All these calls concern **Bio-based Industries**, including:

Innovation action – Demonstration: 4 competitions

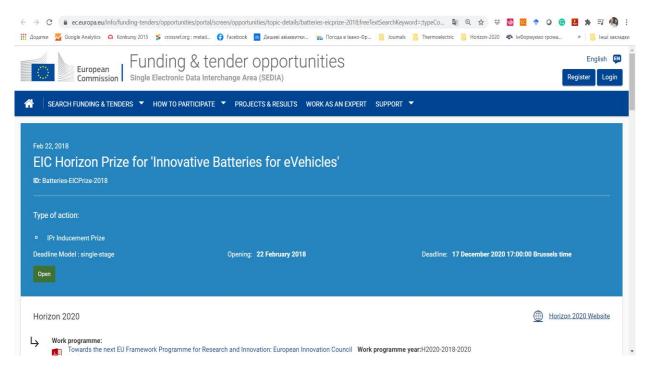
Innovation action – Flagship: 3 competitions

Research and Innovation action: 5 competitions

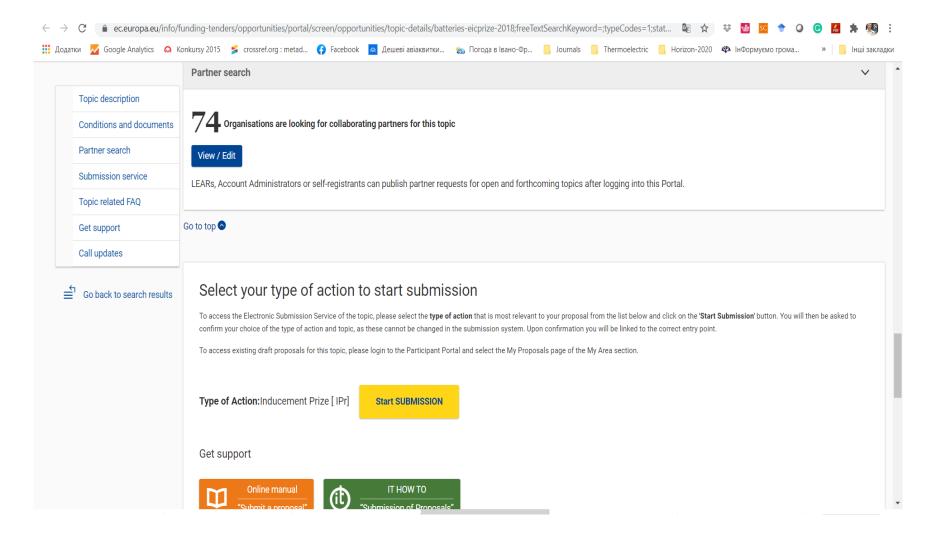
Coordination and Support action: 4 competitions

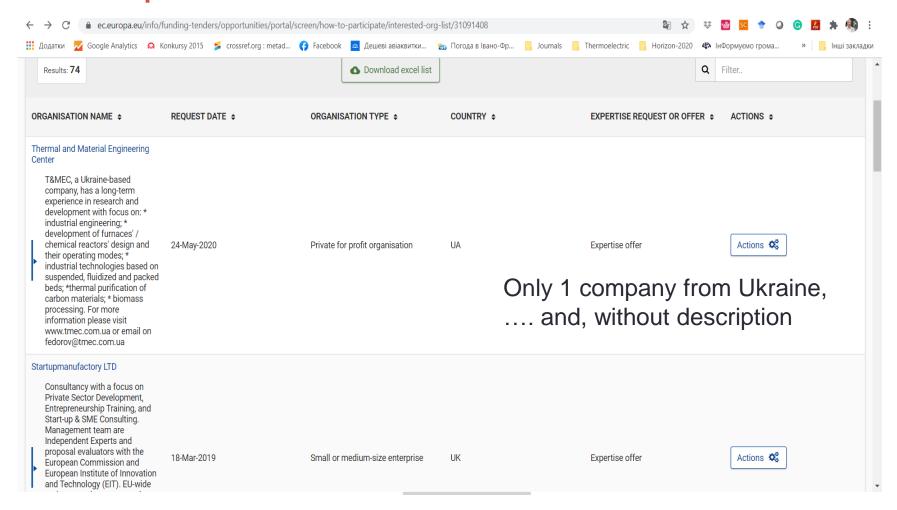
and **Inducement Prize**: 1 competition.

Participant Portal: Inducement Prize

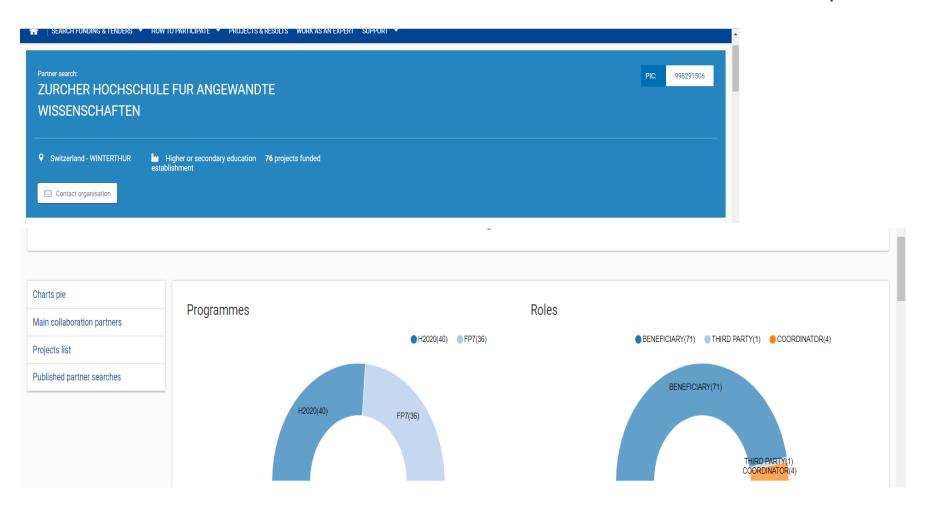


The challenge is to develop a safe and sustainable battery for electric-vehicles through the development of new materials and chemistries making use of abundant, sustainable low cost materials, which are easily available in Europe. Solutions are required to provide the same or better performance than vehicles with internal combustion engines and to be capable of recharging the electric vehicle within a time equivalent to fill a conventional gasoline/diesel fuel tank.



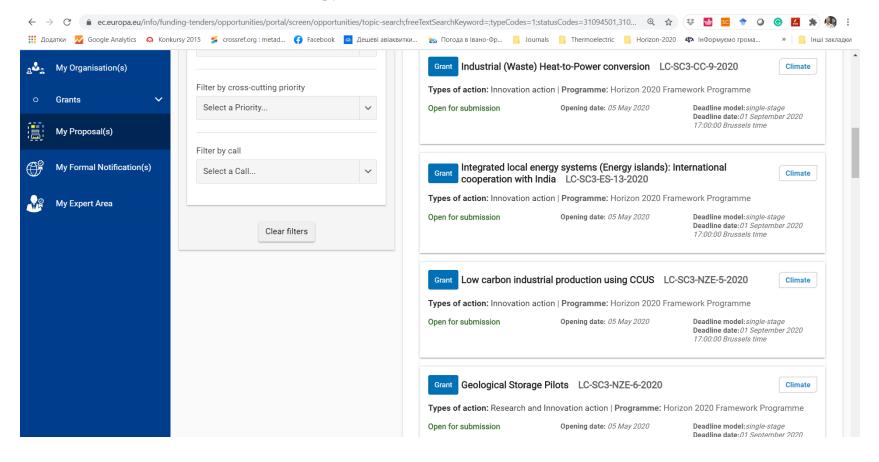


Only 1 Higher or secondary education establishment, with excellent description

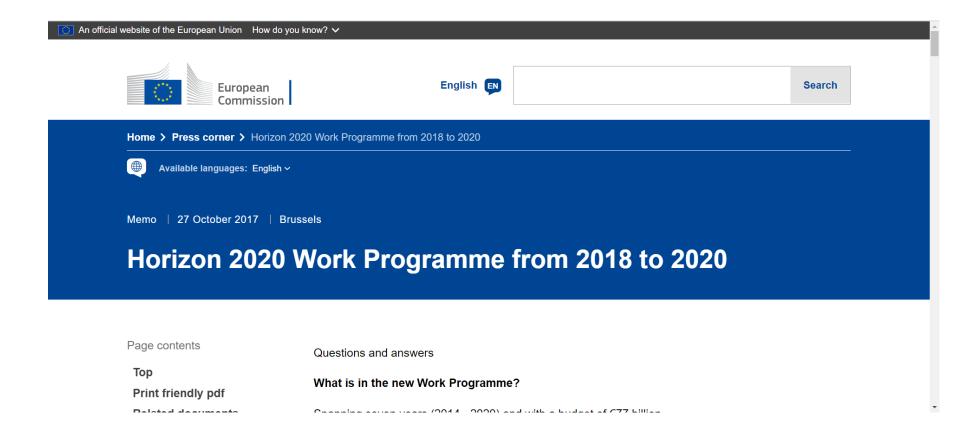


Participant Portal: other directions (not only NMP)

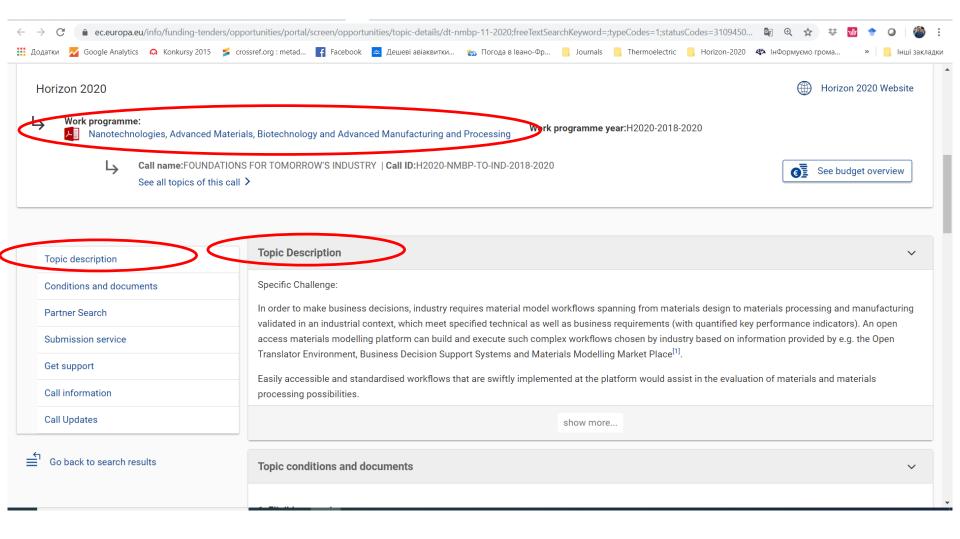
Leadership in enabling and industrial technologies (LEIT) 23 open calls; Secure, clean and efficient energy – 23 open calls,



Horizon 2020 Work Programme from 2018 to 2020

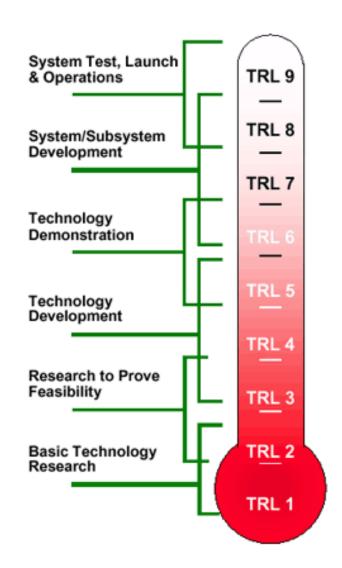


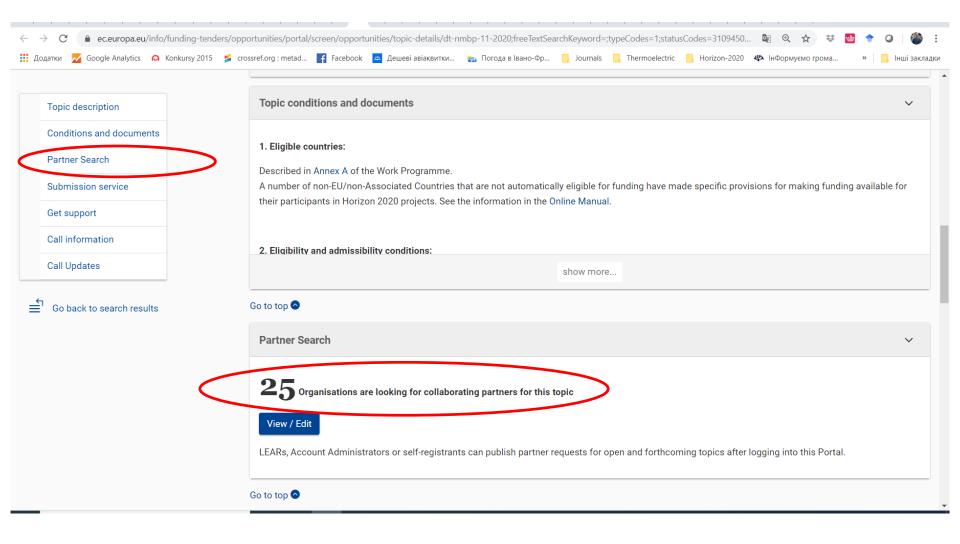
https://ec.europa.eu/commission/presscorner/detail/en/MEMO_17_4123



Technology readiness levels (TRL)

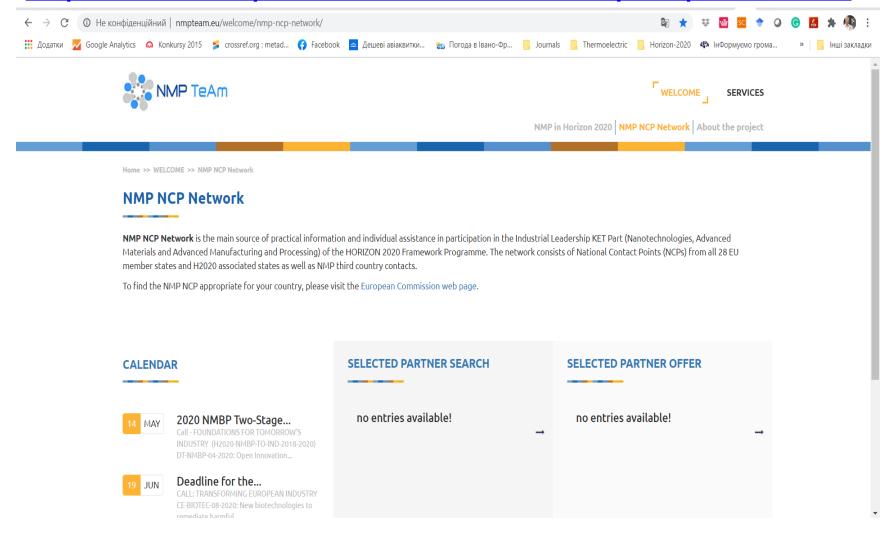
- TRL 1 basic principles observed
- TRL 2 technology concept formulated
- TRL 3 experimental proof of concept
- TRL 4 technology validated in lab
- TRL 5 technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6 technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7 system prototype demonstration in operational environment
- TRL 8 system complete and qualified
- TRL 9 actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)



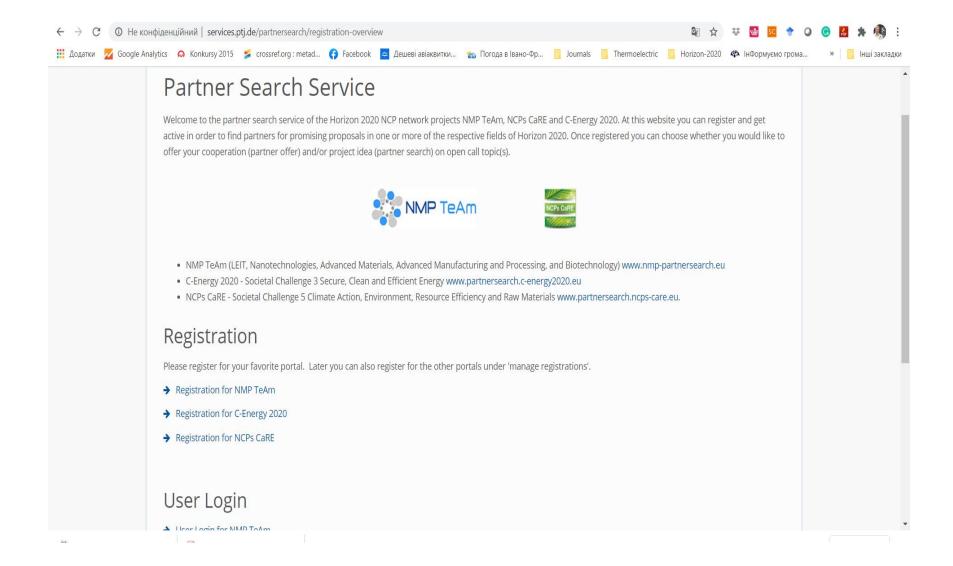


Partner search:

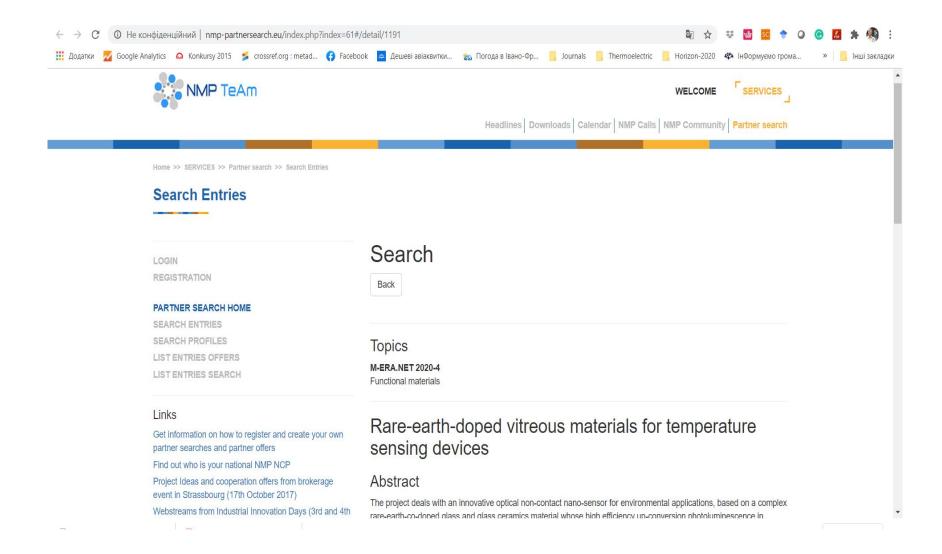
http://www.nmpteam.eu/welcome/nmp-ncp-network/



Partner search: NMP TeAm

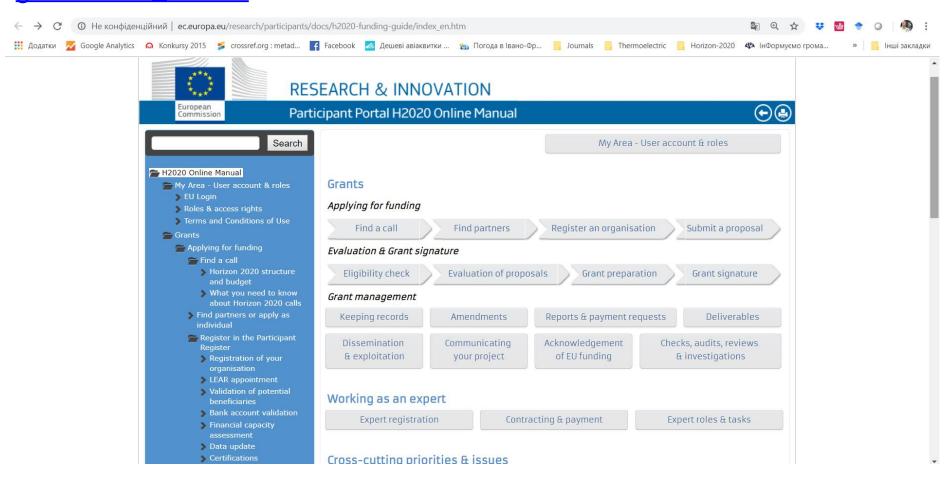


Partner search: example



Step-by-step

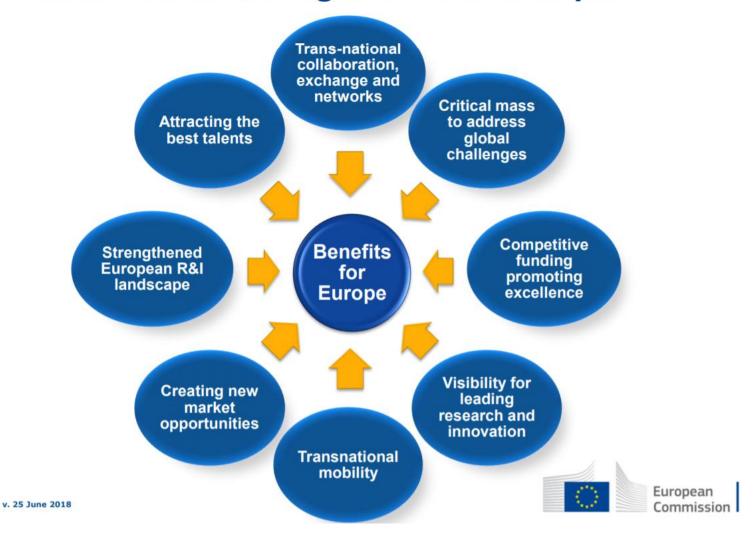
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm



What next?

- Horizon Europe

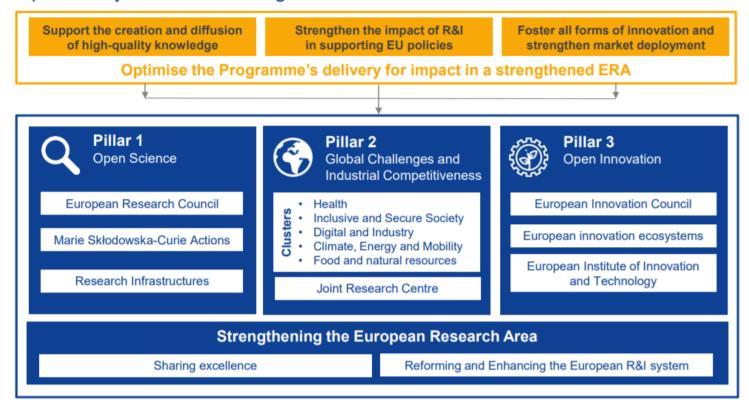
Added value through Horizon Europe:



Horizon Europe

Horizon Europe: evolution not revolution

Specific objectives of the Programme





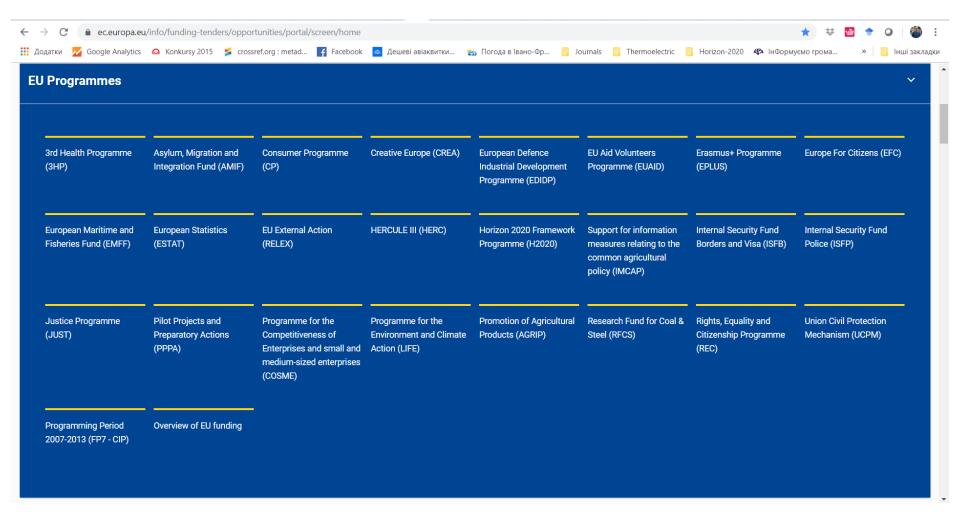
Horizon Europe

Clusters in 'Global Challenges and Industrial Competitiveness'

Clusters	Areas of intervention	
Health	* Health throughout the life course * Non-communicable and rare diseases * Tools, technologies and digital solutions for health and care	* Environmental and social health determinants * Infectious diseases * Health care systems
Inclusive and Secure Societies	* Democracy * Social and economic transformations * Protection and Security	* Cultural heritage * Disaster-resilient societies * Cybersecurity
Digital and Industry	* Manufacturing technologies * Advanced materials * Next generation internet * Circular industries * Space	 * Key digital technologies * Artificial intelligence and robotics * Advanced computing and Big Data * Low carbon and clean industry
Climate, Energy and Mobility	* Climate science and solutions * Energy systems and grids * Communities and cities * Industrial competitiveness in transport * Smart mobility	* Energy supply * Buildings and industrial facilities in energy transition * Clean transport and mobility * Energy storage
Food and Natural Resources	* Environmental observation * Agriculture, forestry and rural areas * Food systems * Circular systems	* Biodiversity and natural capital * Sea and oceans * Bio-based innovation systems



EU R&D Programs



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