

H2020 MEGA Project

Model of Implementation

Dr. Oksana Palekienė
KTU Research and Innovation Projects Centre
21/10/2022



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under the Marie Skłodowska-Curie Grant Agreement No 823720

H2020 MSCA-RISE PROJECTS AT KTU, 2014 – 2022



Source: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard>,

21/10/2022

MEGA – Heavy metal free emitters for new-generation light (823720)

ktu

Overall goal is to develop heavy metal free emitters for new-generation light sources.

Objective 1

Screen compounds with TADF or lasing properties by means of molecular modelling

Objective 2

Synthesise most promising compounds with TADF or lasing properties

Objective 3

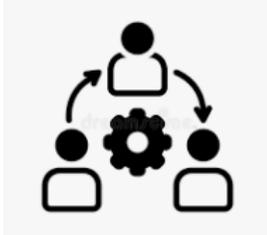
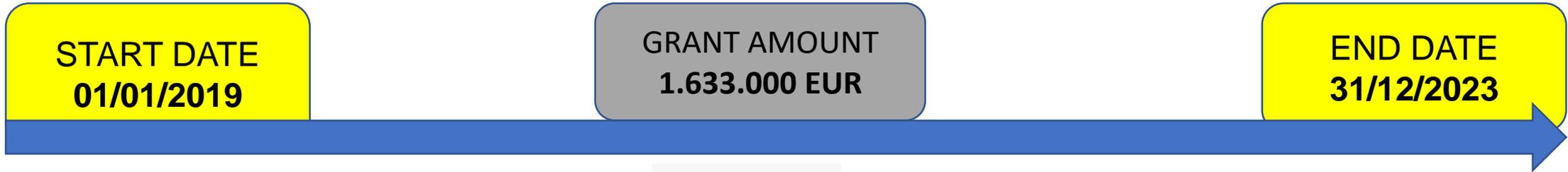
Characterise most promising compounds with TADF or lasing properties

Objective 4

Test materials in device structures to meet industry requirements

[H2020 MEGA Project Video >>>](#)  YouTube

MEGA Legal Project Information

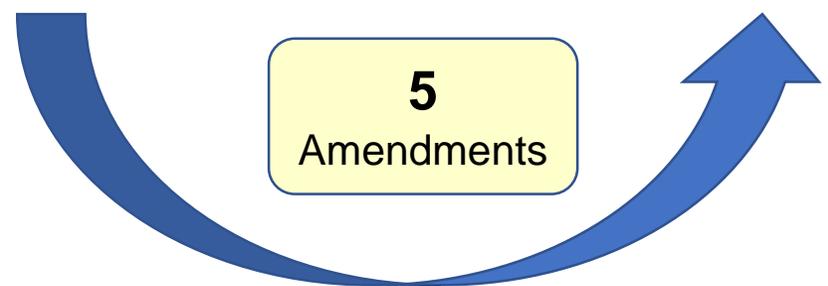


From the 01/01/2019:

10 Beneficiaries from 6 EC/AC +
2 Partner Organisations from TCs (BY, TW)

At the moment:

11 Beneficiaries from 7 EC/AC +
2 Partner Organisations from TCs (TW, ML)



 Lithuania

 Germany

 Ukraine

 Taiwan

 France

 Luxembourg

 United Kingdom

 Armenia

 Malaysia

ACADEMIC SECTOR

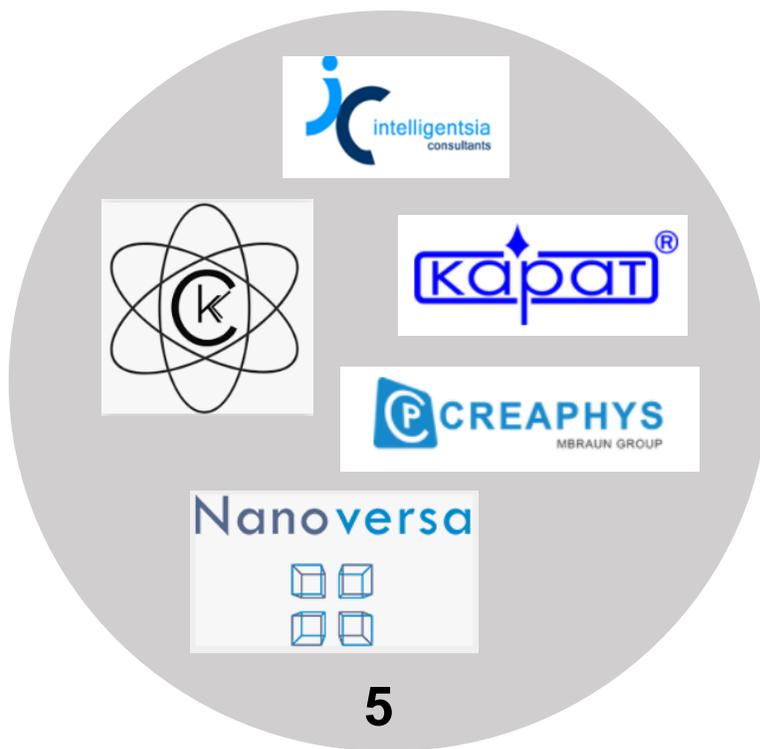


A yellow circle containing six logos of academic institutions:

- ktu kaunas university of technology 1922
- NATIONAL POLYTECHNIC
- University of Glasgow
- UNIVERSITÉ de Cergy-Pontoise
- TECHNISCHE UNIVERSITÄT DRESDEN
- YERKLAN STATE UNIVERSITY

6

NON-ACADEMIC / INDUSTRIAL SECTOR

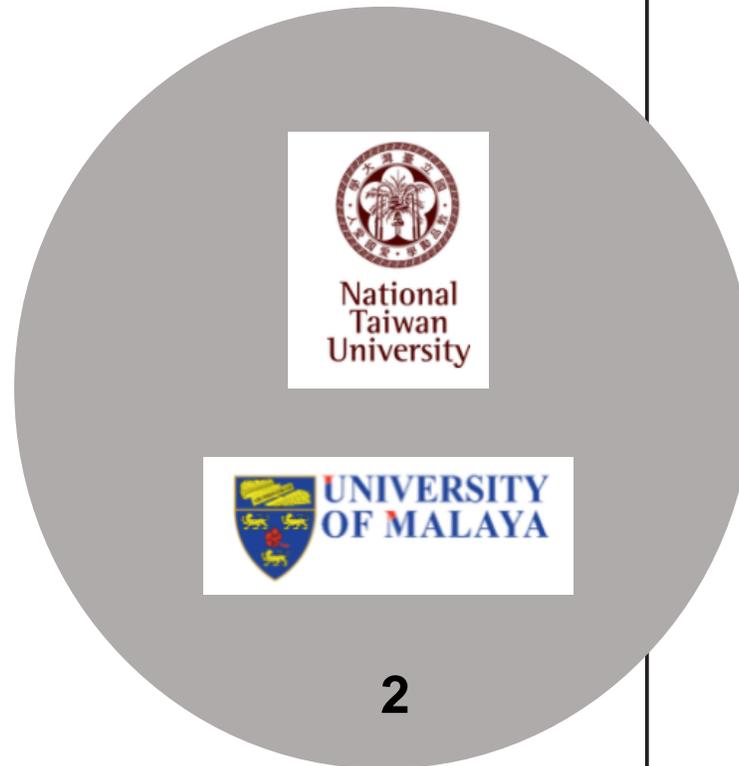


A grey circle containing five logos of non-academic/industrial organizations:

- intelligentsia consultants
- kapat®
- CREAPHYS MBRAUN GROUP
- Nanoversa
- Logo with a stylized atom symbol and the letter 'K'

5

PARTNERS' ORGANISATIONS FROM THIRD COUNTRIES



A grey circle containing two logos of international partner organizations:

- National Taiwan University
- UNIVERSITY OF MALAYA

2

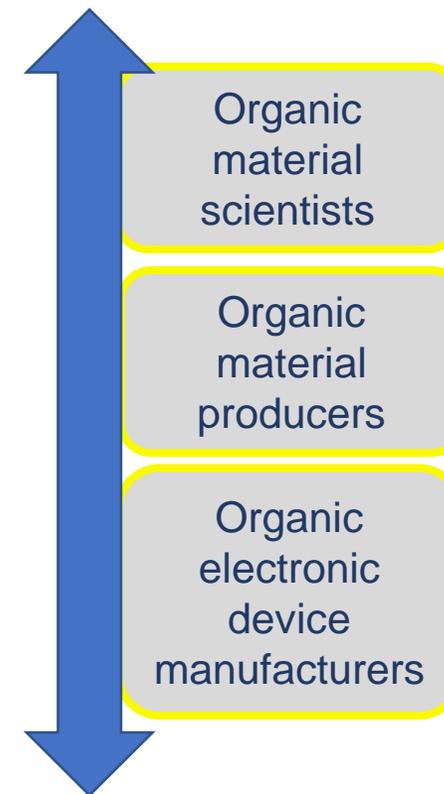
MEGA: KNOWLEDE TRANSFER

Key objective – to develop international and intersectoral pathways for the transfer of knowledge to enable the production of heavy metal free emitters for new-generation light sources.

Category of Knowledge
Organic material theory
Organic material synthesis
Organic material characterisation
OLED devices
Organic laser device componentry



Expertise Required
Quantum chemistry, mathematical optimisation
Organic structures, synthesis schemes, green chemistry methods, sublimation
NMR and IF spectroscopy, mass spectrometry, microanalysis, X-ray analysis, TGA differential scanning calorimetry, electro-optical analysis (charge mobility, energy levels), AFM, SEM
Vacuum and wet technologies, organic material handling, optical simulations for device optimisation, device characterisation (jVL, EQE, spectra, lifetime)
Theoretical simulation; deep vacuum, holographic and photolithographic techniques; device characterisation (input-output characteristic, spectra, stability)



MEGA: BENEFITS

Joint research → publications of the results

Know-how transferal trainings (including workshops)

Secondment based on the **on-the-job research trainings**

Enhancing the potential and future career perspectives and development of the staff members (ESRs and ERs)

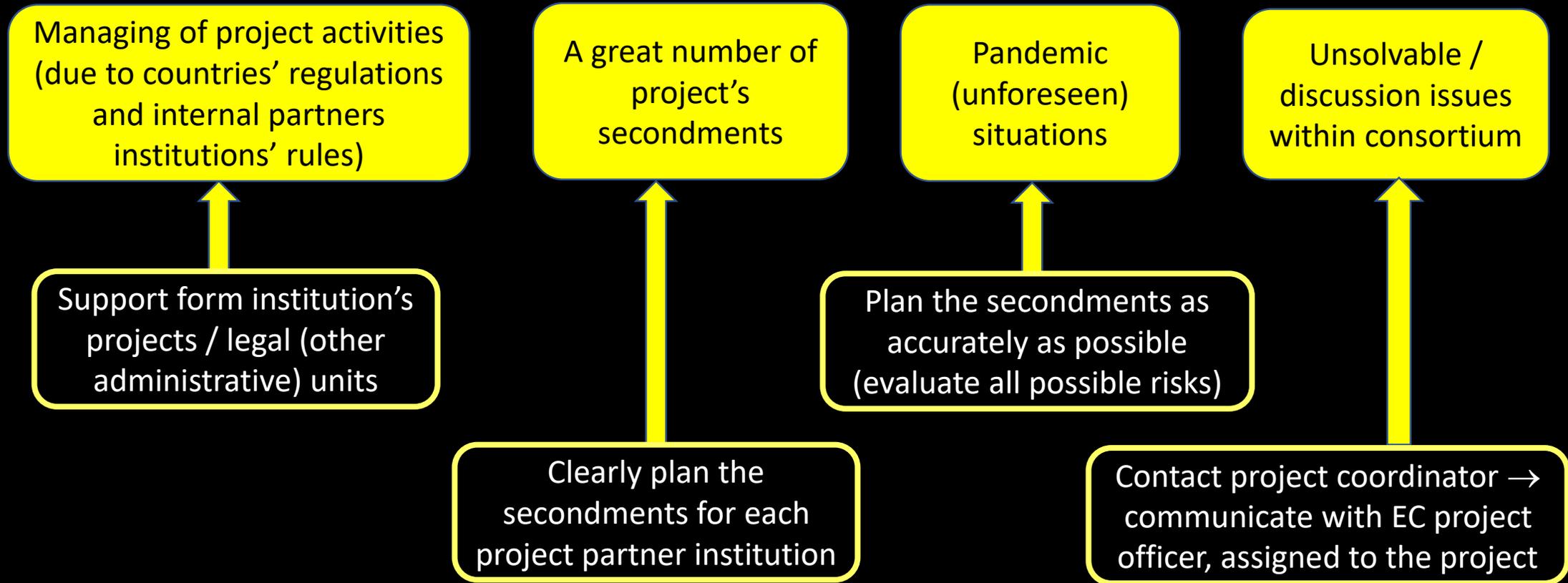
Achieving transfer of knowledge between participating institutions

Developing new and lasting research collaborations

Improving research and innovation potential of participating institutions

Improving of the research and innovation potential of the Hosting and Sending institutions at the European and global levels

MEGA CHALLENGES



MEGA: SUGGESTIONS

Grant application process

To prepare the grant application in line with the appropriate Work Program, call documents and other appropriate strategic documents

Partners have the experience in implementing the EU financed projects before

Responsibly plan the secondment plan

Identify and foreseen main risks

Project implementation process

Clearly identify project management structure and responsibilities in CoA (*coordinator, admin. manager, boards, etc.*)

Focusing on project results (*Deliverables, Publications*)

Risk management

Collaboration / communication based in trust among consortium partners

MSCA – Staff Exchange (RISE) action benefits

A platform where academia and industry interact and join forces



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