



Valsts izglītības  
attīstības aģentūra

# Ieskats 2020. gada WP

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NACIONĀLAIS  
ATTĪSTĪBAS  
PLĀNS 2020



EIROPAS SAVIENĪBA

Eiropas Reģionālās  
attīstības fonds

IEGULDĪJUMS TAVĀ NĀKOTNĒ

1.1.1. specifiskā atbalsta mērķa "Palielināt Latvijas zinātnisko institūciju pētniecisko un inovatīvo kapacitāti un spēju piesaistīt ārējo finansējumu, ieguldīt cilvēkresursos un infrastruktūrā" 1.1.1.5. pasākuma "Atbalsts starptautiskās sadarbības projektiem pētniecībā un inovācijās" 1.kārtas, projekta Nr.1.1.1.5/17/1/001 "Atbalsts starptautiskās sadarbības projektu izstrādei un īstenošanai" ietvaros

# ICT 2020. gada darba programma

- 2020. gada uzsaukumos kopā **1019.8M EUR**
- Gribi izlasīt? Uzraksti: [andris.freimanis@viaa.gov.lv](mailto:andris.freimanis@viaa.gov.lv)

Topic	M, EUR
<b>ICT-12-2018-20: Big Data technologies and extreme-scale analytics</b>	31.5
ICT-xx-2020: Cloud Computing: towards a smart cloud computing continuum	20
ICT-zz-2020: International cooperation Activities	TBD
DT-ICT-09-2020: Digital service platforms for rural economies	30 (15 from SC2/AGRI)

# ICT

Topic	M€
<b>ICT-09-2019-2020: Robotics in Application Areas and Coordination &amp; Support</b>	87
<b>ICT-10-2019-2020: Research and Innovation boosting promising robotics applications</b>	20
ICT-XX-2020: Towards a vibrant European network of AI Excellence centres	50
ICT-26-2018-20: Artificial Intelligence on demand platform	20
ICT-38-2020 Artificial intelligence for manufacturing	49
<b>ICT-36-2020: Disruptive photonics technologies</b>	47.5
<b>ICT-37-2020: Advancing photonics technologies and application driven photonics components and the innovation ecosystem</b>	49
ICT-xx-2020: Software Technologies	30

# ENERGY

LC-SC3-EE-13-2018-2019-2020: Enabling next-generation of smart energy services valorising energy efficiency and flexibility at demand-side as energy resource

- At the same time, new technologies have emerged opening the door for new types of services which **use ICT to better control and steer energy consumption** according to market and system needs and to the availability of renewable energy
- **The use of 'big data'** generated by smart meters, equipment, sensors and tools for standardised processes **enabling a more accurate and dynamic measurement and verification of energy savings** and flexible consumption, also in order to ex-ante identify and develop business opportunities;

## LC-SC3-B4E-5-2020: Integrated design concepts for energy-efficient ICT in buildings

- Proposals should investigate innovative design concepts and **advanced ICT solutions for integrated design of server rooms** and small data centres in buildings (based on state-of-the-art sustainable data centre designs such as the Open Compute Project or similar),
- **Operation of ICT equipment in a wider range of temperatures** (to mitigate cooling and airflow needs in data centres but also heating needs in telecommunication cabinets/booths in the field).
- proposals should address server rooms or small data centres, with an **IT Equipment energy requirement of a maximum of 250 kW or lower** per pilot

# NMBP

## DT-NMBP-11-2020: Open Innovation Platform for Materials Modelling

- The aim is to **establish an open innovation platform for integrated materials modelling and materials processing** development for industry that would facilitate setting up experiments, reduce error and enhance efficiency of the development process.
- This modelling framework should develop a seamless and standardised **integration of third party physics-based models, solvers, post-processors and databases ...**
- **Develop apps that can be integrated readily** in Business Decision Support Systems and in the Open Translator Environment to assist rapid and efficient decision making

# DT-SPIRE-11-2020: Artificial Intelligence and Big Data Technologies for Process Industries (CSA)

- **A roadmap should be developed** for all the different sectors in the process industries **to take full advantage of AI and big data** and give clear and pragmatic recommendations for researchers, managers, and operators planning to harness their potential.
- Research and innovation management, planning, and design (e.g. new chemical synthesis strategies, health and safety assessments);
- Process control: yield and accuracy enhancement;

# FET

## FETPROACT-07-2020: Neuromorphic computing technologies

- The challenge is to exploit a wider range of biological principles from **the hardware level up** (e.g., neuro-mimicking materials and principles – electronic, photonic, ionic,... – , 3D networks, higher degrees of connectivity, cross-connectivity, spiking, rate-based and population-level neuronal dynamics, plasticity, parallelism, etc.) ... and **from the cognitive level down**, by developing the related algorithms and programming framework ...
- **Bring neuromorphic engineering at the level where it can be benchmarked** in terms of performance, power consumption, size, latency or other relevant metric e.g., for learning capacity, speed or plasticity,, and its interfaces be standardised;



# FET

## FETHPC-04-2020: International Cooperation on HPC - CSA

- The aim is to develop a strategic partnership in HPC with **Latin America** enabling closer research cooperation in HPC.
- **Develop a roadmap** for increased future research cooperation in HPC
- Identify key **HPC application areas** and hardware/system **requirements** per Latin-American country

# CLIMATE

## SC5-11-2018: Digital solutions for water: linking the physical and digital world for water solutions

- ... more intelligent means of **managing and protecting the planet's water resources** and lays the foundation of a water-smart society.
- Actions should develop and test **new, robust and cybersecure systems, linking the physical and digital world** to ensure tailored, water-smart solutions, to exploit the value of data for the water sector and to foster higher information transparency and accountability.
- ... improved decision making on water management, related risks and resource efficiency through increased real-time accuracy of knowledge;

# SECURITY

- SU-DRS02-2018-2019-2020: Technologies for first responders - RIA
  - Sub-topic 3: [2020] Methods and guidelines for pre-hospital life support and triage
  - The aim is to ensure more effective pre-hospital triage of victims with **appropriate digital traceability of actions and data transfer from the event to the hospital(s)**, including across administrative and political boundaries.
  - Any novel technology or methodology under this topic should be tested and validated, not just in laboratories but also **in training installations and through in-situ experimental deployment.**
  - TRL 6 - 7

# SU-FCT02-2018-2019-2020: Technologies to enhance the fight against crime and terrorism

- Sub-topic 3: [2020] Money flows tracking
  - ... for reinforcing effective and legitimate public-private cooperation for the sharing of financial data, and for **strengthening the effectiveness of current methods of countering terrorism financing and of modelling abnormal transactions** in the fight against terrorism.
- Sub-topic 4: [2020] Development and deployment of technologies, tools and relevant infrastructure to identify speedily terrorist content online, and prevent its re-upload
  - ... Research should therefore be leveraged to **support the development and deployment of technologies, tools and relevant infrastructure to identify speedily terrorist content online, and to prevent its re-upload**. The beneficiaries of such projects should include SMEs so as to ensure that the technology developed would be of direct relevance to their platforms.

# SU-BES03-2018-2019-2020: Demonstration of applied solutions to enhance border and external security

- Sub-topic 3: [2020] Improved systems for the vessel tracking, behaviour analysis and automatic anomaly detection
  - ... facilitate the discovery of possible illegal activities carried out by those vessels.
  - The solutions should be based on implementation **agnostic, state of the art algorithms for artificial intelligence and machine learning**, applied to existing ship reporting systems and maritime databases and information sources.

Paldies par Jūsu laiku!