Artificial Intelligence strategy for Europe

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European Commission
1. AI strategy for Europe
2. European AI Alliance
3. AI funding in H2020:
   - AI-on-Demand-Platform
   - Digital Innovation Hubs
   - Future Calls
4. After H2020
1. **AI strategy for Europe:**
   1. Be part of it!

2. **European AI Alliance**

3. **AI funding in H2020:**
   - AI-on-Demand-Platform
   - Digital Innovation Hubs
   - Future Calls

4. **After H2020**
Maximising benefits from AI

- Economic impact

Contribution to societal challenges

- Healthcare
- Energy efficiency
- Road safety
- Cybersecurity

...
EU CHALLENGES

- Staying at the forefront of in S&T
- Access to Data
- Inclusive: AI available/Usable for All
- Evolution of the Labour landscape & Skill gaps
- Acceptance/Ethical issues
- Safety/Liability issues
- Scattered Effort vs. Fierce International competition
EU strengths

- Excellent research centres
- World-leading position in robotics
- Strong business-to-business domain
- Strong industrial and services sectors: automotive, healthcare, agrifood
- Industrial data
EU strategy for AI

A STRATEGY FOR EUROPE TO LEAD THE WAY

Boost technological and industrial capacity & AI uptake

Prepare for socio-economic changes

Ensure an appropriate ethical & legal framework

AI FOR GOOD AND FOR ALL
EU investments in AI

2018-2020: €1.5 billion in = 70%+ of annual investment

- R&D and excellence centers
- AI-on-demand platform
- Digital Innovation Hubs
- Industrial data platforms

Goal beyond 2020: Increasing investments from €4-5 billion / year today to €20 billion / year
Preparing for socio-economic challenges

Anticipating changes in the labour market

Re-skilling the workforce

Developing, Attracting & retaining talent (EIT, Digital Opportunity Traineeships, Digital Europe Programme)
Ethical and legal framework

High level group of experts → Ethical priorities by early 2019
Joining forces

Coordinated plan with Member States by end of 2018
Interaction with Member States via the European platform on national initiatives to digitise industry

All Member States and Norway signed the Declaration of cooperation on AI
OUTLINE

1. AI strategy for Europe
2. European AI Alliance:
   1. Contribute to shaping the future!
3. AI funding in H2020:
   - AI-on-Demand-Platform
   - Digital Innovation Hubs
   - Future Calls
4. After H2020
THE EUROPEAN AI ALLIANCE

Joint reflection on the future of AI in Europe

Full mobilisation of all stakeholders needed: industry, academia, civil society

Supported by high-level expert group on AI and an online platform

Goal: Making it the world-wide reference platform for thinking and reflecting on AI
The European AI Alliance

JOIN @
And contribute to the debate
You can now officially join the European AI Alliance - a forum engaged in a broad and open discussion of all aspects of Artificial Intelligence development and its impacts.

Why join the AI Alliance?
The on-line platform of the European AI Alliance
European AI Alliance

The European AI Alliance is a multi-stakeholder forum for engaging in a broad and open discussion of all aspects of AI development and its impact on the economy and society. It is steered by the High-Level Expert Group on AI (AI HLG), which consists of 52 experts who have been selected by the Commission for this task. The AI HLG will focus on two main deliverables, for which input from the members of the European AI Alliance will be sought:

1. It will prepare draft AI ethics guidelines, which will offer guidance on how to implement ethical principles when developing and deploying AI, building on the work of the European Group on Ethics in Science and New Technologies and the European Union Agency for Fundamental Rights; and

2. It will make mid- and long-term policy recommendations on AI-related challenges and opportunities, which will feed into the policy development process, the legislative evaluation process and the development of a next-generation digital strategy.

Blog

Which themes should the High-Level Expert Group on AI (AI HLG) tackle?

On 27 June, the AI HLG will meet for the first time and discuss (1) the main ethical principles to focus on when preparing the draft AI ethics guidelines, and (2) the main AI-related challenges to...

Lucilla Sioli

14 June 2018 - last comment 17 hours ago

Welcome to the European AI Alliance!
1. AI strategy for Europe
2. European AI Alliance
3. **AI funding in H2020: What is there for you?**
   - AI-on-Demand-Platform
   - Digital Innovation Hubs
   - Future Calls
4. After H2020
WP18-20
EUROPEAN AI-ON-DEMAND PLATFORM

Central access point:
- integrating tools and resources
- offering solutions and support to all users of AI to integrate such technology into application, products and services
Objective:
Access to digital technologies and expertise within "working distance" for any industry in Europe, especially SMEs, mid-caps, non-tech
- Regions and local authorities have a key role to play
- EU funding: at least 500 million € in H2020

Commissioner Oettinger:
"My objective is to have at least one world class digital innovation hub in every region in Europe."
DIGITAL INNOVATION HUB: INGREDIENTS

- TECHNICAL SUPPORT (development, integration, etc.)
- INFRASTRUCTURE
- TESTING
- ACCESS TO USERS
- ACCESS TO FINANCE
- KNOWLEDGE
- INNOVATION COACHING
- TRAINING

COMPETENCE CENTER
DIGITAL INNOVATION HUB: INGREDIENTS

- KNOWLEDGE
- TECHNICAL SUPPORT (development, integration, etc.)
- INNOVATION COACHING
- TESTING
- TRAINING
- ACCESS TO USERS
- ACCESS TO FINANCE
- INFRASTRUCTURE
- BROKERAGE: USERS, SUPPLIERS, INVESTORS
DIGITAL INNOVATION HUB: ACTORS

COMPETENCE CENTER
Shared Physical Infrastructure & Support
(technical, legal, administrative, business,...)

- Academia
- Entrepreneur
- Incubator
- Industry
- Government
- Users Community: SMEs, citizens, local economic actors,...
- Investors
DIGITAL INNOVATION HUB: ACTORS

- **Academia**
- **Entrepreneur**
- **Innovator**
- **Industry**
- **Government**
- **Users Community: SMEs, citizens, local economic actors,...**
- **Investors**

**Competence Center: Shared Physical Infrastructure & Support (technical, legal, administrative, business, ...)**
THE HUB = CENTER OF A NETWORK EXPLOIT COMPLEMENTARITIES (LOCAL AND EUROPEAN)
COLLABORATION AND NETWORKING BETWEEN CENTRES
→ LOCAL ONE-STOP-SHOP FOR EXPERTISE, COMPLEMENTARITY & SPECIALISATION
AI-related DIHs

- AI and cognitive Systems, interaction technologies, data mining and big data, robotics and autonomous systems
INCLUSIVE EU STRATEGY

-> TOOLBOX:
AI-on-demand Platform
+
Network of Digital Innovation Hubs

⇒ DISTRIBUTION CHANNEL FOR AI TO EMPOWER ALL LOCAL COMPANIES/USERS
OUTLINE

1. AI strategy for Europe
2. European AI Alliance
3. **AI funding in H2020:** What is there for you?
   - AI-on-Demand-Platform
   - Digital Innovation Hubs
   - Future Calls
1. After H2020
€1.5 billion EC investments into AI in 2018-20
BY 70% INCREASE OF ANNUAL INVESTMENT

- Basic and industrial research (health, transport, agriculture, manufacturing, etc.)
- AI-on-demand platform
- Network of AI-focused Digital Innovation Hubs (DIHs)
- Strengthening AI excellence centres
- Setting up an industrial data platform
PERCENTAGE OF WP 2018-20 - Total AI-relevant spending

ICT-LEIT
TOTAL OPEN (ERC - SME-MC-FET)
Transport
NMBP
Health
Space
FET (excluding FET Open)
Food
JU - Innovative Medicines Initiative (IMI)
Climate
Security
JU - ECSEL -
Inclusive Society
RESEARCH INFRASTRUCTURE

[Bar chart showing the percentage of WP 2018-20 total AI-relevant spending across various categories]
ICT-LEIT

- **ICT-08-2019**: Security and resilience for **collaborative manufacturing environments**
- **ICT-09-2019-2020**: **Robotics** in Application Areas
- **ICT-10-2019-2020**: **Robotics** Core Technology
- **ICT-11-2018-2019**: **HPC and Big Data** enabled **Large-scale Test-beds** and Applications
- **ICT-12-2018-2020**: Big Data technologies and extreme-scale analytics
- **ICT-13-2018-2019**: Supporting the emergence of **data markets and the data economy**
- **ICT-14-2019**: Co-designing **Extreme Scale Demonstrators** (EsD)
- **ICT-16-2018**: Software Technologies
- **ICT-24-2018-2019**: **Next Generation Internet - An Open Internet Initiative**
- **ICT-25-2018-2020**: Interactive Technologies
- **ICT-26-2018-2020**: Artificial Intelligence
- **ICT-29-2018**: A multilingual Next Generation Internet
- **ICT-30-2020**: An empowering, inclusive Next Generation Internet
- **ICT-38-2020**: Artificial intelligence for manufacturing
- **ICT-39-2020**: Digital advances for local/urban manufacturing
• DT-ICT-02-2018: Robotics - Digital Innovation Hubs
• **DT-ICT-03-2019**: I4MS (phase 4) - uptake of digital game changers and digital manufacturing platforms
• DT-ICT-05-2020: Big Data Innovation Hubs
• **DT-ICT-07-2018-2019**: Digital Manufacturing Platforms for Connected Smart Factories
• **DT-ICT-08-2019**: Agricultural digital integration platforms
• **DT-ICT-10-2018-19**: Interoperable and smart homes and grids
• **DT-ICT-11-2019**: Big data solutions for energy
• DT-ICT-12-2020: The smart hospital of the future
• SU-ICT-01-2018: Dynamic countering of cyber-attacks
• EUK-01-2018: Cloud, IoT and AI technologies
• EUJ-01-2018: Advanced technologies (Security/Cloud/IoT/BigData) for a hyper-connected society in the context of Smart City
**Health**

- **SCI-DTH-01-2019**: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment
- SCI-DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing
- **SCI-DTH-05-2019**: Large scale implementation of digital innovation for health and care in an ageing society
- **SCI-DTH-11-2019**: Large Scale pilots of personalised & outcome based integrated care
- **DT-TDS-01-2019**: Smart and healthy living at home
- SC1-DTH-04-2020: International cooperation in digital solutions and robotics for independent living
- SC1-DTH-02-2020: Personalised early risk prediction, prevention and intervention, RIA
- SC1-BHC-06-2020: Digital diagnostics – developing tools for clinical decisions integrating in vitro and in vivo diagnostics
• **DT-ART-01-2018**: Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data

• **DT-ART-03-2019**: Human centred design for the new driver role in highly automated vehicles

• **DT-ART-04-2019**: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all

• **DT-ART-05-2020**: Efficient and safe connected and automated heavy-duty vehicles in real logistics operations

• **DT-ART-06-2020**: Large-scale, cross-border demonstration of highly automated driving functions for passenger cars
• **MG-3-2-2018**: The autonomous ship
• **MG-3-3-2018**: "Driver" behaviour and acceptance of connected, cooperative and automated transport
• **MG-BG-01-2018**: Unmanned and autonomous survey activities at sea
• **MG-2-1-2018**: Human Factors in Transport Safety
• **MG-2-6-2019**: Moving **freight by Water**: Sustainable Infrastructure and Innovative Vessels
• **MG-2-8-2019**: Innovative applications of drones for ensuring safety in transport
• **LC-GV-02-2018**: Virtual product development and production of all types of electrified vehicles and components
• **LC-MG-1-10-2019**: Logistics solutions that deal with requirements of the 'on demand economy' and for shared-connected and low-emission logistics operations
• **MG-3-1-2018**: Multidisciplinary and collaborative aircraft design tools and processes
• **MG-4-5-2019**: An inclusive digitally **interconnected transport** system meeting citizens' needs
• **DT-BG-04-2018-2019**: Sustainable European *aquaculture* 4.0: nutrition and breeding
• **RUR-13-2018**: Enabling the farm advisor community to prepare farmers for the digital age
• **DT-RUR-12-2018**: ICT Innovation for agriculture – Digital Innovation Hubs for Agriculture
• **SFS-31-2019**: ERANETs in *agri-food* A. [2019] ICT-enabled agri-food systems
• **RUR-04-2018-2019**: Analytical tools and models to support policies related to agriculture and food
• **EU-China FAB Flagship initiative - SFS-37-2019**: Integrated approaches to *food safety controls* across the food chain
• **SPACE-12-TEC-2018**: SRC – Space robotics technologies
• **SPACE-27-TEC-2020**: SRC -Space robotics technologies (continued in 2020)
• **SPACE-20-SCI-2018**: Scientific instrumentation and technologies enabling space science and exploration
• **DT-SPACE-EGNSS-2-2019-2020**: EGNSS applications fostering digitisation
• **DT-SPACE-25-EO-2020**: Copernicus big data algorithm factory [EUR 10.00 million]
• **SPACE-11-TEC-2018**: Generic space technologies
• DT-FOF-02-2018: Effective Industrial Human-Robot Collaboration (RIA)
• DT-FOF-12-2019: Handling systems for flexible materials (RIA)
• DT-SPIRE-06-2019: Digital technologies for improved performance in cognitive production plants (IA)
• DT-NMBP-20 Plug & Produce Platform for Manufacturing
• DT-FOF-09-2020 Holistic energy-efficient factory management
• DT-FOF-11-2020 Quality control in smart manufacturing
• DT-NMBP-07-2018 Open Innovation Test Beds for characterisation (IA)
• DT-NMBP-08-2019 Real-time nano-characterisation technologies (RIA)
• DT-NMBP-10-2019 Adopting materials modelling in manufacturing processes (RIA)
• DT-NMBP-11-2020 Open Innovation Test Beds for Materials Modelling (IA)
• NMBP-14-2018 Nanoinformatics: from materials models to predictive (eco)toxicology (RIA)

* Nanotechnologies, Advanced Materials, Advanced Manufacturing and processing, and Biotechnology
CLIMATE

- **SC5-10-2019-2020**: Raw materials innovation actions: exploration and **Earth observation** in support of sustainable **mining**
- **SC5-11-2018**: Digital solutions for water: linking the physical and digital world for water solutions
- **CE-SC5-03-2018**: Demonstrating systemic urban development for circular and regenerative cities
- **SC5-17-2018**: Towards operational forecasting of earthquakes and early warning capacity for more resilient societies
- **SC5-14-2019**: Visionary and integrated solutions to improve **well-being and health in cities**
SECURITY

- **SU-DRS02-2018-2019-2020**: Technologies for *first responders*
- **SU-FCT02-2018-2019-2020**: Technologies to enhance the fight against *crime and terrorism*
- **SU-BES03-2018-2019-2020**: Demonstration of applied solutions to enhance *border and external security*
- **SU-FCT03-2018-2019-2020**: Information and data stream management to fight against *(cyber)crime and terrorism*
Inclusive Society

- **DT-TRANSFORMATIONS-02-2018-2019-2020**: Transformative impact of disruptive technologies in public services
- **TRANSFORMATIONS-13-2019**: Using big data approaches in research and innovation policy making
- **DT-GOVERNANCE-12-2019-2020**: Pilot on using the European cloud infrastructure for public administrations
- **8. Expert support for big data for R&I performance monitoring**
• **JU – ECSEL (Electronic Components and Systems Joint Undertaking)**

  9.3.2. Major challenge 2 Implementing AI and machine learning, to **detect anomalies** or **similarities** and to optimize parameters

  7.3.6. Developing platforms for wearables/implants, data analytics, artificial intelligence for **precision medicine** and **personalized healthcare and well-being**

• **JU - Innovative Medicines Initiative (IMI)**

  2018 - F. **Big data, digital health**, clinical trials and regulatory research / 40. **Big data in oncology.**
• INFRAEDI-02-2018: HPC PPP - Centres of Excellence on HPC
• **FET PROACTIVE**
• **FET Flagship**
• **FET Open**
OTHER OPEN SCHEMES

- ERC (European Research Council)
- SMEinstrument
- Marie Curie
TOPIC NAME: ICT-01-2019
Computing technologies and engineering methods for cyber-physical systems of systems

- **Objectives of the topic:**
  models, tools and methods for software and system design of dependable and physically-entangled systems of systems

- **AI Component:**
  AI will be a core technology in most cyber-physical systems.
  The tools and methods developed have to deal with specific issues of embodied AI (e.g. safety, fault-tolerance, response time)

- **AI-stakeholders expected in the proposals:**
  All stakeholders are impacted by AI technologies, mostly CNN (ambient recognition) and RNN (interfaces, control)
Key facts and figures

- Topic budget:
  - RIA: 38M€
  - CSA: 2M€

- Deadline of the call:
  - 28 March 2019

- Link to the call text:

- Contacts:
  - cnect-A2@ec.europa.eu
TOPIC NAME: ICT-08-2019
Security and resilience for collaborative manufacturing environments

• **Objectives of the topic:**
  tools and services for manufacturing guaranteeing high data security while allowing exchange of data on the factory floor and across the value chain

• **AI Component:**
  The call encourages semi-autonomous or fully autonomous solutions, in which AI is needed to guarantee a better response time and availability compared to human experts

• **AI-stakeholders expected in the proposals:**
  Industrial stakeholders as users of AI technologies, mainly those based on real-time big data analysis.
KEY FACTS AND FIGURES

• Topic budget:
  • **RIA: 11M€**

• Deadline of the call:
  • **28 March 2019**

• Link to the call text:

• Contacts:
  • cnect-A2@ec.europa.eu
TOPIC: ICT-09-2019-2020: Robotics in Application Areas

- **Objectives of the topic:**
  a) Research and Innovation boosting promising robotics applications (excluding the areas covered in c) )
  b) Large scale pilots in Robotics for infrastructure inspection and maintenance
  c) Robotic competition in healthcare, inspection and maintenance of infrastructure, agri-food, and agile production

- **AI Component:**
  Research and deployment of advanced robotics capabilities, able to cope with the uncertainties of the real-world.

- **AI-stakeholders expected in the proposals:**
  Academia and industry developing or using intelligent robots, and end-users. The involvement of end-users is particularly important in b) and c).
KEY FACTS AND FIGURES

- **Topic budget:**
  - RIA: 20€ - indicative size of project: 3-5M€
  - IA: 28M€ - indicative size of project: 7-9M€
  - CSA: 2M€ - indicative size of project: 2M€

- **Deadline of the call:**
  - 28 March 2019

- **Link to the call text:**

- **Events:** (planned infodays, etc.)
  - Brokerage event (tbc) – check: [https://www.eu-robotics.net/](https://www.eu-robotics.net/)

- **Contacts:** CNECT-A1@ec.europa.eu
TOPIC : ICT-10-2019-2020: Robotics Core Technology

- **Objectives of the topic:**
  
  Increased autonomy in robotics systems through research in: AI and Cognition, Cognitive Mechatronics, Socially cooperative human-robot interaction, Model-based design and configuration tools

- **AI Component:**
  
  Intelligent and adaptable robots, Human-robot interaction, autonomous robots, AI and cognition in robotics, advanced perception & autonomous action.

- **AI-stakeholders expected in the proposals:**
  
  Academia and industry developing or using intelligent robots.
KEY FACTS AND FIGURES

• Topic budget:
  • **RIA: 42M€** - indicative size of project: 5-10M€

• Deadline of the call:
  • **28 March 2019**

• Link to the call text:

• Events: (planned infodays, etc.)
  • **Brokerage event (tbc)** – check: [https://www.eu-robotics.net/](https://www.eu-robotics.net/)

• Contacts: CNECT-A1@ec.europa.eu
TOPIC: ICT-11b-2018-2019 HPC and Big Data enabled Large-scale Test-beds and Applications

- **Objectives of the topic:**
  
  Large Scale Pilot Actions to demonstrate how effective integration of Big Data/Cloud/IoT technologies transform data intensive industrial sectors and stimulate the emergence of the data economy in Europe.

- **AI Component:**
  
  Big data analytics, industrial transformation.

- **AI-stakeholders expected in the proposals:**
  
  Key European industrial actors, big data analytics companies and research organisations.
**KEY FACTS AND FIGURES**

- Topic budget:
  - **IA 40M€** - indicative size of project: **15-18 M€**
- Deadline of the call:
  - **14 November 2018**
- Link to the call text:
- Events: EBDVF, Vienna 12-14 November 2018
- Contacts: CNECT-G1@ec.europa.eu
TOPIC: ICT-13a-2018-2019 Supporting the emergence of data markets and the data economy

- **Objectives of the topic:**
  Set up and operate platforms of proprietary and/or personal data to preserve utility of such data for analysis, and to facilitate trusted and secure sharing and trading of data assets

- **AI Component:**
  Pooling and sharing of data for the training of AI systems

- **AI-stakeholders expected in the proposals:**
  Industrial actors, data analytics companies and research organisations
**KEY FACTS AND FIGURES**

- **Topic budget:**
  - *IA 48M€* - indicative size of project: 15-18 M€

- **Deadline of the call:**
  - **28 Mar 2019**

- **Link to the call text:**

- **Events:** EBDVF, Vienna 12-14 November 2018

- **Contacts:** CNECT-G1@ec.europa.eu
TOPIC NAME: ICT-24-2018-2019

Next Generation Internet – An Open Internet Initiative

- Objectives of the topic:
  - 3 RIAs with subgranting mechanisms to find internet innovators in the areas of Privacy, Decentralized data and Search technologies.
  - 3 CSAs to support NGI Strategy and Policy actions, Harvest and Transfer technologies and to create an Outreach Office.

- AI Component:
  
  AI is not directly researched, but subgrantees may use AI components to enhance their research

- AI-stakeholders expected in the proposals:
  Academia and industry developing or using AI to improve search mechanisms, trust or decentralized data.
KEY FACTS AND FIGURES

• Topic budget: 7M € for CSA and 21M € for RIA
• Deadline of the call: 17 April 2018
• Events: Further information in NGI.eu
• Contacts: CNECT-E3@ec.europa.eu or CNECT-Next-Generation-Internet@ec.europa.eu
Interactive Technologies

- Objectives of the topic:
Establish a sustainable competitive ecosystem of European technology and solution providers for interactive technologies.

- AI Component:
Human-centred interactive technologies such as: virtual and augmented reality, conversational systems affective computing, AI are set to transform the ways in which people communicate, interact and share information on the internet and beyond.

- AI-stakeholders expected in the proposals:
Academia & industry & research centre.
KEY FACTS AND FIGURES

- Topic budget:
  RIA: 20M€ - indicative size of project: 2-4M€

- Deadline of the call:
  14 November 2018 17:00:00

- Link to the call text:

- Contacts: CNECT-G2@ec.europa.eu
TOPIC: h2020 **ICT-30-2020** - An empowering, inclusive Next Generation Internet

**Objectives of the topic:**
The objective is to support actions on smarter, open, trusted and personalised learning solutions to optimise digital learning and to allow learners to engage and interact with content and with peers.

**AI Component:**
The project will build on cross-links and advances in the various NGI technologies (such as machine-learning, AR/VR, AI) research fields and foster synergies between all the relevant market players, researchers and educational agents working on promising and innovative products.

**AI-stakeholders expected in the proposals:**
Academia & industry & research centre & Education.
KEY FACTS AND FIGURES

• Topic budget:
  IA - CSA: 8 M€

• Deadline of the call:
  28 March 2019 17:00:00

• Link to the call text:

• Contacts: CNECT-G2@ec.europa.eu
TOPIC NAME: DT-ICT-07-2019
Digital Manufacturing Platforms for Connected Smart Factories

• **Objectives of the topic:**
  Establish platforms for the connected smart production facilities of the future including their supply chains, targeting one of the grand challenges:
  • The human factor: human competences in synergy with technological progress
  • Sustainable Value Networks: manufacturing in a circular economy

• **AI Component:**
  Integration of AI, IoT, cloud, robotics, big data and other technologies in platforms. Data analytics as a service.

• **AI-stakeholders expected in proposals:**
  AI providers to integrated AI based analytics in platforms. Industrial stakeholders as users of AI technologies.
KEY FACTS AND FIGURES

- Topic budget:
  - RIA: 45 M€
  - CSA: 2 M€

- Deadline of the call:
  - 2 April 2019

- Link to the call text:

- Events:
  - Workshop "Digital Manufacturing Platforms for Connected Smart Factories", 19 Oct 2017
  - ConnectedFactories dissemination event, 5-6 Feb 2018
  - Webinar DT-ICT-07-2018 (2018 version)

- Contacts:
  - cnect-A2@ec.europa.eu
Objectives of the topic:

a) Building platforms integrating different technologies.

b) Sharing data and generating knowledge.

c) Developing decision support systems.

AI Component:

Use of AI To deliver tailored advices to farmers. Data analytics to enable low maintenance, robust and scalable monitoring of farm systems.

AI-stakeholders expected in the proposals: Academia and industry applying AI in agriculture.
**KEY FACTS AND FIGURES**

- **Topic budget:** 30 M€
- **Deadline of the call:** *14th November 2018, 17.00*
- **Link to the call text:**
- **Contacts:**
  - Joel.Bacquet@ec.europa.eu DG CNECT;
  - Louis.Mahy@ec.europa.eu DG AGRI
DT-ICT-10-2019- Interoperable and smart homes and grids

• **Objectives of the topic:**
  
a) Novel services for more **comfortable**, **convenient** and **healthier** living

b) The integration of renewable **energy** sources (RES) and promotion of **energy efficiency**.

C) To match user needs with the **management** of distributed **energy** across the grid, and to gain access to benefits from **Demand Response**.

• **AI Component:**
  
  IoT platforms that enable the integration of relevant digital technologies like **AI**, **cloud** and **big data services** and where applicable, combined with blockchain technologies.

• **AI-stakeholders expected in the proposals:** industry especially **SMEs**, start-ups applying **AI** for new apps, services.
KEY FACTS AND FIGURES

- Topic budget: 30 M€
- Deadline of the call: 14th November 2018, 17.00
- Contacts:
  - Rolf.Riemenschneider@ec.europa.eu (DG CNECT)
  - Svetoslav.MIHAYLOV@ec.europa.eu (DG CNECT)
  - Mark.VAN-STIPHOUT@ec.europa.eu (DG ENER)
TOPIC: DT-ICT-11-2019
Big data solutions for energy

- **Objectives of the topic:**
  Large-scale pilot test-beds using big data tools and architectures to *optimise the energy system management* in the challenging situation with an increasing number of small-scale and dispersed production (e.g. windmills, solar panels) and consumption sites generating huge amounts of data.

- **AI Component:**
  Big data analytics, industrial transformation

- **AI-stakeholders expected in the proposals:**
  Energy network operators and suppliers, big data analytics companies and research organisations
KEY FACTS AND FIGURES

- **Topic budget:**
  - IA 30M€ - indicative size of project: 10 M€

- **Deadline of the call:**
  - 2 April 2019

- **Link to the call text:**

- **Events:** EBDVF, Vienna 12-14 November 2018

- **Contacts:** CNECT-G1@ec.europa.eu
Health

- **SCI-DTH-01-2019**: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment
- **SCI-DTH-03-2018**: Adaptive smart working and living environments supporting active and healthy ageing
- **SCI-DTH-05-2019**: Large scale implementation of digital innovation for health and care in an ageing society
- **SCI-DTH-11-2019**: Large Scale pilots of personalised & outcome based integrated care
- **DT-TDS-01-2019**: Smart and healthy living at home
- **SC1-DTH-04-2020**: International cooperation in digital solutions and robotics for independent living
- **SC1-DTH-02-2020**: Personalised early risk prediction, prevention and intervention, RIA
- **SC1-BHC-06-2020**: Digital diagnostics – developing tools for clinical decisions integrating in vitro and in vivo diagnostics
SCI-DTH-01-2019: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment

• **Objectives of the topic:**
  how to better acquire, manage, share, model, process and exploit big data using, if appropriate, high performance computing to effectively monitor health status of individual patients, provide overall actionable insights at the point of care and improve quality of life after the cancer treatment

• **AI Component:**
  systems for determining and monitoring the combined effects of cancer treatment, environment, lifestyle and genetics on the quality of life, enabling early identification of effects that can cause development of new medical conditions and/or impair the quality of life

• **AI-stakeholders expected in the proposals:**
  tbc
**Key facts and figures**

- Topic budget: 35M€
- Deadline of the call: 24 April 2019
- Link to the call text: tbc
- Events: (planned infodays, etc.): 12 July 2018
SCI-DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing

**Objectives of the topic:**
Address the challenge of accelerating the translation of large scale data and knowledge to define balanced healthy conditions and to predict and prevent diseases through the development of personalised approaches and clinical tools. Focus on the clinical aspects of personalised prediction and prevention of disease.

**AI Component:**
- Integration and use of high quality microbiome, metabolome and other -omics data produced by large scale international initiatives
- Clinical tools for predicting and preventing diseases

**AI-stakeholders expected in the proposals:**
tbc
**KEY FACTS AND FIGURES**

- Topic budget: 25M€
- Deadline of the call: 25 April 2019
- Link to the call text:
- Events: (planned infodays, etc.): 12 July 2019
SC1-DTH-05-2019: Large scale implementation of digital innovation for health and care in an ageing society

• Objectives of the topic:
A PPI to specify, purchase and deploy ICT based solutions for active and healthy ageing through a common supply and demand side dialogue, which can deliver sustainable, new or improved health and care services promoting patient feedback in which public procurement approaches for innovative solutions lead to improved outcomes

• AI Component:
  • Digital solutions integrating health, social or community care and informal care
  • IoT enabled independent living solutions that allow the citizens to live safely and independently at home therefore avoiding institutionalisation
  • Tele-care solutions and tools supporting for self-care and person-centred care

• AI-stakeholders expected in the proposals:
tbc
KEY FACTS AND FIGURES

- Topic budget: 10M€
- Deadline of the call: 24 April 2019
- Link to the call text: tbc
- Events: (planned infodays, etc.): 12 July 2019
SCI-DTH-11-2019: Large Scale pilots of personalised & outcome based integrated care

• Objectives of the topic:
  Foster the large-scale pilots for deployment of trusted and personalised digital solutions dealing with Integrated Care, with a view to supporting and extending healthy and independent living for older individuals who are facing permanently or temporarily reduced functionality and capabilities

• AI Component:
  • Scalable and robust digital solutions for integrated care

• AI-stakeholders expected in the proposals:
  tbc
KEY FACTS AND FIGURES

- Topic budget: 20M€
- Deadline of the call: 24 April 2019
- Link to the call text: tbc
- Events: (planned infodays, etc.): 12 July 2019
Objectives of the topic:
Large-scale deployment of integrated digital solutions which will bring improved quality of life to citizens while demonstrating significant efficiency gains in health and care delivery across Europe

AI Component:
- Advanced ICT ranging from biophotonics to robotics, from artificial intelligence to big data and from IoT to smart wearables
- Platform for smart living at home integrating technologies in an intelligent manner

AI-stakeholders expected in the proposals:
tbc
Key facts and figures

- Topic budget: 60M€
- Deadline of the call: 14 November 2018
- Link to the call text: tbc
- Events: (planned infodays, etc.): 12 July 2019
Active and Assisted Living Programme -

NMBP
TOPIC NAME: DT-NMBP-07-2018: Open Innovation Test Beds for Characterisation

- **Objectives of the topic:**
  Establishing open user-driven characterisation test beds for novel materials characterisation techniques to accelerate uptake of new materials in new products.

- **AI Component:**
  Test beds should include all aspects of novel multi-scale and multi-modal characterisation solutions management, analytics and mining of the resulting data (Materials Informatics).

- **AI-stakeholders expected in the proposals:**
  Characterisation engineers and tool developers, data scientists, software and database engineers, modellers
KEY FACTS AND FIGURES

• Topic budget: 9 M€ per project (44 M€ total together with topic DT-NMBP-09-2018: Accelerating the uptake of materials modelling software)

• Deadline of the call: 28 June 2018

TOPIC NAME: DT-NMBP-08-2019: Real-time nano-characterisation technologies (RIA)

- **Objectives of the topic:**
  To advance and establish nano-scale, multimodal and multi-scale materials characterisation tools and methods, allowing rapid and reliable high-resolution analyses.

- **AI Component:**
  Optimisation of existing or development of new technologies, characterisation equipment, data processing routes and data analysis strategies.

- **AI-stakeholders expected in the proposals:**
  Characterisation engineers and tool developers, data scientists, software and database engineers, modellers
**Key Facts and Figures**

- **Topic budget:** Between 4-5 M€ per project (37,8 M€ total together with topic DT-NMBP-10-2018: Adopting materials modelling to challenges in manufacturing processes)
- **Deadline of the call:** 3 September 2019
- **Link to the call text:**
TOPIC NAME: DT-NMBP-10-2019: Adopting **materials modelling** to challenges in manufacturing processes

- **Objectives of the topic:**
  Develop an open translation environment to optimise decision making for materials producers and product manufacturers.

- **AI Component:**
  A suite of integrated and interoperable apps that combine existing materials models and databases of materials properties. Develop apps to improve decision making and facilitate the building of the required workflows.

- **AI-stakeholders expected in the proposals:**
  Materials scientists, modellers, manufacturing companies
**Key facts and figures**

- **Topic budget:** 5 M€ per project (37.8 M€ total together with topic DT-NMBP-08-2019: Real-time nano-characterisation technologies)
- **Deadline of the call:** 3 September 2019
- **Link to the call text:**
ERC
Objectives:
To support excellence in frontier research through a bottom-up, individual-based, pan-European competition.

AI Component:
The ERC does not prioritise any discipline or topic; AI-oriented proposals in any basic or applied research domain are welcome.

AI-stakeholders expected in the proposals:
Any researcher can apply individually, without the need to have a consortium.
**KEY FACTS AND FIGURES**

- **Budget:**
  - € 13 billion (2014-2020) - 1.9 billion €/year
  - € 7.5 billion (2007-2013) - 1.1 billion €/year

- **Deadline of the call:**
  Calls are published every year

- **Link to the call text:**
  [https://erc.europa.eu/](https://erc.europa.eu/)

- **Contact:**
ERC Grant Schemes

**Starting Grants**
- starters (2-7 years after PhD) up to €1.5 Mio for 5 years

**Consolidator Grants**
- consolidators (7-12 years after PhD) up to €2 Mio for 5 years

**Advanced Grants**
- track-record of significant research achievements in the last 10 years up to €2.5 Mio for 5 years

**Proof-of-Concept**
- bridging gap between research - earliest stage of marketable innovation up to €150,000 for ERC grant holders

**Synergy Grants** (re-launched 2018)
- 2 – 4 Principal Investigators up to €10.0 Mio for 6 years
OUTLINE

1. AI strategy for Europe
2. European AI Alliance
3. AI funding in H2020: What is there for you?
   - AI-on-Demand-Platform
   - Digital Innovation Hubs
   - Future Calls
4. After H2020:
   4. The next Multi-Annual Financial Framework (MFF)
DIGITAL IN THE NEXT MFF: OVERVIEW

**Digital Europe**
1. High Performance Computing (HPC)
2. Artificial Intelligence (AI)
3. Cybersecurity
4. Advanced digital skills
5. Digital transformation and interoperability

**Digital in Horizon Europe**
1. Digital under "global challenges"
   - Digital and industry cluster
   - Digital in other clusters - health, mobility, energy, environment...
2. FET Open under Open Innovation
3. Research Infra under Open Science

**CEF - Digital Connectivity**
- Synergies with Transport /Energy
- WIFI/BB 4EU
- 5G roll out

**MEDIA under Creative Europe within Cohesion and Values**
- Distribution of works
- Creation

€9.2 Bn
€3 Bn
€1.1 Bn
€100 Bn with share to digital of 15Bn
Investing in the future: Digital Europe Programme

€2.5 billion for Artificial intelligence

Bring the power of the AI to businesses & public administrations

Strengthen testing and experimentation facilities across the EU

Facilitate safe access and storage of data and algorithms

#EUBudget #DigitalEurope
DIGITAL EUROPE PROGRAMME: CAPACITY BUILDING AND DEPLOYMENT

Investing in the future: Digital Europe Programme

- Digital transformation & Interoperability: €1.3 billion
- Advanced digital skills: €0.7 billion
- Cybersecurity & trust: €2 billion
- High performance computing: €2.7 billion
- Artificial intelligence: €2.5 billion

€9.2 billion in total
Thank you

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