

ICT in HORIZON 2020 WP 2018-2020

INTRODUCTION/SCOPE

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[Introduction to Leadership in enabling and industrial technologies \(LEITs\) WP 2018-20](#)

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[General annexes to the Work Programme 2018-2020](#)

[Legal basis: Horizon 2020 Regulation of Establishment](#)

[Legal basis: Horizon 2020 Rules for Participation](#)

[Legal basis: Horizon 2020 Specific Programme](#)

CONTACT

Elena ZAMSA
NCP Topic: ICT&FET
Tel: +373 68 135 745
E-mail: elena.zamsa@h2020.md

Dorina HAREA
NCP Topic: ICT
Tel: +373 68 754 829
E-mail: dorina.harea@h2020.md

Topic ID	Topic title	Budget (M€)	Opening		Deadline 2019	Deadline 2020
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Excellent Science						
Future and Emerging Technologies (FET)						
FET Open: novel ideas for radically new technologies						
FETOPEN-01-2018-2019-2020	FET-Open Challenging Current Thinking	354.2	07/11/17		18/09/19	13/05/20
FETOPEN-03-2018-2019-2020	FET Innovation Launchpad	3.0	09/10/19		08/10/19	14/10/20
FET Proactive topics in the EIC Enhanced Pilot (2019-2020)						
FETPROACT-EIC-05-2019 (published in the EIC work programme part of Horizon 2020)	FET Proactive: emerging paradigms and communities	87.4	19/03/19		08/10/19	
FETPROACT-EIC-06-2019 (published in the EIC work programme part of Horizon 2020)	EIC Transition to Innovation Activities	26.0	19/03/19		08/10/19	
FETPROACT-EIC-07-2020	FET Proactive: emerging paradigms and communities	50.0	19/11/19			22/04/20
FETPROACT-EIC-08-2020	Environmental Intelligence	18.0	19/11/19			22/04/20
The topic(s) below are not part of the European Innovation Council Enhanced Pilot						
FETPROACT-09-2020	Neuromorphic computing technologies	15.0	19/11/19			22/04/20
FET Proactive - High Performance Computing						
FETHPC-04-2020	International Cooperation on HPC	0.5	19/11/19			22/04/20
FET Flagships - Tackling grand interdisciplinary science and technology challenges						
FETFLAG-04-2020	Quantum Flagship - ERA-NET Cofund	15.0	06/02/20			07/05/20
FETFLAG-05-2020	Complementary call on Quantum Computing	19.7	09/07/19			13/11/19
FETFLAG-06-2020	International Cooperation on Quantum Technologies	0.5	09/07/19			13/11/19
FETFLAG-07-2020	Training and Education on Quantum Technologies	0.3	09/07/19			13/11/19

Research Infrastructures						
Implementing the European Open Science Cloud						
INFRAEOSC-03-2020	Integration and consolidation of the existing pan-European access mechanism to public research infrastructures and commercial services through the EOSC Portal	40.9	19/11/19			22/04/20
INFRAEOSC-07-2020	Increasing the service offer of the EOSC Portal	24.0	19/11/19			22/04/20
Integrating and opening research infrastructures of European interest						
INFRAIA-02-2020	Integrating Activities for Starting Communities	115.0	28/11/19			17/03/20
INFRAIA-03-2020	Pilot for a new model of Integrating Activities	45.0	28/11/19			17/03/20
European Data Infrastructure						
INFRAEDI-05-2020	Centres of Excellence in exascale computing	20.0	09/07/19			13/11/19
Demonstrating the role of Research Infrastructures in the translation of Open Science into Open Innovation						
INFRAINNOV-03-2020	Co-Innovation platform for research infrastructure technologies	35.0	28/11/19			17/03/20
INFRAINNOV-04-2020	Innovation pilots	30.0	28/11/19			17/03/20

Industrial Leadership						
LEIT - Information and Communication Technologies						
Information and Communication Technologies						
Artificial Intelligence and Technologies for Digitising European Industry and Economy						
ICT-46-2020	Robotics in Application Areas and Coordination & Support	83.0	19/11/19			22/04/20
ICT-47-2020	Research and Innovation boosting promising robotics applications	20.0	19/11/19			22/04/20
ICT-48-2020	Towards a vibrant European network of AI excellence centres	50.0	09/07/19			13/11/19
ICT-49-2020	Artificial Intelligence on demand platform	20.0	19/11/19			22/04/20
ICT-38-2020	Artificial intelligence for manufacturing	48.0	09/07/19			16/01/20
ICT-36-2020	Disruptive photonics technologies	47.5	19/11/19			22/04/20
ICT-37-2020	Advancing photonics technologies and application driven photonics components and the innovation ecosystem	48.0	19/11/19			22/04/20
ICT-50-2020	Software Technologies	30.0	09/07/19			16/01/20
European Data Infrastructure: HPC, Big Data and Cloud technologies						
ICT-51-2020	Big Data technologies and extreme-scale analytics	31.5	09/07/19			16/01/20
ICT-40-2020	Cloud Computing: towards a smart cloud computing continuum	20.0	19/11/19			22/04/20
5G						
ICT-52-2020	5G PPP – Smart Connectivity beyond 5G	55.0	19/11/19			22/04/20
ICT-41-2020	5G PPP – 5G innovations for verticals with third party services	49.0	19/11/19			22/04/20
ICT-42-2020	5G PPP – 5G core technologies innovation	49.0	09/07/19			16/01/20
ICT-53-2020	5G PPP – 5G for Connected and Automated Mobility (CAM)	30.0	09/07/19			13/11/19
Next Generation Internet (NGI)						
ICT-54-2020	Blockchain for the Next Generation Internet	20.0	09/07/19			16/01/20
ICT-55-2020	Interactive Technologies	17.0	09/07/19			13/11/19
ICT-56-2020	Next Generation Internet of Things	48.5	09/07/19			16/01/20
ICT-57-2020	An empowering, inclusive Next Generation Internet	7.0	19/11/19			22/04/20
ICT-44-2020	Next Generation Media	17.5	09/07/19			16/01/20
Cross-cutting activities						
ICT-45-2020	Reinforcing European presence in international ICT standardisation: Standardisation Observatory and Support Facility	4.0	09/07/19			13/11/19
International Cooperation activities						
ICT-58-2020	International partnership building between European and African innovation hubs	11.0	19/11/19			22/04/20
Digitising and transforming European industry and services: digital innovation hubs and platforms						
Support to Hubs						
DT-ICT-03-2020	I4MS (phase 4) - uptake of digital game changers and digital manufacturing platforms	71.0	09/07/19			13/11/19
DT-ICT-04-2020	Photonics Innovation Hubs	19.0	19/11/19			22/04/20
DT-ICT-05-2020	Big Data Innovation Hubs	30.5	09/07/19			13/11/19
Platforms and Pilots						
DT-ICT-09-2020	Digital service platforms for rural economies	30.0	19/11/19			22/04/20
DT-ICT-12-2020	The smart hospital of the future	40.0	19/11/19			22/04/20
Cybersecurity						
SU-ICT-02-2020	Building blocks for resilience in evolving ICT systems	47.0	25/07/19			19/11/19

LEIT - Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing						
Foundations for tomorrow's industry						
Materials characterisation and computational modelling						
DT-NMBP-11-2020	Open Innovation Platform for Materials Modelling	12.0	03/07/19			05/02/20
Industry Commons						
DT-NMBP-40-2020	Creating an open market place for industrial data	4	03/07/19			12/12/19 14/05/20 – 2nd stage
Transforming European Industry						
Factories of the Future						
DT-NMBP-18-2019	Materials, manufacturing processes and devices for organic and large area electronics	20.0	16/10/18		03/09/19 2nd stage	
DT-NMBP-19-2019	Advanced materials for additive manufacturing	20.4	16/10/18		03/09/19 2nd stage	
DT-FOF-07-2020	Assembly of micro parts	100 (incl. one other topic)	03/07/19			05/02/20
DT-FOF-09-2020	Energy-efficient manufacturing system management					
DT-FOF-11-2020	Quality control in smart manufacturing					
Biotechnology						
BIOTEC-07-2020	Multi-omics for genotype-phenotype associations	56 (incl. one other topic)	03/07/19			12/12/19 14/05/20 – 2nd stage
Industrial sustainability						
Sustainable Process Industry (SPIRE)						
LC-SPIRE-08-2020	Novel high performance materials and components	31.9	03/07/19			05/02/20
DT-SPIRE-11-2020	Artificial Intelligence and Big Data Technologies for Process Industries	0.6	03/07/19			05/02/20
Energy-efficient buildings (EEB)						
LC-EEB-07-2020	Smart Operation of Proactive Residential Buildings	52.5 (incl. one other topic)	03/07/19			05/02/20
LC-EEB-08-2020	Digital Building Twins					
LEIT - Space						
Space						
Artificial Intelligence and Space						
DT-SPACE-25-EO-2020	Big data technologies and Artificial Intelligence for Copernicus	10.0	05/11/19			05/03/20
Space business, entrepreneurship, outreach and education						
DT-SPACE-26-BIZ-2020	Space hubs (support to start-ups)	2.0	05/11/19			05/03/20
Space technologies, science and exploration						
SPACE-29-TEC-2020	Satellite communication technologies	9.0	05/11/19			05/03/20
SPACE-30-SCI-2020	Scientific data exploitation	9.0	05/11/19			05/03/20
Artificial Intelligence and Space						
SPACE-27-TEC-2020	SRC - Space robotics technologies	9.0	05/11/19			05/03/20
EGNSS market uptake						
DT-SPACE-EGNSS-2-2019-2020	EGNSS applications fostering digitisation	4.0	16/10/18		05/03/19	
Societal Challenges						
Health, demographic change and wellbeing						
Better Health and care, economic growth and sustainable health systems						
Personalised medicine						
SC1-BHC-06-2020	Digital diagnostics – developing tools for supporting clinical decisions by integrating various diagnostic data	40.0	04/07/19			07/04/20
Innovative health and care industry						

SC1-HCO-18-2020	Developing methodological approaches for improved clinical investigation and evaluation of high-risk medical devices	2.0	04/07/19			07/04/20
Infectious diseases and improving global health						
SC1-BHC-20A-2020	Pre-commercial procurement (PCP) for integrated care solutions	25.0 (incl. one other topic)	04/07/19			07/04/20
Supporting the digital transformation in health and care						
SC1-DTH-12-2020	Use of Real-World Data to advance research on the management of complex chronic conditions	41.0	04/07/19			07/04/20
SC1-DTH-13-2020	Implementation research for scaling up and transfer of innovative solutions involving digital tools for people-centred care	20.0	04/07/19			24/09/19 07/04/20 – 2nd stage
Digital transformation in Health and Care						
SC1-DTH-02-2020	Personalised early risk prediction, prevention and intervention based on Artificial Intelligence and Big Data technologies	32.0	19/11/19			22/04/20
SC1-DTH-04-2020	International cooperation in smart living environments for ageing people	8.0	19/11/19			22/04/20
SC1-DTH-06-2020	Accelerating the uptake of computer simulations for testing medicines and medical devices	32.0	19/11/19			22/04/20
SC1-DTH-14-2020	Pre-commercial Procurement for Digital Health and Care Solutions	9.0	19/11/19			22/04/20
SC1-HCC-06-2020	Coordination and Support to better data and secure cross-border digital infrastructures building on European capacities for genomics and personalised medicine	4.0	09/07/19			13/11/19
SC1-HCC-07-2020	Support for European eHealth Interoperability roadmap for deployment	3.0	09/07/19			13/11/19
SC1-HCC-08-2020	Scaling up innovation for active and healthy ageing	2.0	19/11/19			22/04/20
SC1-HCC-09-2020	Supporting deployment of eHealth in low and lower middle income countries in Africa for better health outcomes	2.0	19/11/19			22/04/20
Trusted digital solutions and Cybersecurity in Health and Care						
Focus Area on Digitising and transforming European industry and services						
DT-TDS-04-2020	AI for Genomics and Personalised Medicine	35.0	19/11/19			22/04/20
DT-TDS-05-2020	AI for Health Imaging	35.0	09/07/19			13/11/19
Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy						
Food and Natural Resources						
FNR-02-2020	Developing long-term monitoring and evaluation frameworks for the Common Agricultural Policy	2.0	15/10/19			22/01/20
Secure, Clean and Efficient Energy						
Building a low-carbon, climate resilient future: secure, clean and efficient energy						
Buildings in energy transition (B4E)						
LC-SC3-B4E-3-2020	Upgrading smartness of existing buildings through innovations for legacy equipment	8.0	05/03/20			10/09/20
LC-SC3-B4E-5-2020	Integrated design concepts for energy-efficient ICT in buildings	3.0	16/07/19			15/01/20
LC-SC3-B4E-6-2020	Big data for buildings	12.0	16/07/19			15/01/20
LC-SC3-B4E-7-2020	European building stock data 4.0	4.0	16/07/19			15/01/20
LC-SC3-B4E-10-2020	Self-assessment and self-optimisation of buildings and appliances for a better energy performance	6.0	16/07/19			15/01/20
LC-SC3-B4E-14-2020	Enabling next-generation of smart energy services valorising energy efficiency and flexibility at demand-side	6.0	05/03/20			10/09/20
Global leadership in renewables						
LC-SC3-RES-31-2020	Offshore wind basic science and balance of plant	8.0	03/12/19			21/04/20
Smart and clean energy for consumers						
LC-SC3-EC-3-2020	Consumer engagement and demand response	16.0	03/09/19			29/01/20

Smart citizen-centred energy system						
LC-SC3-ES-3-2018-2020	Integrated local energy systems (Energy islands)	26.3 15.0	05/12/17 03/09/19			29/01/20
LC-SC3-ES-4-2018-2020	Decarbonising energy systems of geographical Islands	19.0 40.0	05/12/17 03/09/19			29/01/20
LC-SC3-ES-5-2018-2020	TSO - DSO - Consumer: Large-scale demonstrations of innovative grid services through demand response, storage and small-scale (RES) generation	30.0 22.0	05/12/17 03/09/19			29/01/20
LC-SC3-ES-10-2020	DC – AC/DC hybrid grid for a modular, resilient and high RES share grid development	14.0	03/09/19			29/01/20
Smart Cities and Communities						
LC-SC3-SCC-2-2020	Positive Energy Districts and Neighbourhoods for urban energy transitions	5.0	05/05/20			01/09/20

Smart, green and integrated transport						
Mobility for growth						
Building a Low-Carbon, Climate Resilient Future: Low-Carbon and Sustainable Transport						
LC-MG-1-12-2020	Cities as climate-resilient, connected multimodal nodes for smart and clean mobility: new approaches towards demonstrating and testing innovative solutions	18.0	03/09/19			09/01/20 08/09/20 – 2nd stage
Safe, integrated and resilient transport systems						
MG-2-6-2019	Moving freight by Water: Sustainable Infrastructure and Innovative Vessels	30.0	05/09/18		12/09/19 2nd stage	
MG-2-7-2019	Safety in an evolving road mobility environment	8.0	05/09/18		12/09/19 2nd stage	
MG-2-11-2020	Network and traffic management for future mobility	20.0	03/09/19			09/01/20 08/09/20 – 2nd stage
MG-2-13-2020	Coordination and support for an integrated freight transport and logistics system	1.0	03/12/19			21/04/20
Global leadership and competitiveness						
MG-3-4-2020	Innovative electric network architectures and systems, optimising global energy, electrical power, data and communication for aviation	10.0	03/12/19			21/04/20
MG-3-6-2020	Towards sustainable urban air mobility	15.0	03/12/19			21/04/20
MG-3-7-2020	Improved Production and Maintenance Processes in Shipyards	15.0	03/12/19			21/04/20
Accounting for the people						
MG-4-7-2020	Digitalisation of the transport system: data sharing	3.0	03/12/19			21/04/20
MG-4-8-2020	Advanced research methods and tools in support of transport/mobility researchers, planners and policy makers	3.0	03/12/19			21/04/20
Digitising and Transforming European Industry and Services: Automated Road Transport						
DT-ART-05-2020	Efficient and safe connected and automated heavy-duty vehicles in real logistics operations	20.0	03/12/19			21/04/20
DT-ART-06-2020	Large-scale, cross-border demonstration of connected and highly automated driving functions for passenger cars	30.0	03/12/19			21/04/20

Climate action, environment, resource efficiency and raw materials						
Building a low-carbon, climate resilient future: climate action in support of the Paris Agreement						
Decarbonisation						
LC-CLA-11-2020	Innovative nature-based solutions for carbon neutral cities and improved air quality	30.0	12/11/19			13/02/20 03/09/20 – 2nd stage
Climate adaptation, impacts and services						
LC-CLA-12-2020	Advancing climate services	22.0	12/11/19			13/02/20 03/09/20 – 2nd stage
Inter-relationships between climate change, biodiversity and ecosystem services						
LC-CLA-16-2020	Multi-hazard risk management for risk-informed decision-making in the E.U.	5.0	12/11/19			13/02/20 03/09/20 – 2nd stage
Earth Observation						
LC-CLA-19-2020	Integrated GEOSS climate applications to support adaptation and mitigation measures of the Paris Agreement	10.0	12/11/19			13/02/20 03/09/20 – 2nd stage

Greening the economy in line with the Sustainable Development Goals (SDGs)						
Connecting economic and environmental gains - the circular economy						
CE-SC5-04-2019	Building a water-smart economy and society	72.0	14/11/18		04/09/19 2nd stage	
Raw materials						
SC5-09-2018-2019	New solutions for the sustainable production of raw materials	30.0	14/11/18		04/09/19 2nd stage	
SC5-10-2019-2020	Raw materials innovation actions: exploration and Earth observation in support of sustainable mining	41.86	12/11/19		04/09/19 2nd stage	13/02/20 03/09/20 – 2nd stage
Protecting and leveraging the value of our natural and cultural assets: Nature-based solutions, disaster risk reduction and natural capital accounting						
SC5-33-2020	Monitoring ecosystems through research, innovation and technology	3.0	12/11/19			13/02/20
Europe in a changing world - inclusive, innovative and reflective Societies						
Socioeconomic and cultural transformations in the context of the fourth industrial revolution						
DT-TRANSFORMATIONS-02-2018-2019-2020	Transformative impact of disruptive technologies in public services	11.0	05/11/19			12/03/20
DT-TRANSFORMATIONS-20-2020	European Competence Centre for the preservation and conservation of Monuments and Site	3.0	05/11/19			12/03/20
DT-TRANSFORMATIONS-21-2020	Mentoring scheme for schools: mainstreaming innovation by spreading the advanced ICT-based teaching practices to a wide circle of schools	2.0	05/11/19			12/03/20
DT-TRANSFORMATIONS-23-2020	To set up a digital accessibility observatory as a forum to take stock of market and technological developments, monitor progress in digital accessibility and provide opportunities for exchange of best practices	1.5	05/11/19			12/03/20
Governance for the future						
DT-GOVERNANCE-05-2018-2019-2020	New forms of delivering public goods and inclusive public services	20.0	05/11/19			12/03/20
DT-GOVERNANCE-12-2019-2020	Pilot on using the European cloud infrastructure for public administrations	10.0	05/11/19			12/03/20
DT-GOVERNANCE-22-2020	Citizen-centric public services in local and regional administrations	1.5	05/11/19			12/03/20
Secure societies - Protecting freedom and security of Europe and its citizens						
Protecting the infrastructure of Europe and the people in the European smart cities						
SU-INFRA01-2018-2019-2020	Prevention, detection, response and mitigation of combined physical and cyber threats to critical infrastructure in Europe	20.7	12/03/20			27/08/20
SU-INFRA02-2019	Security for smart and safe cities, including for public space	16.0	14/03/19		22/08/19	
Artificial Intelligence and security: providing a balanced assessment of opportunities and challenges for Law Enforcement in Europe						
SU-AI01-2020	Developing a research roadmap regarding Artificial Intelligence in support of Law Enforcement	1.5	12/03/20			27/08/20
SU-AI02-2020	Secure and resilient Artificial Intelligence technologies, tools and solutions in support of Law Enforcement and citizen protection, cybersecurity operations and prevention and protection against adversarial Artificial Intelligence	17.0	12/03/20			27/08/20
SU-AI03-2020	Human factors, and ethical, societal, legal and organisational aspects of using Artificial Intelligence in support of Law Enforcement	1.5	12/03/20			27/08/20
Security						
Disaster-Resilient Societies						
SU-DRS02-2018-2019-2020	Technologies for first responders	21.0	12/03/20		22/08/19	27/08/20
Fight against Crime and Terrorism						
SU-FCT02-2018-2019-2020	Technologies to enhance the fight against crime and terrorism	28.1 28.0	14/03/19 12/03/20		22/08/19	27/08/20
SU-FCT03-2018-2019-2020	Information and data stream management to fight against (cyber)crime and terrorism	8.0 8.0	14/03/19 12/03/20		22/08/19	27/08/20
Border and External Security						
SU-BES02-2018-2019-2020	Technologies to enhance border and external security	21.0 21.0	14/03/19 12/03/20		22/08/19	27/08/20
SU-BES03-2018-2019-2020	Demonstration of applied solutions to enhance border and external security	10.0 10.0	14/03/19 12/03/20		22/08/19	27/08/20

Digital security						
Cybersecurity, Digital Privacy and data protection						
SU-DS02-2020	Intelligent security and privacy management	38.0	12/03/20			27/08/20
SU-DS03-2019-2020	Digital Security and privacy for citizens and Small and Medium Enterprises and Micro Enterprises	18.0 10.8	14/03/19 12/03/20		22/08/19	27/08/20
SU-DS04-2018-2020	Cybersecurity in the Electrical Power and Energy System (EPES): an armour against cyber and privacy attacks and data breaches	20.0	12/03/20			27/08/20
SU-DS05-2018-2019	Digital security, privacy, data protection and accountability in critical sectors	20.0	14/03/19		22/08/19	

European Innovation Council (EIC) Pilot						
EIC Accelerator pilot (SME Instrument)						
EIC-SMEInst-2018-2020	SME instrument	689.26	07/11/17		Phase 1: 05/09/19	Phase 2: 08/01/20 18/03/20
		654.00	07/11/17		Phase 2: 09/10/19	19/05/20 07/10/20
Fast Track to Innovation (FTI)						
EIC-FTI-2018-2020	Fast Track to Innovation (FTI)	100.0	07/11/17		21/02/19 23/05/19 22/10/19	
		100.0	07/11/17			19/02/20 09/06/20 27/10/20