

In this document, you can find the **ACTIVITY KEYS** (technical development activities from a variety of technological fields) that you will need to include in your MME application form (question no. 7 – please select up to 5 codes). Please search diligently and make sure you select the right code(s) before entering them in your application.

The **ACTIVITY KEYS** are arranged in 4 classification levels (i.e. Level 1 – Level 4; starting with the Level 1 - general fields).

Instructions

1. The following table presents the Level 1 options listed in this document. Please click on the most relevant Level 1 option(s) to navigate to more specialised fields (Levels 2, 3 and 4).
2. You should then select up to 5 codes, regardless of their classification level, and copy and paste them in your application. Please insert the codes in between commas.
3. It is recommended (but not mandatory) to select codes corresponding to the deepest level possible.

LEVEL 1
<u>COMPUTER AND INFORMATION SCIENCES</u>
<u>BUSINESS</u>
<u>ECONOMICS AND BUSINESS</u>
<u>EDUCATION AND CULTURE</u>
<u>ELECTRICAL ENGINEERING, ELECTRONIC ENGINEERING, INFORMATION ENGINEERING</u>
<u>MATERIALS ENGINEERING</u>
<u>MATHEMATICS</u>
<u>MECHANICAL ENGINEERING</u>
<u>MEDIA & COMMUNICATIONS</u>
<u>OTHER ENGINEERING AND TECHNOLOGIES</u>
<u>OTHER NATURAL SCIENCES</u>
<u>PSYCHOLOGY</u>
<u>SECURITY</u>
<u>SOCIAL AND BEHAVIOURAL SCIENCE</u>
<u>SOCIAL AND ECONOMIC GEOGRAPHY</u>
<u>SPACE</u>
<u>TRANSVERSAL FIELDS</u>
<u>INNOVATION</u>
<u>PHYSICAL SCIENCES</u>

Level1 Level2 Level3 Level4

4		COMPUTER AND INFORMATION SCIENCES	
4001		Computer Sciences, Information science and bioinformatics	
	400101	Advanced computing	
	40010101	Computing for servers, data centers	
	40010102	Embedded computing	
	40010103	High performance computing	
	400102	Algorithms, distributed, parallel and network algorithms, algorithmic game theory	
	40010201	High performance computing	
	400103	Artificial Intelligence, intelligent systems, multi-agent systems	
	400104	Bioinformatics, e-Health, medical informatics	
	40010401	Bioinformatics	
	400105	Cognitive science, human computer interaction, natural language processing	
	400106	Cloud Computing	
	40010601	Cloud Infrastructures	
	40010602	Cloud computing models	
	40010603	Cloud services	
	40010604	Cloud trust & security	
	40010605	Cloud Architectures	
	400107	Collaborative systems	
	40010701	Collective awareness platforms	
	40010702	Crowd sourcing	
	40010703	Knowledge co-creation networks	
	400108	Communication networks, media, information society	
	40010801	Collective awareness platforms	
	40010802	Internet of Things	
	40010803	Distributed Social Networks	
	40010804	Mobile sensor devices	
	40010805	Network technologies/ Internetworking	
	400109	Computer graphics, computer vision, multimedia, computer games	
	40010901	Computer games	
	40010902	Computer graphics	
	40010903	Computer vision	
	40010904	Multimedia	
	400110	Computer systems, parallel/distributed systems, grid, cloud processing systems	
	40011001	High performance computing	
	400111	Computer systems, parallel/distributed systems, sensor networks, embedded systems, cyber-physical systems	
	400112	Cryptology, security, privacy, quantum crypto	
	40011201	Anonymity	
	40011202	Privacy preservation (user-centric)	

	40011203	Cyber security
	40011204	Digital identity
	40011205	Information security
	40011206	IT Security
	40011207	Network security
	40011208	Trust
400113	Cyber-physical systems	
	40011301	Co-habited environments
	40011302	Embedded systems
	40011303	Monitoring and control systems
	40011304	System of systems
400114	Digital games, gamification, applied games, serious games	
400115	Digital services	
	40011501	Automated translation
	40011502	Big data
	40011503	e-Infrastructure
	40011504	e-Commerce
	40011505	e-Delivery
	40011506	e-Identification (eID)
	40011507	e-Invoicing
	40011508	e-Procurement
	40011509	e-Services
	40011510	e-Signature
	40011511	e-Tendering
	40011512	Cyber security
	40011513	Metadata
	40011514	Network infrastructures
	40011515	Open data
	40011516	Public sector information
	40011517	Trust and connectivity services
400116	e-Commerce, e-Business, computational finance	
400117	Experimentally driven research & innovation	
	40011701	Future Internet Research and Experimentation (FIRE)
400118	Geo-information and spatial data analysis	
400119	Human-computer interaction and interface, visualization and natural language processing	
	40011901	Accessibility
	40011902	Augmented reality
	40011903	Collaborative and social computing
	40011904	Human-computer interaction
	40011905	Machine translation
	40011906	Mobile devices
	40011907	Natural language processing
	40011908	Smart objects and interaction design

	40011909	Users and interactive retrieval
	40011910	Wearable technologies
400120		Informatics and information systems
	40012001	Data management
400121		Interaction, Multimodal, Brain-Computer-Interfaces, Assistive Technologies
400122		Internet and semantic web, database systems and libraries
	40012201	Database management
	40012202	Data protection
400123		Internet services & Applications
	40012301	Service Engineering
	40012302	Service oriented architectures
400124		Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)
400125		Networks (Communication networks, sensor networks, networks of robots etc.)
400126		Neuroimaging and computational neuroscience
400127		Numerical analysis, simulation, optimization, modelling tools
400128		Ontologies, neural networks, genetic programming, fuzzy logic
400129		Pan-European proxy service (PEPS)
400130		Sensor networks, embedded systems, hardware platforms
400131		Software Engineering, operating systems, computer languages
	40013101	Software quality management
	40013102	Open hardware
	40013103	Open Source Software
	40013104	Requirements analysis
	40013105	Software architectures
	40013106	Software design & Development
400132		Technology-enhanced learning
400133		Translational bioinformatics
400134		Unconventional computing
400135		Web and information systems, database systems, information retrieval and digital libraries, data fusion
	40013501	Data curation
	40013502	Data visualization
	40013503	Linked open data
	40013504	Open access, Open Access to publications, Open Access to data, OA, linked open data, semantic web technologies
	40013505	Open data
	40013506	Semantic web technologies

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BUSINESS
5001
Marketing management

500101

Brand positioning

500102

Market intelligence

5002
Technology management

	500201	Technology development
	500202	Prototyping
5003		Financial & Investment management
	500301	Risk management
	500302	Risk analysis
6		ECONOMICS AND BUSINESS
6001		Business and management
	600101	Innovation
	60010101	Digital social innovation
	600102	Research management
6002		Economics, Econometrics
	600201	Econometrics, statistical methods
	600202	Financial engineering
	60020201	Economic and socio-economic evaluation, economic-financial modelling
	600203	Financial Technology
	60020301	Fintech
11		EDUCATION AND CULTURE
1101		Creative
	110101	New technologies for Audio-Visual sector - Media
	11010101	Application of new technologies to the Audio-Visual distribution
	11010102	Application of new technologies to the Audio-Visual production
	11010103	Digital distribution of Audio-Visual works
	11010104	New technologies for promotion of Audio-Visual works
	110101	Architecture - Culture
	110102	Archives and Libraries
	110103	Arts
	11010301	Performing arts
	11010302	Graphic and Audio-Visual Arts
	110104	Audio - Visual Funds and TV Broadcasters - Media
	11010401	Commissioning Editors and Acquisitions for TV Broadcasters
	11010402	Film funds & Film Commissions
	110105	Audiovisual Festivals/ Events/ Markets/ Training - Media
	11010501	Film markets
	11010502	Other Film promotion events
	11010503	Training
	110106	Distribution - Media
	11010601	Cinema
	11010602	DVD
	11010603	Television
	11010604	VOD
	110107	Design and applied arts - Culture
	11010701	Photography
	110108	Film production - Media
	11010801	Animation

	11010802	Cinema
	11010803	Documentary
	11010804	Fiction
	11010805	Multimedia
	11010806	Television
110109		Design and applied arts - Culture
110110		Exhibition/ Theatre/ Cinema - Media
110111		Radio and Cross-media - Culture
110112		Script development/ Consulting/ Film Director - Media
	11011201	Audio visual consultant
110113		Training
	11011301	Audio visual trainer
	11011302	Media Training
110114		Visual arts - Culture
110115		Visual arts, performing arts, design
	11011501	Music
	11011502	Others
	11011503	Theatre

1102 ICT based learning

	110201	Integration and upscaling of digital technologies and media in education
	110202	Open educational resources and practices
	110203	Quality in digital resources

1103 Generic

	110301	Management and monitoring of large cooperation/ partnership/ network projects
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ELECTRICAL ENGINEERING, ELECTRONIC ENGINEERING, INFORMATION ENGINEERING
1201 Automation and control Systems

	120101	Control Engineering
	12010101	Monitoring and control systems
	120102	Systems engineering, sensorics, actorics, automation

1202 Communication engineering and systems telecommunications

	120201	Experimentally-driven research & innovation
	120202	Systems engineering, sensorics, actorics, automation

1203 Electronics, Photonics
1204 Electrical and Electronic engineering

	120401	Micro (system) engineering
	120402	Organic electronics
	120403	Photonics
	120404	Systems engineering, sensorics, actorics, automation

1205 Electrical and electronic engineering: semiconductors, components, systems

	120501	System of systems
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MATERIALS ENGINEERING

	1301	Coating and films
	130101	Thin films
14		MATHEMATICS
	1401	Pure mathematics, Applied mathematics
	140101	Algorithms and complexity
	140102	Discrete mathematics and combinatorics
	140103	Mathematics for high-performance computing
	140104	Numerical analysis and scientific computing
	140105	Signal processing
	1402	Statistics and probability
	140201	Statistics
15		MECHANICAL ENGINEERING
	1501	Audio engineering, reliability analysis
	1502	Aerospace engineering
	150201	Communications
	15020101	Internet of Things
	15020102	Network technologies/ Internetworking
	15020103	Revolutionary/ Non-conventional concepts
16		MEDIA & COMMUNICATIONS
	1601	Journalism
	160101	Communication networks, media, information society
	16010101	Global systems science, GSS
	16010102	Collective awareness platforms
	1602	Library science
	1603	Media and socio-cultural communication
	160301	Behavioural change campaigns
	160302	Collective awareness platforms
	160303	Computer graphics, computer vision, multimedia, computer games
	160304	Cultural studies, cultural diversity
	160305	Media and communication strategies, campaigns, outreach activities
	16030501	General
	160306	Web and information systems, database systems, information retrieval and digital libraries, data fusion
	1604	Information science (social aspects)
	160401	Collective awareness platforms
	160402	Communication networks, media, information society
17		OTHER ENGINEERING AND TECHNOLOGIES
	1701	Other Engineering and technologies
	170101	Systems engineering
18		OTHER NATURAL SCIENCES
19		PSYCHOLOGY
	1901	Psychology (including human-machine relations)
	190101	Cognitive and experimental psychology: perception, action and higher cognitive processes

	190102	Neuropsychology and cognitive psychology
21	SECURITY	
2101	Integrated platforms and Systems and Human Factors	
	210101	Networks and information security systems
	21010101	Anonymity
	21010102	Privacy preservation (user-centric)
	21010103	Data protection
	21010104	Digital identity
	210102	Signature control and signature reduction
	21010201	Anonymity
	21010202	Privacy preservation (user-centric)
	21010203	Digital identity
	210103	C2, Information and intelligence systems
	210104	Communication Systems
	210105	Software design validation & maintenance
	21010501	Component-based software development
	21010502	Integrated Development Environment (IDE)
	210106	Technologies - Components
	21010601	Artificial Intelligence & Decision Support
	21010602	Data mining
	21010603	Electronic components
	21010604	Information security Technology
	21010605	Opto-electronics: Laser, optics and related devices
	21010606	Photonic/ Optical Materials and Device Technology
	21010607	Signal processing
	21010608	Simulation tools and Technologies
	210107	Integrated systems of systems
2102	Systems-Services functions	
	210201	Identification
	21020101	Positioning and localization
	210202	Intelligence
	21020201	Information management
	210203	Interoperable secured communications (Security systems architecture)
	21020301	Command and control
	210204	Intervention and neutralization
2103	Design-Manufacturing	
	210301	Ergonomic and Human factors
	21030101	Analysis of user needs and user requirements
	210302	Systems engineering and design management
	21030201	COTS/ MOTS/ GOTS system based integration
	21030202	Integrated systems testing & evaluation
	21030203	Reliability and maintainability of systems
	210303	Systems Engineering and Integrated systems design
	21030301	Design for improved reliability and maintainability

	21030302	In-service data capture systems
	21030303	Knowledge-based engineering
	21030304	Man Machine interface/ Man system interface
	21030305	Power management of systems
	21030306	Signature related materials
22	SOCIAL AND BEHAVIOURAL SCIENCE	
23	SOCIAL AND ECONOMIC GEOGRAPHY	
	2301	Cultural and economic geography
	230101	Social geography, infrastructure
24	SPACE	
	2401	Space technologies domain
	240101	Electromagnetic technologies and Techniques
	24010101	Antennas
	24010102	Wave interaction and propagation
	240102	System design & Verification
	24010201	Collaborative and concurrent engineering
	2402	Space activity domains
	240201	Global Satellite Navigation System (GNSS)/ Services & Applications
	24020101	Augmented positioning (ABAS, GBAS, GRAS, SBAS)
	24020102	Communications
	24020103	Location-based applications
	24020104	Other applications
	240202	Earth observation/ Services and Applications
	24020201	News and Media
	24020202	Retail & Geo-Marketing
	240203	Telecommunications
	24020301	Terminals
	24020302	Networking
	24020303	Services and applications
25	TRANSVERSAL FIELDS	
	2501	Inclusion
	250101	Social inclusion
	2502	Quality assurance
26	INNOVATION	
	2601	Innovation management
	260101	Types of innovation
	26010101	Business model innovation
	26010102	Marketing innovation
	26010103	Participatory innovation
	26010104	Process innovation
	26010105	Service innovation
	26010106	Social innovation
	26010107	Sustainable innovation
	26010108	Technological innovation

27		PHYSICAL SCIENCES
2701		Optics (including laser optics and quantum optics)
270101	Optical engineering, photonics, lasers	
	27010101	Displays
	27010102	Fiber optics and optical communications
	27010103	Holography
	27010104	Imaging, image and data processing
	27010105	Lasers and Laser optics
	27010106	Nanophotonics
	27010107	Optoelectronics
	27010108	Photonics in computing, interconnects, data storage
	27010109	Photonic devices
	27010110	Silicon photonics
	27010111	Vision, colour and visual optics
270102	Organic and large area electronics	
	27010201	Flexible electronics and displays
	27010202	Vision, colour and visual optics
270103	Quantum optics and quantum information	