

Complementary 0916						
RIF PROPOSAL NUMBER	TITLE	COORDINATOR	HOST ORGANIZATION	PROJECT BUDGET	RIF FUNDING	PUBLISHABLE SUMMARY
COMPLEMENTARY Y0916/0005	Visorsurf Complementary	Theodoros Pananos	SIGNALGENERIX LTD	34.212,50	34.212,00	SignalGeneriX is a leader R&D company in the domain of electronics and owner of state-of-the-art research and development infrastructure. The company will utilise this grant in the direction of further enhancing its R&D infrastructure which will boost its international research activities and capabilities and also in actions related to enhancing the competitiveness of the company internationally.
COMPLEMENTARY Y0916/0006	Enhancing the research activities of the FOSS Research Centre for Sustainable Energy of the University of Cyprus	George Georgioulou	University of Cyprus	33.317,50	33.317,00	<p>This project aims to significantly enhance the experimental facilities of FOSS Research Centre for Sustainable Energy, University of Cyprus. FOSS is active in the research theme of sustainable energy, with a particular focus on PV technology and its grid integration. In the last few years, it has developed advanced infrastructure for studying PV in laboratory and in real outdoor conditions for research purposes. FOSS is currently participating/leading over 25 different projects on PV technology and degradation, new standards for novel cells, solar forecasting, power quality, electrical storage, smart grids. The large number of research projects at FOSS has led to a significant increase in research/technical personnel and subsequently to growing needs particularly as regards testing equipment.</p> <p>In this project, accurate measurement equipment for both field and quality measurements, consumables for indoor/outdoor testing, and software for data analysis will be purchased. The activities that will be implemented include determining equipment specifications, designing new structures in the lab and defining the provisions for hosting the new equipment or upgrades of equipment, searching different supplier websites, tender preparation if necessary and placing relevant orders, and finally onsite equipment setup and validation testing.</p> <p>It is expected that the upgrading will address lab needs concerning projects, high-quality services provided to PV companies, and advanced research training activities undertaken at FOSS. The funds are anticipated to offer necessary equipment maintenance and upgrading ensuring high quality work and results, and accurate measurements abiding to the latest standards in the field. A state-of-the-art lab, which generates excellent results and provides advanced training, will attract the best researchers to work there. This is expected to boost FOSS' track record which will support its future endeavors including research & industrial collaborations, and attracting external funding.</p>
COMPLEMENTARY Y0916/0008	Real-time Control of the Wireless Behavior of Environments with HyperSurfaces	Andreas Pitsillides	University of Cyprus	98.112,50	98.112,50	Metamaterials (MMs) and Metasurfaces (MSs) are a new class of materials with engineered properties, even if these go against nature. Once designed and manufactured, commonly by specialised researchers in the field, they are generally 'rigid' and optimised only for the set of the given application requirements and environmental conditions designed for. If any of these conditions change then their performance is altered. VISORSURF - A Hardware Platform for Software-driven Functional Metasurfaces project will provide programmatic MSs to implement customised behaviour, on demand, using a set of MS tiles, called HyperSurfaces (HSs). The optimisation of the behaviour will be dealt within VISORSURF mostly by using off-line techniques (e.g. Genetic Algorithms). This will only guarantee their behaviour as long as the environmental conditions designed for (e.g. angle of arrival of the e-m wave) remain the same. The objectives of HSadapt, the proposed project, are to investigate the real-time control of these specialised HSs, which will allow for their dynamic and adaptive control for given reference objectives, even with changing environmental conditions. Furthermore, it will look at the specification and verification of multi-agent, large-scale systems, which will support the implementation of the theoretical results of the project on a large scale. Finally, the theoretical directions will be supported by some experimentation and prototyping, extended from the VISORSURF project.
COMPLEMENTARY Y0916/0009	Aviation-driven Data Value Chain for Diversified Global and Local Operations	Christodoulos Meritouris	CELLOCK LTD	12.250,00	12.250,00	The European aviation industry needs to leverage the surge of multi-source and multi-lingual data streams to gain augmented intelligence on its status quo and open up a wide spectrum of unprecedented services for the whole ecosystem (airlines, airports, passengers, service providers, manufacturers, local authorities, etc.). ICARUS will build a novel data value chain in the aviation-related sectors towards data-driven innovation and collaboration across currently diversified and fragmented industry players, acting as multiplier of the "combined" data value that can be accrued, shared and traded, and rejuvenating the existing, increasingly non-linear models / processes in aviation. Using methods such as big data analytics, deep learning, semantic data enrichment, and blockchain powered data sharing, ICARUS will address critical barriers for the adoption of Big Data in the aviation industry (e.g. data fragmentation, data provenance, data licensing and ownership, data veracity), and will enable aviation-related big data scenarios for EU-based companies, organizations and scientists, through a multi-sided platform that will allow exploration, curation, integration and deep analysis of original, synthesized and derivative data characterized by different velocity, variety and volume in a trusted and fair manner. ICARUS will bring together the Aerospace, Tourism, Health, Security, Transport, Retail, Weather, and Public sectors and accelerate their data-driven collaboration under the prism of a novel aviation-driven data value chain. Representative use cases of the overall domain's value chain include: (I) Sophisticated passenger handling mechanisms and personalised services on ground facilities, (II) Enhanced routes analysis of aircrafts for improved fuel consumption optimisation and pollution awareness, (III) More accurate and realistic prediction model of epidemics, (IV) Novel Passenger experiences pre-in and post-flight.
COMPLEMENTARY Y0916/0010	A Scalable Big Data Visualization Dashboard for ICARUS	George Pallis	University of Cyprus	13.937,50	13.937,50	The complimentary funding will be used by HO to develop a scalable, big-data visualization dashboard that will provide a) temporal and spatial analysis, b) sentiment and emotion analysis; and c) comprehensive statistics exploiting the ICARUS data. The developed dashboard will be used to visualize the results of the ICARUS use cases. Specifically, the dashboard will offer users the opportunity to customize a collection of data visualization widgets according to their interests. Users will be able to create individual boards that are easy to configure, edit, and share. The dashboard will compile and curate data from ICARUS use cases that will be developed through the project and will provide actionable information for better decision making.

COMPLEMENTARY0916/0011	The European Nanotechnology Community Informatics Platform: Bridging data and disciplinary gaps for industry and regulators (NanoCommons)	Antheas Afantitis	NovaMechanics Ltd	15,000.00	15,000.00	Nanotechnologies and the resulting novel and emerging materials (NEMs) represent major areas of investment and growth for the European economy. Recent advances have enabled confidence in the understanding of what constitutes toxicity of NEMs in relation to health and environmental hazards. However, the nanotechnology and nanosafety communities remain disparate and unconnected, whilst knowledge and data remain fragmented and inaccessible, such that from a data integrating and mining perspective it is clearly a 'starting community'. The field, and indeed the European open knowledge economy, requires conversion of these scientific discoveries into legislative frameworks and industrial applications, which can only be achieved through concerted efforts to integrate, consolidate, annotate and facilitate access to the disparate datasets. NanoCommons brings together academia, industry and regulators to facilitate pooling and harmonising of methods and data for modelling, safe-by-design product development and regulatory approval purposes, thereby driving best practice and ensuring maximum access to data and tools. Networking Activities span community needs assessment through development of demonstration case studies (e.g. exemplar regulatory dossiers). Joint Research Activities will integrate existing resources and organise efficient curation, preservation and facilitate access to data/models. Transnational Access will focus on standardisation of data generation workflows across the disparate communities and establishment of a common access procedure for transnational and/or virtual access to the data, and modelling and risk prediction/management tools developed and integrated.
COMPLEMENTARY0916/0012	Sociopolitical Implications of media and communication technologies	Dimitra Miloni	Cyprus University of Technology	17,920.61	17,920.61	The Complementary Funding will be used to support research work in the broad field of media and new communication technologies (web 2.0), in relation to their social, cultural and political implications, namely how internet technologies and web 2.0 platforms have created a communication ecosystem where power relations are being created and recreated by various communication actors. Research has three objectives: (a) to understand how algorithmic profiling as well as the political economy of web 2.0 affect processes of identity construction i.e. gender, sexuality, social status etc. (b) to further develop Voting Advice Applications for the upcoming 2019 elections across the EU and study the political attitudes of respondents, and (c) to explore Misinformation and Collective Memory by conducting tracking studies across the social media and professional media spectrum.
COMPLEMENTARY0916/0013	↑increase of ADITESS R&D capabilities	NIKOLAOS KOUTRAS	ADITESS ADVANCED INTEGRATED TECHNOLOGY SOLUTIONS & SERVICES LTD	45,696.28	44,626.44	The Complementary Funding will be used by ADITESS to reinforce the company's capabilities as well as to satisfy resources needed to be better equipped in the field of R&D. Furthermore, this investment targets in enabling our team to perform demanding tasks that so far could not be performed due to restrictions of existing equipment, doing so will inevitably increase efficiency and productivity with the existing personnel. The budget can be categorized in three parts: 1. Company structure & resources. This first category is directly involved with supporting of the R&D capabilities of the company. 2. R&D (topic: IoT - Cybersecurity/Cybercrime). The investment to be made in this category has to do with the continuous growth of the company in the topic of developing cybersecurity solutions and protecting against cybercrime. 3. R&D (topic: Unmanned systems-UAV's). The investment to be made in this category targets in increasing the capability of the company in the UAV thematic area, as well as the already acquired experience and R&D development. ADITESS has already in possession a variety of UAV systems such as: Fixed wings type UAV, Heli type UAV, Multicopter type UAV (https://aditeess.com/main/products/aditeess-products/).
COMPLEMENTARY0916/0015	European Joint Doctorate in Simulation in multiscale physical and biological systems	Constantin Alexandrou	University of Cyprus	24,137.93	24,100.00	Simulation alongside theory and experiment is nowadays considered an integral part of scientific discovery. As computation speeds up and new technologies and instruments improve, data generation in all fields of science is rapidly increasing. As a consequence, researchers face new challenges: Data collection exceeds by far the capacity to validate, analyse, visualize, store, and curate the information contained. Additionally, traditional, single-scale, macroscopic physical models are becoming inadequate for the accuracy requirements of modern physical, biological and engineering applications that involve multiscale phenomena occurring over vastly different scales. Tackling these challenges will transform our approach to research potentially leading to unprecedented data-driven scientific discoveries. The overall goal of STIMULATE is to deliver an innovative interdisciplinary educational and research program in simulation and data science, which educates students to best address the challenges posed by exascale computing and intensive data applications, producing computational science professionals tactically positioned to become leaders in both academia and industry. The project proposes a rigorous network-wide training program and research projects that combine mathematical modeling and algorithms for exascale simulations and data-intensive science with applications in the fields of Computational Fluid Dynamics, Computational Biology and Particle and Nuclear Physics with focus in lattice Quantum Chromodynamics. Students will be seconded to industrial partners that will complement expertise in computer technologies, mathematical modeling and data analytics with hands-on training. Experts from eight degree-awarding institutions, three research centers and three companies are engaged in the project. Each of the fifteen fellows of the program will obtain a single joint Ph.D. degree from three academic institutions.
COMPLEMENTARY0916/0017	Learning Outcomes and Quality of Teaching: Searching for Short- and Long-Term Effects	Leonidas Kyriakides	University of Cyprus	24,122.93	24,040.00	The project aims to complement a large-scale European project entitled "Outcomes and Causal Inference in International Comparative Assessments", which examines the causal effects of educational policy factors on student outcomes using data from international comparative studies. Two sub-projects will take place in Cyprus: one will examine the effects of teaching-level factors on student learning outcomes and the other will explore school and system-level factors associated with quality and equity dimensions of effectiveness. The proposed project aims to complement both sub-projects by investigating: 1) the potential added value of observational data on quality of teaching in relation to self-reported data; 2) the effect of the quality of dialogue as an additional teaching-level factor; and 3) the long-term effect of quality of teaching on student learning outcomes. The project will follow for two consecutive school years all Grade 11 students in Cyprus who have taken the PISA Literacy exam at the end of Grade 10 (approx. 1250 students in 50 classes). Panel data related to student achievement will cover three time periods: 1) end of Grade 10 based on the PISA results, 2) end of Grade 11 based on a curriculum-based literacy test developed as part of the project; and 3) end of Grade 12 based on the results of the Pancyprian (Entrance) Exams in the Greek Language. Teaching-level data will be collected using the Dynamic Model Instruments and the 'Dialogue Observation Tool' measuring the quality of classroom dialogue. A multi-level regression analysis and a multi-level structural equation model will be used to determine the short-term effects of teaching quality on student achievement in literacy, while a latent growth model will be used to investigate the long-term effects. The outcomes are expected to have important implications for the design of national and international evaluation studies, as well as for developing our understanding of factors associated with effectiveness especially those at the teaching level.

COMPLEMENTARY Y0916/0019	5G Enabled Highly Secured Smart Grids	Ioannis Giannoulakis	Eight Bells Ltd	21,086.59	21,086.58	<p>In order to avoid electricity black-outs, to optimize the use of renewable energy sources, and to take measures against potential cyberattacks, a real-time dynamic routing of electricity flows and also new technologies for increasing cyberthreat detection and response capabilities are required. The new dynamic routing flows and the detection technologies of threats and anomalies need a real-time monitoring and control for electricity distribution networks. 5G telecommunication platforms are on the way to fill this gap and they can be considered as an all-inclusive critical communication platform that support a wide range of applications and usage scenarios.</p> <p>By providing authentication over wireless coverage and capacity, private LTE and 5G networks can ensure guaranteed connectivity, while supporting a wide range of applications and usage scenarios, like smart energy grids. Besides, small-scale private LTE and 5G-ready networks are also beginning to be deployed in industrial IoT (Internet of Things) settings - where LTE and 5G can fulfil the stringent reliability, availability and low latency requirements for connectivity in industrial control and automation systems, and also for supporting mobility for robotics and machines.</p> <p>The report that will be conducted for the purpose of the ELLI project will study the appropriateness of the H2020 SPEAR solution for a secure and private smart grid, and if it can satisfy the functional and the non-functional requirements and the Key Performance Indicators (KPIs) that have been released from 5G PPP pertaining to the energy vertical. Last but not least, ELLI will also study business aspects trying to answer questions about the viability of smart grids and private LTE and 5G networks, the trends, the challenges and the barriers that influence the growth, the evolution of the ecosystem by segment and region with particular emphasis in the Cypriot environment, the energy market growth quantification, key market players and their strategies, etc.</p>
COMPLEMENTARY Y0916/0021	Complementary Action for Projects to Achieve Improvements in Delivery and Impact	Elias Kyriakides	University of Cyprus	46,250.00	46,250.00	<p>The aim of the project entitled CAPACIDI is to address the specific needs of the researchers involved in two KIOS CoE projects funded by the EU's Horizon 2020 programme as a priority and build the capacity of the research teams to actively participate in similar calls/projects in the future. The two projects are:</p> <p>1) An Innovation action entitled "An Integrated Platform for Increased FLEXibility in smart TRANSMission grids with STORAge Entities and large penetration of Renewable Energy Sources - FLEXITRANSTORE".</p> <p>2) An ERC Proof of Concept entitled "Intelligent Building Automation Diagnostics - DOMOGNOSTICS".</p> <p>The objectives of both projects focus on related research areas namely energy efficiency and Smart Buildings technology which are key priority areas for the EU. The main objectives of CAPACIDI are to: (a) Strengthen the research and innovation potential of researchers working on these projects to maximize the contributions made during the implementation of the projects. (b) Advance the participation of Cyprus based researchers so they are able to participate actively in shaping and formulating funding priorities for EU projects and subsequent programmes.</p> <p>To achieve these aims the proposal introduces a series of activities that include:</p> <p>(a) Facilitate access to research and industry experts who can work with researchers on technical and innovation aspects of related research. Where appropriate, similar support will be provided to the Cyprus based partners in the projects.</p> <p>(b) Support researchers to participate actively in targeted and key EU thematic networks related to the research and innovation priorities of the aforementioned projects.</p> <p>(c) Ensure researchers have access to adequate professional training to help them to solve problems relevant to their research and/or obtain new skills with which they will be able to address complex research challenges.</p>
COMPLEMENTARY Y0916/0025	Thalassaemia In Action 2018	Lily Cannon	Thalassaemia International Federation	14,891.40	14,891.40	<p>Thalassaemia, a previously fatal childhood genetic disease, can today be effectively prevented and appropriately treated, as a result of medical and scientific advances in the last three decades. THALassaemia In Action 2018 (THALAI2018) focuses on Europe, targeting patients with thalassaemia and other haemoglobinopathies, healthcare professionals and policymakers and aims to attain four general objectives, based on TIF's main pillars of activities:</p> <p>1. Continue and strengthen the education of patients/parents and healthcare professionals, as well as the patients' capacity, competency and networking within and across countries and regions of Europe. This is to be achieved via the development of e-learning tools and the launching of capacity building courses and training seminars.</p> <p>2. Raise awareness on thalassaemia and the importance of optimal care amongst the public at large, as well as among THALIA target groups at national and European level. This will be attained using an array of online tools, activities and publications.</p> <p>3. Prioritise haemoglobin disorders and their control (prevention and management) at European level. This will be accomplished by establishing and training national patients' associations in EU priority countries, creating an EU Electronic Health Record and entering into policy dialogue with policymakers at national and European level.</p> <p>4. Support research programmes and studies focused on the clinical management of Thalassaemia. This is to be achieved via the publication of guidelines on the clinical management of Thalassaemia, participating in scientific conferences and providing medical specialists in priority countries with fellowships.</p>
COMPLEMENTARY Y0916/0028	Energy-autonomous portable access points for infrastructure-less networks	IOANNIS KRIKIDIS	University of Cyprus	23,583.65	23,583.65	<p>The explosive growth of applications and industrial sectors that rely on broadband connectivity, is set to stretch the demand for wireless networks beyond the reach of the power grid infrastructure. Access points are being deployed on board of drones, while more than 84,000 hybrid-energy base stations are expected to be deployed annually in remote areas by 2020.</p> <p>Portable network nodes that are energy-autonomous and operate detached from the power grid will become indispensable in the coming applications of wireless networks. Energy-autonomy presents immense challenges for the wireless network design and imposes a complete re-think of technological solutions. PAINLESS has the visionary aim to establish a training and research platform to pioneer green, energy-autonomous portable network nodes which are self-subsistent and limitlessly-scalable, to satisfy future demands with minimal infrastructure. It promises a paradigm shift by integrating and jointly optimising wireless networks with renewable energy sources, radiated energy harvesting and airborne access points, as well as establishing disruptive performance benchmarks for the combined wireless power-and-information distribution.</p> <p>Our results will kick-start an innovation ecosystem for infrastructure and service providers of ICT to develop and commercialise a new generation of autonomous, sustainable and power-independent communication networks with self-organising functionality, to enable 100% coverage in urban environments in a power-efficient manner; provide network access to all types of emergency, disaster and special events areas; and connect remote/developing areas with problematic infrastructure. PAINLESS relates to H2020-MSCA with a vision to produce the first generation of experts in a radically new wave of energy autonomous networks that will revolutionise the wireless networking technology landscape and the plethora of associated vertical business sectors.</p>

COMPLEMENTARY0916/0029	Upgrading the capabilities of the FOSS experimental facilities	George Georgiou	University of Cyprus	64.631,25	64.631,25	<p>The project aims to enhance the research facilities of the FOSS Research Centre for Sustainable Energy, University of Cyprus and to support their smooth operation.</p> <p>The core research activities of FOSS are PV technology and more recently, PV grid integration, smart grids as well as power quality and electromagnetic fields. FOSS has developed advanced infrastructure for experimentally investigating PV cells, modules, and systems at both, laboratory and outdoor conditions as well as more advanced aspects e.g. battery storage, energy management, advanced inverters, EM, power quality measurements, numerical modelling, etc. In order to ensure high quality work and results, accurate measurements which abide to the latest standards in the field, the infrastructure of FOSS requires constant maintenance and frequent upgrading. Moreover, the large number of research projects at FOSS has led to a significant increase in research/technical personnel and subsequently to growing even further the laboratory needs particularly as regards testing equipment, consumables, and other maintenance costs (e.g. regular calibration of equipment).</p> <p>For these reasons, the Complementary Funding will be valuable in acquiring new small equipment for our laboratory as well as updating existing infrastructure with new components and necessary consumables. It is expected that the upgrading will address laboratory needs concerning projects, high-quality services provided to different stakeholders and companies, and advanced research training activities undertaken at FOSS. Ultimately, maintaining a state-of-the-art laboratory drives research excellence, excellence in researcher training, and in attracting the best researchers to work at FOSS.</p>
COMPLEMENTARY0916/0030	Next-generation theranostics of brain pathologies with autonomous externally controllable nanonetworks: a trans-disciplinary approach with bio-nanodevice interfaces	Andreas Odysseos	E.P.O.S IASIS RESEARCH AND DEVELOPMENT LTD	55.577,00	55.576,00	<p>Brain pathologies are highly complex disorders. Despite recent progress, their prognosis is grim, defining a high societal challenge. Bridging life sciences, bio-nanotechnology, engineering and ICT, GLADIATOR promises a vanguard and comprehensive theranostic (therapeutic+diagnostic) solution for brain malignancies. Through a multi-faceted breakthrough, GLADIATOR will provide, for the first time, a working prototype of a complete, autonomous and clinically applicable, nanonetwork-based, Molecular Communications system based on the conceptual framework of Externally Controllable Molecular Communications (ECMC). Using Glioblastoma Multiforme tumours, the most detrimental brain pathologies, as a proof-of-concept case, GLADIATOR will implement a platform of cell-based and electronic components. Implantable autologous organoids of engineered neural stem cells (INSCs) will release rationally designed exosomal bio-nanonetworks, delivering reprogramming (therapeutic) miRNAs and building nanonetworks. Interfering with the underlying biological environment, the nanonetworks will define a revolutionary intervention. A hybrid bio-electronic interface, consisting of coupled external and implantable devices, will enable communication channels with host-derived fluorescent bio-nanonetworks via micro-optoelectronic sensors. The cellular, sub-cellular and electronic components will be integrated into a wireless ECMC network. This system will autonomously monitor the spatiotemporal tumour evolution and recurrence and generate, on demand, appropriate reprogramming interventions, by radiofrequency stimulation of INSC renewal. A paradigm shift in Oncology Research is anticipated via the supra-discipline of "bio-nanonetwork diagnostics". GLADIATOR establishes a radical long-term vision leading to a drastic change in cancer therapy, also ushering the emergence of the ECMC field and transforming the burgeoning industry of Internet of Nanobio-things, with high socioeconomic impact.</p>
COMPLEMENTARY0916/0031	Identity verification with privacy-preserving credentials for anonymous access To Online services	Michael Strydom	Cyprus University of Technology	14.300,00	14.300,00	<p>The overarching goal of INCOGNITO is to combine state-of-the-art technologies in a platform that will allow users to easily understand what is needed to access online services with respect to their privacy and be able to prove specific attributes of their identity. We build on top of the framework that is being developed under the ReCRED project where we use advanced mobile software in order to convert online and physical identity proofs into validated and cryptographically strong proofs of identities that can be used for getting access to Online Services.</p> <p>INCOGNITO has the following objectives:</p> <ol style="list-style-type: none"> 1) Design and implement an infrastructure that supports qualified anonymity (QA) by leveraging state of the art cryptographic credentials schemes as well as Federated Login solutions. 2) Design and implement an Identity Acquisition and Management platform that will allow the user to quickly and securely acquire identity attributes from Physical ID documents and Online Identities. 3) Design and implement an advanced UI/UX AI-based assistant that will guide and inform the user about aspects of his identity management as well as possible actions to take. 4) Evaluate the results of the project through two pilot activities. <p>To achieve these objectives an inter-sectorial and interdisciplinary secondment program for Experienced and Early Stage Researchers that fosters knowledge exchange is proposed. Academic partners will offer their expertise on online identity acquisition and management, machine-learning algorithms and user experience assessment. Industry partners will offer their expertise on state-of-the-art IT security technologies, production-grade development processes and exposure to industrial research environment.</p>
COMPLEMENTARY0916/0032	Security ECONomics service platform for smart security investments and cyber insurance pricing in the beyond 2020 network era	Michael Strydom	Cyprus University of Technology	12.750,00	12.750,00	<p>SECONDO addresses the question "How can decisions about cyber security investments and cyber insurance pricing be optimised?". SECONDO will support professionals who seek cyber security investments, developed to support human decision making, and a complete well-founded security strategy. This is a timely research problem, as the rapid growth of cyber-attacks is expected to continue its upward trajectory. Such growth presents a prominent threat to normal business operations and the EU society itself. On the other hand, an interesting, well-known, finding is that an organisation's computer systems may be less secure than a competitor's, despite having spent more money in securing them. Budget setting, cyber security investment choices and cyber insurance, in the face of uncertainties, are highly challenging tasks with massive business implications.</p> <p>SECONDO aims to make impact on the operation of EU businesses who often: (i) have a limited cyber security budget; and (ii) ignore the importance of cyber insurance. Cyber insurance can play a critical role to the mitigation of cyber risk. This can be done by imposing a cost on firms' cyber risk through a premium that they have to pay and the potential for paying a smaller premium should they reduce their current cyber security risk.</p> <p>SECONDO has a cross-disciplinary nature, combining mathematical and engineering insights to empower innovative software. Apart from the novel research results, the project will offer a software platform to narrow the gap between theoretical understanding and practice. To achieve this, the four industrial project partners will (i) lead the part of the project where industrial needs will be entered as input to the requirements collection phase, and, (ii) provide their innovative software for risk assessment. The three academic partners will work together to (i) design and thoroughly describe the proposed methodologies, but also (ii) contribute to their software development.</p>

COMPLEMENTARY0916/0033	Nanoinformatics models and tools for the Risk Assessment & Governance of Nanomaterials	Antheas Atanitis	NovaMechanics Ltd	61.492,50	61.492,50	Nanotechnology requires integration of knowledge from quite different disciplines such as material science, biology, chemistry, toxicology and medicine. In parallel computational approaches are gaining increasing importance and popularity and the advancement of nanoinformatics will be crucial for sustainable nanotechnology. Nanoinformatics is a systematic methodology to collect, organize, validate, store, share, model, and analyze data involving nanotechnology processes, materials, properties and commercial product implications. This emerging field of research can greatly contribute in the understanding of the interactions in the nano scale as well as the quantification of NMs adverse effects. NanoSolveIT aspires to introduce a ground-breaking in silico Integrated Approach to Testing and Assessment (IATA) for the environmental health and safety of Nanomaterials (NM), implemented through a decision support system packaged as both a stand-alone open software and via a Cloud platform. NanoSolveIT, coordinated by NovaMechanics, will play a key role in advancing nanoinformatics methods and tools and moreover will be tightly connected with the newly funded risk governance projects for nanotechnology, among which RiskGONE project in which NovaMechanics also participates. RiskGONE will support the standardization and validation process for ENM by evaluating, optimizing and pre-validating SOPs and TGS and integrating them into a framework for risk governance (RG) of ENMs. The framework will comprise modular tools and will rely heavily on current strategies for the RA of conventional chemicals, complemented by methods for estimating environmental, social and economic benefits.
COMPLEMENTARY0916/0036	Internet of Sports Testbed	George Pallis	University of Cyprus	35.375,00	35.375,00	Within this project an Internet of Sports (IoS) testbed will be built providing the opportunity to run Big Data analytics applications. In addition, a large collection of sports-related datasets collected by wearable consumer products will be created, establishing a data ecosystem with embedded quality control that preserves data privacy.
COMPLEMENTARY0916/0037	Advanced Signal Processing Technologies for Wireless Powered Communications	IOANNIS KRIKIDIS	University of Cyprus	96.531,25	96.000,00	Wireless power transfer (WPT), pioneered by Tesla, is an idea at least as old as radio communications. However, on the one hand, due to health concerns and the large antenna dimensions required for transmission of high energy levels, until recently WPT has been limited mostly to very short distance applications. On the other hand, recent advances in silicon technology have significantly reduced the energy needs of electronic systems, making WPT over radio waves a potential source of energy for low power devices. Although WPT through radio waves has already found various short-range applications (such as the radio-frequency identification technology, healthcare monitoring etc.), its integration as a building block in the operation of wireless communications systems is still unexploited. On the other hand, conventional radio wave based information and energy transmissions have largely been designed separately. However, many applications can benefit from simultaneous wireless information and power transfer (SWIPT). The overall objective of the APOLLO project is to study the integration of WPT/SWIPT technology into future wireless communication systems. Compared to past and current research efforts in this area, our technical approach is deeply interdisciplinary and more comprehensive, combining the expertise of wireless communications, control theory, information theory, optimization, and electronics/microwave engineering. The key outcomes of the project include: 1) a rigorous and complete mathematical theory for WPT/SWIPT via information/communication/control theoretic studies; 2) new physical and cross-layer mechanisms that will enable the integration of WPT/SWIPT into future communication systems; 3) new network architectures that will fully exploit potential benefits of WPT/SWIPT; and 4) development of a proof-of-concept by implementing highly-efficient and multi-band metamaterial energy harvesting sensors for SWIPT.
COMPLEMENTARY0916/0040	Cyber security Competence For Research and Innovation	Michael Siniavios	Cyprus University of Technology	12.812,50	12.812,50	Europe needs to step up its efforts and strengthen its very own security capacities to secure its digital society, economy, and democracy. It is time to reconquer Europe's digital sovereignty. The vision for Europe can only be to join forces across Europe's research, industry and public sector and to include all talents not just those that have representation in the EU mainstream or are within big organizations. Diversity and inclusion are keys for success. Europe has incredible coverage and talent in the area of IT and cybersecurity. The area of cybersecurity is geographically fragmented across Europe for competences, and often also technically fragmented with problem-specific development of security solutions. There is no doubt that excellent research exists in Europe. Nevertheless, it is a fact that this research does not result in IT products and solutions that contribute to the European Single Digital Market. On contrary, a lot of research, also financed by EU ERC grants, is tested on real data in large US companies that cooperate with them. Europe has to and is already rethinking this strategy. CONCORDIA addresses the current fragmentation of security competence by networking diverse competences into a leadership role via a synergistic agglomeration of a pan-European Cybersecurity Center. The vision of CONCORDIA is to build a community a strong cooperation between all stakeholders, understanding that all stakeholders have their KPIs, bridging among them, and fostering the development of IT products and solutions along the whole supply chain.
COMPLEMENTARY0916/0041	WiseBOS Transaction Monitoring module	Godelene PIATON	EBOS TECHNOLOGIES LTD	64.281,90	64.282,00	The project aims to develop a new Transaction Monitoring module that allows organisations to monitor transactions, screen for suspicious financial activities against each customer profile, and support the Know Your Customer (KYC) and onboarding process, helping them to assess the risk associated with their business relationships. It will offer a user-friendly predictive modeling using Artificial Intelligence/Machine Learning algorithms, and will integrate with our WiseBOS ERP suite to help track and manage any alerted behavior, ensuring anticorruption. The Transaction Monitoring module will provide a customizable workflow focused on work effort and it is expected to reduce the task load. The aim is to obtain as much as possible credible info about prospective customers, so as to be as reliable as possible when assessing the risk for onboarding them.
COMPLEMENTARY0916/0042	Promoting Bioarchaeological Research in the Eastern Mediterranean	Thilo Rehren	The Cyprus Institute	27.503,15	27.503,15	Bio-Promised aims at enhancing the bioarchaeological research activities and capabilities at the Science and Technology in Archaeology and Culture Research Center (STARC) of the Cyprus Institute through the recruitment of an early-stage researcher as lab assistant. Bio-Promised will complement the initiatives of the H2020 Twinning Project Promised – Promoting Archaeological Sciences in the Eastern Mediterranean (Grant agreement 811068), which, as a Support and Coordination Action, aims at building research and education capacity at STARC but does not provide funding for the implementation of research initiatives. The laboratory assistant will contribute to archaeobotanical work in the field and in the laboratory (flotation, residue sorting, plant macro-remains sorting, sample preparation for phytolith and starch extraction), as well as to human osteoarchaeological research (preparation of dental casts for microwear analysis). Most importantly, the new STARC member will contribute to the development of digital open-access reference collections for archaeobotany and human osteoarchaeology, which will form an invaluable resource not just for STARC but for the broader region and beyond. In performing the above tasks, the lab assistant will gain valuable and diverse research experience in bioarchaeology, while working in an environment that has the formal commitment, demonstrable funding and publication track record, modern infrastructure and dedicated academic staff to become a leader in the field.