



The Malta Council for  
**Science & Technology**

A blue-tinted background image of a molecular structure, showing spheres representing atoms connected by lines representing bonds. The image is partially obscured by large, overlapping blue geometric shapes that form a stylized 'A' or 'M' shape.

# 2019

**ANNUAL REPORT**  
AND FINANCIAL STATEMENTS



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# FOREWORD

BY THE HON. CLAYTON BARTOLO

**PARLIAMENTARY SECRETARY  
FOR FINANCIAL SERVICES  
AND DIGITAL ECONOMY**

Innovation goes beyond technological breakthroughs.

Through it we have

the power to create, invent and produce. Research and innovation are key tools in building a knowledge-based economy where a digital society can be formed. Across the years, thanks to the Malta Council for Science and Technology we have shown our commitment to incentivize and invest in programmes aimed at putting R&I as vital components to build a Digital Malta.

Whilst recognizing the importance of sustaining investments in Research and Innovation (R & I), the Government has continued to support the Malta Council for Science and Technology (MCST) in its flagship programmes implemented through national funding. Further to the Peer Review of Malta's R&I system, conducted through the Horizon 2020 Policy Support Facility, preparations were set in motion to further develop MCST's offerings to researchers, improve its portfolio of programmes, and increase support for R&I capacity building. Moreover, in 2019, the government extended its support for research internationalisation, by assisting MCST in its preparations for new internationalisation support measures and opportunities to be offered to the local research community, with the ambition of extending research capacity building through collaborations beyond our shores. MCST also continued to provide invaluable support to the government on R&I and Space policy, as well as representing Malta's positions in the preparatory process towards Horizon Europe.

R&I is vital in economic development enabling sustainable growth and job creation. Esplora Interactive Science Centre, as a non-formal learning facility is responsible and equipped with the tools for shaping tomorrow's future. Malta's ongoing economic stability and competitiveness are bound jointly to the development of public engagement with Science, Technology, Engineering and Mathematics (STEM) and the sustainable generation of future scientists, tech experts, engineers, and mathematicians from among Malta's young people. In this regard, in 2019, the government has continued to support Esplora in its myriad of STEM Engagement measures and events. The latter brings positive change to society through personal growth, employability and active citizenship and also enforces the government's commitment to STEM-related innovation.

In order to have an economy that is more diversified, more flexible and better able to withstand external turbulences, we need to equip Malta's workforce with

STEM-related skills. Esplora has once again been crucial in this aspect throughout 2019 in being part of the STEM-related learning journey of around 100,000 visitors.

Other than the ever-so-important traditional science-related fields, in 2019 Esplora's sphere of activity also incorporated various fields of technology including Mixed Reality, Artificial Intelligence and Robotics. This bodes well to Malta's digital sector, in relation to enhanced skill-sets for citizens to be able to be more innovative and productive.

2019 was indeed another fruitful year for MCST. The government is committed to continue its support for the council's future projects. Finally, I would like to congratulate Dr. Jeffrey Pullicino Orlando and his team for their hard work and perseverance. You have always been our strongest advisors on science and technology policy, now it's time for you all to be with us, hands on deck as one of our main stakeholders in making Malta a technological hub on the international stage. Our vision is ambitious but together, we can make it happen.



**MESSAGE**  
FROM THE  
EXECUTIVE CHAIRMAN





# MESSAGE

FROM **Dr. JEFFREY PULLICINO ORLANDO**  
**EXECUTIVE CHAIRMAN**

2019 was yet another successful year for the Malta Council for Science and Technology (MCST). This Council is the government body responsible

for research and innovation (R&I) policy and strategy, the promotion of scientific research and science communication, the running of Malta's National Interactive Science Centre-Esplora, the management of the local R&I funding programme, International Research Cooperation, Space, and is also the National Contact Point Organisation for the EU funding programme - Horizon 2020. Thanks to our dedicated team, that I feel privileged to work with, The Council has achieved excellent results in all the areas within our wide-ranging remit.

Running an entity with such diverse responsibilities provides the management team with an interesting challenge however, through our team's visionary and strategic planning, we have ensured that The Council grows exponentially whilst maintaining the highest of standards - across the board. I feel that the metaphor to sow the seeds today and reap the fruits tomorrow is very apt in our respect. We are now seeing the excellent results of years of hard work and commitment in all the sectors covered by MCST. The spirit of teamwork – not only amongst ourselves but with our esteemed stakeholders - is a critical contributory factor to our success.

## Investment In Education

2019 saw the culmination of years of work put in by the Council in the Space Sector. The Space Education Programme for local schools, funded through the National Space Fund and with the support of the European Space Agency (ESA), was launched. MCST has worked on bridging the gap between Space and society, bringing Space technologies closer to Maltese citizens and companies. A national drive to introduce the Space Sector to Malta was initiated through the signing of a cooperation agreement between Malta and ESA in 2012. The relationship with ESA intensified along the years and a milestone in the sector was reached when a €2 million national Space Fund was established - with the support of local government. During the scholastic year 2018-9, the 'AstroPi Challenge' and 'CanSat Competition' targeting primary, middle, secondary, and post-secondary schools were launched. The latter saw the

results of four student teams working on a rocket and satellite launch coming to fruition. It was a truly exciting and remarkable event.

MCST puts a huge focus on education. We believe that it is an indispensable tool for national development. A primary goal set in 2019 was to address the STEM (Science, Technology, Engineering, and Mathematics) skills gap in Malta. MCST has embarked on a joint national campaign, together with the University of Malta and MCAST - through the support of the Ministry for Education and Employment - to promote STEM Engagement in relation to employability, personal growth, and active citizenship. The underlying philosophy guiding this campaign is to 'catch them young', particularly since research has shown that by the age of 7, children have already formed a strong opinion on science. Esplora endeavours to encourage our visitors of all ages to 'explore, think, imagine, appreciate ... and create'. It is the primary tool which we will be using, together with our partners, to facilitate our efforts at encouraging our younger generations to seriously consider the possibility of embarking on STEM-related careers whilst at the same time upskilling all citizens with related transferrable skills.

## New Schemes For Esplora Visitors

Since its launch in October 2016, Esplora has welcomed thousands of visitors with varying backgrounds and ages, including many senior citizens. At the heart of the Esplora ethos is the provision of an immersive experience in Science which is delivered through more than 200 interactive exhibits and around 2000 educational activities annually. Being Malta's foremost visitor attraction and a declared emblematic project by the European Commission, Esplora will continue leading the way in Science engagement.

We consider educators to be our most valued partners. I am pleased to announce that, as from January 2020, Esplora will be introducing new schemes aimed at educators to ensure that they can make the utmost use of our resources. This will include free entrance to all Maltese educators and their families and subsidised transport for state schools with the invaluable support of the Ministry for Education and Employment.

We are also ensuring that the Science Centre is well equipped to cater for individuals with behavioural challenges and learning difficulties, such as autism. Our staff members have been given intensive training in this respect. Bank of Valletta will also be supporting

us financially to develop a state-of-the-art multisensory room. This will ensure that children with learning difficulties are able to make the most out of the Esplora experience. The success of the Centre has encouraged us to think outside the box and experiences related to the historical aspect of the Bighi Complex will be launched next year - to reach new audience segments. These include a 'Paranormal Trail' for adults and a 'British Experience' for visitors coming from the UK.

This annual report showcases our team's efforts. Our successes would not be possible without the continuous support we received from the Parliamentary Secretariat for Financial Services, Digital Economy and Innovation and the Office of the Prime Minister.

Together, we have continued to ensure that Science, Research, and Innovation are placed at the very top of the National Agenda.

## Research And Innovation - An Important Pillar

Through its various Research and Innovation (R&I) programmes, MCST continued to provide local and international researchers with opportunities to see their innovative ideas come to fruition. The Peer Review of Malta's R&I scene, carried out with the assistance of the EU Horizon 2020 Policy Support Facility, was concluded and their findings were presented to us, together with some excellent recommendations. This exercise will surely assist us in the development of the National R&I Strategy post-2020, which is underway.

MCST continued serving as Malta's official contact point organisation in the administration of EU Framework Programmes. Horizon 2020, the biggest EU R&I programme, will be succeeded by Horizon Europe - an ambitious €100 billion research and innovation programme which will kick off in 2021 and run till 2027. Malta has greatly benefitted from EU innovation funding within the Horizon 2020 programme. Since the start of the programme, 135 Grant Agreements have been signed with Maltese participants - amounting to over €25 million in grants.

In 2019 we also set up a new Internationalisation Unit aimed at intensifying our collaborative efforts with other countries in several programmes and through bilateral agreements. Of note is the work being done with our Chinese counterparts, the Ministry of Science and Technology, most notably through our Sino-Malta Fund.

## Looking Ahead

We look forward with confidence and with a determination to continue to excel in all our tasks. Our dynamic Management Team is working on many new initiatives and projects that will surely present us with new opportunities for the sector we have been entrusted with. The EsploraNatura project, focused on a state-of-the-art natural history experience, remains one of our main priorities.

The works related to the rehabilitation of the foreshore around the Bighi peninsula is at an advanced stage, and visitors to Esplora will soon be able to access our Science Centre from the Grand Harbour through the historic Cot Lift. We believe that, through these efforts, MCST will be offering a holistic visitor experience that is second to none in the Mediterranean.



**POLICY, STRATEGY**  
AND  
INTERNATIONALISATION UNIT



# POLICY, STRATEGY AND INTERNATIONALISATION UNIT

## Introduction

The main aims of the Policy, Strategy and Internationalisation team are to advise Government on matters relating to research, innovation and space at both national, EU and international level as well as supporting the researcher community to participate in international opportunities and project consortia. The team is responsible for championing the implementation of the National R&I Strategy 2020 and ensuring that the principles of the Strategy are mirrored in other national policies and strategies, thereby facilitating a coordinated approach to policy making across Government. In championing the Strategy's implementation, the team acts as a catalyst in bringing together key entities working on related issues to ensure open dialogue, information exchange and promote cooperation. The team members represent Government in numerous EU level fora and provide support and advice in the process of developing a national position on research, innovation, space and related initiatives. In 2019, the Unit further strengthened its internationalisation remit engaging in a number of new internationalisation initiatives and further strengthening its human resource capacity in the area.

In 2019, MCST set up a dedicated Internationalisation Unit to deepen international collaboration amongst local and foreign researchers and stakeholders and serve as a one-stop-shop for international initiatives in which the Maltese research community may participate. The changing landscape of international financing to research, dictates more openness to international opportunities and therefore it was deemed necessary to have a dedicated unit to properly follow and monitor the developments and to adequately tap into such opportunities. The unit oversees a number of initiatives and runs a number of programmes listed below.

## The National Research and Innovation Strategy

The current Research and Innovation Strategy was launched in early 2014 and covers a seven-year period until 2020. Its implementation is undertaken through a rolling R&I Action Plan, which the Unit finalised in 2016 with the support of relevant stakeholders.

At the end of 2018, with the coming to a close of the period covered by the current National R&I Strategy, MCST kicked off the entrepreneurial discovery process in preparation for the new R&I Strategy for post-2020. In 2019, various steps were taken to collect as much information as possible from stakeholders on the future smart specialisation strategy and understand the key challenges that should be addressed in the next R&I strategy. An online survey was issued to



reach civil society and organisations, a desk-based economic analysis was carried out, and one-to-one consultations were held with key players (government, academic institutions, and business representatives). To further engage with the private sector, MCST held a dedicated evening event to specifically discuss private sector obstacles and barriers to undertaking R&I. After analysing all the information gathered, MCST held thematic focus groups for all stakeholders in November 2019 on the economic sectors that were deemed to have most potential to become smart specialisation areas post-2020. On confirmation of the economic sectors, MCST carried out in-depth analysis and consultations on each sector, to identify the niche areas with R&I potential for Malta. In 2020, MCST will be issuing the draft Smart Specialisation Strategy and National R&I Strategy for public consultation.

An important input into the new national R&I Strategy post 2020 was the Peer Review of Malta's R&I system, supported by the EU's Horizon 2020 Policy Support Facility. The main aim of the Peer Review was to provide recommendations on Malta's efforts to support R&I capacity building and improve the dynamics as well as the efficiency of the R&I system and of the current public investments in R&I. The Peer Review kicked off in July 2018 and was concluded in June 2019 with a dissemination event in Malta. The outcomes and recommendations of the Peer Review report have been reviewed and discussions on their implementation have also commenced. This work will continue in 2020.

## Policy Advice

Throughout 2019, the Unit continued to assist and advise the Maltese government in all discussions and negotiations on the EU's research and innovation policies. Expertise was provided both at the technical level, for the EU Council's Research Working Group (RWG), the Joint Research/Atomic Questions Working

Party and the Space Working Party, and at the political level for meetings of EU permanent representatives (COREPER) and the Competitiveness Council meetings of research ministers (COMPET). Discussions focused mainly on the conclusion and adoption of the remaining elements of the draft Horizon Europe framework programme and the opening of negotiations on the proposal to update the European Institute for Innovation and Technology (EIT) regulation and its corresponding new Strategic Innovation Agenda (SIA). Furthermore, the Policy arm of the Unit worked closely with the H2020 Unit in the preparation of the upcoming Horizon Europe research partnerships. Together, both units helped organise an internal governmental consultation on gauging preliminary national interest in participating in the Partnerships and acted as the point of communication with the European Commission. Furthermore, the Unit continued with its work representing Malta in various international fora such as the European Research Area and Innovation Committee (ERAC), the Standing Working Group on Gender in Research and Innovation (SWG GRI), the European Open Science Cloud (EOSC) and its Governing Board and the Fusion4Energy Governing Board among others. Among other issues, Malta worked together with EU Member States and Associated Countries to develop the new ERA paradigm for post-2020.

In relation to Space Policy, team also provided the necessary support to the Space Taskforce that was launched in March 2019.

### **Towards a National Open Access Policy**

In 2017, Malta submitted a request to the European Commission for support in developing a national open access policy for Malta. This work started in July 2019 through a kick-off meeting held in Brussels between the European Commission, the panel of experts and MCST. This work was supported by the Horizon 2020 Policy Support Facility. Later in the year, the expert panel held two country visits to Malta during which they met with all relevant stakeholders to discuss requirements, potential bottlenecks and a plan of action. The expert panel is expected to deliver the final report by April 2020, following which MCST will use this report as the basis for developing the first National Open Access Policy for Malta by the end of 2020.

### **Policy Intelligence: Monitoring and Analysis**

Throughout the year, the Unit continued expanding its role with regards to policy intelligence by working on the monitoring of the national R&I performance and trends based on official statistics. Building on the work undertaken in 2018, in 2019, data collection on the selected R&I indicators was finalised along with a first draft of the first R&I monitoring report for Malta. The result of the headline indicators used to measure the overall implementation of the National R&I Strategy show that Malta is far off from achieving the 2% R&D expenditure as a percentage of GDP target by 2020. Other indicators show that Malta has invested more in capacity building for research and human resources. On the other hand, the data on headline indicators concerning knowledge-intensive employment and innovation activities in private industry are of concern. The finalised report will be published in early 2020.

### **PRIMA - Partnership for Research and Innovation in the Mediterranean Area**

PRIMA operates under the framework of an Article 185 TFEU and its network consists of European Union Member States, Horizon 2020 Associated Countries and Mediterranean Partner Countries on an equal footing basis of co-ownership, co-management and co-funding, together with participation of the European Commission. Through PRIMA, Malta is participating for the first time in an Article 185 initiative. The PRIMA negotiations took place during the Maltese Presidency of the Council of the EU in 2017.

By funding R&I through competitive calls, PRIMA aims to "build research and innovation capacities and to develop knowledge and common innovative solutions for agro-food systems, to make them sustainable, and for integrated water provision and management in the Mediterranean area, to make those systems and that provision and management more climate resilient, efficient, cost-effective and environmentally and socially sustainable, and to contribute to solving water scarcity, food security, nutrition, health, well-being and migration problems upstream".

Malta has committed itself to participate in these annual calls with an annual budget of €500,000. Apart from nationally funded Calls (also referred to as Section 2 Calls), PRIMA also launches Calls that are funded exclusively by the European Commission (also referred to as Section 1 Calls).

In 2019, one local partner was successful in being selected for funding in under Section 1 and will be receiving a total of €200,000. The project will be focusing on developing an interlinked digital platform for food integrity and traceability of relevant Mediterranean supply chains.

### **Joint Programming Initiative on Healthy and Productive Seas and Oceans**

The aim of JPIs is to coordinate research and programming in specific thematic areas across EU countries. JPI Oceans focuses on enabling the advent of knowledge based maritime economy, ensuring Good Environmental Status of the seas, optimising the response to climate change and mitigating human impacts on the marine environment.

In order to be able to deliver on its strategic mission and enter into new partnerships, the JPI on Healthy and Productive Seas and Oceans (JPI Oceans) established itself as an international non-profit association under Belgian law (association internationale sans but lucrative – AISBL) in 2018. Malta was the first country after the founding countries to become a member of this legal arm of the JPI.

Through the Internationalisation Unit, MCST actively participates in this JPI, including at Management Board level. In November 2019, Malta also secured the JPI Oceans Vice-Chair position and is thus foreseen to also start actively participating in the Internal Advisory Committee Meetings from 2020 onwards.

MCST's participation in JPI Oceans is resulting in securing R&I funding opportunities for local researchers to participate in joint calls for proposals in the field of marine and maritime science. Indeed, in 2019, MCST actively participated in the second MarTERA Call, the second joint call for proposals on microplastics in the marine environment and also in the first call for proposals of the Blue Bioeconomy ERA-NET Co-fund, with a total budget of €300,000. Two local participants have successfully secured funding to participate in two of the successful projects and these are foreseen to commence their activities in 2020.

The MarTERA ERA-NET Co-fund focuses on funding R&I transnational projects in the field of marine and maritime technologies, whilst the Blue Bioeconomy ERA-NET Co-fund focuses on strengthening Europe's position in the blue bioeconomy. They both operate through the pooling of National funding resources from the different participating countries, with the ultimate aim being the funding of transnational R&I projects that tackle common societal challenges. The overall budget put forward for the 2019 Calls for MarTERA and BlueBio was of thirteen and thirty million euros respectively.

### Science and Technology Cooperation between Malta and China – SINO-Malta Fund

The Sino-Malta Fund emanated from the framework of the Agreement on Science & Technological Cooperation between the Government of Malta and the Government of the People's Republic of China (PRC) and subsequent agreements by Joint Commission on Science & Technology between the Ministry of Science & Technology (MOST) of the PRC, and the Malta Council for Science & Technology (MCST). The aim of

this Science & Technology Cooperation is to intensify scientific collaboration between the two countries to strengthen R&D activities, technology transfer and to carry out comprehensive, steady and long-term cooperation through support of researchers' mobility and the networking of industries, universities and research institutions to generate mutual-beneficial and win-win research.

The first call was launched in 2019, with a total budget of €700,000 put forward by MCST and MOST to fund one project in the field of Maritime Science and another project focusing on Transport. Successful projects are foreseen to commence in 2020.

MCST is already working to secure another bilateral funding call in 2020.

### plumtri—A platform for Research and Innovation

plumtri was set up in 2015 as a one stop online portal for researchers wishing to connect with other researchers and/or find opportunities on research openings and calls amongst other R&I initiatives. In 2019, work intensified on plumtri to make it more relevant to local stakeholders whilst expanding the platform to partners operating in the Mediterranean region. More work on upgrading plumtri took place in the last quarter of 2019 to include new features such as an event match making tool facility in order to further enhance the user experience. In 2019, new partnership agreements were signed with key stakeholders including with the Lebanese Development Network. plumtri has been awarded as the Best eGovernment Initiative for 2019 in the eBusiness Awards.







**RESEARCH  
AND INNOVATION**  
PROGRAMMES UNIT



# RESEARCH AND INNOVATION PROGRAMMES UNIT

## Internationalisation Partnership Award Scheme Plus (IPAS+) - 2019

The Malta Council for Science and Technology (MCST) launched the Internationalisation Partnership Award Scheme (IPAS) four years ago and has since, operated yearly calls.

This scheme supports collaborative initiatives between local academic institutions or private entities and at least one foreign counterpart. This year, MCST decided to widen the Scheme by introducing Part B. The aim of Part B is to provide opportunities for Maltese entities planning to submit a Horizon 2020 proposal as a coordinator to engage a consultant (local or foreign) who will be supporting the applicant until submission stage. IPAS+ 2019 Part A, attracted 21 applications, while Part B, attracted 11 applicants. From the 21 applications in Part A a total of 14 projects were awarded requesting a total of €69,418 in funds, while for Part B a total of 8 projects were awarded requesting a total of €40,000 in funds. The 22 projects awarded under Part A and part B, are in the process of finalising their deliverables by end of September 2020 with final reporting due by October 2020.

The aim for 2020 is to re-launch the IPAS+ twice and increase the promotion of the programme to ensure a successful turnout of applications. MCST will be conducting an evaluation of the IPAS+ programme. MCST will invite applicants and beneficiaries who applied through the years to provide recommendations for improvement of the future programme.



### IPAS+ Part A 2019 Funded Projects

Name/ Surname / Project Number	Funds Requested
IPAS-2019-021 Anthony Fenech	€ 5,000
IPAS-2019-011 Giuseppe Di Giovanni	€ 4,956
IPAS-2019-020 Olga Bokolyubova	€ 4,999
IPAS-2019-009 Pierre Schembri Wismayer	€ 4,996
IPAS-2019-019 Mellissa Formosa	€ 5,000
IPAS-2019-030 George D. Mantas	€ 5,000
IPAS-2019-027 Joseph Borg	€ 5,000
IPAS-2019-002 Rueben Farrugia	€ 4,995
IPAS-2019-004 Ruben Cauchi	€ 5,000
IPAS-2019-013 Byron Baron	€ 4,750
IPAS-2019-028 Joseph Caruana	€ 4,736
IPAS-2019-010 JoAnn Cassar	€ 4,986
IPAS-2019-016 Lonnek Van Der Plas	€ 5,000
IPAS-2019-012 Adrian Muscat	€ 5,000

### IPAS+ Part B 2019 Funded Projects

Name/ Surname / Project Number	Funds Requested
IPAS-2019-017 Antonios Liapis	€ 5,000
IPAS-2019-014 Sean Baldacchino	€ 5,000
IPAS-2019-008 Georgios N. Yannakakis	€ 5,000
IPAS-2019-001 Claire De Marco	€ 5,000
IPAS-2019-018 Gabor Molnar	€ 5,000
IPAS-2019-024 Alexander Micallef	€ 5,000
IPAS-2019-006 Axel Steuerer	€ 5,000
IPAS-2019-005 Axel Steuerer	€ 5,000

## FUSION – The National R&I Programme - 2019

### Commercialisation Voucher Programme and Technology Development Programme

FUSION is the national funding programme designed to boost local Research and Innovation by encouraging researchers and technologists to transform their innovative ideas into market-ready realities. FUSION is endorsed through Maltese Governmental funds and it is managed by the Malta Council for Science and Technology (MCST).

FUSION is composed of two main programmes, namely the Commercialisation Voucher Programme (CVP) and the Technology Development Programme (TDP). Both programmes are essentially intended to provide the vital mentoring and financial support required by researchers and technologists to lift their ideas off the ground and take them to market. The CVP aims at improving the development and commercialisation potential of

innovative research ideas, whereas the TDP supports the actual development of innovative projects proposed by public entities and industrial players.

Between 2016 and 2019, a total of 246 CVP applications were received. These applications targeted eight Smart Specialisation areas: ICT, Health, Resource Efficient Buildings, High Value-Added Manufacturing, Aviation & Aerospace, Tourism Product Development, Maritime and Aquaculture. Following scientific evaluations by external independent experts, a total of 113 beneficiaries were selected for funding through 2 CVP Calls per year, requesting a total of almost €1.9 Million in funding. Table 1 portrays a breakdown of 2016-2019 project submissions and funded projects per smart specialisation area. A comprehensive list of the 2016-2019 funded CVP projects, indicating their progress and status is provided in Table 2. The FUSION Programme budget was €2.2M in 2019. In 2020, it is envisaged that two CVP Calls will be open for funding whilst maintaining the €2.2M budget. MCST also supported 3 Optional CVP Vouchers to TDP Projects with a total commitment of €0.09M (see table 3).

Following the successful completion of the projects under CVP, 12 projects were awarded funding for through TDP during 2019. A total of almost €2.8M were committed to these projects, some of which will be completed in 2022. A list of these projects is provided in the table entitled 'Projects Awarded under the Technology Development Programme during 2019.'

Between 2004 and 2019 inclusive, 120 proposals were accepted for funding, requesting a total commitment of approximately €16.16 million.

A comprehensive list of these projects, indicating their progress and status in 2019, is provided in the subsequent pages through tables 4 to 8. There were no calls in 2005 and 2007 and there were no closed calls in 2014 due to the dependency on CVP.

Projects that had been completed prior to 2019 have been removed from this table and these can be viewed on the Council's website.

**Table 1 Breakdown of CVP project submissions in 2018 and 2019**

Submitted Proposals by Sector	2018			2019		
	Number of Proposals	Funded Projects	Percentage of Total submissions	Number of Proposals	Funded Projects	Percentage of Total submissions
ICT	12	5	42%	10	7	70%
Health	12	7	58%	15	11	73%
Resource Efficient Buildings	4	2	50%	3	3	100%
Aviation & Aerospace	4	3	75%	2	2	100%
Maritime	3	3	100%	0	0	0%
High Value Added Manufacturing	7	3	43%	3	2	67%
Tourism Product Development	3	1	33%	3	1	33%
Aquaculture	1	0	0%	1	0	0%
Other	0	0	0%	0	0	0%



**Table 2 R&I CVP 2018–2019 Report Table with Funded Projects**

2018		
Project No.	Entity Name	Status
R&I_2018_002V	University of Malta	Technology Development Programme Stage
R&I_2018_003V	University of Malta	Completed
R&I_2018_004V	University of Malta	Completed
R&I_2018_005V	University of Malta	Technology Development Programme Stage
R&I_2018_006V	University of Malta	Completed
R&I_2018_007V	University of Malta	Technology Development Programme Stage
R&I_2018_009V	University of Malta	Technology Development Programme Stage
R&I_2018_010V	University of Malta	Technology Development Programme Stage
R&I_2018_011V	University of Malta	Completed
R&I_2018_012V	University of Malta	Technology Development Programme Stage
R&I_2018_014V	University of Malta	Technology Development Programme Stage
R&I_2018_016V	University of Malta	Technology Development Programme Stage
R&I_2018_021V	University of Malta	Technology Development Programme Stage
R&I_2018_024V	University of Malta	Completed
R&I_2018_026V	University of Malta	Completed
R&I_2018_029V	University of Malta	Completed
R&I_2018_030V	University of Malta	Completed
R&I_2018_031V	University of Malta	Completed
R&I_2018_035V	University of Malta	Terminated
R&I_2018_037V	University of Malta	Technology Development Programme Stage
R&I_2018_039V	University of Malta	Completed
R&I_2018_040V	Altern Limited	Closed
R&I_2018_041V	Altern Limited	TDP
R&I_2018_042V	Epsilon Malta	Closed
2019		
Project No.	Entity Name	Status
R&I_2019_004	University of Malta	Ongoing
R&I_2019_005	University of Malta	Completed
R&I_2019_006	University of Malta	Ongoing
R&I_2019_007	University of Malta	Completed
R&I_2019_009	University of Malta	Completed
R&I_2019_010	University of Malta	Completed
R&I_2019_012	University of Malta	Completed
R&I_2019_015	University of Malta	Completed
R&I_2019_015	University of Malta	Completed
R&I_2019_016	University of Malta	Completed
R&I_2019_017	University of Malta	Completed
R&I_2019_018	University of Malta	Completed
R&I_2019_022	University of Malta	Ongoing
R&I_2019_023	University of Malta	Ongoing
R&I_2019_024	University of Malta	Ongoing
R&I_2019_025	University of Malta	Ongoing
R&I_2019_026	University of Malta	Ongoing
R&I_2019_027	University of Malta	Ongoing
R&I_2019_028	University of Malta	Ongoing
R&I_2019_029	University of Malta	Ongoing
R&I_2019_030	University of Malta	Ongoing
R&I_2019_032	University of Malta	Ongoing
R&I_2019_036	MCAST	Ongoing
R&I_2019_037	University of Malta	Ongoing

**Table 3 R&I CVP Optional Voucher 2019 Report Table with Funded Projects**

Project No	Project Name	Entity Name
R&I-2018-016T	Drift	University of Malta
R&I-2018-016T	Brianapp	University of Malta
R&I-2016-002T	Nevac	University of Malta

**Table 4 R&I 2013 projects list with legacy projects that continued in 2019**

Project No	Project Name	Stage	Entity Name
R&I-2013-023	Offshore Passive Photovoltaics	Complete	MCAST
R&I-2013-025	CLEAN-FLIGHT 2	Complete	University Of Malta

**Table 5 R&I 2015 TDP projects list with legacy projects that continued in 2019**

Project No	Project Name	Stage	Entity Name
R&I-2015-001T	Studies of the Effects of Aspirin on Metabolism and Programmed Cell Death in Redox Compromised Yeast Cells	Completed	University Of Malta
R&I-2015-015T	Advanced Aircraft-Pilot Interaction with Emerging Technologies	Completed	University Of Malta
R&I-2015-024T	Multi Camera High Frame Rate Synchronisation	Intermediate	University Of Malta

**Table 6 R&I 2016 TDP projects list with legacy projects that continued in 2019**

Project No	Project Name	Stage	Entity Name
R&I-2015-023T	Development of a Low-Wearing Novel Metal on Metal Hip Joint Prosthesis for a Longer Lifespan	Final	University Of Malta
R&I-2015-042T	Development of a Novel Device to Support Children with Language Impairment in a Bilingual Context	Completed	University Of Malta
R&I-2015-044T	Development of Hydro-Energy Storage System for Offshore Multi-purpose Floating Platforms	Completed	University Of Malta
R&I-2016-066T	Accurate Cancer Screening Tests	Completed	University Of Malta
R&I-2015-047T	A Smart Micro Combined Heat and Power System	Intermediate	University Of Malta
R&I-2015-016T	Smart Flight Data Monitoring	Final	University Of Malta

**Table 7 Projects Awarded under the Technology Development Programme during 2017**

Project No	Project Name	Stage	Entity Name
R&I-2015-032-T	Brain Controlled Applications	Intermediate	University Of Malta
R&I-2016-013-T	Datadear	Final	SCOPE Solutions
R&I-2016-022-T	Novel Evaporative Cooled Battery Technology	Intermediate	University Of Malta
R&I-2016-010-T	Eye-Gaze Tracking in the Wild	Intermediate	University Of Malta
R&I-2015-048-T	Food Inspection Using Hyperspectral Imaging	Final	University Of Malta
R&I-2016-040-T	Recycling of Inert Building Construction Waste Power System	Intermediate	University Of Malta
R&I-2016-033-T	Situation Awareness and Traffic Management for Engineless Taxiing	Final	University Of Malta

**Table 8 Projects Awarded under the Technology Development Programme during 2018**

Project No	Project Name	Stage	Entity Name
R&I-2017-037T	Biodegradable Iron for Orthopedic Scaffold Applications	Intermediate	University Of Malta
R&I-2016-035T	Smart Single Phase Motor Soft Starter without Starter Capacitor	Intermediate	Carlo Gavazzi Ltd.
R&I-2017-002T	Face Image Restoration using Deep Learning	Intermediate	University Of Malta
R&I-2017-039T	Advanced Revolutionary Manufacturing Solutions and Development of novel GFRP Composit Poles	Intermediate	University Of Malta
R&I-2017-003T	Ride-Centered Product and Services for Designing Safer Motorcycles	Intermediate	University Of Malta
R&I-2016-031T	Crop Intelligent Tools	Intermediate	MCAST
R&I-2017-028T	Development of a Mechanical and Control Framework for a Minimal Anthropomorphic Prosthetic Hand	Intermediate	University Of Malta
R&I-2017-025T	Development of a 3D Printing Head with Laser Melting for Printers using FFF Technology	Intermediate	Laser Engineering & Development Ltd.
R&I-2017-032T	Active Control Sidestick for Aircraft Ground Operations	Intermediate	University Of Malta
R&I-2017-033T	Auxetic Oar Grips for Pain Free Rowing	Intermediate	University Of Malta
R&I-2018-016T	Dense recording of Inside Foot Temperatures	Intermediate	University Of Malta
R&I-2017-005T	Kinetic Energy Recovery System for a Landing Aircraft	Intermediate	University Of Malta
R&I-2018-010T	Smart Artificial pilot	Intermediate	University Of Malta

**Table 9 Projects Awarded under the Technology Development Programme during 2019**

Project No	Project Name	Stage	Entity Name
R&I-2018-005T	Bouy Eau Air: Safety Multiple Drone	Initial	University Of Malta
R&I-2017-029T	Boosting K+ Channels In Neurological Diseases	Initial	University Of Malta
R&I-2018-012T	Eye Based Control	Initial	University Of Malta
R&I-2018-041T	Innovative Design And Mass Customized Fabrication Of Led Luminaries	Initial	Altern Ltd.
R&I-2018-037T	Innovative Molecular Profiling Of Distinct Tumour Derived Cells In Blood	Initial	University Of Malta
R&I-2017-023T	Application Of Lysine Methylation Assay For Grading Colorectal Cancer Severity	Initial	University Of Malta
R&I-2018-007T	Characterisation Of A Novel Bioactive Agent For The Treatment Of Leukaemia And Other Cancers	Initial	University Of Malta
R&I-2018-002T	A Picosatellite for Testing Reliability in Space	Initial	University Of Malta
R&I-2018-014T	Lung cancer Enhanced Novel Therapy	Initial	University Of Malta
R&I-2018-009T	Innovative Multi-Axis and Multi-Head 3D Printer	Initial	University Of Malta
R&I-2017-038T	Modular, Easy-to-assemble photovoltaic and insulating tiles	Initial	University Of Malta
R&I-2018-021T	Video Light Field Acquisition and Reconstruction	Initial	University Of Malta

## Space and Related Technologies - 2019

In 2019, the Malta Council for Science and Technology continued working hard on capacity building activities within the local space sector. Reinforced through collaboration with multiple leading space entities in Europe, this drive is in line with the first Maltese National Space Policy published in early 2017.

While the space sector in Malta is still in its inception phase, tangible capacity-building measures become ever more critical. Training and collaborative opportunities for public-private projects, as well as internationalisation efforts where possible, provide the means for developing critical mass. It is well recognised that the establishment and implementation of collaborative agreements with key space players is an important building block to help build local capacity and knowledge in the sector. Consequently, MCST continued to strengthen relationships with entities of substantial heritage within the sector, notably with the French Space Agency (CNES) and the Italian Space Agency (ASI). Apart from partnering on awareness raising initiatives, such bilateral agreements enable the exchange of personnel and partnership on space-related research projects, particularly those related to Earth Observation (EO) data processing and small-scale technology development. A competitive call issued in 2019, which followed an expression of interest to all Maltese stakeholders interested in collaborating with their French counterparts, led to the selection of two bilateral projects involving Maltese and CNES researchers. Apart from the academic research developments, which vary from the exploitation of

satellite imagery to the development and testing of a miniature satellite, the collaboration has also opened internship opportunities for Maltese student researchers at CNES' state of the art establishments. A number of workshops that help tap into the expertise of European experts and elevate the local research acumen have also been organised within the framework of such bilateral agreements.

Throughout the year, MCST sustained its ever-growing collaboration with the European Space Agency (ESA), Europe's gateway to Space. Further to the establishment of a €2 million national fund operating between 2018 and 2022, the Space Research Fund scheme and the local Space Education Programme continue to tangibly aid local space capacity-building through the support of ESA. Operating on yearly competitive calls for 20-month research projects, the Space Research has till now funded five EO-related downstream research projects across various thematic areas. As beneficiaries of this research programme, Maltese public, private, research and academic entities have the opportunity and the funds, to truly explore the potential harboured by satellite data over various thematic areas. This enables them to initiate a track-record within space research that helps close-down disparities between Malta and established players. More information on the Space Research Fund available at <http://mcst.gov.mt/space-directorate/space-research-fund/>

The first edition of the National Space Education programme, particularly the CanSat Malta and AstroPi activities open to all Maltese schools, reached its



*The model rocket being prepared for launch at the Malta Cansat Competition 2018/9.*







**HORIZON**  
2020



# HORIZON 2020

Part of the European Union's Multiannual Financial Framework, Horizon2020 is the 8th Framework Programme for Research and Innovation running between 2014 and 2020. With a budget of nearly €80 billion, the Programme addresses three main challenges; Responding to the economic crisis to invest in future jobs and growth; addressing people's concerns about their livelihoods, safety and environment; and strengthening the EU's global position in research, innovation and technology.

Horizon 2020 is split into three pillars:

1. **Excellent Science**
2. **Industrial Leadership**
3. **Societal Challenges**



**Excellent Science** focuses on world class science research which is the foundation of tomorrow's technologies, jobs and wellbeing. This pillar addresses the need for Europe to develop, attract and retain research talent by providing researchers access to the best infrastructures.



**Industrial Leadership** aims to speed up the development of the technologies and innovations that will strengthen tomorrow's businesses, including SMEs, by providing dedicated support for research, development and demonstration in ICT, nanotechnologies, materials biotechnology, manufacturing and space.



**Societal Challenges** addresses the concerns of citizens and society by providing breakthrough solutions. This pillar addresses seven specific challenges: Health; Food security, sustainable agriculture, marine and maritime and inland water research; Energy; Transport; Climate action and environment; Inclusive, innovative and reflective societies and Secure Societies.

Funding opportunities don't stop at the three pillars, Horizontal Actions are found within the programme:

1. Spreading Excellence and widening participation to support the low-performing Member States;
2. Science with and for Society (connecting science with society)

In 2019, 24 new Grant Agreements were signed by 34 Maltese entities. These entities secured funding amounting to approximately €5 million, thus bringing the total of signed Grant Agreements (since the beginning for H2020) to 133 and over €25 million granted to Maltese entities.

## National Support Systems and Programme Committees

The Malta Council for Science and Technology (MCST) has been mandated to act as the National Contact Point (NCP) organisation for the EU R&I Framework Programme. The Horizon Unit within MCST provides advice and support to potential Maltese applicants at all stages of applications. The NCPs' services vary from providing guidance on choosing relevant H2020 topics and types of actions, to assistance in partner searchers, and support during project management. Proposals being submitted by Maltese coordinators may also be reviewed by the NCPs so feedback can be provided on how the proposal can be improved.

National Contact Points also serve as members of the Programme Committee (PC) for the societal challenges, programmes and areas they represent. PC delegates represent and lobby for national priorities at EU level in any consultations as well as approve the work programmes before these are published.

The Horizon Unit provides support to Maltese entities from public, private and academic sectors as well as to individual researchers to participate actively in Horizon 2020. During 2019, the National Contact Points had over 250 one-to-one meetings with Maltese stakeholders. A number of events and outreach sessions were also organised throughout the year as described further below in this document.

During the last year of the Framework Programme, our NCPs will continue supporting entities and researchers to enable them to participate in the last calls of the programme. Our aim is to improve Malta's success rate, increase the number of Grant Agreements with Maltese participation as well as increasing the funding obtained from this programme. As PC members, we will lobby and actively contribute to ensure Malta's interests are represented in the next Framework Programme – Horizon Europe.

## Horizon Europe and the Shadow Committees

The next Framework Programme - Horizon Europe will run from 2021 to 2027 and its main objectives are to strengthen the EU's scientific and technological bases, contribute to achieving the Sustainable Development Goals and boost the Union's competitiveness. The European Commission has started the strategic planning process for Horizon Europe (HE) immediately

Following the endorsement of the provisional agreement on the new Framework Programme by the European Parliament in April 2019. A multi-annual Strategic Plan will be set in order to prepare the content for the various work programmes and calls for the first years of HE. The 'Orientations towards the first Strategic Plan for Horizon Europe' document has been published in December 2019.

Horizon Europe will include five policy-oriented Missions and three types of European Partnerships. The Mission areas that have been identified are the following:

- Adaptation to climate change including societal transformation
- Cancer
- Climate-neutral and smart cities
- Healthy oceans, seas, coastal and inland waters
- Soil health and food

A Mission board and an Assembly have been established for each one of the Mission areas. Following a public call for applications, two Maltese representatives have been selected to sit on the Climate Change and the Oceans mission boards.

Total of 44 potential European Partnerships have been shortlisted, representing all three types of partnerships: Co-programmed European Partnerships, Co-funded European Partnerships using a programme co-fund action, and Institutionalised European Partnerships. During 2019, the Horizon Unit cooperated with the Policy, Strategy and Internationalisation Unit and provided feedback on related Horizon Europe matters. Representatives of various Maltese entities have been appointed to represent Malta on several committees in relation to the European Partnerships and the subgroups of the Mission areas. Furthermore, the Horizon 2020 unit staff have been appointed to represent Malta as primary delegates for the Shadow Strategic Programme Committee, thematic clusters Shadow Programme Committees as well as Shadow Programme Committee members for the remaining areas of Horizon Europe. The Horizon 2020 unit staff members have also been appointed as alternative delegates for the subgroup mission areas.

## Malta's participation in Horizon 2020

By the end of 2019, 133 Grant Agreements have been signed with the participation of 179 Maltese entities. The amount of funding received by Maltese participants amount to €25.3 million.



2014	<b>€1,463,267</b>
2015	<b>€3,033,704</b>
2016	<b>€9,095,079</b>
2017	<b>€2,156,666</b>
2018	<b>€4,399,027</b>
2019	<b>€5,163,498</b>

There are currently 61 unique entities successfully participating in Horizon 2020. The most active beneficiary is the University of Malta which is participating in 46 projects and received around €8.8 million since the beginning of the programme.

The table below shows the funding received by Maltese beneficiaries since the beginning of Horizon 2020.

## COST

The European Cooperation in Science and Technology (COST), is the longest-running European framework supporting the creation of interdisciplinary research networks across Europe. It works mainly through what is called COST Actions. The Actions involve teams of researchers, industry, SMEs, NGOs, as well as other interested parties focused in a particular area and collaborating across borders and disciplines. COST in Malta is managed by the Malta Council for Science and Technology. Through MCST, Malta has been a member of COST since 1997 and is presently participating in 292 COST Actions i.e. 64% of all running actions. In 2019, 100 researchers based in Malta joined 67 new COST actions. 202 researchers took part in the networking activities organised by the various COST actions. 44 COST related meetings were organised in Malta in 2019 (including short term scientific missions, training schools and workshops). Key contributions included actions looking at Smart Habitat for the Elderly, European Network for Innovative Diagnosis and Treatment of Chronic Neutropenias, European transdisciplinary networking platform for marine biotechnology, Multidisciplinary innovation for social change, Perinatal Mental Health and Birth-Related Trauma: Maximising best practice and optimal outcomes, NECTARNetwork for Equilibria and Chemical Thermodynamics advanced research, Understanding and modeling compound climate and weather events, and Accelerating Global science In Tsunami Hazard and Risk analysis, among others.

## JRC

The Joint Research Centre (JRC) is the European Commission's science and knowledge service which employs scientists to carry out research in order to provide independent scientific advice and support to EU policy.

Scientific collaboration between JRC and Maltese partners focuses on prevention, preparedness and response to disasters, nuclear emergencies, radiological data and monitoring, and digital technology. Malta is in a collaboration agreement with JRC with regards to the European Radiological Data Exchange Platform (EURDEP). Malta also collaborates with the JRC in a number of institutional scientific networks such as the Air Quality Laboratories Association, the European Network of Cancer Registries, EU National Coordinators for testing Methods and the Infrastructure for Spatial Information in Europe.

## H2020 Events

Throughout 2019, the H2020 unit organised and participated in a number of information sessions and outreach activities. These activities are part of the Horizon 2020 unit's remit in promoting the Framework

Programme initiatives, and specific research areas and topics.

### **MSCA Individual Fellowship and Widening Info day at UoM, May 2019**

The Info Day was jointly organised with the Research Support Services Directorate (RSSD) of the University of Malta on 8th May at TAKEOFF. The event was attended by 25-30 participants and it provided information about the Individual Fellowship of the Marie Skłodowska Curie Actions (MSCA) call and the Twinning call of the Widening area. Researchers with successfully funded projects were invited to share their experiences. One-to-one sessions with researchers was organised after the event.

### **EIC Roadshow 2019, June 2019**

First introduced in 2018 under Horizon 2020, the European Union's programme for research and innovation, the EIC pilot provides funding, advice and networking opportunities for those at cutting edge of innovation. Building upon the previous iteration of the programme, the pilot introduced novelties in funding and support for innovations and innovators.

The 'European Innovation Council Roadshow' was held at the premises of MCST on the 14th of June 2019 and it included the participation of over 50 researchers, entrepreneurs and SMEs. European Commission representative Wolfgang Burtscher, Deputy Director-General, of DG introduced the novelties of the Enhanced EIC Pilot.

Two previous successful recipients of the EIC pilot, Mr. Mark Mallia from InboundMuse and Mr. Bernard Grima from Loqus Group discussed their experience in the programme during the panel session whilst Dr. James Foden and Ms. Ana-Maria Magri Pantea deliberated on the innovation landscape in Malta as well as provided guidelines for developing a successful EIC proposal. European Commission officials Mr. Frédérique Péron-Lühns and Ms. Natascha Lai further highlighted the EIC work programme as well as practical information on submission and evaluation of EIC proposals.

### **Horizon 2020 Info Day, July 2019**

The Horizon 2020 Info Day is a yearly activity which is organised by the Horizon Unit. The event is regularly well attended by newcomers and local stakeholders who are involved in different research and innovation actions or interested in learning how to participate in the programme.

This year, the event was held on the 2nd of July. In the morning, generic information on the programme such as participation eligibility, types of actions, research areas and support service offered by NCPs were presented. This was followed by a panel discussion between local stakeholders who are involved in an ongoing Horizon 2020 project and two Maltese evaluators who have carried out a number of evaluations for the Framework Programme. Other presentations included the Enterprise Europe

Network and information on the upcoming Framework Programme - Horizon Europe. In the afternoon, a set of parallel sessions on the more specific open and upcoming topics of the work programmes were delivered by the respective NCPs. During these sessions, the attendees had time to discuss and put questions to the NCPs. Finally, the event was followed with a networking breakout session for all the participants.

### **Legal and Financial Workshop, October 2019**

As part of the Legal and Financial (L&F) mentoring programme provided by NCP Academy (NCP network), a L&F NCP from Belgium together with our Maltese L&F NCP organized a workshop to make best use of the mentoring programme and its resources.

Two back-to-back activities were held on 28th and 29th of October 2019. The first day was dedicated to providing training to Maltese NCPs on L&F issues. This was aimed at addressing specific queries which the NCPs encounter in their day-to-day jobs.

The second day, was a full-day workshop for Maltese stakeholders, specifically for participants in ongoing projects and project administrators. The workshop covered in depth information for participation at proposal and project implementation stages. Moreover, participants were instructed on best practice, support structures, and key L&F issues for participating in Horizon 2020 collaborative calls. Furthermore, hands on exercise were organised and consisted of tangible local scenarios. The participants gained better insights into various issues encountered in H2020 projects.

### **Horizon Europe Implementation Workshop, November 2019**

'Stakeholders Workshop on Horizon Europe Implementation' was held on 13th November 2019 at Esplora Interactive Science Centre. The workshop



was been co-organised together with the European Commission as part of their activities on collecting feedback on the upcoming Framework Programme. Four guest speakers from DG Research and Innovation of the European Commission covered various related topics including an overview of the Horizon Europe programme, the new Model Grant Agreement, simplified

Forms of costs, proposal submission and evaluation, dissemination and exploitation, among others. The event was attended by 50 local stakeholders who had the opportunity to provide feedback, ask questions and interact with the Commission speakers.

**Other Events**

**Europe Day, May 2019**

The Horizon 2020 unit was invited to participate at the Europe Day activities in Valletta on 9th May. Horizon 2020 had a dedicated stand with three NCPs present. The stand was visited by several Members of Parliament as well as Minister Helena Dalli and Parliamentary Secretary for EU Funds, Aaron Farrugia.

**NCP Twinnings**

Throughout 2019, the National Contact Points participated in a number of networking activities with other NCP organisations from other countries to improve collaboration and cooperation.

**Marie Skłodowska Curie Actions (MSCA) NCP twinning**

On 3th and 4th July 2019, the Horizon 2020 Unit hosted a group of MSCA NCPs from 6 countries – Spain, Ireland, Turkey, Moldova, Czech Republic and Slovakia. The twinning was co-organised and financed by the Net4mobility+ project. The aim of the activity was to share and exchange information and experience on

various MSCA related topics such as National strategies on how to attract researchers and promote the country, approach to industry and other stakeholders, and the COFUND action. Local MSCA beneficiaries were invited to join some of the sessions to share their experiences with the group.

**Energy NCP Twinning**

On the 12th and 13th of September 2019, the Horizon 2020 Unit in collaboration with the C-Energy 2020 project hosted 20 Energy NCPs coming from



17 countries – Estonia, Turkey, Cyprus, United Kingdom, Bulgaria, Germany, Portugal, Faroe Islands, Poland, Slovakia, Ireland, Belgium, Israel, Italy, Tunisia, Croatia and Czech Republic.

The activities of the meeting revolved around best practices of the respective national strategies, exchange of views and information on several Energy related themes where discussed. Participants also had the opportunity to attend a technical visit at the premises of a local SME.

**Twinning between NCP Organisations from Malta, Cyprus, Croatia and Hungary**

Ensuring Malta's access to international research and innovation networks is crucial for maintaining our country's future competitiveness. Four NCP organisations from small Widening countries organised a twinning visit in Nicosia, Cyprus in December 2019. The aim of this twinning was to share experiences and best practices on how to best engage researchers into participating in Horizon 2020. Each delegation presented a review of their national approach, methods and tools for improving the country's participation through engaging discussions and sharing of methodology.



The twinning was hosted by the Research and Innovation Foundation in Cyprus. The next twinning will be hosted by the Malta Council for Science and Technology in Malta in 2020.



University of Bologna, Italy, with other partners from Italy, Tunisia, Lebanon and Greece.

- 3. LabMAF:** Developing a Labelling Scheme for Mediterranean Small-scale and Artisanal Fish Products, Coordinated by the Euro-Mediterranean University EMUNI, in Slovenia, with partners from Malta, United Kingdom, Spain, Italy, Portugal, Lebanon and France.
- 4. BlueBoatsMed:** Foresight on cruise and recreational boating, their potential for transition towards a blue economy in the Mediterranean and associated environmental challenges, Coordinated by Plan Bleu, France with partners from Italy, Croatia, Spain, Tunisia and France.

A kick-off web meeting was held on 10th January 2019 and was attended by the four selected Start-up Actions Coordinators, MCST and CNR. Between January and December 2019 progress was made by each Start Up Action with 9 meetings having taken place with good cross-sectoral participation and gender balance. Moreover, the meetings attracted a mix of stakeholder participation across the board.

On the 25th of January 2019, MCST organised the BLUEMED 2nd Project Coordinators' meeting titled *"Sustaining the Lessons Learned and Enhancing the Bluemed Initiative Synergies"*, at the Planetarium, Villa Bighi. The meeting brought together coordinators of projects working on Mediterranean Blue Growth related projects to share current work, best practices and transfer technical information on the implementation of Strategic Research and Innovation Agenda (SRIA).

Throughout the year, MCST also contributed to other tasks and activities such as updates of the BLUEMED SRIA, project events, inputs towards the Bluemed Implementation Plan, as well as dissemination activities. MCST also represents Malta at the meetings of the Group of Senior Officials Working Group, an overarching body tasked with the promotion and extension of the BLUEMED Initiative to non-EU countries where efforts are being made towards the Pilot on Healthy, Plastic-Free Mediterranean Sea.

## Projects

Through the H2020 Unit, MCST participates in a number of H2020 projects. The following projects were active in 2019:

**BLUEMED:** The BLUEMED CSA is a four-year project that was launched in October 2016 to support the BLUEMED Initiative. The project is coordinated by CNR in Italy and has eleven partners from nine different countries. Its main aim is to bolster blue growth in the Mediterranean by promoting the implementation of the BLUEMED Strategic Research and Innovation Agenda (SRIA).

In 2019, MCST, as Work Package 4 leader, has overseen the implementation of the Start-Up Actions on Blue Growth in the Mediterranean, funded by the project. The four selected Start-up Actions are:

- 1. SEALINES:** Mediterranean Safety Network, Coordinated by the Ministry of Economic Development and Bicocca University of Milan, Italy with other partners from Italy, Egypt, Greece, Tunisia, Italy, Croatia and Cyprus.
- 2. ECOMEDPORT:** Feasibility study of an ecosystem-oriented plant for sediments management in Mediterranean ports and marinas, Coordinated by the

**Enterprise Europe Network (EEN) – MELITA 3:** EEN is the largest support network for Small and Medium-sized Enterprises (SMEs) aimed at assisting businesses innovate and grow on an international scale. All partners assist and accompany client SMEs along the entire partnership process – from the identification of suitable partnering opportunities to focused advisory services, and to the actual participation in events. MCST, being the consortium member specialising in research and innovation programmes, provided assistance to a large number of SMEs with regard to financing opportunities for both start-up and scale up companies. Following the launch of the European Innovation Council initiative in mid-2019, MCST was especially active in promoting the introduction of equity finance to the SME Instrument under the EIC.



BLUEMED Start-up Actions

The project also focused on the organisation of an EEN Brokerage event within the AI and Blockchain Summit which took place in Malta, in May 2019. The event welcomed 80 international business participants

From 15 countries with over 160 B2B meetings being held. Furthermore, the consortium launched an online awareness campaign which was spread over nine months. It reached out to Malta based ambitious companies with the help digital marketing tools to outreach as best possible with target clients. An annual consortium meeting with senior representatives from the EEN consortium was organised in January 2020 to provide updates on the project's outcome in 2019, and the impact of the project's activities on the growth of local SMEs. The project MELIITA 3 ended in 2019. Its successor, MELIITA 4, will commence in 2020.

**EURAXESS Top IV Network Call:** The objective of EURAXESS Top IV project is to develop and offer new services built on the results of previous EURAXESS projects. The project is providing financial support to all has EURAXESS Bridge Head Organisations who have applied to the Network Call and are beneficiaries or linked third parties to the project. In January 2019, MCST has signed the funding agreement and has started benefiting from this call.

The Network Call will consolidate and strengthen the work of all EURAXESS members by ensuring that the level of existing services is consistent and high. The Research & Innovation landscape of Malta video has been produced with funds from the Network Call.

#### **EURAXESS Portal**

The Horizon 2020 Unit is in charge of the EURAXESS Malta portal.



EURAXESS is a unique pan-European initiative delivering information and support services to professional researchers. Backed by the European Union, Member States and Associated Countries, it supports researcher mobility and career development, while enhancing scientific collaboration between Europe and the world. It is key initiative in supporting the commitment of the European Union to remove the barriers of free movement of knowledge within Europe, to strengthen cross-border mobility of researchers, students, scientists and academic staff and to provide researchers with better career structures.

During 2019, the portal was updated with new content, including news, job offers, events, updated copyrights and disclaimer section. Furthermore, the home page now features a video that presents the research and innovation landscape of Malta. The video, along with other relevant information, have been published in an EURAXESS article that was disseminated worldwide, including China, Latin America and the Caribbean, North America, India, Korea, and others, aiming at promoting Malta as a research destination.

More than 6.8k users from around the world have visited EURAXESS Malta portal in 2019.



**ESPLORA**  
INTERACTIVE SCIENCE CENTRE



# ESPLORA

## ESPLORA INTERACTIVE SCIENCE CENTRE

**Our vision** is to cultivate a culture of scientific curiosity and creativity

**Our mission** is to ignite a passion for questioning, investigation & discovery

**Our core values** are to explore, think, imagine, create & appreciate

### Esplora's Remit

Esplora, Malta's Interactive Science Centre, is a non-formal educational and recreational facility appropriate for visitors of all age groups, from early years to adults and seniors. Esplora applied to be partly financed by ERDF back in 2011 and after years of restoration and regeneration, Esplora opened its doors to the general public on the 28th of October 2016. In the first two years of its operation and in a country having around 400000 inhabitants, Esplora managed to attract an average of 100,000+ visitors annually which include school kids, families, tourists, adults and the elderly. Esplora currently has approximately 70 paid staff members.

Esplora's mission statement is: 'Esplora aspires to cultivate a culture of scientific curiosity and creativity by igniting a passion for questioning, investigation and discovery through encouraging our staff and visitors to Explore, Think, Imagine'. The core values are aimed at inspiring visitors and staff to Explore, Think and Imagine while the strategic values focus on connecting with visitors and providing the general public with a place where they can realise the relevance of science in their lives. The iconic colour space 4K theatre Planetarium, projects full-dome films and presenter-led live shows about the Earth and the Moon, the planets and the whole solar system, adventures in space, and life here on Earth. Being a relative newcomer in the field of Science Communication and STEM Engagement, Esplora has been trying to build bridges, network and strengthen connections with other Science Centres, Museums and Organisations across the oceans all over the World. In Malta, now, more than ever, employers and employees are having to face the fact that specific industry skills are hard to find. In relation to the latter, the European Union's 2020 growth strategy plan is working to ensure that the labour supply is equipped with the right skills across a plethora of sectors. Esplora and the local scene focuses on STEM Engagement rather than Science Engagement. The Esplora Team believes that STEM is a better representation of what Esplora does which

when coupled with the Arts, would then give a holistic approach to public engagement.

Currently Malta holds one of the lowest unemployment rates in the EU which when coupled with the digitisation and related services such as A.I., Blockchain and Online Gaming, is transforming the social scene at a very fast pace. Change has become the only constant and employees, citizens and students need to develop a growth mindset and foster 21st century skills more than ever before. The STEM sector is, perhaps, one of the most challenging and dynamic sectors when it comes to the ever-changing skills-set required at the place of work. New technologies and new ways of working generate the expectation that workers must remain as up-to-date as possible. The latter is also crucial for personal growth and active citizenship. Science needs to be communicated properly and the public needs to be adequately engaged in it for Sustainable Research and Innovation.



Esplora (on behalf of the Malta Council for Science and Technology), the University of Malta and the Malta College of Arts Science & Technology have embarked on a tripartite national approach in relation to STEM

Engagement. In this regard, and in light of the above, Esplora would be turning to its STEM Working Group which involve representatives from MCAST, University of Malta, The Ministry for Education and Employment, The National Skills Council, Jobs Plus, The Institute for Education, Science in the City and Science in the Citadel Committees (Researchers' Night – EU funded Science Festivals) to offer a synergistic and holistic approach to STEM Engagement on a local, EU and International level.

## Esplora Key Achievements 2019

### General Public

By way of comparison, in 2018, Esplora Interactive Science Centre welcomed a total of 85,724 visitors. The majority of Esplora's visitors were local families and groups, who visited the science centre during their free time, primarily on the weekends and during the school holidays. In 2019 Esplora welcomed 96,481 visitors which shows an increase of 11.3% in visitor numbers when compared to 2018.

### School Visits

In an attempt to encourage more school group visits several actions were taken, namely:

1. Free access was given to all educators and their immediate family so they can freely experience what Esplora has to offer and plan accordingly
2. Free school transport to all State Schools in collaboration with MEDE
3. Discussions were initiated to create Pre-visit, Visit and Post-Visit resources to school educators and students in relation to Esplora's 4 Exhibition Galleries:
  - Gallery A – Motion and Optics
  - Gallery B – Human Body, Eco-Life and Electricity
  - Gallery C – Engineering, Music and Illusions
  - Gallery D – Universe and Life at Space Exhibition Galleries
4. It has also been agreed that as of 2020, the Esplora Prize in Science Communication will be introduced in all schools
5. A Quartely Teachers Newsletter will be issued and sent to all schools
6. An Esplora Official Educators' Facebook Group has been launched.

Due to the COVID-19 scenario it is estimated that all Visitor Groups will suffer a drastic reduction in numbers in 2020.

### Annual number of educational outputs

**The target number of 1,130 outputs (Science Shows and workshops) was far exceeded, with the delivery of a total of 1,985 outputs (Science Shows, workshops and planetarium shows, including four outreach activities in Gozo).**

To further attract visitors to the planetarium experience, the Planetarium Experience Team at Esplora has been going through some restructuring with the intention to have a Manager overseeing the coordination of the Planetarium planning and tasks. Esplora Science Communicators were trained in the delivery of live,

Planetarium shows, Science Shows and Workshops adding to the repertoire of the available content. This training was held through the support of various Erasmus+ job shadowing and training experiences, namely in Naples Science Centre, Glasgow Science Centre, Finland Science Centre and in Czech Republic. Further training opportunities are planned for 2020, conditions permitting.

### Thematic Science Communication Events

Esplora worked intently to increase the involvement of experts and collaborations with major STEAM players in its Education Programme and Calendar of Events, namely Kuluri Karnival, Family Science Days around Easter and in August, Seniors Week, Halloween at Esplora, Christmas at Esplora, EU Code Week at Esplora, Nickolodeon Treasure Hunt event, Superheroes meets StarWars in Science, 50th Anniversary of the Moon Landing Event, DaVinci at Esplora as well as various Family Digital Science Quests, a Planetarium Evening, National STEM Engagement Conference, R&I Dissemination Events and Autism Friendly Hours sessions. This resulted in the commitment of various entities contributing to events for STEM stakeholders and various temporary exhibitions involving industry/academia showcases, bringing visitors closer to the application of STEM, primarily through the Family Science Days initiatives. Several Outreach activities in Mater Dei, Schools and in Local Councils were also held.

### Audience Development

#### Esplora Visitor Feedback in Figures

- 100% of visitors would recommend Esplora to family or friends\*
- over 48% of visitors surveyed had visited 2 – 5 times in the last year\*
- over 27% of visitors surveyed rarely visit museums\*
- 31% of visitors learnt about Esplora by word of mouth, 26% via Facebook\*

By the end of 2019, Esplora's Facebook page had reached 20,356 followers, majority being women aged 35-44

#### Esplora General Public Visitors Categories and visitor distribution

Esplora's 2019 visitors can be classified in the below categories, as per the theory identified in Identity and the Museum Visitor Experience Book by John H. Falk\*:

- *Explorers*—motivated by personal curiosity (i.e. browsers) – 18%
- *Facilitators*—motivated by other people and their needs (i.e. a parent bringing a child) – 73%
- *Experience-Seekers*—motivated by the desire to see and experience a place (i.e. tourists) – 5%
- *Professional/Hobbyists*—motivated by specific knowledge-related goals (i.e. a scholar researching a specific topic) – 3%
- *Rechargers*—motivated by a desire for a contemplative or restorative experience – 1%

\* Results from Audience Development Surveys (2019) – 10% sample of overall visitors.

## Esplora Non-Visitor Feedback in Figures

Esplora commissioned an external company (Misco) to hold a telephone survey among 400 random non-visitor Maltese residents. In 2014, such a report had already been commissioned. The below are the highlights.

Respondents have expressed a higher level of interest in science than in 2014. Age and level of education are likely to contribute level of interest. Lack of interest is likely to be caused either by a perception that science is difficult to understand and learn or by a lack of exposure to the subject, especially during one's schooling years. This higher level of interest is then reflected in other results obtained in this survey.

The areas which seem to generate most interest in science are health issues and the novelty element generated by scientific discoveries. There has been a slight improvement since the 2014 survey in the level of information persons feel they have about science. There was also an improvement in perceptions about science even if some more convincing still needs to be done in this area.

More persons search or have searched for organisations about science and technology, highlighting the increased level of interest in the subject. Internet is evidently gaining in importance as a source of information related to science and technology and more so Facebook.

The results indicate an increased desire to know more about the subject, but it is still a subject that persons may find difficult to understand.

Participation in activities related to science and technology has increased. The results indicate two important factors. First, there is scope for further expansion of the Esplora visitor base. Second, there is scope for the organization of more activities appealing to the general public.

There is an increased level of trust for persons perceived as experts in the field of science and technology.

Most respondents feel that they have little to no influence on legislation about scientific issues that affect them. However they also believe that they should have such influence, thereby creating a mismatch between expectations and perceptions.

Most respondents also believe that government funding for science research should increase.

## Projects and Initiatives 2019

In addition to the Education Programme and Calendar of Events, Esplora endeavours to enrich its offer by accessing funds and collaborating with other entities to co-develop, produce and/or deliver content and also provide professional development opportunities for staff.



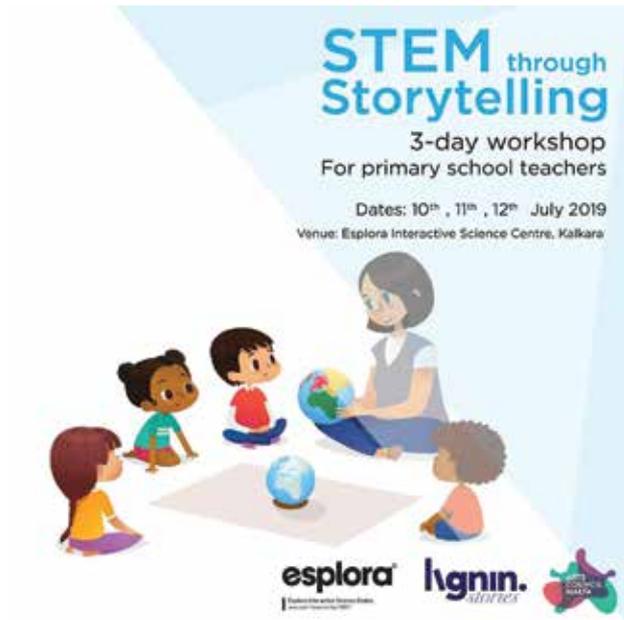
### Staff Capacity Building: Up-Skilling in Science Communication

This is a Key Action 1: VET Staff Mobility project financed by Erasmus+ funds with a grant of Euro 31,520. The project started in August 2018 and will run for twelve months. It is a collaboration between MCST and Glasgow Science Centre in Scotland and Heureka, the Finnish Science Centre. Sixteen different Esplora staff members, from different sections had the opportunity to attend job-shadowing experiences; two opportunities in Finland and one in Glasgow.

### Staff Capacity Building: Continuing Professional Development in STEM Adult Education through Cross-Border Cooperation and 21st Century Skills

This project is aimed at embracing and internationalising Esplora's mission – that of increasing the positive perception and attitudes towards Science and Technology among the general population. It is strategically designed to respond to clearly identified staff development needs through appropriate selection, preparation, and follow-up measures; and ensures that the learning outcomes of participating staff are properly recognised, disseminated and widely used within the organisation.

## Teaching STEM through Storytelling Teacher Training



## Superheroes in Science Teacher Training Seminar



## Esplora launched its Education Programme 2019 – 2020 with teachers



## The Theatre in Education on Cyber Security and Safety Event

The Malta Information Technology Agency (MITA) under the direction of the National Cyber Security Strategy Steering Committee within the remit of the Parliamentary Secretariat for Financial Services, Digital Economy and Innovation, in collaboration with the Malta Communications Authority (MCA), Esplora, the Directorate for Digital Literacy & Transversal Skills and The Drama Unit within the Ministry of Education and Employment, have jointly organised in early 2019, a 'Theatre in Education' event on the theme of Cyber Security and Safety for Year 4 students. Cyber Security and Safety plays a vital role in today's digital world. The importance of related awareness and education is crucial even from an early age. This is more so, following the introduction of the One Tablet per Child Project.

The event consisted of a full day of activities at Esplora where students got a chance to participate in an interactive drama session addressing cyber security and safety topics and in other related illustration opportunity whilst having the opportunity to visit Esplora itself.

This event was attended by 3,000 students in total, from both State and non-State schools, as follows:

**Event Date:** From Tuesday 29th January 2019 to Thursday 21st February (excluding Mondays)

**Time:** 9:00am – 12:30pm

**Number of students per day:** 200

**Requirement:** Each Student was expected to bring along the school tablet

**Fee:** Free for both state and non-state students.



# ESPLORANATURA



Appreciation for Malta's unique natural heritage, and the need to preserve it, is steadily growing. For this reason, the Malta Council for Science and Technology is embarking on an ambitious project for the development of a new Natural History Discovery Centre, EsploraNaturata, which is intended to be situated in an existing building adjacent to MCST and Esplora. It is MCST's intention that EsploraNaturata becomes the new home of the natural history collection currently housed at the Malta Museum of Natural History in Vilhena Palace, I-Imdina. EsploraNaturata will have the character of a museum which collects, conserves, and displays artefacts, albeit doing so in a manner which befits modern forms of interpretation and display. The aim is to develop a world class visitor attraction focusing on the presentation and interpretation of natural history and of further developing the cultural hub for science engagement that the Villa Bighi site has become.

A number of drivers have been identified for the development of EsploraNaturata, including the national drive to encourage a greater take up of STEM (science, technology, engineering and mathematics) subjects by Maltese students, and to develop Malta's knowledge-based economy. Apart from this, EsploraNaturata will complement Esplora in that

it will address particular STEM subjects, such as the biological sciences.

The main objectives of the project are to display a vast collection of natural history artifacts in a suitable environment and location in a broad, engaging, and contemporary manner, thus enhancing the visitor experience. The project will further entail the expansion of Esplora's overall activity and brand by broadening the content to include natural history, to expand the range of audiences that Esplora reaches out to, to continue building a cultural hub in Kalkara that supports learning and contributes to the regeneration of the area and to make the Villa Bighi site one of the primary destinations in Malta by offering a variety of different experiences. The project will further entail the restoration of historical buildings, which already has a cultural value in itself, as well as recreational and touristic impacts.

The cost of this EsploraNaturata project has been estimated to exceed €40 million and it is MCST's intention to seek EU funding. EsploraNaturata will be expected to attract circa 120,000 visitors per year.

In order to launch the project, an EsploraNaturata Director was engaged in the latter part of 2019. Work on the formulation of the terms of reference, for the issuing of calls for tenders for Topographical Surveys and for Geological Surveys of the site intended for the location, progressed at a steady pace.



# PARTNERS





**ANNUAL REPORT**  
AND  
**AUDITED FINANCIAL STATEMENTS**  
FOR THE YEAR ENDED 31 DECEMBER 2019

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## **General information**

### **Registration**

Malta Council for Science and Technology was set up by the Prime Minister on behalf of the Government of Malta as a Public Foundation. This Foundation was set up and is governed by the rules set out in the Charter of the Foundation.

### **Council**

Chairman: Dr. Jeffrey Pullicino Orlando

Except for the Chairman, all Council Members resigned prior to the General Election held on 3 June 2017. The Board has not been reconstituted until the date of the audit report.

### **Registered office**

Malta Council for Science and Technology  
"Villa Bighi"  
Kalkara  
Malta

### **Auditors**

Busuttil & Micallef  
Nr. 11, "L-Ufficcji"  
Misrah 28 ta' Frar 1883  
Birkirkara BKR 1501  
Malta

## Chairman's Report

The Chairman presents his report and the audited financial statements of the Malta Council for Science and Technology for the year ended 31 December 2019.

### Principal Activities

The Malta Council for Science and Technology (hereafter referred to as the Foundation), is responsible for the development of science and technology in Malta.

### Performance review

The level of business and the Foundation's financial position are in line with expectations, and the Council expects that the present level of activity will improve in the foreseeable future.

### Auditors

Busuttil & Micallef have intimated their willingness to continue in office. A proposal to reappoint Busuttil & Micallef as auditors of the Foundation will be put to the forthcoming Council meeting at which these financial statements are approved and authorised for issue.

### By order of the Council



Dr. Jeffrey Pullicino Orlando  
Chairman

Malta Council for Science and Technology  
"Villa Bighi"  
Kalkara  
Malta

16 July 2020

## **Chairman's Responsibilities**

The Council is required by the Charter Document of the Foundation to prepare financial statements for each financial period which give a true and fair view of the state of the affairs of the Foundation and of the surplus or deficit of the Foundation for that period. In preparing these, the Council Members are required to:

- adopt the going concern basis unless it is inappropriate to presume that the Foundation will continue in the business;
- select suitable accounting policies and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- account for income and charges relating to the accounting period on the accruals basis;
- value separately the components of asset and liability items; and
- report comparative figures corresponding to those of the preceding accounting period.

The Council Members are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Foundation and to enable them to ensure that the financial statements comply with the Charter Document of the Foundation. They are also responsible for safeguarding the assets of the Foundation and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

## **Independent Auditor's Report**

To the Council Members of the Foundation

### **Report on the Audit of the Financial Statements**

#### **Opinion**

We have audited the financial statements of the Foundation, set out on pages 7 to 23, which comprise the balance sheet as at 31 December 2019, and the income statement, statement of changes in equity and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the balance sheet of the Foundation as at 31 December 2019, and of its financial performance and its cash flows for the year then ended in accordance with the Accountancy Profession (General Accounting Principles for Small and Medium-sized Entities) Regulations, 2015 and the Schedule accompanying and forming an integral part of those Regulations (GAPSME).

#### **Basis for Opinion**

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Foundation in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) together with the ethical requirements that are relevant to our audit of the financial statements in accordance with the Accountancy Profession (Code of Ethics for Warrant Holders) Directive issued in terms of the Accountancy Profession Act (Cap. 281) in Malta, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### **Other Information**

The Council Members are responsible for the other information. The other information comprises the Chairman's report. Our opinion on the financial statements does not cover this information. In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. Based on the work we have performed, in our opinion:

- the information given in the Chairman's report for the financial year for which the financial statements are prepared is consistent with the financial statements.

In addition, in light of the knowledge and understanding of the Foundation and its environment obtained in the course of the audit, we are required to report if we have identified material misstatements in the Chairman's report. We have nothing to report in this regard.

## **Independent Auditor's Report - continued**

### **Responsibilities of the Council**

The Council is responsible for the preparation of the financial statements that give a true and fair view in accordance with GAPSME, and for such internal control as the Council is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Council is responsible for assessing the Foundation ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Council either intends to liquidate the Foundation or to cease operations, or has no realistic alternative but to do so.

### **Auditor's Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Council.
- Conclude on the appropriateness of the Council's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Foundation to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

## Independent Auditor's Report - continued

### Auditor's Responsibilities for the Audit of the Financial Statements - continued

We communicate with the Council regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.



David Busuttil  
Partner

For and on behalf of  
**Busuttil & Micallef**  
**Certified Public Accountants**

Nr. 11, "L-Ufficcj"  
Misrah 28 ta' Frar 1883  
Birkirkara  
BKR1501  
Malta

16 July 2020

## Income Statement

	Notes	Year ended 31 December	
		2019 €	2018 €
Revenue – Projects	3	<b>2,971,232</b>	2,763,792
Revenue – Operational subventions	3	<b>4,096,998</b>	3,840,000
Revenue – Esplora Interactive Science Centre	3	<b>274,917</b>	326,716
Direct expenditure - projects		<b>(2,911,231)</b>	(2,703,794)
<b>Gross surplus</b>		<b>4,431,916</b>	4,226,714
Other income	4	<b>1,622,080</b>	1,519,108
Administrative expenses		<b>(6,444,132)</b>	(5,609,630)
<b>Operating (deficit)/surplus</b>		<b>(390,136)</b>	136,192
Investment income	5	<b>1,325</b>	1,268
<b>(Deficit)/surplus for the year</b>		<b>(388,811)</b>	137,460

## Balance Sheet

	Notes	As at 31 December	
		2019 €	2018 €
<b>ASSETS</b>			
<b>Non-current assets</b>			
Intangible assets	8	669,929	747,491
Property, plant and equipment	9	16,926,576	17,125,633
Investment in subsidiary	10	1,500	1,500
		<b>17,598,005</b>	<b>17,874,624</b>
<b>Current assets</b>			
Trade and other receivables	11	838,838	638,503
Cash and cash equivalents	12	6,850,846	4,808,501
		<b>7,689,684</b>	<b>5,447,004</b>
<b>Total assets</b>		<b>25,287,689</b>	<b>23,321,628</b>
<b>EQUITY AND LIABILITIES</b>			
<b>Equity</b>			
Accumulated losses	13	(541,832)	(153,021)
<b>LIABILITIES</b>			
<b>Non-current liabilities</b>			
Trade and other payables	14	20,726,004	19,935,154
<b>Current liabilities</b>			
Trade and other payables	14	5,103,517	3,539,495
		<b>25,829,521</b>	<b>23,474,649</b>
<b>Total equity and liabilities</b>		<b>25,287,689</b>	<b>23,321,628</b>

The financial statements set out on pages 7 to 23 were approved, authorised for issue and signed by the Council on 16 July 2020.



Dr. Jeffrey Pullicino Orlando  
Chairman

## Statement of Changes in Equity

	<b>Accumulated losses €</b>	<b>Total €</b>
<b>At 1 January 2018</b>	(290,481)	(290,481)
Surplus for the year	137,460	137,460
<b>At 31 December 2018</b>	<b>(153,021)</b>	<b>(153,021)</b>
<b>At 1 January 2019</b>	(153,021)	(153,021)
Deficit for the year	(388,811)	(388,811)
<b>At 31 December 2019</b>	<b>(541,832)</b>	<b>(541,832)</b>

## Cash Flow Statement

		Year ended 31 December	
	Note	2019 €	2018 €
<b>Cash flows from operating activities</b>			
Operating (deficit)/surplus		(390,136)	136,192
Adjustment for:			
Depreciation and amortisation charge		1,510,926	1,407,707
		1,120,790	1,543,899
Change in trade and other receivables		(133,417)	9,889
Change in trade and other payables		1,564,022	826,579
Cash generated from operations		2,551,395	2,380,367
Investment income		1,325	1,268
<b>Net cash generated from operating activities</b>		<b>2,552,720</b>	<b>2,381,635</b>
<b>Cash flows used in investing activities</b>			
Acquisition of property, plant and equipment		(1,234,307)	(656,665)
Acquisition of intangible assets		-	(171,630)
Advances to subsidiary		(66,918)	(127,842)
<b>Net cash used in investing activities</b>		<b>(1,301,225)</b>	<b>(956,137)</b>
<b>Cash flows generated from financing activities</b>			
Contribution from government grants		790,850	128,334
<b>Net increase in cash and cash equivalents</b>		<b>2,042,345</b>	<b>1,553,832</b>
Cash and cash equivalents at beginning of year		4,808,501	3,254,669
<b>Cash and cash equivalents at end of year</b>	12	<b>6,850,846</b>	<b>4,808,501</b>

## Notes to the Financial Statements

### 1 Basis of preparation

#### 1.1 Basis of measurement and statement of compliance

The financial statements of the Foundation have been prepared in accordance with the Accountancy Profession (General Accounting Principles for Small and Medium-Sized Entities) Regulations, 2015 and the Schedule accompanying and forming an integral part of those Regulations (“GAPSME”). The financial statements have been prepared on the historical cost basis.

#### 1.2 Functional and presentation currency

The financial statements are presented in Euro, which is the Foundation’s functional currency.

### 2 Significant accounting policies

#### 2.1 Property, plant and equipment

##### *Recognition and measurement*

The cost of an item of property, plant and equipment is recognised as an asset when it is probable that the future economic benefits that are associated with the asset will flow to the entity and the cost can be measured reliably. Property, plant and equipment are initially measured at cost comprising the purchase price, any costs directly attributable to bringing the assets to a working condition for their intended use, and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. Subsequent expenditure is capitalised as part of the cost of property, plant and equipment only if it enhances the economic benefits of an asset in excess of the previously assessed standard of performance, or it replaces or restores a component that has been separately depreciated over its useful life.

After initial recognition, property, plant and equipment are carried under the cost model, that is at cost less any accumulated depreciation and any accumulated impairment losses.

## 2 Significant accounting policies - continued

### 2.1 Property, plant and equipment - continued

#### *Depreciation*

Depreciation is calculated to write down the carrying amount of the asset on a systematic basis over its expected useful life. Depreciation of an asset begins when it is available for use and ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) or the date that the asset is derecognised. The depreciation charge for each period is recognised in profit or loss.

The rates of depreciation used for other items of property, plant and equipment are the following:

▪ Improvements to buildings	-	10%
▪ National interactive science centre	-	2 to 33.33%
▪ Office equipment	-	10%
▪ Soft furnishings	-	10%
▪ Technical equipment	-	20%
▪ Furniture, fixtures and fittings	-	10%
▪ Motor vehicles	-	20%
▪ Computer hardware and software	-	33.33%

#### *Depreciation method, useful life and residual value*

The depreciation method applied, the residual value and the useful life are reviewed on a regular basis and when necessary, revised with the effect of any changes in estimate being accounted for prospectively.

#### *Derecognition of property, plant and equipment*

Property, plant and equipment are derecognised on disposal or when no future economic benefits are expected from their use or disposal. Gains and losses arising from derecognition represent the difference between the net proceeds (if any) and the carrying amount and are included in profit or loss in the period of derecognition.

### 2.2 Intangible assets

#### *Internally generated intangible assets – research and development costs*

An internally-generated intangible asset, arising from the company's development of Explora Interactive Science Centre, is recognised only if all of the following can be demonstrated by the Foundation:

- The technical feasibility, the availability of resources and the intention and ability of completing the asset so that it will be available for use or sale;
- How the asset will generate probable future economic benefits; and
- The ability to measure reliably the expenditure attributable to the asset during its development.

## **2 Significant accounting policies - continued**

### **2.2 Intangible assets – continued**

Internally generated intangible assets are initially measured at cost, being the sum of the expenditure incurred from the date when the recognition criteria are met.

After initial recognition, internally-generated intangible assets are carried at cost less any accumulated amortisation and impairment losses. When the intangible asset becomes available for use, it is amortised on a straight-line basis over its estimated useful life which is assumed to be 10 years.

#### *Amortisation method, useful life and residual value*

The amortisation method applied, the residual value and the useful life are reviewed on a regular basis and when necessary, revised with the effect of any changes in estimate being accounted for prospectively.

#### *Derecognition of intangible assets*

Intangible assets are derecognised on disposal or when no future economic benefits are expected from their use or disposal. Gains and losses arising from derecognition represent the difference between the net proceeds (if any) and the carrying amount and are included in profit or loss in the period of derecognition.

### **2.3 Investment in subsidiary**

A subsidiary is an entity which is controlled by the Foundation. Control is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.

An investment in a subsidiary is initially measured at cost. After initial recognition, the investment in subsidiary is measured using the cost method.

Under the cost method, the investment is measured at cost less any accumulated impairment losses. Distributions received from the subsidiary are recognised as investment income in profit or loss when the Foundation's right to receive the dividend is established.

### **2.4 Financial assets, financial liabilities and equity**

A financial asset or a financial liability is recognised on the Foundation's balance sheet when the Foundation becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially recognised at their fair value plus in the case of financial assets and financial liabilities not classified as held for trading and subsequently measured at fair value, transaction costs attributable to the acquisition or issue of the financial assets and financial liabilities.

## **2 Significant accounting policies - continued**

### **2.4 Financial assets, financial liabilities and equity – continued**

Financial assets and financial liabilities are derecognised if and to the extent that, it is no longer probable that any future economic benefits associated with the item will flow to or from the entity.

An equity instrument is any contract that evidences a residual interest in the assets of the Foundation after deducting all of its liabilities. Equity instruments are recorded at the proceeds received, net of direct issue costs.

A financial instrument, or its component parts, is classified as a financial liability, financial asset or an equity instrument in accordance with the substance of the contractual arrangement rather than its legal form.

#### *Trade and other receivables*

Trade and other receivables are carried at cost less any impairment losses (refer to accounting policy 2.5).

#### *Trade and other payables*

Trade and other payables are stated at their nominal value.

### **2.5 Impairment**

The Foundation's property, plant and equipment, intangible assets, investment in subsidiary and financial assets are tested for impairment.

#### *i. Property, plant and equipment, intangible asset and investment in subsidiary*

The carrying amounts of the Foundation property, plant and equipment, intangible assets and investment in subsidiaries are reviewed at each balance sheet date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use.

Whenever the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recognised and the carrying amount of the asset is reduced to its recoverable amount. Impairment losses are recognised immediately in profit or loss, unless they relate to an asset which is carried at revalued amount, in which case they are treated as a revaluation decrease to the extent that the impairment loss does not exceed the amount in the revaluation surplus for that asset.

## **2 Significant accounting policies - continued**

### **2.5 Impairment - continued**

The carrying amounts of the Foundation assets are also reviewed at each balance sheet date to determine whether there is any indication that an impairment loss recognised in prior periods may no longer exist or may have decreased. If any such indication exists, the asset's recoverable amount is estimated. An impairment loss previously recognised is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. When an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, to the extent that it does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. Impairment reversals are recognised immediately in profit or loss, unless they relate to an asset which is carried at revalued amount, in which case they are treated as a revaluation increase unless an impairment loss on the same asset was previously recognised in profit or loss.

#### *ii Financial assets*

A financial asset or a group of financial assets is impaired and impairment losses are incurred if, and only if, there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

If there is objective evidence that an impairment loss on financial assets carried at amortised cost or cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The amount of the loss is recognised in profit or loss. If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed. The reversal does not result in a carrying amount of the financial asset that exceeds what the amortised cost/cost would have been had the impairment not been recognised at the date the impairment is reversed. The amount of the reversal is recognised in profit or loss.

### **2.6 Cash and cash equivalents**

Cash comprises cash on hand and demand deposits. Cash equivalents are short-term investments that are held to meet short-term cash commitments rather than for investment or other purposes.

## 2 Significant accounting policies - continued

### 2.7 Income

#### *Project income*

Project income is recognised when there is reasonable assurance that all the conditions attaching to it are complied with and the grants will be received. Any grants relating to future periods are recognised as deferred income. Project income is recognised in income and expenditure so as to match it with the cost towards which it is intended to contribute.

#### *Government grants*

Government grants are recognised when there is reasonable assurance that all the conditions attaching to them are complied with and the grant will be received. Any grants relating to future periods are recognised as deferred income. Government grants are recognised in income and expenditure so as to match them with the cost towards which they are intended to contribute. Such grants are presented in Other Income in the income and expenditure account.

#### *Interest income*

Interest income is recognised when the inflow of economic benefits associated with the transaction is probable and the amount of income can be measured reliably. Interest income is accrued on a time proportion basis.

#### *Rental income*

Rental income is recognised when the inflow of economic benefits associated with the transaction is probable and the amount of income can be measured reliably. Rental income is recognised in profit or loss on a straight-line basis over the lease term.

### 2.8 Employee benefits

The Foundation contributes towards the state pension in accordance with local legislation. The only obligation of the Foundation is to make the required contributions. Costs are expensed in the period in which they are incurred.

## 3 Revenue

Revenue is analysed as follows:

	2019 €	2018 €
Project income	2,971,232	2,763,792
Operational subventions	4,096,998	3,840,000
Esplora Interactive Science Centre income	274,917	326,716
	7,343,147	6,930,508

**4 Other income**

	2019 €	2018 €
Grant income	1,276,922	1,232,319
Other income	111,810	59,868
Agency income	130,348	75,921
Management fees	103,000	151,000
	<u>1,622,080</u>	<u>1,519,108</u>

**5 Investment income**

Investment income is analysed as follows:

	2019 €	2018 €
Interest income on cash and cash equivalents	<u>1,325</u>	<u>1,268</u>

**6 Operating deficit**

6.1 Operating deficit is stated after charging the following:

	2019 €	2018 €
Depreciation and amortisation expenses	<u>1,510,926</u>	<u>1,407,707</u>

6.2 Total remuneration paid to the Foundation's auditors during the year amounts to:

	2019 €	2018 €
Audit fees	<u>3,500</u>	<u>3,500</u>

**6 Operating deficit – continued**

6.3 Staff costs incurred during the year are analysed as follows:

	<b>2019</b>	2018
	€	€
Wages and salaries	<b>3,199,668</b>	2,723,692
Social security costs	<b>223,932</b>	208,795
Council Members' emoluments	<b>200</b>	-
	<u><b>3,423,800</b></u>	<u>2,932,487</u>

6.4 The average number of persons employed by the Foundation during the year were as follows:

	<b>2019</b>	2018
	No.	No.
Management and administration	<b>154</b>	147

**7 Income taxes**

No provision for Malta income tax has been made in these financial statements as the Foundation is exempt from Malta income tax.

**8 Intangible assets**

	<b>Esplora natura</b>	<b>Pre-trading expenses</b>	<b>Total</b>
	€	€	€
<b>1 January 2019</b>			
Cost	171,630	775,617	947,247
Accumulated amortisation	-	(199,756)	(199,756)
<b>Net book amount</b>	<b>171,630</b>	<b>575,861</b>	<b>747,491</b>
<b>Movement for the year ended 31 December 2019</b>			
Opening net book amount	171,630	575,861	747,491
Amortisation charge	-	(77,562)	(77,562)
<b>Closing net book amount</b>	<b>171,630</b>	<b>498,229</b>	<b>669,929</b>
<b>At 31 December 2019</b>			
Cost	171,630	775,617	947,247
Accumulated amortisation	-	(277,318)	(277,318)
<b>Net book amount</b>	<b>171,630</b>	<b>498,229</b>	<b>669,929</b>

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**9 Property, plant and equipment**

	Improvement to buildings	National Interactive Science Centre	Office equipment	Soft Furnishings	Technical equipment	Furniture, fixtures and fittings	Motor vehicles	Computer hardware and software	Total
	€	€	€	€	€	€	€	€	€
<b>1 January 2019</b>									
Cost	358,901	19,522,857	53,267	34,399	87,561	301,062	8,852	451,860	20,818,759
Accumulated depreciation	(298,033)	(2,614,685)	(48,659)	(22,449)	(87,561)	(221,631)	(8,852)	(391,256)	(3,693,126)
<b>Net book amount</b>	<b>60,868</b>	<b>16,908,172</b>	<b>4,608</b>	<b>11,950</b>	<b>-</b>	<b>79,431</b>	<b>-</b>	<b>60,604</b>	<b>17,125,633</b>
<b>Movement for the year ended 31 December 2019</b>									
Opening net book amount	60,868	16,908,172	4,608	11,950	-	79,431	-	60,604	17,125,633
Additions	86,215	905,031	815	3,429	-	31,591	-	207,226	1,234,307
Depreciation charge	(17,523)	(1,276,923)	(707)	(1,914)	-	(21,483)	-	(114,814)	(1,433,364)
<b>Closing net book amount</b>	<b>129,560</b>	<b>16,536,280</b>	<b>4,716</b>	<b>13,465</b>	<b>-</b>	<b>89,539</b>	<b>-</b>	<b>153,016</b>	<b>16,926,576</b>
<b>At 31 December 2019</b>									
Cost	445,116	20,427,888	54,082	37,828	87,561	332,653	8,852	659,086	22,053,066
Accumulated depreciation	(315,556)	(3,891,608)	(49,366)	(24,363)	(87,561)	(243,114)	(8,852)	(506,070)	(5,126,490)
<b>Net book amount</b>	<b>129,560</b>	<b>16,536,280</b>	<b>4,716</b>	<b>13,465</b>	<b>-</b>	<b>89,539</b>	<b>-</b>	<b>153,016</b>	<b>16,926,576</b>

**10 Investment in subsidiary**

	<b>2019</b>	2018
	€	€
<b>Movements for the year ended 31 December</b>		
Closing net book amount	<b>1,500</b>	1,500
<b>At 31 December</b>		
Cost/Net book amount	<b>1,500</b>	1,500

<b>Name of company</b>	<b>Registered office</b>	<b>2019</b>	2018
		%	%
Engage Science Limited	MCST, Villa Bighi Marina Street Kalkara	<b>100</b>	100

**11 Trade and other receivables**

	<b>2019</b>	2018
	€	€
Trade receivables	<b>33,118</b>	46,712
Prepayments	<b>34,395</b>	22,871
Accrued income	<b>183,763</b>	126,996
Indirect taxation	<b>347,345</b>	268,894
Amount due from subsidiary (Note)	<b>239,948</b>	173,030
Other receivables	<b>269</b>	-
	<b>838,838</b>	638,503

Note:

Amount due from subsidiary is unsecured, interest free and repayable on demand.

## 12 Cash and cash equivalents

Cash and cash equivalents included in the cash flow statement comprise the following balance sheet amounts:

	2019 €	2018 €
Cash at bank and in hand	<u>6,850,846</u>	<u>4,808,501</u>

## 13 Accumulated losses

Accumulated losses represent accumulated surpluses and deficits.

## 14 Trade and other payables

### 14.1 Non-current liabilities

	2019 €	2018 €
Government grants	<u>20,726,004</u>	<u>19,935,154</u>

In accordance with the Foundation's accounting policies relating to grants received for the purchase of tangible non-current assets, grants are included with non-current liabilities and are credited to the income statement when the asset is available for use, on a straight-line basis over the expected useful lives of the related costs. The balance at end of year refers to grants granted by the Government of Malta to the Foundation for the design and construction of the Esplora Interactive Science Centre.

### 14.2 Current liabilities

	2019 €	2018 €
Trade payables	156,514	164,356
Accruals	2,450,539	1,194,817
Deferred income	2,473,281	2,133,544
Other payables	23,183	46,778
	<u>5,103,517</u>	<u>3,539,495</u>

## 15 Contingent liabilities

At 31 December 2019, bank guarantees amounting to €5,370 (2018: €5,370) were given by the Foundation during the normal course of operational activity in favour of third parties over which no loss is expected to arise.

Third parties have initiated legal proceedings against the Foundation, claiming that the Esplora Interactive Science Centre contract be awarded to them. The Foundation has requested a retrial which is currently being heard. The Foundation's lawyers are unable to quantify any potential contingency arising from the said case due to the nature of the claims.

## 16 Related party transactions

The Malta Council for Science and Technology is a public Foundation funded by the Government of Malta. Transactions with the Government of Malta during the year arose as shown hereunder:

	2019 €	2018 €
Revenue	2,971,232	2,763,792
Projects operational subvention	4,096,998	3,840,000
	7,068,230	6,603,792

Salaries payable to the Council Members have been disclosed separately in Note 6.

	2019 €	2018 €
<b>Amounts due from subsidiary</b>		
Opening balance	173,030	45,189
Movements for the year	66,918	127,841
	239,948	173,030

## 17 Statutory information

The Malta Council for Science and Technology acting for and on behalf of the Foundation for Science and Technology is established by a public deed as a Foundation by the Government of Malta.

## 18 Comparative information

Certain comparative information has been reclassified to conform with the current year's disclosure for the purpose of fairer presentation.

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### Project income

	2019 €	2018 €
FP programmes	75,965	56,567
RTDI programmes	1,637,497	1,715,273
ENIAC programmes	-	63,261
Other programmes	1,257,770	928,691
<b>Total project income</b>	<b>2,971,232</b>	<b>2,763,792</b>

### Project expenses

	2019 €	2019 €
FP programmes	151,355	137,094
RTDI programmes	1,637,497	1,715,273
ENIAC programmes	-	63,261
Other programmes	1,122,379	788,166
<b>Total project expenses</b>	<b>2,911,231</b>	<b>2,703,794</b>

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### Administrative expenses

	2019	2018
	€	€
Advertising and promotions	175,417	119,734
Amortisation charge	77,562	86,180
Audit fees	3,500	3,500
Bank charges	12,987	13,894
Catering events and hospitality	67,299	92,561
Cleaning	177,353	132,987
Computer and IT expenses	52,741	33,120
Depreciation	1,433,364	1,321,527
Equipment hire	6,314	10,532
General expenses	67,005	51,325
Insurance	30,436	33,015
Internationalisation	60,000	60,000
Legal and professional fees	131,538	152,649
Motor car expenses	11,219	11,711
Printing, postage and stationery	37,861	39,303
Provision for bad debts	-	117
Repairs and maintenance	119,101	66,795
Security	79,739	69,272
Staff training	86,963	29,429
Staff uniforms	7,472	4,958
Staff welfare	45,936	40,213
Subscriptions and memberships	23,586	31,058
Telecommunications	30,469	30,890
Travelling and entertainment	154,564	132,788
Wages and salaries	3,423,800	2,932,487
Water and electricity	127,906	109,585
<b>Total administrative expenses</b>	<b>6,444,132</b>	<b>5,609,630</b>

MALTA COUNCIL FOR SCIENCE AND TECHNOLOGY  
Detailed Results - 31 December 2019**Other income**

	<b>2019</b>	2018
	€	€
Grant income	<b>1,276,922</b>	1,232,319
Other income	<b>111,810</b>	59,868
Agency income	<b>130,348</b>	75,921
Management fees	<b>103,000</b>	151,000
	<b><u>1,622,080</u></b>	<u>1,519,108</u>

**Investment income**

	<b>2019</b>	2018
	€	€
Interest income on cash and cash equivalents	<b><u>1,325</u></b>	<u>1,268</u>



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**Science & Technology**

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