

ANNUAL REPORT and Financial Statements **2021**



The Malta Council for
Science & Technology

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PURSUING A KNOWLEDGE-BASED ECONOMY

Despite the continuation of disruptions brought about by the COVID-19 pandemic, the Malta Council for Science and Technology (MCST) continued to spearhead policies, programmes, educational activities, and initiatives to raise the profile of science and technology. Owing to national and European investment in the sector, an institutional fabric that is grounded in innovation is supported, and the capacity of the local research community is broadened. This enables further pursuit of a knowledge-based economy which enhances competitiveness and encourages more people to pursue related careers.

Government recognised the importance of the research and innovation (R&I) pillar within Malta's economy and has committed €3.5M in 2021 under FUSION – the National RI Programme experiencing a year-on-year budget increases. This has resulted in tangible, multi-disciplinary projects involving industrial and academic expertise.

The funding programme FUSION and others managed by MCST are guided by the strategic direction outlined in the 2021-2027 Smart Specialisation Strategy (RIS3), which has been adopted at the end of 2021. Six priority thematic areas were identified, which are relevant to the local context and which encapsulate the technological ambitions of the future across societal challenges. These include health and wellbeing, the sustainable use of resources, maritime and aviation sectors amongst others for which, on the basis of extensive consultation, the potential for further development and better economic performance was highlighted.

2021 also marked the official launch of Horizon Europe – the new European framework programme for research and innovation with a budget of € 95.5 billion for the period 2021-2027. On a European level, research and innovation are ranking high on the agenda given the role in driving towards a green and digital transition, with Horizon Europe seen as the hallmark in unlocking more R&I potential. Building on the moderate success achieved through Horizon 2020, whereby by the end

of 2021, Maltese entities received more than €37 million, MCST aims to further sustain and improve its success rate in the new Horizon Europe. MCST continues to lead and coordinate Malta's national support team of National Contact Points and Programme Delegates, providing input to potential beneficiaries and building effective partnerships amongst stakeholders with the ultimate objective of increasing Malta's participation in Horizon Europe tapping into more lucrative funding opportunities.

Participation in three co-funded European Partnerships under Horizon Europe was committed to by MCST in 2021. The official launch and subsequent call for applications will take place in 2022. The Partnerships focus on the clean energy transition, towards a sustainable blue economy and the transformation of health and care systems, which are very much aligned with the smart specialisation priority areas. Government committed a total national budget of €10.5 million to ensure effective participation of Maltese stakeholders in multilateral projects within these partnerships.

Government supports R&I through its portfolio of funding measures and programmes on a national, bilateral and multilateral scale, and in turn researchers through their unremitting quest of innovative ideas contribute enormously to our continuing economic sustainability. Nurturing further this ecosystem by investing in a skilled workforce from the



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**Parliamentary Secretary for Youth,
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youngest of ages through STEM (Science, Technology, Engineering and Mathematics) engagement will ensure keeping up with the swift pace of change in the development of research and technologies worldwide. In doing so, Esplora is a key set-up which builds indispensable bridges between STEM and the community.

Esplora continued its drive forward toward strengthening knowledge, STEM employability awareness, education and participatory methods in STEM within the community. Studies show that STEM-related occupations are on a steady rise globally. CEDEFOP projects employment in STEM occupations to increase by 12.1 % by 2025 in the EU, while overall employment in all other professions is only expected to increase by 3.8 %. Through the National STEM Engagement Working Group, the Science Centre launched a pilot exercise of the National STEM Community Fund to support schools, Local Councils, non-governmental organisations (NGOs) or other individuals belonging to a specific community who have an innovative research idea that can benefit the local community. Four projects were awarded a total of €24,000 among them.

In its pursuit to create a culture of scientific curiosity, Esplora supported the project Maleth with a one hundred day public awareness campaign. The project Maleth featured the launch of a Maltese bio-experiment capsule to the International Space Station. Together with the project researchers and entities, a press event was held at the Esplora Planetarium on the 15th of May - World AstroDay. The project is a first-of-its-kind effort for Malta to advance diplomatic efforts in space capabilities

between European and other International Organizations, while continuing to support life sciences research in space.

In line with the Framework for the Education Strategy for Malta 2014-2024, in September 2021, Esplora launched its School Blended Learning Programme which featured both onsite and online activities. Concurrently, and in order to facilitate a more inclusive and accessible offer, the Science Centre also signed a Memorandum of Understanding with the Ministry for Education. The agreement ensures that government school students have access to free transport to and from the Science Centre.

In November, the Science Centre successfully concluded a three-year ERASMUS+ project entitled Embracing the Sustainable Development Goals through Creative Arts' (C-SDGs). The project was a European Strategic Partnership financed by Erasmus+ funds with a total grant of €379,166. In line with Malta's Sustainable Development Vision for 2050 and the Gender Equality Act, the project addressed the United Nations 2030 Sustainable Development Goals (SDGs) with an emphasis on Quality Education, Life below Water, and Gender Equality.

2021 has undoubtedly been another productive year for MCST, despite having been riddled with challenges. Government's continuous support fosters growth and investment in the sector, which however could not be possible without the commitment and hard work invested by Dr. Jeffrey Pullicino Orlando and his team.

GAINING MOMENTUM

In 2021, the Malta Council for Science and Technology (MCST) continued to raise the bar in terms of its performance and in its endeavours to achieve positive results in all the sectors that fall under its remit. I am pleased to announce that we have gained considerable momentum in strengthening our efforts in the field of Research and Innovation through existing and new initiatives. We believe that we have managed to put Science, Technology, Engineering and Mathematics (STEM) at the forefront of the national drive aimed at addressing Malta's social, economic, and environmental challenges. The Council continued to act as a leader in the field, offering financial and technical support to all the players in the local R&I ecosystem. We are also the undisputed trend-setter in attracting and engaging audiences towards STEM subjects through our Interactive Science Centre - Esplora. Notwithstanding the continued challenges posed by the pandemic, MCST employees persisted in striving for excellence, adaptability, and innovation.

Expanding the frontiers of Malta's Research and Innovation scene

The adoption of the Smart Specialisation Strategy by end 2021 was pivotal to our efforts. It followed exhaustive consultation with all the relevant local stakeholders. It indicates which priority areas we should focus upon in the field, in a bid to foster further economic growth in sectors with high potential. Whilst including traditional areas such as manufacturing and the maritime industry, together with aviation and health, the primary axis along which these thematic areas revolve is the synergy sought across sectors. This is primarily the case with digital technology and the sustainable use of resources - which are the other two priority areas. Policy implementation in 2022 is expected to be a continuation of the entrepreneurial discovery process used in designing this strategic document.

The first national Open Access Policy was also finalised and adopted in 2021, bringing Malta in line with international developments in the area and fostering broader access to global outcomes in the research process. Throughout 2021, more policy development work was undertaken in further defining the goals within the R&I Strategic Plan post-2020. This is due to be concluded in 2022. It will surely secure a better governance structure for this growing sector.

Considerable growth has also been registered in FUSION - Malta's national Research and Innovation funding programme, both in terms of the allocated budget - with an increase of 60% over 2020 - and in the number of programmes offered. FUSION had its funds boosted to €3.5 Million to further

contribute to the expansion of our research capacity on a national level. This will help to further strengthen the momentum gained throughout the years and will facilitate the increased relevance of this funding programme - which has gone from strength to strength since its inception in 2014. The two new programmes under FUSION - TDP Lite and the Thematic Programme - further testify to the importance of this flagship funding programme, which has been tailor made to the needs of the local research community through constant consultation with our stakeholders throughout the years. TDP Lite is designed to accelerate the development of fast-emerging technologies such as digital tech and has, since its launch in 2021 become immensely popular with SMEs, providing the required support for new value-added activities. The Thematic Programme addresses an exigency identified for any given year. It is meant to change for each successive year in accordance with the relevant feedback and guidance received. For 2021, the priority area chosen was 'Infectious Diseases', for obvious reasons.

Another milestone in 2021 was the continued success of the IPAS+ programme, which managed to attract the greatest number of applicants since its launch in 2015, 34 applicants engaged in networking and capacity building activities through this scheme, in turn leading to more applicants tapping into local funds and the lucrative Horizon Europe programmes.

Horizon Europe (HE), the EU Framework Programme for research and innovation, was officially launched in 2021. With a budget of € 95.5 billion for 2021-2027, the programme is an excellent vehicle to support researchers in their efforts in the creation of new technologies and facilitating the innovation necessary to boost competitiveness and growth.



Photo: Matt Thompson

Dr Jeffrey Pullicino Orlando Executive Chairman

As was the case with Horizon 2020, HE funds are incredibly competitive. Malta's national support unit of National Contact Point (NCPs) and Programme Delegates for Horizon Europe are part of our team, and their role is specifically to maximise Malta's participation and success in the programme. This is done through the provision of support to researchers and consortia, via meetings, webinars, and training sessions - of which we organise more than five hundred yearly. In 2021, we also introduced three support schemes - aimed at improving local capacity in reaching the desired level of quality expected for HE funding. Our efforts found fertile ground. Within the first year of HE (July 2021-July 2022), 185 proposals with Maltese participants have been submitted for funding. Of these, forty-four proposals have been retained for funding - raising our success rate to 24%, compared to the current overall success rate of the programme which stands at less than 16%.

MCST's internationalisation initiatives go beyond Horizon Europe. A dedicated team has been set up and encharged with managing bilateral and multilateral cooperation initiatives aimed at widening Malta's R&I activities across borders. In 2021, five open calls for related R&I proposals were managed. Of these, three are multilateral. Two of these fall under JPI Oceans (the Blue *Bioeconomy ERA-NET Cofund* and *MarTERA* - Maritime and Marine Technologies for a new era). The other is a Mediterranean initiative called PRIMA - Partnership for R&I in the Mediterranean Area, focusing on agriculture, water management and agro-food supply chains with partners which are not only European, but also from the Maghreb region in North Africa and the Middle East. Two bilateral cooperation agreements are in place, one with China through the Sino-Malta fund and another

with Turkey, after the Council set up the first joint call for proposals in 2021 under the MCST-Tubitak programme.

In 2021, we have seen increased interest in the internationalisation calls, which are supported through national funds, with requests amounting to € 8.7 Million. Calls were heavily oversubscribed. In total, six projects were funded with a budget of € 1.5 Million. There is clearly a significant increase when compared to 2020, and this clearly denotes the potential for further expansion of internationalisation activities in the future.

2021 was indeed remarkable in widening the frontiers of R&I locally. We made giant strides forward across the board, from securing increased national funding to garnering more interest in collaborations between local and foreign researchers in our internationalisation initiatives. We also registered significantly better success rates in Horizon Europe. Having gained so much momentum, we now need to invest in maintaining it and striving to raise the bar even further.

Committed to engage more people with STEM

Esplora is a state-of-the-art visitor centre in which students, educators and members of the public can immerse themselves in hands-on, interactive science experiences in a unique non-formal learning facility. Esplora's objectives include that of bringing STEM closer to the public, cultivating a culture of scientific curiosity and creativity, and encouraging an increased uptake of STEM subjects and careers. Furthermore, through the National STEM Engagement Working Group chaired by Esplora,

the long term objective for the Science Centre is to contribute to the increase in STEM professionals, thus giving Malta the much-needed human capital to sustain a competitive and knowledge-based economy.

Through the careful design of the indoor and outdoor spaces, sprawling over 22,000 square metres and the myriad of STEM Engagement events organised in 2021, visitors had the opportunity to see the relevance and presence of STEM in their everyday lives. Esplora offered visitors an opportunity to discover and understand science at their own pace through a series of hands-on experiences and phenomena-related exhibits. In 2021, with the support of more than 1150 science shows, more than 250 interactive workshops and over 650 Planetarium films, the importance of scientific processes was communicated through questioning, predicting, experimenting, analysing and conclusion regimens. Among the most popular annual events held, with all the relevant restrictions instituted by our Public Health Authorities, were 'Kuluri Karnival', 'Spooktacular Halloween', 'Christmas at Esplora', and the various evening events aimed at an adult audience. The Science Centre also offered online activities to around 10,000 students in 2021, in our efforts at overcoming the challenges presented to us by the pandemic.

During the course of the year, the Planetarium further expanded its library by adding a new film 'Europe to the Stars', in addition to finalising the procurement of 'Legends of the Night Sky – Perseus and Andromeda'. These new additions served to broaden the range of shows catering for both younger and older age groups interested in Astronomy and Space Science. On the professional development front, a comprehensive training programme was held for the planetarium administrative team to provide them with a more in-depth knowledge of the cutting edge Uniview 3.0 software now being used during planetarium shows. To enhance our commitment towards inclusivity, the Planetarium was equipped with a Hearing Loop System for the benefit of people making use of hearing aids.

A Memorandum of Understanding was signed with the Ministry for Senior Citizens and Active Ageing. The agreement seeks to encourage more older adults to visit Esplora as part of their social activities. An agreement to encourage visits by citizens with a disability was also signed - with the Ministry for Inclusion and Social Wellbeing. 21,000 people with an EU Disability Card can benefit from this agreement.

Esplora also embarked on a new adventure - producing its first ever bespoke TV programme called 'Ġina u l-Esploraturi'. Aimed at igniting children's curiosity and passion for questioning through STEAM activities and experiments, various STEM-related problems were solved and questions were answered throughout the series. The TV programme was a collaboration between Esplora and PBS Ltd and was aired on TVM.

The Centre also launched a new self-led History Tour, which together with the exhibition housed at the historic Cot Lift entitled "Life at Bighi", features stories, information, artefacts and memorabilia pertaining to the years when Villa Bighi was used as a hospital. In a related initiative, Esplora joined forces with Kristina Borg, a visual and socially engaged artist - together with a Historian and a Videographer - to tap into funds provided by Arts Council Malta. The project ranked first out of forty-seven eligible applications. *RNH Bighi Through Communities' Stories* is a research-based project that aims to shine a light on the ex-Royal Naval Hospital (RNH) Bighi.

One of Esplora's aims is to foster better relationships and communication between researchers and citizens. One way of doing this is by engaging citizens directly by, for instance, helping in the collection of data. 'Science is better when we do it together' and Esplora is the perfect forum to bring researchers, citizens, and organisations together to work towards a common goal. Science centres and museums are playing an increasingly significant role in connecting people to projects and issues which have a local relevance. As issues such as 'global climate change' increasingly dominate public debate, museums are finding that their role as 'educators' is growing in importance.

Ongoing efforts to engage people with research, such as the *Globe Challenge*, continued helping to improve the perception and attitudes of the public towards Science. Through the Globe Malta collaboration, Esplora made use of one of Globe's Observer Citizen Science Programmes, which are used worldwide. This challenge raised awareness and provided an opportunity for the public and students to better explore and understand the importance of trees in our lives.

Esplora Interactive Science Centre hosted its first edition of the National STEM Awards in July 2021. The aim of this biennial Award scheme is that of acknowledging and honouring the contribution of Maltese or Malta-based professionals to STEM, and to society at large. These Awards formed part

of an ongoing initiative of the STEM Engagement Working Group. The 2021 National STEM Awards were awarded for the following categories: Best Secondary School Teacher for Contribution to STEM, Lifetime Contribution to STEM, Young Researcher, Engaged Researcher, Women in STEM, STEM Ambassador, Best STEM Employer, Best STEM Community Project, Best STEAM Project and Best STEAM Project (People's Choice). In addition, a STEM Career poster exhibition featuring local STEM professionals was displayed at Esplora from January to March 2021. This exhibition included a series of four videos and a digital booklet featuring local STEM professionals to further highlight local researchers and available careers.

On 3rd August 2021, the Malta Council for Science and Technology proudly inaugurated the Esplora Foreshore, a project which saw a €2.5 million investment in the rehabilitation of the dilapidated and hazardous Bighi foreshore area. The newly restored waterfront opened to the public and has become an immensely popular area for locals and visitors alike. As part of this investment, a jetty was also constructed to facilitate access to the Science Centre through the fully functional and restored historic Cot Lift. The rehabilitated Esplora Foreshore was inaugurated by Prime Minister Robert Abela.

We are proud to announce that Esplora was confirmed as the official host of the 2023 Ecsite Annual Conference. The conference welcomes around one thousand science professionals from fifty different countries across the world, who will be delivering more than eighty-five sessions and keynote addresses.

The novel hands-on exhibits and unique elements of the Centre, as well as the recreational areas - including the EsploraCafé - make Esplora one of Malta's top attractions. MCST is planning an extension of the project focussing on the natural sciences as part of the Esplora experience - EsploraNatura. The preparatory works for the

related architectural tender are well underway, and a Task Force was set up to continue spearheading the development process.

Continued support for educators

We appreciate the dedication that educators show in engaging their classes, giving value to real-life education, embedding best practices and instilling a lifelong love of learning among our younger citizens. Educators are an important resource to our society and we offer a vast range of experiences aimed at supporting them and their work.

In September 2021, Esplora launched its School 'Blended Education Programme' which featured both onsite and online activities. It included school and educational visits suited for students from early years, early primary, late primary, middle school to secondary school. Concurrently, and to facilitate universal access to our unique experience, MCST also signed a Memorandum of Understanding with the Ministry for Education which will result in government school students being provided with free transport to and from the Science Centre.

Going the extra mile

We believe that the future will be even brighter if we continue investing in R&I and we are therefore all committed to going the extra mile. It is our intention to continue pursuing our goal of further strengthening our R&I ecosystem and investing in a skilled workforce from the youngest of ages through STEM engagement.

Without the sterling work conducted by all the members of the MCST team, and the full support of this Government and other stakeholders, we would not have been able to achieve the excellent results outlined in this report.

We shall continue to strive for excellence in delivering the targets set for us.

1. Policy and Strategy Unit

The Policy and Strategy team seeks to advise Government on matters relating to research, innovation and space at national, EU and international level. This Technical Unit is responsible for the development of relevant policies and strategies in the realm of research and innovation and ensuring that the principles enshrined therein are in turn reflected in other national policies and strategies. Amongst the key strategic documents are: the national Research and Innovation Strategy, the Smart Specialisation Strategy and the national Open Access Strategy. 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.

1.1 The National Research and Innovation Strategy

The Unit continued its work on the development of a new R&I Strategic Plan, building on the outcomes and recommendations of the 2019 PSF Peer Review on the Maltese Research and Innovation system and lessons learned from the COVID-19 pandemic. Strengthening governance as well as the development of the monitoring framework were important priorities for 2021. Indeed, discussions were held with the Steering Group and Core Group on strengthening these groups' role in the post-2020 R&I Strategic Plan for Malta. Updated Terms of Reference for these groups were developed based on the feedback received and on the Unit's experience since 2014. These new Terms of Reference were finalized at the end of 2021, while work on finalizing the R&I Strategic Plan will continue in 2022.

1.2 Smart Specialisation Strategy

Smart specialisation is a key principle underpinning the European Commission Cohesion Policy for the period 2021-2027 in the Research, Technology, Development and Innovation priority. Similarly to the 2014-2020 programming period, the existence of a Smart Specialisation Strategy is an enabling condition for EU Member States to access structural funding under the European Regional Development Fund in this field. Work on the development of Malta's Smart Specialisation Strategy (RIS3) 2021-2027 was finalized during 2021, building on the outcomes of the public consultation exercise of October 2020. During 2021, work focused on finalizing the text by ensuring that all criteria of the ERDF enabling conditions are met. Emphasis was made on the creation of a strong governance

structure for its implementation, led by the ministry responsible for research with technical support by MCST. The governance structure will include the setting up of dedicated thematic committees for each identified smart specialization area. In addition, the strategy identified mechanisms to keep the entrepreneurial discovery process ongoing throughout the implementation phase of the strategy. The RIS3 2021-2027 was approved by Cabinet in December 2021.

1.3 The National Open Access Policy

The development of a national open access policy is a measure in the 2017 Electoral Manifesto, which identified the need for supporting the broader dissemination of research results. The National Open Access Policy is a response to this measure. The Policy builds on the recommendations of a report from a group of experts appointed in 2019 under the auspices of the European Commission's Policy Support Facility (PSF), that were tasked with providing contextualized external advice and operational recommendations on defining the vision, goals and scope of a national open access policy in Malta.

MCST coordinated the setting up and work proceedings of a dedicated working group, the 'National Open Science Technical Working Group', to exchange knowledge and provide technical opinions and advice on translating the PSF recommendations into practical, actionable items for Malta.

Following the review of earlier versions of the draft policy and the input given by the National Open Science Technical Working Group, as well as further internal deliberations and refinement, MCST developed and finalized the draft National Open Access Policy which was launched for public consultation in November 2021 and finalized by the end of the same year.

1.4 The National Space Policy

The Policy & Strategy Unit actively contributed to the input solicited by the national Space Task Force entrusted by Government to formulate Malta's National Space Strategy for the period 2022 - 2027. The policy input and recommendations were based on an internal ex-post analysis of the MCST Space Policy dating from 2017. The formulation of the new Malta Space Strategy builds upon the preceding version, by striving to capitalise on the initial capacity-building investment carried out in

the local Space sector, notably through the Space Research Fund, administered by MCST. The new Space Strategy establishes a new ambitious and cross-cutting framework for further developing the ongoing endeavours in the Space domain, including by shifting the thrust from capacity-building to capability development efforts. Throughout 2021, MCST contributed to the technical deliberations feeding into the advanced draft of the new Space Strategy which is aimed for launch and finalisation in 2022. MCST has advocated for a strengthened and deeper relationship with the European Space Agency (ESA), increased investment in STEM-related skills, the expansion of the Space Research and Educational programmes, coupled with a reinvigorated governance approach, so as to ensure an appropriate implementation of the Strategy during its lifecycle.

1.5 Policy Advice

Throughout 2021, the Unit continued to assist and advise the Maltese government on all discussions and negotiations on the EU's research and innovation (R&I) and Space policies. The Unit worked closely with colleagues in the Permanent Representation in Brussels and the Ministry responsible for the R&I portfolio to ensure the appropriate scrutiny and cross government oversight of all related EU files and provided regular input to the examination of these, in policy areas such as Digital, the Internal Market, the Environment and Health.

In the area of R&I, deliberations mainly centered on the finalisation and adoption of the Horizon Europe framework programme (2021-2027) and the approval of the Single Basic Act (SBA), a regulation aimed at facilitating the launch of nine new Joint Undertakings. Negotiations also focused on the design and priorities of the new European Research Area (ERA) governance framework, following the Commission's publication of a Communication on the New ERA in 2020. The Council responded to the proposal for the New ERA through the adoption of a Council Recommendation for an ERA Pact for R&I and Council Conclusions on the ERA Governance structure that, included for the first time, an ERA Policy Agenda.

With regards to Space, discussions predominantly concentrated on the adoption of the Space Programme Regulation (2021-2027), the long-term sustainability, sustainable development and financing of the 'New Space' and on building an EU space-based global secure communication system.

The Unit maintained its continued work in representing and promoting the Maltese government's interests in different expert groups and international fora, such as the ERA Forum for Transition, the European Strategic Forum on Research Infrastructures (ESFRI), the European Research Infrastructure Consortium (ERIC) Committee, the Standing Working Group on Gender in Research and Innovation (SWG GRI), the Standing Working Group on Open Science and Innovation (SWG OSI), the European Open Science Cloud (EOSC), amongst others. These activities were underpinned by biannual meetings involving the national representatives on these expert groups, to foster the frequent sharing of information and to enable a coordinated national approach.

1.6 Policy Intelligence: Monitoring and Analysis

The Unit worked on the second Monitoring Report of the National R&I Strategy covering until 2020. This report closes the 2014-2020 monitoring period following which monitoring will follow the approach outlined in the relevant new strategies. The report is expected to be finalized and launched in early 2022. Similarly, the unit also worked on developing the second Space Policy monitoring report, covering the period 2019-2020. This report is also expected to be finalized and launched in early 2022.

Further to the Unit's efforts to build more capacity in intelligence gathering, during 2021 the unit worked on the analysis of the two surveys undertaken in 2020 - one focused on understanding the career paths and trajectories of doctorate holders, and the other focused on the effectiveness of national R&I programmes and support schemes in the context of COVID-19. The finalised reports are expected to be published in early 2022.

2. National R&I Funding Unit

2.1 FUSION – The National R&I Programme - 2021

FUSION is a national funding programme that drives and supports local Research and Innovation (R&I), as well as providing the necessary support for researchers and technologists to turn their innovative ideas into a market-ready reality. FUSION is supported through national funds and is managed by the Malta Council for Science and Technology (MCST) as the Managing Authority. The main objectives of FUSION are:

- to raise the level and profile of locally funded research;
- to ingrain R&I at the heart of the Maltese economy;
- to spur knowledge-driven and value-added growth and;
- to sustain improvements in the quality of life.

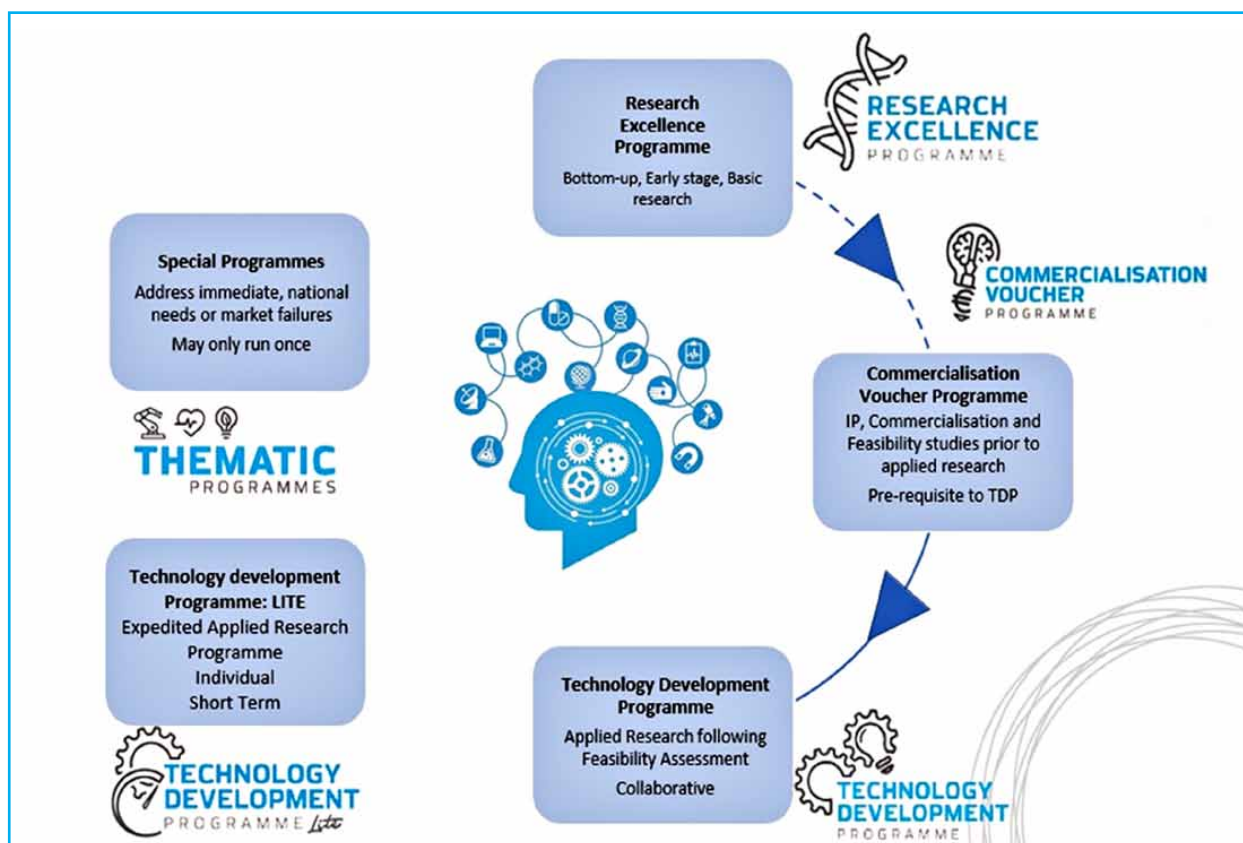
These can be achieved since research results and innovation have the potential of translating themselves into commercial activities which

generate a multiplier effect on the economy, by increasing Malta's competitiveness through the creation of additional high-value and knowledge intensive employment opportunities in Malta's priority industries.

FUSION is composed of various programmes. These programmes are designed in a way to offer the necessary mentoring and financial support for researchers and technologists to develop their ideas for the betterment of society.

2.1.1 Research Excellence Programme - 2021

The primary aim of the Research Excellence Programme is to spur the growth of new knowledge through experimental evidence following scientific hypotheses. The REP does this by funding novel, early-stage research which boasts a high degree of scientific excellence, through a bottom-up approach. The programme is intended to support projects of national and international relevance with the possibility of commercial applications, which



FUSION is composed of different programmes

could add more value to the Maltese economy. MCST has relaunched the Research Excellence Programme (REP) in April 2021, following the pilot scheme. During the REP 2021 Call, a total of 37 applications were submitted to MCST from several entities, ranging from public entities to also industrial players, NGOs and non-profit making entities. Moreover, applications were received from a broad range of scientific areas ranging from Agriculture, Fisheries and Food, Digital Technologies, Energy, Engineering, Health, Marine and Maritime, Social Sciences and Space.



Further details with respect to the awarded projects, having a start date of 1st September 2021, can be found summarised in the table below:

Research Excellence Programme is a national funding programme for early stage, bottom up, non-thematic basic research

Project Reference	Title	Beneficiaries	Granted Amount (€)	Project Status
REP-2021-004 (OPTICA)	Optical Telescope Intelligence for Computational Astrophotography	University of Malta	€49,983	Ongoing
REP-2021-005 (MicroFab-Neuro)	Microfabrication of a culture surface for therapeutic testing of neurones	University of Malta	€49,579	Ongoing
REP-2021-007 (DeepREL)	Deep Reinforcement Learning for Large and Complex Systems	University of Malta	€49,974	Ongoing
REP-2021-008 (SEA2F)	Investigating the Thermal Performance of Subsea Energy Storage Accumulators with a 2-Phase Fluid transition	University of Malta	€49,940	Ongoing
REP-2021-011 (ReCombiCML)	Re-sensitisation of Imatinib-Resistant Chronic Myeloid Leukemia using Combination Therapy	University of Malta	€49,811	Ongoing
REP-2021-012 (MetaBone)	Metabolomics to identify novel biomarkers for Bone disease	University of Malta	€49,867	Ongoing
REP-2021-014 (RLH)	Re-Live History	Saint Martin's Education Services Limited	€46,792	Ongoing
REP-2021-016 (DIAMYLOID)	An Anti-Amyloid Approach for Treating Type-2 Diabetes Mellitus	University of Malta	€49,998	Ongoing
REP-2021-021 (MoINET)	Molecular switch underpinning Neuroendocrine Transdifferentiation in malignant neoplasms	Mater Dei Hospital	€49,533	Ongoing
REP-2021-027 (PIXBRUSH)	Pixels Brushing Software Tools for Drones	PIXAM Limited	€50,000	Ongoing
REP-2021-033 (Matics)	Museum Analytics	Sey Travel Limited	€44,560	Ongoing

Table 1: Awarded projects for the Research Excellence Programme 2021 Call

Following another successful uptake of the REP and the positive feedback obtained from interested entities, MCST is envisaging the relaunch of this programme through the FUSION portfolio, as a single call per year during Quarter 1, with a similar budget. This ensures further funding for early-stage, basic research and simultaneously entices further engagement by the industrial players.

2.1.2 Commercialisation Voucher Programme and Technology Development Programme 2021

The Commercialisation Voucher Programme (CVP) aims at improving the development and commercialisation potential of innovative research ideas, acting as a pre-requisite for the Technology Development Programme (TDP). The latter supports the actual development of innovative projects.

Between 2015 and 2021, a total of 273 CVP applications were received from Maltese research entities. 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 130 beneficiaries were selected for funding, requesting a total of almost €2.6 Million

in funding. CVP funds grants up to €22,420 for public entities whilst industrial entities are eligible for €14,250 in funding.

Table 2 portrays a breakdown of 2020-2021 project submissions and funded projects per smart specialisation area. A comprehensive list of the 2020-2021 funded CVP projects, indicating their progress and status is provided in Table 3.

In 2021, FUSION expanded into a wider portfolio of programmes. In 2021, we have also provided 5 Optional IP Registration vouchers of €15,000 each excl. VAT, 4 Business Plan Optional CVP Vouchers of €5000 each excl. vat. and 1 Investor's Meeting voucher of €4000 excl. VAT. (see table 4)

In 2021, the TDP underwent a number of modifications. The most notable modifications were the introduction of the General Block Exemption Regulation as a route for applicants to request aid and an increase of the maximum grant to €295,000. Following the successful completion of the projects under the CVP, 5 projects were awarded funding under TDP during 2021. A total national funding of almost €1.5M was committed to these projects, some of which will complete in 2024. A list of these projects is provided in Table 5 entitled 'Projects Awarded under the Technology Development Programme during 2021'. Between 2015 and 2021 inclusive, 130 FUSION CVP proposals and 59 FUSION TDP proposals were accepted for funding, requesting a total commitment of €14.6 million.

	2021			2020		
Submitted Proposals by Sector	Number of Proposals	Funded Projects	Percentage of Total submissions	Number of Proposals	Funded Projects	Funded percentage of Total submissions
ICT	6	3	50%	7	2	29%
Health	5	3	60%	7	4	57%
Resource Efficient Buildings	2	2	100%	2	0	0%
Aviation & Aerospace	1	1	100%	1	1	100%
Maritime	1	1	100%	0	0	0%
High Value-Added Manufacturing	3	2	67%	5	4	80%
Tourism Product Development	0	0	0%	0	0	0%
Aquaculture	0	0	0%	0	0	0%
Other	0	0	0%	1	0	

Table 2: Breakdown of CVP project submissions in 2020 and 2021. Projects completed prior to 2020 have been removed from this table, however these can be viewed on the Council's website

Reference	Beneficiary	Title	Status
R&I_2021_001V	Universal Imports and Exports	Liquisorb	Completed
R&I_2021_002V	University of Malta	Decontaminate	Completed
R&I_2021_003V	University of Malta	ReCon	Completed
R&I_2021_005V	University of Malta	Smartspack	Completed
R&I_2021_006V	University of Malta	DeXAR	Completed
R&I_2021_007V	University of Malta	Rocksense	Completed
R&I_2021_008V	University of Malta	ADVISER	Completed
R&I_2021_010V	Tarsos Ltd	REMEDI	Completed
R&I_2021_011V	IoT Solutions Ltd	WEM	Completed
R&I_2021_012V	CoreTech Innovations Ltd	SCORE	Completed
R&I_2021_013V	University of Malta	LeukoMorph	Completed
R&I_2021_014V	University of Malta	ArtiAp	Completed

Table 3: R&I CVP 2021 Report Table with Funded Projects

Reference	Title	Beneficiary
R&I_2017_003	RIDE+SAFE (IP Registration)	University of Malta
R&I_2015_047	MicroCHP (IP Registration)	University of Malta
R&I_2018_012	Eyecon (IP Registration)	University of Malta
R&I_2017_028	MaproHand (IP Registration)	University of Malta
R&I_2016_010	Wildeye (IP Registration)	University of Malta
R&I_2017_037	BIOSA (Business Plan)	University of Malta
R&I_2017_037	BIOSA (Investor's Meeting)	University of Malta
R&I_2015_023	Maltahip (Business Plan)	University of Malta
R&I_2018_016	Drift (Business Plan)	University of Malta
R&I_2017_039	Imprint (Business Plan)	University of Malta

Table 4: R&I CVP Optional Voucher 2021 Report Table with Funded Projects

Reference	Title	Beneficiaries	Granted (€)	Status
R&I-2020-008T	AirSave	University Malta	€294,541	Ongoing
R&I-2020-003T	FABXS	University Malta	€294,952	Ongoing
R&I-2019-030T	HID	University Malta	€294,979	Ongoing
R&I-2020-004T	VacuUM	University Malta	€294,967	Ongoing
R&I-2019-018T	ZeEBRA	University Malta	€288,186	Ongoing

Table 5: Projects Awarded under the Technology Development Programme during 2021

2.1.3 Infectious Diseases Programme – Thematic Programme 2021

In 2021, MCST expanded its FUSION portfolio to provide a more comprehensive support structure to the research community. Whilst these changes promote a wider range of technology readiness/maturity project proposals, it also included a top-down thematic programme provision. This Thematic Programme is intended to address a particular societal challenge or priority area for the year in question.



For 2021, this Thematic Programme was the Infectious Diseases Programme (IDP). As the current COVID-19 pandemic continues, it was clear that the warning signs about pathogen threats were not heeded during the last decade. Using the COVID-19 R&D Fund as a framework, a scheme for further infectious disease research in the local community was designed. The IDP provided R&I investment to ensure Malta was better prepared for threats posed by infectious diseases. Through the IDP, 11 applications were received of which 4 were awarded, totalling approximately €570,000.

The IDP was crucial in establishing an approach to identify areas of national interest in which R&I

investment could have a significant impact. Using this methodology, a specific topic which requires technical input could be identified and a support scheme could be developed in a relatively short time span.



Infectious Diseases Programme is a top-down, thematic programme intended to ensure better preparedness for threats posed by infectious diseases

Using these techniques, the need for research and innovation in the development of Smart Cities was identified as the next thematic programme to be launched in 2022.

Further details on the awarded projects, can be found summarised in the table below:

Project Reference	Title	Beneficiaries	Granted Amount (€)	Project Status
IDP.RD.2021-01 ACCELERATE	Accelerated antiviral therapeutics by phage display	University of Malta	€150,000	Ongoing
IDP.RD.2021-02 BAC-OFF	Production of Antimicrobial Peptides	University of Malta	€149,218	Ongoing
IDP.RD.2021-04 VICRAM	Immune and coagulation profiling pre- and post-COVID 19 vaccination	University of Malta	€149,766	Ongoing
IDP.RD.2021-05 DisCO	Discovery of COVID-19 Inhibitors	University of Malta	€119,944	Ongoing

Table 6: Awarded projects for the Infectious Diseases Programme 2021 Call

2.1.4 FUSION R&I: Technology Development Programme Lite – 2021

The Policy Support Facility (PSF) of the European Commission, as well as an expert review of FUSION undertaken by KPMG recommended the importance of some critical updates that an applied research programme should contain to maximise its benefits to all eligible Maltese entities. It was noted that a one-size-fits-all approach to subject areas of varying nature, the current size and timelines of the programme, as well as the requirement for a public-private consortium, have created gaps in the support system, particularly when recent technology advances are requiring swifter research developments or increased expenditure. As a result, the Technology Development Programme Lite was created, and a pilot call was launched.

The primary aim of the programme is to fund projects that intend to carry out research on fast emerging technologies, at a faster pace than the traditional thematic areas that require significant research timelines to fulfil the scope of the project.



MCST has launched the Technology Development Programme Lite (TDP Lite) in September 2021 as a pilot scheme. During the TDP Lite Call, a total of 16 applications were submitted to MCST from several entities, ranging from public entities to also industrial players, NGOs and non-profit making entities. Applications were received from different SMART Specialisation areas ranging from Health, High Value Added Manufacturing, ICT and Tourism Product Development.

Further details with respect to the awarded projects, having a start date of 1st February 2022, can be found summarised in the table below:

Project Reference	Title	Beneficiaries	Granted Amount (€)	Project Status
R&I-2021-001L EpigAemia	Using epigenetic Modifiers to Sensitise Acute Myeloid Leukemia to Retinoic Acid	University of Malta	142,691	Ongoing
R&I-2021-005L Irrigoptimal	A new integrated operational management system based on Artificial Intelligence to tackle water scarcity	Westrade Ltd.	137,137	Ongoing
R&I-2021-006L SMTB	A battery powered, remote electricity scheduling and control system using LPWAN Technology	IoT Solutions Ltd.	94,750	Ongoing
R&I-2021-008L Pharma-IPSCs	Developing iPSC cell lines for use in research and pharmaceutical industries'	University of Malta	149,999	Ongoing
R&I-2021-013L rePET3D	Development of an upgrade to our novel FDM 3D printer head (ORQA) that makes printing with recycled PET filament more competitive	Laser Development and Engineering Malta Ltd.	126,599	Ongoing

Table 7: Awarded projects for the Technology Development Programme Lite 2021 Call

Following a successful uptake, and positive feedback obtained from interested entities, MCST is envisaging the relaunch of the TDP Lite, as a single call per year in Quarter 3.

2.2 Research on Space and Related Technologies

Since the signing of the Implementation Arrangement with the European Space Agency (ESA) in 2018, the MCST has been tasked with the coordination and governance of space-related matters in Malta. This arrangement established €2 Million of national funds over 5 years between 2018-2022, known as the National Space Fund. It aims to jump-start the Maltese space sector by way of introducing several initiatives to the community with the technical support of expertise from ESA:

- The Space Research Fund; and
- The Space Education Programme.

2.2.1 The Space Research Fund

The scope of the Space Research Fund (Refer to Figure 7) is to provide financial support to encourage Satellite downstream Earth Observation research, development and innovation. Satellite data has become an integral and essential component in modern day systems that concern various aspects such as weather and atmospheric monitoring, land including agriculture and urban



development, marine monitoring of the seas, security, climate change and emergency assistance.

Considering the large amounts of data that need to be processed, the latest technological machine learning algorithms are necessary to create effective and usable data. End user design customises datasets to suit the needs of stakeholders and to ensure that the data is represented in the most effective and efficient way.

The Space Research Fund was launched by MCST in collaboration with ESA in 2018. Malta was considered to have a strong ICT sector that could be exploited in data processing of Earth Observation data. The Space Research Fund provides financial support that encourages Research, Development and Innovation in the downstream Earth Observation sector with the scope of tackling societal challenges in Malta. This fund offers expertise in space related research that will eventually allow Maltese entities to be able to apply for more competitive space-related calls within the EU Framework. To date there have been a total of 10 applications that were granted funds out of 25 applications. These applications come from public research institutions, public sector organisations and private entities. Many of the project applicants form consortiums that involve a variety of public and private sector companies.

In 2021 the Space Research Fund received a total of 6 applications and 3 of these projects were granted funding. The awarded projects commenced their work on the 1st of September of 2021. Table 4 below gives details about each of these projects.

Project Reference	Title	Beneficiaries	Granted Amount (€)	Project Status
SRF-2021-1S2 MAARES	The use of Remote Sensing (RS) and AI systems to map seagrass meadows.	Ambjent Malta	150,000	Ongoing
SRF-2021-2S1 Sipobed	The SIPOBED project uses remote sensing to detect and monitor movement of sediments within the Maltese pocket beaches, to provide detailed estimates of sediment variations through time.	University of Malta	140,277	Ongoing
SRF-2021-3S1 Satellite4Health	To propose a tool for forecasting the hospital admission rate and patient length of stay to help healthcare managers and policymakers' better health care service management.	University of Malta	149,945	Ongoing

Table 8: Awarded projects for the Space Research Fund in 2021

2.2.2 Space Education Programme

The Space Education programme is another tool that aims to drive Malta to becoming an active participant in the global space sector. Through the collaboration between ESA and MCST the Space Education Programme is a training and awareness campaign that bridges the gap between space application and its function in society. This programme is part of Malta's National Space Policy, which identifies a continued need for awareness-raising and related capacity building. The educational initiatives include the AstroPi, CanSat, Climate Detectives, amongst others, targeting primary, middle, secondary and post-secondary schools. Organized in collaboration with the Ministry for Education and Employment, ESA and the National Interactive Science Centre - ESPLORA, the annual Space Education programme seeks to improve not only the scientific and technical insight of the younger generation but also soft skills such as problem-solving, teamwork and communication.

In 2021, due to the Covid-19 pandemic no physical activities were organised due to limitations involving group gatherings which were stipulated in the Guidelines issued by the Health Authorities. Most of the activities above mentioned required physical interaction between students and teachers. Considering the situation, several activities were organised by Esplora to ensure that Space Education was still encouraged during the pandemic. These activities include:

A thematic programme of activities was developed for Q1-Q3 of 2021.

Themes ranged from Inspiring the Next Generation, Exploring Earth and Beyond to Our Bodies Inside Out. Each thematic programme included a range of onsite and online activities. However, an emphasis was placed on virtual opportunities to ensure that our reach was as wide as possible.

A. Inspiring the Next Generation

More than 100 students participating in a virtual Erasmus+ student exchange also had the opportunity to meet and ask questions to local STEM professionals, including a local astrophysicist who specialises in Light Pollution, and a Radiographer.

B. Exploring Earth and Beyond

1. Together with project partners from Project Maleth, 8 virtual webinars were organised for middle and secondary school students. Participating students had the opportunity to meet biomedical scientists and to learn about how spaceflight biology and microgravity can pave the way for better treatments.
2. 2 virtual tours of the facilities at European Space Research and Technology Centre (ESTEC) were also organised for students

aged 14 years and older to discover the world of space, technology and innovation.

3. Other activities included a virtual Eggstronaut Challenge designed to inspire families to work together to build a spacecraft capable of landing an astronaut safely back on Earth, which reached more than 45K views.
4. Esplora also teamed up with GLOBE Malta and the U.S. Embassy, Malta for a citizen science challenge that encouraged families and school students to spot trees around the Maltese Islands and to then map and measure their height using NASA's GLOBE Observer App.

C. Ġina u L-Esploraturi

Towards the end of 2020, Esplora embarked on a new project with TVM to create a science TV series in Maltese called Ġina u L-Esploraturi. During the first three months of 2021, Esplora's education team worked on writing thirteen 8-minute episodes featuring Ġina and 3 esploraturi as they used experiments, demonstrations, and problem-solving techniques to answer questions submitted by kids. One of the episodes focused on the question: Where is the moon when it's daytime?

D. SferaKids

7 Sfera Kids activity books were developed, which included hands-on activities featuring themes ranging from nature to earth observation and the human body. Three of the activity books focused specifically on Space Sciences and Earth observation.

E. Through ESA agreement

Local kids got the opportunity to ask question to a former ESA astronaut Thomas Reiter https://www.youtube.com/watch?v=MFdU_JP5ErQ&t=51s

2.2.3 ESA-MCST Traineeship Scheme

MCST also manages space-related initiatives through other adjacent agreements. An accord between MCST and ESA was established to provide training opportunities to Maltese graduates at an ESA facility. The aims of this agreement contribute to the objectives of the Space Education Programme, tailored for individuals with tertiary education seeking a career in the space domain. Through this scholarship scheme, MCST financially supports individuals travel costs and subsistence. A trainee who had commenced the traineeship in 2020 at ESA Centre for Earth Observation (also known as the European Space Research Institute or ESRIN), successfully concluded his studies in Quarter 4 of 2021.

In the last quarter of 2021, another trainee was awarded an ESA traineeship at the European Space Research Institute and will be completing his term in the last quarter of 2022. In the meantime, MCST is currently working on launching the scheme for 2023 and is in contact with ESA to make this happen.

2.3 Internationalisation Partnership Awards Scheme Plus (IPAS+) - 2021

MCST has operated the Internationalisation Partnership Award Scheme (IPAS) throughout the last five years, with a transition to IPAS+ in the year 2019 where we introduced funding for Horizon 2020 proposal writing. The IPAS+ scheme is divided in two Options. Option A supports collaborative initiatives between Maltese entities and at least one foreign counterpart, while the aim of Option B is to provide opportunities for Maltese entities planning to submit a Horizon Europe proposal as a coordinator to engage a consultant (local or foreign) who will be supporting the applicant until submission stage.

As in the previous year, IPAS+ scheme in 2021 was launched twice and despite the negative impact of the COVID-19 pandemic on this scheme especially Option A, the number of applications received were similar to pre-pandemic times. IPAS+ 2021 Option A attracted 22 applications while Option B attracted 12 applicants. All the 22 applications in Option A were awarded requesting a total of €109,920 in funds. While for Option B a total of 10 projects were awarded requesting a total of €45,000 in funds. During this year we have managed to attract more Private entities to apply for IPAS+. Private entities managed to win 25% of the overall IPAS+ budget.

IPAS+ is a dynamic programme and for 2022 we plan to make some changes. From next year the maximum grant for IPAS+ will increase to €6000 for each option. We plan also to increase the eligible costs under each option. For Option A we plan to include the publications related to the project while for Option B graphical designer fees for improving the visual appearance of the proposal will be eligible for funding.

Project Number / Name of Entity	Funds Requested
IPAS-2021-002 University of Malta	€ 5,000
IPAS-2021-003 University of Malta	€ 5,000
IPAS-2021-006 University of Malta	€ 2,500
IPAS-2021-007 University of Malta	€ 5,000
IPAS-2021-009 University of Malta	€ 5,000
IPAS-2021-011 Ecostack Inn Ltd.	€ 2,500
IPAS-2021-013 AquaBioTech Ltd.	€ 5,000
IPAS-2021-017 AquaBioTech Ltd.	€ 5,000
IPAS-2021-019 MCAST	€ 5,000
IPAS-2021-021 Bioarte Ltd.	€ 5,000
IPAS-2021-013 University of Malta	€ 5,000

Table 9: IPAS+ Option B 2021 funded projects

Project Number / Name of Entity	Funds Requested
IPAS-2021-001 University of Malta	€ 5,000
IPAS-2021-004 University of Malta	€ 5,000
IPAS-2021-005 University of Malta	€ 5,000
IPAS-2021-008 MCAST	€ 5,000
IPAS-2021-010 University of Malta	€ 5,000
IPAS-2021-012 University of Malta	€ 5,000
IPAS-2021-014 AquaBioTech Group	€ 4,920
IPAS-2021-015 University of Malta	€ 5,000
IPAS-2021-018 University of Malta	€ 5,000
IPAS-2021-020 University of Malta	€ 5,000
IPAS-2021-021 Bioarte Ltd.	€ 5,000
IPAS-2021-022 University of Malta	€ 5,000
IPAS-2021-023 University of Malta	€ 5,000
IPAS-2021-024 University of Malta	€ 5,000
IPAS-2021-026 University of Malta	€ 5,000
IPAS-2021-027 University of Malta	€ 5,000
IPAS-2021-028 University of Malta	€ 5,000
IPAS-2021-029 AquaBioTech Ltd.	€ 5,000
IPAS-2021-030 AquaBioTech Ltd.	€ 5,000
IPAS-2021-031 University of Malta	€ 5,000
IPAS-2021-032 University of Malta	€ 5,000
IPAS-2021-033 University of Malta	€ 5,000

Table 10: IPAS+ Option A 2021 funded projects

3. Internationalisation Unit

The Internationalisation Unit (IU) gives impetus to Malta-based stakeholders to participate in bilateral and transnational R&I projects of excellence via the implementation of several regional and international funding programmes.

By successfully negotiating, implementing, and administering several funding programmes in 2021 the IU has assisted over 56 local stakeholders in participating and 15 securing funding of which 7 are from the private sector, as outlined in the below mentioned programmes. The IU has allocated more than €2.8million in funding to 23 beneficiaries since its establishment in 2019.

In 2021, the IU also contributed to various international policy fora, with the aim of fostering more strategic partnerships for future collaborative opportunities for Malta's R&I community. These activities included participation in the 5+5 Dialogue (Research, Innovation and Higher Education), the Strategic Forum for International Scientific and Technological Cooperation (SFIC), Union for the Mediterranean (UfM) Regional Platform on R&I, EU Knowledge Network on China (EU-KNOC) and the High-Level Policy Dialogue between the African Union and the European Union (AU-EU HLPD).

The IU has also committed participation within three (3) Co-Funded European Partnerships:

- Clean Energy Transition Partnership (CETPartnership)
- Sustainable Blue Economy Partnership (SBEP)
- Transforming Health and Care Systems Partnership (THCSP).

During 2021, the Council secured increased funding for all three partnerships over the programming period of Horizon Europe 2021-2027 as it is recognised that all three partnerships will support research and innovation across thematic areas that are of great relevance to Malta i.e., the transitions towards climate neutrality, sustainability in the blue economy sectors, as well as strengthening Malta's health innovation sector.

The most advanced partnership throughout 2021 was the Clean Energy Transition Partnership, as the proposal for this partnership was submitted by the Austrian coordinator in October, together with the Annual Work Plan for the first year of the partnership. Malta is one of 32 countries within this proposed partnership. Furthermore, the IU carried out a detailed exercise to determine which Transition Initiatives (TRIs) are of most interest to Malta and hence guide the IU's participation in the TRI meetings which would eventually discuss the

call modules and topics for the first CETPartnership Joint Call in 2022.

The IU also attended the Sustainable Blue Economy Partnership's Country Representatives' Meeting as well as Interim Executive Committee Meetings to assist with the proposal writing for this partnership. This preparation included various tasks that the IU carried out, including a survey to determine which pillars are mostly applicable to Malta as well as successfully negotiated on behalf of the Council, to be able to co-lead tasks within this partnership. The proposal for the SBEP is expected to be submitted by the Italian coordinator in February 2022.

In relation to the Transforming Health and Care Systems Partnership, the IU participated actively in fortnightly meetings between prospective partners to plan out the proposal and the first annual work plan for this partnership which are both to be submitted by April 2022, also by Italian coordinators.

Furthermore, the IU has also become part of the Partnership Knowledge Hub (PKH) in 2021. The Partnership Knowledge Hub is considered as the core of the Strategic Coordinating Process. The PKH allows working-level interactions and meetings including representatives from the Commission, EU Member States and Associated Countries within Horizon Europe to discuss any work in relation to Partnerships implementation.

The IU shall continue its active participation in country representatives' and committee meetings in all three partnerships which should all reach an advanced stage in 2022 following the submission of the three partnership proposals to the European Commission, together with other EU Member States and Associated Countries.

3.1 PRIMA – Partnership for Research and Innovation in the Mediterranean Area

By funding R&I through competitive Calls, the aim of PRIMA is 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”.

The PRIMA annual funding Calls operate under two different sections; Section 1 calls are funded by the European Commission, whilst Section 2 Calls are funded through the pooling of national resources from the Participating States.

MCST launched the PRIMA 2021 Calls in the first quarter of 2021, with a national budget of €500,000 put forward for Maltese researchers to participate in regional multilateral R&D projects in the field of Water Management, Sustainable Agriculture and Agri-Food Value Chains. One project with Maltese participation was selected for funding and awarded under the Section 1 Call. No projects with Maltese participation were selected for funding under the Section 2 Call. In 2021, MCST also allocated €25,000 to launch an ancillary funding programme to assist researchers in the drafting of PRIMA Proposals. Two Malta-based coordinators benefitted of this Scheme, one of which also benefitted from funds to submit a full proposal in Stage 2.

3.2 Joint Programming Initiative on Healthy Seas and Productive Seas and Oceans (JPI Oceans)

JPI Oceans¹ was established in 2011 as an intergovernmental platform, open to all EU Member States and Associated Countries who invest in marine and maritime research, that acts as a coordinating and integrating platform, adding value to the national research and innovation investments by aligning national priorities and implementing Joint Actions. MCST represents Malta in JPI Oceans and has been actively participating in several of its Joint Actions.



The MarTERA ERA-NET Co-Fund and Blue Bio ERA-NET Cofund are two other JPI Oceans Joint Actions that MCST participated in during 2021, as outlined further below. The IU will be looking into the possibility of joining Scoping Actions that are of national interest. Once Scoping Actions are endorsed by the JPI Oceans Management Board, they can be further developed by interested JPI Oceans members and implemented through fully-fledged Joint Actions.

In 2021, MCST continued its co-leading activities in JPI Oceans Joint Action - **Science for Good Environmental Status (Science4GES)**.

¹ <https://jpi-oceans.eu/>

The Joint Action is working towards establishing three main lines of activities, namely:

- Knowledge sharing towards the determination of GES, through a series of workshops,
- Joint integrated monitoring approaches, that will be taking advantage of all the state-of-the-art techniques and existing infrastructures, and
- Test beds and augmentation observatories, that will introduce new infrastructures for near real time monitoring at sea.

Several activities pertaining to this Joint Action are foreseen to take place in 2022 and 2023, including providing an opportunity to a Maltese Marine Environmental Professional to work with a team of transnational researchers on board a state-of-the-art research vessel in the North Sea.

3.2.1 MarTERA ERA-NET Co-fund - Maritime and Marine Technologies for a new era

MarTERA² is an ERA-NET Cofund Programme which aims to strengthen the European Research Area (ERA) in maritime and marine technologies, as well as Blue Growth. It is composed of a consortium made up of 16 collaborating countries, which collectively organise annual joint calls for proposals to support transnational, research projects in the field of marine and maritime technologies.



In 2021, MCST participated in the third annual call for proposals, with a national budget of €300,000 put forward for Maltese researchers to participate in international multilateral R&D projects focusing on environmentally friendly maritime technologies; Innovative concepts for ships and offshore structures; Automation and sensors; Advanced manufacturing and production; Safety and Security. The results of the Call were issued in December 2021. Two projects with Maltese participation were selected for award.

3.2.2 Blue Bioeconomy ERA-NET Co-fund

Blue Bio³ is an ERA-NET Cofund that aims to strengthen Europe's position in the blue bioeconomy sector, through coordinated R&D. It is made up

² <https://www.martera.eu/>

³ <https://bluebioeconomy.eu/>

of 27 partners from 16 countries, which collectively organise annual joint calls for proposals to support transnational research projects in the sphere of blue bioeconomy.



In 2021, MCST participated in the first additional call, with a national budget of €300,000 put forward for Maltese researchers to participate in international multilateral R&D projects focusing on advancements in the supply systems of the blue bioeconomy value chains. The results of this Call will be issued in Q2 of 2022. Moreover, a total of €477,535 were awarded to national stakeholders for two projects awarded under the 2020 Call, with project activities starting in the latter half of 2021.

3.3 Science and Technology Cooperation between Malta and China – SINO-MALTA Fund

The SINO-MALTA Fund⁴ 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 the Joint Commission on Science & Technology between the Ministry of Science & Technology (MOST) of the PRC, and MCST. The aim of the 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 1st Call was issued in 2019 and subsequently a 2nd Call in 2020 was issued with an increased budget compared to the initial call based on the interest and uptake of this programme. In 2021, a 3rd Call was issued maintaining a total national budget of €600,000 that was put forward by MCST and a corresponding value by MOST, to fund projects focusing on Green Transitions, Health Innovations and Digital Technologies. Three projects were selected for funding, one in each of the three thematic areas, and will be commencing in 2022. As a result of the 2020 call, a total of €572,000 were awarded to national stakeholders for the implementation of three awarded projects, with project activities starting in mid-2021.

⁴ <https://mcst.gov.mt/internationalisation/sino-malta-collaboration/>

3.4 Cooperation between MCST and TÜBİTAK (Scientific & Technological Research Council of Turkey)

In 2020, MCST signed a bilateral agreement with TÜBİTAK, with the aim of encouraging cooperation in the field of science, technology and innovation between research entities, universities, research institutes and industrial enterprises from Turkey and Malta. Following the work undertaken during 2020, a 1st joint Call for funding R&I projects was launched in 2021, with a total national budget of €200,000. This first call was launched as a Section 3 Participating State Initiated Activity under the umbrella of the PRIMA programme, with the aim of supporting bilateral R&I collaboration in the fields of water management, sustainable agriculture, and agro-food value chains. The results of the Call will be issued in January 2022, whereby two projects are intended to be selected for award and funded.



3.5 BLUE BIO MED – Mediterranean Innovation Alliance for Sustainable Blue Economy

In 2020, MCST became a partner in the INTERREG MED project, BLUE BIO MED⁵. This is a strategic project funded under the Interreg MED. The project promotes the transformation of the Mediterranean blue bioeconomy field toward Sustainable Development Goals (SDGs) through innovation and aims to develop a governance model of innovation policies to tackle complex challenges, that will be tested through policy experiments triggering the cooperation of the quadruple helix stakeholders for interregional innovation investments.



MCST participates as a partner in this project along with 10 other partners with an overall project value of €1,507,630, with MCST securing €82,892 for its participation in the project. The IU coordinates all the technical work to fulfil the required deliverables by MCST for this project, most notably taking the lead on a scouting report of opportunities to strengthen the transnational innovation ecosystem.

⁵ <https://blue-bio-med.interreg-med.eu/>

3.6 plumtri – The Platform for Mediterranean Research and Innovation

The plumtri⁶ web platform serves as a comprehensive tool for Mediterranean (MED) researchers and entities with an interest in R&I. It is consistently updated throughout the year with latest news, events, funding, traineeships, and work opportunities, providing followers a holistic source of information in the field of R&I in relation to the MED region.



The community of newsletter subscribers are sent two newsletters on a monthly basis, one covering local articles while the other international material. A LinkedIn page has been launched to promote, reach out and enhance the current audience. This social media tool permits followers to leave comments, interact and share plumtri articles with their fellow networks. Monthly portal and LinkedIn analysis are being carried out to make sure that material uploaded is engaging and within plumtri's followers' interests. A Facebook page will be launched in quarter 1 of 2022 to further enlarge and spread out its reach across the Mediterranean region.

6 <https://www.plumtri.org/>

Project Reference	Title	Beneficiaries	Granted Amount (€)	Project Status
Mara-Mediterra (PRIMA Section 1)	Safeguarding the livelihood of rural communities and the environment in the Mediterranean through Nature-based Solutions.	Integrated Resources Management Company Ltd.	397,075	Ongoing
MedPartner4Bee (Proposal Writing Assistance Scheme)	Mediterranean Partnership on innovative value chain models giving assessment and monitoring tools for quality Beekeeping	Golden Island Ltd	3,000	Pre-proposal submitted to PRIMA Section 1
Remedis-Chain (Proposal Writing Assistance Scheme)	Towards a Resilient Mediterranean Smart Agro-food Supply Chain	UM	9,440	Pre- and Full proposals submitted to PRIMA Section 2
MED WET (PRIMA Section 2)	Improving MEDiterranean irrigation and Water supply for smallholder farmers by providing Efficient, low-cost and nature-based Technologies and practices	ECOGOZO	352,147	Ongoing
MED WET (PRIMA Section 2)	Improving MEDiterranean irrigation and Water supply for smallholder farmers by providing Efficient, low-cost and nature-based Technologies and practices	MCAST	147,843	Ongoing
REACTIVE (SINO-MALTA Fund)	REducing AirCRAFT Taxiing emissions through energy recovery and storage	UM (Institute of Aerospace Technologies)	199,976	Ongoing
Hatchery Match (SINO-MALTA Fund)	An Automated Marine Fish Hatchery with Innovated Water Recirculation Technologies	AquaBioTech Ltd, UM (Department of Food Sciences and Nutrition)	173,244	Ongoing
MGMTOFGR (SINO-MALTA Fund)	Marine Geophysical Mapping Techniques for Offshore Freshened Groundwater Resources	UM (Department of Geosciences)	198,724	Ongoing
BLUEBIOCHAIN (Blue Bioeconomy ERA-NET Cofund)	Novel biorefinery supply chains for wastewater valorization and production of high market value bio products using microalgae	UM (Faculty of Health Sciences)	200,998	Ongoing
PROFIUS (Blue Bioeconomy ERA-NET Cofund)	Preservation of underutilized fish biomass for improved quality, stability and utilization	AquaBioTech Group Ltd	276,536	Ongoing

Table 11: Internationalisation Programmes 2021 Funded Projects

4. Framework Programme Unit

4.1 New Framework Programme Horizon Europe



Horizon Europe, the successor of Horizon 2020, was launched in 2021. Horizon Europe is the European Union's (EU) most ambitious research and innovation framework programme for 2021-2027, with a budget of EUR 95.5 billion. The programme aims to tackle climate change, help to achieve the United Nations' Sustainable Development Goals and boost the EU's competitiveness and goals by facilitating collaboration and strengthening the impact of research and innovation.

Horizon Europe was launched in Malta on 17th February 2021 with the participation of Hon Owen Bonnici, Minister for Equality, Research and Innovation, MCST's Executive Chairman Dr Jeffrey Pullicino Orlando, and representatives from the European Commission.

The work programmes for 2021-2022 were launched in June 2021. With a budget of around EUR 14.7 billion, these work programmes aim to support actions that will help the green and digital transitions, promote a sustainable recovery from the global crisis of the COVID pandemic, and strengthen international cooperation.

4.2 European Partnerships

Around 25% of the Horizon Europe budget (and up to 50% of pillar 2 budget) is being channelled into the European Partnerships. The financial participation of the Member States and industry in some of these partnerships is essential. European Partnerships bring together the European Commission and private and/or public partners in order to coordinate some of the most pressing challenges which cannot be addressed by Horizon Europe alone.

Horizon Europe distinguishes between three types of partnerships:

- Co-funded – partnerships involving EU countries, with research funders and other public authorities at the core of the consortium.
- Co-programmed - partnerships between the Commission and private and/or public partners based on a memorandum of understanding.

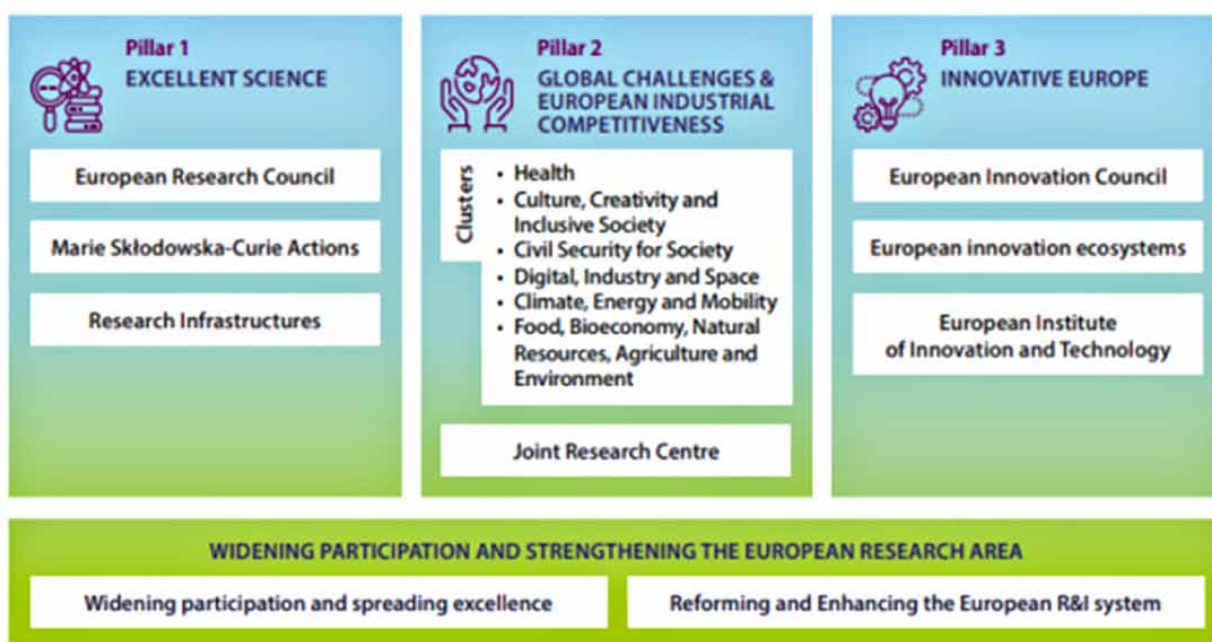


Figure 10: Structure of Horizon Europe

- Institutionalised - partnerships between the European Union, Member States and/or industry requiring legislative proposals and based on Council regulations.

Following a national consultation carried out in 2020, the Malta Council for Science and Technology will be participating and contributing budget to three co-funded partnerships – Transforming Health and Care Systems (THCS); Clean Energy Transitions; and Climate Neutral, Sustainable and Productive Blue Economy (SBEP). These three partnerships will be managed by the Internationalisation Unit within MCST.

The FP Unit, together with representatives from the relevant Ministries, also represent Malta on a number of Member State Representative Groups (MSRG) created for a number of partnerships. The aim of these groups is to provide advice on strategic important issues related to the partnership as well as support and ensure complementarity with national priorities and policies.

4.3 Missions

In September 2021, the European Commission officially launched the five new EU Missions. The Missions are a new feature of Horizon Europe and an innovative tool for EU policy. They will support research in order to meet the top priorities of the Commission and find solutions to some of the biggest problems the EU is facing today, including combating cancer, adjusting to climate change, protecting the ocean, seas, and waters, living in greener cities, and ensuring healthy soil and food. Missions are a brand-new instrument that entails a series of actions, including research and innovation projects, policy measures, and legislative initiatives, to accomplish defined goals with significant societal impact and within a predetermined time frame. By 2030, five missions will try to provide answers to important global problems:

1. Adaptation to Climate Change: support at least 150 European regions and communities to become climate resilient by 2030;
2. Cancer: working with Europe's Beating Cancer Plan to improve the lives of more than 3 million people by 2030 through prevention, cure and solutions to live longer and better;
3. Restore our Ocean and Waters by 2030;
4. 100 Climate-Neutral and Smart Cities by 2030;
5. A Soil Deal for Europe: 100 living labs and lighthouses to lead the transition towards healthy soils by 2030.

In the past year, the Commission has also introduced the Missions National Contact Point. This role will be the main contact for the dissemination of Missions' information, support to applicants and will be supported by the Thematic Cluster NCPs.



Figure 11: The Horizon Europe missions

4.4 Gender Equality and Gender Equality Plans (GEPs) in Horizon Europe

The Commission is committed to ensure and safeguard gender equality in research and innovation on 3 different levels.

1. GEPs as an eligibility criterion for certain categories of legal entities from EU countries and associated countries.
2. Integrating the gender dimension into research and innovation content is a requirement by default, an award criterion evaluated under the excellence criterion, unless the topic description explicitly specifies otherwise.
3. Reaching a target of 50% women in Horizon Europe related boards, expert groups and evaluation committees, and gender balance among research teams set as a ranking criterion for proposals with the same score.

GEPs are a novelty under Horizon Europe. The GEPs became an eligibility criterion for all public bodies, higher education institutions and research organisations that are interested in tapping Horizon Europe funding. The FP Unit was the point of information with regards to these plans, the NCPs organised several workshops and information sessions in 2021 and 2022 to equip Maltese organisations with the necessary tools to create and implement their GEPs. MCST is also part of the GENDERACTION+ project, a consortium consisting of 26 organisations operating in 21 European countries. The GENDERACTION+ project

will focus on five thematic areas, including gender based violence in academia, inclusiveness and intersectionality with other diversity categories and potential grounds for discrimination, such as ethnicity, disability or LGBTQI+. MCST was one of the first Maltese organisations that developed their own GEPs and the FP unit is involved in the MCST Gender Equality Plan working group.

4.5 National Contact Points

MCST is mandated as the National Contact Organisation for the EU R&I Framework Programme. The National Contact Points (NCPs) support local stakeholders in participating in the R&I Framework Programme. The team is currently made up of 6 NCPs and the NCP Coordinator, each with specialised knowledge in their respective areas.

The FP Unit offers a variety of services at any stage of the applicant's proposal, including:

- Providing information on the FP and guidance in choosing relevant topics and calls
- Tailored one-to-one meetings providing specialised support
- Dissemination of information through information sessions, webinars, presentations at events, mail shots and social media
- Partner Search facility
- Pre-proposal checks
- Assisting with legal and financial issues
- Dedicated workshops tailored for entities
- Proposal writing workshops
- Providing advice on project management
- Providing additional support through National funding schemes
- Creating digital content to promote success stories

Throughout 2021, the NCPs held more than 500 one-to-one meetings with local stakeholders.

4.6 Programme Committee Members

The FP Unit also serves as Programme Committee Members (PCM) for Horizon Europe. The PCMs' responsibility is to offer guidance that will help the EC's work on the R&I Framework Programme's development and implementation. The biennial work Programmes are the primary focus of the PCMs' work. The PCMs consult with various specialists, governmental organisations and other relevant stakeholders to get their perspectives on the EC's proposed work programmes. This feedback is relayed back to the EC, through the proper channels. Once the feedback is received by the EC, where applicable, it is reflected into the

work programmes. Finally, a formal vote is taken by the committees to approve or otherwise, the final version of the work programmes before being published.

PCMs also have insight on the evaluation results of the work programme calls, and once the EC finalises the main listed proposals, a vote is taken to approve the proposals for funding.

The PCMs also have a very crucial role in linking the national research ecosystem to the European one and vice versa and this is attained through the close contact with local research stakeholders and policymakers as well as constantly being updated by the EC through committee meetings.

4.7 Thematic Expert Groups

Throughout the implementation of Horizon Europe, Programme Committee Members are periodically asked to provide feedback on the thematic research Work Programmes as part of the consultation process. The thematic research areas cover all scientific research areas. In November 2021, the FP Unit launched an expression of interest in order to formalise feedback groups to discuss the work programmes of the different research areas. The EC adopts a co-creation approach with all the Member States when drafting the work programmes and this called for the involvement of the PCMs to provide the relevant feedback which maps national research interests and agendas.

The groups were coined as the Thematic Expert Groups (TEGs) per area of the programme. The FP Unit has recognised the need to have the following TEGs:

- Research Infrastructures
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment.

Each TEG will be chaired by a PCM from the FP Unit. The members of the TEGs represent Academia, Public Service, Public Sector, NGOs and SMEs representative groups. The groups will be kept alive by the PCMs who will organise at least 2 meetings each year in order to discuss the upcoming cluster thematic work programmes.

4.8 COST

The European Cooperation in Science and Technology (COST) is the longest-running European framework supporting the creation of interdisciplinary research networks across Europe. COST in Malta is managed by MCST and

Malta has been a member of COST since 1997. Malta is presently participating in 183 COST Actions i.e. 73% of all running COST actions. 50% of researchers from Malta participating in COST actions are female. Key contributions included participation in actions looking at water isotopes in the critical zone: from groundwater recharge to plant transpiration; European Network for Gynaecological Rare Cancer research; plastics monitoring detection remediation recovery; language In the human-machine era; and epigenetic mechanisms of crop adaptation to Climate Change amongst others.

4.9 Joint Research Centre

The Joint Research Centre (JRC) is the European Commission's science and knowledge service. The JRC aims to employ scientists to carry out research who in turn provide independent scientific advice and support to the EU policy in several areas, including agriculture and food security, environment and climate change, and also nuclear safety, security, innovation and growth. During 2021, it was ensured that further awareness about the JRC

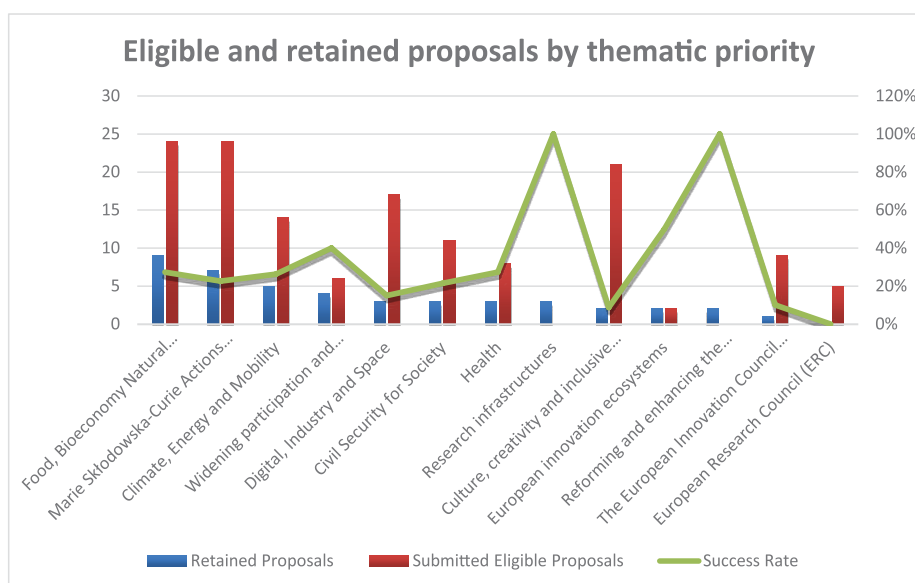


Figure 12: The number of the submitted and retained proposals by thematic priority and the related success rate

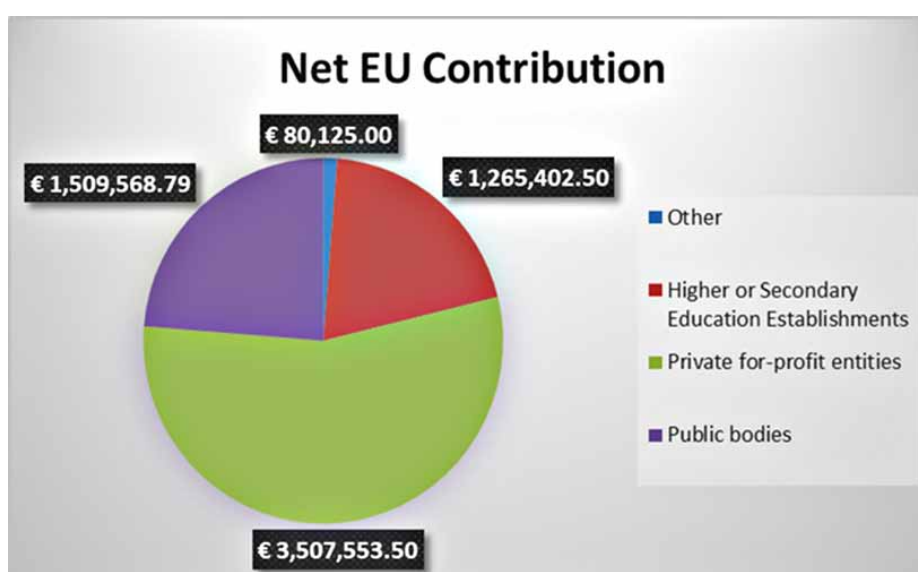


Figure 13: Malta's participation in HE between July 2021-2022

was raised, while also carrying out dissemination and outreach of the JRC workshops and activities to the stakeholders from the scientific community, industry but also public authorities.

4.10 Malta's participation in Horizon Europe (2021)

The first calls for Horizon Europe were launched in June 2021 and within one year (by July 2022), 185 proposals with 214 Maltese participants have been submitted for funding. Of these, 44 proposals have been retained for funding, making Malta's success rate nearly 24%. The current overall success rate for Horizon Europe is less than 16%.

28 of these 44 proposals have signed their grant agreement by the end of June 2022, amounting to EUR 6.36 million going to the participating Maltese entities. The graph below shows the submitted and retained proposals by thematic priority and the related success rate.

With the largest net EU contribution are the private entities which include Small and Medium Enterprises (SMEs). Subsequently, public bodies such as Ministries and public entities tap a considerable amount of funds, and a very close third, is the higher education institutions which are the University of Malta and the Malta College for Arts, Science and Technology (MCAST). The contribution from other Research Organisations and Non-governmental organisations is still insignificant.

4.11 National Support Schemes 2021

The FP Unit has been entrusted with national budget through which the following support schemes have been launched, aiming at increasing and strengthening the participation from local participants into the Horizon Europe programme:

4.11.1 PF2MT: Postdoctoral Fellowship Training Scheme for Incoming Postdocs to Malta

The Postdoctoral Fellowship Training Scheme for Incoming Postdocs to Malta (PF2MT) supports travel and accommodation expenses for experienced researchers willing to submit a proposal with a Maltese entity host (beneficiary) for the MSCA Postdoctoral Fellowship call. The support, in the form of a lump sum grant, is for the participation of the researchers in the MSCA

Postdoctoral Fellowship training to be held annually in Malta. The Scheme was open for applications for those experienced researchers who have already identified their supervisor and planned to apply for the 2021 call with a Maltese host entity. Due to the pandemic situation and the travel restrictions in place, the training was held online on 16th and 17th June with nearly 30 participants. The fellows from the 4 MSCA PF projects that were selected for funding from the 2021 call have attended the training.

4.11.2 The European Research Council (ERC) Support Scheme

The European Research Council (ERC) Support Scheme aims to strengthen the opportunities for talented researchers to obtain grants from the ERC for excellent and ground-breaking research based on researchers' own ideas within all areas of research. The Scheme is divided into two options:

i) Option A: Mentoring initiative - The mentoring initiative will support potential ERC applicants by helping to identify international experts to provide coaching and advice.

ii) Option B: Proposal writing trainings - The objective of this activity is to raise the capabilities of potential ERC candidates to prepare successful ERC grant applications through attending ERC proposal writing trainings (online or physical). During 2021, there were 2 calls for applications under the ERC Support Scheme, resulting in 3 proposals being supported - ERICA, GRASP and NanoPlato.

4.11.3 The European Innovation Council (EIC) Support Scheme

The EC launched the European Innovation Council (EIC) programs for innovative SMEs under HE. This recent creation supports all stages of technological development, be it initial stages of research (Pathfinder), technology development and demonstration (Transition), to commercialisation and scale up (Accelerator). It opens funding opportunities worth over €9.5 billion in 2021-2027 for breakthrough innovators to scale up and create new markets, with grant size up to €2.5 million and the possibility to access equity funding.

The FP Unit developed the EIC Support Scheme to help Maltese companies in developing high quality applications for the EIC Accelerator, which is highly competitive in HE due to its bottom-up approach and focus on private sector innovation.

The scheme is intended to support Malta-based SMEs (including Start-Ups), for both the short and full stage application of the EIC Accelerator. The applicants can apply for Option A and/or B (€5K and/or €2K business and pitch coaching for the short stage application), or Option C (€10K proposal development grant for the full stage application).

As the EIC program launched in March 2021, there was limited time and interest from Maltese SME participants. Despite several inquiries, no Maltese entities applied to the EIC Support Scheme in 2021.

With the EIC program becoming more familiar to potential participants, it is expected that 2022 will see more SMEs applying to these support funds, also considering significant diffusion efforts taken in 2021.

4.12 Events

During 2021, the FP unit organised a mix of physical and online events, including a series of 'Webinar Wednesdays'. In total 32 events were organised throughout the year of which 17 info sessions, trainings and workshops and 15 webinars. In addition, NCPs were invited to speak at 9 other events organised by third parties. The Horizon Europe Launch Event in Malta was organised on 17th February 2021. Due to the COVID pandemic, the event was held in a hybrid format. The event attracted over 500 participants who mostly joined us online to celebrate the start of this new programme. The event also included a presentation of the Horizon 2020 Awards which awarded Maltese beneficiaries for having participated in Horizon 2020 projects.



Figure 14: Photos taken during the events organised by MCST

Info sessions/trainings/ workshops

Event	Date	Mode of delivery
ERC Training	20/01/2021	Online
Horizon Europe Launch	17/02/2021	Hybrid
MECP Workshop	02/03/2021	Online
ERC proposal reading day	22/03/2021	Online
MECP training session	09/04/2021	Online
Webinar Wednesdays (15 webinars)	14/04/2021- 30/06/2021	Online
MSCA Postdoctoral Fellowship	16-17/06/2021	Online
Horizon Europe proposal writing day	08/07/2021	On site
MSCA proposal writing day	09/07/2021	On site
Cyber Security EU Funded Calls	24/06/2021	Online
Event in Gozo Indis	16/07/2021	On site
MCAST info session	18/08/2021	Online
ERC Support Scheme info session	02/09/2021	Online
Gender Equality Plans for Ministries	23/09/2021	Online
IPAS+ Info session	27/10/2021	Online
Horizon Europe for Cost	22/10/2021	On site
SME Chamber	14/12/2021	Online
EIT info event	15/12/2021	Online

Webinar Wednesdays'

Date	Webinar Content
Video	Novelties: daily rate; gender action plan; missions; open science
14-Apr-21	Digital Industry and Space
14-Apr-21	Culture, Creativity & Inclusive Society
21-Apr-21	Civil Security
21-Apr-21	Climate, Energy and Mobility
28-Apr-21	Health + Cancer Mission
28-Apr-21	Food, Bioeconomy and Environment
05-May-21	Widening + RI
05-May-21	Euratom
12-May-21	Funding for SMEs (EIC, EEN, TDP)
19-May-21	MSCA
26-May-21	ERC + EURAXESS
02-Jun-21	Funding and Tender Portal/ Networking/Building a consortium
09-Jun-21	An overview of financial issues in Horizon Europe
16-17 June	MSCA PF proposal writing training
30-Jun-21	Gender issues and GEPs
SME Chamber	14/12/2021
EIT info event	15/12/2021

Events organised by third parties

Events organised by third parties	Date	Mode of delivery
EIC4Fusion	14/01/2021	Online
Marine & Maritime; MSCA and Widening +ERA calls	19/02/2021	Online
Blue Med Final Conference	22-24/02/2021	Online
Grants week at University of Malta	05-09/07/2021	Hybrid
MSCA day at Grants week	06/07/2021	Hybrid
ERC day at Grants week	07/07/2021	Hybrid
UK delegation and Malta Gaming	04/11/2021	On site
SIGMA-MEDTech	18/11/2021	On site
MCAST fair	21-22/12/2021	On site

4.13 Projects

The FP Unit participates in a number of Horizon 2020 and Horizon Europe projects aimed at enhancing its day-to-day work. In 2021, the Unit was active in the following projects:

4.13.1 National Contact Point (NCP) Networks

There are several NCP networks that tackle the different thematic areas of Horizon Europe. The

networks facilitate trans-national cooperation between NCPs, identifying and sharing good practices and raising the general standard of support to programme applicants. The networks also enhance the competences of the NCPs, including helping the less experienced ones to acquire the know-how built up in other countries. This should contribute to increasing the quality of proposals submitted, including those from countries where success rates in Horizon 2020 were lower than average. In addition, the projects also provide important feedback on issues relating to programme planning, design and evaluation. The networks will also work on related missions

and partnerships. NCP Information Days, NCP trainings, brokerage events for potential applicants, appropriate tools and instruments to support NCPs and researchers are additional activities that are carried out in the networks. The FP unit is a beneficiary in several NCP network projects including; Net4SocietyHE (The Cluster 2 NCP network), Seren5 (The Cluster 3 NCP network), Greenet (The Cluster 5 NCP network), Care4Bio (The Cluster 6 NCP network), the NCP_WIDERA.NET (Widening Participation and strengthening the European Research area network), MSCA.NET (Marie Skłodowska-Curie Actions project) and RICH Europe (Research infrastructures project).

4.13.2 Enterprise Europe Network (EEN)

EEN is the largest support network for Small and Medium-sized Enterprises (SMEs) aimed at supporting businesses to innovate and grow on an international scale. Malta Enterprise, Malta Business Bureau, the Malta Chamber and MCST partnered to assist and accompany client SMEs from the identification of suitable partnering opportunities to focused advisory services, and to participation in events.

MCST, being the consortium member specialising in research and innovation programmes, aided a large number of SMEs with regard to financing opportunities for both start-up and scale up companies at EU and national levels.

In 2021, HE events were organised, presenting all the available SME opportunities. For example, an event was organised in collaboration with Malta Chamber of Commerce, and through 1 to 1 contacts, key stakeholders were made aware of Horizon Europe and EIC opportunities and support offered by MCST.

Two brokerage events were organised as a highlight: the “Re-Engineering Manufacturing & Retail for the New Norm” event took place virtually in April, bringing together industry, business experts, public bodies, services providers, and academia to interact, meet and assist in the COVID recovery phase, by realigning business activity, restructuring their operations and optimising the use of technology and identifying new markets.

The second event is “Digital Upgrading 2021” in collaboration with Advantage Austria and the Commercial Consulate of Austria in Italy, aimed to help companies to integrate digital technology practises through cross-border cooperation. 148 companies from Malta, Austria and Italy participated in 92 virtual B2B meetings.

4.13.3 Good practices in SME innovation support (GO-SME)

The GO-SME project responds to the need to provide financial support to SMEs and start-ups for the development of their innovative ideas. The aim of GO-SME is to share the best practices of several European research funding organisations and their mutual learning in designing programmes which would support SMEs and start-ups in an initial assessment of their innovative ideas so that they can progress to more advanced stages of innovation development.

With 15 participants from Czechia, Luxembourg, Germany, Hungary, and Portugal, among others, the added value of the project rests in its ambition to design national and regional programmes supporting innovative SMEs which could act as a pipeline for the EIC Accelerator and be part of the “plug-in mechanism”. At the same time, it can serve as a pilot project for a possible partnership co-funded from innovation ecosystems in the Horizon Europe programme.

In 2021, the consortium kicked off activities, and initiated the process of reviewing and providing feedback on national SME support schemes.

4.13.4 EURAXESS

EURAXESS Hubs: The objective of EURAXESS Hubs project is to develop and offer new services built on the results of previous EURAXESS projects. As a linked third party, MCST has dedicated budget for supporting Maltese start-up companies to attend study visits abroad. The start-up tour study visits will be implemented in 2022.

EURAXESS Portal: The FP Unit is also in charge of the EURAXESS Malta portal: www.euraxess.org.mt

EURAXESS is a unique pan-European initiative delivering information and support services to professional researchers. Backed by the EU, member states and associated countries, it supports researcher mobility and career development, while enhancing scientific collaboration between Europe and the world.

During 2021, the portal was continuously updated with new content, including news, job offers, funding opportunities, events, hosting offers and others.

4.14 IMPACT – Paradise Call

In 2020, MCST issued the Call for Ideas towards Start-Up Actions for a PlAStic fRee heAlthy meDIterranean SEa (PARADISE) to explore innovative ideas, methods and innovations that can bring changes in the manufacturing/imports/distribution, consumption patterns and life cycle of plastics. The aim was to spur innovation in this sector which could then be escalated further towards other funding programmes. Inspiration for the topic was drawn from the modern consumption patterns and use of plastics which demand fundamental changes, through which research and innovation (R&I), enabled and reinforced by policymaking, play a crucial role towards a circular economy.

The PARADISE call displayed the need of a broad range of collaborative research actions (including feasibility studies, economic models, etc.) to determine the feasibility and generation of potential ideas that may provide solutions for the local (Maltese) context and beyond (Pan-European and the Mediterranean Region) to address the plastic waste problem.

Through this call, research endeavours were supported in seeking to accelerate the activities that would lead to an enhanced project proposal based on any actions they wished to carry out locally and may include activities overseas.

One project was selected for funding through the open call. The project, “Identifying MicroPlastiC Hotspots in the Maltese WaTers - IMPACT”, was led by MCAST and kicked off in January 2021. All project activities were completed within the same year. The FP unit oversaw the administration and implementation of this project within the PARADISE Call.

IMPACT was launched to identify microplastic hotspots found around the Maltese islands: Malta, Gozo, and Comino, along with characterising this pollutant, thereby filling a vital knowledge gap. This project gave rise to a number of outcomes that will potentially pave the way to a larger scale study:

Outcome 1# - An infographic map of microplastic hotspots: This study provided an indication of potential microplastic hotspots in the Maltese waters.

Outcome 2# - A report highlighting the types of microplastics in the Maltese waters: This study served as a base-line study for the types of microplastics found in one type of environmental matrix.

Outcome 3# - An awareness raising campaign: Findings were disseminated to all stakeholders and were subsequently involved in the conversation for measures to help mitigate the microplastic content in the marine environment.

With the project in motion, it aided signposting to other entities, and enabled the consortium to engage and scope potential new partnerships to take Project IMPACT beyond a start-up action. The project's long-term sustainability will rest with its high potential for scale-up, and with ability for current partner entities to invest their own resources to ensure success.

The consortium that implemented the Project IMPACT brought together three diverse entities together with the aim of strengthening and promoting synergy. The coordinator being the Malta College of Arts, Science and Technology, whilst AquaBioTech Group and Zibel (eNGO) being the partners.

5. Corporate Services and Projects Directorate

5.1 EsploraNatura

Malta has a unique natural heritage, and this needs to be preserved. The Malta Council for Science and Technology is in the process of developing a new state-of-the-art natural history discovery centre, EsploraNatura. The new centre will be located in the eastern buildings of the former Royal Naval Hospital complex at Bighi, adjacent to Esplora. EsploraNatura will be the new home for our country's natural history collection, ensuring that it is well presented and open to everyone to both enjoy and study. It will have the character of a museum which collects, conserves, and displays artefacts, albeit doing so in a manner which benefits from modern methods of interpretation and display. Our ambition 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. It will ultimately serve to further popularise science amongst our children by complementing the experience already offered at Esplora - which is more focused on the physical sciences - by incorporating new interactive displays on the natural sciences. Our efforts are in tandem with the national drive to encourage greater uptake of STEM (science, technology, engineering and mathematics) subjects by Maltese students and to develop Malta's knowledge based economy.

The EsploraNatura project will see the restoration and preservation of the East wing of the former Royal Naval Hospital Bighi, helping to give people the opportunity to connect to the past, especially since the buildings represent a significant era in our nation's history. The project includes the transferring of the 1 million artefacts, currently housed in the Malta Museum of Natural History (Vilhena Palace, Mdina), to the new centre which will showcase our unique natural heritage. This will continue to give character to the area and give a further boost to our efforts at fostering a sense of community. Indeed, the rehousing of the current natural history collection and archives in a more suitable environment and location, enabling the proper interpretation of the collection to create a broader, more engaging and more contemporary visitor experience are the main objectives of the project. This will enable further local and international research and innovation through projects related to the natural history specimen collection - most of which is based on endemic species, some of which have been lost over time. EsploraNatura will also be a non-formal education facility that aims to inspire visitors and aids in knowledge and skills acquisition that would ultimately boost employability opportunities and encourage social inclusion. The centre will also raise awareness on the richness of local biodiversity and engage various audiences with aspects of

nature which are closely linked to the sustainable development goals, such as climate action, life on land and the environmental integrity of our seas. Preparations for the rehousing of the natural history collection as well as the designs and work on the building and exhibitions are well under way. The geological, topographical and archaeological surveys of the site were completed during 2021, and the Malta Council for Science and Technology is currently preparing a call for tenders for the architectural design and project management, and publish it by the end of next year. Upon the award of the architectural contract, the Malta Council for Science and Technology Corporate Services and Projects Directorate will be focusing its efforts towards the rehabilitation of the site such that it will continue aiding in the Grand Harbour regeneration by increasing the economic prosperity of the area as a tourist attraction, and for ensuring high standards for the facilities needed to preserve the natural history collection, and interactive content development.

5.2 Bighi Foreshore Restoration

In order to make best use of available resources and for obvious logistical reasons, owing to the proximity of the location of this project to the EsploraNatura project, the rehabilitation of the Bighi foreshore, made up of the north and east sides to the Bighi peninsula, including the restoration of the Bighi Wall and Bathhouses (the so-called igloos) and the creation of a continuous walkway all the way to Rinella Bay, has now been integrated into the EsploraNatura project.

5.3 Esplora Foreshore Rehabilitation

In 2021, the Malta Council for Science and Technology completed this project and now, a foreshore area of previously reclaimed land, hitherto very unsafe to access, lying on the west side of the Bighi peninsula beneath the Esplora complex, has been thoroughly embellished. The project included the construction of a pier, intended for the dis/embarcation of passengers arriving from the Grand Harbour.

5.4 Villa Bighi Garden Platform

A project consisting of the installation of a Garden Platform on the upper north side of the Bighi peninsula, with new resurfacing and flooring, new light fittings, an imposing steel structure, railings, and the necessary installation of services, was completed in 2021. This enables the Malta Council for Science and Technology to generate revenue to the entity through the organisation of events, thus being less of a burden on state finances.

6. Esplora Interactive Science Centre



Esplora is a state of the art visitor attraction, offering a unique experience that makes Science, Technology, Engineering and Mathematics (STEM) more appealing and relevant for visitors of all ages. Visitors are encouraged to explore, think and imagine by touching, feeling and using the exhibits in a hands-on, body-on, minds-on approach. Esplora also boasts a sprawling outdoor area and exhibits, a historical exhibition and the stunning views of Valletta and the Grand Harbour.

6.1 Communications Department

Marketing and Design

The pandemic made 2020 one of the toughest years ever and Esplora was eager for a better 2021. Looking back, 2021 was both productive and recompensing. With Esplora's doors being open again to the public, one of the main priorities was to effectively communicate the Centre's plans to all visitors. Not only in terms of opening hours and activities, but also explain all the health and safety protocols that were in place to make everyone feel safe and secure. Esplora's website and social media platforms were constantly being updated with all the latest information, and guidelines were also made available to visitors while at the science centre. The Science Centre continued producing online content for people to enjoy at their own time, but also started actively promoting visits to the science centre and its various activities and science shows through various paid media.

More energy and funding were directed towards digital platforms where the digital presence for Esplora increased significantly. Social media platforms are a way to connect with audiences and expose them to the Esplora brand. Invaluable insights started being gathered from past campaigns examining the progress made whilst providing key metrics for future campaigns. Although Facebook remained the main and most popular social media platform for the Esplora audiences, efforts were made to increase the Esplora presence on Instagram, TikTok and YouTube whilst also keeping the Esplora website and Google Business Page continuously updated with the latest information.

In 2021, Esplora reached an audience of 437,994 on Facebook with various types of content which included live shows, videos, webinars, photos and creative posts, achieving an increase of 43.2% from the previous year. During that same year, the page had a total of 37,115 visits and the number of engagements totalled 166,878. On the other hand, Esplora increased its presence on Instagram especially during the last few months of the year, with content that included stories, posts and reels. Audiences reached during 2021 amounted to 123,421

with a 36.4% increase from the previous year.

Esplora's 5th Anniversary was an important highlight in October 2021 and to celebrate this milestone the Centre produced a new brand video to truly capture the vision and cultivate a culture of scientific curiosity and creativity. This was widely shared online and on various local stations. Another milestone comprised of a strategic communications plan to promote Halloween and Christmas activities through various print adverts, TV adverts, online advertising and articles and the visitors' turnout was beyond the Centre's expectations.

Public Relations

At the start of the year, on the 15th January, a Memorandum of Understanding was signed with the Ministry for Senior Citizens and Active Ageing in STEM. The agreement seeks to encourage more older adults to visit Esplora as part of their social experience activities, stimulate mental activity, remaining active and to have a better quality of life. The first edition of the National STEM Awards was announced during a press event held at the end of January. Esplora then hosted these awards successfully in May, 2021. This event, which was livestreamed, not only celebrated the winners but was also a showcase in a beautiful setting of Villa Bighi.

International Day for girls and women in science was celebrated at Esplora. The Minister for Research, Innovation and the Co-ordination of post COVID-19 Strategy visited Esplora together with the Parliamentary Secretary for Civil Rights and Reforms, who spent time meeting women who engage in science at Esplora.

Esplora reached another important milestone in terms of its mission and vision addressing inclusivity. An agreement to increase accessibility for people with disability visiting Esplora was signed together with the Ministry for Inclusion and Social Wellbeing during a press event held on the 7th April. 21,000 people with an EU Disability Card can benefit from the agreement.

One of the main highlights remains the Esplora Bighi Foreshore which was inaugurated on a hot summer evening of Tuesday 3rd August by the Hon. Prime Minister of Malta, the Minister for Equality, Research and Innovation and MCST's Executive Chairman. Through an investment of Eur 2.5 million, the embellishment of the foreshore made it accessible to the public with a third entrance to Esplora through the Cot lift, by boat.

Another first for Esplora was the announcement of the Master of Science degree in STEM Education and Engagement (M. Sc.). A press conference was

held jointly between the Ministry for Research, Innovation and the Coordination of Post COVID-19 Strategy and the Ministry for Education. The signing was presided by both Ministries, where the legal representatives of MCST and The Institute for Education (IfE) co-signed an agreement on the 22nd June. Both entities jointly sponsored three candidates chosen from MCST staff to follow the M.Sc course.

On the 22nd of September Esplora Interactive Science Centre launched its Educational Programm for the scholastic year 2021-2022. A Memorandum of Understanding which includes the free transport scheme to and from Esplora for state schools as well as other initiatives which encourage at least one visit to Esplora per year, was signed.

The STEM Community Fund was launched via a press conference on Tuesday the 28th September. In order to narrow the gap between science and the community, Esplora is exploring and looking into ways and means for scientists to engage in a dialogue with local communities and raise awareness on the relevance of science to society.

On the 16th of November the results of the Erasmus+ project entitled 'Embracing the Sustainable Development Goals through creative Arts' were disseminated during a seminar to which the press was invited. The project's main aim was to innovate and raise more awareness about the sustainable development goals using three creative arts disciplines: dance, storytelling, and digital gaming. The completed resources are aimed at different age groups, starting from primary to post-secondary school students.

A new tree challenge app was launched on Wednesday 6th October. The app carrying the name of Spot the Tree Challenge is a Globe observer app for citizens to collect data from trees to help scientists compare and validate the data collected from satellites. The aim of this initiative undertaken by the Ministry for Education, Esplora and the U.S. Embassy was to contribute to addressing climate change.

Esplora partnered with the Ministry for Equality, Research and Innovation and procured 15 identical sets of Percussion Play Exhibits. The project was co-financed through the Permanent Secretariat's Office. An expression of interest was launched through the Ministry where local councils applied to host one set of exhibits within their community in a playground setting. The Percussion Play Exhibits can be effortlessly played and enjoyed by people of different ages and abilities to realise how truly gratifying it is to make music together with no need for musical background.

One of the greatest achievements for 2021 was that Esplora Science Centre was confirmed to be the host of the 2023 Ecsite Annual Conference.

The Conference is expected to welcome Science Professionals from nearly 50 different countries across the world, who will be delivering more than 85 sessions and key notes during June 15th - 17th.

Education Department

Due to COVID-19 restrictions, between January and September, Esplora reached out to engage school students mainly through its virtual programmes of activities. During this period, over 8400 students participated in one of Esplora's online sessions.

School visits only resumed during the last quarter of 2021, with strict regulations in place in order to contain the spread of COVID-19. Esplora had to limit the number of school groups and detailed daily schedule were prepared to follow COVID-19 regulations. Nevertheless, a total of 1800 students visited Esplora during this period. By virtue of an agreement with the Ministry for Education, State schools benefited from free transport to Esplora. Two educator packs (K1-K2 and YR3-YR4) were also developed and launched in 2021. Each pack included pre-visit and post-visit interdisciplinary activities which were directly linked to Esplora's exhibits and activities.

Outreach

Esplora reached out to people who preferred to engage with science from home through its website and social media platforms. The education team prepared science blogs, Sfera Kids activity books, science experiments for social media platforms, social media posts as well as research articles. Esplora, in collaboration with TVM, created a 13-episode science TV series in Maltese called **Gina u l-Esploraturi**. Each episode answering a question submitted by a kid through the use of experiments, demonstrations and problem-solving techniques. How do aeroplanes fly? How does a rainbow form? Where is the moon when it's daytime? Are some of the questions answered through this series.

Following its success, the series was renewed for another season, this time for 16 episodes, each approximately 20-30 minutes long. Between September and December of 2021, the team worked tirelessly on experimenting, designing and exploring different ways of making science, technology, engineering and mathematics (STEM) exciting and entertaining for local kids aged between 5 and 10 years old. Apart from writing the episodes, the team also trained with a coach on how best to deliver such content on screen and the first 6 episodes were filmed in December of 2021.

In September, Esplora participated in Science in the City, a yearly science and arts festival, with a science show called **A Changing Climate**. Also, the Science Centre partnered with the Malta International Contemporary Art Space (MICAS) for a two-day immersive sensorial experience in

Valletta's St George's Square from the 20th till the 24th of November 2021. MICAS in collaboration with the Valletta Cultural Agency (VCA) and Esplora Interactive Science Centre curated an experience where the public could actively participate. Esplora communicators facilitated guided visits at the MICAS Shadow Colour Pavilion in Valletta, which encouraged visitors to discover more about light, colour and shadow.

Continuous Professional Development Training

Two main trainings were developed and offered in 2021. The first training formed part of the Erasmus+ C-SDGs – Embracing the Sustainable Development Goals through Creative Arts. A week-long virtual training was organised together with different departments from Esplora. Some of the training sessions offered by the education team included: Tackling stereotypes at Esplora & in partner entities, inclusivity & accessibility including working with sensory audiences, and what makes a good science communicator?

The second training was the **STEM through Storytelling** course, which targeted YR 1- YR4 educators, and was designed to facilitate their understanding of how they can make use of stories to kindle an interest in STEM subjects amongst young children.

Thematic programme of activities

Themes ranged from Inspiring the **Next Generation**, **Exploring Earth and Beyond** to **Our Bodies Inside Out**. Each thematic programme included a range of onsite and online activities. However, an emphasis was placed on virtual opportunities to ensure that our reach was as wide as possible. Virtual workshops, meet the STEM professionals and webinars related to the different themes were organised throughout each period. Every theme was in line with Esplora's vision and mission, through the organisation of various activities and initiatives, namely:

- Inspiring the Next Generation - One of the key virtual workshops offered during this period was Catch Them Young, a discussion-based workshop which delved into STEM stereotypes and skills which STEM professionals require to carry out their work. Moreover, more than 100 students participating in a virtual Erasmus+ student exchange also had the opportunity to meet and ask questions to local STEM professionals, including a researcher who specialises in Light Pollution and a Radiographer. For Esplora's adult audience, a virtual webinar was organised to discuss the Green Economy together with experts in the fields of Research, Energy, Investment and Enterprise. The Science Café highlighted ways in which Malta is tackling this, as well as related future plans and best practices in the field.

- Exploring Earth and Beyond - Together with project partners from Project Maleth, 8 virtual webinars were organised for middle and secondary school students. Participating students had the opportunity to meet biomedical scientists and to learn about how spaceflight biology and microgravity can pave the way for better treatments. 2 virtual tours of the facilities at European Space Research and Technology Centre (ESTEC) were also organised for students aged 14 years and older to discover the world of space, technology and innovation. For our family audiences, a live discussion with marine biologists was organised, together with the Malta National Aquarium, to inspire children to follow a career in marine biology. Other activities included a virtual Eggstronaut Challenge designed to inspire families to work together to build a spacecraft capable of landing an astronaut safely back on Earth, which reached more than 45K views. Esplora also teamed up with GLOBE Malta and the U.S. Embassy, Malta for a citizen science challenge that encouraged families and school students to spot trees around the Maltese Islands and to then map and measure their height using NASA's GLOBE Observer App.

- Our Bodies Inside Out - During these thematic months, Esplora offered a variety of virtual and physical activities relating to physical and mental health. Activities included a new science show for 2021 called **Superhero in You** which was designed to showcase scientists and engineers as being superheroes in their own right, helping to make people's lives better. Other activities included hands-on activities related to the science of sports, a mental health exhibition board which invited visitors to write their perspectives on different mental health disorders, a poster exhibition showcasing six of our body system and a webinar in collaboration with Richmond Foundation focusing on the effects of the COVID-19 pandemic on our mental health. Esplora also collaborated with Ride the Feeling author Auntie Sab and the MyMama team to offer a Ride the Feeling Storytelling Workshop which saw kids aged 5 to 8 years enjoy a storytelling session, whilst at the same time, their guardians were able to attend to a talk about how to speak about feelings with children.

Events

During the periods when Esplora Interactive Science Centre was open for the public, physical activities linked to traditional local holidays were offered to increase visitors' science capital and to raise awareness on the relevance of science to their everyday lives and experiences. The education team had to think outside the box to find ways to keep on cultivating a culture of scientific curiosity and is proud to have managed to offer a programme of activities linked to **Carnival**, **Halloween** and **Christmas** despite the challenges faced with the COVID-19 situation and regulations.

Operations and Sales Department

Footfall Statistics

Monthly Footfall Reporting: 2021												
	January	February	March	April	May	June	July	August	September	October	November	December
	Saturday 1st - Sunday 31st	Tuesday 1st - Sunday 28th	Tuesday 1st - Wednesday 31st	Thursday 1st - Friday 30th	Saturday 1st - Sunday 30th	Tuesday 1st - Wednesday 30th	Thursday 1st - Saturday 31st	Sunday 1st - Tuesday 31st	Wednesday 1st - Thursday 30th	Friday 1st - Sunday 31st	Tuesday 1st - Sunday 30th	Wednesday 1st - Friday 31st
Number of Shows Delivered:												
Science Shows	102	102	32	34	122	98	119	154	94	78	107	123
Workshops	29	44	34	33	32	10	10	11	1	6	31	13
Planetarium Film Shows	69	62	N/A	N/A	N/A	48	95	67	93	71	80	87
Actual number of visitors who entered for Shows (monthly):												
Science Shows	1,513	769	929	894	1,876	1,422	1,849	2,415	1,828	1,761	2,114	1,756
Workshops	99	319	994	959	838	280	91	70	15	58	382	96
Planetarium Film Shows	1,503	641	N/A	N/A	N/A	513	940	915	1,310	1,135	1,310	1,054
Tourists *	267	146	N/A	0	105	131	516	691	381	1,021	529	490
Monthly Footfall: (Total number of visitors + online sessions)												
Students (State & Non-State Schools)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,037	723
Language Schools	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Online Sessions	N/A	203	1,923	1,787	2,410	1,018	683	374	15	N/A	N/A	N/A
Adults (16+)	1,648	946	N/A	10	838	1,103	1,763	2,354	2,785	3,028	2,660	1,791
Children (0-15 years)	1,482	813	N/A	13	810	1,024	1,704	2,154	2,725	2,150	2,176	1,266
Seniors	68	57	N/A	0	54	48	109	174	283	254	207	364
Disability Card Holders	11	9	N/A	0	14	22	14	27	31	70	59	51
Individuals	0	0	N/A	0	0	0	0	0	0	0	0	0
Complimentary	0	0	N/A	0	0	0	82	62	39	355	712	480
Others	50	111	N/A	0	15	162	319	711	567	512	512	502
Total Footfall per month:	3,259	2,158	1,923	1,810	4,341	3,377	4,764	5,816	6,446	6,349	7,363	5,127
* Tourists: Already counted for in the monthly footfall since data is extracted from the Visitors' Nationalities and Marketing Data Logbook												

RNH Bighi History

The imposing location of the Bighi Promontory pertains varied and wide historical connections, not only to the surrounding Grand Harbour, but also to the perimeter of the former Royal Naval Hospital grounds, both of which undoubtedly share an extensive maritime theme.

History Tours

Esplora employs a licenced tourist guide and a student tourist guide, which enables the Centre to offer in-house History Tours upon request. These tours, developed in 2021, are aimed at individuals who wish to have an alternative experience, beyond the Science Centre, but within Bighi premises. The Cot Lift is open as a secondary reception, whereby visitors may relive history by accessing Esplora from sea level. Certain signage was also put in place and a self-led history tour brochure was developed.

A trail, in the form of a self-led history tour, was created as an aid to understand a number of stops

including background of the villa going back to the origins by Fra Giovanni Bichi, the use of certain buildings such as the Zymotic Block for infectious diseases and the surgery halls, snippets about famous personalities and other curious facts, a mention of the intriguing graffiti carved into the limestone columned terraces, the surrounding thalassio-therapeutic baths along the shore and a mention of the visible shrapnel damage on the facade overlooking the harbour. This brochure can be found at the Reception Desks as well as online through the esplora website.

RNH Bighi Through Communities' Stories

In September 2021, Esplora kick-started a STEAM project collaboration with Kristina Borg, a freelance visual and socially engaged artist, to tap into funds through Arts Council Malta. This project ranked first place out of 47 eligible applications.

RNH Bighi Through Communities' Stories is a research-based proposal that aims to shine a light



on the ex-Royal Naval Hospital (RNH) Bighi. The aim of this research is to focus on the holistic context, taking into consideration the historical, architectural and design function of the place, but moreover its social and cultural function for the communities. The context thus becomes the message, the protagonist and the primary focus of study.

The project team - including artist Kristina Borg, Charmaine Bugeja as Project Manager from Esplora, heritage consultant Christian Mifsud, and filmmaker Matthew Calleja from Videocafe - plans to adopt a transdisciplinary research methodology. The project timeline is May 2022 - June 2023. The total estimated budget for this research project amounts to €41,000, half of which are covered by funds from Arts Council Malta.

IseeMalta Collaboration

An agreement was reached with IseeMalta, a brand managed by Captain Morgan Operators Ltd., to operate several stops by the Bighi Quay on a daily basis. This ferry departs from Sliema, takes on a guided Harbour Cruise and stops in Kalkara before returning back to Marsamxett Harbour. Moreover, the same company which operates a double deck bus schedule along the Maltese Islands, also has Esplora as one of the stops for the Southern route.

EsploraPlanetarium

During the course of the year, the Planetarium has further expanded its library by adding a new film 'Europe to the starts' to its offering, in addition to finalising the procurement of 'Legends of the night sky - Perseus and Andromeda'.

These new additions served to broaden the range of shows catering for both younger and older age groups interested in astronomy and space science. On the front of continued professional development, a comprehensive training was held for the planetarium admin team to gain in depth knowledge of the updated Uniview 3.0 software, used during planetarium shows. To enable our commitment towards inclusivity the planetarium was equipped with a Hearing Loop System for the benefit of people making use of hearing aids.

An extensive study has been carried out on the Heat Transfer mechanics inside the Dome and an important Hardware Service Agreement was signed for the year 2021-22. Amongst other different events, the planetarium hosted Teatru Malta performances of 'Il-Qtates ta' max-Xatt', as well as a temporary exhibition detailing the NASA Perseverance Mars Rover landing in the early month of the year.

6.2 STEM Engagement Unit

The STEM Engagement Team, together with all National STEM Engagement Working Group members, continued its work on raising awareness on the importance of STEM subjects and careers for employability, active citizenship, personal growth and social inclusion.

The pandemic made it impossible to host a physical STEM Career Expo similar to that of 2020 and a different approach had been adopted to mitigate the viral spread while still honouring STEM careers and offering some materials aimed at keeping the children's natural curiosity about future occupations alive. From 22nd January to 31st March 2021, Esplora hosted a poster exhibition featuring sixteen STEM professionals at their place of work. Interviews were also conducted with STEM professionals and a booklet and a short film were produced and shared with all primary schools to encourage educators to continue exposing STEM subjects and STEM occupations at such early stages of education.

In July 2021, the STEM Engagement team in collaboration with the Working Group hosted Esplora's first edition of the National STEM Awards aimed at commemorating the contribution of Maltese and Malta-based STEM professionals to education, the economy and society at large. For this edition, six STEM professionals and four STEM sectors were awarded a prize after a thorough evaluation process.

The evaluation process was based on a set of criteria formulated by the STEM Engagement Working Group members. After the success of the 2021 edition, Esplora aims to run this initiative biennially with the aim of creating local role models and combating science-related stereotypes.

In September 2021, STEM Engagement teamed up with Programme Development at Esplora to prepare the content for the second edition of the course targeting kindergarten and early primary school educators on Teaching STEM through Storytelling. This course, supported by Arts Council Malta, focused on the art of telling stories in a way that stimulates creative thinking and fosters interest in scientific concepts.

An external collaborator was also invited to introduce educators to theatrical techniques that contribute to making classroom storytelling more captivating. Within the same month, the STEM Engagement team in collaboration with the STEM Engagement Working Group launched the €24,000 STEM Community Fund, a grant scheme aimed at narrowing the gap between science and the community. Four projects benefitted from such a grant.

6.3 Administration and Projects Unit

The Science Centre values and supports projects that encourage environment-conscious initiatives. Esplora's aim has always been that of generating awareness on sustainability and the need to protect our environment and climate. The Science Centre strongly portrayed this message through artistic performances, exhibitions, and theatrical productions for all ages.

On the 12th and 13th of June 2021, Esplora embarked on a theatrical journey brought by Toi Toi: Teatru Manoel Education Programme. The story behind Climate Revolution live interactive theatrical performance was that of climate change. The performance broadened the audiences' perspective to better understand the so talked about climate change, and how one can contribute to help the environment. During the production, the audience witnessed how Gaia, the Earth herself, was so affected by the severity of the climate crisis that she appeared as a human to convince a careless teenage boy to lead a Climate Revolution to clear discarded plastic from the land and sea. The age range for this performance was 8-11yrs. Both available performances spread on two days were fully booked, and the feedback was very positive.



Esplora's work in the field of STEAM led the Science Centre to immerse in exhibiting related works. In June 2021, Esplora collaborated with Hermine Sammut, an Austrian Malta-based artist from CONNECT2GOZO and Matthew Turner on an exhibition, with the title of 'Art in Waste'.

The two artists have created works of art from waste collected around the country after cleaning up beaches and fields. Through sculptures and art pieces on canvas the Artists sought to transmit the message of giving a new use, purpose and place to things that would otherwise become waste. The Art in Waste exhibition came to an end on the 1st of August 2021. A press event was held on the 26th June to inaugurate the exhibition. The event was held under the patronage of the Austrian Embassy.



During the month of November 2021, through the Esplora Planetarium, the unit partnered with Teatru Malta, Malta's National Theatre company, and hosted a Puppet Children's Opera by the name of 'Qtates ta' max-Xatt'. Based on the book of Clare Azzopardi, Il-Qtates ta' max-Xatt invited audiences, young and old, to indulge in the devised interpretation of a story that explores the understanding behind losing loved ones, through the cheerful mediums of puppetry and songs. A total of 255 Yr2 and Yr5 students have attended this show.

Esplora shall continue taking its vision and mission forward in the coming years, through:

- A dedicated workforce seeking to continue striving for innovation and excellence,
- Increasing the investment in networking, outreach, and collaborations,
- Updating of the Centre's education programmes, exhibition spaces and STEM Engagement initiatives,
- Fostering inclusive, accessible sustainable, and innovative values and practices,
- Widening its audience-base, and
- Developing a centre-wide strategy for effective operations and key performance indicators.



7. Malta Council for Science and Technology Annual Report For the year ended 31 December 2021

MALTA COUNCIL FOR SCIENCE AND TECHNOLOGY Annual Report and Financial Statements - 31 December 2021

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Executive Chairman's Report

The Executive Chairman presents his report and the audited financial statements of the Malta Council for Science and Technology, 'the Council' for the year ended 31 December 2021.

Principal activities

Malta Council for Science and Technology was set up by the Prime Minister on behalf of the Government of Malta as a Public Foundation. The Council's principal activity consists of the administration of science and technology in Malta.

Review of the business

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

Results and dividends

The statement of profit or loss and other comprehensive income is set out on page 4.

Post balance sheet events

There were no adjusting or other significant non-adjusting events between the end of the reporting year and the date of authorisation by the Council members.

Council members

The members of the Council who held office during the year ended 31 December 2021 and as at the date of this report are:

Executive Chairman:	Dr. Jeffrey Pullicino Orlando
Deputy Chairperson:	Mr. David Matrenza (acted as Deputy chairman up till 17 June 2022) Dr. Dianne Galea (appointed on 17 June 2022)
Secretary:	Dr. Vincent Micallef
Board Members:	Prof. Ing. Saviour Zammit Ms. Abigail Mamo Ms. Marisa Xuereb Mr. Godwin Mifsud Dr. Ing. Alex Rizzo Dr. Ian Ellul Ms Carmen Walls (appointed on 17 June 2022) Mr David Matrenza Ms. Joanne Grima Ms. Nadia Pace Mr. Mark Borg Ms. Nadia Vassallo Dr. Chris Vella Dr Joseph Borg (resigned on 17 June 2022)

Executive Chairman's Report – continued

Council members – continued

Except for the Executive Chairman and the members as indicated, all Council Members were elected on 17 June 2022 for a term of 2 years.

Statement of Executive Chairman's responsibilities

The Council is required by the Charter Document of the Foundation to prepare financial statements which give a true and fair view of the state of affairs of the Foundation and of the profit or loss of the Foundation for that period.

In preparing the financial statements, the Council members are responsible for ensuring that:

- appropriate accounting policies have been consistently applied and supported by reasonable and prudent judgments and estimates;
- the financial statements have been drawn up in accordance with International Financial Reporting Standards as adopted by the European Union;
- the financial statements are prepared on a going concern basis unless it is inappropriate to presume that the Council will continue in business as a going concern.

The Council members are also 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. This responsibility includes designing, implementing, and maintaining such internal controls, as the Council determines the necessary procedures to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error. They are also responsible for safeguarding the assets of the Council, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Financial reporting framework

The Council members have resolved to prepare the Council's financial statements for the year ended 31 December 2021 in accordance with International Financial Reporting Standards as adopted by the European Union.

Auditor

The auditor, Equis Assurance Limited, has intimated its willingness to continue in office and a resolution to reappoint them as auditor of the Foundation will be proposed at the forthcoming Annual General Meeting.

Executive Chairman's Report – continued

Registered address:

The registered office of the Council is: Malta Council for Science and Technology, "Villa Bighi", Kalkara, Malta.

By Order of the Council



Dr. Jeffrey Pullicino Orlando
Executive Chairman

12 October 2022

Statement of Profit or Loss and Other Comprehensive Income

		Year ended 31 December	
	Notes	2021 €	2020 €
Revenue	2	10,002,157	8,331,534
Direct costs		(4,378,322)	(3,350,157)
Gross profit		5,623,835	4,981,377
Administrative expenses		(7,071,788)	(6,403,189)
Operating loss	3	(1,447,953)	(1,421,812)
Investment income	5	13	948
Other income	6	1,276,858	1,346,752
Total comprehensive loss for the financial year		(171,082)	(74,112)

The accounting policies and explanatory notes on pages 8 to 25 form an integral part of the financial statements.

Statement of Financial Position

		As at 31 December	
	Notes	2021 €	2020 €
ASSETS			
Non-current assets			
Intangible assets	8	959,904	790,380
Property, plant and equipment	9	16,501,400	16,322,539
Investment in subsidiary	10	1,500	1,500
		<u>17,462,804</u>	<u>17,114,419</u>
Current assets			
Trade and other receivables	11	885,158	1,173,276
Cash and cash equivalents	15	6,258,187	5,385,986
		<u>7,143,345</u>	<u>6,559,262</u>
Total assets		<u>24,606,149</u>	<u>23,673,681</u>
EQUITY AND LIABILITIES			
Equity			
Accumulated losses	12	(787,026)	(615,944)
LIABILITIES			
Non-current liabilities			
Trade and other payables	13	21,015,871	21,058,406
Current liabilities			
Trade and other payables	13	4,377,304	3,231,219
Total equity and liabilities		<u>24,606,149</u>	<u>23,673,681</u>

The accounting policies and explanatory notes on pages 8 to 25 form an integral part of the financial statements.

The financial statements on pages 4 to 25 were approved and authorised for issue by the Council members on 12 October 2022 and were signed on its behalf by:


Dr. Jeffrey Pullicino Orlando
Executive Chairman

Statement of Changes in Equity

	Accumulated losses €	Total €
Balance at 1 January 2020	(541,832)	(541,832)
Comprehensive loss		
Total comprehensive loss for the financial year	(74,112)	(74,112)
Balance at 31 December 2020	(615,944)	(615,944)
Balance at 1 January 2021	(615,944)	(615,944)
Comprehensive loss		
Total comprehensive loss for the financial year	(171,082)	(171,082)
Balance at 31 December 2021	(787,026)	(787,026)

The accounting policies and explanatory notes on pages 8 to 25 form an integral part of the financial statements.

Statement of Cash Flows

		Year ended 31 December	
	Notes	2021 €	2020 €
Operating activities			
Cash generated from/ (used in) operating activities	14	2,591,293	(691,682)
Investment income		13	948
Net cash generated from/ (used in) operating activities		2,591,306	(690,734)
Investing activities			
Acquisition of property, plant and equipment	9	(1,406,887)	(764,877)
Acquisition of intangible assets	8	(174,310)	(239,083)
Payments/advances to subsidiary	11	(96,200)	(102,568)
Net cash used in investing activities		(1,677,397)	(1,106,528)
Financing activities			
Movement in government grants		(42,535)	332,402
Net cash (used in)/generated from financing activities		(42,535)	332,402
Movement in cash and cash equivalents		871,374	(1,464,860)
Cash and cash equivalents at beginning of year		5,385,986	6,850,846
Cash and cash equivalents at end of year	15	6,257,360	5,385,986

Notes to the Financial Statements

1 Accounting policies

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

a. Basis of preparation

These financial statements are prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union (EU).

The financial statements are prepared under the historical cost convention, as explained in the accounting policies below. Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

i. Use of estimates and judgements

In preparing the financial statements, the Council is required to make judgements, estimates and assumptions that affect reported income, expenses, assets, liabilities and disclosure of contingent assets and liabilities. Use of available information and application of judgment are inherent in the formation of estimates. Actual results in the future could differ from such estimates and the differences may be material to the financial statements. These estimates are reviewed on a regular basis and, if a change is needed, it is accounted for in the year the changes become known. Except for the below, in the opinion of the Council, the accounting estimates, assumptions and judgements made in the course of preparing these financial statements are not difficult, subjective or complex to a degree which would warrant their description as significant in terms of the requirements of IAS 1 (revised) - 'Presentation of financial statements'.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities within the next financial year, are described below.

ii. New and amended IFRS Standards that are effective for the current year

In 2021, the Council adopted amendments to existing standards that are mandatory for the Council's accounting year beginning on 1 January 2021. The adoption of these revisions to the requirements of IFRSs as adopted by the EU did not result in changes to the Council's accounting policies impacting the financial performance and position. Furthermore, the Foundation did not adopt amendments to IFRS 16 issued in March 2021 in relation to COVID-19-related rent concessions.

1 Accounting policies – continued

a. Basis of preparation – continued

iii. New and revised IFRS Standards in issue but not yet effective

At the date of authorisation of these financial statements, the Council has not applied the following new and revised IFRS Standards that have been issued but are not yet effective had not yet been adopted by the EU:

IFRS 17 (including the June 2020 amendments to IFRS 17)	<i>Insurance Contracts</i>
Amendments to IFRS 10 and IAS 28	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture</i>
Amendments to IAS 1	<i>Classification of Liabilities as Current and Non-current</i>
Amendments to IFRS 3	<i>Reference to the Conceptual Framework</i>
Amendments to IAS 16	<i>Property, Plant and Equipment – Proceeds before Intended Use</i>
Amendments to IAS 37	<i>Onerous Contracts – Cost of Fulfilling a Contract</i>
Annual Improvements to IFRS Standards 2018-2020 Cycle	<i>Amendments to IFRS 1 First-time Adoption of International Financial Reporting Standards, IFRS 9 Financial Instruments, IFRS 16 Leases, and IAS 41 Agriculture</i>
Amendments to IAS 1 and IFRS Practice Statement 2	<i>Disclosure of Accounting Policies</i>
Amendments to IAS 8	<i>Definition of Accounting Estimates</i>
Amendments to IAS 12	<i>Deferred Tax related to Assets and Liabilities arising from a Single Transaction</i>

The Council members do not expect that the adoption of the Standards listed above will have a material impact on the financial statements of the Council in future years.

1 Accounting policies – continued

b. Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable for services provided in the normal course of business, net of value-added tax and discounts, where applicable.

To determine whether to recognise revenue, the Council follows a 5-step process:

- i. Identifying the contract with a customer
- ii. Identifying the performance obligations
- iii. Determining the transaction price
- iv. Allocating the transaction price to the performance obligations
- v. Recognising revenue when/as performance obligations are satisfied.

The Council recognises revenue from the following major sources:

- i. Government grants and subventions
- ii. Rental income
- iii. Sponsorships

c. Foreign currencies

(i) Functional and presentation currency

Items included in the Council's financial statements are measured using the currency of the primary economic environment in which the entity operates. The Euro is the Council's functional and presentation currency.

d. Intangible assets

Intangible assets comprise of internally generated research and development costs.

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

- 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.

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.

Where an indication of impairment exists, in that the carrying amount of an intangible asset is greater than its estimated recoverable amount, a charge is made to write down the value of the asset to its estimated recoverable amount.

1 Accounting policies – continued

e. Property, plant and equipment

Property, plant and equipment, comprising Improvements to buildings, National Interactive Science Centre, office equipment, Soft furnishings, Technical equipment, furniture, fixture and fittings, motor vehicles, computer hardware and software, are initially recorded at cost and are subsequently stated at cost less depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of items.

Subsequent costs are included in the asset's carrying amount, or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Council, and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the statement of profit or loss and other comprehensive income during the financial year in which they are incurred.

Depreciation is calculated on the straight-line method to allocate the cost of the assets to their residual values over their estimated useful lives as follows:

▪ 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%

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting year.

Gains and losses on disposal of property, plant and equipment are determined by comparing proceeds with the carrying amount, and are taken into account in determining operating profit.

An asset's carrying amount is written down immediately to its recoverable amount if its carrying amount is greater than its estimated recoverable amount (Accounting policy (g)).

1 Accounting policies – continued

f. Investments in subsidiaries

In the Council's financial statements, investments in subsidiaries are accounted for by the cost method of accounting. The dividend income from such investments is included in the statement of profit or loss and other comprehensive income in the accounting year in which the Council's rights to receive payment of any dividend is established. The Council gathers objective evidence that an investment is impaired. On disposal of an investment, the difference between the net disposal proceeds and the carrying amount is charged or credited to the statement of profit or loss and other comprehensive income.

g. Impairment of non-financial assets

Assets that are subject to amortisation or depreciation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

h. Financial assets

(a) Initial recognition and measurement

Financial assets are classified, at initial recognition either at amortised cost, fair value through other comprehensive income ("OCI") or fair value through profit or loss.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Council's business model for managing them. With the exception of trade receivables that do not contain a significant financing component, or for which the Council has applied the practical expedient, the Council initially measures a financial asset at its fair value.

Trade and other receivables that do not contain a significant financing component or for which the Council has applied the practical expedient are measured at the transaction price determined under IFRS 15.

In order for a financial asset to be classified and measured at amortised cost or fair value through OCI, it needs to give rise to cash flows that are 'solely payments of principal and interest (SPPI)' on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Council's business model for managing financial assets refer to how it manages its financial assets in order to generate cash flows. The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

1 Accounting policies – continued

i. Financial assets – continued

(a) Subsequent measurement

For purposes of subsequent measurement, financial assets are classified in four categories:

- a) Financial assets at amortised cost;
- b) Financial assets at fair value through OCI with recycling of cumulative gains and losses (debt instruments);
- c) Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments);
- d) Financial assets at fair value through profit or loss

The Council does not hold any financial assets at fair value through OCI, financial assets designated at fair value through OCI and financial assets at fair value through profit or loss.

(b) Financial assets at amortised cost

The Council measures financial assets at amortised cost if both of the following conditions are met:

- a) The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows; and
- b) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at amortised cost are subsequently measured using the effective interest rate ("EIR") method and are subject to impairment. Gains and losses are recognised in profit or loss when the asset is derecognised, modified or impaired.

The Council's financial assets at amortised cost are trade and other receivables which are expected to be received within 1 year from year end.

(c) Derecognition

A financial asset is primarily derecognised when:

- a) The rights to receive cash flows from the asset have expired; or
- b) The Council has transferred its rights to receive cash flows from the asset, or has assumed an obligation to pay the received cash flows in full without material delay to a third party and either the Council has transferred substantially all the risks and rewards of the asset or the Council has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

1 Accounting policies – continued

i. Financial assets – continued

(d) Impairment

The Council recognises an allowance for expected credit losses ("ECLs") for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Council expect to receive, discounted at an approximate of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

For trade and other receivables, the Council applies a simplified approach to calculating ECLs. Therefore, the Council does not track changes in credit risk but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Council has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to debtors and the economic environment.

The Council considers a financial asset in default when contractual payments are ninety (90) days past due. However, in certain cases, the Council may also consider a financial asset to be in default when internal or external information indicates that the Council is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Council. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

j. Trade and other payables

Trade and other payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

k. Cash and cash equivalents

Cash and cash equivalents are carried in the statement of financial position at face value. For the purposes of the statement of cash flows, cash and cash equivalents comprise cash in hand and deposits held at calls with banks.

l. Employee benefits

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

1 Accounting policies – continued

m. Related parties

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Parties are also considered to be related if they are subject to common control or common significant influence. Related parties may be individuals or corporate entities. Related party accounts are carried at cost, net of any impairment charge.

2 Revenue

Revenue is analysed as follows:

	2021 €	2020 €
Project income	4,378,322	3,350,174
Government subventions	5,300,000	4,890,000
Esplora Interactive Science Centre income	323,835	91,360
	<u>10,002,157</u>	<u>8,331,534</u>

3 Operating loss

Operating loss for the year has been arrived after charging:

	2021 €	2020 €
Depreciation of property, plant and equipment (Note 9)	1,228,026	1,368,913
Amortisation of intangible assets (Note 8)	4,786	118,633
Staff costs	4,403,773	3,918,155
Auditor's remuneration	5,000	3,500
Direct costs	4,378,322	3,350,157
Other expenses	1,430,203	993,988
Total direct costs and administrative expenses	<u>11,450,110</u>	<u>9,753,346</u>

Auditor's fees

Fees charged by the auditor for the services rendered during the financial years ended 31 December 2021 and 2020 relate to the following:

	2021 €	2020 €
Annual statutory audit	<u>5,000</u>	<u>3,500</u>

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4 Staff cost

	2021 €	2020 €
Wages and salaries	4,110,601	3,642,669
Social security costs	293,172	275,486
	<u>4,403,773</u>	<u>3,918,155</u>

Average number of full-time equivalents employed by the Council during the year were as follows:

	2021 No.	2020 No.
Management and administration	<u>153</u>	<u>157</u>

5 Investment Income

Investment income is analysed as follows:

	2021 €	2020 €
Interest receivable on bank balances	<u>13</u>	<u>948</u>

6 Other Income

	2021 €	2020 €
Government grants	1,066,251	1,212,842
Other income	35,661	57,402
Agency income	92,946	37,508
Management fees	82,000	39,000
	<u>1,276,858</u>	<u>1,346,752</u>

7 Income tax

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

8 Intangible assets

	Pre-trading Esplora Natura €	Pre-trading Esplora Expenses €	Total €
At 1 January 2020			
Cost	171,630	775,617	947,247
Accumulated amortisation	-	(277,318)	(277,318)
Net book amount	171,630	498,299	669,929
Movement for the year ended 31 December 2020			
Opening net book amount	171,630	498,299	669,929
Additions	239,083	-	239,083
Amortisation charge	(41,071)	(77,561)	(118,632)
Closing net book amount	369,642	420,738	790,380
At 31 December 2020			
Cost	410,713	775,617	1,186,330
Accumulated amortisation	(41,071)	(354,879)	(395,950)
Net book amount	369,642	420,738	790,380
Movement for the year ended 31 December 2021			
Opening net book amount	369,642	420,738	790,380
Additions	174,310	-	174,310
Amortisation charge	-	(45,857)	(45,857)
Reversal of prior year amortisation charge	41,071	-	41,071
Closing net book amount	585,023	374,881	959,904
At 31 December 2021			
Cost	585,023	775,617	1,360,640
Accumulated amortisation	-	(400,736)	(400,736)
Net book amount	585,023	374,881	959,904

An amortisation charge of €4,786 (2020: €118,632) is included in administrative expenses.

As at 31 December 2021, intangible assets which were not yet available for use amounted to €585,023 (2020: €410,713).

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 €
At 1 January 2020									
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)
Net book amount	129,560	16,536,280	4,716	13,465	-	89,539	-	153,016	16,926,576
Movement for the year ended 31 December 2020									
Opening net book amount	129,560	16,536,280	4,716	13,465	-	89,539	-	153,016	16,926,576
Additions	59,534	605,174	-	2,974	-	43,443	-	53,752	764,877
Depreciation charge	(22,196)	(1,212,841)	(708)	(2,212)	-	(25,030)	-	(105,927)	(1,368,914)
Closing net book amount	166,898	15,928,613	4,008	14,227	-	107,952	-	100,841	16,322,539
At 31 December 2020									
Cost	504,850	21,033,062	54,082	40,802	87,561	376,096	8,852	712,838	22,817,943
Accumulated depreciation	(337,752)	(5,104,449)	(50,074)	(26,575)	(87,561)	(268,144)	(8,852)	(611,997)	(6,495,404)
Net book amount	166,898	15,928,613	4,008	14,227	-	107,952	-	100,841	16,322,539

9 Property, plant and equipment - continued

	Improvement to buildings €	National Interactive Science Centre €	Office equipment €	Soft Furnishings €	Technical equipment €	Furniture, fixtures and fittings €	Motor vehicles €	Computer hardware and software €	Total €
Movement for the year ended 31 December 2021									
Opening net book amount	166,898	15,928,613	4,008	14,227	-	107,952	-	100,841	16,322,539
Additions	339,451	1,013,589	262	239	-	128	-	53,218	1,406,887
Depreciation charge	(52,992)	(1,066,253)	(697)	(1,785)	-	(16,262)	-	(90,037)	(1,228,026)
Closing net book amount	453,357	15,875,949	3,573	12,681	-	91,818	-	64,022	16,501,400
At 31 December 2021									
Cost	844,101	22,046,651	54,344	41,041	87,561	376,224	8,852	766,056	24,224,830
Accumulated depreciation	(390,744)	(6,170,702)	(50,771)	(28,360)	(87,561)	(284,406)	(8,852)	(702,034)	(7,723,430)
Net book amount	453,357	15,875,949	3,573	12,681	-	91,818	-	64,022	16,501,400

10 Investments in subsidiary

	2021 €	2020 €
Movements for the year ended 31 December		
Closing net book amount	1,500	1,500
At 31 December		
Cost/Net book amount	1,500	1,500

The subsidiary, which is unlisted at 31 December is as shown below:

Name of company	Registered office	Percentage of shares held	
		2021	2020
Engage Science Limited	MCST, Villa Bighi Marina Street Kalkara	100%	100%

The subsidiaries, all of which are unlisted at 31 December are shown below:

Name	Registered office	Principal activities	Percentage of shares held	
			2021	2020
Engage Science Limited C 74831	MCST, Villa Bighi, Dawret Fra Giovanni Bichi Kalkara	The Company is engaged in operating a restaurant and a shop at Esplora.	100%	100%

11 Trade and other receivables

	2021 €	2020 €
Trade receivables (Note i)	35,010	18,090
Amount due from subsidiary (Note ii)	233,580	137,380
Prepayments	93,138	48,571
Accrued income	145,343	279,405
Indirect taxation	366,287	310,511
Other receivables	11,800	379,319
	885,158	1,173,276

11 Trade and other receivables - continued

Note:

- i. Trade receivables are stated net of impairment losses amounting to €332 (2020: €332). However, the net balance is inclusive of amounts that are past due at the end of the reporting year for which the Council has not recognised an allowance and the amounts are still considered recoverable.
- ii. Amounts due from the subsidiary are unsecured, interest-free, and repayable on demand.

12 Accumulated losses

The Council's accumulated losses represent accumulated profits and losses since the incorporation date.

13 Trade and other payables

Non-current	2021 €	2020 €
Government grants	<u>21,015,871</u>	<u>21,058,406</u>

In accordance with the Council's accounting policies relating to grants received for the purchase of property, plant and equipment, grants are included with non-current liabilities and are credited to the Statement of Profit and Loss 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 Council for the design and construction of the Esplora Interactive Science Centre.

Current

	2021 €	2020 €
Trade payables	300,206	151,246
Accruals	430,908	396,371
Bank overdrawn balance	827	-
Deferred income	3,479,504	2,560,817
Other payables	165,859	122,785
	<u>4,377,304</u>	<u>3,231,219</u>

14 Cash generated from/ (used in) operations

Reconciliation of loss for the year to cash generated from/ (used in) operations:

	2021 €	2020 €
Loss for the year	(171,082)	(74,112)
Adjustment for:		
Amortisation of intangible assets	4,786	118,633
Depreciation of property, plant and equipment	1,228,026	1,368,913
Investment Income	(13)	(948)
	<u>1,061,717</u>	<u>1,412,486</u>
Changes in working capital:		
Trade and other receivables	384,318	(231,870)
Trade and other payables	1,145,258	(1,872,298)
Cash generated from/ (used in) operations	<u>2,591,293</u>	<u>(691,682)</u>

15 Cash and cash equivalents

For the purposes of the statement of cash flows, the cash, and cash equivalents at the end of the year comprise the following:

	2021 €	2020 €
Cash at bank	6,258,187	5,385,986
Bank overdrawn balance	(827)	-
	<u>6,257,360</u>	<u>5,385,986</u>

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:

	2021 €	2020 €
Revenue	4,378,322	3,350,174
Government subventions	5,300,000	4,890,000
	<u>9,649,236</u>	<u>8,240,174</u>

16 Related party transactions - continued

The Council also entered into related party transactions on an arm's length basis with its subsidiary. Transactions with related parties are also made on an arm's length basis.

Transactions with the subsidiary during the year arose as shown hereunder:

	2021 €	2020 €
Amounts due from subsidiary		
At beginning of year	137,380	239,948
Management fee	82,000	39,000
Other movements for the year	14,200	(141,568)
	233,580	137,380

Year-end balances due from subsidiary are disclosed in note 11 to these financial statements.

17 Financial risk management

Overview

The Council has an exposure to the following risks arising from the use of financial instruments within its activities:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Council's exposure to each of the above risks, policies and processes for measuring and managing risk, and the Council's management of capital. Further quantitative disclosures are included in these financial statements.

The responsibility for the management of risk is vested in the Council members. Accordingly, it is the Council who has the overall responsibility for establishing an appropriate risk management framework.

Credit risk

Credit risk is the risk of financial loss to the Council if a counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Council's trade and other receivables and cash and cash equivalents held at banks. The carrying amounts of financial assets represent the maximum credit exposure.

The Council assesses the credit quality of its customers by taking into account their financial standing, past experience, any payments made a post-reporting date and other factors, such as bank references and the customers' financial position.

17 Financial risk management - continued

Credit risk - continued

Management is responsible for the quality of the Council's credit portfolios and has established credit processes involving delegated approval authorities and credit procedures, the objective of which is to build and maintain assets of high quality.

The Council's policy is to deal only with creditworthy counterparties. The credit terms are generally 90 days. The Council regularly review the ageing analysis together with the credit limits per customer.

Impairment of Trade and other receivables

To measure the expected credit losses, trade and other receivables have been grouped based on shared credit risk characteristics and the days past due. Management considers the probability of default from such trade and other receivables to be not material. In view of this, the amount calculated using the 12-month expected credit loss model is considered to be very insignificant. Therefore, based on the above, no loss allowance has been recognised by Council.

Cash and cash equivalents

The cash and cash equivalents held with banks as at 31 December 2021 and 2020 are callable on demand and held with local financial institutions with high-quality standing or rating. Management considers the probability of default from such banks to be insignificant. Therefore, based on the above, no loss allowance has been recognised by the Council.

Liquidity risk

Liquidity risk is the risk that the Council will not be able to meet its financial obligations as they fall due. The Council's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due. Generally, the Council ensures that it has sufficient cash on demand to meet expected operational expenditures, including the servicing of financial obligations.

The table below analyses the Council's financial liabilities into relevant maturity grouping based on the remaining period at the end of the reporting period to the contractual maturity date. Trade and other payables are all repayable within one year.

As at	Less than 1	Between 1	Between 2	Over 5	Total	Carrying
31 December 2021	year	and 2 years	and 5 years	years		amount
	€	€	€	€	€	€
Trade and other payables	4,377,304	-	-	-	4,377,304	4,377,304
As at						
31 December 2020						
Trade and other payables	3,231,219	-	-	-	3,231,219	3,231,219

17 Financial risk management – continued

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates or interest rates, will affect the fair value or future cash flows of a financial instrument. The objective of market risk is to manage and control market risk exposures within acceptable parameters while optimising the return on risk.

The operating cash flows of the Council are influenced by changes in market interest rates. Up to the statement of financial position date, the Council did not have any hedging arrangements with respect to the exposure of floating interest rate risk. The Council is not exposed to foreign exchange risk since all operations are conducted locally in the Council's functional currency.

Capital management

It is the policy of the Council to maintain an adequate capital base in order to sustain the future development of the business and safeguard the ability of the Council to continue as a going concern. In this respect, the Council monitors the operations and results of the Council, and also monitor the level of dividends, if any, payable to the ordinary shareholders. The Council are not subject to externally imposed capital requirements. There were no changes in the Council's approach to capital management during the year.

Fair values

At 31 December 2021 and 2020, the carrying amounts of cash at the bank, receivables, payables and accrued expenses and short-term borrowings reflected in the financial statements are reasonable estimates of fair value. The fair values of grants are not materially different from their carrying amounts.

18 Post balance sheet events

There were no adjusting or significant non-adjusting events that have occurred between the end of the reporting year and at the date of authorisation by the Council members.

19 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.

20 Comparative information

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

Independent Auditor's Report

To the Council Members of the Malta Council for Science and Technology

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Malta Council for Science and Technology (the "Council"), set out on pages 4 to 25, which comprise the statement of financial position as at 31 December 2021, the statement of profit or loss and other comprehensive income, the statement of changes in equity and statement of cash flows 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 financial position of the Council as at 31 December 2021, and of its financial performance for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (EU IFRSs).

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 Council 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 separate 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 Matter

The financial statements of Malta Council for Science and Technology for the year ended 31 December 2020 were audited by another auditor who expressed an unmodified opinion on these statements on 20 July 2021.

Other Information

The Council members are responsible for the other information. The other information comprises the Executive Chairman's report. Our opinion on the financial statements does not cover this information, including the Executive Chairman's report. 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.

With respect to the Executive Chairman's Report, we also consider the disclosures made in the Executive Chairman's Report include appropriate disclosures. Based on the work we have performed, in our opinion:

- the information given in the Executive 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 Council and its environment obtained in the course of the audit, we are required to report if we have identified material misstatements in the Executive Chairman's report. We have nothing to report in this regard.

Independent Auditor's Report – continued

Responsibilities of the Council members

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

In preparing the separate financial statements, the Council members are responsible for assessing the Council's 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 members either intend to liquidate the Council or to cease operations or have 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 scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of 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 Council's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Council members.
- Conclude on the appropriateness of the Council members' 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 Council's 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 Council 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 members 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.

Other matter – use of this report

Our report, including the opinions, has been prepared for and only for the Council members. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come to save where expressly agreed by our prior written consent.



Nicholas Vella
Director

For and on behalf of
Equis Assurance Limited
Certified Public Accountants

Nr. 11, "L-Uffiċċji"
Misrah 28 ta' Frar 1883
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12 October 2022

Detailed Results

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Project income

	2021 €	2020 €
FP programmes	74,039	98,776
RTDI programmes	2,742,284	2,561,544
Other programmes	1,561,999	689,854
Total project income	4,378,322	3,350,174

Project expenses

	2021 €	2020 €
FP programmes	74,039	98,759
RTDI programmes	2,742,284	2,561,544
Other programmes	1,561,999	689,854
Total project expenses	4,378,322	3,350,157

MALTA COUNCIL FOR SCIENCE AND TECHNOLOGY
Detailed Results - 31 December 2021

Administrative expenses

	2021 €	2020 €
Advertising and promotions	259,466	113,293
Amortisation charge	4,786	118,633
Audit fees	5,000	3,500
Bank charges	25,730	25,699
Catering events and hospitality	62,643	48,632
Cleaning	137,847	128,649
Computer and IT expenses	107,558	39,132
Depreciation	1,228,026	1,368,913
Equipment hire	23,318	9,006
General expenses	82,980	63,843
Insurance	39,140	44,072
Legal and professional fees	35,800	59,686
Motor car expenses	6,503	7,696
Printing, postage, and stationery	27,343	30,606
Rent	55,000	-
Repairs and maintenance	118,587	90,868
Security	101,605	15,790
Staff training	74,893	36,797
Staff uniforms	3,130	4,441
Staff welfare	33,608	49,631
Subscriptions and memberships	35,913	47,563
Telecommunications	53,216	36,940
Travelling and entertainment	24,021	14,165
Wages and salaries	4,403,773	3,918,155
Water and electricity	121,902	127,479
Total administrative expenses	7,071,788	6,403,189

MALTA COUNCIL FOR SCIENCE AND TECHNOLOGY
Detailed Results - 31 December 2021

Other income

	2021 €	2020 €
Grant income	1,066,251	1,212,842
Other income	35,661	57,402
Agency income	92,946	37,508
Management fees	82,000	39,000
	<u>1,276,858</u>	<u>1,346,752</u>

Investment Income

	2021 €	2020 €
Interest income on cash and cash equivalents	<u>13</u>	<u>948</u>





The Malta Council for
Science & Technology

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