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GREEN TRANSPORT

FOUNDATION FOR TRANSPORT

WELCOME

Becoming climate leaders: Decarbonising transport for a better, greener Malta

IAN BORG

Minister of Transport, Infrastructure, and Capital Projects Ian Borg.

The Maltese government has a clear vision for Malta's endpoint destination with regards to holistic sustainability. Its position is one which is firm. This is a pro-environment government leading with a driving force to make Malta a climate leader. The transport sector, being one of the major pillars and growth contributors towards our economy, remains a high priority for this government who is taking several very important decisions and implementing effective measures to shift its gears towards decarbonising transport for a better and greener Malta.

A case in point was this year's budget with measures such as the very well received free public transport for all, a measure which we believe apart from accommodating everyone with free public transport, as the name implies, will also incentivise people from different spheres of our society to rapidly make the shift to a cleaner alternate mode of transport, the public transport.

Electrification: therein lies the future, and the government is aware of this fact. One of Malta's main targets till 2030 is to have all the public transport fleet electrified with a total of 370 vehicles through which the government is investing €40 million from European Funds to reach this goal. Complementing this is the EV grants package which this year marked the largest package ever given to lift some of the people's burden and aid those who opt to buy electric vehicles. Those who then also scrap their old vehicle can even sign up for the scrappage grant which in this year's budget was also increased by €3,000; from €9,000 to €12,000.

Despite the pandemic's effect, this government never failed to hold up to its hard-working ethic especially in terms of alternative modes of transport. Despite the pandemic effects, last June 1, the fast ferry service, a game changer for Malta, was launched to which I am proud to say that a quarter of a million users have already used this service since its inception.

An important measure which the government is currently working on is active transport, also as part of the Low Carbon Development Strategy. The measure focuses towards incentivising the use of e-bikes and pedelecs and towards more bike sharing services which are all major in the minor contributors towards more sustainability.

Moving more to the macro of our vision is mass transportation and the metro proposal to which I urge for a national discussion. The contribution of each person, like pieces of a puzzle, will help sow the seeds towards a prosperous and successful future.

This long-term vision cannot be achieved on its own and the contribution of SMEs and industry leaders is of the essence as they are the backbone fuelling this vision of transition to greener mobility and connectivity. They are the sole agents that will make the vision prosper and reach its full potential.

> "Committed to work even harder, to achieve more results, to drive Malta towards more sustainability and a better environment"

Since the way forward for the transport sector is becoming more and more technologically inclined and pivoted on digitalisation, it becomes imperative that a team equipped with the right skills and competencies is needed. Therefore, we sought to form a foundation, under the name Foundation for Transport to reach all possible modes of transport with the main aim of taking up challenges and drive the sector towards more growth by offering various objectives and room for improvement including promoting, organising, developing, and facilitating innovative services as well as creating training courses in the transport industry.

The Foundation works with various stakeholders to reskill and upskill the current and future employees of this sector, due to the fast-approaching 2030 objectives and longer-term 2050 strategies for the adoption of greener modes of transport. Through this, there will be improvements and developments in the skills of both workers and stakeholders and the public with the aim of improving the transport industry in Malta and Gozo. It is also worth mentioning that this Foundation ensures that the activities always comply with the regulations and strategies of the Government and the ministry I am responsible for.

We must always remain humble. The government is committed to work even harder, to achieve more results, to drive Malta towards more sustainability and a better environment.

The cards are all on the table. This is our vision. We truly believe that hard work pays off and it will.

Ian Borg is Minister of Transport, Infrastructure, and Capital Projects

WELCOME

Challenging ourselves to grow further

JOSEPH BUGEJA

Transport Malta Chairman and CEO Joseph Bugeja.

The past year has been really challenging for all of us. As we battled the COVID-19 pandemic, we faced unprecedented challenges that affected the way we run our businesses. It also brought havoc to our business plans and we had to re-align our priorities to new realities.

Nevertheless, I never doubted our ability to bounce back. This was a rare occasion where my age, more graciously referred to experience, became my ally. Succumbing was never an option – we moved on and faced the challenges head-on with enthusiasm, tenacity and willingness to work together and succeed. This, succinctly, defines our first anniversary at the Foundation for Transport.

As the chairman and CEO of Transport Malta, I am well aware of the difficulties all stakeholders within the transport industry have been facing for many years. We needed to act swiftly but wisely. The establishment of the Foundation for Transport on November 27, 2020 was an important milestone in our long journey towards building the necessary synergies needed to reach unchartered territories in this sector. The Foundation is the vehicle that hones partnerships, sources innovative ways of collaborations, and taps opportunities that for many years were overlooked. It also actively manages collaboration between industry players to oversee our transition to new technologies. The establishment of the Foundation, which I have been chairing for the past year, was surely a timely initiative that signified an important breakthrough in the local transport industry.

My long-term vision for the Foundation is to steer the industry towards becoming an active and integral part of the industry-centric mechanism that enables Malta and Gozo to be part of and benefit from EU's innovation programmes for transport. This will instigate new business ideas and source untapped, wide-ranging solutions to reskill and upskill human resources.

This holistic approach enables the Foundation to act together and cooperate within national policies framework. The setting up of such a wide-ranging regulator has highlighted the need that connectivity and mobility need to be tackled holistically to further develop positive business partnerships with all the industry players. The Foundation's board meets regularly and during our first year, I have chaired eight board meetings during which discussions were always dynamic, forward-looking and primarily focused on enabling innovation, instigate new business ideas, develop new jobs and embrace change. The co-founders give width and depth to the arguments brought forward, whilst solutions stem from ideas put forward from different but complementary perspectives.

The five co-founders include Malta College for Arts, Science and Technology, Transport Malta, Malta Enterprise, Malta Chamber of SMEs and the Malta Employers' Association. This set-up offers a unified perspective for the industry itself whilst bracing in the transport regulator, the government agency responsible for incentives and the promotion of foreign direct investment, startups, and educational institutions.

The transport industry is becoming an everchanging and dynamic industry and the Foundation for Transport is positioned to partner with various stakeholders, both local and foreign, to deliver tangible results through selective specific targeted pilot projects primarily to accelerate the adoption of greener technologies to ultimately reach targets aims of the Government of Malta.

By staying cohesive and interconnected, the Foundation for Transport managed to generate in a very short period of time, synergies not only with the co-founders but also with a myriad of other stakeholders. We also aim to become an active player in national awareness campaigns, both at a national and regional levels to inform and educate businesses within our community. We are all hands-on deck to keep up the good work done so far and to make the Foundation a sound platform for the transport industry for the years to come.

Joseph Bugeja is Transport Malta Chairman and CEO

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FOUNDATION FOR TRANSPORT

MARITIME

Facing the challenges of the twin transitions together

JUDGE EMERITUS JOSEPH ZAMMIT MCKEON

Digitalisation is not only an enabler towards greener operations but it also promises to render businesses – including those in maritime – more resilient. PHOTO: SHUTTERSTOCK.COM

The mission of the Malta Maritime Forum (MMF) is there to 'fly the flag' and promote the interests of the maritime community in the face of the continuous challenges that face the industry. It would be fair to say that the issues and regulatory demands currently facing business in general are more burdensome for the Maritime Industry due to the ever stringent global, carbon-neutrality targets.

With a view to better fulfil its objective of representing and informing the industry, the MMF signed a memorandum of understanding with the newly established Foundation for Transport. The agreement is aimed at enhancing collaboration between various national stakeholders connected to transport in the context of information-sharing, research and the planning of skills availability rendered necessary by the need for new, greener methods of operations across all forms of transport including maritime.

Clearly, similar collaboration can support the MMF across various levels. At face value, the agreement will pool information resources which will ensure that all operators in the maritime industry may take better informed investment and operational decisions based on evidence and research. There can be little doubt that maritime operators need to build resources and capacity which will enable them to meet the current challenges and obligations referred to above. Like every other business, maritime operators are being expected to embrace and manage the so-called twin transitions of digitalization and the green economy.

The MMF believes that the challenges and regulatory demands arising from climate change strategies are extremely onerous and the maritime industry certainly requires the authorities' full support to build muscle, capacity and the know-how required to enable it to leverage the potential of digital and green transformations.

In this context, it is indeed highly encouraging that government has heeded the European Commission's advice and earmarked more than half of the Recovery and Resilience Facility budget allocation for Malta for green projects. The MMF, with the support of the Foundation shall seek efficient projects that facilitate the channelling of such funds in support of companies in the maritime industry.

Indeed, digitalisation needs to be implemented at full-scale amongst maritime operations and at all levels since it is a key driver for a successful green transition and the fulfilment of the EU's ambitious Green Deal objectives. It is estimated that the EU ambition for a carbon-neutral economy by the year 2050 will, in effect, require a 90 per cent reduction in emissions from all forms of transport by that target date.

Besides, as amply manifested during the COVID-19 upheavals, digitalisation is not only an enabler towards greener operations but it also promises to render businesses – including those in maritime – more resilient to shocks and more economically and socially sustainable.

In fact, a tangible area of collaboration between the MMF and the Foundation for Transport is in ensuring the country is equipped with the skills necessary to manage a greener and more technologically-orientated maritime industry. The rate of change in fleet modernisation is influenced by the magnitude of investment and lifetime of assets which is clearly much larger in the maritime industry, relative to road transport. Nevertheless, massive capital investment on its own will not result in a successful twin-transition because this also depends hugely on an adequate availability of skills required to operate the new machinery and technology. The Forum and the Foundation shall therefore be joining forces to support the industry, education providers and other stakeholders including the existing and potential workforce, to plan out the skills required by a transitioned maritime industry and an action plan to achieve same.

Indeed, the MMF plays a crucial role in bridging communications between industry operators including ship/tug/ferry/yacht/superyacht owners, terminal operators, pilots, ship-builders and repairers, charterers, the cruise industry, port workers on the one hand as well as education providers on the other– all of which are represented within the Forum. The Foundation will drive further input and resources from the public sector in order to ensure the adequate planning, development and delivery of the necessary upskilling and reskilling training modules for key-players, employees and stakeholders, and the public at large, for the purpose of ameliorating the transport industry in Malta.

The MMF congratulates the Foundation for Transport on its first anniversary. It is most encouraged by its collaboration with the Foundation which is certain to bring about important collaboration and synergies in the transport industry to the certain benefit of the maritime community represented by the Forum itself.

Judge Emeritus Joseph Zammit McKeon is Chairman, Malta Maritime Forum

AVIATION

Supporting the growth of a sustainable aviation sector

KARMENU VELLA

Despite the backlash that the sector suffered due to the COVID-19 pandemic, aviation still poses a high growth potential for the years to come. PHOTO: SHUTTERSTOCK.COM

Over the years the aviation sector in Malta has grown considerably. The ever-increasing interconnectivity, a thriving tourism sector, together with extensive investment on the part of the national stakeholders in both physical facilities as well as human resources were key to ensure this sector develops into a safe and reliable mode of transport. Given the insularity of our islands, aviation is and will continue to serve as one of the most accessible and fastest ways to connect to the rest of the world, making it an essential component for the operationalization of many other economic activities.

In 2019, the sector supported over 5,000 direct jobs, of which more than 97 per cent were registered on full-time basis. With more than 50,000 aircraft movements carrying over 7.3 million passengers, and more than 16 million kilos in cargo, air transport indirectly contributed to no less than €600 million to the Maltese economy during the same year.

Despite the backlash that the sector suffered due to the COVID-19 pandemic, aviation still poses a high growth potential for the years to come.

At a local level, 2020 and 2021 have proved to be two milestone years in terms of co-ordination and efficiency for the local aviation sector. In 2020, many of the public entities that are directly involved in the aviation sector, have for the first time been grouped under the auspice of one Ministry. This has certainly led to increased efficiency and coordination. The setting-up of the Aviation Advisory Committee (AAC), in November last year, was an important step that continued to strengthen the coordination process between public and private stakeholders.

The overarching aim of the AAC is to advise and support the government in ensuring that the aviation sector in Malta continuous to grow quantitively and improve qualitatively in an economically, socially, and environmentally sustainable manner. To deliver on this objective, the AAC set up 8 different subgroups to discuss and recommend to government on important issues such as the development of new and emerging niches, viable ways on how to make the aviation sector more sustainable, how we can improve our legal framework, how the government can help to enhance the aviation human resource aspect, and much more. As a committee, the AAC played an important role in the setting up of the Aviation Stakeholders Forum and the drafting of the National Aviation Policy.

Launched in April this year, the Aviation Stakeholders Forum is serving as a common platform for all stakeholders involved in the Maltese aviation sector. Through this platform, private stakeholders can now have an even greater voice to contribute and shape public policies that have a bearing on their operations.

The input of the Aviation Advisory Committee to the National Aviation Policy that will drive our aviation sector up till 2030, focused on ensuring that the sector not only manages to recover from the backlash of the COVID-19 pandemic but continues to develop and prosper, and paves the way for the Maltese aviation sector to reap the best possible share of the forecast global aviation growth. The policy identifies over 20 objectives that will enhance the economic benefits deriving from a thriving civil aviation sector; exploit the potential of new and emerging sectors; strengthen the critical role of aviation in terms of connectivity; and mainstream sustainability in all aviation activities.

> “The distinct challenges and opportunities that aviation, land and maritime transport have, necessitate individual attention

More recently, the government announced its plans to demerge the Transport Malta Authority, which among others is responsible for the regulation of the aviation sector through the Civil Aviation Department. The Malta Transport Authority, as it stands today, is performing its functions very well. However, the dynamic environment of the transport sector, its fast-paced growth, as well as the distinct challenges and opportunities that aviation, land and maritime transport have, necessitate individual attention. This is therefore a major step forward, which will yield even greater benefits for the entire aviation sector.

As a committee we are committed to continue putting forward recommendations and assisting the Maltese government in ensuring that the aviation sector remains not only one of the best in Europe but also globally. To achieve this, we will continue focusing on immediate challenges and opportunities, but also anticipating what lies ahead, preparing ourselves and working together with all aviation stakeholders in the best interest of the Maltese aviation industry.

Karmenu Vella is Aviation Advisory Committee Chairperson

SAFETY

EV, a return to the future

PIERRE P. VELLA

Rewind back to 2013 and try to have a chat with someone about electric cars. The chances were that you would end up talking to yourself. Way back in October of that year, I was offered the opportunity to spend a few months driving an electric car. Little did I imagine that here I am eight years later talking about this rather long experience with over 75,000 kms travelled locally.

I will point out that the respective vehicle is now practically obsolete when it comes to technology as things have evolved quite a margin these past three years. The initial vehicles had a very limited range, even though with a bit of travel management it was sufficient for a day trip to Gozo and back without the need for a charge. Charging facilities at the time were already installed around Malta and Gozo which provided an adequate platform for the relatively small community of EV explorers.

But a lot has changed. Batteries have become smaller, range has increased and we now have the facility for fast charging. But the original concept is still there.

In those pioneering days introducing electric cars to the public was quite a challenge not just from a sales perspective but also from a safety issue. Many were those that felt somewhat unsafe driving around with some 400 volts on board. Was this a myth, lack of information or a total misconception?

Things like: Can I drive around when it rains, do I have to wear rubber shoes? These were questions asked at the time, but they are still being asked today. Just a few days ago during a storm, a driver on the outside lane was frantically waving at me - eventually I realised that he was warning me of being possibly electrocuted.

With all these myths, can EVs be considered safe? The National Car Assessment Program better known as NCAP has for decades been testing out all production cars that make it on our roads. They have now embarked on testing out EV with the same stringent requirements imposed on all existing vehicles from a safety aspect.

All EVs tested have attained very good results, clearly illustrating that EVs are not inferior in safety features when it comes to structure resistance in crashes – in fact, they tend to get a better grade.

Definitely time is of utmost importance in creating more friendly information to the general public – one has to take into account the ever-increasing social media community both locally and abroad who constantly share experiences. Yet the authorities have to address this issue of information more holistically. More time, energy and resources are needed to deliver a better and wider message about the safety factors on these electric vehicles.

> "Now things have changed dramatically with various EV manufacturers teaming up to speed up development and lower R&D costs"

For quite some time car manufactures were somewhat reluctant to illustrate their models but that does not reflect the development that has been achieved, from revised power units and different battery configuration to smaller batteries with a larger range. However there still was the idea of everyone working on their own, creating their own identity which was costly and prolonged.

Now things have changed dramatically with various EV manufacturers teaming up to speed up development and lower R&D costs. This is creating a massive wave of development across the board.

But what do I look for when buying an EV? For sure the budget is important. As a country we have government grants which are quite supportive, as well as the possibility that markets will realign in the next three years and prices will be even more competitive. Vehicles will be mass produced according to upcoming demand.

Reverting back to safety, maybe one point we do have to mention is if one has to the facility to charge a EV in a garage. Here the vehicle can be charged through a domestic 13amp plug or else through a specially fitted box or charger. These home chargers come with an array of functions and one has to be careful and get qualified help to have these installed. Even if using a normal 13amp plug, get this certified by a qualified electrician so as to make sure a flawless charging session is undertaken in a safe manner.

The growing network of charging pillars around the island will boost up the charging grid. One has to appreciate that a charging pillar is a tool to be used and not a free parking spot. This should be utilised diligently and keeping in mind that other EV users might need to use that location.

As a council we have invested a lot in training and we are constantly working with the Civil Protection Department and the Mater Dei emergency Unit who both are represented on the council, to speed up the learning curve in the case of encountering such incidents. It is a new scenario which has to be dealt with adequate attention and professionalism, which are the main qualities of both entities.

As a council we have suggested to the authorities that EV number plates are identifiable. This would also help emergency units to identify them better – as the response to accidents involving EVs would be different than that for traditional cars.

The Malta Road Safety Council will continue to address such issues with one objective: making our roads safer.

Pierre P. Vella is Executive Chairman, Malta Road Safety Council

MALTA ROAD SAFETY COUNCIL

TRANSPORT

Green growth fosters a multi-disciplinary platform

JEANNETTE AXISA

Through growing partnerships and engagement with our co-founders we are steadily working together to deliver value. During the past year, I have had the privilege and ample opportunity to witness the professional approach and care that the Foundation for Transport's cofounders adopt in conveying their respective mission and vision. Our strong collaboration will definitely enable excellence and my heartfelt gratitude goes to each and every one of them as their strong belief in the Foundation and their commitment to introduce and promote the Foundation to well established networks have enlarged the outreach to local and international stakeholders. Such a wide perspective of articles for this Supplement would not have been possible.

In 96 months' time we will be in 2030. If the milestones set by the EU Commission in the proposed Sustainable and Smart Mobility Strategy materialize, by then, we will have in Europe 30 million zero-emission cars and 80,000 zero-emission lorries in operation and zero-emission ocean-going vessels for the market. Five years thereon, in 2035 we will have large zero-emission aircraft ready for the market.

The Foundation for Transport is rightly placed within the industry to accelerate the adoption of greener technologies and the dispersion of tangible knowledge. We are not discussing whether science is right or wrong, but we are actually studying the impact of these technologies on the operations and the alignment of the vision and plans of businesses with the changes they bring about. And there is no better place than to work together hand in hand with all industry players!

Growing businesses using green technologies for the long term has finally become a hot topic. Green growth in transport, and not only, requires investment in human capital, aligned with educational institutions, the new national employment policy for the coming ten years, the planned Foreign Direct Investment and national policies for post covid recovery, low carbon development strategy and the greening of transport altogether.

We must be innovative and up the game and make better use of the Work-based Learning Act which came into force a couple of years ago, but I think it can be one of the necessary tools to integrate multi sector needs.

Green growth needs the integration of multi-sector needs and a holistic multi-disciplinary platform. This will structure the discussions on strategic decisions in the field of mobility. As we all know, changes in the mobility sector are accompanied by far-reaching technical, legal and social changes.

> "The Foundation for Transport is rightly placed within the industry to accelerate the adoption of greener technologies and the dispersion of tangible knowledge"

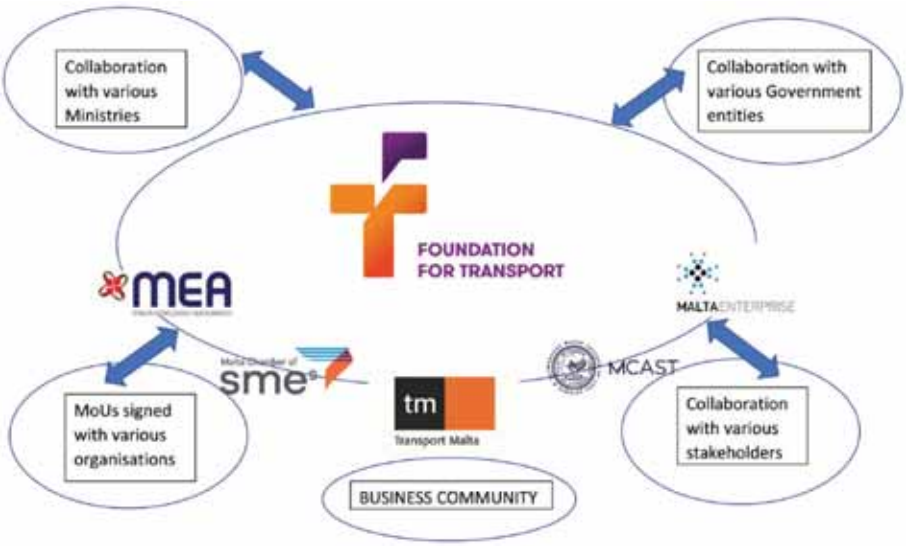
This platform can clarify facts on complex topics and brings together relevant stakeholders, technical expertise and policy makers. Based on the results from discussion, recommendations for action can be made thereon to policy makers and businesses. The structured approach will enhance visibility of the holistic impact of and can visualise the dashboard of all key factors in the greening process of Malta and Gozo.

Such an effort brings about a wide range of disciplines in connection with transport. So various working groups or focus groups can be set up to tackle transport and climate change and alternative drive technologies and fuels for sustainable mobility. Securing Malta and Gozo as a place for green transport and guaranteeing the necessary training and qualification are two key pillars. Connecting mobility with energy and other sectoral needs undoubtedly links standardization, norms, certification and type approval.

We are not reinventing the wheel, as such set-ups do exist in other countries to evaluate uncertainties and vulnerabilities, challenges, and opportunities, operationalize green growth holistically across multiple sectors and outline green policies and programmes that increase national and/or private sector productivity and job creation. They also play a vital role in providing clear and specific technical concepts and activity planning and in rolling out small scale pilot projects that can become large-scale follow-up projects. Places of work and private residences need to share cleaner and safer environment and a holistic approach can enable a shared neighbourhood concept whereby businesses' and residences' needs for spaces are complementary and not competing. The adoption of new technologies needs a national awareness campaign giving insights and on the ground assistance.

The Foundation for Transport, positioned in the heart of the industry, can be an active player in this proposed structure. We believe that adapting to innovation can be a game changer.

Securing Malta and Gozo as a place for green transport and guaranteeing the necessary training and qualifications are two key pillars. PHOTO: SHUTTERSTOCK.COM



Jeannette Axisa is Director General, Foundation for Transport

FUNDS

The largest ever package of transport financial grants awarded

GILBERT AGIUS

Transport Malta has launched various packages of incentives, including cash grants to promote the uptake of electric vehicles. PHOTO: SHUTTERSTOCK.COM

This year will be remembered as the year for the largest ever package of transport financial grants awarded through Transport Malta.

It is evident that road transport is the major contributor to air pollution, specifically the emission of air pollutants directly associated with road traffic.

The reduction of emissions from road transport necessarily involves a suite of measures tackling both demand and supply, such as: reducing the need for road-based travelling within the Maltese territory, shifting mobility to alternative modes of transport and shifting road-based mobility to mass transport, and also alternative technological solutions to the current internal combustion engine (ICE) system. No one measure would be enough by itself.

The government recognises that measures need to be implemented as of today in order to reduce these emissions, and since 2013, Transport Malta has been identifying a number of measures that had to be implemented.

In this regard, Transport Malta has launched various packages of incentives, including cash grants to promote the uptake of electric vehicles. One also needs to keep in mind that these grants being offered are on the higher end when compared to other European countries.

The measures in place have been increasing year on year. Grants of between €1,000 and €13,000 are available for the acquisition of electric vehicles when de-registering an older conventionally fuelled vehicle (depending on the category of electric vehicle) and registering a new or used electric vehicle. Incentives have been provided both for private individuals as well as for registered companies and partnerships, local councils, registered NGOs, self-employed individuals, and co-operatives.

Electric vehicles do not pay registration tax and are exempt from paying the annual licence fee for the first five years. Companies can avail themselves of up to €200,000 in cash grants. Electric vehicles are not charged for entry in Valletta (no CVA charges) and can charge for free in government solar car ports.

Substantial financing of various kinds will also be needed to invest in infrastructure and the maintenance and operation of EV charging networks, fleet renewal and maintenance, public awareness, and communication campaigns.

> "Working hard on the subject of alternative transport"

These financial incentives being offered to Maltese families are being provided in order to make use of more sustainable and efficient means of transport. It is worth recalling that this government is working hard on the subject of alternative transport, not only on the basis of these financial measures, but also through incentives that we have taken and are still taking, including free public transport for many sectors in society, the liberalisation of the fast ferry service for the greater use of shipping, and also the start of a direct route by sea and public transport between Cospicua and Tas-Sliema.

These schemes are a demonstration of an environmentally-friendly government, one that is committed to continue making a difference in order to achieve its main goal as well as maintain European commitments. These grants will not force the general public to buy a new car, but they will lead and serve as an incentive to purchase newer and cleaner vehicles.

A total of five grants have been issued, which can be accessed and applied for from the Transport Malta website.

THE FIVE GRANTS ARE BASED ON SCHEMES WHICH INCLUDE:

Grant No. 1

- Incentive scheme to enable the public to change their car engines to have more vehicles running on autogas.

Budget allocated: €50,000 with a total of 160 vehicles converted to run on Autogas by the end of October 2021.

This measure will see to it that emissions from road traffic are reduced. With this measure, a person can benefit from a grant of €400 per vehicle in category M1 or N1 which is modified to be able to run on Autogas. Persons who have modified their vehicle to run on Autogas in previous years can apply for the scheme and benefit also from a 10 per cent reduction from the annual circulation licence.

- Scheme to incentivise the use of dual fuel systems on heavy duty diesel vehicles.

Budget allocated: €200,000 with a total of eight vehicle conversions by the end of October 2021.

Another measure to reduce emissions from road traffic: a person can benefit from a grant of €800 when a heavy-duty motor vehicle is equipped with this system which results in a reduction in smoke emissions of at least 25 per cent. Vehicle owners will also benefit from a 10 per cent reduction from the annual circulation licence.

Grant No. 2

- Scheme to incentivise the purchase of environmentally friendly vehicles.

Budget allocated: €1.5m with a total of 1,033 vehicles registered by the end of October 2021.

The purchase of new M1 vehicles that are environmentally friendly and the simultaneous elimination of old vehicles from the road is being encouraged. The grant amounts to a maximum of €1,500 awarded when purchasing a new vehicle in category M1 and a grant of € 2,000 when purchasing a new hybrid vehicle in category M1, while cancelling the registration of an old vehicle in category M1 or N1.

Grant No. 3

- A scheme to incentivise the scrapping of an old vehicle and the purchase of an electric vehicle or a plug-in hybrid for individuals, local councils, NGOs, and businesses.

Budget allocated: €4.6m with a total of 646 vehicles registered by the end of October 2021.

In the case of private individuals:

- €12,000 when registering a new electric vehicle falling under Category M1 or N1 while de-registering and scrapping another M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture.
- To qualify for a further €1,000 the vehicle owner must register a NEW electric vehicle and scrap a motor vehicle (M1 or N1 Category) which is registered in his name in Gozo, is 10 years or older prior to the year appearing on the application for the grant, and which was already registered, garaged, or licensed with Transport Malta in their name prior to October 11, 2021.
- €11,000 when registering a new electric vehicle falling under category M1 or N1 without de-registering and scrapping an older ICE vehicle;
- €5,000 when registering a used electric vehicle falling under categories M1 or N1 that is not older than six months from date of first registration and does not exceed 6,000km on the odometer, while de-registering and scrapping another M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture;
- €4,000 when registering a used electric vehicle falling under categories M1 or N1 that is not older than six months from date of first registration and does not exceed 6,000km on the odometer, without de-registering and scrapping another ICE vehicle;
- €3,000 when registering a used electric vehicle falling under categories M1 or N1 that is not older than 36 months from date of first registration and does not exceed 15,000km on the odometer, while de-registering and scrapping another M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture;
- €2,000 when registering a used electric vehicle falling under categories M1 or N1 that is not older than 36 months from date of first registration and does not exceed 15,000km on the odometer without de-registering and scrapping another ICE vehicle;
- €1,000 when registering a used electric vehicle falling under categories M1 or N1 that is older than 36 months but not

exceeding 72 months from the date of first registration.

In the case of local councils, NGOs, registered businesses, and registered private companies:

• €12,000 when registering a new electric vehicle falling under category M1 while de-registering and scrapping another M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture;

• €11,000 when registering a new electric vehicle falling under category M1 without de-registering and scrapping another ICE vehicle;

• €12,000 when registering a new electric vehicle falling under category N1, N2, M2, or M3 and de-registering and scrapping another conventional M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture;

• €11,000 when registering a new electric vehicle falling under the Category N1, N2, M2, or M3 without de-registering and scrapping another ICE vehicle;

• €5,000 when registering a used electric vehicle falling under categories M1, N1, or N2 that is not older than six months from date of first registration and does not exceed 6,000km on the odometer, while de-registering and scrapping another M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture;

• €4,000 when registering a used electric vehicle falling under categories M1, N1, or N2 that is not older than six months from date of first registration and does not exceed 6,000km on the odometer, without de-registering and scrapping another ICE vehicle;

• €3,000 when registering a used electric vehicle falling under categories M1, N1, or N2 that is not older than 36 months from date of first registration and does not exceed 15,000km on the odometer, while de-registering and scrapping another M1, M2, N1, or N2 ICE vehicle which is at least 10 years old from its year of manufacture;

• €2,000 when registering a used electric vehicle falling under categories M1, N1, or N2 that is not older than 36 months from date of first registration and does not exceed 15,000km on the odometer, without de-registering and scrapping another M1, M2, N1 or N2 ICE vehicle;

• €1,000 when registering a used electric vehicle falling under categories M1, N1, or N2 that is older than 36 months but not exceeding 72 months from the date of first registration.

Grant No. 4

- A scheme which covers the purchase of Pedelecs and Vehicles in Category L.

Budget allocated: €2.5 Million with a total of 1,674 motorcycles and 275 pedelecs registered by the end of October 2021.

In this scheme, two types of grants are being offered: Grant A and Grant B. An 'Applicant' here refers to either the person, local council, voluntary organisation, or enterprise.

Grant B:

• €1,000 when a person registering a pedelec or a new category L vehicle eligible for grant A removes from registration a vehicle in Category M1 or N1 that is at least ten years old from the year of its manufacture; or

• €500 when a person registering a pedelec or a new category L vehicle eligible for grant A removes from registration a Category L vehicle that is at least ten years old from the year of its manufacture.

Grant A

1	2	3
Type of Vehicle	Type Electric	Petrol or LPG
Pedelecs	€400	€200
Pedelecs for the transport of goods		
Motorised bicycles Two-wheel moped A three-wheeled moped for the transport of passengers and for utilitarian purposes		€1,000
Light-weight quads	€2,000	
Low performance motors Low-performance side-car motorcycles; Motorised tricycles with a power exceeding 15kW. Medium performance motorcycles		
Medium performance motorcycles with side-car		€750
High performance motorcycles	25 per cent of Car Value, up to € 6,000	Not applicable.
High-performance side-car motorcycles Motorized tricycles with a power exceeding 15kW Heavy-weight quads		

Grant No. 5 - Purchase of vehicles that are accessible by wheelchair for individuals with disabilities

This scheme is open to vehicles used for the rental or compensation of passengers. For this measure, a person can benefit from a grant amounting to € 10,000 when they license a new vehicle in category M1, M2, or M3.

Budget allocated: €300,000 with a total of 19 wheelchair accessible vehicles registered by the end of October 2021.

Gilbert Agius is Deputy Chief Officer, Transport Malta

"A demonstration of an environmentally-friendly government"

INNOVATION

Malta's drone innovation ecosystem

ANTHONY DAVID GATT

As Malta continues to define its path towards economic regeneration, over the past few months' authorities have introduced several plans, supported with both native and international investment, to attract new economic niches. Drone innovation is one of these emerging niches.

Over the last few years Malta Enterprise, the national economic development agency, and the country's transport regulator Transport Malta have worked together to help create the building blocks of this new industry and now Malta is taking the first steps to serve as a new destination for this field. This is an opportunity both for foreign direct investment as well as for Maltese Companies to, among others, give training, test, as well as build drones in our country.

Trials for new and innovative takes on inter-island delivery have also taken place. PHOTO: SHUTTERSTOCK.COM

> "Continue to strengthen Malta's proposition in the aviation industry"

In February 2021 Malta Enterprise and Transport Malta launched the Malta Drone Innovation Ecosystem whereby drone companies are being invited to build and test their drones as well as train their pilots or operators in Malta.

Authorities will also identify pre-established sites that can be used for commercial drone flying. One such site is a major football stadium on the island – the Hibernians Stadium in Paola. This was possible after an agreement was signed between Malta Enterprise and Hibernians FC which states that while it is not being used for football, parts of the Kordin stadium can be used for drone flying.

On the same day the First Academy licensed in Malta was also announced. Malta Drone Centre ltd, will be investing an initial €500,000 in this project and employing a number of professionals. This licence, which is the first of its kind in Malta, is based on the regulations of the EASA (European Union Aviation Safety Agency) and will make it possible to provide training and preparation for exams in order to operate the many types of drones including those of a certain specialization. This academy, which is a joint venture between a Maltese and a foreign company, was also assisted through business incentives by Malta Enterprise.

Vantage UAV founder and director Richard Scriven who teamed up with Roger Xuereb Archer to create MDC explained that: "Malta Drone Centre Ltd (MDC Ltd), is the first professional drone academy of its kind." He continued on by saying that: "This milestone is just the end of the beginning, and we are excited for what the future holds for the drone industry both in Malta and internationally."

Since the launch of the Malta Drone Innovation Ecosystem Malta has attracted new investment and catered for a new set of companies who are ready to take the next step in drone innovation.

Trials for new and innovative takes on inter-island delivery have also taken place. After several successful test flights, the maiden flight for SkyMax was marked in June. SkyMax will be offering the possibility of delivery through unmanned aerial vehicle. At the moment this service has been tested between Malta and Comino however tests between Malta and Gozo will take place in the next months.

SwissDrones, a global manufacturer of long-range unmanned helicopter systems, conducted a series of long-range Beyond Visual Line of Sight (BVLOS) flights over water for rigorous maritime patrol, search and rescue, and surveillance mission simulations. The flight operations were enabled through close coordination with a number of Maltese entities including Transport Malta and Malta Enterprise.

Ulrich Amberg, CEO of SwissDrones explained that: "The Malta archipelago offers an ideal geographical location for flight testing in demanding maritime conditions over long distances." He continued on to say that "Additionally, the nation is a growing hub for robotics and aviation with world-class infrastructure and excellent government support, making it perfectly suitable for establishing a new base of operations."

In another development Dronamics the world's leading middle-mile cargo drone developer and operator, unveiled Malta as the first base of operations in Europe for its unmanned drone logistics service. After a detailed selection process with multiple national civil aviation authorities and leading customers in Europe, the company selected Malta as its first European operation base to provide same-day delivery service with the Black Swan drone in 2022.

Malta will serve as a starting point for the first commercial routes the company will offer, connecting the country via air first to mainland Italy followed by other destinations in the Mediterranean and all of Europe.

"Malta is the perfect operational and strategic location for our first flights of the Black Swan. We aim to connect Malta first with Italy where the Italian Civil Aviation Authority (ENAC) has established testbed airports for remotely pilot aircraft system trials. Transport Malta and the Civil Aviation Directorate have given us a clear path to establishing our first commercial routes and we aim to do the first demonstration flights in 2022," said Sergio Oliveira e Silva, Chief Operating Officer of Dronamics.

Other Malta-based drone companies are also introducing field changing innovations which are getting international recognition. One of these companies is Dronemail who has developed high speed drones which will allow motorsport races to be shown from the elusive 'PlayStation Perspective'. They have worked closely with the Fédération Internationale de l'Automobile which is the governing body for many auto racing events like Formula One to change regulations around this emerging field.

Malta is a long-standing reputable aviation hub and jurisdiction for the registration of aircraft, with more than 500 aircraft listed locally. The vision for a Malta Drone Innovation ecosystem will continue to strengthen Malta's proposition in the aviation industry while bringing forward new solutions for our communities and businesses.

Anthony David Gatt is Head of External Communications, Malta Enterprise

Maritime Proof of Concept Fund:

Supporting technological innovations in the maritime field

PHOTOGRAPHY: PETER PAUL BARBARA

tm
Transport Malta

STRATEGY

Steering a pathway through the electrical mobility solution

ABIGAIL CUTAJAR

The launch of an additional 260 charging points mixed with medium to fast chargers enable higher efficiency charging while providing one of the most competitive charging rates in Europe. PHOTO: SHUTTERSTOCK.COM

Transitioning to a lower carbon future through electrification of industrial processes, spaces, and fleets is no easy task. This is indeed aligned with the national vision towards achieving decarbonization by 2050. Malta is bound to reduce GHG emissions by 19 per cent below its 2005 emissions pursuant to the Effort Sharing Regulation.

To arrive at this stage, transportation will play a crucial role. Presently, Malta's share of final energy consumption in transport is 55 per cent, which is reported to be much higher than European's average. Also, 40 per cent of this contribution is attributed to aviation, and road transport is a major contributor, of which directly impacts our GHG emissions.

> "Electric vehicles are slowly gaining cost parity while the focus on sustainability grows"

There is no fast track towards the shift to electrical mobility. The electrical car is far from ruling the road and we are all learning as we go along. However, if our country truly wants to carry out an impactful transition, one which truly sees tangible results, our energy sources need to follow suit. An energy transition due to this increase in demand towards a cleaner source of fuel would as a result reduce reliance on fossil fuel across the economy while moving toward greater use of cleaner energy sources, such as renewables.

As things stand, electric vehicles are slowly gaining cost parity while the focus on sustainability grows. The transition is with us, one that is happening now. Most industrial manufacturers are moving towards the electrification of industrial fleets, processes, and spaces. This flows in line with the broader energy transition taking place across the economy. We are indeed shifting towards a greener economy, one which does not only benefit the leaders but also the investor, manufacturer, importer and the end user. The role of the government is not to effect transition but to spearhead it. As a matter of fact, as a nation we have one of the most ambitious incentives for buying electric and plug-in hybrid vehicles and a new incentive for mass fleet transition has just been launched. Every drop counts, however, mass fleet transition is what truly requires a shift. This is what would ultimately make the major impact.

This shift comes about with numerous challenges among which is the consumers' fear of range anxiety and availability of charging infrastructure. To tackle this fear, the Government has taken an account of such hurdles and set out a clear plan towards setting up a charging infrastructure strategy. This included the clear set up of a National Policy for Electric Vehicle Public Charging Infrastructure and a Regulation to assist in setting up and regulating the market through this transition. Also, new residential and domestic tariffs have just been launched to enable private charging. These were followed by the introduction of new operator rates, E-Drive Plug 'n' Charge.

The launch of an additional 260 charging points mixed with medium to fast chargers enable higher efficiency charging while providing one of the most competitive charging rates in Europe. Through the regulation, any new publicly accessible charging infrastructure needs to enable an interoperable platform and technology as well as enable ad-hoc and cross border charging amongst others. This would as a result enable Malta to become connected to the European charging route and beyond.

National policy and regulation could intrinsically steer the transition as private investment is likely to become encouraged to penetrate the market, however, to truly make an impact it takes more than this. The current opportunity to transform the way we move fundamentally also results from changes in two additional important factors, consumer behaviour and technology. Industry players are accelerating the speed of automotive technology innovation as they develop new concepts of electric, connected, autonomous, and shared mobility.

To ensure the widespread adoption of electric mobility, launching new EVs in the market is an important first step. In addition, the entire mobility ecosystem must work to make the transformation successful, from EV manufacturers and suppliers to financers, dealers, energy providers, and charging station operators. One cannot disregard the importance of

training all personnel who will be assisting in the troubleshooting of any potential accidents or servicing along the way. Following in depth discussions with stakeholders an opportunity has been identified, one where the shift towards greener jobs has been highlighted. Working with training institutions is key to attract and certify personnel to follow training programmes.

As the electricity supply evolves and charging with green energy for a larger fleet of EVs becomes more feasible, materials and production will become the dominant sources of emissions in an EV's lifetime.

The world must move beyond a carbon-based economy to save the planet from irreversible climate change. The key will be to couple sustainability with economic viability through innovative technology and properly guided mobility transformation. Malta could truly become a testbed for other countries, as we emerge as a role model for other countries globally.

Ing Abigail Cutajar, Advisor, Energy and Sustainable Development, Ministry Secretariat, Ministry for Energy, Enterprise and Sustainable Development

MOBILITY

A smart island state

TIMOTHY ALDEN

In August of this year, The Malta Chamber of Commerce, Enterprise and Industry and the Foundation for Transport signed a memorandum of understanding to promote sustainable mobility.

As transport accounts for nearly 20 per cent of Malta's carbon emissions, this sector can contribute greatly to a greener economy. Through the electrification of the vehicle fleet, Malta will succeed in significantly lowering its emissions, and tackling air pollution. Therefore, this initiative is not only an environmental responsibility, but is also a question of public health. Through this MOU, The Malta Chamber aims to facilitate the path towards electrifying Malta's vehicle fleet.

The Malta Chamber recognises the scale of the challenge – and that it can only be achieved through collaboration. In developing its policy for sustainable transport, The Malta Chamber's Sustainable Mobility committee tapped into international expertise. Through the German Embassy, the committee engaged in a dialogue with an electromobility think tank. The main lesson was that Malta should learn from the experience of those who have already embarked on the journey towards electrification.

Electrifying the vehicle fleet is one of the most significant challenges Malta has faced in the area of transportation. It involves more than merely replacing internal combustion engine vehicles with electric ones, or installing charging stations. The process touches upon various facets of our economy. For instance, the repair and maintenance of electric vehicles requires specific skills, tools and qualifications. No time must be wasted as a result of bureaucracy and fragmented authority. Therefore, through the MOU, the Foundation for Transport and The Malta Chamber are leading by example, by joining forces.

The MOU highlights the need to build competencies in Malta to achieve a workforce with the required skill set, training and certification to handle electric vehicles. This extends beyond repair and maintenance. In case of an accident involving an electric vehicle, the car batteries pose a potential hazard and must be handled differently than traditional batteries. First responders and the fire brigade also need to be trained to ensure they can carry out their work safely and efficiently. As such, training should focus not only workshops and mechanics. Upskilling and retraining are required across a wide range of disciplines.

Noting the recent launch of charging stations, The Malta Chamber believes that much work is yet to be done towards achieving equitable infrastructure. The MOU recognises the joint objective of establishing guidelines to promote a wider adoption of charging stations. The uptake of electric vehicles further requires an increased focus on the right incentives, which is also accounted for in the MOU, with an emphasis on cost effectiveness. The Malta Chamber brings practical industry expertise and experience to the table, particularly on the impact of new technologies on business operations. Thus, an understanding may be gained of what works best for companies, and skills gaps may be identified and coupled with solutions jointly developed with the Foundation for Transport.

Through the electrification of the vehicle fleet, Malta will succeed in lowering its emissions. PHOTO: SHUTTERSTOCK.COM

The Malta Chamber notes that while Malta has not yet announced a cut-off date for the import of internal combustion engines, the European Union has already identified 2035 as a potential Europe-wide date. Regardless of which date Malta settles on, whether 2030 like the UK, or a later period, much work remains to be done. This will require out-of-the-box thinking, anticipating global supply challenges while ensuring Malta's continued competitiveness. The Malta Chamber remains committed towards a vision of Malta as a competitive, sustainable and smart island, which can only be achieved through continuous stakeholder engagement, as exemplified by this MOU.

Timothy Alden, Executive, Policy Development, Malta Chamber of Commerce

BLUE ECONOMY

Maritime transport in the Mediterranean is one of the busiest worldwide, handling 20 per cent of global seaborne trade. PHOTO: SHUTTERSTOCK.COM

The EU objective to become the first climate-neutral continent and maritime transport

KARMENU VELLA

Our seas and oceans form over 70 per cent of the planet's surface and sustain 80 per cent of all life forms on the planet. The earth's largest ecosystem is the primary source of proteins for more than three billion people, acts as the planet's largest carbon sink and generates half of the oxygen we breathe. But above all, they sustain several blue economy sectors including maritime transport.

Maritime transport represents over 80 per cent of global goods transportation, moves one third of intra-EU trade, and carries almost 420 million passengers to and from EU ports. It accounts for 9 per cent of EU jobs, 17 per cent of the GVA and 21 per cent of the profits in the EU Blue Economy.

Maritime transport in the Mediterranean is one of the busiest worldwide, handling 20 per cent of global seaborne trade, 10 per cent of world containers and over 200 million passengers. In spite of the still unfolding effects of Brexit and the COVID-19 crisis on the EU maritime transport, this sector is expected to grow both in number of routes and traffic intensity. Malta, which is right in the center of the north-south and east-west routes, will undoubtedly take its fair share of this growth. The expected growth of sea transport led by a growing global demand will come at an environmental cost if corrective measures are not taken.

The sector's contribution to rising CO_2 emissions, pollution, marine litter, underwater noise, discharging waste at sea, risk of oil spills, and introduction of invasive alien species will increase dramatically by 2050 if sustainability is not mainstreamed into the whole sector.

The EU Green Deal's objective of 90 per cent reduction in greenhouse gas emissions by 2050 identifies this sector's emissions as an issue to be dealt with. In 2018, the International Maritime Organisation (IMO) set an objective to reduce absolute GHG emissions by at least 50 per cent by 2050 (compared to 2008). The present lack of agreement and the disruption of negotiations by the pandemic, still leaves an ambition gap between the EGD and the IMO target. But whatever the target, the main challenge for maritime shipping over the current decade is to prepare for and urgently start the path to decarbonisation.

More and cleaner transport alternatives are needed, and this makes it paramount for the sector to move to a more sustainable and a greener maritime transport by improving

Karmenu Vella

energy efficiency of ships and by shifting to alternative fuels to reduce its environmental impact.

Having said that, shipping is the most carbon-efficient means of transport when compared to transport by air or land. In fact international shipping accounts for less than 3 per cent of annual global CO_2 emissions and produces less exhaust gas emissions - including nitrogen oxides, hydrocarbons, carbon monoxide and sulphur dioxide - for each tonne transported per kilometre than air or road transport. Consequently, maritime transport can also offer a crucial contribution to decarbonisation by shifting land and air transport to sea if and when appropriate.

In recent years, despite the growth in total fleet tonnage, the increase in bigger vessel size combined with the recycling of less efficient vessels contributed to a limited reduction in CO_2 emissions. As more environmentally efficient ships replace older and less efficient ones, further gains can be expected. However, these marginal improvements are not enough to significantly decrease overall carbon-dioxide emissions.

Given the lifetime of vessels, a first wave of zero emission vessels needs to be technologically and commercially verified by 2030, ready to upscale deployment in the following decades.

"More and cleaner transport alternatives are needed"

New generation vessels will undoubtedly demand and rely on a large scale supply and a large-scale uptake of carbon-neutral fuels in order to achieve the 2050 reduction goals. Until such time that this is made possible, there are already on the market a number of bridging solutions that are fuel-flexible.

As part of the EU Green Deal, the Commission also launched its Sustainable and Smart Mobility Strategy for Europe mostly based on digitalisation, automation, and the use of new technologies. In the not so far away future we will be seeing more sustainable multimodal transport systems for both passengers and freight; more recharging and refuelling infrastructure for zero emission vehicles including ships, boats, and ferries; better equipped ports; the deployment of alternative marine fuels; the production and use of Autonomous and Sustainable Ships and Shipping; and more real-time monitoring of decarbonisation efforts across the blue economy sectors in Europe.

Specifically for the Mediterranean, the Commission is pushing to designate and replicate the success of existing Emission Control Areas. By 2030, this could reduce emissions of SO2 and NOx from international shipping by 80 per cent and 20 per cent respectively.

Ensuring the maritime transport's contribution to meet the EU's ambitious target of being the first climate-neutral continent by 2050 depends on all stakeholders of the sector working together. It will depend on all stakeholders embracing and not resisting the urgently needed change. This is one of the biggest challenges that maritime transport has to face. But this is also a great opportunity for the sector to contribute environmentally and to benefit economically at the same time.

Karmenu Vella is a former EU Commissioner

CLIMATE

This project will contribute to an improved environment for 17,000 families living in Grand Harbour area. PHOTO: SHUTTERSTOCK.COM

Transport Malta and Infrastructure Malta to cut Malta's annual nitrogen oxide emissions by 27%

FRITZ FARRUGIA

Transport Malta, through the Grand Harbour Regeneration Project and together with Infrastructure Malta's Grand Harbour Clean Air Project (GHCAP), are introducing shoreside electricity for cruise liners, Ro-Ro vessels, and other types of vessels visiting Maltese ports, cutting their emissions by more than 90 per cent. That's 1,400 tonnes less nitrogen oxide emissions in Grand Harbour every year, the equivalent of the emissions of 350 million cars travelling from Ċirkewwa to Marsaxlokk.

With one project, Infrastructure Malta is cutting Malta's annual nitrogen oxide emissions by 27 per cent.

"By reducing air pollution in the region, the project will contribute towards EU and national climate change objectives"

The project is currently being led by Infrastructure Malta and, following installation, will be handed over to Transport Malta to manage accordingly.

The infrastructure will be installed within Grand Harbour in the Port of Valletta, which forms part of the TEN-T network at Pinto Wharves, Deep Water quay, Boiler Wharf, Palumbo Shipyards, as well as the Mediterranean Maritime Hub, and, following the land reclamation project, Ras Ħanżir, which will add a further 350m of multi modal quays in the area that will also be installed to serve the vessels making use of this berth.

This includes the development of electricity infrastructure for these vessels to switch off their hydrocarbon fuelled engines and generators, and

plug in to shoreside electricity to power their onboard systems while berthed at port. Through this €49.9m EU-funded investment, this project will contribute to an improved environment for 17,000 families living in Grand Harbour area.

Infrastructure Malta started the GHCAP late last year, soon after the European Commission included this investment in a list of 140 transport infrastructure projects across Europe which will be co-financed through Connecting Europe Facility, the European Union's scheme for sustainable transport infrastructure.

The first phase of the project includes the installation of two frequency converter stations and the laying of a 22-kilometre underground and subsea cable network to distribute electricity from Enemalta's nearest primary substation (distribution centre) in Marsa to Pinto Wharf (three quays) in Valletta, the Deep Water Quay in Marsa, and Boiler Wharf (one quay) in Senglea.

"Vessels will be able to switch off their engines as soon as they berth"

These are the main quays used by cruise liners and Ro-Ro type vessels visiting Malta. Shore side transformers and shore-to-ship connection panels shall link this network to the vessels for them to be able to switch off their engines as soon as they berth.

The second phase of the project will extend shore side electricity to Laboratory Wharf, Magazine Wharf, Ras Ħanżir (Fuel Wharf), Palumbo Shipyards, and the Mediterranean Maritime Hub.

Laboratory Wharf and Ras Ħanżir can also be used by Ro-Ro ships, which berth at the Grand Harbour to ferry wheeled cargo, such as cars and trucks to and from Malta, as well as other type of OPS compatible vessels.

The construction work on the frequency convertor station next to the Deep Water Quay, a first for Malta and one of the first of its kind in the world, has been completed. The related works will now proceed with the finishing and external cladding of the building. Works also commenced on the foundations of the second frequency convertor station, which will be installed in an old industrial shed at Boiler Wharf.

In the meantime, most of the cables along the main project route have now been laid and the design for the submarine cable is currently under way. Infrastructure Malta is also building smaller structures at Pinto Wharf to house the shoreside equipment required to connect cruise liners to the project's new electricity network.

Other equipment, including wagons holding cable reels and winches to connect the cables to the ships, transformers, and switchgear, is being produced in specialised factories in different European countries.

The European Union's 2014 directive on the deployment of alternative fuels (2014/94/EU) stipulates that member states should prioritise the introduction of shore-side electricity supply in ports of the TEN-T Core Network, such as Grand Harbour, by the end of 2025. Infrastructure Malta is planning to complete the first phase of the GHCAP by 2023.

By reducing air pollution in the region, the project will contribute towards EU and national climate change objectives in line with the Paris Agreement, which obliges ports to reduce the carbon footprint of their land-based activities as well as the decarbonisation of shipping activities. The reduction in emissions also contributes towards meeting the obligations of Directive 2008/50/EC on ambient air quality and cleaner air for Europe.

On the basis of the current progress, phase one is expected to be completed by the end of 2023 with phase two commencing in 2024.

Fritz Farrugia is Deputy Chief Officer and Deputy Harbour Master at Ports and Yachting Directorate, Transport Malta

RESEARCH

Your electric vehicle

DR ING. MALCOLM CALIGARI CONTI

Electric vehicles have been around since the late 1800s following the development of rechargeable batteries in the middle of the same century. At the time, the world's greatest minds were inspired to move people around without the cumbersome, heavy steam engines or the requirement of an organism which although was tamed, fed and bathed, would refuse to budge out of its stable if temperatures fell below its comfort zone.

All things considered, both Ferdinand Porsche and Thomas Edison – the latter of whom, is known to you and me as the inventor of the light-bulb, started dabbling in electric as well as hybrid (electric-steam) vehicles.

By the turn of the century, things would however take a rather curious turn as the Ford Motor Company announced the innovation of the century – the Model T, a petrol powered car selling at a third of the price of a similar electric roadster. This would deal a blow to the electric car, which was so profound that a century had to pass for the underdog to even start showing up anywhere on the market again.

The David and Goliath story does however end with Goliath defeated. The end of the 20th century saw the world's CO_2 production move to centre stage with the global climate crisis, which called for the development of carbon free processes, machines and vehicles and David's stone was swiftly heading towards Goliath's head.

The commercialisation of the NiMH batteries in 1989 and the Li-ion battery in 1991, concurrent with the start of research into ZEBRA (Zero Emissions Battery Research Activities) batteries in 1985, meant that electric vehicles could be manufactured without the deleterious effect of lead, from lead acid batteries, on human health. The new batteries had higher specific energies and higher energy densities. This meant that the same amount of energy could be stored in a lightweight, smaller battery, which was exactly what the electric car innovators were looking for.

Although other batteries were and still are being considered, the Li-ion battery stole the show for electric car makers powering the BMW i3, Tesla Model 3, Nissan Leaf and others. However, Li-ion technology does fall short in the requirements of elongated charging times, lifespan and certain reliability issues.

'We truly believe that the future of personal transport lies with the electric car, powered by clean sources of energy'. PHOTO: SHUTTERSTOCK.COM

Research into better, faster charging, more energy efficient, longer lasting reliable batteries thus continues with vigour to this day. This research field is extremely competitive with scientists publishing their latest cutting-edge discoveries in top scientific journals.

> "This research field is extremely competitive"

One battery which is making a statement for itself is the Ni-H_2 battery which can be cycled (charged and discharged) up to 40,000 times with an efficiency of around 80 to 90 per cent and has a very high tolerance to overcharge and discharge. Its only Achilles' heel is its cost and rather large volume to energy ratio.

Research must therefore focus on bringing both values down as it did with our cosy television set. Might we here consider the box which until 60 years ago, used to cost a fortune and occupy a third of our living room, showing us rough black and white images, to our now affordable 4K UHD, less than 30mm thick full colour panel.

Motors for electric cars have also come a long way, from the brushed DC motors of the first cars to the AC induction motor patented by Nikola Tesla in 1888, these cars have seen them all. These days Toyota and Tesla motors are pushing the efficiency of the AC induction motor even further, calling it a 'IPMSynRM' (Internal Permanent Magnet – Synchronous Reluctance Motor), by mating a modified version of the induction motor with its cousin – the permanent magnet motor. All in all, this technology allows efficiencies of up to 96 per cent without the problems associated with the cooling of traditional induction motors.

In Malta, MCAST looks to become the leader in electric vehicle technology, investing in state-of-the-art laboratories and workshops which will train the technicians of the future to be able to service your electric vehicle. MCAST has also initiated partnerships, both with local and international partner universities and automotive companies allowing the development of research into the cutting-edge field of electric vehicle component augmentation and servicing.

Through these initiatives, MCAST aims at becoming Malta's leader and eventually a player on the world's stage concerning research in applied electric vehicle design whilst also providing the skillset required to train automotive mechanics and engineers working on electric vehicles.

A team dedicated to this aim has come together, setting in motion a diversity of projects aimed at achieving excellence in the field of electric vehicle technology research. At MCAST, we truly believe that the future of personal transport lies with the electric car, powered by clean sources of energy. It is for this reason that the team focuses, not only on the technology making up the electric car itself, but the infrastructure required to support the release of this new, exciting technology into the mainstream market - infrastructure which is built on the solid foundation of reliability and sustainability for a better Malta and a better world.

Dr Ing. Malcolm Caligari Conti, Senior Lecturer, Institute of Engineering and Transport at MCAST

GERMANY

ALFONS SCHWARTE
and MICHELA ARENA

German SMEs in the world

SMEs from Germany are repeatedly venturing into internationalisation – for example, by buying or selling goods abroad, opening foreign branches or setting up operations in other countries. There are numerous factors for these measures, first and foremost the higher turnover and profit expectations.

International expansion can bring many advantages. For instance, costs can be saved through cheaper sourcing.

In addition, the awareness of the company and its products can be increased and thus a potentially larger group of buyers can be reached. A specific foreign market could possibly show a higher demand for a specific product or service than on the home market.

Germany's excellent international reputation and the association between German entrepreneurship and the qualities of efficiency and punctuality are certainly not detrimental to expansion. And entrepreneurs who can be relied on are naturally trusted more.

However, international expansion can only be successful if many different conditions are taken into account, because a successful market entry is not a walk in the park. Market research must be carried out and analysed in depth, partners must be found and strategies must be thought out. Questions about taxes and customs duties are just as relevant as considerations about logistics and production chains.

Security issues are also of paramount importance, for example, what about the security of technologies or data protection? What are the legal customs? What manners should be known or need to be learned? In all these areas, a company should always stay up to date. In Germany, it is generally known which paths have to be taken in order to obtain the right information; abroad, one often faces unexpected hurdles, these include prevailing standards in corporate culture or bureaucratic conditions.

The SME BVMW helps on the road to success and provides support in all aspects of preparing for international expansion. With offices abroad in 68 countries, the association has at its disposal a set of tools and a highly qualified group of experts that is second to none.

This vast network serves member companies in their expansion. It is well known that having a strong partner at your side helps to get a foot in the door. Medium-sized interests are thus communicated at all levels. Always seeking dialogue and making acquaintances initiates opportunities all over the world.

As the third-largest exporting country in the world, Germany plays an important role in international trade. Foreign markets offer attractive business potential for small and medium-sized enterprises. 97 per cent of all companies exporting abroad in Germany are SMEs. Even in very small companies, an average of more than 20 per cent of turnover is generated from foreign business. German SMEs are already a mainstay of the global economy. With its location in Malta, the BVMW would like to be the connecting link between our countries.

One of the primary objectives of the Federation is to restore the tarnished reputation of Malta and remove the grey listing. We want to bind German entrepreneurs to Malta through strict compliance, respecting and appreciating the business location, language, country and people. Companies that only see a tax advantage in considering Malta will be rejected and will not be accompanied when entering the Maltese market.

The business location Malta is to be made better known in Germany through lectures and workshops. The advantages are obvious and include a secure political environment, EU membership, the geographic location, well-trained and English-speaking staff, a competitive infrastructure and well-developed internet, double-taxation agreements, attractive business support programme – as well as the sun, beaches, and the Maltese people.

On the other hand, the association offers Maltese companies the key to the German market and to the world through membership.

The transfer of know-how on burning issues such as digitalisation and green energy is already being implemented and enquiries from the pharmaceutical and microelectronics industries are already being processed.

The head of the Malta office and their team are happy to help with any questions regarding Germany.

Alfons Schwarte and Michela Arena, Malta office of the German Association for Small and Medium Businesses

SMES

SMEs: Driving green and inclusive growth

MALTA EMPLOYERS' ASSOCIATION

The COP26 conference in Glasgow has brought a renewed sense of urgency as nations from all corners of the globe, or most of it, grapple to address the biggest challenge of our lifetime, climate change. There is finally hope that after years of inertia and stalemated discussions will lead to tangible change as multiple evidence shows that our behaviour has impacted the planet to an almost irreversible extent. Adapt to survive, is the new mantra.

This is easier said than done. Economies and populations are still growing as is inter-connectivity between markets. As a result, demand for goods and services grows, pushing upwards the need for travel, using different modes of transport. It is estimated that by 2050, current global transport activity will double.

The Malta Employers' Association is acutely aware of the intimate relationship between transport and climate change and the challenges that this creates for local firms. Therefore, the operations of every business sector require some form of transport input, be it a company that forms part of the sector itself, firms offering delivery of goods or those dealing with importation and exportation. This awareness was a key trigger in leading the MEA to join forces with a number of other local institutions in establishing the Foundation for Transport, to assist the industry players of the transport sector in Malta and Gozo to adapt to new skills and competencies.

Together with the Foundation, the MEA has organised a number of joint events such as webinars, surveys and television programmes, culminating in the SME National Forum 2021. These events were all aimed at understanding employers' concerns, sharing information but also to provide a platform for discussion on the best way forward.

The going-green challenge provides entrepreneurs with big opportunities as new technologies, processes and business models become key fundamentals for business growth and success. Malta's business landscape is dominated by small businesses, which constitute more than 90 per cent of all firms established on the island, contributing to over two-thirds of employment.

At the same time, however, the OECD estimates that SMEs contribute 60-70 per cent of industrial pollution in Europe. They also generate all kinds of waste, such as construction, food and plastic. They will therefore need to significantly transform not just the way they operate, but possibly even they conceive their business.

This means that given small firms' collective economic and environmental significance, they can be – and should be - important drivers of inclusive and green growth.

In a recent conference organised by the Malta Employers Association as part of SME Week 2021, stakeholders from diverse industries and authorities, shared

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SMES

A challenge and an opportunity

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views on how small businesses can become drivers of the green transition. Discussions focused on diverse elements – including energy, mobility and planning, exploring the role of new digital technologies to help transform current processes in becoming energy and resource efficient.

Participants exchanged best practice and sought to find common ground for a way forward in Malta's efforts to embrace the green revolution towards a more sustainable future for our country. While different ideas were floated, an underlying theme highlighted by a number of experts related to the need for an integration of policies which impact sustainability.

THE CHALLENGE OF GREEN MOBILITY

Transport is that sector which probably epitomises this need in the most evident manner. There is no doubt that transport and climate change go hand in hand, given that the sector is one of the largest contributors to emissions. Yet, it is not merely about investing in greener modes of transport. This requires a sustained investment in human capital but also needs to be aligned with employment policies, consumer behaviour, planned FDI and national policies on post-COVID 19 strategy.

Greener transport requires an extensive skills gap review with covers both existing mismatches and anticipates future needs. As Jeannette Axisa, Director General of the Foundation for Transport, remarked at the SME National Forum, a large number of employees in the transport sectors are industry-taught. The transition requires a new framework of qualification and recognition and validation with step-in levels of skills and competences assisting the acceleration of new technologies adoption.

The national employment strategy has to look at a wide employment spectrum, from semi-skilled to top jobs, focusing on digitisation, operational literacy and periodic re-certifications. Whether it is spray painters, panel beaters, first responders, safety investigators, towing-truck operators, damage assessors, but also experts in policy-making, compliance, commercial and aviation legal exports – all will need new training and continuous re-certification. "It is only through access to well-trained operators that the country can accelerate the take up of green technologies by public and commercial players," as Dr Axisa explained.

At the same time, this will also ensure a just transition, ensuring that persons currently operating in jobs which are most at risks are given the necessary re-training to ensure that the recovery is not an uneven one.

In parallel, a significant investment in infrastructure is also required. Green adaptation in the maritime sector depends even more heavily on long-term investment given that ships, for example, have a significantly longer lifetime than cars. As speakers at the Forum pointed out, Malta needs important investment on port infrastructure, such as a bunkering facility for LNG vessels and the shore-to-ship power. Such investment is imperative for Maltese maritime businesses to offer the client on the international market a complete, professional and attractive proposition.

As Kevin J Borg, CEO of the Malta Maritime Forum mentioned, examples of breakthrough digital, technological advances and investments which are being made help improve efficiency in the sector, optimising traffic and operations in the industry.

As a practical example, he highlighted a recent investment in larger, energy-efficient, less noise-polluting cranes by Malta Freeport that allowed it to accommodate the new breed of LNG-powered mega-container ships such as CGA-CGM's *Jacques Saade* – the largest LNG-powered vessel ever built and which began to operate on the Malta route soon after it was commissioned late in 2020. 2021 has proved to be a record year for orders of new ships on a global level – a development that bodes well for fleet modernization. Meanwhile, he explained, efforts in R&I were proceeding relentlessly with the aim of finding new engineering and digital solutions that would render the Maritime Industry carbon-neutral by 2050 because the industry itself was falling victim to the grave, climate change consequences such as altering sea and air temperatures, shifting sea levels and the frequency of extreme marine events like tropical storms and cyclones.

Also positively, another element coming out strongly during the SME National Forum was that local policymakers are keen on reducing the gap between those with ideas and corporate entities that have the resources to deliver the projects. In his address during the event, Economy and Industry Minister Silvio Schembri said that this is a crucial moment for businesses to look within and strategise. "It is a do or die moment. Business can choose the status quo or take the next step forward and re-invent themselves. We must make the right choices now, choices which will have an impact on generations to come."

Malta Enterprise has developed a wide range of grants and incentives which assist businesses in this transition, including through energy audits and assistance in the drafting of business plans. In parallel, the Malta Development Bank is in the process of developing facilities which support businesses into making the necessary investments to facilitate their green transition, including the purchase of commercial EVs, among others.

It is also highly encouraging that the Maltese Government has taken the Commission's cue and dedicated more than half of the budget granted to our country through the Recovery and Resilience Facility for green projects.

SUSTAINABILITY AS AN OPPORTUNITY

It is evident, however, that sustainability is not merely a challenge but an opportunity for further growth. As Malta seeks to push forward its green credentials in the context of post-pandemic regeneration, SMEs will be facing growing challenges and opportunities as they map their way forward. Consumers too are changing the way how they make their purchases, how they commute, how they invest, becoming more environmentally conscious day by day.

As they do, entrepreneurs have a unique opportunity to capitalize on such demand. There is a bigger expectation for environmentally and socially responsible products, services and business models. Studies have also shown that going green improves employees' commitment to and pride in the firm, resulting in increased productivity.

Employers are thus major stakeholders in ensuring a better well-being. Through the creation of jobs, people can enjoy a better quality of life.

While some may be concerned that a focus on well-being will mean a contraction in economic activity, the MEA has been pushing strongly the agenda that if handled properly, the imperatives of economic growth and well-being can be reconciled. Ms Joanne Bondin, MEA President, stressed this point when addressing delegates at the National Forum insisting that without the planet, we will have no jobs. "We must learn to adapt, find the right balance and think long-term" Bondin explained, insisting that awareness, knowledge and technology are crucial elements in achieving the desired objectives a longer term, sustainable vision for our society.

The Malta Employers Association believes a collective solution to the unprecedented challenge that we face today is required. Government, authorities, industry, small firms and investors need to work together to truly make change happen. In this context, the MEA recalls the importance of avoiding a silo approach to reform and highlights the important role of the Foundation for Transport as a driver of discussion both on a local level, but also in terms of engagement with international stakeholders in order to build a strong relationship and create a dynamic network where research and innovation are key practices will ultimately lead to tangible results and improvements in the transport sector.

The greening of the economy is an issue that is now finding consensus among a large spectrum of our population. Yet, beyond all discussions on strategies, policies, grants and incentives, its success ultimately depends on will. As aptly put by Mr Joseph Farrugia, Director-General of the MEA, society needs to look beyond instant gratification and reorient itself towards a more sustainable economy: "We owe it to our children so that they inherit a better society. We need to ensure that all stakeholders benefit from the green transition, leaving no one behind. All this implies a change in culture, and the earlier we have an acceptance of a newer way of life, it will be easier to bring about the changes that we desire."

The Malta Employers' Association operates meaindex.com to disseminate and share information on latest developments affecting employers and businesses, including schemes and incentives, serving as a single point of reference to all those in the business community.

SUSTAINABILITY

Sustainable mobility at the core

DANIEL BORG

Gozo is synonymous with mobility and accessibility. At present its only means of accessibility is through sea transport with the regular ferry and the fast ferry services working endlessly to transport people and cars between the two islands. The fast ferry service started operating in June of this year, and in the third quarter of this year, according to statistics published by the National Statistics Office it carried a total of 203,574 passengers, doing a total of 4,206 trips.

In 2019 the vehicles that crossed between the two islands amounted to 1,782,909, with that amount decreasing slightly to 1,552,138 in 2020. In 2021, up till the third quarter of this year the amount of vehicles that had crossed the channel amounted to 1,297,823. One has to note that during 2020 and 2021 there were periods when because of the pandemic only essential travel was allowed between the two islands.

Gozo can play a very important role in aiding the green transition. PHOTO: SHUTTERSTOCK.COM

"Mobility and transport play a crucial part"

The total amount of passengers that travelled between the two islands amounted to 5,917,780 in 2019 and 3,773,981 in 2020. Up till quarter three of this year, 3,266,190 passengers had crossed between the two islands. But why these figures? These go on to show that at the core of Gozitan economy and society, mobility and transport play a crucial part.

The Gozo Business Chamber is proud to share in the Foundation for Transport's vision of encouraging sustainable mobility, with a specific emphasis on the island of Gozo. The Chamber is encouraging Government to adopt the vision of Gozo becoming carbon neutral prior to Malta, where the national target is being set for 2050. Sustainable mobility plays a central part in this vision. The Foundation for Transport and the Chamber held various meetings to discuss how this transition can be facilitated and what can be the stumbling blocks towards its achievement. The ground is being set both at an international and national level.

The European Union has put at the core of its mission the green and digital transitions, which are the main drivers of the Green Deal. This year the Government of Malta has launched a number of consultation documents related to sustainable mobility, principally: Malta's Low Carbon Development Strategy; the Green Paper towards cleaner vehicles on our roads; the publicly accessible electric vehicle charging infrastructure regulations; and the Draft National Policy for Electric Vehicle Public Charging Infrastructure. In all its responses the Chamber highlighted that Gozo can play a very important role in aiding the green transition. However, Gozo's requirements need to be taken into account.

This means for example that the public accessible charging infrastructure must not take into account only the resident population density, but must also cater for those periods where the population density is higher. This applies to Gozo where domestic tourism plays a very important part, and where a significant number of people resident on the main island of Malta now have their second home on the sister island. Gozo is also a preferred destination for day trips with foreign tourists. This means that many of them travel by rented cars to Gozo to visit it for day. This implies that any publicly accessible charging infrastructure must also take into account these traffic flows.

Another important consideration that needs to be made is that we must ensure in Gozo a number of technicians who are specialized in the repair and servicing of electric and hybrid cars and other vehicles. Both the Foundation for Transport and the Gozo Business Chamber have discussed the importance of building this human resource capacity. The uptake of electric vehicles depends also on the confidence people have that when travelling to Gozo with their electric or hybrid car, they will be assisted if needed.

The Chamber has put forward a number of proposals to accelerate the transition towards green mobility in Gozo. These include increased incentives for Gozitan residents to shift to electric vehicles. Another proposal relates to reduced ferry tickets for Maltese residents crossing over to Gozo with electric vehicles.

However, the momentum of the green transition will also depend on the uptake and use of public transport. In this regard Gozo has significant potential also given the fact that public transport will be free as from next year. Nonetheless Gozo's public transport fleet needs to change to smaller electric buses which however would be more frequent between its various localities. Larger buses, which can also be electric or hybrid would only be maintained between the main routes such as Mġarr and Victoria.

However, one also needs to look beyond that. As regards sea transport we need to look forward to hybrid sea vessels. However, this must be accompanied with a clear strategy for the electrification of Mġarr harbour.

The anniversary that the Foundation for Transport is celebrating is an important milestone. Its important work towards ensuring sustainable mobility on all fronts needs to be acknowledged. The Gozo Business Chamber looks forward to continue cooperating with the Foundation for Transport to reach its goals not only at a national but also at a regional level.

Daniel Borg is Gozo Business Chamber CEO

SUSTAINABILITY

The future of sustainable transport: Achievements and way forward

LAURA SUE MALLIA

Over the past decade, Malta's population has grown by over 20 per cent, to now total 516,000. Moreover, there have been changes to Malta's demographic profile as well as a shift in where people work and live. New technologies and new transport services have emerged to cater to a change in lifestyle, and it is fair to say that residents of Malta and Gozo have more transport options at their literal and metaphorical fingertips than ever before.

However, these changes have both created several challenges as well as opportunities for Malta's transport sector.

Transport systems are complex and continuously evolving. It is therefore a constant challenge for transport planners to assess, predict, and plan for current and potential changes to the national transport network. In light of this, the Integrated Transport Strategy Directorate (ITSD) shall undertake three projects over the next few months that are integral to long-term transport planning for Malta.

The first project is the review and update of the National Transport Master Plan (TMP). Development of the TMP was finalised in 2017, and it formulated a holistic implementation plan for investments within the transport sector over the period until 2025. This document was developed in tandem with the National Transport Strategy (NTS), which included a series of policy goals to guide the development of the transport sector until 2050.

The TMP includes 274 measures that take into consideration air, land, and sea transport. It defines clear project pipelines for studies as well as infrastructural, organisational, and operational changes for the sector until 2025. In addition to this, the TMP defined operational targets for a number of indicators of economic, environmental, and social sustainability.

The time is now ripe for a mid-term review of the Transport Master Plan. Expected to be completed in 2022, the TMP will be extended to 2030 and will take stock of the status and progress towards implementation of the various measures for air, land, and sea transport. The master plan must also be aligned to wider policy framework, such as the EU's Cohesion Policy for 2021-2027 as well as its Climate Target Plan for 2030. In addition, the TMP must also take into consideration the National Energy and Climate Plan (NECP), which sets out specific objectives in meeting Malta's target for a 19 per cent reduction in greenhouse gas emissions from 1990 levels by 2030.

To meet these policy objectives, the update shall again involve an extensive and robust modelling exercise. Individual measures shall be modelled, appraised, and assessed to produce packages of measures that will best meet both national and EU targets and objectives. To complement this exercise, the update of the National Transport Model is another major project that will occur over the next few months.

The National Transport Model (NTM) is a macro-level transport model which simulates network conditions across Malta and Gozo in present and future modelling scenarios. The NTM was first developed in 2015 to inform and guide the development of the TMP and national transport strategy in general. It is continuously developed and maintained by Transport Malta, with the last major update occurring in 2019. Every update must take into consideration any changes to the transport network and system occurring in between updates. It is a complex multimodal model that requires a large amount of data to develop, test, and calibrate its results.

Intertwined with the development of the NTM, the National Household Travel Survey shall also be conducted. Malta has undertaken a National Household Travel Survey (NHTS) roughly every 10 years since 1989. The survey is distributed to a statistically representative sample of the population of Malta, which consists of almost 7,000 households. The NHTS asks respondents a series of questions about their travel characteristics and habits. Integral to the survey is the filling out of a trip diary, cataloguing a respondent's trips during a typical weekday.

The goal of the NHTS is to provide valuable information about the ways in which the transport system is utilised. This includes data such as the relative modal share of each travel mode, which demographic profiles utilise these modes, as well as time, origin, and destination information about each trip. By identifying patterns in survey data, further analysis can be performed to identify the cause of these patterns and develop transport policy, infrastructure, and services accordingly. Furthermore, the NHTS is one of the most important sources of data for the NTM as it is used to develop the NTM's trip matrices, which represent trip movements from one locality to another.

The first Sustainable Urban Mobility Plan is being developed for the Valletta Region. PHOTO: SHUTTERSTOCK.COM

> "The project aims to promote walking and cycling for short journeys within the localities"

The updating of the NTM and TMP, as well as the conducting of the NHTS, represent three projects fundamental to the development of long-term national transport planning policy. These intertwined projects provide an indispensable set of tools that will accurately inform on and predict future scenarios, allowing us to make important decisions for the sustainability of the transport sector in the coming years. The importance of these projects cannot be underestimated, as they shall guide transport's contribution to the physical, environmental, social, and economic development of the Maltese Islands over the next decade.

In line with the vision and strategic goals set out in the National Transport Strategy 2050 and the National Transport Master Plan 2025, the first Sustainable Urban Mobility Plan (SUMP) is being developed for the Valletta Region. Funded under the Civitas DESTINATIONS Project, the SUMP aims to promote more sustainable transport alternatives for both citizens and visitors by providing specific, tried and tested solutions to improve the mobility system of the region and attract both residents and visitors to sustainable modes of transport and practices.

The Valletta Region is the main urban area in Malta, including the airport and cruise liner port, the main employment and entertainment hubs on the island, and some of the primary tourist attractions (such as Valletta, Tas-Sliema and Cottonera). The Valletta Region comprises the 27 local councils falling within the Northern and Southern Harbour regions: Vittoriosa, Birkirkara, Cospicua, Fgura, Floriana, Gżira, Ħamrun, Senglea, Kalkara, Ħal Luqa, Marsa, Msida, Paola, Pembroke, Tal-Pietà, Ħal Qormi, San Ġiljan, San Ġwann, Tas-Sliema, Santa Luċija, Santa Venera, Swieqi, Ta' Xbiex, Ħal Tarxien, Valletta, Xgħajra, and Ħaż-Żabbar.

Through the baseline studies, data collection, and outcomes of consultation with stakeholders, three scenarios were defined for further analysis. These include the baseline scenario (business as usual), tourism scenario (concentrating on developments concerning a growing number of tourists travelling to Malta and Valletta), and a clean and efficient transport scenario (focusing on active transport, clean vehicles, and a less important role of the private car). The analysis of each of these scenarios was vital in developing the actions and measures required to be achieved. The final measure packages being proposed in the SUMP relate to parking policy, localisation and implementation of transport hubs, cycling infrastructure, carsharing and on demand transport services, enforcement, electric vehicles, low emissions zone, and urban logistics – SULP. The final measure package, that of

urban logistics, is based on the first Sustainable Urban Logistics Plan (SULP) developed with a focus on logistics in the city of Valletta. This exercise included research, baseline data collection, and the first analysis of the current situation in the logistics sector, together with a feasibility assessment of various potential solutions.

The measures being proposed in the SUMP have been classified as short-term (with implementation within the next three years), medium-term (with implementation between four to six years), and long-term (with implementation between seven and 10 years). The progress and success of each SUMP measure will be gauged through the developed impact indicators.

Local councils have the best visibility of the challenges and opportunities within their locality and thus, when equipped with the know-how, have the potential to propose effective measures that tackle issues related to urban challenges, such as traffic congestion, air pollution, lack of accessibility, and lack of street liveability in urban village cores.

Moving from high-level planning to on-the-ground initiatives, grants are awarded annually through the European Mobility Week campaign for the implementation of sustainable mobility projects within respective localities. As part of this EU-wide campaign, local councils are invited to propose projects and measures related to sustainable urban mobility.

The winning measures are awarded a grant for the implementation of a permanent sustainable measure, where local councils are also provided with project management and implementation support until the respective measure is in place. A series of workshops is organised annually to clarify the application process and explain the underlying principles related to sustainable urban mobility.

The theme for the EMW changes each year and is decided at EU level, and it is to be noted that both the interest from Local Councils as well as the quality of applications have been constantly increasing.

Depending on the submissions, a number of measures, usually ranging from two to four in number, are funded annually. Examples of measures that have been funded through past editions of the competition include transport on demand services using EVs such as in Cospicua, Tal-Pietà and Għajnsielem, the pedestrianisation of school areas (making them safer for children and parents and thus encouraging them to walk or cycle more to school), as well as a smart parking system in Ħal Qormi and cargo bike in Ħaż-Żebbuġ with the aim to reduce emissions in the logistics sector by replacing a large polluting vehicles with a cargo bike.

Similarly, at local council level and with the aim of making local mobility sustainable, safe, healthy, and efficient, a nationwide initiative was launched. The Slow Streets Project is a collaboration of various entities and stakeholders coming together following the COVID-19 pandemic, in view of the impact it has had on the citizens' needs within their locality with regard to social interaction and giving a less of a central role to the private car.

Through a temporary network of connected corridors of safe passage for pedestrians and cyclists connecting local shopping hubs, churches and piazzas, schools, primary health clinics, playgrounds, and gardens, the project aims to promote walking and cycling for short journeys within the localities, encourage the use of public transport as the primary mobility source for movement from one locality to another, promote other solutions such as 'remote working' to avoid unnecessary travel, encourage a healthier lifestyle through physical exercise and outdoor sports for all ages, reduce pollution levels and achieve better air quality in urban areas and support, as well as encourage and build confidence in local businesses and consumers in their localities, all within the necessary health and safety standards as recommended by the health authorities.

The Slow Streets Project will see the conversion of traffic lanes (three metres) to pedestrianised routes and cycle lanes, the conversion of open spaces currently used as parking areas into play and recreational areas, and the designation of a number of essential 'connectors' as shared streets at 20km/h.

Laura Sue Mallia is Director Operations, Office of the Deputy CEO, Transport Malta

ELECTRIC VEHICLES

Grants for EVs: A consumer-centric approach

ANDREW AQUILINA

The Malta Chamber of SMEs through its dedicated transport sub-committee, has taken a pro-active approach to propose a set of proposals aimed at ensuring that businesses are encouraged to transition towards electrifying their fleets. PHOTO: SHUTTERSTOCK.COM

Grants for the purchase of EVs have been available for the past four years, with the majority of grants being over-subscribed within a few months from them being launched. Grants for the purchase of EVs increase from one budget to another which shows the governments' commitment to meet its targets. This is very encouraging and augurs well for the Malta's targets.

Although grants, at face value, are very aggressive, especially for the private citizen wanting to purchase a standard passenger vehicle, such grants do not always address the needs of local businesses wanting to jump on the bandwagon and upgrade their own fleet.

Even though here we are tackling the same subject, that of EVs and the end result remains the same, there are a number of factors which differ between EVs for private use and EVs for commercial business use. These factors and realities all need to be taken into account in order to successfully reach our goals.

Primarily, the cost of vehicles is remarkably different. A normal M1 passenger vehicle average at around €27,000 while an average N1 vehicle (goods carrying van up to 3,500kg) can easily average between €50,000 and €70,000. This difference is, at the moment, being absorbed by local businesses, since grants in place do not cater for this.

Such grants and subsidies should therefore be more aggressive and reflect the cost of the vehicle. In this regard, if a light passenger vehicle which (normally costing around €27,000) is eligible for €12,000 grant, larger vehicles such as vans (normally costing between €50,000 and €70,000) should be eligible for a larger subsidy in proportionate with the current grants.

Secondly, businesses, especially those with large fleets need to make a massive investment, in order to upgrade their current fleets. Although current grants are available for businesses, these do not cater for large fleet operators.

In line with governments' strategy of increasing the number of electric cars on the road, Malta Chamber of SMEs is proposing that grants and incentives currently available are made more attractive and accessible for businesses. This should be through a dedicated scheme separate from the one currently offered in order to reflect these specific requirements.

The latest data available reveals that the total average age of vehicles licensed in Malta is of 14.69 years compared to the 9.73 years EU average. This is according to the latest Malta transport statistics. This is even more amplified, when discussing commercial vehicles. In the case with commercial vehicles not only have a high average age but also consume much more mileage than an average standard consumer vehicle.

Companies such as those operating car rental and leasing and other large fleet operators such as chauffeur driven, generally change fleets every four to six years depending on usage of the vehicle. This is normally calculated on the mileage consumed by the vehicle.

As an example, unlike a standard passenger vehicle, a normal cab can easily register 100,000km in any one year therefore within 4 years operators will opt to purchase newer vehicles.

Under current schemes one can opt for the maximum grant (of €13,000) should one decide to scrap a vehicle that is older than 10 years, something which does not make sense for business's given the above.

The Malta Chamber of SMEs welcomes the governments' commitment in the last budget to allocate funds specifically for businesses in order to help them transition towards electrification. With the ambitious EU targets, everyone needs to be on-board and pulling the same rope towards achieving such targets, this can only be done with the full support and enthusiasm of local businesses and the industry in general.

The Malta Chamber of SMEs through its dedicated transport sub-committee, has taken a pro-active approach to propose a set of proposals aimed at ensuring that businesses are encouraged to transition towards electrifying their fleets, thus ensuring that business also contribute towards achieving national targets and more importantly ensuring a sustainable future for the generations to come.

REACHING OUR GOALS, REALISTICALLY

MARIO CIANTAR

The electrification of vehicles has been on the agenda for some time now and has now started to get traction in terms of consumer acceptance and also preference over ICE vehicles.

The government's incentives in this regard, definitely helped in driving consumers towards this direction. This is greatly welcomed and encouraged. The advancement in technology and competition – together with grants – is also contributing towards achieving price parity when comparing EVs with ICE vehicles.

This however is not across the board and in the case of all vehicle types. With heavy vehicles, the situation is different and slightly more complicated. Sectors such as those operating within the supply chain such as Cargo Hauliers often make use of these heavy vehicles.

Technology readiness and market appetite differs. In fact, in the case with large trucks several manufacturers claim that truck manufacturing will most likely move towards hydrogen fuel cell type vehicles. This said, technology in this sector is still evolving. Volvo have claimed that they are targeting hydrogen fuel cell production by 2025 and aiming for half its European sales in 2030 to be trucks powered by batteries or hydrogen fuel cells.

These industry targets differ significantly when compared with targets set by manufacturers for passenger vehicles with Volkswagen AG, the planning that for more than 70 per cent of its namesake brand sales to be EV from 2030 onward while Renault planning to reach 90 per cent by 2030.

Additionally, price parity is between electric trucks and ICE trucks is still very far-off and it is likely to remain as is in the next few years.

As an example, a hydrogen fuel cell type truck will cost between €300,000 and €400,000 according to different reports which a diesel-powered average cost is between €90,000 to €125,000, depending on the extras. Those whose operations only cater for the local market often normally opt to purchase a second-hand truck with the latest euro engine. This is because our local market allows this, given our short distances, small operations and given it is normally not economically viable for operators. In this case a second-hand truck would cost between €25,000 and €35,000 which continues to increase the price disparity.

The Malta Chamber of SMEs through its dedicated sub-committee on transport, had proposed that given the above limitations, shortcomings and challenges faced by the sector, the governments' strategy should aim for finding a middle ground as opposed to targets set for passenger vehicles. The idea is to encourage investment that makes business senses whilst ensuring a gradual shift towards more sustainable use of transport and equipment.

This can be achieved through a number of different incentives offered for operators to transition towards this goal. Recently the government through Malta Enterprise launched a scheme for the construction sector to encourage operators to upgrade their equipment to greener cleaner and more energy efficient. This scheme was a huge success and has been over-subscribed.

Similar schemes should definitely be offered for those operating within the supply chain industry to upgrade their vehicles and equipment. The schemes would incentivise businesses to scrap their current vehicles and upgrade them to newer ones in line with the latest Euro engine, currently Euro 6 engines.

Another possible intervention could also be the retro-fitting of vehicles. There are several options to do so, which includes the fitting of diesel particulate filters and upgrade of catalysts and also the installation of devices which would drastically reduce emissions. Another option could also be to install a heavy-duty dual fuel system which can be easily retrofitted and again, heavily reduce emissions in line with the latest industry standards.

Given the market limitations, the economic viability of investments and the conditions faced, the government should opt for a transitionary solution which would ensure that heavy vehicles are upgraded to newer, greener and less emitting ones while meeting the industry needs in terms of viability and business sense.

While acknowledging the challenges posed and the limitations in place, the half-way measures encourage investment for more sustainable solutions while addressing the realities in place in order to ensure a shift towards cleaner use of vehicles and equipment.

FROM CONCEPTS TO REALITY: A MULTI-MODAL SHIFT

PAUL ABELA

In 2019, the Malta Chamber of SMEs partnered on a project which was led by Transport Malta.

The project was conducted in collaboration with the Ta' Qali Tenants Association and involved the purchase of an electric goods carrying van which was available for a number of tenants operating from Ta' Qali Crafts Village.

The project is an EU funded project entitled Civitas Destinations, which Transport Malta is participating in and aims to study the feasibility of consolidating the deliveries of various companies in Ta' Qali with the use of a shared electric goods vehicle. As part of this project, participants were given an electric van for one whole year to make use of this van for consolidated deliveries. In total seven businesses participated in this pilot project.

The concept behind the project was to make organised deliveries to Valletta more sustainable and efficient, and to promote cross-collaboration between different businesses. The Malta Chamber of SMEs has always championed and promoted these values within its core function as these are values and practices which should be encouraged.

There are a number of benefits associated with consolidated last mile delivery, some of which are underestimated. Primarily, this concept has a direct impact at reducing traffic congestion, an issue which will persist unless everyone makes changes. In highly dense localities such as Valletta, such issues are further amplified.

Fuel, maintenance and transportation costs are also kept at a minimum with businesses being able to focus and shift their savings elsewhere. This is especially in cases where the goods carrying vehicle used is an electric vehicle, thus further increasing the savings for users. As an example the project reduced around 150 trips which would normally have taken place if it wasn't for this initiative.

Finally, such initiatives optimize delivery routes, increase flexibility and support business scalability – ultimately such practices also increase productivity.

The project for Ta' Qali Tenants Association was a great success and are currently evaluating of the feasibility of purchasing their own van with the aim of consolidating deliveries in the future is taking place.

We believe that this project was a good starting point – and the experience gained should be embraced, further developed and definitely not lost. This experience in fact served as a basis for other possible green initiatives which the Malta Chamber of SMEs.

As a result the SME Chamber realised the need for increasing knowledge on EVs with its members. Although the general public has embraced the idea of shifting to EVs as opposed to conventional ICE vehicles, businesses still need to analyse if such solutions fit within their business model.

In this regard, the SME Chamber in collaboration with the Foundation for Transport, is currently studying the possibility of launching a pilot project aimed at achieving a number of results mainly to understand the issues businesses face when using an EV and to give the opportunity for businesses to see if an electric vehicle is suitable for their business needs. Through this initiative we would seek to encourage businesses to make the shift from ICE vehicles to EVs.

The SME Chamber also believes also that the promotion of multimodal mobility should be a concept promoted with businesses. We believe that government should be a key promoter when it comes to innovative solutions and collaborative solutions.

In the last round of consultation on the European Regional and Development Funds, the SME Chamber proposed the creation of a last mile delivery hub for businesses delivering to Valletta and the surrounding Localities. This is following the success pilot project with proved very beneficial for businesses to combine deliveries and deliver goods collectively in areas that are problematic such as Valletta and the surrounding regions.

A large national project can possibly be developed, through the creation of delivery hub and the support of regular delivery service to Valletta and the surrounding localities. Support may include support; the allocation of a logistics centre, the purchase of EVs catering to the different needs and requirements, IT infrastructure involved in the setting up of a common platform which should be automated as much as possible, delivery personnel and the inclusion of advanced software solution which would automate and make the process as efficient as possible, possibly through the use of AI via predictive route planning software.

The SME Chamber can be both a leader and a facilitator to assist the government in implementing such schemes.

These possible interventions all lead towards addressing the issue of sustainability and promote innovative green initiatives which ultimately ensure the sustainability of Maltese businesses.

Andrew Aquilina is Head of Policy, Malta Chamber of SMEs, Paul Abela is President of the Malta Chamber of SMEs and founding Board member of the Foundation for Transport and Mario Ciantar is a Board member of the Malta Chamber of SMEs and member of the cargo hauliers sub-committee

EDUCATION

Exciting times at the Automotive Department within the Institute of Engineering and Transport at MCAST

ING. LONGINO DINGLI

All the courses offered by the Automotive Department were delivered in all their entirety. PHOTO: SHUTTERSTOCK.COM

Without doubt, the calendar year 2020 and the year 2021 to date, are among the most challenging years in the history of MCAST. This is more evident, in the vocational departments such as the Automotive department, where practical sessions are an integral part of the course being delivered.

Despite these abnormal times, during the academic year 2020/21, all the courses offered by the Automotive Department were delivered in all their entirety. The MQF Level 3 courses, namely Diploma in Light Vehicle Servicing and the Diploma in Automotive Repair (body and paint) were delivered on campus while the MQF Level 4 course – Advanced Diploma in Light Vehicle Maintenance – commenced online, with the practical sessions delivered on campus as from the second semester.

During the current scholastic year 2021/22, all three programmes of study are being delivered on campus, while still observing the health authorities' directives on COVID-19. Currently there are more than 100 full-time students following a programme of study related to the automotive industry.

While the pandemic increased substantially the degree of logistical planning, the Automotive Department was also busy planning and formulating an Undergraduate Diploma (MQF Level 5) in Auto Electronics and Electrical Theory. This diploma is being offered on a part-time basis over 2 years and is intended for qualified and experienced automotive mechanics seeking to broaden their knowledge on electric vehicles and hybrids. The diploma contains 60 credits, but offers the learner an exit route after 30 credits, with the possibility of being awarded an Undergraduate Certificate in Auto Electronics and Electrical Technology.

As from scholastic year 2022/23 this programme of study will be offered as a one-year full time course to students at the Automotive Department who have successfully completed the Advanced Diploma in Light Vehicle Maintenance.

Students following the undergraduate diploma, start from the fundamentals and concepts of electrical and electronic systems. Subsequently they are then gradually introduced to the advanced theory of auto electrical and electronic control systems and microprocessor control systems. The course delves into the theory of electrical vehicles and hybrids, including Electrical machines, power electronics and the different energy sources available on the market.

The course also provides hands-on experience using diagnostic approaches that help students troubleshoot potential integration problems. Learners are also instructed to work with various electronics equipment and become familiar with various computer-controlled systems, diagnostic software test equipment and tooling.

> "The course also provides hands-on experience"

At the end of the programme the learner will be able to service and maintain electric and hybrid vehicles. They will be familiar with the fundamentals and concepts of electrical and electronics systems, be aware of the H&S requirements, and the use of tooling when working on an EV or hybrid. The learner will also be able to differentiate between various EV control systems and energy sources, gain excellent knowledge on microprocessor systems, power sources and electrical machines.

The entry requirements are an MQF Level 4 certification in either electrical and electronics or automotive engineering. Mature students, who lack the required qualification are also able to apply under the maturity clause.

Exciting times are ahead of us. Apart for plans to offer additional courses in EVs and hybrids, the automotive department is also looking to offer electives related to motorcycles, marine engines, heavy vehicles and agriculture machinery to the students following the Advanced Diploma in Light Vehicle Maintenance. More information may be obtained from www.mcast.edu.mt

Ing. Longino Dingli is Deputy Director, MCAST Institute of Engineering and Transport

Europe Direct Core Platform has been collaborating with the Malta Foundation for Transport and other leading stakeholders, to raise awareness about the implications of the European Green Deal. PHOTO: SHUTTERSTOCK.COM

Reaching out to the public

HELGA ELLUL

Core Platform is a registered voluntary organisation that promotes corporate sustainability in Malta. This organization is under the patronage of the President of Malta. It is primarily made up of the business institutions in the country, namely the Malta Chamber of Commerce, Enterprise and Industry, the Malta Hotels and Restaurants Association (MHRA), the Malta Employers' Association (MEA), the Malta Business Bureau (MBB), the Malta Chamber of SMEs and SOS Malta.

The mission and vision of Core Platform are directly linked to this year's EU's priority areas being the European Green Deal and having a 'Europe which is fit for the digital age'.

The European Green Deal places great emphasis on boosting the efficient use of resources by moving to a clean, circular economy; and restoring biodiversity and cut pollution. This will require the engagement and cooperation of the business community. Core Platform's contacts with the business community will greatly help in the outreach and when it comes to dissemination of information and attracting more interest in EU related topics.

Similarly, the priority to create a 'Europe fit for the digital age' as set out in the EU's digital strategy aims to make this transformation work for people and businesses, while helping to achieve its target of a climate-neutral Europe by 2050. This priority is best communicated through events to disseminate information and build more momentum around the chosen themes and action areas.

Core Platform is also member of CSR Europe, the largest CSR lobby group in Europe. This gives the organization the opportunity to showcase and promote CSR initiatives, while also discuss matters related to the subject at a European level. Core Platform also became a member of the European Alliance for Apprenticeships in May 2017 and in March 2018 Core Platform became a member of the Sustainable Development Solutions Network (SDSN) Mediterranean and SDSN Youth.

Earlier this year Core Platform became a Europe Direct Centre, bringing the number of Europe Direct Centres in Malta to three. The mission of Europe Direct centres is to inform EU citizens at local and regional level about the EU, referring them to specialised information sources and other services and networks. As part of our activities, we interview individuals that are part of civil society on topics that fall under to two priority areas, with the aim to reach out to the public at large. These interviews that fall under the Chats.EU series are shared on social media platforms.

We also organise webinars for members of the organisations forming part of our platform, write articles, visit schools and we are organising a series of ideation events at youth organisations, focusing on the themes emanating from the Conference on the Future of Europe (CoFE).

THE EUROPEAN GREEN DEAL AND SUSTAINABLE MOBILITY

Within the context of the global challenges brought about by climate change, and environmental degradation which poses an 'existential threat to Europe and the world', Europe is striving to be the first climate-neutral continent. To overcome these challenges, Europe needs a new growth strategy that will transform the Union into a modern, resource-efficient, and competitive economy, where there are no net emissions of greenhouse gases by 2050; economic growth is decoupled from resource use, and last but not least, where no person and no place are left behind. The European Green Deal is our plan to make the EU's economy sustainable. This can be achieved by turning climate and environmental challenges into opportunities and making the transition just and inclusive for all.

The EU Mobility Strategy lays the foundation for how the EU transport system can achieve its green and digital transformation and become more resilient to future crises. Negative effects such as greenhouse gas emissions, air and water pollution, but also accidents and road crashes, congestion, noise, and biodiversity loss affect our health and wellbeing. Today, transport accounts for a quarter of the EU's total greenhouse gas emissions and emissions have increased over recent years.

Europe also needs to use digitalisation and automation to further increase levels of safety, security, efficiency, reliability, and comfort, thereby maintaining the EU's leadership in transport equipment manufacturing and services and improving our global competitiveness.

Transport was among the sectors hit hardest by the coronavirus pandemic and the crisis has caused healthy companies to lose jobs and revenue. The strategy sets out much-needed reforms, policies and actions to support the sector in its recovery.

WORKING TOGETHER TO ACHIEVE COMMON AIMS

Europe Direct Core Platform has been collaborating with the Malta Foundation for Transport and other leading stakeholders, in order to raise awareness about the implications of the European Green Deal, with a specific focus on transport and mobility, among the local business community and other relevant stakeholders. This was achieved through the organisation of a number of events, including a launch event, a webinar on the EU Climate Law in collaboration with the Malta Chamber of Commerce, Enterprise and Industry, a webinar on sustainable mobility held in collaboration with the Malta Foundation for Transport, a webinar on Malta's Recovery and Resilience Plan, and a webinar titled 'Is Malta Fit for 55?

All these webinars are freely available on the YouTube Channel of Europe Direct CORE Platform. For upcoming events, follow our Facebook page at https://www.facebook.com/EuropeDirectCOREPlatform.

Helga Ellul is the President of CORE

TRANSPORTATION

Reimagining transportation: An LCDS perspective

HENRIETTE CALLEJA

Climate change is increasingly impacting our lives. The sweltering heat experienced in the Mediterranean basin coupled up with the deadly floods in Northern Europe last summer, are enough to make us realize that climate change's veracity is no longer up for discussion. The latest IPCC 'Special Report on Global Warming of 1.5°C' warned global warming will continue to unfold harder than anticipated, unless countries decarbonize now.

Governments are thus setting ambitious decarbonization targets, with the latest commitments agreed upon at the COP26 in October. The Maltese government has also joined this global effort to net zero by drawing the Low Carbon Development Strategy (LCDS), a plan to decarbonize by 2050. This focuses on seven sectors in which changes are required, including transport.

Transport is the highest single sector contributor of CO_2 emissions locally and this is expected to worsen when considering that on average 31 new cars per day are introduced. Only 1.4 per cent of the total stock of 411,056 vehicles are electric or plug-in hybrid, though this is on the rise as interest picks up, government increases grants, and car manufacturers and importers expand the choice of models. For Malta to decarbonize we need to change how we do transport. Building on the National Energy and Climate Plan and transport policies, the LCDS will act in two key ways: accelerate the shift to electric vehicles and decrease dependency on the private car. The Clean Vehicles Commission is expected to announce an official cut-off date for Internal Combustion Engines (ICE). This will be supported by other measures to ensure a satisfactory shift to EVs. Raising awareness and upskilling the workforce in the automotive industry is a must to ensure a smooth transition. Grants are already generous when compared to European benchmarks. Other financial instruments shall be introduced to pay off the current EV price disparity.

Government is also committing to install the required supporting charging points to ensure EVs are well serviced. A doubling of the charging pillars was recently announced, with these being in place by end of the year. Additionally, this shift to EVs is expected to be spearheaded by government through the replacement of its fleet and the installation of charging points at the respective ministries and departments.

Decarbonization will also mean less reliance on private cars. The extension of the free public transport services announced in Budget 2022 is one such step, and will be backed up with improvements in the bus system. The LCDS recommends other measures, such as additional bus services, dedicated bus lanes and traffic priority measures, as well as the introduction of technologies to build on efficiency and reliability. The current bus fleet will be electrified and complemented with charging infrastructure. There is also the mass transit project, a longer-term initiative still under study.

Active transport options will also be encouraged. Given our current road systems, natural topography and warm climate, cycling has often been discounted. However, increased investment in the cycling infrastructure and the increased use of e-bikes might support such modes. Active commuting such as walking will also be incentivized through safer walking routes.

These measures will need to be supported through education, awareness, signage giving priority to bikes and pedestrians and aspects which disincentivize car usage. The LCDS also refers to the need to decouple productivity and commuting by drawing on the lessons learnt through the pandemic in terms of remote working. By investing in greater technologies supporting teleworking and providing further online services, government aims to use this option, especially during rush hours, to reduce carbon emissions and provide a family-friendly alternative.

The road to decarbonization will require a shift in culture and mentality, and we must realize that unless we invest now and be ready to adjust our lifestyles today, we will be faced with higher costs and disruptions in the near future.

Henriette Calleja is Director Policy Development and Programme Implementation Directorate, Office of the Permanent Secretary, Ministry for Environment, Climate Change and Planning

ECONOMY

Coping with the unperfect new normal

MARCO CUNETTO

The future of the Mediterranean largely depends on how public and private actors are able to set clear, measurable, and internally consistent goals and targets for a sustainable blue and green economy. PHOTO: SHUTTERSTOCK.COM

Two years after being hit by the coronavirus pandemic, sustainable sectors could be the solution for the recovery of Mediterranean countries, but the mission is not easy to carry out.

For this reason, the private sector needs to work with all the actors of the business ecosystem and pool all needed resources and efforts to achieve the ambitious SDGs forecast for the 2030 agenda, draining a significant number of investments, and creating a good number of jobs for youth and women across region and beyond.

Since its creation, Businessmed, Union of Mediterranean Confederations of Enterprises, supports the efforts of the coalition of actors for an exemplary Mediterranean region in 2030 calling for a concrete and urgent strengthening of regional cooperation.

"The blue economy is on top of the regional agenda"

The blue economy is on the top of the regional agenda, since the Mediterranean Sea generates an annual economic value, which is comparable to the larger economies in the Euro-Mediterranean region.

Businessmed, as private sector representative, is pushing for the development of a sustainable blue economy in 22 countries of the area, including Malta, promoting a modern, resource-efficient, resilient, and competitive environment that improves living conditions and contributes to social solidarity while preserving socially scalable investments and business continuity particularly in the aftermath of the COVID-19 pandemic. This also foresees the strengthening of platforms of exchange of virtuous models for internationalization of businesses.

Supporting the blue economy through the adoption of incentives ranging from taxation to applicable labor standards, from blockchain as a simplification tool for the movement of goods and people, to the creation of intermodal microhubs is of outmost importance for employers' organizations of the region.

This implies a stronger transport and logistic sector to foster competitive economies, trade and investments in our region. For instance, the scramble to establish Africa-to-Europe commercial corridors has given rise to a new global engagement with North Africa that is reshaping the basic economic architecture and the geopolitics of the region. With China, Russia, Turkey, and the Arab Gulf states playing increasingly significant roles in the development of these corridors in the southern Mediterranean, the European Union system confronts a pressing strategic challenge to form a coherent and effective policy in North Africa. Within Businessmed, SMEs and private sector organisations are working hand-in-hand with TVET institutions in the view of using of a cross-shared educational strategy for the establishment of a community to coordinate climate change actions in the Mediterranean's countries.

Sectoral market research services, quality certification, methods of registration and protection of trademarks and the validation of patents and innovation services, are among the tracks that opens for more equitable blue trade between countries of the Mediterranean.

And this is not only valid for the blue sector but particularly for greening the economies in the Southern Neighbourhood, the blue being the new green today, with educated young people shaping it.

If we look closely at the supply chains, Businessmed has acted over the years to advocate for a stronger diplomatic action linking the Mediterranean countries, aware that only cooperation can help safeguard the sea and the environment to develop industrial relations, technology-based innovative solutions which have helped SMEs going international.

Within its mission and projects, Businessmed is supporting new sustainable and equitable business opportunities for youth and women-led start-ups, MSMEs founders and young graduates engaged in the emerging and innovative sectors of the blue and green economy offering significant potential for economic growth and sustainable transition in Tunisia, Egypt and Lebanon (Investmed project).

The future of the Mediterranean largely depends on how public and private actors are able to set clear, measurable, and internally consistent goals and targets for a sustainable blue and green economy to create a level economic and legislative playing field providing with adequate incentives and rules.

In this context, Businessmed employers' organizations with the help of the Union for the Mediterranean, need to adopt a systemic approach, drawing together innovations in enabling technologies, market design, business models and system operations; promote R&D roadmaps and strategies and new data that can sway decision makers, emphasizing stakeholders' partnerships and build international cooperation. Promoting access to innovative financing and deploy sustainable finance initiatives to direct investments into economic activities that can enhance the overall ecosystem will be also key.

Marco Cunetto is EBSOMED Project Coordinator, Businessmed

ENVIRONMENT

Reducing CO2 emissions from human activity is urgently required if the world is to have climate stabilization. PHOTO: SHUTTERSTOCK .COM

Decarbonization of transport in Malta

LUCIENNE MEILAK

Decarbonization, simply put is the term used for the removal or reduction of carbon dioxide (CO2) output into the atmosphere and is achieved by switching to usage of low carbon energy sources. In the process of our daily mobility needs, when we use modes driven by fossil fuels, we are ourselves contributing to Malta's count of CO2 emissions. These emissions from transport have continued to increase year on year, with perhaps a recent short-lived drop as a result of the coronavirus pandemic.

Reducing CO2 emissions from human activity is urgently required if the world is to have climate stabilization and avoid the catastrophic consequences of climate change, with the objective being to keep the global temperature increase to well below 2°C. Decisions have been taken to prioritize this process at global, regional and national levels. We have surely all heard of recent efforts at the CO26 held in Glasgow.

At a European level, the European Union, which was already on track to meeting its 2020 greenhouse gas emissions reduction, is now set to target multiple policy areas to address international commitments on climate change, setting binding ambitious emission reduction targets in order to achieve climate neutrality by 2050. The European Green Deal strives to make Europe the first climate-neutral continent. Applying its 2030 Climate Target Plan, the EU is set to raise the EU's ambition on reducing greenhouse gas emissions to at least 55 per cent below 1990 levels by 2030, placing it well on track to its 2050 goals.

> "Translating these ambitions into concrete actions"

Translating these ambitions into concrete actions, and fully aware that such ambition requires the transformation of the EU economy and society, last July the European Commission adopted a set of proposals to make the EU's climate, energy, transport and taxation policies ready to face this challenge. Of the 13 legislative proposals, aptly referred to as the Fit for 55 package, a number of them address transport emissions. In order to finance this transition, while also regenerating the

European Economy out of the COVID-19 pandemic, one third of the €1.8 trillion investments from the NextGenerationEU Recovery Plan and the EU's seven year budget will finance the European Green Deal.

As an EU member state, Malta is also bound to contribute to this reduction to the tune of 19 per cent below its 2005 emissions in line with the Effort Sharing Regulation. At a national level, Malta has already taken various policy decisions to embark on this transformation. These are outlined in a number of documents and strategies: the 2019 National Policy Framework for the deployment of Alternative Fuels 2018-2030; the Sustainable Development Vision; the Low Carbon Development Strategy; the National Energy and Climate Plan (NECP). The NECP recognizes that Malta's share of final energy consumption in transport is 55 per cent higher than the EU average, although 40 per cent of this is accounted for by aviation, the road sector is a major contributor. Malta's Low Carbon Development Strategy aims to identify targets in order to uphold national GHG emission commitments and to move towards a reduction of national GHG emissions post 2030.

"Crucial role of the transport sector"

There is no doubt that this transition to achieving sustainable, resilient and smart mobility requires to be financially supported. Recognizing the crucial role of the transport sector in this process, €111 million, slightly over one third of Malta's Recovery and Resilience Fund, will target carbon neutrality by decarbonizing transport. Malta will be allocating €94 million to accelerate its electrification of road transport and measures to enhance the uptake of new electric vehicles in the private sector through grant schemes for individuals and businesses and to the electrification of the public fleet and the public transport fleet.

Further promotion of ferry transport with further investment in a new ferry landing facility at St Paul's Bay, as well as the implementation of a sustainable urban mobility Plan for the Valletta Region, the regeneration of public squares and community, car free and open spaces across Malta and Gozo are also targeted for financing through this fund. The recent adoption by Malta's public service of a robust remote working policy also has to be lined up for support, as well as an awareness campaign to encourage use of collective and multimodal transport by citizens. Indeed, out of the 22 Recovery and Resilience Plans, Malta is one of the four EU member states that is allocating most of its RRF to climate-related goals, allocating 54 per cent to decarbonizing transport.

The Connecting Europe Facility (CEF) which in recent years has financed the completion of Trans-European networks in the transport, energy and digital sectors, will now also address cross-border cooperation for renewable energy, decarbonization commitments and European competitiveness and the focus will be on decarbonization and investing heavily in environmentally friendly transport modes. This facility is managed by the European Commission through CINEA (https://cinea.ec.europa.eu/calls-proposals/2021-cef-transport-call-proposals_en).

Currently Malta has commenced implementation of the €49.9m Grand Harbour Clean Air Project, part financed by CEF, which will be providing the infrastructure to provide vessels calling in the Port of Valletta with shoreside electricity, thereby reducing the emissions from vessels.

Calls for funding from the CEF are issued EU-wide throughout the year and the national contact point for such applications is the Ministry for Transport, Infrastructure and Capital Projects. More information may be obtained by accessing https://mtip.gov.mt/en/Pages/Others/ConnectingEuropeTransport.aspx

Malta has indeed embarked on a process that seeks to decouple mobility from the negative environmental impacts attributed to the transport sector, armed with medium- and long-term plans and gearing up to encourage investment in this transition while providing the possibility of financial support.

Lucienne Meilak is Director, Office of the Permanent Secretary, Policy Development and Programme Implementation Directorate, Ministry for Transport, Infrastructure and Capital Projects

INTERVIEW

Promoting green mobility

JOE SANT FOURNIER and JEANBERT GATT

SEE MALTA AND GOZO IN A DIFFERENT WAY

iSeeMalta

This year saw the introduction of the iSeeMalta concept, providing visitors with the flexibility to manage their holiday schedule and navigate through the islands' must-see sites.

The iSeeMalta concept offers several passes and point-to-point trips on all modes of transportation. In fact, all passes under the iSeeMalta concept include unlimited use of hop-on hop-off services both on land and at sea with the Sea Hop-On Hop-Off service being another innovation for the Maltese islands which is made possible through substantial investment by industry leader, Captain Morgan Holdings.

Owing to the endeavour, the Captain Morgan fleet saw the addition of four brand new, state-of-the-art vessels and sea-routes.

Two new 20-metre catamarans operate on the Harbour Route, whereas two new 33-metre catamarans operate the Coastal Hop-On Hop-Off Sea Route commuting various times a day between the Maltese Islands.

In addition, the newly designed Hop-On Hop-Off Sea routes and the City Sightseeing land hop on hop off buses, lead customers to all key attractions and activities including Heritage Malta sites, making these the only pass visitors need. The iSeeMalta pass packages range from one to six days and include an option to visit Gozo.

EFFICIENT AND RELIABLE

Gozo Fast Ferry

The new Gozo Fast Ferry service has been designed to accommodate everyone's needs. The new fast ferry service transports commuters travelling between Gozo and Malta and accommodates foot passengers.

The Gozo Fast Ferry vessels take more than 300 passengers and are wheelchair accessible, including bicycles and scooters at no charge – these facilities substantially reduce the hours spent on travelling and commuting. This means that passengers get to work or back home in less time and with value for money added.

The new Gozo Fast Ferry service is a reliable and dependable public transport service which, in collaboration with Malta Public Transport, offers an end-to-end seamless connection with increased accessibility.

We normally associate green mobility with land transport. But can sea vessels also contribute to cleaner transport?

Absolutely. The answer is in the numbers. Each of our vessels allows us to carry safely on board the equivalent of five buses or 60 to 70 cars. We do so by obtaining propulsion from just two high powered engines certified to latest international standards and which offer incredibly low emission values per kW power. In simple terms the emissions per passenger per hour of transport are considerably lowered in this way.

iSeeMalta is fully committed to embracing a 'Green Economy' project. Our vision in relation to this concept revolves around the following four pillars: A green and fair economy – enabling progress, while managing resources sustainably; protection and maintenance of the marine environment; creating a balance between what is economically achievable with what is ecologically essential; and reduction in carbon emissions.

How critical is clean sea transport to an island such as Malta?

At Gozo Fast Ferry and iSeeMalta, we believe clean sea transport is an essential link in the efficient and green mobility vision for Malta. Transport systems and services are vital to our economy, and to our quality of life.

> "Clean sea transport is an essential link in the efficient and green mobility vision for Malta"

Currently, vessels engaged in passenger transport in local waters are only and exclusively powered by means of diesel compression ignition engines which are either of older generation marine type or by land industrial engines converted to marine use.

The main propulsion engines installed on the iSeeMalta Vessels meet the IMO MARPOL Annex VI Tier II standards as required under the Convention. By introducing Malta's first MARPOL Tier II/EU Stage IV compliant engines we intend to send a clear and strong signal as to the way forward. A sustainable, low emission, silent mode of propulsion for state-of-the-art vessels. A crucial component to moving to a greener transport and mobility option revolves around alternative modes of transport and the provision of a reliable and efficient service thereby making it an attractive choice for locals and tourists alike, thus leading to less congested roads and less pollution.

In a bid to reduce the negative consequences of road transport, the iSeeMalta concept, with its new fleet of vessels has a vision to make better use of lower-emission transport modes and seeks to promote this multi-modal transportation shift.

What green credentials do the vessels operated by Gozo Fast Ferry and I See Malta have?

Apart from latest generation engines which are certified to produce the lowest possible CO2 and NOX emissions, we implement several other measures from the concept to the operational stages.

Firstly, all our vessels are designed and being built using marine type light alloys for a lower operational displacement and consequent propulsive power requirement. All hulls are optimized to reduce drag and wave making resistance. Thus, they are specially designed for low wake formation and improved propulsive efficiency, therefore lower energy loss when under way. In addition, the vessels are also equipped with other measures such as low consumption lighting, type-approved sewage treatment systems, and garbage separation schemes, meaning no raw sewage discharges into the sea shall result.

This certification guarantees higher environmental performance under a regulated aspect meaning the controlled emissions (SOx and NOx) are known and lowered from design stage to meet the

said Standard. Furthermore, being manufactured in 2017 the engines operate at a higher fuel efficiency than previous generation engines.

Do these green credentials extend to the operations side?

Most definitely.

iSeeMalta promotes all app based ticketing to reduce printing of paper as much as possible. At Gozo Fast Ferry, being eco-friendly is extremely important, hence the fact that we collaborate with Malta Public Transport to ensure a seamless and green journey.

We encourage individuals to use public transport as much as possible to reduce the carbon footprint. We also encourage all bookings to be made online, through our app or board with their '*Tal-Linja* card' so that one may 'tap and go' and reduce printing of paper.

In what ways do you maintain, and improve, your eco credentials?

Checks are continuously made by the engineers and teams of professionals on board. Regular servicing of engines and generators are carried out according to the manufacturers' directions and hours run. We are also continuously looking for ways of ticketing to eventually have the minority purchasing paper tickets, maximizing the schedule to operate on the most potential timings.

Digital technologies have brought significant transformation to the tourism industry, revolutionising tourism enterprises, products and experiences, business ecosystems, and destinations.

At iSeeMalta we have invested heavily in this aspect with the launch of a new website allowing customers to purchase passes digitally. The rise of digital platforms has increased the variety and volume of tourism products, services, and experiences, with on-demand functionality accelerating the speed of economic transactions, market awareness and feedback. These shifts have created new opportunities, as well as, challenges, for the tourism industry and SMEs as they strive to meet consumer demands and reach new markets. Our new technology platform will also allow us to benefit from customer engagement as well as reducing use of paper.

> "This certification guarantees higher environmental performance"

From a business perspective, do greener operations also translate into financial savings?

The expenses relative to waste disposal and fuel consumption are minimised with such savings translating into more competitive fares. Also, customers are more aware of green economy, hence attracting commuters is on the rise. We see a trend developing where customers are more environmentally conscious and tend to choose to travel on more environmentally friendly vessels and modes of transport.

Joe Sant Fournier is Operations Manager, Gozo Fast Ferry and JeanBert Gatt, is Chief Operations Officer, iSeeMalta

ELECTRIC VEHICLES

How an electric vehicle works and how to take care of it

ANDY BUGEJA

Before purchasing an EV, analyse your driving range and choose the battery capacity accordingly. PHOTO: SHUTTERSTOCK.COM

Electric vehicles (EV) are easier to live with and are cheaper to run than conventional vehicles. EVs are less likely to require repairs, and owners save thousands of euros in fuel and garage services due to the high-efficiency electric power train, energy recovery through the regenerative braking and low maintenance required.

The battery is the heart of the EV and is the vehicle's residual value. The battery is very pricey to replace, and the range of the EV depends on its capacity and health level. Batteries lose their initial capacitive range every year, and the rate at which this loss occurs depends mainly on the storage conditions, driving style and charging schemes applied to the battery.

The liveability of the battery can suffer damage when unused for too long especially if left discharged sitting in a garage or, worst, under the scorching sun or in sub-temperature on the street. Charging up the battery to full-cycle every time and frequent recharging of the battery will degrade it more quickly. When practically possible, consider a charging scheme ranging from 20 up to 80 per cent. However, the optimal way for long trips is to charge the battery to 100 per cent and drive until it just about runs out.

"The battery is the heart of the EV"

Before purchasing an EV, analyse your driving range and choose the battery capacity accordingly. The good news is that EV batteries generally last more than 10 years under normal driving conditions, and in most cases, one will still be able to drive the car as usual but with only a bit less range. Most electric vehicles use ventilators, coolants and refrigerants to prevent the batteries from overheating. On average, coolant servicing is applied every 80,000km or every five years. However, it is best to refer to the EV owner's manual to check the frequency of flushing or replenishing of any coolant in the EV system.

Typically an EV uses a combination of a regenerative and conventional friction braking system. Regenerative braking allows the EV to operate on what is called one-pedal driving. By pressing the accelerator pedal sets the EV to accelerate, while when releasing the pedal, the vehicle will decelerate due to a braking torque similar to the engine brake in a vehicle equipped with a conventional combustion engine. When the EV brakes, the motor switches to generator mode and the vehicle's kinetic energy is converted back into electrical energy, thereby recharging the battery pack. The hydraulic section of the braking system is not used as frequently as in a gasoline-powered vehicle, but one must still look after the brake pads, and even though pads and discs tend to last much longer, the brake fluid needs to be replaced from time to time. The hydraulic fluid is hygroscopic, which absorbs water moisture from the air.

The amount of energy recovery depends on the different driving styles, and together with the regenerative braking settings, it is difficult to give an exact number when the brake pads are to be replaced. Therefore when driving an EV, the number one game is to make the brake pads last long enough and never need to replace them again. On average, the Brake Fluid is to be flushed every 50,000km or five years, whichever comes first.

Same as in other vehicles, the EV uses the same form of wheels. Regular tyre air pressure checks and wheel balancing and alignment is requisite. The significant weight of the EV combined with the added acceleration due to the instant power and torque delivered by the electrical motor will lead to the tyres needing replacement more often than with a conventional vehicle. Also, tyre rotation is recommended every 10,000KM. A safe way is to purchase replacement tyres specifically designed for EV, which generally contribute less rolling friction, are quieter and are more durable than traditional ones, but still, regular tyre maintenance will remain an essential service to the EV.

Different EV use different types of electric motors, but the most common is the AC induction motor. Usually, the electric motor's performance is very efficient, and its life expectancy is anywhere from 15 to over 20 years. However, various factors, including unexpected load changes fluctuations, input power supply, and different environmental factors like humidity and temperature, may influence an electric motor's performance. A reduced voltage supplied from the battery may lead to overcurrent to maintain torque, damaging the electric motor and/or its speed drive. EV motors will break down quicker than intended if contamination from chemicals or foreign particles like dirt and dust debris are trapped inside it, damaging the ball bearings in ways that lead to high levels of wear and vibration. The cooling system and heat sink of the electric motor and speed-drive shall be serviced on time, since it may be limiting the motor's ability to regulate the temperature, rendering the motor to be less efficient, which results in overheating and may cause a shortage of the windings due to insulation failure.

The conventional internal combustion engine can have as many as 2,000 moving parts, while the power drivetrain in an EV can function using only 20 parts. The continuous torque generated by the electric motor contributes to many EVs having only a single set of gears to power the wheels.

Fewer moving parts mean less likelihood of mechanical problems. On the other hand, EVs contain a costly battery, electric motor, and speed drive with complex electrical and electronic components.

One might be glad to learn that EVs need no oil changes and do not worry about spark plugs or timing belt changes. It is a considerable upside that the friction parts of the EV are much more lived than on vehicles with a combustion engine because most of the braking is done by the drag generated by the energy recovery marking the electric vehicle as very efficient and convenient.

Andy Bugeja is Senior Lecturer, Institute of Engineering and Transport, MCAST

ACIM

Future challenges of the motor industry in Malta: Transition to electric transport

DEBORAH SCHEMBRI

November has seen the conglomeration of more than 200 world leaders in Scotland for the COP26, the United Nations summit about climate change. The COP26 was preceded by the United Nations' report on climate change which stated in no unclear terms that humans were having an 'unequivocal' effect on Earth's rising temperatures.

Carbon dioxide levels in the atmosphere are presently higher than they have been for three million years and scientists predict that global temperatures will continue to increase unless drastic action is taken by all countries and major stakeholders on a global scale.

In an effort to reduce carbon emissions, the EU has set ambitious targets, namely the cutting of emissions by at least 40 per cent by 2030 and by 80-95 per cent by 2050, from 1990 levels.

Since road transportation is undoubtedly one of the major contributors of carbon emissions, it is becoming increasingly clear that the achievement of climate goals depends on a large-scale shift from vehicles with and internal combustion engine (ICE) to electrically driven vehicles (EVs) as the latter emit no carbon dioxide given that they do not burn fossil fuels.

Even though Malta is a very small country, it cannot shrug off its responsibility to try and reach the desired targets.

The National Statistics Office lately reported that the number of licensed motorcycles in Malta had surpassed 400,000 as at the end of last year – therefore, even though efforts have been made to make the Maltese population less dependent on private transportation, it is evident that the result has not been as positive as it was anticipated.

Unfortunately, one of the main reasons why Malta finds itself in this situation is a result of the fact that Malta was forced by the EU to change its taxation on imported used vehicles from other EU countries way back in 2009.

EU directives regulating transfers of used vehicles between EU member states dictated that registration tax levied on imported second-hand vehicles should reflect the depreciated value of the same vehicle.

This resulted in older cars, being taxed at a much lower rate compared to newer vehicles. These older used vehicles also happened to be the worst polluters.

As a result, more than 60 per cent of vehicles registrations ended being made up of these older and more polluting vehicles year on year until last year mainly imported from the UK.

This resulted in the average age of the car population increasing rather than decreasing as happened in other EU countries therefore resulting in much higher carbon emissions from private transport.

> "For this story to be a success there must also be well-trained and well-equipped authorised repairs facilities"

This situation persisted irrespective of changes in government even though small amendments were made to the taxation regime.

The problem, in a nutshell, was that while on the one hand government stated that it wanted to put down emissions and work towards cleaner options, it incentivised consumer behaviour which was in diametrical opposition to this eco-friendly thrust.

Even attempts at steering the general public towards alternative means of transportation did not shift the Maltese trend for people to desire owning their own cars as opposed to using public transport or sharing vehicles during their commute.

The number of cleaner cars being put on Maltese roads is bound to increase. PHOTO: SHUTTERSTOCK.COM

Malta therefore faces a big challenge when it comes to the transition from ICE vehicles to electric alternatives. It is good to say, however, that although the number of electric and hybrid vehicles remains at a low 1.5 per cent of the total vehicle population on the island, last year saw an encouraging increase of eight per cent from the previous quarter.

The number of cleaner cars being put on Maltese roads is bound to increase as a result of a few different factors.

Primarily the price of used vehicles from the UK is bound to increase by almost 30 per cent following Brexit, a blessing in disguise as this will help neutralize the influx of the highest pollutants.

There have also changes made in the testing procedure by the European Union resulting in a more accurate calculation of emissions and this coupled with the new mandatory emission reduction targets for new cars under EU regulation (EC) 443/2009 will help make a radical shift towards cleaner vehicles being registered in Malta.

There are critical factors which will determine the success of the transition towards electrification. Government incentives certainly help, and government has even committed itself to their increase during the last budget, which is encouraging.

There must continue to be adequate, convenient and effective charging solutions. There is also a commitment towards this and a lot of work is being done to increase charging points throughout the island. It is important to state, at this point, that there must also be separate facilities for larger vehicles such as buses, trucks, construction equipment and so forth as these have additional requirements to those used for lighter vehicles.

For this story to be a success there must also be well-trained and well-equipped authorised repairs facilities with ongoing training for workers as electric vehicles make use of rapidly changing technologies.

A regulatory legal framework should ensure that repairs are done in a highly professional manner to safeguard the health and safety of passengers.

Repairs to EVs by unqualified and untrained people could greatly endanger the lives of motorists, passengers and passers-by.

It is also imperative that the Civil Protection Department be trained to specifically deal with undesired eventualities from EV's.

The challenges for the motor industry in Malta are many but with the right infrastructure, regulatory frameworks, training and the desire to reach targets, Malta should be capable of making a success story of this transition.

Deborah Schembri is Association of Car Importers General Secretary

CLIMATE

COP26 strikes hard-fought deal but UN says 'not enough'

Nearly 200 nations have come together on a global deal to combat climate change after two weeks of painful negotiation, but fell short of what science says is needed to contain dangerous temperature rises.

Rich countries stood accused of failing at the COP26 summit in Glasgow to deliver much-needed finance to vulnerable states at risk of drought, rising seas, fire and storms. Britain's COP26 president Alok Sharma rounded up the marathon negotiations telling delegates: "It is now decision time. And the choices you are set to make are vitally important."

But China and India insisted that language on fossil fuels be weakened in the final summit decision text. As the final deal was clinched, a tearful Sharma said "I apologise for the way this process has unfolded. I am deeply sorry," before banging down his gavel. Delegates entered the talks charged with keeping the 2015 Paris Agreement goal of limiting temperature rises to 1.5-2C degrees within reach. They were also tasked with finding the funding for nations most at risk of climate-related droughts, floods and storms supercharged by rising seas. Observers said the agreement fell far short of what is needed to avert dangerous warming and help countries adapt or recoup damages from the disasters already unfurling globally.

UN Secretary General Antonio Guterres welcomed the deal, but stressed it was "not enough".

Swedish environmental activist Greta Thunberg said the talks had achieved nothing but "blah, blah, blah", echoing earlier comments.

Laurence Tubiana, the architect of the Paris deal, told AFP that "COP has failed to provide immediate assistance for people suffering now."

But a statement from the European Commission said the deal had "kept the Paris targets alive". British Prime Minister Boris Johnson, whose government hosted the talks, insisted the deal was a "big step forward" even if much more work needed to be done. The final text urged nations to accelerate efforts to "phase down" unfiltered coal and "phase out" inefficient fossil fuel subsidies.

Large emitters China and India had opposed the mention of the polluting fuels, and the language in the final text was significantly more nuanced than earlier drafts. But after resistance from rich nations led by the United States and EU, the text omitted any reference to a specific finance facility for the loss and damage climate change has already caused in the developing world.

It instead only promised future "dialogue" on the subject. Although host Britain said it wanted COP26 to keep the 1.5C temperature cap in reach, a UN scientific assessment last week said countries' latest climate plans put Earth on course to heat 2.7C.

The text noted "with deep regret" that wealthy nations had also failed to stump up a separate annual sum of $100 billion they promised over a decade ago. It urged countries to pay up "urgently and through 2025".

It also promised to double finance to help developing countries adapt to rising temperatures by the same date. (AFP)