

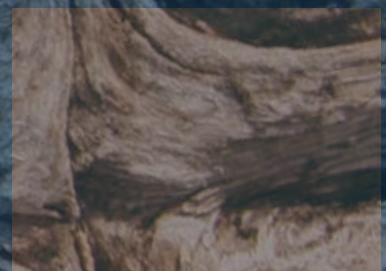
NATIONAL
PRODUCTIVITY
REPORT

2024



**MALTA'S TWIN
TRANSITION**

A Roadmap for Sustainable
Productivity and Resilience



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CHAIRMAN'S INTRODUCTION

As Chairman of the National Productivity Board, it is my honour to present this year's National Productivity Report, which focuses on the profound opportunities and challenges posed by the twin transition—namely, the simultaneous advancement of green and digital transformations. This report reflects our nation's shared vision of achieving sustainable growth, resilience, and competitiveness in an increasingly complex and interconnected world.

The twin transition represents a defining moment for Malta. On one hand, the green transition compels us to address urgent environmental challenges, adopt renewable energy sources, and embed sustainability into every facet of our economy. On the other hand, the digital transition demands the adoption of cutting-edge technologies to optimise processes, unlock innovation, and improve connectivity. Together, these transitions offer a pathway to not only modernise our economy but also enhance our productivity and improve the quality of life for all our citizens.

Productivity is the backbone of economic progress. It determines our ability to grow, innovate, and improve living standards in a competitive global economy. This year's report underscores the central role of productivity in navigating the twin transition. It highlights how the efficient use of resources, coupled with technological advancements and sustainability practices, can drive long-term resilience and prosperity.

This report has been shaped by robust analysis, stakeholder engagement, and a deep understanding of Malta's unique socio-economic context. It provides a comprehensive framework of actionable recommendations aimed at addressing key challenges, from skills mismatches and infrastructure gaps to policy coordination and financing mechanisms. These

recommendations are not merely theoretical; they offer practical pathways to align our national priorities with global and European Union standards, including the ambitions of the EU Green Deal and the Digital Decade.

We recognise that achieving the twin transition is a shared responsibility that requires collective action. Policymakers must enact and enforce forward-looking policies, businesses must embrace innovation and sustainability, and society as a whole must adapt to the demands of a changing world. The National Productivity Board is committed to supporting this transition by fostering collaboration, providing expertise, and ensuring accountability.

As we look to the future, we remain guided by the principles of inclusivity, sustainability, and resilience. This report serves as both a roadmap and a call to action for Malta to lead by example in addressing global challenges while seizing opportunities to secure our economic and social well-being. Together, we can ensure that Malta thrives in this new era, setting a benchmark for productivity and innovation on a global scale.

I extend my deepest gratitude to all those who contributed to the development of this report. Your expertise, insights, and commitment to Malta's future have been invaluable. It is my hope that this report inspires bold action and fosters a shared vision for a more productive and sustainable Malta.

Perit David Xuereb
Chairman
National Productivity Board



PARLIAMENTARY SECRETARY'S FOREWORD

Malta stands at a pivotal moment in its economic and social development. The twin transition—the simultaneous advancement of digitalisation and sustainability—represents the most significant economic shift of our time. Across Europe and beyond, nations are redefining their economies, embracing new technologies, rethinking how they use resources, and laying the foundation for more resilient, competitive, and sustainable growth. Malta must not only keep pace with this transformation but position itself as a leader among small states.

As a Government, we recognise that the choices we make today will define Malta's future for generations to come. This is why we are committed to ensuring that our economic policies, investment priorities, and national strategies align with Vision 2050, a long-term framework designed to build a future-ready Malta—one that is productive, sustainable, innovative, and inclusive.

Vision 2050 is a reflection of Malta's ambition—an ambition that sees us not merely adapting to global changes but actively shaping our own trajectory. It recognises that productivity must be at the core of our economic transition. As we navigate the twin transition, our approach is not just about achieving compliance with international targets but about unlocking new opportunities for economic diversification, job creation, and enhanced quality of life for all Maltese citizens.

For Malta, the twin transition is not an abstract concept; it is a strategic necessity. Our economy is unique—dynamic and service-driven, but also constrained by our small size, resource limitations, and external dependencies. If we are to remain competitive and resilient, we must fully integrate the digital and green transitions into our economic model.

The digital transition provides an opportunity to enhance efficiency, unlock new business models, and modernise traditional industries. This Government has heavily invested in digital infrastructure, e-government services, AI adoption, and emerging technologies to position Malta at the forefront of digital transformation. However, infrastructure alone is not enough—we must ensure that digital skills, workforce readiness, and business adoption move in parallel. This is why we have launched nationwide digital skilling programs, SME support initiatives, and investment incentives to accelerate digital transformation across all sectors.

At the same time, the green transition is critical to Malta's long-term sustainability. Climate change, rising energy costs, and environmental constraints require us to fundamentally rethink how we consume resources, plan our cities, and power our economy. Government policies are already supporting renewable energy adoption, sustainable transport, and circular economy initiatives. We are also mobilising investment in clean technology, green finance, and climate adaptation projects to ensure that Malta's economy can thrive in a low-carbon future.

Both transitions—digital and green—must reinforce each other. This is why Malta is investing in smart energy grids, AI-driven resource management, and data-driven governance models that will enhance efficiency across industries. These changes aren't just about policy; they are about ensuring that our businesses remain globally competitive, our workforce is equipped for the jobs of tomorrow, and our citizens benefit from a more liveable and efficient economy.

The National Productivity Report 2024 provides an in-depth analysis of Malta's productivity performance and offers a strategic roadmap for action. The framework outlined in this report aligns with our Government's economic priorities, ensuring that productivity gains are not only measured in economic terms but also in terms of social well-being and environmental sustainability.

This Government is fully committed to implementing the necessary reforms, investments, and policies to make this transition a success. We are dedicated to working with businesses, academia, and civil society to ensure that Malta not only meets global standards but sets new benchmarks for sustainable growth.

This report is an important contribution to that effort. I thank the National Productivity Board and all stakeholders who have contributed to this analysis. The insights and recommendations presented here will play a vital role in shaping policy decisions that will guide Malta into the next phase of its economic evolution.

Together, we have the opportunity to build a Malta that is not only stronger and more resilient—but smarter, greener, and more innovative than ever before.

Hon Andy Ellul
Parliamentary Secretary

COMPOSITION OF THE NATIONAL PRODUCTIVITY BOARD 2025

The National Productivity Board is an independent institution that helps to analyse developments and challenges related to economic productivity and competitiveness.

The Board comprises eleven members, including the Chairperson and ten other members. The Chairperson of the Malta Council for Economic and Social Development serves as the Chairperson of the Board by virtue of their position. The remaining ten members consist of a senior official nominated by the Minister responsible for Finance, a member nominated by the Governor of the Central Bank of Malta, four members nominated by workers' organisations represented by constituted bodies on the Council, and four members nominated by constituted bodies representing national employers' organisations on the Council.

Perit David Xuereb
Chairperson National Productivity Board

Mr. Andrew Aquilina
Chamber of SMEs

Mr. Josef Vella
UHM Voice of the Workers

Mr. Kevin Callus
Malta Hotels and Restaurants Association

Mr. Mario Sacco
Confederation of Malta Trade Unions

Mr. Kevin.J.Borg
Malta Employer's Association

Mr. Josef Bugeja
General Workers Union

Mr. Ian Borg
Central Bank of Malta

Mr. Mario Sacco
For.U.M

Mr Kevin Vella
Ministry of Finance and Work

Mr. Philipp Seifert
Malta Chamber of Commerce, Enterprise, and Industry



EXECUTIVE SUMMARY

Malta is at the threshold of a transformative era, driven by the twin imperatives of digital innovation and environmental sustainability, collectively referred to as the twin transition. This profound shift represents an unprecedented opportunity for Malta to redefine its economic trajectory, address structural vulnerabilities, and position itself as a leader in sustainable development. The twin transition is not just a policy agenda; it is a systemic reimagining of how resources are managed, innovations harnessed, and societal needs met in a way that aligns with the urgent demands of our time.

At its core, the twin transition seeks to integrate the green and digital transformations as complementary and mutually reinforcing pillars. The green transition emphasises the adoption of renewable energy, circular economy practices, and sustainability frameworks to mitigate climate risks and ensure long-term ecological balance. Simultaneously, the digital transition leverages technologies such as artificial intelligence, big data, and the Internet of Things to optimise processes, enhance decision-making, and drive innovation. For Malta, these intertwined pathways provide a unique blueprint for achieving sustainable productivity growth.

The report highlights how the twin transition addresses Malta's persistent challenges, including resource inefficiencies, skills mismatches, and limited scalability as a small island economy. By embedding sustainability into economic and social systems and harnessing digital tools to drive efficiency, Malta can unlock new opportunities for innovation, competitiveness, and resilience. These efforts align seamlessly with the European Union's priorities under the Green Deal and Digital Decade, offering Malta access to technical support, funding mechanisms, and policy coherence.

The Twin Transition and Malta's Competitiveness

Malta's economic profile is characterised by its vibrant service-driven sectors, including tourism, financial services, and information and communication technologies. However, as a small island state, Malta faces distinct challenges such as limited natural resources, geographic constraints, and dependence on external markets. Productivity, defined as the efficient use of resources to create value, remains a critical lever for enhancing economic sustainability and improving living standards.

The report underscores the twin transition as a catalyst for redefining Malta's productivity landscape. The green transition fosters resource optimisation, cost reduction, and compliance with global sustainability standards, creating a competitive edge for businesses that align with these principles. Concurrently, the digital transition enhances productivity through data-driven strategies, streamlined processes, and greater market connectivity. Together, these dimensions hold transformative potential for Malta, enabling it to modernise industries, reduce carbon footprints, and expand economic horizons.

While Malta has made strides in sectors like renewable energy and digital infrastructure, gaps remain. Addressing these barriers will require targeted interventions in governance, infrastructure, workforce development, and financing mechanisms. The report presents a comprehensive roadmap for realising the twin transition's potential, emphasising the need for integrated strategies that align with national and EU-level goals.



STRATEGIC FRAMEWORK AND RECOMMENDATIONS

Central to the report is the articulation of a Theory of Change framework, which provides a structured approach to achieving the twin transition's long-term objectives. The framework identifies critical inputs, such as governance reforms, capacity building, and technological investments, and maps them to activities, outputs, and desired outcomes. This systematic approach ensures that the twin transition is not only impactful but also inclusive and adaptable.

The report offers ten strategic recommendations to guide Malta's journey toward sustainable productivity. These recommendations focus on areas such as enhancing policy alignment, modernising infrastructure, building workforce capacity, and fostering innovation ecosystems. Each recommendation is supported by detailed analyses, highlighting the challenges they address, the opportunities they unlock, and their alignment with broader strategic priorities such as Malta's Vision 2050.

For instance, one of the key recommendations involves strengthening governance frameworks to ensure policy coherence and effective implementation of green and digital priorities. This includes creating integrated monitoring systems to track progress and fostering public-private partnerships to mobilise resources and drive innovation. Another recommendation emphasises the modernisation of infrastructure, with a focus on renewable energy systems, digital connectivity, and multi-modal transport solutions. These initiatives aim to reduce inefficiencies, enhance resilience, and position Malta as a leader in sustainable infrastructure development.

The report also highlights the importance of empowering small and medium-sized enterprises (SMEs) as engines of innovation and inclusivity. Tailored support mechanisms, knowledge-sharing platforms, and simplified access to financing are proposed to help SMEs adopt green and digital practices. In addition, targeted workforce development initiatives are recommended to bridge skills gaps and equip workers with the expertise needed to thrive in the twin transition economy. By aligning educational curricula with market demands and promoting lifelong learning pathways, Malta can create a resilient and future-ready workforce.

Implementation Pathways

Achieving the twin transition's ambitious goals will require a robust implementation strategy that prioritises adaptability, inclusivity, and stakeholder engagement. The report outlines key principles to guide this process, including the importance of aligning national initiatives with EU frameworks to leverage funding and technical expertise. It also stresses the need for continuous monitoring and evaluation, supported by data-driven insights, to ensure that strategies remain responsive to emerging challenges and opportunities.

The role of public-private partnerships is highlighted as a critical enabler of success. By fostering collaboration between government institutions, private enterprises, and civil society, Malta can mobilise the resources and expertise needed to implement complex initiatives. The report also emphasises the importance of equity and inclusivity, ensuring that the benefits of the twin transition are shared across all segments of society, including marginalised groups and underserved sectors.

A Call to Action

The twin transition represents a defining moment for Malta—a chance to lead by example in addressing global challenges while securing long-term economic and social resilience. The report concludes with a call to action for policymakers, businesses, and civil society to embrace the twin transition as a shared responsibility. By adopting the strategies outlined in this report, Malta can position itself as a pioneer of sustainable productivity, setting a benchmark for small economies worldwide.

This executive summary provides a cohesive overview of the report's key findings, emphasising the critical role of the twin transition in shaping Malta's future. Through its detailed analyses and actionable recommendations, the report aims to inspire collective action and chart a clear path toward a more sustainable, competitive, and inclusive Malta.

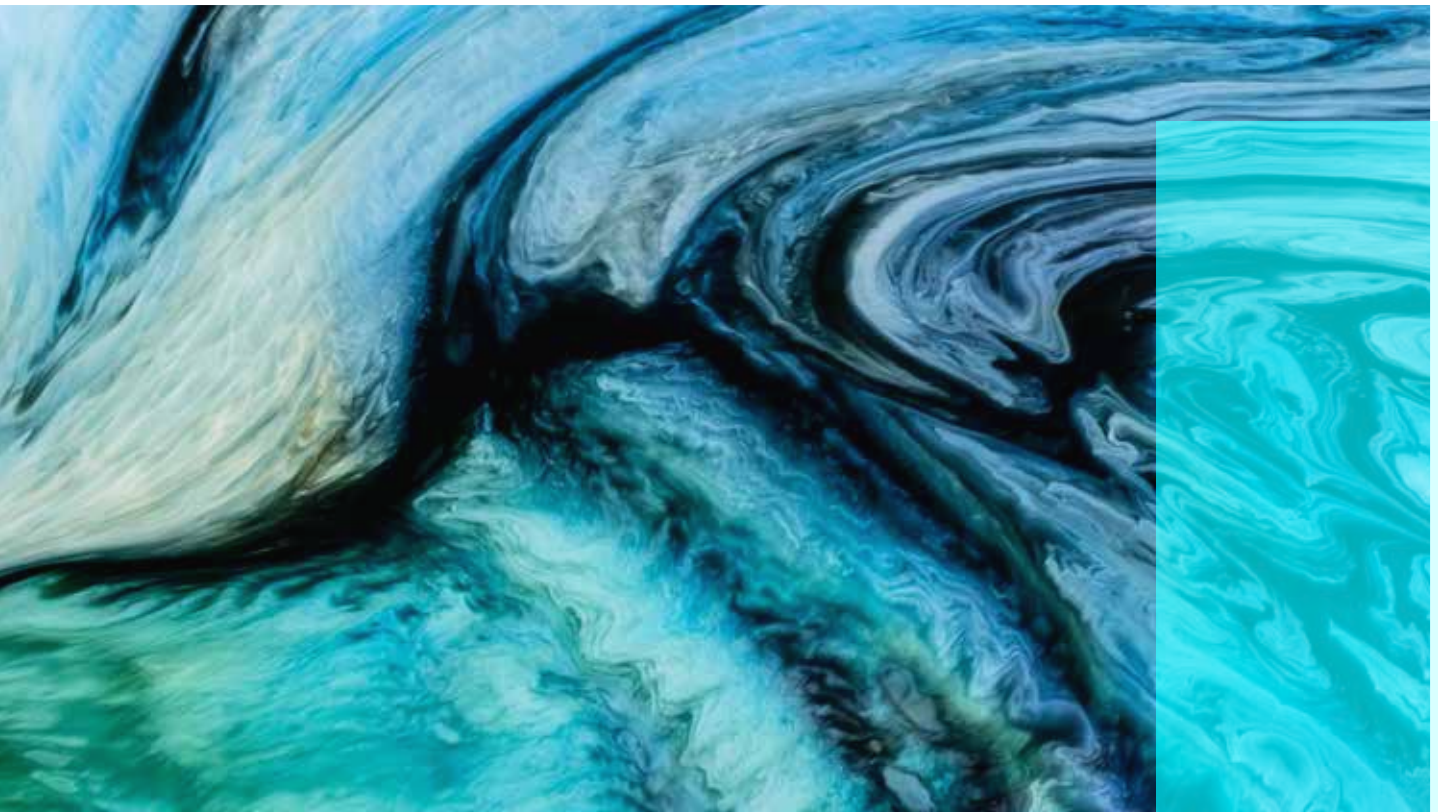
Key Principles Guiding the Recommendations

Throughout the chapter, several key principles are emphasised:

- **Adaptability:** The recommendations are designed to be flexible, enabling policymakers to adjust strategies as new challenges and opportunities arise.
- **Inclusivity:** Initiatives are structured to ensure that all segments of the population and economy benefit from the twin transition, including marginalised groups and underserved sectors.
- **Alignment:** All actions are closely aligned with Malta's existing national strategies and EU directives, ensuring coherence and access to funding and technical support. In particular, care has been taken to ensure consistency with the latest developments in the EU's competitiveness strategy, especially in relation to the 'Competitive Priorities' defined in the Draghi report¹.

Proportionality

This chapter aims to equip Malta with the tools and strategies needed to navigate the twin transition effectively. By balancing ambition with feasibility and leveraging the power of collaboration, Malta can emerge as a leader in sustainable and digital transformation.



¹ Draghi, M.(2024). The future of competitiveness - In-depth analysis and recommendations.

5.1 Strengthening Coordination and Policy Alignment

Governance is the foundation of any successful transformation. For Malta, the challenge lies not in a lack of initiatives but in ensuring that efforts are cohesive, adaptive, and impactful. Fragmentation and overlapping responsibilities remain significant barriers to progress, particularly in aligning green and digital priorities. Instead of creating new administrative structures, Malta should enhance the capacity and coordination of existing mechanisms, ensuring they are responsive and aligned with EU frameworks. This echoes a headline finding in the Draghi report, which calls out a lack of focus and consistency - in both policy and action - as a key barrier to truly 'reigniting' European competitiveness and 'industrial dynamism.' Effective policy alignment in EU and national industrial, competition and trade policies is in fact identified as one of the core building blocks of Draghi's way forward. Draghi therefore advocates a joined-up approach across all three areas, taking a sectoral approach rather than one focused on companies, backed by robust public engagement and implementation monitoring strategies.

Applying Draghi's recommendation to the local context, policy alignment can be achieved by streamlining inter-ministerial coordination processes and fostering stronger collaboration with private sector stakeholders. Regular stakeholder engagement forums, integrated into existing mechanisms, can ensure continuous dialogue, monitor progress, and adapt policies to emerging challenges. Developing an overarching framework for integrating green and digital policies is essential. This framework would serve as a strategic blueprint, ensuring that all initiatives are complementary and mutually reinforcing. This approach ties in with Draghi's emphasis on integrating decarbonisation and competitiveness policy and action, deploying different policy tools and approaches for different industries, with clean digital tech acting as a horizontal driver for sustainable growth. Draghi in fact identifies the joint planning of decarbonisation and competitiveness as the second of three main areas of action to propel sustainable growth.

Finally, monitoring progress at national level is essential for maintaining accountability and achieving outcomes. Enhancing existing data collection and reporting tools to provide a transparent view of policy impacts will help Malta adjust its strategies dynamically. This approach ensures that governance remains responsive to new opportunities and risks, without burdening the system with additional layers of oversight.

Action Points:

- Designate a lead institution to oversee the alignment of green and digital priorities across government bodies and coordinate with EU frameworks.
- Develop an overarching Green and Digital Policy Integration Framework by leveraging existing national strategies and aligning them with EU directives.
- Institutionalise stakeholder engagement forums within existing governance structures to facilitate continuous dialogue and ensure broad-based participation.
- Enhance data collection and analytics capabilities through the development of a centralised digital dashboard to track and adapt initiatives dynamically.

Indicators:

- Lead Indicators: Establishment of a lead coordinating body within existing institutions; publication of an integrated policy framework by a specified timeline.
- Lag Indicators: Improved alignment of national strategies with EU directives and increased stakeholder satisfaction as measured through annual assessments.

5.2 Investing in Infrastructure to Support the Transition

Modernising infrastructure is central to Malta's ability to achieve the twin transition. While progress has been made in areas such as renewable energy integration, significant gaps remain in digital connectivity, transport networks, and energy systems. Investments in resilient and adaptable infrastructure are needed to support both green and digital transformations, with a particular emphasis on multi-modal transport solutions and smart technologies.

In energy, the priority should be upgrading the grid to support renewable energy sources, adopting smart energy management systems to enhance efficiency; and increasing energy security. The earlier reference to the integration of decarbonisation and competitiveness strategy applies strongly here. The Draghi report clearly addresses the pitfalls of failing to adopt this coordinated approach, stating that this carries the "risk that decarbonisation could run contrary to competitiveness and growth." In this context, he highlights the need for a phased transition to 'secure, decarbonised and affordable energy' across all Member States, identifying this as a 'Competitiveness Priority' and calling for sustained and targeted investment in the necessary infrastructure to meet this objective cost-effectively.

Digitalisation is a further 'Competitiveness Priority' set out in the Draghi report, which recommends focused investment in advanced connectivity and related infrastructure. Expanding high-speed broadband access to underserved areas will also ensure equitable participation in the digital economy.

Transport infrastructure and systems are a further focus area in the Draghi report. In the frame of the green transition, transport is highlighted as a priority sector for the EU's transition to a net-zero economy, given that it accounts for over one-quarter of greenhouse gas emissions (particularly road transport)². This contribution is even higher in Malta, with a rising trend in emissions from road transport.³ Transport systems therefore require a fundamental shift toward multi-modal solutions that integrate public transit, cycling, and pedestrian infrastructure with energy-efficient vehicles. Implementing a smart traffic management system can further optimise urban mobility, reducing congestion and emissions.

Collaborative funding approaches should be pursued to ensure these initiatives are financially sustainable. Partnering with EU institutions and private stakeholders can unlock resources, while aligning infrastructure projects with EU Green Deal priorities will provide access to additional support.

² European Commission. (2024). Climate Action Progress Report 2024.

³ European Commission. (2023). Climate Action Progress Report 2023 - Country Profile (Malta).

Action Points:

- Upgrade the energy grid to support renewable energy integration, with a focus on smart energy management and storage solutions.
- Develop a multi-modal transport strategy that integrates public transit, cycling lanes, pedestrian infrastructure, and electric vehicle networks.
- Implement a Smart Traffic Management System to optimise urban mobility, reduce congestion, and improve air quality.
- Leverage EU funding mechanisms and private investment to support the development of energy, digital, and transport infrastructure projects.

Indicators:

- Lead Indicators: Completion of feasibility studies and funding agreements for major infrastructure projects within two years; establishment of pilot multi-modal transport initiatives by a specified timeframe.
- Lag Indicators: Increased use of public transport and non-motorised mobility options, along with measurable reductions in transport-related emissions and energy inefficiencies by 2030.

5.3 Building Workforce Capacity for Future Growth

A skilled workforce is essential for driving and sustaining the twin transition. Malta's labour market currently faces significant challenges, including a skills mismatch, low STEM attainment, and a lack of technical expertise in key areas such as renewable energy and digital technologies. Addressing these gaps is critical to ensuring that workers can adapt to and thrive in an economy increasingly shaped by green and digital advancements. Ensuring a skilled workforce is another Competitiveness Priority specified in the Draghi Report, which describes the persistent lack of relevant and sufficient skills in Member States as a core barrier to enhanced competitiveness. The report attributes to a combination of factors affecting the performance of national education and training systems, as well as labour market dynamics. It identifies five key points of failure which, in its analysis, continue to widen the skills and labour gap:

- 1. the gradually deteriorating performance of the education system;**
- 2. a shrinking active labour population;**
- 3. limited adult learning;**
- 4. low labour mobility;**
- 5. poor working conditions.**

This analysis, and how it applies to Malta's evolving situation, has been considered in the formulation of the action points below.

A number of these points are already covered in the National Employment Policy, which provides a solid foundation for addressing workforce challenges, with its emphasis on upskilling, improving labour market participation, and fostering alignment between education systems and economic demands. Building on this policy, Malta must create lifelong learning pathways that allow workers to continually update their skills in response to labour market needs. Strengthening partnerships between academia, industry, and government is vital to developing sector-specific training programs in areas such as artificial intelligence, renewable energy systems, and circular economy practices. Embedding sustainability and digital literacy into secondary and tertiary education curricula will also ensure that future generations are well-prepared for the twin transition.

The policy's focus on inclusivity aligns with the need to ensure that marginalised groups, including women and older workers, have equitable access to training and upskilling opportunities. Digital platforms for skills assessment and e-learning can be leveraged to reach these audiences, overcoming traditional barriers to participation. Additionally, public-private partnerships can expand the reach and quality of lifelong learning initiatives, ensuring alignment with market needs and fostering innovation.

Action Points:

- Align all upskilling initiatives with the goals of the National Employment Policy, ensuring a cohesive approach to workforce development.
- Establish sector-specific training programs in collaboration with academia and industry, focusing on high-demand areas such as AI, renewable energy, and digital marketing.
- Integrate sustainability and digital literacy into secondary and tertiary curricula to prepare younger generations for future challenges by fully implementing the 2025-2030 Digital Education Strategy.
- Develop a national e-learning platform to provide accessible, on-demand training for workers across all sectors.
- Launch public-private partnerships to fund and implement lifelong learning initiatives, ensuring alignment with labour market needs.

Indicators:

- Lead Indicators: Launch of sector-specific training programs and the national e-learning platform within two years, with specific emphasis on sectors identified in the National Employment Policy.
- Lag Indicators: Increased participation in training programs from underrepresented groups and measurable reductions in the skills mismatch, as evidenced by labour market surveys and employer feedback.



5.4 Enabling SME Transformation

Small and medium-sized enterprises (SMEs) are the backbone of Malta's economy, yet they face unique challenges in adopting green and digital practices. Limited financial resources, technical expertise, and awareness often prevent SMEs from fully leveraging the benefits of the twin transition. They often also face cumbersome regulatory requirements which stretch their capacity constraints. Targeted support is therefore essential to empower SMEs to innovate, improve efficiency, and access new markets.

The crucial role of SMEs in reigniting Europe's competitiveness is a core theme of the Draghi report, which pushes for a renewed focus on burden reduction for such enterprises and, crucially, on the full and effective entrenchment of proportionality in EU law.

A number of actions are therefore clustered under this recommendation aimed at supporting SME resilience, growth and innovation. One key initiative is the creation of a centralised knowledge hub that provides SMEs with resources, case studies, and advisory services tailored to their needs. This hub can guide SMEs through the process of adopting digital tools, such as cloud computing and IoT, as well as sustainable practices, such as energy efficiency and waste reduction. Additionally, fostering industrial clusters can facilitate collaboration among SMEs, larger firms, and research institutions, enabling them to share resources and expertise.

The concept of working within industrial clusters to advance the twin transitions and secure growth and competitiveness is fast gaining traction in Europe and beyond, particularly within a decarbonisation context. In very general terms, industrial clusters are ***“geographic concentrations of interconnected companies and institutions in a particular field.”***⁴ Collaboration across firms within such clusters carries clear benefits for SMEs, driving common growth, increasing competitiveness and facilitating the sharing of resources; it also provides a stronger platform for engaging with institutions in the development of relevant policies and measures. The cluster concept is evident in the Draghi report, which takes a highly sectoral approach in its analysis and recommendations, recognising the different needs and challenges of particular sectors and the value of harnessing collaboration within them to stimulate innovation and enhance value chains. One specific recommendation made by Draghi in this regard is the deliberate creation of industrial clusters in Energy-Intensive Industries to drive and support a purpose-built decarbonisation strategy for each sector.

Access to financing remains a significant barrier for SMEs. Simplifying application processes for green and digital funding programs, while providing targeted capacity-building workshops, can ensure that SMEs have the tools and knowledge to secure financial support. By aligning these efforts with existing EU initiatives, Malta can unlock additional resources for SME transformation. This must include wider and better access to venture capital, which has been identified as a core requirement in the Draghi report for boosting innovation and competitiveness. The report in fact points to an under-developed venture capital market in the EU as a barrier to the emergence of more innovative SMEs and start-ups.

⁴³ This is the most widely used definition in use, originally coined by Michael E. Porter in the Harvard Business Review (1998).

Action Points:

- Further develop the Business First hub of Malta Enterprise to provide tailored resources, advisory services, and case studies with a focus on the twin transition.
- Foster industrial clusters through existing stakeholder organisations to encourage collaboration among SMEs, larger enterprises, and research institutions.
- Simplify access to green and digital funding programs by streamlining application processes and offering targeted workshops.
- Promote digital and green certification programs to help SMEs access new markets and meet regulatory requirements.

Indicators:

- Lead Indicators: Establishment of the knowledge hub and delivery of workshops on funding opportunities within the first year of implementation.
- Lag Indicators: Increased SME participation in green and digital initiatives, along with measurable improvements in resource efficiency and market competitiveness.

5.5 Supporting Innovation through Collaborative Ecosystems

Innovation is a key driver of productivity, and Malta has significant potential to lead in green and digital technologies. However, this requires the creation of an ecosystem that encourages collaboration among businesses, researchers, and policymakers. By fostering innovation hubs and public-private partnerships, Malta can catalyse the development of new technologies and business models that align with the twin transition.

An immediate priority is establishing a national innovation ecosystem that connects stakeholders across sectors. This approach is in line with the findings of the Draghi report, which recommends a wide and deep reform of the innovation ecosystem in Europe to close the innovation gap between the EU and its competitors. This reform starts with improving the quality and capacity of research institutions within Member States to develop innovative products and services with commercial value, and the creation of a vibrant innovative start-up ecosystem to take these to market. This ecosystem should provide access to R&D facilities, mentorship programs, and funding opportunities, creating an environment where innovative ideas can flourish. Annual innovation challenges focusing on sustainability and digital transformation can further stimulate creativity and cross-sector collaboration.

In addition to fostering local innovation, Malta should leverage international partnerships to access cutting-edge research and technology. Collaborative agreements with EU research centres and global think tanks can bring valuable expertise and resources to Malta, enabling it to punch above its weight in the innovation landscape.

Action Points:

- Replicate and extend the DiHubMT – European Digital Hub launched by the Malta Digital Innovation Authority across other sectors.
- Host annual innovation challenges to stimulate creative solutions in sustainability and digital transformation.
- Develop collaborative agreements with EU research centres and international think tanks to access cutting-edge expertise.
- Strengthen the existing seed funding and incubation services to support the development of green and digital startups.

Indicators:

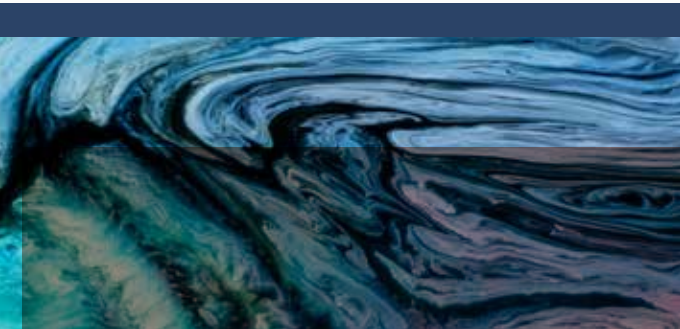
- Lead Indicators: Creation of the national innovation ecosystem and establishment of partnerships with EU research centres within two years.
- Lag Indicators: Increased R&D activity and the number of successful green and digital startups emerging from Malta's innovation ecosystem.

5.6 Facilitating Access to Green and Digital Financing

Access to financing remains a critical barrier to achieving the twin transition in Malta. Despite the availability of EU funding and sustainability-linked financial instruments, many businesses—particularly SMEs—struggle to navigate complex application processes and secure the resources needed to adopt green and digital technologies. To overcome these challenges, Malta must establish a streamlined, accessible financing framework that supports both public and private initiatives in these areas.

Rather than creating new financial mechanisms, the focus should be on simplifying access to existing funding opportunities, such as EU programs, green bonds, and sustainability-linked loans. This can be achieved by creating a centralised advisory platform that provides businesses with guidance on funding applications, eligibility criteria, and best practices for implementation. Capacity-building workshops can further enhance the ability of businesses, particularly SMEs, to secure and utilise financing effectively.

Collaboration between public and private sectors is also critical. By fostering partnerships with financial institutions, Malta can develop innovative financing solutions tailored to the needs of local businesses. For example, blended financing models can combine public grants with private loans to lower risks and encourage investment. These efforts should prioritise inclusivity, ensuring that smaller businesses and marginalised sectors of the economy can access the resources they need to participate in the twin transition.



Action Points:

- Establish a centralised advisory platform to provide guidance and resources for accessing green and digital financing opportunities.
- Conduct capacity-building workshops to improve the financial literacy of SMEs and other stakeholders regarding funding mechanisms.
- Foster public-private partnerships to develop innovative financing solutions, such as blended financing models that combine grants and loans.
- Align national funding strategies with EU Green Deal and Digital Decade priorities to maximise resource mobilisation.

Indicators:

- Lead Indicators: Launch of the centralised advisory platform and delivery of capacity-building workshops within the first year of implementation.
- Lag Indicators: Increased successful funding applications for green and digital projects and measurable growth in private sector investment in sustainability initiatives.

5.7 Advancing Circular Economy Practices

The gradual yet sustained shift to a circular economy is a core component of the digital transition, together with ongoing decarbonisation efforts. This is emphasised in the Draghi report which identifies circularity as a defining feature of the EU's competitiveness which can deliver significant opportunities if tackled effectively. On this basis, the report recommends that circular economy solutions should be built into all aspects of competition, industrial and trade policy. A circular economy (CE) therefore represents a critical pillar for Malta to achieve resource efficiency, reduce waste, and transition toward sustainability. The principles of circularity—reducing, reusing, and recycling materials—align with Malta's objectives of lowering environmental impacts while enhancing economic resilience. The Circular Economy Malta (CE Malta) initiative provides a foundational framework for implementing these practices and fostering innovation. However, challenges remain, including gaps in infrastructure, limited awareness, and insufficient incentives for businesses and consumers to adopt circular models.

To advance the circular economy, Malta should prioritise investments in infrastructure such as advanced recycling facilities and material reuse hubs. The CE Malta initiative can serve as a platform to drive collaboration between government, businesses, and research institutions, enabling innovation in areas such as sustainable product design, circular supply chains, and waste-to-resource technologies. Public-private partnerships can further accelerate progress by pooling resources and expertise.

Public awareness campaigns, led in collaboration with CE Malta, should highlight the benefits of circular practices for businesses and individuals, fostering a cultural shift toward sustainability. Coupled with targeted policy measures, such as incentives for using recycled materials and penalties for excessive waste generation, these efforts will embed circular principles into Malta's economic framework.

Action Points:

- Strengthen CE Malta as a platform for collaboration and innovation in circular economy practices, including the promotion of innovation through sustainable product design, circular supply chains and waste-to-resource technologies, and leveraging it to connect stakeholders and drive research.
- Invest in circular economy infrastructure, including advanced recycling facilities, material recovery hubs, and industrial symbiosis platforms.
- Provide incentives for businesses adopting circular models, such as tax benefits and certifications, aligned with CE Malta guidelines.
- Launch public awareness campaigns in partnership with CE Malta to promote behavioral shifts toward circularity among consumers and businesses.

Indicators:

- Lead Indicators: Expansion of CE Malta's programs and increased participation from businesses and research institutions within two years.
- Lag Indicators: Reduction in landfill waste, growth in recycled material usage, and increased adoption of circular business models, as reported by CE Malta.

5.8 Accelerating Urban Mobility Solutions

The Draghi report references the importance of sustainable yet effective transport infrastructure to a competitive economy, looking ahead to an expansion in global, regional and local transport demand which will require “unprecedented robustness of the transport sector.”

Malta faces an urgent need to transform its urban mobility landscape, with the excessive reliance on private vehicles leading to congestion, air pollution, and productivity losses. Reducing the number of cars on the road is a central priority for ensuring sustainable mobility and achieving broader twin transition goals. This requires a comprehensive approach that integrates multi-modal transport systems, incentivises the use of public transit and active transport, and disincentivises private car usage.

A National Multi-Modal Transport Strategy should be developed to align investments in public transport, cycling, ferry use and pedestrian infrastructure. Expanding the electric bus fleet and creating interconnected networks of cycling and pedestrian paths will provide viable alternatives to car use. Smart traffic management systems can further optimise urban mobility, reducing congestion and improving air quality.

In addition to improving infrastructure, policies must actively discourage ICE vehicle dependency. Measures such as park and ride systems, reduced increased parking availability to serve urban centres, and financial incentives for adopting cleaner transport options, like electric vehicles or carpooling, can shift behavior. Public awareness campaigns should emphasis the personal, economic, and environmental benefits of sustainable transport, fostering a cultural shift toward reduced car ownership.



Action Points:

- Develop a National Multi-Modal Transport Strategy that prioritises the reduction of the number of private vehicles on the road.
- Expand the electric bus fleet and establish interconnected cycling and pedestrian networks to encourage active transport.
- Implement park and ride systems and increase parking availability to serve urban areas.
- Conduct public awareness campaigns highlighting the benefits of reduced car dependency and promoting alternative transport options.

Indicators:

- Lead Indicators: Implementation of park and ride systems and completion of pilot multi-modal initiatives within three years.
- Lag Indicators: Reduction in the number of registered private vehicles, increased use of public and active transport modes, and measurable improvements in air quality by 2030.

5.9 Implementing Energy-Efficient Urban Development

Urban development in Malta must address the dual challenge of supporting economic growth while reducing environmental impacts. Energy-efficient urban planning is essential to achieving the twin transition, ensuring that Malta's cities and towns are sustainable, liveable, and productive. The focus should be on integrating renewable energy, optimising resource use, and enhancing resilience in the face of climate change.

Urban development policies must prioritise energy-efficient building standards, retrofitting older structures, and promoting renewable energy solutions such as solar panels and smart energy management systems. These initiatives should align with Malta's existing sustainability frameworks and EU directives, ensuring that urban areas contribute to national climate and energy goals.

Green infrastructure—such as urban green spaces, rainwater harvesting systems, and permeable surfaces—can also play a critical role in improving urban resilience. Collaboration between local governments, private developers, and residents is vital for ensuring that energy-efficient urban development is inclusive and adaptable. By adopting smart city technologies, Malta can further optimise resource use, reduce emissions, and enhance the quality of life for its urban population.

Action Points:

- Establish mandatory energy-efficient building standards for all new developments and encourage retrofitting of existing structures with energy-saving technologies.
- Promote the adoption of renewable energy systems, such as solar panels, in urban and residential developments through incentives and streamlined permitting processes.
- Expand urban green infrastructure to enhance resilience and livability, including parks, rainwater harvesting systems, and green roofs.
- Implement smart city technologies for energy management, waste reduction, and efficient urban planning.

Indicators:

- Lead Indicators: Adoption of updated energy-efficient building codes and establishment of incentive schemes for renewable energy installations within two years.
- Lag Indicators: Reduction in urban energy consumption and increased adoption of renewable energy systems in residential and commercial buildings, measured through national energy reports.

5.10 Creating a National Digital Twin Strategy

Digital twin technology offers a transformative opportunity for Malta to optimise urban and infrastructure planning. By creating virtual replicas of physical assets, digital twins enable real-time monitoring, simulation, and predictive analytics. For Malta, adopting a National Digital Twin Strategy would enhance decision-making, resource efficiency, and sustainability across sectors, from transport to energy and urban development.

The first step is to develop digital twins for critical infrastructure, including transport networks, energy grids, and water systems. These models can help identify inefficiencies, predict maintenance needs, and simulate the impact of policy decisions. Collaboration with private technology providers and EU research institutions will ensure that Malta benefits from cutting-edge expertise and solutions.

Integrating digital twins with IoT sensors will further enhance their effectiveness, enabling real-time data collection and analysis. Training programs for public officials and urban planners will ensure that these tools are used effectively, fostering a culture of data-driven decision-making. Over time, the National Digital Twin Strategy can be expanded to include smart city applications, enhancing Malta's global competitiveness in sustainable development.

Action Points:

- Develop digital twins for critical infrastructure, including transport networks, energy grids, and water systems, as a priority initiative.
- Collaborate with EU research institutions and private technology providers to access advanced expertise and solutions.
- Integrate digital twins with IoT sensors to enable real-time monitoring and data analysis.
- Launch training programs for public officials and urban planners to build capacity in digital twin applications.

Indicators:

- Lead Indicators: Development of pilot digital twin projects for key infrastructure within three years and integration with IoT sensors within five years.
- Lag Indicators: Improved infrastructure efficiency, reduced maintenance costs, and enhanced urban planning outcomes, as measured through performance assessments.

5.11 Conclusion

The twin transition represents a transformative opportunity for Malta to address its long-standing economic, social, and environmental challenges while preparing for a sustainable and competitive future. By aligning its strategies with EU frameworks and leveraging its unique strengths, Malta can overcome structural challenges and achieve long-term resilience and competitiveness.

This chapter has outlined a strategic framework that focuses on high-level recommendations to address key areas such as governance, infrastructure, workforce capacity, SME transformation, circular economy practices, and urban mobility. Rather than prescribing rigid numerical targets, the emphasis is on adaptable and actionable pathways that reflect Malta's evolving socio-economic context.

Central to these recommendations is the need for coordinated governance, investments in infrastructure, and a skilled workforce. Empowering SMEs, advancing circular economy principles, and adopting innovative technologies will further optimise resource use and improve the quality of life for all citizens. By fostering public-private partnerships, encouraging stakeholder engagement, and leveraging EU resources, Malta can ensure that its twin transition is both effective and inclusive.

In conclusion, the twin transition is more than a response to global trends—it is an opportunity for Malta to define its future. By implementing these strategic recommendations, Malta can lead by example, building a resilient economy that balances growth with sustainability and inclusivity.

