



Restructuring and Social Participation for Employee Consultation & Transition in Energy Sector

Country Report: Malta

May 2026

1. Introduction

1.1 Objectives of the Study

This national report has been prepared within the framework of the European project RESPECT – Restructuring and Social Participation for Employee Consultation & Transition in Energy Sector. The project examines the implications of the twin transition, namely the simultaneous processes of decarbonisation and digitalisation, for workers, employers and industrial relations systems in the energy sector.

The Maltese study aims to examine how the twin transition is affecting the energy sector, with particular emphasis on its implications for workers, working conditions and social dialogue. The study analyses the policy and regulatory framework supporting decarbonisation and digitalisation in Malta, assesses the implementation of transition-related measures within the sector, and explores the opportunities and challenges arising from these developments from the perspectives of workers, employers, trade unions and other stakeholders.

Particular attention is given to the role of employee information, consultation and participation mechanisms during organisational and technological change. The study seeks to identify examples of good practice in worker involvement during transition processes and to formulate recommendations for policymakers and social partners aimed at supporting a just, inclusive and sustainable transition. Through this approach, the report contributes to a better understanding of how the twin transition is reshaping Malta's energy sector and the measures required to ensure that its benefits are shared by workers, employers and society more broadly.

1.2 Methodology

The study adopted a mixed-methods approach combining desk research, a survey, semi-structured interviews and a company case study. This methodology was designed to capture both the broader policy and industrial relations context of the twin transition in Malta and the experiences of stakeholders directly affected by processes related to the transition.

Desk research was conducted to examine the legal, policy and institutional framework governing decarbonisation, digitalisation and industrial relations in Malta. Particular attention was given to national strategies, legislative developments, policy documents and publicly available reports relating to the energy sector, sustainability, digital transformation and social dialogue.

Primary data were collected through an online survey targeting workers and other stakeholders within the sector. The survey generated 41 valid responses and explored perceptions regarding digitalisation, decarbonisation, employee participation and capacity-building needs. While the number of responses fell slightly below the target established by the project methodology, the survey provides useful insights into stakeholder perceptions and complements the qualitative research findings.

The qualitative component included semi-structured interviews with key stakeholders representing workers, employers, trade unions and relevant institutions. The interviews explored perceptions of the twin transition, implementation challenges, skills needs and the role of social dialogue in managing organisational change. To ensure confidentiality, all interview findings are presented anonymously.

In addition, a focus group was conducted with six participants drawn from a company operating critical energy-intensive infrastructure. The discussion explored a specific example of transition-related change, focusing on the opportunities, challenges and implications for workers, working conditions and employee involvement. The identity of the organisation has been anonymised to protect confidentiality and encourage open discussion among participants.

The findings presented in this report are based on the triangulation of evidence from these different research instruments. Combining desk research with quantitative and qualitative data enabled the study to identify both broad trends and stakeholder experiences relating to the twin transition, while strengthening the reliability and validity of the overall analysis.

2. State of Twin Transition at the Sectoral and National Level

2.1 Legal and Policy Framework for the Green and Digital Transition

Malta's approach to the twin transition is shaped by both European Union policy objectives and national development priorities. As a Member State, Malta is committed to the European Green Deal, the Fit for 55 package and the EU's broader objective of achieving climate neutrality by 2050. At the same time, Malta is implementing measures aligned with the Digital Decade Policy Programme, which seeks to strengthen digital infrastructure, digital skills and the adoption of digital technologies across the economy.

At national level, the principal framework guiding decarbonisation is Malta's National Energy and Climate Plan (NECP), which outlines the country's objectives relating to renewable energy, energy efficiency, greenhouse gas emissions reduction and energy security. The plan identifies the transition towards cleaner energy sources and improved energy efficiency as essential components of Malta's long-term economic and environmental sustainability. Complementing these objectives are a range of initiatives aimed at promoting renewable energy generation, improving energy performance in buildings, supporting low-carbon transport and encouraging more sustainable consumption patterns.

Malta's transition strategy is influenced by a number of structural constraints. As a small island state with limited land availability, high population density and a strong dependence on imported energy, Malta faces challenges that differ from those of many larger European countries. These constraints limit opportunities for large scale renewable energy projects and have contributed to increasing policy attention towards offshore renewable energy, energy storage technologies and the upgrading of the electricity infrastructure. Energy security therefore remains a central consideration alongside decarbonisation objectives.

Digitalisation constitutes the second pillar of the twin transition. National policies seek to strengthen Malta's digital economy through investments in digital infrastructure, cybersecurity, digital public services and workforce skills. Government strategies place particular emphasis on increasing digital adoption among businesses, supporting innovation and improving the use of data-driven technologies across economic sectors. Digital technologies are also increasingly viewed as important enablers of environmental objectives through their capacity to improve energy management, resource efficiency and operational performance.

Starting from Malta's National Recovery and Resilience Plan (NRRP) under the EU's Recovery and Resilience Facility (RRF), the digital transition was supported with investments and through reforms in the public and private sectors. In public administration

and public services investments into digitalisation strengthened government's IT systems and enhanced digital public services. Reforms included the adoption of Malta's Digital Strategy 2021-2027, which aims to reduce the digital divide and promote digital skills. The strategy has contributed to improvements in digital public services, infrastructure and digital skills development. However, challenges remain in ensuring widespread digital adoption across all sectors of the economy, particularly among SMEs and in addressing skills shortages.

Notwithstanding, within the energy sector, digitalisation and decarbonisation are becoming increasingly interconnected. Smart technologies, automated monitoring systems, digital data management and advanced analytics are being used to improve efficiency, optimise resource use and support sustainability objectives. Consequently, policy discussions increasingly recognise that environmental and digital transformation should not be viewed as separate processes but as mutually reinforcing dimensions of a broader economic transition.

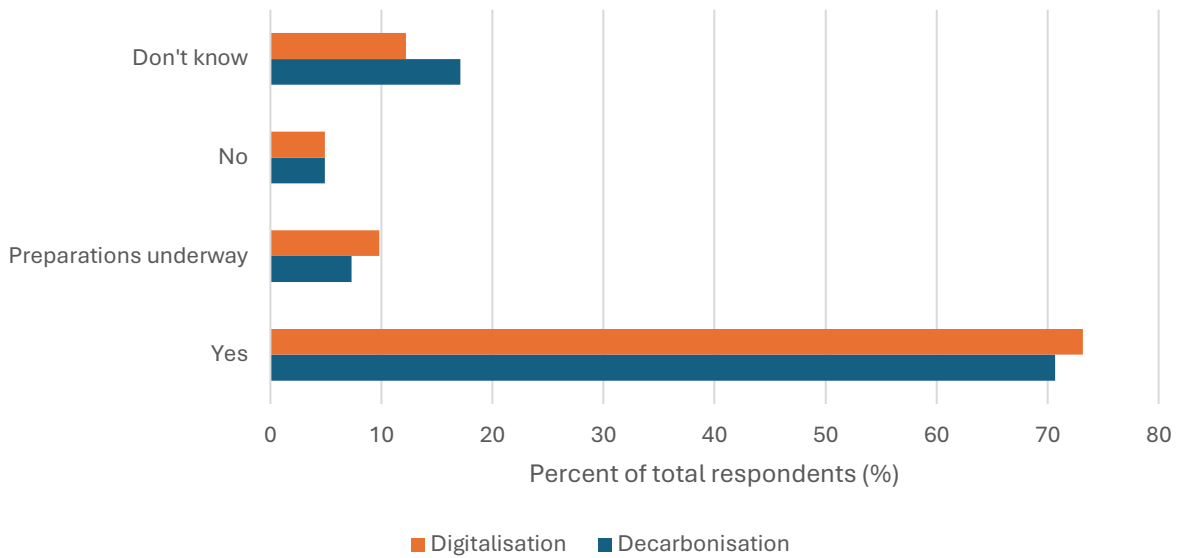
Alongside these policy developments, Malta's industrial relations framework provides mechanisms for social dialogue and employee representation that are relevant to the management of change related to the transition. Information, consultation and collective bargaining structures create opportunities for workers and their representatives to contribute to discussions concerning organisational transformation, skills development and workforce adaptation. As the twin transition continues to unfold, the effectiveness of these mechanisms is likely to become increasingly important in ensuring that technological and environmental objectives are pursued in a socially sustainable and inclusive manner.

2.2 Key Challenges and Results of Twin Transition Policy Implementation

The implementation of twin transition policies in Malta has accelerated in recent years, driven by European Union policy commitments, national strategies and organisational efforts to improve sustainability, efficiency and competitiveness. Evidence collected through the survey, interviews and focus group indicates that both decarbonisation and digitalisation are increasingly visible within workplaces and are already influencing operational processes, workforce requirements and organisational practices.

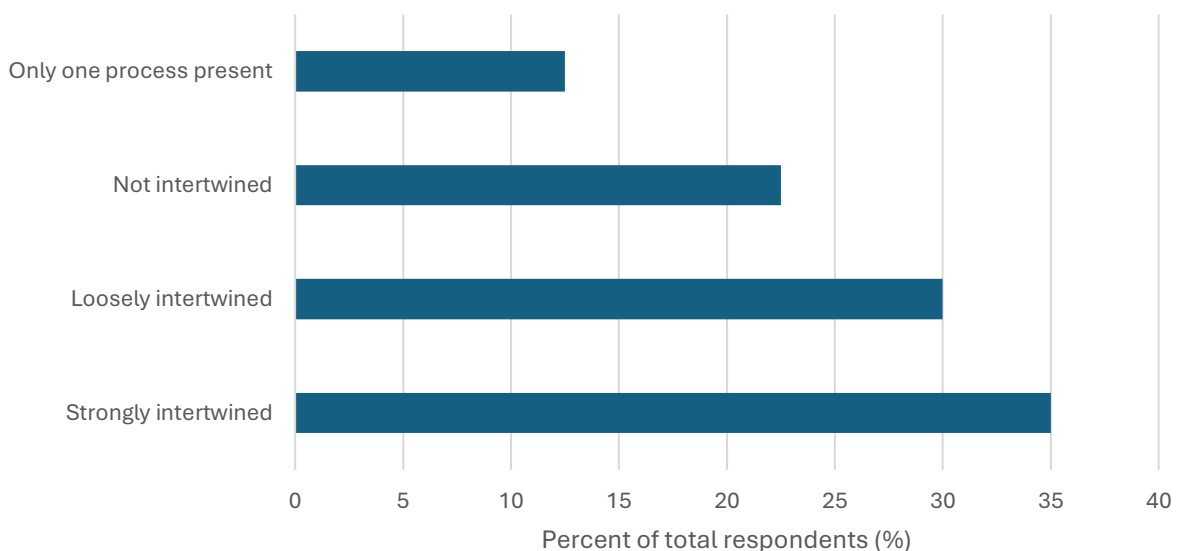
Survey respondents reported a wide range of transition measures being implemented within their organisations. The data in Figure 1 highlights that on the green front, decarbonisation initiatives most commonly included energy efficiency measures, renewable energy projects, and targeted efforts to reduce environmental impacts. Simultaneously, the most prevalent digitalisation initiatives included the introduction of new software systems, automated processes, digital communication tools, and data management technologies.

Figure 1: Decarbonisation and Digitalisation Changes Implemented in Respondents' Organisations



Survey findings indicate that a majority of respondents perceive decarbonisation and digitalisation as interconnected processes rather than entirely separate organisational initiatives. Specifically, Figure 2 quantifies this sentiment, showing that approximately two-thirds of respondents reported the two processes are either strongly or loosely intertwined within their organisations. This statistical baseline demonstrates that digital technologies are increasingly viewed as structural enablers of environmental objectives through improved resource management, enhanced monitoring of energy consumption, and greater operational efficiency.

Figure 2: Perceived interconnection between decarbonisation and digitalisation processes

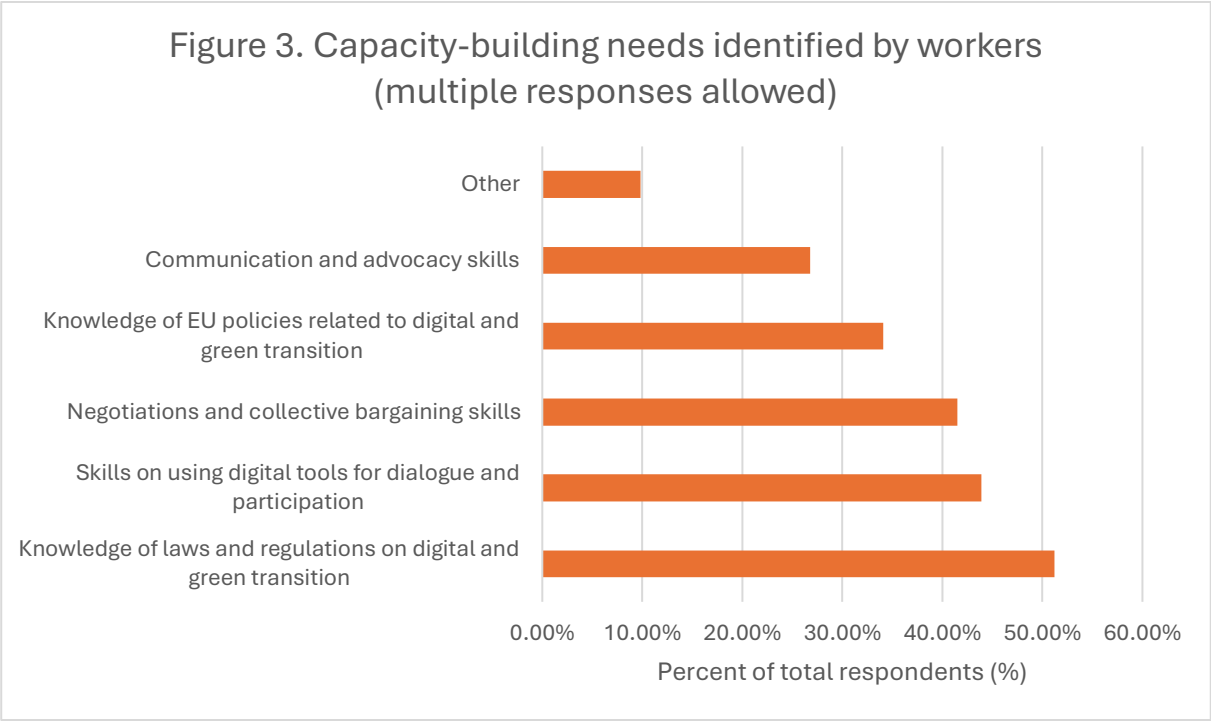


Interview participants similarly emphasised that digitalisation is becoming an important mechanism through which sustainability objectives are pursued. Technologies such as

automated monitoring systems, sensors, data analytics and digital reporting tools are increasingly used to optimise resource use, improve efficiency and support compliance with environmental requirements. This reflects a broader trend in which digital transformation and environmental sustainability are mutually reinforcing elements of organisational change.

Despite these developments, stakeholders identified several challenges associated with the implementation of transition policies. One of the most frequently cited concerns relates to skills development. The introduction of new technologies and work processes is generating demand for new competencies, particularly in relation to digital systems, data management and automated technologies. While training opportunities are available within many organisations, respondents highlighted the importance of ensuring that skills development efforts evolve alongside technological change and remain accessible throughout workers' careers.

Survey findings further highlight the importance of workforce development. As illustrated by the priority rankings in Figure 3, more than half of respondents explicitly identified knowledge of laws and regulations relating to the digital and green transition as a critical capacity-building need. The chart also details that substantial proportions highlighted the need for skills related to digital participation tools, collective bargaining, and understanding European Union transition policies. These findings suggest that the twin transition requires not only technical competencies but also further and greater awareness of the regulatory and industrial relations dimensions of change.



Survey findings also indicate that workforce adaptation measures are primarily centred on up-skilling and re-skilling. For both decarbonisation and digitalisation processes, the most commonly reported support measure was training aimed at enabling workers to retain their current jobs. This suggests that organisations generally view workforce development as the principal mechanism for managing the change brought about by the transition rather than relying on workforce restructuring or labour market adjustment measures.

Beyond challenges related to skills, stakeholders identified structural and organisational constraints that may affect the pace of transition. Malta's limited land availability,

dependence on imported energy and small domestic market create particular challenges for decarbonisation efforts. At organisational level, participants referred to resource limitations, implementation costs and the complexity of integrating new technologies into existing operational environments.

Interview participants also highlighted governance challenges associated with the cross-cutting nature of the twin transition. As policies relating to energy, transport, agriculture and construction fall under different ministries and authorities, effective coordination across policy areas remains important for ensuring coherent implementation.

Open-ended survey responses further highlighted the importance of workforce preparation, communication and employee involvement. Respondents frequently referred to the need for stronger communication regarding organisational change, additional training opportunities and greater worker participation in transition initiatives. These themes closely mirror those emerging from interviews and the focus group discussion, suggesting broad agreement regarding the principal challenges associated with the implementation of digitalisation and decarbonisation measures.

Overall, the evidence indicates that significant progress has been made in advancing the twin transition within Malta's energy sector. However, the findings also demonstrate that technological and environmental objectives must be accompanied by continuous investment in skills development, effective communication and workforce adaptation measures if transition policies are to achieve their full potential. These implementation experiences and challenges are reflected in the perspectives of key stakeholders and social partners discussed in the following section.

2.3 Social Partners' Perspectives on Twin Transition Policies and Implementation

The findings indicate broad consensus among stakeholders regarding the importance of decarbonisation and digitalisation for the future competitiveness, sustainability and resilience of Malta's economy. Interview participants generally recognised the necessity of reducing environmental impacts, improving energy efficiency and adopting digital technologies capable of supporting more effective and innovative ways of working. At the same time, stakeholders emphasised that the success of the transition depends not only on technological investment but also on the ability of organisations and institutions to manage its social implications.

A recurring theme across interviews, survey responses and the case study was the importance of workforce adaptation. Stakeholders stressed that workers must be equipped with the skills required to operate in increasingly digitalised and technologically advanced environments. Trade union representatives, in particular, highlighted the need for continuous training, reskilling and upskilling opportunities to ensure that workers can benefit from transition-related changes and are not disadvantaged by them.

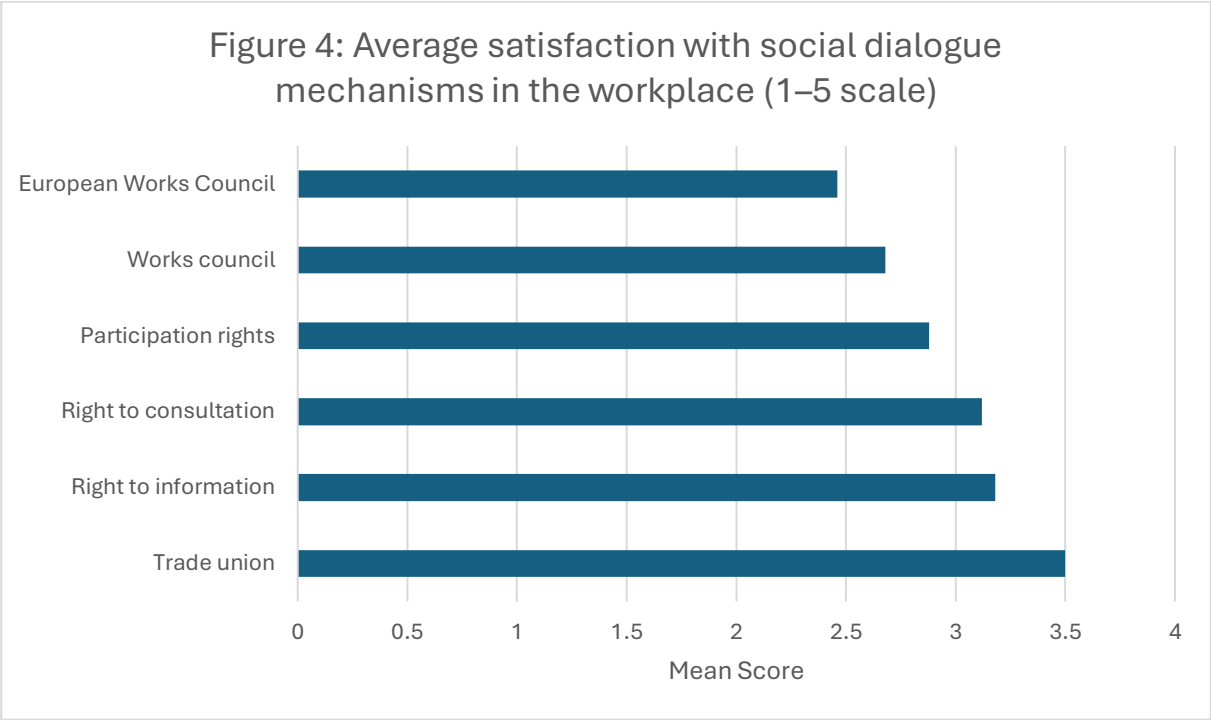
The role of social dialogue also emerged as a significant consideration. Keeping in mind the strong presence of the state in the energy sector, stakeholders generally still agreed that information, consultation and collective bargaining mechanisms provide an important framework through which transition challenges can be addressed.¹ However, participants

¹ Social dialogue has been formalised. At the same time, the Energy and Water Agency (Malta), EWA, an agency, responsible to forecast demand, formulate sustainable policies, and manage grants for energy/water efficiency, has as shareholder majority the government. The government finances EWA which is, in turn, an employer. Furthermore, it is government that decides industrial relations which fall under public administration

also noted that the effectiveness of these mechanisms varies depending on the issue under consideration. While information and consultation processes are generally established in relation to traditional employment matters, their application to sustainability and digitalisation initiatives appears less systematic.

Evidence from interviews and the sectoral data suggests a systemic communication lag across the sector. Rather than involving employees upstream, organisations frequently treat communication as a post-hoc notification process, which effectively insulates the core planning stage from frontline worker input. As a result, workers are separated into distinct information-consultation-participation categories within the same industry, some deserving more attention than others. Worker participation tends to be stronger during implementation than during the design and decision-making phases of transition initiatives.

Survey findings reinforce this conclusion (see Figure 4). Respondents reported higher levels of satisfaction with information and consultation arrangements than with opportunities to participate directly in organisational decision-making. This suggests that while formal mechanisms for communication and consultation often exist, workers may have fewer opportunities to influence the direction or design of transition measures.



Stakeholders further emphasised the importance of ensuring that the twin transition is managed in a manner consistent with the principles of a just transition. This includes protecting job quality, supporting workforce adaptation and ensuring that workers are actively involved in discussions concerning changes that may affect their work, skills requirements or working conditions. Several participants argued that stronger engagement with workers during the planning stages of transition initiatives could improve implementation outcomes, increase acceptance of change and make better use of employees’ operational knowledge and experience.

and therefore the Industrial Relations Unit (IRU) and the People & Standards Division (P&SD) responsible for HR policies, public service management codes, and improving workforce efficiency across government departments.

Overall, the findings suggest that social partners broadly support the objectives of decarbonisation and digitalisation. However, they also highlight the need to strengthen the social dimension of the transition. While social dialogue structures are relatively well established at national level, their translation into meaningful participation in sustainability and digitalisation initiatives at organisational level remains less consistent. Addressing this gap represents one of the key challenges for ensuring that the twin transition is both effective and inclusive.

3. Company Case Study

3.1 Company Profile

The case study focuses on a company operating critical energy-intensive infrastructure related to the production and distribution of potable water in Malta. The organisation plays an important role in the provision of essential public services and is responsible for the operation and maintenance of infrastructure that supports water security and supply across the country. To ensure confidentiality and encourage open discussion among participants, the company has been anonymised.

The company was selected because its operations are closely linked to Malta's broader energy transition. The production and distribution of potable water, including desalination, pumping and wastewater treatment processes, are high energy-intensive activities. According to data published by the Water Services Corporation and the Energy and Water Agency, the management of water services accounts for approximately 6% of Malta's national electricity consumption (Climate Action Authority, 2024). As a result, the organisation provides a relevant example of how digitalisation and decarbonisation interact within an operational environment where energy efficiency, technological innovation and sustainable resource management are critical to both operational performance and environmental sustainability.

Like many organisations operating within energy intensive activities, the company is facing increasing pressure to improve efficiency, reduce environmental impacts and adapt to changing technological requirements. In response, it has implemented a range of initiatives aimed at improving energy performance, integrating renewable energy sources and expanding the use of digital technologies to support operational processes and decision-making.

The case study examines one such transition process, focusing on the interaction between digitalisation and decarbonisation measures and their implications for workers, working conditions and employee involvement. Particular attention is given to how transition changes are planned and implemented, the opportunities and challenges that arise during this process, and the role played by information, consultation and participation mechanisms in supporting organisational change.

3.2 The Twin Transition Example

The case study focuses on a transition process that combines decarbonisation and digitalisation measures aimed at improving the efficiency and sustainability of energy intensive operations. The example illustrates how digital technologies can support environmental objectives while simultaneously improving operational performance and resource management.

On the decarbonisation side, the organisation has invested in renewable energy generation through the installation of solar photovoltaic systems across a number of operational sites. These investments contribute to increasing the share of renewable energy within the organisation's overall energy profile and support broader national sustainability objectives. Additional initiatives have focused on improving energy efficiency through the adoption of more efficient equipment, optimisation of operational processes and the introduction of energy recovery technologies within production systems.

Digitalisation has played a central role in supporting these efforts. The organisation has progressively introduced digital technologies across both administrative and operational functions. Administrative processes have increasingly moved towards electronic record management, digital documentation systems and enhanced data accessibility. At operational level, digitalisation has involved the integration of sensors, automated monitoring systems, telemetry solutions and business intelligence tools capable of providing real-time information on system performance and resource consumption.

Participants reported that digital technologies have significantly improved the organisation's ability to monitor, analyse and manage operations. The availability of real-time operational data enables faster identification of inefficiencies, quicker responses to technical issues and more informed decision-making. Automated monitoring systems also support preventative maintenance and allow operational staff to detect potential problems before they develop into more significant disruptions.

Digitalisation has further enhanced the organisation's capacity to monitor energy consumption and optimise resource use. The integration of operational data into digital management systems enables more accurate performance measurement and supports continuous improvement efforts. Participants highlighted that activities previously requiring extensive manual monitoring and analysis can now be completed more efficiently through automated systems and digital dashboards.

The transition example therefore demonstrates the close relationship between digitalisation and decarbonisation within an energy intensive operational environment. While renewable energy investments and energy efficiency measures contribute directly to environmental objectives, digital technologies function as an important enabling mechanism by providing the information, monitoring capabilities and operational control necessary to maximise their effectiveness. The case illustrates how the twin transition increasingly operates as a single, interconnected process rather than as two separate organisational initiatives.

3.3 Opportunities and Challenges

The transition has generated a range of opportunities for the organisation, its workforce and its operational performance. Participants consistently highlighted improvements in efficiency resulting from the introduction of digital technologies. Real-time monitoring systems, automated processes and business intelligence tools have enhanced the organisation's ability to manage infrastructure, identify inefficiencies and respond more rapidly to operational issues. Improved access to information has also supported more informed decision-making and strengthened overall operational control.

Participants further noted that digitalisation has simplified a number of routine tasks and reduced the time required to complete certain operational and administrative activities. The increased availability of data has enabled more proactive management practices and facilitated the identification of opportunities for continuous improvement. These

developments were generally viewed as contributing positively to organisational effectiveness and service delivery.

The transition has also supported environmental objectives. Investments in renewable energy generation, energy efficiency measures and energy recovery technologies have contributed to reducing the environmental impact of operations while improving resource utilisation. Participants recognised that these initiatives are increasingly important in light of national and European sustainability objectives and growing expectations regarding environmental performance.

Several positive functional impacts on working practices were also identified. The introduction of digital tools has reduced the physical demands associated with some tasks and improved access to operational information. Participants referred positively to the increased use of digital communication technologies and the expansion of flexible working arrangements, including teleworking in appropriate roles. These changes were generally viewed as improving work organisation and providing greater flexibility for employees.

Despite these benefits, participants also identified a number of challenges associated with the transition process. One of the most frequently cited concerns related to the relationship between planning and implementation. Participants reported that transition initiatives are often designed by technical specialists and management teams, with limited involvement of operational staff during the planning stage. In some cases, this created implementation challenges where new systems did not fully reflect operational realities.

Communication emerged as another important challenge. While participants acknowledged that information regarding organisational changes is generally provided, they felt that communication could be more structured and more closely linked to opportunities for meaningful feedback. Several participants indicated that workers are often informed about changes after key decisions have already been taken, reducing their ability to influence outcomes and contribute operational insights that could improve implementation.

Participants also emphasised the importance of ensuring that training and skills development keep pace with technological change. Although training opportunities are available within the organisation, the continued introduction of new technologies requires ongoing investment in workforce development to ensure that employees can fully utilise new systems and adapt to evolving work processes. It emerged that old-timers are kept on the job with some basic training whereas for new operational digital systems, new recruitment is sought which is already trained or for specific programmes, easily trainable for the new technologies.

Finally, participants highlighted the challenges associated with implementing transition measures across different operational environments. Variations in infrastructure, operational requirements and local conditions can complicate standardisation efforts and require solutions to be adapted to specific circumstances. This underlines the importance of maintaining flexibility during implementation and ensuring that transition initiatives remain responsive to operational needs.

Overall, the findings suggest that the transition has created significant opportunities for improving efficiency, sustainability and work organisation. At the same time, they demonstrate that the successful implementation of transition measures depends not only on technological investment but also on effective communication, workforce development and

the meaningful involvement of workers throughout the change process, the latter relatively hierarchical.

3.4 Planning and Implementation of the Transition in the Context of Worker Involvement

The planning and implementation of transition initiatives within the organisation are influenced by a combination of regulatory requirements, sustainability objectives, technological developments and operational priorities. Participants indicated that many of the changes associated with digitalisation and decarbonisation are driven by external obligations and strategic organisational goals, resulting in a predominantly top-down approach to decision-making.

Workers are generally informed about transition initiatives and organisational changes through established communication channels. Participants acknowledged that information regarding new technologies, operational changes and workplace policies is typically communicated to employees by management or heads of unit, particularly once projects enter the implementation stage. Consultation also occurs in specific areas, most notably in relation to health and safety matters and operational issues directly affecting employees' day-to-day work. Staff in communication with clients or customer care employees are more frequently updated.

However, the findings suggest that worker involvement is far less structured in relation to sustainability and digitalisation initiatives than in traditional industrial relations. Because green and digital updates are viewed as purely technical adjustments rather than workplace changes, project rollout relies on top-down directives. This limits the workforce's ability to shape the selection or design of new tools, meaning employee participation is mobilised reactively to troubleshoot problems during the final deployment phase rather than proactively during decision-making.

Several participants highlighted the value of involving operational staff more actively during planning processes. Employees responsible for operating and maintaining systems possess practical knowledge of operational realities, site-specific conditions and potential implementation challenges. Participants argued that earlier engagement with end users could improve project design, facilitate implementation and increase acceptance of organisational change.

The role of employee representatives and trade unions was viewed positively, particularly in relation to matters affecting working conditions and employment arrangements. Participants referred to examples where dialogue between management and worker representatives had contributed to the development of workplace policies, including teleworking arrangements and other measures supporting organisational adaptation. These experiences demonstrate the potential benefits of constructive engagement between management and employees during periods of change.

At the same time, participants noted that sustainability and digitalisation initiatives are not always perceived as issues requiring the same level of consultation as traditional employment matters generally referred to as bread-and-butter concerns. As a result, opportunities for structured dialogue regarding technological and environmental transformation may be more limited than those relating to terms and conditions of employment. This finding was also reflected in the survey results, which indicate higher levels of satisfaction with information and consultation arrangements than with opportunities to participate directly in organisational decision-making.

Overall, the case study suggests that information and consultation mechanisms are generally present within the organisation. However, their application to transition-related initiatives remains less developed than in other areas of industrial relations. Strengthening worker involvement during the planning and design stages of digitalisation and sustainability projects could improve implementation outcomes, make better use of employees' operational knowledge and contribute to a more inclusive approach to organisational change.

3.5 Case Study Results and Impact on Working Conditions

The transition has produced a number of positive outcomes for both the organisation and its workforce. Participants reported improvements in operational efficiency resulting from the introduction of digital monitoring systems, automated processes and enhanced access to operational data. These technologies have improved system oversight, supported faster decision-making and enabled more proactive management of infrastructure and resources.

The transition has also contributed to the organisation's sustainability objectives. Investments in renewable energy generation, energy efficiency measures and energy recovery technologies have helped reduce the environmental impact of operations while supporting more efficient resource utilisation. Digital technologies have further strengthened these efforts by providing the information necessary to monitor performance and identify opportunities for continuous improvement.

Participants generally viewed the impact on working conditions positively. The increased use of digital tools has simplified a number of tasks, improved access to information and reduced the physical demands associated with certain activities. The expansion of digital communication systems and teleworking arrangements has also contributed to greater flexibility in work organisation for employees whose roles permit remote working.

At the same time, participants noted that the successful integration of new technologies requires continuous adaptation by workers. Ongoing training and skills development remain important to ensure that employees can effectively utilise new systems and keep pace with technological change. Participants also highlighted the importance of maintaining clear communication throughout transition processes to support understanding and acceptance of organisational changes.

Overall, the findings indicate that the transition has delivered tangible benefits in terms of operational performance, environmental sustainability and work organisation. While the introduction of new technologies has required adaptation by both the organisation and its workforce, participants generally viewed the outcomes positively and recognised the potential of digitalisation and decarbonisation to support future organisational development.

3.6 Success and Failure Factors

The case study highlights several factors that have contributed to the successful implementation of transition initiatives. A clear strategic commitment to sustainability and operational efficiency has provided a strong foundation for investment in renewable energy generation, energy efficiency measures and digital technologies. External policy drivers, including European Union and national environmental objectives, have also played an important role in creating momentum for change and supporting long-term planning.

The integration of digital technologies into operational processes emerged as a particularly important success factor. Real time monitoring systems, automated controls and data-driven

decision-making tools have enabled the organisation to improve efficiency, optimise resource use and strengthen operational performance. Participants generally recognised the value of these technologies and their contribution to both organisational and environmental objectives.

At the same time, the findings indicate that technological investment alone is insufficient to guarantee successful implementation. Effective communication, workforce adaptation and employee engagement were repeatedly identified as important factors influencing the acceptance and effectiveness of transition measures. Participants emphasised that workers are more likely to support organisational change when they understand its objectives and have opportunities to contribute their knowledge and experience.

The principal challenges identified by participants related to the timing and extent of worker involvement in transition initiatives. While information and consultation mechanisms generally exist, opportunities for meaningful participation during the planning and design stages of sustainability and digitalisation projects remain more limited. Participants also highlighted the need to ensure that training and skills development continue to evolve alongside technological change.

Overall, the case demonstrates that the successful management of the twin transition depends not only on investment in infrastructure and technology but also on the social processes through which change is implemented. Combining technological innovation with effective communication, continuous learning and meaningful worker involvement can help maximise the benefits of transition initiatives while reducing implementation challenges.

4. Conclusions

4.1 Key Conclusions from the Study

The findings of this study indicate that the twin transition is already well underway within Malta's energy sector. Evidence gathered through desk research, the survey, stakeholder interviews and the company case study demonstrates that both decarbonisation and digitalisation are increasingly influencing organisational strategies, operational processes and workforce requirements. These developments are largely driven by European and national policy objectives, technological innovation and the need to improve efficiency, sustainability and competitiveness.

At policy level, Malta has established a framework that supports both environmental and digital transformation. The implementation of measures related to the transition has resulted in increasing investment in renewable energy generation, energy efficiency initiatives, digital infrastructure and advanced technologies capable of improving operational performance and resource management. However, the research also highlights the influence of Malta's structural characteristics, including its small size, limited land availability and dependence on imported energy, which shape the pace and nature of the twin transition developments.

The findings further demonstrate that decarbonisation and digitalisation are increasingly interconnected processes. Survey respondents, interview participants and focus group participants consistently identified digital technologies as important enablers of environmental objectives. Technologies such as automated monitoring systems, data analytics and digital management tools are being used to optimise resource consumption, improve efficiency and support sustainability goals. The evidence therefore suggests that

the twin transition is increasingly experienced as a single process of organisational transformation rather than as two separate developments.

Skills development emerged as one of the most significant factors influencing the success of the transition. While training opportunities are generally available, stakeholders emphasised the importance of ensuring that workforce development keeps pace with technological change. Survey findings highlighted demand not only for technical skills but also for greater knowledge of twin transition policies, digital participation tools and industrial relations processes. This suggests that the transition requires a combination of technological, regulatory and organisational competencies.

A further key finding concerns the role of worker involvement. The study found that information and consultation mechanisms are generally present within organisations and are viewed positively by many respondents. However, evidence from interviews, the survey and the case study suggests that their application to sustainability and digitalisation initiatives remains less systematic than in relation to traditional employment matters. Workers are often informed about transition-related changes after key decisions have already been taken, limiting opportunities for meaningful participation during the planning and design stages of projects.

Open-ended survey responses reinforced these findings, frequently highlighting training, communication and worker involvement as priorities for supporting successful transition processes. Similar themes emerged across the interviews and focus group discussion, demonstrating a high degree of consistency between the different research instruments and strengthening confidence in the overall conclusions.

Overall, the study suggests that Malta has made significant progress in advancing the twin transition. However, the findings also demonstrate that technological and environmental objectives must be accompanied by continued investment in workforce development, effective communication and employee participation. Strengthening these social dimensions of transition will be essential to ensuring that future changes are both effective and inclusive.

4.2 Recommendations for Strengthening Employee Involvement in the Transition

The findings of this study suggest that the effectiveness and inclusiveness of the twin transition could be strengthened through a combination of policy, organisational and industrial relations measures. The recommendations presented below are informed by evidence gathered through desk research, stakeholder interviews, survey responses and the company case study.

1. Involve workers earlier in transition planning and decision-making

Employers should seek to engage workers and their representatives at the earliest stages of twin transition initiatives. While information and consultation mechanisms generally exist, opportunities for participation during the planning and design phases of sustainability and digitalisation projects remain more limited. Earlier engagement would allow organisations to benefit from employees' operational knowledge while improving acceptance of change and facilitating implementation.

2. Strengthen continuous skills development and workforce adaptation

Public authorities, employers and social partners should continue to invest in training, reskilling and upskilling initiatives that support workforce adaptation to technological and

environmental change. Particular attention should be given to digital competencies, data management, emerging technologies and sustainability-related skills. Training programmes should be accessible throughout workers' careers and responsive to evolving organisational needs.

3. Enhance awareness of twin transition policies and participation mechanisms

Survey findings indicate a demand for greater knowledge of laws, regulations and policies relating to digitalisation and decarbonisation, as well as stronger understanding of employee participation mechanisms. Efforts should therefore be made to improve awareness of transition policies and strengthen workers' capacity to engage effectively in organisational change processes.

4. Strengthen social dialogue on sustainability and digitalisation issues

Social dialogue mechanisms should be used more systematically to discuss sustainability, digitalisation and organisational transformation. While collective bargaining and consultation structures are generally established in relation to traditional employment matters, greater attention should be given to ensuring that technological and environmental change becomes a regular subject of dialogue between employers and worker representatives.

5. Improve communication throughout transition processes

Organisations should ensure that workers receive timely, accessible and transparent information regarding transition-related initiatives. Communication should not be limited to informing employees about decisions that have already been taken but should create opportunities for feedback and discussion throughout the implementation process.

6. Promote a just and inclusive transition

Policymakers and social partners should continue to ensure that environmental and technological objectives are accompanied by measures that address their social implications. This includes supporting workforce adaptation, safeguarding job quality and ensuring that workers have meaningful opportunities to contribute to decisions affecting their work, skills requirements and working conditions.

4.3 Action Plan: From Strategy to Practice (Medium- and Long-Term Perspective)

The findings of this study demonstrate that the successful implementation of the twin transition requires a balanced approach that combines technological innovation, environmental sustainability and workforce engagement. While Malta has made progress in advancing decarbonisation and digitalisation objectives, continued effort will be required to ensure that workers remain active participants in the transition process.

In the medium term, priority should be given to strengthening skills development initiatives, improving communication regarding twin transition measures and expanding opportunities for employee involvement in organisational change. Employers, trade unions and public authorities should work internally and together to ensure that workers have access to the knowledge, competencies and support required to adapt to evolving technological and environmental requirements.

In parallel, social dialogue structures should increasingly incorporate discussions relating to sustainability and digitalisation. This will require the development of mechanisms that enable

worker representatives to contribute not only to traditional employment matters but also to decisions concerning technological innovation, environmental performance and organisational transformation.

In the longer term, policymakers and social partners should seek to embed the principles of employee participation and just transition within national and sectoral strategies. Anticipating future skills requirements, promoting lifelong learning and strengthening workforce adaptability will be essential to maintaining competitiveness while ensuring that the benefits of transition are shared broadly across society.

The experience examined in this study demonstrates that the twin transition is not solely a technological or environmental challenge but also a social one. Its long-term success will depend on the ability of organisations and institutions to combine innovation with meaningful worker involvement, ensuring that future changes are implemented in a manner that is both effective and inclusive.

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