The ICT Workforce of Tomorrow Workshop Report

eSkills ICT Skills Demand & Supply Monitor
Workshop in collaboration with EY

Wednesday 8th March 2023

eSkills
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The ICT Workforce of Tomorrow Report

This document is a summary report on the Demand and Supply Monitor Workshop event that took place on the 8th March at the MITA Offices in Blata l-Bajda, organised by the ***eSkills Malta Foundation*** *in collaboration with* ***EY.***

The report contains information on the workshop agenda, attendees, presentations summary and the main takeaways from the sessions and group discussions.

The report is organised in the following sections:

1. *Overview and Agenda*
2. *Monitor Findings and Actionable Outcomes*
3. *Enabling Skills and Actionable Outcomes*
4. *Group Breakout Session Take-aways*
5. *Panel Discussion Take-aways*
6. *National eSkill Strategy Highlights*
7. *Formal recognition of ICT Profession Way Forward*

Workshop Overview and Agenda

Overview of the Workshop

The ICT Workforce of Tomorrow Demand and Supply Monitor Workshop event is a continuation of the Demand and Supply Monitor 2021 initiative launched by the eSkills Malta Foundation in the same year.

*In a collaborative effort between the **eSkills Malta Foundation** and **EY**, the workshop aimed to engage key stakeholders from the Maltese ICT sector and Industry to raise awareness, identify and prioritise key action areas required to drive growth and generate value in Malta through the further development of digital skills.*

In line with other European countries, Malta is facing numerous challenges in meeting the industry's demand for ICT professionals as evidenced in the ICT Skills Demand and Supply report of 2021. This initiative strives to analyse skills, initiatives and tools that would equip the ICT workforce of tomorrow to ensure the achievement of industry goals, thereby influencing Malta's competitive position in the global digital and ICT economy.

The goals set out for the workshop sought to provide guidelines to valuable stakeholders, including educational institutions, ICT professionals, local ICT organisations and government agencies, whilst promoting collaboration between these entities.

Participants had the opportunity to contribute towards Malta's digital and technological goals by voicing their opinions and bringing to the table their sectoral and professional knowledge. This benefited all stakeholders in supporting future business needs and acting as an input towards the formation of ICT professionals and educational institutions.

Workshop Agenda

09:00 Introduction – *Delivered by Carmel Cachia from the eSkills*

09:10 Keynote - Presentation of Monitor results – *Delivered by Michael Azzopardi, EY*

The key findings of the monitor results were analysed, highlighting crucial areas of demand and supply, education, training, skills, professional bodies, profession recognition and technology.

10:00 Q&A session - *Facilitated by Carmel Cachia from the eSkills Malta Foundation and Michael Azzopardi, EY*

10:15 Enabling skills for today's and tomorrow's market – *Delivered by Patrick Bezzina, EY*

Due to the accelerated rate of technology development, there is a gap between the educational institution's programs and the industry's demand of ICT skills. This session explored current and future technology skill trends, together with the means to make upskilling more accessible and relevant to ICT professionals.

11:00 Breakout sessions - *Facilitated by EY and the eSkills*

The breakout sessions explored some of the challenges identified in the Demand and Supply Monitor and each group presented ideas on the possible development and method of implementation of solutions. The groups could also identify new challenges not mentioned in the Monitor.

12:45 Hybrid working best practice – Delivered by Robert Gonzi, Ascent

Ascent is a leading technology firm that designs, builds, modernises and optimises software, data and cloud solutions. This helps organisations to build their digital muscle and add tangible value to their business. Ascent has 400 engineers, and following COVID, they have successfully mastered a flexible hybrid working pattern for their team. This has made a difference in their efficiency, cost and employee retention. Ascent shared this wonderful experience during this session.

13:15 Panel discussion on Enabling an international ICT workforce in Malta – *The panelists were Ediana Guillaumier from EY, Francois Grech from Exigy, Conrad Attard from the Faculty of ICT at the University of Malta and Mark Camilleri Gambin from Expedition42 – Facilitated by Carmel Cachia from eSkills*

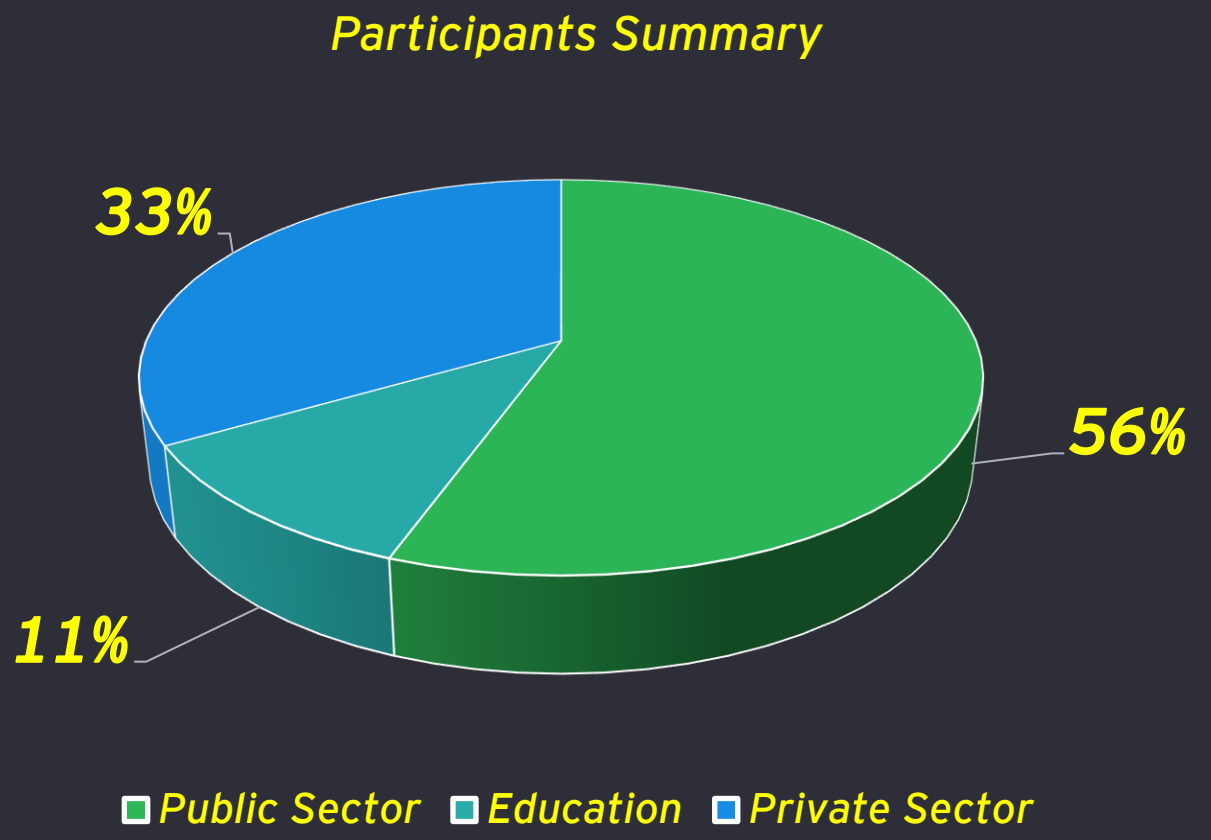
This session delved into addressing the skill and talent gap within the Maltese market and the challenges faced in attracting international talent.

14:00 A snapshot of National eSkills Strategy 2022-2025 and National Recognition of ICT Professionals Study – *Delivered by Carmel Cachia from the eSkills*

The eSkills Malta Foundation provided a snapshot of two important initiatives completed in 2022. The National eSkills Strategy seeks to achieve ambitious goals for the ICT sector, but also in the education, the workforce, and society. Meanwhile, the National Recognition of ICT Professionals in Malta focuses on the sentiment of the local ICT professionals and practitioners.

Participants

The event was attended by a considerable number of representatives coming from public sector entities, educational institutions and ICT industry.



Main Topics

Enabling skills for today's and tomorrow's market

Addressing current trends and general direction of the ICT sector, defining the required skills and the approach towards learning and development.

Preparing tomorrow's ICT workforce

Preparing the next generation of ICT practitioners whilst looking at market gaps, trending requirements, career paths and organisation-oriented topics.

Attracting an international ICT workforce in Malta

Addressing the gaps in the Maltese market by attracting international talent, with a focus on international benchmarking, initiatives, practices and incentives.

Best practices on hybrid working

Highlighting the benefits of hybrid working after the pandemic revolutionized the day-to-day operations of numerous organisations worldwide.

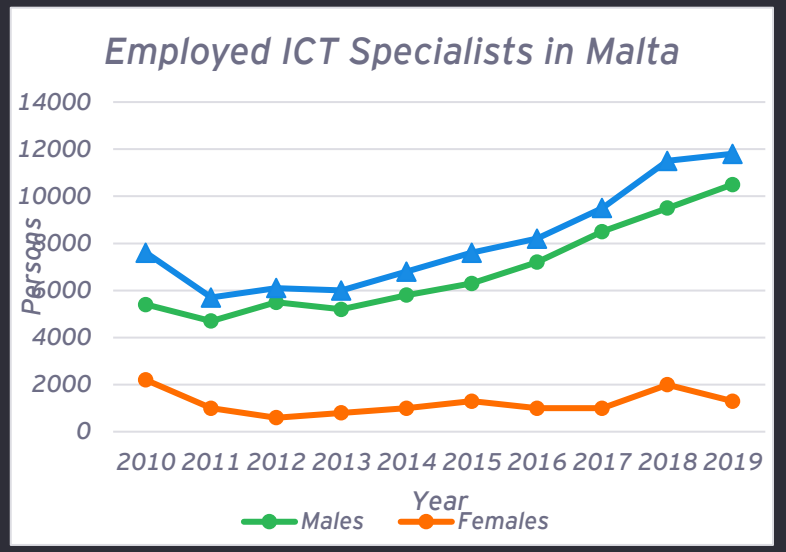
Key Outcomes

ICT Demand & Supply Monitor
The current state of the ICT workforce

According to European Commission studies, the demand for digital technology professionals has been growing at the rate of 4% annually.

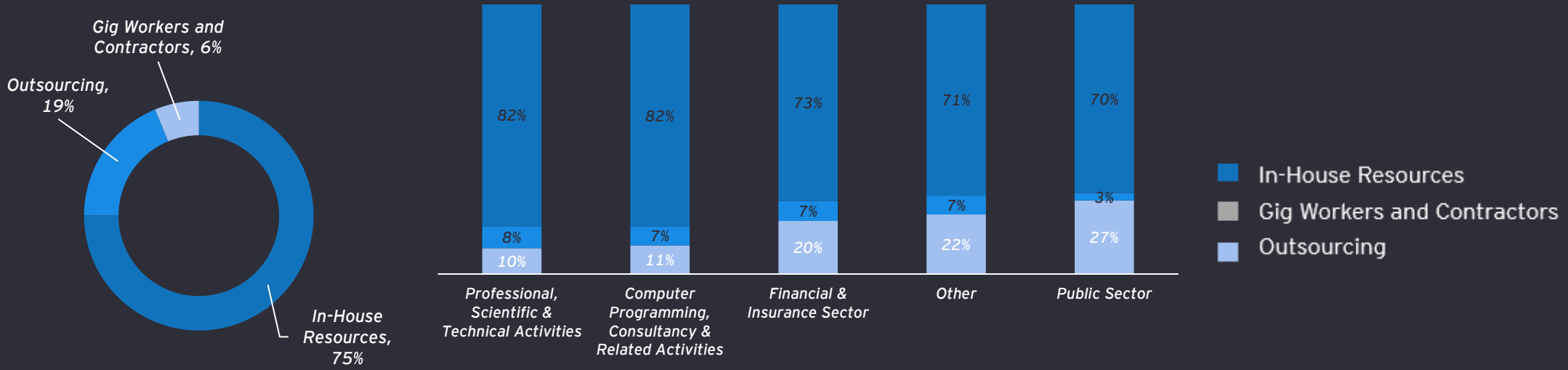
A 21.9% employment growth in the Malta ICT sector is forecasted by Cedefop from 2020 to 2030, more than twice as large as the forecasted growth for EU27 (8.9%).

The ICT workforce needs to be suitably equipped to respond to these developments in order to ensure the aspirations of business, Malta's competitive position in the global economy and the attractiveness of Malta for Foreign Direct Investments in the digital and technology-related fields.



Employed ICT Specialists in Malta (2010 – 2019). Source: Eurostat (isoc_sks_itsps)

Source of ICT Workforce



ICT Demand & Supply Monitor
Workforce Analysis – From a Demand Organisation Perspective

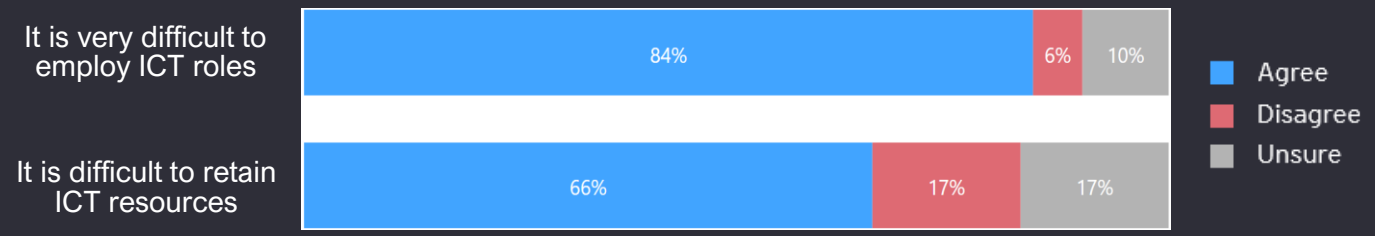
84% of respondents think that it is very difficult to staff ICT roles.

66% find it difficult to retain ICT resources.

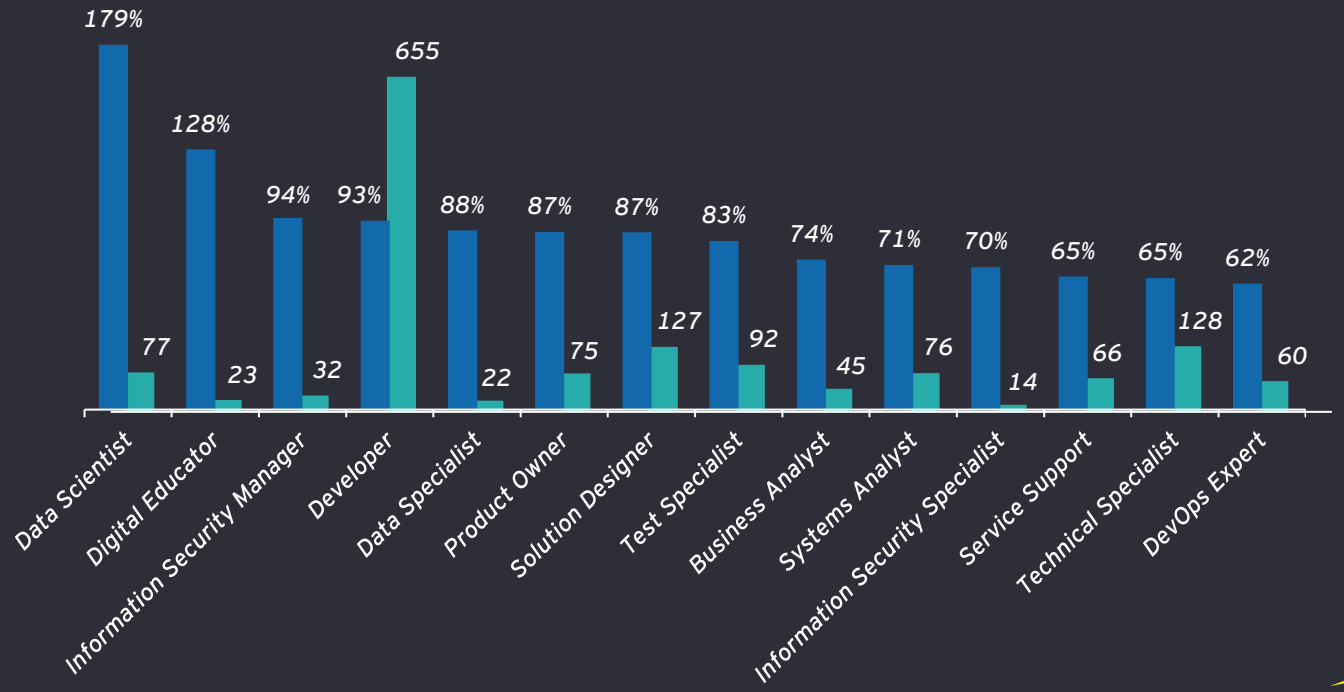
The Data Scientist and Digital Educator roles are expected to see an increase of 179% and 128% respectively in the next 3 years.

The demand for the largest role segment, Software Developers, is expected to continue increasing.

Opinion on recruitment & retention within the ICT industry



Estimated increase of roles in the next 3 years



Key Insights and Actionable Outcomes

Demand and Supply

- *Sourcing and retention of ICT personnel is proving to be difficult.*
- *A number of organizations would consider hiring ICT practitioners without formal education but in the public sector this is constrained by policies.*
- *Public sector and financial services companies are used externally sourced ICT skilled resources.*
- *ICT profession remains male dominated.*

Actionable Outcomes:

- *An open discussion on the convergence of formal education requirements across both public and private sectors is required to give more stability and direction to aspiring ICT practitioners.*
- *Despite the efforts, a collective effort is needed to promote and attract more women to pursue an ICT career.*

Education

- *Growth in demand for ICT professionals is not being satisfied by local ICT student pipeline.*
- *Graduates require additional training to meet the needs of organisations.*

Actionable Outcomes:

- *Expedite the entry and onboarding process of ICT professionals from countries outside the Europe.*
- *Align technology training in academia with the technical needs of different industries.*
- *Extend formal academic training to include soft skills training such as presentation skills, teamwork, etc.*

Key Insights and Actionable Outcomes

Training

- *There is an increase demand in skills and certifications for cloud, AI and software development.*
- *Lack of specialized resources is pushing companies to assign existing ICT staff to take on other roles.*
- *Adoption of AI in industry remains low potentially due to lack of training and certification offerings.*
- *Demand organisations have limited plans to expand their learning and development of ICT employees.*

Actionable Outcomes:

- *Provide assistance to organisations to increase training opportunity offerings to broaden the knowledge of in-house ICT personnel.*
- *Increase the interaction and involvement of academic institutions with industry by organizing structured collaborative programmes where ICT researchers can work on practical real-world problems.*

Technologies

- *Companies are planning to shift towards cloud and DevOps*
- *A significant increase in the use of Microsoft technologies especially in cloud and software development has been recorded*

Actionable Outcomes:

- *Provide more elaborate and structured applied AI and Machine Learning training programmes in verticals such as healthcare, finance, advanced manufacturing, and others*

Key Insights and Actionable Outcomes

- *Professional Bodies and Profession Recognition*
  - *ICT practitioners are in favour of a formal recognition of the ICT profession although they remain concerned about cost and maintainability*
  - *A large number of ICT professionals do not form part of any professional body*
  - Actionable Outcomes:
    - *Establish a forum to discuss how the ICT profession can be recognized at national and EU level so that it becomes more attractive for young people to pursue*
    - *Encourage ICT practitioners to enroll and involve themselves in profession-enrichment programmes and social groups in order to widen their horizons and broaden their industry knowledge.*

Top enabling ICT skill areas in demand today that will shape the world of tomorrow

Data Analysis

With the abundance of data available, the ability to analyze and make sense of it is critical.

Skills in data analysis, including data mining, machine learning, and statistical analysis, are highly sought after.

Artificial Intelligence and Machine Learning

AI and machine learning are rapidly transforming many industries.

Skills in AI and machine learning, including natural language processing, computer vision, and deep learning, are in high demand.

Software Development

The need for custom software solutions continues to grow across industries.

Skills in software development, including programming languages like Python, Java, and C++, are highly valued.

Cybersecurity

With the rise of cyber threats and attacks, cybersecurity skills are in high demand across industries.

These skills include knowledge of network security, risk management, data protection, and incident response.

Cloud Computing

Cloud computing is increasingly becoming the preferred platform for data storage and processing.

Skills in cloud computing are in high demand, including knowledge of cloud architecture, deployment, and management.

Project Management

With the increasing complexity of ICT projects, strong project management skills are essential.

These skills include knowledge of project planning, risk management, and agile methodologies.

DevOps

DevOps skills, such as continuous integration, continuous delivery, and infrastructure as code, are in high demand as more organizations adopt agile development methodologies.

User Experience (UX) Design

UX design skills, including user research, wireframing, and prototyping, are in high demand as companies seek to improve their digital products and services.

Digital Marketing

Digital marketing skills, including search engine optimization (SEO), search engine marketing (SEM), and social media marketing, are in high demand as more businesses move their marketing efforts online.

Continuous learning and upskilling

Continuous learning and upskilling benefits employers and employees.

Staying relevant: As technology and business practices continue to evolve, it's important to keep up with the latest developments in the field. Continuous learning and upskilling help ensure that the organisation remains relevant and competitive in the market.

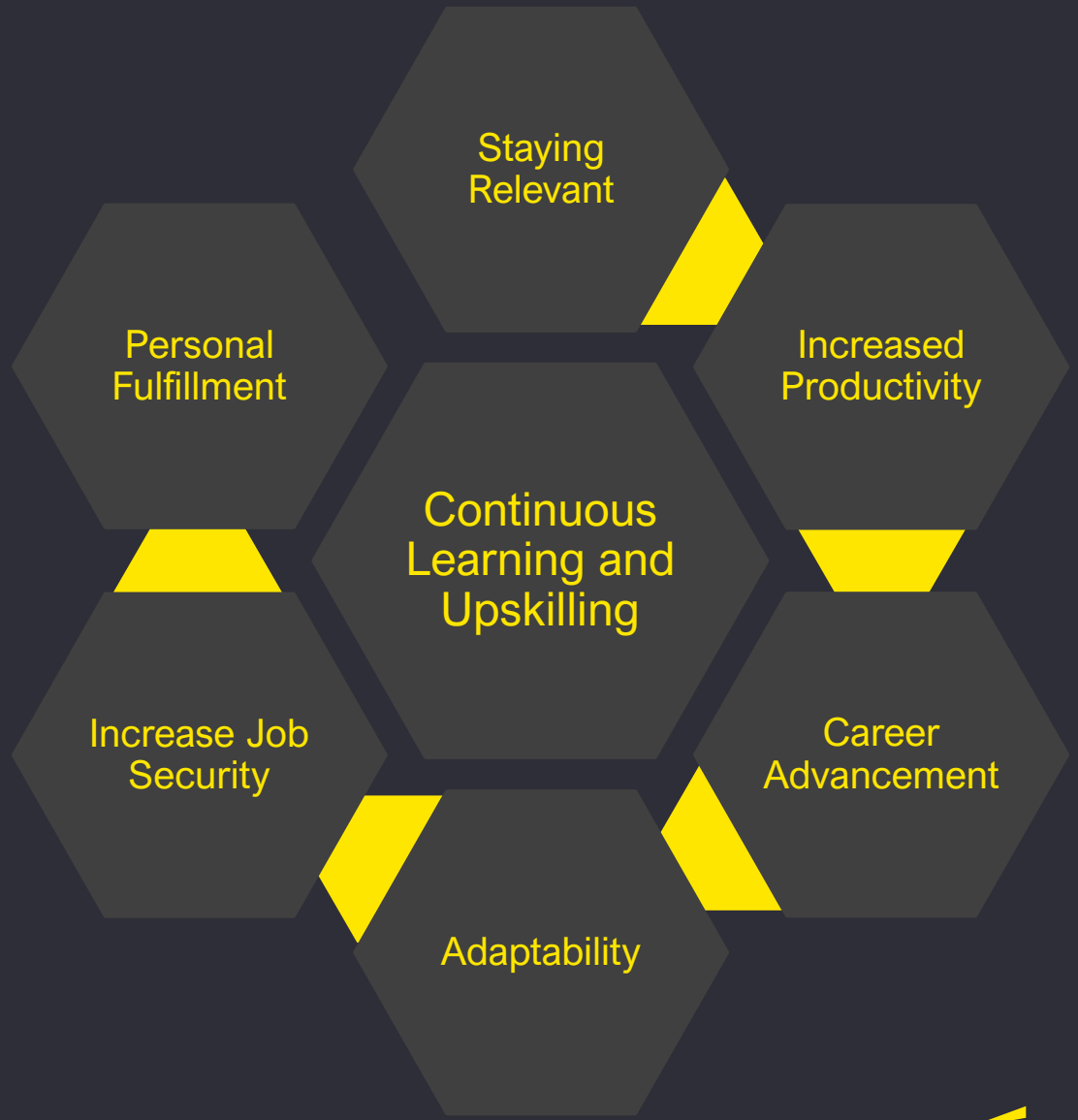
Increased productivity: Learning new skills and techniques can help individuals work more efficiently and productively. This can lead to improved job performance, increased job satisfaction, and potentially even higher salaries.

Career advancement: By staying up-to-date with the latest trends and technologies in the relevant field, one may be better positioned to take advantage of new opportunities and advance their career.

Adaptability: Continuous learning and upskilling help develop a growth mindset and adapt to changing circumstances. This can be especially important in industries that are prone to disruption, such as technology or healthcare.

Increased job security: Continuously learning and upskilling adds value to the individual's personal credentials and valuable to employer alike. This can increase job security and reduce the risk of layoffs or other job-related challenges.

Personal fulfillment: Learning new things and developing new skills can be personally fulfilling and rewarding. It can also help individuals to stay intellectually curious and engaged in their work.



Key Insights and Actionable Outcomes

Actionable Outcomes:

- *A diverse range of skills can give organizations a competitive edge by enabling them to adapt more quickly to changing market conditions and emerging technologies.*
- *Facilitate collaboration and knowledge sharing to lead to more effective teamwork and better work outcomes.*
- *Organizations should provide employees with access to a variety of learning opportunities, including training workshops, webinars and conferences. These opportunities should be tailored to the employees' needs and relevant to their roles and career goals.*
- *Provide incentives for employees to engage in continuous learning and upskilling. This can help to motivate employees to invest in their own development and to demonstrate the value of these activities to the organization.*
- *Foster a learning mindset by encouraging ICT practitioners to experiment, seek out feedback and learn from mistakes.*

Enabling an International ICT workforce in Malta – Panel Questions

The following questions were asked during the panel session:

1. *How are ICT students prepared to work in a multicultural workforce during their studies and when they join the industry?*

2. *Many opportunities exist these days for students to study and work abroad. This is part of career development. What can we do to make sure they return to the Maltese industry?*

3. *Do you think this balances out against the number of the international workforce coming to Malta to work here, or is there a long-term effect?*

4. *An international workforce means those coming to work in Malta and the GIG working, perhaps those working in a foreign location. Do recruiters offer GIG working opportunities to fill local vacancies? What is your view on the performance of GIG working or working overseas?*

5. *What are the factors to consider when managing an international workforce (such as mindset, readiness)?*

6. *Is a multicultural team more productive?*

7. *The local industry has struggled with the lack of soft skills among ICT students and new employees. Is there a difference between the locals and those coming from other countries?*

8. *What challenges do recruiters face in onboarding and nurturing an international workforce (such as transparency, visas, accommodation)?*

Key Insights from the Panel Discussion

The following are some key takeaways from the panel discussion:

- *Bringing over resources from outside the EU continues to be a daunting challenge filled with bureaucratic procedures and excessively long waiting times to obtain a working VISA. Most cases involve a waiting time of many months, resulting in a huge inconvenience for both the employing entity and the employees, together with their accompanying families. In contrast with other European countries Malta is one of the slowest in processing working VISAs. Government authorities must take immediate and drastic action to remedy the situation.*
- *Employees from different parts of the world have different cultural backgrounds. Companies should work towards accommodating their foreign employees whilst maintaining their company culture and values. On the other hand, foreign employees should also adapt to the company culture whilst maintaining their cultural identity.*
- *Finding the right balance in a hybrid mode of working is not easy. Some companies are facing challenges concerning communication. Employees who are not coming to the office are missing out on spontaneous and active communication with their colleagues. When employee relationships are largely built online, it is easy for things to get lost in translation.*
- *The Gig economy brings flexible services and offers consumers a unique and fast alternative to regular, standardized business. Businesses tend to benefit from an easily accessible labor force, a cost-efficient hiring and onboarding process, together with an increase in employee motivation. On the other hand, workers in the gig economy may suffer from lack of benefits, and isolation which can negatively affect production and mental health.*
- *Flexible working hours and work-life balance are two things that are highly sought after by the latest crop of employees. Recruitment identify these two items as the deciding factors for potential recruits.*
- *Transversal Skills are crucial elements for a successful ICT employee these days, yet this is still found missing in many students and new recruits who are employees today. This situation has not changed in the last five years. It is therefore important for ICT employers to include transversal skills in their training development.*
- *The lack of women in the ICT workplace has not changed much, even if Malta has progressed according to the late European DESI Index. It is therefore essential that the current women in industry are encouraged to give talks about ICT careers and women in the secondary schools.*

Key Actionable Outcomes from the Panel Discussion

- Actionable Outcomes:
  - *Increase awareness with local authorities to streamline the VISA processing to enable a fast onboarding of ICT professionals. This will help in addressing the digital skills gap.*
  - *Foster a more multi-cultural society that enables effective collaboration between local and foreign practitioners.*
  - *Encourage organizations to embrace the new reality of hybrid and remote working by providing governance guidelines that safeguard effective communication and teamwork.*
  - *Integrate soft and transversal skill development in formal education and ICT training.*
  - *Take proactive steps in attracting and empowering more women in the ICT sector by creating more space for participation in national and industry-level forums.*

Keynote by EY

Presentation of results ICT Demand and Supply Monitor 2021

Results from ICT Demand and Supply Monitor

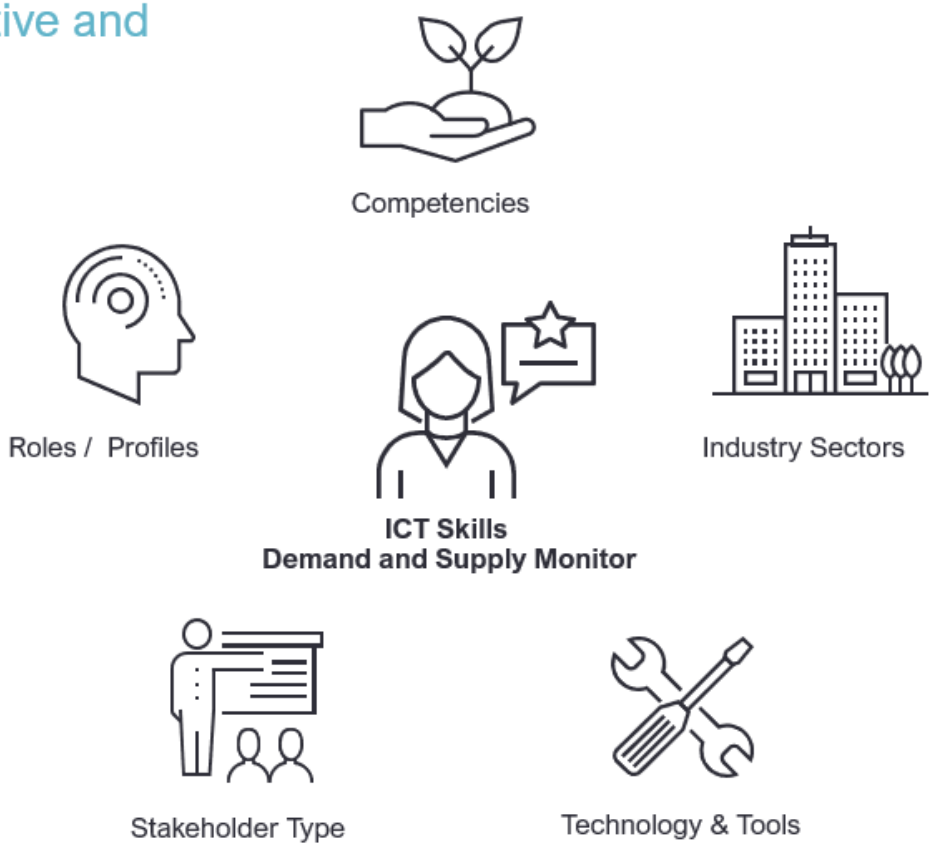
Extract from Keynote Presentation

Objectives of the Study

The Maltese ICT sector must remain competitive and innovative on the European and global stage

The objectives of the study and this workshop are:

- To guide and inform the educational institutions in the development and demand of ICT related training;
- To guide new and existing ICT professionals on developing trends to assist them in staying relevant to the market;
- To guide the Maltese ICT sector on emerging skills and trends at an international level;
- To guide governmental agencies in the establishment of ICT-related policies and strategies;
- To guide and foster collaboration between various ICT-related organisations who may even oppose or compete with each other.

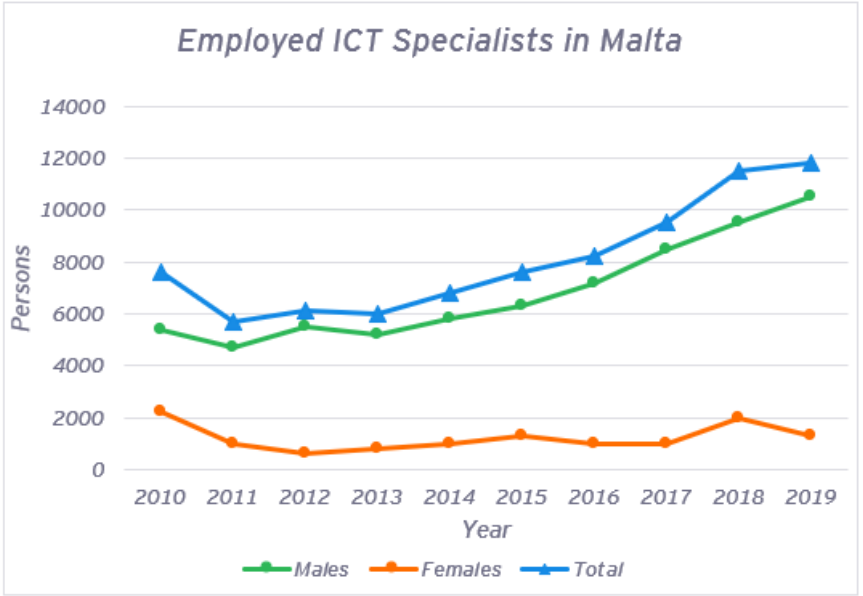


Results from ICT Demand and Supply Monitor

Extract from Keynote Presentation

Setting the Scene

- According to European Commission studies being conducted, the demand for digital technology professionals has been growing by 4% annually
- A 21.9% employment growth in the Malta ICT sector is forecasted by Cedefop from 2020 to 2030, more than twice as large as the forecasted growth for EU27 (8.9%).
- The ICT workforce needs to be suitably equipped to respond to these developments in order to ensure the aspirations of business, Malta's competitive position in the global economy and the attractiveness of Malta for Foreign Direct Investments in the digital and technology-related fields.

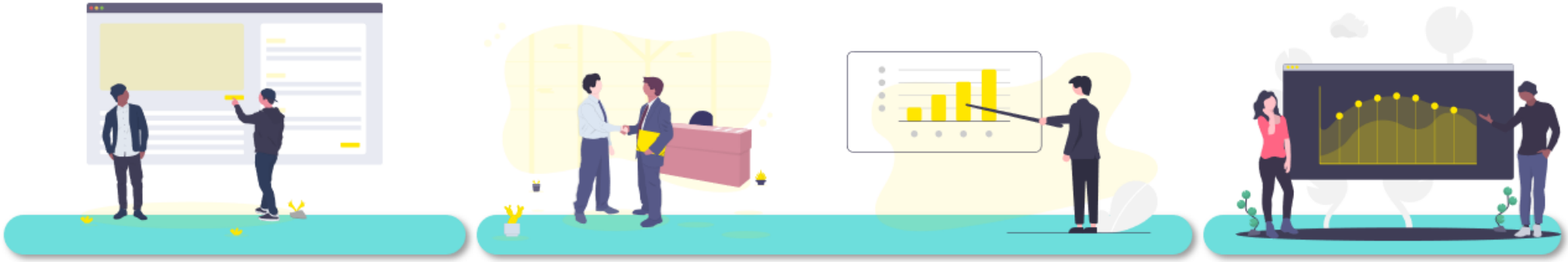


Employed ICT Specialists in Malta (2010 – 2019). Source: Eurostat (isoc_sks_itsps)

Results from ICT Demand and Supply Monitor

Extract from Keynote Presentation

The Process



Consultation with eSkills Malta Foundation and research to develop a comprehensive study

Engagement of the various stakeholders through an online survey and interviews

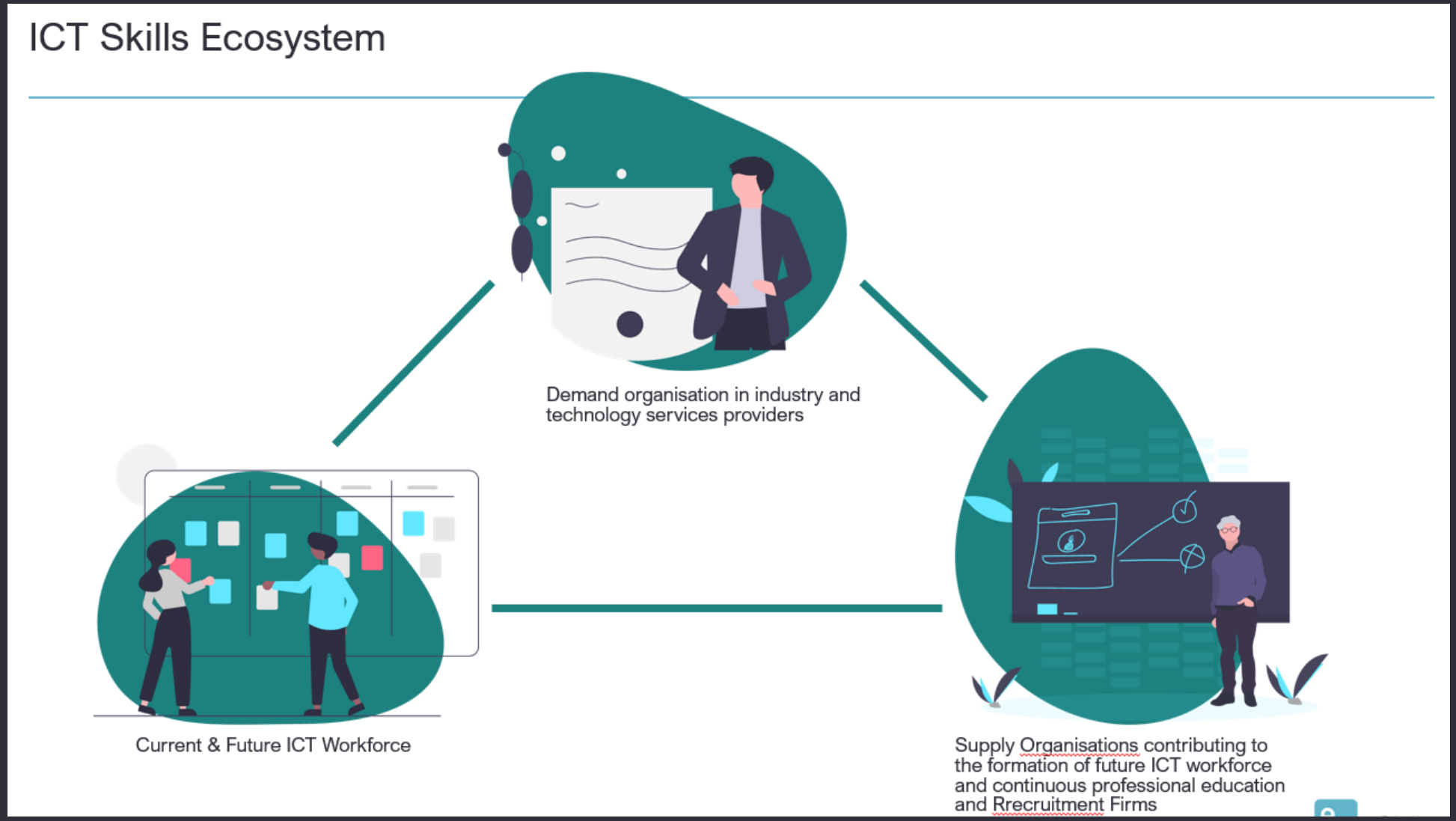
Analysis, recommendations and publishing of the ICT Demand and Supply Monitor

Consultative workshop with key stakeholders to collaboratively ideate on action

- Reached out to 644 individuals through direct e-mail distributions.
- Executed an extensive social media campaign and collaborated with organisations like the Malta Chamber of Commerce, MIA and Tech.mt.
- A total of 168 consented and completed to have their responses processed and analysed.
- Interviews across Demand and Supply organisations.
- We also extended a special survey to those studying in an ICT related field.

Results from ICT Demand and Supply Monitor

Extract from Keynote Presentation



Results from ICT Demand and Supply Monitor

Extract from Keynote Presentation

Roles - Based on the European ICT Professionals Role Profiles

- Throughout the study, reference is made to competencies and job profiles, which are based on the e-CF Framework.
- Specific technologies and respective technology categories were extracted from the Stackoverflow survey.

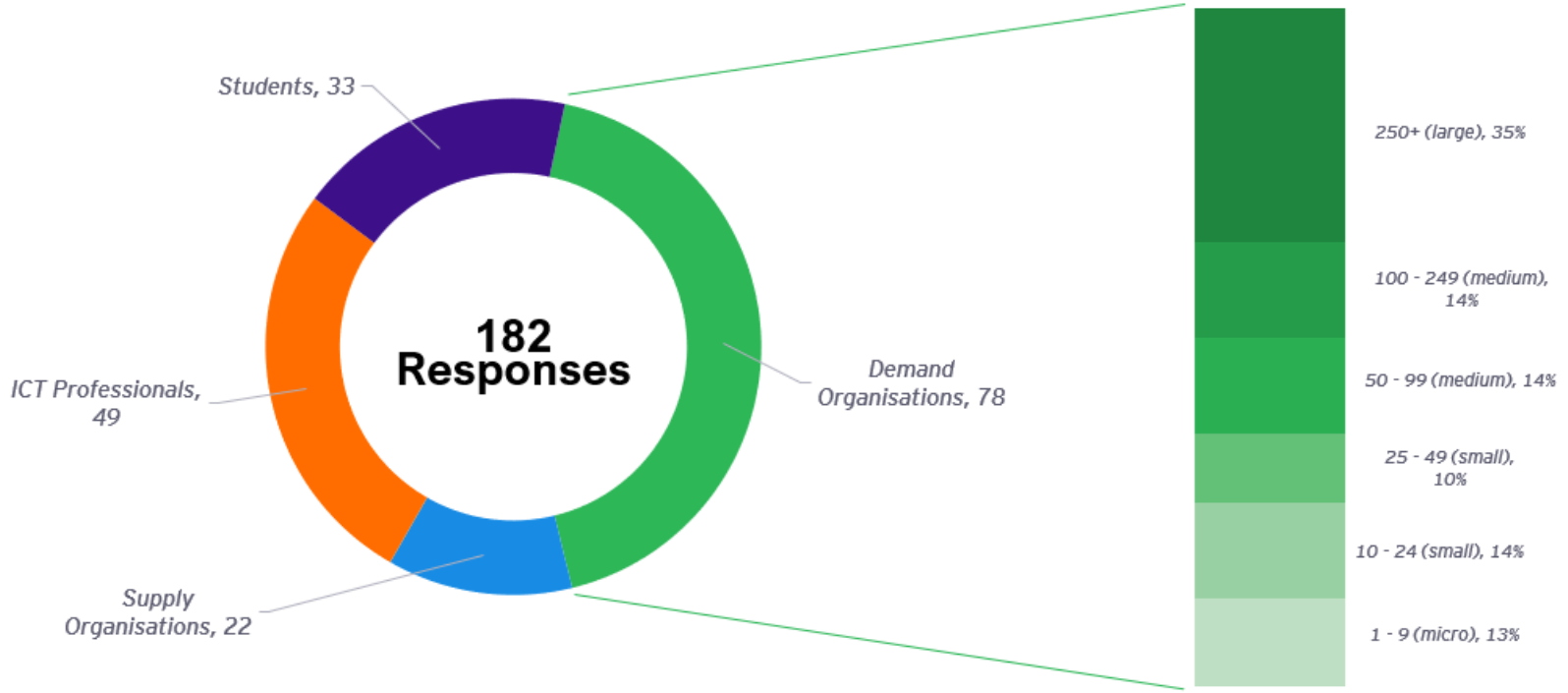
Process Improvement	Business	Technical	Design	Development	Service & Operation	Support
Digital Transformation Leader	Business Information Manager	Quality Assurance Manager	Business Analyst	Developer	Data Administrator	Account Manager
Product Owner	CIO	Cyber Security Manager	Systems Analyst	Digital Media Specialist	Systems Administrator	Digital Educator
Scrum Master	ICT Operations Manager	Project Manager	Enterprise Architect	Test Specialist	Network Specialist	Cyber Security Specialist
DevOps Expert	Data Science	Service Manager	Systems Architect		Technical Specialist	Digital Consultant
			Solution Designer		Service Support	
			Data Specialist			

Based on the European ICT Professionals Role Profiles

Results from ICT Demand and Supply Monitor

Extract from Keynote Presentation

Split of Survey Respondents combined with Company Size split of Demand Organisations



Respondents of Demand organisations represent a workforce size of at least 7,650

The current state of the ICT workforce

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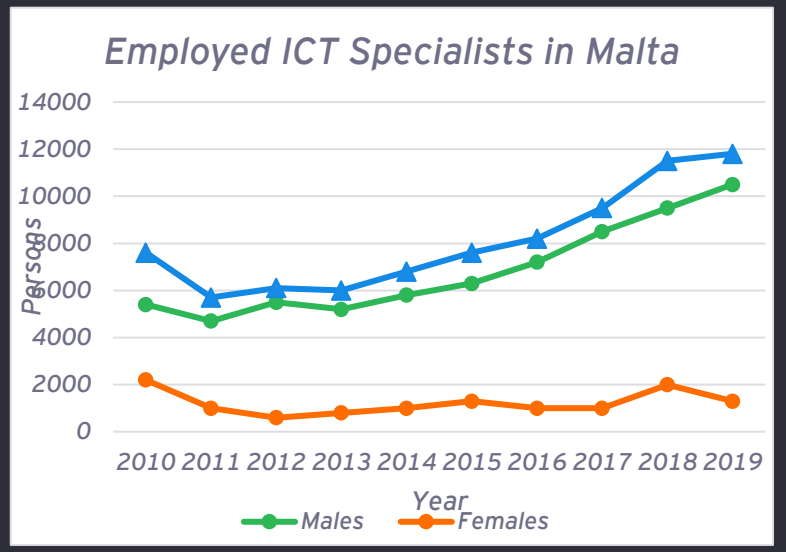
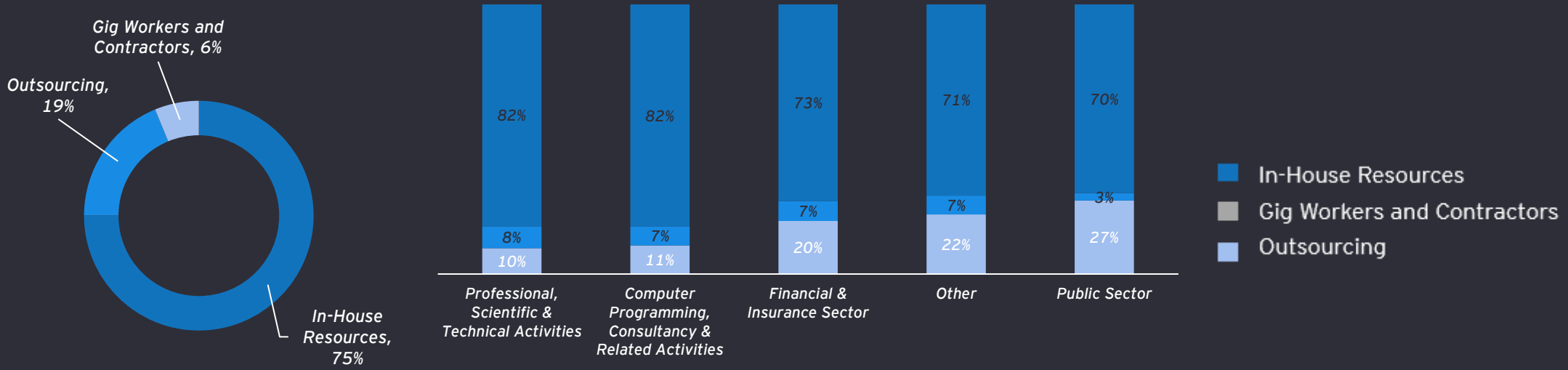


Employed ICT Specialists in Malta (2010 – 2019). Source: Eurostat (isoc_sks_itsps)

Source of ICT Workforce



Workforce Analysis – From a Demand Organisation Perspective

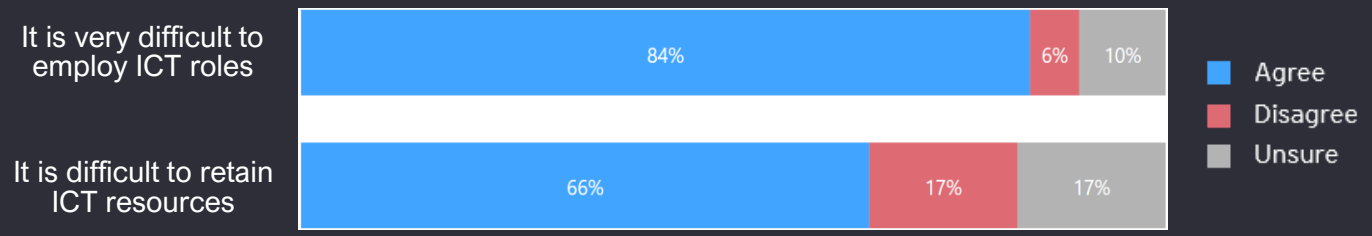
84% of respondents think that it is very difficult to staff ICT roles.

66% find it difficult to retain ICT resources.

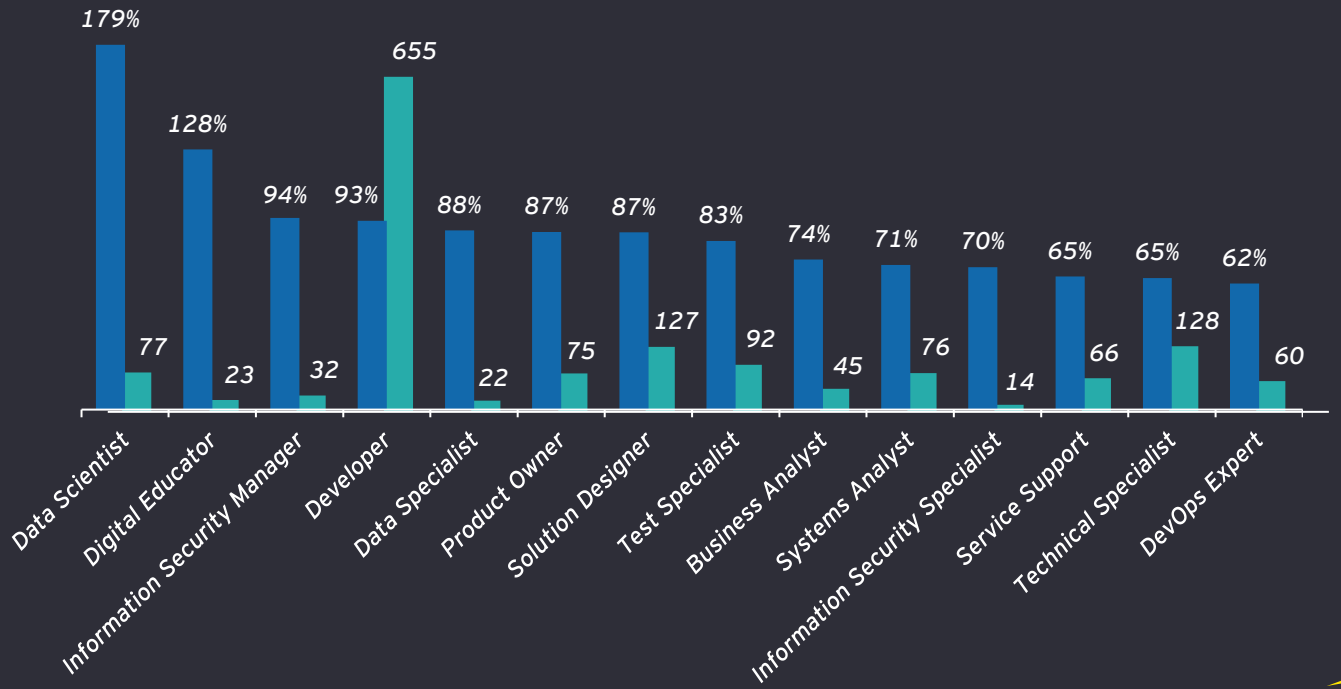
The Data Scientist and Digital Educator roles are expected to see an increase of 179% and 128% respectively in the next 3 years.

The demand for the largest role segment, Software Developers, is expected to continue increasing.

Opinion on recruitment & retention within the ICT industry



Estimated increase of roles in the next 3 years



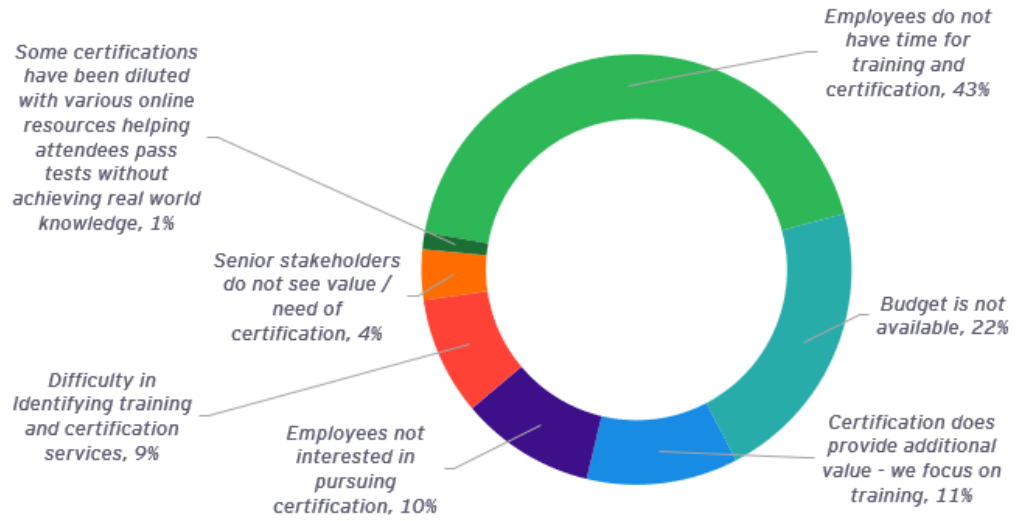
Results from ICT Demand and Supply Monitor

Extract from Keynote Presentation

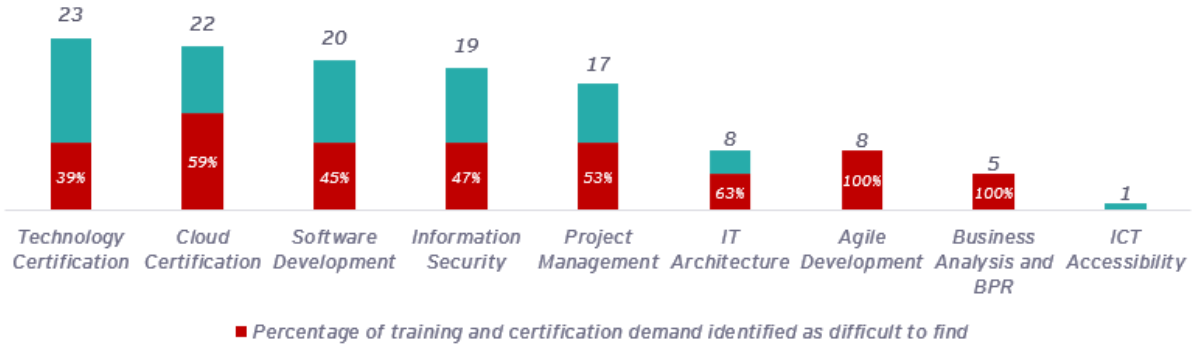
Training & Certification – Demand Organisation Perspective

- Employees feel that they do not have time to commit for training and certification
- Technology specific courses and certification are the most popular, and also the easiest to find
- Certifications related to Sigma, Lean, and Scrum Mastery that form part of the Agile Development and Business Analysis & BPR categories are the most difficult to find training and course providers for, however they are also some of the least in demand

Challenges faced when providing employees with access to training & certification



Training & certification demand & difficulty in finding training or course providers*

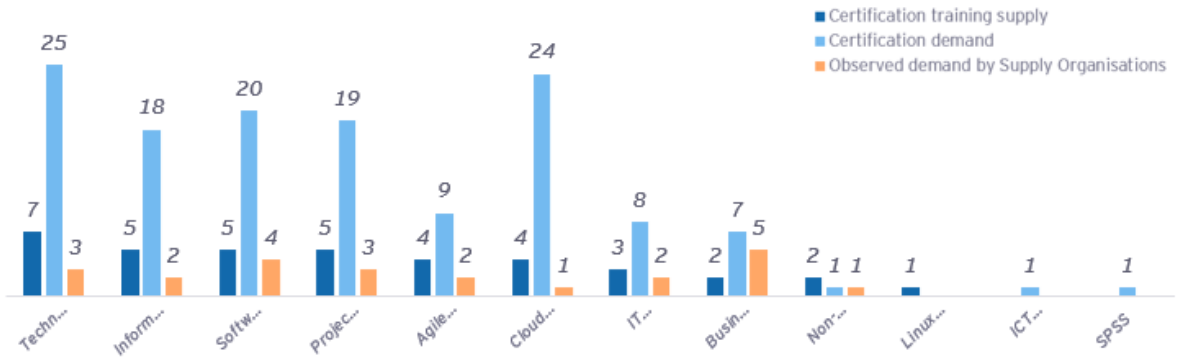


Results from ICT Demand and Supply Monitor

Training & Certification – Supply Organisation Perspective

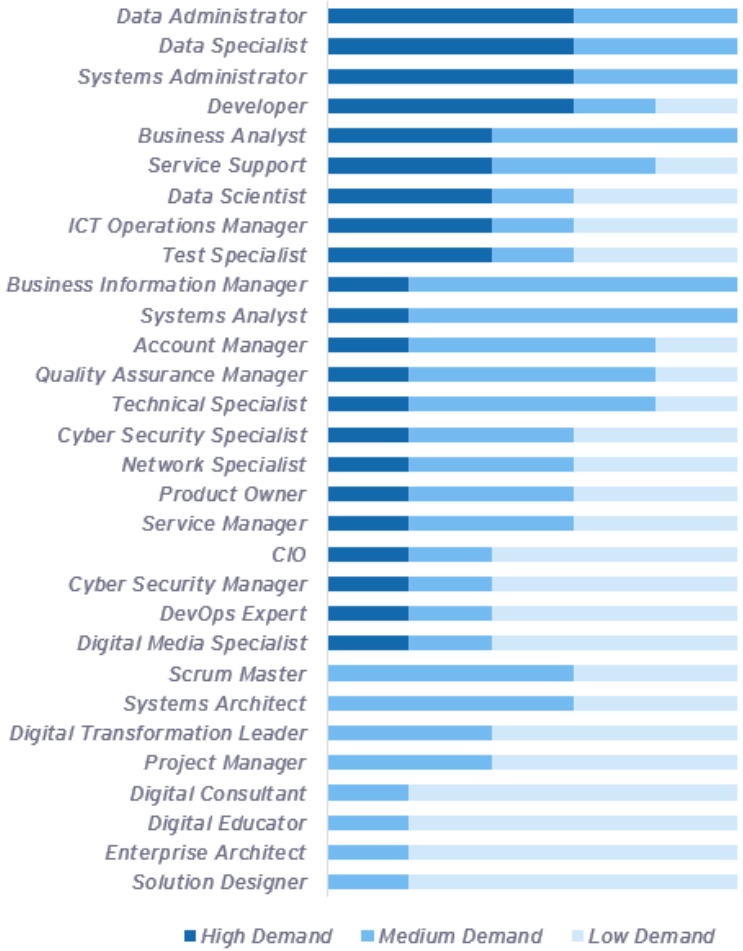
- Technology Certification is the most popular in terms of training provided and demand,
- Cloud Certification is provided by 3 less organisations despite being the second most in demand.
- Supply Organisations have also observed a high demand for roles like Developers, Systems Administrators and Data Specialists among others. While in demand, these roles are also relatively difficult to find suitable candidates for due to lack of skills, training, and experience.

Supply, Demand, and Observed Demand of Training & Certifications*



*Values represent number of organisations

Perceived Role Demand within the Industry

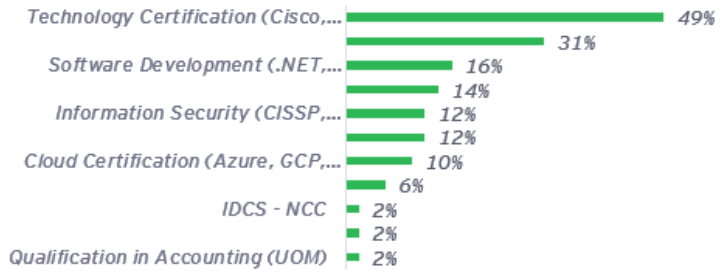


Results from ICT Demand and Supply Monitor

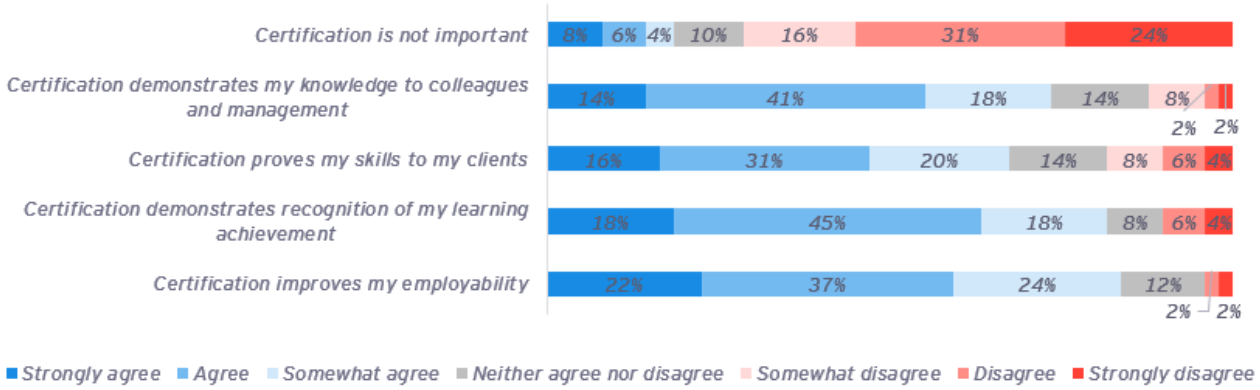
Training & Certification – ICT Practitioner Perspective

- Most ICT practitioners agree that certification provides benefits as a whole.
- 42% find that they are too busy to commit to training and certification.
- Technology Certification is the most popular certification in the possession of ICT practitioners.
- Although Business Analysis and BPR, Cloud and Agile are key trends in the industry, less than 10% of practitioners have certification in these area.

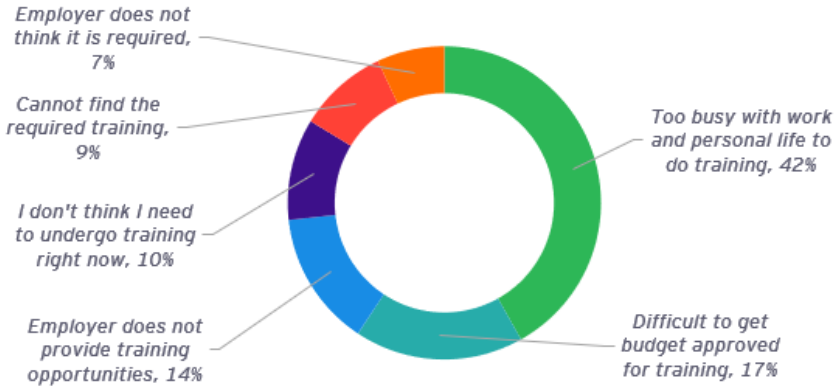
Possession of Qualifications



Benefits of certification



Difficulty in attending training or certification courses



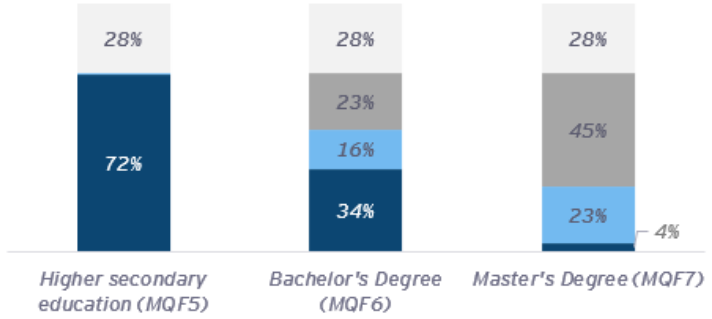
Results from ICT Demand and Supply Monitor

Education & Experience

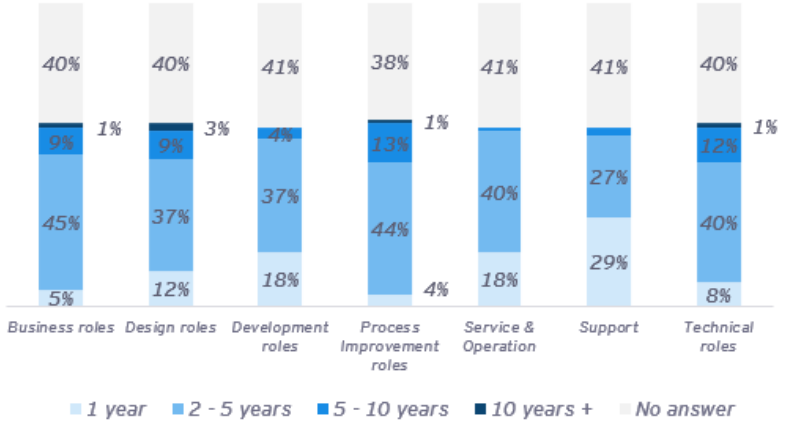
- 52% of Demand Organisations would only require 1 year of experience for Support roles, it is likely that recent graduates will find themselves working in such roles.
- In other roles there is expectation of some experience.
- An MQF 6 degree is required in at least 49% of the cases – reflecting the importance of tertiary education for ICT.

Importance of formal education when recruiting ICT roles

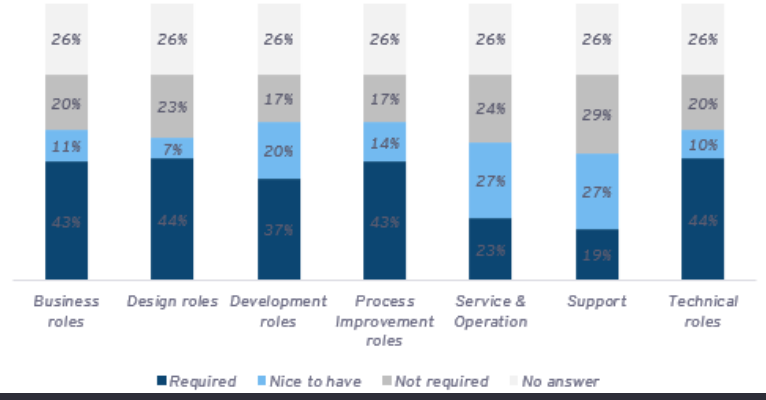
Educational attainment expectations when hiring



Prerequisite experience expectation for hiring resources



Bachelor's Degree requirement per role category

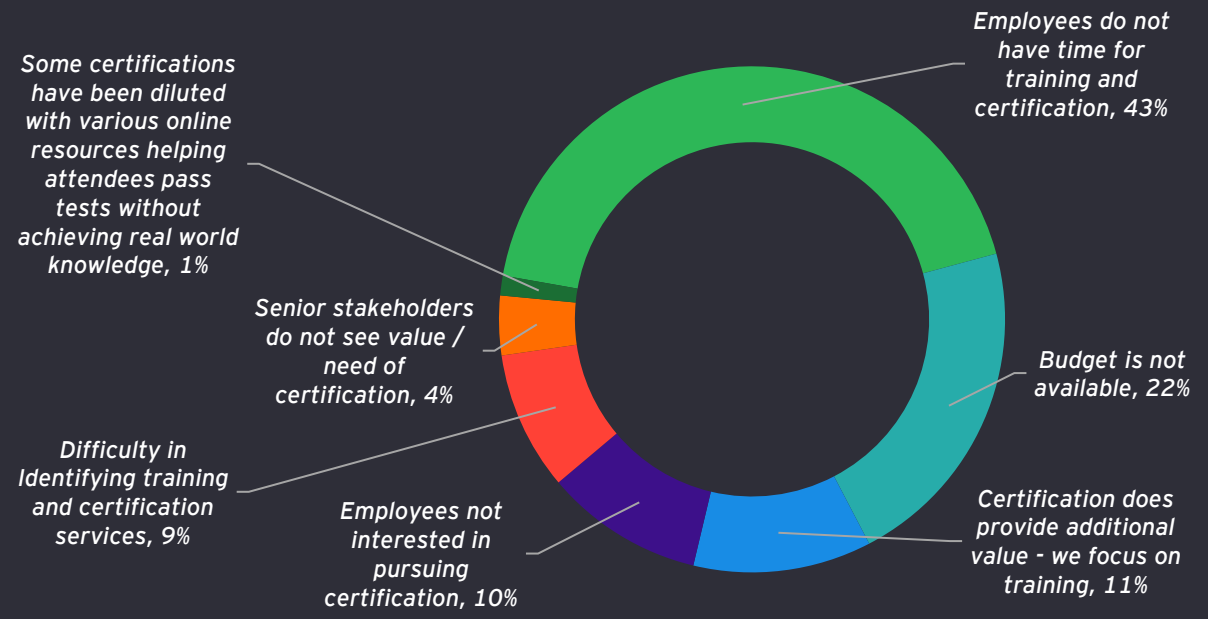


Skills and Training

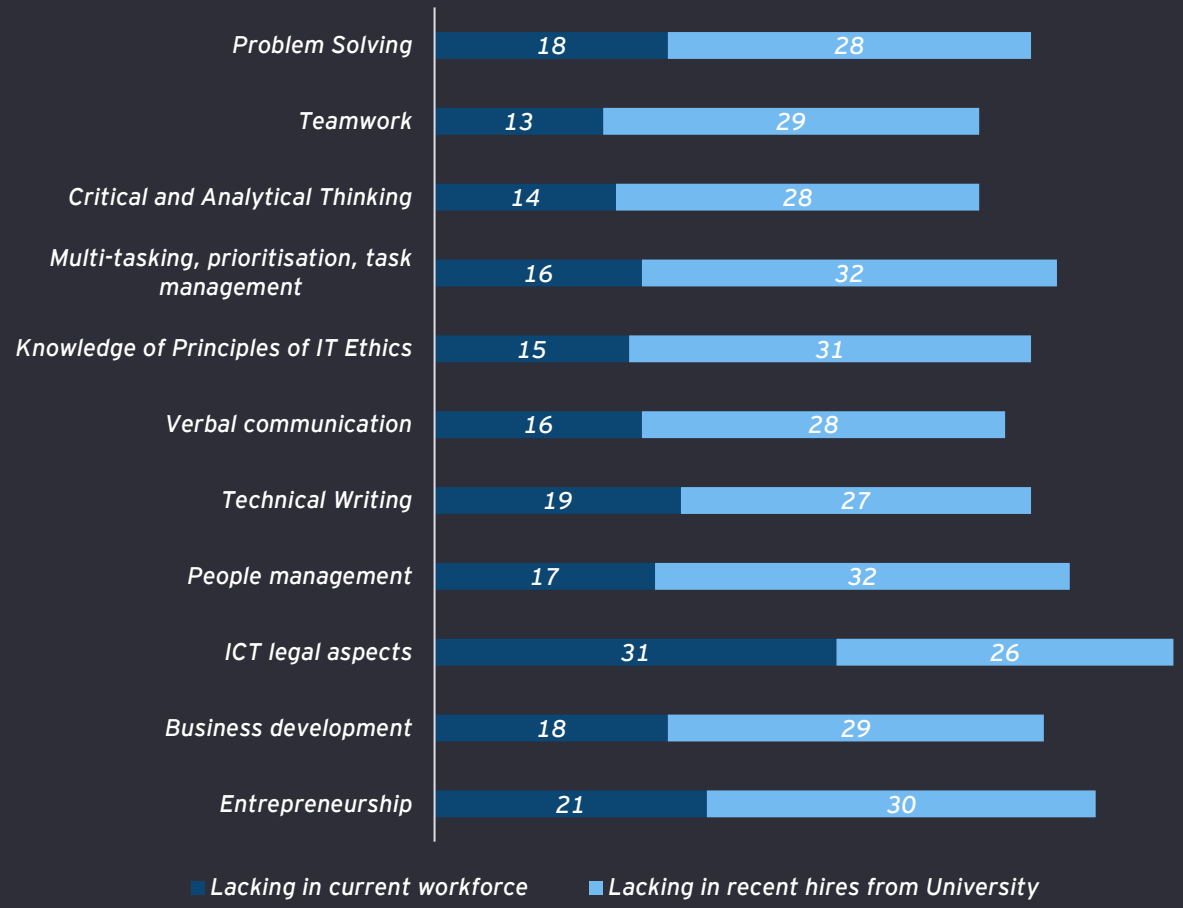
Employers encounter various challenges when providing access to training and certification. Particularly, employees feel that they do not have time to commit for training and certification. On the other hand, budget is not always available.

Meanwhile, Demand Organisations perceive a lack of skills in the current ICT workforce and recent graduates, notably in the areas of ICT legal aspects, Entrepreneurship and Business Development.

Challenges faced when providing employees with access to training & certification



Lack of skills in ICT workforce and recent graduates

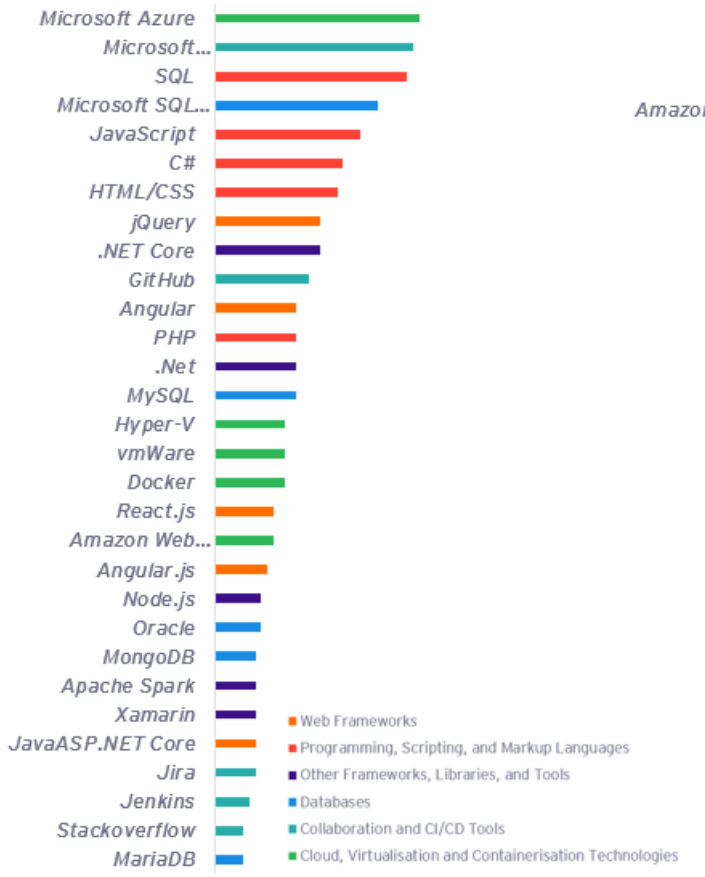


Results from ICT Demand and Supply Monitor

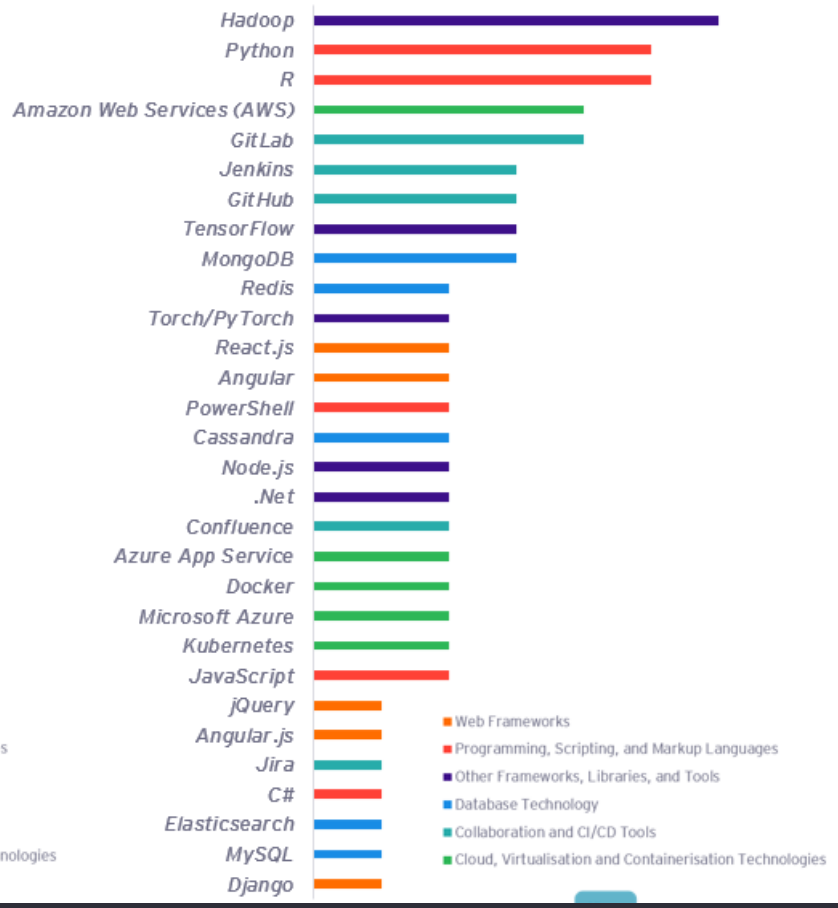
Technologies

- Demand Organisations favour solidifying their expertise of traditional technologies like Microsoft 365 & Azure, SQL and Javascript.
- The trend among ICT Practitioners shows tendency to focus on latest technology and trends, with the likes of R, Hadoop, Python and Amazon Web Services being the most popular for future use.

Future uptake of technologies among Demand Organisations



Future use of technologies among ICT Professionals

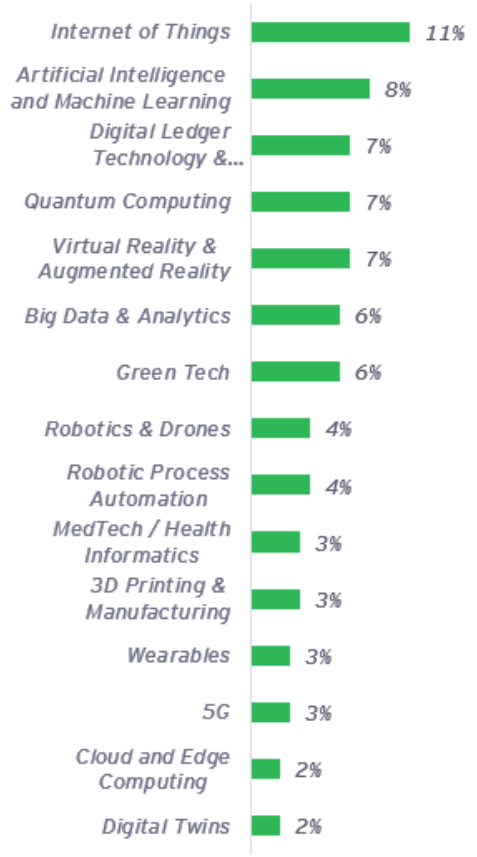


Results from ICT Demand and Supply Monitor

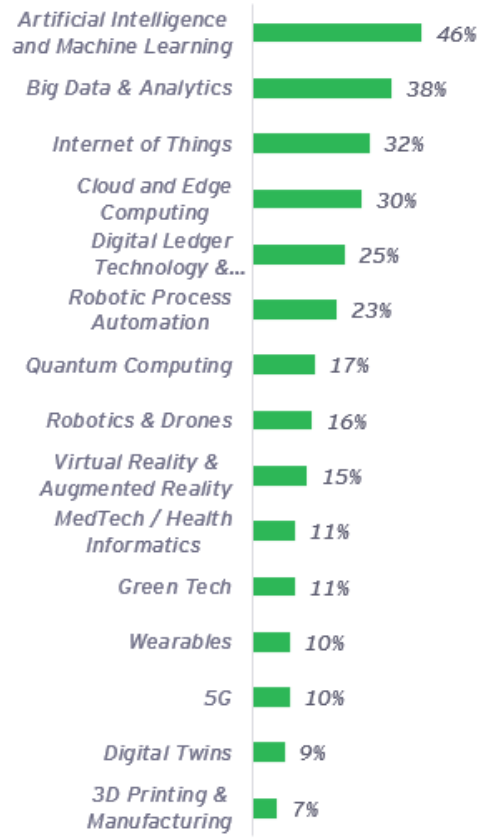
Emerging Technologies

- Artificial Intelligence and Machine Learning is the most popular as a whole, with DLT & Blockchain, Big Data & Analytics and Internet of Things following shortly.
- It is worth noting that ICT Practitioners are favouring technologies (like R, Hadoop and Python) that complement Artificial Intelligence and Machine Learning, and Big Data & Analytics as Emerging Technologies.

Emerging Technology Adoption and Usage in 3 Years



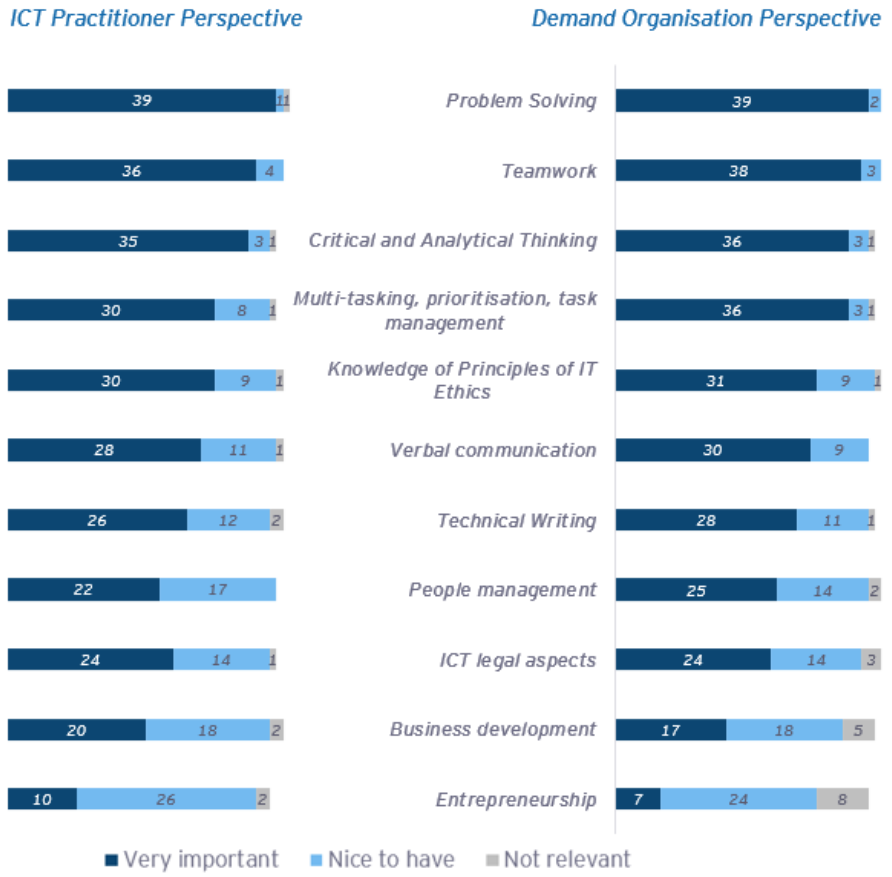
Emerging Technology Training Interest



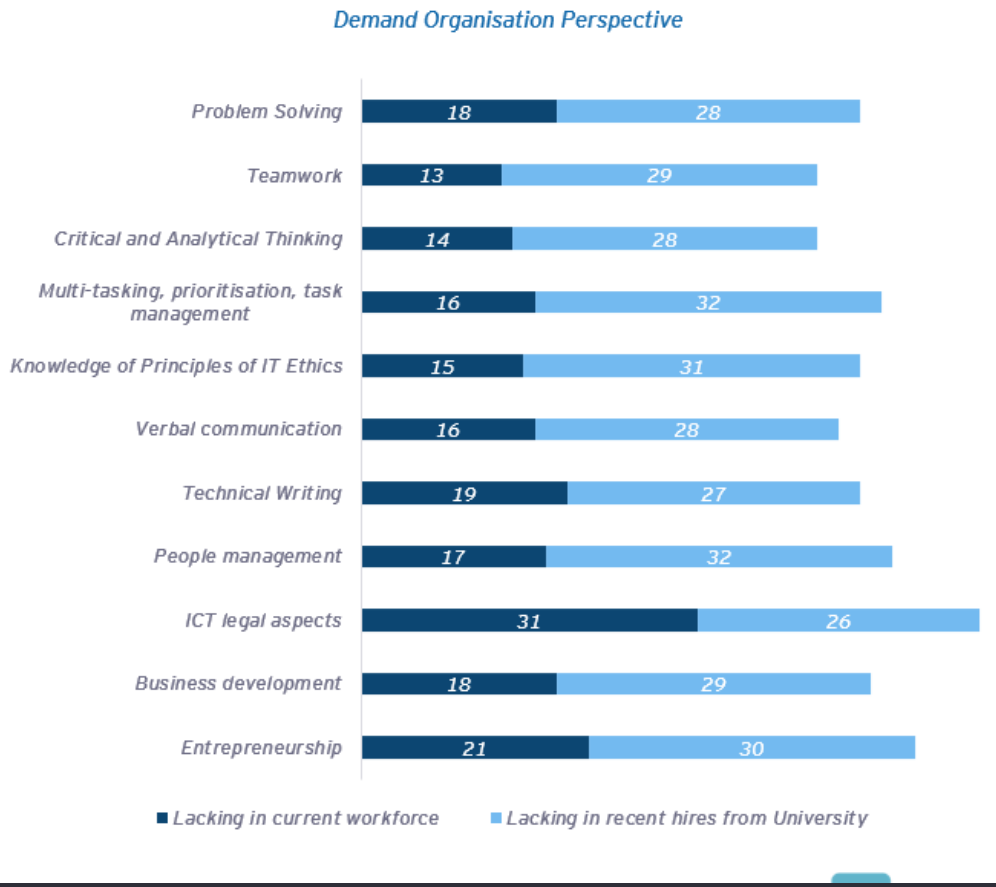
Results from ICT Demand and Supply Monitor

Soft Skills

Importance of non-technical skills among ICT Professionals



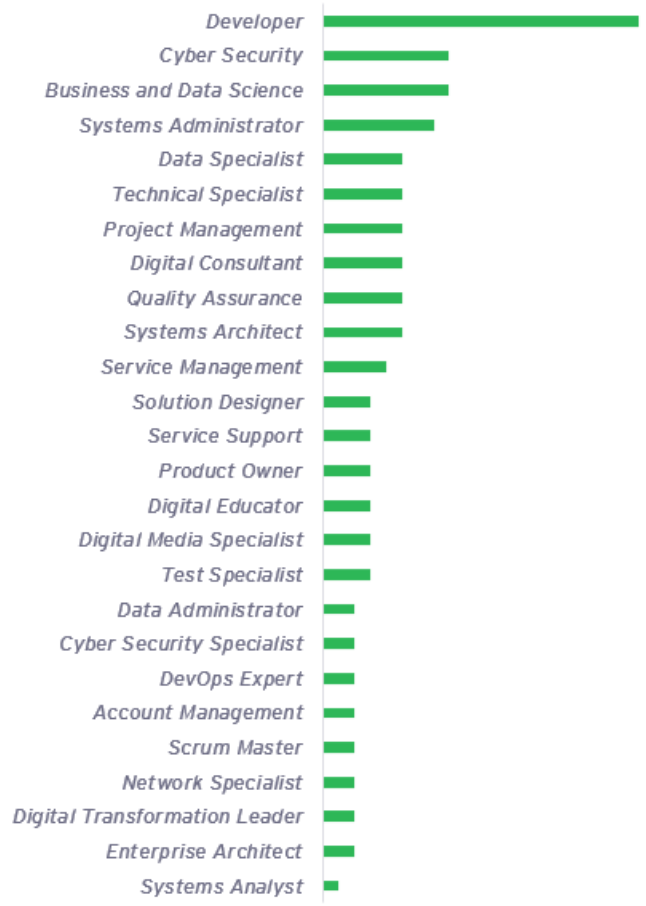
Lack of skills in ICT workforce and recent graduates



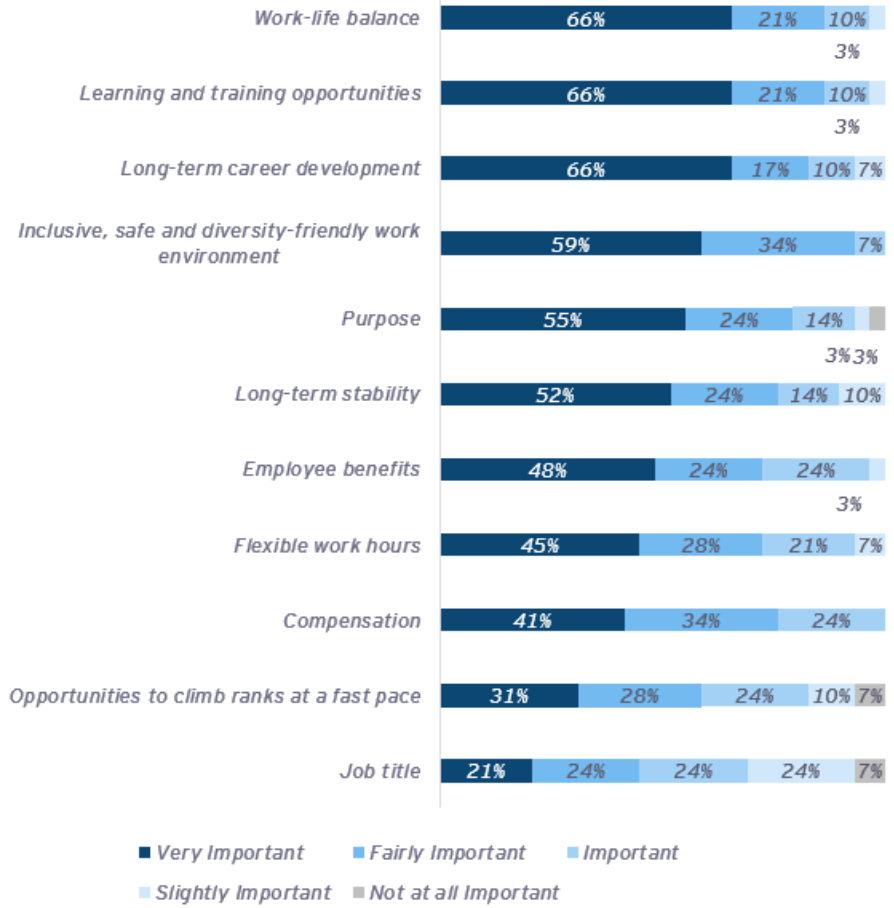
Results from ICT Demand and Supply Monitor

Student Survey Responses

Prioritisation of pursuit of roles after graduation



Importance of aspects when pursuing employability

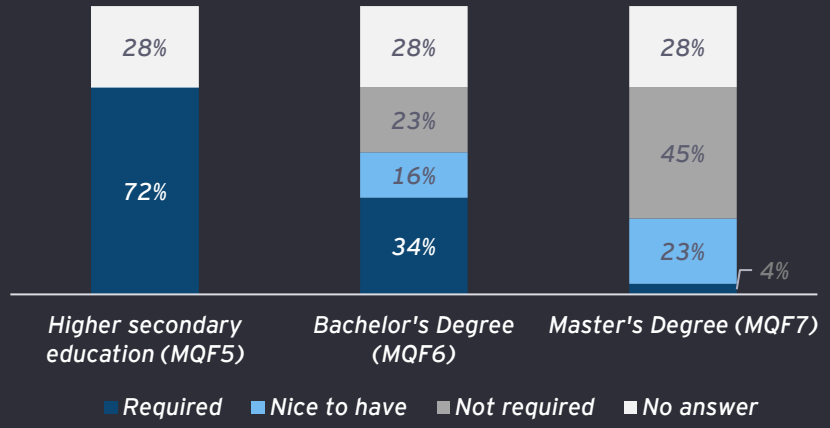


Hiring and the pursuit of employability

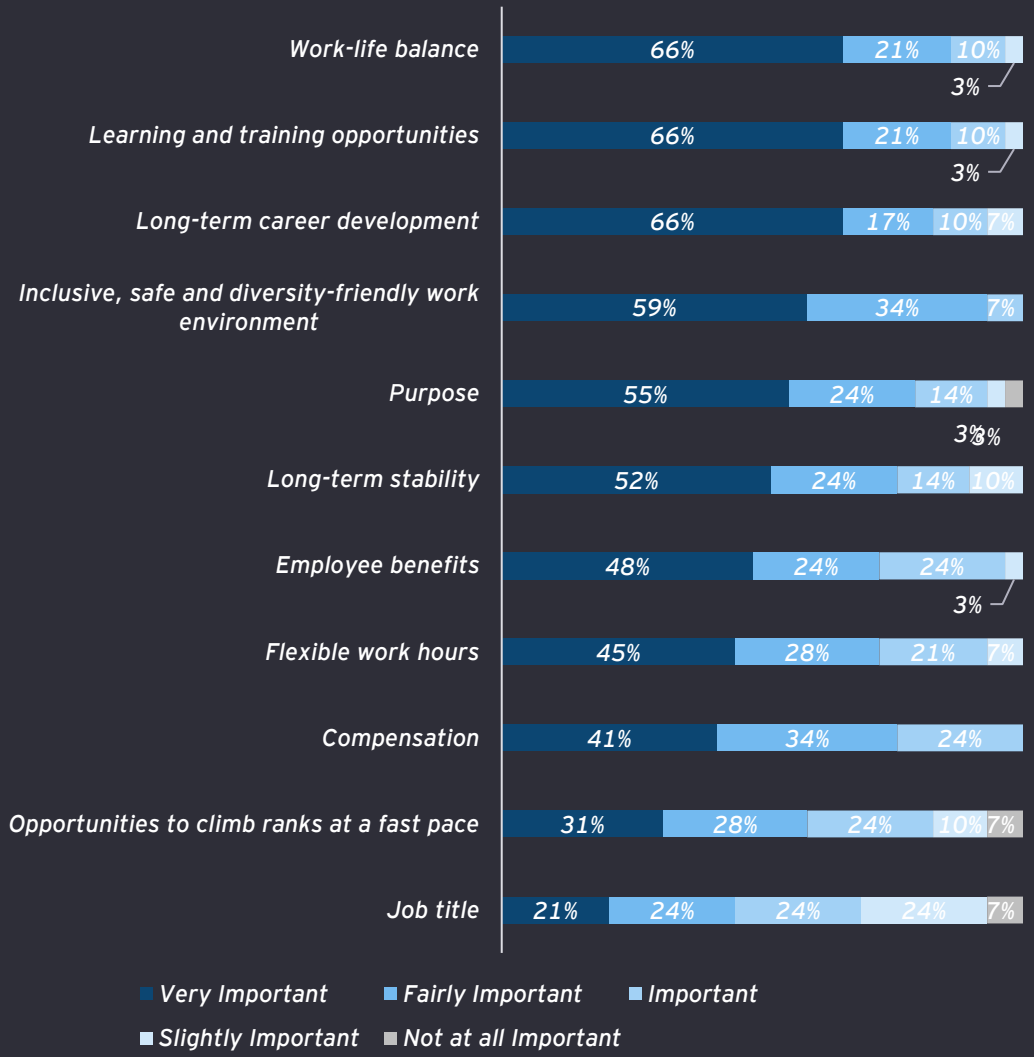
It is evident that organisations prioritize the possession of an MQF 6 degree when hiring, highlighting the importance of tertiary education.

Moreover, students attribute value to multiple aspects when pursuing employability, such as work-life balance, learning / training opportunities and long-term career development.

Educational attainment expectations when hiring



Importance of aspects when pursuing employability



Key Insights and Actionable Outcomes

- *Demand and Supply*
  - *Sourcing and retention of ICT personnel is proving to be difficult.*
  - *A number of organizations would consider hiring ICT practitioners without formal education but in the public sector this is constrained by policies.*
  - *Public sector and financial services companies are used externally sourced ICT skilled resources.*
  - *ICT profession remains male dominated.*
  - Actionable Outcomes:
    - *An open discussion on the convergence of formal education requirements across both public and private sectors is required to give more stability and direction to aspiring ICT practitioners.*
    - *Despite the efforts, a collective effort is needed to promote and attract more women to pursue an ICT career.*
- *Education*
  - *Growth in demand for ICT professionals is not being satisfied by local ICT student pipeline.*
  - *Graduates require additional training to meet the needs of organisations.*
  - Actionable Outcomes:
    - *Expedite the entry and onboarding process of ICT professionals from countries outside the Europe.*
    - *Align technology training in academia with the technical needs of different industries.*
    - *Extend formal academic training to include soft skills training such as presentation skills, teamwork, etc.*

Key Insights and Actionable Outcomes

- *Training*
  - *There is an increase demand in skills and certifications for cloud, AI and software development.*
  - *Lack of specialized resources is pushing companies to assign existing ICT staff to take on other roles.*
  - *Adoption of AI in industry remains low potentially due to lack of training and certification offerings.*
  - *Demand organisations have limited plans to expand their learning and development of ICT employees.*
  - Actionable Outcomes:
    - *Provide assistance to organisations to increase training opportunity offerings to broaden the knowledge of in-house ICT personnel.*
    - *Increase the interaction and involvement of academic institutions with industry by organizing structured collaborative programmes where ICT researchers can work on practical real-world problems.*
    - *Provide more elaborate and structured applied AI and Machine Learning training programmes in verticals such as healthcare, finance, advanced manufacturing, and others.*
- *Technologies*
  - *Companies are planning to shift towards cloud and DevOps*
  - *A significant increase in the use of Microsoft technologies especially in cloud and software development has been recorded*

Key Insights and Actionable Outcomes

- *Professional Bodies and Profession Recognition*
  - *ICT practitioners are in favour of a formal recognition of the ICT profession although they remain concerned about cost and maintainability*
  - *A large number of ICT professionals do not form part of any professional body*
  - Actionable Outcomes:
    - *Establish a forum to discuss how the ICT profession can be recognized at national and EU level so that it becomes more attractive for young people to pursue*
    - *Encourage ICT practitioners to enroll and involve themselves in profession-enrichment programmes and social groups in order to widen their horizons and broaden their industry knowledge.*

Presentation by EY

Enabling skills for today's and tomorrow's market

Enabling Skills for Today's and Tomorrow's Market

Key technology trends by numbers

Digital Transformation

- According to EC digital transformation could generate up to €2.5T in additional annual revenue in Europe by 2025.
- The EU's Digital Single Market Strategy aims to create a single market for digital goods and services, boosting digital growth in Europe.

Cybersecurity

- According to the European Cyber Security Organisation (ECSO) the European cybersecurity market is expected to grow to €50B by 2025.
- The European Union Agency for Cybersecurity (ENISA) provides expertise and support for the EU's cybersecurity efforts.

Cloud Computing

- The European cloud computing market is projected to grow from €30B in 2019 to €62B in 2024, according to a report by IDC.
- The European Cloud Initiative aims to provide researchers and scientists with easy and secure access to public and private cloud services.

Artificial Intelligence and Machine Learning

- According to a report by a global consulting firm, AI could contribute up to €13T to global economic output by 2030.
- The EU's High-Level Expert Group on AI has developed guidelines and recommendations for ethical and trustworthy AI.

Enabling Skills for Today's and Tomorrow's Market

Key technology trends by numbers

Internet of Things (IOT)

- The European IoT market is expected to reach €250B by 2025, according to a report by IDC.
- The EU's Digital Single Market Strategy aims to create a single market for digital goods and services, boosting digital growth in Europe.

Big Data Analytics

- The European big data market is projected to reach €4B in 2025, according to a report by IDC.
- The EU's Big Data Value Association aims to boost the European big data economy and increase competitiveness in global markets.

Blockchain

- The European blockchain market is expected to reach €4.5B by 2023, according to a report by IHS Markit.
- The EU's Blockchain Observatory and Forum provides analysis and recommendations on blockchain technology and its potential impact on EU policies.

5G

- The European 5G market is projected to reach €225B by 2025, according to a report by IHS Markit.
- The EU's 5G Action Plan aims to ensure that all EU citizens have access to 5G networks by 2025.

These statistics show the growing importance and investment in ICT skills in Europe, highlighting the need for skilled professionals in these areas.

Enabling Skills for Today's and Tomorrow's Market

Impact of technology and automation

Technology continues to be a primary catalyst for change in the world…

AI and automation are transforming how businesses function…. but we are still at the dawn of this era and intelligent automation will help most industries take the next steps toward smarter and more efficient modes of operations.

Whatever the market, that change is coming, impacting processes and the workforce.

It is important for workers and employers alike to adapt to these changes and invest in upskilling and retraining people to remain competitive in the changing job market.

Enabling Skills for Today's and Tomorrow's Market

Need for upskilling the workforce

- There are several factors driving the need for upskilling in an organisation

- Upskilling is essential for organizations to remain competitive, adapt to changing technology and market conditions, and retain top talent.

- Organizations that invest in upskilling can improve their productivity, innovation, and overall success.

Top enabling ICT skill areas in demand today that will shape the world of tomorrow

Data Analysis

With the abundance of data available, the ability to analyze and make sense of it is critical.

Skills in data analysis, including data mining, machine learning, and statistical analysis, are highly sought after.

Artificial Intelligence and Machine Learning

AI and machine learning are rapidly transforming many industries.

Skills in AI and machine learning, including natural language processing, computer vision, and deep learning, are in high demand.

Software Development

The need for custom software solutions continues to grow across industries.

Skills in software development, including programming languages like Python, Java, and C++, are highly valued.

Cybersecurity

With the rise of cyber threats and attacks, cybersecurity skills are in high demand across industries.

These skills include knowledge of network security, risk management, data protection, and incident response.

Cloud Computing

Cloud computing is increasingly becoming the preferred platform for data storage and processing.

Skills in cloud computing are in high demand, including knowledge of cloud architecture, deployment, and management.

Project Management

With the increasing complexity of ICT projects, strong project management skills are essential.

These skills include knowledge of project planning, risk management, and agile methodologies.

DevOps

DevOps skills, such as continuous integration, continuous delivery, and infrastructure as code, are in high demand as more organizations adopt agile development methodologies.

User Experience (UX) Design

UX design skills, including user research, wireframing, and prototyping, are in high demand as companies seek to improve their digital products and services.

Digital Marketing

Digital marketing skills, including search engine optimization (SEO), search engine marketing (SEM), and social media marketing, are in high demand as more businesses move their marketing efforts online.

Enabling Skills for Today's and Tomorrow's Market

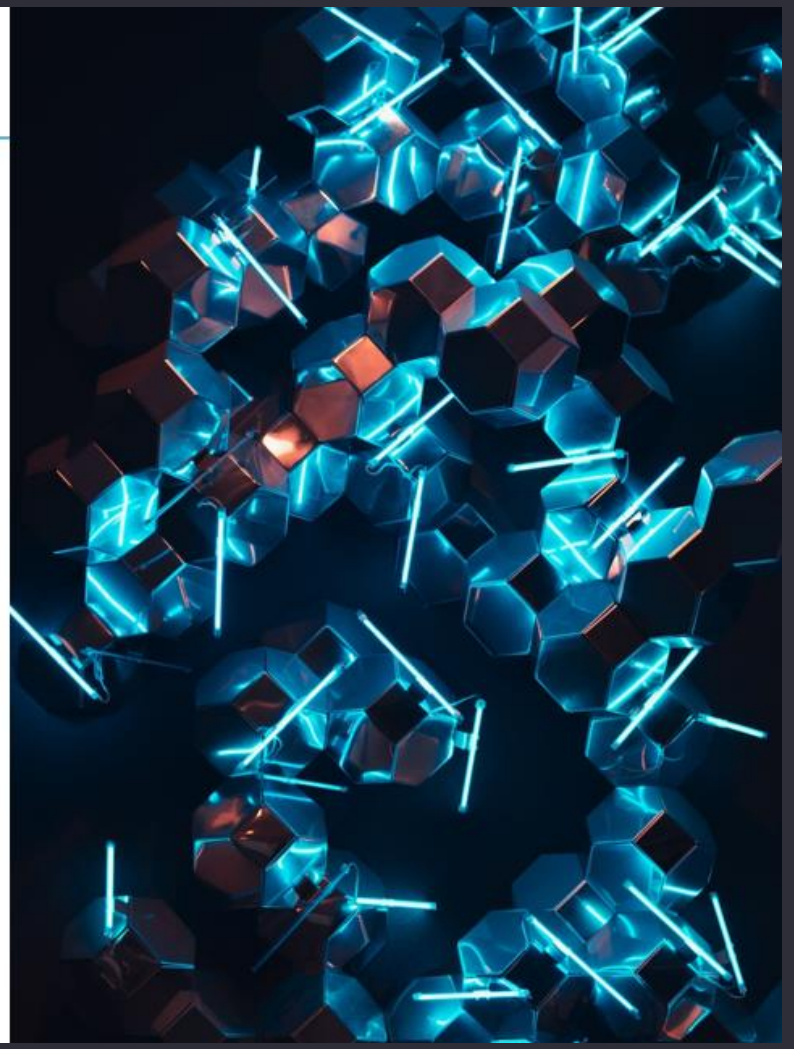
Skill Diversity

Employers and workers alike should invest in developing and acquiring a diverse range of skills to remain competitive and succeed in the evolving working environment.

Enabling Skills for Today's and Tomorrow's Market

Preparing technologists for tomorrow's market

- Embrace emerging technologies
- Foster interdisciplinary collaboration
- Develop creativity and innovation skills
- Build leadership and communication skills
- Encourage continuous learning
- Emphasize ethics and social responsibility



Continuous learning and upskilling

Continuous learning and upskilling benefits employers and employees.

Staying relevant: As technology and business practices continue to evolve, it's important to keep up with the latest developments in the field. Continuous learning and upskilling help ensure that the organisation remains relevant and competitive in the market.

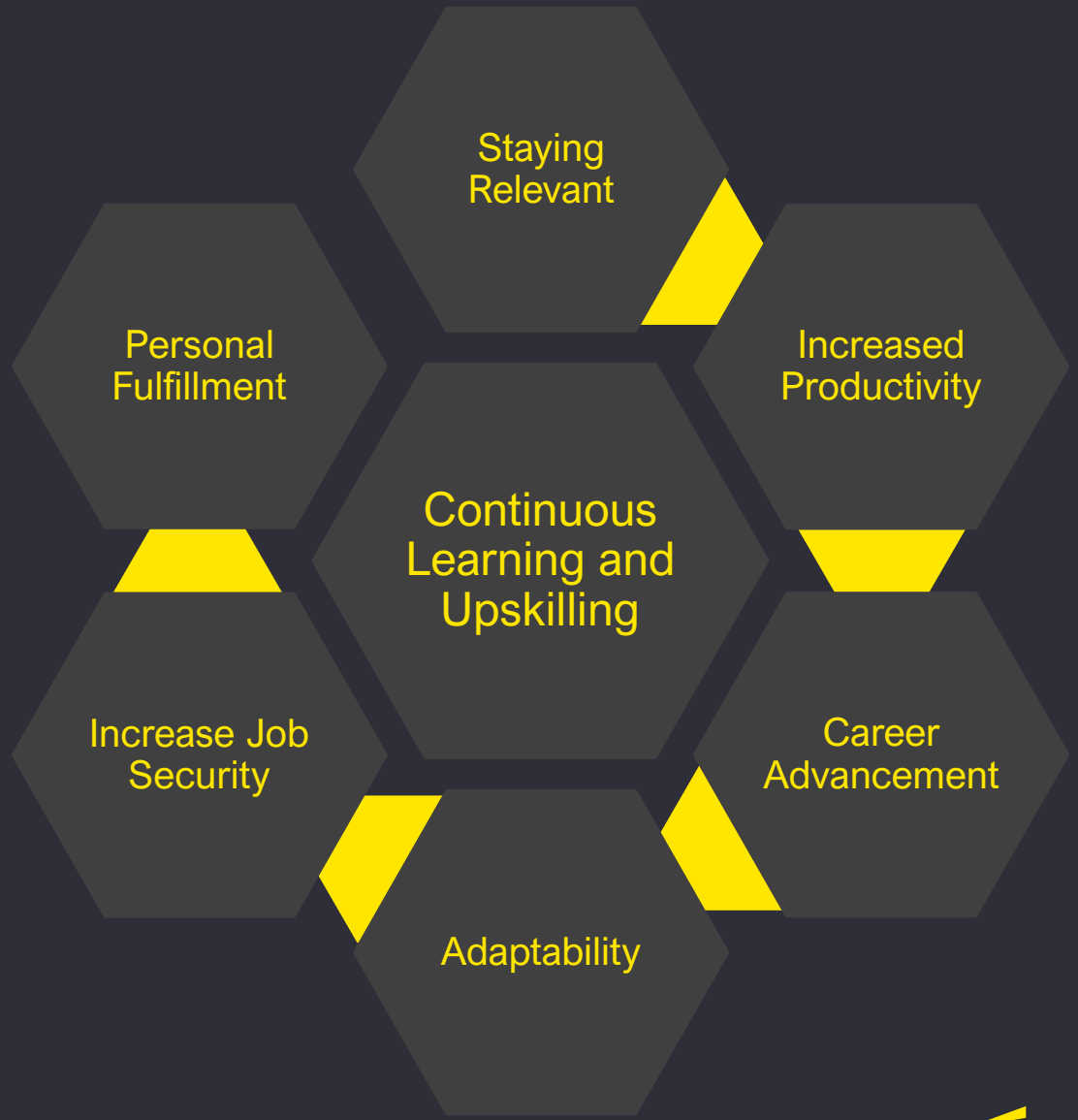
Increased productivity: Learning new skills and techniques can help individuals work more efficiently and productively. This can lead to improved job performance, increased job satisfaction, and potentially even higher salaries.

Career advancement: By staying up-to-date with the latest trends and technologies in the relevant field, one may be better positioned to take advantage of new opportunities and advance their career.

Adaptability: Continuous learning and upskilling help develop a growth mindset and adapt to changing circumstances. This can be especially important in industries that are prone to disruption, such as technology or healthcare.

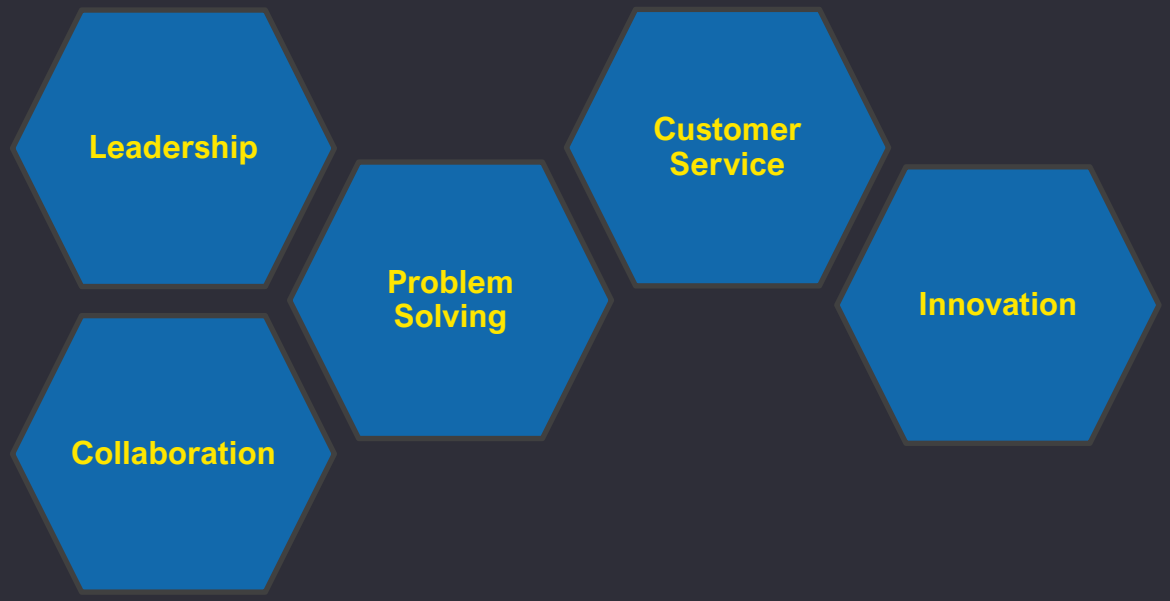
Increased job security: Continuously learning and upskilling adds value to the individual's personal credentials and valuable to employer alike. This can increase job security and reduce the risk of layoffs or other job-related challenges.

Personal fulfillment: Learning new things and developing new skills can be personally fulfilling and rewarding. It can also help individuals to stay intellectually curious and engaged in their work.



Why is it important to integrate enabling skills in the workforce?

Enabling skills play a critical role in the success of ICT professionals. Here are some reasons why integrating enabling skills in the ICT workforce is important.



Leadership: As ICT projects become increasingly complex, the ability to lead and manage teams becomes more important. Enabling skills such as communication, decision-making, and problem-solving are essential for effective leadership.

Collaboration: Many ICT projects involve working with others, including non-technical stakeholders. Effective communication, teamwork, and interpersonal skills are essential for successful collaboration and project outcomes.

Problem-solving: ICT professionals must be able to think critically and creatively to solve complex technical challenges. Enabling skills such as problem-solving, decision-making, and adaptability are crucial for identifying and implementing effective solutions.

Customer service: Many ICT professionals interact with customers or end-users, and the ability to provide excellent customer service is essential for building trust and satisfaction.

Innovation: ICT is a rapidly evolving field that requires professionals to be agile and adaptable to change. Enabling skills such as creativity, adaptability, and lifelong learning are critical for staying up-to-date with the latest technologies and practices and driving innovation.

Enabling Skills for Today's and Tomorrow's Market

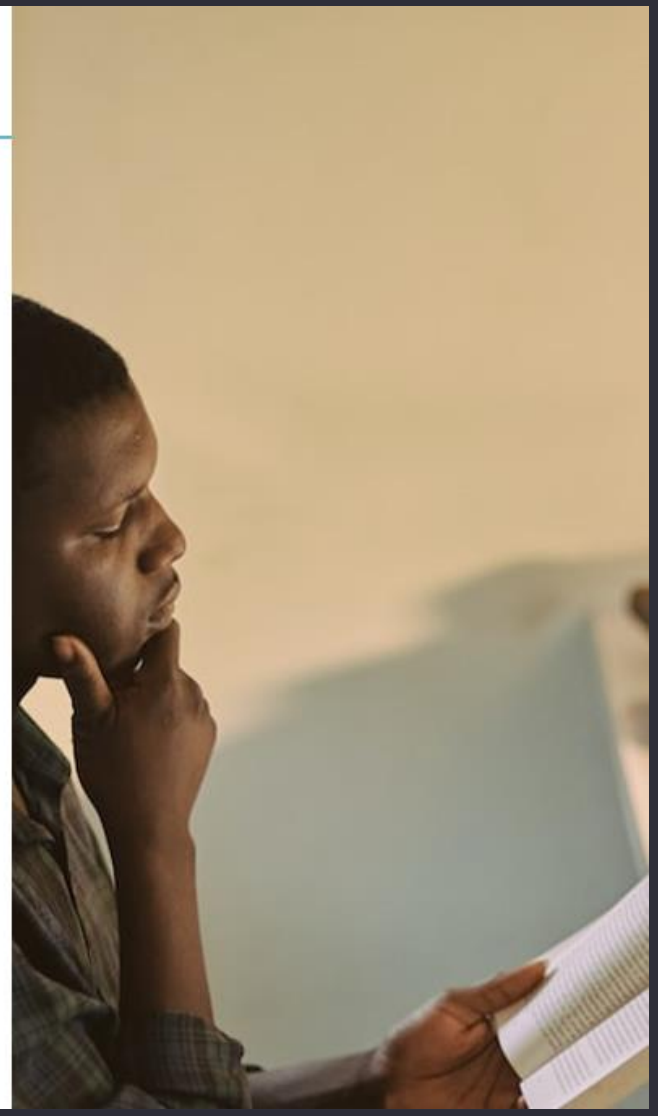
Benefits of having a workforce with a diverse range of skills

- Increased competitiveness
- Enhanced collaboration
- Improved problem solving
- Better customer service
- Improved morale and retention
- Compliance with regulations
- Increased innovation

Enabling Skills for Today's and Tomorrow's Market

Strategies for promoting a culture of continuous learning

- Provide learning opportunities
- Encouraging learning outside of work
- Foster a learning mindset
- Set goals and measure progress
- Foster a collaborative culture
- Provide incentives
- Celebrate achievements



Key Insights and Actionable Outcomes

- Actionable Outcomes:
  - *A diverse range of skills can give organizations a competitive edge by enabling them to adapt more quickly to changing market conditions and emerging technologies.*
  - *Facilitate collaboration and knowledge sharing to lead to more effective teamwork and better work outcomes.*
  - *Organizations should provide employees with access to a variety of learning opportunities, including training workshops, webinars and conferences. These opportunities should be tailored to the employees' needs and relevant to their roles and career goals.*
  - *Provide incentives for employees to engage in continuous learning and upskilling. This can help to motivate employees to invest in their own development and to demonstrate the value of these activities to the organization.*
  - *Foster a learning mindset by encouraging ICT practitioners to experiment, seek out feedback and learn from mistakes.*

Breakout Session

Breakout Session – Set Up

The breakout session aimed towards exploring some of the challenges identified in the Demand and Supply Monitor by splitting the attendees in two groups to share their perspectives and experiences in a more collaborative setting, encouraging all individuals to talk. The attendees were asked to brainstorm on the possible developments and methods that could mitigate the posed challenges.

Each group was composed of representatives from the industry, government institutions, educational institutions and the organising team. This set up was crucial to generate a healthy discussion from individuals having a different professional background that face different challenges and realities on a daily basis.

A set of questions were distributed to each group (the same questions) based on the workshop's key topics to initiate discussions. Furthermore, the attendees were also encouraged to talk about other challenges and opportunities which were not identified in the workshop.

A member of each team was assigned the role of facilitator who would drive the discussion based on the provided questions and to record the points that were mentioned in the group.

At the end of the breakout session, both groups presented their discussion points and actionable outcomes to the entire audience.

Breakout Session – Questions

1. *The local ICT workforce needs to increase. The pipeline of tertiary education graduates would not be sufficient. How can we increase the no of practitioners in the market? Any ideas?*
2. *Education offers Student placements, apprenticeships, or part-time jobs. Nevertheless, a skills gap between what the industry requires and what student offers is still very prevalent. How can we further decrease this skill gap? Any ideas?*
3. *Education institutions keep saying that their curriculums include soft skills. However, the lack of soft skills is still very prevalent. How can we solve this problem once and for all?*
4. *Industry complains that most of today's practitioners lack employability and professional skills. What can we do to increase these?*
5. *Training and certification offers from the industry do not seem to have enough due to time and finance. Upskilling and training for ICT practitioners are crucial. In face of this, what can we do to keep our ICT practitioners abreast and upskilled?*
6. *The time for a student to join the industry, if tertiary education is taken would take 10 years. How can we decrease this and at the same time produce competent students in the field?*
7. *Students finishing tertiary education are said to have high expectations both in positions and remuneration. How can we bring these students down to earth?*
8. *Today's ICT practitioners are not only local but come from other countries and different cultures. What can we do the to make sure we have a streamlined, fully functional organisation?*
9. *In the ICT sector, it is said that there are 5 men to 2 women. Apart from raising more young girls to join the ICT sector, what else can we do to make sure we have enough women in the sector?*
10. *The common ICT roles in Malta are software developers, Devops specialists, data specialists, database administrators, technical system engineers and technicians and system administrators. What other upcoming roles do you envisage?*
11. *In respect of government programmes, what government programs would be ideal to help the ICT industry?*
12. *Would the industry be willing to sponsor part of the cost to encourage ICT practitioners and professionals to join a local ICT society?*
13. *What can be done in Malta to have more technology forums?*

Breakout Session – Key Actionable Outcomes Identified by the Groups

Pipeline of Tertiary Education:

- *Lack of resources who provide tertiary ICT graduates*
- *No strategic plan how to attract students towards ICT tertiary courses*
- *Professional resources required to work on promotion in schools with a strategic plan to attract students*
- *Alternative model to inspire more creativity especially in tertiary education*
- *Alternative career paths to enter the ICT sector (e.g., Industry certification career path)*
- *Promote the opportunity of Career switching*

Decreasing the Skills Gap:

- *More communication between industry and education (for example by involving students in real life business cases)*
- *Internships should give students the opportunity to work on tasks related to the fields of study (not limited to admin work)*
- *Apprenticeship hours extended (more hands-on activities)*
- *Courses are to enable the actual skills needed in industry*
- *Courses should reflect industry professional frameworks and standards (for example the European e-Competence Framework)*

Lack of Soft Skills:

- *Organise more summer camps to build soft skills*
- *Embed soft skills education in study curriculum at an early age*
- *Monitoring of soft skills from secondary schooling onwards*

Lack of employability for ICT Practitioners:

- *Encourage the students to take part in ICT extra curricular activities*

Training and Certification:

- *More Structured training needed for ICT employees*
- *Organisations must prioritise formal and informal training*

Decreasing the ICT Career Path:

- *Apprenticeship parallel to the course during the summer months*

Breakout Session – Key Actionable Outcomes Identified by the Groups

Increasing the number of practitioners in the market:

- *More awareness directly aimed towards students*
- *Teaching coding and digital aspects from younger ages*
- *Attract students/specialists from abroad*
- *Long, medium- and short-term gap bridging solutions*
- *Employing before having a certificate or diploma*
- *Reskilling, upskilling and introducing a system of micro-credits*
- *Certification/Recognition of non-formal learning*
- *Technology academy providing available trainings and certification*

Skills gap between the student and industry:

- *Placements and apprenticeships should be done in a more systematic way, involving more collaboration with the industry*
- *During industry placements students should be exposed to content relevant to ICT, ideally with their course*
- *Placements should incorporate course credits (ECTS)*
- *A specific period of the course should be allocated for placements (1-6 months)*
- *Teachers, trainers, people from industry and part-time lecturers should complement each other*

Re-training teachers on ICT practices:

- *Industry requirements*
- *Technology learning*
- *Soft skills*
- *How assessments are done*
- *Delivery presentation format*
- *Computational-thinking*
- *The curriculum should change to allow experimentation*
- *To be innovative and adapt fast*

Supporting students in becoming more employable:

- *Involve industry trainers in courses at Further and Higher Education*
- *Teachers and educators should act as facilitators and mentors*
- *Reduce studying time and empower students to choose their paths*
- *Tuition method should be more flexible to cater for a wide range of aptitudes and inclinations*
- *A system of micro-credits to support the students to prepare for jobs*

Regulate students' position and renumeration expectations:

- *Remuneration and payment models should have flexible arrangements*
- *Retrain to address skill gap*
- *Educators should guide students to have about employer expectations for example about realistic salary expectations and employability skills*

Presentation by Ascent

Hybrid Working Best Practices

Hybrid Working Best Practices

Hybrid Working Best Practices

Topics.

- **Market**
  Evolution of Hybrid and RTO
- **Context**
  Who we are and what we do
- **History**
  Evolution of Hybrid Working at Ascent
- **The Pitch**
  What we say about our Hybrid Approach
- **Governance**
  How we manage and communicate Hybrid
- **Pros & Cons**
  What works and what doesn't

CONNECTING SOFTWARE, DATA + CLOUD

Hybrid Working Best Practices

Global Talent Trends Report
December 2022
https://business.linkedin.com/talent-solutions/global-talent-trends

Candidates continue to want remote work — even as employers scale back on remote-job postings.

We continue to see a sharp divergence between what job seekers want (remote work) and employers are willing to offer (" back to the office!").

CONNECTING SOFTWARE, DATA + CLOUD 4

Hybrid Working Best Practices

Global Talent Trends Report
December 2022
https://business.linkedin.com/talent-solutions/global-talent-trends

LinkedIn

Candidates consider compensation and benefits their top priority.

How candidates rank their priorities (as of December 2022)

#1 Compensation
Excellent compensation and benefits

#2 Balance
Organizational support to balance work and personal life

#3 Flexibility
Flexible work arrangements (i.e., when and where you work)

#4 Advancement
Opportunities to career growth within the company

CONNECTING SOFTWARE, DATA + CLOUD 5

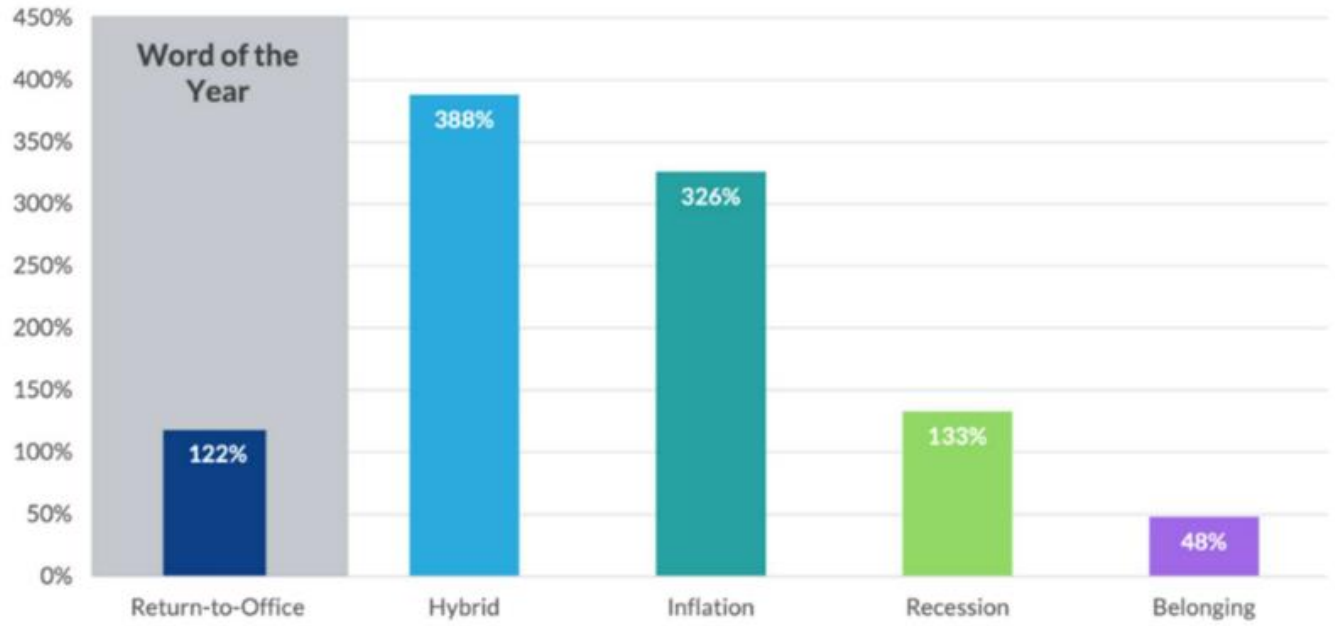
Hybrid Working Best Practices

'Return-to-Office' is Glassdoor's 2022 Word of the Year in the U.S.

October 2022

https://www.glassdoor.com/research/word_of_the_year_us_2022/

glassdoor



Source: Glassdoor US-based employee reviews from January 1, 2021 to October 18, 2022

glassdoor | ECONOMIC RESEARCH

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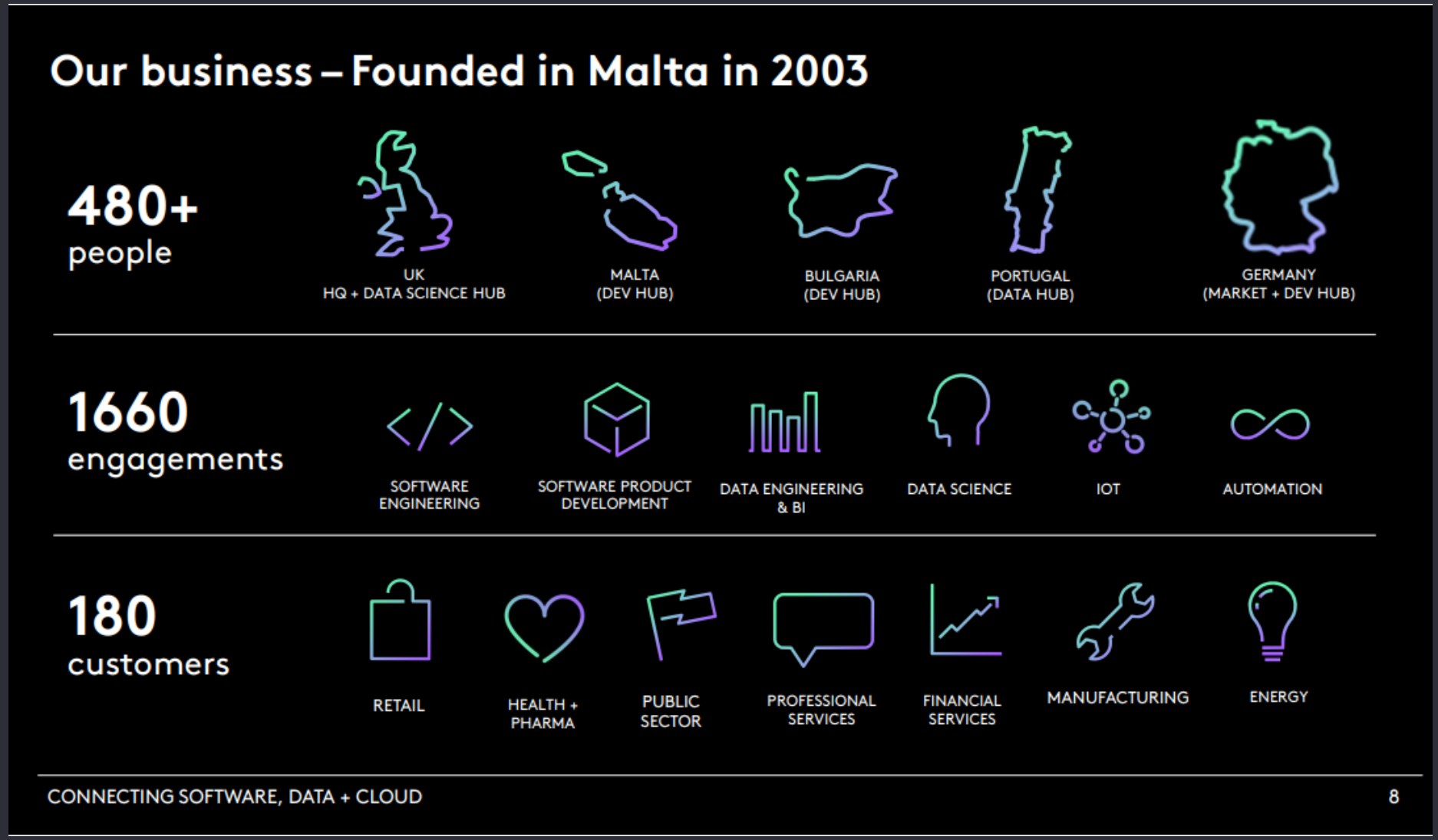
Hybrid Working Best Practices

Hybrid Working Best Practices



Hybrid Working Best Practices

We design and build cloud-native products, solutions, platforms & experiences on Azure.

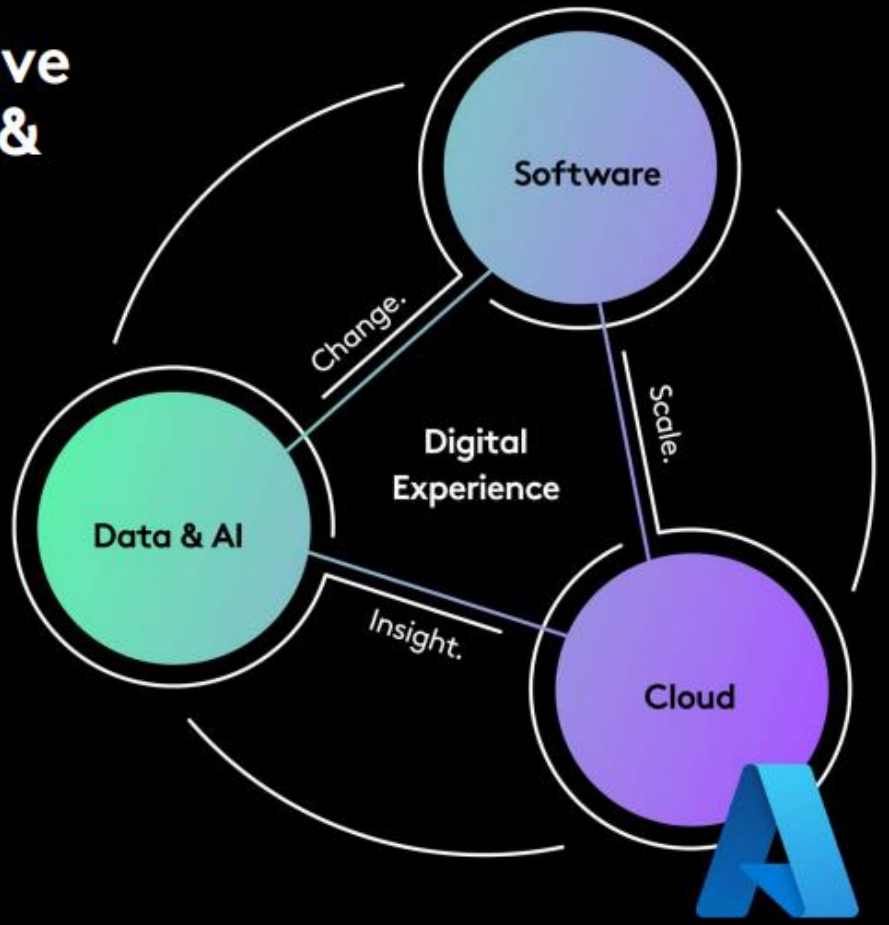
Our community of engineers, architects, data scientists, experience designers and consultants are here to help you do something new, or do something better.

We work with you to design, build, modernise and optimise your software, data and cloud solutions. This helps you develop the digital muscle to create new revenue opportunities, generate insight and deliver change and scale more easily.

Microsoft Solutions Partner
Digital & App Innovation
Azure
Specialist
Modernization of Web Applications

Microsoft Solutions Partner
Data & AI
Azure
Specialist
AI and Machine Learning

Microsoft Solutions Partner
Infrastructure
Azure
Specialist
Infra and Database Migration



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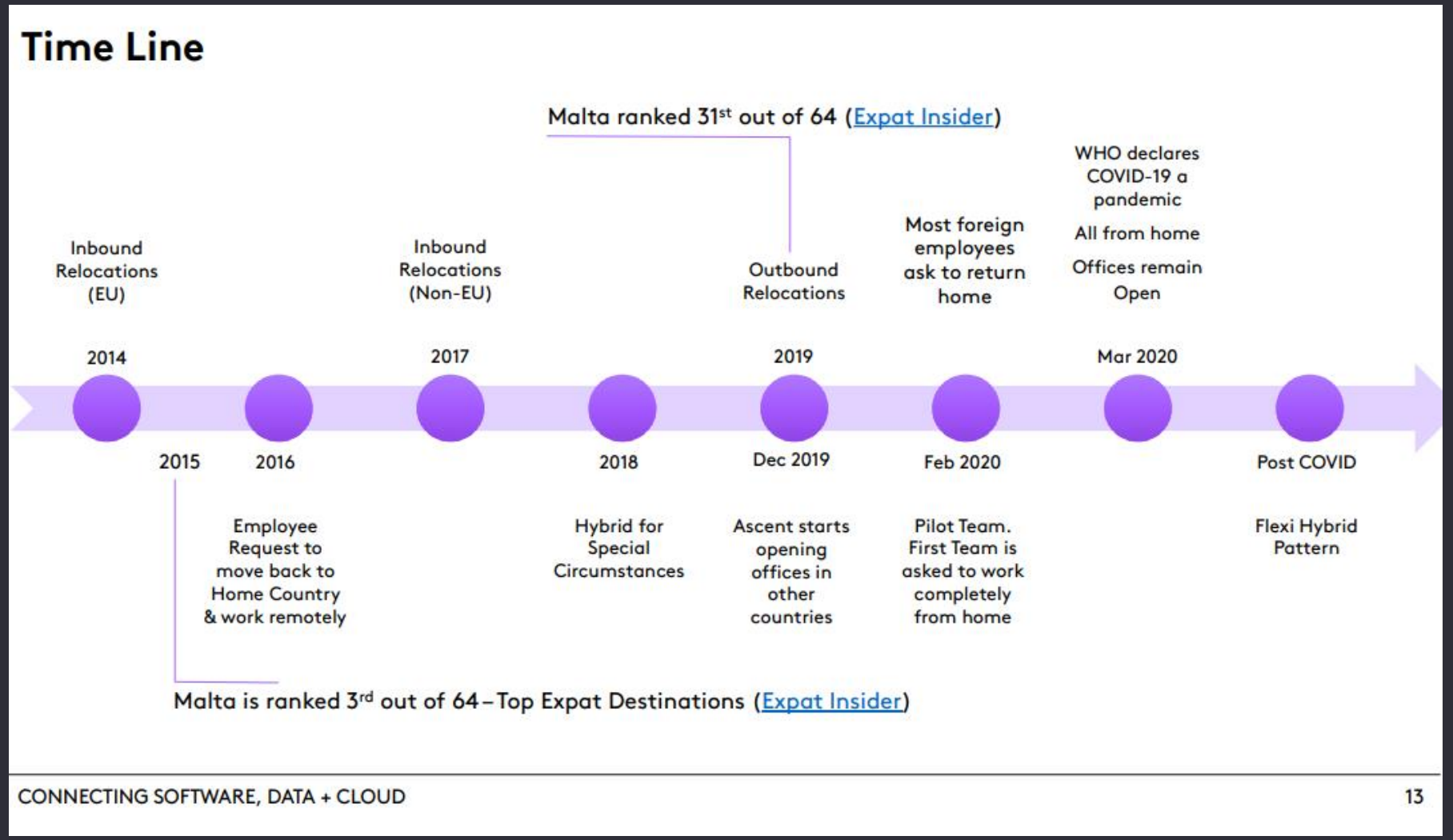
Hybrid Working Best Practices

Hybrid Working Best Practices



Hybrid Working Best Practices

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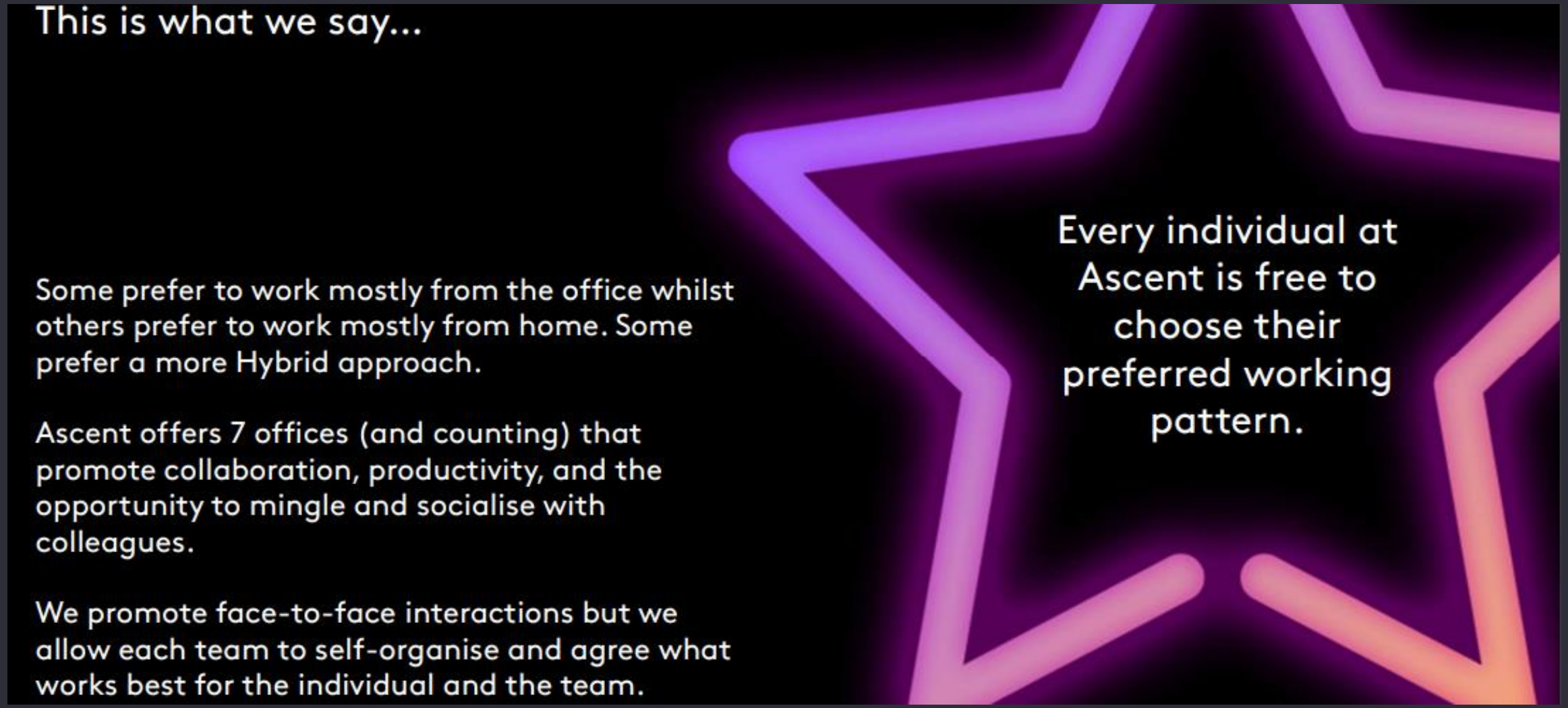


Hybrid Working Best Practices

Governance.

Hybrid Working Best Practices

Definition

- *What we understand by hybrid*
- *Why we believe hybrid is the right approach*
- *What it's Not. It's not remote working (H&S and Tax implications) and it's not Flexi-Time*

Policies & Guidelines

- *Eligibility per role and adequate setup at home*
- *When we recommend office time*
- *Home H&S assessment*
- *Access to wellbeing coaches*

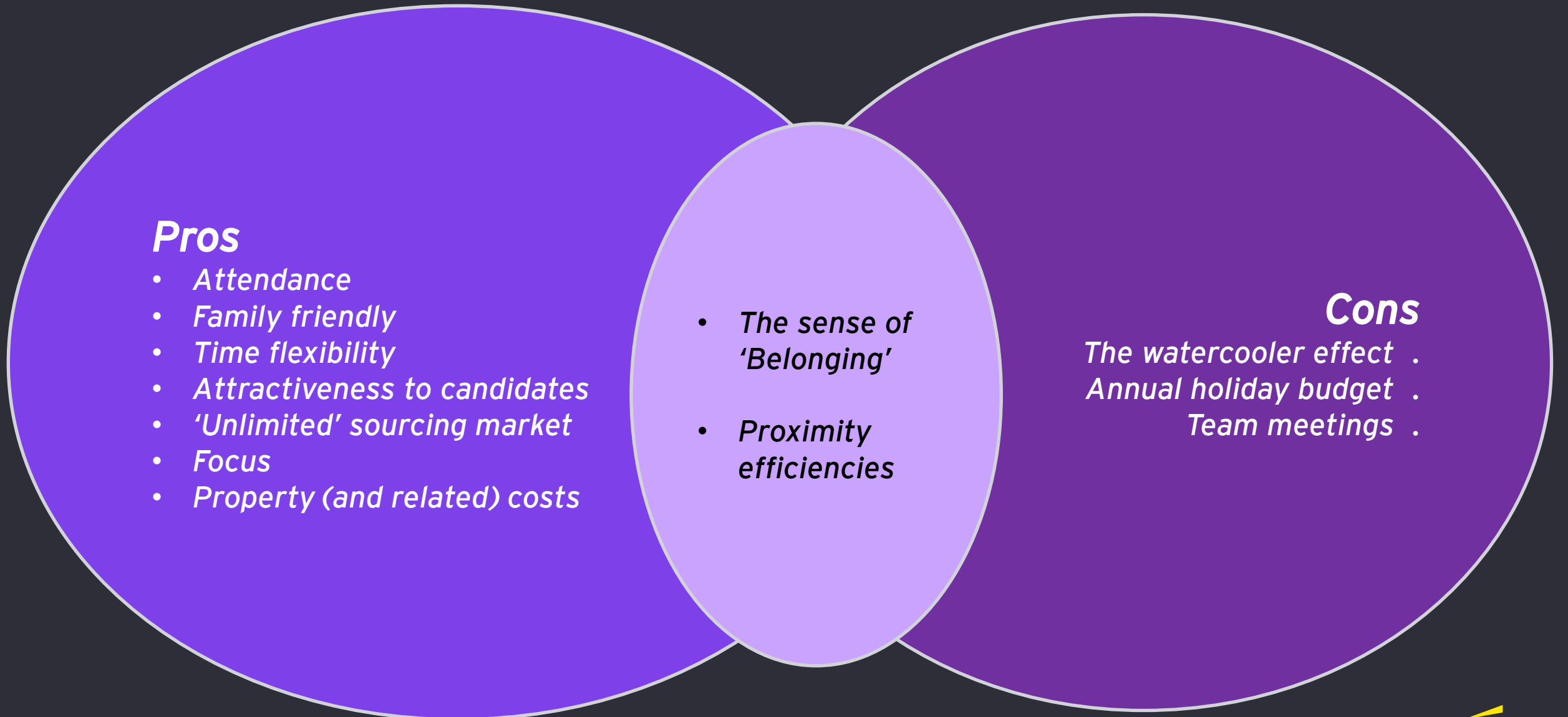
Contractual

- *Office vs home based*
- *Holiday management*
- *Data protection*
- *Security*

Hybrid Working Best Practices

Pros and Cons of our approach.

The Good, the Bad and the Ugly



Hybrid Working Best Practices

More Bosses Order Workers Back to the Office as Job Market Shifts
January 2023
https://www.wsj.com/articles/more-bosses-order-workers-back-to-the-office-as-job-market-shifts-11672689665

THE WALL STREET JOURNAL. WSJ

"There's a little bit of a tug-of-war going on right now... Employers are not having an easy time of it... And with an overwhelming percentage of workers worried about losing their jobs, neither are employees."

David Garfield
Global Head of Industries
AlixPartners

CONNECTING SOFTWARE, DATA + CLOUD 20

Hybrid Working – Key Insights

- *Hybrid working has its advantages and disadvantages. Whilst being an attractive proposition to potential candidates, it may hinder effective collaboration and teamwork. A hybrid working style provides more flexibility and is more family-friendly but on the other hand it may distract people from staying focused on priorities.*

- *Companies face a number of challenges when adopting a hybrid or remote working approach. Perhaps a common challenge is how to sustain that sense of belonging among team members when they are working outside the office for an extended period of time or from different time zones.*

- *Thus as a general principle, a proper governance structure needs to be put in place to set expectations to both employer and employee. Organisations need to remain open to a hybrid working environment and create a balanced structure that accommodates the realities of the workforce whilst protecting the interests of the business.*

Panel Discussion

Enabling an International ICT workforce in Malta

Panel Discussion – Enabling an International ICT workforce in Malta – Set Up

The panel discussion focused on how can we enable and attract international talent to addresses the skill and talent gaps within the Maltese market, highlighting international benchmarking, initiatives, practices and incentives.

The panel consisted of the following members:

- *Ediana Guillaumier – EY Malta*
- *Francois Grech – Exigy*
- *Mark Camilleri Gambin – Expedition42*
- *Conrad Attard – Faculty of ICT at the University of Malta*

The panel was moderated by Carmel Cachia.

A set of questions were prepared for the panel discussion. However, conversations based on attendee comments and questions were also part of the session.

Panel Discussion - Enabling an International ICT workforce in Malta – Questions

The following questions were asked during the panel session:

1. *How are ICT students prepared to work in a multicultural workforce during their studies and when they join the industry?*

2. *Many opportunities exist these days for students to study and work abroad. This is part of career development. What can we do to make sure they return to the Maltese industry?*

3. *Do you think this balances out against the number of the international workforce coming to Malta to work here, or is there a long-term effect?*

4. *An international workforce means those coming to work in Malta and the GIG working, perhaps those working in a foreign location. Do recruiters offer GIG working opportunities to fill local vacancies? What is your view on the performance of GIG working or working overseas?*

5. *What are the factors to consider when managing an international workforce (such as mindset, readiness)?*

6. *Is a multicultural team more productive?*

7. *The local industry has struggled with the lack of soft skills among ICT students and new employees. Is there a difference between the locals and those coming from other countries?*

8. *What challenges do recruiters face in onboarding and nurturing an international workforce (such as transparency, visas, accommodation)?*

Key Insights from the Panel Discussion

The following are some key takeaways from the panel discussion:

- *Bringing over resources from outside the EU continues to be a daunting challenge filled with bureaucratic procedures and excessively long waiting times to obtain a working VISA. Most cases involve a waiting time of many months, resulting in a huge inconvenience for both the employing entity and the employees, together with their accompanying families. In contrast with other European countries Malta is one of the slowest in processing working VISAs. Government authorities must take immediate and drastic action to remedy the situation.*
- *Employees from different parts of the world have different cultural backgrounds. Companies should work towards accommodating their foreign employees whilst maintaining their company culture and values. On the other hand, foreign employees should also adapt to the company culture whilst maintaining their cultural identity.*
- *Finding the right balance in a hybrid mode of working is not easy. Some companies are facing challenges concerning communication. Employees who are not coming to the office are missing out on spontaneous and active communication with their colleagues. When employee relationships are largely built online, it is easy for things to get lost in translation.*
- *The Gig economy brings flexible services and offers consumers a unique and fast alternative to regular, standardized business. Businesses tend to benefit from an easily accessible labor force, a cost-efficient hiring and onboarding process, together with an increase in employee motivation. On the other hand, workers in the gig economy may suffer from lack of benefits, and isolation which can negatively affect production and mental health.*
- *Flexible working hours and work-life balance are two things that are highly sought after by the latest crop of employees. Recruitment identify these two items as the deciding factors for potential recruits.*
- *Transversal Skills are crucial elements for a successful ICT employee these days, yet this is still found missing in many students and new recruits who are employees today. This situation has not changed in the last five years. It is therefore important for ICT employers to include transversal skills in their training development.*
- *The lack of women in the ICT workplace has not changed much, even if Malta has progressed according to the late European DESI Index. It is therefore essential that the current women in industry are encouraged to give talks about ICT careers and women in the secondary schools.*

Key Actionable Outcomes from the panel discussion

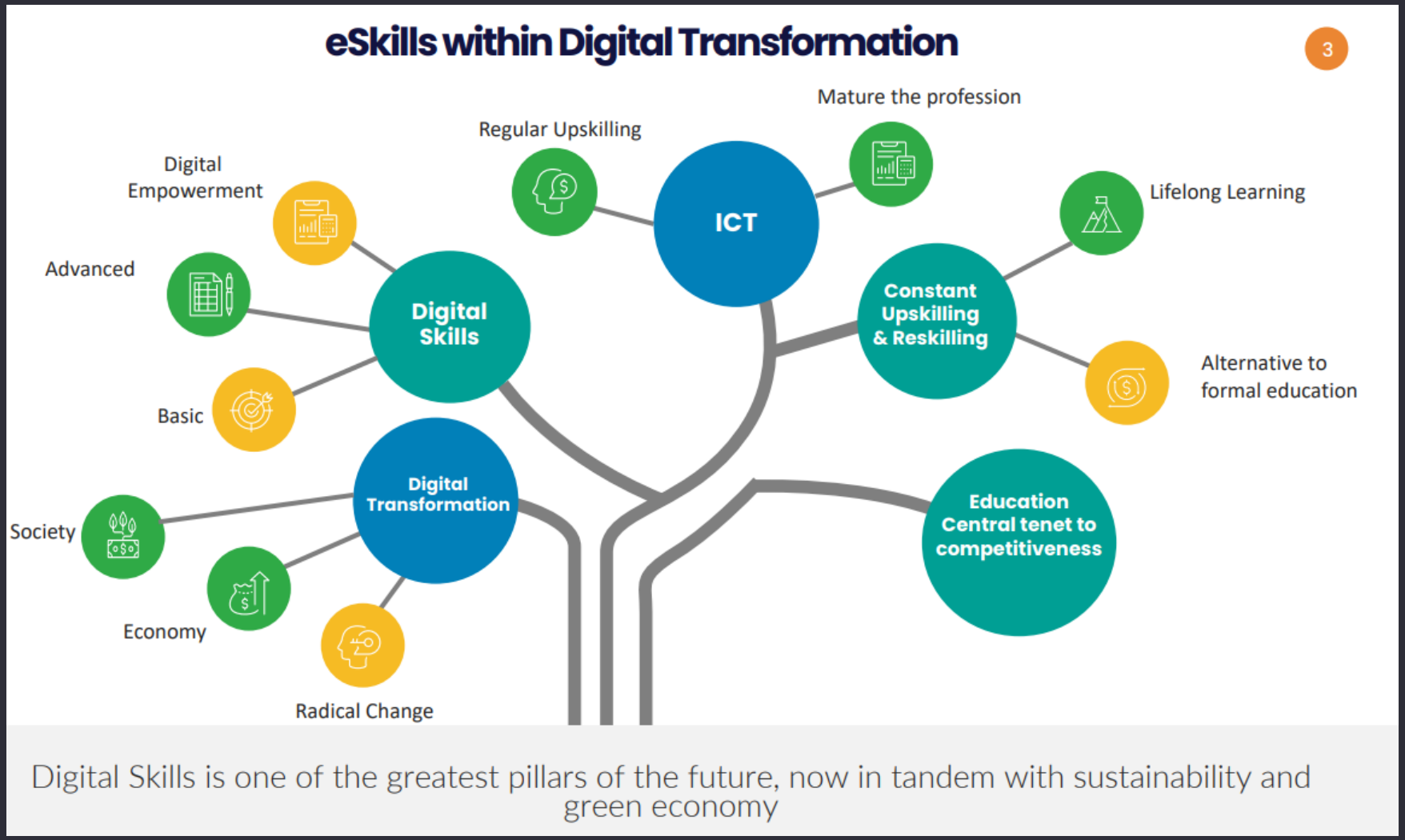
- Actionable Outcomes:
  - *Exert pressure on the local authorities to streamline the VISA processing to enable a fast onboarding of ICT professionals. This will help in addressing the digital skills gap.*
  - *Foster a more multi-cultural society that enables effective collaboration between local and foreign practitioners.*
  - *Encourage organizations to embrace the new reality of hybrid and remote working by providing governance guidelines that safeguard effective communication and teamwork.*
  - *Integrate soft and transversal skill development in formal education and ICT training.*
  - *Take proactive steps in attracting and empowering more women in the ICT sector by creating more space for participation in national and industry-level forums.*

Presentation by eSkills

National eSkills Strategy 2022-2025

National eSkills Strategy 2022-2025

National eSkills Strategy 2022-2025



National eSkills Strategy 2022-2025

European Commission Path to the Digital Decade by 2030

Strategy takes in consideration

Digitally skilled population and highly skilled digital professionals

- Number should at least **reach 20 million**
- Increase, along with more **proportionate gender** representation
- **80% of EU citizens** (aged 16-74) should have at least basic digital skills

Digital transformation of businesses

- **75%** of EU based companies – **adoption** of Cloud/AI/Big Data
- More than **90% of SMEs** –least a basic level of **digital intensity**

Digitalisation of Public Services

- **100%** of key public services **online**
- **100%** of EU citizens -**online** access to medical records
- **80%** of EU citizens – using online **government ID**

Secure, performant and sustainable digital infrastructures

National eSkills Strategy 2022-2025

strategy takes in consideration

Digital Education Action Plan 2021-2027

Digital Education Action Plan

Priorities:

- Fostering the development of a high-performing **digital education ecosystem**
- Enhancing **digital skills and competences** for the digital transformation

e-Competence Framework (*for ICT Practitioners*)
DigComp standard 2.2 (for basic skills)

GreenComp (*Sustainability competence framework*)

Digital Competence Frameworks

Purposes:

- **Capacity building** for transformation of education and training
- Addressing **skills challenges** in the digital age

National eSkills Strategy 2022-2025

Aligned and linkages with existing National Strategies

The National eSkills Strategy 2022-2025 has many **recommendations and Actions**. The actions refer actions by existing strategies.

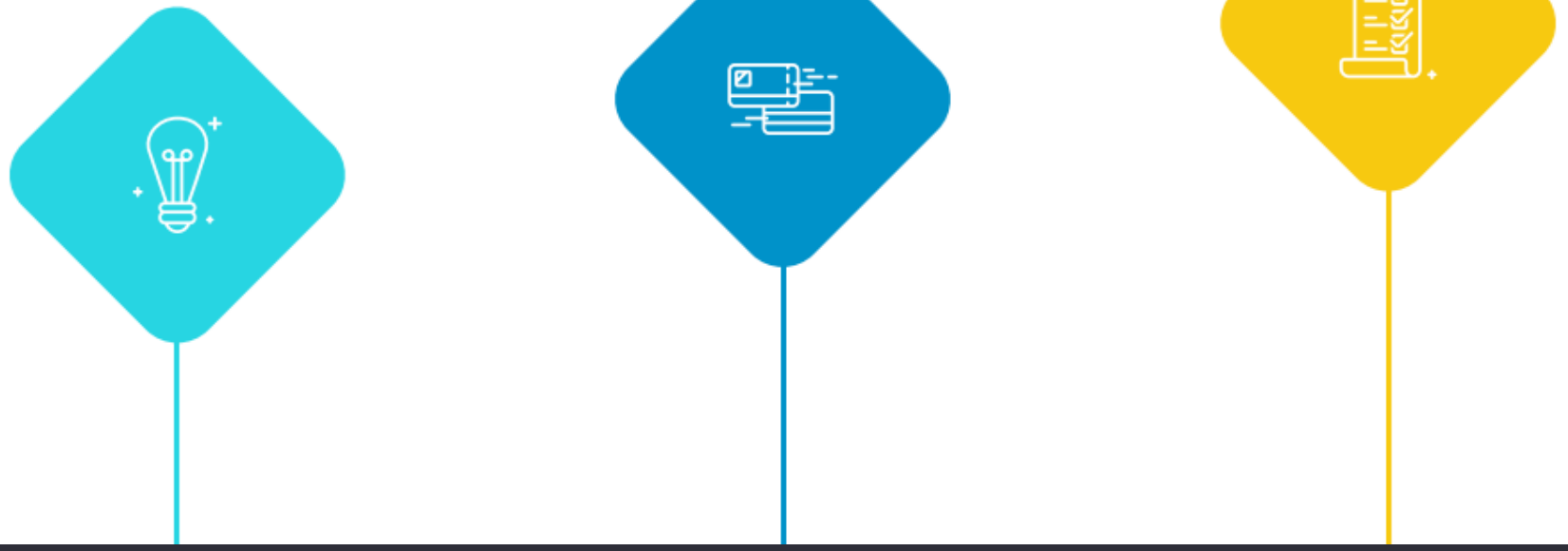
- Malta Digitali 2022 -2027
- Five-year Strategy for the Public Service, Achieving a Service of Excellence 2022-2027
- Five-year Strategy for the Public Service, Achieving a Service of Excellence 2022-2027
- National Strategy for Digital Education 2021-2030 (consultation phase)
- National Literacy Strategy for all in Malta and Gozo 2020-2030 (consultation phase)
- Smart Specialisation Strategy 2021-2027
- National eSkills Strategy 2019-2021
- National Cyber Security Strategy 2022-2024
- National Data Strategy
- Malta.AI Strategy
- National Post Pandemic Strategy 2021
- National Employment Policy 2021-2030
- Malta Recovery and Resilience Plan 2021
- CION Digital Economy, Recovery Plan and Skills

National eSkills Strategy 2022-2025

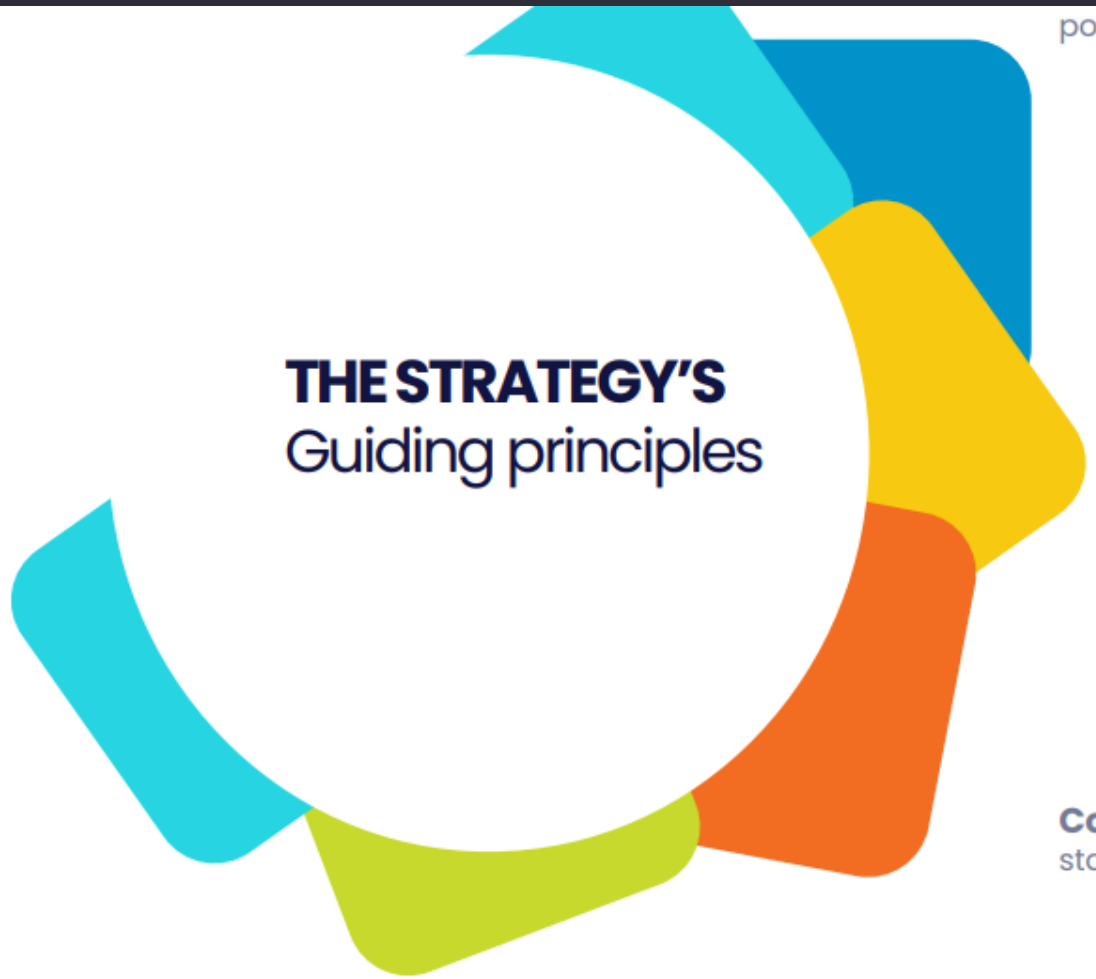
Pillars
Education
Society
Workforce
ICT Professionals

Goals
Society
Public Administration
Enterprises
Educational System

Government Enablers
Collaboration
Leadership & Shared responsibility
Benchmarking
Funding
Focused Strategic Alignment



National eSkills Strategy 2022-2025



positively, critically and competently in the digital environment

Digital inclusivity – opportunities not just to digital professionals but also to vulnerable groupings; equal-gender opportunities in ICT profession

Effective digital skills formation enabled from early years at home and consolidated further through a wider social environment *

Digital Skills multiplicity – necessary for the successful functioning in society – ranging from a core set of digital skills to ones more tailored to the various tasks needed*

Coherence to strategic direction to foster multi-stakeholder coordination on a national scale

Education as a life-long process

National eSkills Strategy 2022-2025

Strategy Vision and Goals

Vision

Reshaping Maltese society and economy through digital skills and competencies

Goals

- Improve further **digital capabilities**
- Promote **inclusive , ethical and responsible use** of technologies
- Promote **ICT as a promising career**
- Positively contribute to **the digital economy**

Which should lead to:

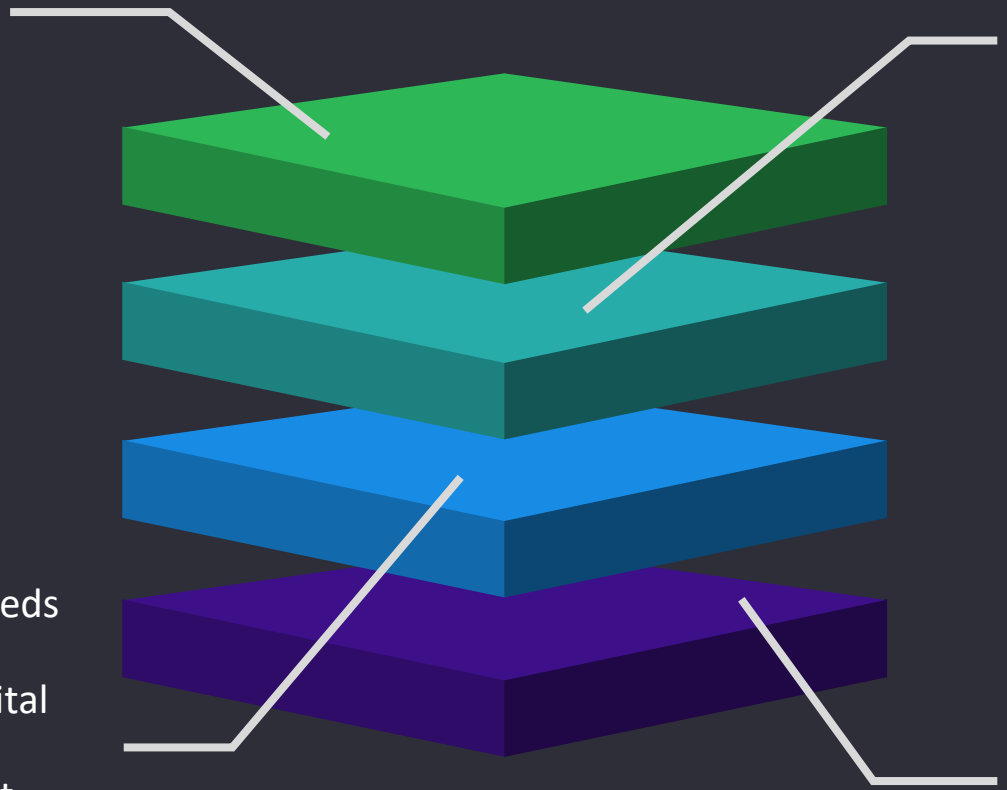
- **Society** acquiring more digital awareness and are increasingly confident in the use of digital.
- **Public Administration** pursuing its digital transformation and its online public service delivery, in line with the Public Service Strategy
- **Enterprises** increasingly adopt digital transformation, which includes increased awareness and understanding as well as appropriate training to employees
- **The educational system** evolving further at all levels to ensure readiness to the needs of current and future digital skills.
- Having **more ICT Professionals** in the local labour market

National eSkills Strategy 2022-2025

RECOMMENDATIONS AND ACTIONS

ICT PROFESSIONALS

- Popularise the profession
- Seek professional recognition
- Address the skills gap
- Address gender imbalance



EDUCATION

- Digital Teaching and Learning Resources
- Development & Assessment of relevant digital competences to educators and learners
- Increase STEM students and converge the gender gap
- Symbiotic links between education and industry
- Digital competencies at home

SOCIETY

- Define the Audience and their needs
- Reduce the digital divide
- user-centric tools to facilitate digital uptake
- Address the digital empowerment Challenge

WORKFORCE

- Digital Transformation through training and awareness
- Encourage and support digital upskilling and reskilling

Presentation by eSkills

Attaining more formal recognition of ICT professionals in Malta

Attaining more formal recognition of ICT Professionals in Malta

ICT Skills Demand & Supply Monitor
8th March 2023

Carmel Cachia

Chief Administrator

Attaining more formal recognition of ICT Professionals in Malta

02. OPTIONS FOR MALTA

Identify the options for Malta to achieve national recognition for ICT Professionals

03. TASKS NEEDED

Identify the tasks needed to achieve the options in 02

04. ANALYSIS OF SURVEYS

Analysis of surveys to questions answered by the ICT stakeholders.

01. MAJOR COUNTRIES

National Recognition of ICT Professionals in other major countries

05. ANALYSIS OF BEST OPTIONS

Using the feedback in 05, identify

Attaining more formal recognition of ICT Professionals in Malta

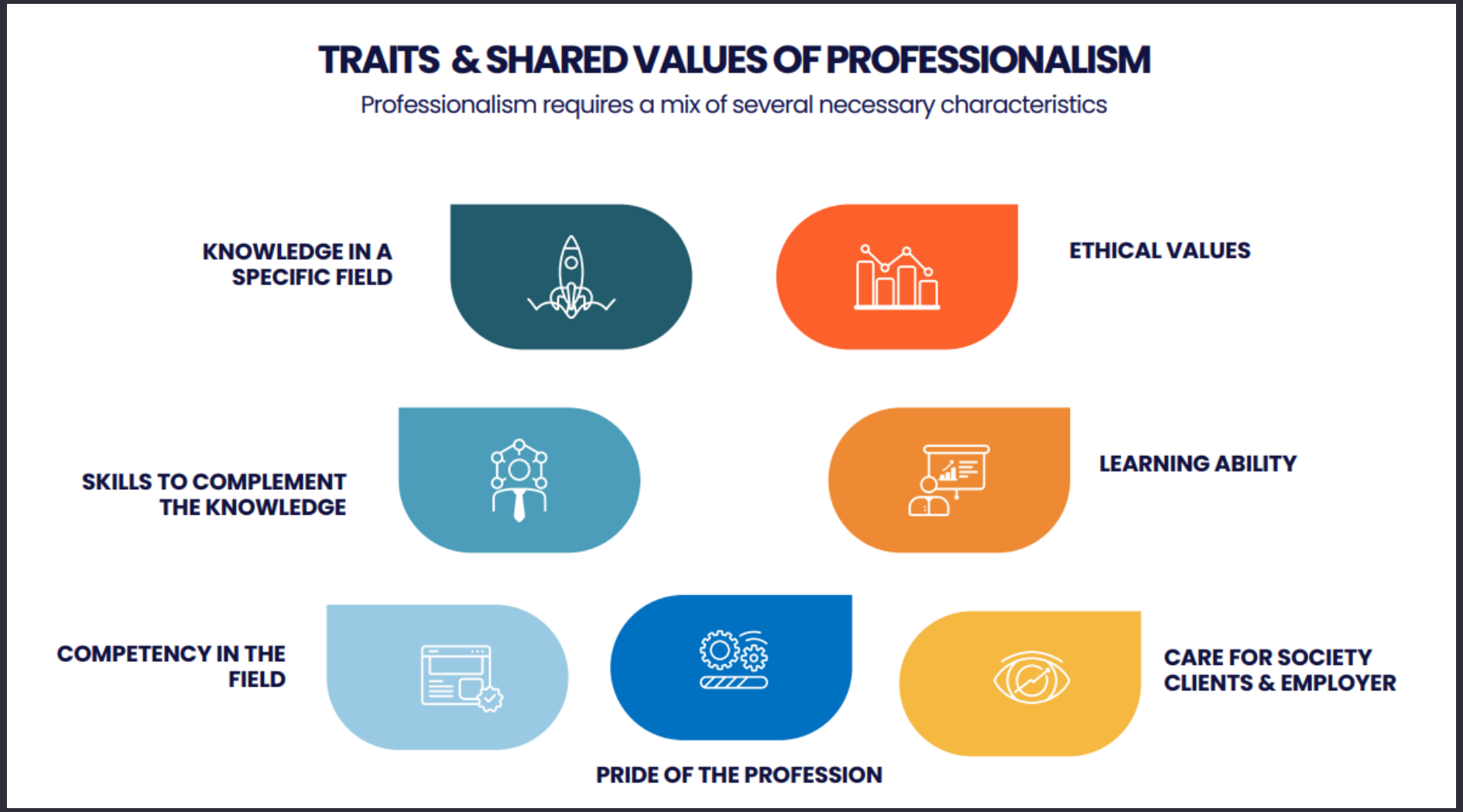
BULLET POINTS

14

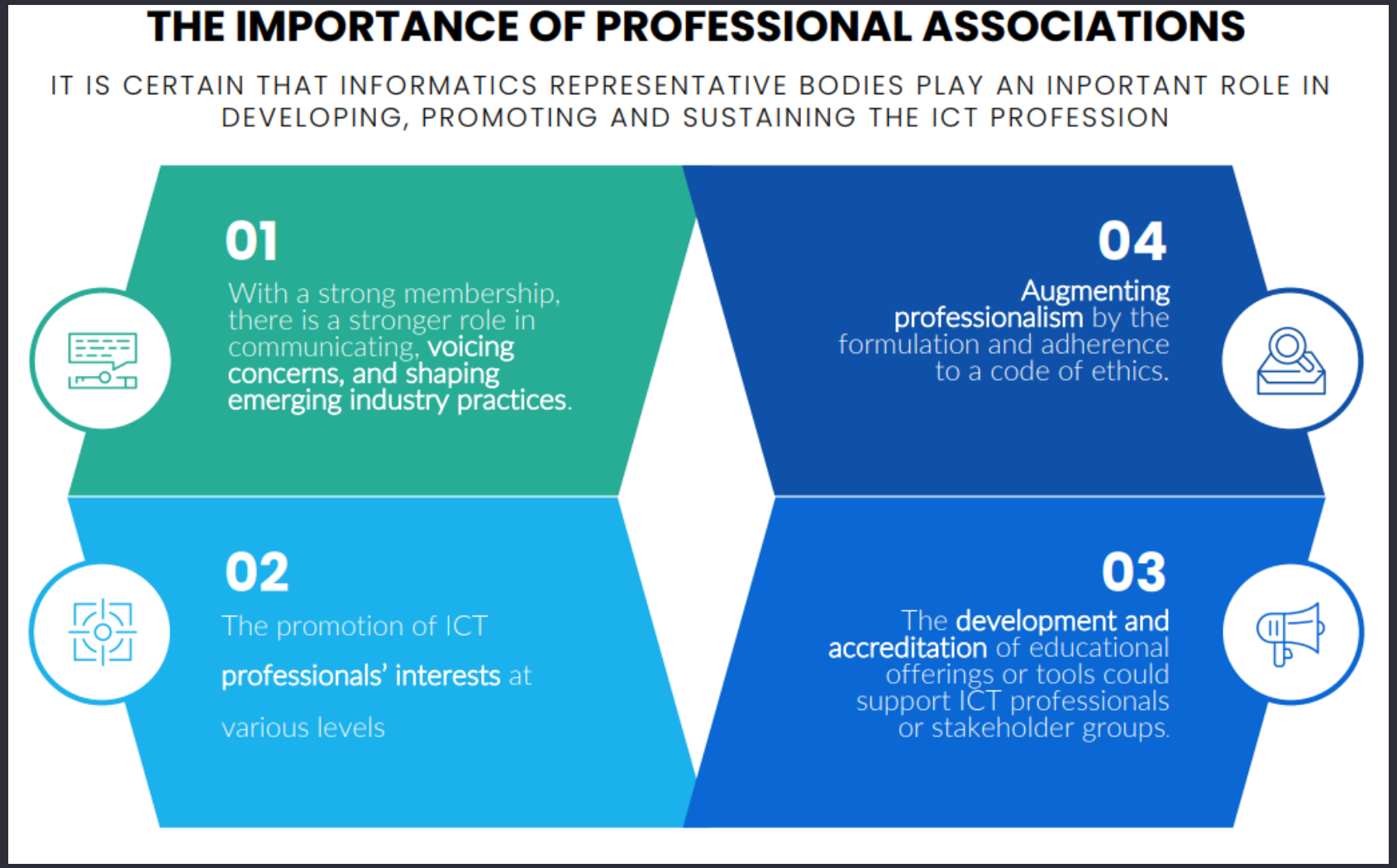
IMPORTANT TO ESTABLISH

- Establish the traits that define a profession
- Consider the extent to which the practice of ICT exhibits those traits
- Understand the different ways in which better professional recognition can be attained
- Examine the pros and cons of each recognition approach and the potential benefits and drawbacks
- Analyse and understand how other countries are recognising ICT professionals
- Come up with options and recommendations on how to implement better recognition of ICT professionals in Malta

Attaining more formal recognition of ICT Professionals in Malta



Attaining more formal recognition of ICT Professionals in Malta



Attaining more formal recognition of ICT Professionals in Malta

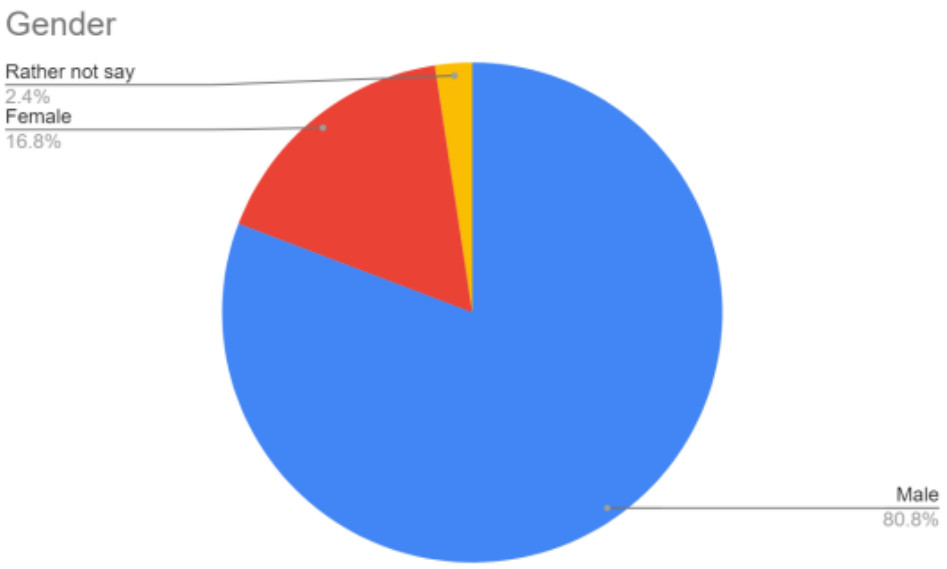
THE IMPORTANCE OF PROFESSIONAL ASSOCIATIONS

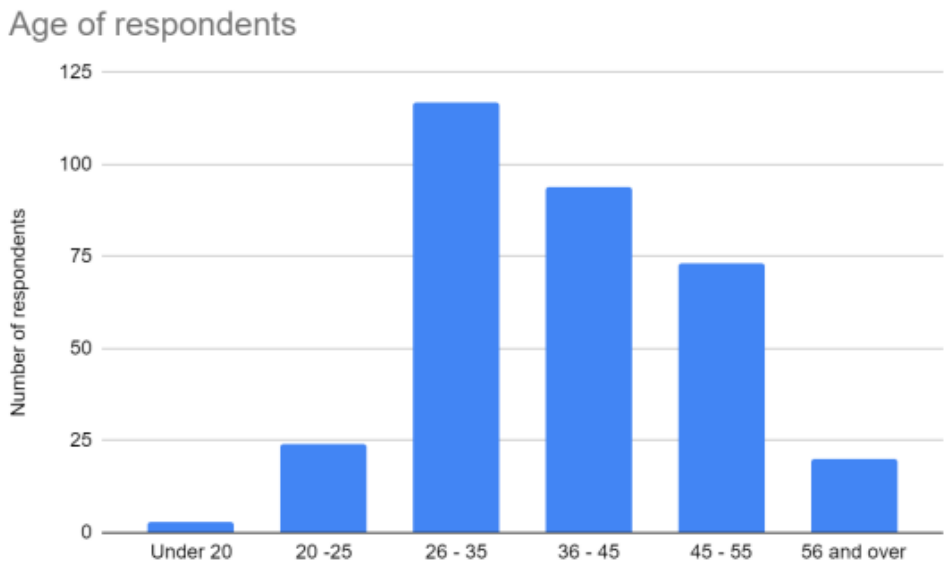
17

The situation in Malta

*"One of the **noticeable** features of the ICT profession in Malta is that there is **no association** with a general membership whose objective is to represent ICT professionals in the country. This is a **rather curious omission and a potentially unfortunate one** since, as has been argued above, this sort of association **seems to be a prerequisite** for more formal professional recognition."*

Attaining more formal recognition of ICT Professionals in Malta





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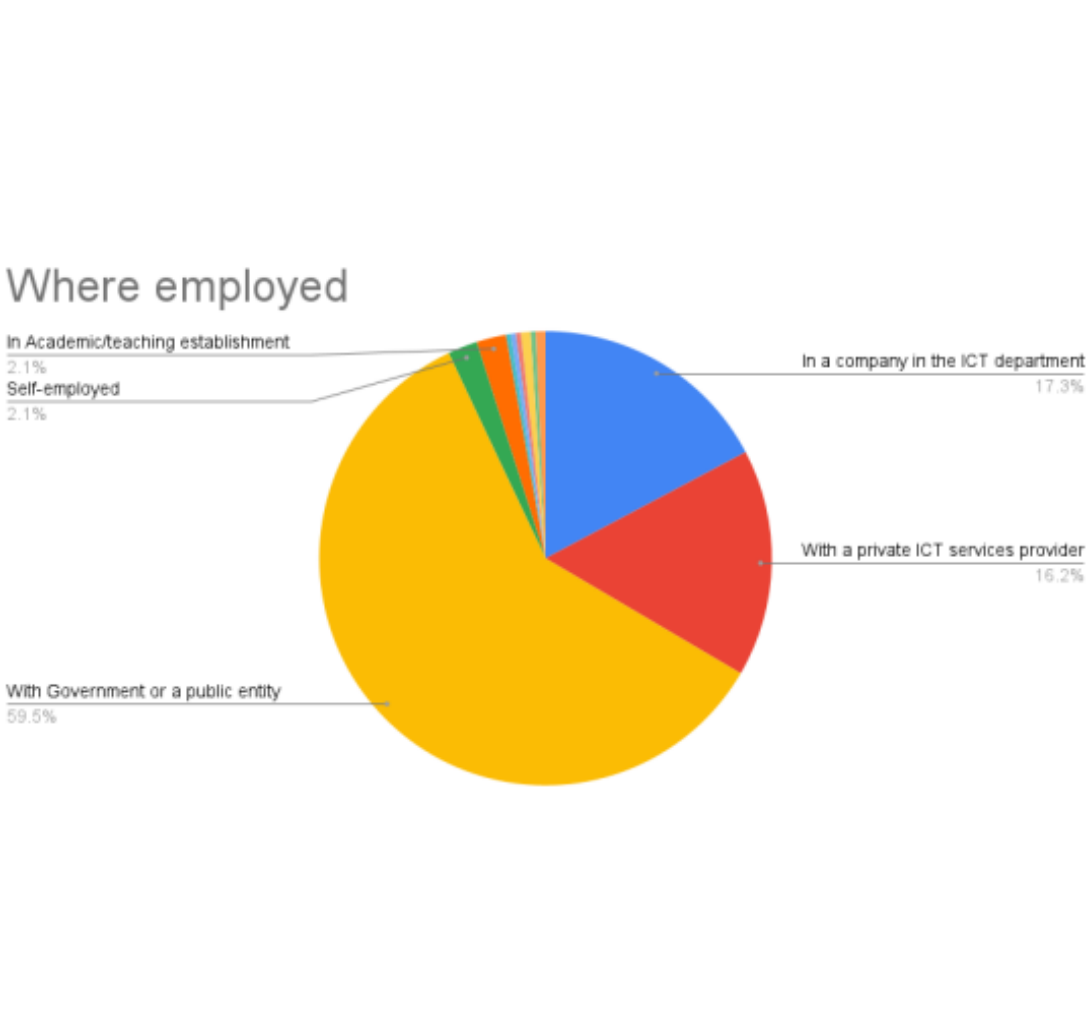
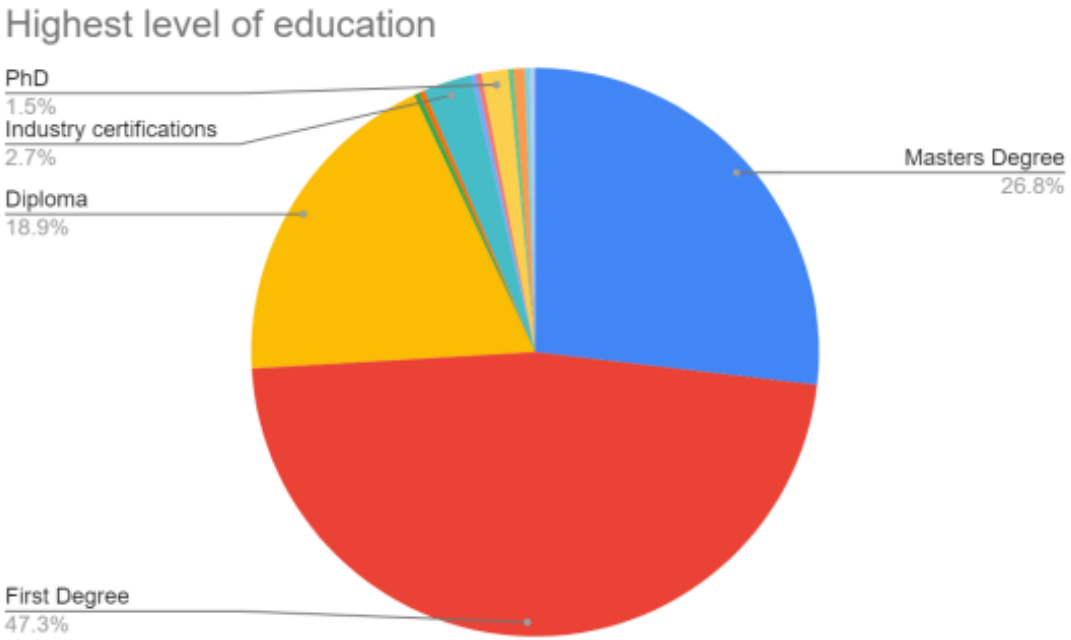
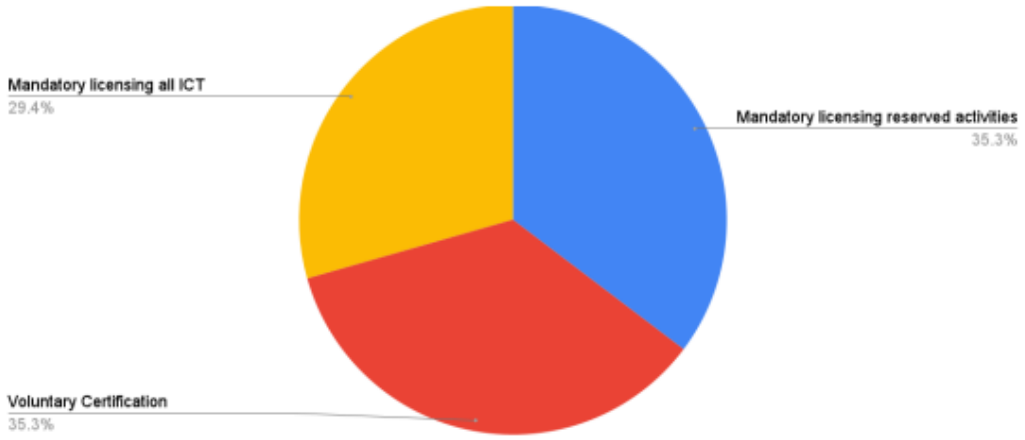
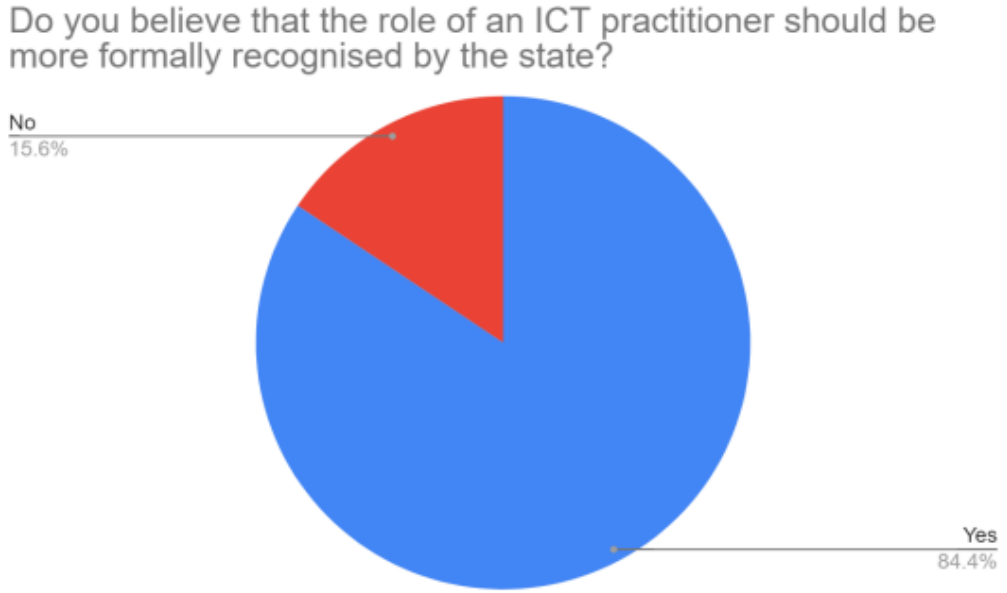




Attaining more formal recognition of ICT Professionals in Malta





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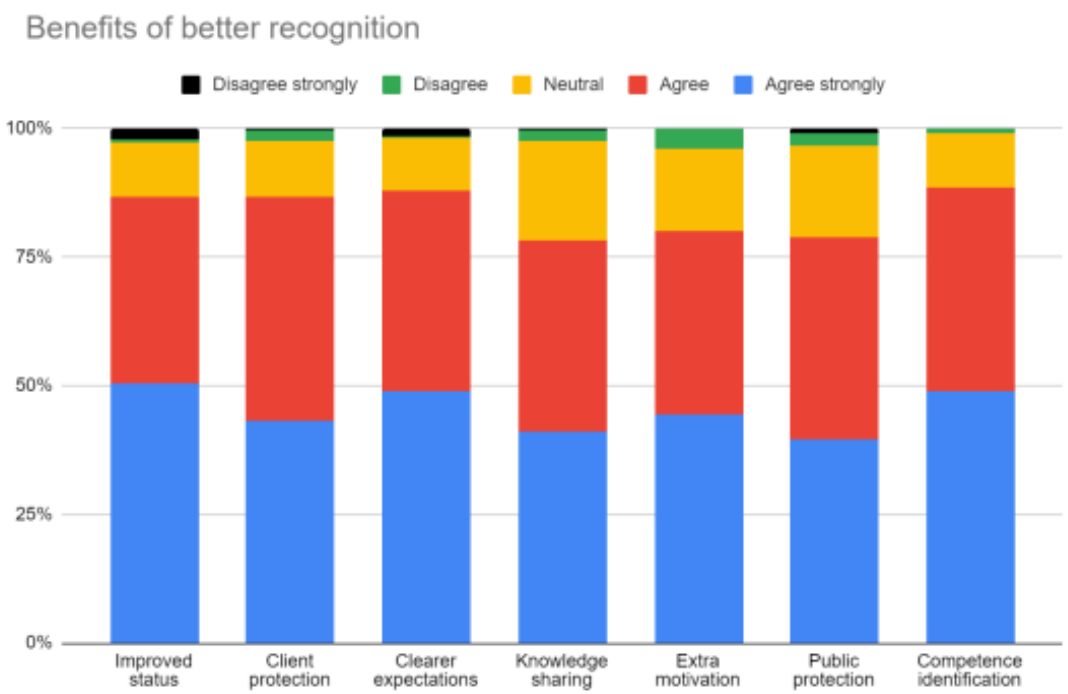
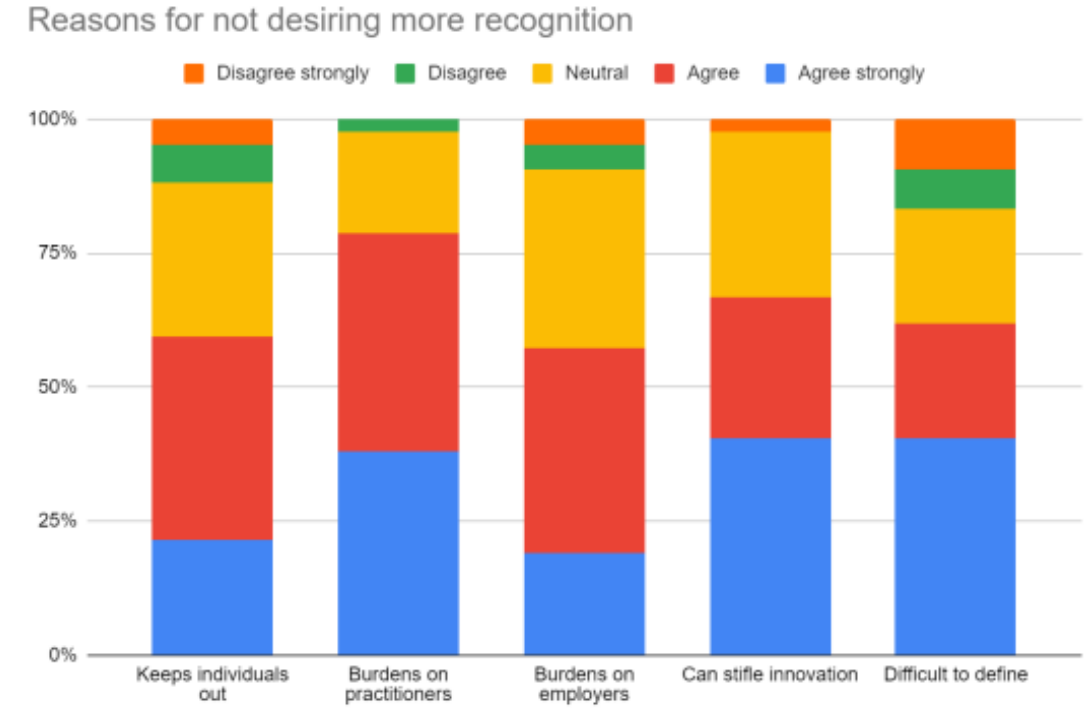
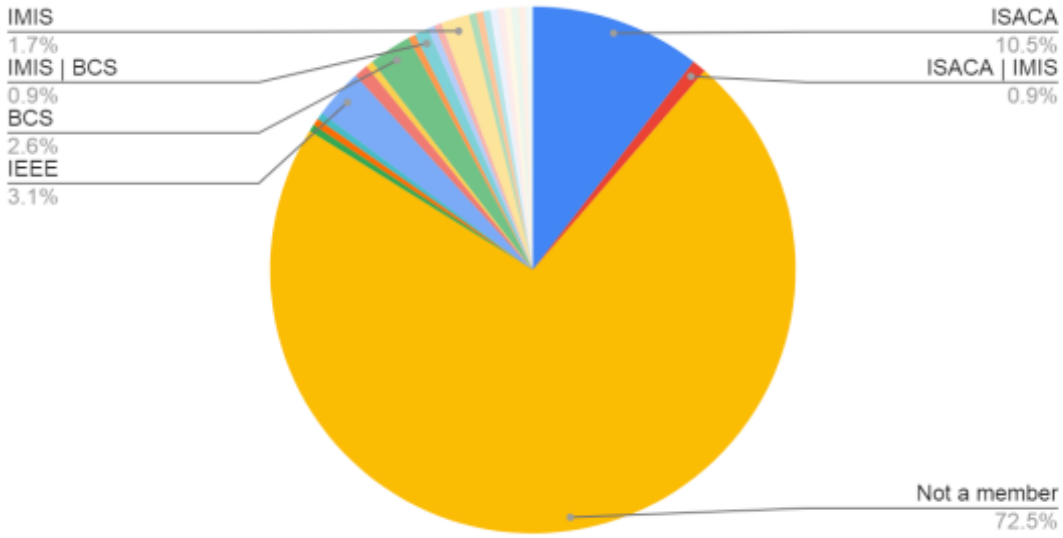


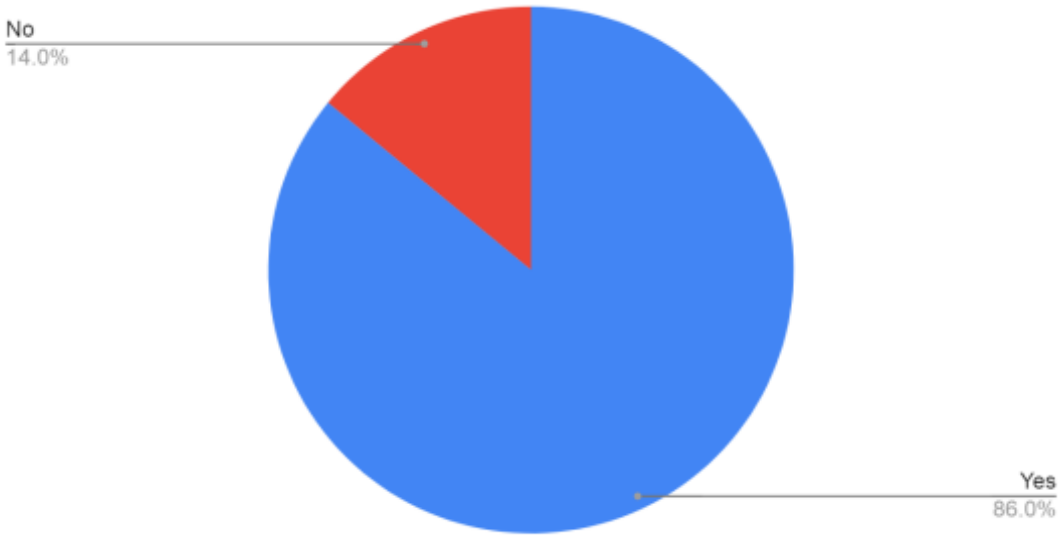


Attaining more formal recognition of ICT Professionals in Malta

Are you a member of a professional society or association in the ICT related sector?



Do you believe a local ICT society or association should be set up to represent ICT professionals and practitioners?



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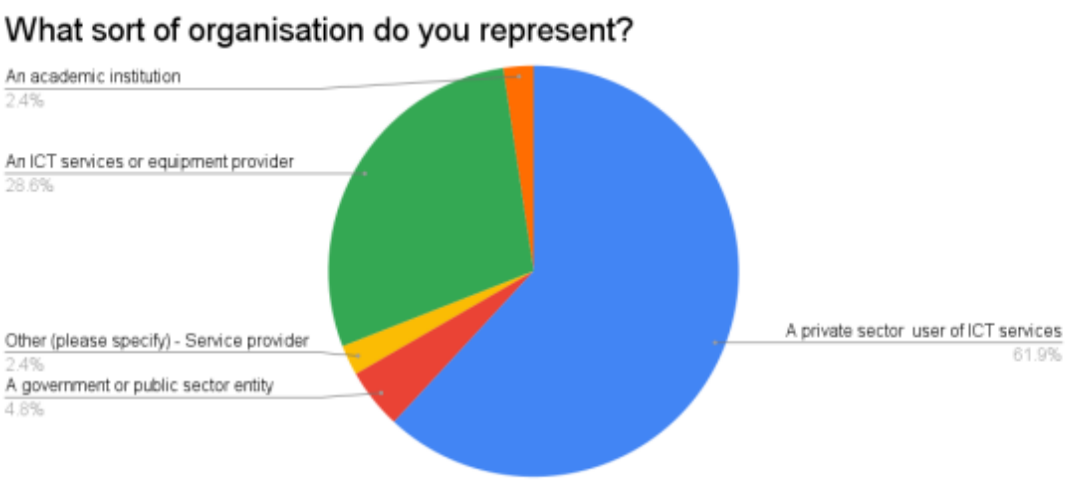
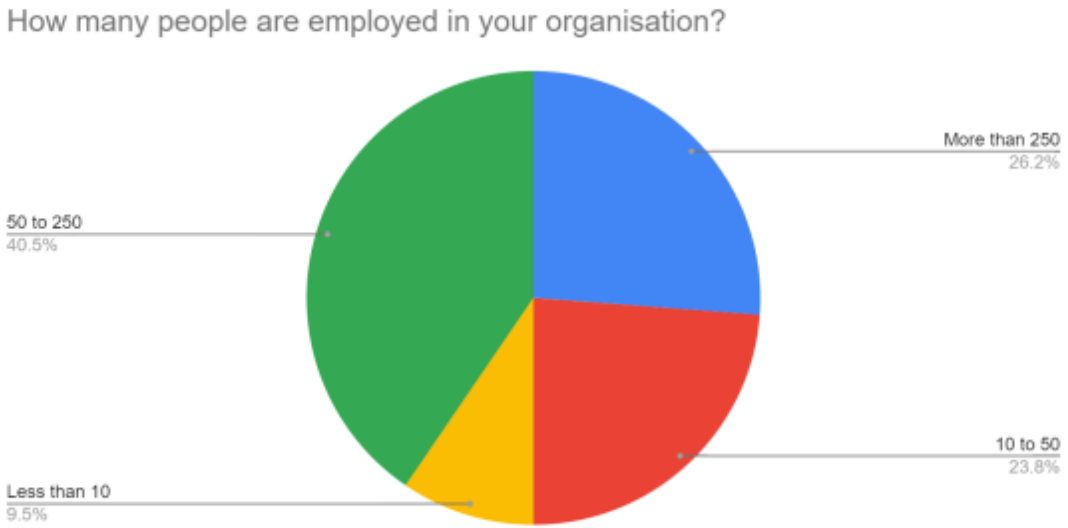
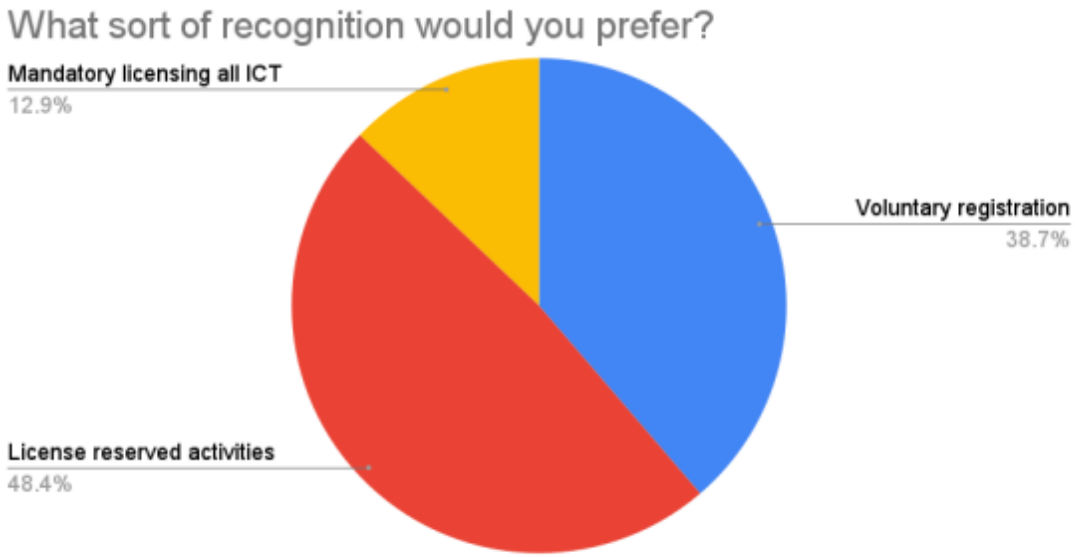
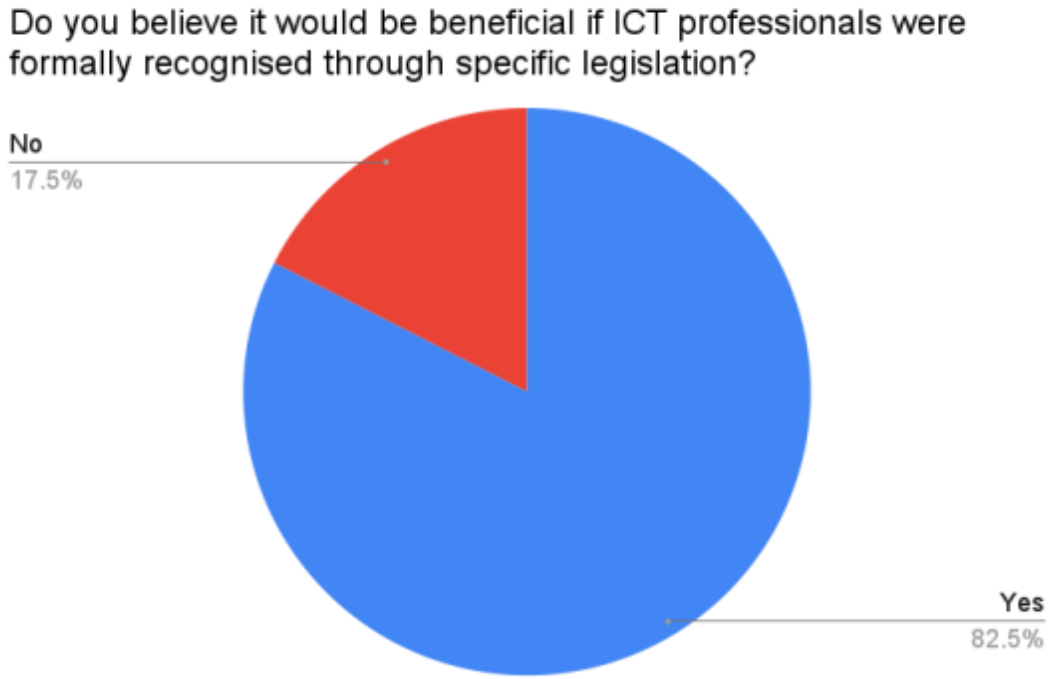


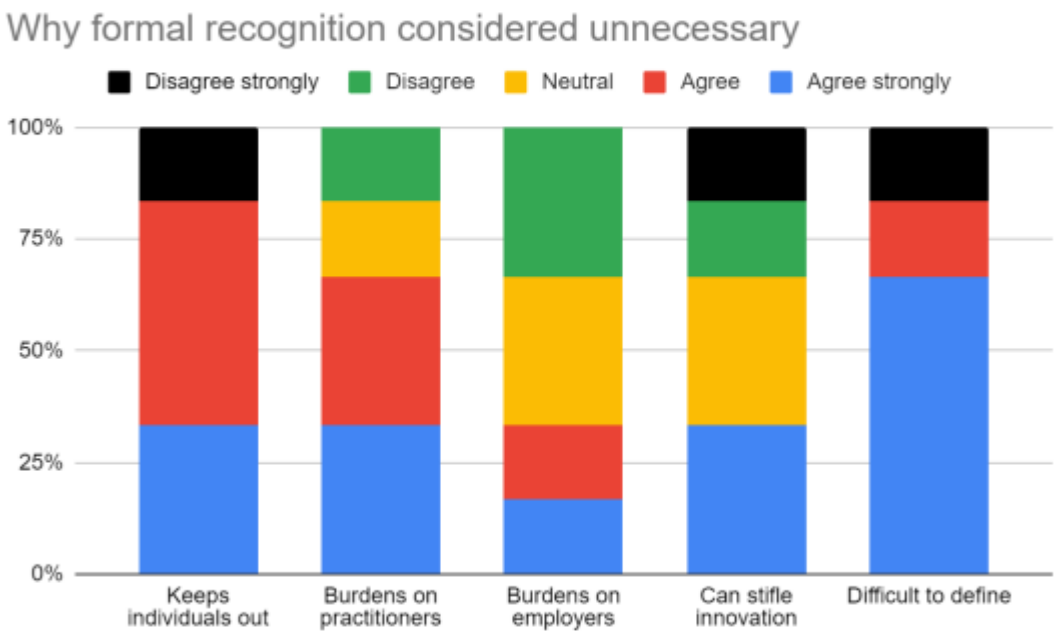


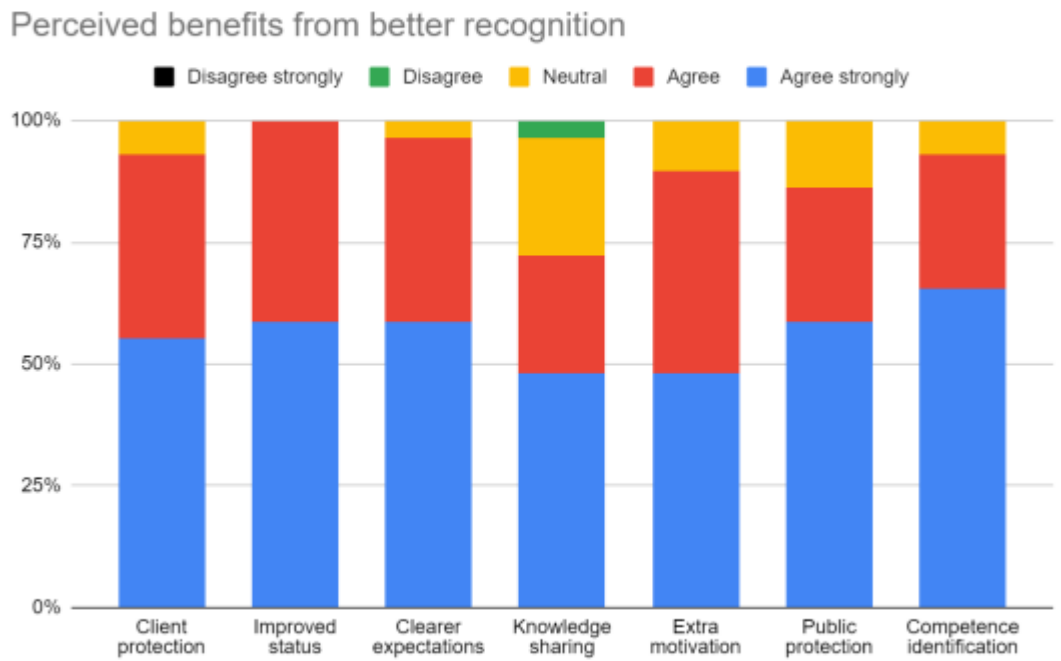
Attaining more formal recognition of ICT Professionals in Malta





Attaining more formal recognition of ICT Professionals in Malta





ACTIONABLE ITEMS AND WAY FORWARD OPTIONS

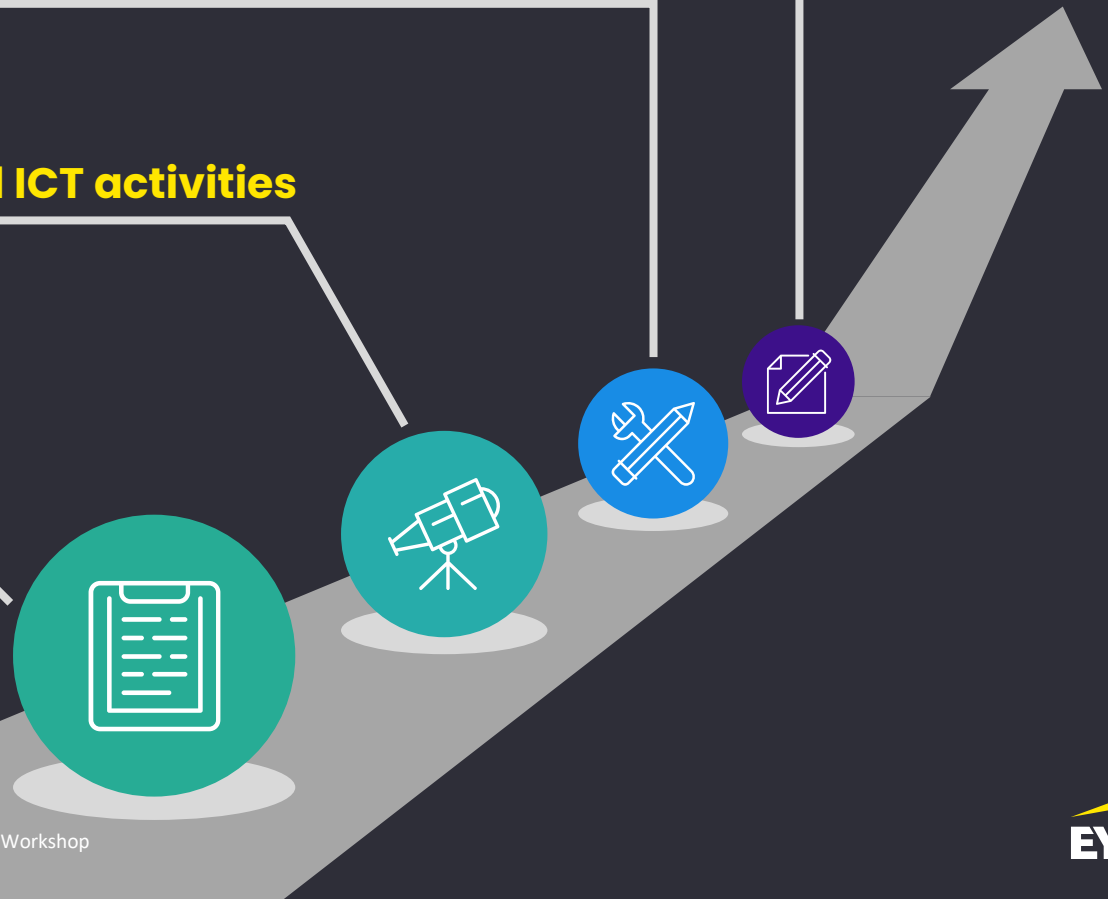
Should we consider a phased approach?

01. STAY AS WE ARE

02. Provide voluntary state-endorsed certification

03. Create a mandatory licensing regime for all ICT activities

04. Create a mandatory licensing regime for certain reserved ICT activities



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