

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**  
**UKRAINIAN-AMERICAN CONCORDIA UNIVERSITY**

School of Management and Business

Department of International Economic Relations, Business & Management

Bachelor's Qualification Work

**Digitalization and its influence on globalization**  
**(based on the Optimise Management Consultants ltd t/a Qualtec case)**

Bachelor's student of the 4<sup>th</sup> year study  
Field of Study 29 – International Relations  
Specialty 292 – International Economic Relations  
Educ.program – International Economic Relations

**Sofiia Diiuk**



Research supervisor

**Natalia Chaplynska**  
Ph.D. in Economics



Kyiv – 2023

## Abstract

The work is devoted to research of the mutual influence and interconnections of digitalization and globalization, particularly on the Irish market, in the context of small and medium enterprises based on the Irish company Optimise Management Consultants Ltd t/a Qualtec. The paper explores a framework of the issues, such as emergence of new digital trends and technological innovations, along with their impact on business environment in terms of globalization. Moreover, several key areas were identified and considered which hold the highest threats and opportunities for the future business development, concluding in a plan for managing risks and exploiting potential capacities as efficiently and effectively as possible taking into account changing realities. Therefore, on example of Qualtec a layout for small and medium enterprises development and growth was conducted with regard for digital transformation of the global economy, up-to-date business modernization, and basic principles of global trade. On the foundation of a detailed research, the demand for innovation in economic environment was ascertained, with promising prospects as advantageous and promising field for business development. The work is concluded with a practical summary in the area of digital transformation for increasing effectiveness of SMEs on the Irish market.

Keywords: digitalization, globalization, technological innovation, Irish market, small and medium enterprises, digital activity, economic transformation, digital transformation.

## Анотація

Робота присвячена дослідженню взаємного впливу взаємовпливу та взаємозв'язків діджиталізації та глобалізації, зокрема на ринку Ірландії, в контексті малих та середніх підприємств на основі ірландської компанії Optimize Management Consultants Ltd t/a Qualtec. Доповідь досліджує структуру таких питань як поява нових цифрових трендів і технологічних інновацій, а також їхній вплив на бізнес-середовище в умовах глобалізації. Крім того, було визначено та розглянуто кілька ключових сфер, які містять найвищі загрози та можливості для подальшого розвитку бізнесу, й були укладені в план управління ризиками та використання потенційних можливостей якомога ефективніше з урахуванням мінливих реалій. На прикладі Qualtec була проведена схема розвитку та зростання малих і середніх підприємств у контексті цифрової трансформації глобальної економіки, сучасної модернізації бізнесу та основних принципів глобальної торгівлі. На основі детального дослідження було встановлено попит на інновації в економічному середовищі з багатообіцяючими перспективами як вигідне та швидко зростаюче поле для розвитку бізнесу. Робота завершується практичним підсумком у сфері цифрової трансформації для підвищення ефективності МСП на ринку Ірландії.

Ключові слова: діджиталізація, глобалізація, технологічні інновації, ірландський ринок, маленькі та середні підприємства, цифрова діяльність, економічна трансформація, цифрова трансформація.

**PHEE-institute «Ukrainian-American Concordia University»**

**School of Management and Business**

**Department of International Economic Relations, Business and Management**

Educational level: **bachelor degree**

Specialty: **292 “International Economic Relations”**

Educational Program **“International Economic Relations”**

**APPROVED**

Head of Department Zharova L.V.



**TASK  
FOR BACHELOR'S QUALIFICATION WORK**

**Sofia Diuk**

(Name, Surname)

1. Topic of the work:

2.

***Digitalization and its influence on globalization (based on the Optimise Management Consultants ltd t/a Qualtec case)***

Supervisor of the work ***Natalia Chaplynska, Ph.D. in Economics.***

Which approved by Order of University from “22” September 2022 №22-09/2022-1c

2. Deadline for bachelor's qualification work submission **“23” April 2023**

3. Data-out to the bachelor's qualification work\_

*Materials from internship received during consultation with representatives of the company. Information from open resources in the Internet, official reporting of financial and economic activities of the enterprise.*

4. Contents of the explanatory note (list of issues to be developed).

***There are three main topics a student should develop in this work:***

- 1. Develop an understanding of the phenomena of digitalization, the concept of globalizations (main elements, processes, interconnections, impact on the economic transformation and business environment);*
- 2. Provide a general familiarization with the Qualtec company, its economic activity from the perspective of technological development, calculate its effectiveness.*

3. *Analyze the directions for increasing effectiveness of SMEs through digitalization, draw suggestions in the area of digital transformation for small and medium enterprises, on the example of Qualtec.*

5. List of graphic material (with exact indication of any mandatory drawings)

*Graphs and figures for analysis of economical and statistical information on the company and its development, visualisation of mechanism of development, etc.*

6. Consultants for parts of the work

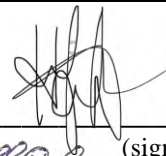
Part of the project	Surname, name, position	Signature	
		Given	Accepted
<b>1</b>	<i>Natalia Chaplynska, Ph.D. in Economics</i>	+	+
<b>2</b>	<i>Natalia Chaplynska, Ph.D. in Economics</i>	+	+
<b>3</b>	<i>Natalia Chaplynska, Ph.D. in Economics</i>	+	+

7. Date of issue of the assignment

Time Schedule

№	The title of the parts of the bachelor's qualification work	Deadlines	Notes
1.	I chapter	<i>31.12.2022</i>	<i>In time</i>
2.	II chapter	<i>20.02.2023</i>	<i>In time</i>
3.	III chapter	<i>11.04.2023</i>	<i>In time</i>
4.	Introduction, conclusions, summary	<i>23.04.2023</i>	<i>In time</i>
5.	Pre-defense	<i>26.04.2023</i>	<i>In time</i>

Student



(signature)

Supervisor



(signature)

Conclusions:

*The Bachelor's qualification work is designed at the high level, and its content and structure fully meet the methodological requirements. The study provided a meticulous analysis of digitalization and globalization processes in the interconnection on a regional and global scale. The work contains all the necessary parts of scientific research with empirical and theoretical recommendations. The paper includes*

*a well-developed theoretical approaches to the digitalization questions and their influence on globalization processes in country and particular in the companies on the example of Optimise Management Consultants ltd t/a Qualtec case. The practical recommendations were formulated correctly and focused on the main goal and tasks of the work. In general, if successful defense, the thesis can claim to be "excellent".*

Supervisor

(signature)

A handwritten signature in black ink, appearing to be 'S. J. J.', written over a horizontal line.

## Table of content

<b>INTRODUCTION.....</b>	<b>3</b>
<b>CHAPTER I. THE CONCEPTS OF DIGITALIZATION AND GLOBALIZATION, THEIR INTERCONNECTION WITHIN THE IRISH ECONOMY .....</b>	<b>8</b>
1.1. Understanding the phenomena of digitalization: definition, process, peculiarities .....	8
1.2. Globalization, defining and understanding the phenomena .....	12
1.3. Interconnections and mutual influence of digitalization and globalization in the business environment.....	20
<b>CHAPTER II. IMPACT OF DIGITALIZATION ON THE DEVELOPMENT OF GLOBALIZATION ON THE EXAMPLE OF A COMPANY QUALTEC. 32</b>	<b>32</b>
2.1. General familiarization with the business entity, analysis of the state activity .....	32
2.2. Analysis of Qualtec and its economic activity from the perspective of technological development .....	42
2.3. Impact of digitalization on the effectiveness of Qualtec. Role of digitalization in the prospects of innovation and foreign operations of the enterprise .....	52
<b>CHAPTER III. INCREASING GLOBALIZATION OF QUALTEC’S ACTIVITY THROUGH DIGITALIZATION.....</b>	<b>59</b>
3.1. Analysis of directions for increasing effectiveness of SMEs through digitalization .....	59
3.2. Suggestions in the area of digital transformation for small and medium enterprises, on the example of Qualtec.....	66
3.3. Research of potential opportunities and threats for the Irish economy in result of intense digitalization and globalization.....	75
<b>CONCLUSIONS AND PROPOSALS .....</b>	<b>83</b>
<b>LIST OF REFERENCES .....</b>	<b>88</b>

## INTRODUCTION

**Relevance of the topic.** Nowadays, the main topics on the international panel of discussion and reasons for global concerns, among ecological disasters, hunger, wars and pandemics, is increased digitalization in the scale the world has never seen before. Therefore, due to its possibly unpredictable outcomes, the issue is drawing attention of specialists and masses, as the risk of replacing people with clones and robots becomes our reality.

In the face of a major technological transformation, the society is standing at a turning point of reassessing its values and previous life order. Since it is already unclear for the modern generations how to live a day without a smartphone, the gap between generations becomes drastically wider due to the speed of technological development, in other words, digitalization. Multiple studies focus our attention on the humongous difference of how parents and children perceive the world, let alone grandparents and grandchildren.

Psychologists conduct research on how technologies and media damage our brain, leaving an irreversible impact on mental health and the way we view life.

If we speak about technological effect on the economy, which is the topic of this paper, the conclusions will be simple: we do not know. The unprecedented rates of change that the world is experiencing will lead to results that we are yet to discover and this paper is a means to do so.

The report is mainly focused on analysis of Ireland and its businesses as an example of a service-oriented company Qualtec. However, globalization is a complex term that includes multiple participants, therefore, the research discloses the interconnection of the Irish economy with the rest of the world, in order to get a sufficient and clear picture.

Dublin, the capital and the largest city of Ireland, is known to be a main residence for international giants' headquarters, such as Google, Amazon, Apple, Microsoft,



eBay, Facebook, Airbnb, Twitter, and many others. Thus, Dublin is considered to be a “technological capital” of Europe.

Therefore, this paper discloses the full research of globalization and digitalization phenomenon, their interconnection, correlation with modern realities in terms of economical, social and business transformation, as well as technological advancement and its influence of the previously mentioned topics on the example of the economy of Ireland and Irish company Qualtec.

The work itself consists of the introduction and conclusion and opening and closing parts of the research, between them there is the body of the paper that is divided into three chapters: theoretical, analytical and practical, each of which comprises several sub-chapters that provide a detailed and more in depth approach to a particular subject. The additional part is the list of references to make the reader more familiar with the sources that have been used and explored during the development of the report.

The first section provides a theoretical overview of the necessary knowledge that further work is based on, including the research on digital transformation data and its popularization throughout businesses. The second chapter is dedicated to the company itself, with its detailed analysis and description of the most essential aspects on which suggestions for technological incorporation are developed. Furthermore, the third and practical part of the report is dedicated to the analysis of the Irish company Qualtec, which is the object of the research itself, from the point of view of globalization and digitalization and the perspectives, challenges and opportunities that companies around the world are facing due to these factors.

The relevance of this work is defined by the extensive and rapid wave of digitalization that has overtaken all of the previously developed prospects and where economies along with society are in need of comprehensive analysis and sustainable approaches towards managing the situation.

The **aim** of the master thesis of the paper was to conduct a detailed analysis on digital transformation and its impact on the business environment of Ireland, with globalization and digitalization being the major pillars of the subject. Moreover, the

study of the digitalization framework will allow to analyze the effects of digital transformation on small and medium enterprises in Ireland and draw possible conclusions on how to make a business grow and succeed in new realities.

In order to achieve the purpose or the aim, the following **tasks** were set:

- develop an understanding of the phenomena of digitalization and the concept of globalizations, as well as their main elements, processes, and impact on the economic transformation;
- explore the interconnections and mutual influence of digitalization and globalization in the business environment;
- provide a general familiarization with the business entity, analysis of Qualtec and its economic activity from the perspective of technological development;
- conduct research on the impact of digitalization on the effectiveness of Qualtec. Role of digitalization in prospects on foreign operations of the enterprise;
- analysis of directions for increasing effectiveness of SMEs through digitalization;
- on the analytical foundation, draw suggestions in the area of digital transformation for small and medium enterprises, on the example of Qualtec;
- research of potential opportunities and threats for the Irish economy as a result of intense digitalization and globalization.

**The main research methods** used in the qualification work include: the analysis method – by processing the information available in the scientific literature regarding understanding the role of technological innovation for the business framework; methods of observation and survey – when investigating the present state of innovation potential of Optimise Management Consultants Ltd t/a Qualtec and its individual innovative management solutions; synthesis – when reviewing the economic activity of Optimise Management Consultants Ltd t/a Qualtec and the general state of the innovative market of Ireland; generalization – in the critical understanding of scientific approaches regarding the phasing and peculiarities of financial aspect of innovative

activities of business entities in the digital transformation process of SMEs in Ireland; comparison – when comparing advanced technologies and achievements in the field of digital transformation of different sized entities of the Irish economy.

The research **objects** are digitalization and economic globalization, their interconnection and mutual influence, as well as business development in this context with the specific example of the Irish economy.

The research **subject** is the Irish company Optimise Management Consultants Ltd t/a Qualtec being studied in detail during the internship practice.

**Scientific novelty of the work** lies in the scrupulous research of the newly appeared phenomenon of digitalization, its meaning, opportunities and threats for the Optimise Management Consultants Ltd t/a Qualtec and overall small and medium sized enterprises of Ireland from the point of view of digital transformation and innovation implementation. Despite the fact that SMEs comprise the majority of the Irish market, they are rarely properly analyzed, especially in terms of future prospects for development in the innovative field. Therefore, this paper presents the first comprehensive analysis of Optimise Management Consultants Ltd t/a Qualtec, as well as a systematic solution plan for further growth of SMEs in Ireland by incorporation of new technologies and digital trends.

Scientific propositions submitted for protection and claiming novelty: detailed research of the Irish company Optimise Management Consultants Ltd t/a Qualtec incorporating information from the private sources of the company, its key economic operations, market position, potential for development and international cooperation. From the analysis the step-by-step plan was drawn for Qualtec's digital transformation with the sole purpose of enhancing its strengths and successfully managing possible risks.

**The theoretical value of the obtained results** of the work reveals the fundamental information for understanding matters of digitalization and globalization, their interconnection and significance for the business world; analyzes the causes and consequences of digital transformation; conducts a comprehensive analysis of

innovative activities within the Irish economy; and conducts a comparative analysis of business performance for enterprises that do and do not utilize digital technologies in their operations.

**The practical value of the obtained results** lies in the recommendations and suggestions for the Irish small and medium enterprises market in terms of performance enhancement, growth and international expansion made on the basis of completed research on the matter of digital transformation and subsequent globalization. The main idea of the paper in the practical sense was to fully introduce SMEs to the recent digital trends and technological innovation, making it realistic for them to surpass current limitations, while increasing efficiency and effectiveness.

Finally, using the knowledge gained from the systematic analysis, it was possible to conduct an applicable conclusion for maintaining viability of the SMEs in Ireland.

Bachelor's Qualification Paper consists of an introduction, 3 chapters, conclusion, and list of references. Work is carried out on 97 pages, containing 33 figures. References include 93 literary sources.

# CHAPTER I. THE CONCEPTS OF DIGITALIZATION AND GLOBALIZATION, THEIR INTERCONNECTION WITHIN THE IRISH ECONOMY

## 1.1. Understanding the phenomena of digitalization: definition, process, peculiarities

In order to clearly understand digitalization, it is best to look at several definitions and overall picture of the process of what digitalization is a part of. According to Gartner, “Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.” Using digitized information, digitalization is the process of making workflows and processes easier and more efficient. Especially in today’s tech-driven world, it is crucial to adopt a digital culture in order to survive and succeed [1].

Other definitions of digitalization include: “[...] the manifold sociotechnical phenomena and processes of adopting and using these technologies in broader individual, organizational, and societal contexts” (Legner et al., 2017) [37]; "interpretation and management of the world [...] through processes, that are almost entirely dependent on digital data" (Clarke, 2019) [38]; "emergence of technological platforms of information and communications technology [...] determining significant and unprecedented changes in many aspects of our social and economic life” (Corrocher and Ordanini, 2002) [39]. The abundance of descriptions continues referring to digitalization as a "process of transforming the structure, processes, people skills and culture of the entire organization so it can use digital technologies to create and offer products, services and experiences that customers, employees and partners find valuable" (El Sawy et al., 2016) [40]; "[...] the proliferation of digital technologies

and socio-technical process of applying those to broader [...] contexts as well as in the lives of individual users" (Matt et al., 2019) [41].

Nevertheless, despite the formulations may differ, all of them share the same basics in the foundation, which is technological domination in all areas of financial, economic, political, social, and cultural activity.

However, there are two terms that shall not be confused: digitalization and digitization. The first one is the method of leveraging digital technologies, leading to more profound alterations that can disrupt the fundamentals of business models. In the end, these modifications present chances for greater productivity and income. While digitization only involves transforming physical documents and files into digital ones, creating a cloud base or storage which allows access to the data instantly and from different locations increasing efficiency and convenience of working with and sharing information [42].

File storage in the cloud promotes digitalization because it makes files available to anyone, everywhere, with adjustable rights and settings. This makes it possible for a business to expand outside a specific geographical area.

Additionally, no matter where they are located, individuals who work remotely have access to the information they require. This is especially helpful now since by the end of 2021, 32% of all employees have already been working, comparing the number with 17% in 2019. For instance, as CIOs give priority to cloud-based solutions such as software as a service, global end-user spending on public cloud services increased by 23.1% in 2021 [2].

Even though digitalization is spreading throughout all areas of our lives, people often misuse or misinterpret the term, conflating it with other steps of technological or digital transformation which can be defined as the use of digital technology and data analytics to make data-driven decisions, improve operational efficiency, streamline work and gain (or retain) a competitive edge in business [36].

The first trials of digitization began in the 1950s with the invention of first computers, when the essence of digitization firstly came into reality giving a possibility

to store information in databases, cloud storages, documents of a digital format, and online. With the invention of the Internet in 1983 it further transformed into digitalization - a period that the majority of the world is still experiencing up to date. However, it was not until the IT sector skyrocketed, clearing the road for a full scale digitalization that means for online communication appeared, along with online banking, business development, shopping, and work platforms, immersing the society into a digital world [43, 44].

According to the Digital Transformation Pyramid (Fig. 1.1) which depicts three stages of technological progress, digitalization is a transitional point between digitization (a.k.a. converting data into electronic format) and digital transformation (transformation of any aspect of life, for instance, business, due to implementation of new-era technologies and heavy reliance on them). Therefore, with the current pace of digital/technological development, the forecast of entering the era of a digital transformation in the foreseeing future can be made with factual certainty.



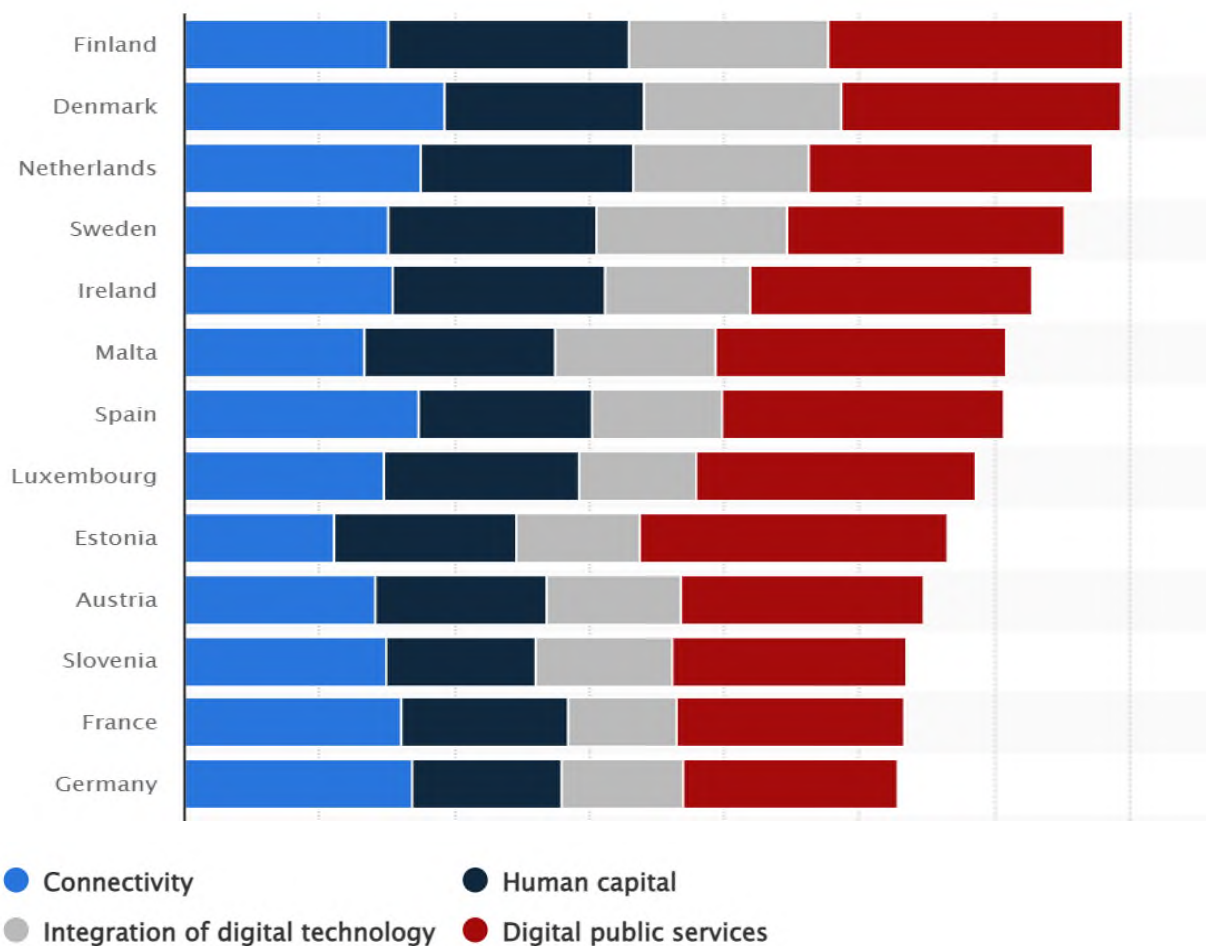
*Figure 1.1. Digital Transformation Pyramid*

*Source: ARC Advisory Group [2]*

Among various purposes and effects of digitalization, there are several key points that include faster access to information, easier exchange and networking, convenience in storing data, lower operational costs, improved documents security, etc. It is vital while conducting research for a particular area to also take into account the whole picture, especially when they are closely connected. According to Statista Research Department analysis of digitalization in the European Union, in 2022 (Fig. 1.2),

Finland was the European country with the highest score on the Digital Economy and Society Index (DESI), ranking first in the human capital component due to the advanced digital skills of its citizens. Denmark ranked first for its connectivity (i.e. access to the internet services). Estonia was the first in digital public services. Greece, Bulgaria, and Romania were the member states with the lowest scores in the digitalization of their economy and society [3].

Among the leaders in digitalization is Ireland that takes 5th place by digitalization, therefore, Ireland obtains certain advantages by being technologically advanced, such as attracting qualified workforce, creating international ties for economic and business cooperation, and remaining on top of the possibilities that online space and new inventions open daily.



*Figure 1.2. Digitalization Level of the European Union in 2022, by Country*

*Source: Statista [3]*



Overall, European countries, especially those of the Western Europe, possess sufficient technological advancement, relatively equally distributed among them without drastic distinctions which makes the European Union one of the leaders in the technological and service industry and allows it to retain competitive advantage along with the United States and Eastern Asian countries.

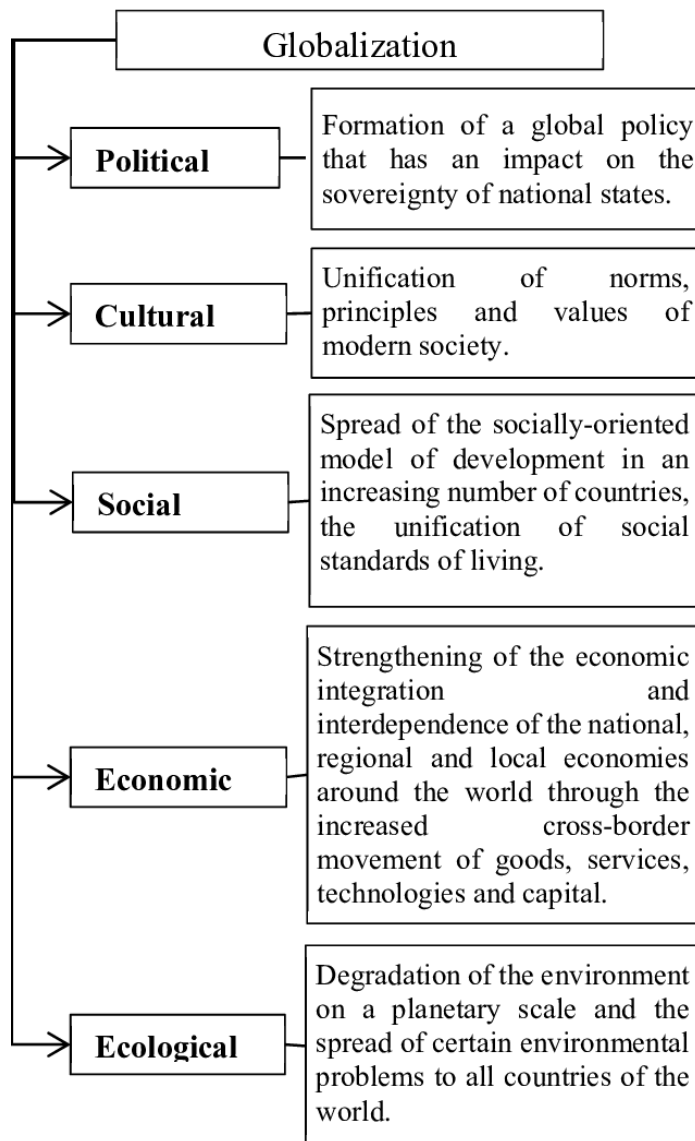
## **1.2. Globalization, defining and understanding the phenomena**

The term "globalization" refers to the increasing interdependence of the economies, cultures, and populations throughout the world as a result of technology, cross-border trade in goods and services, and flows of capital, people, and information. Over many years, nations have developed economic alliances to support these movements.

Although many people think of globalization as a twentieth-century phenomena, it has actually been occurring for thousands of years. To illustrate the point of co-called genesis of globalization phenomena, there are several historical examples. Since at least 600 B.C., the Roman Empire has significantly influenced much of the ancient world with its political and economic structures. The commerce of the Silk Road. These trade lines, which existed between 130 B.C. and 1453 A.D., were a part of a subsequent phase of globalization. Through Central Asia, the Middle East, and Europe, they transported traders, products, and tourists from China. before World War I. The decades leading up to World War I saw enormous foreign investment by European nations. The "golden age of globalization" was between 1870 and 1914. after World War II. A global economic system with a set of well regarded international regulations was developed under the leadership of the United States. To advance global cooperation and free commerce, multinational organizations such as the United

Nations (UN), International Monetary Fund (IMF), World Bank, and World commerce Organization were founded [46].

As to date, the most common classification of globalization includes 5 main types: political, social, cultural, economic, and ecological, presented and briefly described in Fig. 1.3. Mentioned five aspects have started corresponding movements as to establishing global interconnections and international cooperation by creating organizations such as the United Nations (UN), Organisation for Economic Co-operation and Development (OECD), Organization for Security and Co-operation in Europe (OSCE), European Union (EU), and World Trade Organization (WTO), forming alliances, such as G20, G7, and uniting people in new ways in order to achieve particular goals and redefine criterias according to which people associate themselves with.



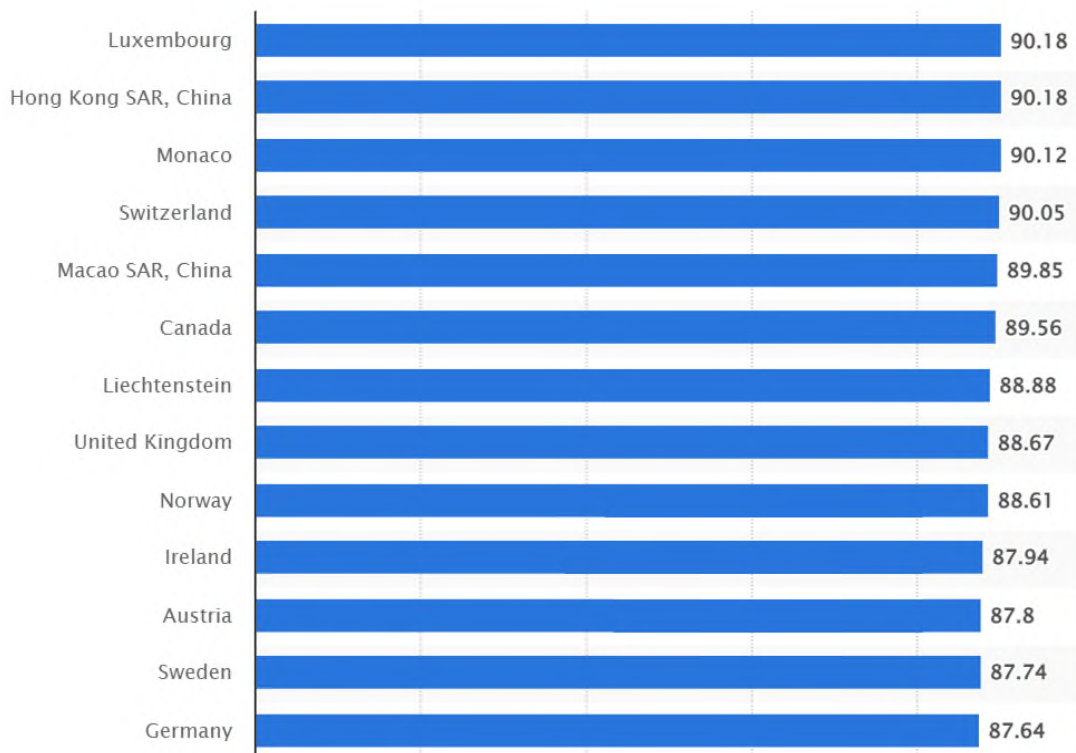
*Figure 1.3. Main forms of globalization.*

*Source: Research Gate [45]*

The topic of research requires focusing mostly on the economic and socio-cultural aspects of globalization, with the purpose of better and clearer understanding of the subject. Therefore, socio-cultural globalization refers to the process by which people around the world become more interconnected and interdependent in terms of social and cultural factors, such as values, beliefs, customs, and lifestyles. It involves the spread of ideas, information, and cultural practices across national borders, facilitated by advances in communication, transportation, and technology.

Examples of social globalization include the adoption of popular culture, behaviors, social norms, interests, and fashion trends due to unification of society by social medias, the diffusion of religious and spiritual practices, the growth of social platforms and online communities, and the emergence of global civil society organizations that promote human rights, environmental sustainability, and other social causes. In addition, English and Hindi are spoken and understood almost all over the world and are used widely, which immediately eliminates obstacles on the way of intercultural communication and cooperation. All of the above contributes to creating a somewhat universal culture and society, making significant differences that have previously determined one's path in terms to their native environment and cultural background, fade.

Figure 1.4 fortifies the point that globalization goes hand in hand with digitalization, as all of the aforementioned results of socio-cultural globalization would not be possible without advanced technological development. Therefore, the most globalized countries in the sense of social interconnections are the ones with the strongest technological facilities.



*Figure 1.4. Leading countries in the Globalization Index field of social globalization 2022*

*Source: Statista Official Website [47]*

Social globalization can have both positive and negative effects on societies. On the one hand, it can foster greater understanding and empathy among people from different cultures, leading to increased tolerance and respect for diversity. On the other hand, it can also lead to cultural homogenization, as dominant cultures exert influence over smaller or marginalized ones, potentially eroding local traditions and values.

Cultural globalization has been facilitated by the information revolution, the spread of satellite communication, telecommunication networks, information technology, and the Internet. The global flow of ideas, knowledge, and values is balancing cultural differences between nations, regions, and individuals.

Economic globalization is the term used to describe the rising interconnectedness of the world's economies as a result of the expansion of international capital flows, the wide and quick diffusion of technology, and the size of cross-border trade in goods and services. It is an unstoppable tendency for global economic development and demonstrates how market borders are continuously expanding and integrating with one another. The two main forces driving economic globalization are the marketization and increasing use of information in all forms of productive activities. As a result of the environment in which the market economic system has been rapidly spreading throughout the world, the world's economies have been extensively globalizing in recent years. This development has been based on the increasing cross-border division of labor that has been permeating down to the level of production chains within enterprises of different countries [6].

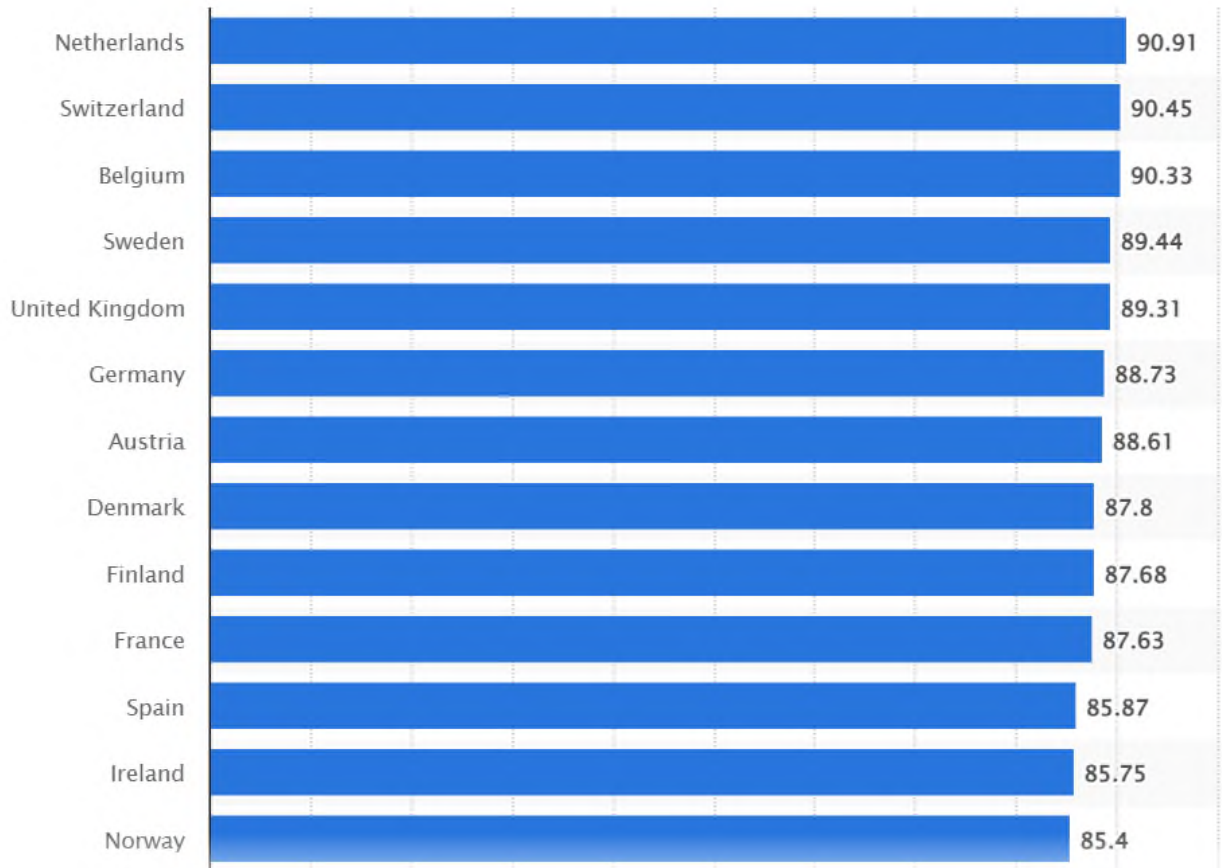
Generally speaking, economic globalization is based on an exchange of some sort with mutual benefit for involved parties, however, there are certain exceptions due to inevitable market dominance, resource excess, power superiority, and other factors that make an arrangement more profitable for one and less for other.

As to estimating levels of globalization, the KOF Index of Globalization (Fig. 1.5) aims to measure the rate of globalization in countries around the world. Data used to construct the 2020 edition of the index was from 2019. The index is based on three dimensions, or core sets of indicators: economic, social, political.

Economic globalization is measured by the actual flows of trade, foreign direct investment and portfolio investment, as well as the restrictions applying to these flows. Social globalization is expressed as the spread of ideas, information, images and people. It is estimated by personal contact (international telephone traffic, transfers, tourism, foreign population, and international letters), information flows (Internet users, television ownership, trade in newspapers), and cultural proximity (number of McDonald's restaurants, number of Ikea shops and trade in books). Political globalization is characterized by the degree of political cooperation. It is measured by the number of embassies, membership of international organizations, participation in UN Security Council missions, and number of international treaties signed [7].

Via these three dimensions, the overall index of globalization tries to assess current economic flows, economical restrictions, data on information flows, data on personal contact, and data on cultural proximity within surveyed countries.

Globalization for this index is defined as the process of connecting actors across several continents through a range of flows, including people, information and idea flow, capital and goods flow, and other flows. It is a process that blurs the lines between nations, combines their economies, cultures, technologies, and systems of government, and creates intricate webs of interdependence [4].



*Figure 1.5. Top countries in the globalization index 2021.*

*Source: Statista [4]*

Figure 1.5 confirms that the most developed and wealthy countries in the world are ones with the highest globalization levels, which brings up a point that in order to remain viable and competitive in the modern economic environment, a state must establish cooperative bonds and business relationships with other countries. Globalization is an antonym to closed economies, the latter nowadays may be called “an economic suicide”, since countries became so interconnected with one another that is near impossible to satisfy all economical and social needs in closed economical environment. Whether it is related to trade, market access, natural resources, labor force, or manufacturing facilities, any given economy can develop and grow only in cooperation with other countries. As a result, the term “global economy” is widely used nowadays.

Countries that are perceived as more economically globalized (Fig. 1.6) are those with low tariffs on imports, more free-trade agreements, regulation that accommodates foreign investment and lower non-tariff barriers to trade such as safety regulations on imports. However, when it comes to globalization processes and their effects on nations, economic globalization falls short of providing a whole picture. Thus, as seen by the index for social globalization and index for political organization, academics have focused on the social and political implications of globalization [5].

Characteristic	Index value in points
Singapore	94.28
Netherlands	90.12
Belgium	88.75
Ireland	88.14
Luxembourg	87.77
Malta	87.18
United Arab Emirates	86.55
Switzerland	86.33
Estonia	86.13
Denmark	84.53
Sweden	84.41
Hong Kong SAR, China	84.29
Finland	83.86

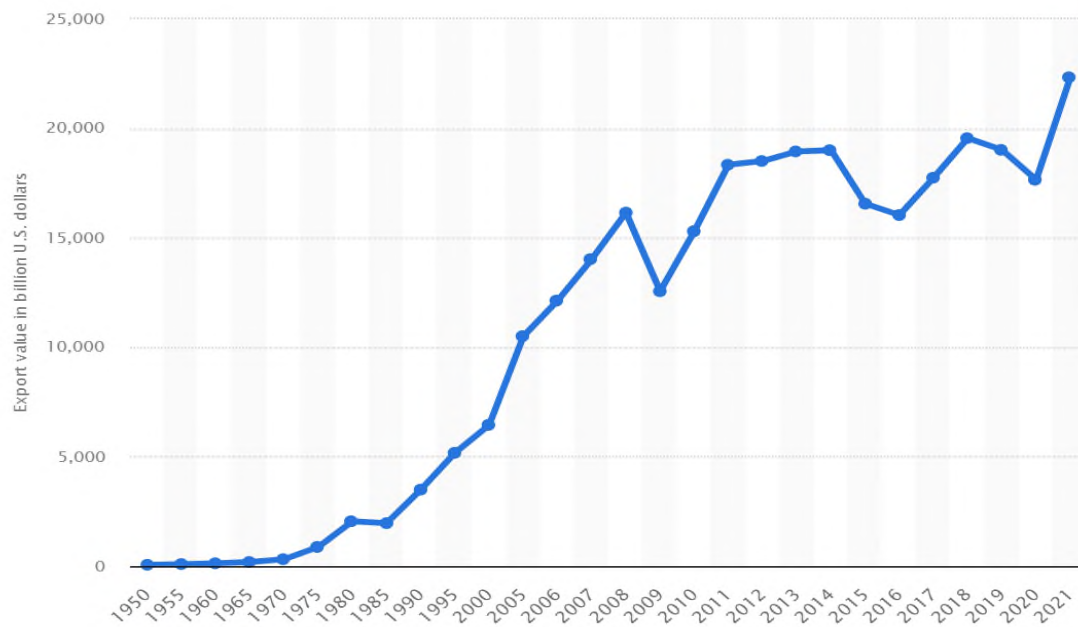
*Figure 1.6. Leading countries in the Globalization Index field of economic globalization 2021.*

*Source: Statista [5]*

In addition to conducting mutual business and economic agreements that foster globalization, international organizations including the World Bank, International Monetary Fund, and World Trade Organization aimed to lower the obstacles to cross-border trade in products, services, and financial markets. In the decades following their inception international trade has skyrocketed to become a cornerstone of the



international economy, as demonstrated by trends in global export volume of trade in goods from 1950 to 2020 (Fig. 1.7). According to current exchange rates, the value of products shipped globally in 2021 was almost 22.3 trillion dollars. In 2000, this amount was around 6.45 trillion US dollars. The increase in the value of commodities shipped globally is a result of expansions in global trade, globalization, and technological advancements [8].



*Figure 1.7. Trends in global export volume of trade in goods from 1950 to 2020*

*Source: Statista Official Website [8]*

### **1.3. Interconnections and mutual influence of digitalization and globalization in the business environment**

The Organization for Economic Cooperation and Development (OECD) Secretary-General, Mathias Cormann, provided an insight into the developments that are transforming the world economy and spawning new markets: “An increase in digital connectivity between two countries leads to increased export of goods and services.

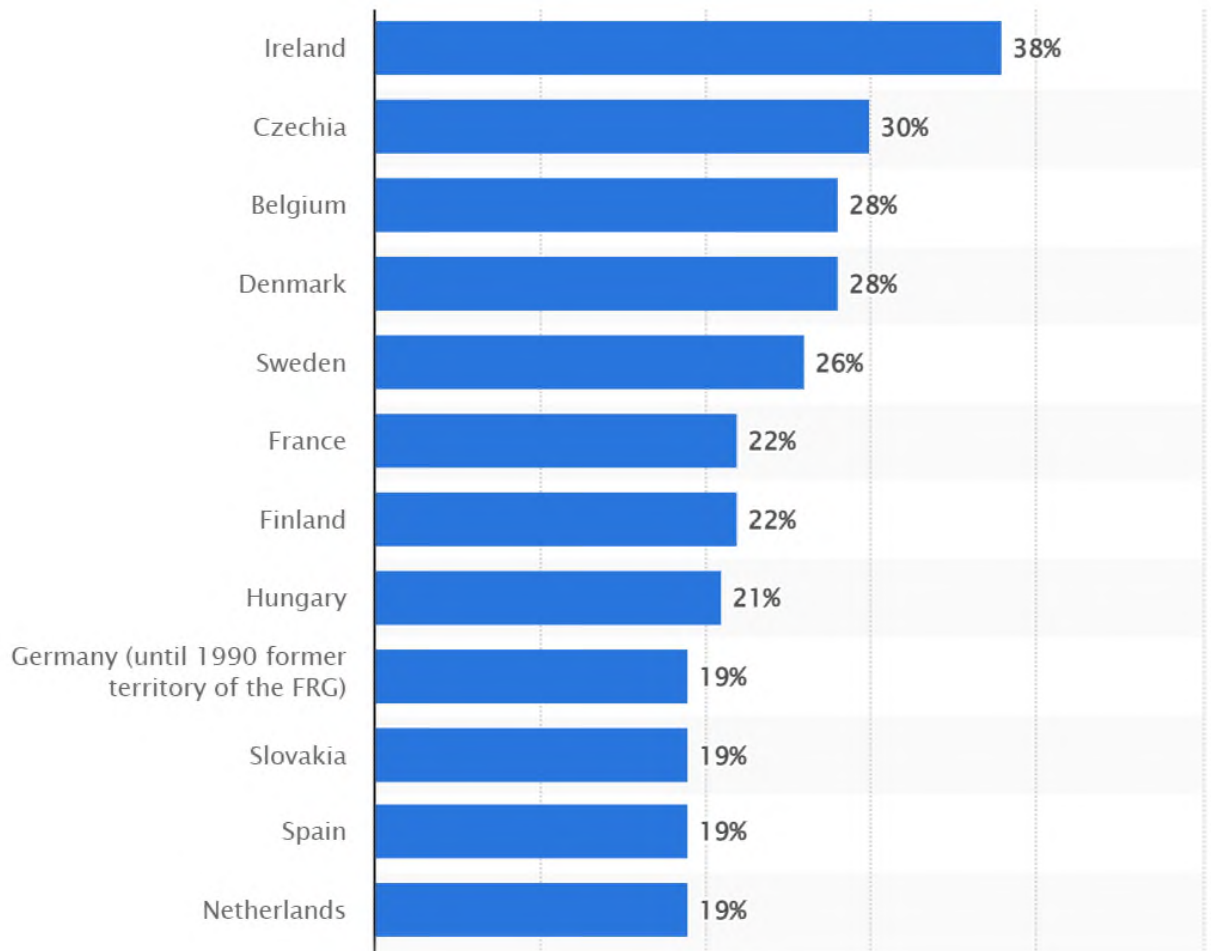
Digitalization also facilitates border processes, reducing the cost of doing business when they are automated” [9].

Nevertheless, preserving these economies entails dangers. According to Cormann, governments must put measures in place to support small and medium-sized firms during the shift: “Responsible governance is critical to optimizing the benefits [of advanced technologies] by better managing the potential risks associated with the digital transformation of our economies. Digitalization has disrupted and reshaped competitive dynamics – ensuring that policies and regulations remain appropriate and well adapted is key” [9].

Analyzing the sudden rise in digitalization in the last few years, a popular opinion is that Covid-19 has forced this prompt development, as means to successfully adapt to changing realities. However, pandemic cannot be perceived as the main reason for the rapid wave of digitalization that the world is currently experiencing. Without doubt, the pandemic has played a significant role in the matter, nevertheless, Covid-19 is considered only as an accelerator to those transformations, heavily impacting economies, consumer behaviors, and business operations, and thus fostering digital transformation at higher rates.

A crucial aspect of rapid technological progress of the 21st century also refers to the well-known fact that with every new invention the upcoming ones will happen quicker, because next generations have the ability to work on the basis of already established truths and existing discoveries. Therefore, in the last 20-30 years we have experienced an all-areas development so exponential that previously it would take centuries to achieve.

In 2021, European companies generated part of their revenue through e-commerce sales (Fig. 1.8). The country with the largest e-commerce revenue in 2021 continued to be Ireland with 38 percent. Followed by Czechia (30%), Belgium (28%), and Denmark (28%).



*Figure 1.8. E-commerce revenue share of companies in Europe in 2021, by country*

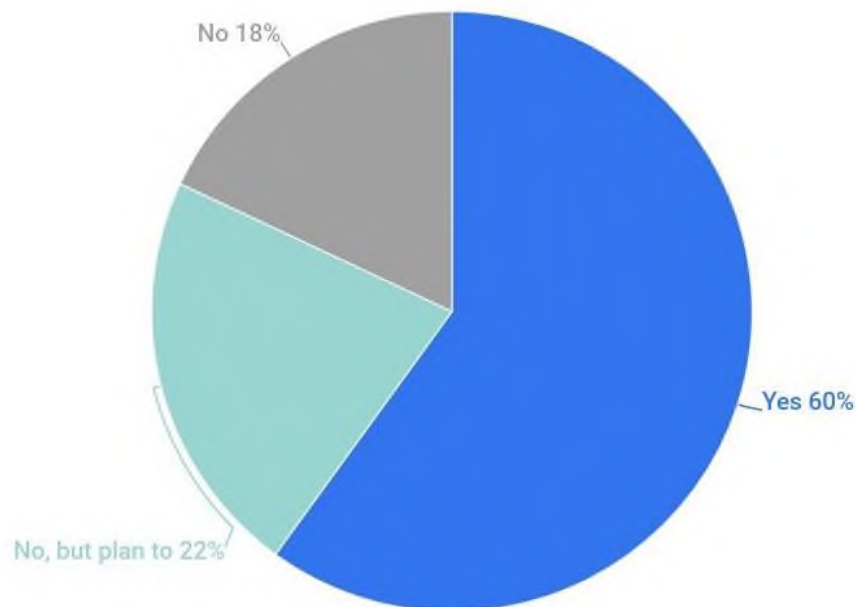
*Source: Statista [10]*

In terms of the beneficial influence of digitalization on business growth and development, among other aspects, like increase in production efficiency, lowering costs due to cheaper manufacturing methods, international cooperations which are often based on division of labor, digitalization also appears as means to achieve recognition and popularity for a company, in addition to form a wider client audience, with no regard on location.

This brings up the point of a business's online presence, that is having websites. Besides that a website is a company's literal face, it also helps an enterprise to build credibility in a particular industry and legitimizes a business, no matter how small. It is no news that companies worldwide create and launch their personal websites, social

media pages, and even whole applications, all with the purpose of attracting more people and being easy to work with. However, for smaller businesses it is vital to make themselves seen and known in order to survive the competition. The chart below (Fig. 1.9) displays the ratio of small enterprises that do have a website, and the number comprises more than 60%, in fact, it is growing steadily every day.

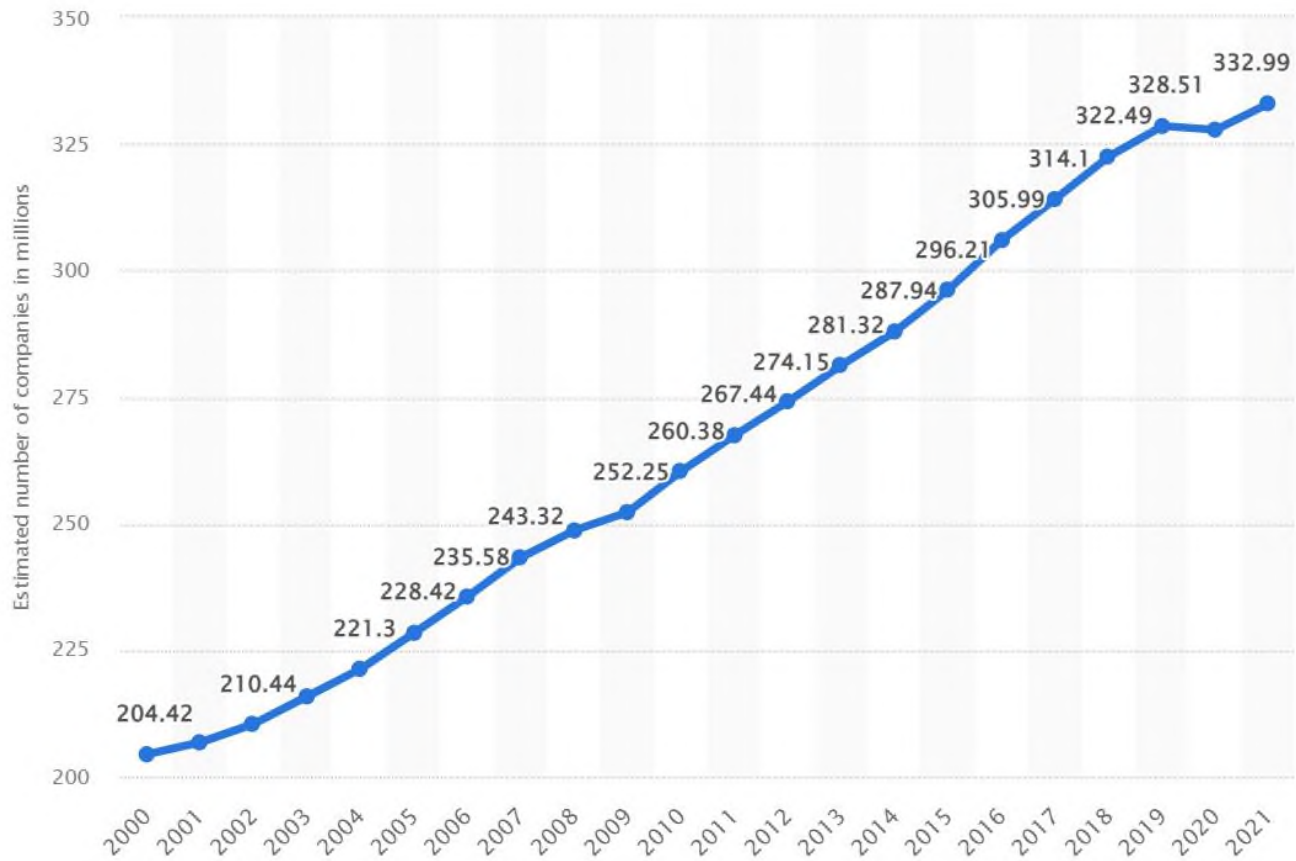
#### DO SMALL BUSINESSES HAVE WEBSITES?



*Figure 1.9. How many businesses have a website*

*Source: Zipa Business Express [11]*

Taking a look at a current number of small and medium sized enterprises (Fig. 1.10), it was estimated at almost 335 million businesses worldwide in 2021. Which, if taken by 60% of companies that have a website, will equal around 200 million websites in 2021.



*Figure 1.10. Estimated number of small and medium sized enterprises (SMEs) worldwide from 2000 to 2021*

*Source: Statista Official Website [12]*

Further research covers the ultimate question of interconnection and mutual influence of globalization and digitalization from the economic perspective [48-50]. Digitalization has enabled businesses to communicate, collaborate, and conduct transactions across borders in real-time. This has led to the growth of global supply chains and the expansion of global markets. Digitalization has made it easier for businesses to access customers, suppliers, and partners in different parts of the world, and has reduced the cost and time required to do so.

Globalization has driven digitalization: The need to compete in global markets has driven businesses to adopt digital technologies to increase efficiency, reduce costs, and improve their competitive position. For example, businesses have implemented digital

technologies to streamline their supply chains, automate processes, and reach customers through online channels.

Digitalization has enabled new business models: Digital technologies have enabled new business models that transcend geographical boundaries and traditional business structures. For example, digital platforms like Uber and Airbnb have disrupted traditional industries by connecting consumers with providers in real-time, without the need for physical infrastructure or inventory.

Globalization has increased demand for digital skills: Globalization has led to the emergence of new markets and new ways of doing business, which has increased the demand for digital skills. Businesses that want to compete in global markets need employees who have the digital skills necessary to operate in a global, digital environment.

Digitalization has enabled data-driven globalization: Digital technologies have enabled businesses to collect, analyze, and share data in real-time, which has enabled them to make better-informed decisions about global markets and customers. Data-driven globalization has enabled businesses to tailor their products and services to the needs of global customers, and has enabled them to anticipate and respond to changes in global markets.

Numerous scholars and business scientists have studied the matter of digital globalization over the years and the research continues due to the fact that economies, societies, markets, and the global environment in general transform daily. As essential as it is to study the objective nature of the phenomena along with data that supports it, there are various opinions on the matter, hence, discovering them will contribute to overall understanding of consequences that digitalization and globalization brings to shaping the modern world.

Anthony Giddens, for instance, argues that globalization has created a global risk society, in which people and institutions are increasingly interconnected and interdependent, leading to new and unpredictable forms of risk. This means that issues such as economic instability, climate change, terrorism, and pandemics are no longer

isolated problems, but global risks that can affect people across borders. Giddens also emphasizes the importance of cultural and social aspects of globalization, in addition to the economic and political dimensions. He asserts that globalization is not just about the spread of markets and technologies, but also about the diffusion of cultural practices and ideas that can have significant social and political consequences [51].

Manuel Castells has focused on the role of information and communication technologies in shaping the global economy and society. He states that digital technologies have enabled the creation of a global network society, in which people and organizations are increasingly connected and interdependent. He also highlights the rise of new forms of power and inequality in this networked society. This has led to the emergence of new forms of power and inequality, as some individuals and organizations are able to leverage their network connections to gain advantages over others. Castells also highlights the importance of understanding the relationship between technology and social structures, as the emergence of new technologies can have significant implications for power relations and social organization [52].

Thomas Friedman, on the other hand, in his "The World Is Flat" claimed that technological advances in communication and transportation have made it possible for individuals and businesses to operate on a global scale like never before. He also highlighted the rise of new economic powers in the developing world and the challenges this presents to traditional Western powers. Friedman argues that globalization has created a level playing field for individuals and businesses around the world, but also that it has increased competition and accelerated change. He emphasizes the importance of adaptability and innovation in the face of these changes [53].

Joseph Stiglitz has written about the economic effects of globalization, particularly on developing countries. He proves that globalization has led to increased inequality both within and between countries, and that traditional measures of economic growth do not capture the full picture of well-being and social progress. Stiglitz argues that globalization has benefited the wealthy and powerful at the expense of the poor and

vulnerable, and that a more equitable global economic system is needed to address these inequalities. He also emphasizes the importance of social safety nets and investments in education and infrastructure to support economic growth and reduce inequality [54].

Finally, Saskia Sassen in her research has focused on the formation of global cities and the emergence of new forms of economic and political power. She argues that global cities are key sites for the concentration of economic power, and that they often function as nodes in global economic networks that transcend national boundaries. She also highlights the importance of understanding the interplay between global and local forces in shaping the urban landscape. This has led to the emergence of new forms of economic and political power that operate beyond traditional state structures. Sassen also highlights the importance of understanding the local impacts of globalization, as global economic processes can have significant implications for the social and economic development of individual cities and regions [55].

Along with the fundamental points provided above, modern scholars have made more recent discoveries as to how digital globalization impacts the world and creates certain patterns that society experiences.

For example, Pankaj Ghemawat, a professor of Global Strategy at New York University's Stern School of Business, has written extensively about globalization and international business. In a recent article for Harvard Business Review, he argues that digital technology is not as transformative as some people believe, and that it has not yet led to a fully globalized business environment. While digitalization has made it easier to communicate and share information across borders, there are still significant differences in language, culture, and regulation that can impede the flow of goods and services across borders. Ghemawat argues that companies should focus on understanding these differences and developing strategies that account for them, rather than assuming that digital technology will erase them [56].

Erik Brynjolfsson and Andrew McAfee, professors at MIT's Sloan School of Management, in their book "The Second Machine Age," state that digital technology



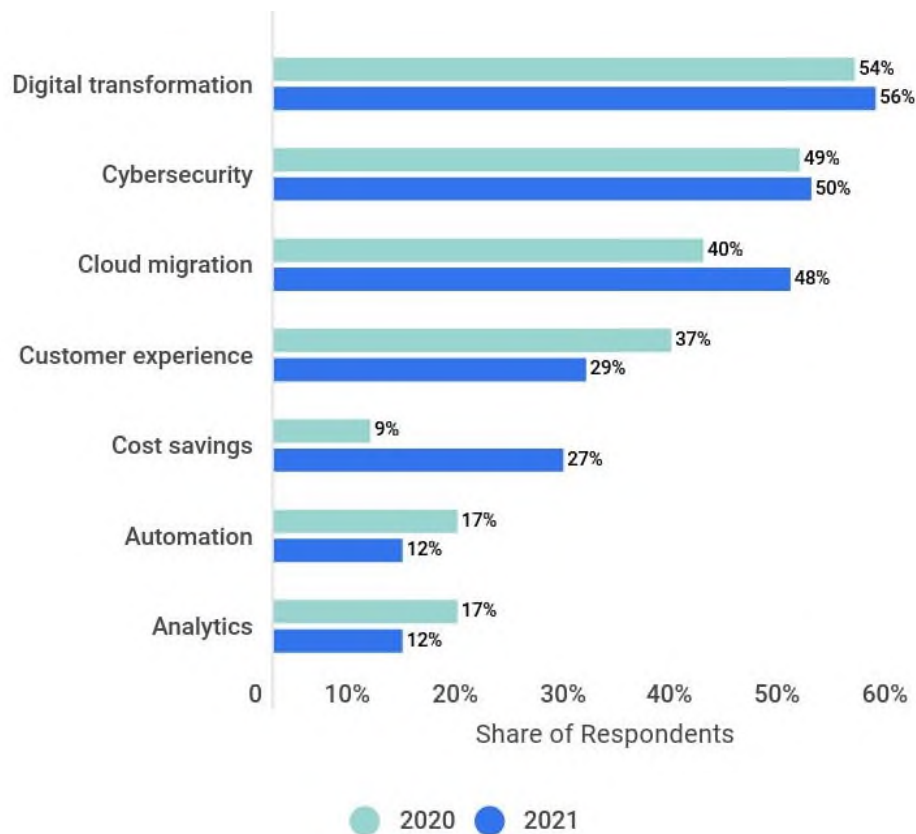
is transforming the global economy, and that it has the potential to create both winners and losers. They suggest that companies should focus on developing and deploying digital technologies in ways that augment human labor and create new opportunities for workers, rather than simply replacing human workers with machines. They also emphasize the importance of investing in education and training to help workers adapt to the changing demands of the digital economy [57].

Furthermore, Richard Baldwin, a professor of International Economics at the Graduate Institute of International and Development Studies in Geneva, in his book "The Globotics Upheaval," he proposes that digital technology is transforming the nature of work and the global economy, and that it has the potential to create significant disruptions and inequalities. He suggests that companies and policymakers should focus on ensuring that the benefits of digitalization are distributed more equitably, and that workers are supported through education and training programs. He also argues that companies should be more transparent about their use of digital technology and its impact on workers, and that governments should be more proactive in regulating the digital economy [58].

Overall, experts in the area suggest that digitalization and globalization are deeply interconnected, and that they are transforming the business environment in significant ways. While digital technology has the potential to create new opportunities for companies and workers, it also creates new challenges and risks, and companies and policymakers need to be proactive in addressing them. The experts also emphasize the importance of understanding the social and political implications of digitalization and globalization, and of developing strategies that account for these broader concerns. Since the websites are available in any country with the internet access, therefore, they provide an opportunity to any given individual to participate in international trade via shopping, online services, or any other offers. To trace the interconnection between digitalization and globalization, the digitalization is largely driven by the internet, a.k.a the World Wide Web that works as a tool that unites people and countries, while diminishing borders among them, which is basically what globalization is based on.

To illustrate the statements mentioned previously regarding the impact of digitalization and globalization on the business environment and also to highlight the ongoing changes and measures that are being taken, several charts are provided below.

Figure 1.11 represents the key activities that companies are currently paying close attention to, in order to stay competitive and viable. The chart displays that 56% of companies are currently prioritizing digital transformation worldwide as of 2021. This represents a growth of 2% from the previous year when 54% of companies were making digital transformation one of their main priorities instead of cybersecurity, cloud migration, and customer experience.

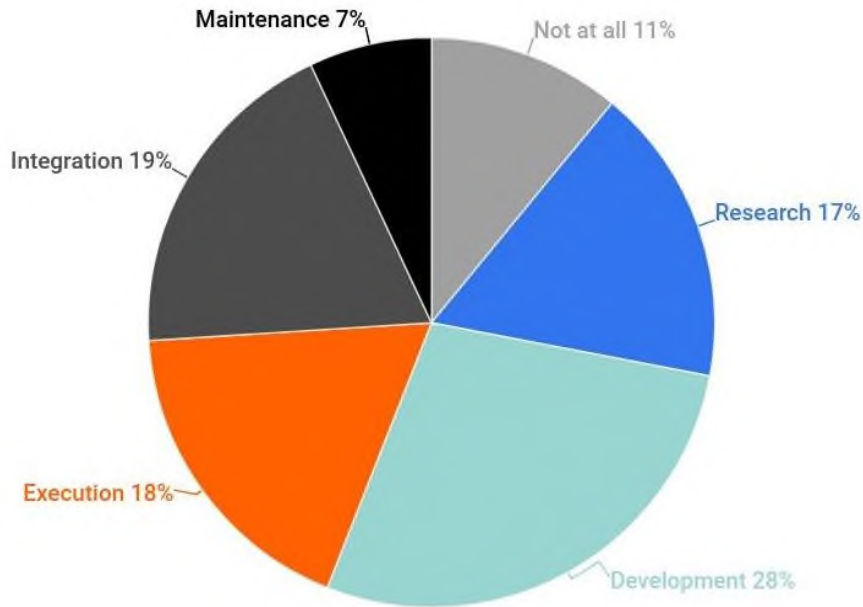


*Figure: 1.11. Top company initiatives for development*

*Source: Digital Transformation Statistics 2023 [59]*

According to one survey of 1,010 CIOs [59], digital transformation leadership is one of the main priorities for CIOs at 58% of companies (Fig. 1.12). This means that at 3 out of 4 companies, the CIO contributes significantly to the imagination and

strategy of digital transformation. Adding a new element and greatly expanding the responsibilities of CIOs. Only 7% of companies have fully implemented digital transformation and are now in the maintenance phase. The majority of companies, 28%, are still in the development stage of digital transformation.



*Figure: 1.12. Current integration phase for U.S. companies*

*Source: Digital Transformation Statistics 2023 [59]*

## CHAPTER II. IMPACT OF DIGITALIZATION ON THE DEVELOPMENT OF GLOBALIZATION ON THE EXAMPLE OF A COMPANY QUALTEC

### 2.1. General familiarization with the business entity, analysis of the state activity

Qualtec was established in 1992 by Sean Kelleher and specializes in the delivery of Instructor Courses. Since then, they have trained over 10,000 people as Instructors. They began delivering the Manual Handling Instructor program and then progressed onto delivering the Patient Handling Instructor Course. Qualtec was one of the first companies to become approved by FETAC in 2008 to deliver the Level 6 Manual Handling, People Moving Instructor programmes. They are also approved to deliver the Level 6 Training Delivery & Evaluation course.



*Figure 2.1. Official Qualtec Logo*

*Source: Official Qualtec website [18].*

In 2013 Qualtec became a PHECC Recognised Institution and began delivering the CFR Instructor program. In 2017 they were one of the first training organizations approved to deliver the new First Aid Responder Instructor courses and have assisted over 150 trainers progress from being Quality Qualifications Ireland Level 6 OFA Instructors to becoming FAR Instructors.

When the Covid global pandemic hit in 2019 Qualtec recognized the potential to use Blended Learning as an approach to the delivery of its programs.

Blended learning is a recently popularized type of education that is based on technological advancement and integrates digital platforms and online media, as well as traditional face-to-face approach, which provides higher flexibility and efficiency of learning process, along with opportunities to cooperate and work globally, not being limited by the location of an enterprise.

Qualtec already had experience in using blended learning as a medium for the delivery of training. In 2005 Qualtec was contracted to develop and provide a Blended Learning option for the Institute of Occupational Safety and Health (IOSH)'s Managing Safely Programme for Chambers Ireland. This ensured Qualtec with a strong grounding in the requirements of an effective Blended Learning Approach. Qualtec's Managing Director carried out an analysis on the Effectiveness of e-learning as a medium for Health & Safety training as his project for his dissertation for the Diploma in Occupational Safety & Health. This project concluded that Blended Learning can be an effective tool for the delivery of Health & Safety courses.

To date Qualtec's Blended Learning Approach has been limited to the use of Webinar (Live training) followed by classroom training. The definition of "Blended learning" used by PHECC & QQI is "the integration of classroom face-to-face learning experiences with online learning experiences" as defined by Garrison and Kanuka (2004). This is the approach that Qualtec intends to adopt for the delivery of its current programs. It will use a combination of classroom based face-to-face training, live "webinar" training and e-learning training for its courses.

Both PHECC and QQI gave emergency approval for the use of Blended Learning for the delivery of their programmes. This emergency approval remains in place until today. Both PHECC and QQI have developed guidance documented on the use of Blended Learning for the delivery of their programmes. Blended Online Learning as an Approach to Deliver PHECC Recognised Courses.

Since then, Qualtec delivered QQI Instructor programmes to over 400 learners using a Blended Learning approach. The company also developed and delivered an Infection Control Instructor programme based on the HSE's Core Infection Prevention

and Control Knowledge and Skills and trained over 80 Facebook managers worldwide to be Infection Control Instructor. The approach has proven to be very effective and has received very positive feedback from these learners. This feedback also includes a preference for a Blended Learning approach over the traditional teaching model.

With that in mind, Qualtec has begun developing e-learning training material for its PHECC First Aid Responder course that can be placed on their Learning Management System to provide the full Blended Learning Approach described above. This course has been developed in accordance with PHECC's Blended Online Learning as an Approach to Deliver PHECC Recognised Courses and is currently being reviewed by PHECC.

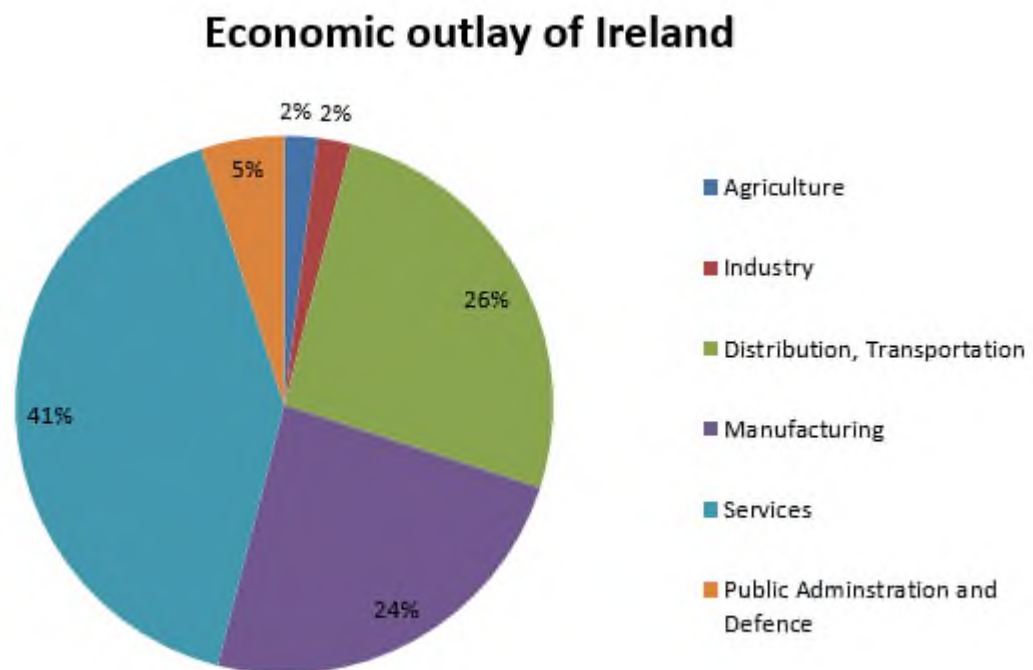
Qualtec has been approved by several international and local organizations, as an entity which is well-qualified for providing programs and services for other businesses and individuals. In addition, wide recognition contributes to increasing trust among potential clients to rely on Qualtec as a professional in its area. These accreditations include: Community First Responders (CFR Community), Pre-Hospital Emergency Care Council, and QQI (Quality and Qualifications Ireland).

Qualtec's core purpose is set out in its mission statement: "As an organization, our mission is to ensure that our learners leave our courses being both confident and competent in the skills that we have trained them in." Qualtec's values can be summarized as Integrity and Professionalism. This is achieved by ensuring that they train and advise learners honestly and professionally in how they can progress in their own right as competent, professional trainers and instructors.

Since Qualtec is an Irish company, therefore, it is a part of the Irish service market which comprises more than 40% of total economy and continues ongoing rise (Fig. 2.2). As a member of the European Union, Ireland takes 3rd place among other European countries by Human Development Index, following Norway and Switzerland [14, 17]. Therefore, current economic and social conditions affect Qualtec in a positive way creating a room for growth and development. With a further increase in the service area of the Irish economy and world in general, companies such as

Qualtec are faced with new challenges, but at the same time a bunch of new opportunities, for instance exploring markets outside of domestic borders.

By the GDP estimation of the National Monetary Fund, Ireland has 14<sup>th</sup> place in the world in 2021. Currently, Irish GDP rose by 10.8% in Q1 2022, after a 6.2% contraction in Q4 2021. Taking this into account, GDP is expected to rise by 8.2% GDP growth by the end of 2022 into double-digit territory [19, 20]. Today, Ireland's economy is growing solidly, nevertheless, issues of real estate cost, lack of living space, and cost-of-living pressures have significantly increased, since the drastic influx of Ukrainian refugees on the Irish territories. The Irish economy growth is now estimated at 1.8% quarter-on-quarter in the second three months of the year, surprisingly quite ahead of the eurozone [23].



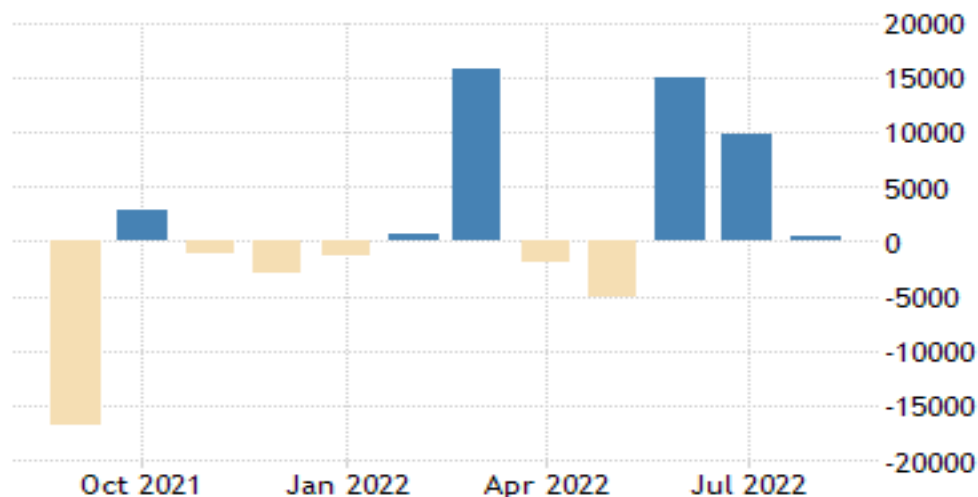
*Figure 2.2. Sectoral economy of Ireland*

*Source: Easyuni Website [14]*

Current political situation has affected heavily each country in the world, especially the European Union which provided shelter for thousands of people. With the influx of refugees, we can observe an increase in population of Ireland in particular, which

will ultimately lead to the rise in job market, and lower demand for labor, since there are more people who are looking for and willing to work. Analyzing the most recent unemployment rates in Ireland [22, 24] after the Ukrainian-Russian war started, we observe an increase in unemployment due to rapid population boom (see Fig. 2.3). At the same time, taking into account the amount of newly-arrived workforce, due to Ukrainians mass migration which comprises over 50,000 people [21], the prospect of decrease in salaries is likely, due to rise in job demand.

Overall, there are two scenarios possible based on the given situation: the unemployment rates may continue the negative dynamic, meaning increase of unemployment due to labor market oversaturation, or Ireland will use this extra workforce to boost its economy by creating more job positions in areas that require development.



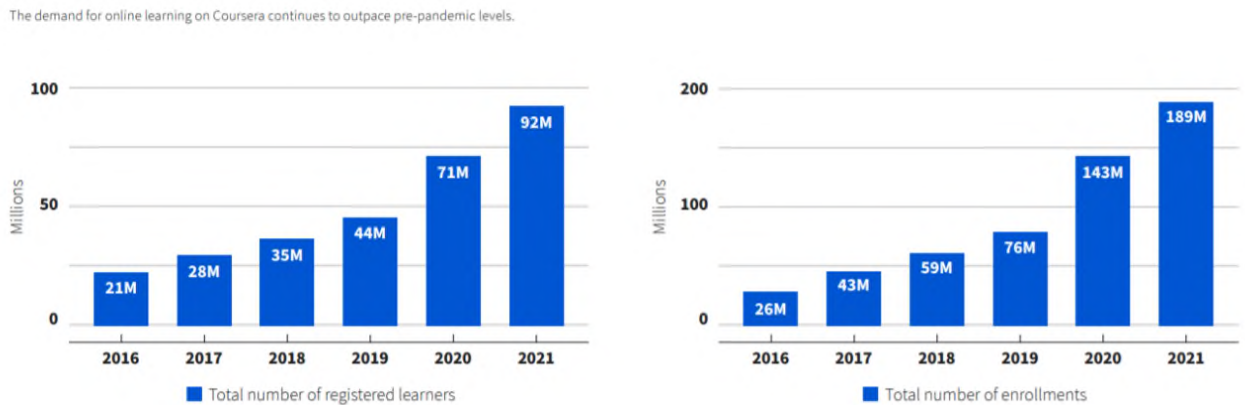
*Figure 2.3. Dynamics of unemployment in Ireland*

*Source: Trading Economics website [22]*

Overall, political, economic, social, and technological factors all contribute to the increase in demand for online learning. People from less developed countries, thriving to get education, enroll for online courses which became accessible to them due to digitalization; political conflicts, such as the Ukrainian-Russian war, have forced mass migration, therefore, distance education became essential; in addition, people got used



to study online and have discovered certain advantages that such approach provides: time-saving, flexibility, availability, and abundance of options. According to the World Economic Forum (Fig. 2.4), the number of applicants for distance education reached 189 million in 2021, with 92 million of registered learners [60]. The gaps between the years become wider with time as the demand grows. And it is what to be expected.



*Figure 2.4. The upward trend in online learning*

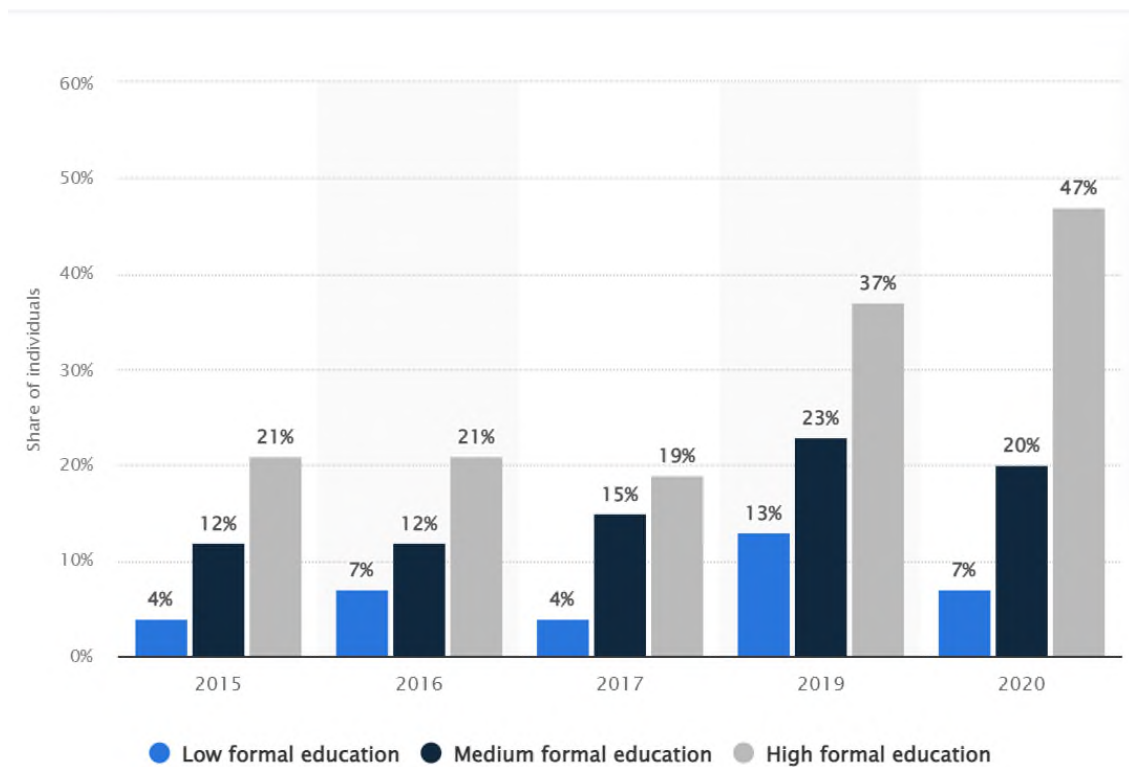
*Source: World Economic Forum [60]*

For Coursera's online courses, 21 million people signed up in 2016, and during the next two years, that figure rose by about 7 million every year. However, the move to remote working as the epidemic spread led to a threefold rise in new registrations, pushing the number to 71 million in 2020 and 92 million in 2021. Similar trends emerged in online course enrollment, with pre-pandemic improvements being swamped by significant increases. A peak of 189 million students were enrolled in 2020, after which enrollment counts more than doubled and rose by 32% the following year. These increases are a reflection of the growing popularity of online learning on a worldwide scale, which includes a growth in the number of remote students enrolled in higher education programs and those who come from isolated or vulnerable regions.

As for the development and popularization of the online education services on the Irish market, it has been a progressive process in the recent years due to factors that include: technological advancements, since rapid development of technology has made distance learning more feasible and effective, with online platforms and tools that

enable students to participate in real-time classes, submit assignments and receive feedback from instructors. In addition, the Irish government has recognised distance learning as a legitimate form of education, and many universities and colleges offer accredited courses and qualifications, which are recognised by employers. Distance learning has also made education more accessible to people who may not have the opportunity to attend traditional classes due to geographical or financial constraints. Finally, the factor that in the most drastic way has affected the rise of online education and distance learning was COVID-19 pandemic which has accelerated the adoption of distance learning as traditional classroom-based teaching has been disrupted. Many educational institutions have switched to remote learning to ensure continuity of education.

Statista conducted a questionnaire that displays the number of people who gave preferences to online education instead of traditional one and the dynamic of demand increase from 2015 to 2020 (Fig. 2.5). When the Covid-19 pandemic hit, the number of online students in distant form of higher education increased from 19% to 37%, however, the growth continued with 40% in 2020 which forecasts further rise in demand for online education.

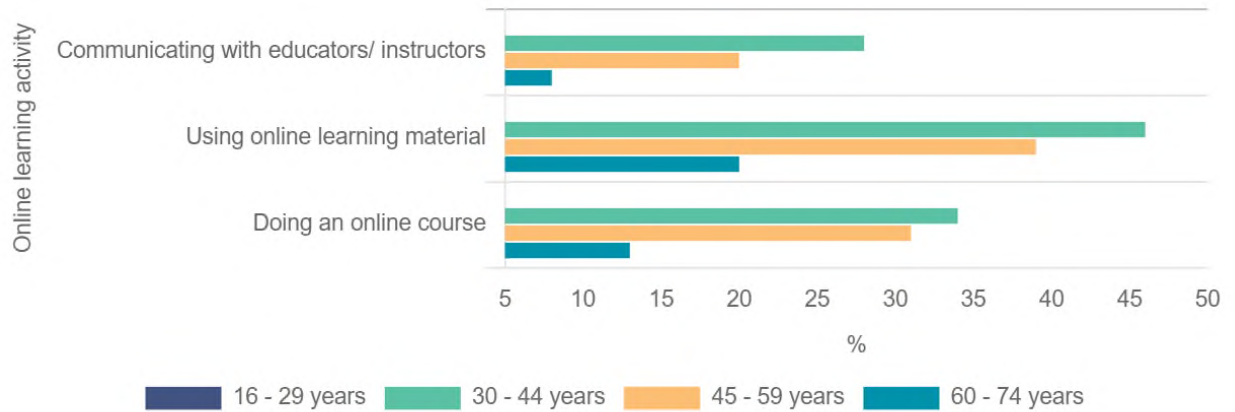


*Figure 2.5. Share of people in Ireland using online learning activities from 2015 to 2020, by formal education*

*Source: Statista Official Website [61]*

In addition to online formal education, there are a variety of courses and programs that the population is constantly engaging into. Figure 2.6 by the Central Statistics Office depicts participation in other kinds of online learning activities as well as their purpose for education in Ireland as of 2022.

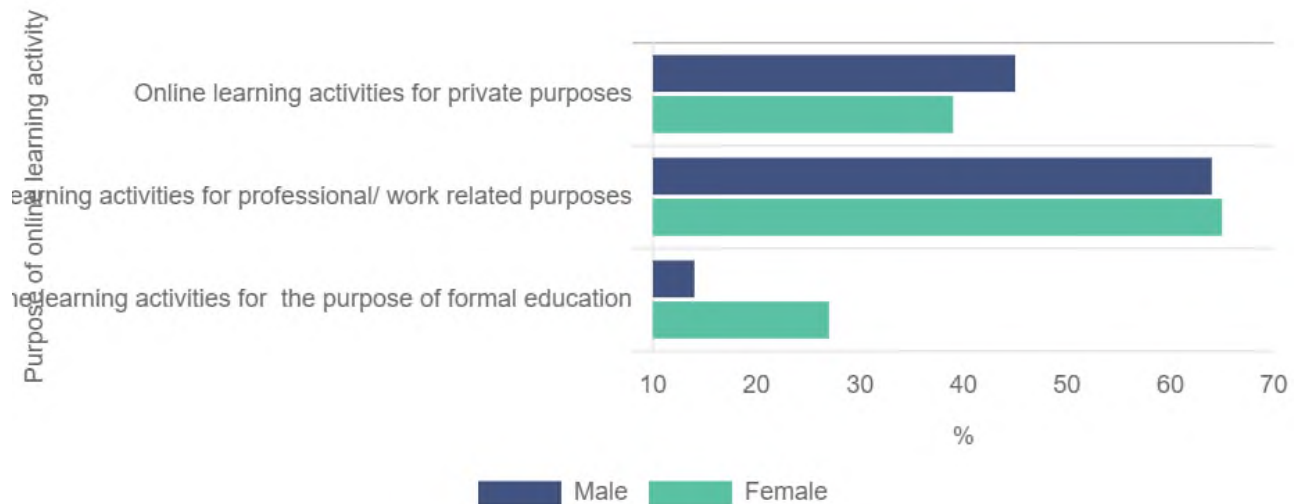
According to a breakdown of the statistics by age in 2022, 13% of internet users between the ages of 60 and 74 took an online course, compared to 34% of people between the ages of 30 and 44 who did so. Only 8% of respondents with home chores reported taking an online course, compared to 36% of people whose primary economic status was at work (Fig 2.7).



*Figure 2.6. Household Digital Consumer Behaviour 2022*

*Source: Central Statistics Office [59]*

Other than a full online course, some internet users used online learning resources and materials to help them study (such as audio-visual materials, online learning software, electronic textbooks, etc.). 38% of internet users reported using online learning resources other than a full online course (such as audio-visual materials, online learning software, and electronic textbooks), an increase of two percentage points over the same time in 2021. In 2022, 45% of male users compared to over 35% of female users of this type of learning resource. Survey data from 2022 reveals that households with children were more likely to engage in this kind of learning activity. Nearly 59% of internet users in households with three or more adults and dependent children used online learning resources like audio-visual materials, online learning software, electronic textbooks, etc., compared to 45% of users in households with two adults and dependent children and more than 42% of users in single parent families. Using audio or video online technologies like Zoom, MS Teams, Google Classroom, Seesaw, Edmodo, etc., 20% of students interacted with teachers or instructors whereas 44% did not use any online learning platforms.



*Figure 2.7. Purpose for which persons conducted online learning activities for educational, professional or private purposes by sex, 2022*

*Source: Central Statistics Office [59]*

Respondents who had taken some type of online learning were asked about its purpose in the 2022 poll. Nearly two thirds claimed that it was done for professional or work-related reasons, 20% claimed that it was done for formal education (such as for school or university), and more than 42% of those who have done online learning claimed that it was done for personal reasons. A sex-based analysis of the survey data reveals that 27% of females and 14% of males participated in formal online learning activities. This is almost twice as many women as men. Similar numbers of males and females had used online learning resources for professional/work purposes, while 45% of males said that some or all of their online learning was for private purposes compared with just 39% of females (Fig. 2.7)

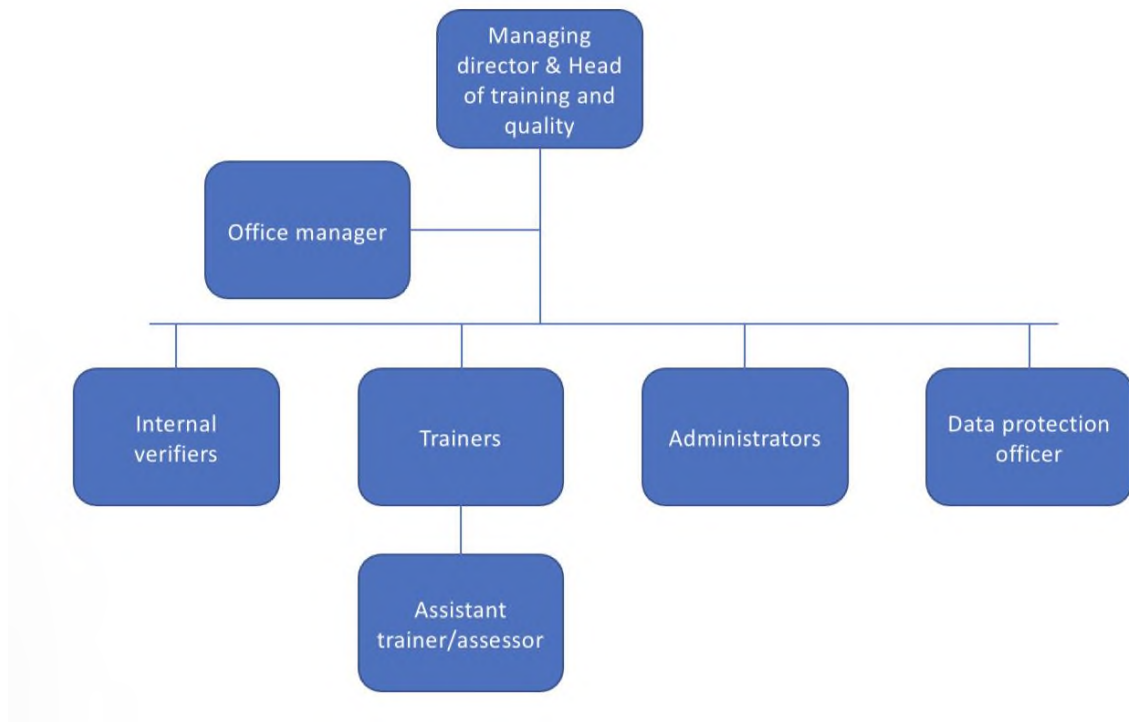
Of persons aged 30 to 59 years who had used online learning resources in the previous three months, eight in ten and over said that some or all of this online learning was for professional/work purposes, compared with less than half (49%) of persons aged 60 to 74 years who had used online learning resources. Two thirds (66%) of the

participants in this older age group claimed to have participated in online learning for personal gain.

## **2.2. Analysis of Qualtec and its economic activity from the perspective of technological development**

The following part is devoted to the detailed representation of the company itself being a concise summary based on the Internship work practice. It briefly describes the main areas of Qualtec's current activity, including economic planning, human resource management, marketing and logistics management, and strategic management from the perspective of engagement in technological operations, in order to gain greater knowledge about the business, as well as to further investigate Qualtec's activity in the digital field and conclude the results along with potential flaws and benefits of the company's approaches.

Qualtec is a family business, owned and managed by Sean Kelleher, who is also the face of the company and main instructor. In addition, he is responsible for controlling all areas of its activity. (For the full company's structure see Fig. 2.8).



*Figure 2.8. Administrative structure of Qualtec.*

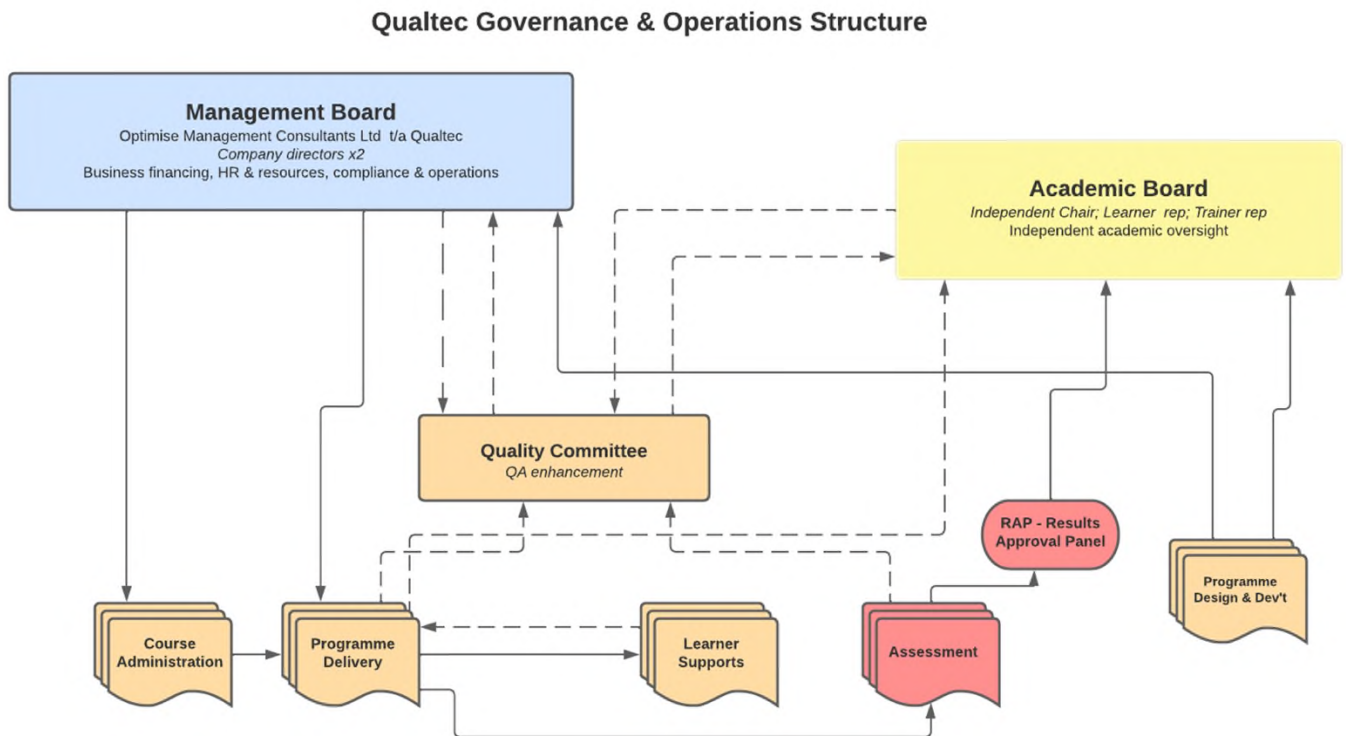
*Source: Prepared in accordance with official information from the company.*

It is Qualtec's policy that the organization has fit-for-purpose governance structures that ensure objective oversight, with clear lines of authority and accountability for all activities associated with its training courses and programmes, including those leading to PHECC and QQI awards.

Qualtec has established an appropriate governance structure to ensure that its scope of activities is governed and managed effectively, with clear and appropriate lines of oversight and accountability. This policy area ensures that academic and commercial decision-making responsibilities within Qualtec are separated and that there is an external dimension to academic governance, e.g., the separation of responsibilities between those who produce and develop training materials and those who approve them.

The different units of governance are outlined in the diagram below (see Fig. 2.9) and this structure describes the lines of responsibility between each governance unit, their Terms of Reference and the respective roles and responsibilities for each unit.

Core Governance Units of Qualtec include: Management Board, Academic Board, Quality Committee, Approval Panel, Office Manager, Head of Training and Quality, Administrator, Internal Verifier, Data Protection Officer, Trainer, Assistant Trainer & Assessor.



*Figure 2.9. Qualtec's governance and operational structure.*

*Source: Prepared in accordance with official information from the company.*

Economic planning as the primary area for securing a company's wellbeing and development may be defined as the process of analysis and documentation of a business' current financial state, identifying further objectives and goals for financial growth. Financial or economic plan itself is a document that consists of steps and tasks that serve for achievement of set financial goals. Economic planning also includes a detailed description of actions that are required in order to achieve short- and long-term financial targets of an entity [28].



The characteristics of comprehensive, realistic and professional economic planning that a business has to coordinate its actions with include several factors: adequate funds or solvency, meaning that a financial plan must ensure the availability of sufficient funds to achieve set objectives; balance costs and risks, for instance, while investing or expanding the market, it is vital to conduct risk control management to prevent any loss.

Moreover, flexibility is a key that enables a business to adjust in accordance to changing circumstances, as was observed during the Covid-19 pandemic when only enterprises that could instantly manage the reorientation of their activity to online format were able to succeed. Therefore, a company's policies, operations and strategies have to remain clearly defined, yet flexible, giving room for innovation, not to mention, flexibility in a plan will help to adapt and cope with the fluctuating future demands. In addition, an economic plan should be conducted in accordance with a long-term view on the perspective and results of a company's activities, thus, each decision has to be made with regard to its impact on further performance and goals.

Since the company is operating in the service sector, economic planning of Qualtec refers mostly to program design and development, as it will ensure business' consistent growth and increase in profitability. Thus, investment in technology and digital innovation is the main objective for Qualtec with potentially the highest ROI (return on investment). Program design and development is the main direction for growth and performance enhancement in Qualtec, as it opens up access to new markets and client bases. Innovative approaches, mastering new technologies and applications are the key for an enterprise's success that is engaged in the service industry.

Program design and development within Qualtec (Fig. 2.10), covers all proposals and procedures for new course development leading to an Award by PHECC or QQI. Qualtec takes a strategic approach to new course design and development in line with QQI's Core/Sector Specific Statutory Quality Assurance Guidelines for Providers (2016) and PHECC's Quality Review Framework (2015).

The references for the area of policy and procedures for new program development include Program Design and Development Policy, and Program Design and Development Procedure (Fig. 2.10).

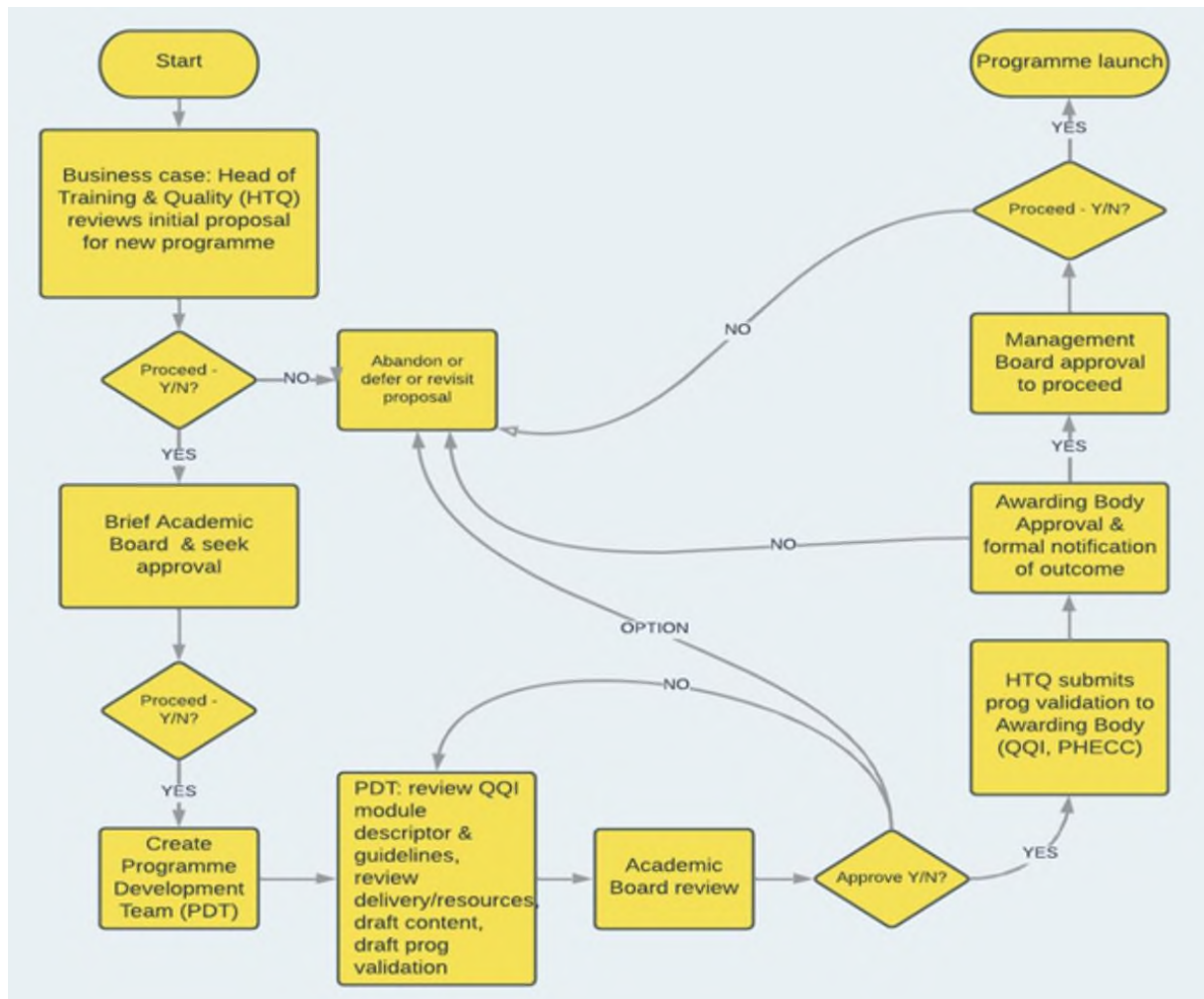


Figure 2.10. Program design and development of Qualtec.

Source: Prepared in accordance with official information from the company.

As essential as the quality of a company's final product is for the customer, marketing and logistics management are another important component of a successful performance on the market since the recognition, company's reputation, and competent advertising contribute heavily to the growth of the enterprise.

Qualtec is committed to assuring the quality of its training programmes and to this end has installed a Quality Assurance System as required by QQI and PHECC. Qualtec is committed to continuous improvement through:

- A customer focus based on understanding learners’ and stakeholders’ needs and expectations;
- Providing leadership to promote and foster a quality culture;
- A process approach to deliver training and related services in an effective and compliant manner;
- Systems thinking and evidence-based decision-making (see Fig. 2.11).

The system itself reflects proven quality principles, including the “Plan Do Check Review” model used within the ISO 9001 Quality Management Standard.



*Figure 2.11. Quality assurance cycle.*

*Source: Prepared in accordance with official information from the company.*

Plan - Operational objectives are specified (at various levels) and are aligned with Qualtec’s mission, strategy and obligations to external stakeholders (statutory, regulatory, professional or other). A Strategic Plan has been developed which specifies these organizational objectives. Risks to the organization including corporate and academic risks are identified in the Strategic Plan. Any opportunities such as new

programmes will be discussed and identified in this. Opportunities such as Blended Learning are also discussed. The strengths of the organization are also identified.

Do (Implementation) - Training Programmes are developed in accordance with the Course Design & Development and Design procedures in Section 5 Programmes of Education and Training. Trainers & staff are recruited in accordance with Section 6 Staff Recruitment, Management and Development. Training is delivered in accordance with Section 7 Teaching and Learning.

Check - Training is assessed in accordance with Section 8 Assessment of Learners. Data on performance is collected and monitored in accordance with Section 10 Information and Data Management.

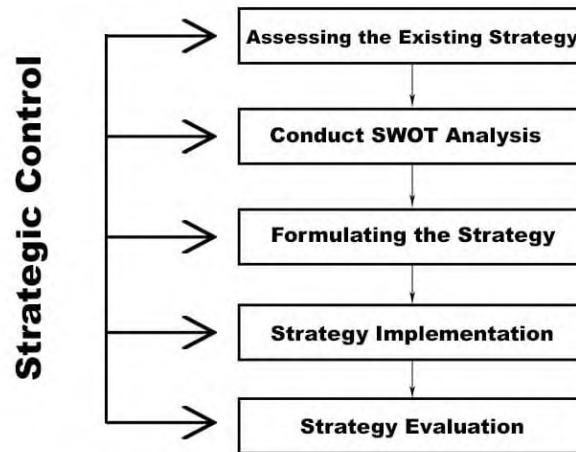
Review – Within the goal of continuous improvement, the system is reviewed in Self Evaluation, Monitoring & Review.

Public Information and Communication Channels:

Finally, Qualtec aims to clear and effective communication with its customers, prospective clients, staff, and other interested parties. Up-to-date relevant information is published on Qualtec's official website, [www.qualtec.ie](http://www.qualtec.ie). Main communication channels include phone, email and enquiry forms via the company website.

In addition to Qualtec's economic planning activities, strategic management contributes to the safety of the company by assessing potential risks and opportunities. Strategic management of an entity is a process of planning, monitoring, analysis and assessment of all its activities, policies, decisions, and their results, in order to meet the company's goals and objectives. The essence of strategic management is control of all areas of an organization's activity, the ultimate purpose of which is to ensure that the company is going in the right direction [29].

Risk management is the key part in strategic management, and it refers to forecasting, preventing, and coping with potential threats, and works on transforming risks into opportunities. Therefore, to regulate its performance, the company must go through each step of the cycle (see Fig. 2.12) from time to time to make necessary changes and set new goals.



*Figure 2.12. The cycle of strategic management.*

*Source: Parsadi Website.*

Qualtec aims to identify and manage risks in the provision of its training programmes in order to ensure and maintain the overall quality and academic integrity of its training courses. In addition, Qualtec maintains a Risk Register to monitor both operational and academic risks.

## **SWOT Analysis**

### **Strengths**

QQI and PHECC approved accreditations.

Number of approved courses: MHI, PMI, Safety Management, T&D.

Trained over 10,000 Instructors.

Well-developed panel of instructors and excellent administration team.

Strong reputation amongst the training fraternity.

Technological advancement.

Excellent website.

Solid reputation with Skillnet's & IBEC, Chambers of Commerce.

Qualified in H&S, Business Management, Adult Education.

Advanced understanding of ISO 9000, quality procedures.

Considerable experience and expertise in Blended Learning development and delivery.

Trained over 500 learners using Blended Learning to date (Synchronous and classroom).

Experience developing e-learning material using Adobe Articulate.

Experience using LMS software such as A-Tutor, Moodle and Learn-Dash.

Blended Learning Policies & procedures and material approved by PHECC.

### **Weaknesses**

Blended Learning Policies and procedures not approved by QQI yet.

Not all staff (trainers and administration) are familiar with the Learning Management System.

QQI material not developed yet.

Limited number of videos developed.

### **Opportunities**

Opportunities to deliver courses through Blended Learning.

Other trainer qualifications such: Management of Aggression and Violence and Mental Health First Aid Instructor Courses.

### **Threats**

New entrants.

More companies approved.

E-learning makes courses cheaper.

Loss of QQI or PHECC accreditation.

Discontinuation of some awards.

Possible Data breach.

To sum up, Qualtec is a currently succeeding company with a wide client base (they have trained over 10,000 people), solid reputation and a great potential for further expansion and development. Qualtec's strong qualities lie in the ability to adapt, act and change rapidly, in its flexibility and devotion to novelty. For example, the company

constantly improves its work through online sources by utilizing newer, more convenient and advanced applications, which is appreciated by their customers and gives business an advantage over market rivals.

In addition, the accreditations that Qualtec has been receiving from QQI and PHECC for quite some time have provided the company with recognition and trust from its clients, thus, increasing the turnover and bringing the business onto the next level, allowing it to engage into more international activities and partnerships.

However, Qualtec faces certain risks in several areas of its operation which include technological and innovation issues and market competition. Therefore, the company should directly focus on the security of its online activities, ensure data protection when utilizing applications and online servers for business operations and communication with clients.

Nowadays, cyber security is one of the most important branches for enterprises that rely heavily on technologies and the Internet in their work, as it ensures that secret data, documents, and plans will be preserved, which will create company's authenticity, thus, Qualtec should invest into cyber security to eliminate the possibility of data breach or hackers' attack.

Innovation in the technological field will also contribute to the company's growth, as they will enhance the quality of provided services and bring innovative approaches and ideas into work. Moreover, launching a unique application based on Qualtec's needs and requirements will create a unified community that will increase recognition.

The above-mentioned measures will assist in attracting new international and local customers, and dealing with competition effectively, due to the fact that Qualtec will build a reputation of trustworthy and secure organization. Not to mention, current technological development makes it vital for the company to constantly explore new applications and digital platforms in order to keep up with potential rivals on the market.

### **2.3. Impact of digitalization on the effectiveness of Qualtec. Role of digitalization in the prospects of innovation and foreign operations of the enterprise**

Innovative activities are considered to be the engine of growth in any company, it may be developing a sustainable, environmentally-friendly approach, implementing newest technologies into the manufacturing process, or reorienting the work process to online platforms. In fact, nowadays, the majority of innovations are technologically related which makes this the issue of primary significance for any business. Therefore, the main focus of enterprises of all sizes is currently on technology investment which results in modernizing IT infrastructure, supporting inventions and digitally-related transformation, and enabling changes to business operations.

Digital or technological innovation is best defined as “the practical application of ideas that result in different new types of new offerings, like products, services, processes, and business models, intending to improve or disrupt existing applications or creating new solutions” [30].

Since technological innovation is a rather broad term, it may be classified into several categories in order to assist enterprises in determining the general direction and particular goals for innovation that a business is going for. The most recent classification is based on factors that impacted any given innovation and consists of four types: incremental, disruptive, architectural, and radical (see Fig. 2.13).

Incremental innovation (existing technology, existing market) is one of the most common approaches and refers to using existing technology within an existing market with the purpose of improving any product or service by adding new features, changes, and modernization.

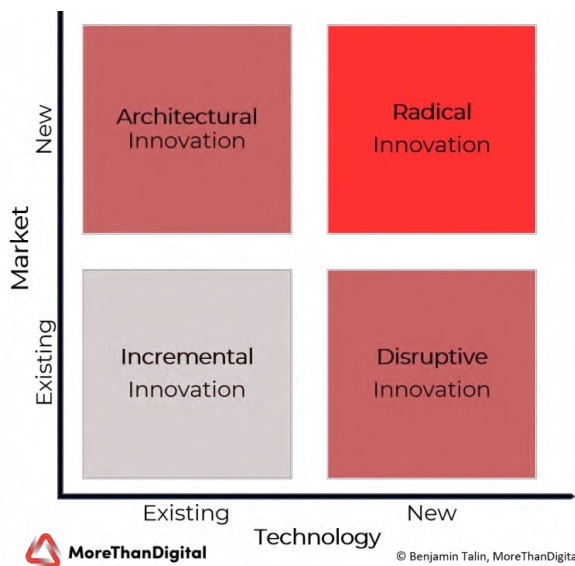
Disruptive innovation (new technology, existing market) is associated with introduction of new technologies to existing industries in order to enhance performance



by replacing present methods and solutions with new ones that have efficiency advantage.

Architectural Innovation (existing technology, new market) usually takes place within the industry giants, such as Google and Amazon, which use this approach to expand their markets globally. Huge corporations implant existing technology on a new market, therefore, they receive more opportunities for growth and potential profits at the expense of a wider customer base.

Radical Innovation (new technology, new market) is defined as creation of a completely original service, technology, or business model, which opens entirely new markets. It is considered the least utilized type of innovation due to its complexity, especially in the modern globally-interconnected society where every invention is frequently based on pre-existing one [30].

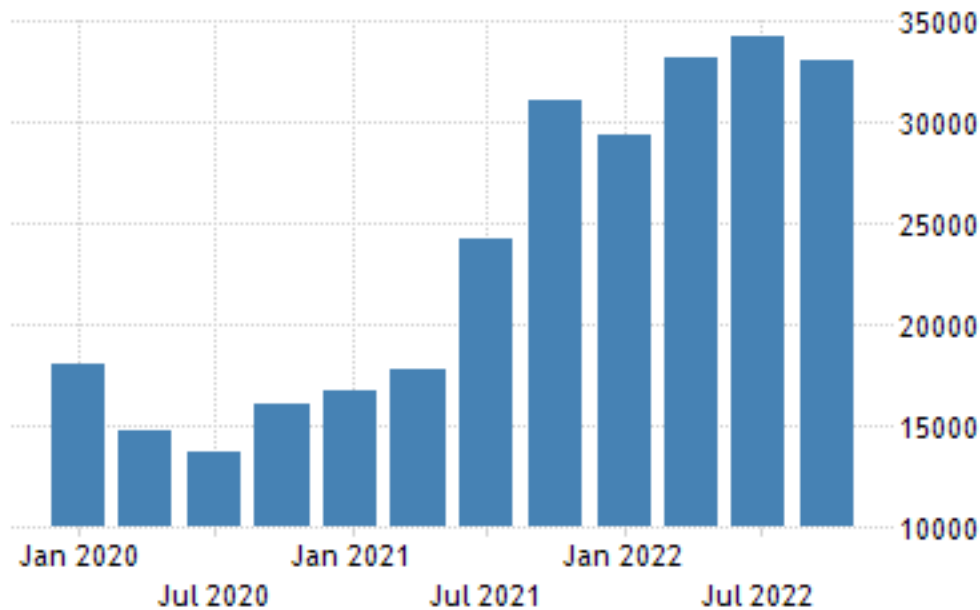


*Figure 2.13. Types of innovations.*

*Source: MoreThanDigital.*

The headquarters of numerous global juggernauts, including Google, Amazon, Apple, Microsoft, eBay, Facebook, Airbnb, Twitter, and many more, are known to be located in Dublin, the capital and largest city of Ireland. As a result, Dublin is referred to as the "technological capital" of Europe with Ireland being a technologically advanced country that attracts qualified workforce from all around the world in

addition to youth looking for an opportunity for sufficient education along with further job opportunities. Figure 2.14 demonstrates rapid employment growth the corresponding increase of the number of newly appearing vacancies on the market.



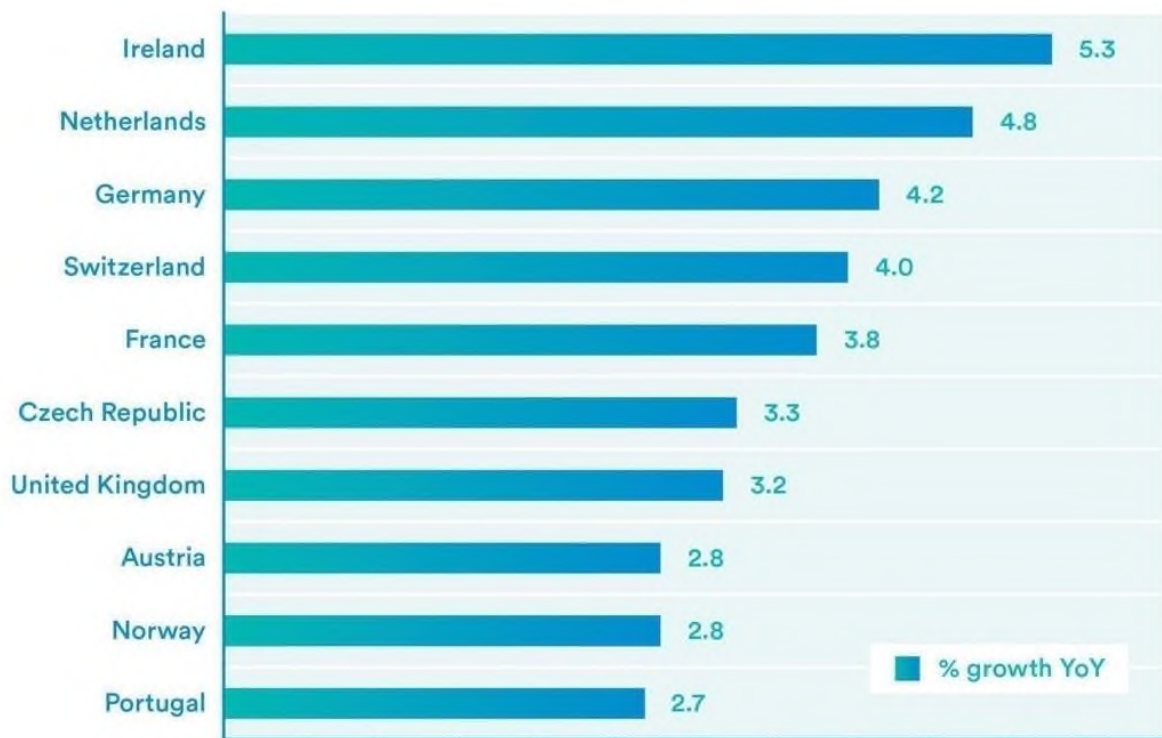
*Figure 2.14. Ireland - Number of Job Vacancies*

*Source: Trading Economics [25]*

Ireland is the European headquarters for some of the largest tech businesses in the world and takes on the role of the "Silicon Valley of Europe." The country is the second-largest exporter of software services behind the US, contributing €16 billion to the economy annually. Additionally, as more and more industries feel the pressure to become digital, Ireland will become increasingly significant in the global tech landscape [25].

The nation's capital is crucial to this, since it is home to the European headquarters of Google, Meta (previously Facebook), and Amazon, among others, in its 'Silicon Docks' neighborhood. It is a section of Dublin that is located in the Grand Canal Dock neighborhood in the southern part of the inner city. It is Meta's largest base outside of California, highlighting the significance of the Silicon Docks. In comparison to the rest of Europe, Ireland is far beyond in terms of technological development and innovation

(Fig. 2.15) with an index of digital growth per year 5.3, while the median is around 2.4.



*Figure 2.15. Top 10 Fastest-Growing Tech Worker Population*

*Source: Enterprise Ireland [27]*

When trying to establish themselves as significant players, developing startup tech businesses find Dublin to be an attractive location because it is possible to hire people from other top tech organizations there. Many members of the Dublin technology workforce have prior experience working for innovative, successful businesses, which provides further motivation for businesses looking for a place for their European headquarters.

Therefore, a favorable technological climate that Ireland is in possession of is a number one factor that contributes to business development based on innovation and digital advancement. Even those companies which do not deal with technological and service design and production as their main source of income, still actively engage in use of digital instruments in order to facilitate, simplify, and enhance their performances.

When IBM established operations in the country's capital in the mid-1950s, Ireland's venture into technology officially began some 60 years ago. Then, in the 2000s, came the businesses we typically refer to as "giants," like HP in the 1970s, Microsoft, Dell, and Intel in the 1980s, SAP and others in the 1990s. These include a number of companies including LinkedIn, Yahoo, and eBay in addition to the previously listed Microsoft, Google, Amazon, and Facebook.

The city later gained notoriety for having a large talent pool in the late 2010s. According to a research from 2017, the city's workforce included more than 10% software developers. Dublin also attracted young tech professionals eager to work for cutting-edge companies because it has one of the youngest populations in Europe. These and other elements combined to create a cluster effect that affected both enterprises and talent, assisting Dublin in becoming the hub it is today.

Ireland is the sole English-speaking nation in the EU based on the proportion of its population that is considered to be native speakers following Brexit. It clearly appeals to the North American tech giants because of this. However, things start to look a little bit different as we approach the 2020s. A tough competition for top engineering skills has already started to emerge as a result of widespread digitalization initiatives across industries, which Covid has exacerbated.

Without doubt, Covid-19 pandemic has heavily affected the world's economy as a whole, and it has opened the eyes of many participants not only of the business environment but also non-profit organizations and social institutions that digitalization is a new and perhaps the only way to remain viable and continue growth in modern realities [31]. Sectors and solutions leader for EY Americas Advisory Markets Herb Schul has emphasized in The CIO's Coronavirus Playbook on the "necessity and immediate need to eliminate the typical barriers" [32].

As to date, we can observe a rise in interest in hybrid and flexible work models by the companies the ultimate goal of which is to remove common obstacles and limits for their activities that were caused by pandemic, social distancing, and the matter of location in general. The health crisis has shown the public the insignificance of such

barriers, and has pointed corporations towards a solution, which is technological advancement, that will make this complex business structure work.

However, heavy reliance on online platforms and applications may be in some ways damaging for the enterprises' efficient performance, as human interactions suffer the most from such approaches which include absence or lack of face-to-face communication, teamwork skills, and individual cultural background which is greatly valued in international corporations goes extinct due to intense globalization.

Qualtec operates in the service sector of the economy, therefore, the most relevant innovative factors for the business are those connected to digitalization which include technological advancement and empowering the IT department into further creativity and development [33].

Technological innovations are aimed to improve existing digital tools, as well as invent, promote and utilize new ones, with that allowing companies to compete within the industry by using novel technological features and contributing to progress. Some enterprises that stand out among others build their own unique networks or create one of a kind programs that ensure security of their operations, and give them an advantage on the market [34].

Qualtec's main innovative activities refer to pursuing digitalization by integrating newest technologies into the work process to make it cheaper, more accessible and efficient for both organization and its customers. Currently Qualtec continues to utilize various media and apps, such as Google Meet, Teams, Zoom, Moodle, etc. which allow them to create a flexible and mobile network with no regard to employees' and clients' location.

Furthermore, advanced technologies give the company a competitive advantage and assist in the majority of its operations, from marketing, logistics, and accounting to economic and strategic planning. Moreover, reorienting the company's performance to online level is resulting in wider customer access, as people all around the world might become clients or partners of Qualtec.

As a part of the globalization process, digitalization opens up new horizons for market extension, international cooperation, and overall entity's growth. Nowadays, IT department plays a crucial role in further performance enhancement, online familiarity with the company, as well as it is heavily responsible for the quality of the digital services, for instance, web site, recorded materials, successful promotion, and many more, therefore, up to date, technological innovations remain Qualtec's main priority.

## **CHAPTER III. INCREASING GLOBALIZATION OF QUALTEC'S ACTIVITY THROUGH DIGITALIZATION**

### **3.1. Analysis of directions for increasing effectiveness of SMEs through digitalization**

Digitalization has become a key aspect of business operations in the 21st century, and small businesses are no exception. By adopting digital tools and platforms, small businesses can benefit in numerous ways, including improved efficiency, enhanced customer experience, increased reach, better data management, and cost savings.

One of the most significant benefits of digitalization for small businesses is improved efficiency. By automating manual tasks and reducing paperwork, digital tools can help save time and resources while increasing overall efficiency. For example, accounting software can help automate financial processes, while project management tools can help streamline workflow and collaboration [62].

Digitalization can also help small businesses enhance the customer experience. By creating an online presence and leveraging digital marketing tools, small businesses can better communicate with customers, understand their needs, and personalize their experiences. This can lead to increased customer satisfaction and loyalty, which is critical for long-term success.

In addition to enhancing the customer experience, digitalization can also help small businesses increase their reach. By leveraging digital marketing channels such as social media and email, small businesses can connect with potential customers in ways that were not possible before. This can help expand their customer base and increase sales.

Better data management is another benefit of digitalization for small businesses. By collecting and analyzing data about their customers, sales, and operations, small businesses can gain valuable insights and make informed business decisions. For

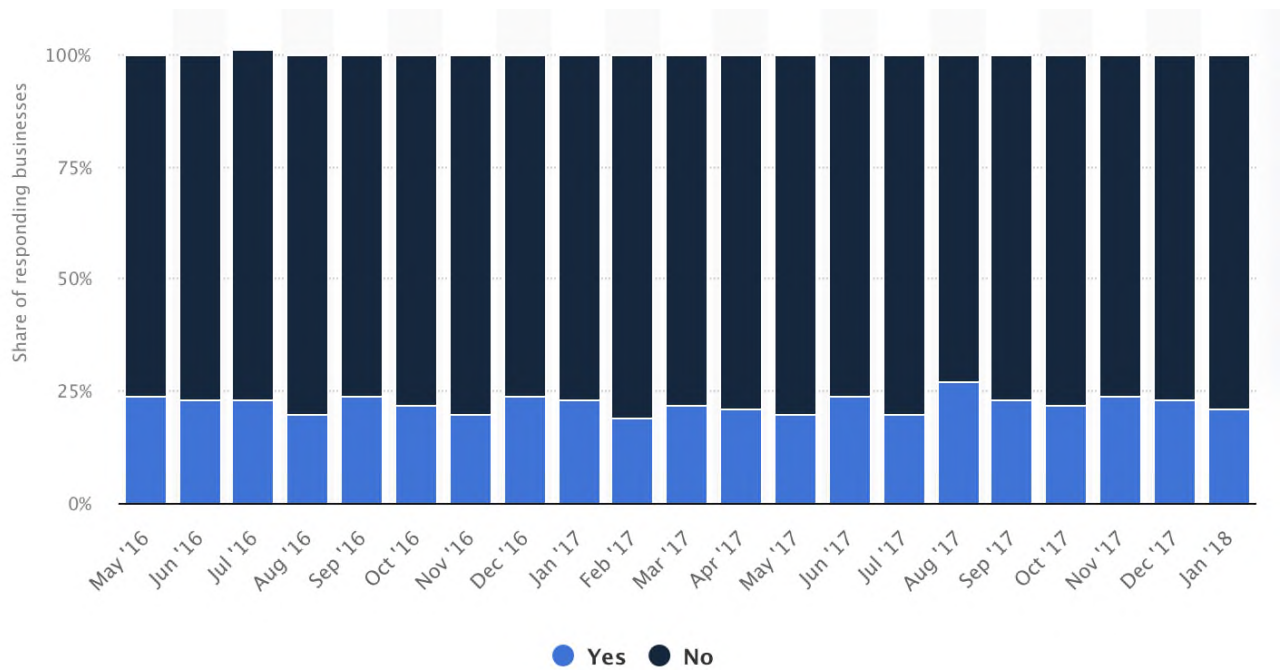
example, analyzing customer data can help small businesses identify trends and preferences, while sales data can help them optimize pricing and inventory.

Finally, digitalization can help small businesses save costs associated with manual processes, paper-based systems, and traditional marketing methods. For example, by automating financial processes, small businesses can reduce the need for manual accounting and bookkeeping. Similarly, by leveraging digital marketing channels, small businesses can reduce costs associated with traditional advertising methods such as print or radio ads [63].

In conclusion, digitalization can provide numerous benefits for small businesses. By adopting digital tools and platforms, small businesses can operate more efficiently, connect with customers more effectively, and make data-driven decisions. As technology continues to evolve, it is becoming increasingly important for small businesses to embrace digitalization to stay competitive in today's rapidly changing business landscape.

Ireland is no exception from the rest of the world in terms of growing tendencies for digitalization and interactions with the global business environment. Unlike a decade ago, nowadays even the smallest of businesses have the opportunity to promote themselves widely and have international customers. With tools provided by digitalization, in particular social media and presence on online platforms and websites, SMEs (small and medium businesses) are now able to reach a significantly larger audience. The diagram below contains the most relevant existent statistics on the issue and depicts the approximate percentage of SMEs in Ireland that are engaged in international trade operations from May 2016 to January 2018 (Fig. 3.1). Thus, from the responding SMEs in January 2018, 21 percent were conducting business with international partners.

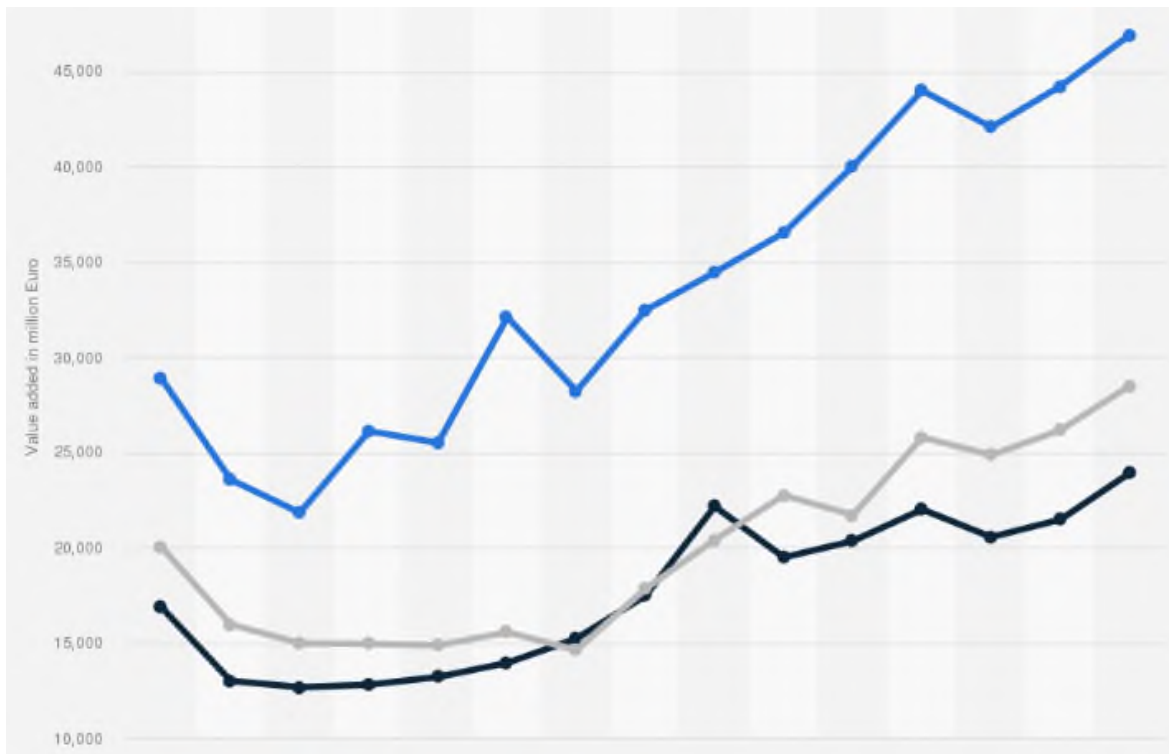




*Figure 3.1. Proportion of SME engaged in international trade in Ireland from May 2016 to January 2018*

*Source: Statista [65]*

It is safe to say that with the pace of current technological growth this number has only increased over the years, allowing SMEs to participate more actively in international trade which can be confirmed by analyzing data on share of SMEs in Irish exports: the SME sector accounts for 67.5% of total employment in the economy and contributes 37% of gross value added to the economic activity in the economy [64]. In 2022, the value added by SMEs in Ireland amounted to approximately 99.2 billion Euros, compared with 91.8 billion Euros in the previous year (Fig 3.2).



*Figure 3.2. Value added by small and medium-sized enterprises (SMEs) in Ireland from 2008 to 2022, by enterprise size (in million Euro)*

*Source: Statista [66]*

Keeping in mind the vital role that SMEs play in the Irish economy, there are several ways in which functioning and efficiency of small and medium sized business can be enhanced with the help of digitalization, including building an online presence, using cloud-based tools and digital marketing, leveraging e-commerce, and embracing mobile technology, as well as invest in cybersecurity [67, 68].

One of the first steps to digitalizing a small business is to build an online presence. This means creating a website and social media profiles that are optimized for search engines and provide customers with valuable information about the business. The website should be easy to navigate, visually appealing, and mobile-friendly. Social media profiles should be active and engaging, with regular updates, customer engagement, and promotions. According to a 2021 survey by the Irish Domain Registry (IEDR), 76% of Irish consumers research products or services online before

making a purchase. This highlights the importance of having an online presence for small businesses [69].

In addition, cloud-based tools can help small businesses to work more efficiently, save time and money, and streamline processes. Some popular cloud-based tools for small businesses include Google Workspace (formerly G Suite), Microsoft 365, and Dropbox. These tools allow businesses to access files and data from anywhere, collaborate with team members remotely, and automate tasks. According to a report by the Small Firms Association, cloud computing can save small businesses up to 30% on IT costs [71].

Digital marketing can help small businesses to reach new customers and build brand awareness. Some effective digital marketing strategies for small businesses include email marketing, search engine optimization (SEO), social media marketing, and pay-per-click (PPC) advertising. Digital marketing allows businesses to target specific audiences, measure the success of campaigns, and adjust their strategies accordingly.

Ultimately, e-commerce has become an essential component of digitalization for small businesses. Setting up an online store or selling products through third-party e-commerce platforms like Amazon or Etsy can expand a small business's customer base and increase sales. E-commerce platforms provide businesses with tools for online payments, shipping, and order tracking, making it easier to manage online sales. According to a report by the European Commission, 71% of Irish consumers made an online purchase in 2020 [70].

Mobile technology is becoming increasingly important for small businesses. This includes having a mobile-friendly website, using mobile apps for business tasks, and engaging customers through mobile devices. Mobile technology can help businesses to stay connected with customers on-the-go, provide real-time updates, and respond to customer inquiries quickly.

Digitalization also comes with potential risks, particularly in the area of cybersecurity. Small businesses should invest in cybersecurity measures to protect

against cyber threats, including malware, phishing attacks, and data breaches. This includes using strong passwords, updating software regularly, and training employees on cybersecurity best practices.

In conclusion, digitalization presents numerous opportunities for small businesses in Ireland to grow and thrive in an increasingly digital world. By embracing digital tools and technologies, small businesses can improve their efficiency, expand their reach, and stay competitive in a rapidly changing market.

The significance of small enterprises adopting digitalization is demonstrated by a Cisco study [72]. 2,000 small firms from eight different countries, including the US, Canada, Germany, Mexico, the UK, Brazil, Chile, and France, were included in the study. It also showed that these international markets might boost their economies by 5.5% and expand at a rate of 42% quicker by stepping up their digitalization efforts.

Based on the mentioned research, small businesses that quickly adapt new technology generate 120% more income and are 106% more productive than those that don't. Still, approximately one in three small firms continue to put off making any choice regarding new technology. There is a huge adoption gap, one that could possibly cost an economy, as well as a reluctance to contemplate digitalization.

The COVID-19 shock proved to be an efficient stimulus for small businesses to realize how crucial digitalization is. Lockdowns drove companies and their clients to switch to online shopping. In 2020, e-commerce will account for 17% of all retail sales, up from 14% in 2019. And moving online wasn't just required of the retail sector. Businesses have to adapt and learn how to function in a new environment. For example, one in three small firms hadn't made a digital sale before to COVID-19. Today, online sales account for seven out of every eight firms. Since 99% of Irish enterprises are small ones, they will fall behind if they don't adopt digitization, which would negatively affect the economy. Eight times more growth was experienced by small organizations who adopted digital transformation than by those that did not [73].

All in all, by approximate estimation, By 2024, the global GDP might increase by US\$2.3 trillion if small firms accelerate their digital transformation processes. By

becoming digital, a company may increase efficiency and produce better results. The fundamental advantages that SMEs will be able to receive when implementing digital tools on a daily basis come down to improved efficiency and productivity, increased competitiveness, enhanced customer experience, greater flexibility, and improved data management and analysis [74].

For instance, technologies are created first and foremost to automate repetitive tasks, streamline workflows, and reduce the time and effort required to complete business processes. This can free up time for employees to focus on more strategic tasks, and help the business operate more efficiently and effectively. Digital tools can provide small businesses with a competitive force against larger companies by enabling them to access the same tools and resources. For example, cloud-based software can provide small businesses with access to powerful computing resources and data analytics capabilities that were once only available to large enterprises. In addition, digitalization allows small businesses to improve customer experience by providing better access to information, faster response times, and more personalized service. This can help build customer loyalty and drive repeat business. Moreover, digital technologies can enable small businesses to work more flexibly, with employees able to work remotely and access business systems and data from anywhere with an internet connection. Which makes the adaptation to changing market conditions and customer demands quicker and easier. Finally, digital ways can help small businesses to collect and analyze data more effectively, providing insights into customer behavior, market trends, and business performance. Which is an ultimate advantage for small businesses in making better-informed decisions and identifying opportunities for growth [75].

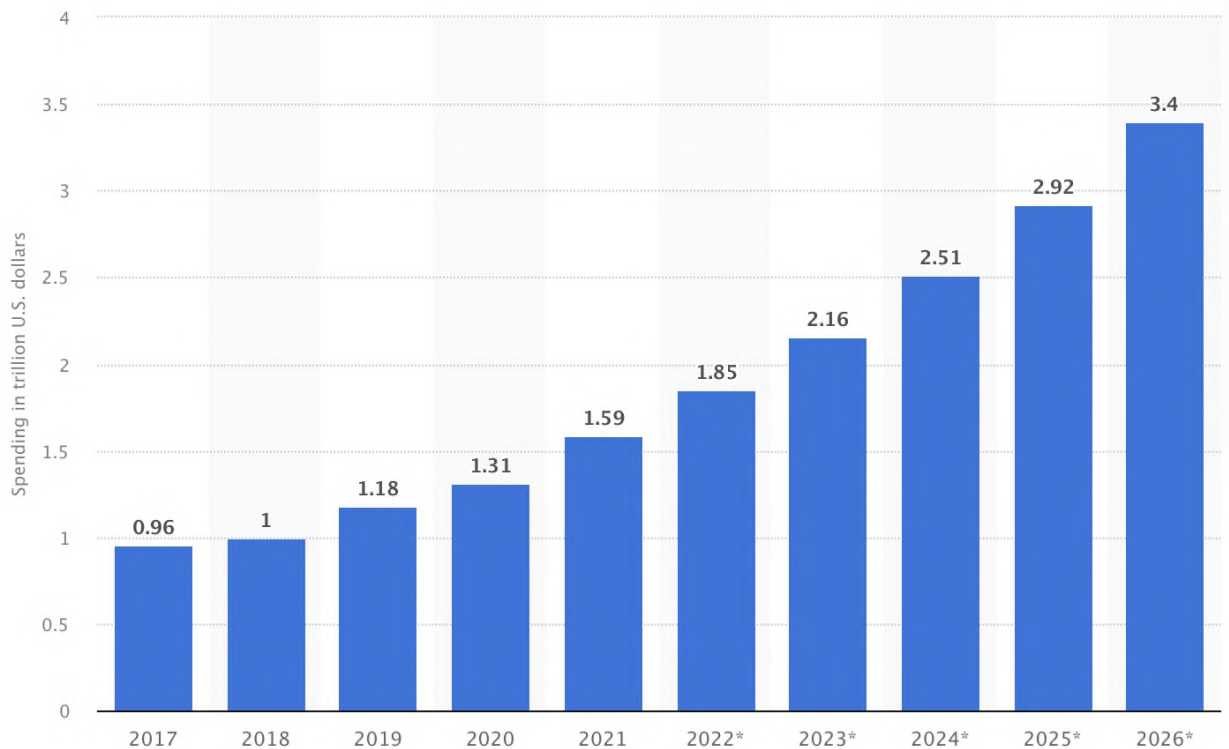
### **3.2. Suggestions in the area of digital transformation for small and medium enterprises, on the example of Qualtec**

Since Qualtec is a part of the Irish service sector, it is essentially closely related to all the innovations and digital trends there are in the world. Moreover, as the means of staying efficient and competitive on the market, the company simply must keep up with technological progress which ultimately refers to constantly exploring and implementing new digital trends for the continued vitality and growth of the business.

Main activities of Qualtec include providing their training programs and courses for other enterprises, therefore, the company is the most relevant example in terms of digital transformation. Thus, drafting a development plan for Qualtec is not only beneficial for this particular company, but also for any similar business on the market in general.

In this chapter, the research will focus on the newest digital trends for small and medium enterprises, with subsequent propositions as for their incorporation into the company Qualtec. It is important to note, that digital transformation affects all the levels of the company's activity and must be implanted throughout the whole organization in order to give the desired results in increased efficiency of the operations.

In 2022, spending on digital transformation (DX) reached 1.85 trillion U.S. dollars (Fig. 3.3). By 2026, global digital transformation spending is forecast to reach 3.4 trillion U.S. dollars [77].



*Figure 3.3. Spending on digital transformation technologies and services worldwide from 2017 to 2026 (in trillion U.S. dollars)*

*Source: Statista Official Website [77]*

There are several digital trends that are likely to shape the future of businesses. The following innovations could be divided into three categories: data, people, and processes. The paper will focus on the top nine most relevant digital transformation steps for SMEs based on the relation to the mentioned categories.

Data: 1) cloud computing, 2) artificial intelligence, 3) cybersecurity.

Cloud computing offers businesses various benefits, such as scalability, cost savings, flexibility, security, and collaboration. It allows businesses to easily adjust their computing resources as needed, pay only for what they use, access data and applications from anywhere, and benefit from advanced security measures. Cloud computing can enable teams to collaborate on projects more efficiently, while also improving agility, cost-effectiveness, and remote work options [78]. Cloud computing is a technology that allows businesses to access and store data and applications over

the internet rather than on their own physical servers or computers. SMEs can leverage cloud computing to access enterprise-level technology and resources that would have otherwise been out of their reach.

Technologies like artificial intelligence (AI) and machine learning (ML) allow robots to learn from data and improve over time. They can help SMEs automate tasks, improve decision-making processes, and enhance customer experience. For instance, an SME could use AI-powered chatbots to handle customer queries or ML algorithms to identify patterns in sales data and make more accurate sales predictions. People are prone to automate their work, yet considering the economy, organizations must prioritize cost-effectiveness. With automation, jobs can be completed quicker while simultaneously promoting efficient growth and getting greater outcomes with less resources.

Cybersecurity serves multiple purposes for businesses, such as protecting sensitive data, preventing cyberattacks, ensuring regulatory compliance, maintaining business continuity, and preserving brand reputation. By implementing robust cybersecurity measures, businesses can prevent unauthorized access to their data, detect and respond to cyber threats promptly, comply with legal and regulatory requirements, ensure uninterrupted business operations, and safeguard their reputation. Cybersecurity is essential for businesses of all sizes and types to protect themselves and their customers from the growing threat of cybercrime and cyberattacks in addition to ensuring trusty relationships with their customers. Client data is especially vulnerable, not only because data security is an ongoing concern but also because the stakes are incredibly high. When customers' addresses, credit card information, and email addresses are at risk, it only takes one data breach to irreversibly damage their trust in businesses. Businesses with plenty of data might avoid brand damage, financial loss, or even legal action by adopting a "zero trust approach" like Microsoft's [82].

People: 4) hybrid work model, 5) customer data platform, 6) virtual business collaboration.



In the years that followed the mandate for remote work in 2020, several companies gradually began bringing personnel back into the office. Thanks to the development of remote infrastructure, hybrid work has recently been the most effective work schedule for many businesses. In fact, 54% of employees who work remotely at least in part say they prefer to work both in an office setting and from home. A hybrid approach has reportedly been used by about 60% of responders since COVID-19, demonstrating that organizations may still achieve their goals utilizing this paradigm. A financial institution can adopt a personalized hybrid workplace solution to give its staff flexibility while upholding efficiency and security. The solution would give users a seamless experience and access to the same resources and tools whether they choose to work from home or from the office. Centralizing and streamlining your technology enhances your teams' capacity for collaboration, enabling you to maintain competitiveness. When everyone on the team uses the same approach, you can enhance efficiency and produce quality work at scale.

From their initial social media click through their online order, every connection a customer or consumer has with a brand creates useful data. It can be a complicated task to organize and transform large amounts of customer journey data into useful insights without the correct tools. A customer data platform (CDP) provides a unified view of the customer by combining all customer data into a single real-time profile. Because the data is arranged and safely stored in one central database, decision-makers can easily examine insights and act promptly to drive conversions. Like other similar tools, CDPs enable businesses to fully comprehend their clients and provide excellent customer experiences.

Virtual business collaboration serves multiple purposes, such as enhancing productivity, improving communication, increasing flexibility, reducing costs, and enabling global reach. It can enable teams to work together more efficiently and effectively, promote better communication, offer flexible work arrangements, reduce travel and office space costs, and expand a business's reach worldwide. Virtual business collaboration can help businesses to stay competitive in a fast-paced business

environment, improve cost-effectiveness, and increase productivity while improving communication and flexibility [79]. The Covid-19 pandemic was one of the worst things that could have occurred to us in the past two years, but on the bright side, it has significantly influenced companies' decision to begin using or aggressively adopting digital technologies. Businesses discovered that they could not function while their employees worked from home, which encouraged increased investment in digital software that facilitates virtual collaboration, whether it be collaboration tools or document collaboration tools.

Processes: 7) social commerce, 8) mobile optimization, 9) investment in blockchain.

Social commerce serves various purposes for businesses, such as increasing brand awareness, reaching new audiences, driving sales and revenue, enhancing customer engagement, and improving customer loyalty. By leveraging social media platforms for e-commerce activities, businesses can promote their products or services, expand their customer base, facilitate social sharing, offer personalized recommendations, and provide seamless customer service. Social commerce is becoming increasingly important for businesses to stay competitive in a rapidly evolving digital landscape, where social media has become an integral part of consumers' daily lives. It meets consumers where they are, allowing them to make a purchase immediately and seamlessly on social media rather than redirecting them to a business' website. The result is a quicker path to purchase with less friction and more on-demand action [76]. Global social commerce sales reached \$492 billion in 2021, a number expected to nearly triple by 2025 to \$1.2 trillion. In our survey, more than half of businesses indicated they will introduce social commerce as a new sales channel in 2023. Furthermore, as of 2022, there are 4.59 billion social media users around the globe, and that number is expected to increase even further. And with that increase comes more social platforms to market [83, 84].

Mobile optimization offers several benefits for businesses, including improving user experience, increasing website traffic, enhancing search engine rankings, expanding customer reach, and boosting conversion rates. By making websites or applications more mobile-friendly, businesses can provide a better user experience for mobile users, attract more visitors, improve search engine rankings, reach more customers, and increase sales and revenue. As the use of mobile devices continues to grow, mobile optimization is becoming increasingly important for businesses to remain competitive and successful. With more and more consumers accessing the internet on their mobile devices, it is crucial for SMEs to ensure that their websites and online platforms are optimized for mobile use. This involves designing websites that are easy to navigate on small screens and ensuring that content is easily accessible on mobile devices [80].

Blockchain is an emerging technology that can be used in various industries like finance, healthcare, supply chain management, etc. It has the potential to disrupt the traditional way of doing business in many sectors by enabling us to create smart contracts and store records permanently without any possibility of being tampered with. As software suppliers need a more secure environment to prevent sensitive information from being leaked to the public, this technology is also regarded as a crucial element in the list of digital transformation trends to watch for. Investing in blockchain technology can offer multiple benefits for businesses, such as improving efficiency, enhancing security, increasing transparency, reducing costs, and creating new business models [81]. By streamlining processes, providing a secure and transparent ledger, reducing intermediaries, and enabling new revenue streams, blockchain technology has the potential to transform various industries and disrupt traditional business models. Overall, investment in blockchain technology can help businesses to improve profitability, reduce costs, and stay competitive in a rapidly changing business landscape.

The formula for ongoing success of Qualtec is defined by coordinated implementation of each of the aforementioned aspects. The new and progressive vision

for the company in terms of digital transformation would be comprised by the following plan (Fig. 3.4).



*Figure 3.4. Digital Transformation in Qualtec*

*Source: Prepared in accordance with the paper requirements*

1. Assess current digital capabilities by conducting an internal audit to identify any areas where the company is lagging behind, and areas where it is already digitally strong. Evaluate the website, cloud computing capabilities, collaboration tools, CRM software, and data analytics tools to identify strengths and weaknesses.

2. Based on the assessment, define digital goals of the business. These goals should align with the overall business strategy and should be specific, measurable, achievable, relevant, and time-bound (SMART). Develop a digital roadmap that outlines specific tasks, milestones, and timelines for achieving the digital goals. Identify key performance indicators (KPIs) that will measure progress towards these goals.

3. To execute the digital transformation strategy, Qualtec will need a team that has the right skills and expertise. Therefore, build a team that includes a mix of IT professionals, data analysts, digital marketers, and user experience designers. Consider hiring external consultants or contractors to fill any skills gaps. Collaboration tools

such as Slack, Microsoft Teams, or Zoom can help a team work together more effectively, regardless of their location.

4. A key part of any digital transformation is upgrading the infrastructure. Upgrade the company's website, ensure that it is user-friendly, mobile-responsive, and provides a great user experience. Adding e-commerce functionality to the website to enable online sales may be also a profitable option. Embrace cloud technology, as cloud computing offers many benefits, including scalability, flexibility, and cost savings. Consider migrating the company's data and applications to a cloud-based platform, such as Amazon Web Services (AWS) or Microsoft Azure. In addition, implement collaboration tools such as Slack or Microsoft Teams. With increased digitalization comes increased risk of cyber attacks. Invest in cybersecurity measures such as firewalls, antivirus software, and employee training to protect the business from cyber threats.

5. To improve efficiency and streamline your operations, Qualtec should look for opportunities to automate its operations. For instance, robotic process automation (RPA) can assist automate repetitive and manual processes, freeing up time for the employees to focus on more strategic tasks. Thus, implementation of robotic process automation (RPA) tools or using artificial intelligence (AI) and machine learning (ML) may be a key to automate decision-making. Furthermore, mobile apps can provide a convenient way for customers to interact with your business. Consider developing a mobile app to enhance customer engagement and provide value-added services.

6. To drive customer engagement and increase revenue, the company should implement digital marketing strategies. Use digital marketing channels such as social media, email, and search engines to reach new customers and increase sales. Develop a digital marketing strategy that aligns with Qualtec's business goals (Chapter 2). This step is particularly important, since currently Qualtec does not have a strong presence on any of the social media platforms. Therefore, establishing itself on such media as Facebook and Instagram is vital for increasing business awareness, effective client communication, and service promotion.

7. To make data-driven decisions, the company should collect and analyze data from digital channels mentioned in the previous step. Use data analytics tools to collect and analyze data about your customers, operations, and performance. Track website traffic, engagement rates, customer behavior, and other key metrics. This can help make data-driven decisions and improve business operations. Implement customer relationship management (CRM) software as it is created to efficiently manage customer data, track interactions, and improve customer service. Popular options include Salesforce, HubSpot, and Zoho CRM.

8. Digital transformation is not just about technology, it is also about people. Therefore, investment in employee training should be another priority that will ensure that the team has the skills and knowledge they need to succeed in a digital environment. Provide ongoing training and development opportunities to keep the team up-to-date on emerging technologies.

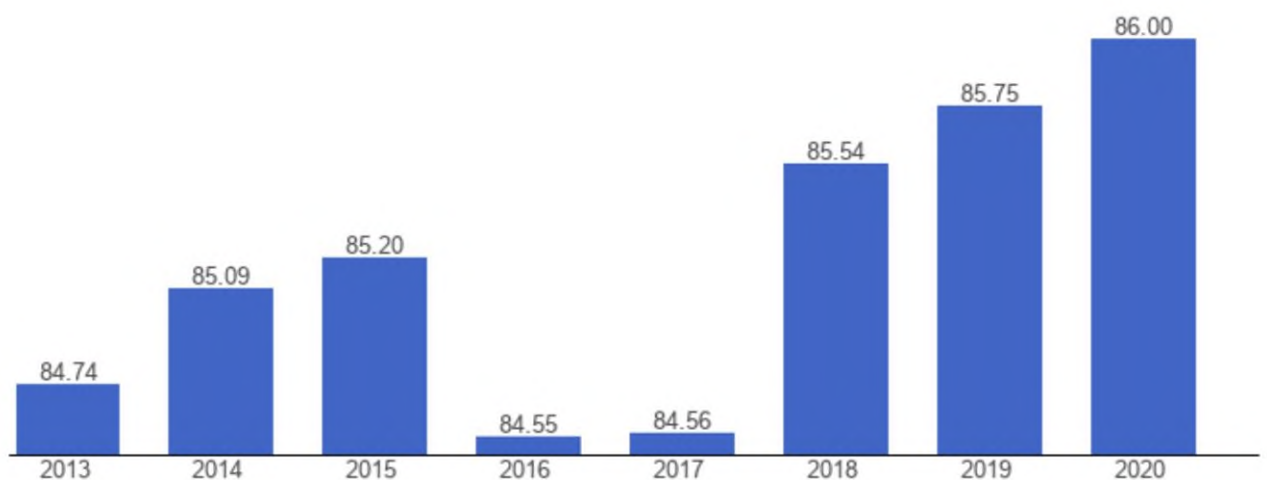
9. Digital transformation is an ongoing process, so it is essential to continuously monitor the company's progress and adapt the strategy as needed. Use data and feedback from customers and employees to refine the digital roadmap and ensure that business is meeting its digital goals. In addition, keep an eye on emerging technologies such as artificial intelligence (AI), machine learning (ML), and blockchain, and explore how they can offer new opportunities for innovation and business growth.

To conclude, digital transformation is essential for businesses to remain competitive and meet the changing needs of customers in today's digital age. By embracing new technologies and upgrading existing infrastructure, businesses can improve their efficiency, streamline their operations, and enhance their customer experience. Number one priority for Qualtec is to build a strong social media presence, including digital marketing and expanding its target audience currently being limited by previous customer relationships and the company's website. This will ultimately open horizons for stronger interconnection with clients and potential customers, engagement into business-customer communication and secure business awareness.

With the other steps being implemented gradually, Qualtec will be on the path of digital transformation which means an overall improvement for the company.

### 3.3. Research of potential opportunities and threats for the Irish economy in result of intense digitalization and globalization

The Irish economy is highly globalized with the globalization index being 86 in 2020 and moving forward (Fig. 3.5). This means strong reliance on international trade, supplies, and cooperation. Most of the goods and services produced in Ireland are created using goods and services produced in other countries, and, after being produced, they are then sold outside Ireland as well. As was discovered in Chapter 1, digitalization accelerates the globalization processes by providing means for international communication and partnerships. Therefore, countries with the highest digitalization rate are often the most globalized ones.

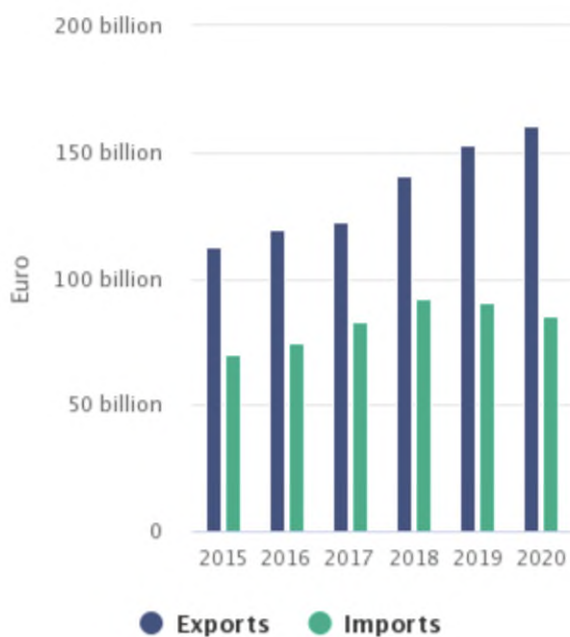


*Figure 3.5. Globalization Index, Ireland*

*Source: The global economy website [87]*

As nearly any world affecting phenomenon, globalization fostered by digitalization plays a crucial role in everyday business operations, shaping methods of product development, production, distribution, logistics and marketing. With certain opportunities come imminent threats which companies must be aware of in order to remain in balance and stay competitive. Major opportunities that increased digitalization provides businesses with nowadays include increasing engagement in international trade resulting in market expansion and subsequent income growth; job creation; improved efficiency and productivity, enhanced innovation, access to global talent. Whilst main threats comprise increased competition; job displacement; cybersecurity risks; regulatory challenges; and unequal distribution of benefits.

Substantially, Ireland's small domestic market means that international trade is critical for its economic growth. Digitalization and globalization have made it easier for Irish businesses to connect with customers and suppliers in other countries. According to the Central Statistics Office (CSO), the value of Irish exports in 2020 was €163.7 billion, an increase of 2.2% compared to 2019 (Fig. 3.6) [89]. The EU remained the most significant destination for Irish goods exports, accounting for 40% of the total value, followed by the United States at 27%.



*Figure 3.6. Exports and Imports Dynamic, Ireland*



*Source: Central Statistics Office [89]*

Moreover, the digital economy has led to the creation of new industries and jobs in Ireland. The tech sector, in particular, has been a significant contributor to economic growth in recent years. According to the Irish government's Action Plan for Jobs [90], employment in the information and communication sector increased by 5.7% between Q2 2019 and Q2 2020, and the sector now employs over 105,000 people in Ireland.

Digitalization can increase efficiency and productivity in many industries, leading to cost savings and increased competitiveness. According to a report by Deloitte [91], the adoption of digital technologies in Ireland could lead to a 10% increase in productivity and a 20% reduction in costs over five years.

In addition, digital technologies can facilitate innovation in many sectors, leading to new products and services that can drive economic growth. The Global Innovation Index 2020 ranked Ireland as the 10th most innovative country in the world, with strengths in areas such as human capital and research, infrastructure, and business sophistication.

Finally, globalization and digitalization make it easier for Irish businesses to access talent from around the world. According to the 2021 IMD World Talent Ranking, Ireland ranks 6th in the world for the availability of skilled labor.

Nevertheless, awareness of fundamental threats brought up by digitalization could help to prevent certain risks in advance and preserve costs and competitive position. Globalization can lead to increased competition from foreign firms, particularly in industries where Irish businesses may not have a comparative advantage. For example, in 2020, Ireland imported €96.2 billion worth of goods, with the EU and the UK being the main sources. However, competition from low-cost countries such as China remains a concern for many Irish businesses.

Furthermore, the digital economy can lead to job displacement in certain sectors, particularly those that are susceptible to automation or offshoring. According to a report by the Irish government's Future Jobs Ireland initiative, 22% of Irish jobs are at

high risk of automation. However, the same report notes that new jobs will also be created, particularly in areas such as data analysis, software development, and cybersecurity.

The increasing reliance on digital technologies can also increase the risk of cyberattacks, which can have significant economic consequences. According to a report by the National Cyber Security Centre, cybercrime costs Irish businesses an estimated €630 million annually.

Moreover, the rapid pace of technological change can create challenges for policymakers in developing effective regulations to address issues such as data privacy, cybersecurity, and intellectual property rights. For example, the EU's General Data Protection Regulation (GDPR) has had a significant impact on Irish businesses, with many needing to update their data protection policies and practices to comply with the new regulations.

Ultimately, the benefits of digitalization and globalization may not be equally distributed across society, potentially exacerbating existing inequalities. For example, a report by the Irish government's National Economic and Social Council found that while the digital economy has created many new jobs, these tend to be concentrated in Dublin and other urban areas, leaving behind smaller towns and countryside which comprise the majority of Ireland's territory.

With this in mind, what can be done within the Irish economy to manage increasing pressures of change due to digital globalization? Since Ireland has long been a hub for international business and innovation, digitalization and globalization present a lesser challenge than for some other countries, yet an instant action must be taken to remain in its position in the world. Based on the previous research, it is possible to draw a comprehensive detailed plan for Ireland that will focus on promotion of digitalization and support the digital economy's growth, as well as forecast improvement in the country's international vitality, competitiveness, and prosperity. This plan should be centered around the following eight key actions: 1) developing a national digital

strategy; 2) investment in digital infrastructure; 3) promotion of digital skills; 4) support of innovation; 5) fostering of international collaboration; 6) enhancing cybersecurity; 7) development of a digital government; 8) support of sustainable digital growth.

In the first place, the government should develop a National Digital Strategy that sets out clear objectives and action plans for digitalization across all sectors of the economy. This strategy should prioritize the development of digital infrastructure, digital skills, and cybersecurity. By doing so, Ireland can create an ecosystem that supports digital innovation and growth.

Secondly, investing in digital infrastructure is essential for the success of the digital economy. The government should invest in high-speed broadband, mobile networks, and data centers to ensure that Ireland has the necessary digital infrastructure to support the growth of the digital economy. Additionally, research and development should be prioritized to support the development of emerging technologies such as 5G, artificial intelligence, and the Internet of Things.

Digital skills are critical for success in the digital economy. Therefore, the government should promote digital skills development to ensure that the Irish workforce has the necessary skills to succeed in a digital economy. This includes investing in digital skills training programs for both the current workforce and future generations. A study by Analysys Mason found that the total economic impact of Ireland's national broadband plan could be up to €2.4 billion by 2040, with over 21,000 new jobs created. This supports the need to invest in digital infrastructure such as high-speed broadband and mobile networks to support the growth of the digital economy [88].

Since innovation is at the heart of the digital economy, the government should encourage innovation by providing financial incentives for research and development and support for startups and small businesses. This can include grants and tax incentives for research and development, as well as access to funding and mentoring programs for startups.

Furthermore, fostering international collaboration can expand the Irish digital economy. The government should collaborate with other countries on research and development, technology transfer, and trade. This can include partnerships with other countries to develop new technologies and support international trade missions to promote Irish digital products and services. According to the World Economic Forum's Global Competitiveness Report 2019, Ireland ranks 8th out of 141 countries in collaboration between companies and universities in research and development. This highlights the potential for Ireland to expand its digital economy through international collaboration [93].

Cybersecurity is a critical concern in the digital economy, thus, the government should enhance cybersecurity measures to protect against cyber threats and build trust in digital infrastructure. This includes investing in cybersecurity research and development, providing education and training to businesses and the public, and developing policies and regulations to promote cybersecurity. According to the Digital Economy and Society Index (DESI) 2021, Ireland ranks 4th out of 27 EU countries in digital infrastructure, but only 16th in digital skills and 8th in cybersecurity. This highlights the need for a comprehensive National Digital Strategy that prioritizes digital skills and cybersecurity [85]. The Digital Skills Observatory Report 2021[92] found that digital skills gaps exist across all sectors of the Irish economy, with 60% of organizations reporting a skills gap in digital marketing, 50% in social media, and 47% in web design. This highlights the need to promote digital skills development to ensure Ireland has a workforce equipped for the digital economy. Moreover, a study by PwC found that cybercrime costs the Irish economy up to €630 million per year. Enhancing cybersecurity measures is critical to protecting against cyber threats and building trust in digital infrastructure.

In addition, a digital government can provide efficient and effective public services online. The government should develop online portals and mobile apps to streamline government services and enhance citizen engagement. Additionally, open data policies can promote innovation and drive economic growth. The Irish government's online

portal, MyGovID, received over 10 million logins in 2020, demonstrating the potential for a digital government to provide efficient and effective public services online [86].

Finally, sustainable digital growth promotes responsible and ethical business practices. The government should support the development of green technologies and promote the responsible use of data. Additionally, responsible digital policies can promote trust and protect the privacy of citizens. According to the Sustainable Energy Authority of Ireland, the number of electric vehicles in Ireland increased by 23% in 2020, demonstrating a growing interest in sustainable technology. Supporting sustainable digital growth promotes responsible and ethical business practices, which is increasingly important to consumers .

In conclusion, digitalization and globalization offer both opportunities and challenges for the Irish economy. By developing a comprehensive plan that supports digitalization and the growth of the digital economy, Ireland can remain competitive and promote growth in this rapidly changing environment. The eight key actions outlined above provide a roadmap for Ireland to achieve this goal. By investing in digital infrastructure, promoting digital skills, supporting innovation, fostering international collaboration, enhancing cybersecurity, developing a digital government, and supporting sustainable digital growth, Ireland can ensure that it continues to be a leader in the digital economy for years to come.

## CONCLUSIONS AND PROPOSALS

In conclusion, having analyzed the overall development of globalization as a whole and, specifically, economic globalization, as well as its extremely close interconnection with digitalization, its future course and role within the framework of international business development, digital globalization has benefited in economical, political, social and cultural aspects, nevertheless, leaving the world with questions and challenges that are yet to be answered and solved. There is no such thing as something undoubtedly advantageous – every phenomenon has its potential opportunities and drawbacks. However, in the case of globalization being accelerated by digitalization, the possibilities and capabilities are endless in developing, shaping and improving businesses and all life aspects.

The aim of this thesis was to analyze how digitalization has become a moving force for ongoing economic globalization and, subsequently, for international business development, its effects on the latter, as well as establish ways for business development and enhancement in terms of digitally driven economic globalization. The primary tasks of this scientific work were to develop an understanding of digitalization, globalization, and economic globalization; discover how all three affect international business development, as well as economies in general; explore the impact of digital globalization on a particular company (Qualtec); provide an understanding of modern business development by completing an internship practice in the Irish company Qualtec, and analyzing its strategies for competitiveness. Furthermore, transform mentioned research into comprehensive knowledge on how digital globalization, i.e. global technological progress, can enhance business development; research on the matter of popularization and implementation of digitalization throughout the Irish business sector; conduct a strategic plan on business development and improvement. As a result of completing the work, it is safe to say

that the goal of the paper has been achieved through accomplishing all the tasks and requirements.

The first part discussed the theoretical and methodological framework of digitalization, globalization in relation to international trade and business development. In correspondence with aforementioned tasks, the understanding of digitalization and globalization concepts was developed, as well as their main elements, processes, and impact on economic transformation. Thus, by a constructive analysis of the phenomena of digitalization and globalization, along with figuring out its impact on business development oriented on internationalization, the outcome is that both are interchangeably connected, meaning that one serves as a motivator and a catalyst for the other. Globalization has blurred national boundaries, free trade has enhanced economic integration, moreover, information and communication have become more easily accessible playing a crucial role in uniting the new digital society. Economic globalization has enhanced the exchange of goods and services among businesses throughout the world, while digitalization is shaping the way globalization will develop in the future.

This chapter lays the theoretical foundation for further analysis and discusses the impact of digitalization and globalization on the economic transformation, as well as interconnections and mutual influence of digitalization and globalization in the business environment. With that being said, the advantages of digital globalization are solid, since never before small and medium enterprises were able to grow their customer base to the extent we currently observe, let alone successfully participate in international trade. Digitalization provides businesses with growth opportunities, increased turnover, reduced dependence on local markets, etc. The increase in international trade in recent years has been majorly conditioned by digitalization, as it is clear by the end of the research that globalization is highly dependent on it.

The second section is dedicated to the research of the Irish company Qualtec from the point of view of its competitiveness and prospects within a transforming international economy. The practical familiarity with the company was developed

during an internship that took place in Qualtec, a private licensed business operating in Dublin, Ireland. The position of a managerial director's assistant assigned when doing the internship has required completion of multiple tasks in various departments which made possible a full understanding of the company's operations on all levels. The purpose of the internship was entirely fulfilled and reinforces the theoretical knowledge in a practical form.

Here the profile of the company was explored, along with its competitiveness, business environment, market strategies and other economic factors. Additionally, the task of this section was to focus on potential prospects of how digital globalization can impact the enterprise. The current dilemma of Qualtec lies in combining online and offline work approaches, making its working model hybrid. The main question for the company is ensuring the equal quality of delivered services with both methods, therefore, the summary of the second chapter is the fact that digital transformation comes out to be number one priority for Qualtec.

The company's slogan was built around quality, responsibility and respect, therefore, its strategy corresponds with these values and motivates Qualtec to maintain them through implementation of innovations, making changes for the overall benefit of the business.

Finally, gathering all the theoretical data, conducting extensive research of the aforementioned information and connecting it with business development in scope of digital transformation, the last section of the paper focuses on finding ways for improvement and growth of the business, and serves the purpose of being a practical development of the previously conducted analysis of the company itself. All the ways of improvement were discussed and analyzed both through the prism on individual business and on a large scale. Therefore, the task of drawing suggestions in the area of digital transformation for small and medium enterprises, on the example of Qualtec was achieved, in addition to the research of potential opportunities and threats for the Irish economy as a result of intense digitalization and globalization.



That being said, Qualtec is a well established business, though it has some particular weaknesses, especially when the world economy stands on the edge of global change. This part focused on the practical aspects of utilizing benefits provided by digitalization, as well as managing potentially appearing challenges of change. The summary of Qualtec's opportunities and threats in regard to digital transformation was drawn which helped to subsequently build a strategy for the company as for future developments.

The overall conclusion and main recommendation for the improvement of Qualtec is to keep an open eye for emerging digital trends and technologies, implementing those that have the highest potential and cost-result opportunities. The mentioned recommendations have been taken into consideration with the theoretical framework while specifically analyzing ways of improving and enhancing business development in terms of digital transformation. Further proposals for Qualtec include building a strong online network that will connect the company more effectively to their customers and potential clients, enhance company's recognition, and will stimulate sales and partnerships. With that said, the significance of cybersecurity cannot be neglected, thus, protecting the company's database is a next matter of importance for Qualtec.

Lastly, since all businesses are a part of a country's economy as a whole, as was discussed in the first two chapters, the general tendencies and well-being of the country's economy directly affects the local business environment. Thus, based on the previously carried out analysis, the economy of Ireland was subjected to the detailed overview and as a result, potential suggestions for its enhancement were conducted.

To summarize this paper, it can be stated that set tasks were completed, and reaffirmed that digitalization is a powerful force and the phenomenon that drives not only economic globalization and international business development, but also affects the world economy, along with every aspect of human lives. It is possible to predict certain trends of digital transformation, but complicated to say for sure how it will impact business development and even more shape the economies of the future in the

long run, since circumstances and conditions are constantly changing. However, the primary conclusion is that digital transformation has appeared to be an excellent framework for business so far and has allowed it to expand, develop, grow and achieve success all while ensuring economic growth and change in nations throughout the world. At the end of the day, digitalization is that force of modernity that drives the world forward.

## LIST OF REFERENCES

1. Business Dictionary, Digitalization. Retrieve from [What is Digitalization? \(walkme.com\)](#).
2. ARC Advisory Group, What is Digitization, Digitalization and Digital Transformation (March 24, 2020). Retrieved from [What is Digitization, Digitalization, and Digital Transformation | ARC Advisory \(arcweb.com\)](#)
3. Statista, Statista Research Department, Digitalization level of the EU in 2022, by country. Retrieved from [EU: digitalization levels by country 2022 | Statista](#).
4. Statista Official Website, Top 50 countries in the Globalization Index 2021 (December 2021). Retrieved from [Globalization Index by country 2022 | Statista](#).
5. Statista Official Website, Leading countries in the Globalization Index field of economic globalization 2021 (December 2021). Retrieved from [Index of economic globalization 2022 | Statista](#).
6. Economic and Social Affairs, Economic Globalization: Trends, Risks and Risk Prevention. Retrieved from [Economic Globalization: Trends, Risks and Risk Prevention Economic &](#)
7. Introducing the KOF Index. Retrieved from [IB DP Geography – Introducing the KOF Index](#).
8. Statista, Trends in global export volume of trade in goods from 1950 to 2020 (September 28, 2022). Retrieved from [Worldwide export trade value 1950-2021 | Statista](#).
9. U.S. Chamber of Commerce, The Digital Economy: A Look Into the 2022 Digital Frontier (May 11, 2021). Retrieved from [The Impact of Digitalization on the Global Marketplace in 2022 | U.S. Chamber of Commerce](#).
10. Statista Official Website, E-commerce revenue share of companies in Europe in 2021, by country (March 2022). Retrieved from [E-commerce: revenue share of companies by country in Europe 2021 | Statista](#).

11. Zippa Official Website, How many businesses have a website (October 13, 2022). Retrieved from [20+ Essential Small Business Website Statistics \[2023\]: How Many Businesses Have A Website – Zippia](#).
12. Statista Official Website, Estimated number of small and medium sized enterprises (SMEs) worldwide from 2000 to 2021 (August 2022). Retrieved from [Global SMEs 2021 | Statista](#).
13. Information was researched and prepared during the internship practice in the company in accordance with its private sources.
14. Easiuni Website, Economic Outlay of Ireland. Retrieved from [Economic Outlay of Ireland \(easyuni.com\)](#).
15. Harvard Business Review, Digital Transformation, Implementing New Technology. Retrieved from [Implementing New Technology](#).
16. Financial plan: meaning, objectives and characteristics. Retrieved from <https://www.accountingnotes.net/financial-management/financial-planning/financial-plan-meaning-objectives-and-characteristics/7739>.
17. Business Models and Technological Innovation. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0024630113000691>.
18. Qualtec Official Website <https://www.qualtec.ie/>.
19. Ireland – Business Enabling Environment, World Bank. Retrieved September 12, 2022, from <https://www.doingbusiness.org/content/dam/doingBusiness/country/i/ireland/IRL-LITE.pdf>.
20. Ireland Economic Snapshot, OECD. Retrieved September 15, 2022, from <https://www.oecd.org>.
21. Arrivals from Ukraine in Ireland Series. CSO - Central Statistics Office, (3 October 2022). Retrieved September 21, 2022, from <https://www.cso.ie/en/releasesandpublications/FP/p-aui/arrivalsfromukraineinirelandseries6/>.

22. Ireland Unemployment Rate, Trading Economics, Central Statistics Office Ireland. Retrieved September 5, 2022, from [Ireland Unemployment Rate - January 2023 Data - 1983-2022 Historical](#).
23. Ireland Indicators, Trading Economics, Central Statistics Office Ireland. Retrieved September 5, 2022, from [Ireland Indicators](#).
24. This is How Covid-19 Hit Youth Employment in Europe – and How it Can Recover, World Economic Forum (April 25, 2022). Retrieved September 28, 2022, from [This is how COVID-19 hit youth employment in Europe - and how it can recover](#).
25. The Scalpers: How Dublin became one of the key European tech hubs (April 13, 2022). Retrieved from [How Dublin became one of the key European tech hubs](#).
26. Trading Economics, Ireland - Number of Job Vacancies (2023). Retrieved from [Ireland - Number of job vacancies - 2023 Data 2024 Forecast 2019-2022 Historical](#).
27. Enterprise Ireland, The Irish Advantage, the fastest growing population in the tech area. Retrieved from [Ireland Has Fastest-Growing Tech Worker Population in Europe](#).
28. Financial plan: meaning, objectives and characteristics. Retrieved from [Financial Plan: Meaning, Objectives and Characteristics](#).
29. Strategic Management: Definition, and Process (March 25, 2022). Retrieved September 26, 2022, from [Strategic Management: Definition, and Process - Parsadi](#).
30. Innovation explained - definition, types and meaning of innovation by Benjamin Talin (August 17, 2022). Retrieved from [Innovation explained – Definition, Types and Meaning of Innovation - MoreThanDigital](#).
31. The CIO's Coronavirus Playbook: "Necessity and immediate need eliminate the typical barriers" by EY Americas Advisory Markets Herb Schul

(December 22, 2021). Retrieved from [5 Steps to Successfully Implement New Workplace Technology | Teem by iOFFICE](#).

32. The CIO's coronavirus playbook: 7 tips for surviving the crisis by Clint Boulton, Senior Writer, CIO (March 31, 2020). Retrieved from [The CIO's coronavirus playbook: 7 tips for surviving the crisis](#).

33. Business Models and Technological Innovation. Retrieved from [Business Models and Technological Innovation - ScienceDirect](#).

34. Global Strategy Journal Volume 11, Maximilian Stallkamp & Andread P.J. Schotter (February 2021). Retrieved from [Platforms without borders? The international strategies of digital platform firms \(wiley.com\)](#)

35.

36. Techopedia, Digital Transformation by Margaret Rouse (October 6, 2022). Retrieved from [What is Digital Transformation? - Definition from Techopedia](#).

37. Legner, C., Eymann, T., Hess, T., Matt, C., Böhmman, T., Drews, P., et al. 2017. "Digitalization: Opportunity and Challenge for the Business and Information Systems Engineering Community," Business & Information Systems Engineering (59:4), pp. 301–308.

38. Clarke, R. 2019. "Risks inherent in the digital surveillance economy: A research agenda," Journal of Information Technology (34:1), pp. 59–80.

39. Corrocher, N., and Ordanini, A. 2002. "Measuring the Digital Divide: A Framework for the Analysis of Cross-Country Differences," Journal of Information Technology (17:1), pp. 9–19.

40. El Sawy, O. A., Kræmmergaard, P., Amsinck, H., and Vinther, A. L. 2016. "How LEGO Built the Foundations and Enterprise Capabilities for Digital Leadership," MIS Quarterly Executive (15:2), pp. 141–166.

41. Matt, C., Trenz, M., Cheung, C. M. K., and Turel, O. 2019. "The digitization of the individual: conceptual foundations and opportunities for research," Electronic Markets (29:3), pp. 315–322.

42. Forbes, Digitization, Digitalization, And Digital Transformation, by Jason Bloomberg. Retrieved from [Digitization, Digitalization, And Digital Transformation: Confuse Them At Your Peril.](#)
43. Exela Technologies, A Brief History Of Digitization, by Matt Tarpey (August 19, 2020). Retrieved from [A Brief History of Digitization | Exela.](#)
44. History of Digital Transformation, Daniel R. A. Schallmo & Christopher A. Williams, 2018.
45. Research gate. Retrieved from [The main forms of globalization. | Download Scientific Diagram.](#)
46. Globalization definition and historical overview, by Ben Lutkevich. Retrieved from [What Is Globalization? Globalization Explained.](#)
47. Statista Official Website, Leading countries in the Globalization Index field of social globalization 2022. Retrieved from [Social globalization 2022 | Statista.](#)
48. McKinsey Global Institute. Retrieved from [Digital Globalization: the new era of global flows - McKinsey & Company.](#)
49. OECD, How Digitalization and Globalization have Remapped the Global FDI Network, by Thomas Elkjaer and Jannick Damgaard. Retrieved from [How Digitalization and Globalization have Remapped the Global FDI Network.](#)
50. The Global Turn: Theories, Research Designs, and Methods for Global Studies, by Eve Darian-Smith, Philip C. McCarty, chapters 5-7. Retrieved from [https://books.google.ie/books?hl=uk&lr=&id=5bQwDwAAQBAJ&oi=fnd&pg=PR8&dq=Interconnections+and+mutual+influence+of+digitalization+and+globalization+books&ots=iF8GMVELOO&sig=iEx7fGCiL\\_GfdiX-VieZZqWRPn8&redir\\_esc=y#v=onepage&q&f=false.](https://books.google.ie/books?hl=uk&lr=&id=5bQwDwAAQBAJ&oi=fnd&pg=PR8&dq=Interconnections+and+mutual+influence+of+digitalization+and+globalization+books&ots=iF8GMVELOO&sig=iEx7fGCiL_GfdiX-VieZZqWRPn8&redir_esc=y#v=onepage&q&f=false)
51. Giddens, A. (1990). The Consequences of Modernity. Stanford University Press.
52. Castells, M. (2010). The Rise of the Network Society. Wiley-Blackwell.
53. Friedman, T. L. (2005). The World Is Flat: A Brief History of the Twenty-first Century. Farrar, Straus and Giroux.

54. Stiglitz, J. E. (2002). *Globalization and Its Discontents*. W.W. Norton & Company.
55. Sassen, S. (1991). *The Global City: New York, London, Tokyo*. Princeton University Press.
56. Ghemawat, P. (2019). *Globalization in the Age of Disruption*. Harvard Business Review. Retrieved from <https://hbr.org/2019/03/globalization-in-the-age-of-disruption>.
57. Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. W.W. Norton & Company.
58. Baldwin, R. (2019). *The Globotics Upheaval: Globalization, Robotics, and the Future of Work*. Oxford University Press.
59. Household Digital Consumer Behaviour 2022. Retrieved from [Online Learning - CSO - Central Statistics Office](#).
60. World Economic Forum, *Global Growth in Online Learning*, January 27, 2022. Retrieved from [These 3 charts show the global growth in online learning](#).
61. Statista, *Share of people in Ireland using online learning activities by formal education*, June 2021. Retrieved from [Ireland: online learning user 2015-2020, by education | Statista](#).
62. Anderson, M. C., & Lundquist, A. R. (2018). Digitalization and the future of work: Implications for SMEs. *Journal of Small Business Management*, 56(2), 225-236.
63. Evers, M., & Hirsch-Kreinsen, H. (2018). Industry 4.0 and its impact on reshoring decisions in manufacturing SMEs. *Journal of Business Research*, 88, 1-12.
64. All Ireland Business Times, by All-Ireland Business Foundation (May 11, 2021). Retrieved from [The Role That SMEs Will Play in Rebuilding the Irish Economy \(Free Downloadable Executive Summary\)](#).
65. Statista Official Website: *Proportion of SME engaged in international trade in Ireland from May 2016 to January 2018*, by D. Clark (April 22, 2022).



Retrieved from <https://www.statista.com/statistics/700967/monthly-sme-engaged-in-international-trade-ireland/>.

66. Value added by small and medium-sized enterprises (SMEs) in Ireland from 2008 to 2022, by enterprise size (in million Euro), by D. Clark (August 22, 2022). Retrieved from <https://www.statista.com/statistics/937763/value-added-by-smes-in-ireland/>.

67. Statista. (2021). Internet usage in Ireland. Retrieved from <https://www.statista.com/topics/5037/internet-usage-in-ireland/>.

68. Google Workspace. (n.d.). Benefits of Google Workspace. Retrieved from [https://workspace.google.com/intl/en\\_ie/benefits/](https://workspace.google.com/intl/en_ie/benefits/).

69. Irish Domain Registry. (2021). Irish SME Digital Health Index 2021. Retrieved from <https://www.iedr.ie/resources/irish-sme-digital-health-index-2021/>.

70. Leite, G., Pinto, L., & Gomes, A. (2020). Digital transformation in SMEs: A systematic literature review. *Journal of Business Research*, 108, 385-396.

71. Small Firms Association. (2018). Cloud Computing Adoption by Small Firms. Retrieved from <https://www.sfa.ie/Sectors/SFA/SFA.nsf/vPages/News~cloud-computing-adoption-by-small-firms-15-05-2018?OpenDocument>.

72. Employsure (January 09, 2023), Stephen Roebuck. Retrieved from [5 Ways Digitalization can Benefit your Business](#).

73. Ireland's SME Test the “Think small first principle”. Retrieved from <https://enterprise.gov.ie/en/publications/publication-files/ireland-s-sme-test.pdf>.

74. 5 Benefits of Digital Transformation for Small Business by Jules Tompkins, Business 2 Community (September 1, 2021). Retrieved from <https://www.business2community.com/small-business/5-benefits-of-digital-transformation-for-small-business-02434792>.

75. The benefits of digital transformation for small businesses by Brett Relander, Forbes (November 5, 2020). Retrieved from <https://www.forbes.com/sites/brettrelander/2020/11/05/the-benefits-of-digital-transformation-for-small-businesses/?sh=24f6b7dd6f9c>.

76. 2023 Commerce and Payment Trends Report. The 2023 Commerce and Payment Trends Survey from Global Payments. Retrieved from [Top 5 2023 Payment & Commerce Trends | Global Payments](#).
77. Statista: Spending on digital transformation technologies and services worldwide from 2017 to 2026 (in trillion U.S. dollars), October 2022. Retrieved from [Global digital transformation spending 2026 | Statista](#).
78. Armbrust, M., Fox, A., Griffith, R., Joseph, A. D., Katz, R., Konwinski & Zaharia, M. (2010). A view of cloud computing. Communications of the ACM, 53(4), 50-58.
79. Lipnack, J., & Stamps, J. (1997). Virtual teams: Reaching across space, time, and organizations with technology. John Wiley & Sons.
80. Google Developers. (2021). Mobile Optimization. Retrieved from <https://developers.google.com/search/mobile-sites/mobile-seo>.
81. Deloitte. (2020). Blockchain in business: A primer for C-suite executives. Retrieved from <https://www2.deloitte.com/us/en/insights/topics/digital-transformation/blockchain-in-business.html>.
82. Ponemon Institute. (2020). Cost of a Data Breach Report 2020. Retrieved from <https://www.ibm.com/security/data-breach>.
83. Accenture, Shopping on Social Media Platforms (January 04, 2022). Retrieved from [Shopping on Social Media Platforms Expected to Reach \\$1.2 Trillion Globally by 2025, New Accenture Study Finds](#).
84. Statista. (2021). Social commerce - Statistics & Facts. Retrieved from <https://www.statista.com/topics/3003/social-commerce/>.
85. European Commission, Digital Economy and Society Index (DESI) 2021 Ireland. Retrieved from [https://www.eccireland.ie/wp-content/uploads/2022/07/DESI\\_2021\\_Ireland\\_eng\\_10WcZRCR0XJcJngLKQWsoTrA9jc\\_80489.pdf](https://www.eccireland.ie/wp-content/uploads/2022/07/DESI_2021_Ireland_eng_10WcZRCR0XJcJngLKQWsoTrA9jc_80489.pdf).
86. Department of Public Expenditure, NDP Delivery and Reform. Government makes digital transformation a priority for the Public Service. Retrieved

form <https://www.gov.ie/en/press-release/cd7882-government-makes-digital-transformation-a-priority-for-the-public-se/>.

87. The Global Economy, 2020, Ireland Overall Globalization. Retrieved from [Ireland Overall globalization - data, chart | TheGlobalEconomy.com](#).

88. Analysys Mason is the technical adviser to the Irish government's National Broadband Plan. Retrieved from <https://www.analysismason.com/about-us/project-experience/irish-government-national-broadband-plan/>.

89. Central Statistics Office, Ireland Exports and Imports (15 February 2022). Retrieved from [Goods Exports and Imports December 2020 - CSO - Central Statistics Office](#).

90. Government of Ireland, Action Plan for Jobs. Retrieved from <https://enterprise.gov.ie/en/publications/publication-files/action-plan-for-jobs-2018.pdf>.

91. National Skill Council, Digital Transformation: Assessing the Impact of Digitalisation on Ireland's Workforce. Retrieved from <https://assets.gov.ie/24469/db54da067af2473fa5a668ffa34f4e6e.pdf>.

92. Skill Net Ireland, National skills platform will help close Ireland's digital skills gap (February 28, 2023). Retrieved from <https://www.skillnetireland.ie/national-skills-platform-will-help-close-irelands-digital-skills-gap/>.

93. World Economic Forum, The Global Competitiveness Report. Retrieved from [https://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf).