RECONOMY
Revitalize Reconnect Reshape

NEEDS ASSESSMENT

PROJECT: "SKILL BOOST: TECH UPSKILLING INITIATIVE"

August, 2022

HELVETAS

Sweden
Sverige

UEICT UNION OF EMPLOYERS OF INFORMATION AND COMMUNICATION TECHNOLOGIES

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List of Abbreviations

SME	Small and Medium Enterprise
FDG	Focus Group Discussion
SMM	Social Media Marketing
CEO	Chef Executive Officer
PE	Private Enterprise
LLC	Limited liability Company
SEO	Search Engine Optimization
NGO	Non-Governmental Organization
ICT	Information and Communication Technologies
RA	Republic of Armenia
IMC	Institute of Management consulting
CRM	Customer Relationship management
ERP	Enterprise Resource Planning

1. RESEARCH SUMMARY AND OBJECTIVES

In Armenia, small and medium enterprises (SMEs) play a critical role in shaping the economy. According to the 2021 publication by the National Statistical Committee, there are 83,032 SMEs in Armenia and only 132 large companies.[1] Therefore, the development of SMEs is directly connected with the development of the whole economy.

Digitization is an important part of the development of SMEs, as it has a proven impact on process optimization, increase of productivity and efficiently of a company. At a public level, digitization allows governments to operate with greater transparency and efficiency.

The role of digitalization has increased especially after the Covid-19, which has highlighted the importance of innovative technologies and digital tools to be able to survive and develop in the changing business environment.

From the one side, ICT sector in Armenia has a rabid and constant development, from another side, the level of digitalization in SME sector is quite low. Moreover, there is certain communication gap between IT sector and traditional businesses.

To find out the current digitalization level among SMEs and key barriers, which prevent them from joining the digital economy a needs assessment has been conducted. The need assessment has been implemented in the frames of the RECONOMY regional inclusive and green economic development project funded by the Swedish International Cooperation Development Agency (Sida), implemented by HELVETAS Swiss Intercooperation in partnership with the Union of ICT Employers (UEICT) and other organizations in the Eastern Partnership and the Western Balkan countries.

The need assessment has been conducted by private business consulting and research company; BSC Business Support Center. The research study included comprehensive needs assessment of Armenian SMEs to identify current status of digitalization of businesses, key barriers and challenges related to digitalization, as well as to map the current opportunities for digital transformation.

The main objectives of the research were:

- Identifying the current level of SME digitalization
- Assessing digital literacy and awareness level of SMEs on digital tools
- Defining the needs and priorities of SMEs in digitalization
- Identifying main barriers faced by SMEs in digitalization

[1] Small and medium enterprises in the Republic of Armenia, 2021

- Identifying the readiness for digitalization
- Developing main findings and conclusions on SME digitalization in RA
- Developing recommendations to take into consideration in development of future projects to increase effectiveness of SME digitalization.

The needs assessment methodology was designed to meet the research objectives. In the frames of the need assessment, both primary and secondary data sources have been gathered and analyzed. As a primary data collection method qualitative and quantitative research was conducted, which enabled to gather in-depth understanding of the context and experiences. The needs assessment included a survey with SMEs, in-depth interviews with the industry experts, focus group discussions, as well as other tools and techniques that are described in Chapter 3 of the current report.

The findings of the report are clearly illustrated to support the future interventions. Recommendations are practical and the majority of them are linked directly to conclusions.

2. BACKGROUND

2.1 The role and importance of SMEs in the Armenian economy

In Armenia, SMEs play a critical role in shaping the economy. According to the 2021 publication by National Statistical Committee, there are **83,032** SMEs in Armenia.

In Armenia Small, and Medium enterprises are determined by the law.[2] According to RA legislation, SME entities are classified according to the criteria presented below.

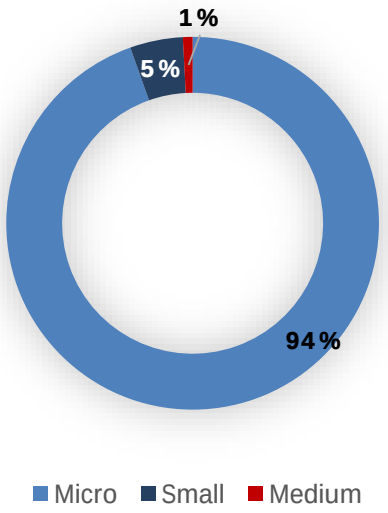
Table 1: SME classification by law

SME classification	Average annual number of employees	Accounting value of assets as of the end of the previous year (AMD)	Revenue from previous year's operations (AMD)
Micro	_	_	<24 mln
Ultra small	Up to 9	< 100 mln	_
Small	10-49	<500 mln	_
Medium	50-249	< 1000 mln	<1500

The SME sector accounts for around 98% of all registered and functioning legal entities in the country, out of which 94% are classified as micro size companies.

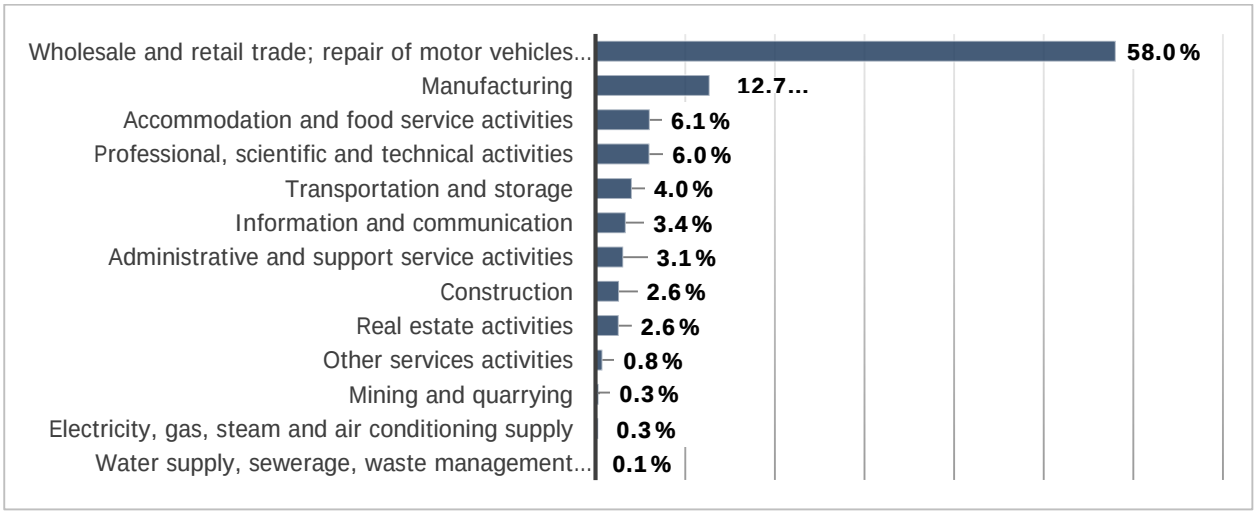
[2] https://www.arlis.am/documentview.aspx?docID=64617

Chart 1: The distribution of SMEs by size



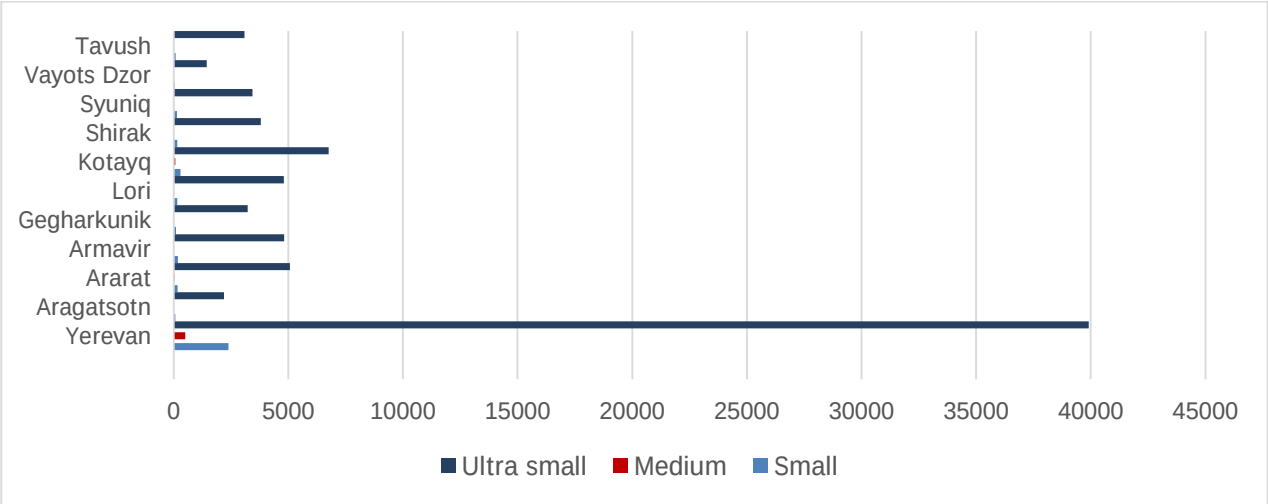
As shown below, 58% of SMEs consist of wholesale and retail trade sector.

Chart 2: The distribution of SMEs by sector



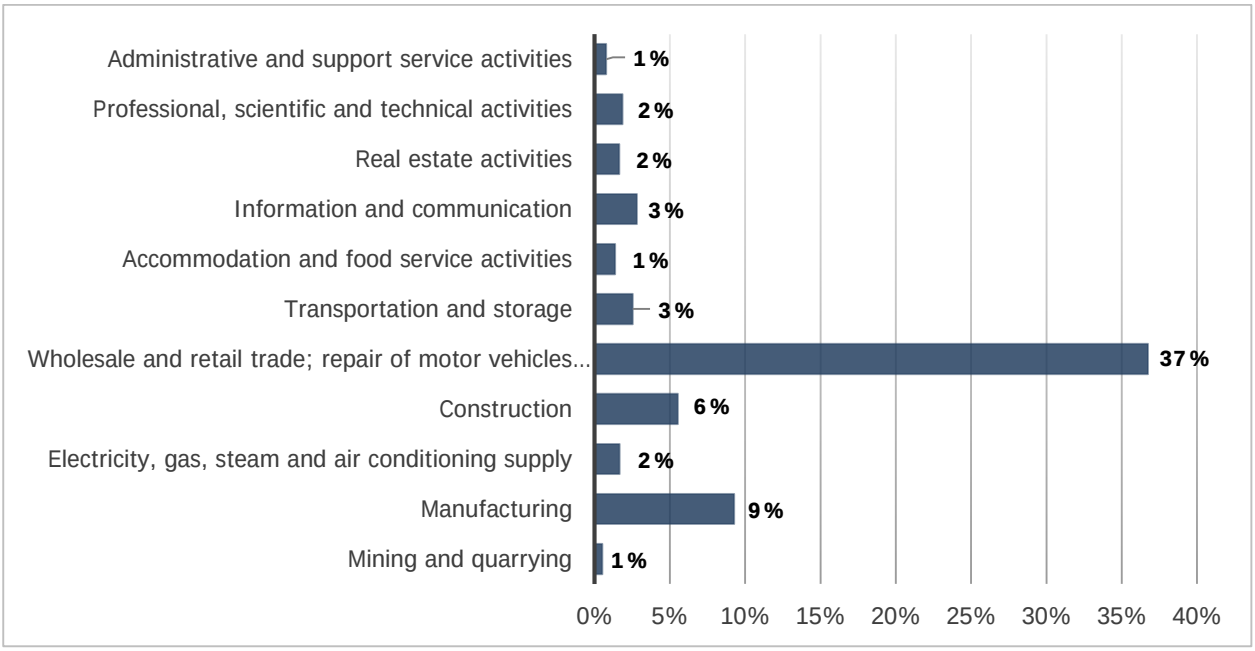
The below chart shows the distribution of SMEs across the country. As seen from the graph, the distribution is quite uneven in the capital Yerevan and in the regions. Around the half of the companies are located in Yerevan.

Chart 3: Number of SMEs per region



Respectively, the annual income of companies located in Yerevan is also significantly different from the indicator in the regions. This disproportional development also has a great impact on the development of companies. Companies in the regions are isolated from the country's economy for various reasons, which will be discussed in the main research section.

Chart 4: Sectorial annual turnover in total SME turnover[3]



[3] Small and medium enterprises in the Republic of Armenia, State Statistical Committee 2021

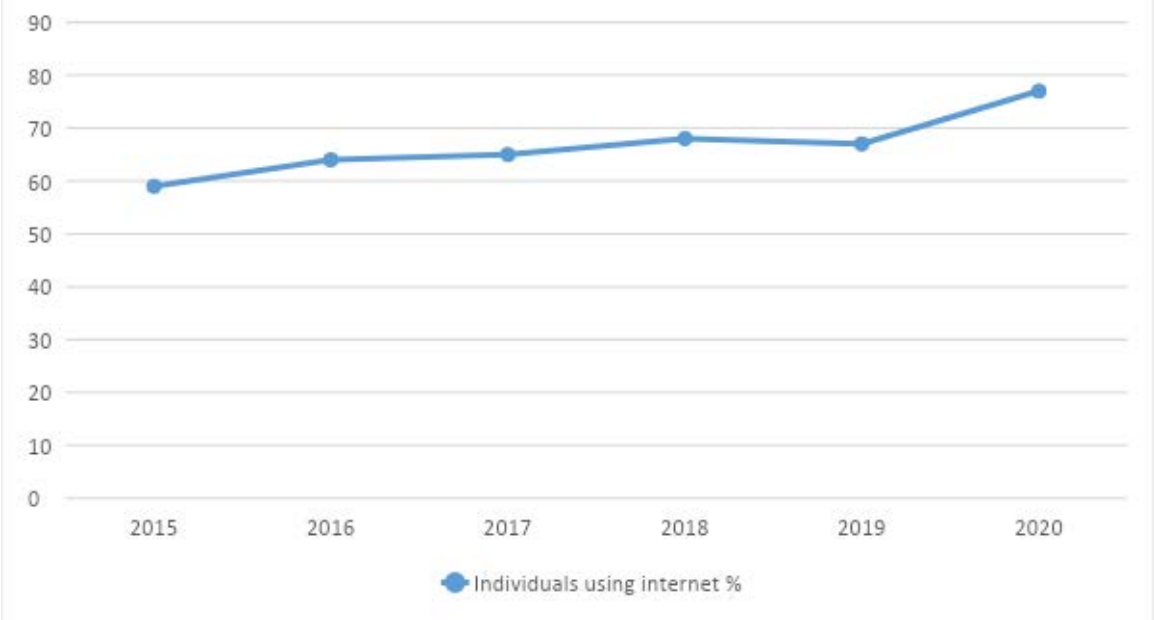
It is important to highlight the leading sector based on this indicator, which is trade. The annual turnover of the wholesale and trade sector consists 37% of the entire SMEs' turnover.

2.2 Environment for digitalization in Armenia

Among important factors to be discussed when analyzing the environment for digitalization is **internet access in the country and the digital literacy of the population**.

The accessibility of the internet during the period of last years is presented below.

Chart 5: Individuals using Internet in Armenia[4] (% of population)



Internet users are individuals who have used the Internet (from any location) in the last 3 months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc. According to the statistics, in 2020, 77% of the population have used the internet in Armenia.

The quality and speed of internet in the country is above the international average. Anyway, the difference of indicator in the capital and regions is quite substantial. There are rural areas in the country which still no not have access to high speed, undisturbed internet.

[4] Individuals using the Internet (% of population) – Armenia, The World Bank

For accessing internet, the population mostly use smartphones. For example, 97.8% of the population uses smartphones to access Facebook and only 2.2% via laptop.[5]

By Alexa Ranking, the 20 most visited websites by Armenians are the following:

Table 2: The most visited webpages in 2022.[6]

1.	Google.com	8.	Mail.ru	15.	Totogaming.am
2.	Youtube.com	9.	News.am	16.	Telegram.org
3.	Facebook.com	10.	Amazon.com	17.	Kickstarter.com
4.	List.am	11.	Google.ru	18.	Instagram.com
5.	Bangacams.com	12.	Yandex.ru	19.	VK.ru
6.	Ok.ru	13.	Google.am	20.	ZOOM.us
7.	Wikipedia.org	14.	Wildeberries.ru		

According to the results, it can be noted that businesses have the opportunity to make online sales via most popular web pages, like Facebook, Instagram, List.am, Wildberries and Amazon.

COVID-19 affected the rates and purposes of internet usage among population dramatically. The indicators of internet usage have been increased, also increasing the rates of activities including online purchases and online transactions. In 2021, 16% used internet or mobile phone to buy something online and 47% made or received a digital payment.[7]

These indicators naturally had an impact on digital business environment, especially e-commerce. Based on the secondary data source, 40% of SMEs use the Internet for sales, 32% for customer communication, followed by accounting, purchasing, and other functions.

When interacting with the government, SMEs use digital platforms mainly to pay taxes. In the business-to-business domain, only 20 percent of SMEs do online contracting and use digital payments for transactions. [8]

Literacy of society is another primary and important factor affecting the digitalization environment. In the context of digitalization, literacy can be divided into 2 parts: business literacy and digital literacy.

[5] https://datareportal.com/reports/digital-2022-armenia?rq=armenia
[6] https://datareportal.com/reports/digital-2022-global-overviewreport?utm_source=DataReportal&utm_medium=Country_Article_Hyperlink&utm_campaign=Digital_2022&utm_term=Armenia&utm_content=Global_Promo_Block
[7] The Global Findex 2021
[8] Armenia. ICT Use by Households and Individuals, World Bank, 2020

Digital literacy is defined as set of basic skills and knowledge to be able to effectively and safely use digital technologies. The level of digital literacy can affect digitalization of businesses in three directions; the management, customers and employees.

The use and effectiveness of application of digital tools is directly connected with awareness level and digital literacy. According to the Caucasus Barometer Survey in 2019, 34% of population in Armenia was lacking even basic digital skills.

The level of digital literacy directly affected by 3 main directions:

- Customers
- Employees
- Business owner

Customer: The digital literacy level of society is directly correlated with the digitalization of businesses. Business serves the customer, considering their needs and demand. Thus, if the customer is not digitally literate enough, he will not be able both to use and to demand digital solutions from businesses. The businesses usually adapt their processes to the client's capabilities, their behavior and habits, therefore if the target customers of the business are not using digital tools as a channel of information and communication, as well as platform for online purchases, digitalization of related directions will have no sense and effectiveness.

In Armenia, the society is not educated on the topic of digital literacy neither at school, nor at most of the universities. The new government strategy aimed at filling in the gap with its reforms and events.

Employees: Employees as well have significant impact on the digitalization decisions of the businesses. In case of low digital literacy of employees, the digital tools will not be effectively and efficiently used by the staff.

Moreover, employees often resist and are not ready to use digital tools. The following main perceptions and fears create resilience among the staff:

- The fear that machines and automated process will replace them
- The estimated reduced value and importance employees
- The fear of not being able to work with digital tools
- Absence of desire to change the working methods they are used to and lack of willingness to learn something new
- Absence of understanding and belief in effectiveness of digital tools

Owner/management: The digital literacy of the owner and/or management of the company is crucial as the latter are decision makers. If the business owner is not digital literate enough, do not have awareness on digital tools and their effectiveness or has wrong perceptions about the digital looks, the digital transformation of the company is unlikely to take place.

Business Literacy concerns the business owner and refers to basic managerial and financial knowledge possessed by the latter. The business literacy of companies is crucial for effective digitalization. The most essential aspects affecting digitalization are the following:

1. Company need assessment
2. Result analysis
3. Strategic mindset

Need assessment. According to the interviewed experts, in many cases business owner fails to conduct a company needs assessment to analyze which tools the company needs and which will be effective in their individual case. This ends in the selection and application of not proper digital tool. In its turn, this results in low effectiveness of the tool, which frustrates the business owner and make them consider that digitalization is not effective overall. The effective assessment of company problems, needs and goals are essential while choosing the digitalization strategy.

Analyzing the results. After the need assessment and establishment of digital tool, it's important to analyze the results, which is barely developed among SMEs. The most SMEs do not analyze the results and cannot make data-driven decisions.

Strategic mindset. According to the experts, SMEs do not have a strategic plan and a goal to grow. The reason is that the business owner mainly thinks on a short-term level. This is partially because of fast-changing external environment, economic and political uncertainty. However, this factor is also highly correlated with the business literacy and knowledge.

In addition to digital and business literacy, there is another essential barrier, which prevents business owner to use digitalization opportunities, which is the language barrier. In most of the cases content, digital tools and systems are mainly in English language.

2.3 Government strategy

In the framework of government digitalization strategy, **"Digital Transformation Agenda of Armenia 2018-2030"** document was developed, where the following strategic perspectives are outlined:

- 2018-2020: "Digital Leap" (emphasis on large-scale implementation of infrastructural changes and update of existing funds),
- 2021-2025: "Digital acceleration" (investments to ensure the highest efficiency),
- 2026-2030: "Digitalization driven development" (strong emphasis on innovations for ensuring growth)

According to the digitization strategy[9], the state will carry out digitization-oriented reforms in 3 directions:

1. State Bodies and Processes

This direction aims to digitize the main functions and processes implemented by the government. Some of which directly affects the businesses.

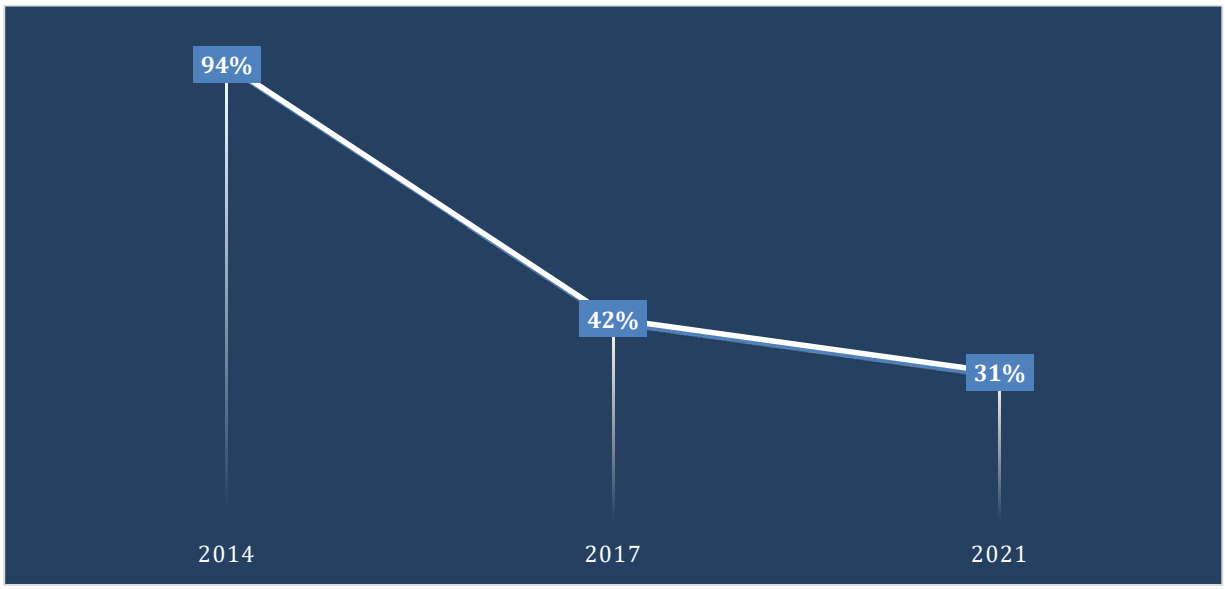
The government's e-gov.am platform consolidates real estate (www.e-cadastre.am), state payments (www.e-payments.am), electronic registration of organizations (www.e register.am), electronic submission of tax reports (file-online.taxservice.am) electronic systems, and the unified platform for electronic requests (www.e-request.am). There are also other systems that support construction permit processes (www.e-permits.am) and the unified electronic register of RA licenses (www.e-license.am).

Digitization of public services also promotes the use of digital tools among society and businesses. Digitization of many government processes will lead to a situation where organizations will begin to digitize some directions independently of their preference, for example, accounting processes to comply with laws.

Moreover, the government promotes online transactions. As seen in the table below, the number of people, who received government transfer by cash only method has been decreased dramatically since 2014.

[9] https://www.arlis.am/DocumentView.aspx?docID=149957

Chart 6: The number of people who received government transactions cash only[10]



2. Economy

The main goals set by the government in the economic sector are as follows:

- Increase of awareness level on digital technologies in the private sector
- Promotion of application of digital solutions
- Review of Digital Business Legislation
- Encouragement of the organizations to use e-commerce and removing barriers
- Digitization of industry

The latter, is very important from the point of view of digitization of business, because currently state programs are aimed exclusively at digitization of society and improvement of digital education level. Presently, business is not a separate target for the state, which is why number of problems are not identified and solved.

3. Society

The main and primary goal of the state set in the strategy is to increase digital literacy of population, which is a crucial factor for digitalization. The directions include:

- Inclusion of the digital skills course in the general education system
- Development of interactive digital skills courses

[10] Individuals using the Internet (% of population) – Armenia, The World Bank

- Review and update of Cyber Literacy Curriculum
- Information dissemination on available digital platforms

According to the agenda, there are 3 main responsible institutions for digitalization:

- The Ministry of High Tech Industry
- The Central Bank of Armenia
- The Ministry of Economy of Armenia

The main responsible institution of digitalization strategy is the Ministry of HTI. There is a digitalization department in the Ministry whose main goal is to increase the digitalization level among society and to develop digitalization strategy.

According to the head of the digitalization department, the target of the government is the entire society, not only businesses.

First, we as a government do not want to separate the business, the citizen or the state. In other words, we believe that if we build a road, it is for everyone, whether for business, citizens or the state. As a result we will have digital society, which will create favourable enviornment for the digitalization of economy.

Arshak Kerobyan, Head Of Digitalization Department of the Ministry Of High Tech Industry

The role and support of the government is critical in regards to digital society and economy, in a direction of which number of programs are being implemented.
However, there are a number of problems identified which impact the effectiveness of projects and government actions. One of the problems is not clearly defined responsible bodies for each activity.

The roles, responsibilities and actions related digitalization strategy are not assigned and distributed between key implementers effectively. There are number of uncertainties and overlap between the roles of the state institutions and their activities.

Jack Hackimian, International Digitalization Expert, Former Expert at National Center of Innovation and Entrepreneurship

Another issue identified, that number of state digital platforms are not connected to each other and representatives of different institutions do not possess identical information, which causes complications and low efficiency.

To solve this issue, it is envisioned to establish a national digital identity system and conduct an open data policy. Having a national digital identity system will also significantly reduce the costs of data collection and processing in the financial system.

Legislative system

The legislative field in the direction of e-commerce, online business, and cyber security is not well developed and defined in Armenia and needs improvement.

However, we can note that several reforms are being implemented in the direction of e-commerce and personal data protection.

One of the examples is the recent **"Law on Cashless Operations"[11].** According to the law, companies are obliged to have payment terminals (POS-terminals) to accept non-cash payment regardless of the amount via cards or other online payment methods. The availability of Apple Pay in 2022 in the country will surely have its effects on the development of non- cash payment culture in Armenia. Moreover, according to the law, from July 1, 2022, transactions exceeding AMD300,000 in the territory of the Republic of Armenia, must be carried out in a cashless manner. In addition, transactions such as scholarships, government purchases, medical, educational, notary, lawyer, including consulting services, must be completely made cashless regardless of the amount. Salaries and loans provided by the banks and credit organizations must also be non-cash. Repayment of provided loans, insurance benefits must be implemented in no-cash form as well. The application of the law will allow further development of the online payment system.

On the another side, SMEs engaged in the needs assessment expressed concerns related to the law. The first argument is perhaps that companies and society are not yet ready for such a change, especially the residents of regions and the elderly.

During the focus group discussions, it became clear that most of the organizations are not aware of the details and application of the law. There is an identified gap between the state and the private sector, which causes number of problems.

[11] https://www.arlis.am/DocumentView.aspx?docID=160074

2.4 SME digitalization opportunities

The role of digitalization has extremely increased after Covid-19. The pandemic came to prove that investment in digitalization is a crucial factor for building resilience among SMEs against external shocks. As a result of Covid-19 pandemic, thousands of businesses around the world went bankrupt due to incompetency to adapt to the new business environment. The situation was quite intense in Armenia as well.

The research showed that ICT sector is quite developed in Armenia and local companies offer number of high-quality digital solutions. Moreover, number of other tools and software offered by international suppliers are widely available in Armenia. Examples of digitalization tools are:

- E-commerce platforms
- Enterprise resource planning (ERP)
- Customer relationship management (CRM)
- Supply-chain management (SCM)
- Warehouse management system
- Etc.

As the survey results showed, the use of digital tools is directly connected with awareness on tools and capability of effectively using it. In the frames of the research, there were number of programs identified aimed at SME support and capacity development. The development projects include capacity building, training, consulting, and financing opportunities provided to SMEs. The project are being initiated in implemented by the government, international institutions, local NGOs, private companies, and business consultants.

When analyzing the available support programs for SMEs, it was identified that there are very few project aimed specifically at digitalization and digital transformation. Most of the SME support projects include capacity building for improvement of general business knowledge and development of entrepreneurship with some component of digitalization. Some projects also include access to finance opportunities with provided grants or low cost loans.

An important highlight related to development programs, is that mostly they do not include follow-up, monitoring and consulting activities. As a result, the participants of the programs learn about various tools, but still face challenges in applying these tools in real life.

Most of the programs are aimed at raising awareness and provision of knowledge. However, when it comes to applying this knowledge in real life, SMEs understand that they lack in practice, they need someone to assist and consult them on integration of digital tools and systems. The programs are mainly on a one level basis, and no continuation affects the effectiveness significantly.

Ruzanna Khachatryan, Ministry of Economy, Department of Entrepreneurship Development, Igorts expert

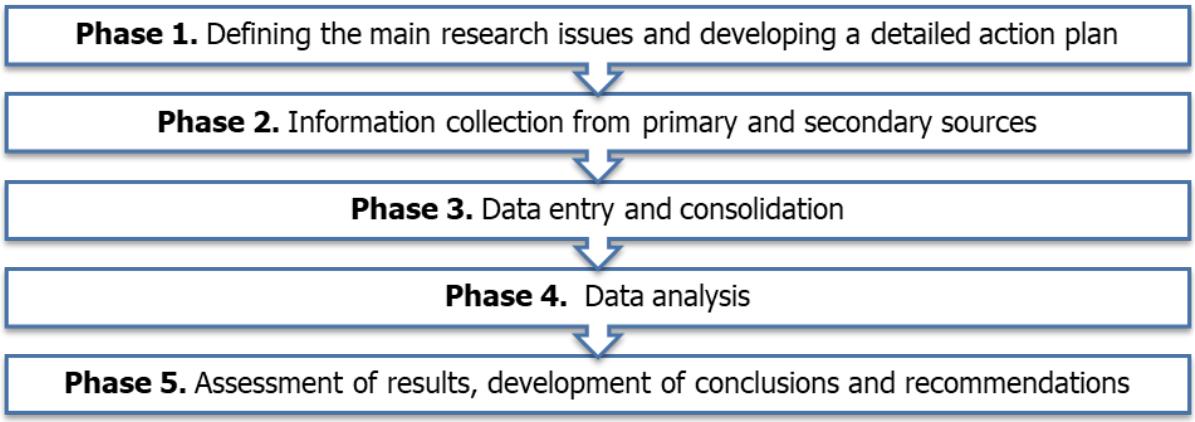
It the frames of the research it was identified that the government also faces number of problems when implementing support programs. One of them is the low level of digital literacy among the society and practically businesses.

When we were implementing the program, we have realized that our beneficiaries do not have capability of using simple digital tools, thus we have decided to organize training on this. The training refers to the most basic tools: computer skills, social networks, Microsoft Office, etc.

Tamara Sargsyan, Ministry of Economy
Entrepreneurship Development department, consultant

3. NEEDS ASSESSMENT METHODOLOGY

BSC carried out in-depth research based on the following structure, applying various approaches and methods for effective need assessment.



The research was conducted based both on **qualitative and quantitative approaches** and involved collection of information **both from primary and secondary sources**. This combination made it possible to study the problems and opportunities comprehensively and objectively.

The **secondary data** was collected from the following sources (not limited):

- Information requested and collected from state bodies including: Ministry of Economy, Statistical Committee of the Republic of Armenia (https://armstat.am/en/), Ministry of High Tech Industry, etc.;
- Information requested from NGOs, foundations, companies implemented similar projects;
- Information requested and received from relevant municipalities;
- Research of the available documents on international experience regarding SMEs;
- Previously implemented studies and researches;
- Legislation and regulations on SME sector;
- Other relevant articles, publications and reports.

The conducted secondary research allowed to map the programs and opportunities designed for SMEs, gather information on related legal regulations, as well as examine the current statistical data related to SMEs in Armenia.

Primary data collection included the following methods:

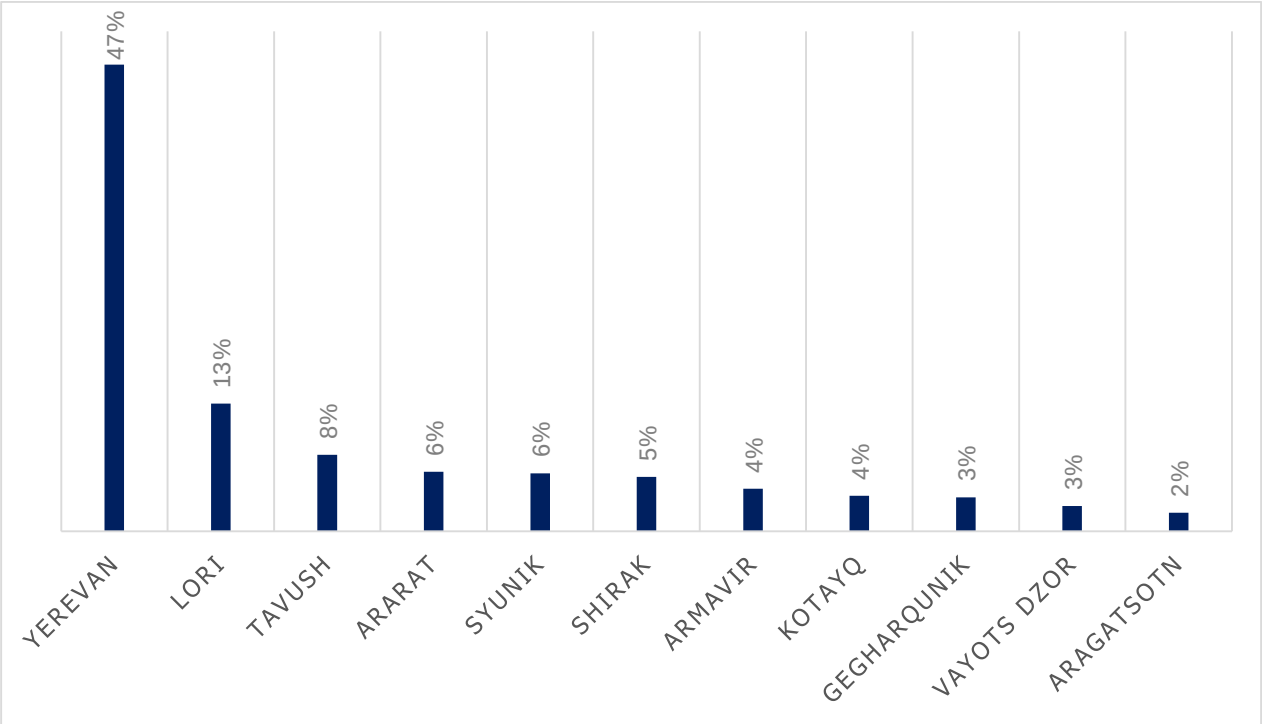
- 587 surveys among SMEs in Armenia;

- 15 in depth interviews with relevant stakeholders such as industry experts, representatives of public sector, etc.
- 3 focus group discussions with SME representatives
- 2 round table discussions with industry experts, representatives of public sector, NGOs and foundations, associations and provide sector, etc.

3.1. Survey among SMEs

Survey with a sample size of 587 was conducted among SME in regions of Armenia and in Yerevan. The sample size was calculated based on the number, structure and regional distribution of registered SMEs by using sample size calculation formula, specifically, having 99% confidence level and 5% margin of error. The needs assessment also had a focus on the priority sectors of the project; which are manufacturing, agriculture and agro/food processing, tourism and hospitality. 53% of the survey respondents were SME representatives of the highlighted sectors.

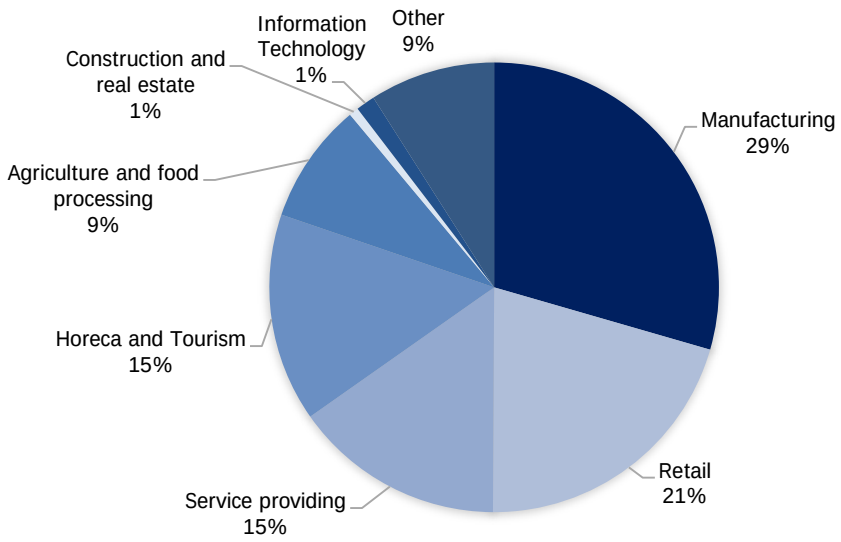
Chart 7: Distribution of the survey respondents by the region



As presented in the Chart 8, 47% of the respondents were from Yerevan, whereas the 53% of the respondents were from regions. The survey respondents represented different fields, which allowed

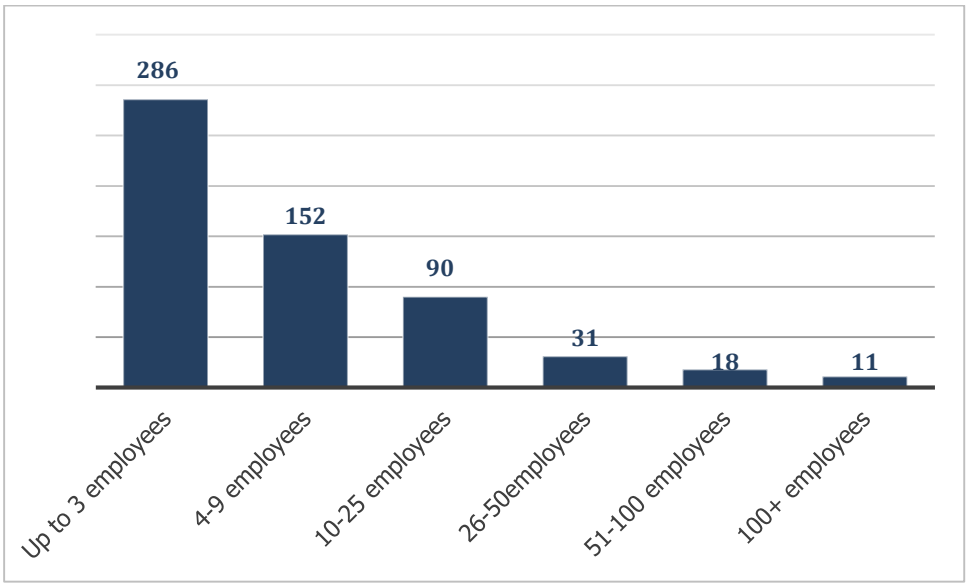
to conduct more objective and comprehensive research. Below is the distribution of participating SMEs by the sector.

Chart 8: The distribution of the survey respondents by the sector



The majority of the respondents represented micro-size companies, as they account for 94.5% of all the SMEs in the country.

Chart 9: Distribution of the respondents by company size



The following main subjects were assessed in the survey:

- Awareness level of SMEs on digital tools
- Digital literacy of SMEs
- Digital solutions currently used by SMEs
- Sales and distribution channels used by SMEs
- Key barriers and challenges of SMEs related to digitalization
- Needs and priorities in digitalization
- Readiness for digitalization
- Resources available and required for digitalization practices
- Business literacy of SMEs and main entrepreneurial skills
- The Covid-19 impact on digitalization

In the frames of the need assessment the following digitalization directions have been analyzed.

- Digital Marketing
- Business Process Automation Software and Tools
- E-commerce and Online Payment Systems
- Data collation and Analysis
- Cyber Security and Data protection

The regional distribution of the survey respondents is presented in the table below.

Questionnaire consisted of 38 questions including multiple-choice questions. Surveys were conducted via three formats: face to face, online and via phone.

Before the fieldwork, the interviewers were trained by the BSC experts on the project specifics, digital tools terminology, the methodology of the survey, research approach, code of ethics and quality assurance mechanisms (cross checking, specific information discovering etc.). The distribution of the number of conducted surveys per region was based on the distribution of the number of SMEs registered in each region. The sample of survey participants was further determined by the field of activity and company size.

3.2. In depth interview with experts

15 in depth interviews were conducted with:

- Industry experts, such as experts in the fields of e-commerce, digital marketing, business process automation, cybersecurity, finance, etc.;
- Representatives of public sector;
- Representatives of NGOs and foundations;
- Representatives of relevant unions, chambers and associations;

In the frames of the expert interviews, the assessment of the current state and needs of the local companies was carried out, the main problems and barriers faced by the SMEs were highlighted. Moreover, during the interviews, a number of suggestions were made by the experts, which were used in development of the main recommendations.

The list of experts engaged in the needs assessment is presented below.

Table 3: List of in-depth interviews participants

N	Name Surname	Organization	Title
1	Astghik Hoveyan	AGBU Armenia, NGO	Business Consultant of "Women Entrepreneurship" program
2	Tigran Matinyan	Call to Action, Digital Marketing Agency	CEO
3	Tigran Manukyan	MERSOFT, Business Management Systems	CEO
4	Samvel Martirosyan	CYBERHUB, Cybersecurity Consulting	CEO
5	Ruzanna Khachatryan	Ministry of Economy of Armenia	Igorts Expert
6	Grigori Yolyan	IDRAM, Online Payment System	Creative Director
7	Silva Mesropyan	Institute of Management Consulting (IMC)	Director, Business Consultant
8	Ruben Osipyan	SME Cooperation Association	Director

9	Arshak Kerobyan	Ministry of High Tech Industry of Armenia	Head Of Digitalization Department Of The Ministry Of High Tech Industry
10	Artak Harutyunyan	Smartology, Digital Marketing Agency	Digital Marketing expert, CEO
11	Gevorg Hayrapetyan	Personal Data Protection Agency of Armenia	Head of Agency
12	Jack Hakimian	Info-tech research group, Canada	International Digitalization Expert, Former Expert At National Cener Of Innovation And Entrepreneurship
13	Ruben Sarukhanyan	EBRD, BSO	Project Manager
14	Levon Galstyan	4U, online sales platform	CEO, Founder
15	Hayk Harutyunyan	Inecobank CJSC	The Head Of Strategic Management Center

For conducting in-depth interviews 9 questionnaires were developed.

1. Questionnaire for NGO
2. Questionnaire for digital marketing company
3. Questionnaire for business processes automation company
4. Questionnaire for financial institution
5. Questionnaire for public sector institution
6. Questionnaire for cybersecurity and personal information protection expert
7. Questionnaire for representative of union
8. Questionnaire for international expert
9. Questionnaire for e-commerce platform

The interviews were recorded (with the consent of interviewee) and results were analyzed.

3.3. Focus Group Discussions

3 focus group discussions were implemented with the representatives of SMEs. The discussions helped to identify the needs of SMEs in terms of digital solutions, reveal digital means currently

used by the companies, assess its effectiveness, as well as highlight the problems faced by SMEs during digitization.

Two focus group discussions were held with the SME representatives in the Tavush and Shirak regions. Discussions were held in the cities of Gyumri and Dilijan. Another focus group discussion was held online and the participants represented different regions of Armenia and Yerevan.

The recruitment of participants was carried out through dissemination of information through state institutions, partner organizations, social media, e-mailing and other sources.

The participant list of focus group discussions are presented in ANNEXES.

For conduction of FDGs a questionnaire and guide was developed. FDGs were recorded and results were analyzed.

3.4. Roundtable Discussions

2 round table discussions were conducted with industry experts, NGOs and foundations, private and public sectors, associations, etc. Round table discussions helped to highlight the issues companies face during digitalization on an expert level, discuss opportunities and brainstorm on possible solutions.

The agenda of the roundtable discussions was developed based on the results of primary and secondary research. Below the topics of round table discussions are presented.

1. Digital literacy and available infrastructure: First roundtable was held online, via Zoom. The goal of the discussion was to find out the impact of the economic, legislative and social environment in RA on SMEs, relevant to digitalization. The sufficiency of current infrastructure to provide all the necessary opportunities for companies to effectively manage and implement digitalization was discussed.
The agenda of the discussion is presented below.

Introduction to the project
Digital infrastructures. Available Payment systems for e-commerce

Digital infrastructures. Internet accessibility in regions
Non-digital infrastructures. Availability of delivery services for regional companies
Digital and financial literacy. Implemented and planned programs aimed at increasing the level of digital literacy
Digital and Financial Literacy: The correlation between digital literacy of Society, business literacy and digitalization

2. Business automation. Opportunities and key barriers: The second roundtable discussion was held offline. The main goal of the discussion was to identify the opportunities for SMEs on business automation tools and assess the expected benefits of using business automation tools. During the meeting, the main challenges, barriers and opportunities related to business process automation were addressed, the communication gap between ICT sector and traditional businesses was discussed.

The participants were representatives of both SMEs and business processes automation software providing companies, as well as field experts to assure discussion format and presence of prospective and opinions of each.

The participant list of roundtable discussions are presented in ANNEXES.

The full agenda is presented below.

Introduction to the project and participants
Opportunities for SME's business processes automation: Existing companies in Armenia, cost of services
Return of Investments (ROI) after using automation tools
The existing gap between SMEs and the IT sector: Armenian market as a target for it companies
Business literacy: The accuracy of SMEs' need assessment

4. SME NEEDS ASSESSMENT

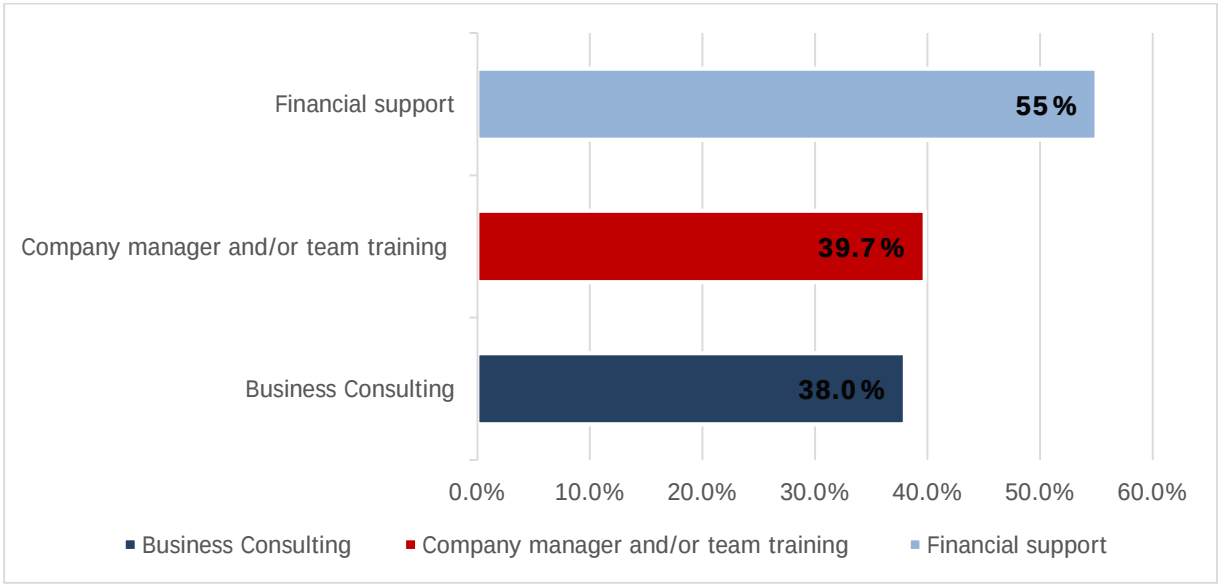
4.1. Need Assessment Executive Summary

The research had an objective to assess the main needs, challenges and priorities of SMEs, as well as identify the current digitalization level in the companies.

The below chart represents the main support directions identified by the respondent SMEs. Not surprisingly, 55% of the respondents indicated about the need of financial support.

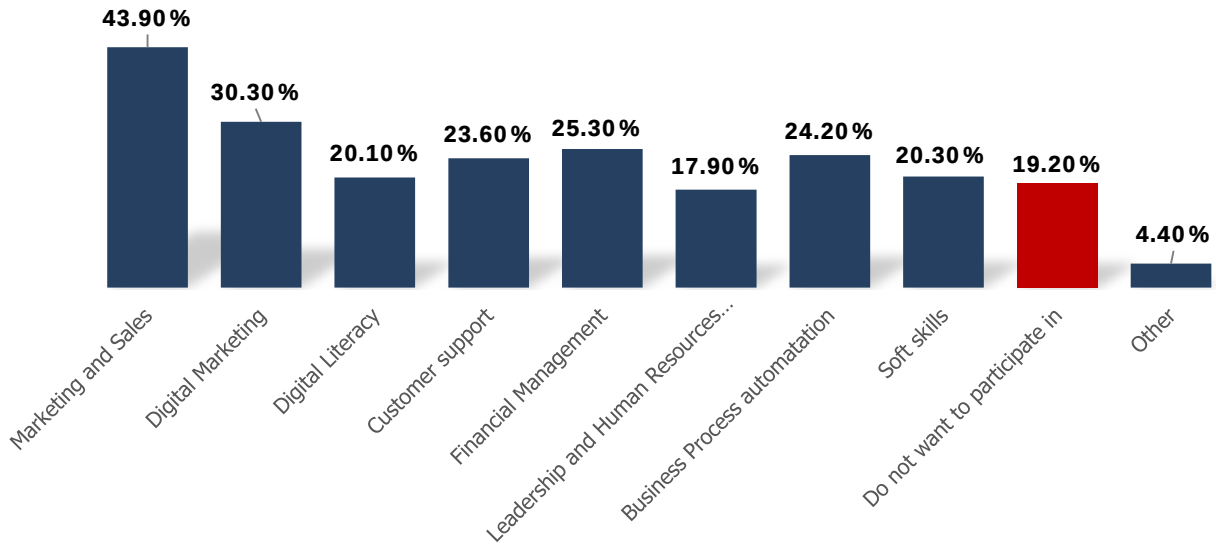
38% of the respondents highlighted about the importance of business consulting activities. Another 39.7% of the respondents mentioned about the desire for participation in capacity building trainings.

Chart 10: Type of support demanded by the respondent SMEs



Further, the spheres of interest of SMEs in regards to trainings were identified.

Chart 11: Demanded training topics by the respondents

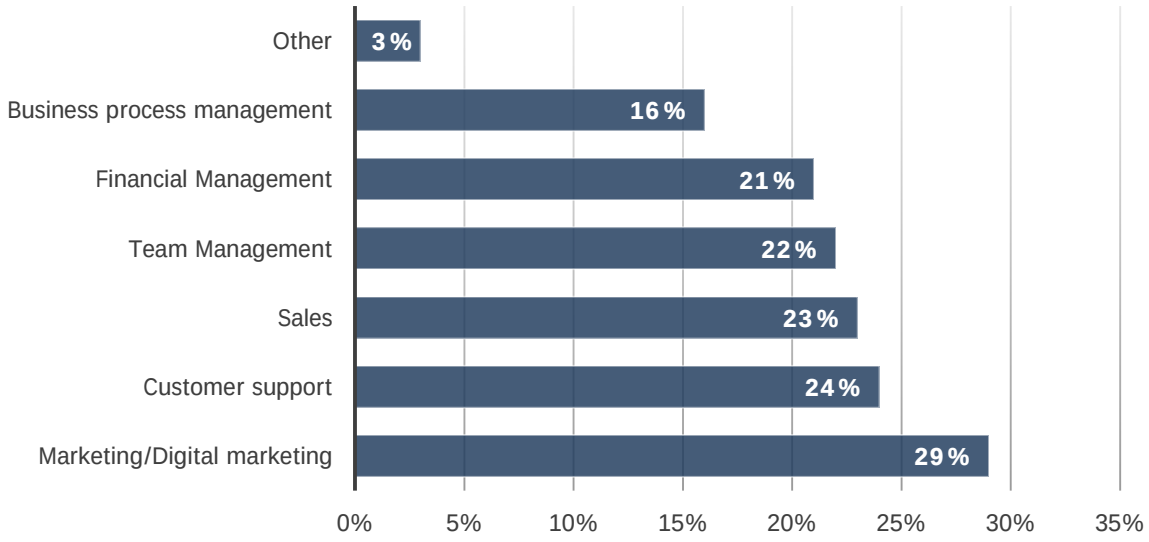


As seen from the chart above the highest interest is towards marketing and sales related training, 43.9% of the respondents expressed interest in participating in similar courses. Moreover, 30.3% stated about desire to participate specifically in digital marketing training. As shown in the chart, only 19.2% of respondents have not expressed interest in engaging to any kind of training.

Besides the list of training topics provided, SMEs also identified the need to participate in narrow field training specific to their professional activities, as well as English language courses. As stated by several interviewed experts in the frames of the needs assessment, languages is one of the barriers for digitalization and overall development of businesses as most of the resources and tools are in English language.

The survey also had an objective to identify the main business process related problems faced by SMEs. The distribution of main challenges mentioned was quite equal. The respondents indicated facing problems related to marketing, customer support, sales, team management, financial management, as well as business process management. Anyway as seen from the chart, the indicator of business process management is the lowest (16%), however vast majority of the problems are caused exactly by not well organized and optimized business processes. This once again states about the low level of business literacy to be able to clearly identify the main business problems and their causes.

Chart 12: Distribution of the main managerial problems among the respondent SMEs



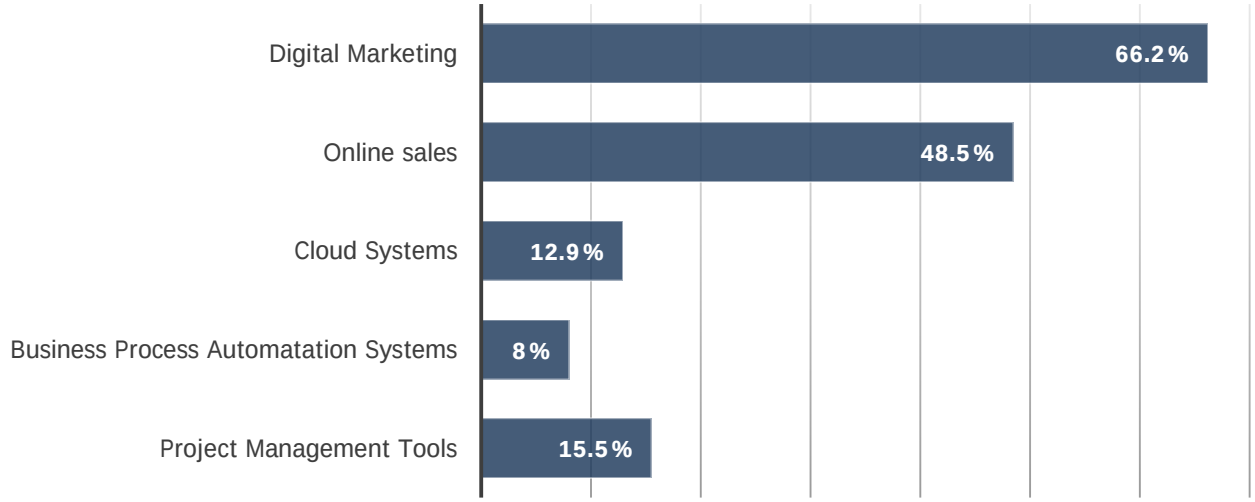
According to the current research, in Armenia digital tools are mostly used to implement digital marketing activities, communicate with customers and conduct sales.

As shown in the chart below, digital marketing is the most applied digitalization direction; 66,2% of the respondent SMEs indicated about implementation of digital marketing activities. Further in the section *"4.2. Digital Marketing and main directions"* in-depth analysis is presented on the main types of the tools used.

Another 48,5% of the respondents indicated about conducting online sales. However, it should be stated, that this indicator includes not only completely e-commerce operations, which implies digital payment as well, but also sales which were generated online (for instance order made through social media page).

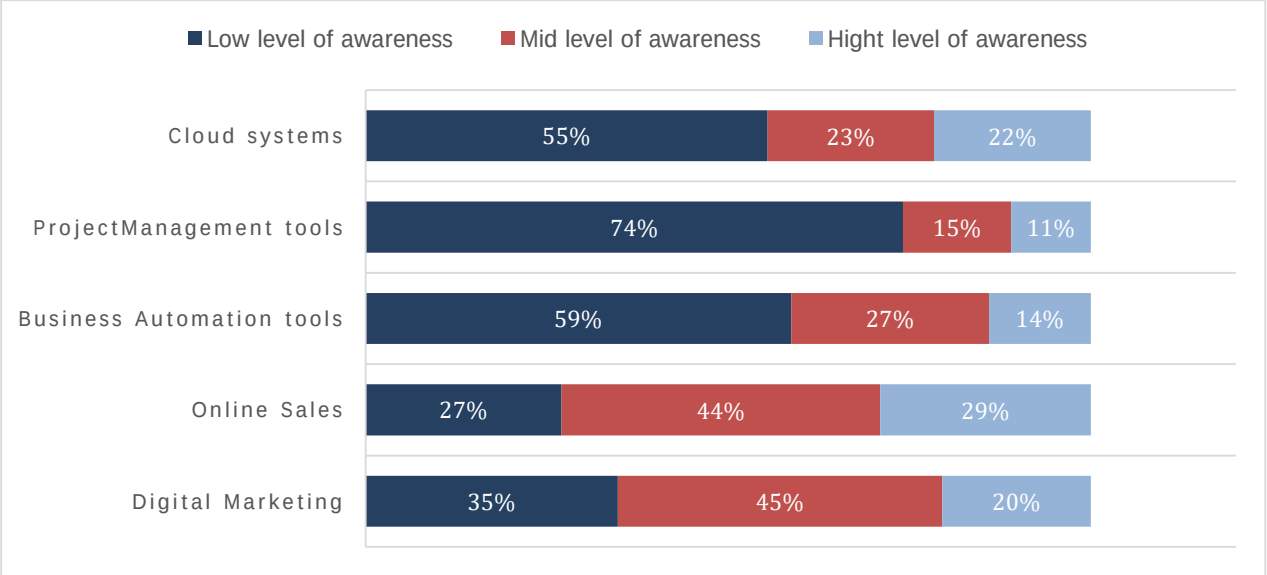
Only 8% of the respondents indicated about regularly using business process automation and optimization systems, such as CRM or ERP. The experts interviewed also confirmed that the majority of SMEs do not use digital tools for increasing efficiency and effectiveness of business processes, data collection and analysis, financial and operational management.

Chart 13: Digital tools, which are regularly used by the respondent SMEs



Next, the level of awareness of respondent SMEs on digital tools were analyzed. As it is shown in the chart below, digital marketing and online sales tools have the highest awareness level. This is an indicator, that the level of usage of certain tool is highly correlated with the level of awareness on it.

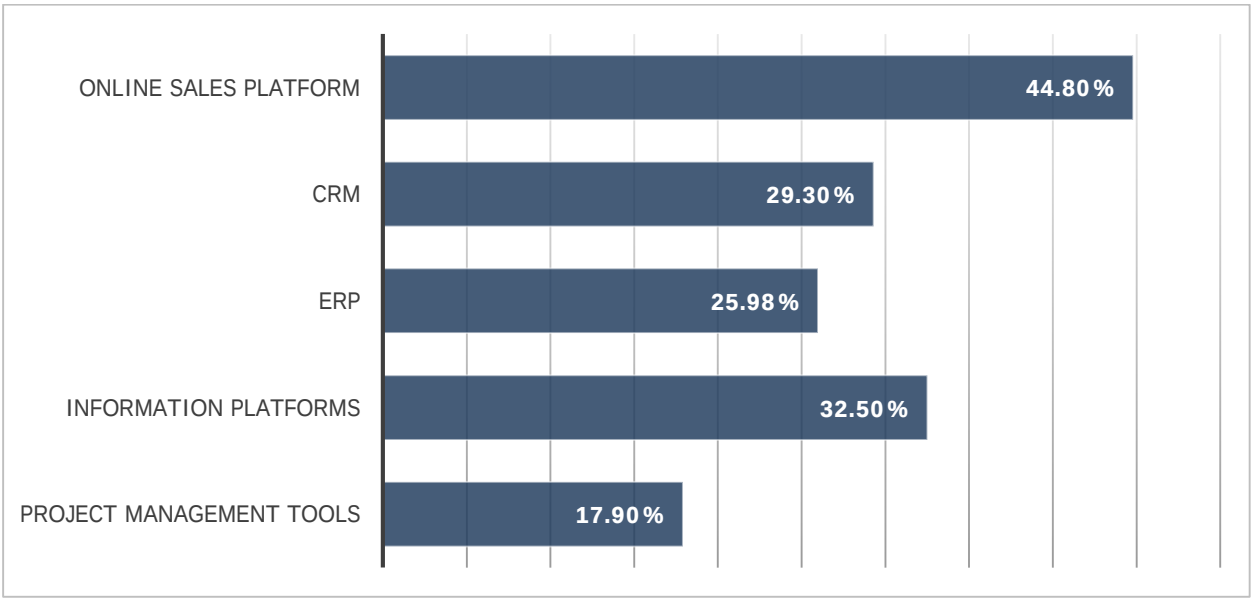
Chart 14: The level of awareness on digital tools among respondent SMEs



The level of awareness on digital tools is also connected with the age of the respodnent. The level of awareness on digital tools among young entrepreneurs is higher. According to the results of the survey, 92% of entrepreneurs aged 60+ are not aware of project management tools, 79% are not aware about CRM, ERP systems.

The respondents were also asked about tools, which will potentially increase the effectiveness of their business operations.

Chart 15: What digital tool implementation would help improve company's efficiency and/or effectiveness?



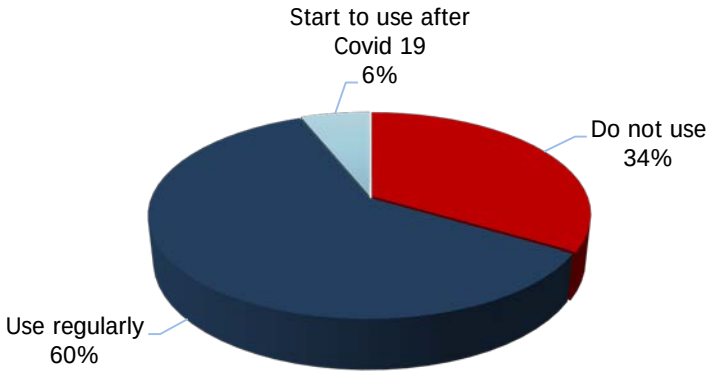
As seen from the chart above, 44.8% of the respondent indicated that application of online sales will improve company's efficiency and effectiveness. The second most common answer is informational/educational platforms (32.5%).

4.2. Digital Marketing and main directions

Digital marketing has become one of the most effective and commonly used marketing direction. Digital marketing has number of tools for cost-efficient and productive promotional activities, as well as for sales generation.

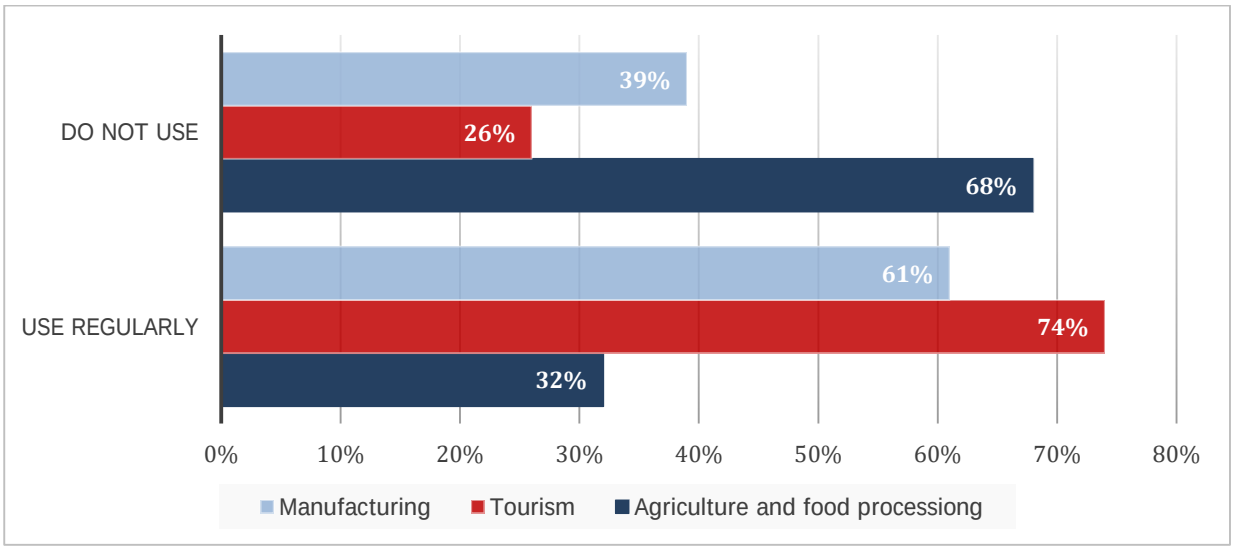
> *The 66% of the survey respondents stated about regular application of digital marketing directions, whereas 34% of the respondents do not use any digital marketing tools.*

Chart 16: The use of digital marketing among the respondents



The use of digital marketing tools highly depends on the sector where the company operates. The chart below shows the application of digital marketing by the priority sectors of the project. As seen from the chart, digital marketing tools are more used in the tourism sector; 74% of the respondents from the tourism sector indicated about application of some digital marketing direction. Digital marketing tools are used the least by agriculture and agro food processing companies (32% of the respondents from the sector)

Chart 17: The use of digital marketing by sector of the respondents



In regards to digital marketing, tourism is the most digitalized sector even regardless the company size and region.

Artak Harutyunyan, Digital marketing expert

As research showed, the usage of digital marketing tool is highly correlated with factors like gender and age of the business owner.

According to the survey, the application of digital marketing tools are essentially high among women and younger (up to 40y/o) entrepreneurs. It can be concluded, that this segment is more eager to learn about new tools and open to apply new technologies.

Chart 18: The distribution of digital marketing tools used by gender of the respondents

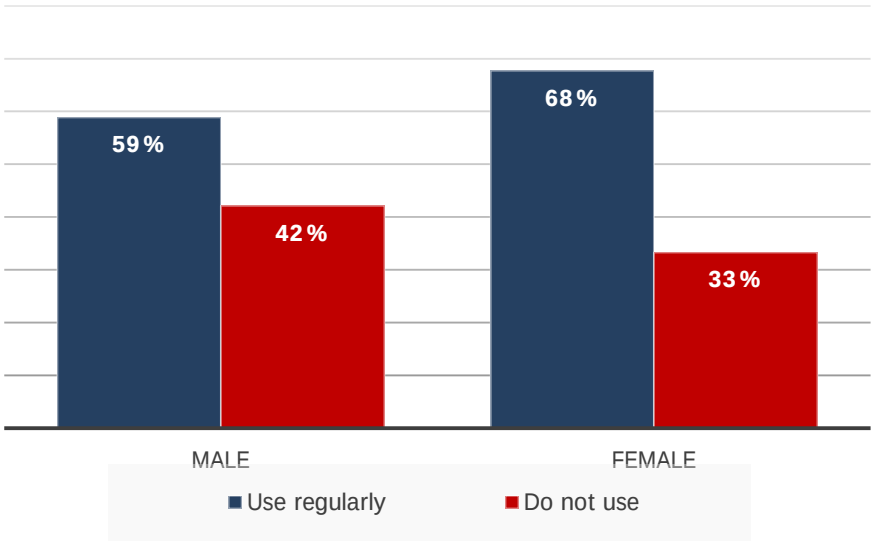
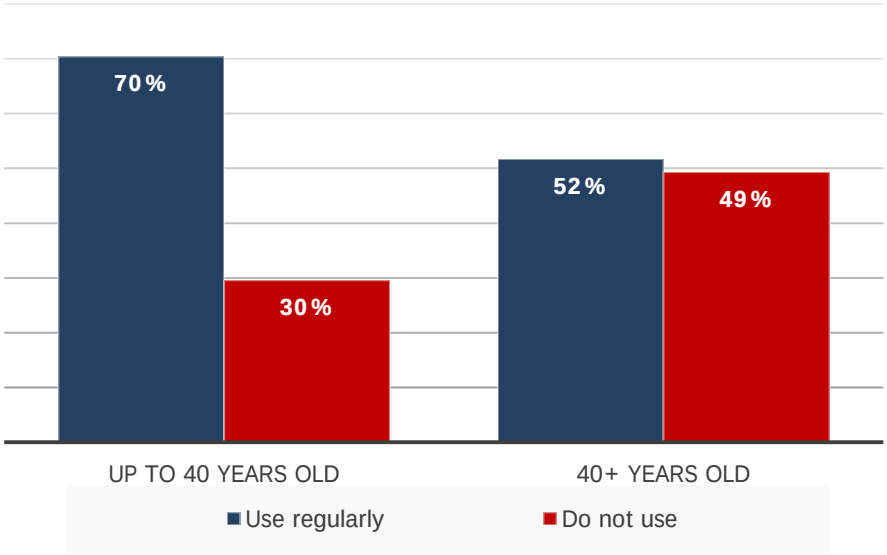


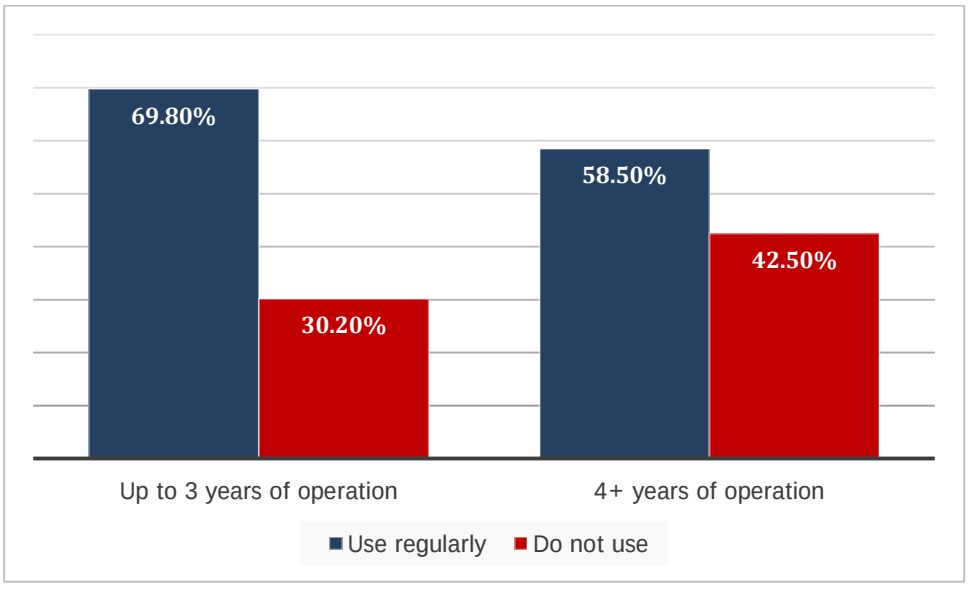
Chart 19: The distribution of digital marketing tools used by age of the respondents



The level of usage of digital marketing tool also depends on the company's years of operation. The indicator is slightly higher for comparably newly established companies.

One of the reasons is that newly established business needs more advertising and promotion for positioning and brand awareness. Another reason is that new businesses are mostly established by younger generation, which as research showed are more likely to use digital tools.

Chart 20: The distribution of digital marketing tools used by the respondent companies' years of operations

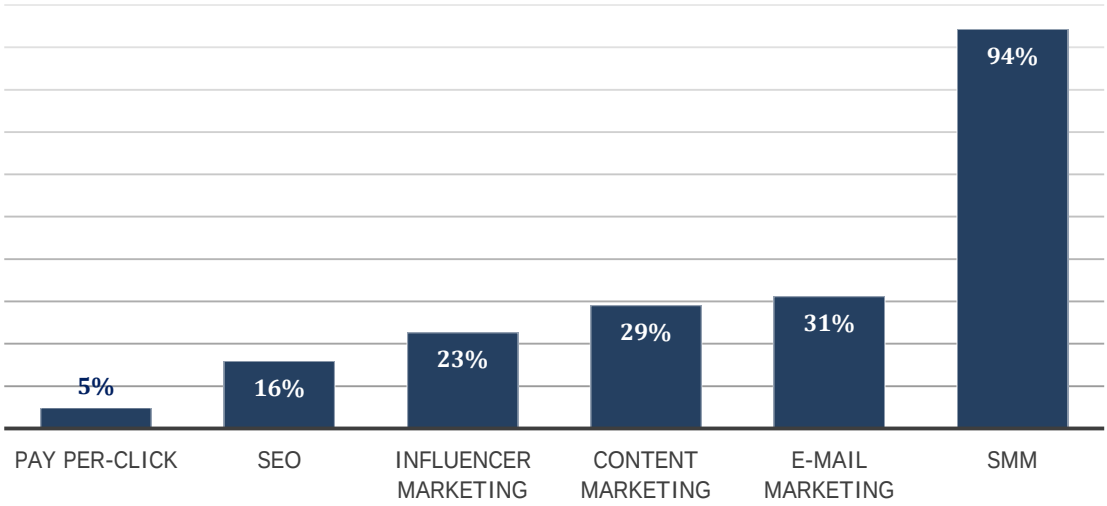


During the interviews, digital marketing experts approved the presented numbers as well.

Not surprisingly, SMM is the most popular direction of digital marketing. **94% of the respondents who implement digital marketing conduct social media marketing.**

As seen from the chart below, SMM is the absolute leader and the deviation from other directions is quite huge.

Chart 21: Digital marketing directions regularly implemented by the respondents



In Armenia there are quite favorable conditions for the implementation of social media marketing, taking into account the high level of internet access and involvement of the population in social networks, which was presented in the BACKGROUND.

*Approximately **70-80%** of our clients use SMM. We try to show that there are other tools that are also effective and important. For example, one of our partners has a computer hardware store and wanted SMM services. We convinced him that it is better to use List.am rather than SMM in this case, and it worked perfectly.*

Artak Harutyunyan, Digital Marketing Expert

Another digital marketing expert has mentioned;

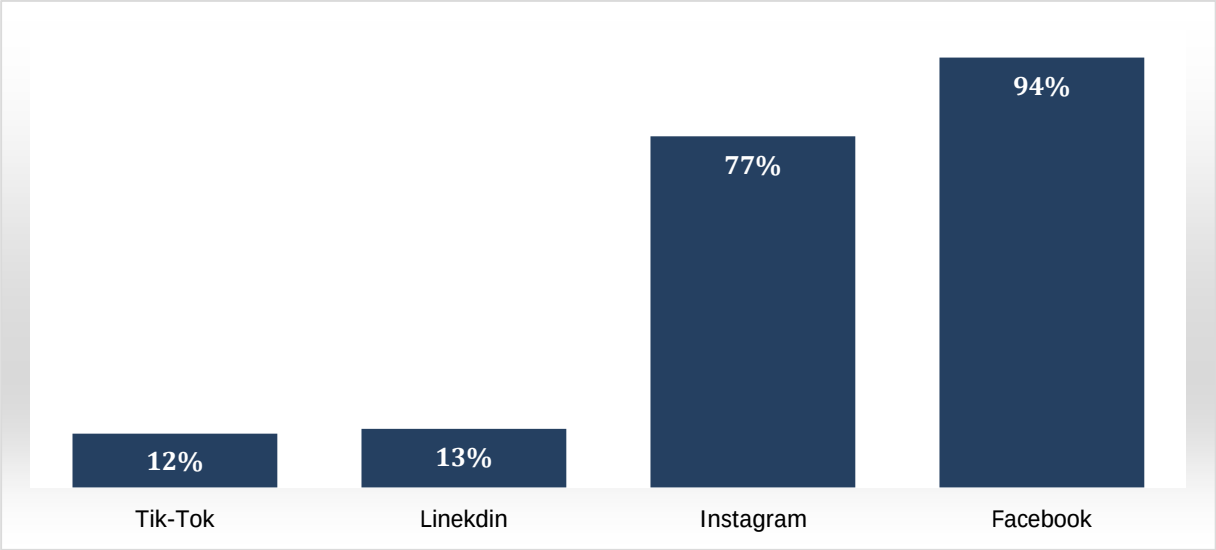
One of the main reasons is that doing SMM is a lot easier and produces faster results. Moreover, there is a lack of good SEO specialists in Armenia. Most of the digital marketing specialists are

concentrated on SMM. On one hand, this is what the market demands, on the other hand, the increased awareness on other digital marketing tools, will surely create it demand.

Tigran Matinyan, CEO at DMS

Talking about social media as the most commonly used digital marketing direction, the below chart shows the percentage of respondent companies (among once who implement SMM) per social media network.

Chart 22: The percentage of the respondent SMEs registered in the corresponding social media network



As seen from the graph above, Facebook and Instagram are the leaders with 94% and 77% of usage respectively. This is connected with the fact that the majority of social media users are registered in mentioned networks.

Facebook is still dominant, for a simple reason: because the social network actually dictates the rules itself, society use Facebook more, thus, the companies offer their services and products there.

Artak Harutyunyan, Digital Marketing Expert

Despite the fact that SMM is the most used digital marketing direction, only 44,3% of the respondents utilize it for sales. Most SMEs consider digital marketing as a platform to present their product/service and communicate with customers.

Moreover, according to the interviewed experts, despite the widely use of SMM, the majority of SMEs **do not analyses the result** of marketing campaigns and calculate return on investment of social media advertisements.

Very few businesses are able to measure the results of the advertisement campaign. Analysis is crucial for effective digital marketing. It is one of the most serious issues creating inefficiency in digital marketing tools.

Tigran Matinyan, CEO of Digital Marketing Agency

Because of poor analytics, SMEs fail to estimate the effectiveness of the tool or advertisement and cannot make data driven decisions. As stated by the experts, most of the SMEs will be ready to use digital marketing tools if they are able to analyze and calculate the benefits.

Every business is ready to pay if the effectiveness of the tools is envisioned. In other words; the important thing is to show the real results.

Artak Harutyunyan, Digital marketing expert

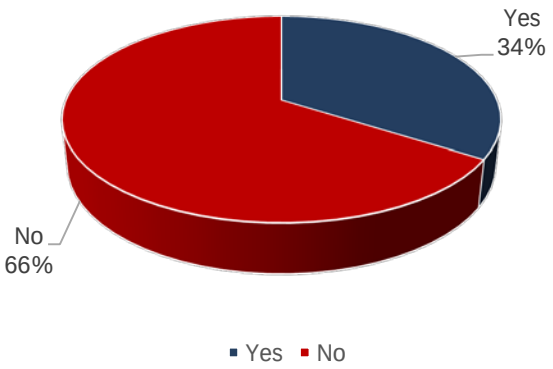
According to the survey conducted within the current research, the overwhelming majority of SMEs do not use tools like Pay Per Click (PPC) and Search Engine Optimization (SEO). Only 5% of the respondents who implement digital marketing activities applied PPC in their marketing strategy and 16% - SEO.

The field experts gave objective explanations to this statistic. The main reasons are introduced below:

1. Google ads do not operate effectively in Armenia
2. The majority of SMEs do not have webpages, which is crucial for effectiveness of SEO

3. There is a lack of good specialists in these digital marketing directions (most of the specialist in the field are concentrated on SMM)

Chart 23: The distribution of the respondent SMEs owning a web page



Only 34% of the respondent SMEs own a webpage, out of them only 38.3% consider a webpage as a platform for online sales. The remaining respondent companies owning a web page use it as a representative and informational platform.

One of the identified reasons for not using a web page as a sales platform is the **customers' habits.** According to the FGD participants, the population in Armenia, especially in the regions do not have the habit to visit web-pages and shop through it. Thus, the respondents assessed the effectiveness of having a web-page, as well as the costs related to the development and maintained as low.

Several participants of FDGs revealed this statement.

We have had a website since the foundation of our organization, but it is not used in Armenia. Prices and pictures are constantly being changed, and website maintenance is being carried out, but the client prefers, for example, to contact us through Facebook.

FDG participant

Another regional SME representative has mentioned;

I am representing a business in Shirak region. Do you think that an ordinary citizen of our region will go to our web-site to see the products or shop through it? Our target customers prefer to come and see the product with their own eyes.

FDG participant

The SMEs involved in the research highlighted another barrier that prevents them from implementing digital marketing activities, which is the **lack of corresponding knowledge and skills**.

Several SMEs mentioned that they want to learn and establish digital marketing tool themselves. According to the survey, 43.7% of respondents expressed willingness to participate in marketing and sales courses, and 30%, specifically digital marketing courses. However, currently the skills of business owners are not enough for effective usage of the tool.

For example, I cannot do online marketing. I even went to SMM courses, but it did not work. I am looking for someone to do it more competently, besides, I don't have time to do it myself, and my page has always been passive.

FDG participant

On the other side, the experts have talked about **the lack of professional digital marketing specialists**.

18.7% of respondents have mentioned that the company faces difficulties in finding and hiring digital marketing specialists.

This situation is more outstanding in the regions. There are very few educational and training opportunities in the regions related to the profession of digital marketer. Moreover, the few digital marketing specialists in the regions strive to come to capital for employment or work for Yerevan or abroad on a freelance basis.

Very frequently, not having the resources to hire a senior professional, companies hire juniors who are unable to implement digital marketing effectively.

After hiring an inexperienced beginner, businesses are mostly disappointed with the SMM as they cannot see the results. That is why I think that it is better for the owner to deal with it at the beginning and hire a good specialist. The process of educating an executive is important.

Roundtable discussion participant

According to the experts involved in the research, companies change their behavior of not implementing digital marketing in two cases. Firstly, due to external factors (such as covid-19), in case of which the company is forced to adapt to stand the competition and save the business.

I only started using digital marketing after Covid-19 when the store was closed and I could not make sales without online platform.

FDG participant

SMEs remember about digital marketing and turn to a specialist only when there is a risk of failure and exit from the market.

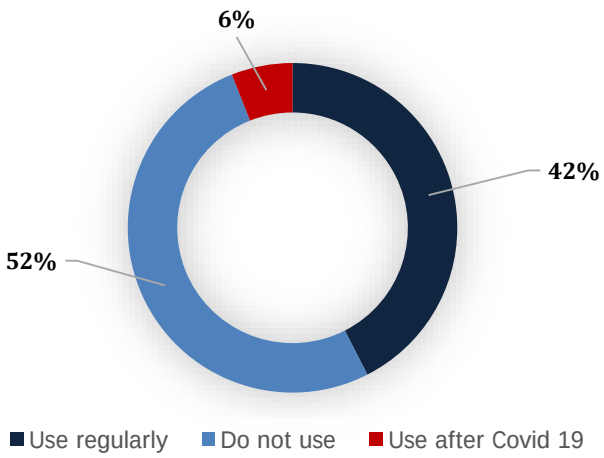
Tigran Matinyan, CEO at DMS

Secondly, the interest towards and application of digital marketing activities arise, when the business owner envisions a successful case of using digital marketing tools in his near environment, among people he knows.

4.3 Online Sales and payment systems

The main purpose of digital marketing is conversion and generation of sales. Online sales has been developed after Covid-19, and more companies have started to sell online. However, still 52% of the respondents SMEs indicated about not implementing online sales.

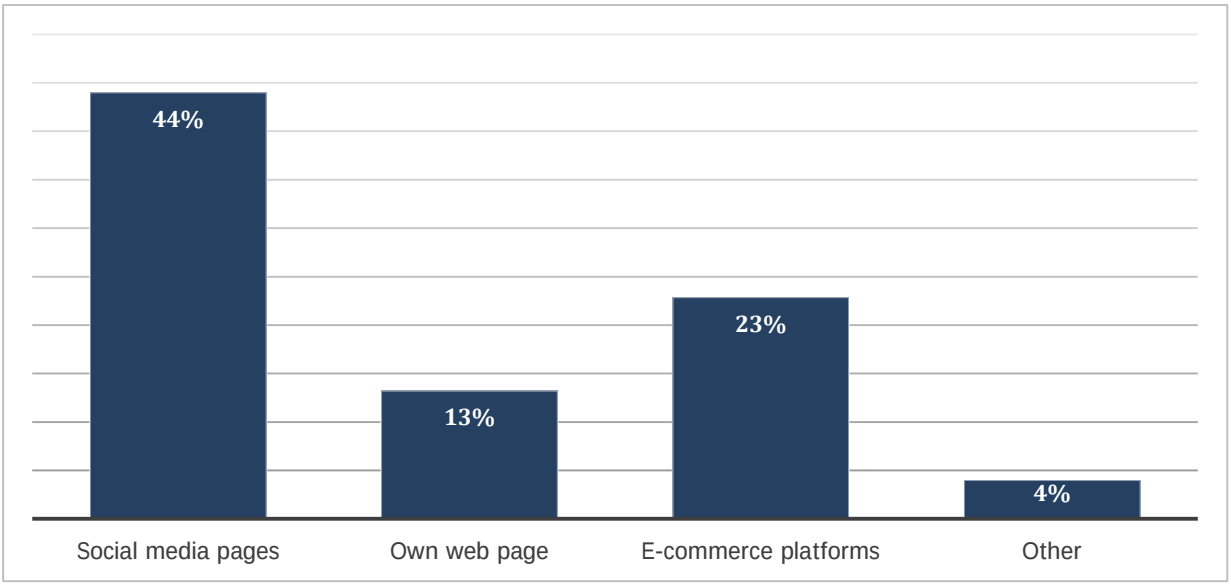
Chart 24: The distribution of the respondent SMEs using online sales tools



48% of the respondents mentioned about implementing online sales. It should be indicated that the number includes not only solely e-commerce sales, which implies completely digital purchase and digital transaction, but also sales which were generated online. For instance, an order is done via social media or web-page, but the payment is done by cash upon delivery. Generally, in many cases the option of ordering online is available but online payment system is nor integrated.

Below the main directions of online sales implemented by the respondent SMEs are presented.

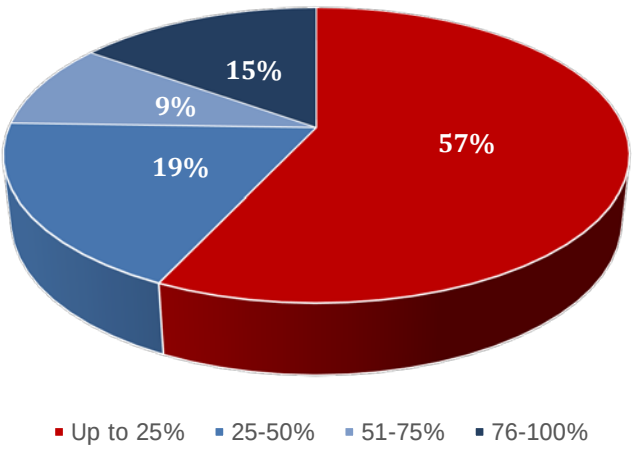
Chart 25: The direction of online sales among the respondent SMEs



As seen from the chart, the majority of SMEs use social media pages as a sales platform. Taking into account that the payment integration in social media does not effectively work in Armenia, it can be concluded that social media pages are mainly used to generate sales; communicate with the costumer and organize purchase. The payment process can be organized by other intermediate payment systems or cash upon delivery.

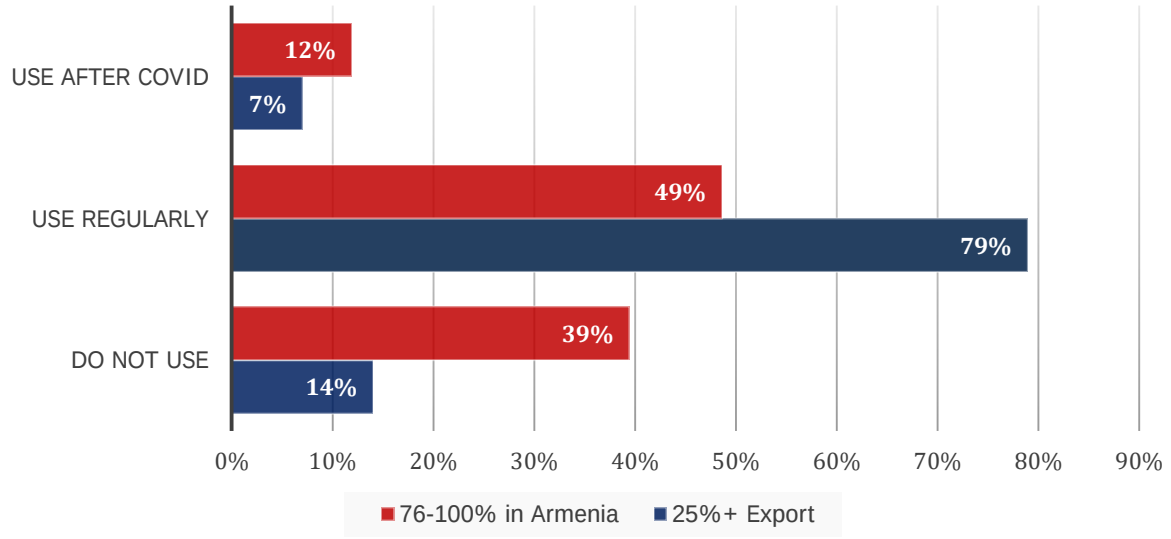
Though 48% of the respondents implement online sales activities, online sales is not considered as the main sales direction. 57% of respondents who implement online sales mentioned, that this sales channel consist of less than 25% of their whole sales.

Chart 26: The proportion of online sales in total sales among the respondent beneficiaries



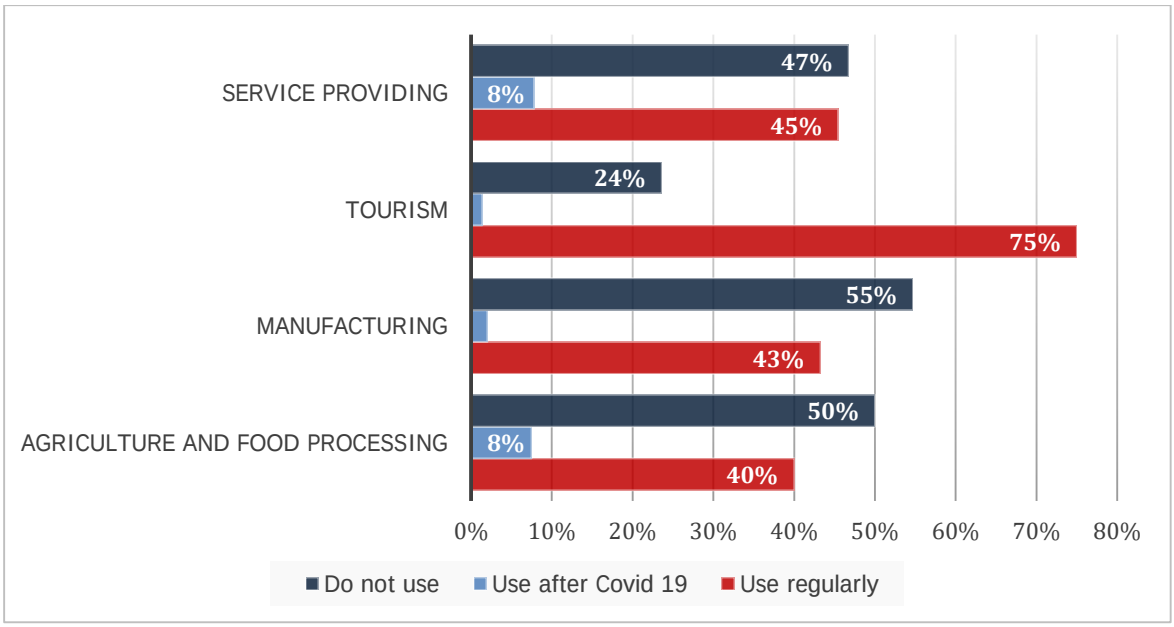
The indicators of online sales are directly correlated with geographic coverage of business's operations. The companies, which export their products or services use online sales platforms more. 86% of the respondents which have above 25% sales abroad use online sales tools regularly.

Chart 27: Online sales implementation based on the geographical distribution areas



When analyzing the online sales by the sector, it was identified that tourism sector is leading by this indicator.

Chart 28: Online sales implementation by the respondent company sector

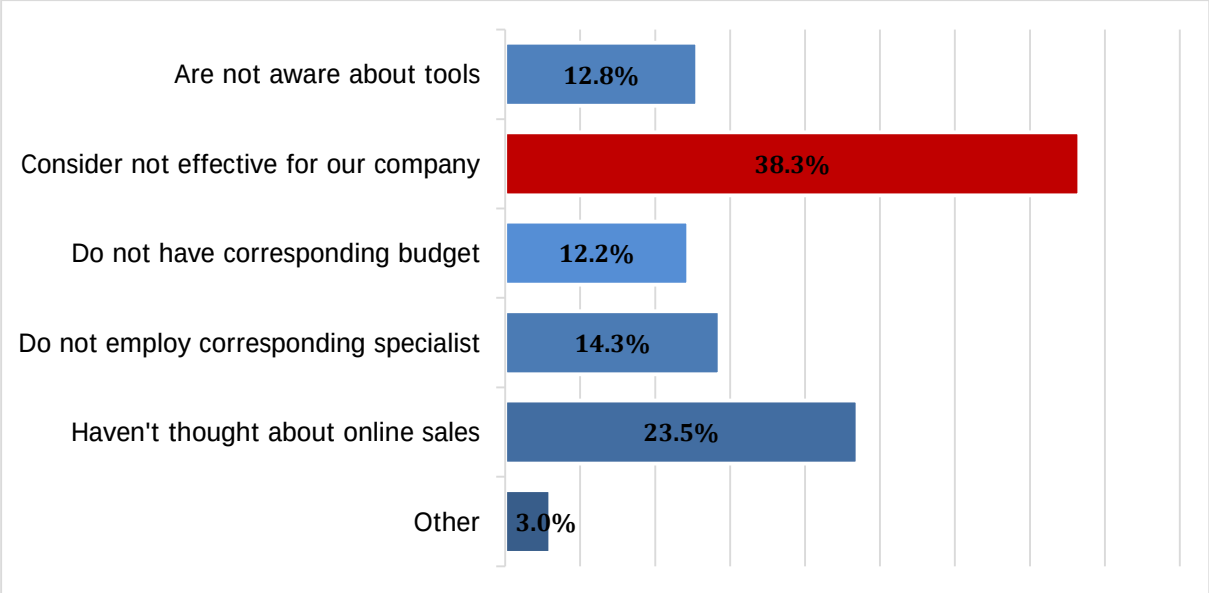


75% of the respondents from tourism sector indicated about using online sales platforms. In case of tourism and hospitality sector, the online sales are mostly implemented through intermediate e-commerce platforms such as booking.com, airbnb.com, etc.

23% of the respondents who implement online sales stated about using intermediate online sales web-pages. Among the most commonly used platforms by the respondents were Wildberries, BuyArmenia, Buy.am, Airbnb, Booking.com, as well as Glovo and Menu.am in case of restaurants and cafes.

Further, the main reasons for not using online sales platforms were analyzed.

Chart 29: The main reason due to which the respondent companies do not conduct online sales.



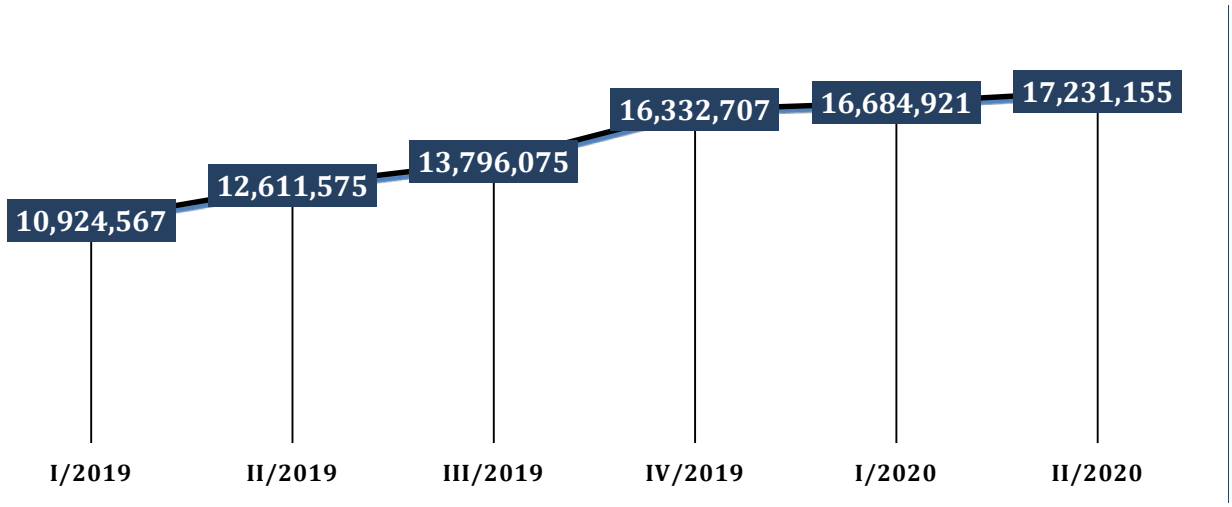
Around 38.3% of the respondents do not consider online sales an effective method sales for their company. Surely, there are some sectors that the effectiveness of online sales is not high, however this indicator is also majorly connected with the low awareness level among SMEs on the benefits and opportunities of online sales. 12.8% of the respondents directly mentioned about lack of awareness on tools and 23.5% highlighted that they haven't thought about online sales, which can also be correlated with the awareness level.

Online transfers and Payment Systems

When analyzing the online payment culture and current state, it should be mentioned that after Covid-19, online banking is developing along with the increase of online trade. According to WB data, 13% of population made a digital online payment for an online purchase for the first time as a result of COVID-19.

Favorable conditions have been created in the country from the point of view of the variety of online payment instruments. Various types of online payments are available: online transfers, card payments, online wallets, QR payments, NFC payments, etc. According data provided by the Central Bank of Armenia, during the last years, the number of non-cash transaction was increasing. It can be assumed that the number also had dynamic growth after COVID-19.

Chart 30: The growth of non-cash transactions[12]



More positive change in this indicator is predicted soon, since the Law of the Republic of Armenia about "Cashless Operations" entered into force on July 1, 2022. According to the law cash transactions between enterprises is prohibited, and in the case of B2C purchases, cash payment is prohibited when the amount exceeds 300,000 AMD.[13]

According to the survey results, 74% of the respondents use some kind of online payment systems.

[12] ՀՀ տարածքում անկանխիկ վճարային գործիքներով բանկային համակարգում իրականացված փոխանցումներ , ՀՀ ԿԲ

[13] https://www.arlis.am/DocumentView.aspx?DocID=160074

Chart 31: Use of payment systems among the respondent companies doing online sales.

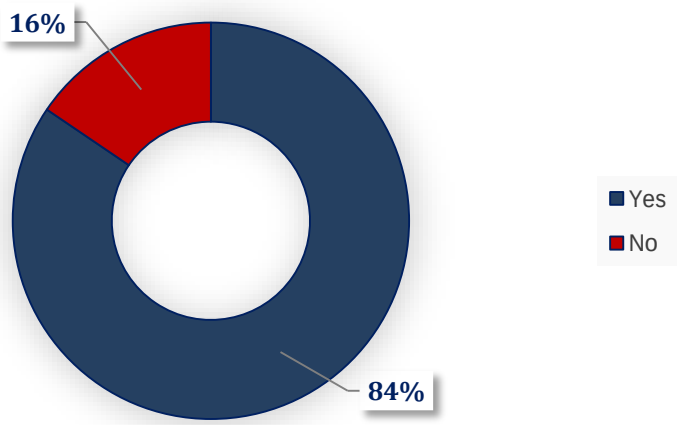
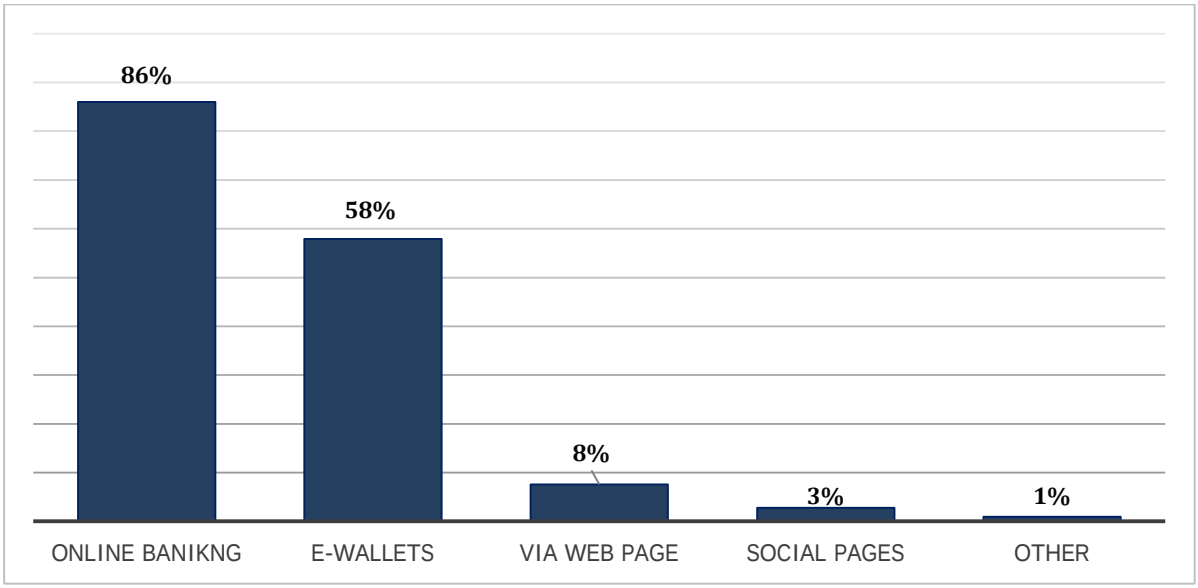


Chart 16 shows that 16% of the companies that make online sales do not use any kind of online payment systems. In these cases, we can assume that companies use online platforms to promote the products/services, communicate with the customer and generate sales, however the payment is received in cash upon purchase or delivery. The high indicator of using online payment systems does not apply integrated e-commerce tools, this number also include cases of direct transfers to company's or business owners bank account, card or e-wallet. As seen from the chart below these options are the most common among respondent SMEs. Moreover, this indicator does not show the regular usage of online payment systems, but rather experience in it, which can include few cases.

Further, the types of online payments systems used by the respondent SMEs are presented.

Chart 32: Online payment systems used by the respondent SMEs



As shown in the Chart 32, 86% of companies receive online payments through online banking, 37% use e-wallets such as Telcell, Idram, Easy Pay and **only 8% have payment systems integrated to their website.** Remarkable only 3% of respondents use social media to receive payments, though it was identified the overwhelming majority of sales are organized via social media /Chart 25/. This is explained by not well developed digital infrastructure connected with the integration of payment systems to social media accounts.

During the research there were number of barriers revealed that prevent SMEs to make online sales.

Infrastructural problems: Among the infrastructural problems the ***quality of roads and low availability of delivery services*** were discussed. Comparably the infrastructure is more developed in the capital, whereas in the regions, the roads are not in a good condition, the communication and transportation connections are underdeveloped. Moreover, there is certain lack of delivery services offered to and for the regions.

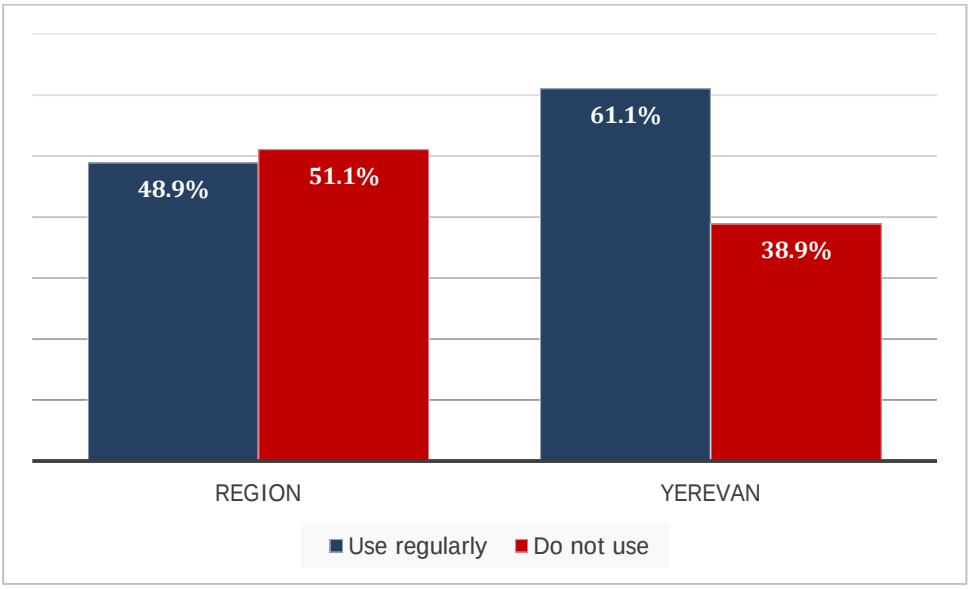
Online sales deliveries of small businesses are mostly done through the postal service (Haypost). In that case, payments are done through either mobile banking or e-wallets. However, there is another problem highlighted by businesses connected with the tariffs of delivery services, which have been increased almost 3 times compared to the last year causing logistical problems for SMEs.

Astghik Hoveyan, Business Consultant at AGBU "Women Entrepreneurs" program

Logistical companies such as Onex and Globbing have found low-cost methods (smart lockers) to expand their activities in the regions, which, however, still do not serve the whole territory of Armenia.

It was also highlighted by the interviewed experts that the maturity level between companies' situated in regions and in Yerevan are extremely diverse depending on infrastructural issues.
That statement was proved by survey results, as well: 61% of Yerevan SMEs use online sales tools regularly and only 48.9% of regional companies use online sales tools regularly.

Chart 33: The usage of online sales tools by region



When analyzing the export opportunities through online sales, logistics is one of the main problems faced by the companies. Due to not well-developed infrastructure, exports outside the country are quite expensive and not affordable for many SMEs. Moreover, the geographical position, political situation, and political relationships with neighboring countries create additional challenges and limited opportunities for delivery by land routes.

The main barrier is infrastructure. For example, if the company produces dried fruits, then exporting that product to the USA will be very difficult for that company, because there is no infrastructure, the company does not know how to organize the sale process, and Haypost probably will not deliver that product as well. There is no developed system supporting companies to export to other countries, thus e-commerce is not developing in Armenia.

Ruben Osipyan, The head of the SME Cooperation Association

Payment system issues: According to the experts, one of the reasons that prevents SMEs from using online sales systems is the issues regarding payment system. Just 5% of the respondent companies have integrated payment system in their web-pages. One of the main reasons identified is that for SMEs it is quite challenging and takes a long time to integrate payment

systems into websites. Moreover, the integration of the payment system on the website requires IT knowledge, which implies extra costs for the company; hiring a specialist or IT company.

Many companies do not have the financial and professional resources to attach payment systems to their websites. If the company has a growth potential, our bank helps them in this regards. In many cases we are a link between the IT service providers and businesses.

Hayk Harutyunyan, the Head of Strategic Management Center at Inecobank

Moreover, there are certain problems related to the ARCA[14] system, which is the main system ensuring financial card transactions in Armenia. Therefore, online transactions are usually not preferred by businesses, especially by micro and small size companies, in case of which each day is important in cash flow. In addition to the problems related to payments within the country, problems also arise in receiving payments from other countries due to the disruptions of the ARCA system.

Another barrier mentioned by the businesses when selling abroad and engaging in digital economy is the absence of PayPal in the country. Many companies are forced to register their company abroad to receive online payments quickly.

The payment system is the biggest problem for our company. 50% of our customers are from USA, France, and Russia. As there are certain problems with payment systems in Armenia, we have registered our company in the USA to receive payments from any point in the World.

Levon Galstyan, CEO at 4U.am

Low level of awareness and capabilities: The most essential problem affecting digitalization in regards to online sales and payment tools are the lack of awareness and capabilities. SMEs and their customers often are not aware about tools or cannot use those tools effectively.

[14] https://cabinet.arca.am/hy/

SMEs are usually aware of platforms like Amazon or Wildberries, but don't know how to organize sales, how to handle payments, etc.

Levon Galstyan, CEO at 4U.am

Low awareness and digital literacy also results in wrong perception or mistrust toward digital technologies.

The main reason is not being familiar with the tool, and therefore not trusting it. Card payments also took a long time to integrate into society.

Grigori Yolyan, Creative Director at Idram

On the other side, it should be mentioned that the companies who have used online payment systems, have continued the application, as a several-fold increase in sales was recorded.

After establishing an online payment system, my sales doubled. After that, I decided to sell only online. Now we do not have a store.

FDG participant

Costumer preferences and habits: During the focus group discussions, it was revealed that very often SMEs don't sale online based on **customers preferences and habits**. Surely, when the target customers of the business are not using or not active on internet, do not prefer or do not possess skills to make online purchases, the e-commerce will be ineffective. The situation is more common in the regions. The marketing and communication channels should by chosen based on the target customers; their social-demographic, locational, behavioral and psychological characteristics.

On the other side, it was discovered during the research that many businesses start selling online based on customer's request. This implies, that the role of the customer in the organization's decision making is essential.

Business realizes the importance of digitization when the customer demands it. They understand that if they do not digitize, they will lose a customer. If the customer asks several times for online shopping, the business starts thinking about conducted online sales.

Silva Mesropyan, Head of IMC, Business Consultant

4.4. Business Process Automation

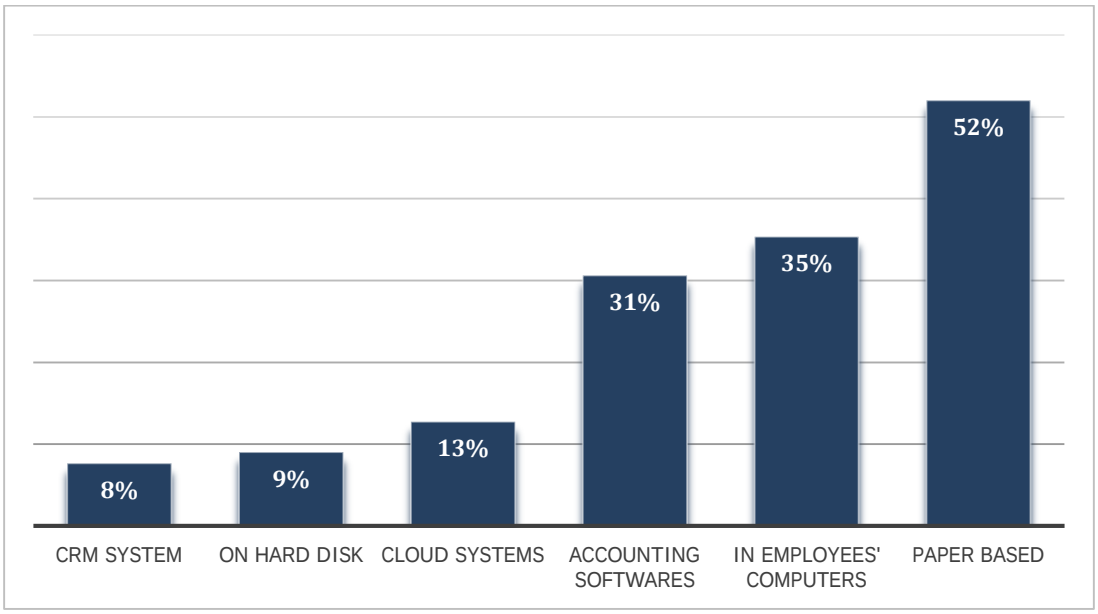
The current chapter of the report, has an objective to identify the level of application of business process automation systems, the main types of tools used, as well as identify challenges and barriers among SMEs in regards to digitalization of business processes.

> ***Only 8 % of the respondent SMEs regularly use business process automation tools, such as CRM, ERP, warehouse management systems, etc.***

The number is quite concerning taking into account the target sectors selected; such as manufacturing, food processing and tourism, in case of which automation systems are crucial for efficient and effective business processes.

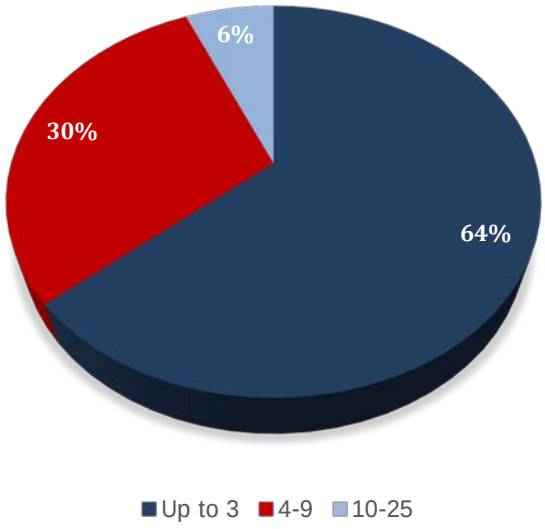
> ***According to the survey, in 52% of cases, the respondent SMEs keep sales and customer data solely or also on a paper based format. 21% of the respondents keep and record data only paper based. 13.8% of the respondent do not record data at all.***

Chart 34: The methods for data collection among the respondent SMEs



The majority of SMEs that use only paper based method for data recording are micro or small sized and have up to 9 employees. This indicator has a simple explanation: smaller companies have much less data to keep. However, even small companies need to collect and analysis data for effective business processes.

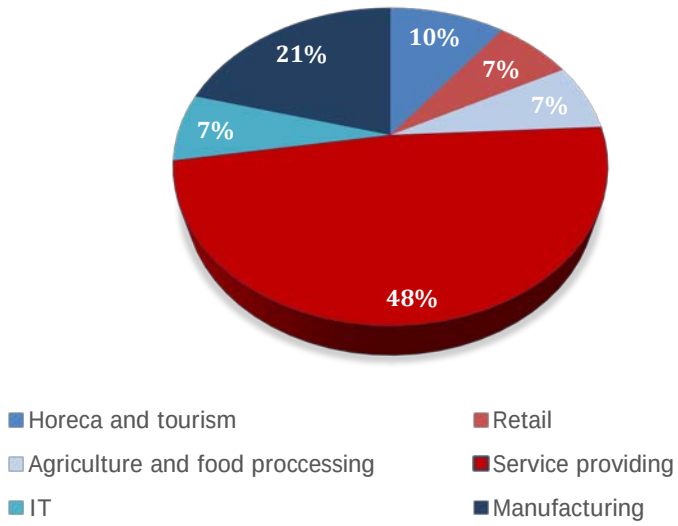
Chart 35: The distribution of SMEs using only paper-based data collection method by company size



Not appropriately recorded company data means inefficient business processes; the absence of data analysis implies ineffectiveness in marketing, sales, warehouse management and many other spheres.

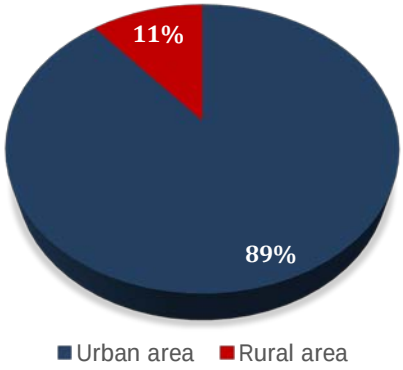
The overwhelming majority of CRM user companies are service providers (48%), which is due to reason that this sector has the largest customer data base.

Chart 36: The distribution of respondent CRM users by sector



The below chart shows the distribution of CRM users by geographical area.

Chart 37: The distribution of respondent CRM users by geographic area



There is a huge difference in the indicator for urban and rural companies. Only 11% of CRM users are from rural areas.

These numbers once again document the disproportionate territorial development in the country.

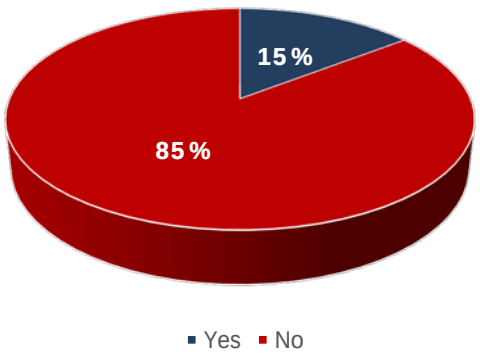
In fact, there is a big difference between regional and Yerevan companies, for which there are several reasons. One of the reasons is that regional SMEs are not export-oriented; they try to find small solutions to maintain their existence. Some of them are trying to go to Yerevan market or other regions of Armenia. Such small sizes and locality do not allow them to think about digitizing their activities or using digital tools.

Ruben Sarukhanyan, Project Manager at EBRD

The respondents from manufacturing sector have been also asked about their experience in using digital tools to improve the efficiency of resource management in manufacturing process (eg tools used to track and manage inventory, reduce waste and improve resource efficiency).

It was identified, that only 15% of respondents from manufacturing sector use resource management tools for calculating and analyzing resources.

Chart 38:Resource management tools usage among the respondents representing manufacturing sector



Below the main reasons and barriers for not using business process automation tools are described.

Low awareness and knowledge: One of the identified reasons is low awareness and knowledge on the tools.

We have never used to record data on software, until we participated in training regarding business administration. After training, we started to use Microsoft excel and it saved a lot of time. Now we are operating more effectively.

FDG participant

Another factor reveled is the perception among business owners on the results and effectiveness of the automation tools.

I would invest in CRM if I am sure that the tool will bring me for instance 20 percent revenue growth. As a business owner, I need to see the results and talk with numbers.

FGD participants

Resilience from the team: In many cases the employees of the company shows resilience towards business process automation tools due to following reasons:

- The fear that machines and automated process will replace them
- The estimated reduced value and importance employees
- The fear of not being able to work with digital tools
- Absence of desire to change the working methods they are used to and lack of willingness to learn something new
- Absence of understanding and belief in effectiveness of digital tools

For instance, number of employees perceive business process automation systems as extra work and waste of time (for example, filling in the data in CRM system).

One of the most important factors for successful application of CRM system is the team, the desire and willingness of the employees to use the tool. If the team will show resilience, will not believe in the value created by the tool, the business owner cannot do anything.

Tigran Manukyan, CEO of MerSoft

Another expert also highlighted the importance of staff in the digitalization and suggested that special work should be done with them.

Firstly, it's required to work with the team and familiarize them with the tool, which will help to decrease that fear.

Narek Aleksanyan, Business Consultant

The statement was confirmed by the representative of SME.

We trained the employees before application of CRM system, only after that we started using the tool and immediately saw the results.

FDG participant

From another prospective, there can be cases when employers themselves do not chose to apply automation tools to avoid firing employees due to social and psychological reasons.

We can automate the scheduling, but I love our employees very much; I don't want to fire them and replace with a robot.

FDG participant

Lack of financial resources: As reported by SMEs and experts one of the main reasons for not using automation tools is the lack of financial resources. Though there are number of low-cost or even free online tools available, special integrated and adapted systems like CRM, ERP, or management systems require financial investments, which are not feasible for many micro, small or medium size companies.

Even in case of awareness about the tool and its benefits, organizations have a lack of financial resources to establish and maintain automation tools.

Ruben Sarukhanyan, Project manager at EBRD

According to expert opinions, not investing in digitalization tools is not only connected with the scaricity of financial resources but also the culture and mentality of the local businesses and society overall.

The fact that businesses want free tools is a matter of culture. For example, people in our country do not have paid applications on their phones, very few people use Spotify to listen to music, which is normal practice abroad. We are used to the fact that Windows must be cracked and that is normal. From this point of view, we have a culture that the system or tool should be free and paying for some tool is non-sense.

Ruben Osipyan, the Head of The SME Cooperation Association

Communication gap between SMEs and the IT sector: In many cases the barrier is created by the communication gap between IT service providers and businesses, and the fact that these two stakeholder groups speak in different ''languages''.

According to the SMEs engaged in the research, frequently IT companies use technical terminology when presenting the offer, as well as fail to assess the needs and priorities of the business, which results in communication gap.

Before using any kind of automation tool, the needs and problems of the business should be assessed and individual offers should be made based on this. For example, if I do not have a warehouse and IT company offers me a warehouse management system, surely I will not acquire it. On the other side, my business has a problem in other sphere for which the solution should be offered and in that case maybe I will be their target customer.

FDG participants

Another reason to create the communication gap is the fact that IT companies usually do not target Armenian market due to its small size.

There is a problem of communication between the IT sector and SMEs. Despite that IT sector is quite developed in Armenia, IT companies do not target Armenian market, they do not speak, they do not educate, and they do not advertise the benefits of their products. This is mainly because the Armenian market is too small for IT companies and their target international markets.

Silva Mesropyan, Consultant, Head of IMC

Language barrier: As the majority of SME, especially in the regions do not possess English language skills, this can disturb the process of digitalization, as most of the tools and information are in English.

When you inform an SME about digital tools, it does not mean that they will be able to use them. Many tools are in English or in a foreign language, and the majority of SMEs do not know languages other than Armenian.

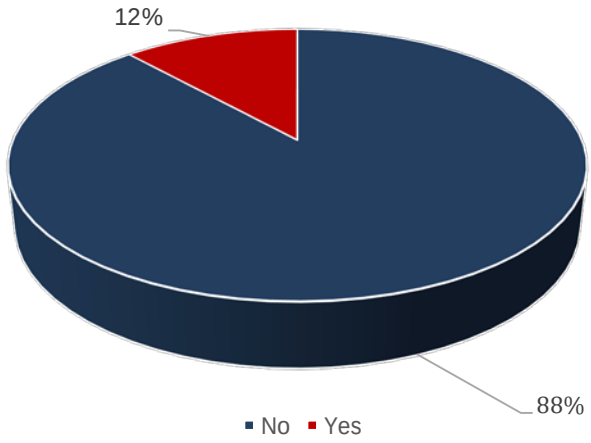
Ruben Sarukhanyan, Project Manager at EBRD

4.5. Data protection and Cyber Security

The research showed that the awareness and knowledge on data protection and cyber security is in a very low level in Armenia. Even organizations that deal with large amounts of financial transactions online and work with big customer data often do not take this direction seriously. According to the data protection expert, the issue is global and refers to all society.

According to survey, 88% of respondents SMEs have never experienced cyber-attacks. This high indicator is not connected with proper security, but mainly with the fact that Armenia is not a major target for international cybercrime.

Chart 39: The distribution of respondent SMEs by experienced case of cyber attack

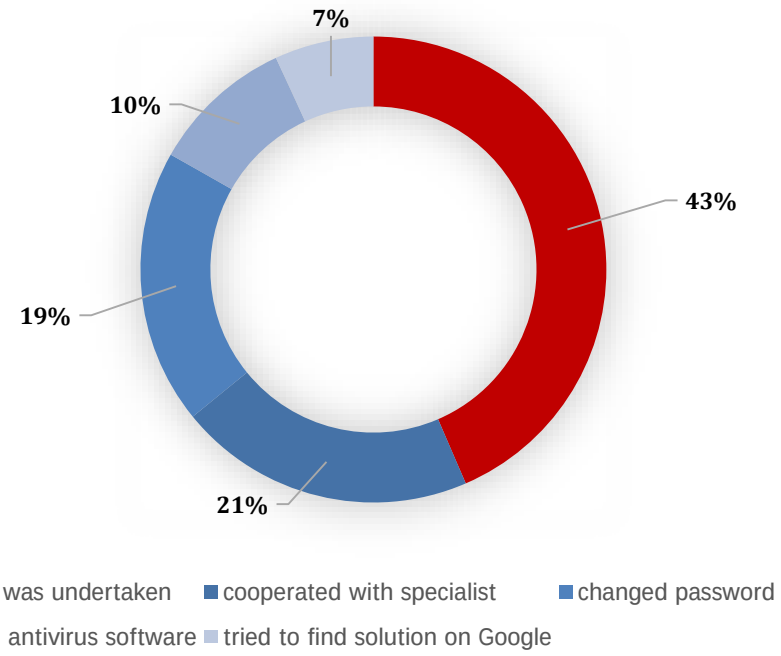


According to the interviewed cyber-security experts, the following sectors are usually the target for cyber-attacks:

- Financial institutions
- Health institutions
- Tourism companies
- Retail business, etc.

Remarkably, 43% of the respondents who have dealt with cyber-attack indicated not undertaking any measures to protect further cyber security issues. Just in 16.4% cases the respondent companies approached to a cybersecurity specialist.

Chart 40: Actions undertaken by the respondent SMEs in case of cyber-attack



Several causes of the problem were revealed.

Lack of awareness: The low level of digital literacy is a problem for the whole society, because neither schools nor universities include digital literacy classes in the educational programs.

The problem is that digital hygiene is not taught anywhere: school, university. People do not understand the danger and consequences of cyber-attack. There are no conditions in the country to become digitally literate. If the company does not provide training for its employees, it is not clear where they can learn all that.

Samvel Martirosyan, Cyber Security expert

An expert representing financial institution confirmed the statement.

All the cases where our users were affected by internet fraud have nothing to do with cyber security. In all those cases, our users have given personal information to strangers: PIN code, password, four-digit identification code, etc. So the problem is more connected with the digital literacy.

Grigori Yolyan, Idram Payment System

There are trivial steps that, once implemented, will prevent 70-80% of information security risks. These steps do not require special costs.

Arshak Kerobyan, The Head Of Digitalization Department Of HTI Ministry

The lack of awareness is an obvious issue in the case of all directions; nevertheless, there are 2 more specific and important issues in the case of data protection and cyber security: the lack of a strict legal environment and the lack of financial resources.

The lack of strict law and standards: The Cyber Security and Data protection field is hardly regulated in Armenia. Standards do not exist in the country for MSMEs; the companies do not have information to understand what should be done to protect their data.

Almost all the focus group participants mentioned that they are not aware of any cybersecurity regulation or rule to which their business is subjected.

Moreover, the existing standards, for instance ISO 27000, are suitable only for large companies.

Related to the issue only the Law **"Protection of Personal Data"**, which was adopted in 2015, is in force in RA. On the basis of the law, an authorized body for the protection of personal data, the **Personal Data Protection Agency,** was also established, which regularly implements measures to raise awareness, including through social networks. The agency has developed guidelines/ https://moj.am/page/610 / aimed at raising awareness.

One of the mandates of the Personal Data Protection Agency under the law is to provide advice or inform about best practices regarding the processing of personal data. The objectives of the agency are:

- to ensure maintenance of the registry for those processing personal data;
- to ensure the protection of the rights of subjects of relations connected with the protection of personal data;
- to ensure, within the scope of its competence, lawful processing of personal data.

Though there is a law on "Protection of Personal Data", but there is a idetified issue connected with the applicability of the low. One of the indicators is that since the establishment of the law back in 2015, no one has been fined,.

According do expert one of the causes of the situation is the lack of standards for SMEs.

There are no cybersecurity standards adopted for SMEs, which will be affordable for them.

Samvel Martirosyan Cyber Security Expert

Insufficient Financial Resources: There are a number of steps a company can take to maintain cyber security for very little money, but things like buying licensed software or getting new computers require financial resources that small companies, especially in regions, cannot afford.

Even if the standards were there, our SMEs are not able to spend that much money, as for high cyber protection the operating system of all the computers must be licensed, any software or application used must be licensed. Not licensed, unofficially downloaded programs can bear many risks. Taking into consideration the economic situation in Armenia, most of the SEMs are not ready to spend money. If someone does not force them, they will not do it.

Samvel Martirosyan Cyber Security Expert

5. CONCLUSIONS

Digitalization is in active development stage in Armenia. Day by day more businesses chose to go online, apply digital tools and benefit from digital economy. The government also tries to create favorable conditions for digitalization within the state strategy and reforms. However there are still core issues identified, which affects the process.

Below the key findings of the needs assessment are presented.

Literacy

One of the core issues resulting in low level of digitalization among businesses is literacy. The aspect of literacy can be classified into 2 main directions: business literacy and digital literacy

Business literacy refers to such skills as analytical, financial and managerial. Business literacy level is directly correlated with the digitalization decisions in the company. Higher level of business literacy enables the owner or manager to correctly assess the problems, needs and priorities of the business, evaluate the effectiveness and benefits of digitalization for the company, as well as calculate the return on investment of digital tools.

Lack of business literacy usually causes wrong perception among companies about digital tools; such as assuming that digitalization implies unjustified extra costs, does not result in increased efficiency and effectiveness or creates additional work.

The absences of strategic mindset is another identified barrier to prevent SMEs to make investments in digital tools. The results and return on investments of these tools are usually see in longer terms, however vast majority of SMEs are more targeted towards short-term and rabid results.

Additionally, the language barrier is another key factors in effective digitalization, as most of the resources and tools are in English language.

Digital literacy effects the digitalization decisions by three main stakeholder groups; customers, employees and business owners. Business owners, employees, and customers are first and foremost people and members of society and the digital literacy of businesses are directly related to the digital literacy of society**.**

Firstly, if the literacy level of business owners and their employees is high, it is more likely that the company will effectively apply digital tools. The level of application of certain tools is directly correlated with the level of awareness on the tool. Otherwise, the lack of basic digital skills and

knowledge will lead the company to fail in its digital transformation. The research showed that there is a lack of awareness, lack of information, and wrong perception regarding number of digital tools among many business owners and its team.

Moreover, very often company employees show resilience towards digital technologies due to fears connected with their reduced value in the company, the possibility of their replacement with the technology, as well as the possible inability to use the tools.

The establishment of some business processes automation systems such as CRM and ERP systems truly can imply a reduction in the number of employees. Due to social and psychological reasons, many business owners postpone the digitalization process, as they are not ready to fire their employees.

On the other hand, the business serves the customer, considering their needs and demand. So if the customer is not digitally literate enough, he will not be able both to use and demand digital solutions from businesses. As SMEs do not have enough resources to educate their customers, therefore the businesses usually adapt to the client's capabilities, behavior and habits. On a positive note, many businesses start to use digital marketing tools or online sales tools based on customers' requests. This once again proves that the role of the customer in the organization's decision-making process is essential.

Digital and non-Digital Infrastructure

One of the most important barriers to digitalization is not well developed infrastructure in the country, which refers to both digital and non-digital infrastructures. These factors mainly impact the effectiveness of digital marketing and online sales, particularly e-commerce.

Among the issues related to **digital infrastructures,** the following factors can be mentioned:

Payment systems: The speed and effectiveness of the main platform assuring online transactions in Armenia (ARCA) is not very high, which causes delays in transfer. Another major reason is unavailability of international payment system in the country, such as PayPal. This created extra barriers for the Armenian companies to engage to global digital economy. In order to operate efficiently and receive quick payments from abroad, some SMEs register the organization in another country and open foreign accounts. At a macroeconomic level, this will have a serious economic impact on the country as those companies pay taxes not in Armenia.

Ineffectiveness of social media advertisements and problems with integration: One of the digital marketing barriers is that ads on sites like LinkedIn, YouTube, and Google do not

operate well for Armenia and do not allow businesses to take full advantage of these opportunities, while nowadays ads on these platforms have a significant impact on sales, especially in case of international trade. Moreover, there are certain integration issues; such as development of online shop via social media pages.

Non-digital infrastructures.

Not well-developed infrastructural problems hinders e-commerce activities both inside and outside the country.

Unequal development across the country like poor quality of regional roads, incomplete availability of delivery services in regions creates barriers for companies to implement online sales across the country.

The research clearly showed there are big differences among Yerevan and regional companies related to digitalization. The gap is created due to following key factors :

- Non-proportional economic development
- Infrastructures are more developed in Yerevan
- Digital and business literacy level is higher in Yerevan
- Development programs are implementing mainly in Yerevan
- Main Resources and capabilities are concentrated in Yerevan

The barriers connected to aboard markets and export in case of international sales via e-commerce platforms were also identified. Due to not well developed infrastructure, export outside the country is quite expensive and not affordable for many SMEs. Moreover, the delivery processes abroad takes quite a long time which results in non-competitiveness of the business in the global digital economy. Additionally, geographical position, political situation and political relationships with neighboring countries create additional challenges and limited opportunities for delivery by land routes.

Armenian SMEs are usually isolated from the global economy, not considering foreign companies as competitors, partners or clients, which is not the effective approach in the era of globalization.

Government strategy of Armenia

The development of IT sector and digitalization of organizations are among high priority directions in the state agenda. In the framework, the government developed a ” Digitalization Strategy”, which tends to increase the digitalization and digital literacy level of the entire society, which will

have an impact on business too. On the other side the strategy does not concentrate specifically on businesses and no direct support programs for SME digitalization are currently in place.

The legal system in regards to digitalization is not mature as well. The field of the digital economy is barely controlled by laws in the country. There are few laws regarding e-commerce and cyber-security, however there is a problem with the application of the laws.

Local Culture

In many cases the conservatism of the population prevents the process of digitalization. It is rater common that people do not make online purchases, do not use online digital tools, because they do not trust the latest digital solutions. Using a new digital tool implies a change in the behavior and habits that the local society is often not ready for. Surely, the situation is changing, youth have started using digital technologies more, setting example for others, however the local culture is still one of the issues negatively affecting digitalization. The situation is more vivid in case of regional population

Competition and External Events

Competition and external events can affect digitalization decisions of the business crucially. For instance, COVID-19 ”forced” the businesses to adapt to the new environment to survive the external shocks. Number of businesses have started the application of digital tools just after the pandemic.

Moreover, the competition in the market also affects the digitalization of the companies with both positive and negative scenarios.

On a positive note, the companies start to use digital tools to resist the competition in the market. The research showed that many companies have started digitalization process only when their competitors use certain digital tools, which creates a competitive advantage for the latter.

On the other side, if other players in the market do not use digital tools as well, the companies do not have external initiative for digitization and continue to operate in traditional ways.

Awareness and Communication

Nowadays there are number of tools and opportunities available for SMEs in regards to digitalization. Number of tools does not even imply financial costs or have low cost options. However, the research showed that the majority of companies are not aware of these opportunities. The needs assessment showed that the level of usage of certain digtial tool is highly

correlated with the level of awareness on it. There is an identified communication gap between public and private sectors, as well as traditional businesses and IT sector.

On the one side, the IT sector in Armenia continues to grow rabidly and offers number of high quality digitalization tools; however, the local SMEs are either not aware and informed about those IT solutions or consider those tools as not effective.

This communication gap between the IT industry and SMEs is created mainly due to two reasons:

- IT companies often do not target the Armenian market, as it is quite small
- IT companies and SMEs do not talk on the same "language", usually terminology and wording of IT companies are not understandable for traditional SMEs. Additionally, IT companies lack the skills for effective needs assessment of SMEs, as well as understanding their main challenges and priorities.

One of the main findings of the need assessment is that there is no identified lack of digital tools, but rather lack of awareness on these tools and/or incapability of effectively using these tools.

Availability of Resources

Lack of financial and human resources can affect the digital transformation of the businesses. Despite the fact that there are few free or low-cost digital tools that SMEs can effectively use, it still takes relatively big financial investments to establish and maintain specific business process automation system, such as CRM, ERP or warehouse management system. Most frequently, SMEs do not have sufficient financial resources to allocate to this spending.

Lack of appropriate human resources is another barrier for the effective digital transformation. Number of respondent beneficiaries identified that they face challenging in recruiting digital marketing and technical specialists. In regards to digital marketing, most of the labor market in the field is concentrated on SMM, however there is lack of good specialist in SEO or PPC directions. Engaging in and maintaining e-commerce platform, especially the ones with the integrated payment systems suggests availability of technical specialist, which implies extra human and financial resources. Moreover, for effective maintenance of various business process automation systems again specialized human resources are needed.

6. RECOMMENDATIONS

The recommendation was made considering the upcoming activities in the frames of current project. The last section of the chapter includes general recommendations concerning support to SME digitalization.

The next stage of the "Skill Boost: Tech Upskilling Initiative" project is implementation of training on digital transformation for beneficiary SMEs, as well as development of digital tool which will assist SMEs in their digitalization.

TRAINING ON DIGITAL TRANSFORMATION

For raising the effectiveness of the planned digital transformation course the following recommendation are developed:

Selection of the beneficiaries: Effective selection of the beneficiaries for digital transformation course is essential for its success and achieved results. Clearly defined selection criteria, and recruitment procedures should be developed. While evaluating the beneficiaries, it is important to take into consideration their digital needs, as well as motivation level and readiness for digital transformation. It is essential that the decision-makers of the organizations are involved in the training program to increase the impact.

The recruitment should be done thoroughly, it is suggested to use various assessment tools such as:

- **application forms**, which will include information on the company (sector, main services provided, years of experience, number of staff, etc), information on digital tools currently used by the company, as well as clear definition of main challenges, needs and expectation of the company from this training program.
- **Initial test.** The shortlisted beneficiaries based on the application form should take initial tests to assess current digitalization level, digital literacy and knowledge.

In case of availability of time within the project timeline, additionally interviews can be conducted with the potential beneficiaries based on the developed interview scoring guidelines.

It's also recommended to give priority to youth and female entrepreneurs, as the need assessment results showed that this segment is more open for change and development.

To have larger pool of applicants to be able to choose the most appropriate beneficiaries, it is recommended to implement active promotional and awareness raising activities about the opportunity among SMEs. Information can be disseminated through state institutions (for instance regional municipalities), various associations and chambers, social media, member organizations of UEICT, other stakeholder organizations like NGOs and foundations, etc.

Formation of groups: For increasing the effectiveness of the training program, it is recommended to form the groups of the selected beneficiaries based on factors such as company size, sector, current digitalization level and knowledge. This will give opportunity to provide more targeted content to the participants. The training curriculum for each group can have slightly different agenda and case studies taking into consideration the mentioned factors.

Development of training agenda and content: The following main topics are recommended to be included in the training program, with their sub-topics:

- Digital Marketing and its main directions
- Online sales platforms, e-commerce tools
- Tools and systems for business process automation and optimization
- Basic cybersecurity

As it was identified during the research that business literacy is one of the barriers preventing companies from digitalization, it is recommended to have **short introductory part on entrepreneurship and management** before moving on with digital topics.

The training should have very practical manner, include individual and group activities as well as practical case studies. It is suggested to involve different **guest speakers** to share their success story on company's digital transformation and benefits of digital tools. The real success will "convince" the beneficiaries about the effectiveness of digital tools.

The program can also involve guest speakers from various IT companies, to present available IT solutions, advice effective ways of application of digital tools, thus filling in the identified communication gap between the IT sector and SMEs.

Consulting and monitoring activities: Even if the in-class training has high quality and effectiveness, the real life integration and application of digital tools can be challenging for the SMEs. As the research showed, SMEs face various difficulties during establishment of tools, even in case of high awareness level. To increase the results and number of success stories, the

availability of consulting services in the frames of the program is quite important. In the frames of consulting, the businesses will be guided in the phase of digitalization, support and assistance will be provided in case of possible challenges and questions. As identified in the frames of the research, many training and development programs are assessed as not effective due to lack of individual consultancy received.

It is also important to conduct monitoring activities to assess the results and impact of the project, determine number of success and failure stories of digitalization cases among SMEs, analyze the reasons. The collected information will be a valuable source of data for identifications of lessons learned and best practices for more effective development of further similar projects

DIGITAL TOOL FOR SMEs

Based on the need assessment results it was identified that there is no lack of digital tools availability for the Armenian market. Both the local and international IT companies and platform offer various solutions and systems for business digitalization. The problem identified is the low awareness level of SMEs on the digitalization tools or incapability of effectively using the them. Moreover, the availability of informational/educational platform was the second most common answer among the survey responses related to digital tools, which will potentially increase the effectiveness of company's operations. 32.5% of the respondents indicated about the need of such platform.

Thus, it is recommended to develop an interactive informational and educational digital platform for SMEs related to digitalization, digital opportunities and tools. Below some suggested features of the platform are described:

- **Online video trainings on digitalization.** The content of above described digital transformation course can be available on the portal in interactive video format. This will allow to include more number of SMEs who will benefit from the developed course. Besides the main training, frequent webinars and master classes can be organized via platform on specific business or digitalization issue. The main content on digital transformation will be available for SMEs free of charge; however the sustainability of the platform can be assured by paid webinars, master classes or specific training programs offered.
- **Content on available digitalization opportunities**; There are already number of opportunities available for SMEs related to digitalization, however the information is not well disseminated and the awareness level on the opportunities is low among SMEs. A

platform can have a special section were available digital tools and solutions, as well as programs, projects and grants aimed at digital transformation will be communicated.

- **Guidebooks and templates on digitalization.** It is proposed to develop and upload brief guidebooks and checklists for practical use of SME on basic digital tools. Some examples can include: a checklist on cybersecurity obligatory measures, a guidebook on available online payment methods, social media content template, etc. The published guidebooks can be specific based on the sector, company operations, etc. General business related templates can also be available such as business plan template, marketing action plan template and other useful content and forms for SME development.
- **Digital consulting opportunity.** The platform could integrate an interactive online consultancy feature to address questions of SMEs and guide to solutions. The platform can also have partner consulting companies, to which the SMEs will be refer in case of more comprehensive consulting needed. Thus, the platform will also has impact on the development of professional services in Armenia and encourage SMEs to apply for consulting in case of need. The latter will surely has impact on the overall development of business environment and culture.
- **Communication platform**. It is also suggested that the developed tool will provide a platform for communication of SMEs to exchange their experience, problems and success stories related to management and digitalization. Moreover, the communication platform can potentially develop partnership and networking among SMEs.
- **Blog;** which will include content on business news, latest state regulations, trends in digitalization, etc.

OTHER RECCOMENDATIONS

- **Cooperation with other stakeholders**. Different institutions of the government, as well as number of international organizations and NGOs also implement various projects aimed at digitalization of businesses. Partnership with other stakeholders in this sphere will create synergy effect; higher effectiveness and impact of project. Moreover, partnership or at least analysis of available similar projects will decrease the risks of repetition of similar actions and direction of resources towards the same actions.

- **Financing opportunities for SMEs:** As identified in the research availability of resources is another key barrier preventing SMEs from application of digital tools. Establishment and maintenance of some digital tools implies certain financial investments. In development of future similar projects, the component of providing micro grants to SMEs for digitalization may be considered.

- **Co-financing of consulting service:** In Armenia, the culture of applying to professional services is not well developed among SMEs. Moreover, usually SMEs do not possess sufficient financial resources to be allocated to this spending. However, it should be remarked that services like digital marketing or business consultancy can highly increase the efficiency and effectiveness of business processes, including and not limited digitalization. To respond to this gap, in the development of future projects aimed at increasing digitalization, co-financing of consulting services should be considered. The co-financing percentage can differ based on number of factors. For instance, for regional SMEs the co-financing contribution can be higher to promote the digitalization in the regions. As the research showed the difference between digitalization level in Yerevan and regions is quite substantial. In Armenia, European Bank for Reconstruction and Development (EBRD) has similar kind of co-financing opportunity for consulting services, however micro and small sized companies cannot benefit from it as the target of the initiative is more mature companies. There are certain requirements set on the minimum yearly turnover, years of experience and number of employees of the business.

- **Guarantee fund for financial support for digitalization:** To increase the access to finance for digitalization purposes, a project can be initiated aimed at establishment of guarantee fund. In the frames of the latter, the partner financial institutions will provide loans specifically for digitalization purposes to SMEs with the guarantee fund as security mean instead of collateral or pledge.

- **Training for ICT representatives**: As it was identified in the frames of needs assessments there is substantial communication gap between the local ICT sector and SMEs. On the one side, ICT companies do not understand and effectively assess the needs and priorities of SMEs, on the other side businesses cannot understand IT terminology. To put it short, the sectors do not speak on the same “language”. As a response to the problem, training program can be organized for ICT representatives. The training will be aimed at improving the marketing and sales capacity of the IT companies. As a result of the course, the participants will be able to better assess the needs of the SMEs based on

sector and company specifics, understand the pains, gains and priorities of businessmen, thus make more targeted sales.

- **Digital literacy course integrated to education programs:** As identified, digital literacy is among the key aspects affecting the digitalization of businesses. If the society is not digital literate enough to demand and use technologies, the state and international programs aimed at business digitalization will have decreased impact. One of the recommendations related to the design of future digitalization projects can be the development of education program on digital literacy in partnership with the government and integration of it to the agenda of schools and/or universities.
- **Standardized annual reports on digitalization development in Armenia:** It is recommended to initiate the development of standardized annual reports on digitalization for Armenia. The reports will be intended to assess yearly development tendencies, compare main digitalization indicators, as well as act as a source for data-driven decision making in design of future projects.
- **PR campaign on digitalization success stories:** Businesses need success stories. It was revealed in the frames of the needs assessment that there are number of perceptions among business owners on the effectiveness of digital tools. Thus, the real success stories and proven results will surely have impact on the digitalization decisions of the businesses. It recommended to implement PR campaigns to share digitalization stories of SMEs among businesses. The campaigns can be organized via social media, TV, radio and outdoor advertisement channels.

7. ANNEXES

Annex 1: List of FDG participants

	Name Surname	Company	Sector
Dilijan Focus Group participants			
1	Anna Tamrazyan	Aesthetic beauty	Beauty Salon
2	Garik Tovmasyan	Dilijan gym	Gym
3	Anna Ghazaryan	Dilijan gym	Gym
4	Elinar Petrosyan	Home Eco Food	Poultry farm
5	Lyova Hovakimyan	Traveler's house	Cafe, tours
6	Bagrat	Dil textile	Textile production
7	Meri Tamrazyan	Bambak	Textile production
8	Oksanna Arakelyan	Sunny photography	Photography
9	Ruslan Antonyan	"Mirg" LLC	Food processing
10	Ruzanna Hakobyan	"Ruzan Hakobyan" PE	Event management
11	Sevak Saghatelyan	PE	Woodworking
12	Anna Tamrazyan	PE	Guest house
13	Vazgen Khachikyan	PE	Restaurant, Extremal tourism
Gyumri Focus Group participants			
1	Anushik Saroyan	Anes Fashion	Textile production
2	Sona Yengoyan	Sona's Cake	Bakery
3	Gohar Papoyan	BESOFT	Business processes automation
4	Anna Tonoyan	BEON business academy	Trainings, Digital marketing
5	Angela Rostomyan	BEON business academy	Trainings, Digital marketing
6	Gevorg Hovsepyan	Wooden Toys' Production	Manufacturing
7	Astghik Hwvsepyan	Magnon BBY	Manufacturing
8	Dianna Khachatryan	Aregak bakery and cafe	Bakery
9	Elza Ginetsyan	Zebra Auto School	Auto School

10	Lilit Makaryan	TOOP	Manufacturing
11	Karen Qartashyan	Antik Art Salon	Trade
12	Mariam	Antik Art Salon	Trade
13	Stepan Kakosyan	Yatuk	Import and manufacturing
14	Artur Stepanyan	And-V LLC	Agriculture and food processing
15	Narek Hakobyan	Zakaryan LLC	Textile production
Online Focus group Discussion			
1	Arthur Arshamyan	Arthur Arshamyan PE	Agriculture
2	Arman	SATUR	Tourism
3	Zhak Voskanyan	Voskanyan Parfums	Parfume production
4	Tsovak Voskanyan	Tsovatur	Tourism
5	Manvel Stepanyan	Young Invest	Manufacturing
6	Sevanyan Sevak	Old fordge guesthouse	Tourism
7	Taron	IT Spark	
8	Armine Melikyan	Bu Bi toys	Handmade toys
9	Lusine Arakelyan	Lucy Art	Clothing design studia
10	Artur Karapetyan	CarPet	Car renovation and service

Annex 2: List of first round table discussion participants

N	Institution	Representative	Position
1	Central Bank of Armenia	Gayane Khachatryan	Head of the Payment Systems Control Department
2		Arsen Aramyan	Financial system development center project manager
3		Araks Manusharyan	Financial Education Specialist at the Center for Consumer Advocacy and Financial Education
4		Lusine Nersisyan	Financial Education Specialist at the Center for Consumer Advocacy and Financial Education
5		Mariam Ter- Sahakyan	Financial Education Specialist at the Center for Consumer Advocacy and Financial Education
6		Davit Kharatyan	Center for Consumer Advocacy and Financial Education
7	HTI ministry of Armenia	Arman Demirkhanyan	Chief Communications Officer of the Department of Communications and Posts
8		Davit Gasparyan	Senior Post Department Specialist
9		Nushik Petrosyan	Chief Specialist of the Digitization Department
10		Ani Papikyan	Chief Specialist of the Digitization Department
11		Meri Manukyan	Chief Legal Officer of the Legislation Department of the Legal Department
12	4U.am	Levon Galstyan	CEO, Founder
13	Jinishian Memorial Foundation	Liana Sargsyan	Executive director
14	Haypost	Yuri Hayrapetyan	Head of the Department of Tariffs, Transport Coordination and External Partners,
15	World Bank	Gohar Malumyan	Ditigitalization expert
16	Inecobank	Sergey Qosyan	Head of Support and Control Department

Annex 3: List of second round table discussion participants

N	Name/ Surname	Company	Position
1	Tigran Mkrtchyan	Coinstats	Head of Digital Marketing
2	Tigran Manukyan	Mersoft	CEO
3	Vaspur Grigoyan	ZOHO	CEO
4	Vahagn Ghazaryan	Stamina	CEO
5	Hayk Margaryan	National Center for Innovation and Entrepreneurship	Executive Director
6	Tigran Margaryan	National Center for Innovation and Entrepreneurship	Expert
7	Norayr Dumoyan	Ucar/ Volta U LLC	Founder
8	Levon Khachatryan	Levoun Khachatryan PE	Founder
9	Arpine Poghosyan	Aveta	CEO, co-founder
10	Zaven Vardanyan	Aveta	co-founder
11	Khachatur Sargsyan	ARMON LLC	Director
12	Narek Aleksanyan	Individual Business Consultant	Business Consultant
13	Ani Yeghiazaryan	Ashkatank ev Hayrenik NGO	Program Manager
14	Hasmik Barkhudyan	SME cooperation assosiation/ ARIES	Board member
15	Lilit Paronyan	Invest in AM Investment Platform	Investment officer
16	Tatevik Yeghiazaryan	Invest in AM Investment Platform	Export officer
17	Eduard Musaelyan	UEICT	Executive Director
18	Ani Harutyunyan	UEICT	Expert
19	Karen Gevorgyan	International Trade Centre	National Project Coordinator

8. SECONDARY DATA SOURCES

- Law On State Support For Small And Medium-Sized Enterprises
- National Financial Education Strategy of Armenia
- RA Digitalization Strategy 2021-2016
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- Eu4digital: Supporting Digital Economy And Society In The Eastern Partnership
- Framework Law On Electronic Communications For Armenia
- Global Entrepreneurship Monitor 2021/2022 GLOBAL REPORT: Opportunity Amid Disruption
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