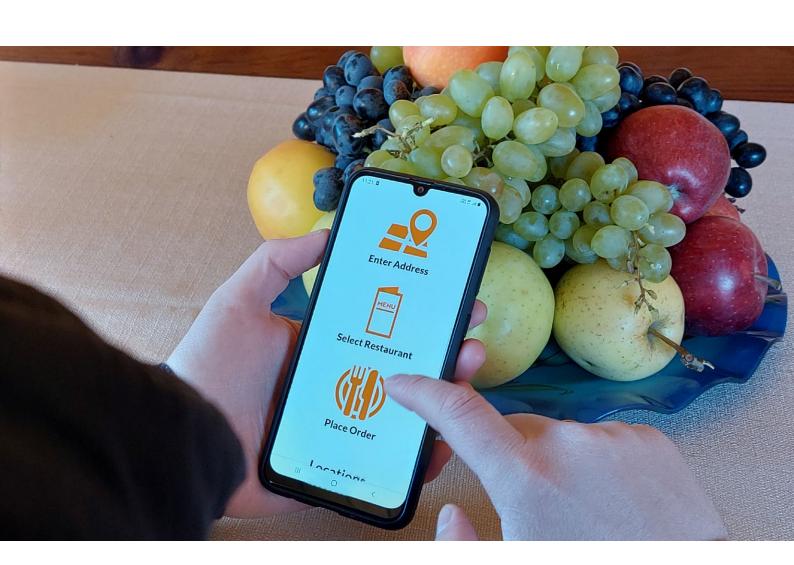


Development of an e-commerce platform (D2C) for small and medium-sized farmers and returned migrants agri-entrepreneurs



Development of an e-commerce platform (D2C) for small and medium-sized farmers and returned migrants agri-entrepreneurs

Feasibility study

Roadmap recommendations

By Victor Guzun and Adrian Cojocaru

Required citation:

Guzun, V. and Cojocaru, A. 2022. Development of an e-commerce platform (D2C) for small and medium-sized farmers and returned migrants agri-entrepreneurs – Feasibility study. Roadmap recommendations. Chisinau, FAO. https://doi.org/10.4060/cb8496en

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-135717-0 © FAO, 2022



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original English edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization http://www.wipo.int/amc/en/mediation/rules and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

Cover photograph: © FAO/Victor Guzun

CONTENTS

Ab	breviations and acronymsbreviations and acronyms	٧.
Ac	knowledgementsv	/ii
Ex	ecutive summary	ix
1.	Introduction	.1
2.	Objectives	.3
3.	Methodology	.5
4.	Findings	.7
5.	Approach and development potential	8
6.	Prerequisites for the implementation and ingredients needed to ensure sustainability	23
7.	Implementation scenarios and specific recommendations per scenario	28
Re	ferences4	ŀ2
Fig	gures	_
Fiç	ure 1: Prioritizing interventions by their impact on the viability of the system	ίi
Fiç	jure 2: Outline of deliveries today1	3
Fig	jure 3: Conceptual outline of the logistics system	27

ABBREVIATIONS AND ACRONYMS

rion nice of terriaries rigerie,	AGE –	Electronic	Governance	Agency
----------------------------------	-------	------------	------------	--------

ANSA – National Agency for Food Safety

APCSP – Agency for Consumer Protection and Market Surveillance

ATIC – National Association of Information and Communications Technology Companies

BRD – Bureau for Diaspora Relations

B2B – business to business

CBI – Centre for the Promotion of Imports in Developing Countries within the Dutch Ministry of Foreign Affairs of the Kingdom of the Netherlands

D2C – direct sales to consumers

FAO – Food and Agriculture Organization of the United Nations

FARM – Federation of Agricultural Producers from Moldova

GDPR – General Data Protection Regulation

IT – information technologies

KYC – know your customer

LAG – local action group

LPA – local public authorities

MAC-P – Moldova Agricultural Competitiveness Project

MAIB – Moldova Agroindbank

MDL - Moldovan leu

MinEcon – Ministry of Economy and Infrastructure

MinFin – Ministry of Finance

NBS – National Bureau of Statistics

NGOs – non-governmental organizations

ODIMM – Organization for the Development of Small & Medium Enterprises

HVAA – USAID High Value Agriculture Activity in Moldova

POS – electronic payment terminals

PSA – Public Services Agency

PSP – payment service provider

SAAS – software as a service

SFS - State Tax Service

STICS – Information Technology and Cyber Security Service

UNDP – United Nations Development Programme

USAID – United States Agency for International Development

USP – unique selling proposition

VAT – value added tax

ACKNOWLEDGEMENTS

his study was carried out by the Food and Agriculture Organization of the United Nations (FAO) under the Multidisciplinary Fund project "Promoting decent employment and socio-economic integration of returned migrants to rural areas in the context of COVID-19 and beyond." The authors of the study – Victor Guzun, international digital business expert, and Adrian Cojocaru, national agricultural market expert – developed the study based on the qualitative and quantitative data and information collected.

The Feasibility study was coordinated by Jana Midoni, project coordinator, FAO Moldova, and Ion Bulgac, rural migration consultant, FAO headquarters, and peer reviewed by Marzia Pafumi, youth engagement specialist, and Jun He, policy officer, inclusive rural transformation and gender equality (ESP) digitalization taskforce at FAO headquarters.

The study is based on 29 thematic in-depth interviews and four group discussions with over 30 producers, financial institutions, online platform administrators, information technology specialists, representatives of state institutions, and other relevant stakeholders.

For a comprehensive vision of the analytical effort, the authors studied various online trading platforms in the Republic of Moldova: totul.online, a1.md, 999.md, ggg.md, fth.md, shop. md, ecovillage.farms.md, agrobourse.com, and the Facebook community "Susţinem afacerile locale din Moldova" ("We support local business in Moldova"). In addition, the authors studied the internationally well-known platforms eMag.ro, Amazon.com, Omniva.ee, and AliExpress.com.

FAO offers thanks for the valuable contributions made during interviews by Luminita Morozan (NISVINEX), Evgeni Tanov (Major Auto), Tudor Rotaru (Rifero), Nicanor Negru (Regina Naturii/Queen of Nature), Victor Cazacu (Prolnedit), Vasile Dolghieru (Association of honey exporters/Imperiul Apis), Octavian Olaru (Moldova Fruct), Veaceslav Ionita (IDIS Viitorul), Tatiana Burca (USAID High Value Agriculture Activity in Moldova), Doina Nistor (USAID Moldova Competitiveness Project), Vasile Pojoga (AGROINFORM), Vladimir Cara (NEXT Business Association from Gaguzia), Viorel Chivriga (MIDL Project, UNDP), Daniela Colesnic (madein.md), Radu Cheltuiala (iticket, ifood), Stanislav Florica (Posta Moldovei), Vadim Jeleascov (Simpals), Sergiu Jaman (Agrobiznes), Elena Croitor (Posta Moldovei, Curier Rapid), Ilinca Rata (TotulOnline, MAIB), Victor Ciobanu (Kiwi), Nicolae Olarasu (National Center for Consumer Protection), Diana Gherman (National Food Safety Agency), Vlad Manoil

(Electronic Governance Agency), Nadejda Zubco (Diaspora Relations Bureau), Diana Crudu (Community of Small Producers), Geo Lupascu (Pomusoara Dulcisoara, Lavielace), and Vlad Vedrasco (Cl Ved-Mar Agro).

The study provides an overview of the online commerce for small and medium agricultural producers in the Republic of Moldova, including returning migrants involved in agriculture-related businesses, as well as an analytical assessment of the development of an e-commerce platform from scratch and a solution based on one of the existing platforms in the Republic of Moldova.

The authors of the study and the FAO Moldova team thank the representatives of the Agency for Interventions and Payment for Agriculture, the National Agency for Rural Development, the National Farmers Federation of Moldova, the Moldova Agricultural Competitiveness Project, Posta Moldovei, QIWI, the National Farmers Federation of the Republic of Moldova, the Association of Beekeepers of the Republic of Moldova, the Diaspora Relations Bureau, Agrobiznes, and USAID High Value Agriculture Activity in Moldova for the opinions and feedback expressed during the three consultation groups on the findings and recommendations proposed by experts.

This document was prepared with the editorial support of Matthew Anderson and the layout support of Foxtrot Publishing House.

EXECUTIVE SUMMARY

he digitalization of national economies is perceived by more and more governments in developed countries as a solution to increase labour productivity, which, in the context of increasing labour costs, can ensure the maintenance of international economic competitiveness. Despite some progress, the level of digitalization in the Republic of Moldova is relatively low (UNDP Moldova, 2021). Without an acceleration of the pace of digitalization, the Moldovan economy risks remaining at a state of low labour productivity and low income for the population, which will predispose the economically active population to seek better opportunities abroad.

The COVID-19 pandemic further exposed the vulnerabilities of the national economy. In particular, the imposed quarantine conditions reduced the access of smallholder farmers to markets, virtually leaving them without sources of income.

In this context, FAO Moldova is looking for opportunities to support small local producers, including returned migrant workers, to improve their access to markets, including by adopting digital tools and technologies. Thus, this Feasibility study focused on identifying the opportunities, optimal scenarios and interventions needed to launch an e-commerce platform that would be of maximum use to the above-mentioned target group.

This study was developed taking into account a number of reports prepared at national and international levels, various online resources, and primary information obtained from 29 in-depth interviews and complemented by four group discussions involving over 30 producers, financial institutions, online platform administrators, information technology specialists, representatives of state institutions, and other stakeholders. The FAO team of experts studied international practices related to the development of online commerce, identified the key elements necessary to create a viable and efficient ecosystem, assessed the level of preparation and acceptance by potential end users, and determined the existing constraints. Following a holistic analysis, the experts proposed a set of interventions, with specific recommendations meant to contribute to the creation of all the necessary premises for the development and operation of a sustainable e-commerce platform.

The study highlights the following major findings:

- The need for the development of an e-commerce platform for farmers is widely understood, and there is a consensus that such a platform has the potential to contribute to increasing e-commerce, although the quantities of agrifood products sold by this method currently remains insignificant.
- In the Republic of Moldova, there are knowledge and technical skills, capacities and full
 potential for developing e-commerce platforms in accordance with the target group
 needs.
- Although there are already many e-commerce platforms that can be developed to meet the needs of smallholder farmers, most of them are not well known by the general public. Without removing the essential constraints, the development of a new platform will not change the current situation.
- The main constraint is the existing logistics infrastructure failing to ensure the necessary conditions for the storage and shipment of perishable products, especially over long distances. The available solutions (e.g. direct delivery from seller to buyer) provide neither efficiency nor reasonable costs for such deliveries.
- The majority of online purchases take place in Chisinau. Producers near to Chisinau have the advantage, if necessary, of affording to ship orders within the delivery area of their municipality, within reasonable costs, which is practically impossible for producers from more remote regions.
- A common e-commerce platform of a marketplace type has a higher chance of success than a multitude of online stores (of each individual producer), as it can ensure greater efficiency in terms of promotion, management, maintenance and continuous development.
- The existing payment solutions offered by financial operators provide the necessary premises for the development of online commerce, but there are still some reserves and possibilities to make them more cost efficient and user friendly for end users.
- The legislative framework lags behind the global trends in economic development. The
 implementation of e-governance elements and the minimization of the use of paper
 documents and physical presence to obtain various approvals, etc., would be an environment conducive to economic effectiveness, including e-commerce development.
- The capacity to use digital/information and communication technology devices among smallholder farmers is low, in most cases limited to making calls, posting short messages or using social networks.
- Financial inclusion is still low; however, the use of digital finance is increasing. According to the latest World Bank Global Financial Inclusion data in 2017, 43.8 percent of the Moldovan population aged 15 and older had an account at a financial institution or through a mobile money provider (41 percent in rural areas), 17 percent had a credit card, and 18.4 percent used the internet to make online purchases (Demirguc-Kunt et al., 2018).

The current pandemic has significantly increased the number of online financial operations. In the first trimester of 2021, the number of card payments through e-commerce platforms increased by 49.8 percent compared to the second trimester of 2020, according to a National Bank of Moldova report (2021).

• It is important that there is willingness to cooperate, engage and support all stakeholders, including producers' groups, logistics, financial, information technology service providers, agricultural support organizations, and state institutions.

A number of prerequisites must be met for the successful implementation of an e-commerce platform, as well as requirements for a minimum viable product, including:

- an existing market: availability of both demand and supply;
- positive experiences for the first users of the platform;
- massive investments in marketing the platform to gain wide popularity;
- potential to bring benefits to all parties involved in its operation and, respectively, the financial motivation of stakeholders;
- presence of an efficient logistical infrastructure, in accordance with food safety requirements;
- removal of legal barriers and the creation of conditions for the issuance and simple circulation of tax and accompanying documents in electronic format;
- presence of clear and transparent rules in the use of the platform;
- easy-to-operate, secure payment instruments available at reasonable costs, including online; and
- existence of an interested team that would manage the platform and be the engine of its continuous development.

Looking at all the elements related to the functionality of the future e-commerce platform for smallholder farmers, including among returned migrant workers, and, starting from the premises listed above, the following two development scenarios are proposed:

Scenario 1 (S1): An e-commerce platform for small and medium-sized farmers, developed from scratch.

Scenario 2 (S2): An e-commerce platform developed based on an already existing platform (online store/marketplace).

To ensure the proper functioning and continuous development of the e-commerce platform, a series of interventions are needed that, to a large extent, are relevant for both scenarios. The interventions are listed and described in Chapter 7, each of them scored depending on how they can condition the viability of the platform:

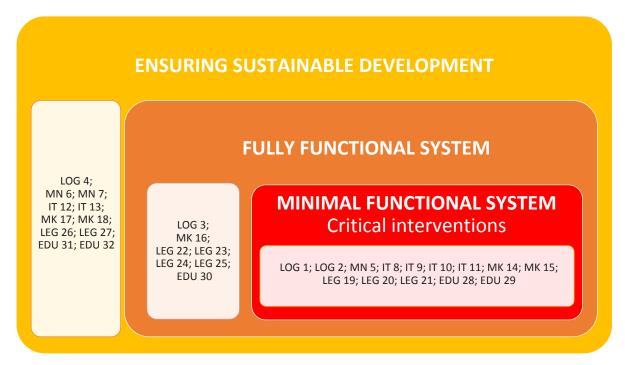
- critical interventions needed to ensure a minimum functional system
- interventions needed to create a complete functional system

- interventions to ensure sustainable development and increase the number of users/ beneficiaries of the platform
- ◆ stages already implemented or requiring minimal adjustments (in case of S1).

Interventions are listed later in the report, each of them having been assigned certain codes depending on the primary area of responsibility to which they relate:

- LOG logistics
- MN management
- IT information technologies
- MK marketing
- LEG legislative
- EDU education

Figure 1: Prioritizing interventions by their impact on the viability of the system



Source: FAO (elaborated by the authors).

1. INTRODUCTION

t is already a reality: in the context of labour market mobility and liberalization, the economically active population tends to move to more developed countries that can offer better livelihood opportunities and better living conditions, including quality services and personal development opportunities (IOM, 2017). Considering the growing global competition, the digitalization of national economies is perceived by more and more governments not only as a solution to increase labour productivity and thus maintain economic competitiveness at the international level but also as a way to provide the people of those countries with better and more accessible public services.

Despite some progress, the Republic of Moldova lags behind in this regard, even compared to neighbouring states. If no vigorous measures are taken to accelerate the pace of digitalization of the Moldovan economy, there might be the risk of a widening gap in labour productivity between the Republic of Moldova and countries of destination for migrant workers, thus making it more likely that the economically active population would decide in favour of more attractive employment opportunities abroad.

In this regard, the Moldovan Ministry of Economy and Infrastructure has developed a roadmap for stimulating the digitalization of the national economy and developing electronic commerce with several priorities for 2020–2021, including promoting digital services for business, stimulating electronic commerce use by companies and consumers, and promoting national and international e-commerce platforms in support of local businesses.

An analysis of e-commerce conducted by the United States Agency for International Development Moldova (USAID, 2020) found that, although most of the basic elements characteristic of the e-commerce ecosystem in the country are present – including general infrastructure, logistics, marketing, regulatory framework, and financial and payment systems – most of these elements need continuous improvement and innovation to function well. The main shortcomings are related to logistics infrastructure and the skills and knowledge of small businesses in using the solutions offered by the online environment.

The COVID-19 pandemic has exposed the vulnerabilities of the national economy, especially regarding how little it is adapted to the new realities. Small-scale farmers and food producers were among the most affected, with modest incomes even before the pandemic hit. Given the enforced movement restrictions, closures of markets and limitations of social contacts, they were practically deprived of the opportunity to sell their products. Due to the pandemic, many companies operating in the agrifood sector have reported a dramatic drop in sales. However, according to a recent study by the United Nations Development Programme (UNDP Moldova, 2020), less than 15 percent of the total number of surveyed businesses of different types have looked at online sales as an alternative, and among them just half have used this solution. At the same time, 53.8 percent of agricultural business companies surveyed said they would need assistance to promote themselves in the domestic market, while 17 percent said they would need assistance in implementing e-commerce solutions.

Based on the above, it has been concluded that smallholders still have a reserved attitude towards online sales. Analyzing the potential causes of such an attitude, the study assessed a series of assumptions:

- Smallholders are not aware of the opportunities and advantages of online commerce.
- There is insufficient demand from buyers to purchase agricultural products online.
- There is no convenient e-commerce platform for small producers, or they do not know about its existence.
- Small producers do not know how to use existing platforms.
- The necessary infrastructure for carrying out the transactions is missing.
- The existing legal framework does not encourage online sales.
- There have been negative experiences that have led to certain preconceptions.

In the above-mentioned context, FAO Moldova is looking for opportunities to support small, local producers, including returned migrant workers, in the agrifood sector to improve their market access and increase sales by adopting digital tools and technologies. To this end, FAO hired a team of experts to develop this Feasibility study. The experts looked at the plausibility of the assumptions listed above and identified the best options for a viable online platform, issuing clear and realistic recommendations for its development to be of maximum utility to the target group.

Particular emphasis during the study was placed on Moldovan migrant workers who have returned home and started businesses in agriculture or small-scale processing of agricultural products. The rationale for this approach is that these people, having returned after years of working abroad and becoming accustomed to using various digital solutions, can become agents of change, serving as role models for other producers who are still reluctant to develop and use online solutions.

2. OBJECTIVES

iven the many elements needed to make the e-commerce ecosystem work for smallholder farmers in rural areas, especially returned migrant workers, the study set out to develop a comprehensive set of timely, effective, realistic, scalable proposals and recommendations with the potential for implementation and further development.

The needs assessment is based on the identification of non-functional elements in this ecosystem and of the solutions applicable in the short and medium term, to the end that the platform can become operational in a relatively short timeframe and its functioning and sustainability are ensured.

The assessment also contains long-term recommendations that will have the potential to be incorporated into the platform's functionalities gradually and as those decisions are taken. The proposals and recommendations aim at creating a new platform or developing an existing platform that is easy to use and intuitive and that can integrate a maximum number of options and users, to offer the possibility of participation to all interested stakeholders, without excluding anyone.

The primary aim of the platform will be to provide a safe, functional and transparent option for agricultural producers to sell their products, increase profit margins, reduce their dependence on multiple intermediaries and increase competitiveness.

The study proposes not only technical and decision-making recommendations (infrastructure, logistics, interconnection or integration of systems and IT components, reduction of transfer rates, reduction of dependence on financial institutions, ensuring return conditions and security of transactions, legislative changes, etc.), but also actions to increase trust in e-commerce platforms, overcome scepticism related to their use, increase producers' skills in using them, and apply marketing solutions and skills, product placement, copyright, etc.

The report assesses the current realities of online commerce for agricultural producers and specifies the steps to be taken for the operationalization of the future platform, developed from a number of perspectives: which model can be selected, what features it must have, the types of products for sale, the geographical scope from the perspective of both producers and buyers, how product traceability can be ensured, who will manage the platform, interconnection possibilities, taking into account the compatibility of the necessary systems and infrastructure, how its functionality and sustainability can be ensured, the key actors involved, etc.

The study also aims to present specific recommendations for ensuring the security of online payments, the provision of financial services in accordance with the law (both in current and future conditions), quality assurance, phytosanitary and food safety requirements of products sold online, transport and storage, and packaging conditions.

The study makes a comparative analysis of two possible solutions: a platform developed from scratch and a solution based on one of the existing platforms in the Republic of Moldova (to be selected), identifying potential partners, the responsibilities of all parties, and options for sustainability.

The study provides a portfolio of actions needed to implement each of the selected solutions and a list of specific interventions and recommendations, including the development of human resources (knowledge and skills) and the identification of potential partners.

3. METHODOLOGY

he study methodology was based on a holistic approach. This implies adopting a vision that will analyze the problem from a complex perspective, starting from the identification of existing constraints and possible solutions. The study considered the development of the future platform from the perspective of both beneficiaries and end users (small and medium-sized producers, potential buyers, and logistics and financial operators) and of the factors that may influence the removal of certain constraints or possible malfunctions. The study analyzed the related elements that would increase the use of e-commerce platforms (capacity development, education programs, partnership development, etc.).

To identify all key issues, data were collected from various sources of information, to ensure that the views and interests of all stakeholders are reflected in the study. The study highlights the main findings and proposes a matrix of general actions and interventions, to ensure the existence of the necessary premises for the development of the e-commerce platform. Also included are punctual and detailed interventions required for two scenarios, which can subsequently be selected for implementation.

Development of the study started with the collection and analysis of secondary information. At this stage, the existing reports and surveys in the field were studied and reviewed, and the first conclusions and study hypotheses were formulated. When collecting primary information, we obtained punctual information, based on a series of in-depth interviews with representatives of various stakeholders, to identify their exact needs, expectations, possible solutions or possible barriers or practices that should be avoided. A total of 29 in-depth interviews were organized with small and medium-sized agricultural producers, representatives of agricultural producers' associations, specialized think tanks, international assistance programs, e-commerce platforms, business associations, logistics companies and institutions, IT companies, financial banking and non-banking institutions, as well as relevant state institutions (ANSA, APCSP, AGE, BRD, AIPA and others).

In addition to the 29 interviews, the team of experts organized a discussion with a target group of 14 producers – members of the small and medium agricultural producer community – from various parts of the country. In addition to the in-depth interviews, there were multiple discussions with producers, technical implementers and specialists in the field on various aspects related to the object of the study.

The findings identified at this stage were triangulated and subsequently confirmed by data from another FAO study, still under development, which aims to assess the extent to which smallholder farmers are using online tools and related digital skills to promote and sell their products.

Based on the analysis of the gathered information, a series of recommendations for specific interventions were developed. These recommendations were subject to primary validation in several in-depth interviews (of the 29 organized), group discussion with producers, and three special sessions of consultation, with the participation of potential users of the platform and relevant institutions. The purpose of the validation sessions was to ensure the practicality of the proposed implementation recommendations and to reconfirm that the views of all stakeholders were taken into account.

The report proposes realistic and applicable scenarios and related actions. The proposed functionalities are prioritized in three categories of functionalities: absolutely necessary, recommended and prospective. The recommendations are focused on creating a platform that is developed according to the principle of being intuitive to use and aligned as much as possible with users' expectations. The recommendations imply a gradual implementation of the proposed scenarios, including from the perspective of developing the functionalities of the platform, initially focusing on local market needs and further developing modules meant for external markets.

4. FINDINGS

he team of experts identified the following nine categories of findings that reflect the holistic approach of the study. These findings cover all aspects that may influence the development and proper functioning of the e-commerce platform for the FAO-designated target group, including elements of technicality, functionality, legal aspects, marketing, skills and potential use:

1. Acceptance of stakeholders

The idea of creating/developing an e-commerce platform for farmers is widely supported.

All interviewees welcomed the idea of creating a unique e-commerce platform for smallholder farmers. Some of the interviewees, especially agricultural producers and traders, intended to realize similar ideas. Moldova Agroindbank (MAIB) also created the marketplace-type¹ platform totul.online (everything online), except that perishable agricultural products aren't offered for sale. Many companies have sales experience through their own online stores (Rifero, Regina Naturii) but support the creation of an online platform as something complementary to their own electronic stores and do not perceive the single platform as one that would create competition. Practically, all recent electronic commerce reports in the Republic of Moldova – the Rapid Study on the Development of Electronic Commerce in the Republic of Moldova (USAID, 2020) and the Evaluation Report on Electronic Commerce and the Cash Economy in the Republic of Moldova (USAID, 2021) – highlight the broad consensus of actors involved in boosting online commerce.

There are a number of digitalization initiatives in various areas related to online commerce.

For example, Posta Moldovei is in the process of developing the concept of an online postal shop, posta.e-shop, to offer local producers the opportunity to place products for sale on the page managed by Posta Moldovei. It also is developing the concept of posta.e-school that will offer courses, including online, on the structure and functionality of online commerce, both for start-ups and more advanced companies (USAID, 2021).

Usually, the owner of the marketplace platform offers only the mechanism of integration between the buyer and the seller, while the realization (delivery) of orders is already up to each seller who is registered and has an account on that platform.

The food delivery company iFood plans to expand its courier network and has expressed interest in developing storage capacity for agricultural products. The Performance Agriculture in Moldova (APM) project has shown its willingness to support iFood through the development of a specialized fresh fruit module. Entrepreneur Vlad Vedrasco, the representative of the Ved-Mar Agro cooperative, which has international online sales, is looking into the possibility of developing an online platform cumulating commercial offers for export.

2. Skills and technical capabilities for platform development

 The technical skills and knowledge to develop an e-commerce platform are not a constraint.

The Republic of Moldova holds technical knowledge, capabilities and full potential for developing online commerce platforms according to the needs of the target group designated by FAO. This is proved by the presence of platforms designed and managed by users such as 999.md, totul.online, madein.md, a1.md and many other platforms created by local IT specialists. The above-mentioned platforms have complex functionalities and are sufficiently user friendly. Most of them have been continuously improved and adjusted to the new requirements. There is wide openness of information technology companies to contribute to the development of technical capabilities and skills related to online commerce of all categories of users of the potential platform. For example, the members of the National Association of ICT Companies (ATIC) highlighted this openness in the recommendations presented in a post-COVID context (ATIC, 2020). At the same time, the pandemic has served as a catalyst for the development and use of online solutions, creating an opportune moment for boosting online commerce for small producers as well, yet requiring a more systemic approach. In the midst of the pandemic, Simpals has developed a new product that offers the possibility of creating a turnkey online SAAS (software as a service)² store. However, the development of an online store is a significant decision-making, human and financial effort, and for most small producers, it is virtually impossible, given the multitude of elements related to creation and maintenance (operating systems, permanent content creation, module integration, payment system integration, hosting, customer service, etc.).

3. Enabling environment

In July 2020, the Ministry of Economy launched a roadmap for boosting the process of digitalization of the economy and, after many studies and reviews, a number of legislative initiatives were proposed to amend regulations related to the digitalization of the economy and, implicitly, to online commerce. After the 2021 parliamentary elections, the digital transformation of the Republic of Moldova became one of the leading priorities, and the long-term strategies and work plans of the government clearly specify a much more systemic involvement of the ICT sector in the country's digital transformation process.

This product is available at https://price.md/ru/

4. Marketing and promotion

In the context of the current pandemic, small producers don't have the possibility to export.

In practice, neither the business-to-business (B2B) business model, nor the direct-to-consumer (D2C) export model is efficient, and in some cases, neither is feasible for small food producers in the Republic of Moldova. This is due to a number of reasons:

- Due to logistical and export management costs and related fees, deliveries for export traders make economic sense when larger lots (usually quantities of about 10–20 tons, capacities and volumes of production that small producers do not have) are traded.
- As a rule, traders prefer to cooperate only with partners who can ensure the continuity of deliveries, and the products delivered should have maximum homogeneity (calibre, appearance, packaging, marking, organoleptic qualities, physical-chemical properties, types of residues allowed, etc.). Sporadic transactions outside of established relations take place only in exceptional cases, such as when there is a deficit of a certain product or when the basic partner is facing a force majeure situation.
- Direct sales to consumers (D2C) do not seem realistic due to the lack of logistics infrastructure, high transaction and delivery costs, and the need to make continuous efforts to promote that platform in target foreign markets, as well as a business culture that shows a lack of experience collaborating with foreign partners and, hence, a lack of trust among potential buyers towards Moldovan producers.
- Over the past ten to 15 years, there have been major behavioural changes among consumers that have been influencing trade in agrifood products.

While a few decades ago it was customary for households, including urban ones, to store considerable reserves of supplies for several month periods, the observations of Moldova Fruct members and Centre for the Promotion of Imports (CBI) experts from the Netherlands show that, currently, most prefer to consume fresh products at all times, making purchases for a maximum of one to two weeks, in much smaller quantities. This practice also affects online commerce. The volume of the order placed for a certain product will not be very large, so it is important to keep the cost of delivery within reasonable limits relative to the cost of the product. Otherwise, consumers will continue to purchase products from traditional sources (markets, shops, directly from the producer, etc.) if similar products are available in their close neighbourhood.

At present, very few agricultural products are sold online, while perishable ones are missing altogether.

The quantities of agrifood products sold online remain insignificant, even if there is a consensus that they have all the prospects for growth. Of the few agrifood companies selling online, Rifero – one of the most-known brands in the Republic of Moldova – mentioned that online sales could reach about 10 percent of the total in certain periods and fall within 1 percent to 5 percent in the rest of cases.

The large majority of the interviewed stakeholders considered that a gradual development of online commerce for the target group, starting from the domestic market, is the most realistic strategy and involves minimal risk.

In view of the above findings, the study considers that it is not reasonable to start a large-scale, complex and costly project, which would imply export sales from the outset, as long as the possibilities offered by the domestic market are not fully exploited. Small producers should first learn to deal with orders qualitatively and without complaint in the domestic market. There is a need to develop an appropriate business culture, to create a critical mass of producers and buyers who will use the systemic platform. In achieving this goal, users will overcome mistrust related to online sales and serve as examples for other users. Negative experiences in the use of e-commerce platforms can compromise any marketing effort, especially in foreign markets in which the Republic of Moldova hasn't yet built a positive image.

5. User experience and preferences

• Local e-commerce stores and platforms (such as marketplace-type platforms) are very little known.

Several online platforms for commercialization exist, but they are not particularly popular. Most of them are anonymous, both for buyers and for most small food producers. An exception to this finding is only 999.md, which – though not yet offering the online sales solution – is known to most of the country's active population, and some small producers use it to promote their own offers. If a platform is not known to the target audience, it is as non-existent.

On the other hand, the existence of a multitude of platforms has a number of negative effects, including confusion for the general public (due to a lack of clear segmentation, especially for potential buyers); the dispersion of financial resources to promote each platform separately; and the multiple efforts required by small producers when orders are placed by customers on various platforms.

The continuity of the product offer on the existing platforms is a problem.

A review of the functionality of existing marketplace platforms in the Republic of Moldova found that, although certain products are listed as available, when a potential buyer wants to place an order, messages such as "Product is not in stock" or "Product is missing" appear. This could indicate that the supplier has lost interest in using the platform, and these messages cause disappointment in potential buyers and contribute to their unwillingness to return to that platform.

Selling through marketplace platforms is more efficient than selling from one's own online stores.

Marketplace platforms offer a greater cumulative effect than when the same number of producers "open" their own online stores separately. First, marketplace platforms attract buyers through the variety of products on display and the possibility of filling a basket with products delivered by different suppliers. At the same time, for suppliers, as a rule, it is less expensive to promote a product in a contextual way within a certain platform than to promote an online store. Cumulative efforts to promote many online stores and to have potential buyers remember all of them would increase exponentially compared to the option of promoting a single platform.

Most online buyers are located in Chisinau.

By virtue of this situation, producers from near Chisinau have the advantage, if necessary, of shipping their own orders within the delivery area of the municipality, and under reasonable costs.

On the other hand, this shows that members of the Chisinau population are much more accustomed to online orders, have better skills in this regard, and are less reluctant to use online stores than are residents of other regions of the country. Another factor is that the level of financial and digital inclusion in rural areas is much lower than in the large cities.

More notably, apart from Posta Moldovei, it is rare that other companies are willing to make deliveries outside of the Chisinau radius.

• Online shopping takes place only when there are certain reasons for it.

The majority of the Moldovan population is not used to shopping online. Summarizing the insights from the interviews performed with the owners of online shops and with IT specialists, buyers visit online commerce platforms only for specific reasons:

- The product purchased is of an exclusive nature (for example, it is fresher than similar ones on store shelves, has certain taste qualities, differs in packaging, comes from a well-known or reputable producer, can be offered as a gift, etc.).
- The product is accessible only online.
- It is cheaper than with traditional (offline) means of sale.
- It is essential that the product be delivered to the buyer's home, and this is only possible through online platforms.

It is obvious that the buyer's motivation must be created and maintained, and this requires marketing knowledge and effort.

6. Logistics infrastructure

• The constraints related to the engagement of smallholder farmers in online commerce are not related to the lack of an online trade platform.

In the Republic of Moldova, there are several e-commerce platforms that, to a greater or lesser extent, are already used by some producers. Theoretically, small Moldovan agricultural producers, even in the current conditions, have sufficient opportunities to place product offers through existing online platforms. The key issues come up after the buyer places the order online.

The current logistics infrastructure allows only deliveries of non-perishable products that do not require special transport and storage conditions.

At present, there are sufficient possibilities for a non-perishable but high-value industrial or agricultural product to reach its destination via the courier service. For small parcels (1–2 kg), delivery to any destination in the country via Posta Moldovei will take one to two days and at the cost of MDL 50. The costs of shipping small packages charged by other service providers on the market are higher – Nova Posta charges MDL 35 for Chisinau and MDL 60 for regions, and Muvi Express charges MDL 35 and MDL 70 (USAID, 2020). Though, according to the observations of several interviewees, the current technical capabilities of these companies do not allow them to operate efficiently outside Chisinau.

There is a problem even in this case, especially when the products have low value and high weight or volume (e.g. one bag of potatoes or a few small packets of dried fruit). In such situations, the cost of delivery relative to the cost of the products does not make economic sense for the transaction, at least for one of the parties. Currently, online platforms selling food products are either platforms operating fast transactions between restaurants/cafés and direct buyers (Glovo, 3 iFood, 4 Straus 5) or online extensions of store chains (Metro, Linella, Fidesco, etc.). For the most part, purchases and sales take place in the city of Chisinau and, marginally, in the city of Balti, which practically excludes small producers from these online commerce systems.

The lack of logistics infrastructure for perishable products is a major constraint for online commerce with this category of products.

Apart from honey, canned goods and groceries, most food products require transport and storage in accordance with the cold chain as well as physical separation according to their nature.

There are 57 companies⁶ licensed to provide postal or courier services in the Republic of Moldova, including Posta Moldovei – the largest operator on the market (with a fleet of almost 150 transport units of different capacities). However, none of the courier service providers (such as Nova Poshta, Glovo, iFood or Straus) have the means to transport perishable food products while ensuring that their quality and food safety are maintained, especially over long distances. No operator has approved storage facilities for perishable agricultural products that require a thermal storage regime. Smart logistics and fulfilment companies currently have a limited presence. There are a number of initiatives in this regard (for example, foreign companies seeking to enter the Moldovan market), but their applicability and functionality are still hypothetical.

Existing solutions, such as direct delivery from seller to buyer (see Figure 2), do not always guarantee the necessary food safety, often being inefficient. As a result, the delivery

The website is available at https://glovoapp.com/md/ro/chisinau/

The website is available at https://ifood.md/

The website is available at https://www.straus.md/en/

The list of companies is available at https://anrceti.md/furnizori_comunicatii_postale

For more information, see https://www.frisbo.md

costs per product make these products, along with delivery, much more expensive than if they were purchased from commercial networks.

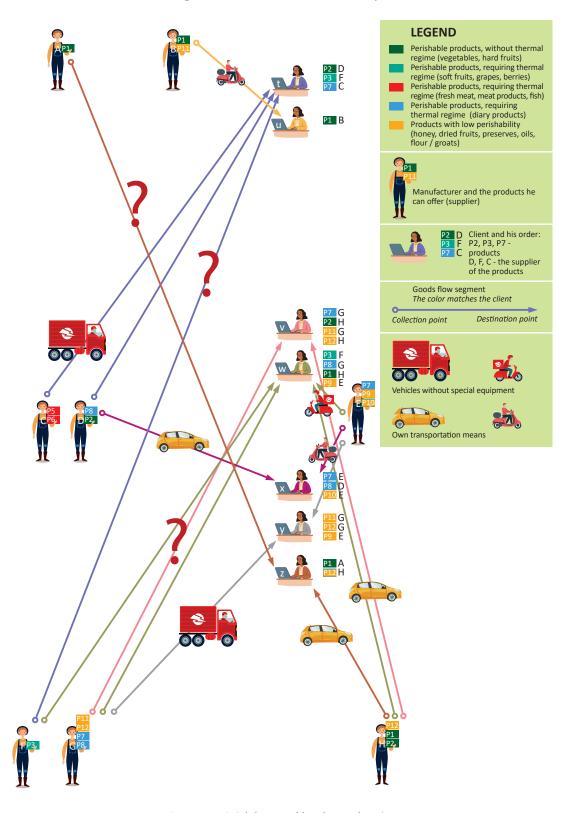


Figure 2: Outline of deliveries today

Source: FAO (elaborated by the authors).

The market study conducted by USAID, assessing the overall activity of Posta Moldovei and analyzing the gaps to be addressed, includes an overview of current activities and available infrastructure. It is expected to be completed shortly and to present quantitative and qualitative estimates of the demand for the courier services market (Posta Moldovei, 2021a). Recently (23 August 2021), Posta Moldovei signed a cooperation agreement with the European Investment Bank on technical assistance in the implementation and co-financing of the company's infrastructure modernization and digitalization projects (Posta Moldovei, 2021b).

7. Financial infrastructure

Existing payment systems are not a major constraint on the development of online commerce; however, there is room for improvement.

For example, such improvements can include the lowering of bank fees, the provision of more advantageous conditions for guaranteeing payments, simplified integration procedures, registration and more, including in an electronic format. The online payment systems available in the Republic of Moldova provide the necessary premises for the development of online stores or sales platforms. However, small producers are at a disadvantage, because the lower the turnovers, the higher the commissions (2.5–5 percent), even if there are always possibilities for them to be negotiated. National Bank of Moldova data show that the number of electronic financial transactions is constantly growing, while the use of cash payments remains dominant. Compared to the European average, in the Republic of Moldova the number of online transactions per capita is about 8 times lower (USAID, 2021), the number of bank cards is over 2 times lower, and the number of POS terminals is 3.7 times lower. Four Moldovan commercial banks (FinComBank, Victoriabank, Moldova Agroindbank and Moldindconbank) and a number of non-banking financial institutions (QIWI, Paynet, Paymaster, etc.) accept online payments. Another systemic problem is the lack of the status of authorized economic operators, held by most postal operators (including couriers). Posta Moldovei has been recently granted this status, which generates several direct benefits for online commerce processes (Posta Moldovei, 2021c).

The current good faith guarantee mechanism on the part of the provider creates difficulties in monitoring and managing payments.

For lesser-known providers, electronic payment system operators apply good faith assurance mechanisms, which consist in blocking 10–15 percent of the amount for 30 to 180 days from each transaction performed. This condition is also imposed by the rules for the use of Mastercard and Visa cards. Withholding these amounts creates significant accounting problems for sales proceeds. In addition to this guarantee, banks may require a fixed financial deposit, which may range from EUR 0 to EUR 300 000, which is a major problem for small and medium-sized producers. There are some non-bank financial operators who do not charge such fees in customer relations (for example, Paynet),8 but instead the charged fees are higher, which represents another impediment. In this context, the authors of the USAID MSRP report (USAID, 2021) recommend that the

The Paynet website is available at https://paynet.md/merchant/home/index

financial guarantee be limited to a maximum of 3 percent of the transaction amount for a maximum period of 60 days.

The field of financial services is one that tends to adjust quickly, even coming up with proactive solutions.

Most banking institutions already have or are implementing various support solutions for online commerce. The fact that Moldova Agroindbank launched the totul.online platform proves the bank's confidence that there are prospects in this field.

The existence of cash payment terminals and virtual wallet systems offers even more payment options and possibilities for the prepayment of purchases for potential buyers who do not have a bank card. At the same time, despite the growing number of virtual wallet systems (QIWI, 9 for example, has a network of more than 30 000 users), there still is reluctance to use them among both buyers and sellers. The USAID report (USAID, 2020) specifies several possible solutions for reducing the costs of online transactions: developing a national payment system to avoid the fees charged by large operators (Visa and Mastercard), potentially avoiding the mandatory connection of non-bank financial service providers through commercial banks (which would reduce the final charged costs), and negotiating lower fees at all stages of the transaction. Another possibility for reducing operating prices would be to use the Mpay¹⁰ national electronic payment processing platform, which is currently dedicated to state institutions only.

8. Legal framework

The legal framework lags behind the global trends in economic development.

The legal framework related to online commerce is regulated by a series of normative acts, including Law No. 284 of 2004 on Electronic Commerce, 11 but given the dynamics of the e-commerce sector, changes are needed. Law No. 91 of 2014 on Electronic Signature¹² specifies the online interaction using the digital signature but, for the time being, the penetration and use rates remain very limited, especially in rural areas. Law No. 105 of 2003 on Consumer Protection¹³ also requires connections that meet the requirements of electronic commerce.

Obtaining various certificates and authorizations requires complex and time-consuming procedures as well as the physical presence of applicants, even at the stages when this is not indispensable (e.g. filing an application or obtaining the final document).

Implementing e-governance solutions and minimizing the use of paper documents and physical presence to obtain various approvals, etc., would help create an environment conducive to the digitalization and efficiency of the economy, including the development of e-commerce.

The QIWI website is available at https://www.giwi.md/harta-terminalelor/

The Mpay website is available at https://mpay.gov.md

This law is available at https://www.legis.md/cautare/getResults?doc_id=107529&lang=ro

This law is available at http://asp.gov.md/ro/node/1306

This law is available at http://lex.justice.md/document_rom.php?id=546986A0%3A88685EC5

Often, the imposed legal framework is interpreted contradictorily by different institutions, which causes dysfunctions in the development of online commerce. For example, the law on private data protection does not accept forms of consent in the form of a click or checkbox, even if the General Data Protection Regulation (GDPR) allows it. Remote identification is another uncertain dimension. Even if the National Bank of Moldova is permissive with commercial banks in this regard, it prefers to identify its customers in person (USAID, 2020).

The identification of participants in e-commerce platforms, 14 stipulated by Law No. 308 of 2017¹⁵ on Prevention and Combating of Money Laundering and Terrorist Financing, which implies restrictive bureaucratic and cumbersome procedures, is a significant barrier for small producers working mostly in rural areas.

The current fiscal and economic activity regime is rigid, inefficient and inconsistent with the new economic circumstances.

The tendency to maintain full control over anyone and any activity often has the opposite effect. For example, if an individual wanted to provide courier services occasionally, in the current context, he would rather do it "illegally", being paid for his services in cash by the final buyer. To comply with current legislation, the individual must be officially employed by a company. Even for this procedure, the physical presence of both parties is needed, which is absolutely inconvenient, especially if the potential courier and the employing company are located in different cities.

A systemic problem is the need to confirm the online transaction through the invoice and the fiscal receipt, in paper format (according to Order 146/2014 of the Ministry of Finance), 16 elements that represent a major impediment in the development of electronic commerce. In this respect, the introduction of electronic tax documents is an absolute necessity, as mentioned in all recent thematic reports.

In addition to the above-mentioned elements, there are ambiguities regarding the issuer of the invoice or tax receipt that should accompany the goods upon delivery. Normally, with the transaction being formally concluded online, directly between the supplier and the buyer, the delivery company does not have ownership over the transported goods. In practice, however, the company may face challenges, as it doesn't appear as a supplier or as a buyer In the invoice accompanying the transported goods. In addition, there could be multiple orders in the transport units, involving dozens of suppliers and buyers. In the above context, the lack of a simple system for the issue and flow of accompanying electronic documents makes it virtually impossible to implement an efficient delivery system.

Many smallholder farmers avoid the legal registration of all processes related to their activity, for various reasons. Unregistered producers have an unequal competitive advantage compared to registered ones, from several perspectives (USAID, 2020), including by

More information on this "know your customer" or "know your client" concept can be found at https:// www.investopedia.com/terms/k/knowyourclient.asp

This law is available at https://www.legis.md/cautare/getResults?doc_id=110418&lang=ro

This law is available at http://lex.justice.md/md/358172/

paying VAT and other taxes, with the possibility to market the products at much lower costs, which obviously disadvantages officially registered producers. The formalization of the legal entity also entails adding related taxes to the cost of the product, which directly influences the marketing capacity of the products. According to a report from the International Labour Organization, about 35 percent of the employed population in the Republic of Moldova works informally, and these figures are even higher in the agricultural field (ILO, 2016). The shadow economy amounts to about 33 percent in the Republic of Moldova, according to the Shadow Economy Report (Putnins, Sauka and Davidescu, 2018), and some data show an even more pessimistic situation.

At the same time, in order to build and develop a viable and functional e-commerce platform from all points of view, the legality of all processes is mandatory. Fortunately, the Moldovan legal framework offers a wide range of ways to legally register commercial activity (Solcan, 2010). Based on the conducted interviews, it is considered that the avoidance of legalizing the processes shows, first and foremost, a lack of knowledge of related processes or an excessive bureaucratization thereof by responsible institutions. A solution to such problems can be a more systemic cooperation among state institutions, the development sector (especially through subsequent projects to support the development of online commerce), the private sector involved in the development of IT solutions, producers, and buyers.

9. Education and knowledge

Most small agricultural producers do not have the necessary skills to engage in online commerce.

The capacity to use electronic devices among small agricultural producers is low, in most cases – limited to making calls or posting short messages via social networks. Often, online interaction takes place in a less professional manner, with the help of relatives, friends or neighbours. Basic cyber security requirements are not applied and are superficial.

Very few online marketers use systemic branding that is easy to recognize and promote. Analytical and statistical data on online sales are not systemic and, as a result, cannot be used for effective planning.

The quality of advertisements placed on several platforms (999.md, Facebook, Viber/ WhatsApp groups, etc.) shows that most agricultural producers do not always have the capabilities necessary to formulate messages that are attractive from a marketing point of view, or that at least are coherent and grammatically correct. At the same time, the managers of the agravista.md and agroconect.md platforms mentioned that all the messages uploaded by producers were submitted to moderation and editing by the administrators of the platforms, in order to ensure they meet the publication requirements.

Increased attention should be paid to the development and uploading of video or photo materials. Often, they are made without special equipment (with smartphones, for example, the images being of poor quality) and without prior preparation of the product or of the spaces in which the images are captured. Sometimes, the advertised images are taken unauthorized from the internet and, in addition to the legal aspects, there is the issue of mismatch between the real product and the pictures posted on the platforms.

5. APPROACH AND **DEVELOPMENT POTENTIAL**

onsidering the findings listed in the previous chapter, the study underlines several conclusions and general recommendations related to the development potential of the future e-commerce platform:

• The sustainable development of an online commerce platform can take place only if the real constraints are initially removed.

The electronic (programming) part of the platform must integrate the basic elements strictly necessary for its viability. It is not reasonable to develop a platform that would comply with the existing elements in the hope that vital elements will appear in that ecosystem sometime in the future. This is demonstrated by the experience of multiple similar projects, which, despite technological efforts, have failed to be used en masse.

Economic interest is key to the success and sustainability of any system.

It is clear that all components of the online commerce ecosystem will become functional and the sustainability of the project ensured only if all stakeholders are able to monetize participation in this project.

 To be efficient (competitive) and sustainable, the ecosystem must be as open as possible and must constantly be evolving.

The ecosystem that is created must allow the free entry and exit of any operator who can bring benefit to its segment of competence. This approach would allow the formation of a competitive environment, contribute to increased efficiency, and eliminate the risk of bottlenecks, meaning that the whole system would not be affected if an operator faces challenges.

The system must be maximally adjustable, allowing gradual development with maximum capacity to integrate various related services, including by the free entry of new users/operators.

Even if the proposed platform is based on the D2C model, with the priority of creating direct links between small agricultural producers and consumers, it does not exclude its use by commercial units, the HORECA¹⁷ sector, distributors or exporters according to the B2B model.

The decision on the electronic platform ownership is a critical one.

Of all the elements of the e-commerce ecosystem (as opposed to the logistical, financial, technological aspects, etc.), the only one that does not allow free exit is the electronic platform. Hence, the identification of the entity to be in charge of the development, management and continuous improvement of the e-commerce platform is crucial.

There are many online platforms that could serve as a starting point to meet the needs of small farmers to sell their goods online. In this context, even if the development of a new platform (from scratch) is not excluded, the option "from the beginning" has the disadvantage of not being known to the public. In this case, huge financial resources will be needed to promote the platform and, most likely, it will take a long time for it to attract its audience. The design, custom development, testing and optimization of a brand new platform would imply significant additional time and monetary resources.

In this context, it is necessary to solve a major problem: producers (potential suppliers) do not see the motivation to place an offer on a website that is not visited and that they do not believe will help them generate sales. In addition, potential buyers usually tend to avoid repeated visits to a platform if it has not captured the necessary attention or provided a solution to their needs.

For the selection of the administrator of the electronic platform, the consideration of the following criteria is recommended:

- The profile of the current audience visiting the platform, or (especially if it starts from scratch) the capacity of the potential administrator to create, in a timely manner, a critical mass of users on the platform.
- The motivation and commitment of the platform owner/administrator. It is desirable that the administrator believes in the success of the platform and is directly interested in the development of the platform, considering it as something important – a pillar upon which the viability of his own business depends.
- The interest of the platform owner in its creation, management and development. The platform owner must be fully open to partnerships, including interconnection with new operators.
- Capacities to manage and maintain the platform from various perspectives. For the proper functioning of the platform, it is necessary that the platform administrator has dedicated staff with the technical skills necessary to continuously monitor its activity and intervene promptly when necessary.
- The ability to develop the platform. The administrator of the platform must have financial capacities, interest and/or staff with technical skills that will support the

The term "HORECA" refers to hotels, restaurants and catering.

development of the platform and assist in continuously adjusting its functionality to the ever-changing requirements in the field, dictated by real-time needs.

Platforms that are not sufficiently user friendly have a minimum chance of being adopted and used by target beneficiaries.

If users face challenges with accessing an online platform or don't have a pleasant user experience, it is very unlikely that the platform will become successful. Usually, after a few failed attempts, users give up interest in repeatedly accessing that platform. It is essential for the future platform to be intuitive and as simple as possible to use, complying with user expectations and providing them with a seamless and memorable experience. Platform developers should conduct proper user research to make sure that both the visual interfaces and the technical functions of the platform reflect the vision of the users and are tailored to their needs, preferences and digital literacy levels.

In the future, the platform can serve as a source of statistics for the public sector.

Following the use of the platform, it has the potential to accumulate relevant data that can be used later by public institutions for data analysis, development of public policies, and identification of educational needs.

• All interested stakeholders are available and open for cooperation, involvement and support.

The development of an online commerce platform in the interest of smallholder farmers has the potential to serve as a multiplier, influencing the development of other actors in the ecosystem created around this platform. Accordingly, in the interviews, most of the respondents expressed their interest and willingness to cooperate, including on the following dimensions:

- Posta Moldovei: involvement as a courier service provider and temporary storage operator.
- iFood: courier service provider, possibly as owner and manager of the online interaction platform.
- Simpals: development, management, monitoring of activities and upgrading of the electronic platform, including online payment processing as an authorized service provider.
- QIWI: availability and integration of its own platform as a payment solution for online purchases, including cash advances.
- ANSA: support and guidance to ensure compliance with legal rules on agrifood safety, and issuing permits for storage facilities and transport units.
- BRD: through its representatives in the town halls, informing potential users about the opportunities offered by the e-commerce platform, as well as direct assistance or advice to small producers regarding the formulation of online offers.

- The producer groups could play an important role in the promoting of the platform.
 - In the Republic of Moldova, there are several groups of producers with various forms of organization, some of them being formalized and legally recognized under Law No. 312/2013 on Agricultural Producer Groups and Their Associations, 18 as well as informal groups based on common interests or ways of association, such as producer communities, local action groups, and participants in various cooperation projects, including international. The involvement and contribution of such groups can take place in the following dimensions:
 - Often, producer group members have more advanced organizational skills, meaning higher potential to use the platform. Such producers can serve as "pioneers" in the use of the platform, serving as an example for other producers and thus creating the critical mass needed to ensure an attractive assortment for potential buyers and creating the first positive user experiences. Producer groups also can provide commercial linkage as a service to their members, playing a role as aggregators and also as e-commerce "agents" for less-tech-savvy members.
 - Producer groups can serve as platform promoters, with wider communication possibilities compared to individual producers. At the same time, the credibility of a group member to other members of that group is higher than that of an external entity.
 - For a group, the capacity to achieve a synergistic effect in promotion efforts is higher due to mutual promotion in various events (fairs, exhibitions, conferences, appearances in the media, etc.).
 - Due to the association, members of a producer group will have greater bargaining power in relations with related service providers (logistics, transport, financial, marketing, inputs, including packaging, etc.).
 - Producer groups have a greater potential to attract development funds from national and international institutions to achieve common goals.
 - Around 50 producer groups were set up within the Moldovan Agricultural Competitiveness Project, 19 which received support for the creation of post-harvest infrastructure; this can be made available to other small producers in the respective regions.
 - The exchange of experience on the use of the platform will be much easier within producer groups than if they were isolated.
 - Specialized trainings, including in areas related to the use of the platform by producer groups, have the potential to be more systemic and result-oriented.
- Returned migrants could be important actors in the development and promotion of a specialized e-commerce platform.

This law is available at https://www.legis.md/cautare/getResults?doc_id=6704&lang=ro

The Moldovan Agricultural Competitiveness Project, or MAC-P, is implemented by the Consolidated Agricultural Projects Management Unit. For more information, see https://www.capmu.md/

This study analyzed returned migrants from the perspective of their possible role as agents of change, pioneers in developing and promoting e-commerce, or leaders of opinion in this sector. Interviews were conducted with returned migrants and representatives of the projects or entities working with this category of citizens. The main findings and conclusions are:

- There is no clear indication that returned migrants could play a decisive role in developing e-commerce platforms, most of them practicing the same traditional selling methods as the majority of the farmers.
- On the other hand, returned migrants who have invested in agribusinesses in the Republic of Moldova have a better understanding of the benefits of e-commerce platforms, online payments and the need for more marketing efforts, and they seem to be more open to experimenting with new e-commerce models.
- Returned migrants, knowing the good examples from various countries where they have lived before, can be more open to planning and developing their businesses in a more transparent way, making effort to exclude corrupt or hidden business practices, avoiding cash transactions, and, subsequently, promoting more online financial operations. All these elements are crucial in the overall development and use of e-commerce platforms.
- Returned migrants can be more open and ready to accept new challenges, learn, accept potential risks and take on their part of the responsibilities connected with the implementation of a potential e-commerce platform.
- When designing and developing the platform, it is important to involve returned migrants among the first beneficiaries, from the above-mentioned perspectives. At a later phase, migrants' potential networks of customers abroad, including the large Moldovan diaspora communities, could be valuable when internationalizing the platform.
- Of key importance is the development of the feeling of inclusion and participation of all potential partners, with coordinated efforts among returned migrants and all prospective partners. From this perspective, the Republic of Moldova's Comprehensive National Diaspora Strategy 2025 (CNDS 2025)²⁰ has among its priorities the mobilization and recognition of the diaspora's human potential, engaging the diaspora directly and indirectly in the sustainable economic development of the Republic of Moldova.

For more information, see https://brd.gov.md/sites/default/files/sn_diaspora_2025_web.pdf

6. PREREQUISITES FOR THE **IMPLEMENTATION AND INGREDIENTS NEEDED TO ENSURE SUSTAINABILITY**

or the successful implementation of an e-commerce platform that meets the requirements for a minimum viable product (MVP), the following premises must be created which, as a whole, underline the strictly necessary elements of the e-commerce ecosystem:

1. Market availability/creation

For the e-commerce platform to make sense, there must be a critical mass of potential users. From the outset, efforts will be needed for a number of potential suppliers with business potential/experience and culture to register their offers on the e-commerce platform, to ensure a minimum range of products that could interest potential online buyers and motivate them to access the platform, buy online and return to the platform for new orders.

This stage is critical for a successful launch, even if there is often a tendency to ignore it or underestimate the required effort. The major difficulty lies in the fact that, from the outset, the main stakeholders (platform owner, suppliers) have to make continuous and combined effort without seeing significant results in the initial period. It is worth noting that this stage could be easier to accomplish if an existing platform serves as a basis, as some necessary elements will already be functional.

2. The first producers (pioneers) to use the platform will need to have an adequate level of knowledge and accountability

The platform will work – and will trigger the snowball effect – if the first producers who start using it have the ability to create attractive content for their offers (text, pictures, etc.), are able to communicate effectively with buyers, and will deliver the products according to – or even exceeding – their expectations.

3. Information about the platform

The general public needs to be informed about the existence of the e-commerce platform and the benefits it offers. In this respect, existing platforms have an advantage, the importance of which depends on the extent to which the platforms are currently known and already have a certain number of users.

4. The potential to bring benefits/the existence of a unique selling proposition²¹

When it is easy to purchase food products from shops located near the buyer, it is unlikely that the buyer will go online to look for the desired products. The platform must have certain attractive items to motivate potential buyers to access it. At the same time, products that have the potential to interest the consumer must be available (not just displayed on the site). Otherwise, any advertising of that platform targeting the buyer is counterproductive and will have the opposite impact. The platform also must bring tangible benefits to the producers who advertise their products.

5. Existence of a well-developed logistics infrastructure

The ordered products must reach the buyer in conditions that ensure food quality and safety, within a reasonable timeframe (one to three days) for fulfilling the order, and at acceptable costs.

For this, transport units should be included in the delivery system that can ensure the necessary thermal regime for perishable products, while following physical separation by product category.

It also is necessary to create a network of properly arranged warehouses in which the products can be stored temporarily to enable guick delivery at optimal costs. The concept of the basic logistics infrastructure required for the online marketing of agricultural products is set out in Figure 3. This concept is based on a review of the functional elements of several internationally known online selling platforms (eMag.ro, Amazon.com, Omniva.ee, AliExpress. com) and the opinions of the logistics specialists interviewed. For example, in the regions where it operates, Amazon.com has a very well-developed logistics system and can ensure deliveries within a maximum of 24 hours (for customers subscribing to the Prime package), which is critical for perishable products. The Estonian Coop store network makes it possible to sell perishable products by using automated postal machines equipped with cold rooms making possible the delivery of meat, dairy products, fresh fish, fruit, etc.

6. Elimination of legal barriers and creation of conditions for the issuance and simple circulation of tax and accompanying documents in electronic format

To be able to implement an efficient logistics system that ensures fast and low-cost delivery, it is important to waive the obligation of tax and accompanying documents on paper. It is necessary to create a legal framework that offers the possibility of electronic registration. Digital commerce, which involves payment by electronic means, offers much more efficient and secure ways to prevent tax evasion or other illicit activities compared to verifying paper invoices.

A unique selling proposition, or USP, is the characteristic or perceived advantage of a good or service that makes it unique or special compared to the rest of the brands competing on the market. It is the main cause that motivates the buyer to purchase that particular product or to seek that particular service.

7. Transparency of the rules of the game

All well-known platforms at the international level adhere to the win-win principle, in which each party involved in the process achieves its goal. In addition to the rules for the use of clearly established platforms for all categories of users, it is crucial to have a well-established mechanism for monitoring order fulfilment, ensuring the good faith of stakeholders and resolving disputes and complaints.

8. Existence of payment instruments

Payment methods must be as convenient and accessible as possible for all categories of users. The platform also must have a mechanism for tracking payments and allocating the money received in accordance with the extent to which each party is involved in fulfilling the orders processed in accordance with the rules/tariffs established, in a clear and transparent manner.

9. Existence of financial motivation for stakeholders

Each party involved (electronic platform administrator, product supplier, financial services operator, courier, storage unit, etc.) must have financial motivation to participate in fulfilling the orders placed by customers.

10. Existence of a team interested in platform development and administration

Unlike other elements of the ecosystem, which require inclusive participation (any operator or user can enter or exit freely), the platform administrator has limited possibilities in this regard. Thus, when selecting the administrator, it is recommended to take the following essential elements into consideration:

- 1) It is recommended that the e-commerce platform is a priority product for its administrator, not a secondary one that can be given up relatively easily.
- 2) The administrator of the platform must have (permanently) the human and technical resources and know-how necessary for the proper functioning and continuous development of the platform.
- 3) The financial sustainability of the platform must be guaranteed, ensuring the sources of financing in a sustainable way and having the capacity to monetize the activity of the platform.
- 4) To ensure that the platform meets the real needs of its users and is easy to use, it must reflect the vision of the administrator and the needs of its beneficiaries, where the vision of the technical implementer (company/IT staff or software implementer) is secondary.
- 5) It is necessary to ensure the capacity of potential developers to build the platform in an inclusive manner, minimizing the risk of conflict of interest.

With regard to how the platform is managed, several options can be considered, including (but not limited to) the following:

a. The platform administrator is the private company that already manages a functional platform

This option will be valid if implementation scenario 2 is selected (development of an existing platform).²² In this case, the platform administrator will connect its functionalities gradually, as the proposed interventions are implemented. Most likely, this could be an IT company that owns a marketplace platform or a courier company that owns an online store or a marketplace. Extension of the functionalities of the platform and adjustments in the schedule of the implementation team will require additional human and financial efforts from the company. Such efforts can be covered by primary support, for the primary implementation period (one to three years), by development partners. This scenario involves limited risks, given that the extension of adjacent functionalities will be seen by the company as a way to develop its existing functionalities. Accordingly, the probability of accepting the risks but also monetizing the subsequent activity of the platform will be higher.

b. The platform administrator is an IT company that develops a new platform

This option will be valid if implementation scenario 1 is selected (development of a fundamentally new platform).²³ The advantage of this solution is that the platform can be developed in the most possible customized way, as a result of the implementation of the proposed interventions. At the same time, this scenario involves a number of risks: an absolutely new platform will not be sought and used by potential suppliers and customers as long as the necessary resources are not allocated continuously to ensure its popularity. This, together with its development from scratch, will require larger and longer-term primary financial and human investments. Evaluation of the credibility of the selected company and of the company's interest in developing the platform and maintaining and monetizing its services will be other challenges. There is a risk that, after the initial support from the development partners (one to three years), the company will lose interest in further development, which may compromise the entire effort.

c. The administrator will be the expression of a broad partnership (private, public-private, mixed)

This model would require that the platform be developed by a technical implementation team (managers and IT technical team) formed by an association, cooperative or other form of organization of a community of producers. This does not exclude a wider partnership (several associations or cooperatives, local action groups, state institutions, development partners, etc.). The advantages of this solution would be that the implementation team would represent the direct expression of the producers who, by association and co-decision, could directly specify the actions for the technical team to undertake. Another advantage would be that members of the community could agree to share the costs and risks of developing the platform but also develop a sense of ownership over it. At the same time, this solution would also entail the obvious risks that may arise following possible dissension among the members of the group. The development of the platform, in this case, would be a more difficult and longer process, requiring the adoption of a broad consensus among

For a full explanation of the implementation scenarios, please see Chapter 7.

For a full explanation of the implementation scenarios, please see Chapter 7.

the members of the respective communities, especially on the dimension of the division of responsibilities, but also of the possible benefits.

LEGEND Perishable products, without thermal regime (vegetables, hard fruits) Perishable products, requiring thermal regime (soft fruits, grapes, berries)
Perishable products, requiring thermal regime (fresh meat, meat products, fish) Perishable products, requiring thermal regime (diary products) Products with low perishability (honey, dried fruits, preserves, oils, flour / groats) **Logistics Center 1** Manufacturer and the products he can offer (supplier) Client and his order: P2, P3, P7 products
D, F, C - the supplier
of the products Goods flow segment The color matches the client Collection point Destination point Logistics Center 2 Specialized vehicles with thermal conditions with / without category separation **(#) (B)** Ocasional transportation (ordered according to the Uber principle) with / without thermal conditions and category separation **Logistics Center** Logistics Center 4

Figure 3: Conceptual outline of the logistics system

Source: FAO (elaborated by the authors).

7. IMPLEMENTATION **SCENARIOS AND SPECIFIC** RECOMMENDATIONS **PER SCENARIO**

his study analyzed all the elements related to the functionality of the future e-commerce platform for small agricultural producers and returning migrant workers, and, starting from those premises, the following two development scenarios are proposed:

Scenario 1: E-commerce platform for small and medium-sized agricultural producers developed from scratch

Scenario 2: E-commerce platform developed based on an existing platform (online store/ marketplace)

To ensure the proper functioning and continuous development of the e-commerce platform, a series of interventions are needed which, to a large extent, are relevant to both scenarios. Some interventions are critical in nature (interventions without which it is impossible to create a viable platform), while others are necessary to ensure the sustainability of that platform. These are listed in the table below, each of them being noted according to the level to which they can condition the viability of the platform:

- critical interventions necessary to ensure a minimum functional system
- interventions necessary for the creation of a complete functional system
- interventions to ensure sustainable development and increase the number of users/ beneficiaries of the platform
- ◆ stages already implemented or requiring minimal adjustments (for scenario 2)

Interventions also were assigned certain codes depending on the primary area of responsibility to which they relate:

- LOG logistics
- MN management
- IT information technologies
- MK marketing
- LEG legislative
- EDU education

The matrix of interventions required for both scenarios

CODE OF INTER- VEN-	INTERVENTION	NTERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	NEED OF INTERVENTIONS PER SCENAR		KEY INSTITUTIONS
TION			S 1	S2	
LOG 1.	Create a network of specialized hubs (darkstore)	The network of specialized hubs (darkstore) is a network made up of a specialized logistics centre in Chisinau and several logistics centres specializing in storage, warehousing, packaging and processing of agricultural products in several regions of the country. The hubs can be created based on the existing network of regional distribution centres of logistics operators that operate or will operate in the Republic of Moldova, by arranging specialized spaces in line with food security require-	e, ns al o-	•	Posta Moldovei; Nova Poshta; store networks Private initiatives;
	ments, including the need to maintain the necessary thermal regime.			ANSA;	
		The hubs will be certified and approved by ANSA, with an evaluation of the necessary specifications. There is openness from Posta Moldovei and ANSA for cooperation on such a scenario.			other potential partners
		The product categories with which hubs can operate should be defined exactly by the logistics specialists, without excluding that they can be extended as new specific requirements arise for a certain product group. At the same time, in order to meet food safety requirements, the categories included in figures 2 and 3 (legend) must be considered.			
LOG 2.	Create a network	The specialized network of transport units for agricultural products represents a	•	•	Posta Moldovei;
	of transport units specialized in	fleet of vehicles equipped according to the requirements stipulated and approved by ANSA, owned by developers of hubs (darkstore), courier companies, business			Nova Poshta;
	the online trade of agricultural	operators or individuals that provide transportation of agricultural products in the required conditions (separation, thermal regime, etc.) to meet optimal transport			Muvi Express;
	products				iFood;
		this intervention.			Glovo;
					other potential part- ners; ANSA

CODE OF INTER- VEN-	INTERVENTION	TERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	NEED OF INTERVENTION PER SCENARIO		KEY INSTITUTIONS
TION			S 1	S2	•
LOG 3.	Ensure a uniform and efficient packaging system	An unclear and uneven packaging system with subsequent transport of agricultural products remains a major impediment. From this perspective, it is necessary to ensure minimum conditions in addition to logistics hubs, where appropriate, or		•	Logistics and courier service operators;
	, , ,	required of manufacturers as a condition of connection to the platform. The product packaging and separation can be done in several distinct categories, depending on the requirements imposed or on the development of the technical aspects imposed by the hubs and transporters. For example, Posta Moldovei develops an			packaging material producers; producer groups;
		iBOX e-Commerce concept.			other potential partners
LOG 4.	Develop a net- work of automatic	Automated postal terminals are a real game-changer in boosting online commerce (see the example of the Baltic and Scandinavian states). Developing a network of	•	•	Posta Moldovei;
	postal terminals	postal terminals is a priority for Posta Moldovei, both in Chisinau and in other localities of the Republic of Moldova. Posta Moldovei elaborated a concept for devel-			NovaPoshta;
		oping a network of postal terminals with the Linella network of supermarkets, and Posta Moldovei is looking for investors to finance the project. At present, there are			MuviExpress;
		already 31 automatic postal terminals in place, and an expansion by another 150 terminals is planned (according to Posta Moldovei).			other potential logistics operators
		The Ukrainian logistics operator Nova Poshta owns a network of automated postal terminals in Ukraine and is considering the opportunity to expand to the Republic of Moldova.			
MN 5.	Determine or found the entity to assume plat- form admin-	The task of identifying the platform owner and administrator is a fundamental one. In the absence of demonstrated interest in developing and ensuring platform sustainability, it will have limited chances of success in the medium and long term.		•	A newly created team or company (start-up);
	istration and development				existing platform teams;

CODE OF INTER- VEN-	INTERVENTION	INTERVENTION DESCRIPTION OF INTERVENTION AND DECOMMENDATIONS	NEED OF INTERVENTION PER SCENARIO		KEY INSTITUTIONS
TION			S1	S2	•
					a mix of the two widely involved ver- sions; including
					producer groups
MN 6.	Negotiate spe- cial courier rates	Agricultural products have low value added but high weight. In terms of efficiency of using courier services, reducing tariffs – following direct negotiations with ser-	•	•	Nova Poshta;
	for smallholder farmers	vice providers – could increase the profit margin of small producers.			Muvi Express; Posta Moldovei;
					other potential partners
MN 7.	Reduce or remove (by joint nego- tiation) financial guarantee fund amount	Commercial banks and financial service providers practice withholding 10–15 percent of the sales amount to cover any financial risks associated with online sales (non-compliant, damaged product, delayed delivery, etc.), for a period that can vary between 30 and 180 days, which blocks producer funds, with a major impact on the small ones. Adjacent to such amounts, commercial banks and payment service providers practice blocking a fixed amount that can vary greatly, depending on the risks calculated by them.	•	•	Commercial banks; payment service providers
IT 8.	Create an integrated product management system (electronic platform)	The integrated management system will represent an electronic interface that connects all the components of the e-commerce platform, including specialized hubs, carriers, interfaces of different categories of users, etc., to streamline the movement of goods, integrate product baskets, monitor sales, and generate tax and accompanying documents and statistics and forecasts. An open-source management platform or one similar to those used by commercial networks for managing stocks, sales, etc., can serve as a basis.	•	•	IT companies; existing integrated management solutions; other potential partners;
					ATIC

CODE OF INTER- VEN- TION	INTERVENTION	NTERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS NEED OF INTERVENTION PER SCENAR		KEY INSTITUTIONS
			S1	S2	
IT 9.	Various interfaces for various roles	users, including sellers, consumers, administrators (including the hub network) and courier companies. Their development is a continuous and expensive process, with	•	♦ 24	999.md; iFood;
		the possibility to align continuously with new requirements and realities.			Glovo;
					Posta Moldovei;
					producers and producer groups;
					other potential partners
IT 10.	Create a simple and efficient	A major problem for small producers is the inability to have access to simple product marking systems and the application of product codes (barcodes for after-sales	•	•	IT companies;
	marking system for products and	in stores, QR codes, other specific marking and tracking elements).			integrated management solutions;
	product baskets to ensure their	According to statements made by the marketing director of Posta Moldovei during the interview, the organization has API extensions that can be integrated into online			ATIC;
	traceability	commerce platforms.			logistics and delivery companies;
		The API for domestic and international shipments:			•
					producers and pro-
		allows the customer to exchange data with the Posta Moldovei Information System (sender and consignee data, shipment parameters, etc.) and to process them			ducer groups;
		automatically;			other potential partners

Most existing platforms are also built in this way and require minor changes.

CODE OF INTER- VEN-	INTERVENTION	TERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	NEED OF INTERVENTION PER SCENARIO		KEY INSTITUTIONS	
TION			S1	S2		
		generates a unique barcode number that is added to the accompanying documents and is used for tracking;				
		automatically checks the values of the entered index to prevent incorrect information; and				
		calculates the cost of transport according to current tariffs, transport category and				
		parameters, additional services, country or region, taking into account individual discounts or tariffs.				
IT 11.	Integrate online payment modules	The online trade platform must have a variety of online payment methods integrated (internet banking, bank card, digital wallet, etc.).	•	2 5	Commercial banks;	
	. ,				PSP;	
		When selecting an existing platform, some of the mentioned payment modules are already functional.			fintech companies;	
					other potential partners	
IT 12.	Integrate the plat- form with state	Integrate, on the platform, the functionalities of responsible line institutions and of the interested entities for:	•	•	ANSA;	
	institutions cov-				MinEcon;	
	ering commerce	obtaining certificates of conformity and food safety; and				
	with agricultural				MinFin;	
	products	authorizations for storage, delivery, transportation, trade, etc.				
					tax office;	

Depending on the platform.

CODE OF INTER- VEN-	INTERVENTION	NITEDVENTION DESCRIPTION OF INTERVENTION AND DECOMMENDATIONS	NEED OF INTERVENTION PER SCENARIO		KEY INSTITUTIONS
TION			S 1	S2	•
					consulting compa- nies; development programs;
					other potential partners
IT 13.	Sandbox for plat- form users	Given that small and medium-sized producers often have limited knowledge in business financial management and all elements related to online commerce, we	•	•	MinFin; MinEcon;
		suggest setting up space for "simulating" operations related to this field, to give producers the opportunity to practice them and align to new realities, without being subject to any risks.			government;
					producer groups;
					other potential partners
MK 14.	Promote the plat-	The study showed there is no shortage of online stores, but rather of well-known	•	_ 26	A1; totul.online;
	its knowledge	and efficient integrative platforms with capacity for development and integration. The advantages of a well-known marketplace are obvious: unique shopping cart,			Elefant
	and penetration	ability to process orders for various goods, ability to negotiate with logistics, financial services, integration of new modules, etc.			Rozetka; 999.md;
					Eco.Local;
					iFood; Glovo;
					producer groups;
					other potential partners

²⁶ Already existing platforms are more or less known and have a circle of users.

CODE OF INTER- VEN-	INTER-	INTERVENTION	ITERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	INTER	ED OF VENTION CENARIO	KEY INSTITUTIONS
TION			S1	S2		
MK 15.	Identify service providers to support photog- raphy / video /	It is important that, from the very beginning, the offers placed (including textual, photo, video, graphic elements) are professionally developed, correspond to the products listed, highlight their real characteristics, and are attractive to buyers, thus contributing to creating and strengthening the image of producers and their	•	•	Specialized NGOs; local associations;	
	word processing /	products.			consulting	
	creating a prod- uct portfolio	One solution would be to create a specialized studio (a network of service provid-			companies;	
	uct portiono	ers) that would integrate its activity with the platform administrators or identify			local public	
		regional partners to work based on minimum requirements for photo, video, text and copyright content.			authorities;	
					BRD;	
					education facilities;	
					development part- ners and specialized state agencies;	
					other potential partners	
MK 16.	Identify ser- vice providers and support (co-financing)	Smallholder farmers do not have the possibility to develop their own brand, at least at the primary level, so that the products are minimally identifiable, a very important element in online commerce. The same need persists for the producer's primary packaging, which also must serve as a communication tool. The interven-	•	•	Consulting, design and marketing companies;	
	for trademark creation and	tion can take place in the specialized sandbox (IT 13) for small producers or can be offered by specialized service providers in various forms of cooperation.			education facilities;	
	primary packag- ing solutions for producers				other potential partners	

CODE OF INTER- VEN-	INTERVENTION	TERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS NEED OF INTERVENTION PER SCENAR		VEVINCTITITIONS	
TION			S1	S2		
MK 17.	Promote products as services and marketing effort	An indispensable element of online commerce is the continuous promotion of products, using various online and offline methods, in cooperation with various institutions, existing programs, promotional events, etc. A more active promotion of the platform, in general, would bring benefit to all its users, in various roles. The platform must offer the possibility of instant interconnection with the most widespread social and communication networks (share on Facebook, Instagram, Viber, etc.).	•	•	Specialized NGOs; local associations; producer associations; consulting companies; education facilities;	
					other potential partners	
MK 18.	Identify and cre- ate local producer clusters	An e-commerce platform would be much more efficient and operational if it worked not only with separate entities but especially with clusters organized by producers, communities of producers who have already organized joint events, or	•	•	LPAs; LAGs;	
		members of local clusters organized based on an administrative-territorial unit or				
		on local action groups (LAGs). Such clusters have more advanced forms of cooper-			producer	
		ation and collaboration, including related fields of logistics, marketing, education, branding, etc. Platform developers will have to identify such clusters and cooperate			associations;	
		with them.			producer groups;	
					regional clusters;	
					other potential partners	

CODE OF INTER- VEN- TION	INTERVENTION	DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	INTER	ED OF VENTION CENARIO S2	KEY INSTITUTIONS
LEG 19.	Implement the system for electronic issuance and flow of tax	It is important to move from paper-based documents, which require physical presence and travel, to an electronic system for issuing and managing tax and accompanying documents in digital format.	•	•	FAO; MinEc; Min- Fin; government; parliament;
	and accompany- ing documents	It is important that the issuance and management of such documents be integrated in the electronic platform, the processes being automated (order placement > order acceptance > delivery preparation + invoice issuance > order delivery).			other potential partners
LEG 20.	Issuing invoice and tax receipt in one document; issuing electronic	At present, couriers have to issue to the buyer both a payment document generated by the POS terminal and a cash receipt, which significantly complicates the procedures and imposes significant additional costs that affect the final cost of the product and processing time. The solution of issuing an electronic tax receipt is needed without delay.	•	•	MinFin; other relevant state institutions
	tax receipt				
LEG 21.	Signing con- tracts and agree- ments remotely (electronically)	At present, the signing of contracts remotely, using approved digital signatures, especially between small producer representatives, is marginal or practically non-existent. The widespread adoption of this practice would greatly simplify the processes related to online sales.	•	•	AGE; STISC;
	(creeti orineally)	processes related to orinine sales.			PSA;
		At the same time, a legal framework is required to regulate the conclusion and validation of agreements by consent to certain terms and conditions set out in electronic form, to be accessible through a click.			Orange / Moldcell;
					other relevant institutions
LEG 22.	Simplified rules, accounting for	At present, the introduction and registration of accounting data by producers who sell online is a difficult process due to the lack of electronic invoicing, retention of	•	•	MinFin;
	producers selling products online	financial amounts as collateral by financial processors, etc. The adoption of simplified rules would solve some of the related problems. If the intervention is not adopted, small producers risk limited participation.			other relevant state institutions

CODE OF INTER- VEN-	INTERVENTION	MTEDVENTION DESCRIPTION OF INTERVENTION AND DECOMMENDATIONS	NEED OF INTERVENTION PER SCENARIO		KEY INSTITUTIONS
TION			S1	S2	•
LEG 23.	Amending Daily Labourer Law to allow a wider participation of individuals in other activities as well, rather than in strictly agricul- tural ones	The Republic of Moldova currently has no law that would allow individuals to provide short-term services – for example, as an express courier. As a result, couriers must be permanent employees of courier companies, which creates multiple related inconveniences. The legislation should provide for individuals who wish to provide occasional services to be self-employed, the proceeds of such services being taxed in line with the rules of taxation of individuals.	•	•	Parliament of the Republic of Moldova; government of the Republic of Moldova
		The same regulations may apply to potential employees of specialized hubs or other related occupations. Patent or electronic declaration also can be used as an implementation mechanism.			
LEG 24.	Facilitate the official registration of producers, with the possibility of automatically obtaining the status of self-employed directly from the electronic platform	A priori, authorized online commerce cannot be made by producers who do not have any form of registration, with all the imposed legal and tax consequences. At the same time, it is important to offer, even to the smallest producers, the possibility to transition to the legal field through a mechanism of registration (by declaration) of their own business, easy to implement and agile. This would allow legalization in a simple way and the smooth running of business for a larger number of producers who, being at the limit of the legal framework, are currently subject to the risk of abuse by government officials.	•	•	MinEcon; other relevant state institutions
LEG 25.	Increase access to various types of certificates: of origin, quality and food safety	A great deal of smallholder farmers do not have certificates attesting the provenance, quality and food safety of products put on market. This poses a major risk, including for the development of online commerce with agricultural products, through jeopardizing confidence in those products or their suppliers.	•	•	ANSA; MinEcon; other relevant state institutions

CODE OF INTER- VEN-	INTERVENTION	DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	INTERV	D OF ENTION ENARIO	KEY INSTITUTIONS
TION			S1	S2	
		Creating a clear mechanism and supporting/guiding producers in the process of obtaining such certificates would increase online sales capacity. For small producers, a system based on self-declaration may be implemented, based on which institutions are empowered to take random samples for laboratory testing or other compliance checks. That mechanism, in a simple manner, can be developed with the advisory support of ANSA.			
LEG 26.	Eliminate the dis- criminatory fees imposed by some LPAs for owning	For example, Chisinau City Hall imposed a fee of MDL 5000 per year for online store owners, which is an additional barrier to opening new e-commerce platforms, especially for small producers.	•	♦ 27	LPA; MinFin;
	an online store	Eliminating that fee would be a signal to encourage online commerce.			other relevant state institutions
LEG 27.	Combat unac- counted cash pay- ment practices	The abolition of informal sales practices would help eliminate unfair competition from offline merchants, create a level playing field for all businesses, including those who sell online and whose revenues are easy to track and have minimal chances of being hidden.	•	•	MinFin; MinEcon;
					SFS
EDU 28.	Initial stage sup- port and guid- ance for platform users (vendors)	This support is critical at the initial stage and will require a considerable part of consultative and financial effort. The goal is to create, from the start, a correct business culture and a multitude of positive examples, which later, being replicated, will be able to trigger a snowball effect.	•	•	BRD; FAO; ODIMM; FARM; development partners;
		The platform will have the chance to attract customers if they find attractive offers that are posted professionally and have their orders fulfilled at the highest level.			associations and producer groups;
					other interested partners

That fee is not attributed to e-commerce platforms registered outside Chişinau. At the same time, it is not a critical constraint for a large marketplace platform, provided that each online seller is not subject to this fee.

CODE OF INTER- VEN-	INTERVENTION	NTERVENTION DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	NEED OF INTERVENTION AND RECOMMENDATIONS PER SCENARI		KEY INSTITUTIONS	
TION			S1	S2	•	
		A number of stakeholders can be involved at this stage, including producer associations, various development projects and representatives of state structures interested in business development at the local level.				
EDU 29.	Develop the capabilities of small and medium-sized producers to develop and place quality online content (photo, video, graphics, text)	An obvious problem is photographing, filming, creating text content and copyright of products and then placing them on the platform. In most cases, the photo/video text content is of low quality, not in accordance with an online store's requirements, often with photos and elements that do not represent the specific product but rather a similar one. Often, photos and graphics are simply downloaded from the internet. As a consequence, buyer's expectations are distorted, and the platforms have a motley and difficult-to-access interface, which reduces the potential for subsequent use of this platform by customers. An option could be providing training to smallholders directly, either through their producer associations or through the platform itself (e.g. mini courses or video tutorials) on basic digital marketing skills (e.g. how to write catchy descriptions, how to take good pictures of their produce, etc.)	•	•	Private consul- tants; consulting companies	
EDU 30.	Specialized e-commerce school/courses	For the sustainable development of the platform, it is important that the support and guidance offered in the initial phase have continuity.	•	•	Specialized companies;	
		Specialized training offered to all users of the platform, especially those who use e-commerce solutions, would increase the efficiency of their work and reduce the risks of non-fulfilment or improper fulfilment of orders. Technical training on the			education centres; ATIC;	
		functionalities of the platform, the ways it can be used, interconnections, integration of product management systems, related regulations, including fiscal ones, are also welcome.			platform administrator;	
				_	other interested partners	

CODE OF INTER- VEN- TION	INTERVENTION	DESCRIPTION OF INTERVENTION AND RECOMMENDATIONS	NEED OF INTERVENTION PER SCENARIO		KEY INSTITUTIONS
			S1	S2	
EDU 31.	Develop plat- form user guides and tutorials for	The platform user guide is a general summary of e-commerce courses specifying the main elements of the platform and how they can be accessed and used.	•	•	Platform administrator;
	specific compart- ments / modules	There is a need to develop guidance materials, including video materials (tutorials), that clearly explain the various functionalities of the platform, how to use them, and how to obtain the various services or documents required.			specialized and consulting companies;
					other interested partners
EDU 32.	Elementary finan- cial education	According to the data of the NBS of the Republic of Moldova, the highest rates of unofficial salaries and of the lack of use of online transactions are in the field of agriculture.		•	Platform adminis- trators; producer associations; devel- opment projects;
		Implementation of legislative interventions on enacting self-employed status would eliminate the economic reason for the unofficial salaries. At the same time, the need for unaccounted sales would disappear, creating incentives for more active involvement in online commerce. The specialized courses would allow for better information for agricultural producers and their daily employees and would help ensure that they act within the legal limits.			other interested partners

REFERENCES

ATIC. 2020. Recomandări ATIC post COVID 19. Asociația Națională a Companiilor din sectorul TIC. 15 pp. (also available at https://ict.md/wp-content/uploads/2020/07/ATIC-Proposals-on-digitalization-Post-COVID-19.pdf).

National Bank of Moldova. 2021. RAPORT PRIVIND EVOLUTIA INFRASTRUCTURILOR PIETEI FINANCIARE DIN REPUBLICA MOLDOVA. https://www.bnm.md/files/Raport_ oversight_Q%20II%202021%20publicat.pdf

GIZ. 2021. The Business Model Playbook – How to Align Business Models with Platforms. Deutsche Gesellschaft für Internationale Zusammenarbeit. (also available at https://make-itinitiative.org/wp-content/uploads/sites/2/2021/03/1_MITiA-TheBusinessModel_Playbook. pdf).

ILO. 2016. World employment social outlook. Trends 2016. Geneva, International Labour Office. 92 pp. (also available at https://www.ilo.org/global/research/global-reports/weso/2016/ WCMS_443480/lang--en/index.htm).

IOM. 2017. Extended Migration Profile of the Republic of Moldova 2010–2015. Chisinau, Republic of Moldova. 172 pp. (also available at https://moldova.iom.int/sites/q/files/tmzbdl266/ files/documents/Extended%20Migration%20Profile%20of%20the%20Republic%20of%20 Moldova%202010-2015.pdf).

ITU & FAO. 2021. Digital Excellence in Agriculture in Europe and Central Asia. Call for good practices in the field of digital agriculture. Stocktaking Report. Geneva, Switzerland. (also available at https://www.itu.int/en/ITU-D/Regional-Presence/Europe/ Documents/Events/2021/ITU-FAO%20Launching%20event/ITU-FAO_StocktakingReport_ DigitalExcellenceinAgriculture_EuropeandCentralAsia_CallforGoodPractices_05July.pdf).

Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S. & Hess, J. 2018. Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. Washington, DC, World Bank. (also available at https://openknowledge.worldbank.org/handle/10986/29510).

Ministry of Economy of the Republic of Moldova. 2020. Proposals to update the Roadmap for Boosting Digitalization of the National Economy and Development of eCommerce. Ministry of Economy and Infrastructure of the Republic of Moldova, with the support of Economic Council to the Prime Minister. 31 pp. (also available at https://consecon.gov.md/wp-content/ uploads/2021/06/PROPOSALS-TO-UPDATE-THE-ROADMAP-.pdf).

Ministry of Economy of the Republic of Moldova. 2021. Roadmap for Boosting Digitalization of the Economy and Development of e-Commerce. 31 pp. (also available at https://consecon.gov.md/wp-content/uploads/2021/08/FOAIE-DE-PARCURS-PENTRU-STIMULAREA-DIGITALIZĂRII-ECONOMIEI-ŞI-DEZVOLTĂRII-COMERŢULUI-ELECTRONIC.pdf).

Posta Moldovei. 2021a. Î.S. "Poșta Moldovei" va efectua un studiu de piață în domeniul serviciilor de curierat și al comerțului electronic. In: Posta Moldovei [online]. 9 February 2021. https://www.posta.md/ro/news/2898.html

Posta Moldovei. 2021b. Î.S. "Poșta Moldovei" a semnat un Acord de cooperare cu Banca Europeană de Investiții. In: Posta Moldovei [online]. 23 August 2021. https://www.posta.md/ ro/news/3098.html

Posta Moldovei. 2021c. Î.S. "Poșta Moldovei" – Operator Economic Autorizat. In: Posta Moldovei [online]. 8 April 2021. https://www.posta.md/ro/news/2915.html

Putnins, T. J., Sauka, A. & Davidescu, A. A. 2018. Shadow Economy Index for Moldova and Romania 2015–2016 (May 1, 2018). (also available at https://ssrn.com/abstract=3171741 or http://dx.doi.org/10.2139/ssrn.3171741).

Solcan, A. 2010. Capitolul IV. Aspectele legale ale inițierii afacerii. In Antreprenoriat: Inițierii Afacerii, pp. 74–104. https://caam.utm.md/wp-content/uploads/sites/23/2019/01/ ANTREPRENORIAT_c4.pdf

UNDP Moldova. 2020. Social and Economic Impact Assessment of the COVID-19 Pandemic on Vulnerable Groups and Economic Sectors in the Republic of Moldova. November 2020. Impact Assessment Report. 296 pp. (also available at https://www.md.undp.org/content/moldova/ en/home/library/inclusive growth/social-and-economic-impact-assessment-of-covid-19in-the-republi.html).

UNDP Moldova. 2021. *Digital Readiness Assessment*. (also available at https://www. md.undp.org/content/moldova/en/home/library/effective governance/digital-readinessassessment-.html).

USAID. 2020. Moldova Rapid e-Commerce Review. USAID Moldova Structural Reform Program. (also available at https://consecon.gov.md/wp-content/uploads/2020/10/ Moldova-Rapid-ECommerce-Review.pdf).

USAID. 2021. Assessment Report on e-Commerce and Cashless Economy. USAID MSRP. (also available at https://consecon.gov.md/wp-content/uploads/2021/02/USAID-MSRP-cashlesseconomy-and-e-commerce-Jan-31-final.pdf).

ISBN 978-92-5-135717-0 9 789251 357170

CB8496EN/1/02.22