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# Russian Federation

## Strengthening Export Competitiveness

THE DIGITAL TRANSFORMATION OF TRADE

PROMOTION ORGANIZATIONS

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# THE DIGITAL TRANSFORMATION OF TRADE PROMOTION ORGANIZATIONS

## Executive Summary

Digital technologies and the changes to production, service delivery, and communications that they enable are continuing to transform nearly every aspect of society including the economy, business and international trade. Firms, both large and small, face a rapidly changing marketplace where traditional business models face disruptive threat at the same time as technologies and platforms create new opportunities and expand markets. The government organizations that serve citizens and firms are also confronted with the challenges of digitization and the need to adapt to the ongoing changes in society and the economy. Trade promotion organizations (TPOs) will be particularly impacted for several reasons: first, their client base of firms with international exposure is highly impacted by wider digital transformation of the economy meaning TPOs need to be constantly updating their knowledge and services to remain relevant; secondly, the justification for TPOs is based partially on market information and access failures that are themselves being addressed by digital technologies; and finally, most TPOs operate in a larger system of state entities working with firms, making it imperative that coordination across agencies incorporates key principles of digital transformation.

Fortunately, there is a growing body of experience among TPOs that can help to identify effective practices. In this context, the digital transformation (DT) of TPOs is defined as leveraging digital technologies to change products, services and operations to deliver better outcomes to clients. Better outcomes will be defined by the objectives of individual TPOs but commonly will include metrics on the growth in exports (as product, value, and/or destination) from client firms, client satisfaction with service provision, efficiency, reach, etc. The transformation will involve the incorporation of new principles to organizational operations. Many of those principles are similar to those that are being followed to address the digital transformation of governments around the world, particularly those state organizations that provide direct services to citizens and businesses. Those general principles provide a context for a more substantive discussion on how these trends apply to TPOs.

First and foremost, the digital transformation of TPOs requires a cultural and strategic shift. This shift is much more than the digitization of existing processes or services but a complete re-definition of the value proposition, business model and strategy of the organization. The shift requires a re-definition of the roles, mission, objectives, service architecture and operating processes and supported by a corresponding cultural change that is data driven and puts the client at the center of all organizational activities.

DT will also require and facilitate the TPO working in collaboration with other relevant government organizations that provide services and/or support to business. This new “whole of government” approach would be supported by an integration of the different databases and digital systems. The new integrated system would allow common access, registration and update of data “once only” with simultaneous updating of information in all different databases of the system. This “interoperability” will allow the TPO to access, within the necessary privacy and data security regulations, a large repository of data throughout the system. The organization will be able then to become “data driven”, intensifying the use of data to

understand better business conditions and the specific needs of key business segments, even of individual firms. Armed with a superior understanding of client needs, the TPO will use data to develop a completely new suite of services designing them “digital by default” and adapting its service architecture to the new digital modes of operation. Some key services like the provision of information and advice to develop international markets will be also built on a more intensive use of big data and data analytics. The introduction of new services and new modes of delivery would be “agile” through iterative consultations with users employing data driven techniques to test different design options until it is possible to achieve well accepted levels of service and operation.

DT will also require the TPO to re-define its models of governance to reflect better the integration of the organization within a whole of government system as well as within a network of digital platforms and private service providers. This new -digital and data driven- TPO will be able to shift towards a more client-oriented strategy with more customized and intensive support while it is also able to reach a wider number of beneficiaries. The ability to use more data from the interoperated systems and platforms, the intensive use of its CRM, data analytics and -even- artificial intelligence, will allow the digital TPO to apply a more intensive client management system. Client management will include a better understanding of individual company needs, new modes of interaction and new channels of communication. The above possibilities and the use of data driven and digital by default design techniques will have a deep effect on TPOs’ service architecture which will incorporate new advocacy, networking and coordination objectives; new modes and channels for much more customized and intensive capacity building; and more relevant and specific information, market intelligence analysis and promotion.

The changes that DT will bring to the TPO strategy and operation will have a deep effect on the structure, management and processes of the organization. The new competencies that will be demanded by DT and the new strategy will result in changes to the organizational structures as well as new, simplified, processes. This will also facilitate the evaluation of organizational performance at all levels, including individual staff performance. Moreover, the large availability of, and better access to, data throughout the government, will enable more robust M&E systems and rigorous evaluation of impact.

Summing up, DT presents deep challenges for TPOs but also opportunities to re-define the organization as “digital by default” working together with other private and public organizations to increase the scope, reach and depth of the support that it can provide to beneficiary firms. The process is still in early stages with uneven implementation among TPOs but there is an increasing awareness within the TPO community about the urgency and compelling need to proceed towards a digital transformation of trade promotion.

## Introduction

Digitalization is transforming our society and having a large effect on the economy and business. The effects are not only on the pace of change but also on the direction of change. Digital transformation (DT) is changing the way business -and organizations in general- work and relate with their customers and, at the same time, is generating the development of completely new businesses and business models. The transformation is also affecting the way governments relate with and provide services to businesses and to its citizens.<sup>1</sup>

DT is transforming businesses large and small and, at the same time, transforming international trade<sup>2</sup>. New products and -specially- new services, new business actors and new distribution channels are creating new modalities of international trade relations and transactions<sup>3</sup>. As companies evolve, change and experience new challenges to expand internationally, so must the government agencies that service them.

Trade promotion organizations (TPOs) are increasingly focusing on how to evolve and adapt to the digitization of the economy, business and trade. Many TPOs started by incorporating digital technology through initiatives like increasing automation of back-office operations (e.g. ERP systems); expanding their offer of on-line training; and establishing programs or services to support the incorporation of their clients to e-commerce. However, as it will be argued in this report, the incorporation of digitization to *existing* programs and operations may not be sufficient or equivalent to a digital transformation of the organization.

Part 1 of this paper starts with an overview of the main issues, technologies and principles involved in digital transformation that are more relevant for government organizations including Trade Promotion Organizations (TPOs). These broader digital transformation/ digital trends provide a context for a discussion on how these trends apply to TPOs. Part 2 of the paper then looks specifically at how digital transformation impacts TPOs, from strategy to customer relations, to services and performance evaluation. Part 3 provides some examples of organizations that have initiated the journey through some interesting initiatives. The paper is

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<sup>1</sup> For a more detailed review and definitions of digital transformation see:

- On digital transformation and government see OECD-OPSI, Embracing Innovation in Government, Global Trends 2019, February 2019, <https://oecd-opsi.org>; and McKinsey & Company, Digital by default: A guide to transforming government, McKinsey Center for Government, November 2016.
- On digital transformation and government policies see for example OECD Key Issues for Digital Transformation in the G20, Report prepared for a joint G20 German Presidency, OECD Conference, Berlin, Germany, 12 January 2017: <http://www.oecd.org/G20/key-issues-for-digital-transformation-in-the-G20.pdf>;
- On digital transformation in business, I-Scoop has a very comprehensive review in “Digital transformation: online guide to digital business transformation”, <https://www.i-scoop.eu/digital-transformation/>;
- On digital transformation and SMEs, see: International Trade Centre (2018). SME Competitiveness Outlook 2018: Business Ecosystems for the Digital Age. ITC, Geneva.

<sup>2</sup> On digital transformation and trade see WTO, World Trade Report 2018, [https://www.wto.org/english/res\\_e/publications\\_e/world\\_trade\\_report18\\_e.pdf](https://www.wto.org/english/res_e/publications_e/world_trade_report18_e.pdf)

<sup>3</sup> See Dan Ciuriak and Maria Ptashkina (2018), “The Digital Transformation and the Transformation of International Trade”, 23 January 2018 <https://ssrn.com/abstract=3107811>

concluded with a brief summary of the key issues that are likely to define the next few years of DT among TPOs.

The review is not comprehensive. Many TPOs at the national and subnational level around the world are working in this area so the body of case studies, information, and results is growing by the month. This paper makes use of existing research, published information from TPOs, and experiences shared by practitioners working in TPOs. We hope that the paper will be useful to structure the issues and to open the debate and further first-hand research on the state of play and options for change.

## Part 1: Key Principles of Digital Transformation

The concept of digital transformation is often associated with the cumulative effects of digital technology on all aspects of human life, the economy and society. Digital technologies and the rise of digital platforms are completely changing not only how we connect with others but also how we produce, consume, invest, move and relate with government and the rest of the society.

In the context of businesses and government organizations, digital transformation involves leveraging digital technology to change products, services and operations to deliver superior value to customers and staff. There are several aspects or principles that this paper will consider in terms of how they support the digital transformation of government organizations in general and trade promotion organizations (TPOs) in particular. As the primary focus of this note is on TPOs, only a brief survey of key principles is provided as summarized below in figure 1. These transformational principles are all inter-connected and pivot around the establishment of a new strategy and culture for a re-defined digital organization.



*Figure 1: Key aspects of digital transformation applicable to trade promotion services*

## DT starts with *strategy* and *culture*

DT is an opportunity for a cultural and strategic shift that is much more than the digitization of existing government processes or services, including existing internationalization support and trade promotion. So, DT for a TPO is not just about technology and applying technology to *existing* strategies, *existing* processes and *existing* services. Digital technology opens an opportunity to re-think the organization and its relations with its stakeholders, mainly its customers and its staff.

The implications of DT have the potential to impact virtually every aspect of the organization in terms of its justification, roles, mission, objectives, service architecture and processes. As a result, the digital transformation of the organization should be driven by a strategy and supported by technology and not the other way around. In Australia, AUSTRADE has been implementing successive digitization initiatives in its processes and services for several years now. In 2018, AUSTRADE's management decided to advance further re-visiting its Strategic Priorities 2018-2022 and establishing a 14-point "transformation plan" that places clients at the center of all organizational activities and looks for opportunities to improve the delivery of services and expand their reach and impact.<sup>4</sup>

This new strategic approach should prioritize firms at the center of the TPO activity, define new roles and objectives and promote streamlined processes and streamlined internationalization data-driven services *supported* by technology. New technology allows to analyze and understand better the needs of beneficiary firms and, at the same time, to provide services in a much more customer-driven approach. This will entail a re-definition of client segmentation and service architecture and emphasize a more "digital trade promotion and internationalization" approach.

The new strategy needs also an organizational culture change. DT requires a shift from a service-centered to a new digital workplace organizational culture where staff are customer-oriented; driven by results; can work collaborative with others -anywhere and anytime-; are encouraged and empowered to be more innovative and experiment with new solutions; and are even encouraged to take more calculated risks. The active incorporation of users/customers in the design of new services is an essential part of the cultural change.

The new general TPO strategy would need to also integrate a coordination and collaboration strategy with other public or private organizations that participate in the internationalization effort. The new TPO strategy will need to look at the development of a digital infrastructure and data ecosystem, with standards and technology that interoperate with those of other organizations to provide a much more integrated approach to supporting the competitiveness and internationalization of beneficiary firms. This also requires a reinforcement of transparency as part of the new -necessary- organizational culture.

## Digital organizations facilitate "Once Only" provision of data

As mentioned, DT enables TPOs to implement a strategy that is more centered around their client firms. These firms interact not only with TPOs but also with a wide spectrum of agencies

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<sup>4</sup> For more details in AUSTRADE's digital transformation strategy see Part 3 of this report.

including tax authorities, customs, licensing bodies, etc., in addition to various state programs aimed at supporting firms through financial and non-financial means. The introduction of other DT principles discussed in this section including inter-operability, digital by default, and whole of government as well as technological solutions such as cloud technology and Blockchain create the possibility of introducing “once only” signature, registration and provision of information.

The introduction of single signature and “once only” approaches allows firms to avoid redundant provision of the same information across different agencies. Firms provide the needed information only once and all integrated data bases are updated simultaneously. There are obvious benefits for the firm in terms of administrative time but also great benefit for government agencies including efficiency gains from avoiding duplication, an increase in resources devoted to servicing clients, and the ability to better identify waste and abuse.

The introduction of Blockchain technology has the potential to take the “once only” concept even further by enabling not only the simultaneous update of all ledgers and databases but also the creation of a durable record of all transactions. Blockchain technology could be particularly suitable in the management of global trade supply chains. International trade supply chain processes involve a large number of actors. Transactions along the process are slowed due to the complexity and volume of communications between actors and agencies including transport providers, government agencies and customs, certification bodies, ocean carriers, etc. The blockchain system opens the possibility of digitizing trade workflow and tracking shipments end to end, including payments and financial operations. IBM and Maersk are working on an initiative to establish a new international trade standard and platform to provide more efficient and secure methods for conducting global trade processes using blockchain technology.<sup>5</sup> TPOs would need to follow the advances in those technologies and applications and evaluate how they affect their position and role within the value chain.

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<sup>5</sup> See “Digitizing Global Trade with Maersk and IBM” in <https://www.ibm.com/blogs/blockchain/2018/01/digitizing-global-trade-maersk-ibm/>

“Interoperability” is key for effective and efficient digitalized service delivery

Interoperability refers to the capacity of different data management solutions from different government organizations to communicate and work together seamlessly. The objective is to provide a cohesive government-wide service delivery. Under this principle, different agencies must have the capacity to share their respective data using standards and protocols that are common across the government. In terms of the promotion of trade and internationalization of business, this principle requires that different agencies involved, like customs, tax authorities, SME and innovation agencies, financial support agencies, trade and investment support agencies, etc., all have the hardware, software, and institutional capacity to share their data in a standardized format.

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#### ***Estonia’s X-Road interoperability system***

*“X-Road is the backbone of e-Estonia. It allows the nation’s various public and private sector e-service information systems to link up and function in harmony.*

*Estonia’s e-solution environment includes a full range of services for the general public, and since each service has its own information system, they all use X-Road. To ensure secure transfers, all outgoing data from X-Road is digitally signed and encrypted, and all incoming data is authenticated and logged.*

*X-Road connects different information systems that may include a variety of services. It has developed into a tool that can also write to multiple information systems, transmit large data sets and perform searches across several information systems simultaneously. X-Road was designed with growth in mind, so it can be scaled up as new e-services and new platforms come online.”*

*Source:* <https://e-estonia.com/solutions/interoperability-services/x-road/>

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Interoperability raises important challenges. Oftentimes agencies have developed their systems independently, without considering compatibility with other government agencies. Fortunately, cloud-based technologies and application programming interfaces (API) can greatly enhance the introduction of inter-operability standards. There are also important legal issues involved, mostly related with privacy legislation and levels of confidentiality.

Despite its challenges, there are good examples of government agencies around the world that have been able to work out the technical, legal, and institutional challenges and are successfully sharing information for the advantage of their beneficiaries. The experience of Estonia’s X-Road Interoperability System demonstrates that there are practical solutions available to link the data bases and systems of different government agencies.

## Services should be integrated within a “Whole of Government” approach

In the pre-digital world, different government agencies defined and implemented their respective services individually, with limited coordination. Government business support, mostly to SMEs, has been generally fragmented in a myriad of separate programs and agencies responsible for support to SME competitiveness or innovation, financial support, trade and investment support, etc., in addition to customs, statistics or tax collection services. The various agencies normally apply different requirements and criteria, offering solutions that are partial in nature, each with their own objectives and their own monitoring and evaluations systems. In some cases, different programs within the same agency may be managed quite separately or within “silos” in the same organization.

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*“Whole of government denotes public service agencies working across portfolio boundaries to achieve a shared goal and an integrated government response to particular issues. Approaches can be formal and informal. They can focus on policy development, program management and service delivery.”*  
*Australian Public Service Commission*  
<https://www.apsc.gov.au/1-whole-government-challenge>

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Firms are a unity but are usually treated by different agencies in silos with isolated and oftentimes un-coordinated solutions. The most effective and advanced TPOs apply a more customer-centric strategy and make efforts to coordinate their strategy and planning with other relevant government agencies<sup>6</sup>. However, this is normally challenging and takes a lot of time to establish the coordination activities with other intervening agencies. But when properly implemented, this coordination enables comprehensive service delivery to firms, which themselves are coordinating their internal capacities around production, innovation, management, access to finance, etc. The implementation of DT principles within a client-centered approach offers the opportunity of breaking that fragmentation and avoiding duplications or gaps with a more rational use of resources for greater impact. In short, much better value for money.

The “Whole of Government” approach is based on:

- ▶ The agreement on the final objectives/impact and on the intermediate objectives that will be the contribution of each agency to the final impact;
- ▶ The adoption of client-centric DT strategies by the coordinated system of agencies;
- ▶ The transformation of government culture away from bureaucracy and process to customer focus, operational simplicity and transparency;
- ▶ The operation under DT managerial principles (“Once only”, “Interoperability”, “Data-driven”, “Digital by default”);
- ▶ The support of new technological solutions (social, mobile, analytics, cloud...); and
- ▶ The use of digital systems (e.g. CRM) to measure results and to coordinate the actions of the different agencies against the agreed final and intermediate objectives.

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<sup>6</sup> The incorporation of more customer-centric strategies or specific customer-centric programs is a common trend in many TPOs like NZTE, AUSTRADE, Canada’s TCS, Business Finland, PROCOMER Costa Rica, KOTRA, etc. This is also a strategy that the World Bank in Russia has recommended in its technical assistance to the newly established Moscow Export Center.

Using a whole of government approach TPOs are well positioned to advocate and coordinate the action of the group of government organizations that intervene in trade processes. The complexity, delays and associated costs of the different stages of the export process are a common complain among SMEs and are often at the top of the list of barriers to trade identified by most surveys. Many countries, from Nigeria to Hong Kong have introduced or are working actively in the introduction of “single windows” for trade, oftentimes with the active participation of their corresponding TPOs. However, those efforts will not be enough if they are built on “existing” processes of pre-digital age. It will be necessary for TPOs to reinforce their advocacy role and leadership to re-design international trade processes from a completely new perspective, making full use of “whole of government “, “once only” and “digital by default” principles

The New Zealand Government experience with its “Smart Start” initiative followed most of the key principles of digitization, including a whole of government approach, and offers a process and methodology that could be replicated by TPOs. Based on that experience and building on a strong tradition of collaboration between government agencies, New Zealand Trade and Enterprise (NZTE) is working with other 9 government agencies under the “Better for Business” initiative<sup>7</sup>. The initiative aims at improving the experience of businesses with and value delivered by government. The agencies have committed to work closely with businesses to identify key pain points and design ways to leverage digital technology to achieve better business outcomes.

The coordination and association of different government organizations is challenging. But TPOs cannot ignore that their beneficiaries, firms and the society in general, are changing fast, are increasingly used to operate digitally in their own social and business environments and have high expectations in terms of public service delivery. The convergence of different government organizations to provide more integrated support to the internationalization of businesses will be increasingly demanded. On the other hand, the benefits of this new approach include greater fiscal responsibility and value for money, and more credibility with beneficiary businesses as a result of more efficient and effective delivery of services.

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<sup>7</sup> See Part 3 of this report for a brief description of NZTE’s “Better for Business” initiative.

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### ***New Zealand's SmartStart – a “Once Only”, “Whole of Government” and “Digital by Default” solution***

*“SmartStart is the first of a number of integrated digital services based around critical life events. It is underpinned by the twin concepts of digitally integrating information and services to the customer and federating data. It enables New Zealanders to:*

- 1) learn about having a child;*
- 2) navigate government services around the birth of a child;*
- 3) access and engage with government services in the simplest possible manner; and*
- 4) consent to reuse information provided to one agency when seeking assistance from another agency.”*

*“Four government agencies – the Department of Internal Affairs, the Ministry of Social Development, Inland Revenue, and the Ministry of Health have worked collaboratively with two Non-Government Organizations (NGOs), The New Zealand College of Midwives and Plunket NZ (delivering advice and support to new mothers). This partnership has been integral to success. A Stewardship Group, in which all four agencies and the two NGOs are represented, oversaw the development. The agencies shared information (in collaboration with govt.nz), shared skills (through secondments to the development team) and shared expertise (in regular meetings of reference groups focused on communication, customer design, policy and architecture). Content was developed by a dedicated internal team in partnership with participating agencies.”*

*“SmartStart product development relied on co-design principles (i.e. customers involved in design and testing), cross-agency governance, iterative agile development, and benefits driven decision-making throughout the process. Information and access to services were integrated into new digital channels that worked on any device (smartphone, tablet or computer) to save users’ time and effort. Three key outcomes were envisaged in the proposal for funding: reducing customer pain points, improving the effectiveness of government services, and building a dynamic ecosystem. SmartStart achieved its first intended outcome: to reduce customer pain points. SmartStart facilitates navigation across all relevant government services, integrating 55 services and shares data between departments with minimal effort by the customer. It reduces the need for the customer to provide the same information over and over again.”...“SmartStart achieved its second outcome: to improve the effectiveness of government services. The Ministry of Social Development provides a proactive service to their existing clients by removing the need for many clients to be interviewed and the need to purchase a birth certificate. Unnecessary client interactions between the Ministry of Social Development and Internal Affairs have also been reduced. The uptake of parents consenting to share their birth registration information is 33% higher than anticipated.” “91% of customers consent to share their information with at least two services, 25% with three services and nearly 5% with four services.”*

*“SmartStart has helped to show what is possible towards achieving its third outcome: to build a dynamic ecosystem. The ecosystem has already been reused in other digital products. Reuse of the team, the software vendor and the technology allowed a second life event to be developed with around half the budget and in half the time: Te Hokinga ā Wairua End of Life Service (<http://endoflife.services.govt.nz>), which focuses on integrating death and bereavement public services, was released 30 June 2017.”*

*Source: OECD-OPSI Observatory of Public Service Innovation, Case Studies:*

*<https://www.oecd-opsi.org/innovations/smartstart/>*

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## Digitally transformed organizations are “Data-Driven”

Data analytics have been used throughout many governments for a range of services such as resource optimization and tax fraud prevention. As systems mature and gain access to a growing range of data sets, they could play a larger role in analyzing business support needs and trade prospects. Government organizations, like the UK Office for National Statistics are just beginning to explore the potential for data analytics, including advanced analytics, predictive analytics<sup>8</sup> and artificial intelligence, to help analyze large data sets generated through their different national systems as well as global trade data sets, with the objective of providing more actionable guidance to identify and support its beneficiaries. The first step to

improve their access to data and enable these services is the implementation of the DT principles covered in this section including interoperability, digital first, and whole of government approaches. A new set of governance and agreements will be necessary among the agencies to preserve confidentiality and proper treatment under privacy control legislation.

The application of data analytics to the wide range of data on existing or potential beneficiaries that the different government agencies -on aggregate- have would allow a trade promotion organization to:

- ▶ Develop more accurate segmentation of existing or potential beneficiaries;
- ▶ Analyze their strengths and weaknesses to determine support needs;
- ▶ Complete impact studies, including segment-specific, industry-specific or product specific business support benchmarks, i.e. understand “what works” and what doesn’t in terms of business support;
- ▶ Understand the relationships among the different interventions of different agencies to guide a more effective coordination of actions;
- ▶ Design more targeted services based on more detailed segmentation, needs and impact assessment, better coordinated with the services of other partner agencies;
- ▶ Develop common standards and program support criteria across different agencies;

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<sup>8</sup> **Advanced analytics** describes data analysis that goes beyond simple mathematical calculations such as sums and averages, or filtering and sorting. Advanced analyses use mathematical and statistical formulas and algorithms to generate new information, to recognize patterns, as well as to predict outcomes and their respective probabilities. **Predictive analytics** is a sub-division of advanced analytics and focuses on the identification of future events and values with their respective probabilities.

In addition, data analytics could play a key role for TPOs in supporting the selection of target markets, market entry strategies, most appropriate channels of distribution and promotion strategies, etc. It should be noted that TPOs not necessarily need to develop their own platforms to provide these services. There are private suppliers of data-driven support to the internationalization of firms including search engines, e-commerce marketplaces and other commercial sources mainly for market information and market intelligence purposes.<sup>9</sup>

TPOs may not want to replicate those private platforms but may provide advocacy, networking and support, mainly to SMEs to facilitate access to those already available solutions. Part of that support may take the form of training SMEs on how to use those systems. This is the strategy followed by ICEX of Spain ([www.icex.es](http://www.icex.es)) and Switzerland Global Enterprise -SGE ([www.sge.com](http://www.sge.com)). In 2018, ICEX and SGE launched partnerships with Google to make Google's Market Finder available to Spanish and Swiss SMEs. Market Finder mines into the large volume of data generated by the browsing and search behavior of its worldwide users to identify the most promising target markets; plan operations such as localization, payments, customer relations, taxes, legal requirements and logistics; and develop a marketing strategy including most promising promotional instruments. In the case of ICEX, the agreement was part of its "E-Market Services" program that aims at expanding the digital transformation and use of e-commerce by Spanish SMEs.<sup>10</sup>

Data overflow is overwhelming for many businesspeople. Not all SMEs have the resources and the necessary professional capacity to extract full value from data through adequate analysis and interpretation. The challenge for TPOs is then how to extract value from data and transform it into useful information to support SME's internationalization decision-making. In this respect, TPOs may be primary users of data analysis platforms, as well as other relevant trade-related open data sources to provide more support in selection of information, analysis of data and strategic advice as part of their service offering to their SME clients. Digital transformation will therefore further support the evolution of TPOs from suppliers of *generic* information to suppliers of *specific* information or data as well as analysis and strategic advice to individual clients.<sup>11</sup>

### Services are "Digital by Default"

DT of trade promotion is not just about automating existing processes and existing services but about being more transformative. Under "Digital by default" the full conceptualization and design of the service is based on digital capabilities, which in many cases, requires a re-definition of the value proposition or business model of the service provider. New Zealand's "Smart Start" service is a good example of how four government agencies worked together to design and set up a service, targeting a specific need of clients and thinking digitally from the very beginning and throughout the whole process.

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<sup>9</sup> See for example: Google's Market Finder <https://marketfinder.thinkwithgoogle.com/intl/en/> ; Descartes Datamyne system <https://www.descartes.com/solutions/customs-regulatory-compliance/global-trade-content> ; Similarweb <https://www.similarweb.com/corp/about/>

<sup>10</sup> See <https://www.emarketservices.es/emarketservices/es/index.html>

<sup>11</sup> This evolution would need to be reinforced through more customized support within more client-oriented strategies.

In the case of “Digital TPOs”, the relationship, the customer experience and the services should be designed on digital and not the mere digitation of existing processes and existing services. Data should be more tightly used in the analysis of customer capabilities, customer needs and in the definition of processes to provide real time business intelligence and support services. This may involve delivering data-based services digitally via multiple on-line and off-line channels, including mobile platforms to improve the experience of business users.

### Organizations should be “Agile” in introducing new services

For the “Digital TPO” being agile is essential. In this digital age, business models reach their sell-by date quickly and customers expect nearly instant feedback from service providers. Being “agile” in the introduction of new services, new applications or new channels requires two basic principles. The first is defining the solution in terms of user needs. The second is to build solutions quickly and simply at first and then iterate based on client feedback in a process of continuous improvement. In Taiwan, the government has developed a “shadow web” [www.gov.tw](http://www.gov.tw) that works in parallel to the official web to help the design, testing and more accelerated introduction of new public services.

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#### **Taiwan’s “Agile” digital services design using gov.tw “Shadow Webs”**

*In Taiwan, the government uses “shadow webs” to speed up design and delivery of new government services. The shadow webs work in parallel with the official web. Citizens can use the shadow by replacing the gov.tw by gov.tw using an experimental version. Designers learn, iterate and improve based on the user-collected data and experiences, until the experimental is ready to replace the original one.*

*Source: Alistair Croll, “Pursuit of perfection the enemy of digital government”, Institute for Research on Public Policy, Quebec, Canada, January 2019.*

*<http://policyoptions.irpp.org/magazines/january-2019/pursuit-of-perfection-the-enemy-of-digital-government/>*

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What is interesting about DT is that organizations have the possibility of learning from users. As services are used, digital allows the TPO to learn what works and what doesn’t and change as you go. It is possible to use analytics to understand better the reaction and needs of customers. In some cases, this learning model could use the concept of “Minimum Viable Product” (MVP), i.e. the least complete thing that the organization could create to test an idea. However, it should be noted that MVP approaches should be used with care and within a well-defined risk strategy as they could lead to oversights or vulnerabilities in issues like data security or privacy. In any case, the application of “agile” modes of operation and service definition may require a shift in the risk appetite of the organization as it would need to give staff permission to experiment.<sup>12</sup>

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<sup>12</sup> Alistair Croll, “Pursuit of perfection the enemy of digital government”, Institute for Research on Public Policy, Quebec, Canada, January 2019. <http://policyoptions.irpp.org/magazines/january-2019/pursuit-of-perfection-the-enemy-of-digital-government/>

## Part 2: The Impact of Digital Transformation on Trade Promotion Organizations

TPOs are under constant pressure to respond to the changing needs of their clients and the opportunities arising from new modes of trade. Digital Transformation (DT) will increasingly play a central role in the capacity of TPOs to provide this support, but only when properly implemented as part of a wider transformation of strategy and culture and incorporating the principles described in Part 1. The impact of this transformation will be felt on all aspects of the organization, including:

1. Value proposition
2. Governance and resources
3. Strategy and structure
4. Client management
5. Service architecture
6. Back-end operations
7. Performance monitoring and impact evaluation systems

### DT and TPOs value proposition

Digital transformation is affecting the value proposition of TPOs in terms of their economic justification and their role within the new context of the digital economy and international trade.

TPOs are normally justified on the basis of market failures, primarily in terms of information externalities. The costs of searching for new partners and new buyers in foreign markets and the possibilities of free riding by other firms, may be higher than the potential returns of internationalization for many small and medium enterprises (SMEs). This can discourage and limit the number of SMEs that seek to expand internationally and strongly impair their capability of competing with larger firms. TPOs try to reduce this gap and provide a more levelled playing field between firms of different sizes to compete internationally. Numerous studies have in the past demonstrated the positive impact of TPOs on the internationalization of firms, particularly of SMEs.<sup>13</sup>

It could be argued that digital technology can help address these market failures, thus reducing the justification for TPO's and their value proposition. Indeed, the existence of a wide range of market information and export "self-service" support possibilities in the web, as well as the growing number of e-commerce channels will eventually reduce the gap between SMEs and larger companies in terms of availability of information and access to international buyers. SMEs could, in theory, have access through the web to a wide range of sources of market information

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<sup>13</sup> For more detailed discussion on market failures, externalities and impact of trade promotion see for example:

Lederman, Daniel, Marcelo Olarreaga and Lucy Payton (2010). Export promotion agencies: Do they work? *Journal of Development Economics*, 91 (2), 257-265.

Ollarreaga, Marcelo, Sperlich, Stefan, and Trachsel, Virginie (2016). Investing in Trade Promotion Generates Revenue, International Trade Centre, Geneva.

Volpe, Christian and Carballo, Jeronimo (2008). Is export promotion effective in developing countries? Firm-level evidence on the intensive and the extensive margins of exports. *Journal of International Economics*, 76:89-106.

and market data free or at relatively low costs. Moreover, many SMEs are increasingly able to promote and market their product and service offering to national and foreign buyers through e-commerce at relatively low cost. In addition to those e-commerce platforms and virtual marketplaces, there are at least two other new type of service providers that can offer competitive services to TPO’s traditional SME clients (see Table 1).

*Table 1: New players in trade promotion and categories of services provided<sup>14</sup>*

E-commerce platforms and virtual marketplaces	Logistic operators	Search Engines
<ul style="list-style-type: none"> <li>•Advocacy</li> <li>•Capacity Building</li> <li>•Information</li> <li>•Promotion</li> </ul>	<ul style="list-style-type: none"> <li>•Advocacy</li> <li>•Information</li> </ul>	<ul style="list-style-type: none"> <li>•Information</li> </ul>

The availability of digital options is reducing not only the “information gap” but also the “distance” obstacles to trade. In a study completed at the end of 2011 that uses eBay cross-border transactions and comparable offline trade flows, it is argued that online technologies reduce search costs associated with geographic distance by 65% in relation to offline alternatives<sup>15</sup>. However, other studies state that the “Gravity Equation” still holds in international trade -particularly for smaller firms- and as long as businesspeople still engage in direct communication and interactions with clients and suppliers, the level of trade between countries still remains inversely proportional to distance<sup>16</sup>.

Though there is still insufficient evidence, it is possible to question whether the new possibilities open by digital options for SMEs to access information, training and new markets are undermining the traditional justification for the existence of TPOs and their role. Digital options seem to expand the possibilities of SMEs in terms of accessing certain *levels* of information, training and promotion. On the other hand, not all SMEs have the same capacity (level of human resources and financial resources) that big companies have, to select,

*Table 2: The traditional roles of TPOs*

<p><b>Advocating</b> to key actors that participate in the export process</p>	<p><b>Developing</b> the capacity of local firms to internationalize</p>
<p><b>Providing information</b> to find, select and develop new markets</p>	<p><b>Connecting to promote</b> market entry and market development actions of firms in foreign markets</p>

<sup>14</sup> For actual examples in **E-commerce platforms and virtual marketplaces** see Ebay Seller Center: <https://pages.ebay.com/seller-center/index.html> , **logistic operators** see Maersk-IBM Digitizing Global Trade <https://www.ibm.com/blogs/blockchain/2018/01/digitizing-global-trade-maersk-ibm/> , **search engines** see Google Market Finder: <https://marketfinder.thinkwithgoogle.com/intl/en/>.

<sup>15</sup> “There Goes Gravity: How eBay Reduces Trade Costs”: Andreas Lendle, Marcelo Olarreaga, Simon Schropp, Pierre-Louis Vezina, (December 2011), Available under: <http://www2.unine.ch/files/content/sites/irene/files/shared/documents/s%C3%A9minaires/Olarreaga.pdf>

<sup>16</sup> Thomas Chaney , The Gravity Equation in International Trade: An Explanation, NBER Working Paper No. 19285, August 2013, JEL No. F1.

filter and analyze the information available on the web or through specialized data suppliers.

Large firms can invest in analytical tools and skilled staff to select, filter, analyze and integrate large volumes of information and data, including model-building. SMEs have substantially less capacity, not only in terms of systems but mainly in terms of skilled human resources to undertake those actions<sup>17</sup>. TPOs can play an important role helping SMEs to overcome important challenges by ensuring better access to data and analysis for decision-making, including through practical applications; providing a pool of data talent who can deliver analysis and advice on internationalization; and advocating for less restrictive data policies and improved access to data across borders. On the other hand, at least in some sectors, businesses continue to rely on analogue business development and commercial partnerships and in these cases, TPOs will continue to have a justified role in terms of searching contacts and promoting trusted partnerships.

In terms of the value proposition of TPOs and the new economic and trade context, it is important to acknowledge that the economy is increasingly based on knowledge and data. Digital trends increasingly permeate most economic activities while at the same time enabling new actors to engage in commercial activity at the local, national, and even international level. New modes of international trade seem to move away from trade between countries to be increasingly trade between firms (B2B) where private standards are growing in importance relative to tariff or non-tariff barriers. Furthermore, there are new modes of international trade between firms and households (B2H) and even international trade between households (H2H). These changes in international trade should be taken into account when considering the mandate and success of TPOs, particularly for their SME clients.

In a recent article, Dan Ciuriak and Maria Ptashkina introduce a classification of trade modalities that incorporates the impact of digital on the transformation of international trade<sup>18</sup>. The changes that digital is introducing on how individuals and firms conduct international commercial transactions should have a direct effect on the role that TPOs play. The authors identify five new different modalities in relation to digital trade:

- ▶ Mode1: “Digital to real” – refers mainly to provision of digital services, mostly by large international providers like Google, WhatsApp, Skype, Netflix, etc.;
- ▶ Mode 2: “Real to real B2B and B2H” (business to household) transactions with digital intermediaries like digital marketplaces;
- ▶ Mode 3: “Real to real H2H (household to household) with digital intermediaries like eBay, Uber, Airbnb, etc.;
- ▶ Mode 4: “Real to real H2B (household to business) transactions with digital intermediation, mainly platform-based providers of household services to business (e.g. Fiverr, Upwork...);

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<sup>17</sup> World Bank. 2019. *Information and Communications for Development, 2018: Data-Driven Development*. Information and Communications for Development. Washington, DC: World Bank, page 75.

<sup>18</sup> Ciuriak, Dan and Ptashkina, Maria, *The Digital Transformation and the Transformation of International Trade* (January 23, 2018). RTA Exchange. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and the Inter-American Development Bank (IDB). Available at SSRN: <https://ssrn.com/abstract=3107811>

- ▶ Mode 5: “The capitalization of data flows” refers to the commercial exploitation of data generated over the internet of things and other financial and personal data of online consumers with cross-border flows.

In terms of Mode 1, through advocacy and coordination roles, there is potential for TPO involvement and possible collaboration with other countries’ TPOs, in the question of data access and data localization<sup>19</sup> to facilitate trade of digital goods and services. TPOs would not only need to work with other government and private sector bodies to be able to manage and use a much broader base of existing data but also establish new, joint -whole of government- services. Moreover, TPOs might need to expand or facilitate data flows across borders and coordination -looking at integrating better their SME clients- within global supply chains.

TPOs would normally have limited intervention in transactions related to modes 3 and 4 because they normally do not provide support to individuals which are the main actors in those modalities. By contrast, the potential for TPOs to provide support under mode 2 is wide with the possible requirement of developing new functions and services.

In terms of information, market intelligence and capacity building, TPOs will continue and expand their support for the selection of suitable e-marketplaces and training to access as well as use e-marketplaces effectively. Promotion will also need to adjust to incorporate e-marketing and promotion as well as helping SME service providers to insert in “trade in tasks” of global supply chains, including advocacy and support to access the digital supply platforms of large firms.

In relation to mode 5, it is important to note the increasing awareness among TPOs about the need to work within the existing network of digital infrastructure and supporting clients to be able to maximize the benefits of the existing infrastructure rather than trying to duplicate efforts or compete with existing dominant players.

So, the key roles that TPOs have played in internationalization support: advocacy, information, capacity building and promotion, are under deep transformation or being challenged. Much will depend on how TPOs react and change to adapt to the new conditions. On the other hand, more empirical evidence from new studies will be necessary to measure the impact of TPOs within this new context of increasingly “digitalized” international trade and the extent to which TPO roles and value proposition are still valid relative to alternative service providers.

## DT and TPO’s Governance and Resources

The digital transformation of TPOs will drive the agencies to incorporate clients and partners more actively in their governance. TPOs will need to work closer with clients and other partner agencies. With clients, the agencies will develop new “digital by default” services that look at the company within a more integrated approach to internationalization using existing data and analytics to better understand their collective, market-segment, or even individual needs. In addition, TPOs will also need to involve more their clients in the process of developing new service options as well as with other organizations to advance “whole of government” initiatives and even common service offerings. The above trends will increase the importance and advantage of integrating the private sector and other partner agencies in the governance of TPOs as well as the active participation of the TPO in the governance of other key partners.

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<sup>19</sup> It mainly refers to restrictions that countries establish to data storage and data transmission.

Pressure to merge different agencies (e.g. the merging of FINPRO and TEKES into Business Finland) will probably increase as well.

On the other hand, the increasing use of big data within interoperating systems will enhance the importance of transparency as well as governance and risk management in the use of data, raising important questions on data preservation, ownership, and security. As different government organizations evolve to agree on common and intermediate objectives and work together, there will be an increasing need for transparency in terms of operations and, above all, in terms of results measurement. This is an opportunity for TPOs to overcome the current limits that performance and impact evaluation systems have in relation to data and results that should be supplied by other government agencies.

Common standards in the use of data and results measurement will need to be agreed upon among the different partners. Furthermore, TPOs will need to develop, in close collaboration with central government and/or other partner agencies, data management systems, standards and protocols that ensure digital security and respect privacy rules and legislation. In some cases, advocacy for adaptations in rules and legislation may be necessary to remove current obstacles to the digital transformation of government services.

In terms of resources, during the last 10 years, fiscal pressures and the need to provide better value for money to governments and stakeholders often resulted in budget reductions and mergers of trade and investment promotion agencies. The new digital options and technical possibilities may provide another round of pressure on all government funded business support programs to integrate within a more client-oriented and “whole of government” approach. It should be recognized that for most TPOs, coordination with other agencies has been challenging. The difficulties encountered by most TPOs to be able to obtain and use data from other agencies for result and impact measurement are just one striking example. However, growing pressure to integrate support programs could be expected as governments more fully implement digital programs in other public services areas (particularly social support and health support programs). As a result, whether within new merged institutions or in partnership with other agencies, TPOs will not be able to work in isolation. TPOs will need to find new, more integrated ways of working and sharing resources with other agencies.

## DT and TPO’s Strategy and Structure

TPOs normally face a trade-off in terms of their strategy and utilization of resources:

- ▶ Spread: to maximize the number of firms assisted
- ▶ Focus: concentrating resources in a limited number of firms with highest potential

Figure 1 illustrates the trade-off. In reality, most TPOs do not operate under any of the two “pure” strategic limits of the trade-off curve but place themselves somewhere along the curve into relatively mixed strategies that combine the two extremes under different proportions.

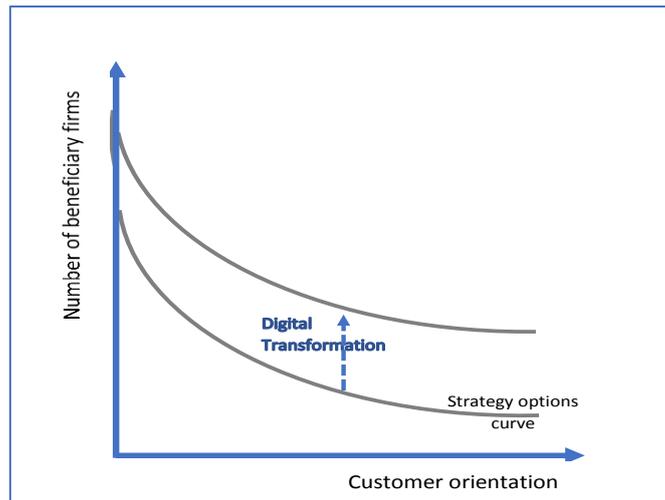


Figure 2: Effects of DT on Internationalization Support Strategy Options

In general, those TPOs that emphasize more the objective of reaching a large number of beneficiary firms apply a more “service-oriented” strategy; those that tend to focus more on a limited number of beneficiaries normally apply a more “customer-oriented” strategy.

As mentioned, digitally transformed organizations are those that are data-driven and use their digital abilities and possibilities to apply much more customer-oriented strategies. But the use of data and other digital instruments opens the possibility of reaching a much higher number of beneficiaries at very low marginal cost, with more customer-oriented services per level of resources.

Figure 1 illustrates the effect that digital transformation could have on the strategic options of TPOs. Organizations move along the Strategy Options Curve to select a trade-off between the level of customer orientation and the number of beneficiaries that they expect to reach with a given level of resources. As noted, most organizations do not adopt “pure” strategies but more of a mix along the strategy options curve, depending on the proportion of resources that they allocate to tailored support services. The adoption of a more customer-centric strategy mix that invests a large proportion of resources on more tailored support will limit the number of beneficiaries relative to the level that the organization could reach applying a more service-oriented strategy mix with less resources invested in more tailored support. DT allows organizations to shift the trade-off curve upwards as the introduction of DT principles and technological solutions facilitates the reach and scope of TPOs to a much larger number of firms with more tailored customer-centered services. It is worth noting that empirical studies have demonstrated that longer term support and the provision of repeated or bundled trade support services tailored to the needs of firms yields higher impact.<sup>20</sup>

<sup>20</sup> For empirical studies on the impact of repeated or bundled trade support services, see for example:

- Amador, J., Opromolla (2008) Product and Destination Mix in Export Markets, *Banco de Portugal Working Papers 17*, 2008
- Chen, Shenjie, (2010) Evaluation of Canada’s Trade Commissioner Service (TCS) Program, Presentation at IDB INTAL Executive Course 2010, Office of the Chief Economist, Foreign Affairs and International Trade Canada, November 2010

The strategic shift from service-oriented to more customer-oriented trade promotion strategies could become increasingly important thanks to the availability of new digital tools. The tools not only allow organizations to reach more clients but also to differentiate, customize and tailor their services to the needs of new, more and more specific segments of clients and, even, specific clients. This is already the situation in private business and TPOs will feel more pressure for customized support from clients that are increasingly used, either as providers or as users, of more targeted and tailored services in the market. A common complaint of clients in relation to many TPOs is that their information or services are not sufficiently specific to respond to their needs.

Several TPOs are responding to the need of expanding their reach with the expansion of on-line training options but there is scope to go further, mainly in terms of scope. The customization of training can be taken even further through existing technological solutions like artificial intelligence-powered learning platforms able to personalize learning and/or microlearning (bite-size learning modules). Similar strategies could be applied to other services opening the way to reach a much larger number of beneficiaries with a wider scope of market intelligence and trade promotion solutions customized to the specific needs of clients or categories of clients.

Changes in the strategy should be reflected in TPO's organizational structure. Many organizations have developed a structure that is either based on industrial and/or goods sectors and/or on off-line program or service lines. A re-organization based on a client-oriented strategy and the need to design "digital first" new solutions will probably break existing structures. DT might influence a reduction in the hierarchical levels of the organization based on an empowerment of staff and an increase in the importance of ad-hoc project teams, particularly those charged with the development of new "digital- by-default" services. The new project teams in the digitally transformed TPO may even include members from other partner organizations as TPOs work around new "whole of government" solutions. PROCOMER of Costa Rica is already expanding the use of teams that are built around ad-hoc projects. The teams are built based on talent and expertise under leadership and distribution of responsibilities that not necessarily correspond to the hierarchical levels of the formal organizational structure.

An increased empowerment of staff and organization of work through ad-hoc project teams might entail a certain de-construction of current -relatively rigid- structures as well as changes in the competency framework of the organization. The organization might de-construct and become much more fluid. In terms of competencies, there might be an increased demand for talent related to understanding of services sectors, data analytics, digital tools and channels of communication, among other new competencies. Development of positive working relations and collaboration with other public or private delivery partners could also become increasingly important. The organization might need to open-up, collaborating with and delivering through a variety of partners. The delivery network will integrate new digital channels and other public or private service providers, further impacting on existing organizational structures.

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- Eaton, J., Eslava, M., Kugler, M., Tybout, J (2007) Export Dynamics in Colombia: Firm Level Evidence. Laurier Business and Economics Department Working Paper Series 2007-04 EC: Wilfred Laurier University, Ontario, Canada.
  - Volpe-Martincus, C. and Carballo, J. (2010) Export Promotion: Bundled Services Work Better, The World Economy, Volume 33, Issue 12, December 2010, pp. 1718-1756.

## DT and client management

DT opens TPOs the possibility of changing how the TPO engages with its clients. The application of DT principles in the organization and the introduction of new technological solutions would allow TPOs to:

- Understand better their customers and customer needs;
- Transform the client relationship experience; and
- Establish new channels of communication and touch points.

**Understanding customers and customer needs.** The combination of “interoperability”, “whole of government” and data analytics provides TPOs an opportunity to dig into existing government databases to understand the structure and behavior of registered firms. In addition, analysis of big data produced by e-marketplaces, search engines and other business transaction sources opens new possibilities of understanding the universe and behavior of companies both in the domestic and international markets, which in turn enables TPOs to introduce new ways of segmenting current and potential clients. Better understanding clients’ specific needs would allow TPOs to design and iteratively adjust their strategy and service architecture (who to support and what kind of support or services). But DT should also allow TPOs to go even further in two important ways. One is using the opportunities that DT creates in terms of involving customers in the design of new services and solutions through feedback mechanisms and agile product design. The other is using artificial intelligence (AI) to personalize digital support delivery programs.

**Transforming the customer relationship experience.** Digital means and channels allow TPOs to develop new ways of connecting the trade promotion agency and its clients. Using the “once only” principle, TPOs will greatly facilitate the relationship with clients by minimizing their provision of data to the organization. The implementation of “once only” will allow the TPO to reduce the administrative burden for clients by re-organizing its internal processes, instead of making clients adjust to existing procedures. A good client registration and fully implemented CRM system would facilitate the implementation of the principle and greatly enhance the efficiency and effectiveness of the TPO’s management of its relations with clients. The integration of the TPO with other government support systems with interoperability and applying a “whole of government” approach will also radically change the way clients relate not only with the TPO but potentially the range of other government services aimed at firms.

Another important possibility opened by DT is the use of “Self-service interactions” or the possibility of using interactive web channels to introduce a wide range of self-service interactions (registrations, export readiness tests, training programs, etc.). This trend will continue to intensify, leading to 24/7 TPOs that can provide some level of service and outreach to new clients at very low marginal cost. The intensification in the use of these tools and the expansion of the services that it could provide through digital channels would allow the agency not only to expand the total number of companies that it could reach and support, but it would also improve its capacity to register all transactions and relationships (intensifying the use and utility of its CRM and improving its capacity to measure its results and impact). It would also affect the structure and content of the TPO service architecture.

**Establishing new channels of communication and touch points.** As communications evolve from personal interactions, telephone, and email to the use of digital channels and social networks, TPOs need to adapt their communication strategy and service delivery channels.

Clients will increasingly demand more instant decisions, instant contacts and instant support/services using applications, self-service and social networks. UNA is a virtual support assistance service offered by the business registry organization of Latvia that provides an example of how AI can be used to develop answers to frequently asked questions of users (see example below).

The above trends will have direct consequences on client management and on the structure and operations of TPOs as well as on the skills that its staff should have. For example, if in the past, a company needed support to understand its export logistic options for a specific shipment, an executive might have called or emailed its TPO Account Manager for information. The Account Manager would investigate and respond back to the client by email or phone in a week's time to satisfy the request. Today, the client would be looking for a self-service app that would allow them to model various scenarios and options to get immediate estimates on logistic options and costs. The same pattern could be projected to other possible TPO services as clients look for instant information, options and solutions to their internationalization efforts or trade operations.

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#### **UNA – the first virtual assistant of public administration in Latvia**

*The Registry of Enterprises of the Republic of Latvia is using artificial intelligence technologies to provide answers in writing, in Latvian to the frequently asked questions of the clients. The virtual assistant works 24/7h on the website of the Register of Enterprises as well as on the Facebook Messenger application of the Register of Enterprises.*

*Establishment of the virtual assistant UNA is a step in the strategic 2020 target of the Register of Enterprises of allowing clients remotely and regularly (without support of mediators) to perform registration of legal entities and legal incidences. The virtual assistant substitutes a visit in presence or call to the call center.*

*To create the virtual assistant, the Register of Enterprises agreed to cooperate with the Latvian company Tilde, specializing in the use of the artificial intelligent technologies. The platform uses neuron networks and natural language technologies to ensure that it is possible to freely communicate with the virtual assistant, like with the employee of the Register of Enterprises. The virtual assistant UNA is an assistant for change management processes of the institution, providing a possibility for employees to substitute the technical routine work, enabling them to focus on the work of higher value added.*

*The virtual assistant is regularly “learning” from staff of the Register of who are “teaching” the virtual assistant on the preparation of new answers to questions as well as from communication with clients, constantly expanding its areas of competence.*

*Source: Observatory of Public Sector Innovation OPSI, Case studies.*

<https://www.oecd-opsi.org/innovations/una-the-first-virtual-assistant-of-public-administration-in-latvia/>

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## DT and Service Architecture

DT impacts the economy, markets and ultimately businesses in a wide variety of ways. Businesses need to constantly adapt and change within a VUCA (Volatile, Uncertain, Complex, Ambiguous) environment that keeps moving the competitive line or horizon. SMEs are experiencing new possibilities as well as new challenges which in the end determine new support needs. SMEs confront the effects of DT on the digital modification of existing business;

the emergence of completely new business models based on digital; and the increasing globalization and digitation of trade and information flows.

The economic and business environment are different and there is an increasing number of new, different type of companies, particularly service related, digitally intensive and, sometimes, born global. Business models change. In some cases, companies can shorten the connection between them and their foreign end-users, eliminating intermediaries (consolidators, agents, distributors, etc.) that have been, up to now, important players in international markets. In other cases, digital determines new more customized design and production possibilities, transforming the way products are manufactured and distributed, changing the usual pattern of international logistics. This situation brakes the traditional business models and needs of SMEs and may question current TPO client segmentation methods and, above all, client service architectures. TPOs need to change the structure and content of their services to keep pace with the new challenges and support needs of their clients. The effect take at least two dimensions: one is a transformation in the way the TPO operates and delivers; the other is the incorporation of new content.

In terms of a transformation on how TPOs deliver, the new business conditions will push TPO's to become more client-centered, coordinating their support with the assistance provided by other organizations (public or private) that point at improving the competitiveness of firms. Within that integrated system of support, TPOs participate by facilitating the access of those firms to an increasingly globalized market. The integration of services with other organizations like SME support agencies, innovation support agencies, financial support programs, etc., becomes ever more necessary because the boundaries between domestic and international competitiveness are being eroded. The service architecture of the TPO needs to take into account the coordination and integration with other support agencies to provide a more customer-centered integrated support.

On the other hand, TPOs face an increasing demand for new services related to digitally operated global markets. Business Finland provides an example of how a TPO has been adapting the content of its service portfolio offer to address the capacity of its clients to compete in the most advanced digitally related markets including artificial intelligence, smart mobility, intelligent industries, mixed reality and e-commerce incorporating a more integrated approach that includes advocacy, training, capacity building, investments and promotion.<sup>21</sup>

The new service architecture needs to take into account the new international market conditions as well as the new modes of digital trade. TPOs will need to restructure their service architecture introducing new services (content) that are designed “digital by default”, integrated with other support agencies and client-oriented (operations and modes of delivery).

Table 3 provides, if not comprehensive at least some initial analysis on the key or classic roles of TPOs across the world and how some new digital technologies are impacting or could impact on their service offering. In some cases, traditional services like capacity building will continue, but transformed in terms of content or how the TPO will operate and deliver them. In other cases, the new market and technological conditions will determine the need to incorporate completely new services.

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<sup>21</sup> For more detailed information see Part 3 of this report.

TABLE 3: DT and TPO's service architecture

Key Service lines	Digital trends	Impact on TPO's Services
ADVOCACY AND COORDINATION	<ul style="list-style-type: none"> <li>Increasing use of cloud technology in government;</li> <li>Rise of alternative knowledge sources and knowledge brokers;</li> <li>Growth and power of digital platforms;</li> <li>Data localization regulations and restrictions in the international flow of data.</li> </ul>	<ul style="list-style-type: none"> <li>Advocacy with national authorities and other partner public entities to improve access, flow and use of relevant data, including across borders</li> <li>Increasing role as "Whole of Government" integrators, to improve data sharing, setting up systems that bring together the systems and data sets of different agencies;</li> <li>Shift from coordination with other government agencies to a more integrated system to manage all government support and government interactions with the firm;</li> <li>Shift from a program or service-oriented organization to a multi-agency integrated customer-oriented strategy.</li> <li>Advocacy with digital platforms to facilitate the access to platforms and flow of information to SMEs, including across borders;</li> <li>Increasing importance of TPOs as builders, brokers or hubs of networks that support the internationalization of SMEs.</li> </ul>
CAPACITY BUILDING	<ul style="list-style-type: none"> <li>Artificial Intelligence and Data Analytics including Predictive and Advanced Analytics (PAA)</li> <li>MOOC (Massive Open Online Courses)</li> <li>Artificial intelligence-powered learning platforms able to personalize learning;</li> <li>Microlearning (bite-size learning modules);</li> <li>Gamification and game-based learning;</li> <li>Video learning</li> </ul>	<ul style="list-style-type: none"> <li>Data-driven integrated internationalization training curricula or programs centered on the firm, based on the most frequent needs and weaknesses of target SMEs in collaboration with other business support agencies to provide a more wholistic approach to the international competitiveness of the firm.</li> <li>Shift from standard training offer to more targeted and personalized digital training, adapting the training experience to the capabilities and needs of each customer, or -at least- categories of customers.</li> <li>Increasing role of TPO as broker leveraging existing content from other national or international sources or as broker between firms that can share information and experiences</li> <li>Increasing importance of DT issues, digital access, digital competitiveness and e-commerce in the content of training programs, including digital capacity building.</li> </ul>
INFORMATION	<ul style="list-style-type: none"> <li>Big Data</li> <li>Artificial Intelligence and Predictive and Advanced Analytics (PAA)</li> <li>Digital market research private service providers and other alternative platforms and sources of knowledge</li> </ul>	<p>Evolve:</p> <ul style="list-style-type: none"> <li>From provision of generic information to provision of specific data <i>and</i> analysis;</li> <li>From provision of generic country studies and product/market studies or generic opportunities to customized analysis and opportunities tailored to the customer;</li> <li>From provision of reports to facilitation of apps and other digital "self-service" options;</li> <li>From production of information to analysis and the facilitation of access to selected private or public trusted sources of data: TPO as hub or door to data infrastructure and AI platforms;</li> <li>Increasing importance of selecting the most appropriate e-marketplaces for each firm and product.</li> </ul>

Key Service lines	Digital trends	Impact on TPO's Services
PROMOTION	Big Data  Artificial Intelligence and Predictive and Advanced Analytics (PAA)  E-marketplaces	<ul style="list-style-type: none"> <li>● Adjust the selection of marketing and promotion strategies and events based on data and impact (“What works”);</li> <li>● Market entry and promotion strategies more tailored to the needs and capabilities of each customer;</li> <li>● Increasing efforts to facilitate access to and promotion in e-marketplaces in destination markets;</li> <li>● Increase the expertise and capability to facilitate the use of social networks in destination markets.</li> </ul>

## DT and Back-end Operations

In terms of own back office or its operations, TPOs are increasingly digitalizing and automating their existing administrative and financial processes. It is an ongoing reality and most TPOs have adopted a wide number of IT solutions to operate their standard back office operations. But DT means going beyond the digitalization of *existing* processes towards a complete re-definition “digital by default” of the organization, its services and its supporting processes.

In terms of operational excellence, DT should take into account the following:

- ▶ A new digital workplace strategy and customer-centered culture
- ▶ Staff skills and staff empowerment
- ▶ Review of processes for simplification and streamlining
- ▶ A coordination and collaboration strategy
- ▶ Digital infrastructure and interoperability of systems
- ▶ IT security and data protection

The new operational model should rest on a new workplace strategy and culture away from bureaucracy and process to customer focus, operational simplicity and transparency. The customer focus is reinforced by the incorporation of customers and customer feed-back in the re-design of the organization. New operating processes, particularly those that are directly related with customer management, should be defined or re-defined working in close collaboration and taking due account of the opinion of customers.

Working on staff culture and skills are also important to provide adequate support to the transformation. In principle, DT generates and is built on an empowerment of staff, but the organization needs to reinforce the cultural attitudes and the digital/technological skills that could underpin that empowerment. Staff need to be trained and empowered to experiment, being “agile”, getting used to introduce interventions that are lean and “good enough” and seek feed-back from and engage with users.

New digital tools are providing more independence and mobility to TPO staff. Some organizations are using the new information technologies to empower and give increasing independence, but also accountability to their staff. There are increasing possibilities of taking advantage of de-location and staff can work from anywhere, home, head office, branch offices, close to the client, on the road... But as staff is empowered and liberated from physical presence and controls, there is an increasing possibility of assessing the performance of staff through the

information trail that they leave and by the actual results of their activities. In Costa Rica, PROCOMER has made intensive use of its CRM system to track and evaluate the performance of its client management staff.<sup>22</sup>

The new DT principles and accompanying technologies (“once only”, “interoperability”, “data analytics”, “whole of government”, etc.) provide an opportunity for streamlining and simplifying operating processes. Those organizations that have initiated this journey, most frequently initiated the transformation concentrating first on those processes that are more labor-intensive and that consume the largest budget requirements.

It is important to consider the increasing possibility of using, crossing and analyzing the large amount of information that the new operating systems are generating. Not always the different systems are properly connected (e.g. CRM and Financial Management System) to be able to provide new relevant and useful analysis. The operating systems should be designed and implemented taking into account the need to promote collaboration within the TPO and coordination with other agencies that work in partnership to provide a more integrated -possibly cloud-based- system of support to firms. The TPO needs to establish a strategy and a plan to proactively develop operating partnerships with public and private business support organizations to share data and to make their data processing and data base systems interoperative, among other objectives.

DT also requires the organization to review its portfolio of systems and create a complete data ecosystem, including data standards and technologies to support the full data lifecycle of storage, processing, analysis, visualization, sharing and preservation. One important aspect of the ecosystem is the agreement of data standards and IT security and data protection protocols.

### DT and Performance Monitoring and Impact Evaluation

DT, with its great emphasis on data, facilitates monitoring and evaluation. New digital tools allow the organization to keep control of its management performance even with a diverse situation of de-located staff. Customer facing processes are also de-located and managed and controlled through available tools like CRM. In addition, the use of digital tools allows the organization to align and keep control of its internal processes, facilitating the access of staff to standard procedures (including applications) and improving the capacity of the organization to keep better control of quality of delivery. Ultimately, all the information produced through new digital tools also allows to accumulate and analyze the information produced by all staff in the process of their operations, facilitating the implementation of an objective information-based performance evaluation system. In Costa Rica, PROCOMER made the CRM and its CRM-based performance evaluation system the centerpiece of its client management and organizational operations model. The model has been highly successful producing high levels of client and staff satisfaction.

It is interesting to note some differences that exist between the customer management strategies of different agencies in relation to the provision of digital solutions and services. Some agencies require prior registration of users to be able to access some -or all- of their e-services. Other TPOs provide open access to their e-solutions or services to all users, normally accessing through their main website. Prior registration allows the TPO to include users that fit certain criteria into their CRM system and subsequently track their activity and, eventually, their results.

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<sup>22</sup> For more details see Part 3 of this report.

The gradual transformation of the TPO into a more virtual service provider and the increasing importance of digital services and solutions within their service architecture enhances the importance of finding practical ways for registration, tracking and result measurement of customers under DT logic.

The capacity of the TPO to measure its performance could also be enhanced by better access to more data opened by collaboration with other agencies through “whole of government” initiatives, the interoperability of their respective data repository systems and new data analytic tools, including AI. Access to a bigger repository and scope of data will allow TPOs to go beyond performance evaluation and explore more in terms of assessing impact. Ultimately, data analytics will facilitate more studies on what works and what doesn’t as well as on the reaction and behavior of clients in relation to the portfolio of services, improving the capacity of the organization to “fine tune” its service offering and its operations in a process of continuous improvement and maximization of returns. Moreover, data analytics opens completely new, and potentially more affordable, opportunities to assess the impact of trade and investment promotion activities.

## Part 3: Examples of TPO digital initiatives

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The digital transformation of TPOs is underway, but with uneven implementation across organizations. This is still a newly emerging topic so there is probably no single TPO that can be considered a benchmark of best practice. Rather, there are lots of good examples of initiatives springing up across the globe. This third section of the report introduces some particularly interesting examples though this is by no means a comprehensive survey.

### **AUSTRADE –Strategy first -**

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AUSTRADE is putting strategy first in the road to its digital transformation. The organization has been providing support to facilitate the access of Australian exporters to e-marketplaces at least since 2015. In 2018, the organization decided to advance towards a new phase of strategic digital transformation.

The organization developed a series of market-focused e-commerce guides and videos. In 2017/18 launched its “Guide to Online Exporting” to help exporters understand the business models available to use e-commerce as a market entry channel. The guide is delivered on AUSTRADE’s website (<https://www.austrade.gov.au/ecommerce-guide/guide/about-this-guide>) and is regularly updated with new information as the online environment evolves. The organization also conducted ongoing research and produced written guides for a range of markets in Asia. In 2017–18, as part of Austrade’s strategic collaboration agreement, Alibaba launched a dedicated channel on their youku.com video-sharing platform to promote Australian products. In addition to developing relationships with major online platforms in China, AUSTRADE began discussions with platforms in other markets, with a focus on Southeast Asia, to understand their operating models and educate Australian exporters on opportunities and direct-to-consumer supply chains .

In 2018, AUSTRADE advanced further into digital. The organization revisited its Strategic Priorities 2018–2022 to include a 14-point “transformation plan”. The strategic priorities and the transformation plan put clients at the center of all organizational activities; look for opportunities to improve the delivery of services and expand their reach and impact; aim at strengthening internal decision making; and look at reducing duplications by increasing collaboration and partnerships. The plan covers all aspects of AUSTRADE’s operations starting with four core projects<sup>23</sup>:

1. A new client segmentation and service delivery model;
2. A digital and data strategy and execution roadmap;
3. A partnership strategy across federal, state and territory governments and industry; and
4. New ways of working based on agile and human-centered methodologies.

The digital and data strategy points at the transformation of AUSTRADE into a “digital first” agency including delivery of services digitally, the development of a digital workplace and culture

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<sup>23</sup> Source: AUSTRADE Annual Report 2017/18.

and an intensification of the use of data. As of early 2019, the so called “Alpha Digital Strategy” pivots around four themes that are closely linked with the transformation strategy<sup>24</sup>:

- Better **services** for clients, delivering digital services for businesses that are quick and easy to use, with simplified end-to-end tasks;
- Better **tools** for Austrade’s staff, to facilitate the search and share of information, simplify working and sharing with Austrade’s partners, and free up staff time so they can focus on higher value activities;
- Increased **capability** across teams, developing the digital capabilities of Austrade’s staff so the organization can better understand what digital can (and can’t) do, use agile and human-centred practices in teams, and help staff use data in their everyday work;
- Improved internal **processes** to facilitate the delivery of services, make it faster to deliver new services and keep improving AUSTRADE’s existing services in the future.

In 2019, the organization is already working on a few initiatives that fit these themes, like prototyping new services and rolling out Office 365 to all staff. AUSTRADE is also interested in exploring digital partnerships within the trade and investment ecosystem with the many organizations that collectively provide offerings that help exporters and investors.

The performance of the Alpha Digital Strategy will be measured on two dimensions: client-related and staff-related.

Client related indicators:

- Increased levels of user satisfaction
- Increased time saved
- Increased digital take-up, where online and offline services co-exist
- More services meeting the Digital Service Standard

Staff related indicators:

- Shorter time to complete common day-to-day tasks
- Increased digital capability of the workforce (e.g. as a greater proportion of staff who work directly with data)
- Faster time to the delivery and iteration of services
- Improved quality of client data across organizational systems

In terms of better **services** for clients, the Digital Transformation Team started work on new digital services: the first is an online tool that will make it easier for exporters to find relevant information to help make an export decision. A team of user researchers have been meeting with a wide range of businesses across Australia and overseas, to understand their trade and investment needs. One of the consistent pain points identified in this research was information overload. Businesses feel like there’s too much information from many different places. To address this need, at the beginning of 2019 Austrade started prototyping a new digital service to help new or existing exporters to find the right information to make an export decision —

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<sup>24</sup> Source: Jordan Hatch, Deputy Chief Digital Officer AUSTRADE, blog posted Feb 12, 2019: “ What’s Austrade doing about digital?” <https://medium.com/austrade-digital/whats-austrade-doing-about-digital-9827b25d128f>

regardless of whether that information is from AUSTRADE or somewhere else.<sup>25</sup> The so-called “Global Business Support Finder” public beta version was released in April 2019<sup>26</sup>. The “Finder” facilitates businesses to find the right information to do business in selected countries. The current beta version of the Finder is centered on the services sector. The system starts with the selection of the type of service and the target country to, later on, open a menu of topics that range from how to do business in the target country, to regulations, taxes, licenses, payment methods, trade agreements, intellectual property issues, cultural considerations and support mechanisms available from AUSTRADE and other sources. The design process included testing it with businesses across the country through successive rounds and consultations with partner organizations. The public beta was delivered in just 10 weeks and was released in early April 2019 to enter into a stage of collecting feed-back before advancing into further iterations.<sup>27</sup>

In terms of improving **tools**, AUSTRADE’s digital team started with user research, focusing on the digital, data and technology experience of AUSTRADE staff that provide direct support to Australian businesses to help them grow and expand overseas. The primary technique was job shadowing and observation. The team mapped out the user journeys for four common activities (finding new clients, preparing for a meeting, running an event, and following-up a meeting), identifying the systems people use, and the pain points experienced in using them.<sup>28</sup>

#### **BUSINESS FINLAND -Services to support AI and the internationalization of digital businesses-**

The Government of Finland has been active in accelerating the digitalization not only of the public sector but also encouraging the rapid adoption and digital transformation of the country’s business and public sector. In May 2017, the Minister of Economic Affairs set the goal of making Finland one of the leading countries in applying artificial intelligence (AI) and set up a steering group to prepare a proposal for the Finnish AI Program. In its latest report, issued in early 2019, the steering group identified key steps including the clarification of rules and legislation for data utilization; supporting experimental environments and testbeds for AI and digitalization; the identification of ecosystems and B2B opportunities; the attraction of large investments in AI; training programs in AI and digital transformation for both business and workers; and the deployment of AI and ethical digital practices in the public sector, among other objectives. Business Finland is one of the key members of the AI public-private program team.

Business Finland has been one of the pioneer trade and investment promotion organizations in the incorporation of digital in its own administrative operations, including the management and administration of its international network. Following the merger of FINPRO (the trade, investment and tourism promotion organization) and TEKES (the innovation promotion agency) to create Business Finland, the organization has accentuated the importance of digital in its portfolio of services. The services of Business Finland’s include -in varying degrees- innovation financing, development of business skills and capabilities, internationalization services and

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<sup>25</sup> Source: Jordan Hatch, Deputy Chief Digital Officer AUSTRADE, blog posted March 4, 2019: “Making it easier for exporters to find information” <https://medium.com/austrade-digital/making-it-easier-for-exporters-to-find-information-4d1b20af83cc>

<sup>26</sup> See beta version in <https://export-help.business.gov.au/>

<sup>27</sup> Source: Leigh Berwick, AUSTRADE Digital, blog posted April 5, 2019: “The Global Business Support Finder is now in beta” <https://medium.com/austrade-digital/the-global-business-support-finder-is-now-in-beta-e9cc75f394e5>

<sup>28</sup> Source: Alithea Seemann, Senior Designer, AUSTRADE, blog posted April 3, 2019: “Employees are users too!” <https://medium.com/austrade-digital/employees-are-users-too-5ebc90cab48c>

activities that follow and anticipate global digital trends within the following Digitalization Programs active at the beginning of 2019:

**Digital Trust Finland:** The program aims to accelerate the emergence of new innovations and business growth in information security and trust solutions and services, both from the point of view of solution providers and users. The program targets critical communication companies and security companies (software, hardware, services), research institutes, parties using information security solutions, such as large industrial and health companies, and Smart Finance and MyData operators. The program also supports the exploration of the potential and threats of new technologies such as quantum computing. In addition to innovation funding, Digital Trust Finland offers internationalization services and enhances ecosystems in Finland through investments. The program, which will run from 2019-2023, will finance innovation projects for a total of € 100 million.

**Smart Mobility Solutions Program:** The program aims to help Finnish companies take advantage of the new business opportunities brought about by the international change in transport, logistics and mobility services. Digitality and new technologies are renewing the transport market, with autonomous vehicles and ships, drones and Hyperloop, among others. The program focuses on seamless transport chains (including autonomous vehicles and ships, drones and Hyperloop, among others) emission reduction solutions and data development solutions. The services of the program include finance, Invest in Finland's services for building new ecosystems, internationalization services for companies, networking services and the transfer of research information in the field. In the early stages of the program, internationalization services are focused on the German, Swedish, Japanese, Chinese and US markets. The estimated funding for the 2019-2022 program from Business Finland is approximately €50 million. The budget for project-funded projects will increase to an estimated € 100 million. The program also aims to create consortia with a significant amount of EU funding.

**AI Business Program:** The objectives of the program are to increase the competitiveness and productivity of Finnish companies by creating new innovations based on artificial intelligence; increase the expertise of AI technologies and digital platforms in companies, research institutes and universities; and enhance the productivity in the public sector by stimulating the development and deployment of AI. The program is aimed at all Finnish companies either for their own individual development project or for a joint development projects with other companies and research organizations. The target groups of the program are also research organizations, as well as public actors that develop innovative public services in cooperation with companies. The program provides funding, training and competence development, international business networking, development of innovation cooperation partnerships, attraction of international partners to invest in Finland, new information on artificial intelligence and platform economy and market information about selected markets and target groups. The funding is directed at: supporting artificial intelligence research; increasing the value of products and services through artificial intelligence and a platform economy, developing new disruptive services, scaling up the artificial intelligence and platform economy business. The scope of the four-year program (2018-2022) is EUR 200 million, of which Business Finland's share is about half.

**Connected Intelligent Industries Finland Program:** The program aims at strengthening the global competitiveness of Finish industry by developing digital products and services and production ecosystems. The program provides innovation finance, advice and market information - at every stage of the company's development and in creating international growth.

In particular, the program supports networking and joint projects between SMEs, large companies and research organizations.

**Mixed Reality Program:** The program provides innovation finance and internationalization services to Finnish companies that develop and utilize virtual reality (VR) and augmented reality (AR) solutions for their business. The program is intended for Finnish companies of all sizes and for research organizations. The program is implemented in co-operation with VR and AR business associations.

**Ecom Growth Program:** The program offers, among other things, competence training, peer learning, visits and customer meetings in the target market, market surveys and company-specific internationalization plans. The content of the program can be divided into the following four areas: (1) increasing international e-commerce expertise through sharing of experiences and knowledge between companies and coaching on on-line strategies, sales, marketing, payments, logistics and analytics; (2) development of market studies, market opportunities and market entry strategies for specific markets; (3) visits and networking in target markets with potential buyers (marketplaces, e-tailers, dealers, importers) and service providers (including logistics, warehousing, marketing); (4) development of common resources in target markets such as Corporate Digital Marketing Offices or Common Native Salespersons on the Market; and (5) developing ecommerce ecosystems through cross-innovations, such as innovation cooperation with different parties, including mobile development, payment methods, gaming, media, etc.

**New Space Economy Program:** the program is designed to develop Finnish space expertise into a global business including Finnish startups that are expanding into the space industry, manufacturing companies seeking growth, and data-user companies. The program also finances Finnish space research. It provides companies with funding, helps develop international business through the global networks of Business Finland, and supports business collaboration.

#### **NZTE -A “whole of government” approach to digital transformation-**

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“Better for Business” is a “whole of government” type of initiative currently under development with the active participation of New Zealand Trade and Enterprise and other nine agencies including the Ministry for Business, Innovation and Employment (the lead agency), Accident Compensation Corporation, Callaghan Innovation, Inland Revenue, the Ministry for Primary Industries, the NZ Customs Service, Stats NZ, the NZ Transport Agency and WorkSafe NZ.<sup>29</sup>

One of the main objectives of the “Better for Business” initiative is to improve the experience of businesses with government. The agencies have committed to work closely with businesses to identify key pain points and design ways to leverage digital technology to achieve better business outcomes. The vision is that 'businesses gain value from easy and seamless dealings with government' to enable them to operate more efficiently and effectively, and improve the productivity, income and well-being of New Zealanders. The program looks at adopting customer-centric methodologies, co-designing and developing innovative cross-agency solutions, and reducing the effort businesses need to put in to dealing with government.

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<sup>29</sup> <https://www.digital.govt.nz/showcase/better-for-business-10-agencies-one-vision/>

In terms of NZTE’s own initiatives, up to recently NZTE’s digital focus was on improving its IT environment, to ensure its staff have access to the technology they need to do their job effectively. In the current phase of NZTE’s strategy, the focus has shifted to digital service offering for customers. While the core of the delivery model is human-centered, digital services will allow greater reach and more customers to access NZTE’s services. Digital services will also enable the organization to scale at marginal additional cost and focus resources where they are most effective.

In addition, NZTE is also committed to helping clients improve their own digital capabilities and digital transformation. “**Prioritizing Digital**” service launched in late 2016 helps build the digital capability for exporting businesses, to help them scale effectively.<sup>30</sup> This service line is available to NZTE’s 700 Focus Clients (priority clients). The first step is to understand where the company is currently. NZTE specially dedicated digital team works with the client to identify their current challenges and opportunities. Then the digital team works with the client to determine what success looks like for the business and how the client/the company thinks to get there. The NZTE Team and the client start developing a roadmap to help transform the business. Once the roadmap is completed, the NZTE Team connects the company with one of the pre-selected “**Digital Advisors**”<sup>31</sup> who will work with the company to go through challenges like:

- When to make the big move to an enterprise system
- How to get started with e-commerce in overseas markets
- How to optimize websites for lead generation
- Getting to grips with paid and organic search techniques
- Creating a digital community
- Developing a social media plan
- How to plan digital marketing campaigns to achieve business objectives

NZTE has also partnered with Tech City UK to deliver Digital Business Academy courses, available for all New Zealand businesses. The free online resource covers a range of essential business skills to help companies increase digital knowledge and understanding through a collection of self-directed online modules.

### **PROCOMER of Costa Rica -CRM and performance management for operating excellence-**

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PROCOMER’s client relationship management system (CRM) is one of its most relevant operating tools. The system centralizes all client records including appointments, training, information and promotion support delivered and other staff interactions with the customer. Further, it has enabled a more customized service offer through more thorough client segmentation and more specific client targeting. The CRM also supports the development of individualized projects for clients through better coordination of internal inputs from various departments.

A key success factor for the CRM implementation was that it was tackled as a cultural change rather than a purely technical one. The management team carefully planned its approach, fully understanding how resistance to the change could potentially undermine the successful

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<sup>30</sup> <https://www.nzte.govt.nz/our-services/prioritising-digital>

<sup>31</sup> Digital Advisors are members of the NZTE “Beachhead Program”, private business and highly connected individuals who can provide pro-bono strategic advice and expertise to NZTE clients.

implementation and adoption of the system. Senior management involved all staff (bottom-up approach) by triggering in the potential users the need for such a tool so that when the establishment of a CRM was proposed, the staff perceived it as a response to their needs rather than an imposition from above.

The CRM has become the only repository of client information within PROCOMER, allowing a total restructuring and standardization of the client management approach and service delivery workflow, including the interaction with foreign offices. Business opportunities are introduced in the system and the responsibility assigned and shared between the officer in the country of destination (generally in charge of the potential buyer) and the officer sitting in the HQ in San José (normally in charge of the potential seller). From the time a potential business opportunity is created in the CRM, the two officers are mutually responsible for the follow-up aiming at the conversion of the business lead into an actual sale. The system has different levels set for the stages of “lead maturity” (10% for interest; 30% for negotiation, 80% contract formulation; 100% finalized). Every time a lead advances, the CRM automatically notifies the trade promotion officer in charge to take consequent action. This allows the trade promotion officer to be constantly on top of leads and maximize the chances of success.

When the lead is classified as “finalized” an automatic survey is sent from the CRM to both clients (the buyer and the seller) to verify their satisfaction regarding the assistance received from PROCOMER and to collect relevant information about the actual value of the deal. The information resulting from the CRM is used to gather information on client satisfaction and on the continuous improvement of services offered to clients.

Since every activity/service is linked to one or more responsible persons, CRM data are also used to evaluate the specific contribution of the staff to the actual results achieved by the organization. The system can extract information and evidence that the responsible manager can use in the performance appraisal process, such as the number of activities the staff member has handled within the reference period, the value of deals concluded thanks to the contribution of the staff member, or the number of new exporting customers.

## Conclusions and recommendations

The rapid advance of the digital economy and its consequences in shaping international trade, creating new opportunities for firms and disrupting many existing industries, will have a profound impact on the mandate, structure, and service delivery architecture and processes of today's trade promotion organizations. There is a need to develop new trade promotion business models that can provide relevant support to SMEs in the digital age, in a more integrated and client-centric approach. Increasing demand from clients and the emergence of competition from alternative digital private service delivery options will put increasing pressure on TPOs to embark into more comprehensive digital transformation. Some key lessons learned through existing experience include the following:

- TPOs cannot retrofit DT principles onto existing strategies. Rather, effective DT must be built on a “digital by default” strategy that rethinks the constraints of earlier strategies in terms of client segments, roles, service delivery portfolio, structures and systems. The consideration of legacies and the current situation can be introduced in further stages when the organization prepares its implementation plan.
- TPOs do not and cannot work in isolation and increasingly, the extent to which TPOs play a coordinating role among government programs working with firms, is an important driver of success. Political leadership and support from the highest levels of government will be needed to establish the protocols, systems, and most importantly, culture, among different government institutions responsible for business support to work together within a more concerted “whole of government” approach to provide more effective support and higher impact to those business that need it the most.
- DT opens great opportunities for TPOs to substantially increase their scope and reach. Data analytics, AI and the myriad of IT solutions seem to offer great opportunities to reach a much larger number of beneficiaries and greatly increase the spread and depth of TPO's impact. Moreover, the new technical possibilities open the way to substantive improvements in the organization's capacity to track, measure and analyze their performance and impact.

The process of DT among TPOs is still at an early stage with uneven implementation across or even within countries. Even the case studies conducted for this paper mostly identify TPOs that started by digitizing their *existing* processes through the introduction of IT into their administrative and back office operations and later introduced some new services to facilitate the access of their clients to training or information, to e-commerce marketplaces or to increase the internationalization of their most digital intensive clients and/or sectors. However, as stated in this paper, DT goes beyond the digitization of existing strategies and services or of promoting digital sectors. For the moment, efforts towards a full DT, with most of the elements that characterize it, seem to be incipient. Some organizations have established working groups and plans to initiate the process, but there is still a good way to go in terms of finding digitally transformed TPOs that integrate on-line and off-line services.

There is significant scope to expand on this initial research either by conducting a survey among TPOs on the topic of DT, or by conducting more in-depth case studies and peer exchange events where practitioners can share their experiences and main obstacles that affect their DT processes. There is also a need to assess the existence and utility of different IT tools as options that open new possibilities for trade and investment promotion. Not all TPO practitioners are familiar with the various options available.

More empirical evidence will also be needed about the impact of trade promotion agencies on the internationalization of business in this new digital age. Most of existing evidence seems to correspond to traditional, “pre-digital” organizations and programs within an international trade environment not yet dominated by digital business and digital forms of trade. But, the environment is changing fast and more evidence will be needed to assess whether the case for trade promotion still holds and what should be the new roles of TPOs in the digital age, if any. In the absence of change and strategic transformation, trade promotion in its current form may gradually become obsolete or marginal in terms of providing effective support for the internationalization of SMEs.