

5 Services

This chapter considers how tax administrations' compliance goals are enhanced by providing effective and efficient services to taxpayers, often through technology. This is helping increase compliance amongst taxpayers by making it easier to understand tax obligations, report taxable income and make payments.

Introduction

A central element in supporting taxpayer compliance is the provision of a wide range effective and easy to use taxpayer services. Many of these services centre on communication channels, both on a reactive and proactive basis. Often, these communications have been delivered on a one-to-many basis, such as the provision of guidance or reminders as well as calculation and reporting tools. However, tax administrations report that their use of innovative tools is growing, and those tools are also allowing communications to become more personalised to the taxpayer's individual circumstances, to be delivered via an increasing range of communication channels and to facilitate the drive towards self-service, on a real-time and 24/7 basis. Some like India have invested in specific communication centres where sound proofed live interactions between the income tax department and other stakeholders like taxpayers, tax practitioners, experts, and policy makers are possible, and can also be streamed on social media channels where appropriate.

In addition, tax administrations are reporting a rapid growth in the use of technology to transform their operational models. The use of advanced techniques in artificial intelligence, machine learning and machine to machine links are opening up new service options for tax administrations that allow more 'compliance-by-design' style approaches to be made available. This is a growing trend that is expected to accelerate as tax administrations continue to unlock the power of digital transformation.

Behavioural insights

The growth in the use of technology has often been supported by a growth in the use of behavioural insights. Behavioural insights is an interdisciplinary field of research using principles from the behavioural sciences such as psychology, neuroscience, and behavioural economics to understand how individuals absorb, process, and react to information. These principles can be used to design practical policies and interventions based on human behaviour. This can be particularly powerful when combined with insights gathered from the analysis of the increasingly large volumes of data available to tax administration, both internally and externally generated.

Previous editions of this series have seen an increasing number of tax administrations report employing behavioural researchers and using behavioural insights in specific areas to influence voluntary compliance. This trend has continued with close to 70% of administrations reporting the use of behavioural insight methodologies or techniques in 2020 (see Figure 6.1). Chapter 10 of the 2019 edition of this report contains further insight into these developments. This trend has continued, with behavioural insights being increasingly mainstreamed into wider tax administration strategies and interventions. The 2021 report from the OECD's FTA Behavioural Insight Community of Interest also contains many examples of this in practice (OECD, 2021^[1]).

Box 5.1. Examples - Behavioural insights

Brazil - Behavioural analysis

The Behavioural Insights Project started with a test over 2 489 small companies that earned more during the pandemic than in previous years in order to prompt compliant behaviour. In this test, there were 3 different letters, each using a different behavioural science technique and a control of the existing letter. The tests were Social Norms, Social Norms plus Simplification, Loss Aversion plus Consequences.

The letters with behavioural insights worked better than the current models in around 8% of cases. However, when groups are stratified into smaller universes according to their tax evasion risk profile, they responded differently. The high tax risk taxpayers responded worse to all the test letters than they did to traditional communication by over 8%. In contrast, the medium and moderate tax risk groups responded to a letter focused on social norms and simplification with improvements of around 31% and 15%, respectively. Finally, the low tax risk group responded better to a letter focused on loss aversion by around 41%.

Following this there was a second test where a letter focused on reminders and appointments worked better for taxpayers with smaller debts, while letters focused on social norms and loss aversion worked better for taxpayers with higher debts.

The learning is that the inclusion of behavioural prompts in letters sent to taxpayers makes a difference, with the result depending on taxpayer profiles. As a result there is now an artificial intelligence study to predict the appropriate choice of letter for each taxpayer.

Ireland - Prompt for Action Development

Ireland has developed a system to use a high degree of personalisation to nudge taxpayers to meet their obligations. This builds on the capability to communicate efficiently with customers and encouraging them to use Revenue's online services and portals to ensure they pay the right tax at the right time.

In order to get real time feedback from customers a proof of concept was undertaken. This involved targeting a limited cohort of e-enabled customers. Using defined criteria to select these specific customers, highly personalised messages were sent through Revenue's online system.

The scope of the development is to create a seamless communications process with selected cohorts. The result is a personalised communication containing a range of information and data specific to each customer, requesting them to complete an action. The provision of personal information prompts more interaction from the customer.

The tailored communication also prompts the customer to take the precise actions that are required of them to engage with Revenue efficiently using online systems, enhancing their customer service interaction, thus developing the customers understanding of their tax treatment and obligations for effective compliance.

The facility will enhance Revenue's business operational processes and will allow business areas to streamline the selection process to accurately identify and target cohorts for bulk personalised outputs.

United Kingdom - Using behavioural insights to improve timeliness

In a typical year, the majority of Self-Assessment (SA) customers file their returns in January. In 2021-22, Her Majesty's Revenue and Customs (HMRC) wanted to encourage early filing to break the habit of filing later, as well as reminding those that have filed early before to continue doing so.

Qualitative and quantitative research on SA filing in 2013 found that customers report the following reasons for filing later:

- Personal circumstances: adversity, disorganisation, financial difficulty
- Ability, awareness, and engagement
- Fear of making errors and mistrust towards HMRC
- Complexity e.g. some customers do not understand that 'filing' is different to 'paying'
- Customer experience e.g. customers might be reluctant to turn to HMRC if they have not previously got the help they needed.

SA customers tend to need multiple reminders, so we used as many channels as possible, presenting information in a clear and easy to navigate format to make information easier to understand and action. This included a factsheet on the UK government website, letters, emails, media, social media and stakeholder engagement.

An example of this was a new email reminder in May 2021 which focused on the help and support available to customers to file their return. This led to a 7% increase in early filing (13 000 more people filed within 60 days) and about 3% more customers, who previously filed early, continued to file early. There was no increase in inbound call rates.

Sources: Brazil (2022), Ireland (2022), and the United Kingdom (2022).

Managing service demand

An important aspect of meeting taxpayer preferences is getting the mix of channels right. While there is an increasing shift to the use of electronic services for both convenience and cost-efficiency purposes, a proportion of taxpayers will not have access to, or be comfortable with such services. This calls for considered strategies as to how to influence channel shift for those for whom it would offer better outcomes without adversely affecting the service offering to other taxpayers.

Such strategies of course need to be based on good measurement and understanding of demands and constraints. Table 5.1 highlights the shift to digital that occurred during the pandemic, with use of online channels growing significantly. This is against a rapid decline in the use of traditional channels (in-person and paper). Interestingly the volume of telephone calls did not rise significantly during the pandemic, suggesting that digital channels were effective at meeting taxpayer demands. It will be interesting to track service demand by channel in future editions of this report, to assess if the pandemic has caused a structural shift.

Table 5.1. Service demand by channel

Channel type	No. of jurisdictions providing data	2018	2019	2020	Change 2018-19	Change 2019-20
Online via taxpayer account	31	847 480 869	1 011 407 743	1 286 851 433	+19.3%	+27.2%
Telephone call	52	328 816 038	314 207 157	329 807 813	-4.4%	+5.0%
In-person	35	109 620 990	109 620 990	48 699 279	-0.5%	-55.3%
Mail / post	18	35 045 875	35 167 199	32 219 102	+0.3%	-8.4%
E-mail	29	12 424 490	13 846 716	19 077 219	+11.4%	+37.8%
Digital assistance	28	10 478 405	21 218 519	30 728 014	+102.5%	+44.8%

Note: The table only includes jurisdictions for which data was available for 2018, 2019 and 2020.

Source: Table A.40 Incoming service contacts: Monitoring and number of contacts by channel (online, digital assistance, telephone) and Table A.41 Incoming service contacts: Number of contacts by channel (e-mail, mail / post, in-person).

Supporting self-service

As highlighted earlier, the self-service offering from tax administrations continues to grow, and there is an expanding range of self-services being provided. Common examples of this include the ability to register, file and pay on-line, along with a range of interactive tools. This is leading to efficiency gains in tax administrations, as well as being able to provide a more 24/7-style service to taxpayers. These services

proved to be invaluable during the COVID-19 pandemic. A number of tax administrations are also applying artificial intelligence techniques to the large amounts of data that is collected through these services to help develop them further to better meet taxpayers' needs. Chapter 6 also sets out how these large amounts of data are being used in audit work.

Box 5.2. Examples – Developments in self-service

Chile – Taxpayer reports

The taxpayer report is an initiative implemented in Chile in 2020, to promote the accountability of public expenditure. The objective is that people know the amounts they have paid, the specific contribution they have made through the payment of their taxes, and how these resources have been allocated to meet the needs of the country. This should increase the transparency of the tax administration and the State. This report is tailor-made for each taxpayer whose income information is available, in the months of April-May of each year, and has 3 sections:

- 'How much did I contribute through taxes?' shows information on the taxes paid the previous year, across income tax, and has an estimate of the VAT and immovable property tax amounts.
- 'How were my taxes spent?' shows a disaggregation of the tax paid by type and area of public spending, indicating how much was spent in education, health, social protection, and so on.
- 'Total income and public spending' shows the state of the public finances indicating the income received in the previous year and the total public spending.

For citizens where a report is not possible, they can access a calculator of taxes and public expenses, in which a similar report is generated after the taxpayer submits an estimate of their monthly income.

See Annex 5.A for supporting material.

China (People's Republic of) - Digital tax accounts

The State Tax Administration (STA) has built an electronic taxation bureau for individual taxpayers that fits with the new individual income tax system and the new tax collection and administration model for individual taxpayers, whose design concept is very similar to that mentioned in the OECD's Tax Administration 3.0 report (OECD, 2020^[2]).

Digital tax accounts for individual taxpayers across the People's Republic of China have been established with secure digital identification capabilities, that includes a taxpayer identification number for individual taxpayers. This means the largest tax-related digital service channel has been set up for precise and real-time online interaction between tax administrations and hundreds of millions of taxpayers.

In the individual digital tax accounts, new business rules covering the whole process of individual income tax meaning the automatic operation of taxation business and the intelligent provision of service and management are driven by "data plus rules".

The digital tax accounts for individual taxpayers also provide intelligent accounting and tax calculation services for individual taxpayers, which promotes self-service among individual taxpayers, and further enhances tax collection and administration. In the annual reconciliation of the comprehensive income of individual income tax in 2020, more than 98% of individual taxpayers have enjoyed pre-filing services in the declaration form, which has significantly reduced the difficulty of tax filing and improved efficiency.

Czech Republic - Modern and Easy Taxes project

In the Czech Republic there are continuous efforts to simplify the administration of taxes and improve communication between the Tax Administration and the taxpayer. As a result of these efforts “MOJE daně” (My Taxes) project was introduced and launched at the end of February 2021. The shortcut “MOJE” stands for modern (MODerní) and easy (JEDnoduché) taxes in English and expresses the client centric approach of Tax Administration. The service is available to both individuals as well as legal entities.

An online tax office “My Taxes” offers a 24/7 access to taxpayers allowing them to view their tax liabilities, tax returns, tax forms or to file a tax return online from anywhere. The “My Taxes” portal also features other tools which make tax compliance easier such as prefilled basic data (e.g. name and address) in tax returns, alerts regarding the due date of a tax liability, or to warn taxpayers that the tax account has an unpaid balance.

To log in to “My Taxes” portal taxpayers can use various methods, e.g. an e-identity from an ID card with an electronic chip, a bank identity, or via a Tax Office.

Hungary - Development and services of the new Customer Portal

Renewing the web portal to reduce the administrative burden for taxpayers and to increase the customer satisfaction index, was one of the major development areas of the National Tax and Customs Administration (NTCA). This led to a new portal with a consistent look that offered a higher level of service, is easy to use for different taxpayer groups, i.e. citizens and businesses, and has a modern search function. The responsive design of the portal works across a range of devices and can be customised according to the user’s needs and is fully accessible.

After logging in, the client can access the personal client profile prepared by the tax administration and representatives can access the personal profiles of their clients. The profile includes, personal data, net balance of the current account, missing declarations and a personal tax calendar.

The portal also provides direct access to the online form filling service and to the interactive, intelligent filing interface of the personal income tax return. If there are arrears, the client can settle the payment obligation by means of an online payment. If there are refunds due, the client can offset them against other liabilities. Numerous other services are available through the portal, including the booking system for customer services, and the Online Invoice data.

See Annex 5.A for supporting material.

India - Compliance Portal

The Compliance Portal aims to deliver seamless communication and is part of the voluntary compliance management framework in India. It enables seamless two-way structured communication that can enhance the transparency and functional efficiency of the tax administration.

The Compliance Portal displays taxpayer information through an Annual Information Statement (AIS). The AIS shows information received from various sources on the taxpayer so that the taxpayer can correct the information as required. In case of incorrect information, the Compliance Portal also provides the functionality for supplying the correct information. The information available in the AIS is also utilised for pre-filling the Income tax return, which simplifies and eases the process of return filing. The Compliance Portal is part of the Graded Compliance Management Framework which enables the taxpayer to fill potential compliance gaps before the information is utilised by the tax administration for risk management. For taxpayers where the profile and the tax returns do not match with the transactions, various campaigns through emails and SMS are executed and taxpayers are made aware

of such information being available with the department, and are given the facility to correct such information.

The Compliance Portal is backed by a dedicated Compliance Management Central Processing Centre which acts as an operational centre for the Portal. It also performs the function of a helpdesk for providing assistance and resolving any issues that the taxpayer might have in respect of the Compliance Portal.

Japan - Tax return portal website

The Japanese government has assigned a 12-digit number known as “My Number” to every resident in Japan to support social security or taxation procedures. After the assignment and notification to a resident of My Number, a “My Number Card” can be issued upon request from the Japanese resident. My Number Card enables the Japanese residents to complete some administrative procedures including taxation matters online, which has increased administrative efficiency and reduced burdens.

Since October 2020, My Number Card holders have been able to declare tax returns online through “Mynportal”. Mynportal automatically inputs the amount of the insurance premiums they paid in the previous year to the tax declarations and conducts year-end adjustments. The number of taxpayers who used this system in 2020 is 2.51 million. Japan has encouraged taxpayers to use Mynportal instead of paper-based declarations and is also planning to develop additional functions to input other information from deduction certificates such as a certificate for income taxes etc. withheld from the national pension.

Another advantage of the My Number System is that taxpayers will no longer be required to submit a copy of their identification documents (such as a certificate of residence) during the filing procedure. Furthermore, the system allows statutory statements to be sorted based on taxpayers’ My Number and thus match the statements with the tax return, helping taxpayers’ income to be recognized more accurately and efficiently.

See Annex 5.A for supporting material.

Sources: Chile (2022), China (People's Republic of) (2022), the Czech Republic (2022), Hungary (2022), India (2022) and Japan (2022).

Digital assistants

The previous edition (OECD, 2021^[3]) of this series highlighted how a growing number of administrations are using virtual or digital assistants to help respond to taxpayer enquiries and support self-service. As Table 5.2 shows the growth has been extremely rapid and these services are now very common. This trend was likely accelerated by the COVID-19 pandemic as these services proved to be invaluable in helping tax administrations respond to the pandemic, allowing for support to continue to be delivered to taxpayers even when services were stretched.

Table 5.2. Evolution of use of virtual assistants, artificial intelligence and application programming interfaces between 2018 and 2020

Percent of administrations that use this technology

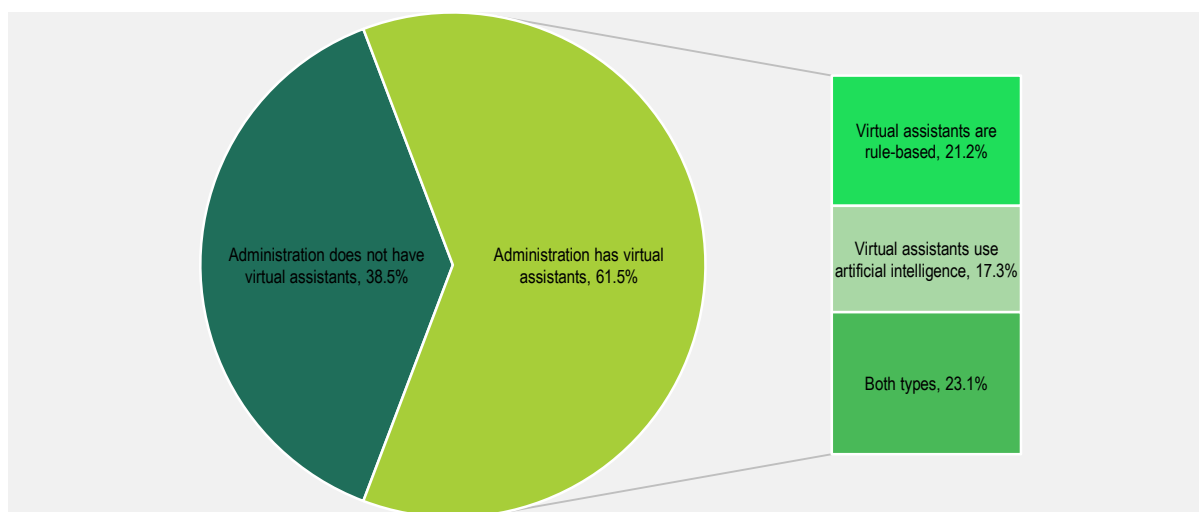
Status of implementation and use	Virtual assistants (e.g. chatbots)			Artificial intelligence (AI), including machine learning			Application programming interfaces (APIs)		
	2018	2020	Difference in percentage points (p.p.)	2018	2020	Difference in p.p.	2018	2020	Difference in p.p.
Technology is implemented and used	34.5	60.3	+25.8	31.6	47.4	+15.8	79.0	93.0	+14.0
Technology is in the implementation phase for future use	13.8	12.1	-1.7	15.8	29.8	+14.0	7.0	7.0	±0.0
Technology is not used, incl. situations where the implementation has not started	51.7	27.6	-24.1	52.6	22.8	-29.8	14.0	0.0	-14.0

Source: Tables A.51 Innovative technologies: Implementation and usage (Part 1) and A.52 Innovative technologies: Implementation and usage (Part 2).

The success of these services are now being developed further with jurisdictions investigating how they use advances in artificial intelligence (AI) to deliver more sophisticated levels of support. Figure 5.1 shows that 40% of administrations who have a virtual assistant are using AI in some form to improve the service. This can allow the system to cope with more complex questions being asked by taxpayers and/or more personalised answers being given. This is part of the wider trend of the use of AI in tax administration which is also explored in Chapter 9.

Figure 5.1. Type of virtual assistants, 2022

Percent of administrations



Note: The figure is based on ITTI data from 52 jurisdictions that are covered in this report and that have completed the global survey on digitalisation.

Source: OECD et al. (2022), Inventory of Tax Technology Initiatives, <https://www.oecd.org/tax/forum-on-tax-administration/tax-technology-tools-and-digital-solutions/>, Table TT5 (accessed on 13 May 2022).

Box 5.3. Examples - Digital assistants

Brazil - Chatbots

Since 2021 the Federal Revenue of Brazil has offered services to the taxpayers through chatbots covering four thematic areas with six other themes in test and many others planned.

To manage budget constraints, and to prevent vendor lock in, Brazil has built its own platform, using its own hardware instead of using a commercial service provider. This also allows Brazil to gather more data on the response from taxpayers and also respond to privacy concerns. The bot engine includes a specialized language as well as a runtime and a natural language processing service based on a deep learning model. This also allows answers to be stored for future retraining.

The next stage is to create a routing chatbot to help identify the goal of the users and send them to the correct service, for example a thematic chatbot, a human-to-human chat, a video conference or to the website.

Japan - Introduction of a chatbot for tax consultation

Since October 2020, the National Tax Agency (NTA) has introduced a chat-bot to automatically provide answers to taxpayers online as a new channel of virtual tax consultation. In addition the NTA has posted answers to taxpayer's common questions on the NTA's Web site ("Tax answer"). This means in addition to the "Tax answer", taxpayers can use a chat-bot to solve their tax-related issues.

Taxpayers can ask questions concerning taxes by selecting questions from a drop down menu or by writing them in a text box, and then AI will generate answers automatically. Through using the chat-bot for tax consultations, users will be able to ask more easily questions concerning taxes at any time of the day, and access information published on the NTA website more immediately.

The NTA will continue to improve the specifications of the chatbot based on users' feedbacks and AI learnings. When the chatbot was officially introduced in 2021, the number of questions the chatbot received was 4.2 million. This has grown more than 10 fold from when the chatbot was in trial operation in 2020.

See Annex 5.A for supporting material.

Sources: Brazil (2022) and Japan (2022).

E-services

As part of the ongoing shift to self-service models, tax administrations report continued investment in new digital tools that can support wider goals of helping taxpayers get their tax right first time has continued. These tools provide new ways for taxpayers to interact with tax administrations, as well as helping drive the efficiencies that self-service models can deliver.

As technology has developed, the sophistication of these services has increased, with the next generation of 'intelligent' e-services starting to be developed that use artificial intelligence and to make the interactions with taxpayers more sophisticated.

Box 5.4. Examples - New e-services

Greece – myData

'myDATA' (my Digital Accounting and Tax Application) is the new electronic platform through which electronic books are introduced into the daily lives of businesses. E-Books are considered a crucial step into the digital transformation of Tax Administration that also boosts and strengthens Greek State's relationship with businesses. On 1 October 2020 the new platform was put into pilot operations and was officially introduced on 1 July 2021. In particular, myDATA monitors all transactions of Businesses' income and expenses that keep Accounting Records in accordance with Greek Accounting Standards and also it depicts their accounting and tax results.

Moreover, myDATA platform includes two types of Books:

- The Analytical (or Detailed) Book, which summarizes Company's Revenue and Expenses, classifies transactions and makes the necessary adjustments to determine each year's accounting and tax result
- The Synoptic (or Summary) Book, which summarizes company's results on a monthly and annual basis.

myDATA has more than 630 000 users, and 360 000 000 records have been transferred, with 3 million documents a day being submitted to the tax administration.

Netherlands – Automated decision transparency

The Netherlands Tax Administration (NTA) is using automated decision services extensively. These decisions are like black boxes to both civil servants and citizens, making it hard to understand the algorithms used in decision services.

Since 2015, the NTA has been working to remedy this situation by specifying rules in a controlled natural language called RegelSprak. These rules are traceable to the source in law and policies. This allows civil servants to verify and test the rules. For citizens, the NTA is experimenting in using the rules to explain decisions. This functionality enables civil servants and ultimately tax payers to understand in detail how decisions have been made. Building on this, bad data or faulty rules can be found easily and corrected.

The NTA expects improvements in the quality of the rules both beforehand and afterward. The former because experience has shown that the need to explain something is a powerful driver for simplification. The latter because many more people can check the legality of the rules by tracing them back to their legal source. This initiative enables the NTA to push towards two strategic goals: proactively helping tax payers and being a learning organization.

Singapore - Seamless and Personalised Self-help digital services

The Inland Revenue Authority of Singapore (IRAS) has leveraged end-user automation, data and AI tools to deliver seamless and personalised taxpayer services. For example, IRAS added on a digital adoption tool to add step-by-step onscreen personalised guidance onto digital services at myTax Portal. Taking an agile approach to act on feedback as they arise, IRAS iteratively improved the guidance content and navigation for its taxpayers. During the pilot period, IRAS achieved a 13% reduction in contacts requesting for e-filing guidance and more than 86% of taxpayers surveyed found it useful in helping them to complete their digital transactions. Spurred on by these positive outcomes, IRAS has expanded usage of this approach to other digital services. IRAS is also using the data to better understand taxpayers' digital experiences within the portal. In 2021, IRAS also developed authenticated chatbot services to handle six common payment enquiries on the new Singapore Government Virtual

Intelligent Chat Assistant (VICA) platform. The VICA chatbot leverages natural language processing capabilities to provide more humanised, conversational digital experiences. Using the chatbot, taxpayers can conveniently check their outstanding tax balance, view payment plans, check payment status, cancel or reinstate payment plans and make tax payment via self-service payment terminals and mobile channels. More than 20 000 taxpayers have used these services since their launch in March 2021 and more than 75% are satisfied with the experience.

Sweden – Embedding tax rules into business systems

The Swedish Tax Agency has made significant progress in its efforts to translate tax regulations into code that can be used by business systems such as accounting software. Tax regulations and written guidance currently need to be verified manually by experts from the Swedish Tax Agency's Legal Department. However, rule-based software solutions can reduce the need for manual input, and have excellent potential for supporting and automating verification and control processes.

To facilitate compliance with the written legal guidance provided on its website, the Swedish Tax Agency is developing machine-readable rules – known as “rule bases” – which are structured to reflect the logic of tax regulations.

The aim is to enable external software developers working with business systems to create rule-based services for certain tax categories. The Swedish Tax Agency will provide software developers with APIs that include machine-readable, version-managed rule bases relating to a variety of tax categories.

The development process consists of the following steps:

- Tax experts in the Swedish Tax Agency's Legal Department develop decision trees and import them into a software program for creating rule bases.
- Rule bases are tested and verified using a rule engine.
- Rule bases are then embedded into APIs. An API includes all versions of the relevant rule set; links to human-readable versions of the same data; and content cards providing definitions, and legal explanations.

United States – Using automation to improve call centres

The Internal Revenue Service (IRS) implemented the ability for taxpayers to request a call back rather than waiting on hold, the ability for taxpayers to communicate with an assistor via text chat (and to upload account specific documents), and English and Spanish speaking voice and chat “bots” that can answer frequently asked questions, give answers about taxpayer notices, and help taxpayers with information on how to make payments. Voice bots are software powered by AI that allow a caller to navigate an interactive voice response system with their voice, generally using natural language. Taxpayers who request to speak with a customer service representative will be placed in the queue for English or Spanish telephone assistance regarding collection matters.

Chat bots simulate human conversation through web-based text interaction, while also using AI-powered software to respond to natural language prompts. The bots are currently unauthenticated, meaning they cannot answer questions about a specific taxpayer account. The IRS is working toward launching more advanced authenticated bots that would allow access to taxpayers' IRS accounts and be able to set up taxpayer-specific instalment agreements.

The goal of these bots is to improve the level of service offered to taxpayers by providing self-help options without having to wait in long queues, thereby also freeing up IRS telephone assistors to answer calls on more complex issues.

Sources: Greece (2022), the Netherlands (2022), Singapore (2022), Sweden (2022) and the United States (2022).

Mobile applications

The recent trend for the increasing use of mobile applications by tax administrations seen in other editions of this series has continued. While the main use often remains the provision of information and guidance, mobile apps are becoming increasingly transactional, and are becoming a primary way for taxpayers to access relevant records and personal tax accounts, communicate with the tax administration, supply information and tax returns and make payments. As the sophistication and availability of mobile technology has grown, the benefits of digital transformation to tax administrations in less developed administrations, where fixed line internet can be less common, has opened up. This is allowing these jurisdictions, who are often free of legacy digital systems, to provide a platform for digital transformation.

Box 5.5. Examples - Mobile applications

Indonesia – Mobile tax office

Since 2019, the Directorate General of Taxes (DGT) has initiated the Click Call Counter (3C) programme to optimize its digital services. The first part of the programme, Click service, aims at providing Taxpayers an easier access to DGT online services. In 2021, therefore, DGT launched a mobile application that can be accessed by the public using their phones. The application is a mobile-based portal for the official website of the DGT (www.pajak.go.id).

Features on the app aim to help taxpayers comply with their obligations and reduce the need to visit tax offices. Through the app taxpayers can complete a range of tasks including generating tax codes and certificates, getting status checks and updating their records, and can use a tax calendar that reminds important dates. For SMEs there is the ability to perform bookkeeping tasks such as recording daily income and completing monthly tax billing.

Italy – E-invoicing app

Electronic invoicing in Italy became mandatory in public procurement for central government administrations from 6 June 2014, and from 31 March 2015 for local government administrations. Thus, it is mandatory for all business-to-government transactions from 2015. In 2019 this was extended to transactions between businesses and private individuals. The aim of this extension is to tackle evasion and fraud, and since its introduction there has been a significant increase in VAT-related tax revenue.

In order to support economic operators, the Italian Revenue Agency (IRA) offers some free tools in addition to those available on the market. These include the mobile App called “FatturAE” which allows users to create an electronic invoice and send it through the Exchange System to the recipient. Moreover, other support features, such as predefined templates, are provided by the App allowing the easy creation of electronic invoices, helping to minimize the risks of formal errors.

The App FatturAE was made available in 2019. Since then, about 30 000 e-invoices have been transmitted through FatturAE per year.

See Annex 5.A for supporting material.

Kenya – Mobile service strategies

M-Service is the umbrella term used to group all mobile technologies used in the delivery of Kenya Revenue Authority (KRA) services. The first implementation of M-Service was undertaken in 2013, with the overall objective of setting up a communication and mobile payment channel, through which taxpayers could query and receive information from KRA, as well as remit payments via mobile channels such as mobile wallets, mobile banking and internet banking.

The next phase of development emphasized leveraging of new technology to transform and enhance revenue mobilization, broaden the taxpayer base and raise customer satisfaction. A mobile app was identified as one of the possible channels that could deliver MService enhancement initiatives. The objectives for this work was to: establish mobile as a new channel for taxpayer engagement; to increase the speed at which mobile services can be deployed; to use a channel that is more relevant to taxpayers; and to engage previously unreachable taxpayers through mobile. This was not an easy challenge as it required alteration of existing laws, and some tax officers were resistant to the change, potentially driven by a lack of technical skills, particularly mobile technology development and security.

Once these challenges were overcome, the app has expanded the tax base with 23 000 Kenyans registered as new taxpayers on the Mobile platform in 2020/2021. Furthermore, compliance has increased with more than 14 000 taxpayers applying for a tax compliance certificate and 73 000 filing their nil returns.

Malaysia – Mytax

MyTax is one of the initiatives under the Hasil Transformation Project by Inland Revenue Board of Malaysia (IRBM). Its aim is to provide a one-stop centre of tax information for taxpayers, through a mobile website and mobile applications. MyTax is also the main channel for taxpayers to file their annual electronic forms for taxation and reliefs.

The system was developed in six months, and opened to the public on 1 November 2020. The crucial part of MyTax was the presentation of its user experience and interface so that it was easy to use by the public. Web responsive design is utilised in MyTax to provide users with full functions irrespective of the devices and user's behaviour or environment. Security was also important and MyTax is secured by Public Key Infrastructure for secure internet encryption and authentication for taxpayers.

As of 30 November 2021, there are 2 681 767 visitors to MyTax, and it is projected that the users will grow exponentially once the tax filing season starts in March 2022. MyTax is also available in the mobile app through three different platforms, and is still being enhanced further. Modules from the new Hasil Integrated Tax System are being tested for integration with MyTax, allowing e-Registration, e-Updates and other e-applications. Taxpayers can also submit their Income Remittance by uploading data, which will be prefilled in their oncoming tax filing. Furthermore, MyTax will continue to be integrated with other systems such as e-Filing, and the Revenue Management System, geolocation functions, online registration verification for taxpayers, uploading and downloading e-documents.

See Annex 5.A for supporting material.

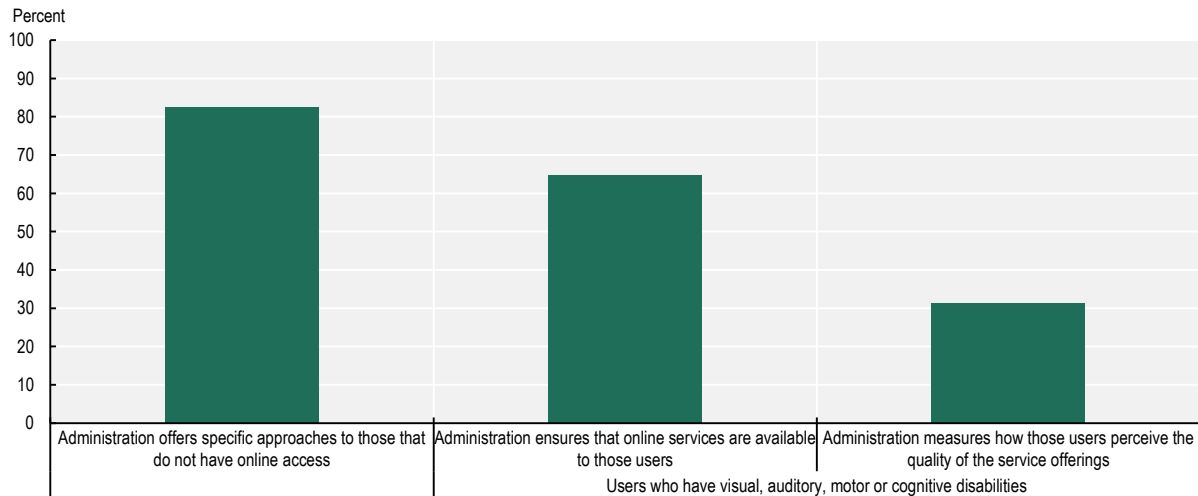
Sources: Indonesia (2022), Italy (2022), Kenya (2022) and Malaysia (2022).

Non-digital services

Digital services have been critical to tax administrations delivering enhanced services to customers, as well as opening up new service options. As digital services have grown, tax administrations are increasingly aware that some groups may not have access to digital services, or may not be comfortable with them. Figure 5.2 highlights that 80% of administrations offer specific services to support those who are not online, and over 60% make sure their services are available to those with a disability. Whilst more progress clearly needs to be made in this space, these programmes are starting to ensure that all taxpayers are served effectively by the tax administration. Tax administrations are therefore continuing to invest in detailed research to understanding the needs and drivers of these taxpayers groups and to develop considered strategies as to how to serve these taxpayers in the most appropriate way.

Figure 5.2. Non-digital services and services for users with visual, auditory, motor or cognitive disabilities, 2022

Percent of administrations



Note: The figure is based on ITTI data from 52 jurisdictions that are covered in this report and that have completed the global survey on digitalisation

Source: OECD et al. (2022), Inventory of Tax Technology Initiatives, <https://www.oecd.org/tax/forum-on-tax-administration/tax-technology-tools-and-digital-solutions/>, Table TT4 (accessed on 13 May 2022).

StatLink  <https://doi.org/10.1787/888934310651>

Box 5.6. Ireland - Analysis to identify taxpayer service needs and trends

Each year Revenue deals with high volumes of customer contacts by phone, email and post, which requires a significant human resource to manage. In a bid to identify customer pain points and devise strategies to address them effectively, a project was undertaken to analyse customer contacts for 'self-assessed' customers over a 12-month period.

Revenue's Data Analytics team provided high-level data of customer contacts which was segmented, including by customer age groupings. This revealed high multi-contact volume levels (five or more in a 12-month period) for older (age 65+) self-assessed customers. A deep-dive analysis of the individual customer contacts was undertaken to critically evaluate our service offering.

From the pain points identified the customers were found to be very compliant. However they were also found to require high levels of support in completing tax returns, high levels of 'reassurance' that they had completed tax returns correctly, and many were potentially filing tax returns unnecessarily.

A range of strategies were devised and piloted (without being advertised) to address the issues identified, this included:

- Providing a dedicated phone service for this customer cohort, noting many were non e-enabled
- A range of proactive outgoing customer contacts where Revenue wrote to customers in plain English

- Providing tax and social welfare information to assist them in completing their end of year tax returns
- Providing information to educate customers, for example, explaining when a customer needed to be registered as 'self-assessed' and providing opportunities to de-register where needed.

Looking at comparable periods in previous years, a 60% reduction in contacts was seen, with a burden reduction for those who no longer need to be registered as 'self-assessed'. The pilot was fully adopted, with plans to expand additional services for customers aged 65 and over.

Source: Ireland (2022).

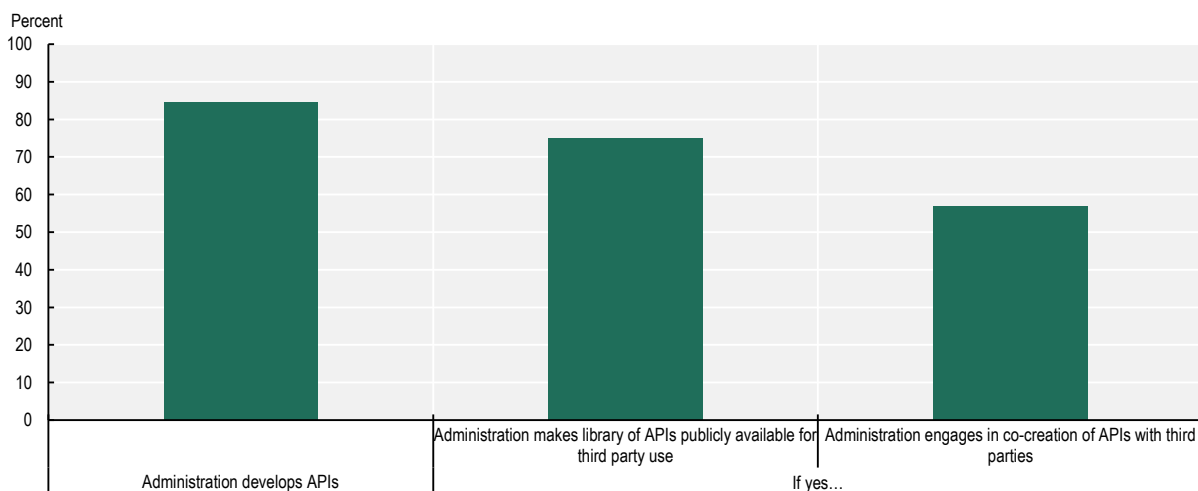
Collaborative services

While many tax administrations develop their own apps internally, Figure 5.3 shows that the vast majority of tax administrations are now creating Application Programming Interfaces (APIs) and that 75% of them are making the APIs available to third party developers. Further, as part of the process of developing APIs, close to 60% of tax administrations are engaging in co-creation with third parties.

APIs are allowing connectivity between systems, people and things without providing direct access, and are the critical enablers of many of the innovative services highlighted in this report. This collaboration is fundamental to the digital transformation of tax administration envisaged in *Tax Administration 3.0* (OECD, 2020_[2]).

Figure 5.3. APIs: Development for third party use and co-creation, 2022

Percent of administrations



Note: The figure is based on ITTI data from 52 jurisdictions that are covered in this report and that have completed the global survey on digitalisation.

Source: OECD et al. (2022), Inventory of Tax Technology Initiatives, <https://www.oecd.org/tax/forum-on-tax-administration/tax-technology-tools-and-digital-solutions/>, Table TT7 (accessed on 13 May 2022).

StatLink  <https://doi.org/10.1787/888934310670>

Table 5.3. Interactions for which administrations have published APIs by tax type, 2022

Percent of administrations

Interaction type	Personal income tax	Corporate income tax	Value added tax
Registration for tax	18.2	29.5	29.5
Filing tax returns	43.2	43.2	43.2
Making payments	29.5	31.8	31.8
Requesting extensions of deadlines	11.4	9.1	11.4
Asking for payment arrangements	6.8	4.5	4.5
Making taxpayer confidential enquiries	11.4	20.5	18.2
Filing tax related objections	0.0	2.3	4.5
Dealing with correspondence	25.0	27.3	27.3
Uploading data files onto tax administration's systems	25.0	29.5	31.8
Other interactions (<i>not by tax type</i>)		34.1	

Note: The table is based on ITTI data from 52 jurisdictions that are covered in this report and that have completed the global survey on digitalisation.

Source: OECD et al. (2022), Inventory of Tax Technology Initiatives, <https://www.oecd.org/tax/forum-on-tax-administration/tax-technology-tools-and-digital-solutions/>, Tables TT8, TT9 and TT10 (accessed on 13 May 2022).

The OECD report *Unlocking the digital economy – a guide to unlocking application programming interfaces in government* (OECD, 2019^[41]) provides an overview of the practices, techniques and standards used to deliver contemporary and effective digital services for taxpayers through APIs. Box 5.5 highlights some of the ways tax administrations are using them.

Box 5.7. Examples – Using APIs to provide better services

Australia - Enhancing agent services

In 2021, the Australia Taxation Office (ATO) further enhanced their services to agents and third parties by delivering Communication preference and Client communication Application Programming Interfaces (APIs). Providing APIs to Digital Software Providers (DSPs) allows them to build functions that agents can then access via their natural systems. These include communication preference APIs to enable DSPs to build functions into their software that allow tax agents to set preferences for who receives the taxpayer's communication and also retrieve digital copies of communications sent to them or their clients.

In addition, these extended services enable agents to proactively manage their client's communications and drive a further uptake in clients receiving communications digitally. As at the end of December 2021 tax agents had set over 1 million preferences for clients to have their communications delivered digitally to the agent.

Austria – Using APIs for taxpayer services

Incomplete and incorrectly completed tax returns and other submissions cause the tax administration a great deal of effort in correcting errors. The Austrian online tax portal - FinanzOnline - offers services that allow data to be transmitted directly from the accounting systems to the tax administration in a simple way. The data to be transmitted must be mapped in an XML structure, and the transmission takes place via SOAP protocol. The interface is not a one-way street as companies can also request notices and other information from the tax administration and thus use it directly in their own systems.

See Annex 5.A. for links to supporting material.

Greece - Development of APIs for taxpayer services

Timologio is a free application that provides digital issuance of electronic invoices, with more than 120 000 users. All business entities that do not own a computerized accounting system can configure their profile, register their clients, organize their products and services and issue their invoices electronically while sending all necessary information to the myDATA platform at the same time through a fully customizable environment.

This means that business data is standardized, allowing procedures to be simplified which reduces costs for business. The tax administration is also able to prefill fields, and better focus risks. The processes for refunds is also quicker and simpler for compliant businesses.

Hungary - Outline of service-type APIs of the Online Invoice Data Reporting System

The Online Invoice Data Reporting System introduced in Hungary in 2018 a requirement for real-time invoice data-reporting by taxpayers. Therefore, the NTCA also introduced real-time services together with the real-time reporting obligation.

The taxpayer's invoicing program transmits the data report to the tax administration at the time the invoice is closed. Thus, the provision of data does not interfere with the process of issuing invoices and is independent of it. At the same time, the tax administration assesses the invoice data received in real-time and immediately shares the results with taxpayers. Taxpayers can assess the results obtained and decide the appropriate steps for them.

Taxpayers receive these results in their invoicing program, which simplifies their own audit activities. The tax administration therefore does not pre-qualify taxpayers' invoices, allowing them to even make mistakes, but at the same time directs them towards compliant behaviour.

The use of APIs provides not only the possibility of immediate evaluation and feedback, but also easy access to invoice data. For example, a Hungarian company can download supplier invoices from the Online Invoice System via an API to its own accounting program for the processing of invoices which reduces administrative errors.

See Annex 5.A. for links to supporting material.

Peru – New services to support small businesses

The tax administration (SUNAT) has developed specific apps to help SME's and entrepreneurs comply, quickly and easily, with their tax obligations. Through the app '*Emprender SUNAT*', they can check on their tax status, receive messages from SUNAT, generate reports on debts, tax returns and payments as well as obtaining further information on tax benefits. The app also allows SMEs to issues electronic invoices and receipts, and generate reports that can be shared with third parties.

Additionally, 'app Personas SUNAT', allows employed or self-employed individuals to manage their records with SUNAT, including checking on their expense deductions, and filing their annual tax return. The app also allows them to produce tax reports for third parties as well as issuing electronic receipts for any fees.

Sources: Australia (2022), Austria (2022), Greece (2022), Hungary (2022) and Peru (2022).

As the services delivered through APIs become more sophisticated, and play a greater role in delivering a quality service to taxpayers, tax administrations are having to invest more in the management and oversight of their APIs. Box 5.6 sets out some of the work that is being done in this area. At the heart of this work is effective collaboration with third parties to ensure that the systems work smoothly, are accurate and secure and continue to deliver for taxpayers.

Box 5.8. Examples - API management

Canada – API co-creation and management

The Canada Revenue Agency (CRA) provides electronic filing services, through a series of application programming interfaces (APIs), a software system that can send and receive information directly to or from the CRA in real-time. The CRA provides private sector software firms with the necessary tools to create user-friendly and affordable tax-filing solutions that improve service delivery for Canadians, some of which are free. This co-creation model has created a digital ecosystem where a variety of vendors provide tax filings solutions, striving to maximize the ease of their user interface and features provided, and simplifying the tax filing experience for Canadians as a result.

While the CRA relies on the software firms to create user interfaces that facilitate greatly the tax reporting task for Canadians, the CRA also has responsibility for ensuring the products on the market are certified for use and have the ability to interoperate with CRA's filing and processing systems. This rigorous software certification process helps to ensure the quality of the tax information transmitted to the CRA.

During the 2021 filing season, approximately 28 million returns were filed using the CRA's systems, representing close to 91% of all tax returns filed, with the vast majority of those returns processed in near-to-real-time. This public-private collaboration has given the CRA an opportunity to receive feedback from their users, exchange on best practices, and inform prioritization of digital services, while ensuring that Canadians receive the benefits and credits they are entitled to.

See Annex 5.A for links to supporting material.

United Kingdom – Managing software and APIs

HMRC's Making Tax Digital (MTD) Programme is the first phase of the United Kingdom's move towards a modern, digital tax service which is fit for the 21st Century. The MTD programme helps taxpayers reduce common mistakes in their tax returns through the use of software. Such errors cost the Exchequer over GBP 10 billion in lost revenue in 2019-2020.

MTD puts businesses on a path to further digitalisation. By integrating tax management with a range of business processes through software, MTD can help contribute to wider productivity gains for business.

Insight to date demonstrates that MTD is delivering on its core objectives and is working as intended. Independent research indicates that many businesses who are using MTD are experiencing benefits including spending less time on preparing and submitting tax returns, greater accuracy, and improved business operations.

MTD has generated GBP 500 million in Additional Tax Revenue (ATR) since the first phase of mandate in 2019. It is predicted to deliver ATR of around GBP 2.8 billion by 2026–27, as certified by the United Kingdom's Office for Budget Responsibility. This extra revenue is forecast to deliver a reduction in the tax gap caused by error and failure to take reasonable care.

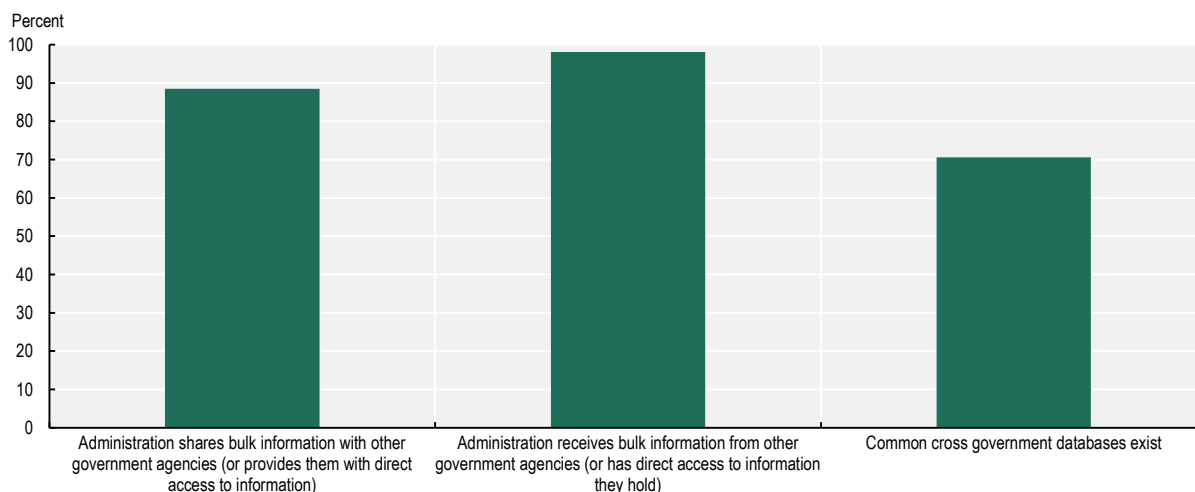
HMRC works closely with the software industry to deliver MTD. The development of MTD compatible software involves building APIs, which enables the software to provide business tax information directly to HMRC.

Sources: Canada (2022) and the United Kingdom (2022).

This collaboration is also opening up possibilities for new service development, often driven by the private sector. Figure 5.4 highlights how common data sharing across government has become, and *Tax Administration 2019* highlighted how tax administrations have become increasingly joined-up with other functions of government to provide better services for citizens (OECD, 2019^[5]).

Figure 5.4. Data sharing with other parts of the government, 2022

Percent of administrations



Note: The figure is based on ITTI data from 52 jurisdictions that are covered in this report and that have completed the global survey on digitalisation.

Source: OECD et al. (2022), Inventory of Tax Technology Initiatives, <https://www.oecd.org/tax/forum-on-tax-administration/tax-technology-tools-and-digital-solutions/>, Table DM3 (accessed on 13 May 2022).

StatLink  <https://doi.org/10.1787/888934310689>

These efforts to join-up with other government agencies often include a “collect once, use many times” approach. Tax administrations (together with social security agencies) have a special place within government in this respect since they will often hold up-to-date verified information on identity, will be involved in both receiving and making payments and will receive and send information to third parties (such as financial institutions and employers).

Since the last edition of this report tax administrations are reporting that they are deepening their collaboration with an increasing number of organisations outside of government, including in the development of new joined-up services.

Box 5.9. Examples – Developing new collaborative services

Austria – Co creation platform

The co-creation platform of the Austrian tax administration “e3lab – *einfach, elektronisch, effektiv.*” (e3lab – simple, electronically, effective.) was set up in 2017. The participation platform follows the idea of open innovation and gives citizens, business and tax agents the opportunity to engage in the designing, developing and improvement process within the tax administration. This is not restricted to the platform itself but also follows a more holistic approach e.g. through workshops and training groups.

Several projects and services have benefitted from this interaction with taxpayers.

- BMF-APP BMF2go - An app for mobile devices to ease the preparation and submission of tax returns.
- Relaunch of the website / online tax assessment system - FinanzOnline including among others support functions such as guided online assistance, explanatory videos and a chat bot.
- Language manual – Setting up guidelines and examples for a simple and understandable diction without using the typical administrative language.

Currently the platform has around 3 000 members and about 400 ideas have been submitted to the system since the beginning of the challenges.

United States - Department of Education Direct Data Exchange

The United States government coordinates a number of income-based financial assistance programs for students through the Department of Education (ED). After receiving new legislative authority to share certain confidential tax data, IRS collaborated with ED to establish a direct data exchange to support students applying for income-based Federal Student Aid. Previously, students applying for assistance had to authenticate into an IRS system to retrieve this data and transfer it to the ED application themselves. Using this new authority, IRS developed three APIs that will provide the necessary Federal tax information from students and their parent's income tax returns directly to ED to make Federal Student Aid determinations and calculate income-driven loan repayment plans. The APIs use modern technology with a secure system-to-system interface allowing ED to request tax data on-demand and IRS to respond in real-time to millions of such requests annually, while processing large bulk requests overnight.

This new direct data exchange is projected to serve as many as 19 million students by 2024. Together, this legislative and technical solution significantly reduces burden on students applying for financial assistance by eliminating the need for individuals to login to an IRS web portal to request their own income tax data. This allows IRS and ED to operate more efficiently and enhances taxpayer privacy while improving data security and usability.

Sources: Austria (2022) and the United States (2022).

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<https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/behavioural-insights-for-better-tax-administration-a-brief-guide.htm> (accessed on 13 May 2022).
- OECD (2021), *Tax Administration 2021: Comparative Information on OECD and other Advanced and Emerging Economies*, OECD Publishing, Paris, [3]
<https://doi.org/10.1787/cef472b9-en>.
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OECD (2019), *Unlocking the Digital Economy - A guide to implementing application programming interfaces in Government*, OECD, Paris, <https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/unlocking-the-digital-economy-guide-to-implementing-application-programming-interfaces-in-government.htm> (accessed on 13 May 2022). [4]

Annex 5.A. Links to supporting material (accessed on 13 May 2022)

- Box 5.2. – Chile: Link to the tax administration’s website and a video with more details on the taxpayer reports used to promote the accountability of public expenditure:
 - Website: <https://www.sii.cl/destacados/reportegt/> (in Spanish); and
 - Video: <https://www.youtube.com/watch?v=bDDkLXidstQ> (in English).
- Box 5.2. – Hungary: Link to a video regarding the new customer portal: <https://www.youtube.com/watch?v=9EOWQNGVIFU>
- Box 5.2. – Japan: Link to a presentation with more detail on “Mynportal”: <https://www.oecd.org/tax/forum-on-tax-administration/database/b.5.2-japan-mynportal.pdf>
- Box 5.3. – Japan: Link to a presentation on the chatbot: <https://www.oecd.org/tax/forum-on-tax-administration/database/b.5.3-japan-chatbot.pdf>
- Box 5.5. – Italy: Links to a video and websites with more information on e-invoicing and the app FatturAE:
 - Video on e-invoicing in Italy: <https://www.youtube.com/watch?v=pLLNi3abCFg>
 - E-invoicing website (in Italian): <https://www.agenziaentrate.gov.it/portale/web/guest/area-tematiche/fatturazione-elettronica>
 - App FatturAE website (in Italian): <https://www.agenziaentrate.gov.it/portale/web/guest/app-fatturae>
- Box 5.5. – Malaysia: Link to a flowchart that sets out the myTax service: <https://www.oecd.org/tax/forum-on-tax-administration/database/b.5.5-malaysia-mytax-diagram.pdf>
- Box 5.7. – Austria: Link to a tax administration’s website that contains additional information for software providers on data transmission to the tax administration (in German): <https://www.bmf.gv.at/services/finanzonline/informationen-fuer-softwarehersteller.html>
- Box 5.7. – Hungary: Link to a video regarding the service-type APIs of the Online Invoice Data Reporting System: https://www.youtube.com/watch?v=8OBQF_NLq6E
- Box 5.8. – Canada: Link to videos with more details on using certified tax software to fill out tax returns:
 - <https://www.canada.ca/en/revenue-agency/news/cra-multimedia-library/individuals-video-gallery/learn-taxes-doing-taxes.html>
 - <https://www.canada.ca/en/revenue-agency/news/cra-multimedia-library/individuals-video-gallery/transcript-filing-online-fast-easy-secure.html>



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