Digital Continuous Transactional Reporting for Value Added Tax

Policy and Design Considerations for Introduction and Operation

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Foreword

This report presents considerations for the design and operation of digital continuous transactional reporting (DCTR) regimes for value added tax (VAT) purposes. It has been developed by Working Party No. 9 on Consumption Taxes (WP9) against the background of the growing number of DCTR mandates being adopted or considered by jurisdictions worldwide. Those mandates typically introduce a requirement for real-time or near real-time reporting of invoices or transactional data to the tax authorities, aimed particularly – or exclusively – at enhancing VAT compliance risk management. WP9 concurred that jurisdictions that consider DCTR implementation or reform would benefit considerably from the sharing of research and experiences on the design and operation of these regimes, to enhance their efficiency and effectiveness and to ease administration and compliance notably in international trade. The significance of this work was underscored further by the report on *Tax Administration 3.0 and Electronic Invoicing: Initial Findings*, released by the OECD Forum on Tax Administration (FTA) in 2022, which found that DCTR mandates presented a high degree of heterogeneity creating growing risks of complexity, legal uncertainty and additional operating costs for economic operators that face these obligations across a growing number of jurisdictions. This includes small and medium enterprises that benefit from the opportunities offered by digital trade to expand their markets. The FTA report noted the potential benefits of the development of a set of considerations that jurisdictions may wish to take into account when exploring the introduction or reform of DCTR mandates, in order to help mitigate some of the issues arising from different implementation choices.

Accordingly, the framework developed by WP9 presents guidance for the effective and efficient design and operation of DCTR regimes notably with a view to facilitate compliance and administration and enhance consistency across regimes. It covers six core aspects of DCTR design and implementation, namely: the strategic approach underpinning DCTR introduction; the digitalisation of invoicing as the fundament for DCTR; approaches to facilitate and enhance business compliance; information security; fostering interoperability; and ensuring the long-term sustainability of DCTR mandates. It has been developed for the consideration of interested jurisdictions and should not be interpreted as a recommendation to implement a DCTR mandate, which remains a sovereign decision of each jurisdiction.

This report has been developed under the auspices of the OECD Committee on Fiscal Affairs (CFA) via its Working Party No.9 on Consumption Taxes (WP9), with critical inputs from its Technical Advisory Group (TAG) and subject-matter experts from businesses participating to the TAG. It builds on intense consultation and dialogue among OECD members, partner countries and other stakeholders, including private sector experts. It was approved by WP9 on 18 July 2025 and by the Committee on Fiscal Affairs on 7 October 2025, and prepared for publication by the OECD Secretariat.

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Abbreviations and acronyms

B2B	Business-to-business
B2C	Business-to-consumer
CFA	The OECD Committee on Fiscal Affairs
DCTR	Digital continuous transactional reporting
FTA	The OECD Forum on Tax Administration
GST	Goods and Services Tax
O2C	Order-to-cash cycle
P2P	Procure-to-pay cycle
VAT	Value added tax. In this publication, VAT is used to refer to any national tax that embodies the basic features of a value added tax by whatever name or acronym it is known, e.g. Goods and Services Tax or GST.
WP9	Working Party No.9 on Consumption Taxes
XML	Extensible Markup Language

Executive summary

A growing number of jurisdictions worldwide are introducing or have implemented a digital continuous transactional reporting (DCTR) mandate as part of a broader shift toward more automated and data-driven tax administration. These regimes typically require real-time or near real-time reporting of invoices or transactional data to the tax authorities (see Annex A for more detail). While DCTR is often aimed primarily at enhancing value added tax (VAT) compliance risk management, there is growing recognition that DCTR can create significant opportunities for greater operational efficiency for business as well as tax administration, notably by stimulating the modernisation and streamlining of accounting, procurement, financial and reporting processes leading to greater quality of data and processes and to improved compliance and revenue collection.

Growing DCTR introduction is closely intertwined with the ongoing digital transformation of business processes. As businesses modernise their enterprise systems, the need for integrating tax compliance into digital workflows increases, particularly for VAT, given its transaction-based nature and its relatively short reporting cycles. The growing adoption of electronic invoicing has become an increasingly central component of the digital transformation of business. It allows for better integration of invoicing with other core business processes leading to greater operational efficiency, transparency and control. Electronic invoicing by businesses has seen substantial growth in recent years and this is expected to continue, along with greater convergence towards international electronic invoicing standards to facilitate its use in international trade.

The international proliferation of DCTR mandates and the challenges it creates

The global expansion of DCTR mandates has thus been both a consequence of the opportunities of digital transformation of business and tax administration, as well as a driver of that transformation. The global expansion of DCTR mandates has however not occurred in an organised manner. These regimes present a high degree of heterogeneity having often been focused primarily, if not exclusively, on a wholly domestic context. That diversity of national regimes poses increasingly significant compliance challenges given the global proliferation of DCTR mandates, in particular for businesses that face such obligations across a growing number of jurisdictions. This includes small and medium enterprises (SMEs) that benefit from the opportunities offered by digital trade to expand their markets. The growing importance of these challenges was highlighted in the report “Tax Administration 3.0 and Electronic Invoicing: Initial Findings” by the OECD Forum on Tax Administration (FTA), which found that the multiplicity of non-interoperable designs was likely to result in excessive complexity, legal uncertainty and additional operating costs for economic operators, particularly those engaged in international operations. The report noted the potential benefits of the development of a set of considerations that tax administrations may wish to take into account when exploring the introduction or reform of DCTR mandates, in order to help mitigate some of the issues arising from different implementation choices.

Recognising that jurisdictions would benefit from such guidance to support greater consistency among DCTR regimes, and acknowledging the strong connection between DCTR mandates and VAT compliance,

risk management and administration, the OECD's Committee on Fiscal Affairs (CFA) launched a project through its Working Party 9 on Consumption Taxes (WP9) to develop a set of considerations that may offer guidance for DCTR design and operation. This document presents the outcome of this work.

Considerations for DCTR introduction and operation

The guidance for DCTR design and operation presented in this document aims to assist jurisdictions in evaluating and identifying options for efficient and effective DCTR design, implementation and operation, notably to enhance consistency across regimes and mitigate the adverse effects of the proliferation of wholly distinct regimes. It builds on intense consultation and dialogue among OECD members, partner countries and other stakeholders, including private sector experts, and has notably benefitted from the sharing of experiences with existing DCTR regimes. It is presented for the consideration of interested jurisdictions and should not be interpreted as a recommendation to implement a DCTR mandate, which remains a sovereign decision of each jurisdiction.

The guidance for DCTR design and operation presented in this document is structured around six key areas of consideration for jurisdictions when assessing the potential introduction – or reform – of a DCTR mandate. Figure 1 presents a visual representation of these six key areas and their interactions. The guidance in this document provides considerations for each of these areas covering distinct aspects of a jurisdiction's decision making on DCTR introduction, design and operation.

Each key area is analysed in a dedicated section, as follows:

- **Section 1: Developing a solid strategic basis for DCTR introduction and operation.** Highlights the critical importance of a strategic approach to the design, implementation and operation of a DCTR requirement, covering the following elements:
  - The definition of the policy objectives of DCTR introduction and subsequent analysis to identify the preferred design options to achieve these objectives.
  - The need for a comprehensive regulatory framework.
  - The importance of stakeholder consultation and the need for adequate change management, governance and resourcing.
- **Section 2: Embracing the digitalisation of invoicing as the fundament for DCTR.** Analyses the considerable opportunities of the growing digitalisation of invoicing as a commercial process for DCTR, highlighting:
  - The growing business adoption of electronic invoicing as a critical enabler for DCTR.
  - The opportunities offered by the growing global convergence of electronic invoicing standards to enhance DCTR efficiency and interoperability.
- **Section 3: Facilitating compliance to maximise DCTR impact.** Sets out options for DCTR design and operation to facilitate and enhance business compliance to maximise DCTR performance, covering the following dimensions:
  - The core elements of guidance that businesses need for compliance.
  - Design options that are likely to minimise costs of compliance and administration.
  - The critical importance of sufficient lead time for implementation.
  - Minimising risks of disruptions to economic activity and enhancing DCTR stability.
  - Taxpayer assistance and the role of service providers in facilitating compliance.
- **Section 4: Ensuring information security.** Discusses the importance of robust information security measures as a core component of DCTR design and operation, across the following areas:
  - Ensuring the integrity, availability and confidentiality of DCTR data.

- Establishing a robust legal and operational framework for information security and implementing the appropriate information security measures in line with international standards.
- The need for special attention to the protection of sensitive information.

- **Section 5: Fostering interoperable data exchange.** Highlights the growing importance of the interoperability across electronic invoicing systems and DCTR data exchange systems, providing considerations on:
  - The need for interoperability between electronic invoicing systems and the need to integrate interoperability as a central component of DCTR.
  - Adopting a data exchange model that facilitates DCTR interaction with businesses, considering the opportunities created by the solutions for enhanced interoperability between invoicing systems.
  - Enhancing interoperability by minimising jurisdiction-specific design features.
- **Section 6: Considering the long-term sustainability of the DCTR strategy,** in particular through the continuous monitoring an evaluation of DCTR performance and impacts and ensuring that DCTR requirements do not stifle innovation or create obstacles to international trade.

Figure 1. Visual summary of the six key areas of considerations for DCTR design and operation

Source: OECD

1 Develop a solid strategic basis for DCTR introduction and operation

This Section highlights the critical importance of a strategic approach to the design and implementation of a DCTR requirement. It presents considerations on the following aspects:

- Defining the policy objectives of DCTR introduction, which typically include tackling VAT fraud and non-compliance and enhancing the efficiency of VAT compliance and administration.
- Carrying out analysis to identify the appropriate design of a DCTR requirement to achieve the stated objectives, taking account of a range of aspects that are likely to be specific to a jurisdiction's circumstances. This could include consideration of alternatives to DCTR to achieve the stated objectives.
- Underpinning DCTR implementation and operation with a comprehensive regulatory framework.
- The importance of business consultation and of experience sharing among jurisdictions.
- Ensuring adequate change management, governance and resourcing.

1.1. Define the strategic objectives of DCTR introduction

A DCTR requirement gives a tax authority visibility of detailed transactional business information in (near) real-time by allowing the collection of these data directly from business systems. This creates considerable opportunities for improved tax administration, including more effective revenue collection, enhanced compliance risk management and greater ease of compliance, particularly for VAT given its transactional nature and self-assessed operation.

Successful DCTR development and implementation requires the adoption of a clear DCTR strategy from the outset, identifying the desired outcomes and the strategy for achieving them in light of the jurisdiction's specific context. DCTR is a tool for achieving specific goals rather than an objective in itself. It is therefore important for a jurisdiction that considers introducing a DCTR requirement to clearly define the desired outcomes to which DCTR is intended to contribute from the outset and to embed its introduction in a broader strategy aimed at achieving those outcomes. This approach is likely to support well-informed decision making and a common understanding of the strategic objectives of DCTR introduction among policy decision makers and the technical experts that will design and implement the system.

Reducing VAT fraud and non-compliance is often an important, if not the main, motivation for DCTR introduction. By allowing a tax authority to have visibility of sales and purchases in (near) real time, DCTR creates opportunities to boost its capacity to tackle VAT fraud and non-compliance, notably by reducing the possibility for the under-reporting of output VAT, over-reporting of input VAT and the use of false invoices. More generally, DCTR can enhance overall tax compliance and collection by fostering a culture of compliance, as it narrows the scope for errors, non-compliance and fraud in reporting of sales and

purchases for businesses that operate in the formal economy, thus creating pressure on others to comply as well. A summary of recent research findings on DCTR impact is presented in Box 1.1.

Box 1.1. Research insights into the impact of DCTR introduction

- Empirical evidence suggests a positive correlation between the adoption rates of electronic invoices and their transmission to tax authorities and the levels of reported economic activity (Bellon, M. et al., 2019[1]) and taxable sales (Templado, I. and D. Artana, 2018[2]).
- It has been asserted that DCTR regimes can help to reduce the informal economy and broaden the tax base (Lee, 2016[3]). As an illustration, it was estimated that in 2014, the electronic invoicing ecosystem in Mexico brought 4.2 million micro businesses into the formal economy (OECD, 2017[4]). It is important to acknowledge, however, that DCTR alone cannot transform an informal economy into a formal one, as other factors come into play such as the cost of compliance and the existence of effective enforcement mechanisms (Lee, 2016[3]).
- Several longer-term assessments have been conducted across Latin America where DCTR regimes were implemented earlier than in other parts of the world. A study on Argentina suggests that DCTR measures generated an average increase in revenue ranging from 0% in 2008 and 2009 to 10% in 2013, with a positive impact in 6 out of the 9 years analysed (Templado, I. and D. Artana, 2018[2]). The results of a similar study conducted on Uruguay indicated a 3.7% increase in VAT payments in the six months following the adoption of electronic invoicing by companies (Bérgolo, 2018[5]). Positive impacts have also been observed in Brazil (Martínez Fritscher, A. et al., 2022[6]), Ecuador (Ramírez, J., N. Oliva and M. Andino, 2018[7]) and Mexico (Fuentes, 2016[8]).
- In Europe, the introduction of DCTR requirements coupled with more efficient tax audits appears to have contributed to a reduction of VAT gaps between 2019 and 2022 in some EU Member States (European Commission, 2024[9]) (OECD, 2024[10]). This occurred in a context where several EU Member States reported VAT gap reductions, despite the absence of DCTR requirements.

To effectively tackle VAT fraud and non-compliance, DCTR needs to be integrated into a broader VAT compliance risk management strategy. While DCTR offers many opportunities, it is not a comprehensive solution for all VAT compliance and enforcement challenges. Since a DCTR system's effectiveness depends on the breadth and reliability of the data it processes, limitations may arise notably where reported data are incomplete (e.g. those relating to the informal economy) or deliberately manipulated (e.g. by adaptable fraudsters). Tax authorities will thus need to consider DCTR implementation as part of a broader set of measures.

The introduction of DCTR also holds considerable potential for greater ease and efficiency of VAT compliance by automating and standardising tax reporting, narrowing the scope for errors and fostering digitalisation and modernisation of economic activity. DCTR introduction could thus contribute to achieving the vision of Tax Administration 3.0 presented by the OECD Forum on Tax Administration (FTA) (OECD, 2020[11]), which notably promotes greater efficiency in tax administration and greater ease of compliance by embedding tax processes seamlessly into businesses' (and other taxpayers') natural systems and transactions. It encourages a shift over time from traditional – often manual and/or periodic – reporting and compliance procedures to more seamless and frictionless real-time and automated processes that are embedded in taxpayers' natural systems, achieving more efficient and higher quality compliance and administration. Inadequate design, however, risks negating the intended benefits and rather lead to increased compliance burdens and costs. Against this background, when designing their DCTR regime, jurisdictions may wish to consider the options that are most likely to enhance

the ease of VAT compliance and to foster modernisation of business and compliance processes, taking into account the specifics of their taxpayer population and the tax authority's administrative capacity. Box 1.2 highlights some of the opportunities that DCTR can create for greater ease and efficiency of VAT compliance.

Box 1.2. Opportunities to enhance ease and efficiency of VAT compliance

Experience suggests that DCTR introduction can notably create opportunities to reduce the complexity of VAT return filing and the time required to carry out this requirement while increasing its accuracy (e.g. by pre-filling information for taxpayers with limited capacity); to phase out reporting obligations or other requirements that might become obsolete or redundant (e.g. implementing a "report-only-once" approach); and/or to enhance the efficiency of key taxpayer-facing processes (e.g. VAT refunds).

Jurisdictions may also consider the opportunities that DCTR presents for tax policy design and beyond. In particular, the insights that policymakers can gain from their (near) real-time access to a wide range of valuable economic data such as trade flows, consumption trends and business performance, among others, may further enhance and facilitate policy decision-making. This is likely to require the appropriate legal basis allowing access to DCTR information to inform policy design, which will normally be limited to anonymised and aggregated data.

1.2. Conduct comprehensive analysis to guide the DCTR introduction and design

There is no "one-size-fits-all" DCTR strategy: the design and adoption of a DCTR mandate require careful consideration of a range of aspects that are likely to be specific to any given jurisdiction. This includes a cost-benefit evaluation, assessing the benefits that can realistically be expected from DCTR introduction in achieving the stated objective (e.g. to tackle VAT fraud and non-compliance) compared to the potential impact of that introduction for key stakeholders. Components of this analysis include the investment in technology that will be required for tax administration and businesses, the capacity of the business population (e.g. small businesses) to adapt and comply, the quality and reliability of a jurisdiction's technological infrastructure and the impact on the jurisdiction's economic activity. Box 1.3 lists a number of core aspects to consider when assessing the impact of DCTR introduction, which are likely to influence the outcome of the analysis.

Box 1.3. Aspects to consider for a "cost-benefit" assessment of DCTR introduction and design

The evaluation of DCTR introduction and design will normally require an impact assessment of key policy decisions and design options, including:

- The scope of the regime, including in-scope businesses, the types of transactions covered and the document types potentially subject to DCTR obligations.
- The extent and complexity of data requirements, such as the number of data points, level of detail, formats, potential data sources, etc.
- The extent of alignment with prevalent commercial processes.
- The exchange mechanisms, timing and conditions, among others.

This evaluation should include consideration of the risks that potential design options can create for business continuity and commercial processes (e.g. risks of delays in invoicing and payment, impact on logistics, etc.). In carrying out this evaluation, it is advisable to consult with businesses and other key stakeholders such as technology developers and service providers that will often have a deep understanding of the potential business impact of DCTR design options.

An evaluation of the jurisdiction's administrative capacity to process and use the DCTR data as required to achieve the intended outcomes is another core component of the assessment underpinning a potential DCTR introduction and design. This includes giving proper consideration to limiting DCTR to data that are strictly needed to achieve the objectives of DCTR introduction (see also Section 3.3 below). Box 1.4 outlines a range of factors to consider when carrying out such an assessment.

The analysis supporting DCTR introduction could be complemented with an assessment of potential alternatives to achieve the desired outcomes, which could be equally or even more efficient and/or attainable, taking into account a jurisdiction's specific circumstances.

Box 1.4. Assessing the administrative capacity to process and use DCTR data effectively

The assessment of a jurisdiction's administrative capacity to process and use DCTR data effectively will normally include consideration of the following aspects:

- The IT capacity of the tax administration to handle the large volumes of inbound data from DCTR introduction, including processing, storage and network capacity.
- The capacity to integrate DCTR into the tax administration's existing systems, ensuring that the collected data can be seamlessly shared and analysed internally, with the necessary safeguards for information security. The proper integration of a DCTR system into a tax administration's existing systems and infrastructure is likely to reduce risks of inefficiency and complexity, for instance from uncoordinated reporting and/or data requirements or inefficient use of data.
- The capacity to analyse the large amounts of DCTR data and to use that analysis to steer enforcement processes in a timely, efficient and effective manner – where DCTR introduction is mainly aimed at tackling VAT fraud and non-compliance.
- The ability to access other – already available – data to achieve the objective(s) pursued by DCTR.
- The administration's existing audit strategy and enforcement capabilities, including the capacity and human resources needed to act upon cases that might be identified.
- The reasonably expected contribution of the DCTR data to supporting enforcement activities, where this is a core objective of DCTR, taking account of the type and expected quality of data.

1.3. Ensure that DCTR implementation and operation are underpinned by a comprehensive regulatory framework

A comprehensive regulatory framework underpinning DCTR introduction and operation is needed to provide clarity and certainty on all aspects of the regime's implementation and functioning, to all stakeholders in government and private sector. The DCTR regulatory framework is likely to include primary legislation, implementing regulations and detailed administrative instructions covering all relevant legal and technical aspects. Within a jurisdiction, the development and adoption of that regulatory framework is likely to require the involvement of multiple actors within government beyond tax administration.

Sections 2 to 6 of this report present further detailed considerations for the development of a DCTR strategy and the regulatory framework that underpins it, including on aspects such as the use of e-invoicing as the basis for DCTR, technical design options, implementation and compliance facilitation, information security, interoperability and sustainability of the regimes.

1.4. Consult with affected businesses and with other jurisdictions

Regular stakeholder consultation from the very early development phases of DCTR design has proven to be an important component of jurisdictions' approach to enhancing the efficiency and effectiveness of policy, legislative, administrative and technical design of DCTR regimes. Stakeholder consultation is critical notably to acquire an appropriate understanding of the capacity and constraints of a jurisdiction's taxpayer population to adapt and comply with DCTR requirements, to identify

opportunities for enhanced efficiency and to minimise risks of undue impact on business operations. Box 1.5 provides a summary of practical considerations to support stakeholder consultation.

Jurisdictions are encouraged to also consult with other jurisdictions. Such collaboration can help identify common approaches, explore possibilities for convergence on key elements, and foster interoperability, offering opportunities to ultimately enhance the design and efficiency of the DCTR strategy.

Box 1.5. Practical considerations to support effective stakeholder consultation

Stakeholder consultation on DCTR will offer valuable insights into various operational aspects that are essential for the design, implementation and operation of the regime. This includes acquiring the necessary operational understanding of the various sectors and segments of a jurisdiction's business population, including commercial practices (e.g. rebates), business system configurations (e.g. rounding rules) and the large variety of relevant "business cases" that the DCTR regime will need to be capable of handling.

Among key stakeholders to include in public consultations are the businesses likely to be affected by the DCTR regime, national and international industry representatives (e.g. chambers of commerce and business federations), electronic invoicing service providers, VAT compliance technology developers and service providers, and accounting and legal professionals.

Jurisdictions may wish to give special attention to consultation with segments of the taxpayer population that may especially face particular constraints to adapt and comply with DCTR requirements (such as small and micro-enterprises; SMEs) and business sectors and/or operators that may face particular challenges, for example, due to the complexity of their operations or specific sector requirements. These challenges increasingly include the complexity of facing multiple DCTR obligations across the jurisdictions where businesses make supplies that are subject to VAT, which affect a growing number of businesses including SMEs that benefit from the opportunities offered by the internet to access new markets.

Providers of widely adopted accounting software and enterprise resource planning (ERP) applications may provide valuable insights into current and future trends and capabilities in invoicing, reporting, and key business processes that may create opportunities for efficient and successful DCTR design and implementation.

Considerations for an effective consultation process include the following:

- To ensure the appropriate transparency, allowing stakeholders to understand the new requirements and to plan for their proper and timely implementation.
- To provide sufficient time for feedback, allowing stakeholders to fully assess the implications of proposed changes and provide meaningful feedback.
- Ensure clarity of information, allowing the wide variety of stakeholders – including those with limited expertise - to easily acquire a proper understanding of the proposed requirements.
- Ensure that the consultation reaches a sufficiently wide share of the stakeholder population, to ensure input representing the necessary diversity of perspectives.

While maintaining some flexibility at the time of introduction is important to give due consideration to diverse perspectives, it is equally important that final decisions are taken and properly communicated as and when required to eliminate ambiguity and minimise the risk of fragmented interpretations, ensuring that all stakeholders share a clear and unified understanding as DCTR introduction moves forward.

1.5. Ensure adequate change management and resourcing

Successful DCTR introduction will normally require a well-structured change management strategy, building on a clear leadership and governance structure. This typically includes the appointment of a dedicated change management team to oversee DCTR design and subsequent implementation and to ensure proper accountability. This may require the involvement of multiple parts of government. This structure may subsequently form the basis for the arrangements to ensure proper oversight of DCTR functioning once it is operational, including to evaluate its performance and sustainability over time (see also Section 6 below).

Other key components of a proper DCTR change management strategy, which are discussed in the considerations presented in this document, include: early and continuous engagement with internal and external stakeholders (incl. internal staff, other government agencies, affected businesses); ongoing communication to inform and reassure all stakeholders; capacity building and training; monitoring and feedback processes to track progress, identify challenges and make adjustments as needed.

Finally, it is critically important for a successful DCTR introduction to make a realistic estimate of resource needs – and capacities – and to ensure that adequate funding is made available to meet these needs. This will be required early on in the DCTR strategy development and decision-making process. In assessing funding needs, a wide range of aspects will need to be considered, as outlined in Box 1.6.

Box 1.6. Assessing funding needs for DCTR implementation

Aspects to consider when estimating the resource needs for DCTR implementation are likely to include:

- The design and development of new IT solutions and their integration into existing IT systems.
- Changes to administrative processes.
- Staff requirements.
- Capacity building and training needs.
- Communication strategy.
- Taxpayer assistance programmes, among others.

2 Embrace the digitalisation of invoicing as the fundament for DCTR

This Section presents and underscores the considerable opportunities that the growing digitalisation of invoicing as a commercial process offers for the efficient and successful introduction and operation of a DCTR requirement by jurisdictions that have decided to implement such a reform. It presents considerations on the following aspects:

- The growing adoption of electronic invoicing by businesses as a critical enabler for DCTR introduction and operation.
- The opportunities offered by the growing global convergence of electronic invoicing standards to enhance DCTR efficiency and interoperability – and the call to limit the introduction of additional tax-specific data requirements for DCTR to ensure that these opportunities are fully exploited.

2.1. Leverage the growing adoption of electronic invoicing as the basis for DCTR

Widespread adoption of electronic invoicing throughout the relevant business population is a critical enabler for DCTR. High compliance levels with DCTR requirements can normally be achieved only if businesses can efficiently and effectively consolidate or extract the requested transactional data from their commercial systems during their normal business activity, ideally in an automated manner. This can be enabled to a large extent by electronic invoicing processes.[1] DCTR therefore typically involves the introduction of a requirement for VAT-registered taxpayers to either transmit actual electronic invoices in full, or to transmit the underlying transactional data (or a subset) to the tax administration in a structured, machine-readable format.[2] These two approaches have been termed “invoice transmission” and “data transmission” DCTR models, respectively. Annex A presents these models in more detail.

By embracing the adoption of electronic invoicing, DCTR introduction can give a significant stimulus to the digitalisation of business processes and thus to greater business efficiency and the modernisation of economic activity while increasing the quality of reporting and enhancing compliance. Electronic invoicing could be made mandatory as part of a DCTR strategy or, alternatively, measures could be taken to stimulate and facilitate widespread adoption of electronic invoicing as an easy and efficient solution to comply with DCTR requirements. Box 2.1 outlines examples of measures taken by jurisdictions to stimulate the uptake of electronic invoicing.

The readiness for the adoption of electronic invoicing is likely to differ across segments of any jurisdiction’s business population. Factors such as size, industry sector, digital infrastructure, access

to electronic invoicing solutions, specific regulatory requirements, among others, can vary widely across business segments, leading to differing readiness and adoption levels.

Box 2.1. Examples of measures to promote the uptake of electronic invoicing

Jurisdictions have typically taken a gradual approach for the introduction and adoption of electronic invoicing among their business population. Such an approach has involved the introduction of measures to promote the transition from paper to electronic invoicing, which can be followed by mandatory implementation when the system is considered sufficiently mature and has achieved relevant adoption rates among key taxpayer segments. Mandates have typically been used as a means to force adoption among segments with lower uptake.

Examples of measures to promote voluntary uptake or to ease the transition to mandatory electronic invoicing include:

- Financial or tax incentives through which governments encourage businesses to invest in electronic invoicing systems.
- Grants and subsidies, which can help businesses cover the costs of implementing electronic invoicing solutions.
- Industry partnerships. This could include encouraging or requiring accounting software providers to offer integrated electronic invoicing functionality; or electronic invoicing service providers to offer basic services (e.g. a limited number of e-invoices) for free or at reduced cost.
- Free basic electronic invoicing systems provided through government portals.

2.2. Use the growing convergence of electronic invoicing standards to enhance DCTR efficiency and interoperability, limiting additional tax-specific requirements

Electronic invoicing standards are gradually converging globally, notably driven by the need for greater efficiency and streamlining of invoicing processes in international trade. While global convergence remains work in progress, a number of international standards have gained prevalence across different regimes and/or sectors. Box 2.2 presents an overview of prevalent international electronic invoicing standards.

Box 2.2. Prevalent international electronic invoicing standards

Some of the most prevalent international electronic invoicing standards are:

- **The United Nations Electronic Data Interchange for Administration, Commerce, and Transport (UN/EDIFACT)**, widely used in cross-border supply chains, notably in Europe. Industry-specific adaptations or subsets exist, such as EDIFOR (freight forwarding) and ODETTE (automotive sector), among others.
- **The American National Standards Institute (ANSI) X12**, prevalent in North America.
- **The OASIS Universal Business Language (UBL)**, approved as international standard ISO/IEC 19845 in 2015 (International Organization for Standardization, 2015[12]), adopted as the basis for the electronic invoicing regimes in a number of jurisdictions including Colombia, Dominican Republic, Norway (EHF), Peru and Türkiye, among others.

- **The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Cross Industry Invoice (CII)**, widely used in cross-border supply chains.

These standards are primarily aimed at facilitating electronic data interchange between business partners. They are not government driven in their inception and have generally been created and maintained by international organisations and private organisations or industry groups. In most cases, invoices are not the sole focus but are considered as part of a broader range of "business documents", which typically include several types of commercial documents including purchase orders, transportation and logistics documents and customs declarations, among others.[3]

The European Union established a European Standard on Electronic Invoicing – EN 16931 under EU Directive 2014/55/EU. This standard does not specify a particular syntax but rather defines a core invoice data model (i.e. semantic rules governing the content of an invoice) that can be bound to different syntaxes. Currently, it provides bindings to CII and UBL as compliant syntaxes. This standard is mandatory for business-to-government (B2G) transactions across the 27 EU Member States and will be the basis for the business-to-business (B2B) Digital Reporting pillar of the EU's "VAT in the Digital Age" reform (Council of the European Union, 2025[13]). As such, it is currently undergoing revision. It has played a role in influencing electronic invoicing frameworks and practices beyond Europe.

Built as a core invoice usage specification (CIUS)[4] of the European Standard EN 16931, the **Peppol[5] Business Interoperability Specifications (Peppol BIS)** provide a set of specifications to facilitate standardised electronic document exchange within the Peppol network and primarily within the EU. The **Peppol International Invoice (Peppol PINT)** supports broader international exchange.

Noting that invoicing standards comprise multiple components, a shared semantic foundation is often regarded as a crucial element in supporting convergence.

This trend towards convergence and interoperability is primarily driven by a need for commercial efficiency, particularly in cross-border trade. While the invoice plays a critical role in the operation of VAT "invoice-credit" systems, it is also – if not primarily – a crucial commercial document (see Box 2.3 on the commercial role of invoices and Box 2.4 on the VAT "invoice-credit" system). As invoicing processes are becoming increasingly digitalised globally, convergence and/or interoperability of electronic invoicing standards is increasingly needed to minimise risks of incompatible systems causing trade disruptions.

Box 2.3. The fundamental role of invoices in commercial activity

In its most basic form, an invoice is a document that serves as a record of a commercial transaction between a seller and a buyer. It reflects the agreed upon commercial terms by documenting the details of goods sold or services provided, quantities, prices, and other relevant transactional information. It constitutes recognition that a transaction has occurred and thus serves an important accounting purpose. An invoice can also function as evidence of a debt or credit, including the terms of payment, thereby offering transparency and clarity in financial dealings.

Invoices are integral to the operation of increasingly digitalised and automated supply chain cycles, including both order-to-cash (O2C)[6] and purchase-to-pay (P2P).[7] The efficient functioning of these cycles is crucial to businesses' cash flows.

As convergence and interoperability of electronic invoicing standards are growing, jurisdictions that wish to introduce DCTR requirements are strongly encouraged to use prevalent international electronic invoicing standards as the basis of their DCTR regime to maximise its efficiency for tax authorities and businesses. By adopting a DCTR strategy that embraces the digitalisation of invoicing in line with commercial trends and prevalent business processes, DCTR can be designed as an organic outcome. This allows a jurisdiction to leverage electronic invoicing processes for VAT risk management and enforcement objectives, while limiting complexity, implementation and operational costs and risks of major disruptions or major inefficiencies for business operations. Importantly, such a strategy is also expected to increase the international interoperability of DCTR requirements and to facilitate the potential sharing of DCTR information between jurisdictions (subject to the availability of a legal basis; the need for interoperable data exchange is discussed further in Section 5).

Box 2.4. The VAT invoice-credit method

Invoicing is at the core of virtually all VAT regimes, largely driven by the widespread use of the invoice-credit method for calculating the VAT liability.

The overarching purpose of VAT is to impose a broad-based tax on consumption. In principle, only private individuals, as distinguished from businesses, engage in the consumption targeted by VAT.

The central design feature of VAT is that tax is collected through a staged process in which each business in the supply chain takes part in the process of controlling and collecting the tax, by charging VAT on its supplies and remitting the proportion of the tax corresponding to its margin, i.e. on the difference between the VAT incurred on its taxed inputs and the VAT charged on its taxed outputs.

VAT is in principle collected on sales to businesses (B2B) as well as on sales to private consumers (B2C). However, since its purpose is to impose a tax on final consumption by households, the burden of the VAT should in principle not rest on businesses, except where explicitly provided for in legislation (e.g. where purchases are made for the private consumption of the business owners or their employees). This requires a mechanism for relieving businesses of the burden of the VAT they incur when they acquire goods, services, or intangibles (OECD, 2017[14]).

Almost all jurisdictions that operate a VAT – including all OECD member countries that do so – use the invoice-credit method for these purposes (OECD, 2024[10]). Under the invoice-credit method (which is a “transaction-based method”), VAT-registered businesses charge VAT on their taxable supplies and issue an invoice for each supply to their business customers (and sometimes also to private customers) indicating the amount of the VAT charged. Business customers are entitled to credit the input-VAT incurred on their business purchases against the output-VAT they charge on their sales, provided that the input-VAT incurred on these purchases is properly documented in a valid invoice issued by the supplier. It creates an incentive for businesses to request proper invoices from their suppliers, thus ensuring – at least in theory – that each supply is properly recorded and reported for VAT purposes and that the correct amount of VAT is remitted to the tax authorities.

Embracing electronic invoicing based on prevalent standards is also likely to preserve the efficiency benefits that businesses may have already achieved through their voluntary adoption of electronic invoicing before the introduction of DCTR. These benefits can include the automation of key business processes and the integration of tax and financial workflows that businesses may have established prior to DCTR introduction. This objective can be achieved by allowing the reusability of existing invoicing technology and processes as the basis for compliance with DCTR requirements.

Enabling reusability allows solutions to be employed across different regimes with scaled-down, cost-effective adaptations, thus minimising the need to develop completely new ones for each regime.

Jurisdictions are strongly encouraged to avoid building their DCTR strategy on bespoke processes that are introduced only for VAT or other tax purposes and that risk to be disconnected from or conflicting with commercial processes. Such an approach is likely to complicate business operations and lead to business inefficiency due to the duplication of processes and parallel – potentially disconnected – document flows (e.g. because the requirements for the VAT invoice are not entirely aligned with the requirements for the commercial invoice). Such an approach that does not build on, or is disconnected from, normal commercial process and documentation requirements is likely to undermine a DCTR regime's core objective to access accurate transactional information, by failing to establish a consistent source of transactional data.

These considerations, with the necessary adjustments, are likewise relevant to DCTR regimes requiring the transmission of additional business documents, beyond invoices, relevant for VAT purposes (e.g. debit or credit notes) or of data derived from these documents.

Notes

[1] These processes should be understood to include not only electronic invoices but also other business documents relevant for VAT purposes.

[2] Structured data can be described as information organised in a (standardised) format facilitating their extraction into databases or other platforms as well as efficient processing and interpretation by computer systems.

[3] Some approaches allow or require "hybrid" formats that involve embedding data (e.g. XML) from an invoicing format into document formats (e.g. PDF/A) which enable a human-readable presentation similar to traditional or paper invoices. Despite this potential benefit, these formats may present challenges related to complexity and potential compatibility issues.

[4] At its core, a CIUS defines how EN 16931 is to be used in a specific context.

[5] Peppol is the Interoperability Framework operated by OpenPeppol, a not-for-profit international service provider. Peppol offers a secure network for business and public organisations to enable the efficient electronic exchange of electronic invoices, purchase orders other business documents using standard formats.

[6] It covers all transactions from the placement of a customer order through to the delivery of goods and receipt of payment, including outbound invoicing and accounts receivable.

[7] It encompasses the entire procurement cycle, from identifying the need for a product or service to the final payment to the supplier, including inbound invoicing and accounts payable.

3 Facilitating compliance to maximise DCTR impact

This Section presents policy and design considerations to facilitate and enhance business compliance with a DCTR requirement, with a view to maximise its impact in achieving its objective(s), including tackling VAT fraud and non-compliance. It presents considerations on the following aspects:

- The importance of clear and timely guidance on the requirements for DCTR compliance, including the core elements of such guidance.
- DCTR design options that are likely to minimise the costs of compliance and administration.
- Limiting the data requirements to what is strictly needed to achieve DCTR objectives as a central consideration to reduce compliance costs and enhance compliance.
- The critical importance of sufficient lead time for implementation.
- Options for DCTR design and operation to minimise risks of disruptions to economic activity.
- The importance of ensuring stability of the DCTR framework.
- Ensuring the appropriate taxpayer assistance.
- The role of service providers in facilitating compliance for businesses.

3.1. Provide businesses with a clear and early understanding of the requirements for DCTR compliance

Clear and early certainty of the requirements for DCTR compliance, incorporated into a unambiguous and consistent legal framework, are essential for in-scope businesses to build their compliance solution, to effectively navigate compliance challenges and to achieve timely, efficient and effective compliance. Ensuring timely and effective compliance with a DCTR requirement is a significant endeavour for any business, typically impacting core business processes in addition to their VAT and other tax compliance systems. Businesses typically adopt a project-based approach to adjust their processes and systems and build the solutions required to comply with a DCTR requirement. Such a project cannot be effectively implemented if there is uncertainty regarding key components of the DCTR regime. That requires that all obligations for business under a DCTR regime are laid out and communicated in a clear, unambiguous, comprehensive and timely manner.

A first fundamental requirement is to clearly define the scope of DCTR requirements, particularly but not limited to:

- The businesses within scope.
- The types of transactions covered.
- The document types subject to DCTR obligations.

A second vital element of any DCTR framework is the clear and timely definition of all relevant technical specifications, recognising that the implementation of a DCTR compliance solution is predominantly an IT-driven project. The practical reality is that, even with legislation enacted, businesses will not be in a position to start the actual implementation of a DCTR compliance solution as long as all relevant technical elements have not been defined. The same holds true for the implementation of a DCTR system by tax authorities. Box 3.1 presents an overview of the minimum technical specifications required for building a DCTR compliance solution.

Box 3.1. Indispensable technical specifications for a DCTR compliance solution

Experience suggests that the indispensable technical specifications that a business – and service providers – require for the development of a DCTR solution include:

- The mandatory or permitted standards for electronic invoicing, including definitions on the handling of attachments.
- The data required for invoice or data transmission.
- The standards, communication protocols, security requirements and functional end-to-end flow for reporting of data to tax authorities.
- The process for handling exceptions, such as errors in the exchange of data.
- The details of validations conducted by the tax administration.
- The messages or codes used to communicate tax authorities' responses to data exchange such as acceptance, rejection, etc.
- The roster of (certified) service providers, including software providers, and/or certification criteria for DCTR solutions, if applicable.

An effective, proactive and sustained communication strategy to disseminate the core legal and technical components of the DCTR framework is critical to facilitate and achieve the necessary level of compliance. This typically requires well organised and properly executed communication to ensure that businesses in scope of a future DCTR obligation are properly informed of the core legal and technical aspects of the new regime as they evolve and become increasingly crystalised as the DCTR reform progresses.

It is strongly recommended that key legislation, regulations and technical guidance be made available in English and in the language(s) of the relevant jurisdiction's main trading partners in addition to the jurisdiction's local language(s). By providing official translations, a single source of truth is established, mitigating the risks of potential misinterpretations due to discrepancies in translation. Providing multilingual documentation is likely to expedite business preparations to ensure timely and effective compliance, considering that translating highly technical documents can be expensive and require considerable time.

3.2. Give due consideration to DCTR design options that minimise cost of compliance and administration

Adjusting business and compliance processes and building a solution to comply with DCTR requirements can require considerable capital investment, which may be more accessible for certain businesses than for others notably depending on their size or their life cycle stage (e.g. startup vs. mature business). Businesses will most likely have to incur these costs of compliance with a new DCTR requirement up front, while any potential business benefits of DCTR may only materialise over time, such as those arising from systems modernisation and automation.

Giving due attention to mitigating compliance and administrative costs when designing a DCTR requirement is likely to enhance compliance and broaden the scope of businesses capable of complying, while facilitating the implementation and operation for tax authorities. This requires a continuous effort to identify and assess the cost impact of various DCTR components during each phase of its development and operation. Box 3.2 provides an overview of typical drivers of regulatory compliance costs.

SMEs require special consideration and specific measures. Costs of compliance are often disproportionately high for SMEs based on their size and turnover and may particularly affect their compliance rates (OECD, 2000[15]). Significant costs associated with DCTR compliance can, for example, arise from the introduction of specific requirements such as the connection of business or compliance systems with government portals, or the obligation to engage certified electronic invoice service providers and cover their fees. In addition to adopting design options and technical specifications for DCTR requirements that are reasonably satisfied also by SMEs, tax authorities may also wish to assess specific measures to support and enhance DCTR compliance by these businesses.

Box 3.2. Identifying and assessing drivers of regulatory compliance costs

The OECD report *Regulatory Compliance Cost Assessment Guidance* (OECD, 2014[16]) provides a useful taxonomy of regulatory costs to serve as a reference source for evaluating the potential impact of DCTR design options and technical specifications on business costs and investment. Some of these costs can be one-off costs while others can be recurring. They include the following in particular:

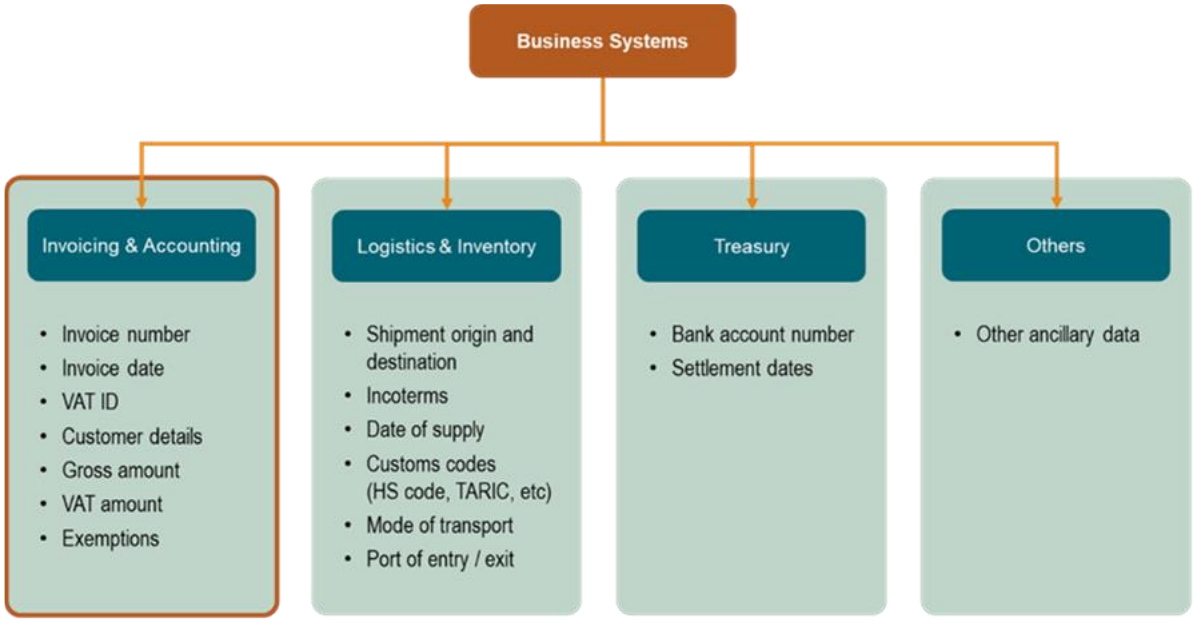
- Substantive compliance costs: these are the incremental costs that are incurred by businesses in undertaking actions necessary to comply with the regulatory requirements. Substantive compliance costs include, among others, implementation costs, direct labour costs, overheads, equipment costs and the costs of external services.
- Financial compliance costs: these are the costs of capital deployed in meeting regulatory compliance obligations (e.g. software or equipment purchased, etc.).
- Indirect compliance costs: also called 'second round' costs, these are incidental to the main purpose of the regulations and often affect third parties. They are likely to arise as a result of behavioural changes prompted by the initial impacts of the regulations.
- Opportunity costs: these are the costs incurred due to the need to divert expenditures to regulatory compliance and away from more productive uses. For example, IT-staff time spent on compliance activities (such as adapting existing IT systems) at the expense of other productive activities (such as developing new digital products).

A systematic approach to identifying and assessing compliance costs as outlined above enhances informed decision making, by helping to identify major cost drivers of potential DCTR design options and stimulating the adoption of a regime that is likely to achieve the most appropriate cost-benefit balance.

3.3. Limiting data requirements to what is strictly needed to achieve DCTR objectives is central to reducing compliance costs and enhancing compliance

The number and types of data points required for transmission to tax authorities are among the key drivers of complexity and thus of costs of business compliance with DCTR requirements. The more types of data are required for reporting, the more data sources that a business's compliance system will need to consult and/or integrate to ensure DCTR compliance. Figure 3.1 presents a high-level overview of prevalent core business systems and the relevant information they may typically hold.

Figure 3.1. Prevalent core business systems and the relevant information they may typically hold



Note: An example set of core invoice data elements is highlighted in orange (leftmost rectangle).
Source: OECD Consultation

Businesses may often face considerable challenges to gather and organise data for DCTR reporting when it involves data categories that are typically held across the different individual business systems they operate across the different components of their activities. Box 3.3 discusses this issue in more detail.

Box 3.3. Lack of integration between business systems

It is often a major challenge for a business to pull together data from the different individual systems it operates across the different components of its activities. In many organisations, the various business systems at different organisational levels frequently lack intercommunication. This situation can arise, for example, when different departments or functions employ distinct software or platforms customised to their particular requirements, often leading to a fragmented landscape of business systems. These issues often stem from the use of legacy software, which can be extremely challenging to incorporate into integrated systems, such as ERP systems (Hansen, H., M. Haddara and M. Langseth, 2023[17]) . The isolation of systems can also be intentional, often as a consequence of implementing data security measures such as information segmentation to safeguard critical data (A. Gordon, L., M. P. Loeb and L. Zhou, 2021[18]).

ERP systems have become a prevalent solution to integrate data from individual systems. While they can provide numerous benefits to businesses, there are also some points that require careful consideration. ERP systems may be very expensive (Veljanoska, F. and M. Axhiu, 2013[19]), which may restrict access for certain tiers of enterprises (e.g. small-sized) and deter businesses from upgrading, switching between different vendors or introducing adaptations. In addition to their cost, personalisation possibilities of ERP software can be limited (Veljanoska, F. and M. Axhiu, 2013[19]). ERPs are complex systems, often seen as too inflexible and too difficult to adapt to the specific workflow and business process of some companies. These challenges can be exacerbated by the fact that large companies seldom have a single ERP system, not being unusual for this type of companies to manage a multitude of ERP systems simultaneously often as a result of various merger and acquisition processes involving different business units.

Recognising that DCTR introduction is typically aimed primarily, and often exclusively, at enhanced VAT administration, limiting reporting requirements to the data that are strictly required to achieve that objective is likely to reduce the complexity and thus the cost of compliance. Limiting the amount of data processed and stored also allows tax authorities to mitigate potential vulnerabilities associated with larger datasets, ultimately enhancing information security. This strategy requires a continuous assessment and refinement of data practices to ensure sustained data minimisation.

Compliance is likely to be facilitated significantly if DCTR requirements focus on the reporting of data elements that are managed by business systems for invoicing and accounting. This approach is likely to contribute significantly towards mitigating key drivers of administrative and compliance costs, not least for small economic operators. Figure 3.1 includes an illustrative outline of core relevant data elements that are typically held in businesses' invoicing and accounting system – see the leftmost rectangle highlighted in orange.

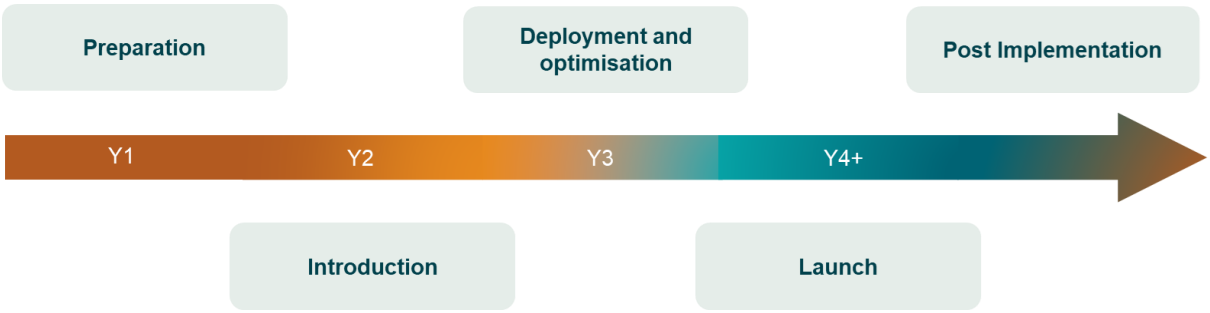
3.4. Allow for sufficient lead time for implementation

Adequate lead time is critical for businesses to allow a proper project-based approach to implementing the, often transformational, changes to their commercial processes and compliance systems in time to meet the requirements of a new DCTR regime. Affected businesses need reasonable certainty concerning the legal and technical DCTR framework to be able to anticipate the consequences of the DCTR introduction – and subsequently adequate lead time to execute the project – to implement their compliance solution. Annex B outlines the tasks that businesses typically need to undertake for the implementation of a DCTR compliance solution.

Appropriate lead time is equally critical for tax administration and other affected government agencies to develop and implement a DCTR framework and the supporting systems and processes required for its proper operation. The lead time necessary for businesses to prepare for compliance will most probably reflect the lead time needed for implementation by government. A reasonable lead time will finally also allow a jurisdiction to consult and communicate with the affected businesses as the regime is designed and implemented. In setting the lead time for implementation, account needs to be taken of the need to conduct thorough testing to ensure its timely and accurate operation.

The determination of what constitutes adequate lead time may vary depending on several factors. Key considerations include the timely release of legislation, detailed guidance and all technical specifications and the number and severity of issues encountered during system design and implementation. Figure 3.2 presents an illustrative roadmap for implementation, which is discussed in more detail in Annex C.

Figure 3.2. An illustrative general roadmap for DCTR implementation



Note: The suggested phases and timeline are merely indicative. They will depend on numerous factors such as the overall complexity of the system, among others.
Source: OECD consultation

3.5. Minimise risks of DCTR causing disruptions to business activity

DCTR design should strive to avoid or minimise risks of disrupting normal business operations. While businesses are exposed to a variety of risks that may affect their regular course of business, a DCTR requirement may exacerbate certain risk elements or introduce new ones depending on its design, e.g. by risking delays in electronic invoicing processes that could notably lead to payment delays, cash-flow issues and logistical disruptions. Minimising these risks in DCTR design, e.g. by avoiding "single points of failure" in the operation of the regime, limits exposure to negative commercial and economic consequences and incentivises strict and timely compliance without jeopardising the stability and continuity of business operations. Box 3.4 presents further detailed considerations and examples on the potential business disruption resulting from choices in DCTR design and operation.

It is important to minimise risks of business disruption not only through DCTR design, but also by ensuring operational resilience and continuity of the regime notably by implementing continuity plans that incorporate effective measures to address contingencies in DCTR operation.

Box 3.4. Potential disruption of business processes resulting from DCTR

The potential impact that a DCTR requirement may have on business processes and the associated risks disrupting critical processes can be assessed at the following main levels of design and implementation:

- At the level of the overarching DCTR model, notably considering the degree of intervention from and interaction with the tax authority's systems and the resulting loss of business autonomy (e.g. to continue operations in case of disruption of the tax authority's systems).
- At the level of the specific design of the systems underpinning the DCTR regime. This involves identifying potential design weaknesses that can create a "single point of failure" and assessing options to address these risks (e.g. through redundancy or alternative operational procedures).
- At the level of the actual implementation of the system. This is broader in scope and involves not just the system in question but all the elements that can affect operational stability.

Typical causes of disruption of business operations associated with distinct DCTR models and/or design options include the following:

- Inadequate response times where the DCTR model and design requires frequent interaction between a tax authority's and businesses' systems, particularly where a timely response from the tax authority's systems is required for invoices to be legally valid. This can affect critical business processes such as:
  - Invoice exchange between trading partners.
  - Receiving payment.
  - Logistics, causing delays in dispatching or receiving of goods or services and, as a consequence, severe supply chain disruption.
  - Customs procedures, including customs clearance and the completion of trade documents, such as bills of lading, airwaybills or export declarations, among others.
- Delays and disruptions caused by stringent requirements that do not align with prevalent business or industry practices, such as:
  - Mandating the inclusion of information that may not be available at the time of invoice issuance, such as detailed information about payment flows or logistics processes.
  - Rejecting invoices, under an invoice reporting model, due to minor calculation differences arising from legitimate business practices, such as rounding adjustments.
  - Requiring references to information to be provided by a government system, such as transaction identifiers, during ordinary processes like making payments.
- Requirements that constrain businesses' ability to organise their operations based on efficiency or other strategic considerations. For example, requiring the use of locally supplied technology or services, particularly in jurisdictions with limited competition, access restrictions or limited technological capacity.

3.6. Ensure stability of the DCTR framework

Avoiding frequent or drastic changes to a DCTR framework, including to the date of its entry into force, is critical to reducing risks of undue uncertainty and complexity of compliance and commercial disruption for businesses in scope of the DCTR obligation. Key requirements, including technical specifications, should maintain reasonable stability over time. Introducing modifications to DCTR

requirements following their publication can significantly impact proper project planning and can cause significant delays and additional costs for businesses and tax authorities.

Recognising that standards and specifications inevitably evolve and improve over time, it requires an organised and structured update process and release cycle to enable businesses, software developers and service providers to efficiently manage change.

3.7. Provide timely, high-quality taxpayer assistance

Proper taxpayer assistance by tax administration, including technical support channels, is likely to enhance and facilitate compliance with the DCTR requirements. To this effect, a team of dedicated technical specialists could be established to manage and deliver technical support.

The rapid resolution of queries from affected businesses is likely to play a critical role in ensuring the efficient and effective long-term operation of the DCTR regime and to minimise risks of business disruption. The initial publication and continuous updates of "frequently asked questions" and comprehensive documentation have proven to be effective in enhancing taxpayer assistance in jurisdictions that have adopted this approach.

3.8. Enable the involvement of service providers to support businesses in achieving compliance

The use of IT integrators and service providers offers opportunities for businesses to leverage the growing availability of solutions in the technology market to meet DCTR requirements. Businesses that trade across international borders may find it more practical to use service providers to comply with their DCTR obligations abroad rather than having to build and maintain in-house expertise to manage compliance in all the jurisdictions where they face such obligations. Specialised service providers increasingly offer this type of services across jurisdictions. This is often an attractive option for businesses with multi-jurisdictional VAT obligations but limited in-house capacity to manage the associated compliance processes for all the jurisdictions where they face such obligations.

4 Ensure information security

This Section recalls the importance of robust information security measures as a core component of DCTR design and operation. It includes considerations covering the following aspects:

- Ensuring the integrity, availability and confidentiality of the information acquired from DCTR.
- Establishing a robust legal framework for information security.
- Limiting risks and implementing appropriate information security measures in line with international standards for information security management.
- The need for special attention to the protection of sensitive information.

4.1. Integrate information security as a core component of the DCTR strategy

Protection of the information acquired from DCTR needs to be integrated as a core component of DCTR design and operation. Information is exposed to a range of security threats and vulnerabilities inherent to its potential use. Appropriate information security is therefore crucial for achieving the desired DCTR outcomes and for minimising the potential consequences of security breaches. It is also crucial for building trust and providing taxpayers with the necessary assurance that their data will be securely and confidentially managed by public authorities, as well as by any third-party contractors or service providers involved in the operation of a jurisdiction's DCTR regime.

Information security typically involves ensuring the integrity, availability and confidentiality of information. When applied to DCTR, this involves safeguarding the integrity of the information reported by businesses pursuant to DCTR obligations, regulating access to it and ensuring that its use aligns with appropriate confidentiality standards and legal requirements. This notably requires due consideration of the resources and infrastructure for the collection, processing and storage of DCTR information.

4.2. Establish a robust legal framework for information security

Information security should be underpinned by a robust legal framework. This framework should clearly designate the relevant government agency(ies) responsible for overseeing and enforcing DCTR information security and allocate the legal powers to do so. It must detail the organisational structure, roles and responsibilities to ensure efficient and effective operation. Appropriate funding should be made available to support these essential functions.

This legal framework should include legislation that clearly defines the obligations of tax officials and other relevant government staff in safeguarding DCTR information security. These rules should also apply to contractors and private service providers to whom government functions may be delegated. They should require any officer or authority with access to or knowledge of DCTR data to maintain secrecy, except in the cases specifically provided by law, and sanctions should be prescribed for violation of this requirement.

Jurisdictions may wish to consider criminalising major offences such as cyber-attacks and sabotage. This could include the granting of criminal investigative and enforcement powers and the necessary basis for co-operation with other agencies under criminal law and for international co-operation

4.3. Implement appropriate information security measures

Information security needs to be translated into effective and sustained action. Since isolated measures are unlikely to be effective, these actions should be structured within an organised and systematic approach to security management at all relevant government levels. As new threats emerge and technology evolves, this approach demands a continuous process of assessment, adjustment and strengthening to remain effective. In this context, minimising or limiting the collection of data can reduce the cost and complexity of protection efforts and the risks associated with security breaches.

Internationally accepted standards on information security management provide an excellent basis for the design, organisation and implementation of a comprehensive strategy. Box 4.1 presents an example of standards for information security management. Annex D presents a high-level summary of the OECD Recommendation on Digital Security Risk Management for Economic and Social Prosperity.

Box 4.1. The ISO/IEC 27000 series of standards for information security management

The ISO/IEC 27000 series of standards developed by the International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC) provide guidance for establishing, implementing, maintaining and continually improving an information security management system (ISMS). An ISMS consists of the policies, procedures, guidelines, and associated resources and activities, collectively managed by an organisation, in the pursuit of protecting its information assets. An ISMS is a systematic approach for establishing, implementing, operating, monitoring, reviewing, maintaining and improving an organisation's information security to achieve business objectives. It involves a continuous process based on:

- Identifying information assets and their associated information security requirements;
- Assessing information security risks and treating those risks;
- Selecting and implementing relevant controls to manage unacceptable risks;
- Monitoring, maintaining and improving the effectiveness of controls associated with the organisation's information assets.

Source: ISO/IEC 27000:2018(E) *Information technology — Security techniques — Information security management systems* (International Organisation for Standardization, 2018[20])

4.4. Give special attention to the protection of sensitive information

Information security measures must be commensurate with potential risks, ensuring that sensitive information receives particularly robust safeguards within the DCTR information security management strategy. In this document, "sensitive information" is understood broadly to include any data requiring enhanced protection due to its nature or the severe potential harm that could result from its undue disclosure, misuse, loss or unauthorised access. This can notably encompass sensitive personal data (i.e. sensitive information related to identifiable individuals such as health data) as well as confidential business information and classified government data. In principle, the higher the sensitivity of the data, the stronger the justification must be for its reporting and processing to be considered as proportionate.

5 Foster interoperable data exchange

This Section discusses the growing importance of the interoperability of electronic invoicing systems between commercial operators and its consequences for DCTR design and operation, particularly the need for interoperability of electronic invoicing systems with DCTR operation in a domestic context and increasingly also in international trade. It presents considerations on the following aspects:

- Understanding the need for interoperability of electronic invoicing systems.
- Integrating interoperability as a central component of the DCTR strategy.
- Adopting an operational model for DCTR data exchange that facilitates interaction with business systems, building on the solutions for interoperability of electronic invoicing between businesses.
- The opportunities offered by the growing convergence of technical DCTR design for greater efficiency in DCTR data exchange.
- Enhancing interoperability by minimising jurisdiction-specific requirements and design features.

5.1. Acknowledge and address the need for interoperability

Interoperability of electronic invoicing systems has become a critical business need. The considerable diversity among businesses influences the business systems they use, including electronic invoicing systems, notably depending on their size and organisational structure and the specifics of the industry sector in which they operate. This often means that they use electronic invoicing systems that are adapted to their specific needs, including to comply with specific regulatory requirements, which can create challenges for the seamless exchange of electronic invoicing data. This has stimulated the development of solutions to facilitate seamless exchange and usage of electronic invoicing data between trading partners, notably in light of the growing end-to-end automation and digitalisation of procurement processes across domestic and international supply chains.

That need for interoperability also applies to the capacity for businesses to comply seamlessly with DCTR requirements. DCTR design and technical specifications can play a considerable role in enhancing the seamless interaction of business systems with a jurisdiction's DCTR system, and thus in facilitating compliance, or in creating obstacles to do so. While the exchange of invoices or transactional data with tax authorities differs from the exchange of invoices and other business documents between businesses in terms of objectives and scope, these processes are closely linked and require a coherent approach to safeguard efficiency, minimise disruption of commercial activity and enhance compliance with DCTR requirements. DCTR design can notably benefit from the solutions that facilitate seamless exchange and usage of electronic invoicing data between trading partners, to also enhance interoperability of business processes with DCTR systems (see for instance the "five corner model" in Box 5.1 below, which builds on the "four corner model" developed to facilitate the exchange and usage of electronic invoicing data between trading partners). This aligns with the vision of the FTA's Tax Administration 3.0 of seamless and more frictionless real-time and automated interaction between businesses' natural systems and tax authorities to boost the efficiency of tax compliance (OECD, 2020[11]).

5.2. Integrate interoperability as a central component of the DCTR strategy

A two-layer approach can be applied to facilitate interoperability with DCTR requirements, and thus enhance the efficiency and effectiveness of DCTR operation and stimulate compliance. The first layer involves creating the conditions and incentives for the usage of interoperable electronic invoicing systems between trading partners, building on the opportunities created by the growing convergence of electronic invoicing standards. This can be achieved by embracing, and further stimulating, the use of internationally accepted electronic invoicing standards as the basis for DCTR (see Section 2). The second layer consists of ensuring the interoperability of electronic invoicing systems with the reporting component of the DCTR system, in alignment with the approach to achieving interoperability of electronic invoicing systems between trading partners. This is discussed in further detail below. This approach enables businesses to reuse and maximise the value of their existing investments in interoperability solutions, reducing costs, minimising duplication of processes and enabling an efficient integration between VAT and other tax reporting and financial systems. For tax authorities, this approach is likely to facilitate and enhance compliance with DCTR obligations while supporting economic activity and growth by incentivising modernisation and improving efficiency.

5.3. Adopt a model for data exchange that facilitates interaction with businesses, building on the solutions for interoperable invoicing between businesses

The operational model and the technical solutions allowed for the transmission and exchange of DCTR data between the tax authority and the businesses that are subject to DCTR requirements, are fundamental to interoperability. It thus represents a key consideration for DCTR design. In essence, options for transmission of DCTR data to tax authorities should be available that are consistent with data exchange solutions that are promoted or mandated for business interactions. Box 5.1 presents examples of commonly-used technologies for data exchange.

Box 5.1. Examples of commonly-used technical solutions for data exchange

The *Extensible Markup Language (XML) is a well-known* example of a commonly-used format for structuring data for exchange between systems. XML allows for structuring and marking up data with simple, readable tags. However, it does not standardise the rules for data exchange.

A commonly-used communication protocol for data exchange is *Applicability Statement 4* (AS4). AS4 is a secure messaging protocol for exchanging data over the internet, part of the ISO 15000 international standard (International Organization for Standardization, 2021[21]). It is based on SOAP[1] and web services to transmit documents, and supports any kind of payload (XML, EDI, etc.). Other examples include *Applicability Statement 2* (AS2) and *Secure File Transfer Protocol* (SFTP).

Communication for data exchange can also be achieved through the use of *Application Programming Interfaces (APIs).* An API is an interface that enables a system to connect with another, enabling the exchange of data and functionality. While there are architectural styles (such as REST)[2] that provide a framework for structuring APIs, they are typically not considered an interoperability solution due to issues such as lack of standardisation, unique implementations and the challenges APIs create in integrating different systems.

An operational model for DCTR data exchange that gives reporting businesses the option to exchange through (authorised) service providers is likely to enable them to choose the option that best suits their specific operations, thereby enhancing economic efficiency. This flexibility is likely to facilitate the reusability of business processes and solutions to meet requirements across different

jurisdictions. Box 5.2 presents the “five corner model” as an example of an operational model for exchange of DCTR data that enables interoperability.

Box 5.2. The five-corner model as an operational model for DCTR that enables interoperability

The five-corner model is an operational framework designed to enhance interoperability and compliance in electronic invoicing and DCTR systems. Participants in the exchange of business documents between trading partners are commonly referred to as “corners” and are divided and categorised according to their functions in these exchanges. The five key corners are the following:

Corner 1: The supplier of goods or services who issues the electronic invoice (O2C cycle).

Corner 2: The entity that processes and forwards the supplier’s electronic invoice to Corner 3. This is typically an (accredited) intermediary, service provider or access point. In certain business scenarios, Corners 1 and 2 can be consolidated into a single entity. This consolidation can take place when the supplier has the capability to handle the processing and exchange of electronic invoices internally, without the need for an external service provider.

Corner 3: The entity responsible for receiving and processing the electronic invoice on behalf of Corner 4, typically an (accredited) intermediary, service provider or access point. Similarly, Corners 3 and 4 can also be consolidated.

Corner 4: The buyer of goods or services who processes the electronic invoice for payment (P2P cycle).

Corner 5: The respective tax authority that receives transactional data (from Corner 2, Corner 3 or both) in scope of DCTR obligations, such as a specific subset of the original invoice exchanged between the trading parties. In cross-border transactions, reporting of these data may involve more than a single tax authority.

This model achieves interoperability by mandating, through a defined governance framework, that participants operate using standardised document formats, communication protocols, among other key components – particularly, but not exclusively, Corners 2 and 3, which play a key operational role.

This architecture provides substantial autonomy in configuring the relationships between Corners 1 and 2, as well as between Corners 3 and 4, offering businesses significant possibilities to reuse their existing solutions and processes. It supports interaction between diverse systems and service providers and can also facilitate cross-border transactions while allowing DCTR data to be effectively reported to tax authorities. Recent developments point to this model gaining traction, especially in Europe and Asia.

5.4. Embrace the opportunities offered by the growing convergence of technical solutions for DCTR data exchange to enhance interoperability across regimes

The usage of existing and emerging common technical DCTR specifications, standards and processes across DCTR regimes has become critical to facilitate interoperability and maximise DCTR compliance. It offers businesses the opportunities to reuse existing and often readily available compliance solutions. DCTR design components that can considerably benefit from the use of common elements may include data formats and standards, semantic model and communication or exchange protocols.

In addition to enhancing interoperability of business systems with DCTR regimes, facilitating the usage of commonly-used or standardised solutions in DCTR design can offer the increasingly important benefit for tax administrations and other relevant government agencies of interoperability between their respective DCTR systems. This can notably facilitate cross-border interoperability and administrative cooperation between tax administrations.

Where an existing DCTR framework already operates, jurisdictions may consider converging towards commonly-used solutions through a gradual and evolutionary approach, initially focusing on key components that are widely used and accepted by their main trading partners, and subsequently expanding to include other jurisdictions.

5.5. Minimise jurisdiction-specific requirements and design features

Minimising jurisdiction-specific DCTR design features and requirements is strongly recommended. Among the jurisdiction-specific technical requirements that can pose significant barriers to reusability, interoperability and international data exchange are requirements concerning the localisation of DCTR data and mandating the use of local service providers.

Notes

[1] Simple Object Access Protocol (SOAP) is a protocol for exchanging structured information in a web service environment, typically using XML.

[2] Representational State Transfer (REST) is an architectural style for APIs that uses HTTP methods to facilitate communication between systems.

6 Consider the long-term sustainability of the DCTR strategy

This Section offers considerations to support the long-term sustainability of a DCTR regime, in particular by:

- Monitoring and evaluating the outcomes and impacts of DCTR.
- Avoiding that DCTR creates obstacles to business development and technological innovation.
- Ensuring that DCTR requirements remain compatible with the evolution of international trade, notably by avoiding siloed approaches that focused primarily or exclusively on wholly domestic economic activity.

6.1. Monitor and evaluate DCTR impacts

A process to monitor and evaluate the impact and outcomes of DCTR allows jurisdictions to implement the necessary adjustments to improve its effectiveness and eliminate elements that could lead to unintended negative consequences over time.

Measuring these outcomes and impacts can be complex, however, in part due to the difficulties to assess DCTR effects separately from other potentially influencing elements, such as broader economic conditions, other regulatory changes, or advancements in technology.

6.2. Avoid potential constraints to economic growth and innovation

Due care should be given to avoid that DCTR creates obstacles to business development and technological innovation over time. Tax authorities are encouraged to ensure that the DCTR framework and its practical operation remain compatible with evolutions in economic activity, including business growth and changes to business models. This notably includes considerations concerning the tax authority's capacity to continuously update its DCTR system to handle new business use cases

Limiting dependencies on the operation of a DCTR system for businesses to carry out their normal business activity is particularly important to ensure the long-term sustainability of a DCTR regime. Requirements for rigid reliance on specific DCTR components risk creating incompatibility of DCTR processes with business processes as they evolve, inadvertently stifling innovation and technological development, and impeding compliance.

6.3. Take account of the international dimension of economic activity

Siloed approaches to DCTR design and operation that focus primarily or exclusively on wholly domestic transactions, are unlikely to be sustainable in light of the international dimension of commercial activity and the continuing evolution of international trade. Such approaches can create distortions to international trade and are bound to impede a jurisdiction's access to DCTR information on international transactions and complicate international administrative co-operation.

Jurisdictions may wish to explore a gradual and adaptive approach to DCTR design and implementation, initially focusing on elements that align with, complement or foster synergies with DCTR regimes of their main trading partners, and subsequently expanding to include other jurisdictions.

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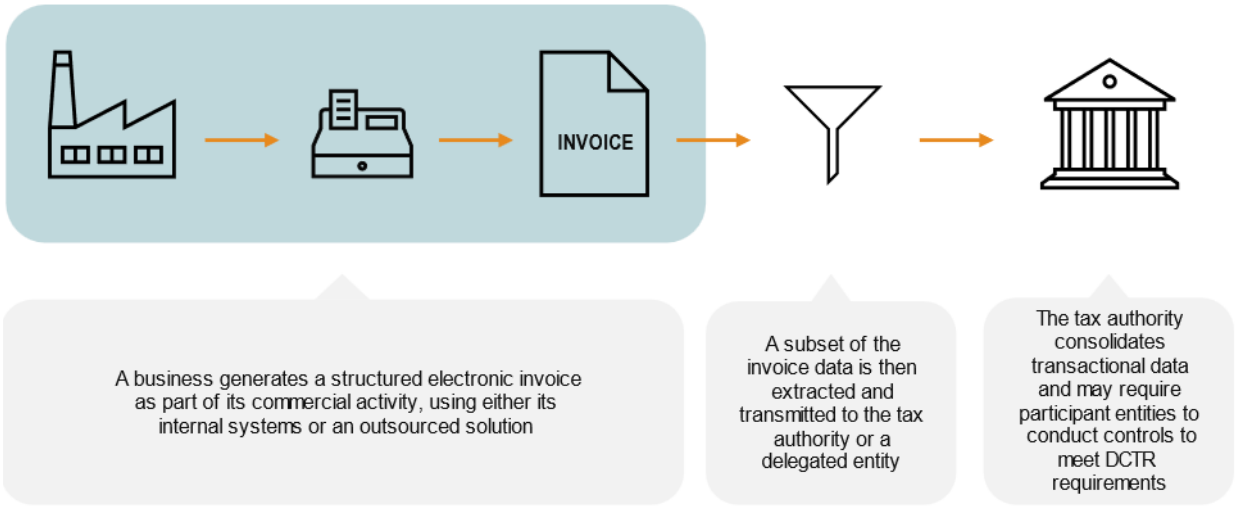
Annex A. Overarching DCTR models

This annex presents a general description of the two overarching DCTR models, i.e. the "data transmission model" and the "invoice transmission model". This is complemented with a general outline of the main variations to the design and operation of these models that have been observed in practice.

Data transmission model

This DCTR model requires taxpayers to systematically transmit specific transactional data to the tax authority or to a delegated entity. The data transmission model tends to build on electronic invoicing by businesses as a basis for the extraction and transmission of key data. It does not, however, require businesses to transmit the invoices as such to the tax authority.

Figure A.1. Illustration of the data transmission model

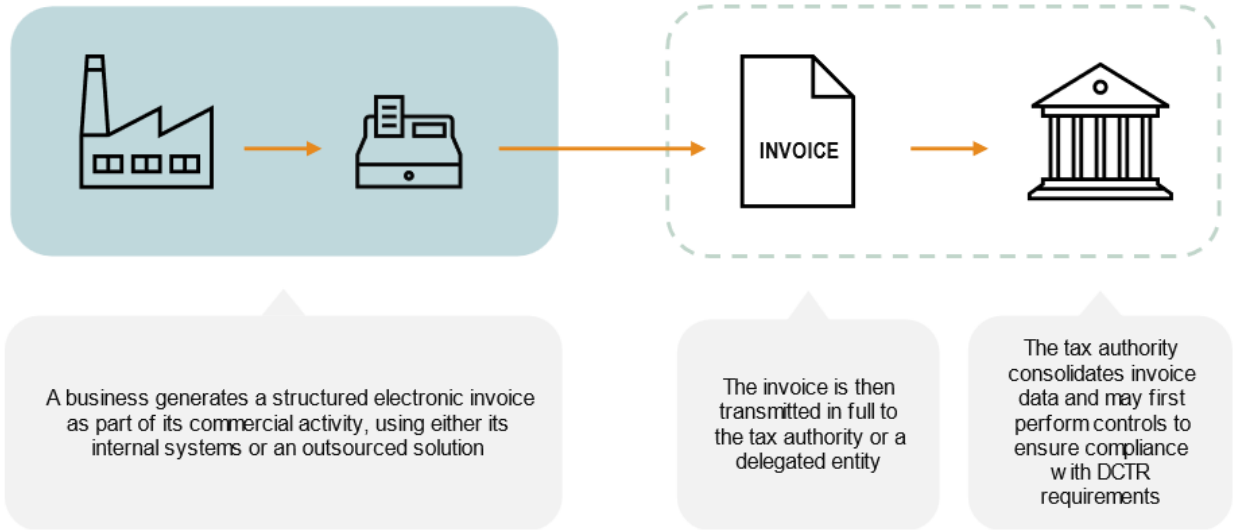


Note: For simplicity, the invoice flow from seller to buyer is not depicted. Structured electronic invoice refers to data that is organised in a (standardised) format that allows for processing and interpretation by computer systems.
Source: OECD Secretariat

Invoice transmission model

This DCTR model requires taxpayers to systematically transmit electronic invoices in full to the tax authority or a delegated entity. It builds on mandatory electronic invoicing for businesses and/or supplies that are within the scope of the regime and the mandatory use of structured data for that electronic invoicing, seeking to ensure that invoice data conforms to a machine-readable standard to allow data consolidation and automated processing by the tax authorities' systems. Invoice transmission is often associated with significant government intervention in the invoicing process.

Figure A.2. Illustration of the invoice transmission model



Note: For simplicity, the invoice flow from seller to buyer is not depicted. Structured electronic invoice refers to data that is organised in a (standardised) format that allows for processing and interpretation by computer systems.
Source: OECD Secretariat

Key variations to the design and operations of these DCTR models

The two overarching DCTR models can vary in several key design components, including:

- **Centralised vs. decentralised approach.** Tax authorities may choose a model where key operational responsibilities are managed directly through a centralised government platform. Alternatively, they may delegate these responsibilities, to varying extents, to (certified) third-party service providers.
- **Role of service providers.** DCTR regimes may allow businesses, to varying degrees, to engage service providers to perform essential processes within a DCTR system for compliance.
- **Transmission deadline.** The specific time limits for businesses to transmit DCTR-related data to the tax authority may vary significantly and may include a requirement for the immediate transmission of data or the invoice following a transaction or within a specified number of days.
- **Implementation of controls**. Controls may be imposed on issued invoices to ensure compliance with key requirements, to be carried out by the tax authority or other entities in the invoicing workflow. These controls may vary in scope (e.g. syntax, arithmetic validity, etc.) and timing (e.g. before, during or after invoice issuance), among other factors.
- **Requirements for fiscal validity.** Rules may differ in determining when an invoice attains fiscal validity and produces its full legal and commercial effects, which can affect the operation of a DCTR regime.

Annex B. What does DCTR implementation involve for a business?

Every business that becomes subject to a DCTR requirement needs to undertake a number of critical tasks, which may be more or less complex and challenging depending on business specifics such as the size of its operations, organisational structure, geographical footprint, financial and accounting processes, among others. These tasks are likely to include:

- **Legislative analysis.** This typically requires a thorough analysis of the DCTR framework and is likely to require engagement with third-party consultants for further clarification and expert guidance.
- **Determining the scope of the DCTR implementation**. This includes an assessment to determine the types of transactions that will become subject to DCTR (B2B, B2G, B2C; domestic supplies, imports, exports, etc.) and an analysis of the legal entities that will be affected within an organisation (e.g. only domestic entities or also non-resident entities registered for VAT purposes) and what they will be required to do (e.g. only to report data, or also subject to mandatory electronic invoicing). From an operational perspective, businesses notably need to identify the inhouse functions that will be affected by the DCTR requirements (typically O2C, P2P and tax compliance flows), the IT systems and processes concerned and the impacted supplier and customer relationships. Acquiring a proper understanding of the internal impact of DCTR implementation is required to determine the appropriate strategy for compliance and the technical and operational capabilities needed for implementation. In large organisations this may involve the creation of a multidisciplinary project team, representing various areas such as IT, finance, accounting, billing, procurement, logistics in addition to tax experts.
- **Allocating budget for implementation**. Compliance with DCTR requirements can require significant business investments. To effectively manage the budgetary aspect, a business will typically need to conduct a comprehensive analysis of the initial investment and the recurring costs of running and maintaining the DCTR compliance process. These are necessary to allow informed decision-making and to plan budgets accordingly. Any additional funding required for a DCTR implementation, e.g. because of the changes to earlier announcements or newly released specifications, may necessitate additional assessment and can cause funding challenges.
- **Developing the DCTR compliance solution**. Depending on the size and complexity of an organisation, this is a technical process that typically requires a number of successive steps, including: (i) mapping all business use cases within the scope of the DCTR requirements; (ii) developing and building the DCTR solution, including defining data requirements such as mandatory and optional data fields; (iii) conducting high-level testing to verify that the solution functions as intended and aligns with legal requirements; (iv) performing tests and addressing any identified deficiencies to ensure a reliable production environment for key users; and (v) executing the transition to the production environment. SMEs are unlikely to develop their own solutions and are more likely to rely on service providers or publishers of relevant software packages.
- **Selecting third-party service providers**. Compliance with DCTR obligations often necessitates the involvement of one or more third-party service providers. For large businesses, this engagement typically entails a structured bidding process that can span several months until

completion. This process can involve evaluating potential service providers based on various parameters, including their technical approach, compatibility with the business's existing systems, data security measures, costs, implementation timeframes. These service providers may sometimes be required to obtain government or tax administration certification to operate. A business may then only be able to finalise its selection once the service providers' certification process has been successfully completed. SMEs will need to assess the support provided by their accounting software publisher or their accountancy or tax advisory service providers.

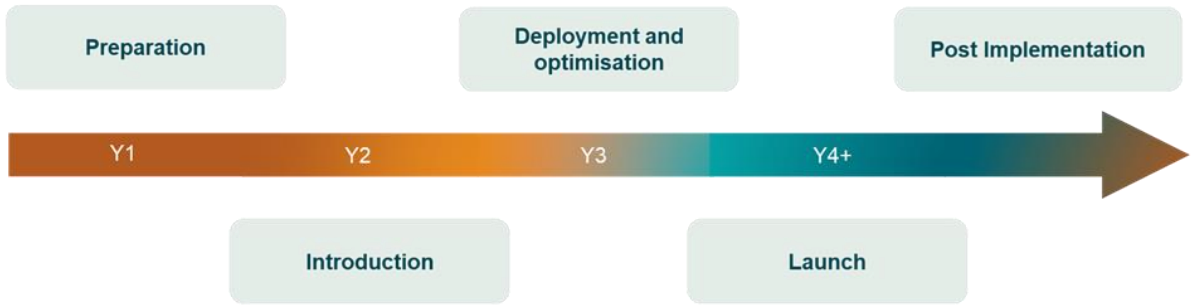
- **Assessing operational and financial risks.** Businesses may need to evaluate how DCTR could affect their relationship with tax authorities, particularly regarding VAT recovery and audit risks. Additionally, they may need to assess the quality and availability of data required for accurate DCTR reporting. Companies may also need to prepare for potential cash flow risks arising from the specifics of the new regime, such as invoice rejections.
- **Adjusting or implementing processes to handle additional requirements arising from DCTR.** For example, if invoice validation is necessary, a dedicated business function or team may be necessary to manage the process, identify errors and ensure their timely correction. Businesses may also need to set up a process to reconcile data with government portals.
- **Training**. Provide training to staff, suppliers and customers on the impact of the DCTR solution on key processes affecting them, such as procurement, sales, billing, delivery, payment, accounting and financial processes.
- **Communication with trading partners.** This is critical to the success of the project to ensure alignment on timelines and relevant flows, readiness, change management as well as to avoid any operational disruptions and rejections.

Annex C. Illustrative roadmap for DCTR implementation

This annex presents a tentative roadmap for the implementation of a DCTR compliance solution by in-scope businesses. It notably builds on the analysis of business experiences with the implementation of a range of recent DCTR introductions. This illustrative roadmap aims to provide a general understanding of the core components of the design and implementation of a DCTR compliance solution and the time that is typically required to complete each of these phases. The illustrative roadmap spans a period of four years, presuming the initiation of an implementation process "from scratch" and assuming that the scope of the DCTR requirements is limited to invoices or invoice data.

A roadmap for DCTR implementation can broadly be divided in five key phases: preparation; introduction; deployment and optimisation; launch; and post-implementation. The relevance of each of these phases is likely to depend on a jurisdiction's specific situation, for instance whether it has already implemented a mandatory electronic invoicing regime, or whether the adoption rate of non-mandatory electronic invoicing among businesses is already high, or whether a DCTR type of requirement has already been implemented with for instance a limited scope.

Figure C.1. An illustrative general roadmap for DCTR implementation



Note: The suggested phases and timeline are merely indicative. They will depend on numerous factors such as the overall complexity of the system, among others.
Source: OECD consultation

Preparation phase

This is the period during which a jurisdiction develops its DCTR strategy and takes key decisions on the overall design of its future regime. Proper planning and attention to detail during this phase are essential to minimise potential risks to a smooth implementation and maximising efficiency. This phase is likely to require several months of research, analysis and consultation with key stakeholders to ensure a well-designed system and successful execution in the future.

Introduction phase

This phase encompasses the formal definition of the DCTR regime and the publication of essential documents by the tax authorities and any other government agencies involved, including legislation, regulations, full and complete technical documentation, guidelines and FAQs. Experience suggests that this phase is likely to take over a year to complete.

The proper and detailed definition of the DCTR requirements and operation and transparent communication through document publication are vital steps in laying the groundwork for successful implementation. Throughout this phase, sustained consultation with key stakeholders plays a pivotal role, enabling continuous feedback and knowledge sharing. Raising awareness among all stakeholders is a key objective, as it helps foster a better understanding of the upcoming changes. To achieve this, it is advisable for the tax authority to implement a communication strategy promptly after the issuance of formal documentation. Businesses of different sizes and specific sectors would benefit from tailored consultations and communication efforts.

International experience underscores the usefulness of establishing a repository of "questions and answers" that is regularly updated and easily accessible. This proves valuable in ensuring effective information dissemination and serves as a valuable resource for stakeholders seeking clarity during DCTR implementation.

Deployment and optimisation phase

This is the "building" phase. It involves setting up and configuring the DCTR compliance system and its underlying infrastructure, ensuring that all components are properly integrated and functioning together. During this stage, the system is tested under conditions that closely mirror real-world operations, enabling the identification of potential issues or inefficiencies before full-scale deployment in the launch phase. This process helps to validate the preparedness of the DCTR implementation, both for businesses and the government authorities. Experience suggests that this phase will likely take over a year to complete.

During this phase, a **testing period** can allow stakeholders to gain valuable insight into the functionality, efficiency, and effectiveness of the system in real-world scenarios. The significance of testing lies in its ability to uncover practical issues and assess system performance: while upfront consultation with businesses is valuable for identifying potential challenges, testing plays a crucial role in concretely evaluating how the system and surrounding processes operate and in identifying areas that require improvement. An effective testing period is unlikely to be completed in under six months.

In making a dedicated test environment available, the following factors are especially relevant:

- The test environment must serve as a genuine "testing ground" ensuring that all testing activities are carried out without any impact on real transactions.
- It must be capable of handling automated scaling to be able to handle a sizable amount of data, enabling businesses to test multiple scenarios and simulate near-real-life full uploads and transmissions.
- It should operate using the same validation rules and error codes as the production system, ensuring consistency and accuracy in the testing process.
- If relevant to the DCTR model concerned, it should support testing of both outbound and inbound electronic invoice flows. This capability is crucial in allowing testers to process test invoices from the system, facilitating end-to-end validation and ensuring the entire invoicing cycle functions seamlessly in the new environment.

Examples of common issues identified during test periods, based on business experience, include problems with calculation or validation rules, such as discrepancies in the rounding of VAT amounts (at line-item level versus invoice level) or in calculation of discounts (at unit price versus line-item level). Effective testing and feedback enable pre-empting such issues.

Technical support should ideally be readily available to address any issues detected by businesses during the testing phase. Fostering a collaborative approach between tax administration and businesses is essential.

As an extension of the testing period, jurisdictions may consider a **pilot stage** of similar duration, allowing businesses to gain further insight into how the new systems and processes operate in a real production environment. This pilot stage can help to ensure a smooth transition to the new DCTR regime, minimising disruptions and optimising the overall success of the project.

Launch phase

Experience indicates that a dedicated launch phase is necessary to guarantee the proper implementation of the DCTR regime. This phase will likely extend through the year following the regime's entry into operation.

The majority of the initial difficulties encountered with a new DCTR regime are likely to emerge during this period, and it is crucial that technical support is readily available to assist businesses in addressing these issues. Consultations, communication outreach and educational support should continue throughout this phase to foster successful adoption.

The launch phase could include a "grace period" during which no or reduced penalties are applied. This can offer businesses the opportunity to identify and rectify any issues that may arise during the initial implementation, promoting a smoother transition and minimising potential financial burdens.

A jurisdiction may have to decide between a staged introduction of the regime (e.g. with different milestones depending on the size, turnover or the location on the affected businesses) or one single entry into force for all affected businesses. A staged approach has been found to work well for a data transmission DCTR model, provided that businesses have upfront knowledge of the timing of successive phases. For an invoice transmission DCTR model, however, a staged approach may present a number of challenges that need careful consideration, including the following:

- It can create complexity for suppliers in identifying the invoices to which DCTR requirements apply at a customer-per-customer level.
- The potential coexistence of both paper and electronic invoicing systems for different businesses can create additional complexity in accounts receivable processes, with businesses in early phases having to manage multiple invoicing systems.
- A staged approach that involves different timeframes for issuing and for receiving electronic invoices may increase complexity.
- A staged introduction may result in shorter lead times for some business segments thus creating undue pressure without necessarily offering significant benefits over a single-stage approach that provides equal lead time for all affected businesses.

Post implementation

While the majority of issues will likely surface in the first year following the entry into force of a new DCTR regime, experience suggests that ongoing support for ad-hoc issues is advisable. Ideally, major upgrades are avoided in the first year following the implementation to allow for the stabilisation of systems and processes. Consultations, communication outreach and educational support should continue after implementation.

Annex D. *Digital Security Risk Management for Economic and Social Prosperity: OECD Recommendation and Companion Document*

This Recommendation and its Companion Document provide guidance on the economic and social prosperity dimensions of digital security risk. It starts with a preamble, followed by numbered recommendations to governments and other stakeholders, as well as clarifications about the terminology. The key recommendations are presented in two main sections.

Section 1 provides a framework of eight interrelated, interdependent and complementary high-level principles on digital security risk management. Adherents are encouraged to implement these principles at all levels of government and in public organisations. The principles are organised in two parts:

- General Principles (1 to 4) addressing "all stakeholders", that is governments, public and private organisations and the individuals who, directly or indirectly, rely on the digital environment for all or part of their economic and social activities. These principles are:
  1. Awareness, skills and empowerment: All stakeholders should understand digital security risk and how to manage it.
  2. Responsibility: All stakeholders should take responsibility for the management of digital security risk.
  3. Human rights and fundamental values: All stakeholders should manage digital security risk in a transparent manner and consistently with human rights and fundamental values.
  4. Co-operation: All stakeholders should co-operate, including across borders.
- Operational Principles (5 to 8) addressing more specifically "leaders and decision makers" who, due to their highest level of leadership in government and in public and private organisations, are best placed to steer their organisation towards the adoption of an appropriate digital security risk management governance framework. These principles are:
  1. Risk assessment and treatment cycle: Leaders and decision makers should ensure that digital security risk is treated on the basis of continuous risk assessment.
  2. Security measures: Leaders and decision makers should ensure that security measures are appropriate to and commensurate with the risk.
  3. Innovation: Leaders and decision makers should ensure that innovation is considered.
  4. Preparedness and continuity: Leaders and decision makers should ensure that a preparedness and continuity plan is adopted.

Section 2 recommends that adherents adopt a national strategy for the management of digital security risk and offers guidance on its key elements.

Annex E. Working descriptions

This annex provides working descriptions of a number of key terms as they are used throughout this document.

Digital continuous transactional reporting - DCTR

The term “digital continuous transactional reporting” and the acronym “DCTR” are used as a generic concept to refer to mandates that require taxpayers to provide a tax authority with real-time electronic information concerning the transactions they undertake. In this context, “real-time” means that reporting of data happens within a (normally) short timeframe of a designated milestone (e.g. during or shortly after), such as when the actual transaction takes place between the parties or the moment when the respective invoice is issued.

Electronic invoicing processes

Unless otherwise specified, “electronic invoicing processes” or similar terms should be understood to encompass invoices as well as other documents typically used in business transactions that are relevant from a VAT perspective, such as credit and debit notes, among others.

Tax authority

The term “tax authority(ies)” is used in this work as a generic term to describe the government body (or bodies) within a jurisdiction responsible for VAT policy and administration. It also encompasses the entity(ies) responsible for overseeing the design and operation of DCTR and influencing its objectives.

Value added tax - VAT

The terms “value added tax” and “VAT” are used to refer to any national tax by whatever name or acronym it is known such as Goods and Services Tax (GST) that embodies the basic features of a value added tax, i.e. a broad-based tax on final consumption collected from, but in principle not borne by, businesses through a staged collection process, whatever method is used for determining the tax liability.

Digital Continuous Transactional Reporting for Value Added Tax

Policy and Design Considerations for Introduction and Operation

This report examines the design and operation aspects of digital continuous transactional reporting (DCTR) regimes for value added tax (VAT). It has been prepared in the context of a growing number of jurisdictions worldwide that have adopted or are considering the introduction of such regimes. DCTR typically requires the (near) real-time reporting of invoices or transactional data to tax authorities, most often with the objective of strengthening VAT compliance and risk management. The rapid global expansion of DCTR regimes has, however, taken place in a largely uncoordinated manner. This has led to significant heterogeneity across jurisdictions, resulting in increasingly complex compliance challenges, particularly for businesses engaged in cross-border trade. In response, this report offers guidance to support jurisdictions in the design and operation of DCTR regimes, with a view to facilitating compliance and administration while promoting greater international consistency. It addresses six key areas: strategic approaches to introducing DCTR; digital invoicing as the foundation of DCTR; measures to support business compliance; information security; interoperability; and the long-term sustainability of DCTR regimes. The report is intended for consideration by interested jurisdictions and should not be interpreted as recommending the adoption of a DCTR regime, which remains the sovereign decision of each jurisdiction.