



## What's New in O Series

A look at what indirect tax groups need from their tax automation – and how Vertex is addressing those needs

In a 2022 KPMG survey of 300 C-level executives at larger companies, more than half of respondents (52%) reported that their organizations were not leveraging tax data to inform business decisions, or to plan around tax policy.<sup>1</sup>

As indirect tax leaders hammer away at an array of formidable challenges – including budgetary pressures, internal digital transformations, a tax-talent crunch, and tax rates and rule volatility along with a processing of new compliance complications – they increasingly need an *elegant solution*. The term is used by software developers, engineers, and math wizards to describe problem-solving mechanisms that are simultaneously highly effective and a breeze to execute.

Given the nature of the challenges that tax groups confront, it is imperative to get an elegant tax automation solution, such as Vertex O Series, in place as quickly as possible. Just ask your CEO. In a 2022 KPMG survey of 300 C-level executives at larger companies, more than half of respondents (52%) reported that their organizations were not leveraging tax data to inform business decisions, or to plan around tax policy.<sup>1</sup>

To make better use of tax data, tax groups first must clear several hurdles including:

- **The automation of manual tax processes and tasks (57%);**
- **The integration of tax engines with ERP systems (28%); and**
- **A shortage of tax professionals (14%).**

These response-rate percentages (based on a survey of the tax leaders and professionals who attended a recent Vertex-KPMG webcast) confirm the need for a tax automation solution that automates manual work and boosts the efficiency of lean tax operations while seamlessly connecting to ERP systems and their expanding ecosystems of related applications (e.g., procurement platforms, e-commerce front-ends, and marketplace solutions) via powerful application programming interfaces (APIs).

The discussions that follow are not an advertisement for Vertex O Series; instead, this paper's intent is to inform tax groups how an elegant tax automation solution functions, so that they diagnose their current solution and, if necessary, developing a compelling business case and practical road map for implementing a better solution.

Before considering specific tax automation features, it makes sense to consider the challenges and pain points those technological capabilities are purpose-built to address.

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Mark Rems  
KPMG Practice Leader

## What Indirect Tax Groups Want

In addition to annually completing more than 1 million tax returns for corporate clients, KPMG has operated as an Alliance Partner of Vertex for 20-plus years. In this capacity, the firm has conducted 100-plus successful deployments of Vertex O Series in the past 5 years while developing its own integrations and implementation solutions to enhance those efforts. In other words, KPMG has a firm grasp on how to help companies automate the calculation, reporting and remittance of indirect taxes. To expand and hone this knowledge, KPMG’s indirect tax technology practice, headed up by Practice Leader Mark Rems, continually solicits customer feedback on a range of tax technology trends, challenges and needs via informal conversations and formal surveys.

The most common way that tax groups keep pace with technology advancement and disruptions, according to KPMG’s 2023 CTO Outlook Study, is by leveraging third-party software providers to provide tax technology. The specific technologies that CTO respondents report having implemented most recently include: e-invoicing solutions (51% of respondents); cloud-base solutions (48%), and ERP implementations or upgrades (47%).<sup>2</sup>

Based on his practice’s technology implementation and upgrade work with tax groups across all industries, Rems reports that the following customer needs routinely drive the adoption of new tax automation solutions:

- Cloud migration:** In KPMG’s C-suite survey of tax operations, 70% of respondents indicate that cloud technologies are important for tax groups to know and use.<sup>3</sup> Citing Gartner research, Rems notes that investments in cloud-based software solutions is projected to surpass spending on traditional on-premises software in 2025. “Cloud investments are increasing -- that trend is not going away,” says Rems, noting that cloud migrations are highly relevant to tax departments. One reason is that cloud implementations are much more accelerated than on-premises software installations. Rather than conducting a typical on-premises ERP implementation that can take up to 1-2 years, a cloud ERP implementation may require only 3-4 months. Another reason tax groups should be well-versed in cloud is that they need to explicitly identify – very early in the implementation project -- what information they need for tax determination, calculation, and compliance purposes. “Unlike an on-premises ERP,” Rems adds, “you cannot just pipe into a database and create your own report as needed.”
- A single, global platform:** “We’re seeing more and more companies request a solution that serves as a single platform for managing the calculation, reporting and remittance of indirect taxes around the world,” Rems reports. This capability enables tax groups to rely on their tax technology vendors, rather than their IT departments, to update the solution’s tax content as tax rate and rules changes occur.

- Flexible integrations with less customization:** For similar reasons, Rems reports that tax groups want solutions with flexible integrations. Cloud-based ERP ecosystems continue to expand as providers of procurement, CRM, e-commerce solutions develop new platforms that operate in these ecosystems. An effective tax engine must be able to quickly and easily integrate with any application and platform that contains tax-relevant transaction data.
- Addressing e-invoicing requirements and uncertainty:** “This is probably the number-one topic we discuss when we get calls from our clients and prospects: *What is e-invoicing? Do I really need to do this? How do we even make this work?*” Rems reports. “These new compliance requirements are so important to understand and get right, especially because satisfying those compliance requirements is very intrusive to business platforms across an organization.”
- Improved reporting and compliance processes:** In addition to new and forthcoming e-invoicing compliance requirements, global tax jurisdictions continue to overhaul rules and update tax rates at a torrid pace. In December, the European Commission unveiled a massive VAT reform proposal that calls for new VAT reporting obligations and e-invoicing requirements, a new treatment of the platform economy, and a single EU VAT registration.<sup>4</sup> In the U.S., a total of 6,392 combined number new and changed sales and use tax rates have been enacted in the past decade; this equates to an average of 304 combined changes annually. Other factors, including the rapid adoption of sales tax exemptions (both temporary and permanent) as well as new fees (e.g., environmental fees and retail delivery fees) by U.S. states also complicate indirect tax compliance work.<sup>5</sup>
- Greater efficiency:** Indirect tax compliance burdens are also growing due to resource constraints. Many tax departments struggle to hire enough tax professionals to manage current tax compliance and planning work volumes: 83% of C-level executives report that it has been difficult to *recruit* tax talent in the past year; and 79% say it has been difficult to *retain* tax talent.<sup>6</sup> Also, keep in mind that high-performing tax professionals tend to accept positions and assignments in which they spend less time on repetitive, transactional tasks and more time sharpening their strategic contributions. The opportunity to develop skills and expertise related to advanced technology and tools also helps attract and retain top performers.<sup>7</sup>



## Elegance Exemplified: What's New with Tax Engines

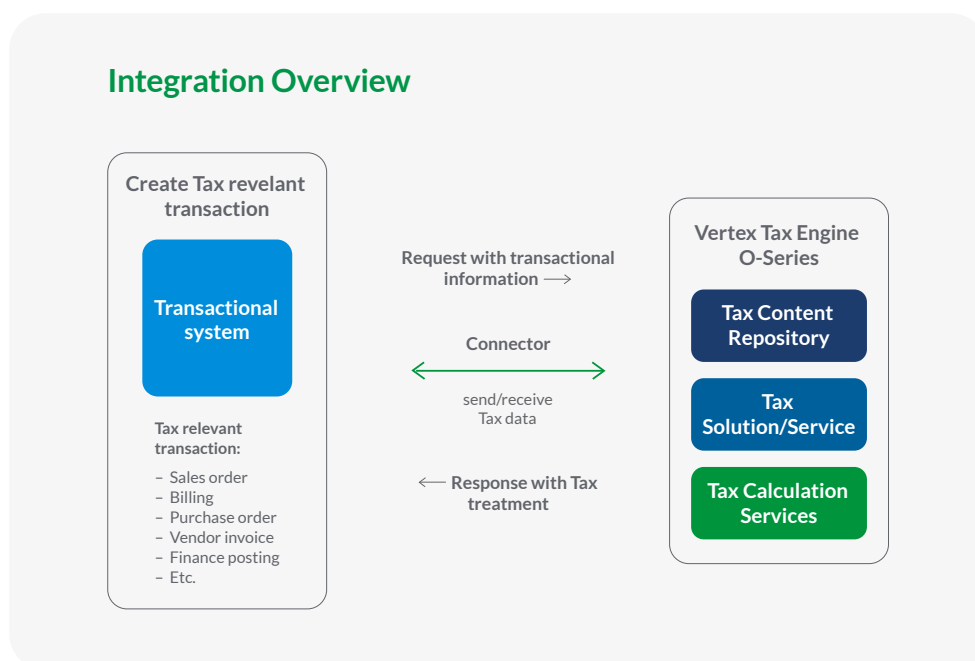
Those indirect tax needs and pressures give rise to specific tax compliance hindrances. These issues include:

- The excessive manual work involved in reconciling taxes.
- The high number of data files that must be managed on a monthly basis.
- Difficulties in mapping tax types, tax basis amounts, and exempt/deduction reason codes to the correct return lines
- The ongoing difficult of retaining and upskilling tax professionals; and
- The sheer volume of domestic and tax returns that must be continually filed.

Since an advanced tax engine is designed to remediate these tax pain points and related challenges, tax groups, and especially the tax technologists who driving the solution selections, should have a basic understanding of a tax engine's structure and its enabling components.

In her rundown of the Vertex O Series architecture, Vertex Principal Sales Engineer Deborah Boone emphasizes the value of:

- Scalability.
- Interoperability.
- Multiple cloud deployment options.
- Automatic global tax content updates (for sales and use tax, VAT, communications taxes, lease taxes, lodging & occupancy taxes and country specific requirements such as Brazil's unique indirect taxes); and
- New capabilities (e.g., new exemption certificate management automation, tax intelligence and analytics, edge computing and support for ESG reporting).



"As you'd expect, our O Series solution is highly scalable," Boone notes. "It's designed so that multiple systems and applications can interact with the O Series tax engine." These systems include ERP, ecommerce platforms, procurement applications, billing systems, customer relationship management (CRM) systems, human capital management (HCM) solutions, and marketplace application as well as in-house systems. The cloud deployments and interoperability are particularly important to understand and assess when selecting a solution, Boone asserts.

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Deborah Boone  
Vertex Principal Sales Engineer

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Mark Rems  
KPMG Practice Leader

From a deployment perspective, O Series offers different cloud options, traditional on-premises installations, hybrid approaches and an edge-computing enhancement:

- **Multi-Tenant Cloud:** In this arrangement, multiple companies use a shared instance of the third-party software that is stored on the same cloud server. This approach enables cloud infrastructure costs to be shared across multiple organizations.
- **Single-Tenant Cloud:** Due to their unique IT environments, security requirements and/or competitive risks, some companies prefer not to share the same application and database servers with other organizations. These companies need their own cloud infrastructure, which can be easily scaled up or down based on throughput fluctuations.
- **On-Premises:** While continually expanding its cloud capabilities, Vertex remains committed to, and invested in, on-premises deployments. This option is well-suited for enterprises with extraordinarily large sales transactions volumes and minimal tolerance for any form of latency (e.g., large retailers).
- **Edge Computing:** This deployment enhancement combines the transactional speed (i.e., minimal latency) of on-premises deployments with the data-backup advantages of cloud deployments. Edge functionality enables tax to be calculated at the point of transaction (in a retail store or on an e-commerce site) but managed centrally (in an on-premises or cloud server). “Deploying the tax engine using edge technology eliminates network connectivity and bandwidth issues in a local store,” Boone notes, offering a retail example. “Edge also enables fast, automated scalability while minimizing latency.” This helps retailers address increased demand on e-commerce websites, especially during peak traffic.

“Vertex supports many different deployment modes,” Rems notes. “That’s great because depending on your IT priorities and infrastructure, you may not be able to use an on-premise solution, or a cloud solution. You have options.”

O Series also provides optionality regarding integrations, via application programming interfaces (APIs). APIs are the building blocks of “connectors” that enable tax data to be sent and received between transactional systems and the tax engine that contains the global tax content, the tax determination functionality and the tax calculation services. These transactions take place in an expanding collection of systems (ERP, procurement platforms, e-commerce solutions, etc.) and tax-relevant data resides in numerous locations, including sales orders, billing systems, purchase orders, vendor invoice, financial postings and more.

The tax engine's enabling components, functionality and related applications combine to help indirect tax groups remediate pressing compliance-related challenges:

**Problem:** High numbers of global tax returns

**Solution:** Returns Export offers direct integration to Vertex Indirect Tax Returns

**Problem:** Talent and skills shortages

**Solution:** The option to automate tax returns with Vertex Indirect Tax Returns or to outsource

**Problem:** Mapping challenges

**Solution:** Vertex O Series supports exemption codes and filing categories

**Problem:** Data file management loads

**Solution:** Batching transactions into Vertex O Series or Vertex Indirect Tax returns

**Problem:** Manual workloads

**Solution:** Leverage analytical tools to automate reconciliations with Vertex O Series and data extracts



## Six Steps to Doing More with Less

As tax groups deploy new tax engines (or upgrade existing solutions) to do more with less, Rems suggest that they consider the following ways to derive the most value from these investments:

1. **Implementing the solution as the company's single, centralized tax engine.**
2. **Expanding the solution's geographic blueprint to all global geographies (and tax jurisdictions) in which the organization operates.**
3. **Automating configuration maintenance.**
4. **Automating unit and regression testing.**
5. **Leveraging the global tax engine to automate related processes (e.g., use tax accruals, address validations, and goods movements and sample distributions); and**
6. **Considering a tax department diagnostic review of current talent, processes, and technologies to identify opportunities for additional efficiency gains and other improvements.**



KPMG offers tools that automate significant portions of tax engine implementation and maintenance activities (including address-cleansing, tax reviews of revenue streams, country-by-country purchase class reviews and more). Rems recommends that companies with a tax engine perform some level of solution diagnostic every 24-36 months.

"The business changes constantly and related systems are always changing," he explains. "You may have purchased or divested a business unit. Sales and marketing teams often find clever ways to generate more revenue – by bundling products with new services, for example. You'd be amazed by how often we've completed a diagnostic that alerts tax groups to business units or transactions they didn't realize were already live on a new platform. It really helps to take proactive looks at transaction data. Solutions like O Series provide a great view via their data extraction capabilities."

The steps and types of diagnostic Rems describes also provide valuable insights and analyses that tax teams can leverage to develop a compelling business case for investing in new indirect tax technology. A business case should quantify the following costs:

- **Legacy technology costs:** "Controllers and CFOs want to see real numbers, so treat the business case as a math exercise," Rems suggests, noting that some legacy system providers have enacted substantial support and maintenance costs in effort to keep their solutions viable amid ERP upgrades, cloud migrations and other aspects of finance transformation.
- **Processing time:** Tally how much time end-to-end tax compliance and planning processes consume. Compare those hours to the streamlined processing a modern tax engine would enable.
- **Audit impacts:** Has the tax function performed reverse audits due to concerns regarding over- or underpayments? Has the company incurred any penalties and related assessments as the result of audit findings? If so, add up these direct costs and also include the cost of your company resources to manage these gaps.

Subtract the cost of implementing an advanced tax engine from the costs associated with the legacy tax technology, and the return on investment takes shape.

In other words, the business case math is elegant: relatively straightforward to compute and helpful in bolstering the investment argument. The same dynamic holds for advanced tax engines, which are easy to implement and integrate, and highly effective in helping indirect tax teams address the array of problems bearing down on them from multiple directions.

## Vertex O Series offers:

- Multiple cloud/on-premise deployment options
- Global product and service taxability rules
- Support for complex tax rules
- The ability for users to create custom content
- Customer self-service exemption process
- Support for street address level validation in the U.S.
- Support for content in 300-plus countries
- Support for industry specific content (e.g., telecommunications)
- Global place of supply rules (i.e., triangulation)

<sup>1</sup> <https://tax.kpmg.us/insights/tax-reimagined-2022-perspectives.html>.

<sup>2</sup> <https://tax.kpmg.us/insights/chief-tax-officer-survey-2023.html>.

<sup>3</sup> <https://tax.kpmg.us/insights/tax-reimagined-2022-perspectives.html>.

<sup>4</sup> [https://www.vertexinc.com/en-gb/resources/resources-library/vat-digital-age-part-1-eu-e-invoicing-requirements-when-not-if?es\\_id=442dea3426](https://www.vertexinc.com/en-gb/resources/resources-library/vat-digital-age-part-1-eu-e-invoicing-requirements-when-not-if?es_id=442dea3426).

<sup>5</sup> <https://www.vertexinc.com/resources/resource-library/2023-sales-tax-rate-changes-rise-significantly-3-trends-driving-increase>.

<sup>6</sup> <https://tax.kpmg.us/insights/tax-reimagined-2022-perspectives.html>.

<sup>7</sup> <https://www.vertexinc.com/resources/resource-library/advanced-tax-automation-recruiting-retention-benefits>.

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