After tax reform: Emerging tax trends and technologies

2019

The Fourth Industrial Revolution is here—and its impact can be felt in all aspects of life and work. This rapid technological evolution includes the increasing use of emerging technologies such as artificial intelligence (AI), machine learning (ML), and robotic process automation (RPA) within finance, tax, and other enterprise operations. These powerful emerging solutions are being used to drive continuous innovation, create new business models and products, enhance data, and develop analytics needed for insightful decision-making.

The manufacturing industry, already prone to complex operational considerations, is also subject to the global economic and tax climate that is causing businesses to rethink their operating model and ability to comply with new regulations. Although the level of impact on organizations will vary, certain trends are prompting tax functions in the manufacturing industry to reassess their adoption of emerging technologies.

MAPI

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- **Manufacturers are continuing to adapt to the 2017 tax reform legislation—the most seismic change to the U.S. tax landscape since 1986.** The tax reform requirements reflect a growing trend towards transparency and the need for more detailed financial information. Tax functions must automate and manage their processes to reduce the time spent on data processing. For example, they can use desktop extract, transform, and load (ETL) tools to extract data from source enterprise systems, then transform and load that data into tax calculation and reporting engines. Tax departments also need enhanced data analytics solutions to assess the strategic impact of and plan for tax legislative and regulatory changes. The average tax department budget has increased over the past few years—not surprising considering all of the recent changes. How can tax capitalize on this enhanced funding and increase technology adoption?
- **Finance and other enterprise functions are increasingly implementing technology and adopting automation in ways we have not seen before.** This time, tax is not being left behind. Leading tax functions are focused on how to use emerging technologies to comply with the new tax reform requirements and to transform their departments and upskill their professionals.
- **Economic growth is resulting in greater tax liabilities, more deal volume, and increased corporate investment among manufacturers.** The current environment presents an opportunity for tax to enhance its strategic value contribution to the organization. The consolidation of companies necessitates the merging of tax functions. Divestitures require companies to establish new tax departments. These transactions provide opportunities for manufacturers to evaluate the target operating model and use of tax technology.

PwC and the Manufacturers Alliance for Productivity and Innovation (MAPI) collaborated on a survey of MAPI member organizations (representing a cross-section of company and tax department size [trending towards larger companies], sub industry, and international presence) around the recent developments in the tax reform and emerging technologies space. This is a refresh of similar surveys conducted in 2013 and 2016. A lot has changed since our last survey. The results provide insights to help manufacturers assess how their tax functions are positioned with respect to emerging technologies, tax reform automation, tax technology strategy, and tax provision and compliance technology. Survey results reflect responses from MAPI members and do not reflect the opinion or endorsement of technology vendors by PwC.

This report is intended to provide your tax function with a peer perspective on emerging technology trends in 2019, help you understand what has changed in the tax technology ecosystem in the past three years, and help you compare your tax department's approach to that of your peers through new benchmarking data on tax technology. Learn what leading tax functions are pursuing with new technologies, why most manufacturers are still in the exploratory phase around emerging technologies, and gain insight to lessons learned as your tax function executes on a tax technology strategy.

How is tax leveraging emerging technologies?

The tax technology ecosystem has changed considerably over the past three years with tax functions now starting to adopt emerging technologies (e.g., desktop ETL, RPA). The most commonly used desktop ETL vendors are Alteryx, Tableau Prep, and Qlik. The most-commonly used RPA vendors are Automation Anywhere (36%), Blue Prism (32%), and Ui Path (14%). However, tax departments continue to rely heavily on spreadsheets—53% of the 2019 survey respondents (down slightly from 56% in 2016) are spending more than 30% of their time gathering and preparing data for tax provision and compliance purposes.

Business intelligence (BI) tools usage at the "medium" to "very high" level in the tax function increased from 44% in 2016 to 51% in 2019. This modest increase indicates that tax has not adopted these new BI technologies at large scale. However, the survey results show a significant increase (from 39% in 2016 to 73% in 2019) for those tax functions using BI tools to visualize and analyze data. We expect this usage to continue to increase over the next few years.

The factors driving the tax function's need to rely more heavily on emerging technologies include:

- Tax function's need for enhanced functionality to address tax reform and increasing global tax transparency and compliance requirements;
- Finance function's use of emerging technology and Finance function's use of emerging technology to automate and transform the function;
- Push from the C-suite to find creative ways to reduce costs; and
- Rapid expansion of affordable technology and automation tools.

Small automation can enhance the performance and efficiency of the tax function. The successful deployment of small automation tools results in quick implementation of flexible, adaptable, and less expensive technologies not easily accomplished by more expensive enterprise systems.

Small automation showing promise

Tax must consider innovative ways to collect and process financial data, moving away from manual processing and reconciliation to more forward-thinking analytics for real-time decision-making. More advanced tools require stronger collaboration with the IT department. However, small automation can be viewed as a first step to embrace the automation trend due to the affordability and ease with which it can be implemented, and the ability to reap benefits quickly. Small automation can enhance the performance and efficiency of the tax function. The successful deployment of small automation tools results in quick implementation of flexible, adaptable, and less expensive technologies not easily accomplished by more expensive enterprise systems. Small automation enables tax professionals to navigate self-service tools (e.g., desktop ETL, desktop RPA) to bridge the gaps of existing enterprise technology solutions and address data challenges on their own. In many cases, tax is leading the charge and creating proof of value automations for other parts of the organization to see the benefits of small automation tools. This citizen-led initiative is in contrast to the large, traditional IT implementations where tax may not have seen significant positive impacts in the past.

Potential benefits of an effective small automation deployment include:

- 50-75% time reduction on legacy manual, data-driven processes through the effective elimination of repetitive tasks (i.e., more time to focus on value-added activities);
- A return on investment multiple in the first year of implementation through quick wins and immediate results with relatively low investment upfront;
- Shorter cycle times and more accurate/timely processes; and
- An automation governance framework established upfront and approved by the company's internal audit function that can be applied consistently throughout enterprise-wide automation (e.g., standardized documentation and embedded control checks within automation to ensure appropriate controls are in place, data element mapping from small automation provides a requirements blueprint for other potential future upstream data solutions).

The survey results show that small automation is an increasing priority for manufacturers, with 44% of respondents exploring potential RPA options for extracting and analyzing source system data and 36% using desktop ETL for data automation. Respondents reported that their tax functions could benefit from desktop ETL/RPA capabilities in the areas of U.S. indirect tax compliance, U.S. direct tax compliance, transfer pricing, non-U.S. indirect tax compliance, forecasting, financial reporting for tax, non-U.S. tax reporting packages, and HR/compensation and benefits.

Artificial intelligence applications emerging

Current internal and external challenges require tax functions to be nimble and accurate in providing information the enterprise needs to make decisions and comply with increasingly complex tax rules and reporting requirements. AI is a machine's ability to perceive its environment and perform tasks that normally require human intelligence. This new technology can perform structured or unstructured tasks and mimic human ability to sense, think, and act with greater speed and accuracy.

AI enables detailed, accurate data without human supervision to grant tax departments time for more in-depth questions, answers, and analytics that previously would have been difficult, time-consuming, or even impossible to accomplish. AI's capabilities can apply throughout the tax lifecycle from planning to compliance, reporting, and controversy. AI can also be paired with desktop ETL to drive a tax data strategy when more granular data is needed to respond to tax complexity, increased governmental demand for transparency, and financial and reputational risk.

More than 10% of the survey respondents are utilizing AI algorithms in their tax functions, including machine learning (ML)—i.e., applying statistical learning techniques to automatically identify patterns in data—and natural language processing (NLP)—i.e., understanding the meaning of written text.

Respondents provided that their tax functions could benefit from:

- AI/ML/NLP capabilities in the areas of U.S. indirect tax compliance;
- U.S. direct tax compliance, tax planning/ scenario analysis;
- Transfer pricing;
- Non-U.S. indirect tax compliance;
- Financial reporting for tax;
- Non-U.S. tax reporting packages; and
- HR/compensation and benefits.

We expect the percentage of tax functions utilizing emerging technologies to increase over the next three years.

How are traditional technology applications transforming tax operations?

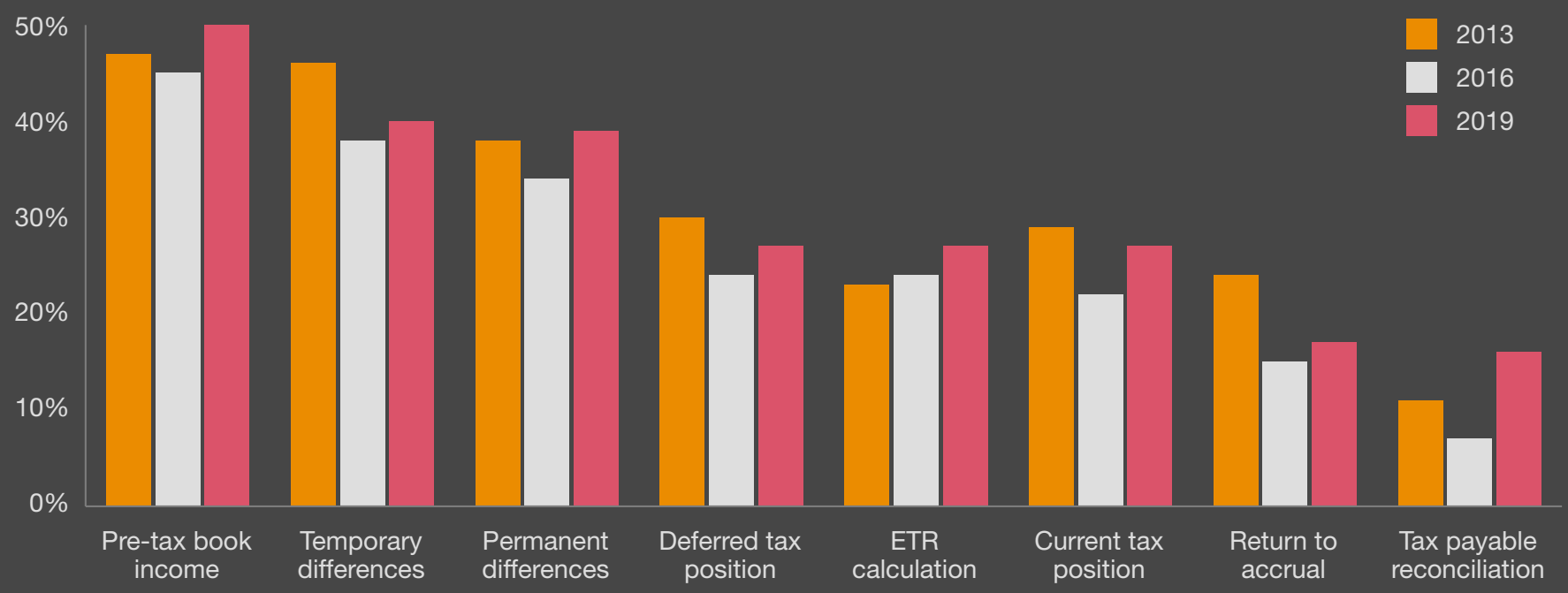
Finance functions have taken strides in embracing technology transformation. They are harnessing the power of significant investments of enterprise data and financial reporting tools, and leveraging cloud solutions for the management of financial data that is essential for planning, financial statement reporting, tax compliance, and managing controversy risk. For example, 40% of respondents have a cloud-based ERP system and of the remaining that are currently not using a cloud-based ERP system, 44% are exploring or have plans to move to a cloud-based ERP system.

Technology-enabled access to accurate data enhances every aspect of the tax lifecycle, from planning to controversy support:

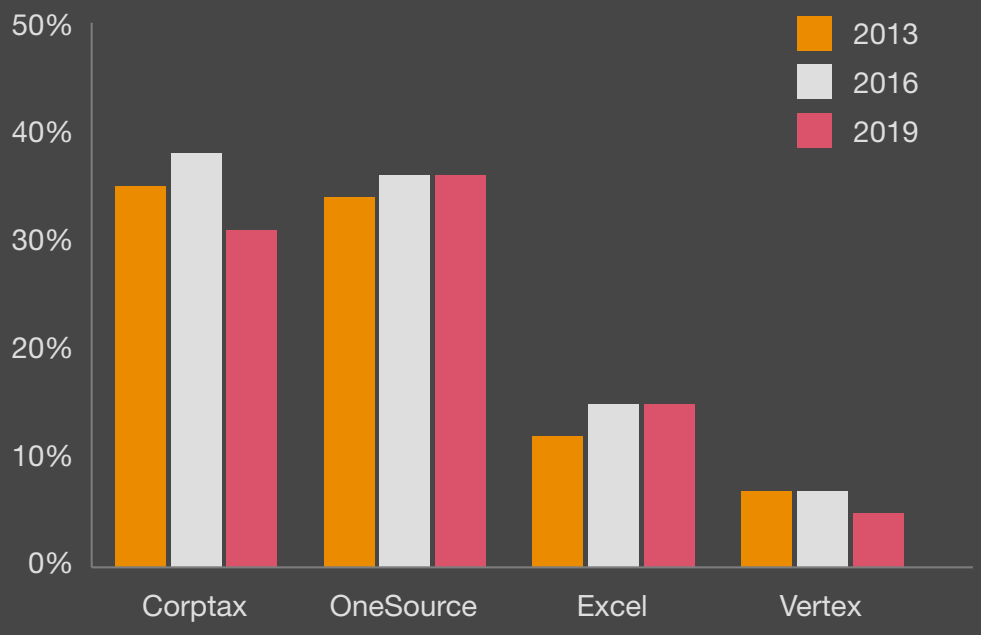
- 69% of survey respondents provided that their degree of automation in the data environments is medium to high;
- 54% (up from 34% in 2016) provided that the effectiveness of their ERP system to drive the accumulation of tax data was medium to high; and
- 99% (up from 91% in 2016) provided that their trust in the accuracy of data used for tax deliverables was medium to high.

Reliance on the enterprise consolidation system (81%) remained consistent with results from 2016 (83%).

Automated functions in tax provision process



Tax compliance applications most used by tax functions



Provision software

Income tax provision and compliance technology advancing

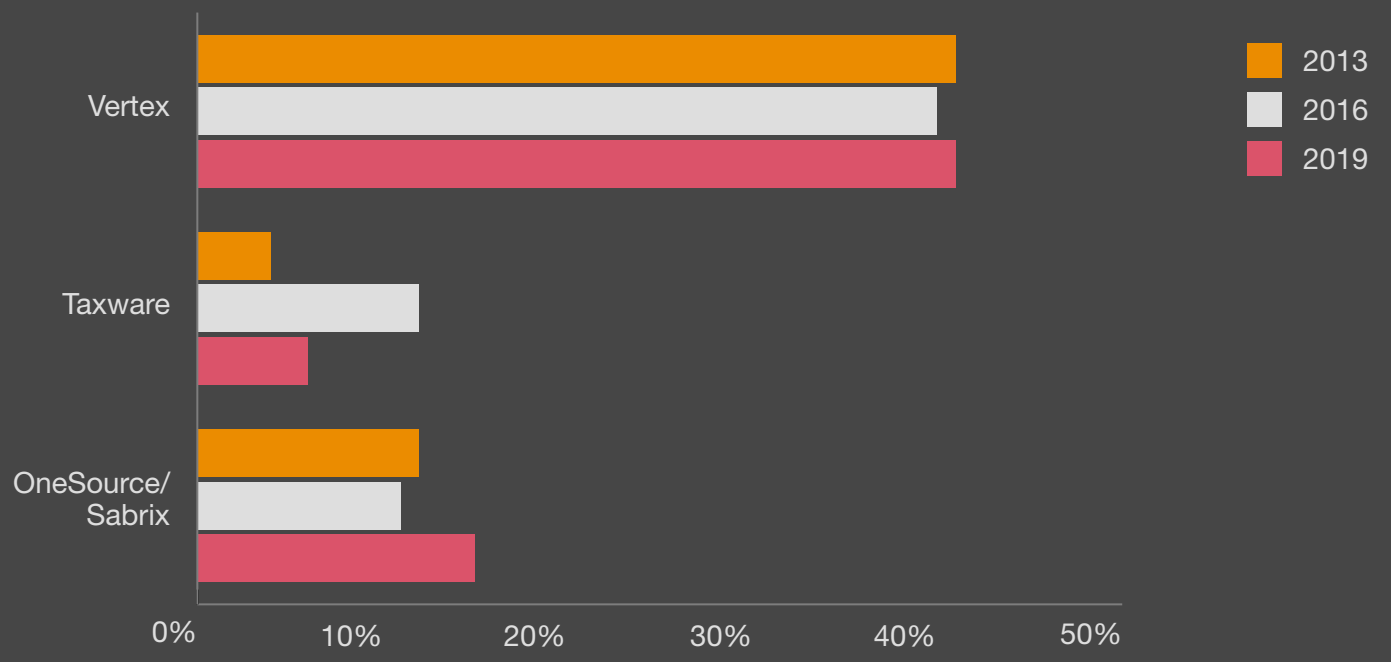
Tax provision and compliance technology solutions have evolved with capabilities to automate workflow, data collections, calculations, and tax return preparation and filing (see previous charts).

Almost 90% of respondents are satisfied with their tax provision software, while 15% have experienced a material weakness related to tax in the last three years. We anticipate maintenance of the tax provision and compliance software to keep up with changes in the business and ERP upgrades for this satisfaction level to stay at such a high level.

Indirect tax compliance processes automated for the majority

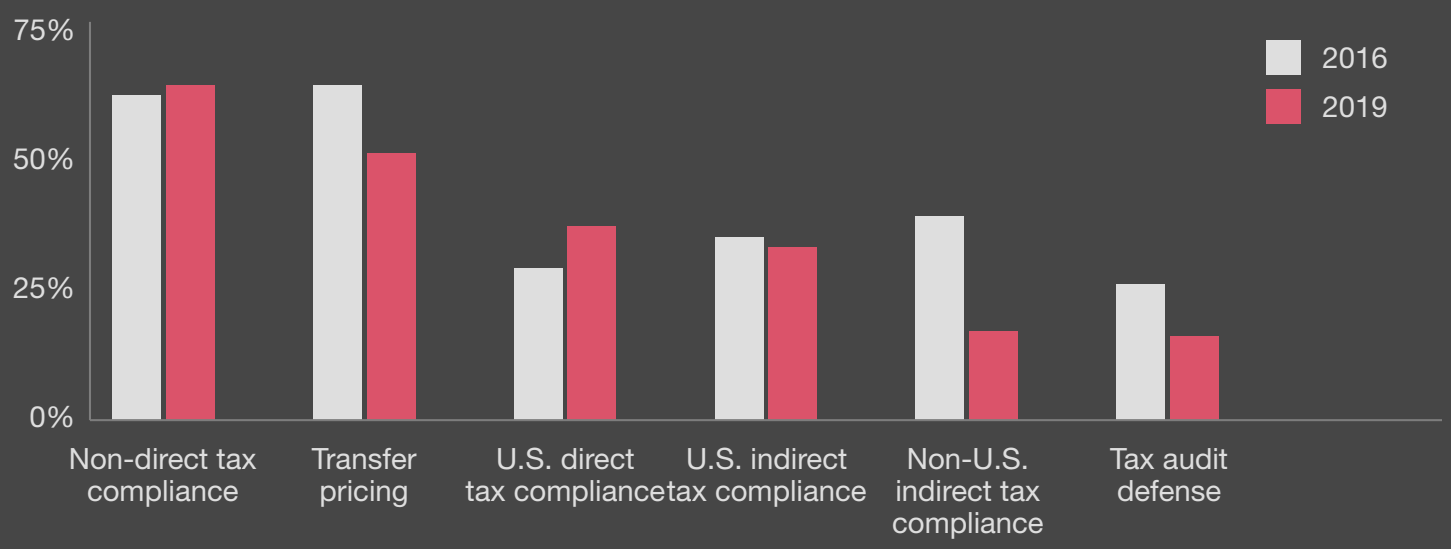
The survey respondents provided that the indirect tax applications most used by their tax functions are Vertex, Taxware, and OneSource/Sabrix. The respondents provided that their tax functions process indirect tax decisions through an automated process (59%), manually (33%), through an outsourced arrangement (6%), and through a combination of an automated process and an outsourced arrangement (2%). They reported that their indirect tax accrual process is automated (40%), manual (30%), and a month-end process (30%).

Indirect tax applications used



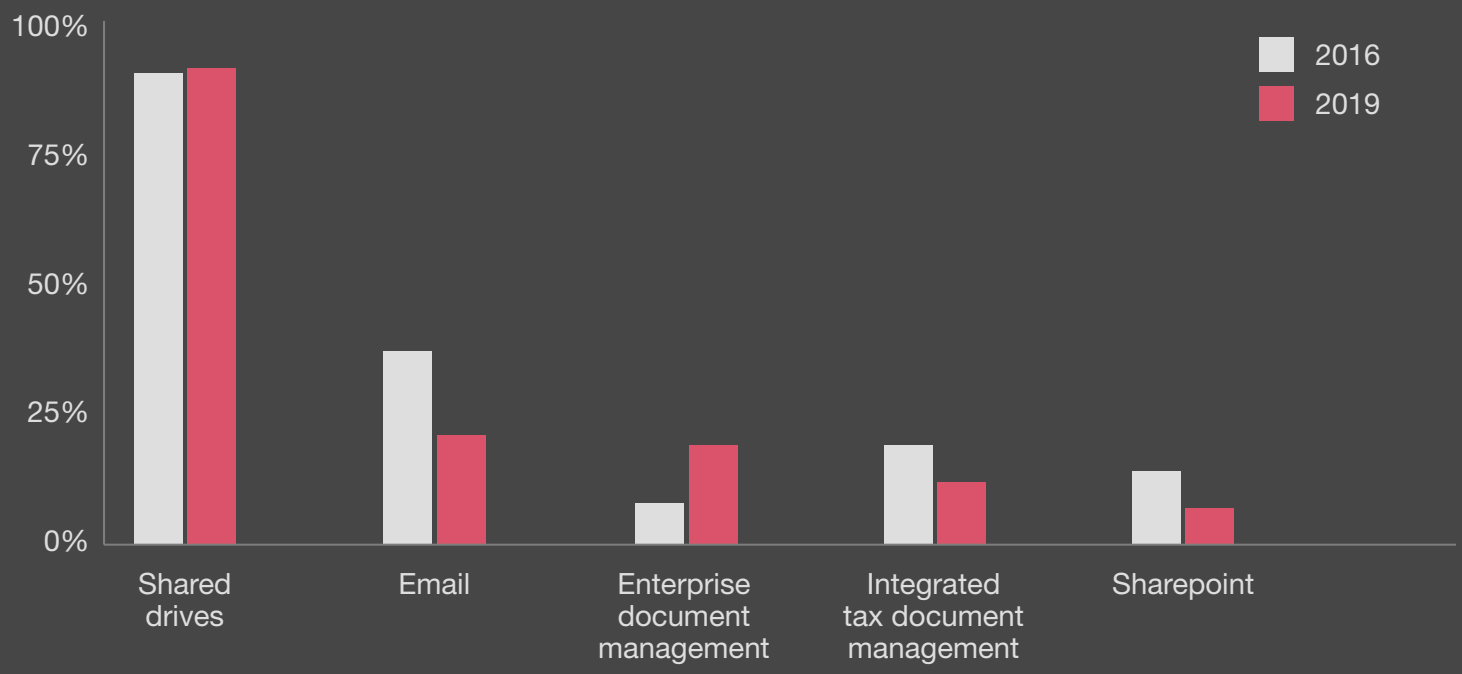
Outsourcing activity remains variable

Tax functions outsourced

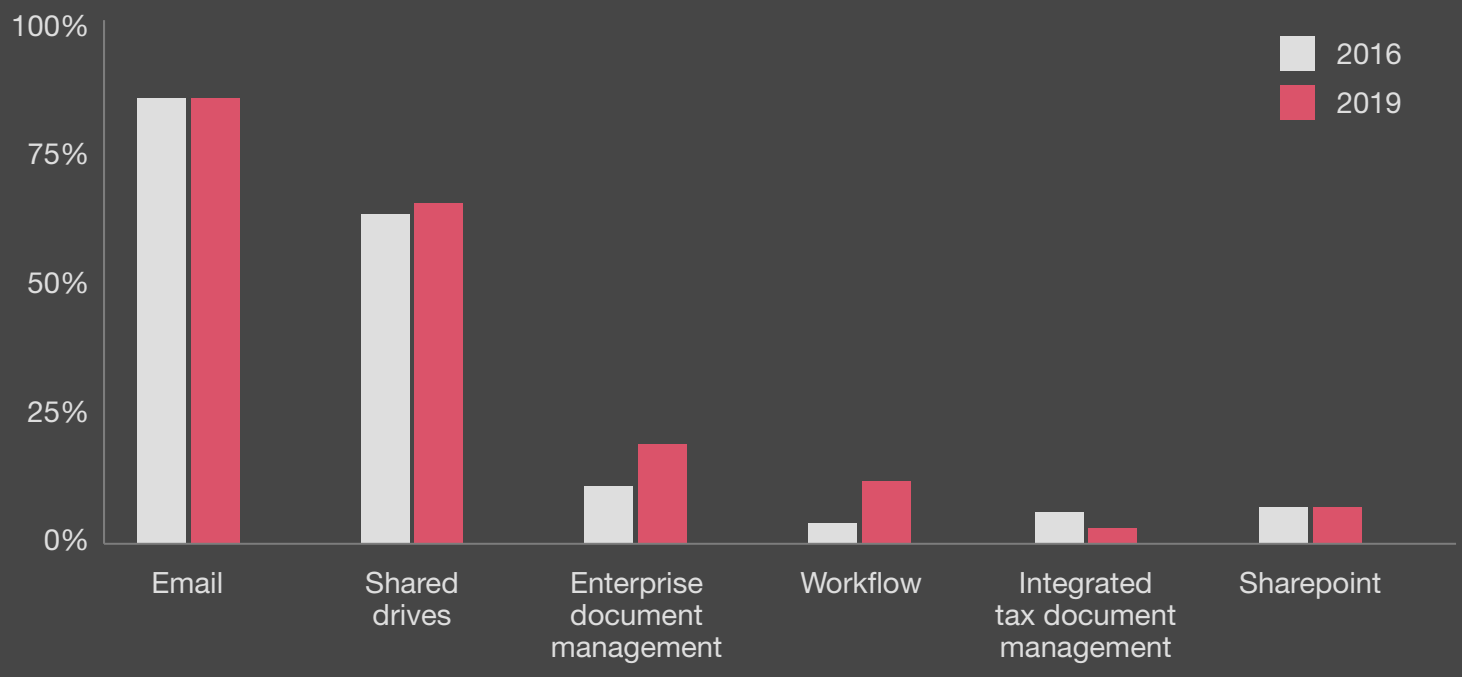


Data storage and sharing rely on multiple tools

Storage of tax-related data

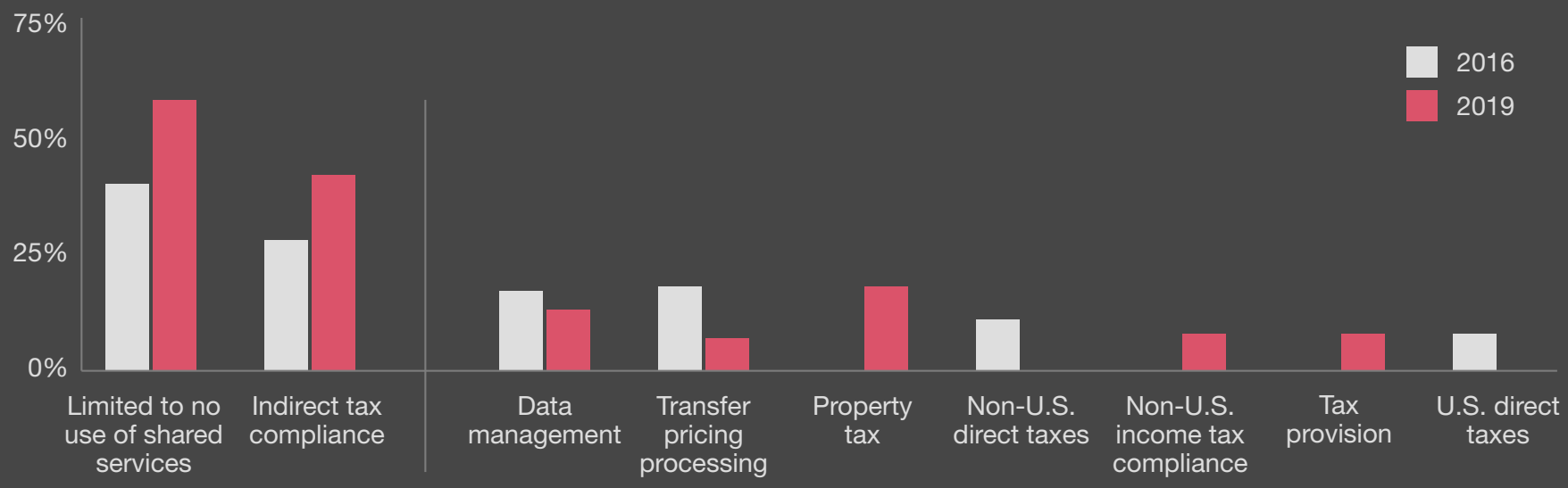


Tax-related document sharing



Almost 60% of the survey respondents use workflow technology, with the most commonly-used providers being Sharepoint (18%), OneSource Workflow Manager (15%), and Corptax WorkSpace (7%).

Shared service centers used to reduce cost



Emerging technologies and small automation are causing tax functions to reassess both how they use shared service organizations as well as the type of tax work they send to them. Automation may prompt tax departments to consider moving certain activities to these centers while potentially bringing certain activities back within the function. The survey results—an 18% increase in the usage of shared services—show this already may be happening.

How is tax executing tax reform reporting?

Today's tax professionals are acutely aware of the complexities and interdependencies of the new tax reform provisions, as well as the state and local tax burdens resulting from nonconformity. Calculating and analyzing the impact of these complex and interdependent provisions is creating unprecedented compliance burdens—when one element changes, other calculations are affected. However, 88% of the survey respondents have adopted only a minimal amount of technology to respond to tax reform and 59% implemented little to no automation to perform tax reform calculations.

Much of the data required for tax reform-related calculations historically has not been gathered by tax. We find 52% of the survey respondents must access more than three additional data sources to perform these new calculations. While it is critical for tax to adopt an automated approach for calculating, reporting, and planning around tax reform, 59% of the survey respondents continue to use spreadsheets for these purposes.

Although tax reform compliance requires more complicated calculations, tax functions may need to embrace manual filing methods for some tax forms and related schedules during this year's filing season. We anticipate more tax functions will automate the data source connections into tax reform calculation engines, which will lead to migration from spreadsheets to consulting firms or vendors.

In light of tax reform, manufacturers must consider whether their legal entity structure is optimized not only for today's needs but also for future challenges. Companies in the industry should not be limited by an outdated entity structure, but should develop a plan to strategically realign legal entities for the benefit of the entire organization.

How is tax developing a technology strategy?

All of this change highlights the need for tax functions to take a longer-term view of their capabilities by developing a tax technology strategy. Such a strategy takes into account the tax function's desired future processes and organizational value drivers while leveraging existing technologies. While 60% (up from 53% in 2016) of the survey respondents have a transformation initiative in finance or tax, 74% do not have a multi-year tax technology strategy (down slightly from 77% in 2013 and 78% in 2016).

Although respondents reported the use of tax technology is their top concern or area of improvement, only 35% have a designated tax technology professional.

The survey respondents provided that the top concerns or areas of improvement in tax are the use of tax technology, data automation, data analytics, people, and tax process. They also provided the technologies that would positively affect their work the most include reporting/forecasting tools, data collection, data analytics, and data integration. Although the respondents reported that the use of tax technology is their top concern or area of improvement, only 35% (up from 20% in 2013 and 25% in 2016) have a designated tax technology professional.

Hallmarks of a good future state process and technology roadmap:

- Is aligned with the organization's culture, environment, and priorities;
- Includes a dynamic tax transformation vision that is flexible enough to adapt to changes with tax and business objectives and requirements, and systems, data, and technology;
- Sets forth a multistage future vision of tax technology;
- Develops an execution plan for immediate and sequential wins, and continuous improvement;
- Is aligned with the organization's technology strategy around small automation and use of digital labor;
- Serves as a guide for future decision-making and investment strategies, as well as behaviors and actions; and
- Incorporates a tax technology governance framework.

There are five key steps to designing and executing a roadmap for addressing tax compliance and reporting obstacles:

1. Inventory needed data requirements and sources by identifying, rationalizing, and mapping source data (e.g., provision and optimal data sources, data gaps and pain points, process for obtaining additional data);

2. Design data sourcing, extraction, and automation to streamline the data-gathering process (e.g., consider data constraints and unique requirements, leverage current platforms, incorporate self-service ETL and visualization tools, implement data staging and mapping, detect and reconcile anomalies);

3. Automatically connect data flows to integrate solutions (e.g, integrate data sources with tax reform calculation engines, reduce risk associated with manual processes); and

4. Establish a sustainable and nimble governance model (e.g., clearly define roles and responsibilities).

5. Empower individual team members at all levels to adopt emerging technology tools to transform the status quo.

The takeaway

Tax professionals of the present and future must be able to adapt to new technologies and be prepared for challenges in a complex tax environment. They also must possess transformation and management expertise and be comfortable with, and even liberated by, disruptive technology and innovation. In addition, they must upskill from a tax technical perspective. Combining these technology and tax technical skills will enable tomorrow's tax professionals to add strategic value to the organization.

Tax professionals of the future will possess different aspirations, career goals, and ambitions than today's professional. Their ability to navigate robotics, digital labor, and analytics tools likely will advance their careers, creating new opportunities across enterprise functions. Assisted by advanced decision-making, their use of streamlined processes will create capacity for enhanced analytics, deeper technical skills and more strategic activities. Technology will facilitate collaboration across geographies, allowing flexibility for 'digital workers' in the workplace.

While respondents report an 8% short-term increase in outsourcing of U.S. direct tax compliance to vendors, we anticipate data/process automation activities may move back onshore to improve data/process governance. We also anticipate a significant increase in the use of RPA/ETL solutions and greater adoption of AI/ML/NLP capabilities.

These changes likely will result in a short-term increase in the tax function's operating budget to adopt analytical, business, and technology tools and develop personnel skill sets. In fact, the survey results show that the average tax department budget has increased since 2016. However, by nurturing a culture that embraces and adapts to constant technological changes, tax will realize the full benefits that new technology and automation can provide, from increased business strategy insights to reduction in overall department operating costs.

About MAPI

The Manufacturers Alliance for Productivity and Innovation (MAPI) is a nonprofit professional association that serves as a premier manufacturing leadership network. Founded in 1933, our mission is to help manufacturing leaders make smarter business decisions through best practice programs for executives, professional development events, and manufacturing-focused business insights and research. For more information, visit mapi.net.

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Our thanks to the members of MAPI's Tax Council who participated in this survey.