Tax technology and transformation

Tax functions ‘go digital’
Foreword

In the EY TaxTech India Survey 2016, we had sought to provide a perspective on the readiness of the tax functions to embrace and capitalize on the changes in the tax environment, especially on the tax technology front.

In the past one year, the digital wave has become stronger and the business case for the adoption of new technologies in the tax function has gained further momentum. Digital tax administration has emerged as one of the biggest drivers of tax function transformation in 2017, with GST being the leading technology-led tax reform necessitating a large-scale business transformation.

Digital technologies are radically altering business and operating models, resulting in round-the-clock and border-less value creation for businesses. Tax authorities worldwide are also introducing newer tax laws to deal with these digital business models and require greater transparency through disclosures and seamless exchange of taxpayer information between tax authorities. Tax functions therefore need to be ready to deal with this digital disruption wave, which requires them to be closer to their business stakeholders and data like never before, and address the changing requirements and expectations of businesses and tax administrations with greater accuracy and efficiency.

The tax technology landscape is rapidly maturing and is now shared by multiple solution providers and products. For most tax functions, the challenge today is determining their requirements, tax technology strategy and resources to execute the strategy rather than the availability of solutions. With the advent of cloud-based solutions, the cost of deployment and maintenance of large applications has come down significantly, cost of sub-optimal compliance is becoming steeper, transparency and information sharing between/with tax authorities is becoming paramount and tax authorities are asking “smart” and “informed” questions.

Building on this theme and focusing on the agenda to help tax functions be ready for the future, we are pleased to announce our second thought leadership on tax technology and transformation. This report aims to provide readers with an understanding of the key global and Indian trends directly impacting tax functions and the future state of digital tax. It aims to guide organizations in their digital tax journey to embrace newer technologies such as automation and analytics, enabling them to effectively respond to the changing tax landscape.

We expect that these factors, put together, would make a strong business case for tax functions in corporates to develop and execute a digital tax strategy.

We hope you find this report both interesting and informative. We would be happy to interact and understand your feedback on this report.

Garima Pande  
Partner, Tax Technology and Transformation, EY India

Rahul Patni  
Partner, Tax Technology and Transformation, EY India
Trends impacting tax functions

- Digital tax administration: Tax authorities adopting technology 04
- New technologies driving the adoption of digital strategy by businesses 05
- Evolving tax landscape demanding increased transparency 10

Are current tax functions in corporates fit for digital world? 13

Future state of the tax function 16

Technology solutions for digital tax functions 19

Concluding thoughts: Is tax technology a necessity or an opportunity? 22

Contents
Multiple disruptions, including regulatory, social, political and technological changes, are posing newer risks and opportunities for businesses, more so for tax functions, which are at an inflection point. However, tax law changes are struggling to keep pace with technological changes and new laws are increasingly being enforced. Not giving tax the attention it deserves on digital issues could increase the risks for organizations.

Tax-specific technologies may make it possible to answer the mandates of the global digital economy with changing tax data flows, data analytics and data requirements. The new digital tax function might evolve at great pace to become a strategic component of enterprise transformation.

Tax authorities are increasingly becoming digital and getting closer to the source data to better understand taxpayer trends and ensure better compliance. Therefore, enterprise tax functions cannot continue to remain blindfolded due to lack of access to and visibility on their own source data and ability to assess trends and issues accessible to tax authorities. Hence, there is a need for the tax functions to undertake timely and accurate compliance and go digital to be able to undertake more value-adding functions for the business.

### Key trends impacting Tax functions

**Digital tax administration** - Tax authorities going digital

**Technology wave** - Emergence of new technologies and businesses adopting digital strategy

**Transforming Tax policies** - Evolving legislative landscape demanding increased transparency and compliances
Digitalization and emerging technologies have opened the doors to new opportunities not just for businesses, but for tax administrators as well to transform their day-to-day operations. Tax authorities are harnessing the power of new technologies such as big data and advanced analytics to improve tax administration, counter fraud and facilitate taxpayer compliance.

Digital tax administration lifecycle and evolution

As countries move toward digitizing their tax administration, their efforts can often follow a similar pattern, aligning with different levels of digitization. The move to digitization is not necessarily linear, nor should higher levels of digitization be viewed as the ultimate goal of either taxpayers or tax authority.

In their journey to adopt digital technologies, most of the tax authorities generally begin with IT-enabled electronic filing of tax returns and further extend it to submission of source data in the e-filings. The major shift happens when this data is further matched with data from other sources (such as banks) in real time, analyzed across taxpayers and jurisdictions to see any abnormalities, and generate e-audit assessments. The highest degree of digitization is when government entities use the submitted data to assess tax without the need for tax forms.

Key trends impacting Tax functions

<table>
<thead>
<tr>
<th>01</th>
<th>Digital tax administration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tax authorities going digital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>02</th>
<th>Technology wave</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergence of new technologies and businesses adopting digital strategy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>03</th>
<th>Transforming tax policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evolving legislative landscape demanding increased transparency and compliances</td>
</tr>
</tbody>
</table>

Governments across the world are leveraging digital platforms to assess taxpayer data, including cross-referencing information at the source, running it through increasingly sophisticated analytics and sharing it among other agencies.

In India, there are significant technology-led reforms underway both on the direct and the indirect tax side. There is increased collaboration among various government agencies, resulting in swift exchange of information using digital means. This is rapidly changing the manner and quality of audits. Traditional tax function operating models need to rapidly evolve to face and defend these inquiries and audits.
### Current state of digitization level across the globe

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
</table>

- **E-file**: Use of standardized electronic form for filing tax returns required or optional; other income data (e.g., payroll, financial) filed electronically and matched annually.
- **E-accounting**: Submit accounting or other source data to support filings (e.g., invoices, trial balances) in a defined electronic format to a defined timetable; frequent additions and changes at this level.
- **E-match**: Submit additional accounting and source data; government accesses additional data (bank statements), begins to match data across tax types and potentially across taxpayers and jurisdictions in real time.
- **E-audit**: L2 data analyzed by government entities and cross-checked to filings in real-time to map the geographic economic ecosystem; taxpayers receiving electronic audit assessments with limited time to respond.
- **E-assess**: Government entities using submitted data to assess tax without the need for tax forms; taxpayers allowed a limited time to audit government-calculated tax.

---

*Note: Not all governments collect the same information or treat it the same under this model. Further, the move to digitization is not necessarily linear.*

*Source: EY analysis*
Future state: While 2017 has witnessed various countries adopting digital tax administrations, many others have announced future plans.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>India implemented new GST requirements to submit detailed transactional level data</td>
</tr>
<tr>
<td>2018</td>
<td>Norway plans to adopt and implement SAF-T requirements</td>
</tr>
<tr>
<td>2019</td>
<td>Malaysia plans to use analytics for E-Audits on payroll tax</td>
</tr>
<tr>
<td>2020</td>
<td>UK’s HMRC plans to introduce ‘MTD’ for other taxes besides VAT in 2020.</td>
</tr>
<tr>
<td>2017</td>
<td>Spain implemented new requirement to submit daily invoice level detail</td>
</tr>
<tr>
<td>2018</td>
<td>Brazil introduced new obligations for payroll - (eSocial) and EFD-REINF</td>
</tr>
<tr>
<td>2019</td>
<td>UK’s HMRC plans to implement ‘MTD’ reporting for VAT in April 2019</td>
</tr>
<tr>
<td>2020</td>
<td>Australia’s ATO plans to further digitize its tax administration through extensive use of analytics</td>
</tr>
<tr>
<td>2017</td>
<td>Mexico updated layouts for invoice data (v3.3)</td>
</tr>
<tr>
<td>2018</td>
<td>Brazil updated layouts for (EFD-Contribuições, NF-e, ECD and ECF))</td>
</tr>
<tr>
<td>2019</td>
<td>Colombia plans on adding e-Invoicing and e-Accounting requirements</td>
</tr>
<tr>
<td>2020</td>
<td>New Zealand is following suite with Australia in its move to digital tax administration</td>
</tr>
<tr>
<td>2017</td>
<td>Hungary is in the process of introducing live invoice reporting requirements starting July 1, 2018</td>
</tr>
<tr>
<td>2018</td>
<td>Italy introduced B2B e-invoicing and updated quarterly VAT obligations with detailed invoice data</td>
</tr>
<tr>
<td>2019</td>
<td>Costa Rica is scheduled to make e-Invoicing mandatory for B2B transactions</td>
</tr>
</tbody>
</table>

Source: EY analysis
The Indian tax administration scenario
The Tax Administration Reform Commission (TARC), under the chairmanship of Dr. Parthasarathi Shome, has recommended extensive use of information and communication technology (ICT) in administration and governance of tax to improve the levels of compliance by taxpayers and help tax authorities in revenue forecasting.

Current state of technology adoption

The Indian tax authorities have been early adopters of information technology (IT). The IT systems implemented so far have helped direct taxpayers applying for tax registrations online, e-payment of taxes, reconciliation and e-viewing of tax credits, e-filing of tax returns, e-processing of returns and refunds by authorities, etc. E-assessment gives the taxpayer the choice to participate in tax assessment electronically without visiting the tax office. For indirect tax as well, with the implementation of the Goods and Services Tax (GST), all compliances, payments and credits matching are proposed to be administered online. The tax authorities have also used IT systems as a risk management tool to pick up returns/consignments (in the case of Customs) for scrutiny.

The Government is leveraging digital platforms to assess taxpayer data, including cross-referencing information at the source. Some of the significant initiatives taken by the Indian Government are as follows:

GST implementation

- With GST, the Government has introduced a uniform indirect tax structure across the country. Expectations are that it will widen the tax base, do away with the multiplicity of taxes and the cascading effects, minimize competitive distortions and encourage better compliance.
- The revolutionary IT platform Goods and Services Tax Network (GSTN) provides a common platform for registration, return filing and e-payment. The objective of the GSTN is to provide a shared IT infrastructure to all GST stakeholders. It integrates the common GST portal with the tax administration systems of the Center and states.

Project Insights

Recognizing the value of data available in electronic form, the Indian tax authorities have set up an integrated data warehousing and business intelligence (DW&BI) platform, which would help them detect patterns and plug leakages to improve policy and operational effectiveness. This US$156 million (over INR10 billion) “Project Insight” is the Finance Ministry’s flagship project, aimed at widening the tax base using technology. The analytics tool will collect data not only from traditional sources such as banks and financial institutions, but also from social media sites to match spending patterns with income declarations. The tool will:

- enable the capture, linkage and analysis of structured and unstructured data for discovering non-filers/under-reporting of income.
- use a wide range of analytics methods and technologies to understand what happened (descriptive analytics), why it happened (diagnostic analytics), what will happen (predictive analytics), and what is required to make it happen (prescriptive analytics).
- use a collaborative approach for information and knowledge sharing.
- pre-process information to free resources for effective analysis and investigation.
The Ministry of Corporate Affairs (MCA) and the Central Board of Direct Taxes (CBDT)

entered into an agreement in September 2017\(^1\) to share data and information on companies. They will regularly share information such as tax returns, permanent account number (PAN) and financial statements. They will also share financial statements filed by corporate entities with the Registrar of Companies (RoC), returns of allotment of shares and statement of financial transactions received from banks.

The Income Tax Department is working on a new system of jurisdiction-free assessment

(pilot underway), where a taxpayer would be assessed by a taxman based in any part of the country. This would further facilitate easier electronic communication between the Income Tax department and taxpayers.

In July 2017, the CBDT announced, three categories of assessments for compulsory selection of returns/cases requiring scrutiny:

Limited Scrutiny (Computer Aided Scrutiny Selection), Complete Scrutiny (Computer Aided Scrutiny Selection) and Compulsory Manual Scrutiny. Currently, the selection of cases for scrutiny is computer-aided but rule-based\(^3\).

A Non-filers Monitoring System

has been rolled out for pilot implementation to prioritize action on non-filers with potential tax liabilities. Data analysis will be carried out to identify non-filers about whom specific information was available in the annual information return, Central Information Branch and TDS/TCS returns database.

Expected future state in the short to medium term

- Sharper and more focused risk-based selection of cases for assessment and selection of cases of scrutiny linked to the profile of taxpayer using business intelligence and without manual interference
- Real-time collaboration among various authorities because of the following:
  - MoU between CBDT and RoC
  - Mutual access and sharing of information between GSTN and IT Database
- Transformation in the quality of assessments
  - Assessing officers to have access to pre-prepared dossiers and profile of taxpayers
  - Benchmarking against peers
  - Industry and area-based issues and qualitative questions such as effective tax rate
- Pre-prepared returns for individuals (partially pre-populated returns already available)
- New forms for reconciliation with GST, employees’ personal returns etc.
- Concept of “taxpayer as a customer” – measures to facilitate high taxpayers and seek feedback

---

1.2 New technologies driving the adoption of digital strategy by businesses

Digital has fundamentally transformed the way companies do business. Enabled by data and technology, digital is a continuous form of disruption to business models, products, services and experiences. It has radically changed the way people consume content, communicate and access products and services.

Digital technologies are radically altering business and operating models. Businesses are continuously looking to adopt newer technologies such as Internet of Things (IOT), robotic process automation (RPA), blockchain and artificial intelligence (AI) to stay competitive. These new ways of doing business are also resulting in newer tax laws, which deal with borderless value creation and big data.

Therefore, it has become necessary for the tax function to be ready to deal with this business transformation.

Key trends impacting Tax functions

**01** Digital tax administration
- Tax authorities going digital

**02** Technology wave
- Emergence of new technologies and businesses adopting digital strategy

**03** Transforming tax policies
- Evolving legislative landscape demanding increased transparency and compliances
Businesses are adopting digital technologies to augment their operational models as these emerging technologies bring in cost efficiencies and make companies move from a CapEx to an OpEx model, for example, delivery services on cloud and offering pay-per-use model. The concept of a sharing economy offers on-demand access to goods and services and brings in efficient utilization of unused inventory of assets across industries. As the adoption of newer technologies gains pace, enterprises are realizing the need to identify the business functions that may derive the greatest value.

The EY-CIO Klub Enterprise IT Trends and Investments Survey 2017 suggests that 83% of CIOs have shown the willingness to invest in new technologies as well as in the discovery of disruptive technologies that hold immense value.4

While the 2016 EY-CIO Klub Enterprise IT Trends and Investments Survey indicated that CIOs were leveraging social, mobile, analytics and cloud (SMAC) as a vehicle for enterprise transformation, the survey responses from 2017 survey indicate the rise of a second wave of digital disruption. Key trends such as the IoT, RPA, blockchain, AI and virtual reality (VR) are emerging, and it is increasingly incumbent on businesses to adopt these disruptive technologies to yield better business outcomes.

The digital wave is disrupting many traditional business models and therefore traditional tax functions will also need to change because:

- tax functions will need deep understanding of such technologies and digital businesses in their current processes.
- requirements of internal stakeholders and expectations from the tax function are changing, as businesses are now running 24x7 – the expectation from the tax function to contribute and partner with the business is the highest ever.
- there are new laws that deal with inherent difficulties in determining the jurisdiction in which value creation occurs – because the value in digital can (and typically is) delivered from multiple locations.
Globally, economies have witnessed prolonged periods of timid economic growth and budget deficits. Authorities have realized that traditional tax laws may not be very relevant in the new business models of the digital world. The new business models based on digital technologies and transactions in virtual marketplaces would need a new tax management system. Hence, governments are focusing on real-time electronic transaction reporting to drive compliance and collection.

Governments are looking at digital ways to interact with companies so as to have complete transparency of their tax, finance and operations data. They are relying on consumption taxes and improved tax transparency by large global companies.

Tax authorities are harnessing the power of digital to improve tax administration, counter fraud and facilitate taxpayer compliance. They are demanding near real-time data reporting and

**Key trends impacting Tax functions**

<table>
<thead>
<tr>
<th>01</th>
<th>Digital tax administration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tax authorities going digital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>02</th>
<th>Technology wave</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergence of new technologies and businesses adopting digital strategy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>03</th>
<th>Transforming tax policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evolving legislative landscape demanding increased transparency and compliances</td>
</tr>
</tbody>
</table>

From country-initiated legislations to globally initiated frameworks, including BEPS and the OECD’s common reporting standards, there is an undeniable trajectory of tax authorities asking for information directly from financial systems rather than waiting for the synthesized information from the tax function through its traditional filing process. This real-time, connected, digital world is enabling governments to get closer to the source of information, providing them entry points and more direct access to transactions, tax and finance data than ever before.

In India, tax administrators have introduced a numbers of changes to tax filings that will increase transparency and reporting requirements. Invoice-level filing in GST is the most notable change; a number of measures have been undertaken/in the offing on the direct tax side as well.
performing increasingly sophisticated analytics. Digital methods will help tax authorities drive better enforcement, increase the tax base and plug leakages in both an intrusive and a non-intrusive manner.

Consequently, tax administrations are quickly adapting to new strategies. For example, the various reporting requirements under Base Erosion and Profit Shifting (BEPS) Action Plans have been designed to drive transparency on the part of taxpayers. Information filed as part of three-tiered transfer pricing (TP) documentation structure — i.e., (i) a master file, (ii) local files and (iii) country-by-country reporting (CbCR) — is expected to be analyzed by tax administrators using sophisticated data analytics tools. Likewise, the demand for increased transparency is also reflected in the agendas and action plans of the G20, the European Union and the United Nations.

On 7 June 2017, 68 jurisdictions signed the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS (the MLI) during a signing ceremony hosted by the Organisation for Economic Co-operation and Development (OECD). Eight other jurisdictions expressed their intent to sign the MLI in the near future.5

Until 2016, 84 countries had signed the Multilateral Competent Authority Agreement for Automatic Exchange of Information (AEOI), with 101 countries committing to it. From 2017 onward, 54 countries will start exchanging information automatically. From 2018 onward, another 47 countries are expected to start exchanging information automatically.6

Sharing of tax-related information among countries using digital platforms has become the norm. India has also been expanding its treaty network by signing new tax treaties and Tax Information Exchange Agreements (TIEAs) with many jurisdictions to facilitate the exchange of information and to bring transparency.

The Indian Tax Authorities have introduced a number of changes to tax filings which will increase transparency and reporting requirements.

1. Monthly GST returns with invoice-level information details
2. Reconciliation of GST returns with audited financial statements and potentially in the future with filings across tax filings, e.g., income tax
3. Increasing levels of disclosures in income tax filing, e.g., disclosure of personal assets, comprehensive filing for cross-border remittances and Income Computation Disclosure Standards (ICDS)
4. Mandatory linking of Aadhaar and PAN and quoting of Aadhaar on particular transactions
5. Annual information return (AIR) replaced by statement of financial transactions (SFT) and expansion in the scope to include details of high-value cash and other transactions such as buybacks by listed companies, and purchase and sale of immovable property
6. Under BEPS section plan, requirement of three-tiered TP documentation, i.e., (i) a master file, (ii) local files and (iii) CbCR
7. Expansion in the scope of online filing, e.g., online filing of appeals

Authorities are using analytics on the significant volume of data being captured to identify potential non-filers who carried out high-value transactions but did not file a return of income.

- The CBDT had identified 6,754,000 potential non-filers with potential tax liabilities for assessment year 2015-16.7
- The CBDT publishes names of willful tax defaulters on public domain for the purpose of tax recovery. In June 2016, the CBDT further suggested that after a due notice, the PAN of tax defaulters should be blocked to prevent them from filing their tax returns and availing the benefit of carry forward of business loss and losses under other heads where filing of tax returns is mandatory.8

---

Are current tax functions in corporates fit for digital world?

According to the EY TaxTech India Survey 2016⁹:

- 45% of organizations currently use basic infrastructure and technology for tax accounting and consolidation
- 24% use tax software with no integration with ERP systems
- Over 90% voted that their tax reporting and compliance system is not automated at all or only partly automated

This clearly shows the gap between the existing and the desired state of use of technology. Currently, the use of basic software such as Excel or standalone non-integrated tax software is prevalent. Additionally, the tax departments face a number of challenges due to lack of integration with other departments and manual ways of working.

The EY TaxTech India Survey 2016 clearly highlighted the gap in the current and the desired state of technology implementation in tax functions. Additionally, organizations today are looking at tax functions to operate at a more strategic level to provide business insights and help in making informed business decisions, apart from being able to cope up with increasing governance by tax/authorities. Having a tax technology strategy is a must for organizations to thrive in the digital world.

Traditional tax department challenges:

- Difficulty managing and locating final versions of critical documents
- Inadequate information-sharing across tax functions and geographic locations
- Redundant and email-intensive data-collection methods
- Excess time and effort spent on administration and manual tracking
- Dealing with multiple data sources and spending valuable time translating them to a common structure or data definition
- Lack of visibility and oversight of deadlines, deliverable status and resource allocation

The traditional methods used in tax functions may not be capable of answering many questions raised by tax authorities’ systems, hence the need for robust ERP systems, tools for consolidation, automation and data analytics.

One of the important to-dos for the tax functions is to have an integrated tax data source. As data is the foundation of accurate and timely reporting, being able to collect and manage that data is critical to timely and accurate compliance. Since tax-related data resides everywhere across the organization, from operations to marketing to finance departments, it is important to have a seamless, consolidated and integrated view of that data. This will prevent a siloed approach and facilitate the availability of 360-degree data across departments at all times.

Some of the other tax areas where technology can be introduced are as follows:

- Document management
- Litigation management
- Management of income and reporting
- Management and group reports
- Data collection
- Process controls and workflow in the tax function
- Data support for TP compliances
Tax is being viewed by the top management as a critical input to take informed decisions and to deliver increased value to the business.

The ability to factor in precise tax cost estimates in business decision making is a competitive advantage. Effective communication of the tax function to C-suite executives is important considering the high reputational risk organizations may face on account of tax litigation or social media-initiated challenges. Now, more often than before, tax finds an important place in the agenda of board meetings. Today, leadership teams are keen to participate in decision making to minimize tax risks and to invest in making their tax functions more efficient and robust.

The focus is on making tax functions operate at a more strategic level to provide business insights, but without significant resource addition. Hence, organizations look at technology to improve their business decision making, keeping in view their cost and margins pressures.

Appropriate dashboards, based on contemporary data and sound dynamic algorithms, need to be developed in organizations to enable meaningful communication from their tax functions to their boards. It is clear that the traditional role of the tax function in managing local compliance-related matters, submitting data in a tax audit etc. has changed substantially in the evolving business scenario. To optimize decisions, up-to-date forecasting and precision are needed.

It is critical that tax has a “seat at the table” in discussions on buying, implementing and configuring new technology systems. The tax function needs to bring senior management, including the CFO and CIO, on board to treat tax technology as a priority.

**Benefits of a tax technology strategy**

- Allows tax professionals to better focus their resources on analyzing data and creating strategies to generate revenue and cut costs, rather than spending valuable time gathering data.
- Enables the tax function to more effectively evaluate current tax processes, identify areas for improvement, and leverage the most supportive technologies at the right time.
- Can help a company spread out costs associated with investments in licensing and implementation of technology.
- Reduces risks, thereby protecting the reputation of the firm.

84% voted that technology is the most important factor in improving the effectiveness of the tax function and over 90% acknowledged role of technology as an enabler in various tax areas.
Future state of the tax function

With the implementation of tax technology strategy, companies may aim to improve data quality through maximized automation of data from multiple source systems and improved data analysis. The idea will also be to have improved collaboration, process control and visibility across all taxes through workflow and information management. The end outcome of such a strategy might bring forth to the management clear, concise and instant dashboard reporting to support business decisions as well as improved efficiency and audit-ready documentation for audit defense.

As discussed in the previous section, in-house tax functions have relatively more manual processes, are heavily reliant on spreadsheets and are generally under-invested in technology. The volume of reporting requirements and the ever-increasing complexity of the responsibility of tax demand a more innovative approach leveraging tax technology.

Digital tax technology: A view on the technology ecosystem of today

The current ERP systems used by companies have limited tax functionalities, hence a lot of work is done by tax professionals using spreadsheets and version controls of changing financial statements.

The current model involves significant manual effort with limited controls or auditability. There are inherent risks around inconsistencies, tailored calculations, manipulation of data and data versioning. Additionally, there are undefined inputs and outputs and unclear roles and responsibilities.
Digital tax technology: What a future-proof tax technology stack will look like

Companies can use integrated ERP systems to capture tax-related data from various departments and collate it at a single source using automated tools. Improved and efficient consolidation of data will minimize the risk and inefficiencies associated with the use of spreadsheets.

With the use of cloud-based applications, data can be stored and accessed anytime, anywhere. Enterprises can adopt analytics solutions for real-time informed decision making and embrace predictive analytics to gain actionable insights from data generated through internal business processes as well as external market sources.

Companies might be able to standardize and improve visibility throughout the end-to-end tax lifecycle process and create a better audit trail between source data and consolidated tax disclosures. Additionally, there can be appropriate controls in place and clear roles and responsibilities created. An integrated view of tax data may help optimize tax accounting process and maximize the time spent on data analysis and review.

### Tax data capture
- Tax Engine
- ERP
- Source Systems
- PDF, Excel, Email
- Third Party Content

### Tax data collation

#### Tax Data Lake

#### On Premise Applications
- Consolidation
- Tax Provision
- Archiving
- TP Doc
- CBCR
- Excise

#### Cloud Applications
- Indirect Compliance
- Direct Compliance
- Stat Accounts
- Cash Analytics
- Risk Analytics
- Chat Bot

### Real-Time Data Access

#### Tax data analysis & reporting
- Tax Dashboard
  - Transfer pricing
  - Direct tax
  - Controversy management
  - Compliance management
  - VAT / GST
  - Duties

#### Continuous Monitoring

#### Tax data visualisation

- Group Tax
- SSC
- Others

---

Tax governance, content management and collaboration
This new model might include these features:

- **RPA to drive efficient data flow across all tax processes**
- **Meeting the e-assess and e-audit requirements of local tax authorities**
- **Immediate data transparency, including real-time reporting**
- **Instant and accurate dashboard management reporting**
- **Flexible self-service reporting, with routine query handling (chat bot)**
There is no “one size fits all” for a tax technology strategy. Across all the stages of the tax life cycle – data capture, collection, analysis and governance – there are multiple technology solutions providing off-the-shelf solutions and platforms. Companies can choose from various options for automation, including customized solutions such as ERP system sensitization, robotics and off-the-shelf applications. There are several tools available that help organizations streamline their internal processes and generate reports as per tax documentation requirements. Such tools are also compatible with existing ERP systems. Different technology solutions can be used to meet the shifting paradigms of tax reporting and tax transparency requirements imposed under both the Indian law and the global tax landscape. The new digital tax function will need to provide real-time global tax management, data access, analytics and government data feeds.

- A **data reconciliation engine** can reconcile data from different sources and to increase the accuracy and reliability of the data being submitted to the authorities.

- A **workflow and team collaboration application** can be implemented to increase the efficiency of the tax team, along with making it easy to store and retrieve tax data when required even after several years.

- An **entity management system** with built-in global tax and regulatory compliances that provides alerts, reminders and escalations can go a long way in addressing compliance monitoring.

- For companies operating in multiple jurisdictions, a tax notice and **tax controversy management application** will help ensure timely response to authorities.

Tax processes that involve high volume, repetitive tasks and recurring deadlines are ideal for RPA. Some of the automation “hot spots” for tax include e-filing with relevant tax authorities, personal tax compliances, TDS processes, GST compliances and reconciliations, printing to PDFs/audit-ready file creation and TP economic analysis.

As companies move toward digital adoption in their tax functions, there are various technology options for them to choose from. Correct need assessment and identification of the desired outcomes can help them select the best possible solution. Organizations need to not only correctly evaluate which technology to deploy but also make sure that the technology is flexible to the changing regulatory environment. Newer technologies such as RPA and analytics have found many use cases in tax, while technologies such as blockchain and AI have many emerging possibilities.

Use of technology will fast-forward the transformation of the tax function, thereby helping it keep pace with business expectations, create more efficiencies and manage risks better.

Companies can also decide to manage this change in-house or outsource to a managed services provider.
Case study

A large India-headquartered conglomerate had a significant number of cross-border remittances. The company implemented RPA technology to automate the process of preparation as well as filing of prescribed forms (Form 15CA/CB), which included automated review by the tax team, CA certificate filing and uploading on the required website. This reduced its resource requirement from six people to two. These two resources now do technical review of the forms from a tax risk/opportunity assessment perspective.

Data analytics is becoming a valuable enterprise asset, improving visibility and facilitating better-informed business decisions. There is need to have an integrated view of a comprehensive end-to-end analytics program in the tax compliance process: from data collection, validation and testing, to analytics reports.

- Tax departments can implement analytics around GST, financial reporting and TP (TP benchmarking) to detect risk, reduce controversy and eliminate unwarranted costs in a variety of areas.
- Companies can also use data analytics to test all tax-related data to detect outliers and identify trends to spot areas that may require further investigation. Other areas would be to analyze related party transactions, ETR analysis, book-to-tax differences and TDS rates.
A large conglomerate with a significant asset base primarily relied on the classification of fixed assets used for statutory reporting purposes for income tax determination and reporting. Due to differences in the classification and definitions for income tax and statutory reporting, the company was not claiming optimal tax depreciation; the significant volume of data also posed a challenge. This problem was solved using text-mining technique, which helped to reduce the work of months to days.

Cognitive computing and AI could be even more powerful in this area, making it easier for tax functions to predict where problems might happen, for example, tax rate determination and responding to tax queries of business personnel (using chatbots to reply to routine tax queries). This is an evolving field and experiments are underway – it would be interesting to see what comes out of it.

Blockchain technology has the ability to streamline transfer of any value (data, assets, currency and information) in a secure and cost-efficient way and in real time. Blockchain administers transactions globally without centralized oversight.

Blockchain has the potential to revolutionize transactions across industries. This is especially true of transactions that require multiple authentications and verifications, contracts and any type of record verification. Hence, this technology could be applied to transactional taxes, such as VAT and TP. This technology also makes it easier to detect fraud and errors by providing clear and transparent information about transactions. In the future, Governments and taxpayers can use blockchain to exchange information, and the requirements to file returns can be done away with.

Fast emerging managed tax services model

Deploying technology for tax takes investment (cost and effort) and specialization. Further, technology needs to keep evolving as the tax law and administration evolves. Therefore, there is a level of risk associated for companies investing in tax technology.

Given the specialized skills required to deploy tax technology coupled with the occasional discomfort around making investments in tax technology (given the associated risks), companies are increasingly looking to professional firms to provide “managed services.”

Managed services involve companies outsourcing their entire tax function to professional firms. While some compliances, litigation, pieces of advice etc. are often outsourced to professional firms, the data management backbone (i.e., collating, curating and reconciling data) has been largely done by companies in-house, often consuming a significant portion of the in-house tax function's time. Piecemeal outsourcing of certain elements of compliance alone leads to even more time spent on co-ordination between parties, connecting tax with stakeholders, data curation etc. A large portion of tax technology touches upon these data management and workflow elements.

Such outsourcing can also allow companies to leverage on the professional firm’s specialized knowledge and investment in people, process and technology without making such specific investments themselves. This also gives companies the time to focus on their core competencies while tax is managed by professional firms.

Some key advantages and outcomes that companies look for from a “managed services” model are risk managed tax compliance, access to quality resources, scalability of the tax function and reduced people dependency. While these advantages do exist, the needs of one company would be quite different from those of another; therefore, it is important that companies introspect on their specific needs to determine the right outsourcing balance.
Concluding thoughts: Is tax technology a necessity or an opportunity?

While tax technology is a necessity for organizations to thrive in the new digital world, it can also become an opportunity for early movers who embrace technology into their tax functions to add more value to business and take informed decisions for the future.

Traditionally, tax functions have functioned in silos and have been technology-deprived. However, the emergence of new technologies, digitization of the working world, governments going digital and new transparency requirements are forcing organizations to take immediate actions to respond to this changing landscape and harness the opportunity to make tax functions more strategic and responsive to business needs. Lack of preparation, visibility and analytic capabilities across data sources can leave companies open to the risk of real-time audits, increased tax penalties, refund delays and reputational risk.

Future tax functions would need to have elements of both technical and professional skills:

- Technology needs to be adopted to improve how tax is integrated with finance and other functions to have seamless data extraction, using tax-specific tools and solutions for automation and analytics.
- Every tax professional needs to have analytical capabilities, at all levels, to help the business take informed decisions. This might require organizations to rethink their organizational designs to suit the next-gen workforce.
The professional element
Analysis, insights and advice from data and advanced analytics

Redefining skills and capabilities required to drive value

This new tax technology paradigm shift will make it important for senior in-house tax employees to be proficient in the use of technology tools and platforms. Digital natives will be ahead of the game and those with specialists skills will be much in demand. Tax teams will likely include technology specialists, with programming skills, and specialists in data analytics. Team members will need to understand new tools, interface with reporting technology and interpret reports and analysis to be able to answer questions that arise from authorities.

Developing a mobile and digitally skilled workforce requires an organization-wide redesign, change management and HR transformation in order to embed people strategy with business outcomes.

Skills of today
current workforce

Technical skills
Analytical thinking
Team work and communication
Tax domain knowledge

Workforce impacts
• Multiple generations
• New workforce models (digital, contingent, etc.)
• New skills and competencies

Business impacts
• New services (increase in planning and consulting)
• New business models and pricing strategies
• New technology

Skills of tomorrow
workforce of the future

Data analytics
Excel
Business diplomats
Process automation
Artificial intelligence and blockchain
Lean Six Sigma
Innovative
Negotiation
Tax domain knowledge

Foundation: tax domain knowledge and expertise
How to start a tax technology and transformation journey:

To succeed in their tax technology strategy, organizations need to do a thorough assessment of the current processes followed during the formulation and collection of data, conduct a candid review of their automation and analytics capability maturity and create a plan for implementing appropriate IT-enabled processes.

Make it a strategic imperative:

The vision needs to be embedded as part of the overall organization’s strategy, with backing from the leadership. This can be done in a number of ways, such as setting up of separate centers of excellence, specific alignments with business units or a distinct centralized unit. The structure may gradually evolve as per business needs.

Strengthen using a governance model:

Trust in data accuracy and security can be developed by setting up a governance council and defining enterprise-wide data governance standards. The council typically should comprise business heads, tax leaders, and IT and analytics leaders.

Identify what value technology will create and review periodically:

There should be clarity in the role technology can play in value creation for the organization. Development of formal key performance indicators and their period assessments will ensure that the efforts are focused in the right direction and deliver tangible results.

Train your talent:

Appropriate skill sets are required to gather and analyze data, and create analytics-based business insights. Hence, there is a need to organize training for the business as well as tax teams to help them be better consumers of analytics.

The key challenge for most organizations is to drive a cohesive change touching people, systems and processes without business disruption. One of the approaches for companies to drive this digital agenda is to go through a 2*4 gradual immersion journey:
Questions to ponder upon

What is my “wish list” of outcomes I want to achieve with my tax function? What are the impediments in achieving them?

What are the expectations of the business from my tax function? What are the key drivers I need to focus on to add value?

Where are my team and I spending all our time? Is there some room for efficiency?

How much time do my team and I spend on coordination, data management etc.?

Am I leveraging technology enough to meet my tax needs?

Is there need to re-visit my tax processes and check for areas that can be done better with technology?

What kind of insights do I need to play my role better?

Are there any internal data/information points I am not getting today that can help me make decisions better?

Should I take on the task of building and maintaining an efficient tax function myself or should I pass it on to tax function outsource service providers?
EY Tax Technology and Transformation (TTT) India team

In order to help organizations redefine their tax functions and drive transformation for the digital age, EY has formed Tax Technology and Transformation (TTT), a dedicated group of more than 1,000 tax technology and performance improvement professionals in member firms across the globe. Our TTT professionals will be happy to provide you with more information and guidance around these topics.

**Ajay Kumar**
Partner, Tax Technology and Transformation, EY India
ajay9.kumar@in.ey.com | +911246714220 | New Delhi

**Garima Pande**
Partner, Tax Technology and Transformation, EY India
garima.pande@in.ey.com | +911246714943 | New Delhi

**Jitesh Bansal**
Partner, Tax Technology and Transformation, EY India
jitesh.bansal@in.ey.com | +918067275303 | Bengaluru

**Rahul Patni**
Partner, Tax Technology and Transformation, EY India
rahul.patni@ey.com | +912261921544 | Mumbai

**Sameer Prakash**
Partner, Tax Technology and Transformation, EY India
sameer.prakash@in.ey.com | +911244432210 | New Delhi

**EY report development team:**
Srirupa Saxena
Jayesh Bavle
Jerin Verghese
Neha Goel
Pushpanjali Singh
Our offices

Ahmedabad
2nd floor, Shivalik Ishaan
Near C.N. Vidhyalaya
Ambawadi
Ahmedabad - 380 015
Tel: +91 79 6608 3800
Fax: +91 79 6608 3900

Bengaluru
6th, 12th & 13th floor
“UB City”, Canberra Block
No.24 Vittal Mallya Road
Bengaluru - 560 001
Tel: +91 80 4027 5000
+91 80 6727 5000
+91 80 2224 0696
Fax: +91 80 2210 6000

Delhi NCR
Golf View Corporate Tower B
Sector 42, Sector Road
Gurgaon - 122 002
Tel: +91 124 464 4000
Fax: +91 124 464 4050

Kolkata
22 Camac Street
3rd Floor, Block ‘C’
Kolkata - 700 016
Tel: +91 33 6615 3400
Fax: +91 33 2281 7750

Hyderabad
Oval Office, 18, ILabs Centre
Hitech City, Madhapur
Hyderabad - 500 081
Tel: +91 40 6736 2000
Fax: +91 40 6736 2200

Jamshedpur
1st Floor, Shantiniketan Building
Holding No.1, SB Shop Area
Bistupur, Jamshedpur - 831 001
Tel: +91 657 663 1000
BSNL: +91 657 223 0441

Kochi
9th Floor, ABAD Nucleus
NH-49, Maradu PO
Kochi - 682 304
Tel: +91 484 304 4000
Fax: +91 484 270 5393

Mumbai
14th Floor, The Ruby
29 Senapati Bapat Marg
Dadar (W), Mumbai - 400 028
Tel: +91 22 6192 0000
Fax: +91 22 6192 1000

Pune
C:401, 4th floor
Panchshil Tech Park
Yerwada
(Near Don Bosco School)
Pune - 411 006
Tel: +91 20 6603 6000
Fax: +91 20 6601 5900

Chandigarh
1st Floor, SCO: 166-167
Sector 9-C, Madhya Marg
Chandigarh - 160 009
Tel: +91 172 331 7800
Fax: +91 172 331 7888

Chennai
Tidel Park, 6th & 7th Floor
A Block (Module 601, 701-702)
No.4, Rajiv Gandhi Salai
Taramani, Chennai - 600 113
Tel: +91 44 6654 8100
Fax: +91 44 2254 0120

Ground Floor, ‘A’ wing
Divyasree Chambers
# 11, O’Shaughnessy Road
Langford Gardens
Bengaluru - 560 025
Tel: +91 80 6727 5000
Fax: +91 80 2222 9914

Ground Floor, Shantiniketan Building
Octroi, New Delhi - 110 037
Tel: +91 11 6671 8000
Fax +91 11 6671 9999

3rd & 6th Floor, Worldmark-1
IGI Airport Hospitality District
Aerocity, New Delhi - 110 037
Tel: +91 11 6671 8000
Fax +91 11 6671 9999

4th & 5th Floor, Plot No 2B
Tower 2, Sector 126
NOIDA - 201 304
Gautam Budh Nagar, U.P.
Tel: +91 120 671 7000
Fax: +91 120 671 7171

Chandigarh
6th, 12th & 13th floor
“UB City”, Canberra Block
No.24 Vittal Mallya Road
Bengaluru - 560 001
Tel: +91 80 4027 5000
+91 80 6727 5000
+91 80 2224 0696
Fax: +91 80 2210 6000

Ground Floor, ‘A’ wing
Divyasree Chambers
# 11, O’Shaughnessy Road
Langford Gardens
Bengaluru - 560 025
Tel: +91 80 6727 5000
Fax: +91 80 2222 9914

Ground Floor, Shantiniketan Building
Octroi, New Delhi - 110 037
Tel: +91 11 6671 8000
Fax +91 11 6671 9999

3rd & 6th Floor, Worldmark-1
IGI Airport Hospitality District
Aerocity, New Delhi - 110 037
Tel: +91 11 6671 8000
Fax +91 11 6671 9999

4th & 5th Floor, Plot No 2B
Tower 2, Sector 126
NOIDA - 201 304
Gautam Budh Nagar, U.P.
Tel: +91 120 671 7000
Fax: +91 120 671 7171

Hyderabad
Oval Office, 18, ILabs Centre
Hitech City, Madhapur
Hyderabad - 500 081
Tel: +91 40 6736 2000
Fax: +91 40 6736 2200

Jamshedpur
1st Floor, Shantiniketan Building
Holding No.1, SB Shop Area
Bistupur, Jamshedpur - 831 001
Tel: +91 657 663 1000
BSNL: +91 657 223 0441

Kochi
9th Floor, ABAD Nucleus
NH-49, Maradu PO
Kochi - 682 304
Tel: +91 484 304 4000
Fax: +91 484 270 5393

Kolkata
22 Camac Street
3rd Floor, Block ‘C’
Kolkata - 700 016
Tel: +91 33 6615 3400
Fax: +91 33 2281 7750

Mumbai
14th Floor, The Ruby
29 Senapati Bapat Marg
Dadar (W), Mumbai - 400 028
Tel: +91 22 6192 0000
Fax: +91 22 6192 1000

5th Floor, Block B-2
Nirton Knowledge Park
Off. Western Express Highway
Goregaon (E)
Mumbai - 400 063
Tel: +91 22 6192 0000
Fax: +91 22 6192 3000

Pune
C:401, 4th floor
Panchshil Tech Park
Yerwada
(Near Don Bosco School)
Pune - 411 006
Tel: +91 20 6603 6000
Fax: +91 20 6601 5900