- Digital Tax Administration System -

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World is Changing: The need for Digital Transformation

**Big Data**
90% of the data was created in last three years alone.

**Mobile**
2 Billion plus smart devices were shipped in 2016 alone.

**Cloud**
62% of total workload will be on cloud by 2017.

**Internet of Things**
50 Billion devices will be connected to internet by 2020.

**Social Media**
81% of customers depend on social sites for purchasing advice e.g. Face Book, Twitter.

**API Economy**
Global e-Commerce Sales were 85 Billion in 2013 and forecast to rise to an estimated US $1 Trillion in 2017-18.
The Pace of Disruption has increased exponentially

Digital technologies have a huge reach...

For every 100 people in the world there are...

- 95 Mobile phone subscriptions
- 40 Internet users
- 32 active mobile broadband subscriptions
- 25 social media users

...and are spreading more and more quickly

<table>
<thead>
<tr>
<th>Technology</th>
<th>Time to reach 100 million users worldwide</th>
<th>Year of Launch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>75 Years</td>
<td>1878</td>
</tr>
<tr>
<td>Mobile Phones</td>
<td>9 years</td>
<td>1979</td>
</tr>
<tr>
<td>World Wide Web</td>
<td>7 years</td>
<td>1990</td>
</tr>
<tr>
<td>iTunes</td>
<td>6 years 5 months</td>
<td>2003</td>
</tr>
<tr>
<td>Facebook</td>
<td>4 years 6 months</td>
<td>2004</td>
</tr>
<tr>
<td>Apple App Store</td>
<td>2 years 2 months</td>
<td>2008</td>
</tr>
<tr>
<td>WhatsApp</td>
<td>3 years 4 months</td>
<td>2009</td>
</tr>
<tr>
<td>Instagram</td>
<td>2 years 4 months</td>
<td>2004</td>
</tr>
<tr>
<td>Candy Crush Saga</td>
<td>1 year 3 months</td>
<td>2004</td>
</tr>
</tbody>
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Source: BCG
Levels of Digitalization

**E-Registration**
Tax Payers & Tax Practitioners are required to register electronically.

**E-Accounting**
Tax Payers are required to submit accounting data to support their tax returns.

**E-Audit**
Data submitted by the tax payers is analyzed by the tax authorities to prevent tax frauds or unintentional errors.

**E-Filing**
Tax Payers are required to submit their tax returns electronically.

**E-Matching**
Additional source data is matched with the data available with tax authorities across all tax payers.

**E-Assessment**
Tax Authorities make the assessment of tax payers based on the data submitted.

Integration of digital technologies into the processes involved in tax administration starting from registration to assessment.

Source: E & Y
Digitalization: Current State

Source: E & Y
## Digitalization: Future State

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

Source: E & Y
Benefits: Tax Authorities

- **AUTOMATION**: All the processes in tax administration will be automated.
- **FASTER PROCESSING OF RETURNS**: Automation of processes will help faster processing of returns.
- **CONTROL OVER REVENUE LEAKAGE**: Software based controls will put a check on revenue leakage.
- **TRANSPARENCY**: Will bring transparency in tax administration.
- **TIMING**: Improvement in timely collection of data.
- **DATA MATCHING**: Data collected from tax payers can be matched with data collected across tax payers.
- **INSIGHTS FROM BIG DATA**: Data Analysis can be done.
- **USE OF ADVANCE DATA ANALYTICS**: Advanced data analytics can be used.
- **INTELLIGENCE BASED DETERRANCE**: Software based controls will work as deterrence to tax frauds & tax evasion.
DIGITALIZATION OF TAX SYSTEM
Digitalization of tax system can generate big data which can be used by tax payer in many ways that can improve his tax compliance obligations.

INSIGHTS FROM DATA
Tax payers can use insights from data to prepare for answering some of the questions expected from tax authorities.

BRINGING EFFICIENCY & ACCURACY
Robotic Process Automation (RPA) finds scalable use in taxation. Tax payers can implement RPA and realize its benefits.

GOVERNANCE & COMPLIANCE
Reduction in the risk of missing compliance deadlines.
Key Building Blocks

**CONSULTATION**
Consultation with taxpayers, trade associations is beneficial while deciding the standards.

**LEGALIZATION**
Legislation to prepare invoice for every transaction & source data and provide the same to tax authorities.

**ENFORCEMENT**
Enforcement of compliance of law and penalties for non-compliance.

**AWARENESS**
Compliance awareness needs to be created among taxpayers and public at large.

**MONITORING**
Monitoring the introduction of new technology, removal of technical glitches.
Challenges: Implementation

Tax Authorities

- Setting-up IT infrastructure which can support all the processes along the line of tax administration to be online.

Tax Payers

- Ensuring Internet connectivity for all taxpayers.
- Lack of availability of data in the desired format.
- Difficulty in submitting the data.
- Inefficient processes for transforming the data.
- Outdated tax operating models.
Challenges: Tax Frauds & Tax Evasion

UNDER REPORTING OF INCOME
Electronic sales suppression undertaken through electronic tools that can alter the evidence of transaction whether paid in cash or cards, without leaving a trace of transaction.

LACK OF VISIBILITY OF BUSINESS ACTIVITY
The cash economy and shared economy, while not forms of tax evasion and fraud per se, have features that can facilitate tax fraud.

OVER REPORTING OF DEDUCTIONS
False invoicing seeks to over-report deductions and to falsify invoices to mask non-deductible personal expenses as legitimate business expenditure.
Internal Controls & Tax Protection Controls

**RISKS & CONTROLS**
Identify risks, determine existing controls, establish new controls and assess internal controls.

**TAX DATA MARKED AS CLOSED**
Prohibition on posting of, or modification of the tax data, for any period marked as closed.

**SEPARATE STORAGE OF DATA OF TAX**
Separate storage of data of fully recoverable tax, partly recoverable tax & non-recoverable tax.

**SEGREGATION OF DUTIES**
Segregation of duties through system of access to functions and tasks.

**PROCESSING CONTROLS**
Processing Controls to protect & ensure the integrity of information, and that it remains correct throughout the processing.

Source: OECD 2010
Artificial Intelligence (AI) in Tax

Artificial Intelligence in Tax System
Artificial Intelligence (AI) will reduce risk, increase value and help drive a cost effective approach to tax administration.

Predictive Analysis
Basic: Regression, rolling average, exponential average
Advanced: Trend analysis

Clustering & Classifying
AI & machine learning functionality can identify cluster of data points faster with higher accuracy, on vaster quantity of data and with a higher number of variables.

Expert Support System
In certain AI systems decision rules are encoded and later queried for accurate response.

Source: PWC
Robotic Process Automation (RPA) in Tax

01. Migration of Registrations, New Registration, Change of schemes.

02. Digital Tax Receipts for Filing of Returns, Automated levy of late fee or Penalty for non-compliance.

03. Data validation, Data matching across taxpayers, Data Mismatch Reports.

04. Assessment to tax based on the returns filed.

“Robots can free humans from Dull, Dirty, Dangerous, and Dear Jobs.”
Digital Disruption

The Digital Disruption has already happened...

- World’s largest taxi company owns no taxi (Uber)
- Largest accommodation provider owns no real estate (Air BNB)
- Largest phone companies own no telco infrastructure (Skype, WeChat & WhatsApp)
- World’s most valuable retailer has no inventory (Alibaba)
- Most popular media owner creates no content (Face Book)
- Fastest growing banks have no actual money (Society One)
- World’s largest movie house owns no cinemas (Netflix)
- Largest software vendors don’t write the apps (Apple & Google)

Digital disruption is the change that occurs when new digital technologies and business models affect the value proposition of existing goods and services.

Source: IBM
The changes create real time data, which companies need to extract, analyze and validate.

**Real Time Analysis of Data**
The changes create real time data, which companies need to extract, analyze and validate.

**Robotics, AI & Automation**
Tax professionals will need to develop new skills that require an understanding of how to apply new technologies. Next generation of tax professionals will come from science, technology, engineering and mathematics background.

**Digital Disruption**
How it will change the role of tax professionals?

**Adaptability**
Tax functions will need to adapt to emerging "gig workforce" trend. Tax functions will need to optimize the process of recruitment.

**C-Suit Influencer**
Tax Directors are increasingly becoming key players at the front end of business strategy.

Key Competencies of Tax Professionals in Future

Source: E & Y
SWOT ANALYSIS

STRENGTHS
- Control on revenue leakage
- Faster processing of returns
- Transparency in tax administration.

WEAKNESSES
- Entirely Dependent on Internet.

OPPORTUNITIES
- Design & development of tools
- Preparation & filing of returns
- Data analysis.

THREATS
- Tax Payers: System can make assessment without tax payer filing return
- Tax Practitioners: Basic Practice goes away.
The GST System Project being implemented by India is a unique and a complex IT initiative. It is unique as it seeks for the first time to establish a unique interface for the tax payer and a common and a shared IT Infrastructure for the center and the states. It will be “Digital Tax Administration System” where data will be exchanged between tax payer and GST Network on a near real time basis. There will be no hard copy of returns filed at GST Network.

- Use of Income Tax Registration No (PAN) as the basis of registration under Goods & Services Act.
- Collection of data of purchase & sale from tax payers & matching thereof between the Supplier & Recipient.
- Use of Big Data Analytics to match information from other Govt. Departments, Social Media Sites to deduce mismatches between spending pattern and declared income.
- The new tax administration system is under implementation & once fully implemented will not only help in checking of revenue leakage but will also bring transparency in tax administration.
“No matter how complex things are, basically everything is simple.”