
Business Application – Acquisition, Development & Implementation

(Chapter - 5 : DISSA Course) RPA

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Update : IT Rules 2021

- **Social Media platforms must be accountable** : Hon'ble Supreme Court
- *“While FB has played a crucial role in enabling free speech, by providing a voice to the voiceless ,..... We cannot lose sight of the fact that it has simultaneously become a platform for disruptive messages, voices and ideologies.”* - Hon'ble Supreme Court
- Centre free to act against Twitter : **Delhi HC**

Twitter's stand

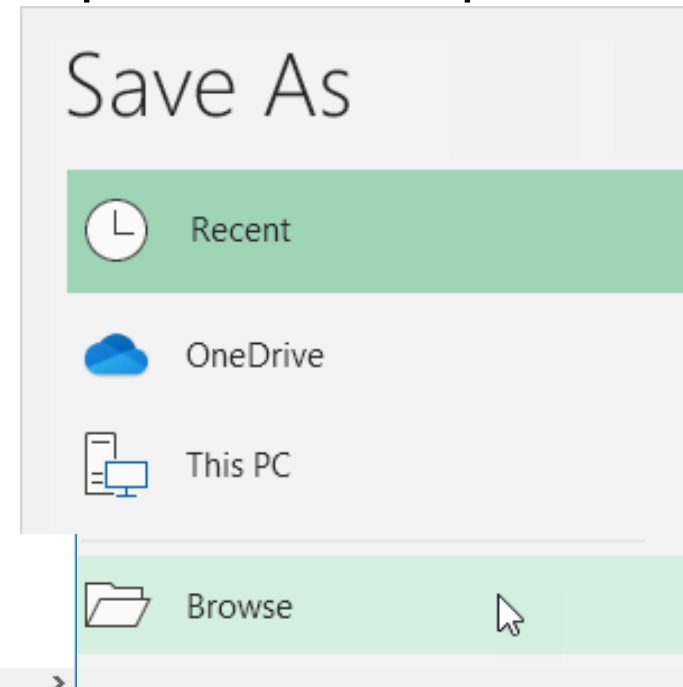
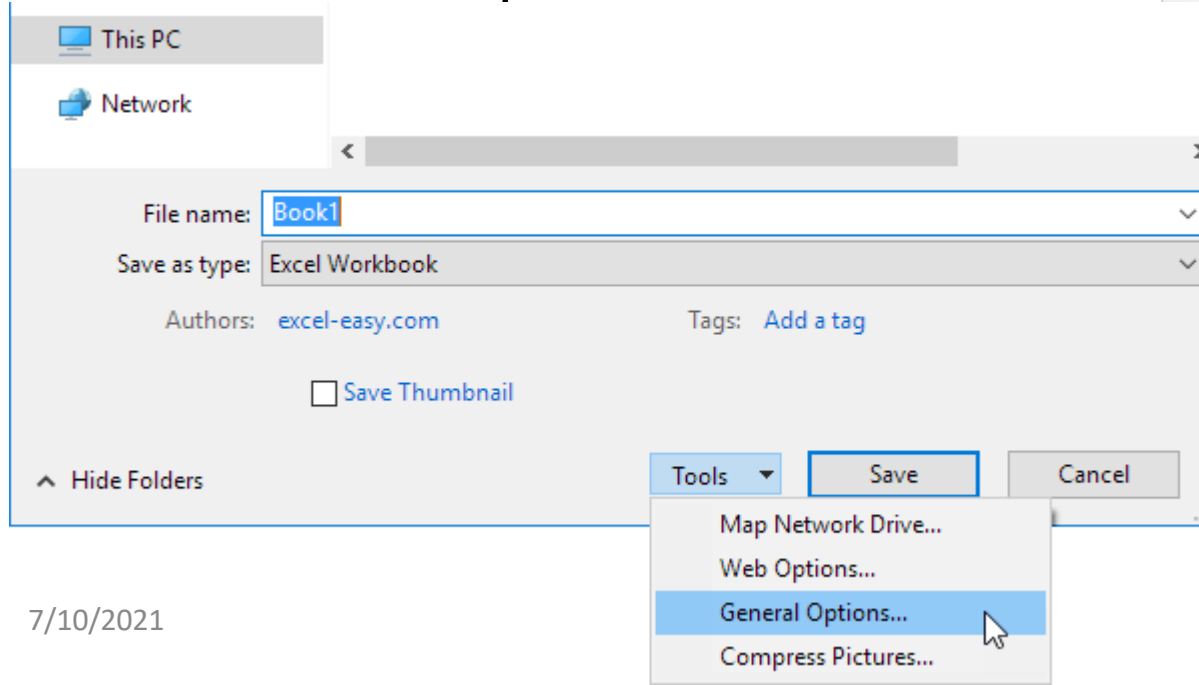
- Twitter stated = it would also appoint 2 more executives - a nodal officer & a grievance officer -mandated by the law.
- Twitter will try to fill the nodal contact person's job on an interim basis within 2 weeks
- Twitter would appoint an interim grievance officer on or before July 11, 2021
- *"While Twitter is striving to comply with the 2021 Rules, Twitter reserves its right to challenge the legality, validity... of the Rules,"* - Twitter official statement

Use of IoT – Monitoring of O₂ Plants

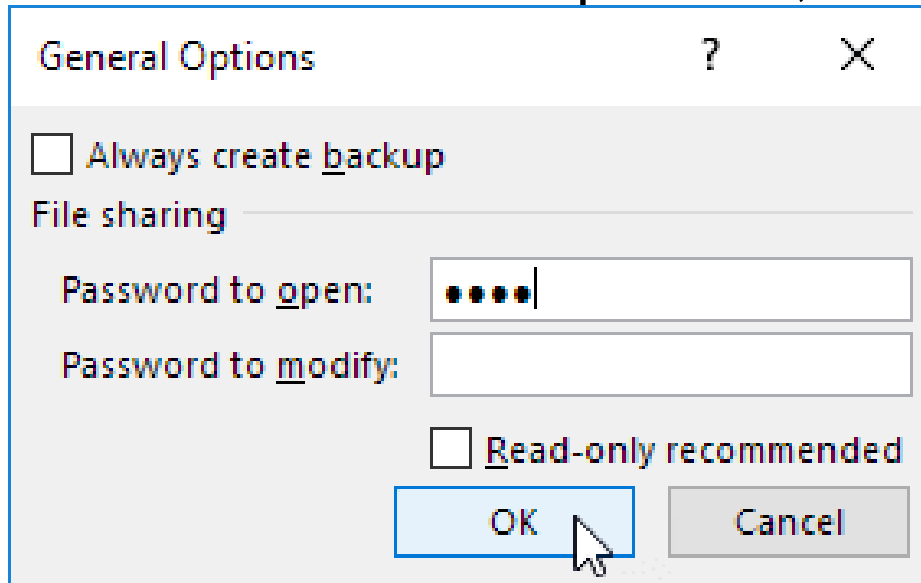
- **Deploy IoT to track performance, functioning of oxygen plants: PM**
- PM directed officials to deploy advance technology = Internet of Things (IoT) to track performance & functioning of oxygen plants at local & national level.
- **Status of Project** : installation of **Pressure Swing Adsorption (PSA)** Oxygen plants across the country, more than 1500 PSA Oxygen plants are coming up across the nation which includes contribution from PM CARES & various ministries & Public Sector Units.
- Reviewing the progress of oxygen supply augmentation & availability across India , PM was apprised about **pilot being done using IoT for monitoring the performance of the oxygen plants.**

Encryption – Excel file

- Encrypt Excel file with password = requires password to open
- 1. Open Excel file.
- 2. On the File tab, click Save As.
- 3. Click Browse.
- 4. Click on Tools button
- & click General Options.



- 5. In Password to open box, enter a password & click OK.



General Options

☐ Always create backup

File sharing

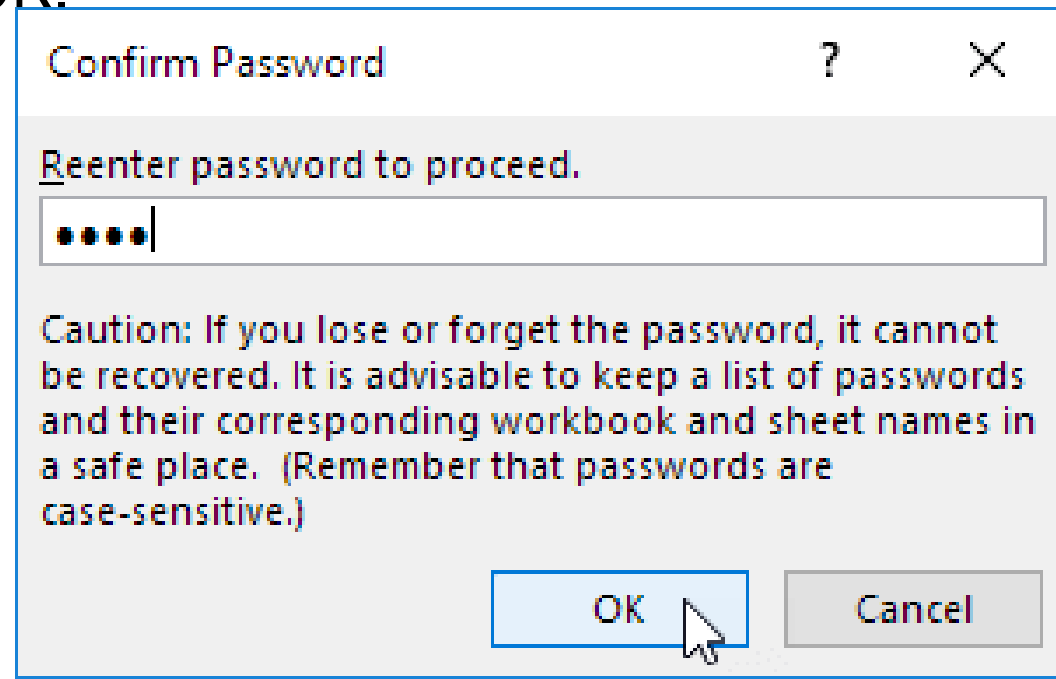
Password to open:

Password to modify:

☐ Read-only recommended

OK Cancel

- 6. Reenter password & click OK.



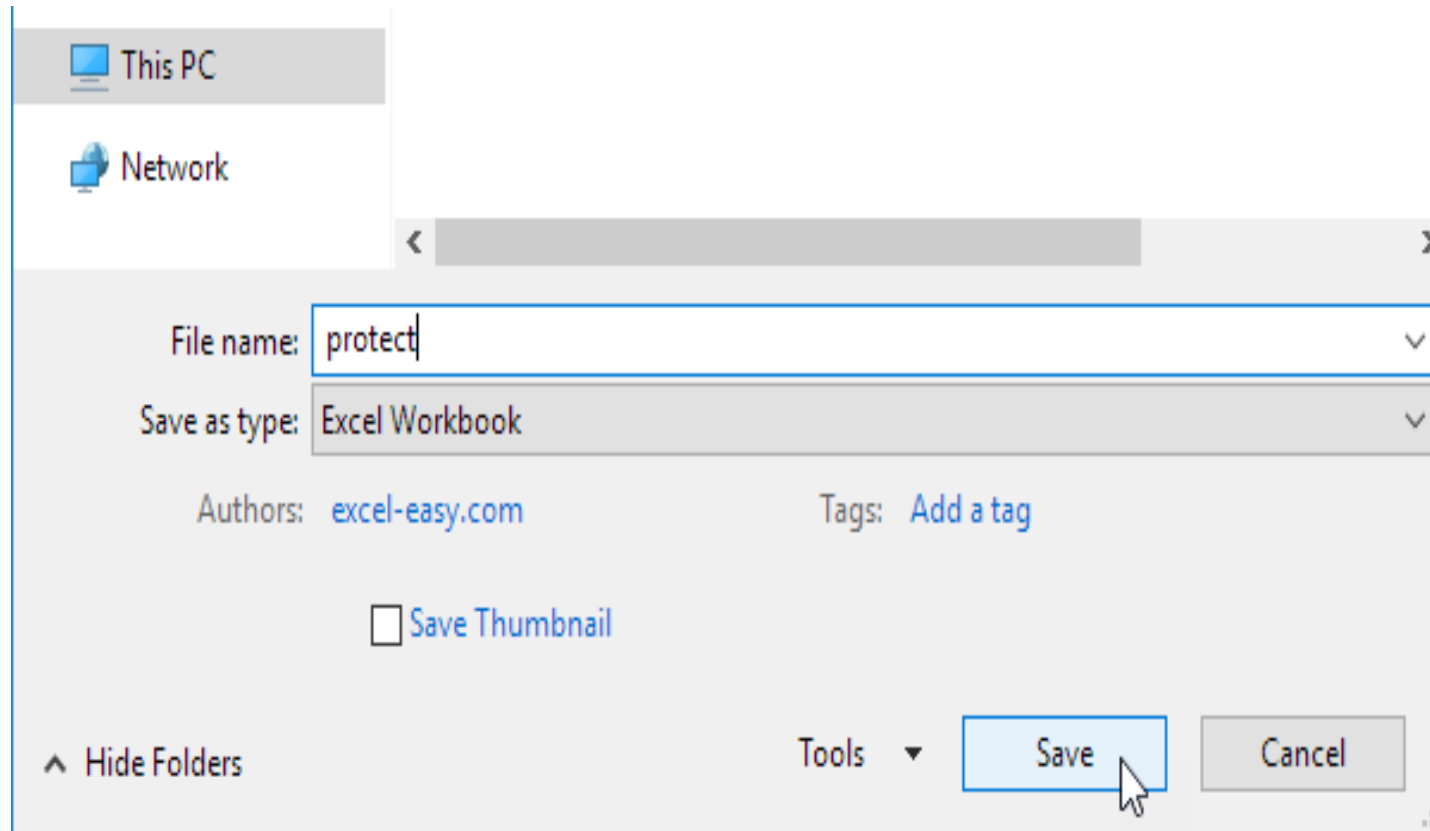
Confirm Password

Reenter password to proceed.

Caution: If you lose or forget the password, it cannot be recovered. It is advisable to keep a list of passwords and their corresponding workbook and sheet names in a safe place. (Remember that passwords are case-sensitive.)

OK Cancel

- Note: encrypts Excel file. requires password to open
- 7. Enter file name & click Save.



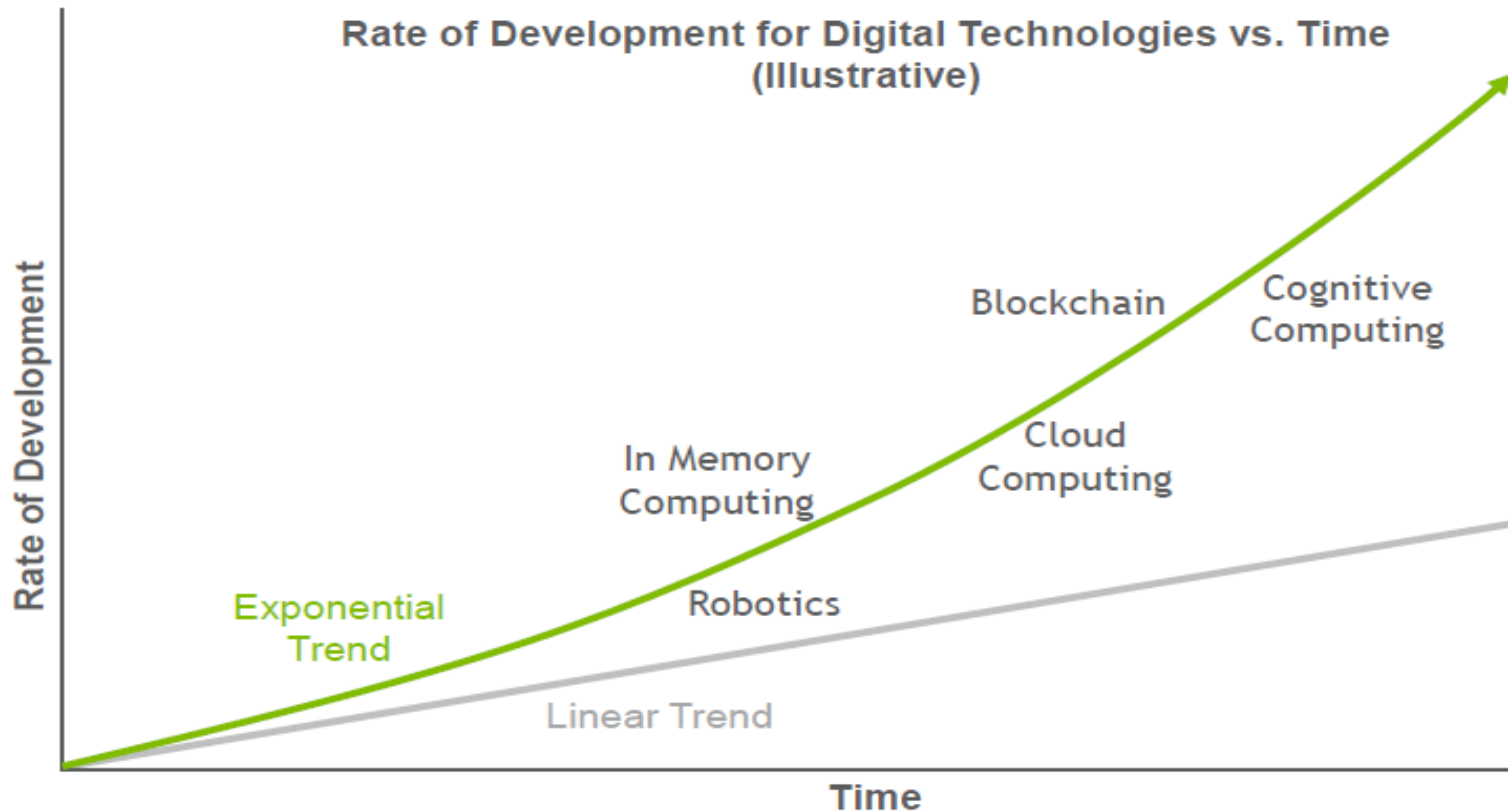
Can Drip irrigation technology and Vertical agriculture be combined with HRI Techniques?

Response - tried & tested with HRI machine

Exponential technology intervention

... creating an ideal environment for exponential growth in
Digital technologies

Rate of Development for Digital Technologies vs. Time
(Illustrative)



Press reports ...

- Robots on the lookout for water leaks and fires.
- In High-Tech Airport, Check In And Board Without Talking To Staff.
- Capgemini develops RPA Centre of Excellence for UK Cabinet Office.
- Robotic Process Automation (RPA) Market Seeing 20% CAGR to 2024.
- Drones may be allowed to make home deliveries.
- Demand for cybersecurity experts to soar in 2022
- AI spending by Indian cos may grow by 8-11% in 18 mths: Intel.
- Nasa drone race: Human pilot beats Artificial Intelligence.
- India to have 200 cr IoT devices in 4 years: Ravi Shankar Prasad.
- Siemens and Microsoft Announce IoT Development Services.
- Jaguar Land Rover Tests its First Autonomous Car on Public Roads.
- Laws for safe use of driverless cars to be ready by 2021.

RPA – overview

Robotic Process Automation (RPA) = innovative solution **for fully automatic handling of business processes** with high volume & repetitive nature

- **RPA = integrated in existing IT infrastructure**
- Software robot = access to diverse applications with ID / password.
- Robot can gather information / change data.
- **Result -** Automation of business processes

“An application of technology that allows employees in a company to configure computer software, or a 'robot', to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems”.

- The Institute for Robotic Process Automation (IRPA)

RPA- concept

• RPA is...



Computer-coded software

Programs that replace humans performing repetitive rules-based tasks



Cross-functional and cross-application macros

• RPA is not...

Walking, talking auto-bots



Physically existing machines processing paper

Artificial intelligence or voice recognition and reply software



Technology : Set up RPA Bots

- **Setting up Instructions**
- Developer gives detailed instructions to robots to perform & interact with Robot Controller Library. (RCL)
- **Robot Controller**
- **Core RPA Software** = used to give jobs to robots & monitor their activities
- **Robots**
- machine or desktop or virtual system - interacts directly with Robot Controller & Business Applications.
- **Business Users**
- review work of robots & resolves any exception , escalates, if required for resolution.

Objectives of RPA

- Key objectives of implementing RPA -
 - ÿ Improve customer experience
 - ÿ Improve accuracy
 - ÿ Manage controls
 - ÿ Higher efficiency
 - ÿ Reduction of monotonous work
 - ÿ Cost saving
 - ÿ Skill upgradation of personnel
- **Step 1** = IT & security risks satisfied with IT architecture,
- **Step 2**= process is documented in detail
- **Step 3** = carried forward for implementation.

Governance in RPA

- **IS Auditor review points :**
 - ✓ Commitment from Board of Directors;
 - ✓ Executive leadership involvement to make change successful;
 - ✓ Well defined policy & procedure;
 - ✓ Establishment of Centre of Excellence;
 - ✓ Roles & responsibility of RPA implementation & sustainability;
 - ✓ KPI for measurement = regularly measured,
 - ✓ necessary corrective action should be taken, wherever required

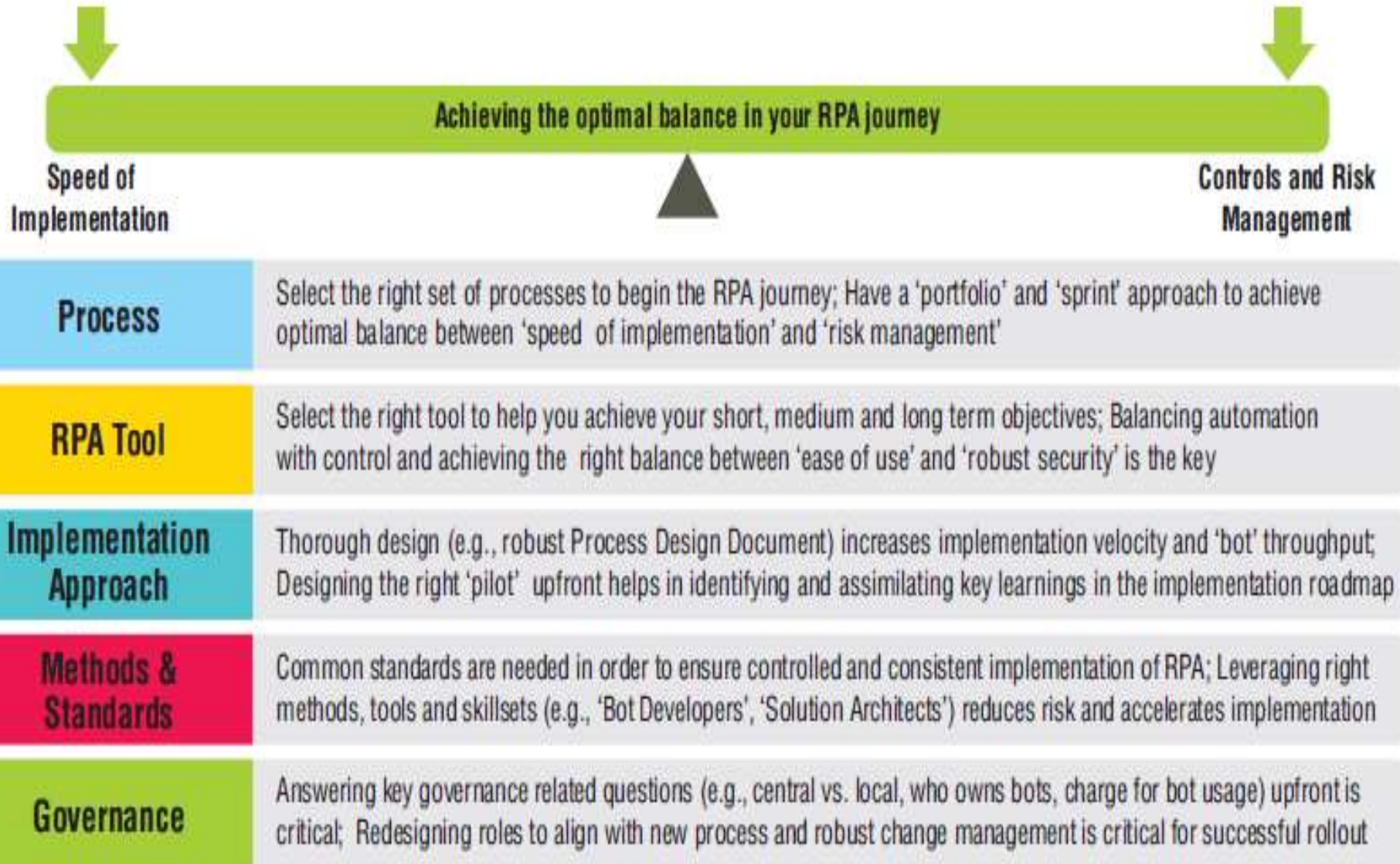
Target Areas for RPA= IS Audit review areas

- **1. Processes requiring High Volume Transactions**
- Any process = labour intensive, high throughput time or high-cost impact errors is = possible target for RPA
- **For e.g.**, cash receipts & payments in banking sector, passbook update, etc.
- **2. Items Prone to Errors or Re-work**
- Manual activities in process today result = substantial number of errors due to human operator mistakes.
- **For e.g.**, cash reconciliation in treasury management, inter branch reconciliation, full & final settlement for employees, etc.

- **3. High predictability**
- The process which can be defined as a rule and do not require much of judgement.
- ❑ **For e.g.**, processing of regular payments,
- ❑ stock management, etc.
- **4. Limited exception handling**
- Simpler processes with little exceptions in delivery =
- Next Step = When learning, the organisation can expand to processes which are complex or error prone.
- ❑ **For e.g.**, attendance & payroll management,
- ❑ invoice reconciliation under GST regime,
- ❑ account ledgers balance , tax reconciliation, etc
- **5. Significant manual work involved**
- Processes with little automation = large chunks of manual work involved
- **For e.g.**, MIS reporting, legal & external reporting, maintaining general ledger balance, etc.

- **Successful RPA implementation demands delicate balance between**
- **speed of implementation &**
- **risk management**

IS Audit focus



Critical Success Factors (CSF) = RPA

- **IS Audit Checklist**
- **A. Process Prioritization**
 1. There should be proper framework for process assessment.
 2. Process owners must be involved in the process assessments for prioritization to secure their early buy-in & build the business case.
 3. Processes critical to the business = identified, it should be completely understood to cover flow towards recipient processes or interaction among processes (process chain).
- **B. Business & IT Accountability**
 1. Business process owners = feel accountable for involvement & commitment of their people to be deployed in both development & implementation stages.
 2. There should be clear definition of business & IT roles across during process prioritization, deployment, planning and execution.
 3. Accordingly, IT governance protocols must be followed.

- **C. Design & Execution**

1. Resources allocated to RPA project should be dedicated for focused involvement.
2. People intimate to the process being automated should provide critical participation in functional design, & also in User Acceptance Testing (UAT) & go-live support as well.
3. Exception handling should be anticipated such that design & testing of such exceptions are comprehensive.

- **D. Benefits Realization**

1. As RPA implementation proceeds, clear regular updates on benefits being sought & progress against each should be provided.
2. Continuous improvement mechanisms should be in place.
3. These are ways of gaining continued confidence of all stakeholders.

- **E. Stakeholder Engagement**

1. Board, Chief Operating Officers, Chief Financial Officers and Chief Information Officers are vital stakeholders.
2. SBU process owners & day-to-day process operators are mainly directly impacted stakeholders of an RPA project.
3. Value & potentials of RPA at all levels are effectively communicated.
4. RPA potentials should be articulated in context of broader agenda of benefits
5. Effective change management tools which facilitate adaptation, should be deployed.
6. Ensuring stakeholder's commitments for project & high sense of ownership which safeguards success.

Capabilities of RPA

- RPA bots can use OS applications like a human user.
- Bots = capable of copying most user actions:
- ***Launching and using various applications including***
 1. Opening emails & attachments
 2. Logging into applications
 3. Moving files & folders
- ***Integrating with enterprise tools by***
 1. Connecting to system APIs
 2. Reading & writing to databases
- ***Augmenting data by***
- Scraping data from web including social media

- ***Data processing***

Following any logical rules such as “if/then” rules

1. Making calculations
2. Extracting data from documents
3. Inputting data to forms
4. Extracting & reformatting data into reports or dashboards
5. Merging data from multiple source
6. Copying & pasting data.

RPA= Potential benefits

- **Efficiency and quality**
- Human errors = eliminated.
- enhances compliances/ auditability & results in higher staff satisfaction.
- Capacity increase by robotics virtual workforce & organisations can refocus on staff for better services.
- **Productivity boost**
- Average handling time is reduced.
- Monitoring is performed round the clock.
- It results in development of new competencies.

- **Cost saver**
- Processing costs may be reduced by up to 80% in many cases.
- High Potential ROI, if successfully implemented. (***Role of CMA & IS Auditor***)
- Short payback in up to 1 year, provided target area to be automated = judicially identified & implemented.
- **Scalability & expertise**
- Quick implementation of new processes based on proper due diligence.
- Re-usable process elements over a period of time.
- Build expertise with refocus on the relevant areas.

RPA Use Cases- Finance

- ► Operational accounting (billing & collections, AP, AR)
- ► General accounting (allocations & adjustments, journal entry)
- ► Processing, reconciliations, intercompany transactions & close)
- ► Financial & external reporting
- ► Planning, budgeting & forecasting
- ► Treasury processes

RPA Uses - HR

- Payroll Administration
- Benefits Enrolment
- Data of Employees Management
- Management of Claims
- Tracking of Leave Applications
- Routine Query Management

Finance & Accounting

- Accounts Receivable
- Procurement/ Sourcing
- Order Management
- Invoice Processing
- Billing Management
- Records to Report (RTR)
- Automation of loading data into spreadsheets & tracking entity submissions;
- Update close tasks list;
- Period-end account reconciliations

RPA -Tax

- Analyse account changes & evaluate potential tax impact
- Populate tax returns with financial data
- Automated import of financial tax workbook into tax return forms (using tax return software)
- Complete non-financial tax return line items & information fields
- Execute work-flow processes for tax returns & initiate electronic estimated payments
- Submit tax returns & related payments.
- **Contracts :**
- RPA = leverage Natural Language Processing (NLP),
- schedule invoices by NPL
- can load & identify functional information from fee schedules of contracts & invoices



MIS

- Cash Flow Projection
- Credit Report
- Budget Vs Actual
- Profitability Statement
- Management Estimates
- **Time & Expense reporting**
- *Reading expense reports & receipts,*
- *Validation of key fields*
- *Providing summarized report*
- *OCR technology leveraged in conjunction with RPA to read receipts & provide structured format for comparison.*
- *Enables audit trail.*

RPA = Applications in Audit

- Audit tasks : routine, voluminous and less risky
 - ► Receivable confirmation
 - ► Sampling assistant
 - ► Lead sheet preparation
 - ► Select Cash/Bank audit process
 - ► Data extraction for analytics
 - ► AP reconciliations
 - ► Enhancement of JE testing
 - ► Unrecorded liabilities
 - ► Analytical reviews
 - ► Consolidation of work papers
 - ► Fixed asset testing
- Bank confirmation

Customer Services

- Billing Support
- Query Management
- Compliance Management
- Order Processing
- Sales Management
- Subscription Management
- Automating employee surveys & feedback programs for identifying areas of improvement

Automating customer check-in emails- *IA Checkpoints*

- **1. CRM : Using automated help desks & bots = quicker issue resolution**
- AI-enabled bots improve automated customer experience without sacrificing personalization or human touch.
- **Human Resources**
 - ✓ Payroll Administration
 - ✓ Benefits Enrolment
 - ✓ Data of Employees Management
 - ✓ Management of Claims
 - ✓ Tracking of Leave Applications
 - ✓ Routine Query Management

RPA = Other apps – *IA Checkpoints*

- **2. Automating onboarding processes**
- Onboarding = crucial process - next experiential touchpoint for customers who are just convinced to choose a brand & invest money.
- **3. Prioritizing & automating process of routing support tickets**
- ensure urgent resolution to problems of certain set of customers
- **4. Automated CSS**
- automatic quantification of customer experience at key points—
- 1 week after onboarding
- 1 month after upgrading

- **5. Automating triggers for customer check-in**
- Each customer can be assigned certain number of meetings, calls, & email check-ins based on their subscribed products
- **6. Automating alerts for customers at risk of churn**
- Analysis of churn related parameters & automating actionable triggers can help companies retain churning customers

Agile approach to run RPA pilot (IS Auditor review)

