

# Internal Audit as an enabler for organization- wide Digitalization and Process automation



# The 10<sup>th</sup> CAE Conference “**BEYOND ALL BARRIERS**”

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ATLANTIS, THE PALM HOTEL, DUBAI

# enhanced expectations from the IA function

As per the IIA, **Internal auditing** is an independent, objective assurance and consulting activity **designed to add value** and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

The management now needs

▶ Enhanced assurance with 100% data validation

▶ Real time exception reports for timely action



▶ Timely identification of red flags and newer risks

▶ Frequent and effective reporting

**How internal auditors are attempting to 'value add':**

▶ Automated control monitoring

▶ Design adequacy review for transformational projects and new system implementations

▶ Identification of cost saving opportunities

**Role Of Business Enablers**

# about ANB



**Apoorva Yatindra**  
Head Telecom and  
Automation

Apoorva Yatindra is part of the leadership team of the Business Risk Management vertical at ANB and has more than 18 years of experience in internal audits, consulting & risk advisory services.

He heads the Telecom vertical at ANB and services clients across 25+ countries in SE Asia, Middle East and Africa.

He also leads ANB's automation initiatives and is actively involved in development of the 'Governance through Robotics' platform.



## Multi Locational

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- ▶ Multi-locational servicing capability with offices in India, Dubai, London and Nairobi.
- ▶ Servicing clients in 25+ countries across SE Asia, Middle east and Africa.



## Multi Industry expertise

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- ▶ Telecom, Media and Technology
- ▶ Banking, Insurance and Financial Services
- ▶ IT and ITES
- ▶ Manufacturing, Pharma and others



## Automation focused

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- ▶ drut | Unified automation platform enabling data collection, analytics and dashboarding
- ▶ Inherent OCR engine
- ▶ Low code BOT creator for connecting to different systems



## Multi-skilled Team

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- ▶ Multi skilled team comprising Chartered Accountants, Bankers, IT experts, MBAs, CISAs, Engineers, Lawyers, etc.
- ▶ Multilingual resources across various countries
- ▶ Resources with specific Industry/ domain expertise

# about Indus Towers



## Sarabhjit Singh

Chief of Internal Audit  
and Assurance

Sarabhjit Singh plays leadership role in managing Risk and assurance function. He has 22+ years of global experience working in diversified organizations and multiple geographies including Big 4 Consulting firms.

He has expertise in Business Process Review, Fraud Investigations, Risk Assessment & Management. He is focused on Automation and building efficiency. Robotic process automation (RPAs), Power BI – DSS platform and Data Analytics tools for enhancing risk coverage & efficiency; Artificial Intelligence Auditing Framework.

He is Chartered Accountant (India), CIA and CISA passed professional with high degree of focus on second line of defense within organizations and driving the management towards adoption of “AI-Enabled” Mindset

## key indicators

**Annual Revenue**  
USD 3.5bn

**Listed entity with**  
**market capitalization**  
**of USD 10.64bn**

**180K+ towers**

**330K+ tenancies**



## products



**Towers:** Deployment of passive physical infrastructure to house the active equipment



**Space:** Acquisition of requisite space for placing passive infrastructure



**Power:** Innovative energy solutions for powering active equipment



**Smart Cities:** Smart city partnerships with municipal corporation across cities

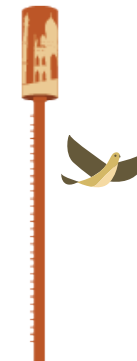
## services



**Tower operations center:** Round-the-clock surveillance services



**Green Technology:** Indoor-Outdoor conversion, achieved through natural cooling



*Putting India First*

# why IA is best placed for enabling process automation

- ▶ Only function with 360 degree view of entity wide operational processes
- ▶ Strong understanding of existing systems
- ▶ Team of domain experts with continual exposure to processes
- ▶ Visibility of transformational initiatives



## Why business should leverage on IA expertise

- ▶ Business is pre-occupied with day-today operational procedures
- ▶ Save efforts on functional knowledge download to IT teams
- ▶ Utilize expertise of third party consultants and automation solutions
- ▶ Leverage IA's continuous process monitoring through concurrent audit reviews

organizations with a forward-thinking mindset and an adaptive internal audit function will be more strategically positioned for AI-related revenue opportunities

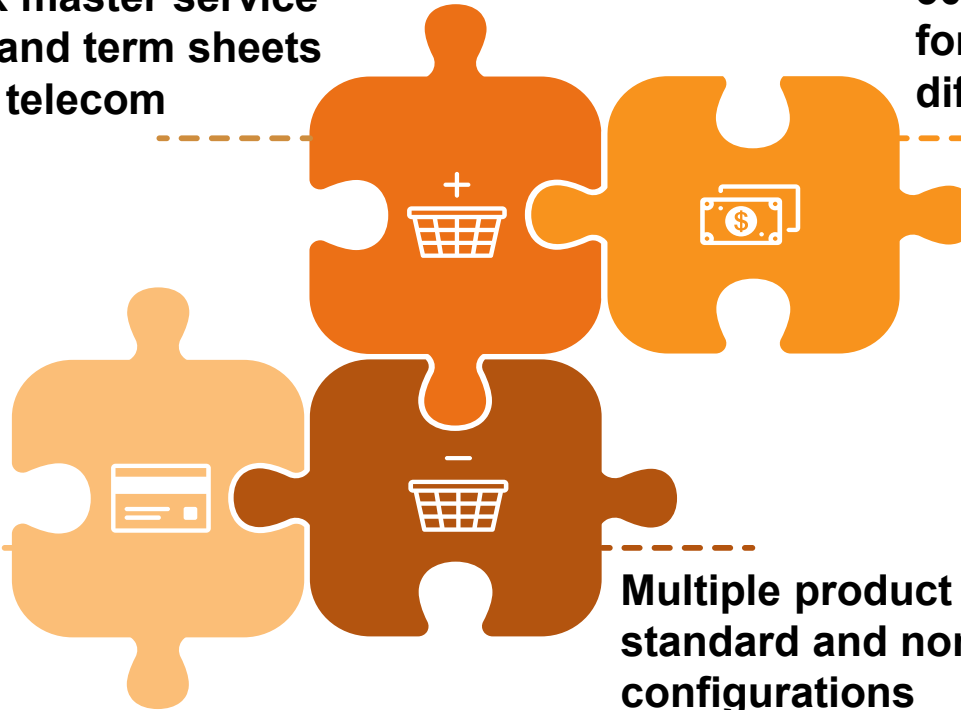
# case study | revenue assurance automation at Indus towers



# challenges in RA validation

**35+ Complex master service agreements and term sheets with various telecom operators**

**30+ Billing parameters for 15+ site types with different billing logics**



**5+ Unique agreements with each operators for different site types and parameters**

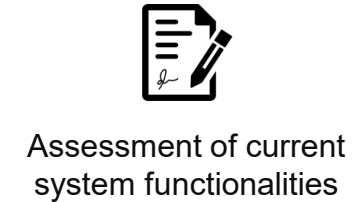
**Multiple product types with standard and non-standard configurations**

## operational challenges

- ▶ **Manual validation done for sample sites**
- ▶ **Each billing parameter gets validated only once a quarter/year**
- ▶ **Potential operational errors and miss-outs due to manual validation**

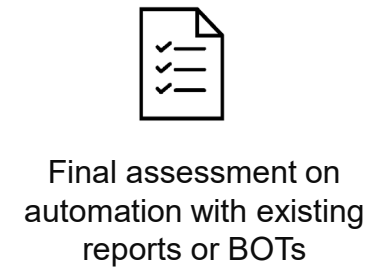
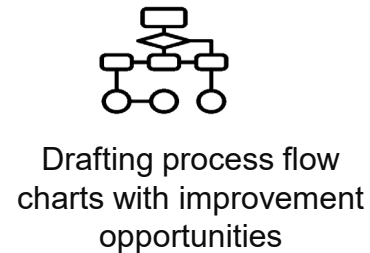
# overall approach adopted for automation

## Process and system understanding



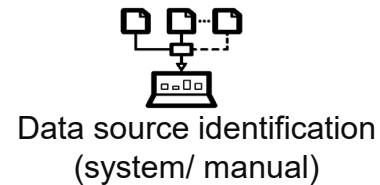
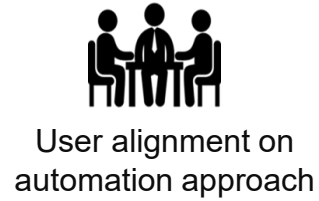
Building automation along with internal audits is time saving for the operations team

## Identification of process automation opportunities



- ▶ Process downloads given during IA activity can be utilized for automation
- ▶ Data used for IA can be utilized for automation

## User inputs and alignment





# automation system | unified process automation platform

## data collection



- ▶ Customized system connectors for auto-extraction of data
- ▶ Unstructured data imported from shared path
- ▶ Connectors for all prominent systems
- ▶ One-time rule creation for data extraction

## automated data processing



- ▶ One-time configuration of data processing rules and sequence
- ▶ Data processing rules can be set up through front-end query builder
- ▶ Complex data processing scenarios can be set up using Python, SQL etc.

## reporting



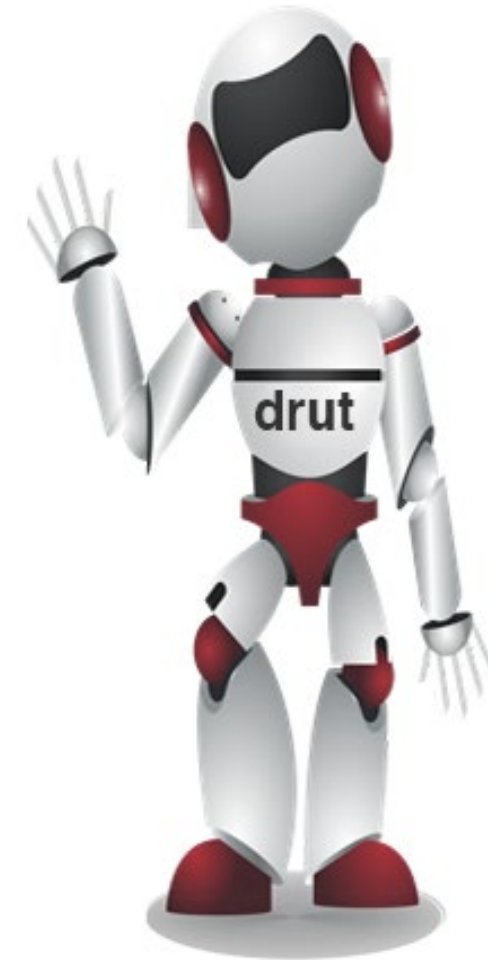
- ▶ Auto-mailers of exceptions to stakeholders
- ▶ Updating exceptions in relevant application / BI
- ▶ Auto-generation of MIS for exceptions

## typical features

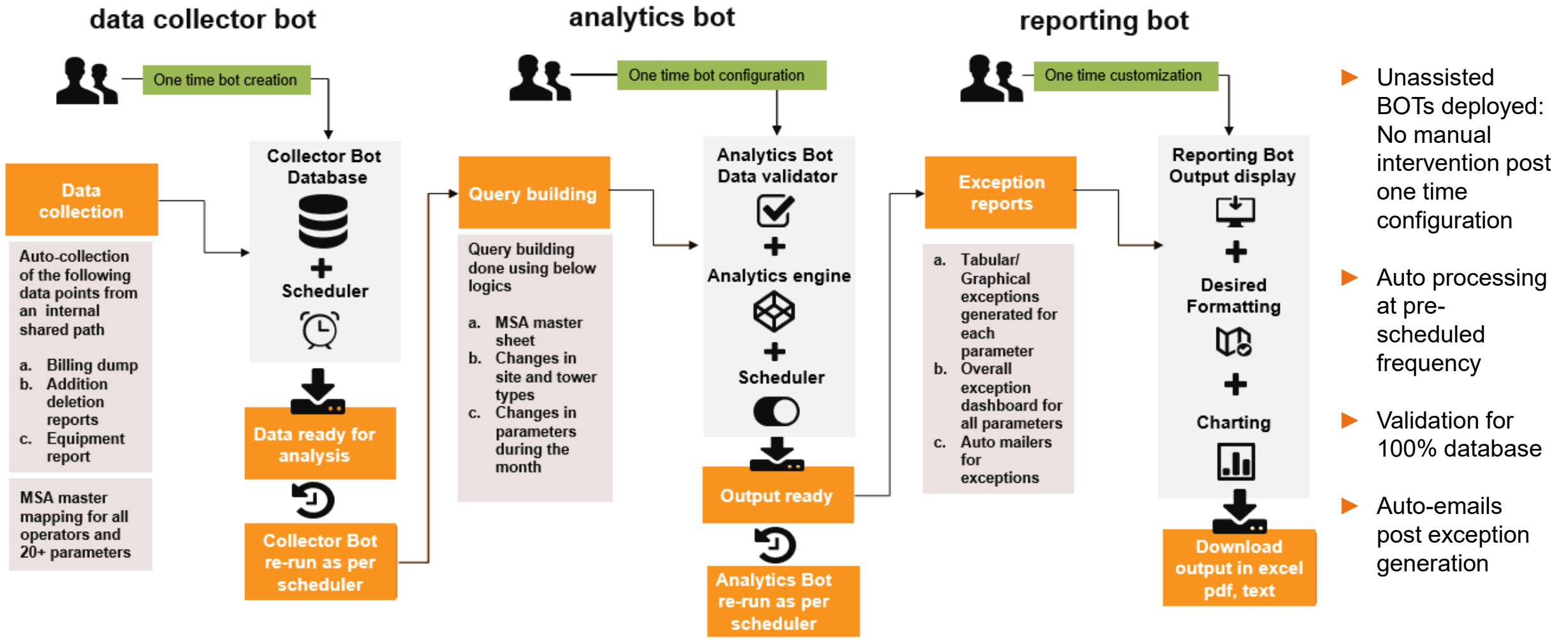
connectors for prominent systems (SAP, Oracle, CRM)

connectors for all leading analytics tools (excel, SQL, access, python)

auto-mailers to stakeholders



# how does the automation work



# creation of organizational process tree

← → ↻ anbrpa.arconnet.com:2024/Structure/Index 🔑 🔍 ☆ 👤

**ANB** RCM

Show 10 entries

↑↓	Activity	↑↓ Risk	↑↓ Severity	↑↓ Control
+	Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing paramete
+	Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing paramete

RCM Tree

- ANB
  - Indus Towers
    - Indus Towers
      - Tower operator
        - Finance
          - Billing operations
            - Billing validation
              - RA Validation

# listing of activity universe

ANB

RCM

Show 10 entries

Search:  [RCM Tree](#)

Activity	Risk	Severity	Control	Automatable	CheckPoint	Update	Robo
Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing parameter and MSA logics	Yes	Escalation on Standard Rate Validation	<a href="#">Edit Activity</a> <a href="#">Edit Risk</a>	<a href="#">Add Collector</a> <a href="#">Add Analysis</a>
Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing parameter and MSA logics	Yes	Standard rate check	<a href="#">Edit Activity</a> <a href="#">Edit Risk</a>	<a href="#">Add Collector</a> <a href="#">Add Analysis</a>
Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing parameter and MSA logics	Yes	Identification of FTM billing	<a href="#">Edit Activity</a> <a href="#">Edit Risk</a>	<a href="#">Add Collector</a> <a href="#">Add Analysis</a>
Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing parameter and MSA logics	Yes	Radio antenna charges validation	<a href="#">Edit Activity</a> <a href="#">Edit Risk</a>	<a href="#">Add Collector</a> <a href="#">Add Analysis</a>
Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing parameter and MSA logics	Yes	Rental Premium Validation	<a href="#">Edit Activity</a> <a href="#">Edit Risk</a>	<a href="#">Add Collector</a> <a href="#">Add Analysis</a>
Billing parameter charges validation	Incorrect parameter charges applied	High	Verification of billing parameter and MSA logics	Yes	Location Premium Validation	<a href="#">Edit Activity</a> <a href="#">Edit Risk</a>	<a href="#">Add Collector</a> <a href="#">Add Analysis</a>

# automated data collection from source



## Bot Collector

Bot For: Excel (selected from dropdown: --Select--, Excel, DB, SAP, Tally, KYC, ANBAUTH)

Bot Name: DP World HAZ

Bot Collector Name: DP World HAZ

Company: DP World

LOB: Logistics

Department: Cargo Logistics

SubDepartment: Cargo Logistics

Process: Revenue Cycle

SubProcess: Revenue Cycle

Activity: Revenue Checks

Risk: Revenue

Source Path: C:\Users\paras.shah\Desktop\Dp World\Data\Sample Data

Output Type: DB Tables

Schedule: RunOnce (selected from dropdown: RunOnce, Repeat, Daily, Weekly, Monthly, Quaterly, HalfYearly, Yearly)

Calendar: April 2020 (Date 6 is highlighted)

Time: 17:01

Hour: [Slider]

Minute: [Slider]

Buttons: Now, Done, Save

**customized connectors for relevant systems and source files**

**auto-extraction of standard reports**

**back-end generated data imported from shared path**

**one-time scheduler for data extraction**

**advanced techniques for file identification**

# low code query building through front end

The screenshot displays the ANB low code query builder interface. It features a sidebar with navigation icons and a main workspace divided into several sections:

- CONDITIONS:** A section for defining query conditions. It includes a logical operator (AND), a count (1), a function selector, and a data type selector. A dropdown menu for 'Select Condition' is open, showing options like 'is not equal to', 'contains', 'does not contains', 'starts with', 'does not start with', 'ends with', 'does not ends with', 'is equal to', 'greater than', 'greater than equal to', 'less than', 'less than equal to', 'is null', 'is not null', and 'in'. The 'is not equal to' option is currently selected.
- Columns Table:** A table listing columns and their associated conditions and values.

Columns	End Date	Condition	Value	Action
Sample_Data.IMCO		is not equal to		
Sample_Data.EQP_MODE		in	'DG','DM'	
Sample_Data.SERVICE_TYPE		is equal to	Terminal Handling	
Sample_Data.CHARGE_DESC		does not contains	HAZ	
- Joins:** A section for defining table joins. It includes dropdowns for 'Choose Left Table', 'Select Join Type', and 'Choose Right Table', along with 'Select Columns' dropdowns. A dropdown menu for 'Select Join Type' is open, showing options: Inner Join, Left Join, Right Join, and Outer Join. The 'Inner Join' option is currently selected.
- Aggregate Functions:** A dropdown menu for 'Select Aggregate Function' is open, showing options: SUM, COUNT, AVG, MIN, and MAX. The 'SUM' option is currently selected.

Buttons for 'Build Query' and 'Preview Result' are visible at the bottom right of the main workspace.

all typical analytical functions like conditions, joins, aggregators, etc. available

Multiple condition statement including 'and', 'or' and 'if' operators

'Contains', 'less than' 'greater than' type data filter functions

Mathematical and data aggregator functions

Data merging, result addition, table joins utilities

# automated validation report | sample 1

anbrpa.arconnet.com:2024/Report/ViewAndDownloadException/9a57cc36-5176-45ea-ae76-b63840d5127b



ANE

## Exceptions

**Activity:** Billing parameter charges validation  
**Risk:** Incorrect parameter charges applied  
**Control:** Verification of billing parameter and MSA logics  
**Annexure:** Standard rate check

Download

Add Charts

Show/Hide Columns:

SITE\_ID -- CIRCLE\_NAME -- INVOICE\_NO -- BILL\_DATE -- REQUEST\_REF -- MSA\_RATE\_TYPE -- BILLED\_TO -- BILL\_START\_DATE -- BILL\_END\_DATE -- SITE\_TYPE\_NAME -- TOWER\_TYPE -- SHARING\_COUNT -- AMOUNT\_STANDARD\_RATE -- Standard\_Rate\_Amount\_as\_per\_MSA -- Difference\_in\_Standard\_Rate --

Show 10 entries

Search:

SITE_ID	CIRCLE_NAME	INVOICE_NO	BILL_DATE	MSA_RATE_TYPE	SITE_TYPE_NAME	SHARING_COUNT	AMOUNT_STANDARD_RATE	Standard_Rate_Amount_as_per_MSA	Difference_in_Standard_Rate
<input type="text" value="Search S"/>	<input type="text" value="Search CIRCLE_"/>	<input type="text" value="Search INVOIC"/>	<input type="text" value="Search BILL_"/>	<input type="text" value="Search MSA_RATE"/>	<input type="text" value="Search SITE_TYPE_I"/>	<input type="text" value="Search SHARING_C"/>	<input type="text" value="Search AMOUNT_STANDAR."/>	<input type="text" value="Search Standard_Rate_Amount_as_per_"/>	<input type="text" value="Search Difference_in_Standard"/>
	UP WEST		5-Dec-20		NORMAL	2	33942.25	32000	1942.25
	UP WEST		5-Dec-20		NORMAL	2	33660	30600	3060.00
	UP WEST		5-Dec-20		NORMAL	3	31679.43	30000	1679.43
	UP WEST		5-Dec-20		NORMAL	3	30120	30000	120.00
	UP WEST		5-Dec-20		STRATEGIC	2	30600	45000	-14400.00
	UP WEST		5-Dec-20		STRATEGIC	1	35700	67000	-31300.00
	UP WEST		5-Dec-20		STRATEGIC	2	30600	45000	-14400.00
	UP WEST		5-Dec-20		STRATEGIC	2	30600	45000	-14400.00



# automated validation report | sample 2



## Exceptions

**Activity:** Billing parameter charges validation  
**Risk:** Incorrect parameter charges applied  
**Control:** Verification of billing parameter and MSA logics  
**Annexure:** Location Premium Validation

Download

Add Charts

Show/Hide Columns:

SITE\_ID -- CIRCLE\_NAME -- STATE\_NAME -- INVOICE\_NO -- BILL\_DATE -- BILLING\_TRIGGER\_DATE -- SO\_DATE -- SR\_DATE -- BILL\_START\_DATE -- BILL\_END\_DATE -- CUSTOMER\_NAME -- ACTUAL\_CUSTOMER -- REQUEST\_REF -- MSA\_RATE\_TYPE -- BILLED\_TO -- SITE\_TYPE\_NAME -- SITE\_TYPE -- TOWER\_TYPE -- PREMIUM\_CITY -- PRORATED\_STD\_RATE\_APPLIED -- PREMIUM\_PERCENT -- LOCATION\_PREMIUM\_CHARGE -- Premium\_Percent\_Master -- Premium\_Rate -- Difference\_in\_Rate --

Show 10 entries

Search:

SITE_ID	CIRCLE_NAME	BILL_DATE	CUSTOMER_NAME	MSA_RATE_TYPE	PREMIUM_CITY	PREMIUM_PERCENT	LOCATION_PREMIUM_CHARGE	Premium_Rate	Difference_in_Rate
<input type="text" value="Search SITE_ID"/>	<input type="text" value="Search CIRCLE_NAM"/>	<input type="text" value="Search BILL_DATE"/>	<input type="text" value="Search CUSTOMER_I"/>	<input type="text" value="Search MSA_RATE_T"/>	<input type="text" value="Search PREMIUM_C"/>	<input type="text" value="Search PREMIUM_PEF"/>	<input type="text" value="Search LOCATION_PREMIUM_CH"/>	<input type="text" value="Search Premium"/>	<input type="text" value="Search Difference_ir"/>
	ANDHRA PRADESH	5-Dec-20			HYDERABAD	10	2481	0	2481
	ANDHRA PRADESH	5-Dec-20			HYDERABAD	10	3152	0	3152
	ANDHRA PRADESH	5-Dec-20			HYDERABAD	10	3152	0	3152
	WEST BENGAL	5-Dec-20			KOLKATA	0	0	3360	-3360

Showing 1 to 4 of 4 entries

Previous 1 Next



# so what did the automation achieve!

Validation performed  
on 100% data

25+ MSA parameters  
validated

85+ reports automated

Significant man hours  
saved

## The Problem:

- a. Manual validation for sample sites
- b. Each parameter validated only once a quarter
- c. Potential operational errors and miss-outs due to manual validation
- d. Time consuming validation due to huge data size and ongoing changes in parameters
- e. Validation challenges due to multiple MSA's created with parameter level charging rates

## Solution provided:

- a. Automated validation for 100% of the sites.
- b. Recurring monthly validation
- c. Enhanced accuracy due to system based validation with minimal human intervention
- d. Efficient validation through system based automation
- e. Created flexible masters to accommodate changes in MSA rates

# way forward | IA as a trusted automation partner

The following automation projects were initiated after successful RA control automation



## Finance Processes

- ▶ **24+ processes** within finance with **350+ activities** identified for automation

## Invoice validation

- ▶ Invoice data extraction from QR codes used for GST invoices
- ▶ Data validation from invoice vs QR code for GST compliance

## Expense provisioning

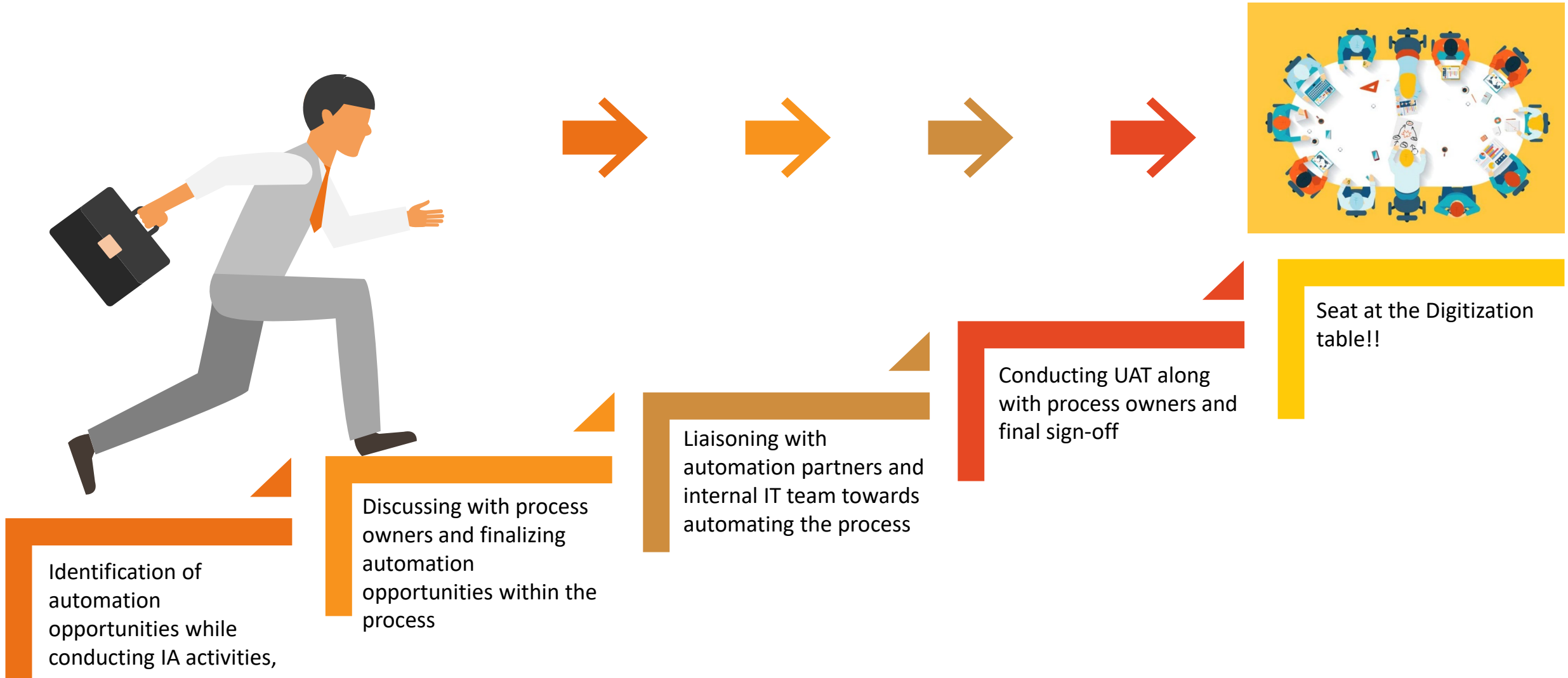
- ▶ Data filtration and auto provisioning of energy expenses

## Tax processes

- ▶ Automated reconciliation of tax accounts and book accounts

Internal Audit to be catalyst for automation initiatives

# what should be the IA pitch



**Thank you!**

