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Robotic Process Automation 2017 CONGRESS

RPA (Robotic Process Automation) e RCA (Robotic Cognitive Automation) – Dois dínamos de produtividade e estratégia

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Type	Vídeo	Link
RPA	The Robots are here!	
RPA	RPA Sample: Supplier Register	
RPA	The Deloitte Approach to Robotic Process Automation	
RPA	Deloitte Robotic Process Automation Services	
RPA	Doing more with less	
RPA	7 Robotic Skills and the rise of robotic and cognitive organisations	
RPA	What is Robotic Process Automation?	
RPA	Software Robotics - Virtualising the workforce	
RCA	Deloitte Cognitive Automation Life Sciences	
RCA	Deloitte Cognitive Automation Banking	

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Context

Organizations are increasingly facing challenges - internal and external - in the search for excellence in management and processes.

Organizational Challenges:

- ✓ Costs
- ✓ Growth ambition
- ✓ Time to Market
- ✓ Compliance and Governance
- ✓ Scalable Business Model
- ✓ Strategical focus

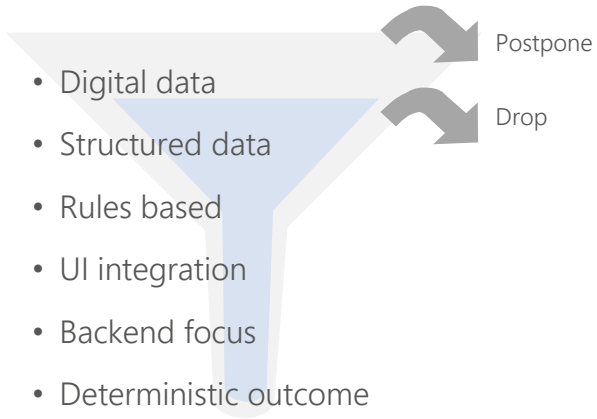
Complexity:

- ✓ Complex IT landscape
- ✓ High operational and manual costs
- ✓ Low budget for investments
- ✓ People sunk in operational tasks
- ✓ Legislation and Regulation
- ✓ Lack of flexibility

RPA (Robotic Process Automation) & RCA (Robotic Cognitive Automation)

Robotic Process Automation

Mimics human actions



- Digital data
- Structured data
- Rules based
- UI integration
- Backend focus
- Deterministic outcome

Cognitive Automation

Mimics human judgment

Artificial Intelligence

Augments human intelligence

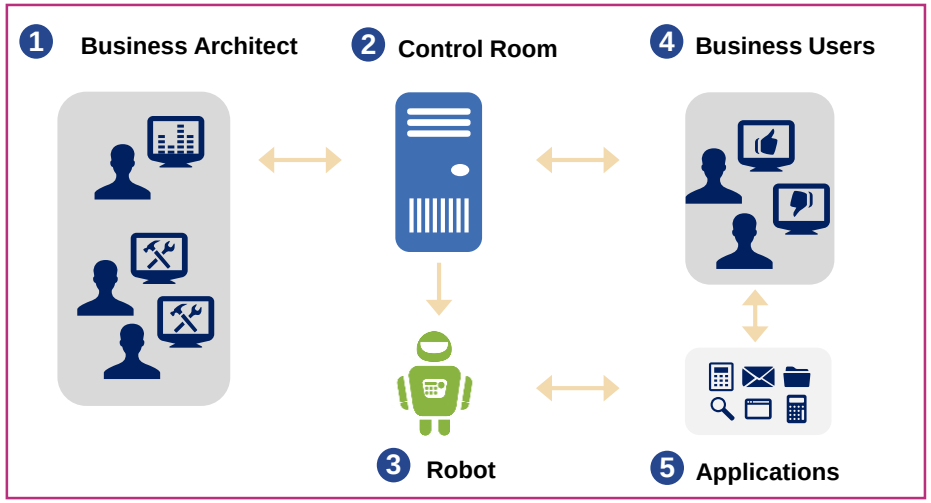
- Digitize data (OCR)
- Structure data from various sources (Text parsing, NLP/NLG)
- Learn patterns, adapt (Machine learning)
- User engagement (chat bots, virtual agents)
- Front and backend focus (chat bots, virtual agents)
- Predictive outcome (Machine learning, deep learning)

Robotic Process Automation – How It Works

RPA can easily be deployed and managed from a central controller to interact with a wide range of business applications

1. **Business Architects** specify the detailed instructions for robots to perform and "publish" them to the robot controller repository
2. The **Control Room** is used to assign jobs to robots and to monitor their activities
3. Each **Robot** is located on an organization environment – which may be virtualized or physical (i.e., desktop computer) – where it interacts directly with business applications
4. **Business Users** review and resolve any exceptions or escalations
5. Robots are capable of interacting with a wide range of **Applications**

ILLUSTRATIVE



Key Functions Replaced by Bots

Routine Keystroke Operations	Application Interface	Manual Data Collection & Manipulation
• Opening emails and attachments • Moving files and folders • Following "if/then" decisions and rules • Copying and pasting data • Populating standard forms	• Logging into web/enterprise applications • Connecting to system APIs • Extracting structured data from documents • Collecting social media statistics • Reading and writing to databases	• Scraping data from the web • Merging data from multiple places • Extracting and reformatting data into reports or dashboards • Conducting data calculations

Robotics & Cognitive Automation – How they add value

As an alternative to process transformations, automation drives value with lower cost and higher speed of execution

Characteristic outcomes of process automation

Re-engineer core processes while automating the function

Revenue and profit generated becomes less dependent on the ability to scale labor; automation enhances the abilities of current resources

Rapidly scale up or down depending on the nature of the business issue

Process owners elevated to process transformation leaders and robot designers as production becomes more automated

15 – 90% cost reduction opportunity depending upon the characteristics of the functions selected for automation

High degree of accuracy and high-throughput

Freed up capacity to develop competencies and build expertise

Option to retain cost savings through insourcing and greater control over processes

Secure, audited and managed robotic platforms and improved quality/ consistency of data

Short payback period with low integration costs and high potential ROI

Benefits of RPA

Benefits of implementing RPA in both core operations and support functions can drive revenue increase, cost reduction, or cost avoidance

Representative Benefits of Automation for Various Process Types*

High Volume Transactional Processes	High Risk Processes with Multiple Hand-Offs	Data Validation Processes	Dependent or Linked Processes
• Reduces the average time and associated costs to execute transactional processes by **60% to 80% on average** • Enables process to be executed approximately **15 times faster** than a human and operates **24x7** leading to high-throughput	• Eliminates need for manual intervention and reduces the number of total employees needed to execute tasks by **20% to 60%** • Increases compliance by reducing errors and the amount of time spent on rework and review by **70% to 99%**	• Ensured consistency and accuracy of data in reporting by eliminating manual errors by **80% to 99%** • Provides ability to shift FTE focus from report generation to analysis by **30% to 60%**	• Decreases processing time by **up to 300%** by enabling processes to be executed outside of standard business hours (i.e. overnight and weekends) • Enables organizations to build automated system connections / interfaces without investment in IT architecture by **20% to 50%**
✓ Revenue Increase ✓ Cost Reduction	✓ Cost Avoidance ✓ Cost Reduction	✓ Revenue Increase ✓ Cost Avoidance	✓ Revenue Increase ✓ Cost Avoidance

**Range estimates are representative samples of the value creation and cost savings found in Deloitte RPA client projects*

Robotic Process Automation Suitability

Following set of criteria can be used to determine high value automation opportunities across process areas

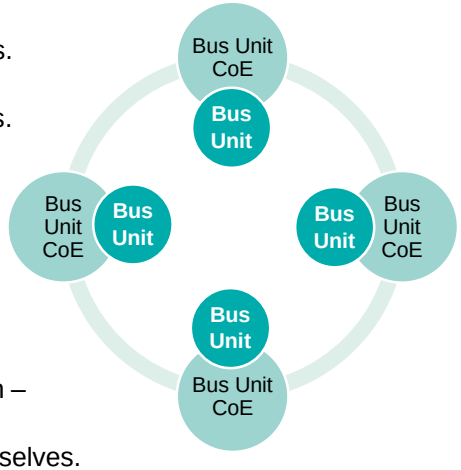
Criteria	Typical examples and questions
Manual	• Which processes require a high degree of manual intervention?
Rules-based	• Which processes can be defined in terms of unambiguous business rules? • Are there any processes that do not require human judgment?
Standardization	• Which processes have clearly defined standards, with little exceptions in execution?
Stability	• Which processes are stable with no frequent upstream or downstream changes?
Data Volume / Transactional	• Which processes involve a high volume of transactions? • Are there processes that experience fluctuations in transaction volume?
Cross-System Application	• Are there processes that work across 2+ platforms? • Does the data extracted require manual validation?
Flexibility	• Are there processes that need to accommodate changes in transaction volumes or service levels without workforce surges?
Customer-facing	• Which processes are customer-facing (immediate brand impact for failure to execute)? • Which processes can improve customer-facing SLAs?
Associate Pain Point	• Which processes create critical pain points for LOB Associates?
Risk	• Which processes have the greatest magnitude of risk associated with execution error?

High-level overview of centre of excellence models

At a high-level, there are three different models for centres of excellence.

Decentralised

Each business unit has its own RPA capabilities. RPA not owned by any one part of the business. Each area can see their potential, decide what to do or not do. They can select whatever solutions they wish, how to implement and how to support/maintain – with third parties or by building capability themselves.



Advantages

Strong ownership in the business, solutions are optimal for the business area and aligned to needs.

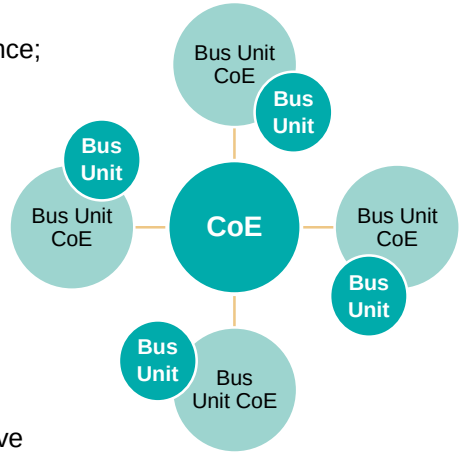
Disadvantages:

Lack of consistency, lack of progress in some areas, may be overlaps in capability and/or capacity, lessons learned may not be shared, lower return opportunities may be delivered first.

Federated

Central activities:
RPA strategy; governance; vendor choices; methodology and quality assurance.

Devolved activities:
RPA identification, assessment and prioritisation; capability decisions are made locally.
Some organisations have the concept of “RPA Factory” which exists locally to identify, design, build and deploy robots.



Advantages

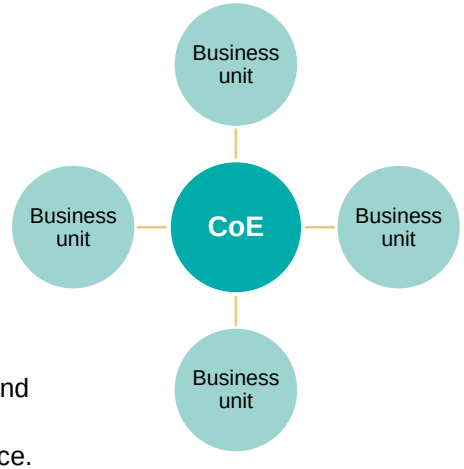
Balances local ownership, prioritisation and drive with central strategic decisions and economies of scale.

Disadvantages:

Neither the ownership level of decentralised model or the enterprise wide prioritisation of the central model. Service quality may suffer if there is not close coordination with the central CoE.

Centralised

RPA owned by a central team, who controls RPA strategy, vendor selection and governance.
Opportunities are driven, identified, assessed and prioritised by the central team.
The central team also controls development and manages deployment, support and maintenance.



Advantages

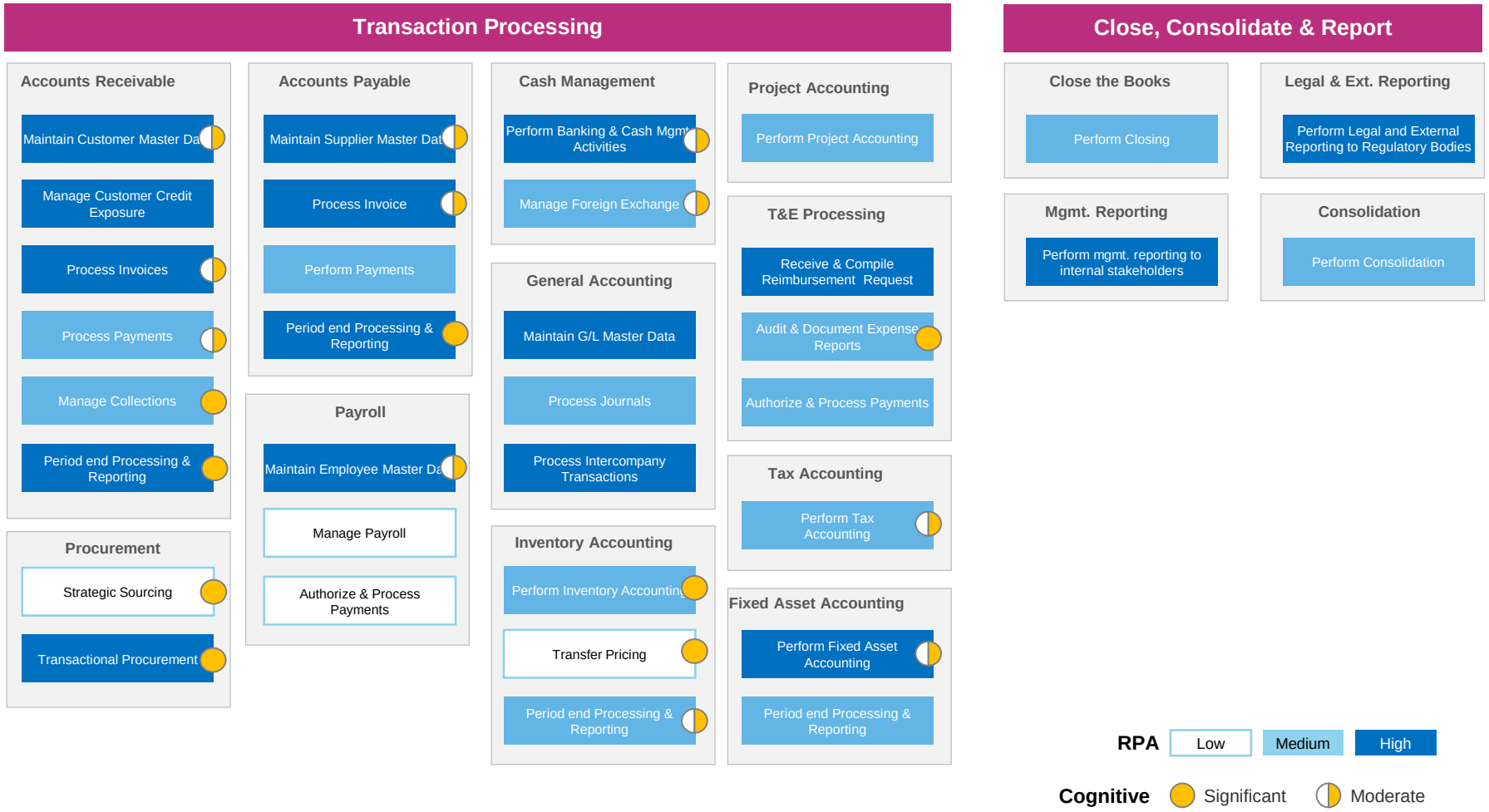
Clear strategy for whole enterprise, able to prioritise for the whole organisation, maximise efficiency, minimise duplication. Effective utilisation and cost management is enabled as resources are deployed across business units as required

Disadvantages:

Lack of ownership from the business, lack of input from SMEs, limited ability to provide customised services for a particular business unit, issues with sustainability of the solution.

Finance Processes Automation Heat Map (1 of 2)

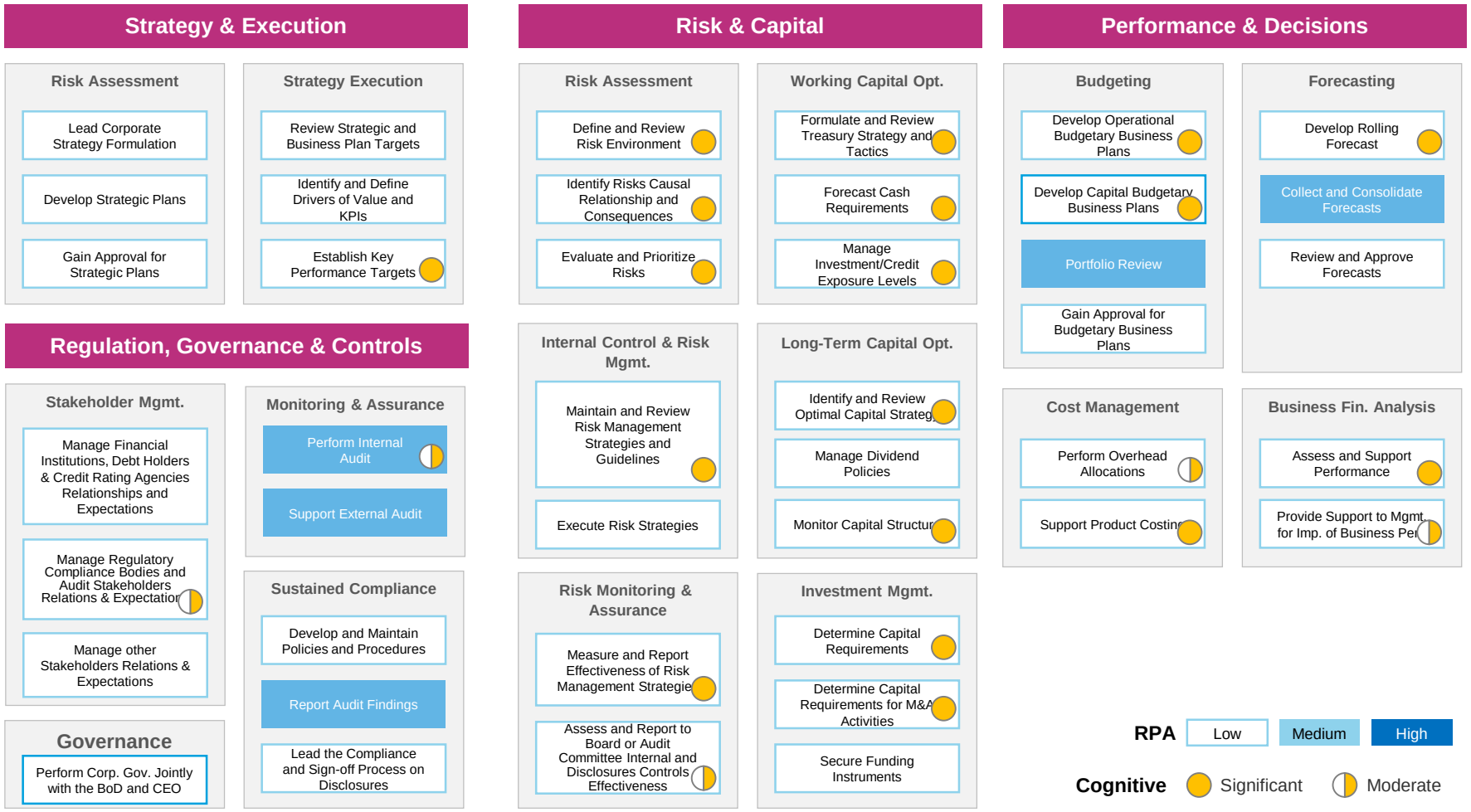
Transactional processing and reporting processes are ideal for automation since they tend to be repeatable and rules-based



Cognitive suitability assessment is based on 5 evaluation criteria – data intensive, complex, judgement based, data velocity and multiple data sources

Finance Processes Automation Heat Map (2 of 2)

Decision support activities that are standard and repetitive in nature can also be in scope for automation



Cognitive suitability assessment is based on 5 evaluation criteria – data intensive, complex, judgement based, data velocity and multiple data sources

AI is transforming how organizations create value

Organizations in every industry are applying AI at the core

Financial services robo advising, insurance underwriting, claims processing, trading

Consumer/ industrial products & retail products, customer service, predictive maintenance

Life sciences & healthcare drug discovery, diagnosis, care management

Public sector predictive policing, surveillance, self service, screening for fraud/waste/ abuse

Technology, media & telecom advertising, products, customer service, network operation

Energy & resources exploration, predictive maintenance, efficiency & sustainability

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Cases RCA

Case	Descrição	Benefícios
Utilização de RCA (RPA + Machine Learning) para detectar fraudes bancárias	❑ Modelos de Machine Learning baseado em transações históricas, RCA define se uma transação é fraudulenta ou não. ❑ O sistema de RPA analisa a conexão entre as transações fraudulentas e, se realmente forem fraudulentas, toma as devidas ações.	✓ Aumento de detecção de fraudes foi de 15%, ✓ Aumento saving em 60% ✓ Diminuição em 50% dos falsos positivos causados por operadores humanos.
D-ICE - Ferramenta que utiliza RCA (RPA + Machine Learning) para converter documentos (por exemplo contratos) em pontos de interesse	❑ Utilizando Machine Learning e técnicas cognitivas de detecção de conteúdo de texto, é possível “destrinchar” documentos complexos em pontos de interesse.	
Reconciliação de faturas e contratos em múltiplas línguas (Grande Banco Global)	❑ Utilizando processamento de linguagem natural via Machine Learning e RPA, é possível identificar oportunidade de cobranças e erros.	✓ Acerto de 96% ✓ Detecção em 20.000 transações, de 3% a 4% de perda de receita referentes a 500 faturas e 100 taxas em cartões
Aplicação da Amelia (agente para atendimento automatizado de clientes) em um grande banco na Holanda	❑ Utilizando o software Amelia, a Deloitte conseguiu em 8 semanas efetuar o treinamento da Machine Learning (Amelia) para atender 6 questões comuns dos clientes do banco. Quando ela não conseguia resolver os casos, ela escalava para um agente humano.	✓ A redução em ligações para o Call Center foi de 40% para essas 6 questões utilizadas

Plataformas RPA/RCA

A Deloitte Brasil possui uma equipe qualificada para atuar com as melhores plataformas de RPA e RCA disponíveis no mercado, tais como as apresentadas neste slide, entre outras

RPA

WDG AUTOMATION

NICE

UiPath Robotic Process Automation

AUTOMATION ANYWHERE

blueprism

RCA

Watson

TensorFlow

python

CNTK

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Demonstrações

#	Robô	Descrição	Vídeo
01	Cadastro de Fornecedores	Cadastro de fornecedore no SAP a partir da leitura de um excel no email. Atualizando a planilha com o código SAP gerado e resposta do email	
02	Ligação ativa antecipação de recebíveis	Ativo para antecipação de recebíveis através de ligação com diálogo, identificação de fornecedor e título em aberto no SAP e fala do saldo.	
03	Consulta SCPC	Consulta de situação no SCPC a partir da leitura de excel no email com resposta por email incluindo evidências em anexo.	
04	Admissão	Parte 1: Cadastro completo de admissão incluíndo dependentes no sistema FPW e envio para analista de RH realizar a conferência. Parte 2: Geração e envio por email do kit admissional contendo todos os documentos que deverão ser assinados pelo novo funcionário.	
05	Conta Telefônica Corporativa	Leitura através de OCR de conta telefônica corporativa para popular planilha excel, enriquecimento da planilha através do sistema fiscal Docs e do site da Receita (com resolução de captcha) e posterior movimentação para servidor SFTP.	
06	Captura Nota Fiscal de entrada (Prefeitura)	Captura de nota fiscal de entrada no site da prefeitura, leitura de OCR e consulta de CEP no site dos Correios e devolução do endereço completo no arquivo Notepad.	
07	Geração de boletos	Consultas no site do banco de intervalos de notas fiscais a partir de planilha excel e geração de boletos no formato pdf.	
08	Verificação no CPOM	Conciliação de notas fiscais do sistema Docs com site da prefeitura e aplicação de checklist com regras de verificação.	
09	Taxa de câmbio	Atualiza no SAP diariamente (schedulado) a taxa de câmbio corporativa através do site do Banco Central para todas as moedas.	
10	Tratamento de boletos	Analisa e separa os boletos em digitais e imagem, coletando o código dos boletos digitais.	
11	Segunda via de boleto	Registram no CRM a solicitação de geração de segunda via de boleto. A informação é baixa em Excel que serve de base para leitura pelo robo e geração no site do Santander e envio da segunda via de boleto por email. Redução de 20% de FTE em um mês	

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Demonstrações

#	Robô	Descrição	Vídeo
12	Geração de Budget	Geração do Budget Corporativo a partir do SAP BI (EPM) – 220 pastas excel	
13	Cotação Dollar – Oracle EBS (várias instâncias)	Recupera o valor do dólar do dia no site do Banco Central e cadastra nas bases do Oracle EBS.	
14	Monitoramento Contábil	Monitora as notas de entrada pendentes de um determinado cliente através de uma aplicação de inventário e em conjunto com a aplicação Docsys alimenta uma planilha com os dados dessas notas, onde posteriormente é analisada pelo Analista fiscal e enviada via e-mail para o cliente.	
15	Revisão DCTF	Gera uma planilha acionando algumas macros para validação de informações da Receita Federal para fechamento de DCTF (Processo de Fiscal Diretos)	
16	Conciliação Folha com Portal E-Social	Compara dados extraídos da base do FPW(Programa de folha de pagamento) com os dados lançados pelos funcionários de uma determinada empresa para verificar as alterações efetuadas, e caso as tenha, é gerado um arquivo para ser importado no FPW atualizando as informações encontradas	
17	Ficha Cadastral de Investimento (PDF Editável)	Preenchimento Ficha Cadastral de Fundo de Investimento (PDF Editavel) com dados da Receita Federal a partir de planilha de CNPJ	
18	Aging Contas a Receber	Preenchimento de planilha de fallow up de cobrança de contas a receber, consulta através transação SAP FBL5N incluindo cálculos e regras de negócios	
19	Contestação e Análise Fatura TELCO	Suporte Atendente na Analise Fatura - Processo Contestação. Analise de 68 informações em 22 Telas com 15 regras de negócios e 4 cálculos complexos.	
20	Entrada de Notas Fiscais Shopping Center	No vídeo do processo manual, o usuário possui dois monitores e entra no sistema WiseIt (utilizado pelos clientes. nos Shoppings para entrar com informações de NFs de fornecedores), faz uma análise prévia, copia as informações e digita no MXM (sistema especialista para Shoppings). Na segunda semana de funcionamento houve uma redução de 30% do FTE	 
21	Cedência de Equipamentos	Processo de entrega de celulares. Utiliza o sistema Lead Traking e SAP para realizar a operação. Um operador demora mais de 15 minutos para realizar uma operação, que é realizada pelo robo em menos de 5 minutos	

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