Automating the Enterprise - NAB's Unique Take On Case Management

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National Australia Bank
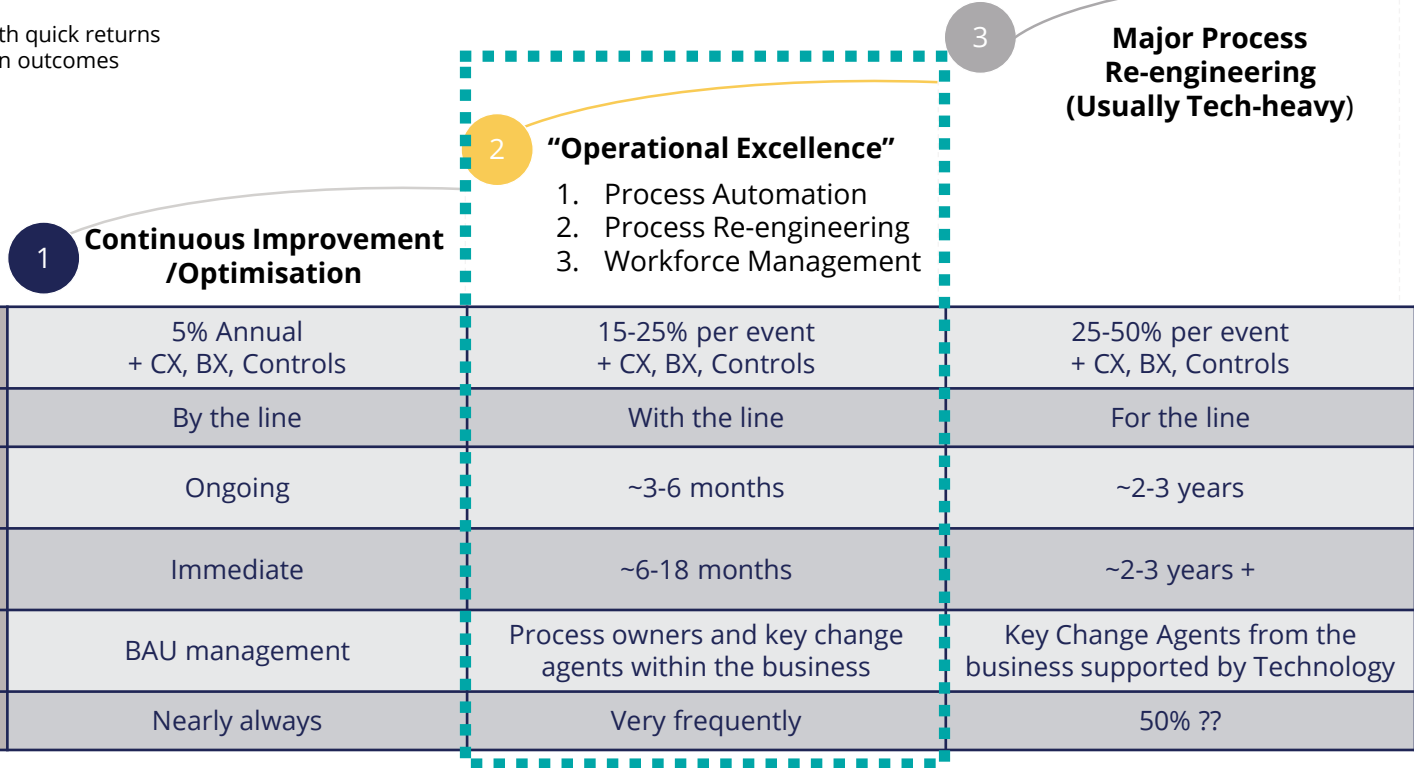
PEGA

PW19

nab

NAB is on a multi-year transformation journey to be simpler and faster for our customers.

Area of focus with quick returns and more certain outcomes

3 **Major Process Re-engineering (Usually Tech-heavy)**

2 **"Operational Excellence"**
1. Process Automation
2. Process Re-engineering
3. Workforce Management

1 **Continuous Improvement /Optimisation**

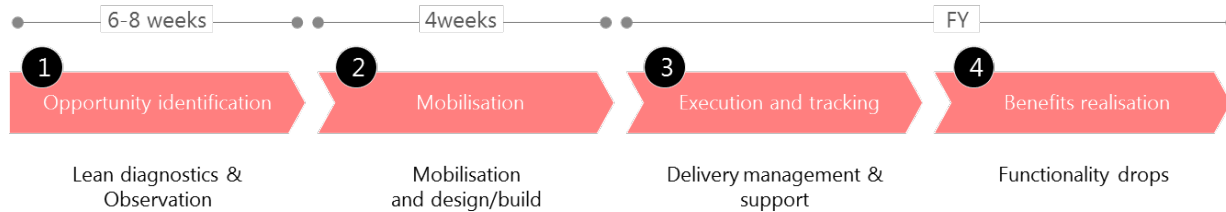|	Continuous Improvement /Optimisation	"Operational Excellence"	Major Process Re-engineering
Typical Benefit	5% Annual + CX, BX, Controls	15-25% per event + CX, BX, Controls	25-50% per event + CX, BX, Controls
Delivery Model	By the line	With the line	For the line
Time to Complete	Ongoing	~3-6 months	~2-3 years
Time to deliver benefit	Immediate	~6-18 months	~2-3 years +
Driven by	BAU management	Process owners and key change agents within the business	Key Change Agents from the business supported by Technology
Success Rate	Nearly always	Very frequently	50% ??

Pega is helping us deliver on our operational excellence strategy with 3 interlocked capabilities

1. Workforce Intelligence
2. Robotic Automation
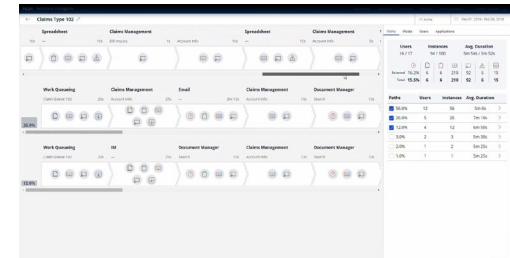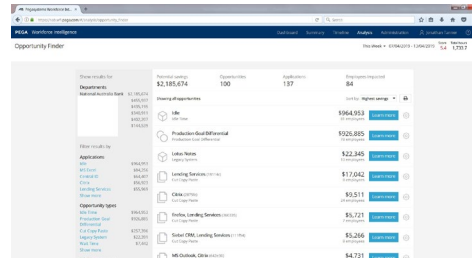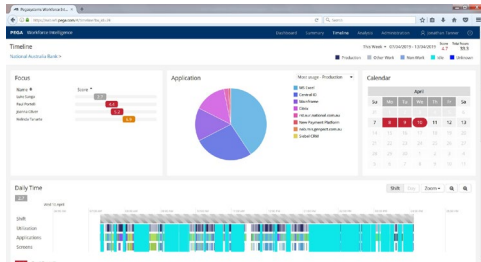3. NAB Universal Workflow
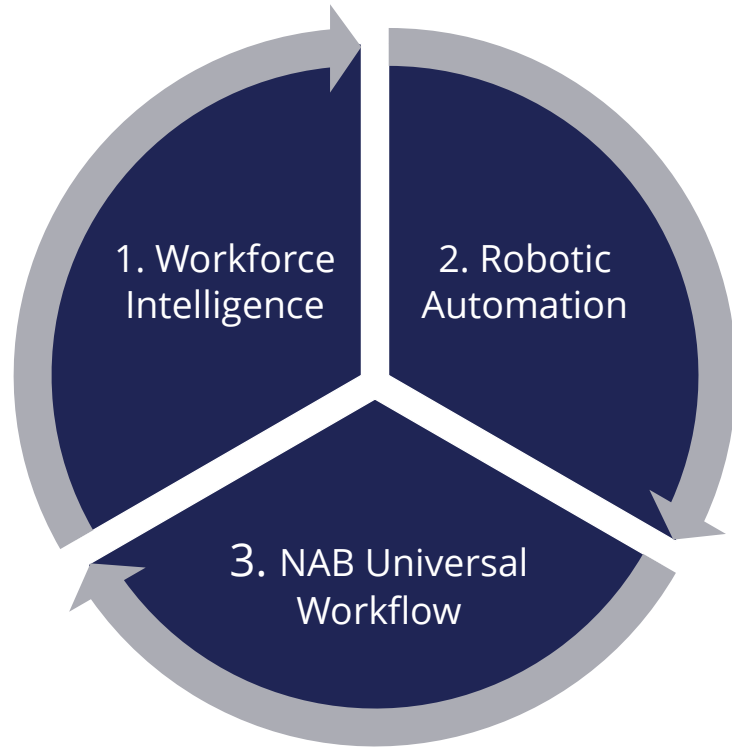
1. Know how efficiently our work is being performed.

2. Optimise our workforce, reduce risk and improve customer turnaround.

3. Automatically create, route and allocate cases from any channel to teams who need to perform the work.

Workforce Intelligence for near real time workforce diagnostics and process analysis

Moving from a traditional process and workforce improvement approach:

6-8 weeks	4weeks		FY
1 Opportunity identification	**2** Mobilisation	**3** Execution and tracking	**4** Benefits realisation
Lean diagnostics & Observation	Mobilisation and design/build	Delivery management & support	Functionality drops

To automated workforce analysis and process diagnostics as a pre-cursor to automation and case management:

- Workforce optimisation
- Automation analysis
- Process and workflow design

NAB Universal Workflow for work tracking and management

What is it?	A key requirement within the operational excellence program is to transform human centric work in to a market leading digital process automation capability. NAB Universal Workflow (NUW) is a framework of re-useable enterprise components that can be configured by the business and deployed in to production to meet their workflow needs within weeks.

Enhanced Capabilities

Improved Experience

Customers

"I have full confidence and understanding of how and when my request will be actioned."

Team Managers

"I finally have a view of all the work in my business and how we are meeting our customer's expectations."

Team Members

"I can rely on the system to prioritise and fulfil my customer's needs."

Key Benefits

| **15-20%**	Uplift in efficiency	**-20%**	Reduced customer follow up enquiries	☺	Customer Satisfaction

Integrated desktop robotic solutions with Universal Workflow for control and efficiency

The best of both capabilities

- Once NUW is implemented and the process refined, manual steps in the case are identified for RDA opportunities and embedded in to the case flow.

- Once automated, those assignments are now completed using the RDA bot and progress the case to the next step.

Key Benefits

- One of the biggest benefits is being able to **leverage all the existing case data** and pass it to the bot to execute tasks in target systems.

- Being able to **codify the bot trigger** has also allowed business to get more consistency and standardisation in their process steps. Full **audit history and bot outcomes are recorded** directly in the case.

RDA Step
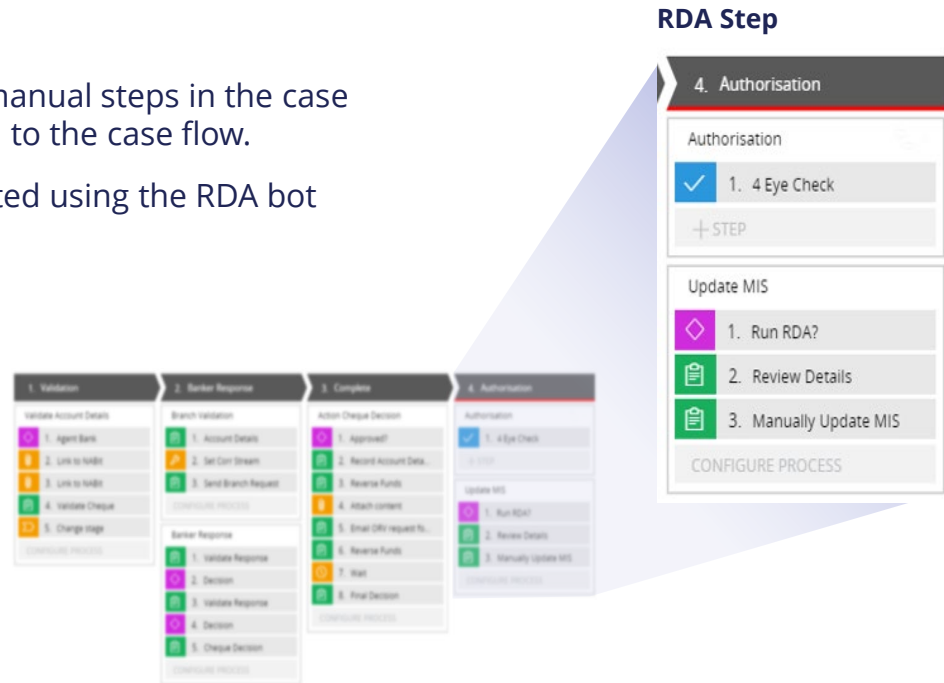
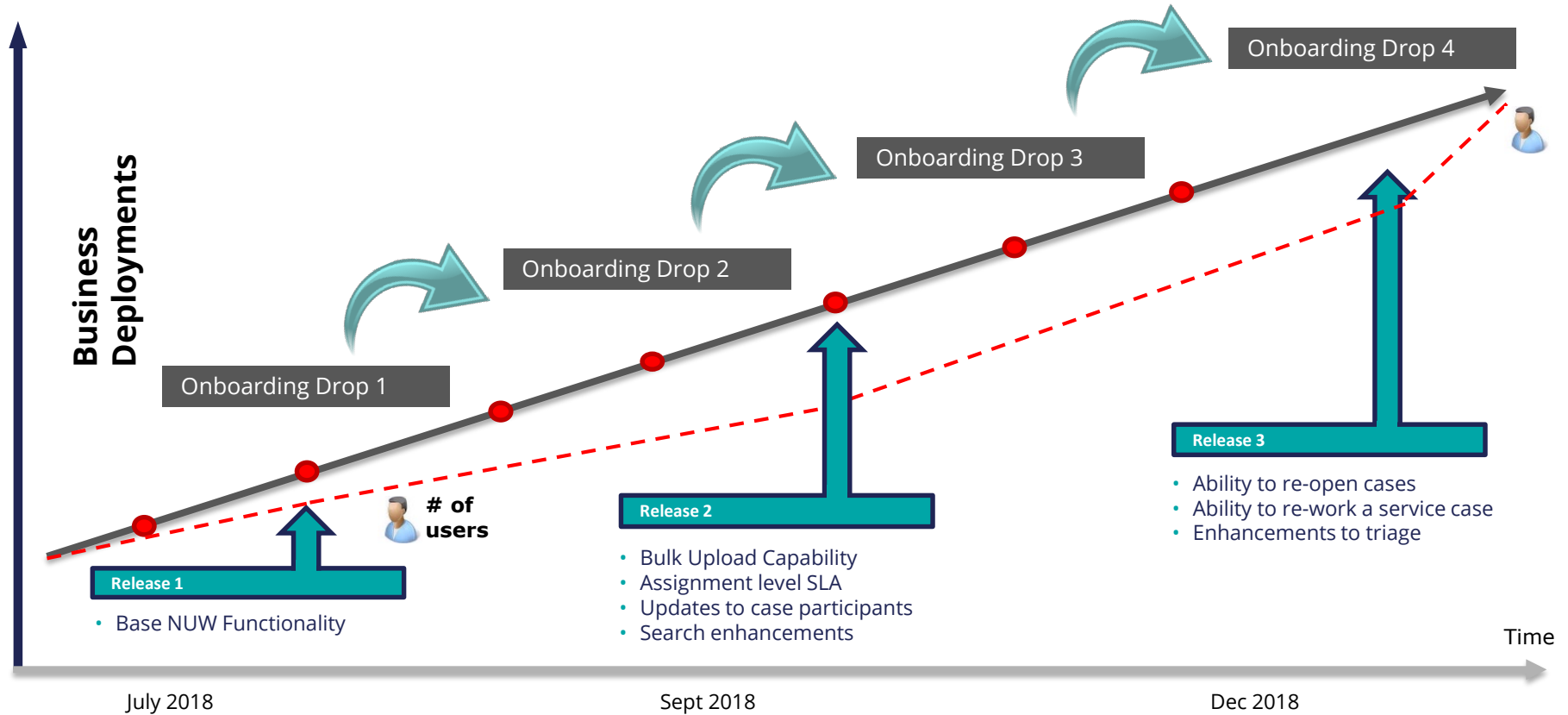# What are the key features of NAB Universal Workflow?

Key Features

- ✓ **Natural Language Processing with machine learning**: Perform automated classification of email requests into cases.

- ✓ **Dynamic processes** based on pre-configured conditions and business rules.

- ✓ **Configurable data model** per case type.

- ✓ **Real-time operational reporting**

- ✓ **Configurable SLAs** set at overarching case and underlying step level.

- ✓ **Integrated Robotic Automation** including RPA and RDA

- ✓ **Auto case creation** via multiple channels including email, API etc.

- ✓ **Bulk case creation** of business unit specific cases supported via csv template upload.

- ✓ In-built correspondence management capability.

- ✓ **Single sign-on.**

The intelligent virtual assistant in Universal Workflow

Eight Business Units In Production Using the Intelligent Virtual Assistant:

- ✓ **Twenty seven email listeners** live in production.

- ✓ Over **sixty nine thousand emails** processed by IVA in Universal Workflow to date.

- ✓ Up to **75% of service cases** auto classified leveraging the natural language processing (NLP) model without human intervention.

- ✓ Business teams are able to update and **maintain their own NLP models** which is constantly improving the auto classification rates.

Ongoing feature enhancements to the core pattern

Business Deployments

Onboarding Drop 1

Onboarding Drop 2

Onboarding Drop 3

Onboarding Drop 4

# of users

Release 1
- Base NUW Functionality

Release 2
- Bulk Upload Capability
- Assignment level SLA
- Updates to case participants
- Search enhancements

Release 3
- Ability to re-open cases
- Ability to re-work a service case
- Enhancements to triage

July 2018

Sept 2018

Dec 2018

Time

Automation is achieved through rapid and iterative deployments

Using the full suite of capabilities we have developed, an overall solution is designed and rolled out iteratively.

Capability

✓ We use **Workforce analytics** to identify the business processes, automation opportunities, and exceptions.

✓ **Universal Workflow** is configured & deployed to set the foundation for further iteration.

✓ **IVA NLP** is added and models matured to process cases with unstructured text.

✓ PEGA **RDA** solutions are added to Universal Workflow to automate manual steps of the process.

Efficiency

10%

25%

40%

60%

APIs, Micro-services

Identify Opportunities and baseline

Robotic Automation

IVA Text Analytics

Universal Workflow

Monitor and Improve

Workforce Intelligence

Legacy Process

Level of Automation

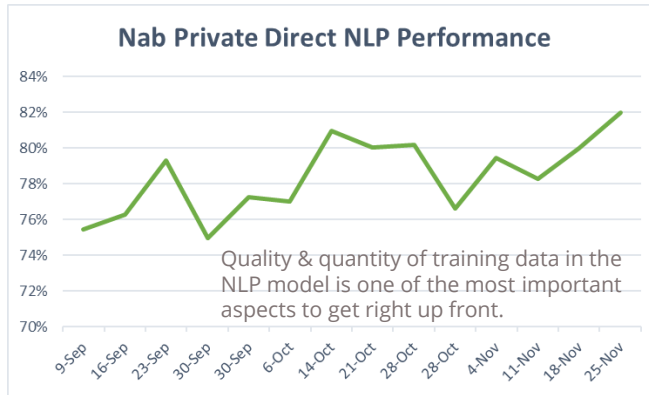Delivery Sequencing & Timeline
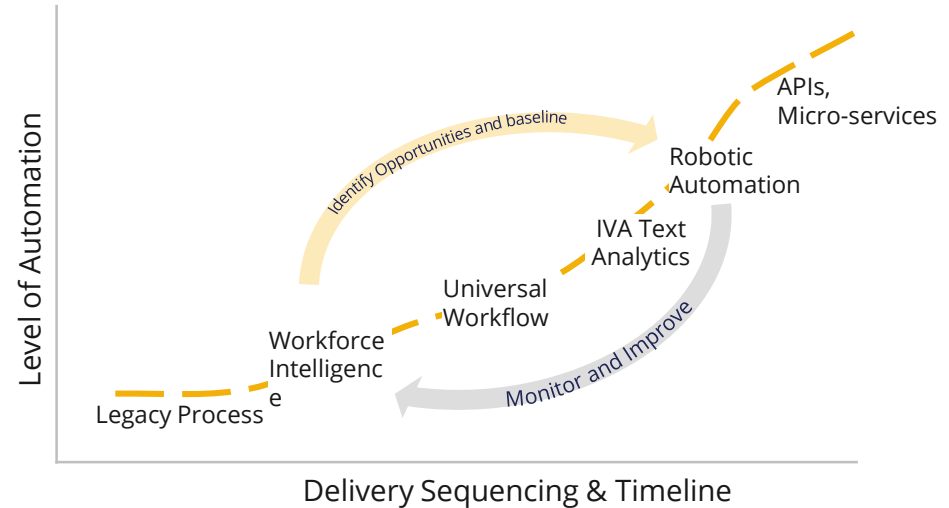
Case Study 1: NAB Private Direct using Universal Workflow & Natural Language Processing

Nab Private Direct is dedicated to managing all aspects of NAB's highest net-worth customers. Clients desire personalised service in an evolving digital & direct landscape. NPD needed better tools to continue growing acquisitions and focus of value-add tasks.

With over 200 email requests a day, Nab Private Direct team members use Universal Workflow to manage their customer's needs. With the use of Pega's NLP models, team manager roles have also changed from case allocation and admin to focus on meeting customer's SLAs.

Work Queues NLP Model Training Performance

Work Queues
Enquiry
Card Enquiry
MICR Enquiry
Interest Rate Conversation
Investment Admin
Investments
New Lending
Payments*
Profile Amendment
Refinance
Sales Discharge
Urgent Request

Nab Private Direct NLP Performance

Quality & quantity of training data in the NLP model is one of the most important aspects to get right up front.

Key Highlights:

✓ Over **17k emails automatically classified**, triaged, and routed using NLP model.

✓ **30% of time spent on work allocation or locating existing cases** has been greatly reduced.

✓ Standardised & consolidated business processes from **80 to 21 case types across 15 work queues**.

✓ Business is continually adopting new features in response to automation business drivers & user's feedback.

Some NLP performance issues were initially caused by the small number of records in the model (1500, across 15 case types), immature data cleansing practices, and challenges in updating the model.

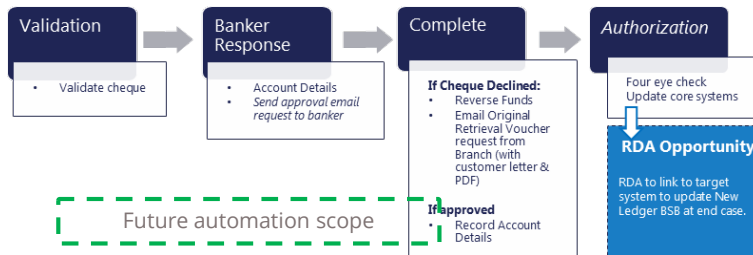# Case Study 2: 3rd Party Cheque Verification Process using Universal Workflow & Robotic Desktop Automation

- The Payments Enquiries team processes **1500+ 3rd party cheques a day**, where there is a discrepancy between the name on the cheque and the account name.

- This process requires a number **of image verification steps and approvals** before releasing the cheque to process the value in core systems.

- **Nab Universal workflow** has replaced the legacy application for case management and a **RDA component** to process the cheque in to core banking systems.

Key Highlights:

✓ RDA component developed in a **week, for under 10K**. (two week payback period)

✓ Efficiency benefit of **125 hours per week**.

✓ Authorisation time reduced from **2 minutes to 5 seconds.**

Nab Universal Workflow with embedded RDA steps

✓ The bot is triggered directly from the process.

✓ This synergy allows the user to complete the decisioning, and bot to process the data.

3rd Party Cheque Verification process demo of the Pega Workflow and RDA user experience.

1. The user completes the manual steps in the process.

2. The robot step will automatically process the cheque to core system at the required stage.

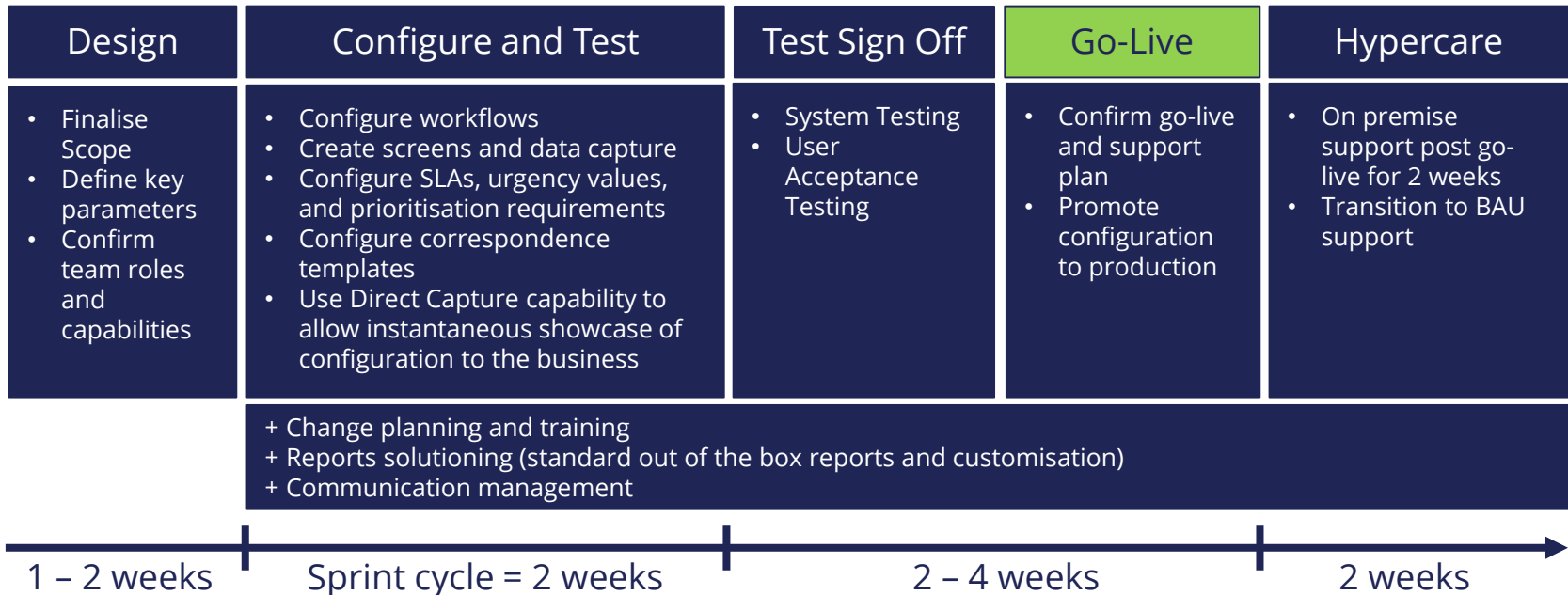3. A confirmation of the robot activity will be provided within NUW and in the robot audit trail.

Full platform cloud architecture leveraging AWS
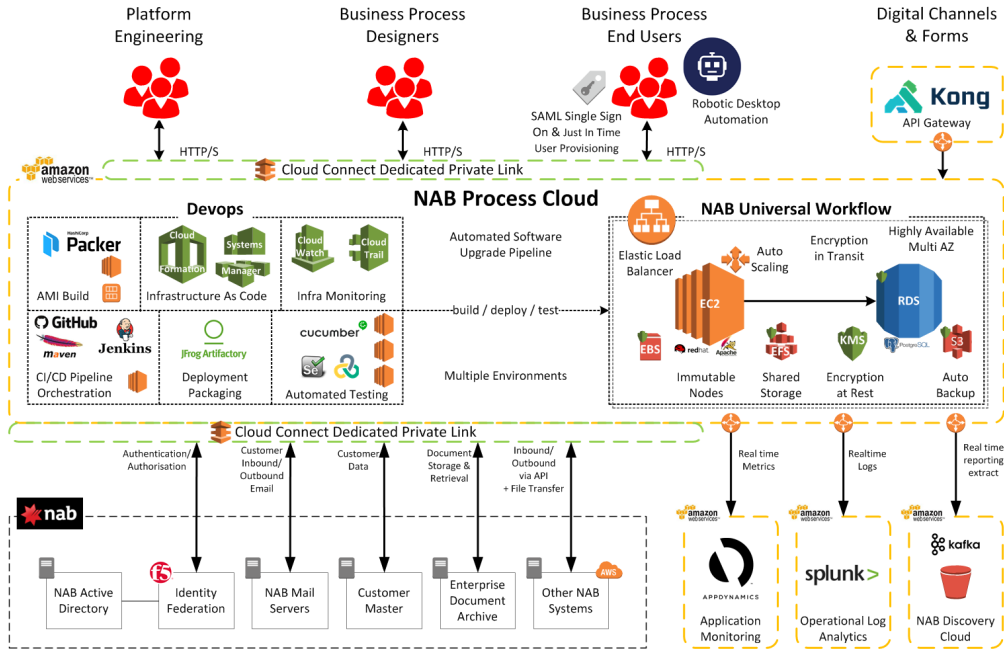
1. The Pega platform has been built fully leveraging the AWS Cloud infrastructure.

2. Our implementation has enabled a full end to end DevOps pipeline for environment provisioning, automated testing, and automated code migrations.

Business led delivery model

✓ Our NAB business units complete an engagement & demand assessment which determines suitability. If assessed as a fit for Universal Workflow, the team handover the initiative to a dedicated onboarding squad. The Onboarding squad follow a predefined process which generally takes between 8-10 weeks.
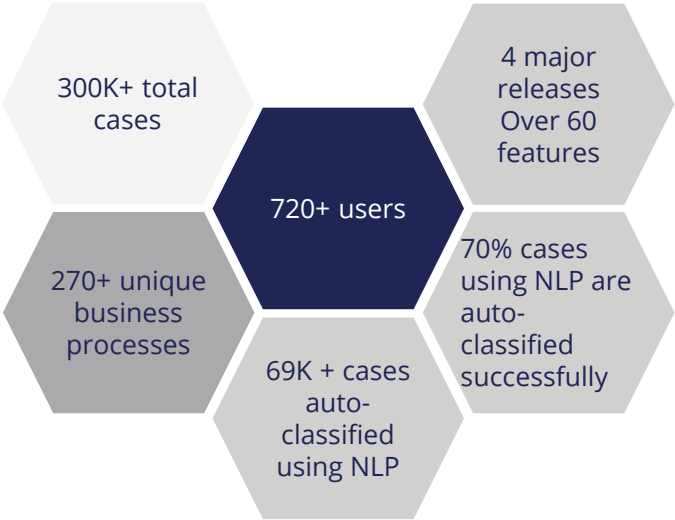
Design	Configure and Test	Test Sign Off	Go-Live	Hypercare
• Finalise Scope • Define key parameters • Confirm team roles and capabilities	• Configure workflows • Create screens and data capture • Configure SLAs, urgency values, and prioritisation requirements • Configure correspondence templates • Use Direct Capture capability to allow instantaneous showcase of configuration to the business	• System Testing • User Acceptance Testing	• Confirm go-live and support plan • Promote configuration to production	• On premise support post go-live for 2 weeks • Transition to BAU support

+ Change planning and training
+ Reports solutioning (standard out of the box reports and customisation)
+ Communication management

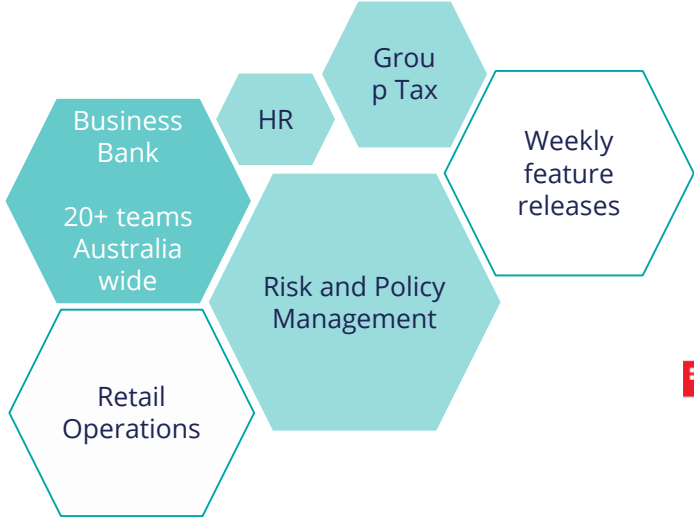| 1 – 2 weeks	Sprint cycle = 2 weeks	2 – 4 weeks	2 weeks

Achievements and business rollout

✓ 60+ successful universal workflow deployments into production from 28th May to 31st Jan at an average of 1 deployment every 3 days.
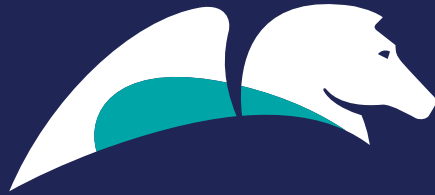
Universal Workflow By the Numbers

- 300K+ total cases
- 4 major releases Over 60 features
- 720+ users
- 270+ unique business processes
- 69K + cases auto-classified using NLP
- 70% cases using NLP are auto-classified successfully

Future Roadmap

- Business Bank
- 20+ teams Australia wide
- HR
- Group Tax
- Weekly feature releases
- Risk and Policy Management
- Retail Operations