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Open Access Process Review

Cognizant Presentation

29th May 2025

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Introduction

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Agenda

1. Introduction
2. Industry Challenges and Trends
3. Understanding of project scope and problem definition
4. Proposed approach, incl. deliverables, team structure and timelines
5. Relevant experience
6. Q&A

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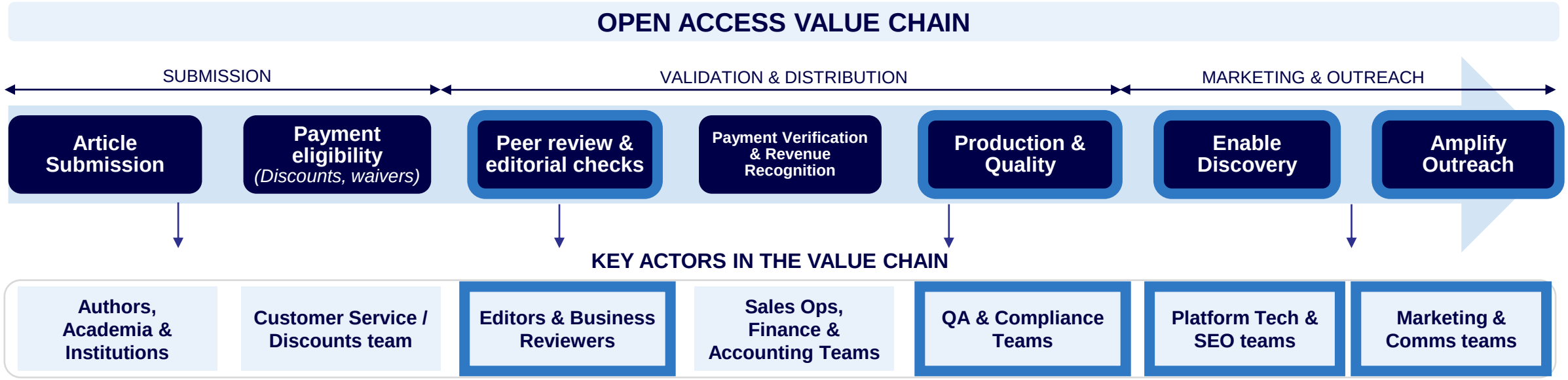
Industry Challenges and Trends

We understand the end-to-end Open Access Publishing Value Chain which is an intricate web of processes, actors and systems



INDUSTRY PAIN POINTS

- **Inconsistent** author verification & eligibility checking processes
- **Inability to easily match authors** to institutional agreements. **Lack of financial transparency of TAs**
- **Disconnected comms** between editorial decisions & financial processing **(APC invoicing)**
- Delayed **Revenue Recognition** & **no live transaction** reporting *(Discrepancies between published content & financial systems)*
- **Varying quality standards** across different journal types
- **Relevant content** gets lost to poor search function impacting discoverability
- **Insufficient resources / tools** to scale articles that influence downloads / citations.

Non-subscription OA models in scope, in particular gold access

Not in scope

Key stakeholders face distinct yet interconnected challenges

AUTHORS & RESEARCHERS

Lack of transparency in article processing charges and incentives

Eligibility of waivers/ discounts

+16%

Increase in **average APC costs** in the past 2 years, now ranging between $1500 - $9500 (Delta Think, 2023)

Researchers spend an average **5 hours** navigating publication processes per article. (Author Experience Survey, 2024)

56%

Early career researchers from Europe have published their work under Open Access compared to APAC **(64%)** & Africa **(65%)** (NCBI, Global Trends Open Access)

PUBLISHERS & PLATFORMS

Legacy systems & workflows incapable of meeting high demand

Transition to new business models is complex

35%

Publishers report **time spent by staff on manual reconciliation** over systems (STM Association, 2024)

42%

Transformative Agreements now account for 42% of major publishers' revenue, **up from 18% in 2020** (Outsell, 2024)

+24%

The level at which OA volumes are growing annually while publishing operations staff **grows at only 8%** (Delta Think OA, 2023)

ACADEMIC INSTITUTIONS

Sceptical about the value of OA against subscription models

Complex agreements & inequitable funding

41%

Libraries report difficulty forecasting OA expenditures with **average budget variance of 23%**. (SPARC, 2024)

14
average

Libraries manage an **average of 14 different publisher agreements**, each with unique terms *(ESAC Registry, 2023)*

73%
Institutions

Lack **formal policies** for distributing OA funds across departments **(ALPSP Survey, 2024)**

Predict, Prevent, Publish – Transforming the dynamics of Open Access Publishing

AI-Led Financial Operations

Leading publishers adopting AI to automate..

Complex financial workflows, anomaly detection & revenue forecasts

85%

accuracy expected in revenue forecasting

68%

Publishers are actively piloting AI tools for financial ops

Dynamic Agreement Management

Publishers want to go beyond static OA agreement models

Real time agreement adjustments based on past patterns

Monitor compliance & performance against targets

40% Expected risk reduction versus traditional fixed rate (Delta Think)

Data as a 'Strategic' Unifier

Publishers seek a shift to **API-first architectures** that create unified data layers

Across the value chain
(editorial, production, financial)

ELSEVIER

Has integrated financial and editorial systems leading to

30%

Reduction in turnaround time for OA publishing (Elsevier TL)

Author first financial experience

Reimagining author first experience with

Real time visibility of agreement eligibility, funding & APC coverage.

72%

Authors completed APC payment seamlessly with integrated dashboard (Taylor & Francis)

43%

Higher Satisfaction rates when financial workflows are transparent .

Continuous Intelligence in motion

25%

Efficiency

Increase when continuous business intelligence tools are used

$ 3.2M

Cost savings

Combined across 3 years in UK's JISC consortium through real time data from publishers

Smart, accessible, equitable content

Improving content quality with

Gen AI plagiarism check, author optimization guidance to get maximum citation impact.

Springer Nature invests in AI tools - Geppetto & Snapshot for research integrity

+18%

Increase in content downloads YoY

+4%

Rise in citations / article YoY

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Understanding of project scope and problem definition

Open Access Process Transformation – Springer Nature's key challenges and expected outcomes

Open Access (OA) is one of Springer Nature's largest revenue streams, but its process model is largely siloed.

Lack of live transaction reporting

This risks accurate financial modelling and end of year reporting for the OA business stream

Critical dependency on few people

Increased susceptibility to single point of failure especially in data sensitive systems

No single source of truth

Fragmented systems & manual processes risk data accuracy & unified understanding of truth

SPRINGER NATURE's PRIMARY OBJECTIVE

End-to-end process transformation aligning people, data, systems and processes to enable sustainable and scalable Open Access growth.

OUR UNDERSTANDING OF OUTCOMES
(3-month timebox)

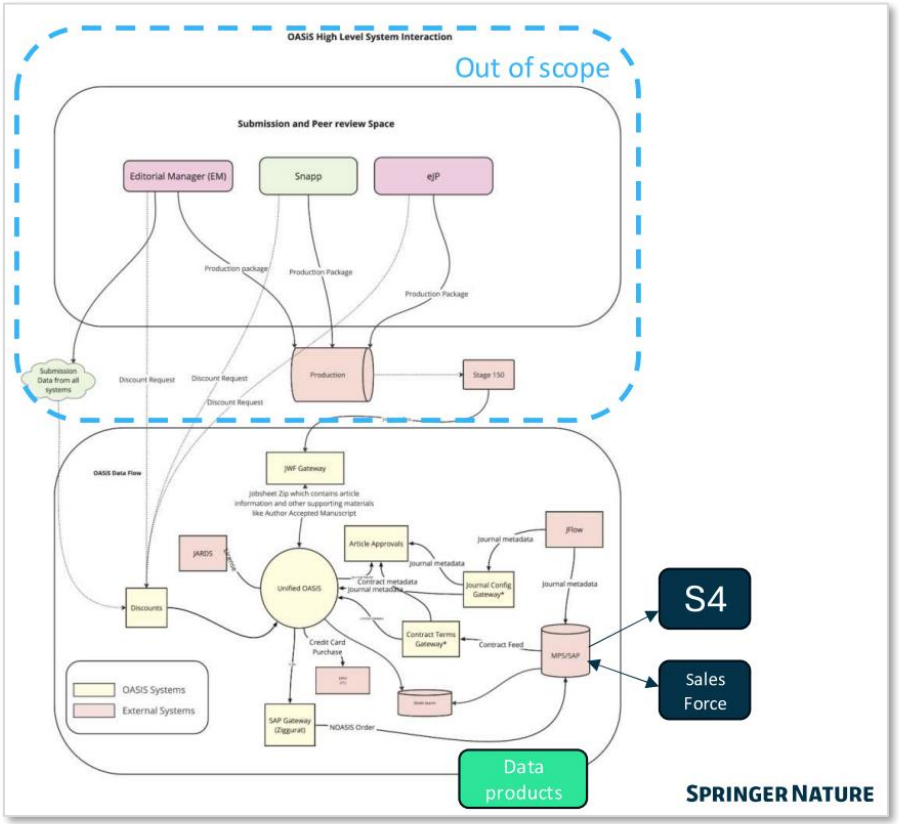
As-is Analysis & process mapping
led by **Domain First** Perspective

To-be process design & blueprinting
driven by collaborative **Systems Thinking**

Process re-engineering
As a Transformative roadmap

Digging Deeper – The systemic challenges behind the process inefficiencies

The Compounding Effect: These issues reinforce each other creating manual workarounds and data quality issues



OASiS – **Springer Nature's** unified open access payment platforms currently communicates with **10+ systems – 6 internal and 7 external.**

1 System Architecture Debt

OASiS and the surrounding systems were designed for simpler OA models but now handle complex transformative agreements.

2 Data Integrity Crisis

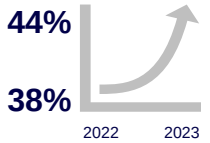
15+ data sources at play. Manual interventions create cascading quality issues that impact financial accuracy across the value chain.

Journal meta data
Contract feed
Licenses
Jobsheet.zip
Purchase Order
Credit Card #

3 Scalability Bottleneck

Current processes that work at today's volume will break as OA continues its annual growth trajectory.

Surge in OA output & Impact
(Springer Nature)



4 Critical System Integration Failures

Messages between OASiS & SAP fail to process forcing manual interventions. The root causes remain unclear & require deeper understanding of data logs, connectivity & message queuing.

Going beyond process improvement – wider questions that will define Springer Nature's OA Future

OUR APPROACH WILL ADDRESS THESE CRITICAL QUESTIONS

Architecture for Scale

What should Springer Nature's technology ecosystem look like to handle continued OA growth & how can we **build scalable infrastructure** without disrupting operations?

(Finance & Accounting, Business Partner setup, Article acceptance policies)

Financial Intelligence

How can financial processes evolve from **reactive reporting** to **predictive intelligence** that prevents revenue leakage before it occurs?

Editorial & Finance Siloes

How can we eliminate critical handoff gaps between **editorial decisions** and **payment processing** that create delays & reconciliation challenges?

Process Automation

Which **high volume manual processes** could be automated to prevent operational bottlenecks as OA transaction volumes continue to grow?

Future Readiness

Which **emerging trends** influence today's technology decisions and how can Springer Nature **adapt capabilities** for the future?

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Proposed methodology and approach, incl. phasing and timelines

Our structured approach to Open Access Process Transformation

Our 4-phase approach will be specifically tailored to scale Springer Nature's Open Access financial reporting, eliminate process risks & enable sustainable growth

1 Planning

1 week

- Existing documentation and outputs
- Detailed schedule for interviews and workshops
- Set up project governance and reporting cadence.

2 As-is Analysis

4 weeks

- 1:1 interviews with key stakeholders Interactive workshops across 6 critical business processes
- System assessments to identify pain points, inefficiencies, and bottlenecks

3 To-be Design

5 weeks

- Target architecture verified and validated with stakeholders that addresses systemic integration challenges.

4 Recommendations

2 weeks

- Agree on transformation opportunities as part of a strategic roadmap that enable scalable and sustainable growth in Open Access.

OUR APPROACH WILL BE UNDERPINNED BY

Collaborative Working
Facilitating and building on Springer Nature's existing knowledge, we will work with the stakeholders to identify transformation opportunities

Robust Project Governance
Owned by a Project Steering Committee with continuous feedback loop system

Domain Expertise
Industry-specific scholarly publishing insights, trends and best practices

Strategic Engagement Plan – A systematic approach to discover, analyse & transform Springer Nature's OA processes

Domain Experts | Workshop | Interview | Research | Playback | Deliverable Milestones

Planning	As-is Analysis	To-be Design	Recommendations
1 week	**4 weeks**	**5 weeks**	**2 weeks**

Input
Existing documentations
 	
Activities
• Create Project Initiation Document
• Schedule detailed interview/workshop planning
• Create Kick Off Deck
• Gather & review existing documentation
	Input
	• As-Is user, process & system segmentation
	• Interview groups and research methodology
	• Stakeholder Information
	• Sessions booked
	• Existing documentation and in-flight project outputs
	
	Activities
	• Deliver kick-off presentation to all stakeholders
	• 1:1 interviews with inter-departmental heads
	• Workshop facilitation across 6 business processes. Additional workshops may be required to dive into the right level of detail
	• Technical assessment interviews for each system in scope
	• Draft process swim lane, dataflows, org structure
	• Review & approval
		Input (From As-is Analysis)
		• Current state process maps, application portfolio analysis & data flow diagrams
		• Pain point catalogue highlighting current inefficiencies
		• Root cause analysis for manual intervention
		
		Input (From Stakeholder Engagement & Industry Expertise)
		• Business requirements & KPIs for redesigned processes
		• Best practices in OA Financial Management
		
		Activities
		• Collaboratively develop To-Be Business Process Diagrams
		• Draft Target Architecture demonstrating an improved end-to-end Open Access process.
		• Conduct To-Be State Workshops with client SMEs
			Activities
			• **Create a phased roadmap** for improvements with clear prioritization and dependencies, including
			  ○ **Process standardisation** recommendations to enhance automation.
			  ○ **Data governance frameworks** to address data quality issues.
			  ○ **System integration improvements** focusing on critical OASiS-SAP connection.
			  ○ **Future state Organisational structure**
			Improvement recommendations list and **business case**.

Deliverables Kick off ★ 1. Project Initiation Document 2. Project Kick Off Deck 3. Detailed Interview & Workshop Plan Domain Experts engaged	**Deliverables** CHECKPOINT 1 ★ 1. As-is Process Flow 2. High-level organisation charts 3. Application Portfolio Analysis covering the 11 systems 4. Current state Data Flow Diagrams across systems 5. Opportunities / Pain Point Catalogue Process Owners/Ops Managers Subject Matter Experts / Operation leads/ System Owners	**Deliverables** CHECKPOINT 2 ★ 1. High Level To Be Process Flow Maps 2. Future State Data Flow 3. High-level Target Technical Architecture blueprint 4. Updated team organisation charts 5. Future State organisation and role & responsibilities Operations Delivery Heads Process Owners/Ops Managers Subject Matter Experts / Operation leads/ System Owners	**Deliverables** FINAL REPORT ★ 1. Recommendations 2. Business Case 3. Phased and costed Roadmap 4. A strategic PoV on 'Future of Open Access' 5. PoC on selected recommendation (*Cognizant's investment*) Executive Sponsors
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As-Is Analysis – Our data gathering methodology

Our team will use **Miro** boards to facilitate and collaboratively gather data during remote workshops. We will then use more sophisticated process tools like **Celonis** to document the current and future processes using a **BPMN 2.0 framework** that you can re-use in future projects

ACCELERATORS TO AID DATA ELICITATION

Process Door

Interviews & shadowing to understand workflows and pain points

Data Door

Questionnaires, process mining with Celonis to track & visualise business processes & identify bottlenecks and exception parts

Post Gathering Analysis

Value stream mapping, process variations, statistical validation & lean/six-sigma methods

OUR 3-PRONGED APPROACH TO DATA GATHERING STRATEGY

INTER-DEPARTMENTAL INTERVIEWS

11 Identified teams Across OA ecosystem

90 min Interview sessions with leaders from identified departments

Financial focus Discussions with staff handling APC, revenue recognition & agreement

PROCESS WORKSHOPS

Capture 6 Current Processes

Article Submission	Verification & Payment	Reporting & Consolidation
Post Pay agreement	Revenue Recognition	Management Reporting

SYSTEM ASSESSMENTS

10 Identified systems Across OA ecosystem

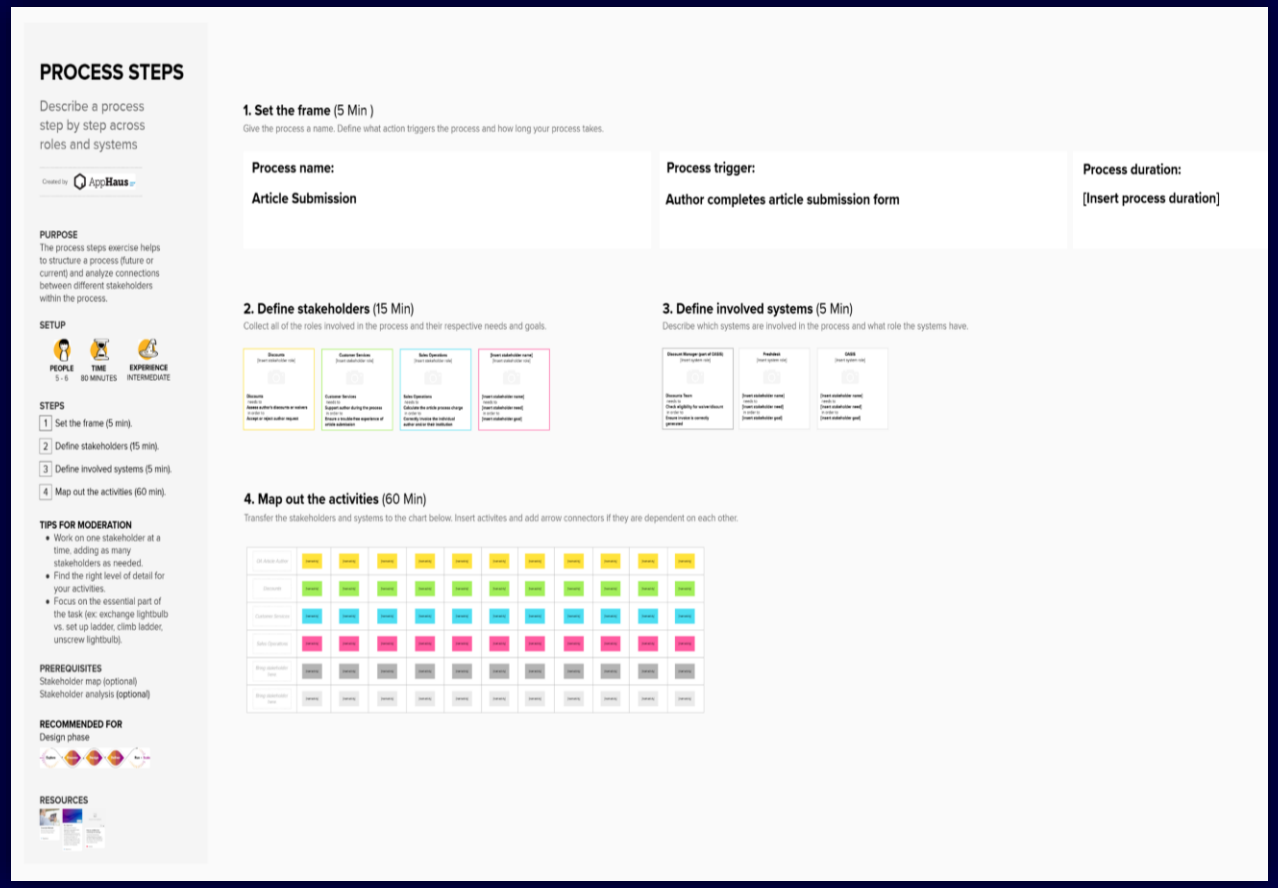
Systems *First view* Technical discussions with leaders of all identified systems to aid integration mapping and performance assessment

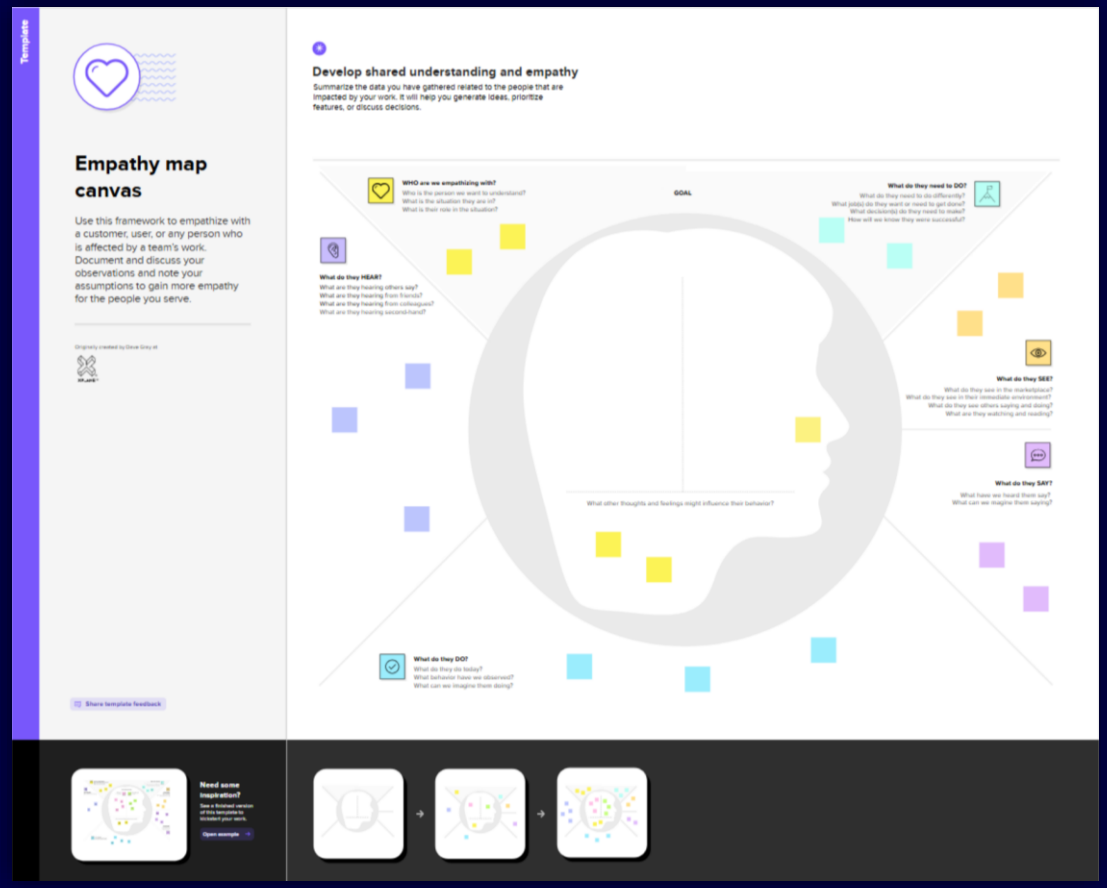
Existing Documentation

Current inflight projects (e.g. audit of internal tools and processes supported by OASIS)

To conduct an application portfolio analysis, we will need to interview technical / business owners of the 10 systems

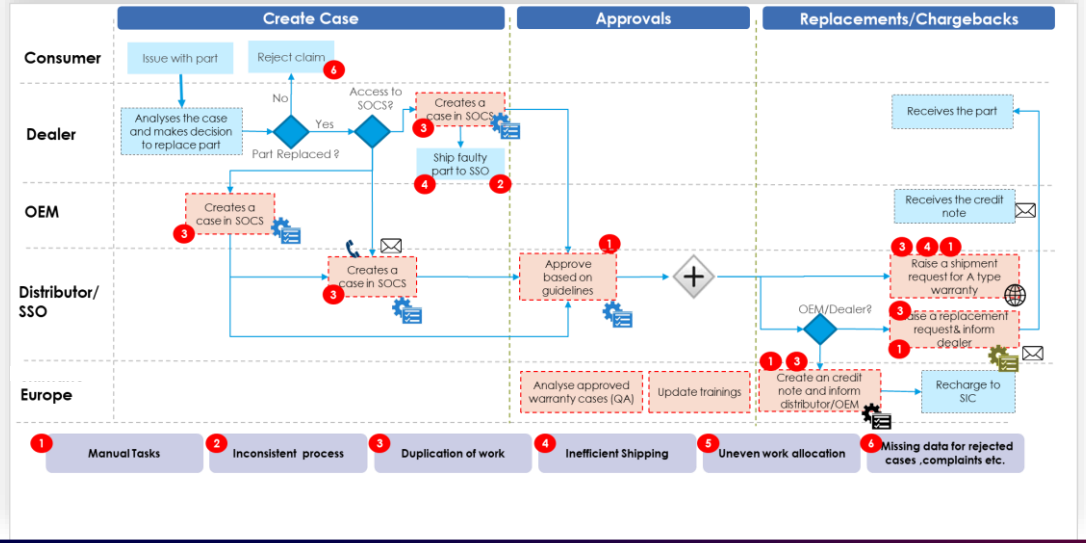
Workshop Accelerators





Sample As-Is Analysis Deliverables

As-Is Process Flows

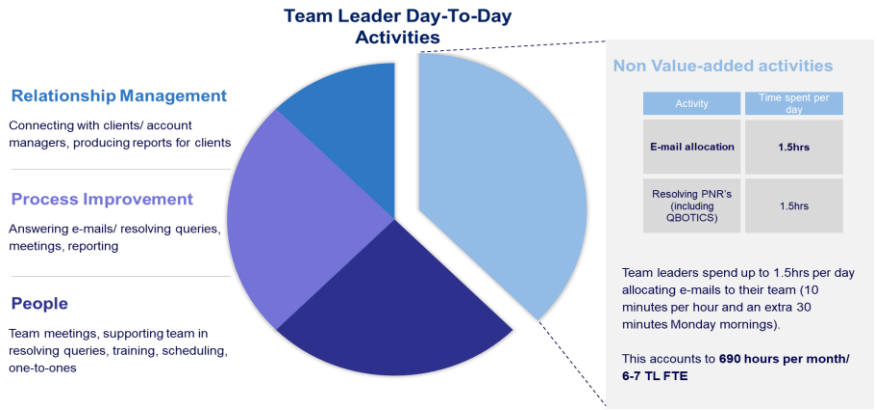


Opportunities / Pain Point Catalogue

Pain Points in Invoicing Process

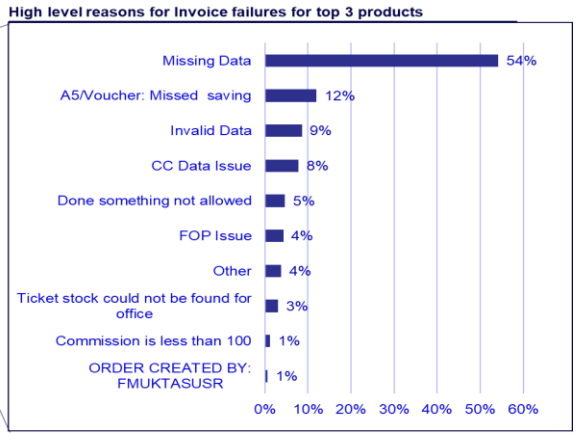
Theme	Description	% Volume Impacted	Efficiency	Customer Experience	User Experience	Margin
Consultant Priorities	Consultants prioritize new enquiries over doing necessary due diligence at enquiry, booking, scripting for smooth invoice creation	60%^	H	-	L	-
	Customers can call with queries such as not being able to find transactions on their CC statements taking consultant's time		M	-	H	-
System efficiency	OBT clients can receive tickets before filling out their data, so have no incentive to fill it out	60%*	H	-	M	-
	System validations not present upfront at enquiry, profile, booking & scripting	100%	H	-	M	-
	System not prompting / suggesting for required FOP	100%	H	-	M	
	Customers who fail on their card payments are still allowed to make new bookings	2%^^	H	-	M	
	Protas is slow and doesn't necessarily provide real time updates					
FOP	Extended variations in FOPs causing problems	1%*	M	-	M	
Profile	Traveller Profiles not being accurate, complete and real time cause issues in invoicing		H	-	H	
Customer issues	Hard to get hold of customer for card issue, particularly if ticket issued		H	-	H	-

As-Is Data Analysis



Split of Invoice failures in Reject queue by Product Type

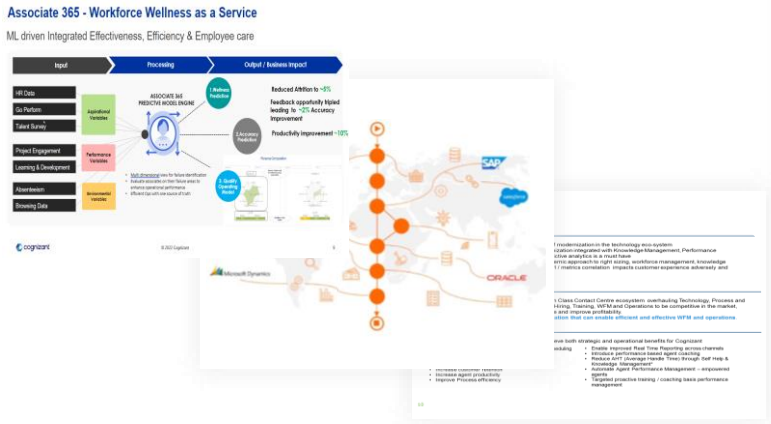
	% of Invoices Failed	Total Value of Invoices Failed
Hotel	42%	60,835.91
Air	31%	901,293.05
Rail	19%	76,506.16
Car	7%	14,153.39
Ancillary	1%	2,395.28
Change Fees	0.2%	322.00
Blank	0.1%	899.04
Out of Hours	0.02%	42.84



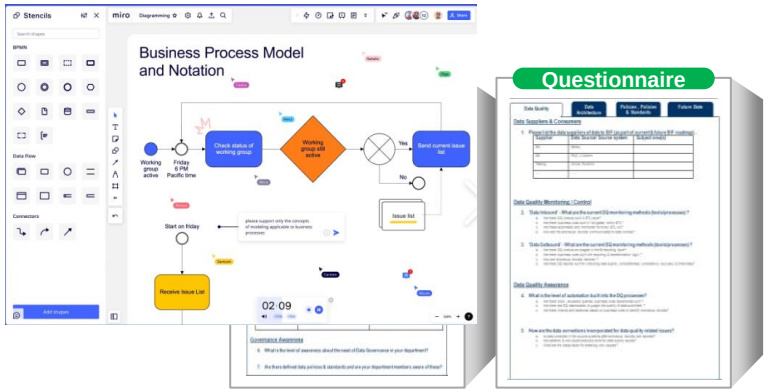
Additional As-Is Analysis outputs – Data Gathering, Tools and Accelerators

We have a plethora of tools, accelerators, and frameworks to build upon to provide a pointed recommendation that keeps our clients' needs and goals at the centre.

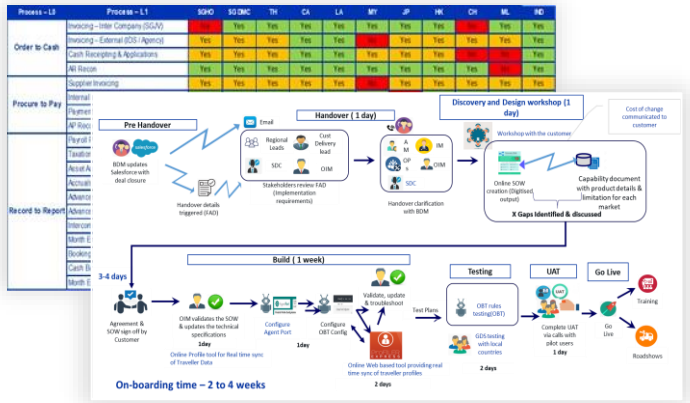
Process Mining, Blueprinting and Business case tool



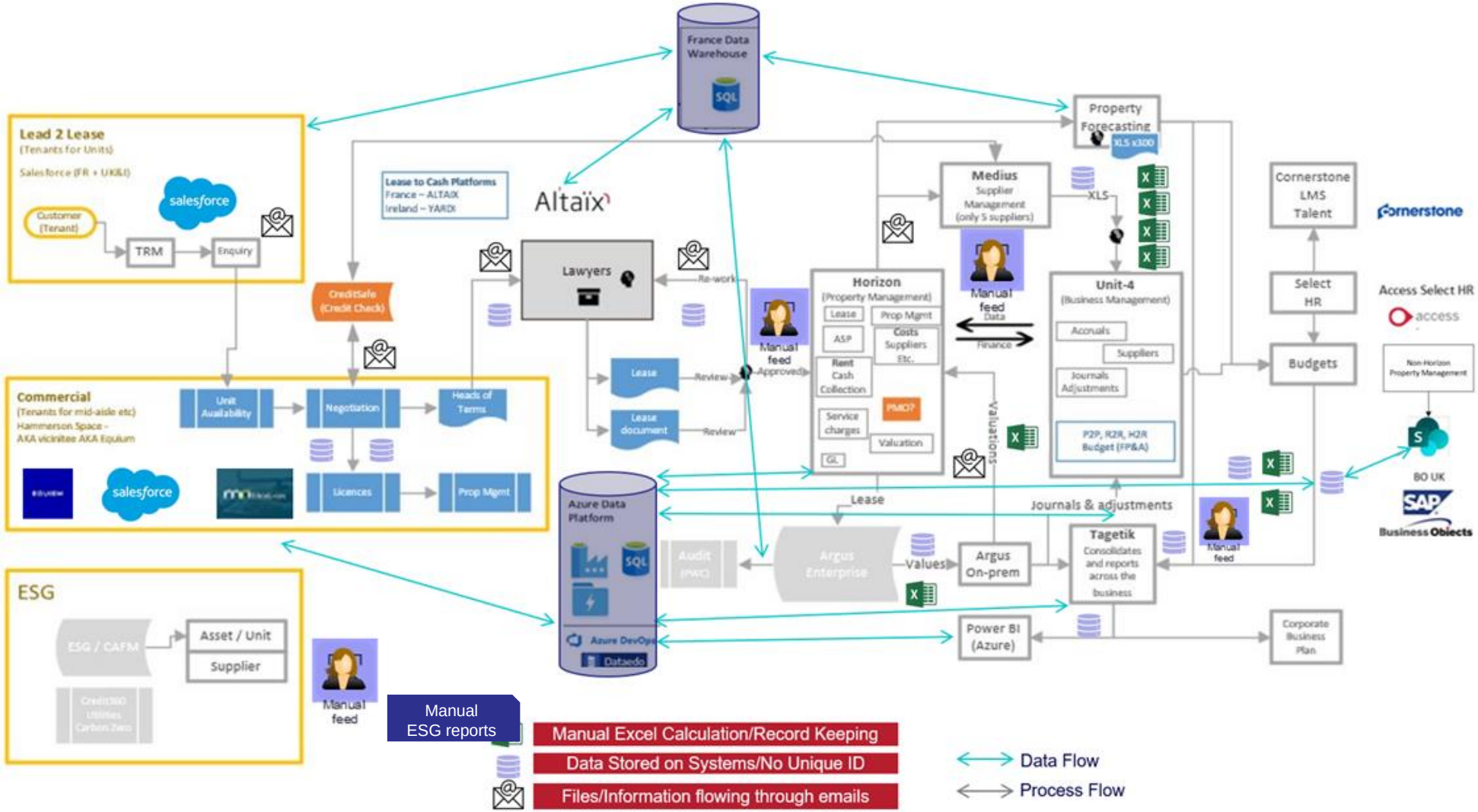
Miro, MS-Visio (BPMN) and Sample Questionnaires



Opportunity heatmaps & use cases



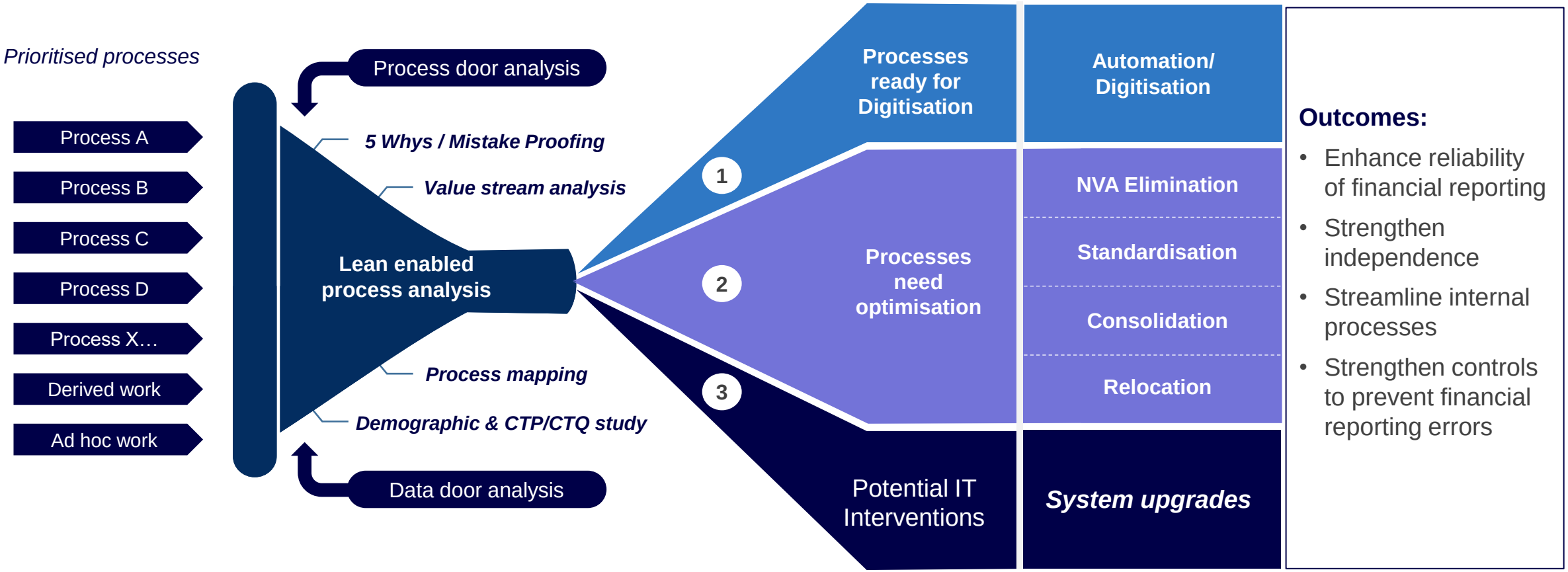
Sample As-Is Business Workflow



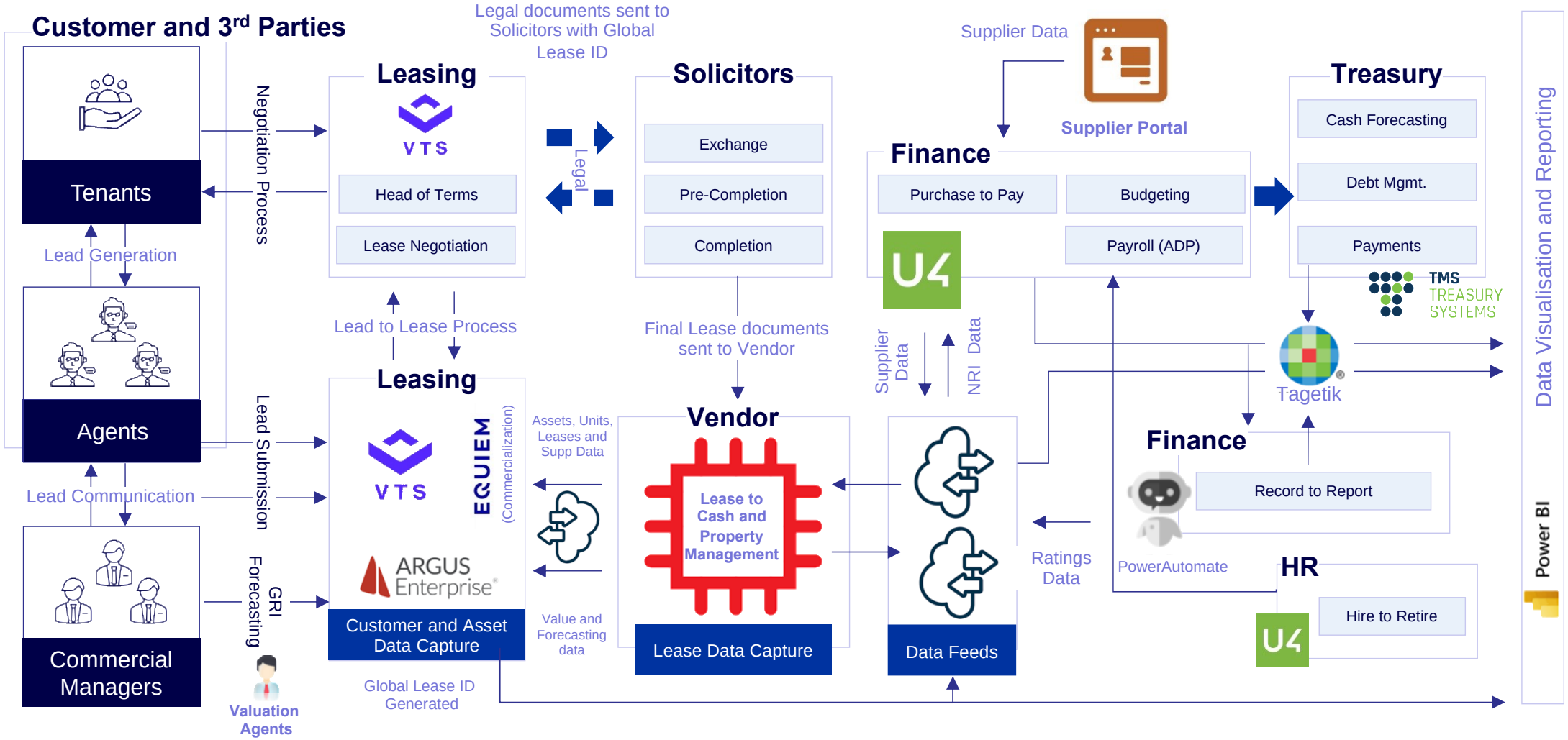
Capturing process data, interconnected systems, dependencies on 3rd parties, manual efforts

To-Be Analysis - Lean enabled deep-dive assessment

Lean Based Assessment: Transform assessment towards a Lean-Enabled Automation Suitability assessment framework to identify the right automation candidates. The framework considers various attributes of Lean, Design Thinking, Value Stream Mapping, and process door & data door analysis concepts.



Sample To-Be Business Workflow

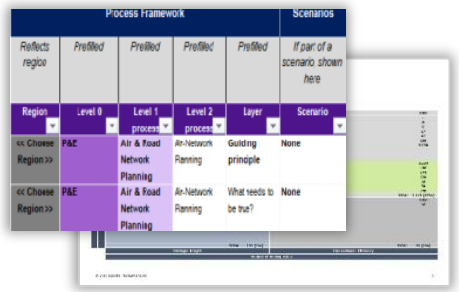


Financial reporting reliability, Independence, Governance , Systems & Solutions Enhancement and Continuous Improvement

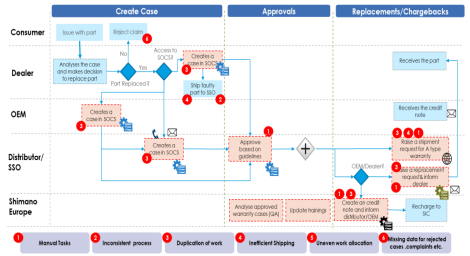
Summary of Final Deliverables

Our final report will include the following outputs from the assessment.
The implementation roadmap will support initiating the foundations for the OA transformation

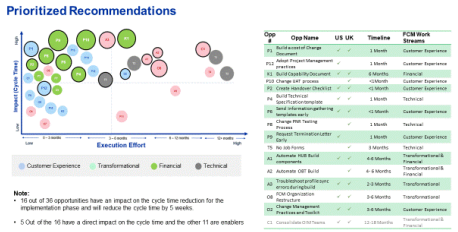
Process Taxonomy & Pain Points



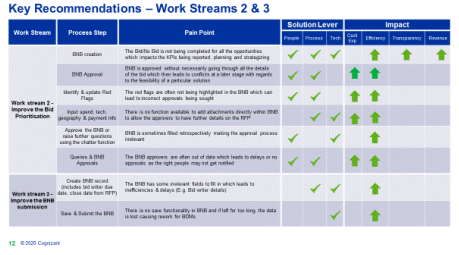
As-Is & To-Be Process Value Stream Map



Solution Prioritisation Matrix

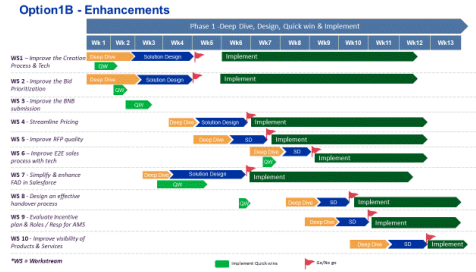


Solution Recommendations



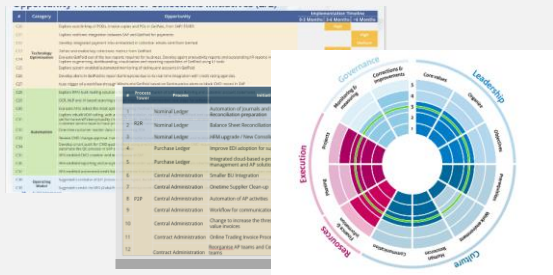
Business Case

Implementation Roadmap



Assessment Report

1. Findings and opportunities classification, ready for lean/reengineering
2. Validated prioritised list of opportunities for execution by effort, value/business case and risk
3. Implementation Roadmap for shortlisted opportunities



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Quick Wins

Added Value – We will aim to deliver three distinct value-added services that set our engagement apart

POCs for next-gen process reengineering

SAP + OPEN ACCESS

Integration between systems to automate data transfer, reducing financial risk.

This could directly address OASiS-SAP message processing failures

UiPath AGENTIC AUTOMATION

Google Big Query

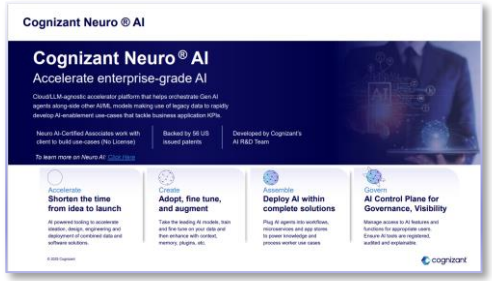
Automate **generation of manually created reports** to remediate the dependency on few people.

Automated validation for processes currently depending upon manual review.

AI-Powered Process Discovery Innovation

Cognizant's **advanced AI tools** (**Neuro AI and Soroco**) could enhance process uncovering capabilities,

revealing **hidden manual workflows** & system interactions that traditional analysis methods cannot detect.



Thought Leadership: The Future of Open Access

A strategic PoV on 'Future of Open Access' that will highlight emerging innovation & trends

that Springer Nature can leverage to build competitive advantage in an evolving Open Access landscape

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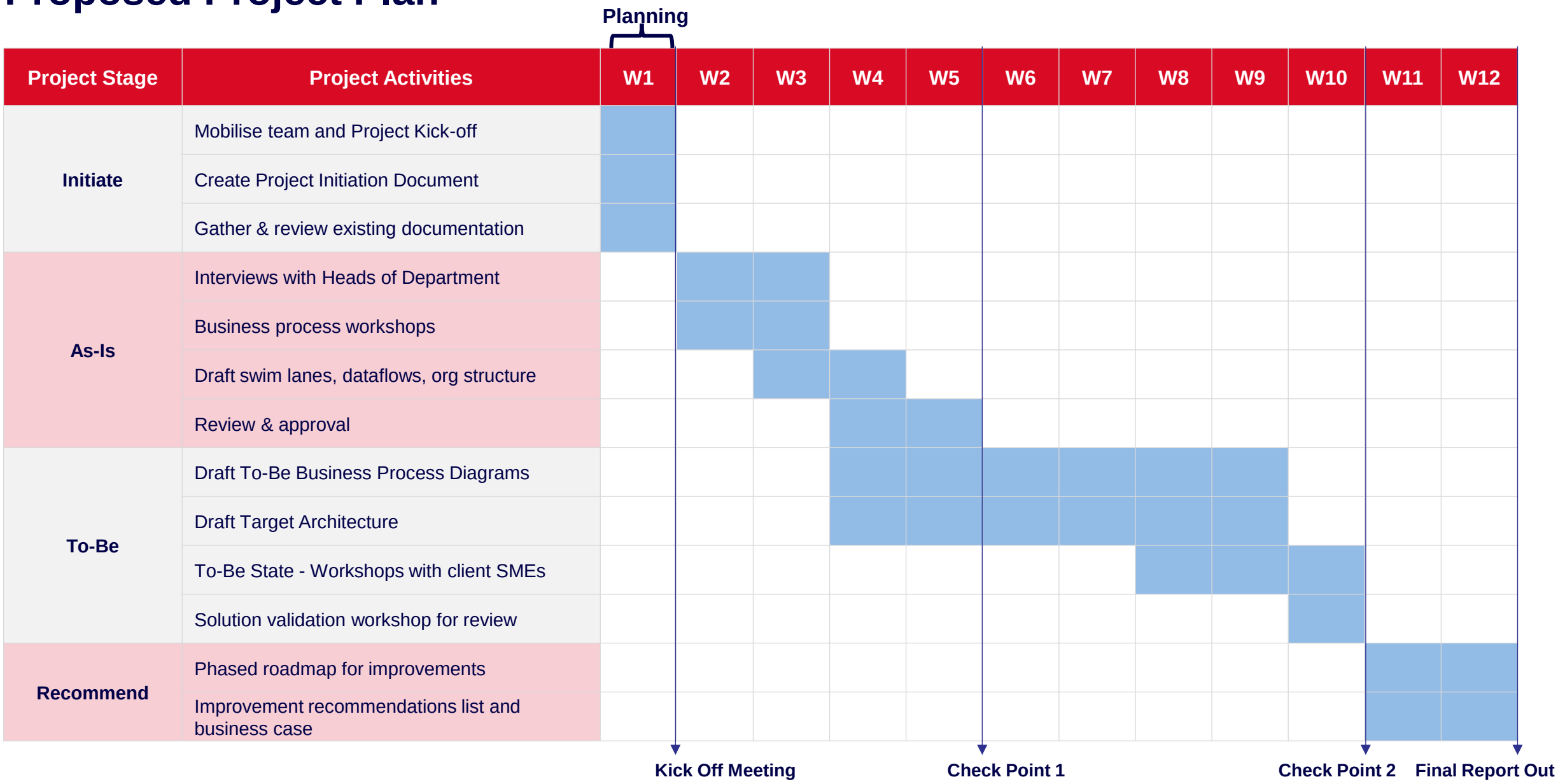
Project Plan

Proposed Project Plan



Key Risks and Mitigations

Risk Description	Effect	Mitigation Plan
Constraints in Springer Nature's personnel availability	Delay to entire project schedule, impact to cost and deliverables.	Work jointly on planning sessions to ensure Springer Nature personnel are available to support the assessment, attend the workshops and answer questions.
Lack of up-to-date process maps and documentation	Delay to entire project schedule, impact to cost and deliverables.	Springer Nature to ensure all detailed process maps and documentation for all process towers are shared timely and the process owners are available to provide a complete process walkthrough to the Cognizant Team.
Historical data non-availability	Failure to get the historical productivity data may impact the assessment deliverables.	Cognizant will explore the option to conduct time and motion studies to get the relevant data within the available timeframe.
System access challenges	Any access or system issues will impact the development activities and implementation timelines.	Cognizant will work with Springer Nature Project Manager/SME's to ensure system access issues are provided timely.
Springer Nature office access challenges	Delay to Springer Nature office access will impact the project schedule.	Cognizant will work with Springer Nature Project Manager/SME's to ensure office access issues are provided timely.

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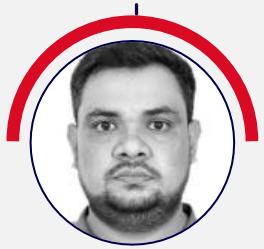
Our Proposed Team

Cognizant Engagement Team

Neloop Dsouza
Engagement Lead

Matt Eaton
Media Domain Expert

Yogesh Ghodke
Process Consultant



Aftab
Business Analyst (Process)

Sagarneel Biswas
Business Analyst (Tech)

Chinye Asiodu
Business Architect

Harikrishna Balachandran
Data Architect

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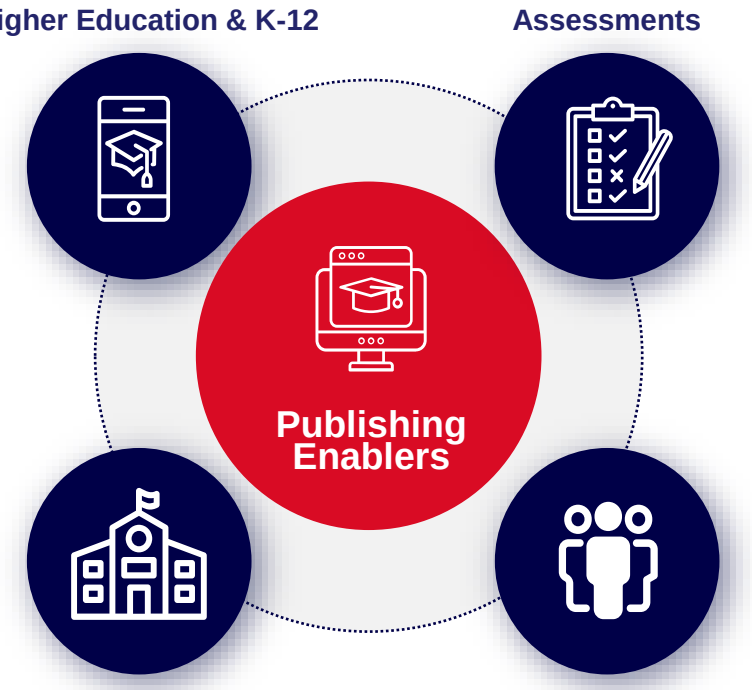
Publishing Experience

Cognizant Publishing Practice – impacting over 100 million lives every year



KEY GEOGRAPHIES	CONSULTANTS	PROJECTS
• North America • Europe – UK • APAC – Australia	8,000+	2,000+ 500+ *Digital Engagements*

Our Key Offerings

- Domain and education technology capabilities
- Solutions that re-imagine learner experience
- Digitalization of services for increased efficiencies and scale
- End-to-end transformation initiatives

Our solutions, accelerators and Points of View

- GenAI for education
- Research
- D2C for Education
- Future of Education
- Learning Analytics
- Digital Credentials Platform
- Remote Proctoring
- Immersive Learning

Our Clientele

Oxford University Press
Cambridge University Press
IELTS
Cengage
Wiley
Elsevier
Pearson

3 OF TOP 5	4 OF TOP 5	3 OF TOP 5
Higher Education Institutions	Education Publishers	Assessment Providers

Strategic partnerships that strengthen the ecosystem

SAP, salesforce, aws, Azure, servicenow, workday, aws PARTNER Education Services Competency

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Our successful testimonials across the Publishing Value Chain

Open Access at Oxford University Press

Implemented a new **innovative** metadata approach and **increased reliability** of services, leading to improved user **engagement**

Growth through new revenue streams at Oxford University Press

Accelerated new platform **development** and facilitated new product launches to unlock revenue streams of up to **£100m**

D2C e-Commerce Implementation

End-to-end **digital transformation** resulting in approximately **4,000** unique customer orders within one month

Digital First Transformation at Wiley

Defined a new authoring framework, enabling platform interoperability, increasing completion rates for assessments by **45%**

Enhancing search tools for Content Assets

Optimised platform publishing, tools updated periodically to enable **seamless** and effective service

Subscription based model for D2C Business

Redefined business model and **enhanced** learners experience through a personalised, action-orientated environment

Agentic AI Process Automation at Cengage

Identified **automation** opportunities and **maximised** content value through new monetization pathways

Executing projects remotely at the BBC

Defined the new organization structure and created a **transition** plan to drive success through BBC **cost saving initiatives**

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Thank you

Cognizant (Nasdaq-100: CTSH) engineers' modern businesses. We help our clients modernise technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or @cognizant.

We're Cognizant. And we believe that results start with relationships.