# Scalable Enterprise AI Use-Case Implementation
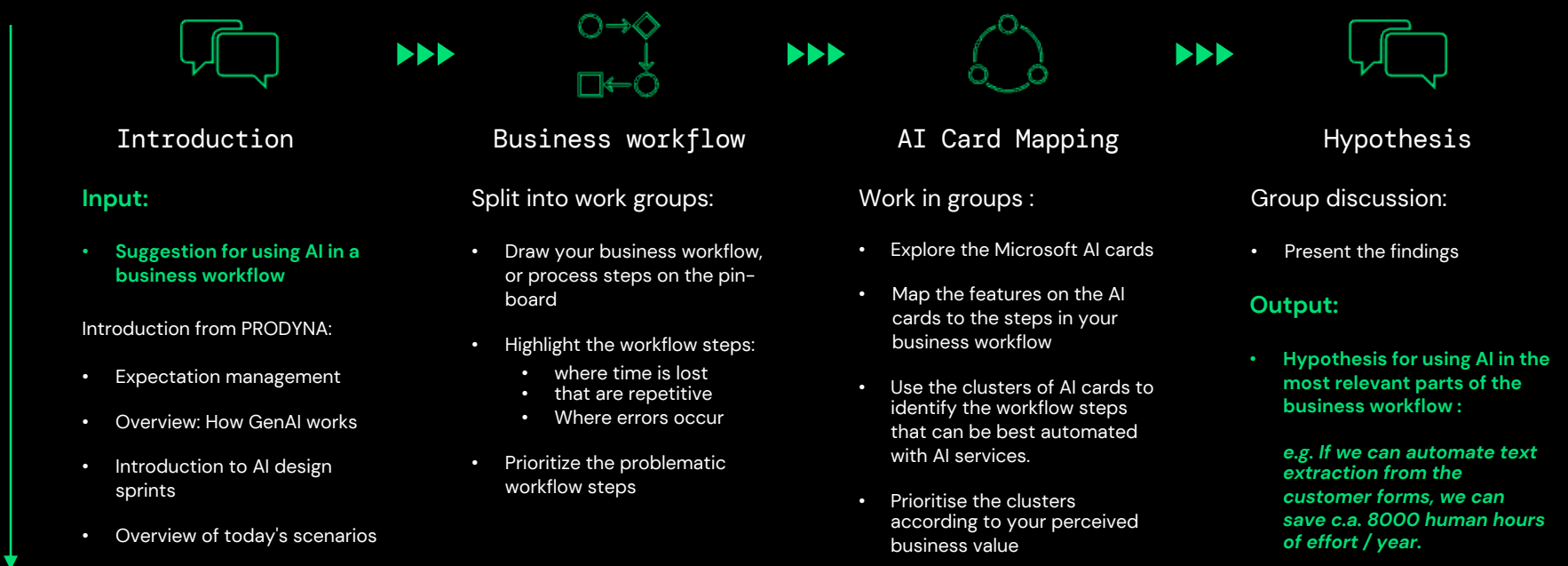## From the Business Process to Proof-of-Value

Many companies struggle to scale AI projects into production, resulting in countless failed PoCs. This is often due to immaturity in one or more of the three layers of a complete AI strategy. Our implementation process draws on experience and lessons learned from countless customer projects. It addresses all layers of the AI strategy, increases your AI maturity and considerably reduces project risk. With a structured set of workshops, assessments, and iterative development based around 4 quality gates; positive business value and business alignment, existence of a usable data basis, existence of an AI operating model, and functional verification via prototypic implementation, we ensure that well-substantiated AI use-case candidates scale properly in an enterprise production environment.

## 1. AI Use-Case Envisioning

Goal: Verify business value generation using AI in this use-case
Target audience: Process owner & business departments
Effort: 1 or 2-day workshop / use-case

### Introduction

**Input:**

• **Suggestion for using AI in a business workflow**

Introduction from PRODYNA:

• Expectation management

• Overview: How GenAI works

• Introduction to AI design sprints

• Overview of today's scenarios

### Business workflow

Split into work groups:

• Draw your business workflow, or process steps on the pin-board

• Highlight the workflow steps:
  • where time is lost
  • that are repetitive
  • Where errors occur

• Prioritize the problematic workflow steps

### AI Card Mapping

Work in groups :

• Explore the Microsoft AI cards

• Map the features on the AI cards to the steps in your business workflow

• Use the clusters of AI cards to identify the workflow steps that can be best automated with AI services.

• Prioritise the clusters according to your perceived business value

### Hypothesis

Group discussion:

• Present the findings

**Output:**

• **Hypothesis for using AI in the most relevant parts of the business workflow :**

  *e.g. If we can automate text extraction from the customer forms, we can save c.a. 8000 human hours of effort / year.*

## 2. Data Readiness for AI Assessment

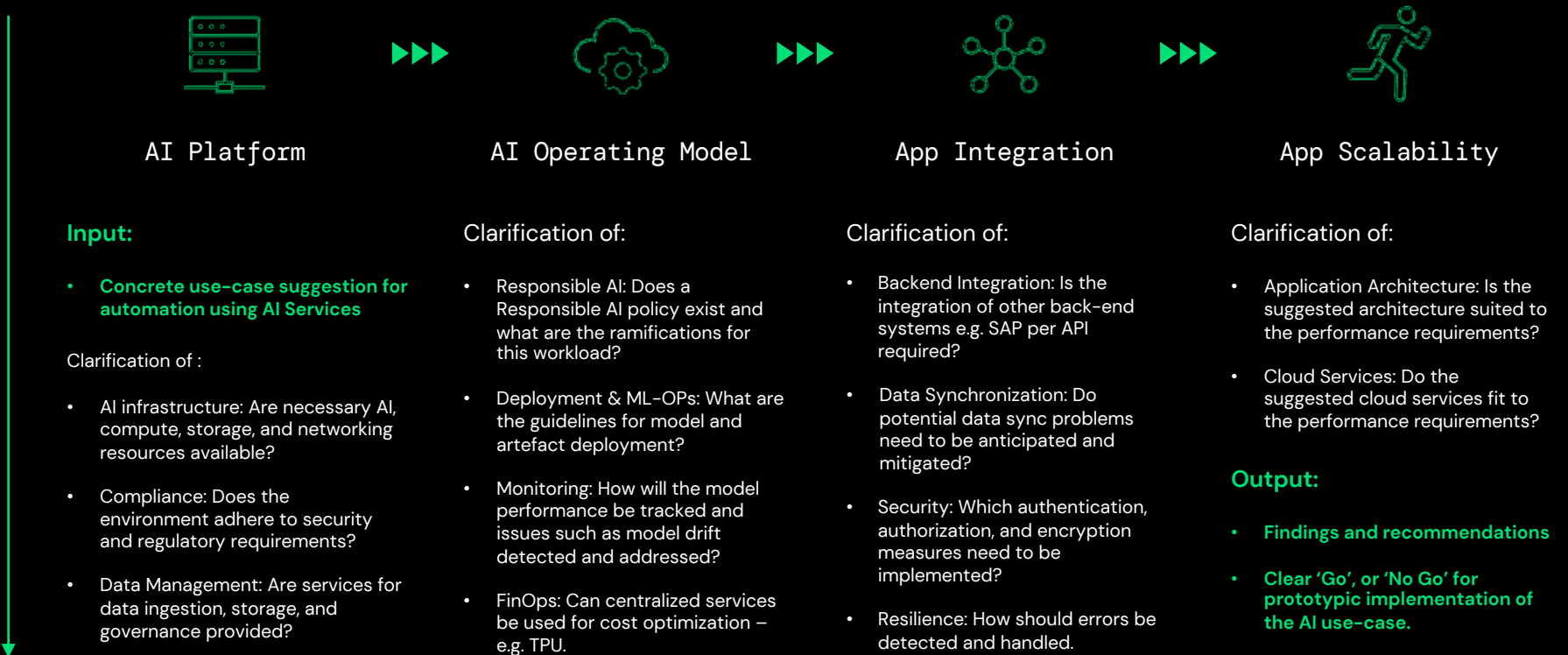Goal: Verify that data required for the use-case has an appropriate quality, format, & infrastructure
Target audience: Data Engineer, Data Steward, Process Owner
Effort: Typically, 2 - 5 days depending on complexity and number of data sources

### Data Relevance

**Input:**

• **Concrete use-case suggestion for automation using AI Services**

Clarification of :

• Contextual fit: Alignment with the specific goals of the project

• Timeliness: Does the data reflect the current state of the subject matter?

• Applicability : Is the data applicable to the specific context in which it is being used?

### Data Quality

Clarification of:

• Accuracy: Does the data represent the real-world values it is intended to model?

• Completeness: Does the data include all information without missing values or gaps?

• Consistency: Is the data uniform across different datasets and time. Are data formats, definitions, and values consistent?

• Reliability: Is the data dependable and stable over time?

### Data Security

Clarification of:

• Confidentiality: Is the data accessible only to authorized individuals?

• Integrity: Can the the accuracy and completeness of data over its lifecycle be maintained?

• Availability: Are there measures to protect against data loss, and ensure resiliency?

• Compliance: Adherence to relevant laws that govern data protection like GDPR, or HIPAA.

### Data Usability

Clarification of:

• Reachability: Is the data properly documented and in an appropriate format?

• Understandability: Is the data structure, meaning and context clear?

**Output:**

• **Findings and recommendations regarding all aspects of the data required for the use-case**

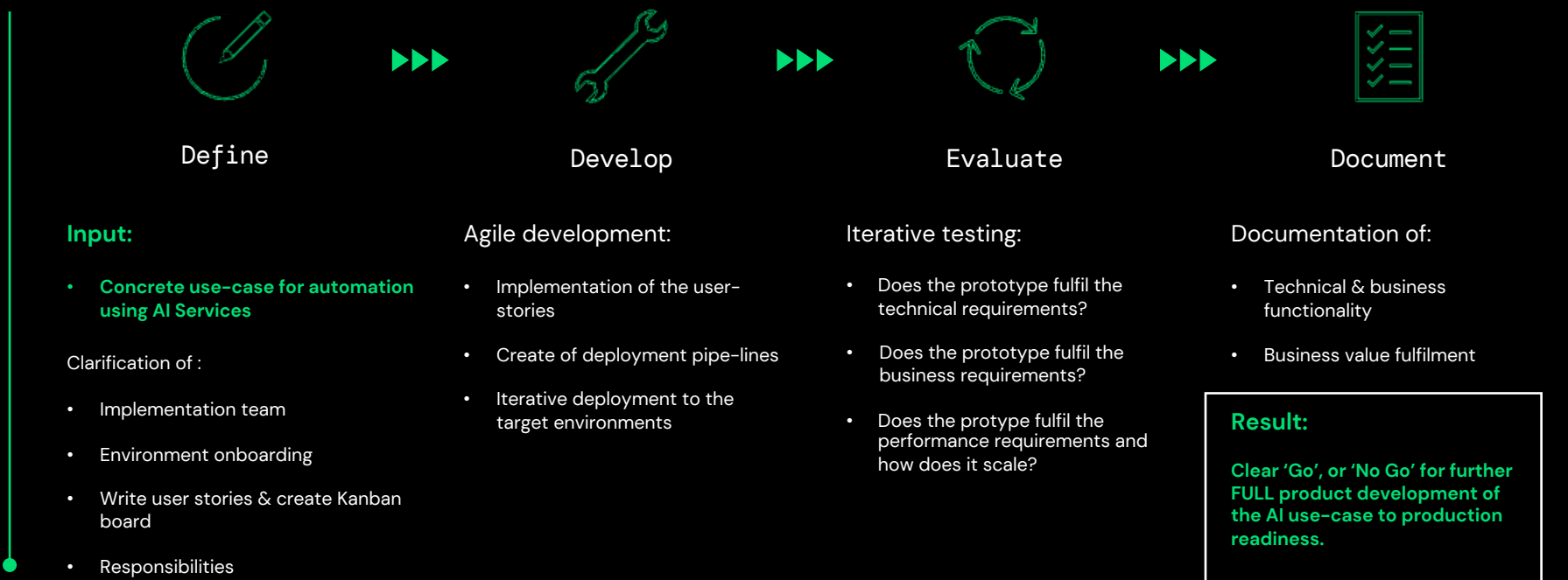• **Clear 'Go', or 'No Go' for further development of the AI use-case.**

# 3. AI Platform, AI Operating Model & Architecture Check

Goal: Verify that cloud platform and app. architecture can scale to the performance requirements
Target audience: DevOps Engineer, Software Architect, Network Engineer, Network Security
Effort: Typically, 3 - 5 days depending on complexity of the application and environment

### AI Platform    ### AI Operating Model    ### App Integration    ### App Scalability

**Input:**

- **Concrete use-case suggestion for automation using AI Services**

Clarification of :

- AI infrastructure: Are necessary AI, compute, storage, and networking resources available?

- Compliance: Does the environment adhere to security and regulatory requirements?

- Data Management: Are services for data ingestion, storage, and governance provided?

Clarification of:

- Responsible AI: Does a Responsible AI policy exist and what are the ramifications for this workload?

- Deployment & ML-OPs: What are the guidelines for model and artefact deployment?

- Monitoring: How will the model performance be tracked and issues such as model drift detected and addressed?

- FinOps: Can centralized services be used for cost optimization – e.g. TPU.

Clarification of:

- Backend Integration: Is the integration of other back-end systems e.g. SAP per API required?

- Data Synchronization: Do potential data sync problems need to be anticipated and mitigated?

- Security: Which authentication, authorization, and encryption measures need to be implemented?

- Resilience: How should errors be detected and handled.

Clarification of:

- Application Architecture: Is the suggested architecture suited to the performance requirements?

- Cloud Services: Do the suggested cloud services fit to the performance requirements?

**Output:**

- **Findings and recommendations**

- **Clear 'Go', or 'No Go' for prototypic implementation of the AI use-case.**

# 4. Prototypic Implementation & Verification

Goal: Create a prototypic implementation of the use-case to verify function and business value
Target audience: Software Engineer, Software Architect, DevOps Engineer, Process Owner
Effort: Typically, 10 - 30 days depending on complexity of the application and environment

### Define    ### Develop    ### Evaluate    ### Document

**Input:**

- **Concrete use-case for automation using AI Services**

Clarification of :

- Implementation team

- Environment onboarding

- Write user stories & create Kanban board

- Responsibilities

Agile development:

- Implementation of the user-stories

- Create of deployment pipe-lines

- Iterative deployment to the target environments

Iterative testing:

- Does the prototype fulfil the technical requirements?

- Does the prototype fulfil the business requirements?

- Does the protype fulfil the performance requirements and how does it scale?

Documentation of:

- Technical & business functionality

- Business value fulfilment

**Result:**

**Clear 'Go', or 'No Go' for further FULL product development of the AI use-case to production readiness.**

**PRODYNA**

System Integrator:

- DACH, UK, GR

- > 400 Consultants

- > 20 year's experience

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