

# The Triangle of Successful Data Management:

Learning Experiences and Key Takeaways from the Automotive Industry

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## 01. INTRODUCTION

RESEARCH  
& DEVELOPMENT

**Euranova** is a research center  
and IT consultancy company.

Founded in 2008



## EXPERTISE



The scientific know-how and its experience on  
the field encompasses:

Engineering – **Data Governance** -  
Management Architecture Data Analytics  
- Strategy



## LOCATIONS

BELGIUM (Headquarters)  
FRANCE  
TUNISIA

## SERVICES



- Expert Consultancy
- Solution Delivery
- Innovation Advisory

# Getting Value How we started

The data management program is executed within the strategic framework of the Enterprise Information program to support the company's ambitions in developing advanced analytics use cases.

The presentation brings forward **best practices** and **learnings** which have proved to be crucial for the success of the data management and Data Governance journey at **Toyota Motor Europe**.

When addressing three key, joint aspects:

“ Getting value, building trust in data with a future-proof Data Governance framework, and implementation. ”

## Align the data governance program with TME's strategic data ambitions



Goals: support TME's ambitions to



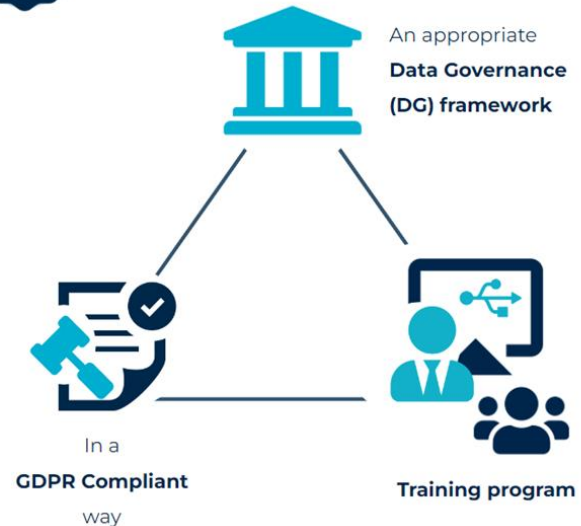
Develop advanced analytics use cases

Break down the data silos => Set up a transversal DG framework

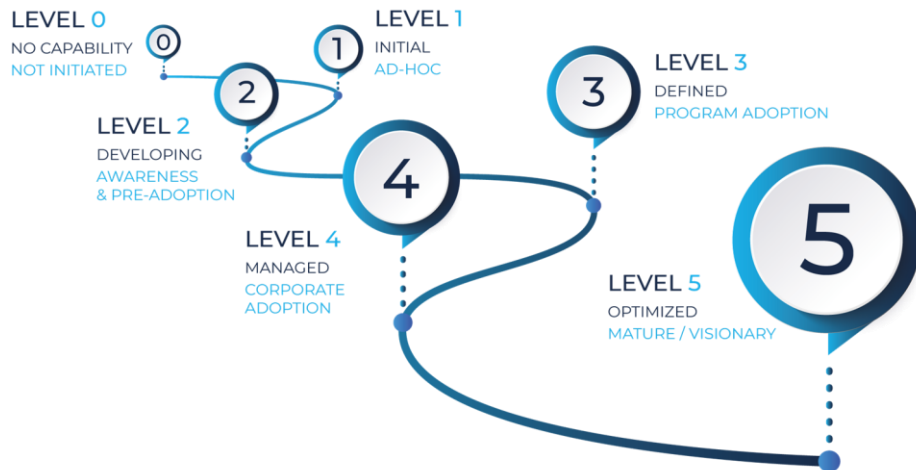
Enable clear indisputable usage of any data across the company's processes



Requirements: The setup of



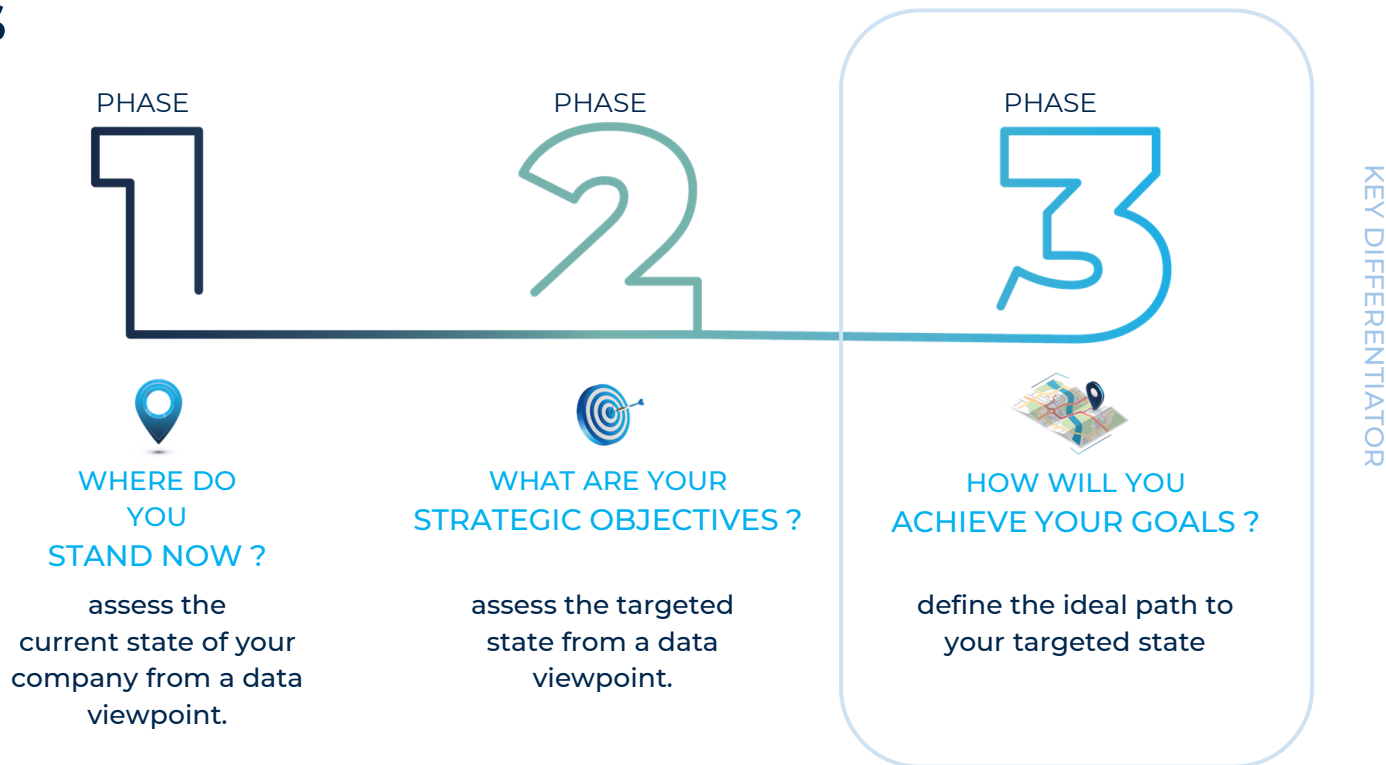
# Euranova - Data Management Maturity Model



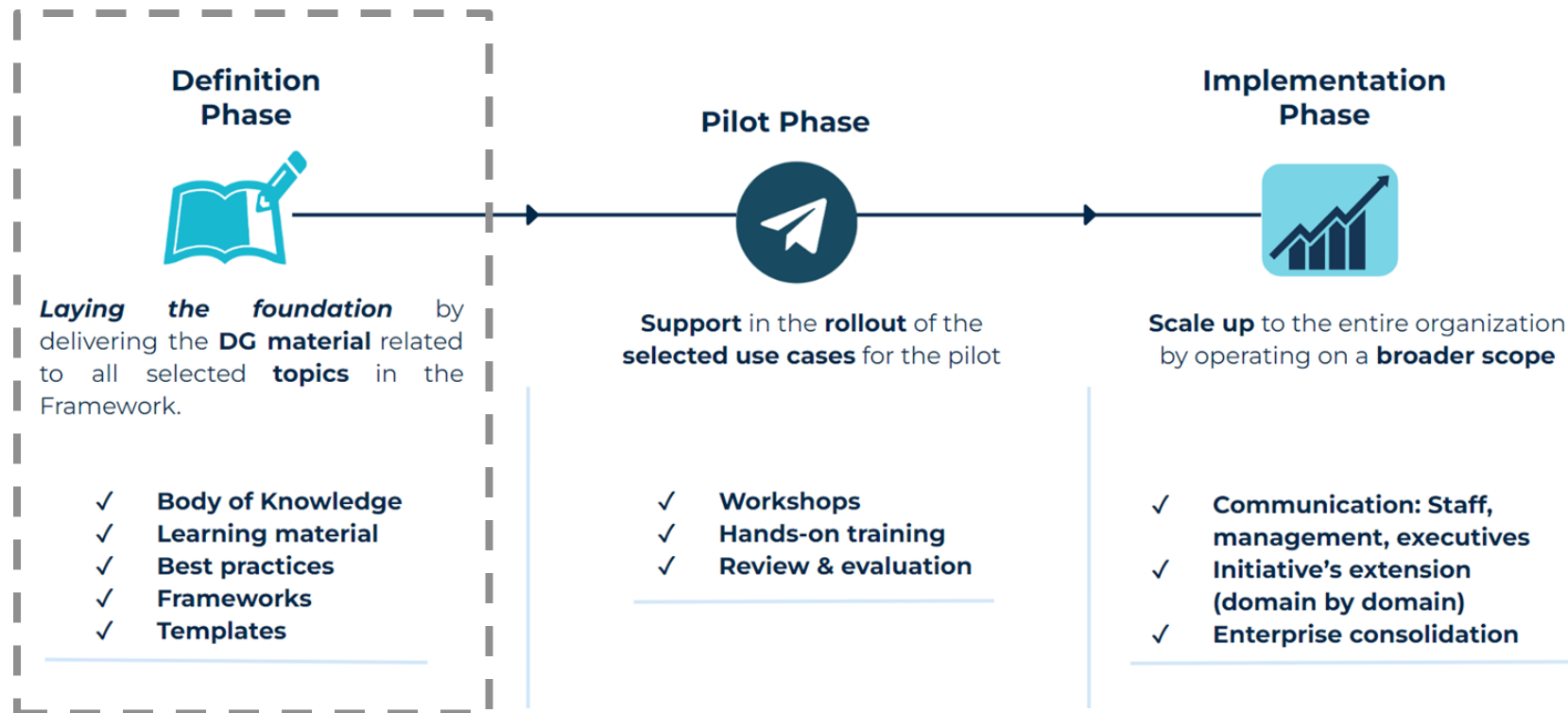
**DMMM 2.0** We assess the **existing** TME setup by determining the maturity level in terms of **data management and data governance**.

- ✓ **Compare** the execution of processes with **predefined goals** and **strategy** that TME has set for its long-term alignment with the value and culture.
- ✓ Consider **privacy** and **GDPR compliance**.

# PHASES

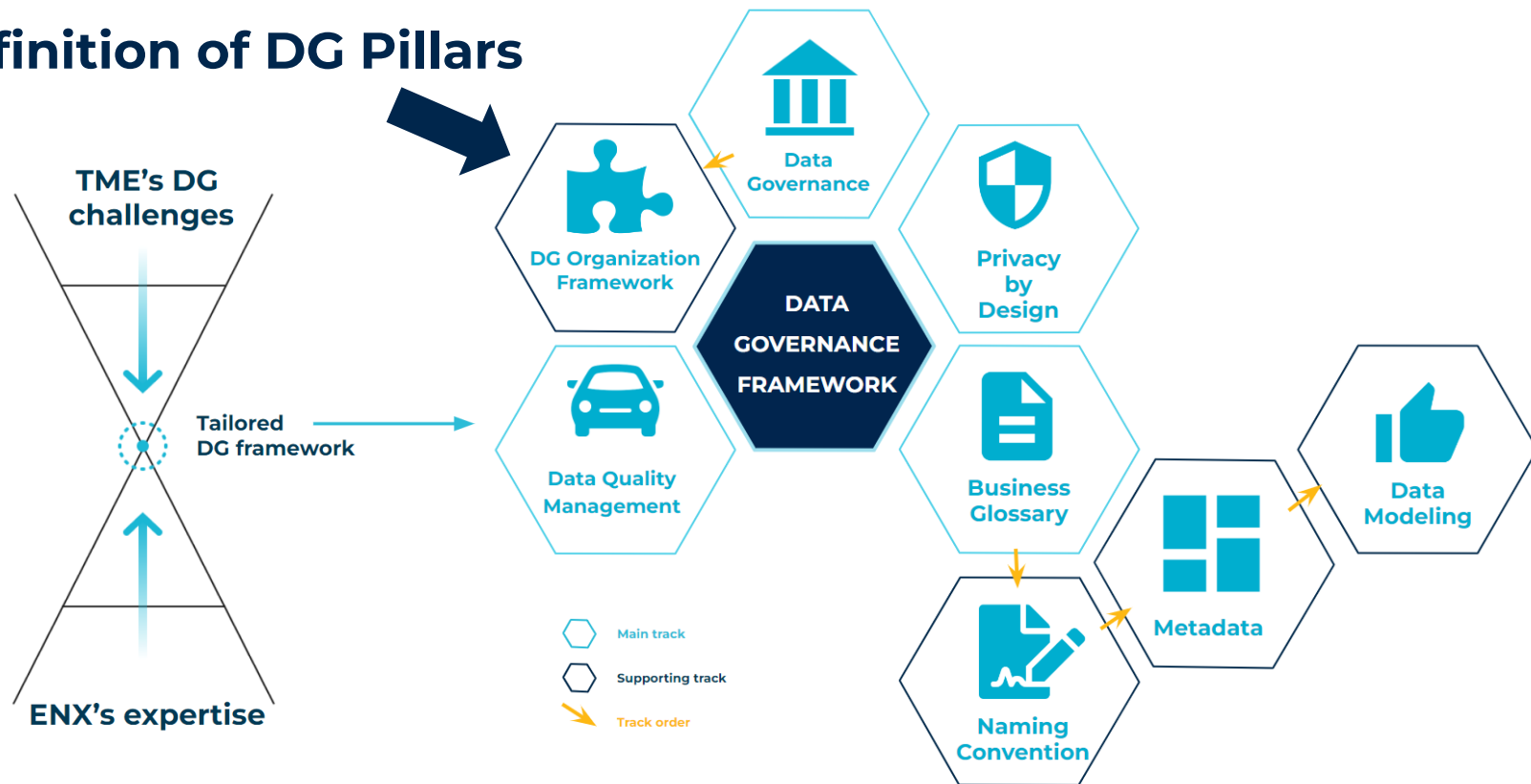


## 03. METHODOLOGY



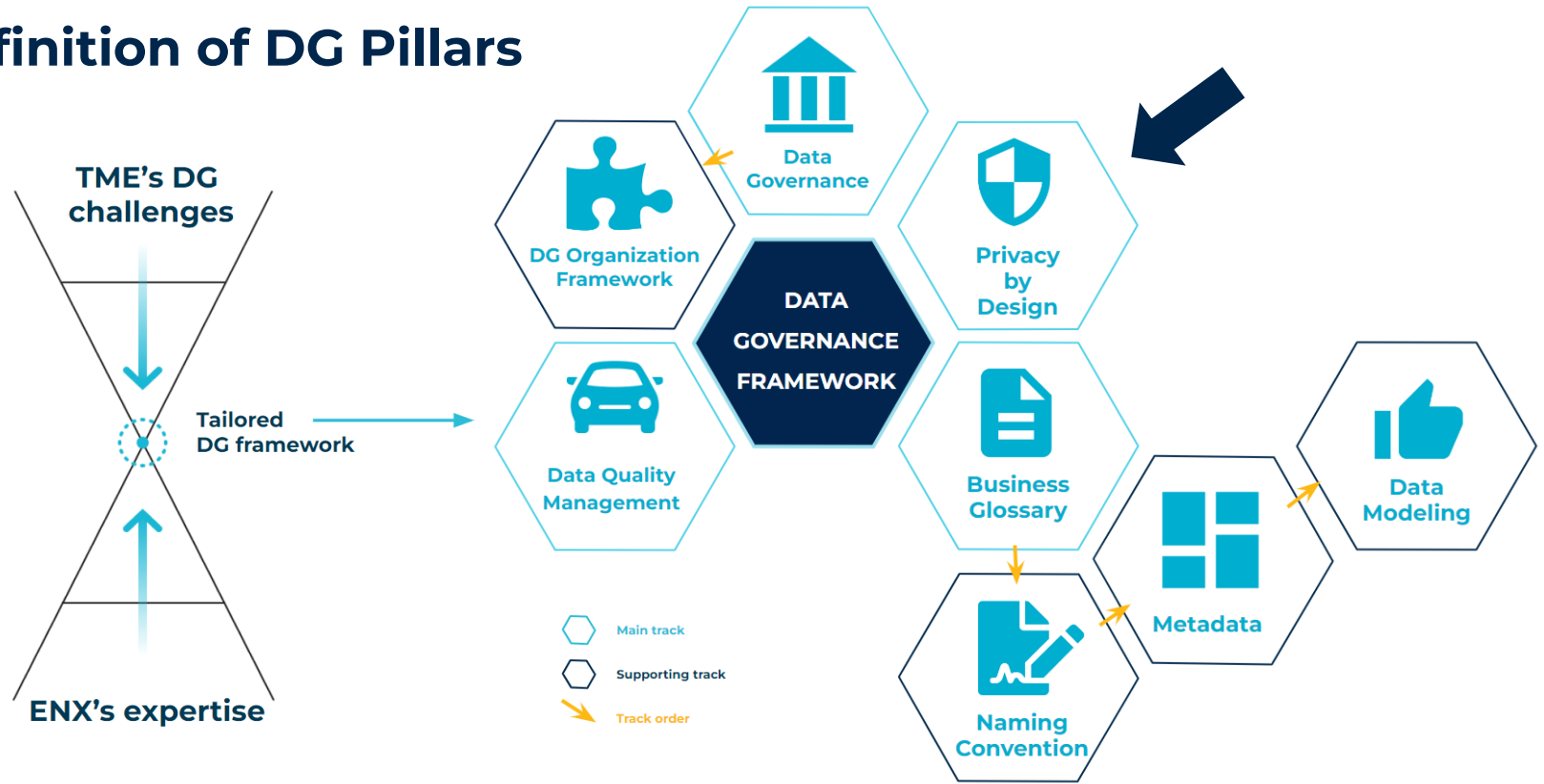
## 04. TAILORED DATA GOVERNANCE FRAMEWORK

# Definition of DG Pillars





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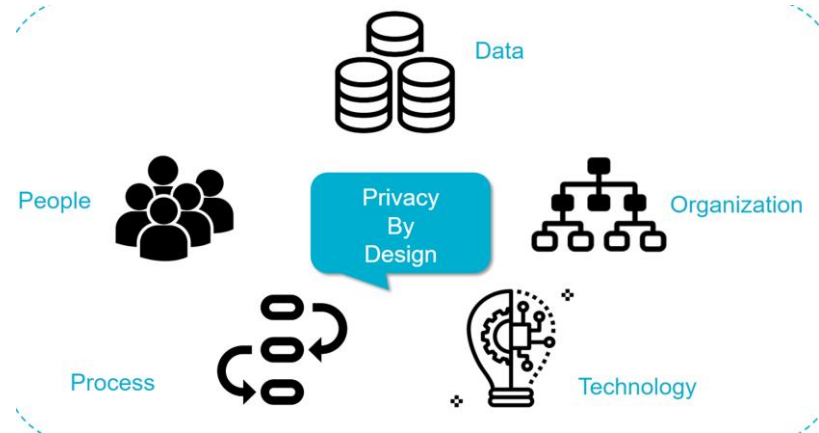
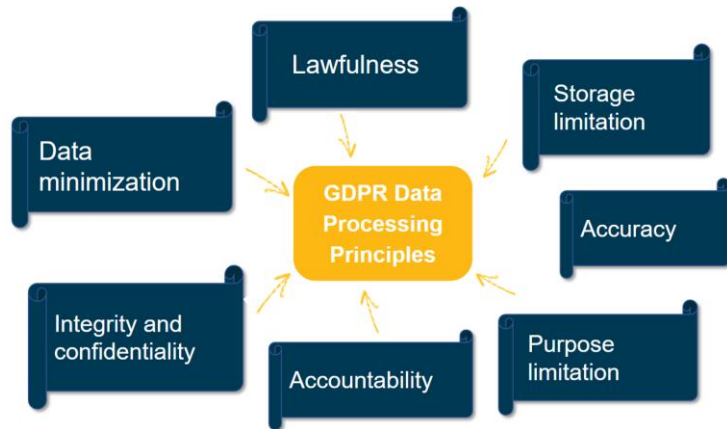


# Deliverables

## 04. TAILORED DATA GOVERNANCE FRAMEWORK

### 1. State of The Art

#### A. Establishing Privacy by Design DIMENSIONS



#### B. Defining Privacy by Design PRINCIPLES

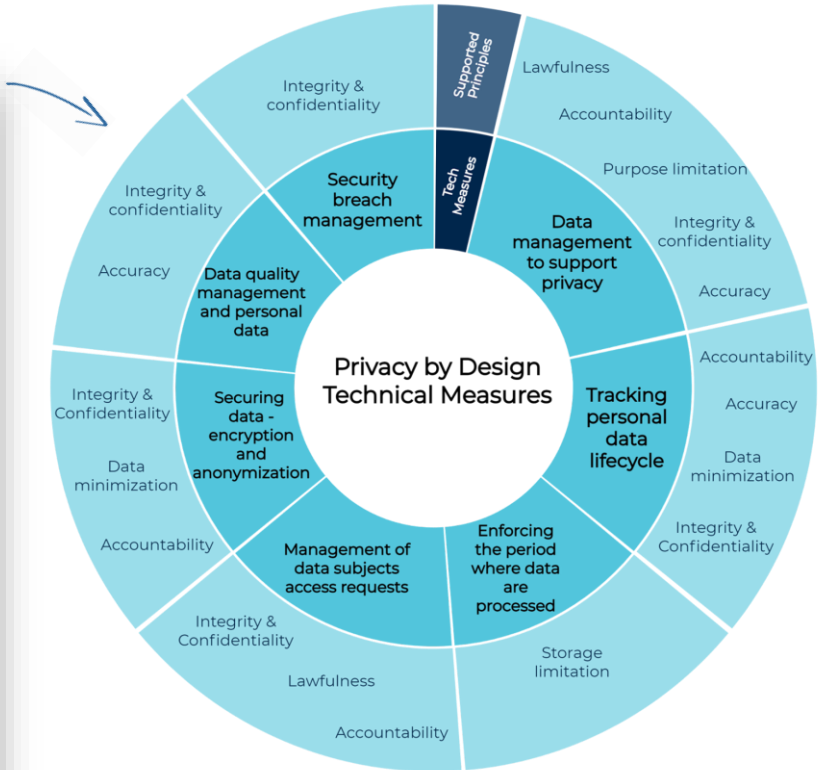
# Deliverables

## 04. TAILORED DATA GOVERNANCE FRAMEWORK

Law / GDPR Principles

### 1. State of The Art

Technology strategy requirements	
REQ01	<b>Governing data—data management to support Privacy</b>
	<b>Support for:</b> Lawfulness, Accountability, Purpose limitation, Integrity & confidentiality, and Accuracy Principles
REQ02	<b>Tracking personal data lifecycle</b>
	<b>Support for:</b> Accountability, Accuracy, Data minimization, Integrity, and confidentiality Principles
REQ03	<b>Enforcing the period where data are processed</b>
	<b>Support for:</b> Storage Limitation Principle
REQ04	<b>Management of Data Subjects Access Requests (SARs)</b>
	<b>Support for:</b> Integrity and confidentiality, Accountability, and Lawfulness principles and respect for data subject rights
REQ05	<b>Securing data—encryption &amp; anonymization</b>
	<b>Support for:</b> Integrity & confidentiality, Data Minimization, and Accountability Principles
REQ06	<b>Data quality management of personal data</b>
	<b>Support for:</b> Integrity & confidentiality and Accuracy Principles
REQ07	<b>Security breach Management</b>
	<b>Support for:</b> Integrity & confidentiality Principles



Privacy by Design IT-Measures

The Triangle of Successful Data Management

## 04. TAILORED DATA GOVERNANCE FRAMEWORK

# 2. Gap Analysis

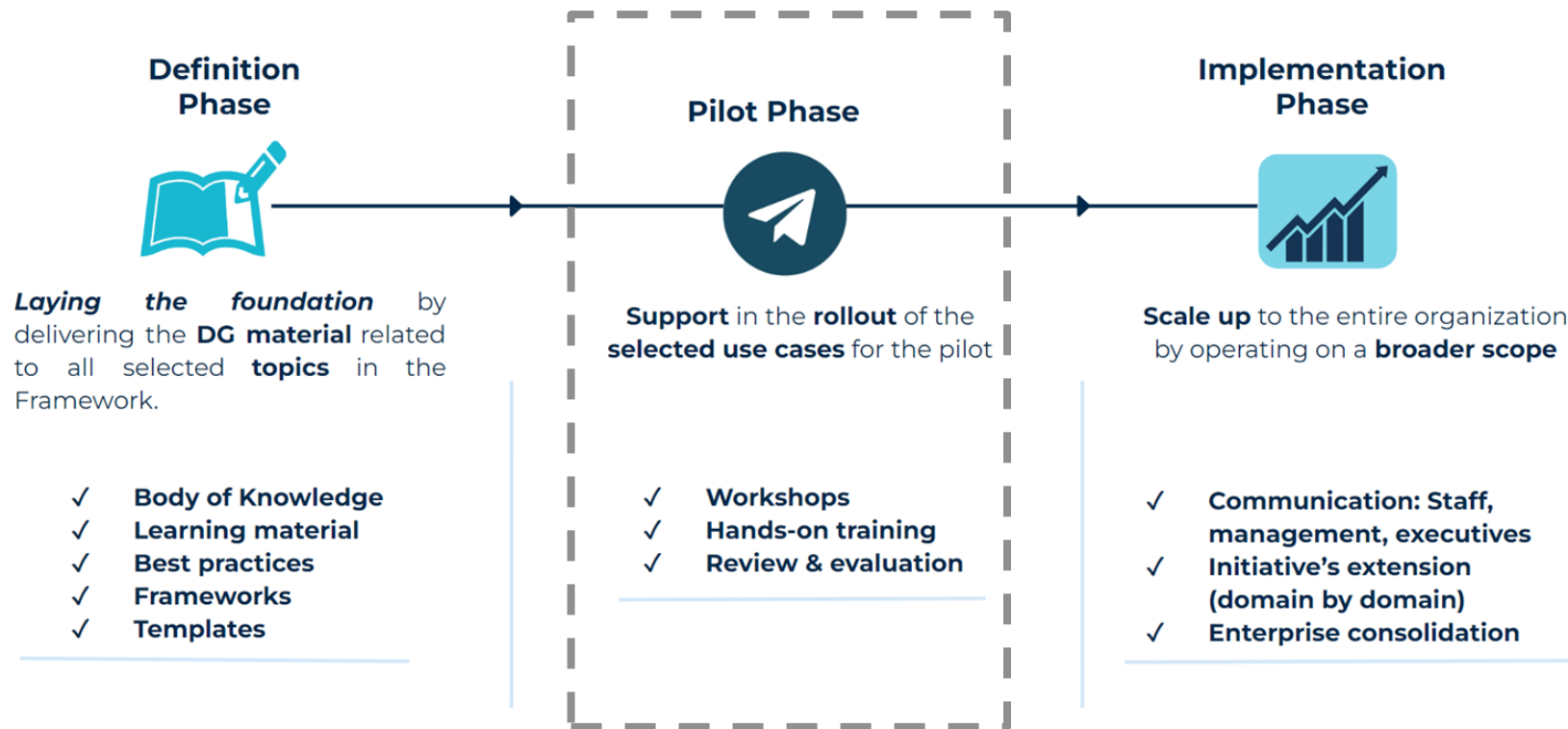
Privacy by design-TME Processes Gap Analysis		EURV NOVA			
Checkpoints	X (Do not exist)	= (exists but partially covering the need)	V (exists and is fully Implemented)	RACI	Comments (description + reference)
<b>REQ 01</b>	<b>Governing Data - Information management to support Privacy</b>				
	Who manages the data governance? What are the governing bodies to enforce the definition of the business terms, of the classification, and of the mapping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A
	What are the roles of data stewards and custodians in this process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Who validates the business catalogs? Do we need an ERM for all data domains?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Is there an onboarding process for data sources? Who is responsible for this process? Do we map the schema of the sources to the ERM business terms?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	How the data retention policy is defined and what are the legal periods for retention?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Is there a common definition of purposes for data acquisition legal grounds? Who is responsible for defining these purposes? What is the RACI matrix?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	What is the process to request a dump of data subject data? (in order to provide the information - ask for the GDPR) to the data subject upon an access request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A
	What is the process to ask for full removal of the personal data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	What is the procedure for further processing of personal data for a different but related purpose? (who performs the assessment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C
<b>REQ 02</b>	<b>Tracking personal data lifecycle</b>				
	What is the process to follow when a data team wants to access personal data? How do they express their purpose? Who decides about granting access? Is the same legal ground and purposes for data acquisition used in this requested processing activity? How does the DPIA get involved? How is the result of this process recorded?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Have the instances that require performing DPIA been identified? Are the requirements and methodology for the DPIA agreed upon? Is the DPIA the same as the data access demand process or are different processes require independent of different teams, security? Who enforces the compliance with the results of the DPIA, and how?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	When the access to data is granted, who is in charge of defining the correct access security policy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Once the audit trails are aggregated, who is responsible for auditing and monitoring the audit trails? How are the audit trails used in the SAG management, or in a controller audit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
<b>REQ 03</b>	<b>Enforcing the period where Data are processed</b>				
	Is the data retention period configured at the onboarding process of a new data source?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Who is responsible for identifying the correct retention period? How is the retention period tied to the legal ground for data acquisition (context for instance)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
	Who is responsible for enforcing the expiration of the retention period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R
<b>REQ 04</b>	<b>Management of Data Subjects Access Requests (SARs)</b>				
	What is the process that follows a data subject request for data rectification? How does the data controller authenticate the data subject and validity of their requests?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R

Privacy checkpoints Matrix

# 3. Recommendations

=> Definition & integration of a **business process** with the DG & data analytics development processes and workflows.

This methodology is **easily adaptable** to **re-use** in supporting any legal framework from compliance perspective, under any **geographical location** and **privacy laws**.



## Onboarding process - APPROACH

**Step 1:** assess your existing data governance setup

### Sample assessment questionnaire

- Do you know all the **critical data elements** used in your domain or use case?
- How do you keep **track** of all the critical data elements, and how do you **update** them regularly?
- Do you know how the critical data element is being **stored** and used across the company? Do you have the **full visibility**?
- Have you defined **clear ownership** for each of the data elements?



**Step 2:** Select one of the following approach based on the assessment outcome

- ✓ **Top-Down Approach: Start from business**
- ✓ **Bottom-Up Approach: Initiated from IT side**



**Step 3:** Organize Official kickoff with the selected use case/domain team

### Defined PHASES



## Onboarding process – KEY HIGHLIGHTS

- ✓ Identification of **critical data elements**
- ✓ Identification of **domains** and **sub-domains**
- ✓ Creation of the **business glossary, logical/conceptual layer**



- ✓ Identification and appointment of **key stakeholders** (*Data Steward, Data Owner, DG Coordinator, Data Architect, Privacy Steward*)
- ✓ Ingestion of the critical/relevant **data sources**
- ✓ Creation of the **lineage**

### Challenges/learnings



- ❑ Company's culture and adaptability with change
- ❑ Level of Data Governance knowledge
- ❑ Understanding the value data governance would bring on company wide level and daily tasks (efforts vs benefits)

## 05. ROLLOUT

Steps	Activities	Efforts by Roles (in business days = 8hours)								
		IT roles (b4d) from onboarded UC	Collibra Team	BP Team	Data Architect	Data Steward	Data Owner	DG Coordinator	Technical Owner	Privacy Role
COLLECT	Identify the relevant data sources, databases, tables, columns	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Appoint Technical Owner	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Ingestion of data sources into Collibra Data Catalog	0.3	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Trigger the identification process of role: DG Coordinator	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DEFINE & CONTEXTUALISE	Identify potential data domains & sub-domains (proposal)	N/A	N/A	1	2	N/A	N/A	N/A	N/A	N/A
	Appoint: data owner and data steward(s)	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A
	Identify critical data elements from data sources (IT applications) together with their definitions & physical location	2	N/A	0.2	1	N/A	N/A	N/A	N/A	N/A
	First attempt to identify the main business terms from the listed data elements	N/A								
	Identify the concerned data domains & sub-domains	N/A								
	Check if business terms exist in Collibra	N/A								
	Define and review business terms following guidelines	N/A								
	Identify the policy associated with business terms, data elements	0.2								
	Map the business terms with the logical data elements (entities and attributes)	N/A								
	Map the logical elements with physical data elements (data sources)	N/A								
CONSTRUCT DATA LINEAGE	Final approval & green light for ingestion	0.5								
CREATE & OPERATIONALISE	Create the identified business terms in identified domains in Collibra	N/A								
	Map the business terms with physical and logical layer in Collibra	N/A								
	Create the data lineage view - diagrammatic representation of all relations	N/A								
	Assign user responsibilities and ask for approval	N/A								
PUBLISH & ENGAGE	Final approval	N/A								
PUBLISH & ENGAGE	Move to productions	N/A								
	Make business glossary and lineages available to relevant stakeholders	N/A								
	Periodic audit/maintenance of business terms	N/A								
	Total Efforts	6								



Onboarding phases	Primary Ownership	Participants	Time required	Assumptions
COLLECT	Business	Business SME roles, Data Architect, ENX Team	Complex: 3 weeks Medium: 3 weeks Simple: 2 weeks	<ul style="list-style-type: none"> <li>Number of business terms: 50</li> <li>Number of data sources: 4-5</li> <li>API integration is not required</li> </ul>
DEFINE & CONTEXTUALIZE	Business	Data Owner, Data Architect, ENX Team, DG Coordinator, Data Steward, Business SME roles, Privacy roles	Complex: 3 weeks Medium: 3 weeks Simple: 2 weeks	
CONSTRUCT DATA LINEAGE	Business + IT	Data Owner, Data Architect, Data Custodian, Collibra Team	Complex: 2 weeks Medium: 2 weeks Simple: 1 week	
CREATE & OPERATIONALISE	IT	Data Steward, Collibra Team	Complex: 3 weeks Medium: 3 weeks Simple: 2 weeks	
PUBLISH & ENGAGE	Business + IT	DG Coordinator, Data Owner, Data Steward, Collibra Team	Complex: 1-2 weeks Medium: 1 week Simple: 1 week	

This timeline is valid only for establishing the foundations. Once the foundation has been setup, it can be leveraged for specific use cases.

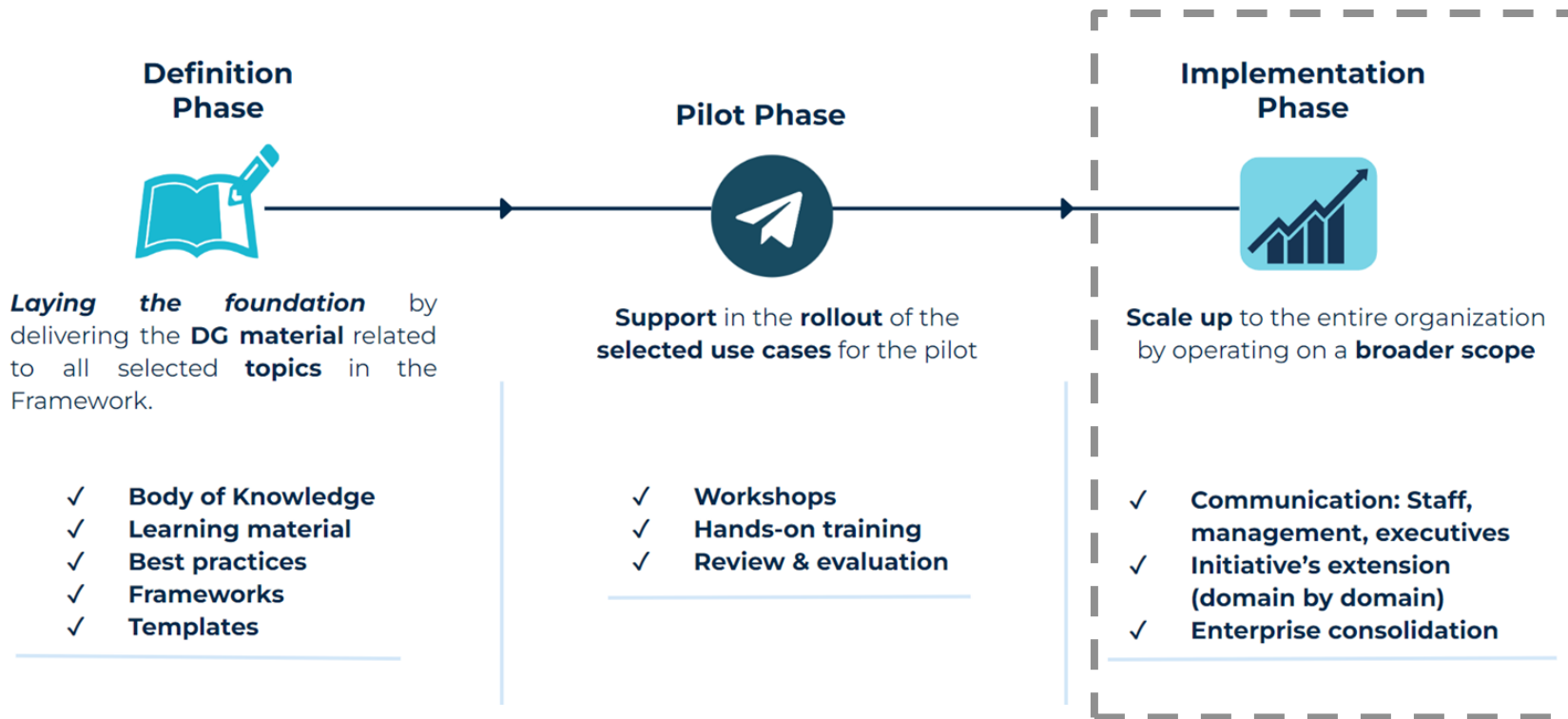
### Standardizing and modelling the :

- Processes
- Activities
- Roles involved
- Estimations of efforts and time



## Tool for the roadmap and program management





## Leadership support and Executive Sponsorship



To fulfill the data governance mission's requirement, there needs to be a

# DG-LEADS

To advocate and promote the DG program on a company-wide scale.



# Value

## Why?

To **provide impact and business added value**:

Need to maximize adoption rate across the organization, through:

**Awareness**

**Knowledge sharing**

**Referenced applications**

**Evolution, not revolution**, to minimize big bang impacts and to **reduce failure risks**. A **Step-by-step approach**, related to I culture and stakeholders' capabilities improvement.



## What?

**Deliverables:** Training material created and shared with the customer (learning snacks @ TME)

It is a learning doc

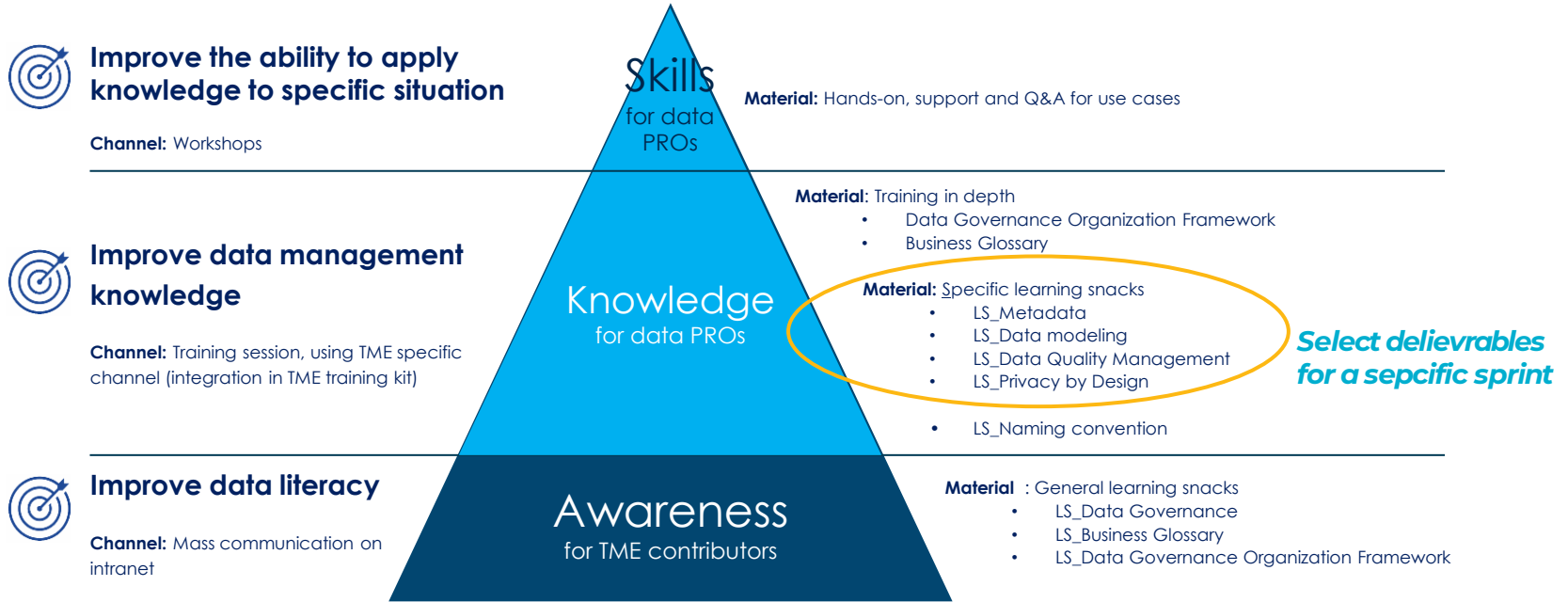


## How?

Communication plan defined with TME: 6 dimensions to help defining the message to convey and how to do it (**WHAT, WHEN, WHO, WHERE, HOW & WHY**)

02. COMMUNICATION & TRAINING

Learning model, on which developing communicative competence is based:



How to? A 3-step roadmap



## 3 main questions:

1. How to support any legal framework? 
  2. How to support the change management?
  3. How to scale up after the initial pilot?
- ✓ Acknowledging the current maturity level of the company in which you want to implement change
  - ✓ Offering a flexible DG framework with tools easily adaptable to the company's culture, processes, and structure
  - ✓ Adopting an agile sprint-based approach in defining the frameworks and their execution

## Network



# THANK YOU FOR YOUR ATTENTION!

## CONTACT

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