

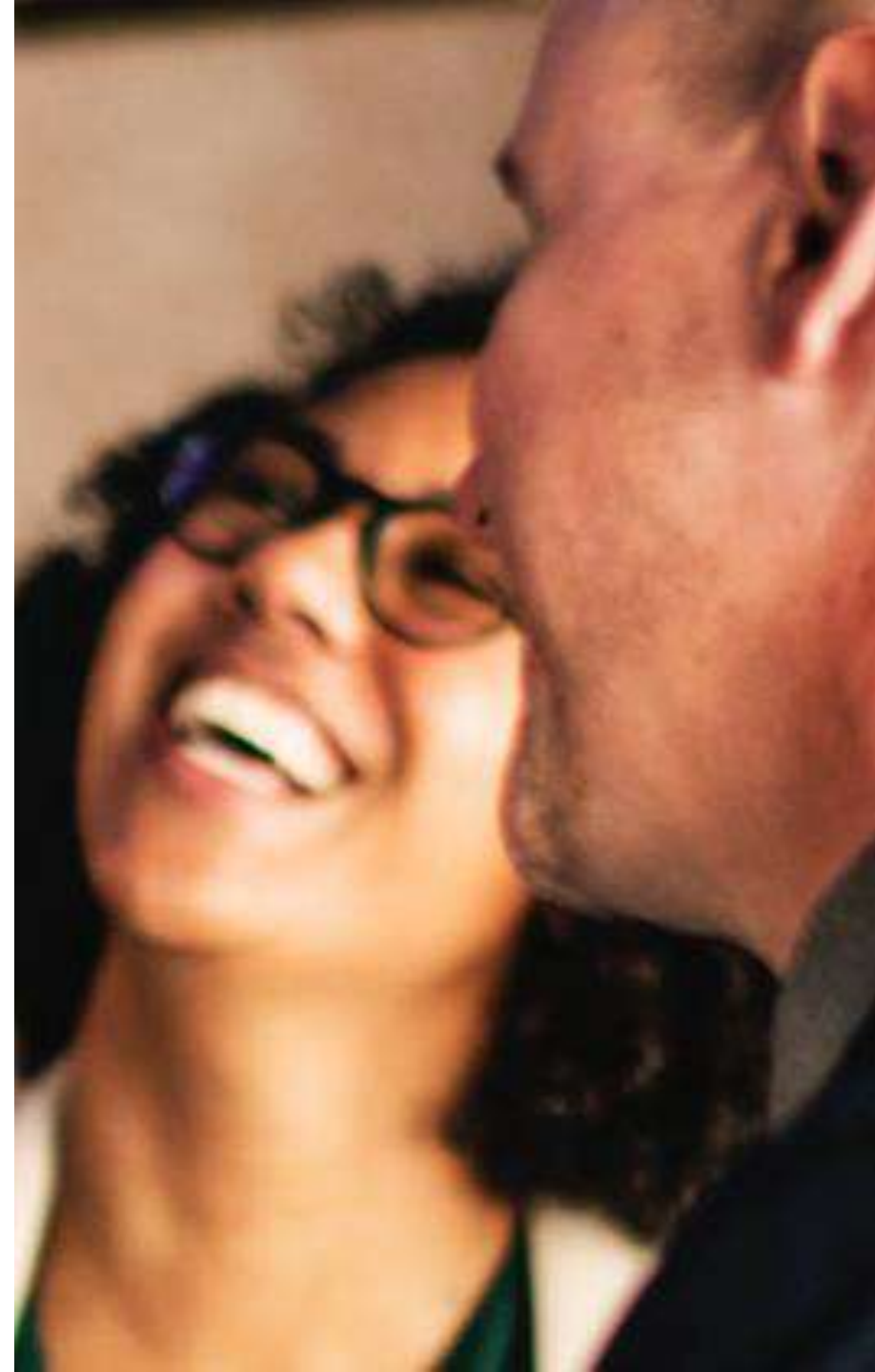


# e-SIDES

## Why are privacy-preserving technologies not used more widely?

*Daniel Bachlechner, Fraunhofer*

BDVe Webinar  
31 January 2020



# Objectives and methods

## *Key objectives*

Reach a common vision for an **ethically sound approach** to data use and facilitate **responsible research and innovation**

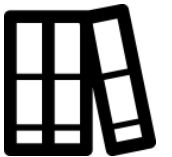


Improve the **dialogue between stakeholders** and increase the **confidence of citizens** in data technologies and use



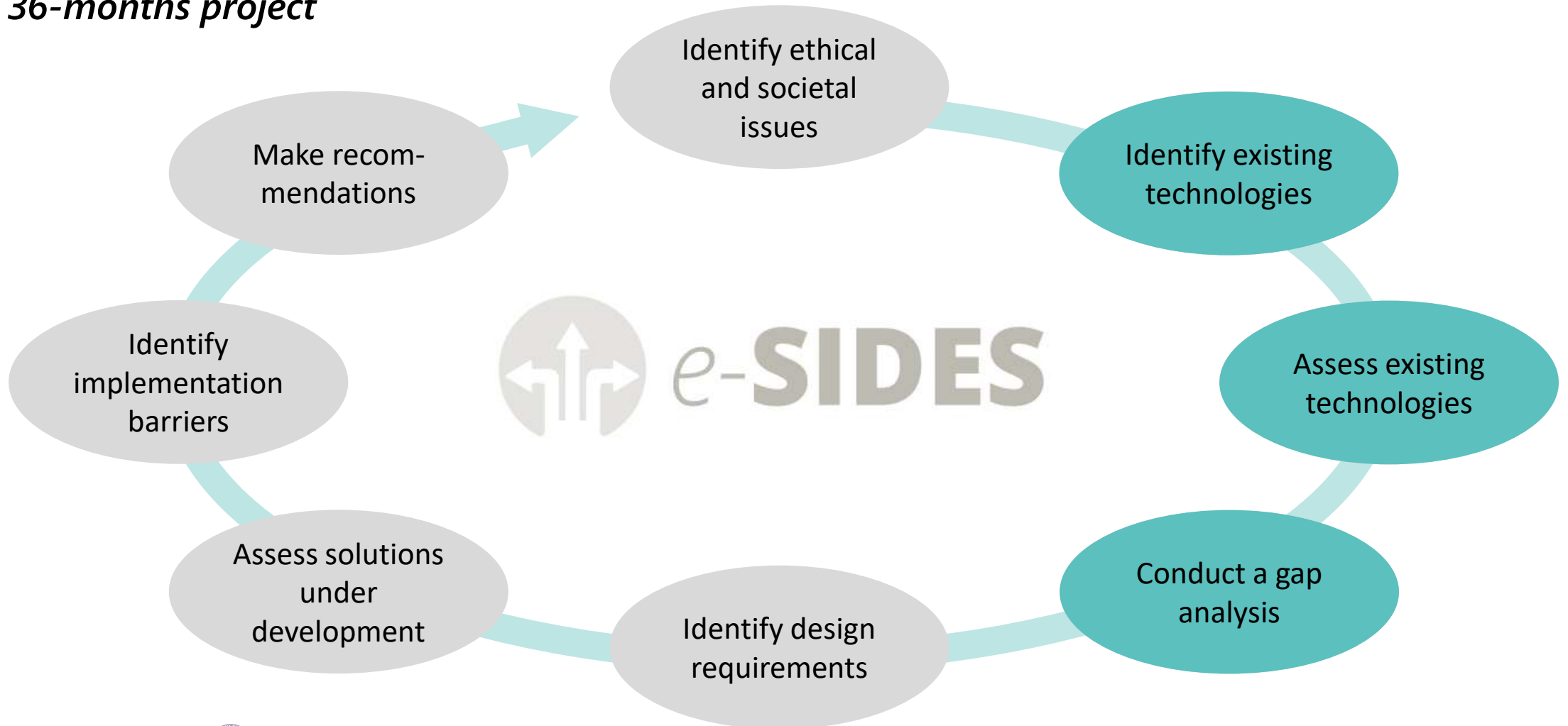
## *Main methods*

- Investigation of **related projects** through joint workshops, interviews and website analyses
- Collection of insight from **renowned experts** with different backgrounds through workshops and interviews
- Review of more than 200 **articles** including academic papers and study reports
- Interaction with a **diverse set of stakeholders** by means of a collaborative platform



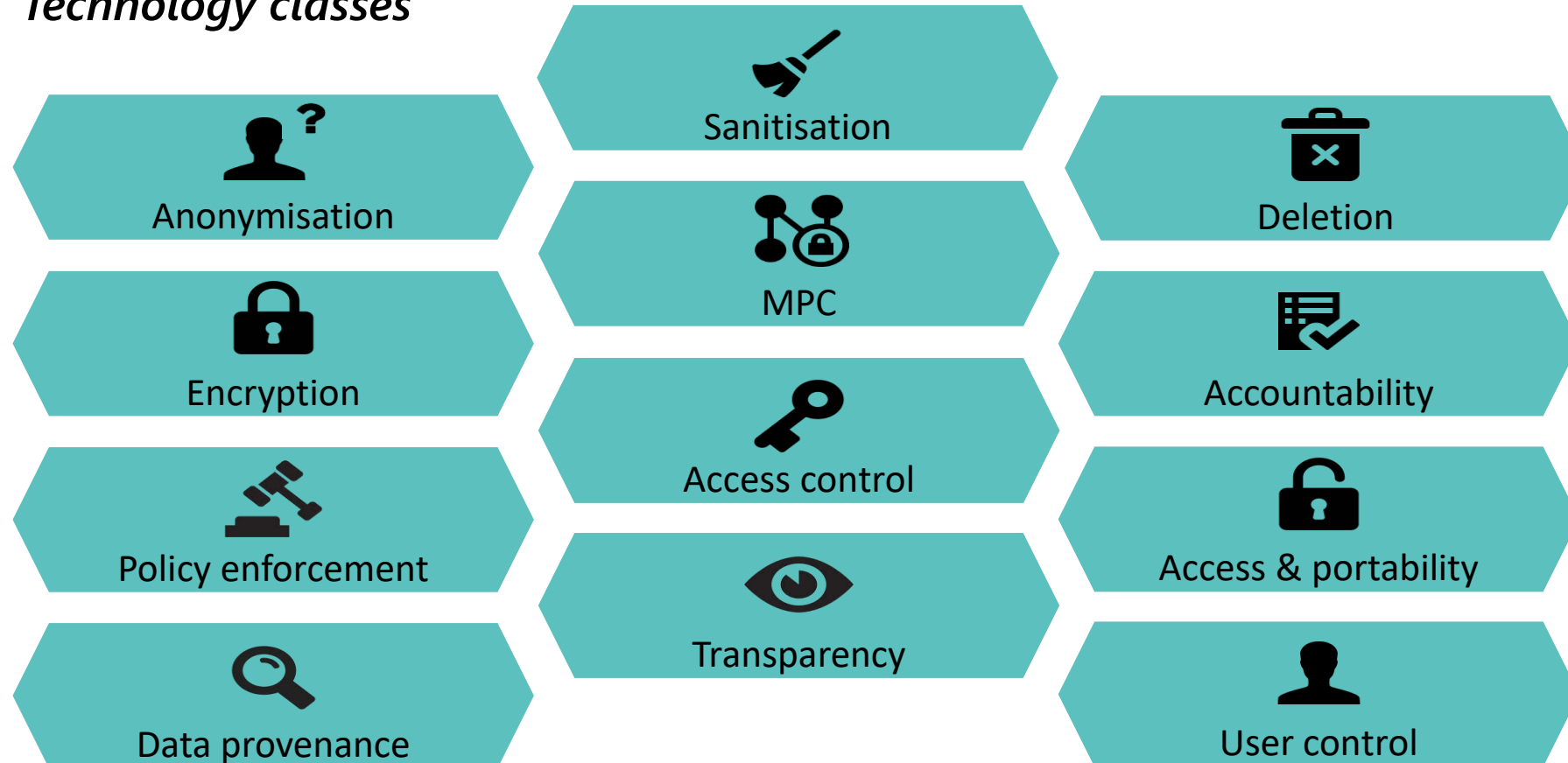
# Phases and focus

*36-months project*



# Existing technologies

## Technology classes



Resources: D3.1, white paper

# Existing technologies

## *Effectiveness and challenges*

- The set of technology classes is **comprehensive**
- Classes of technologies need to be **combined** to be effective
- Technologies pursue different **aims**
- A multidimensional **measure** is required
- There is **tension** between objectives

## *Perception and use*

- Limited **integration** into today's big data solutions
- Low **demand** for privacy-preserving big data solutions
- Considerable **regional differences** regarding perception and use
- Combination with **non-technical measures** needed
- Unclear **responsibilities** for protecting privacy

Resources: D3.2, white paper, WISP publication

# Limited integration

## *Relevant societal and economic aspects*

Costs and benefits
Business models
Public attention
Economic value
Cultural fit
Skill level

- Preserving privacy leads to **additional costs** but there is only little information about the **amount of costs**
- **User inconvenience**, for example, has been described as a relevant cost factor
- There is no evidence that privacy-preserving solutions lead to **increased sales** or justify **higher prices**
- The use of privacy-preserving technologies must make **economic sense**

Resources: D4.1, white paper

# Limited integration

## *Relevant societal and economic aspects*

Costs and benefits

**Business models**

Public attention

Economic value

Cultural fit

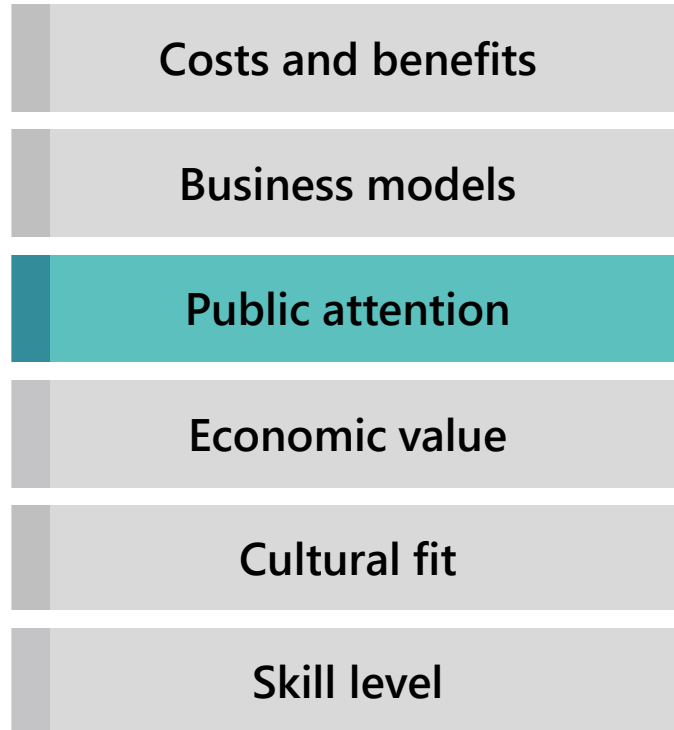
Skill level

- Privacy preservation may be in **conflict** with business models
- Profits made are often not **shared** through innovative business models
- **Trade-off** between privacy protection and the utility of data
- Fear of **limitations** in flexibility and the ability to innovate

Resources: D4.1, white paper

# Limited integration

## *Relevant societal and economic aspects*



- Privacy protection is not yet a **standard business practice**
- Actors tend to take **extreme positions** regarding privacy preservation
- Potential to allow for **competitive differentiation** (e.g., Apple)
- Limited **transparency** with respect to algorithms and data provenance

Resources: D4.1, white paper



# Limited integration

## *Relevant societal and economic aspects*

Costs and benefits

Business models

Public attention

Economic value

Cultural fit

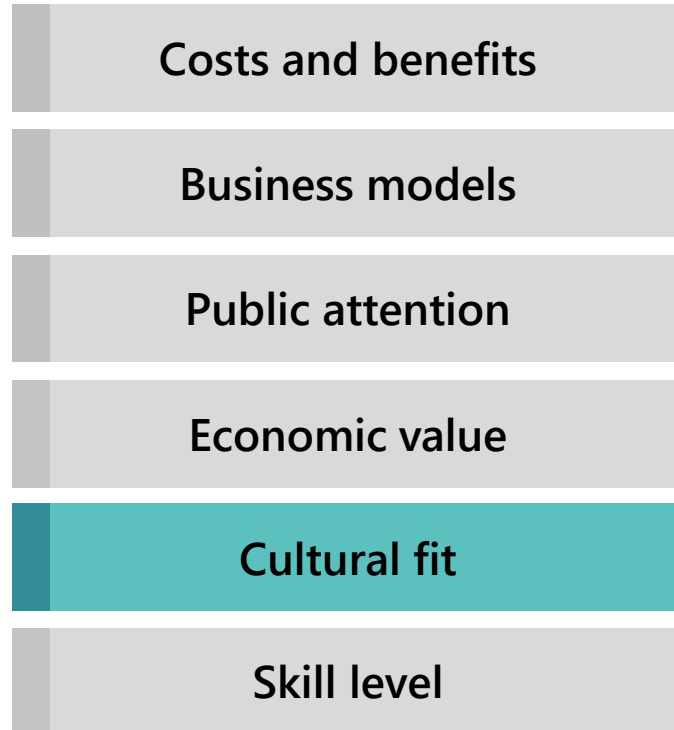
Skill level

- No shortage of economic literature attempting to **quantify** the value of data
- Privacy **concerns** and **expectations** are context-dependent and difficult to predict
- Privacy-unfriendly companies tend to obtain the greater **market share**
- The value of privacy seems to depend on the **social class** to which an individual belongs

Resources: D4.1, white paper

# Limited integration

## *Relevant societal and economic aspects*

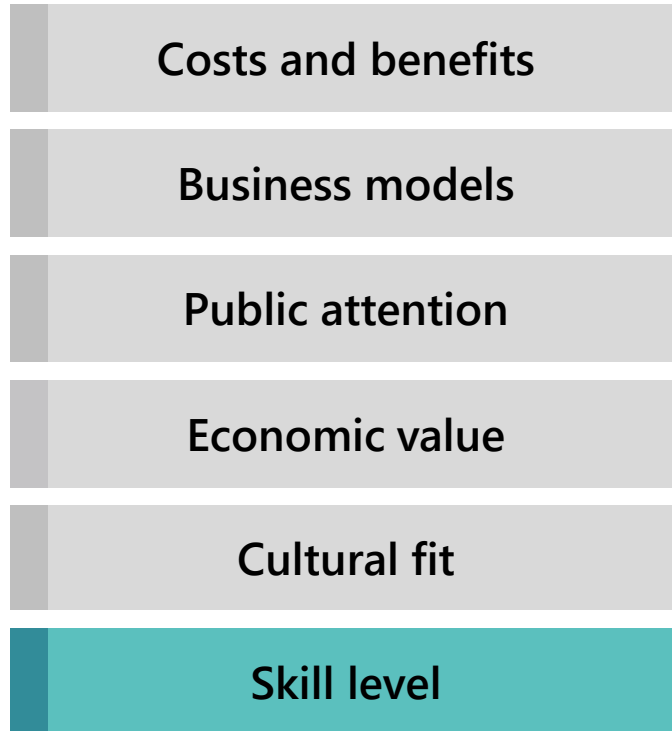


- Privacy **preferences** and **practices** vary among nations and regions
- Broad spectrum of views regarding impacts: from **deindividualization** to **personalization**
- **Less involvement** in data management tasks preferred
- Extent to which unauthorized secondary use raises **concerns** differs

Resources: D4.1, white paper

# Limited integration

## *Relevant societal and economic aspects*



- Often critical people do not know what **questions** to ask
- The data becomes more and more important a **new mind-set** is required
- Integrating and using privacy-preserving technologies **requires specific skills**

Resources: D4.1, white paper

# Going forward

## *Design requirements for data-driven solutions*

**Embed security and  
privacy features**

**Take preventive  
measures**

**Connect people,  
processes and  
technology**

**Comply with laws and  
corporate policies**

Source: <https://leadg2.thecenterforsalesstrategy.com/book>

Resources: D4.2

# Going forward



## *Making responsible data driven solutions a reality*

Developers and operators of data-driven solutions

Developers of privacy-preserving technologies

Policy makers dealing with relevant issues

Civil society (organisations)

Resources: D5.2

Source: <https://www.marblespr.co.uk/news/walk-will-give-next-big-idea-legs-needs/attachment/...>



# Thank you!



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