



Engaging Content
Engaging People

Investigating Conditional Data Value Under GDPR

Harshvardhan J. Pandit^{TCD}, Plamen Petkov^{DCU},

Declan O'Sullivan^{TCD}, Dave Lewis^{TCD}

ADAPT Centre - ^{TCD} Trinity College Dublin - ^{DCU} Dublin City University

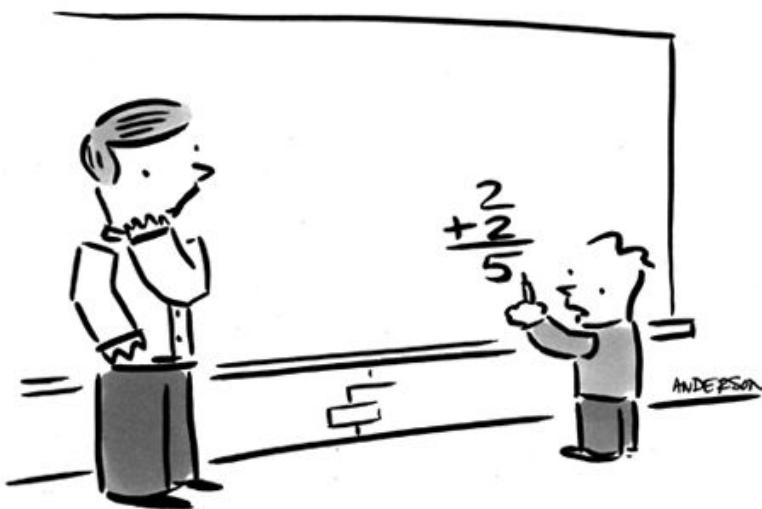
<https://openscience.adaptcentre.ie/> → *GDPR work*
pandith@tcd.ie | [@coolharsh55](https://twitter.com/@coolharsh55)

→ *email*

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"I prefer to think of it as added value."

#2

Layman's Guide to Data Value

- consider data as
 - an asset
 - an entity
- track of data
 - cycles
 - flows
 - chains
 - networks

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presented at Governing Value: The Practice of Exploiting Data Value Workshop Co-located with SEMANTICS 2018



Availability

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core & implicit assumption
that data will always
be available

BUT

does not
apply to open data!

What if the data
that is available

now

may not be
available

later

??? ??? ???

have value today

loss of value tomorrow

#3

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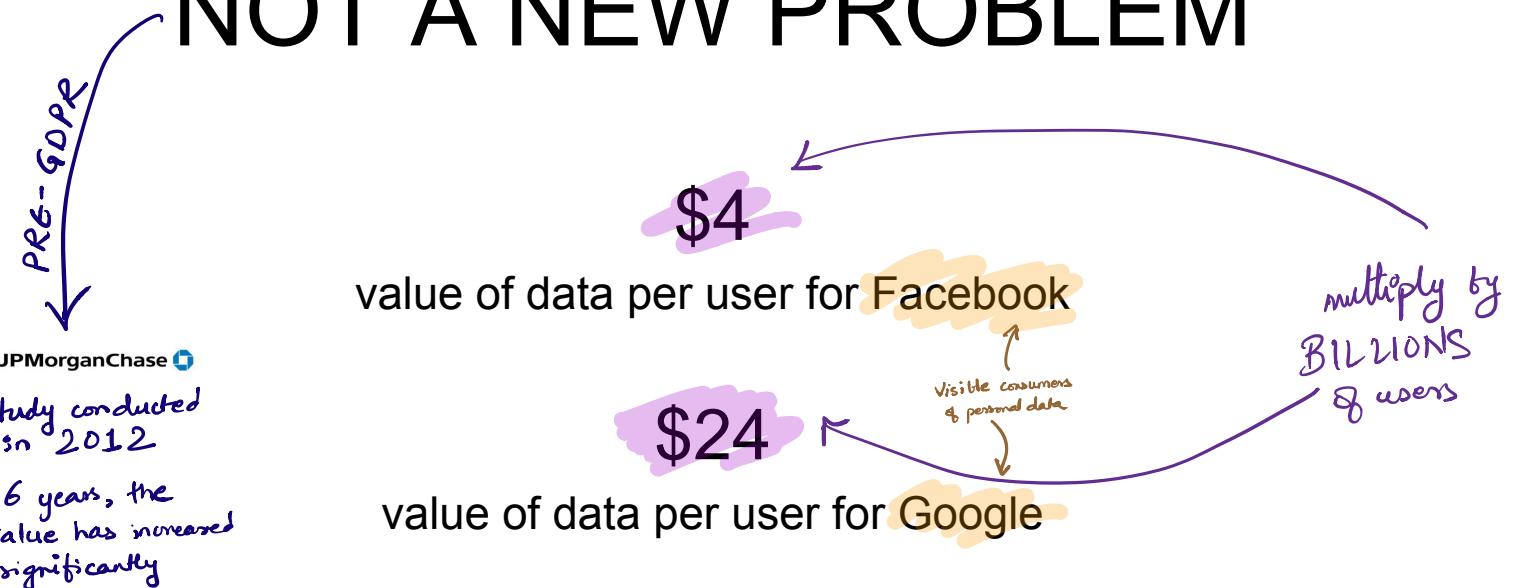
Assumptions / Conditions / Specificity

1. consider dealing with personal data
2. personal data is governed by data protection laws
3. laws such as the **GDPR** affect data availability

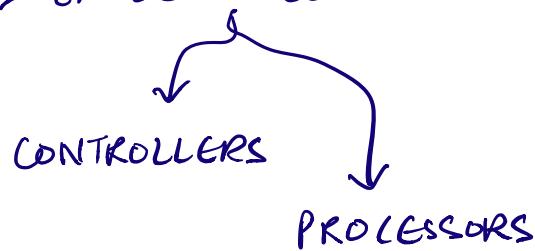
→ personal data becomes unusable
from the legal basis p.o.v.



NOT A NEW PROBLEM



- Given Consent → prior to data collection
- Right to Withdraw Consent → at any time!
- Right to be forgotten → delete retrospective data
- (Pseudo-)Anonymisation → enforced legally
- Obligations → on data consumers



1

Availability

- > is the data available?



2

Conditionality

- > when is the data available?
- > what events trigger these conditions?
- > how to incorporate them into data value frameworks?

methods
approaches
systems
pipelines

7

Availability as a Metric?

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[12] Lim, C., Kim, K.H., Kim, M.J., Heo, J.Y., Kim, K.J., Maglio, P.P., 2018.
From data to value: A nine-factor framework for data-based value creation in
information-intensive services.
International Journal of Information Management 39, 121–135.

Initial attempt using data-based value framework

- based on
- expanded into
- (i) data collection
 - (ii) information creation
 - (iii) value creation
 - (iv) distribution through the provider network

from [12]

- (1) data source
- (2) data collection
- (3) data (artefact)
- (4) data analysis
- (5) information on the data source
- (6) information delivery
- (7) customer (information user)
- (8) value in information use
- (9) provider network

→ (10) data availability.

PROPOSED
ADDITIONAL
METRIC

Possible Application

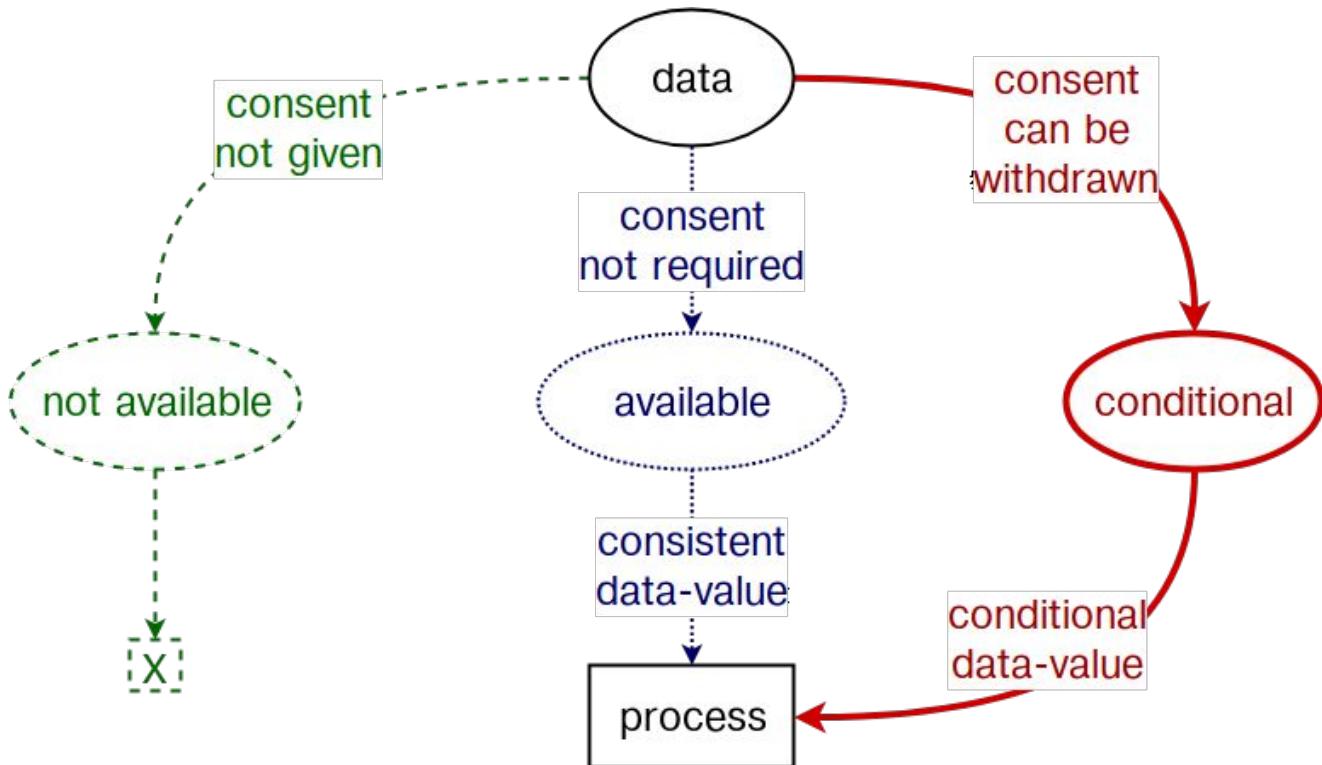
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1. Identify processes that use conditional data
 - activities that depend or are enriched by this data
2. Quantify (if possible) the conditionality and availability
3. Find alternate means to maximise value
 - this is already being done, but not formalised from the data value POV



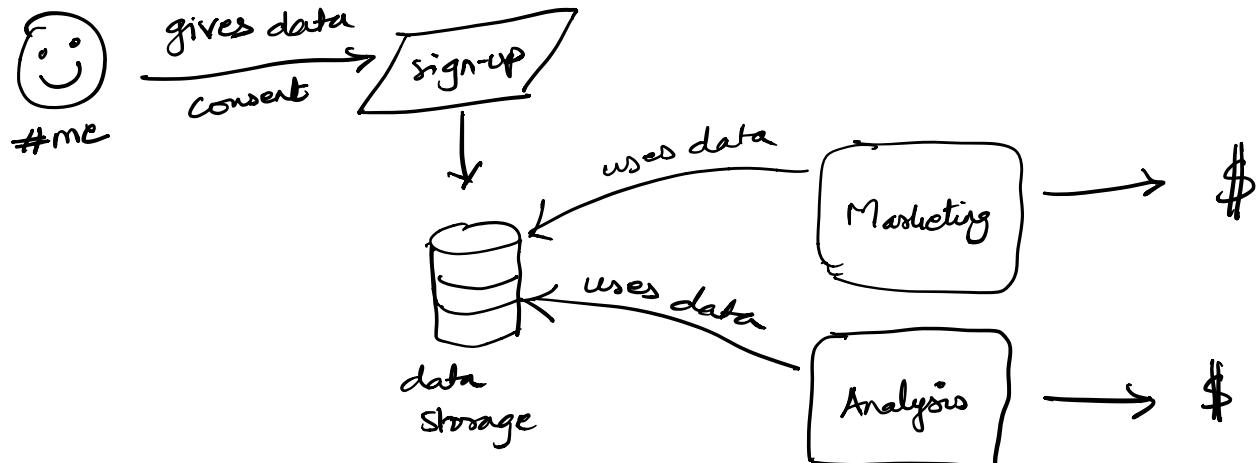
GDPR-Specific Application

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GDPR-Specific Application

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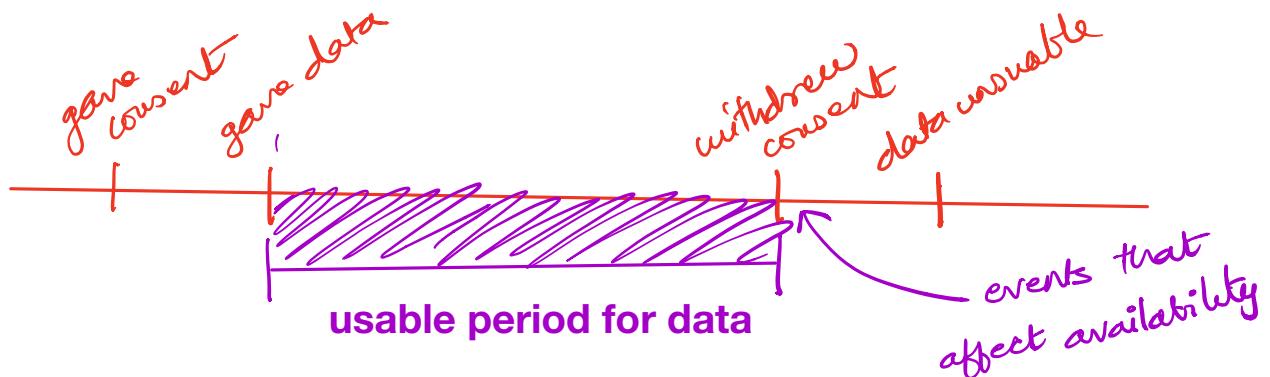
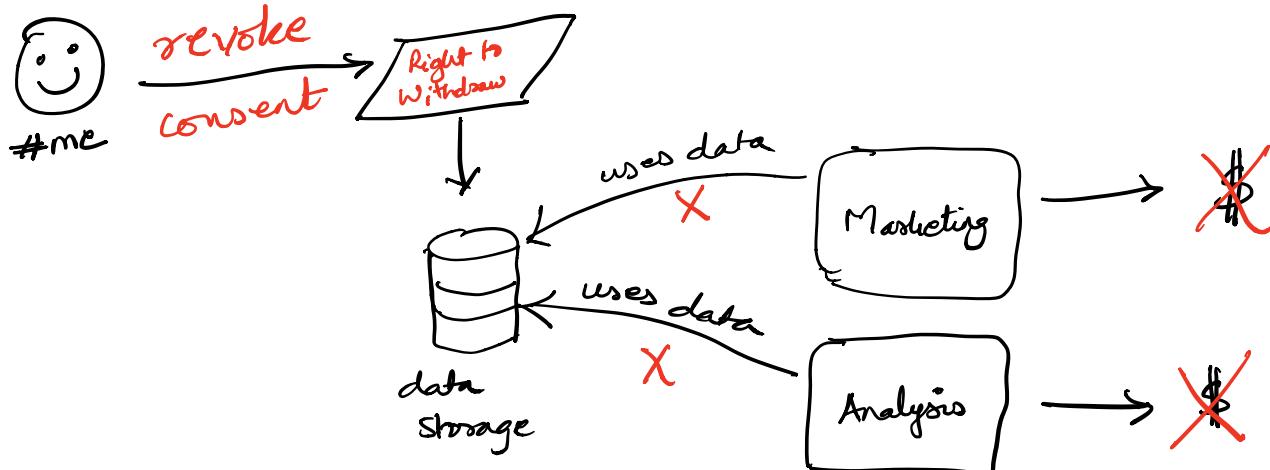
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#11



GDPR-Specific Application

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Data is the new oil....? Let's take that example!

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#12



All petrol/gasoline
stations only provide ↓



W H Y ?

and what
does this have
to do with
DATA VALUE?

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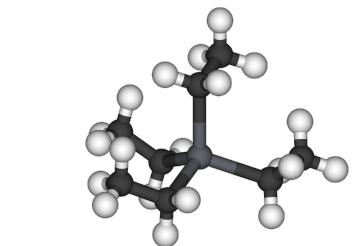
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#13



Fallback analogy to oil

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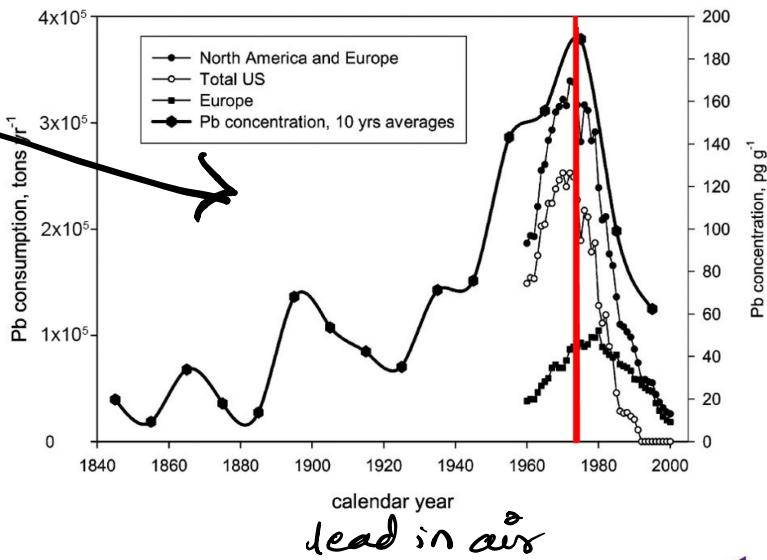
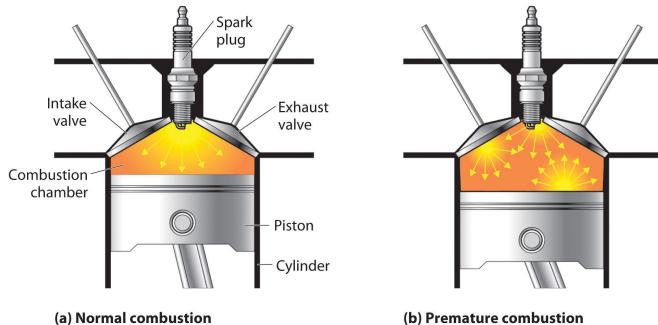
REDUCED
KNOCKING

tetraethyl-lead

ENVIRONMENTAL
HAZARD

BANNED IN ~1970's

- Lessons to learn
- (a) value of petrol
 - (b) innovation



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#14





will have some loss of value

Anonymisation and Pseudo-Anonymisation

example mechanisms
that highlight
alternate approaches
to extract value

Personalisation / Recommendation / Analytics

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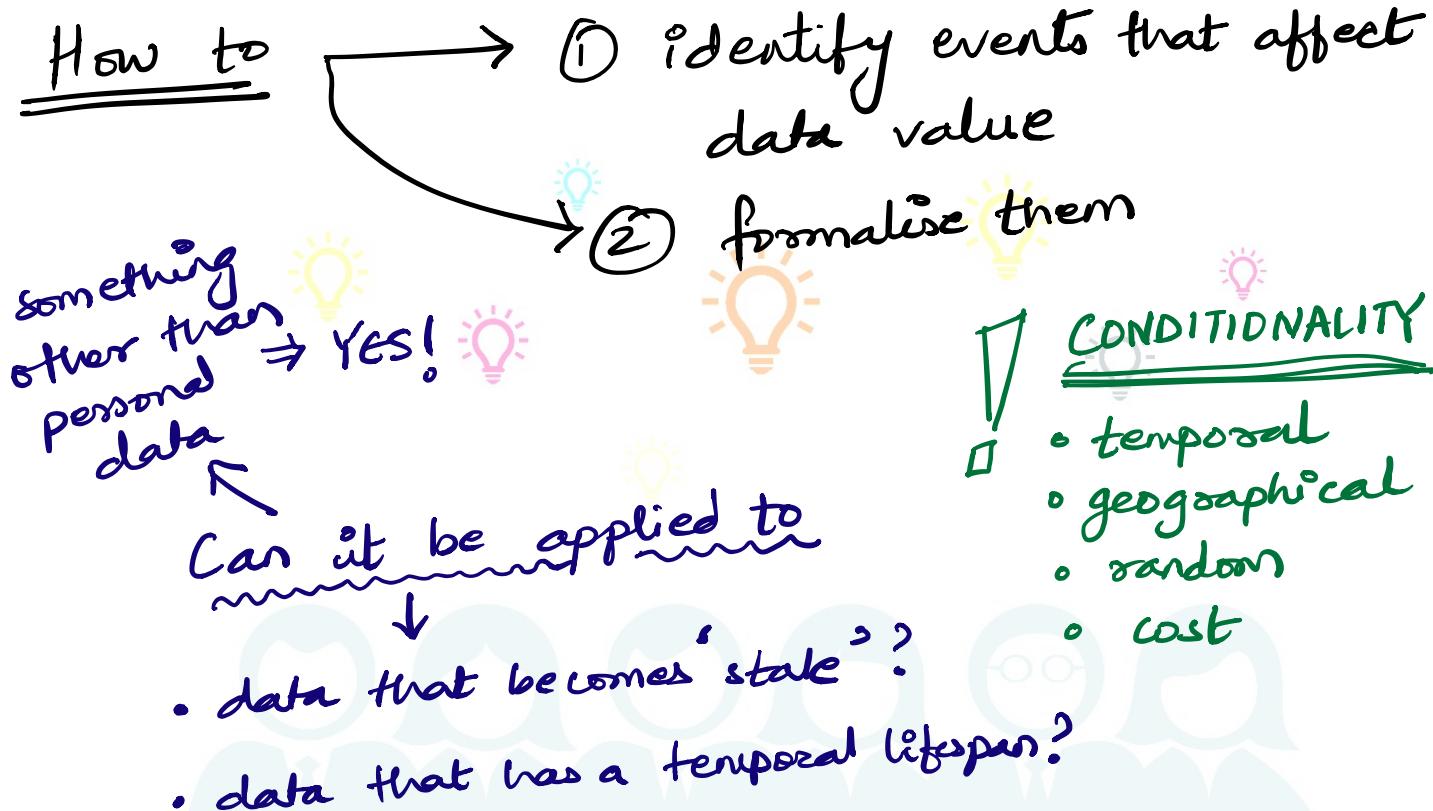
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#16



Discussion!



- CONDITIONALITY
- temporal
 - geographical
 - random
 - cost