Research Councils UK
Digital Economy
Transforming Business and Society

THE SCIENCE AND PRACTICE OF CONSENT

Rev.2 Real Consent, London, Jan 2017

Richard Gomer **@richardgomer**
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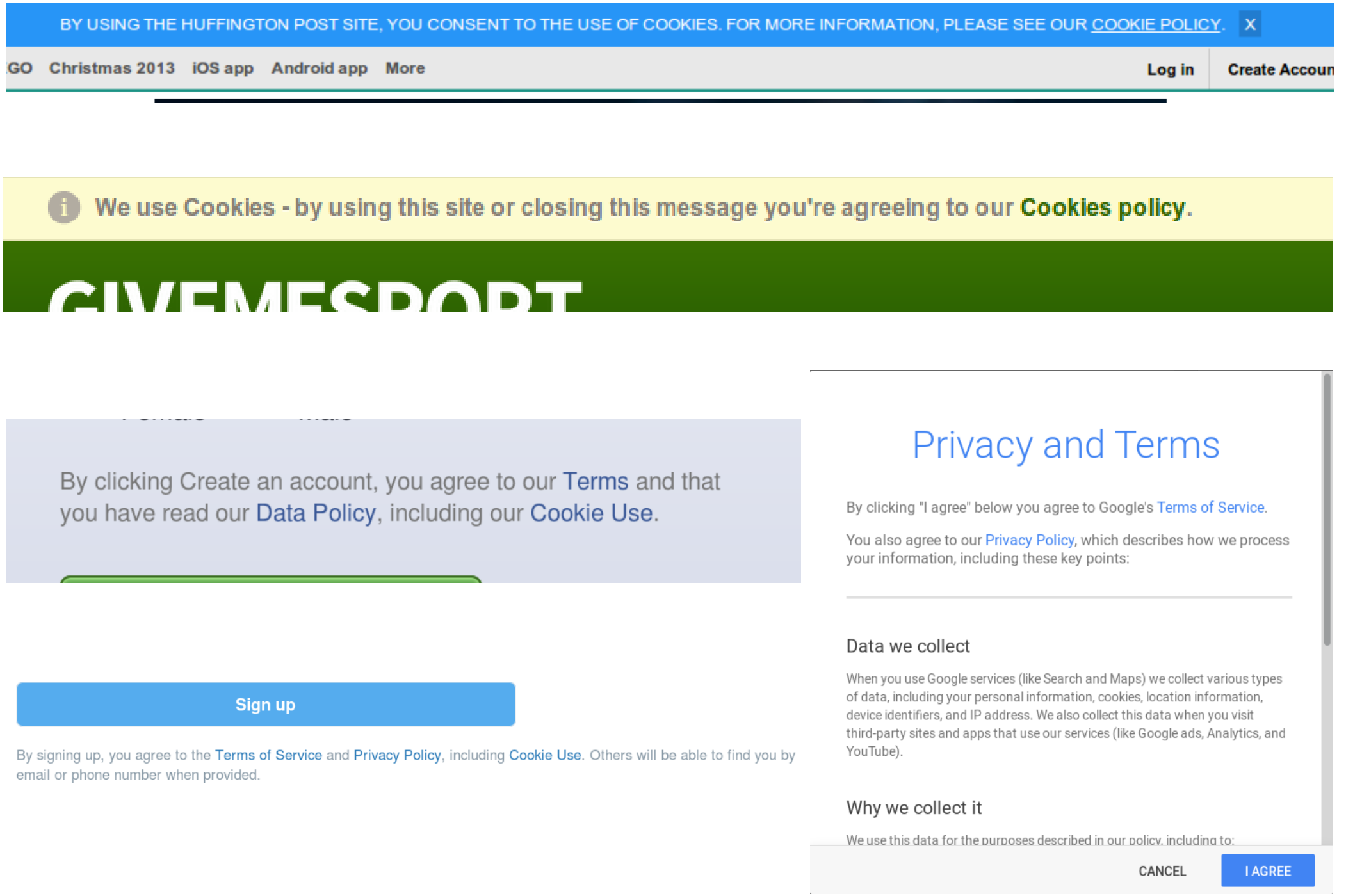
UNIVERSITY OF Southampton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CANCEL
I AGREE

CONSENT

=

GENUINE CHOICE

+

UNDERSTANDING OF THE IMPLICATIONS

GENUINE CHOICE

+

UNDERSTANDING OF THE IMPLICATIONS

=

CONSENT

A SCIENCE OF CONSENT

box-ticking

- Definitions

noun

(*derogatory*) the process of satisfying bureaucratic administrative requirements rather than assessing the actual merit of something

Friedman et Al

- Disclosure
- Comprehension
- Competence

- Voluntariness
- Agreement
- Minimal Distraction

C-HIP

- Source
- Channel
- Receiver
  - Attention
  - Comprehension
  - Attitudes / Beliefs
  - Motivation
- Behaviour


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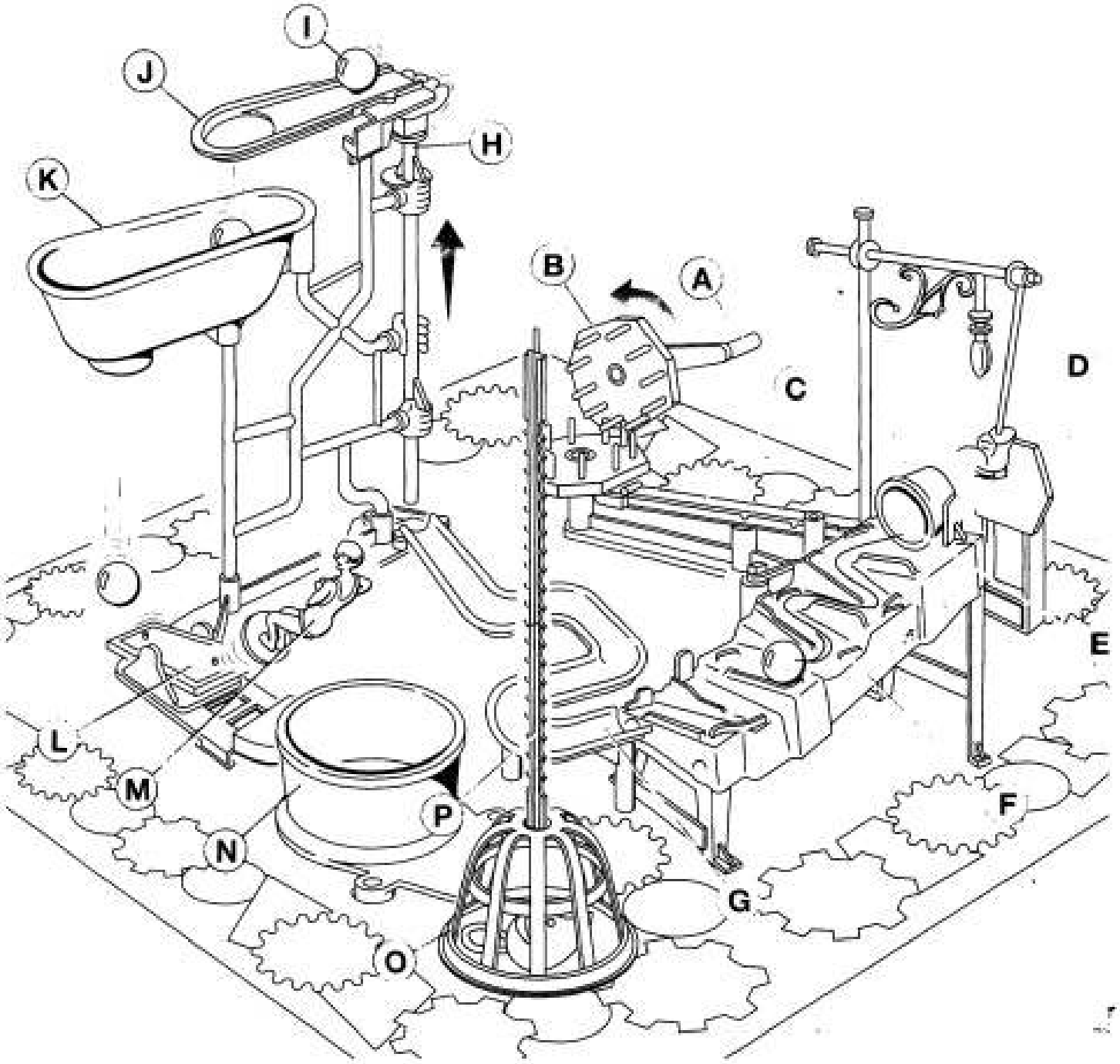
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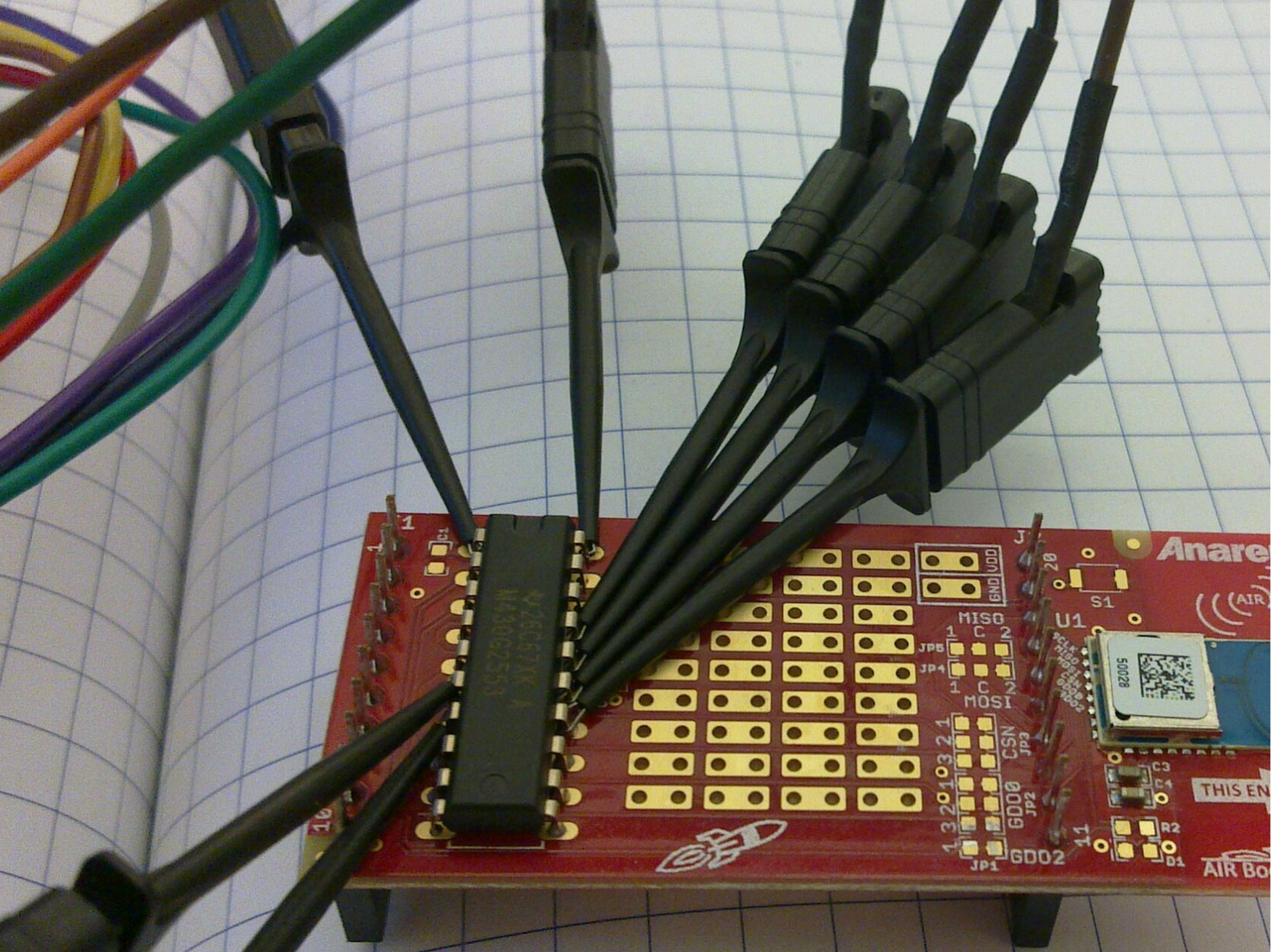
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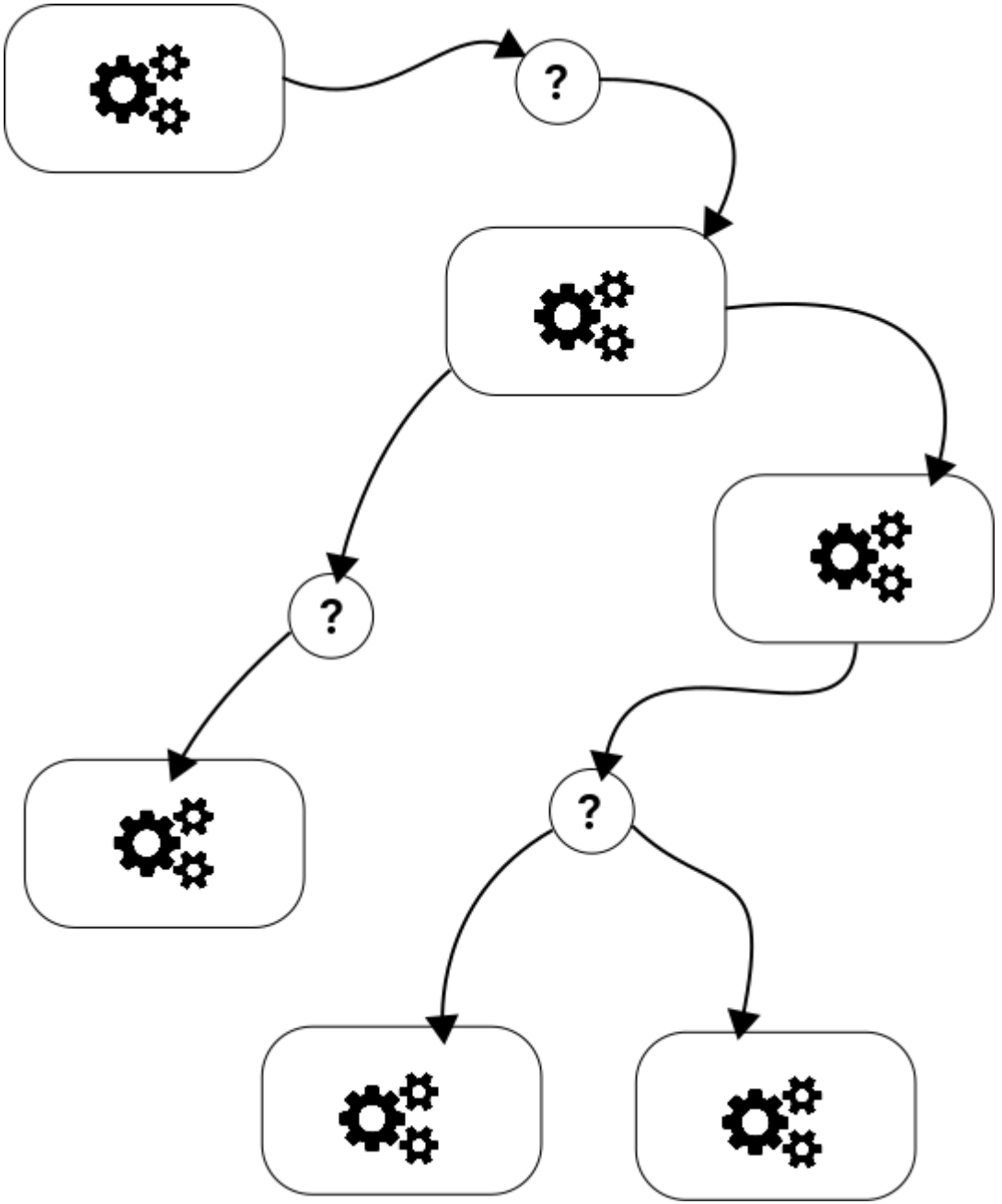


1-(revoked signals / total signals)

A CONSENTOSCOPE?

2-Way Measures (Happiness + Permission/Expectation)

Variant A: Permission

	I think I gave permission for this ✓	I do NOT think I gave permission for this ✗
I am happy for this to take place ☺		
I am NOT happy for this to take place ☹		

Variant B: Expectation

	I expected this ✓	I do NOT expect this ✗
I am happy for this to take place ☺		
I am NOT happy for this to take place ☹		

Prototypes
Controlling for happiness as a potential confound

3-Way Measures (Happiness + Permission + Expectation)

	Yes ☺ ✓	No ☹ ✗
I expected this to happen		
I gave permission for this to happen		
I am happy for this to happen		

CONSENT IN PRACTICE

COMPLIANCE

(42) Where processing is based on the data subject's consent, the controller should be able to demonstrate that the data subject has given consent to the processing operation. In particular in the context of a written declaration on another matter, safeguards should ensure that the data subject is aware of the fact that and the extent to which consent is given. In accordance with Council Directive 93/13/EEC[1] a declaration of consent pre-formulated by the controller should be provided in an intelligible and easily accessible form, using clear and plain language and it should not contain unfair terms. For consent to be informed, the data subject should be aware at least of the identity of the controller and

INTERACTION

PRACTICAL CHALLENGES

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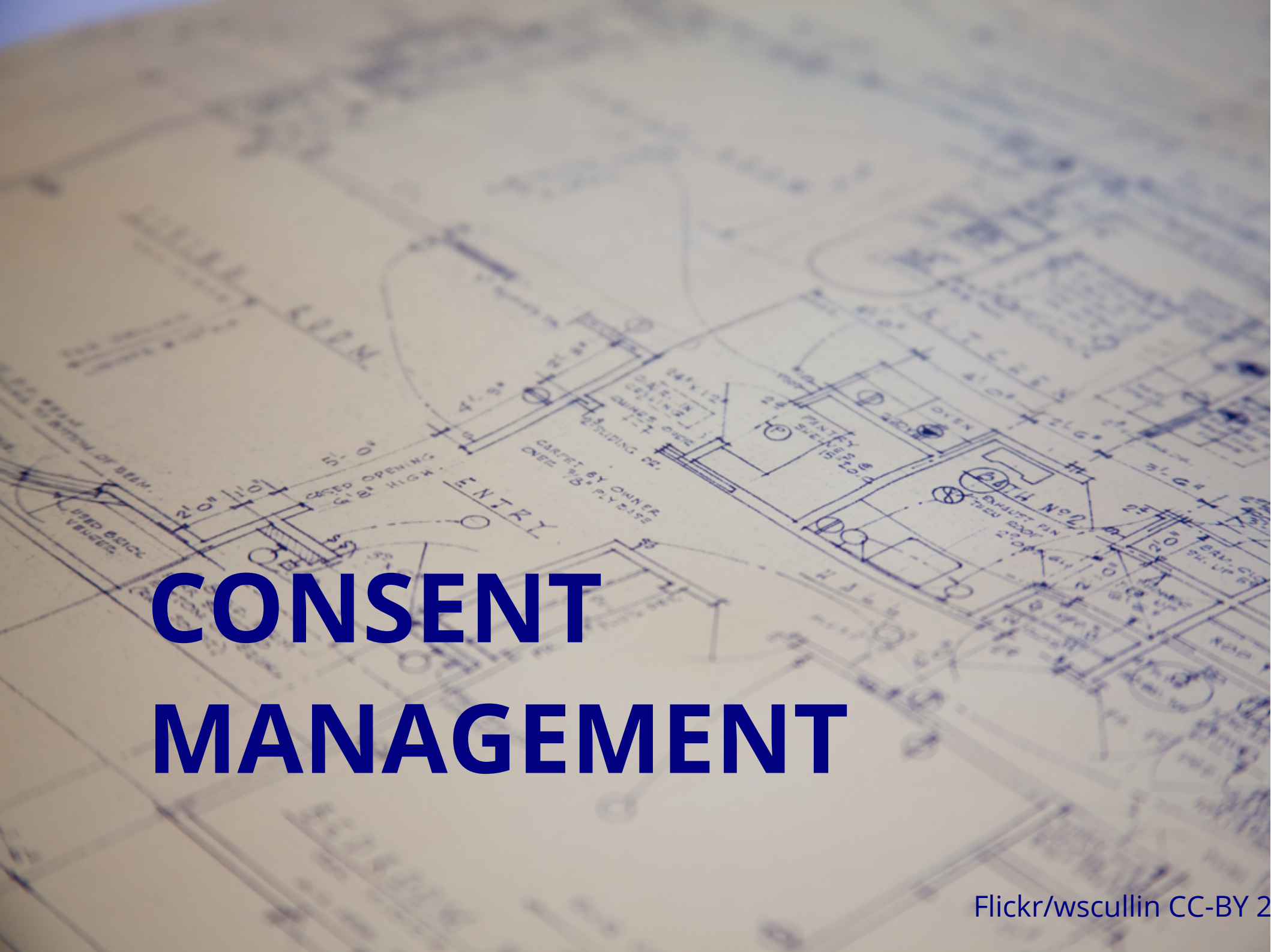
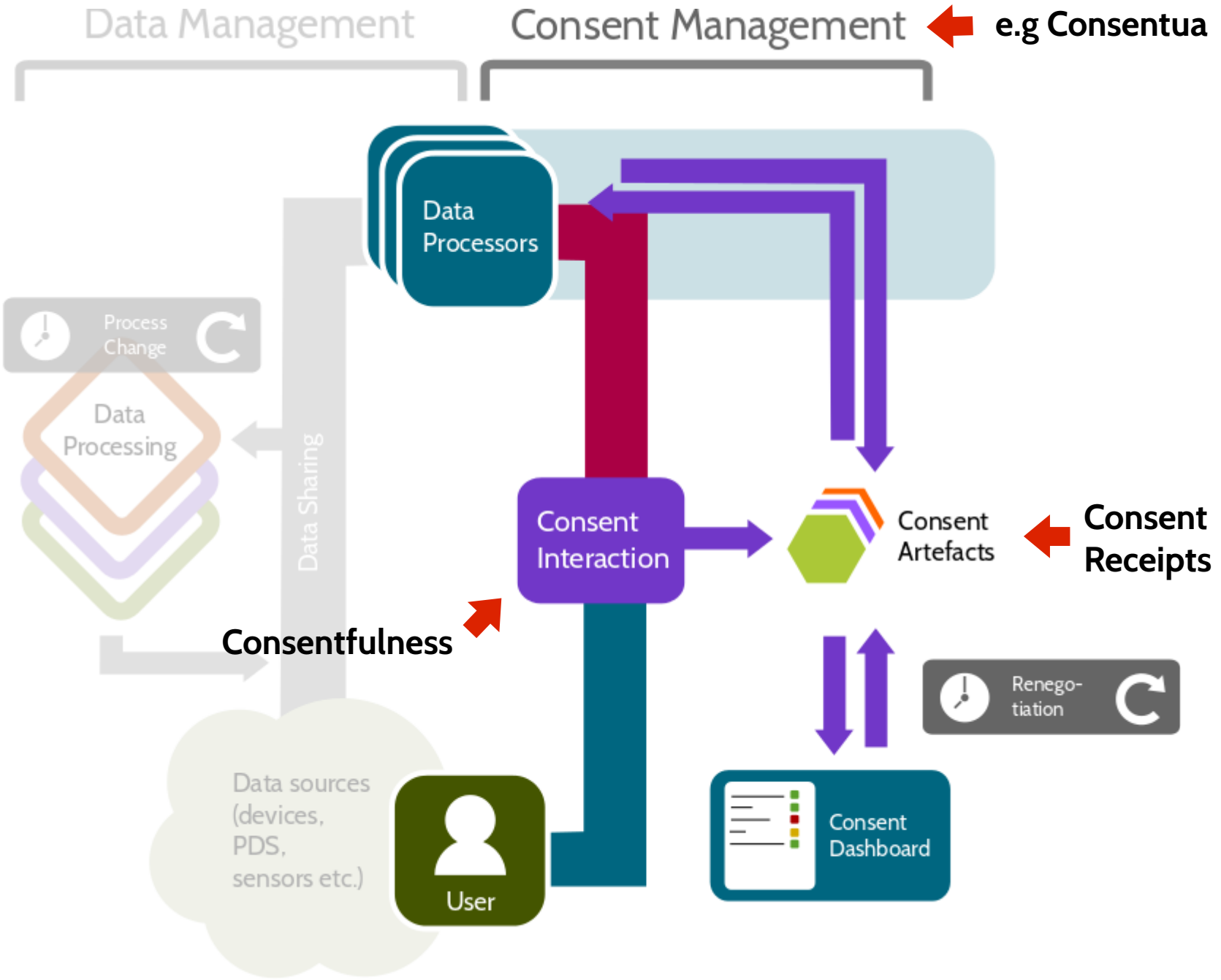
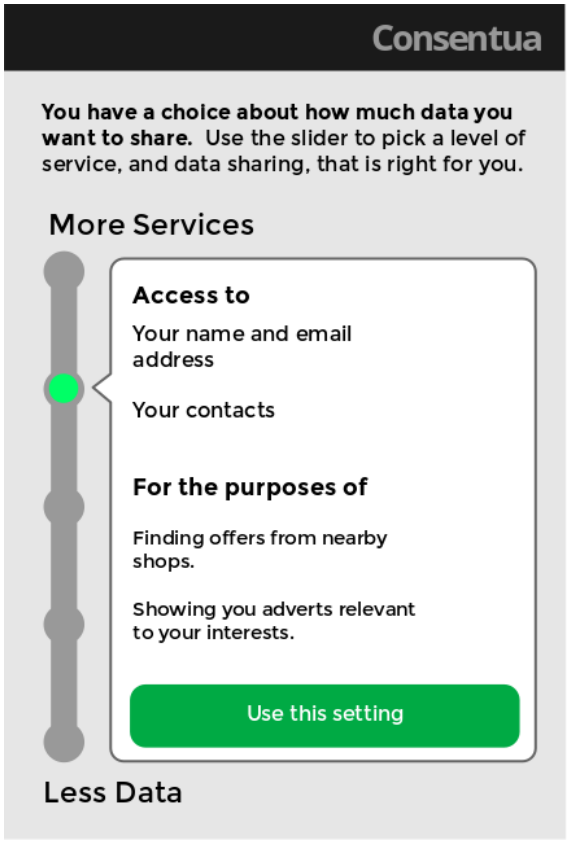
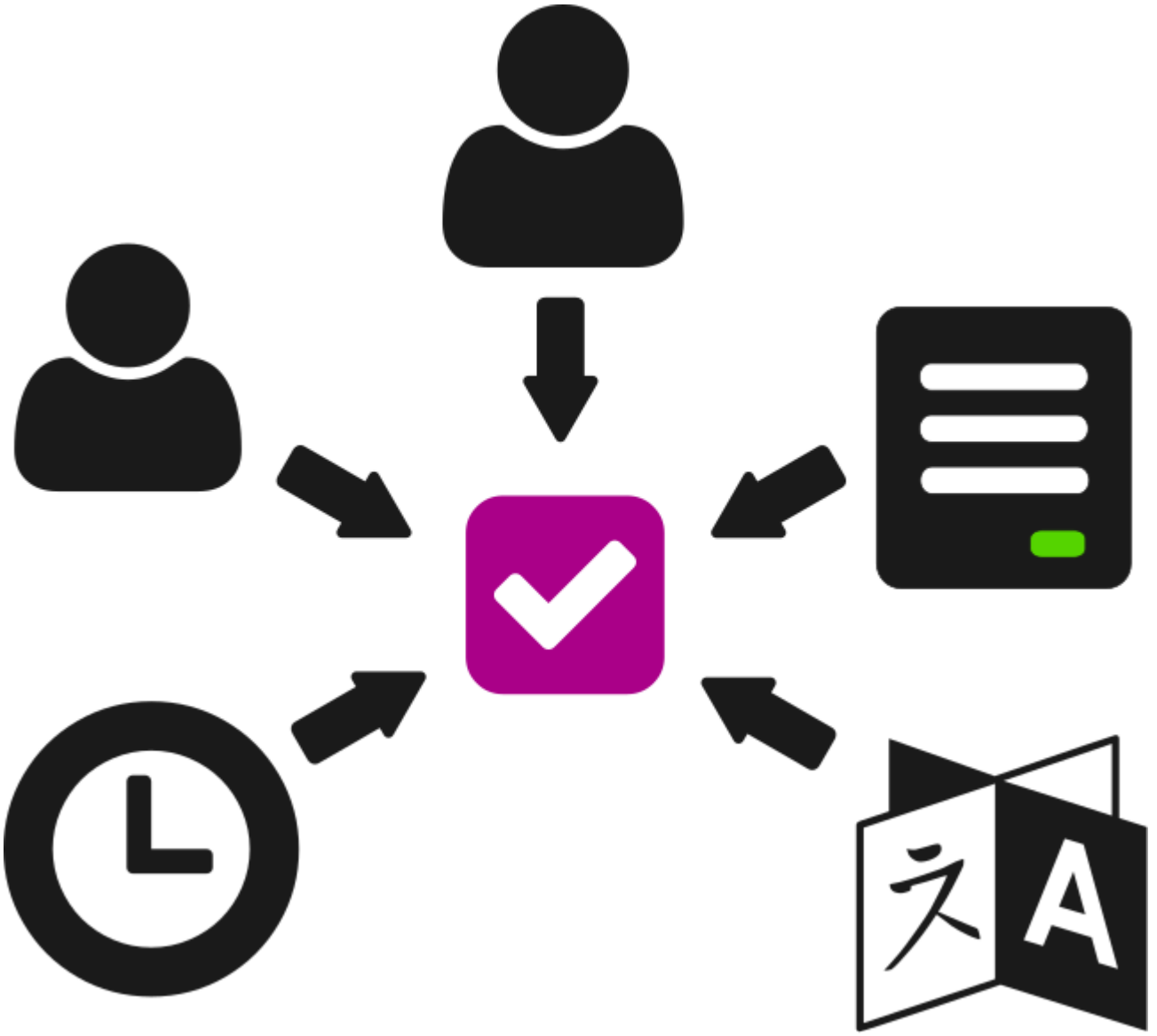


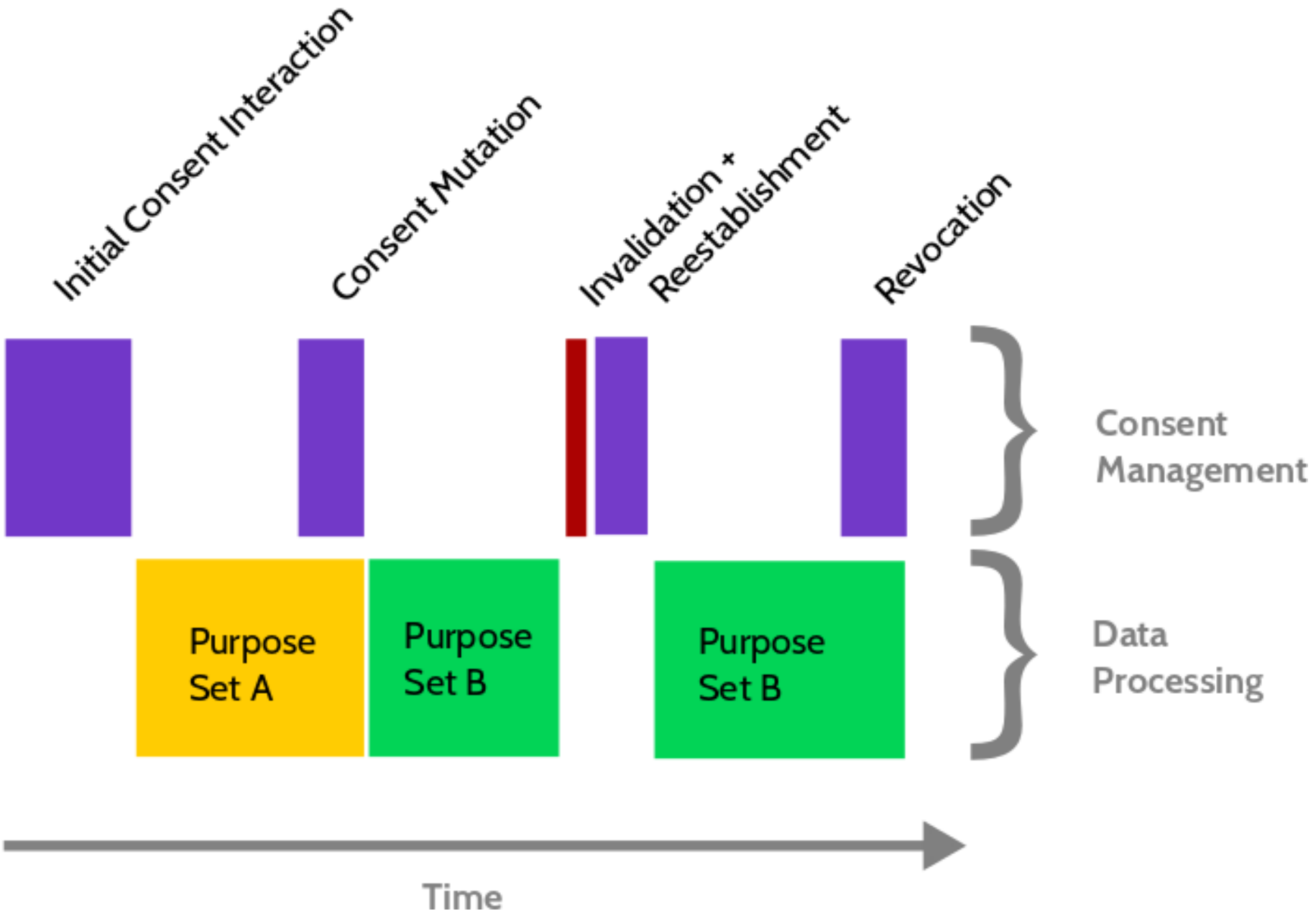
CONSENT MANAGEMENT


Data Management
Consent Management
e.g Consentua
Data Processors
Process Change
Data Processing
Data Sharing
Consent Interaction
Consent Artefacts
Consent Receipts
Consentfulness
Renego-tiation
Data sources (devices, PDS, sensors etc.)
User
Consent Dashboard

Please send me information about special offers, new products and updates about ACME corp.






Initial Consent Interaction
Consent Mutation
Invalidation + Reestablishment
Revocation
Consent Management
Purpose Set A
Purpose Set B
Purpose Set B
Data Processing
Time

SUMMARY

- First-principle definition of consent supports empirical investigation
- Develop a re-usable theory of consent
- Engineer better consent interactions
- Embed consent in data management
- Build a consent infrastructure

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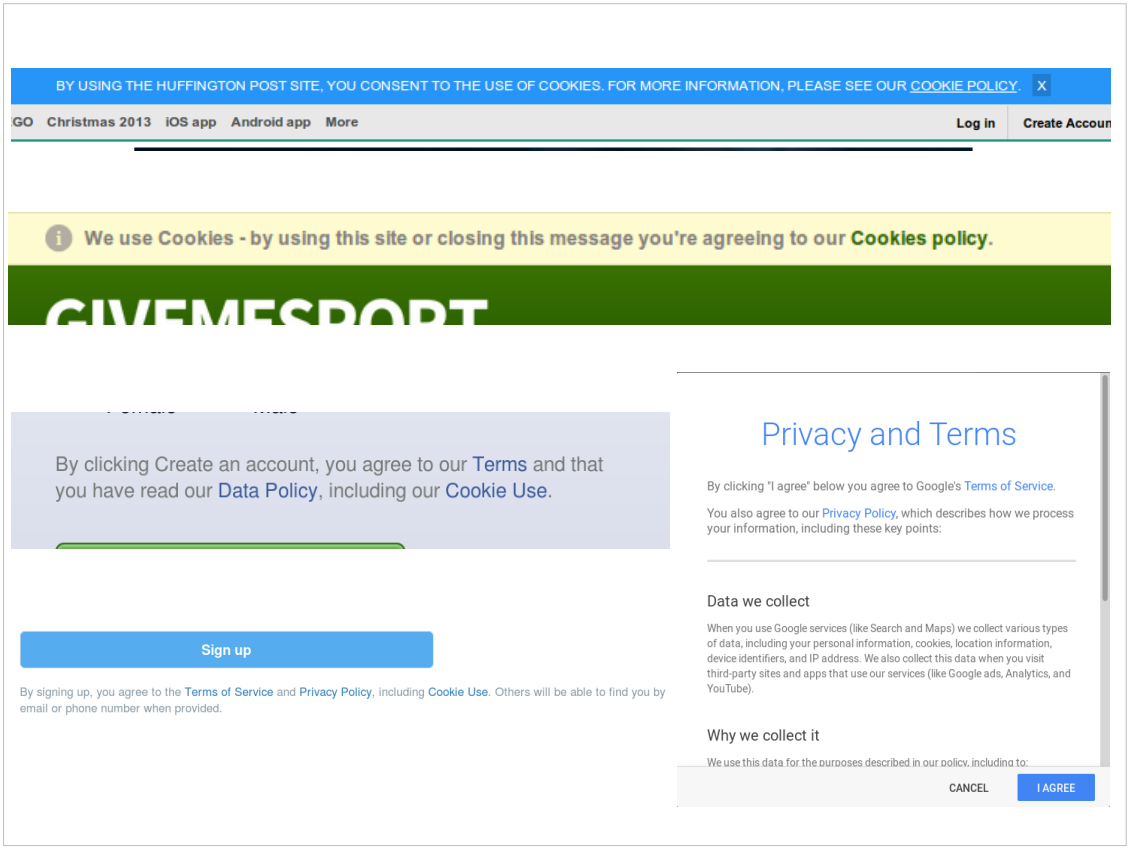


Of course, consent today is typically manifested as annoying boxes on websites; full of dry, incomprehensible information, or something about cookies.

This is one, narrow, class of consent interaction, “notice and consent” it has a number of failings, that aren't really the topic of this talk.

I'd like to encourage you to think beyond these notices and tickboxes, though, and think of consent in a more abstract and imaginative sense!

We can do consent without these; I fact, I think we HAVE to do consent without these if we want to do it well!

CONSENT

=

GENUINE CHOICE

+

UNDERSTANDING OF THE IMPLICATIONS

GENUINE CHOICE

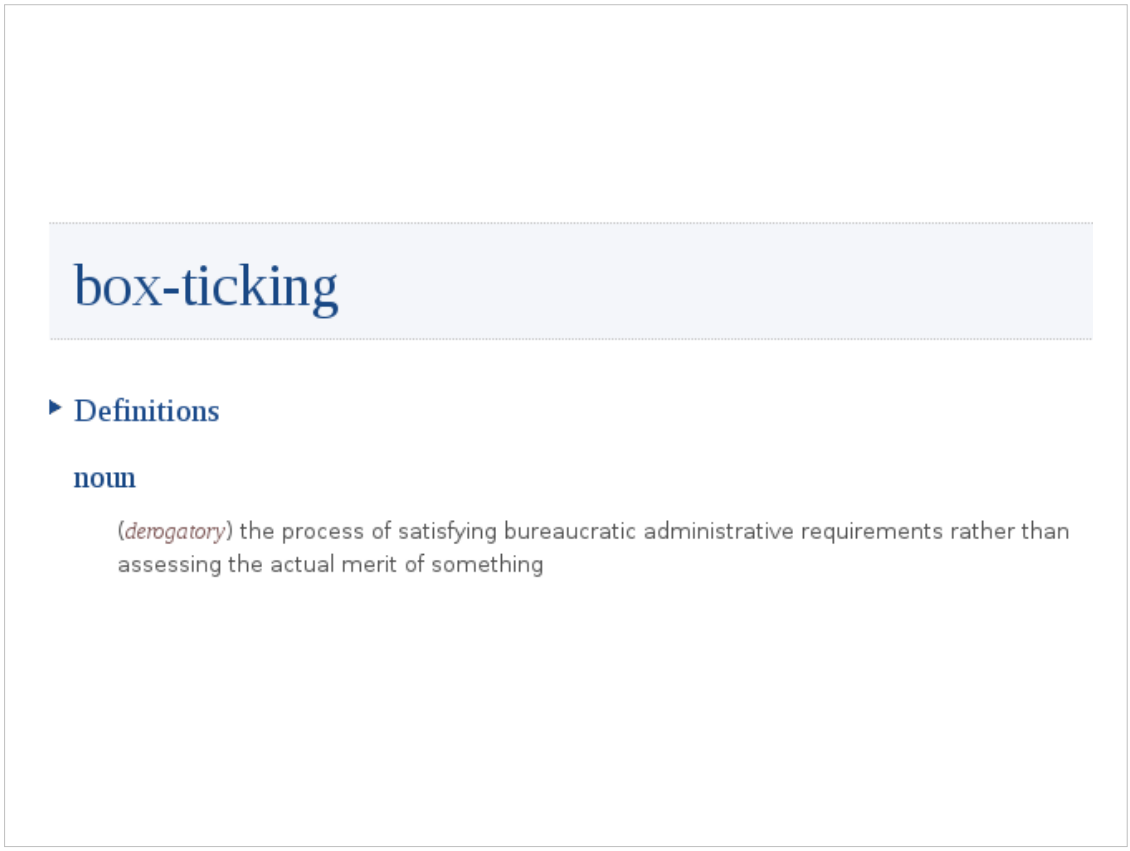
+

UNDERSTANDING OF THE IMPLICATIONS

=

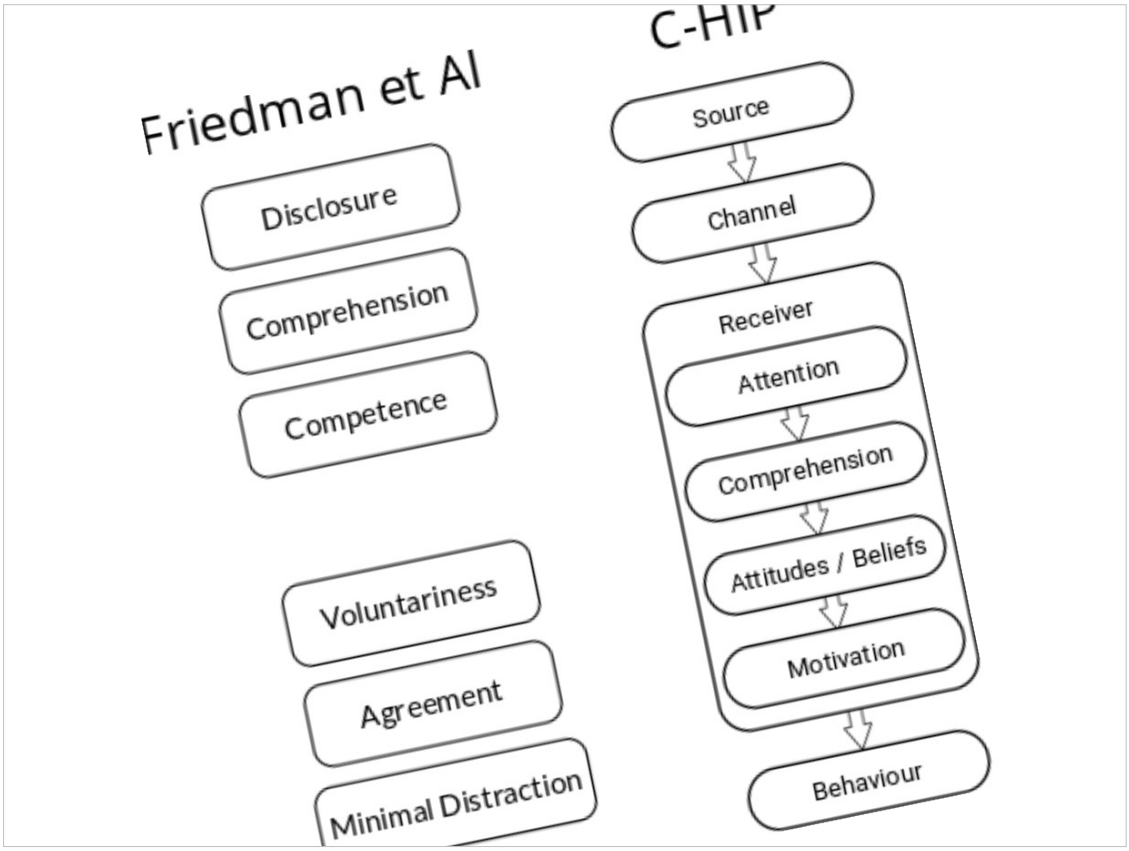
CONSENT

A SCIENCE OF CONSENT



But, like the interaction mechanisms that these guidelines usually recommend, they are often no more than box ticking.

Regulators suppose that opt-in or opt-out mechanisms have certain properties; or that “explicit” consent might be better than implicit consent. Even though consent can be simultaneously implicit AND unambiguous.



Academics have plenty of models either about, or applicable to, consent.

From value-senstive design, we have Friedman's 6-factor model of what seems to be important – from a values perspective – for consent interactions.

From risk management, we have models about communicating information to human beings.

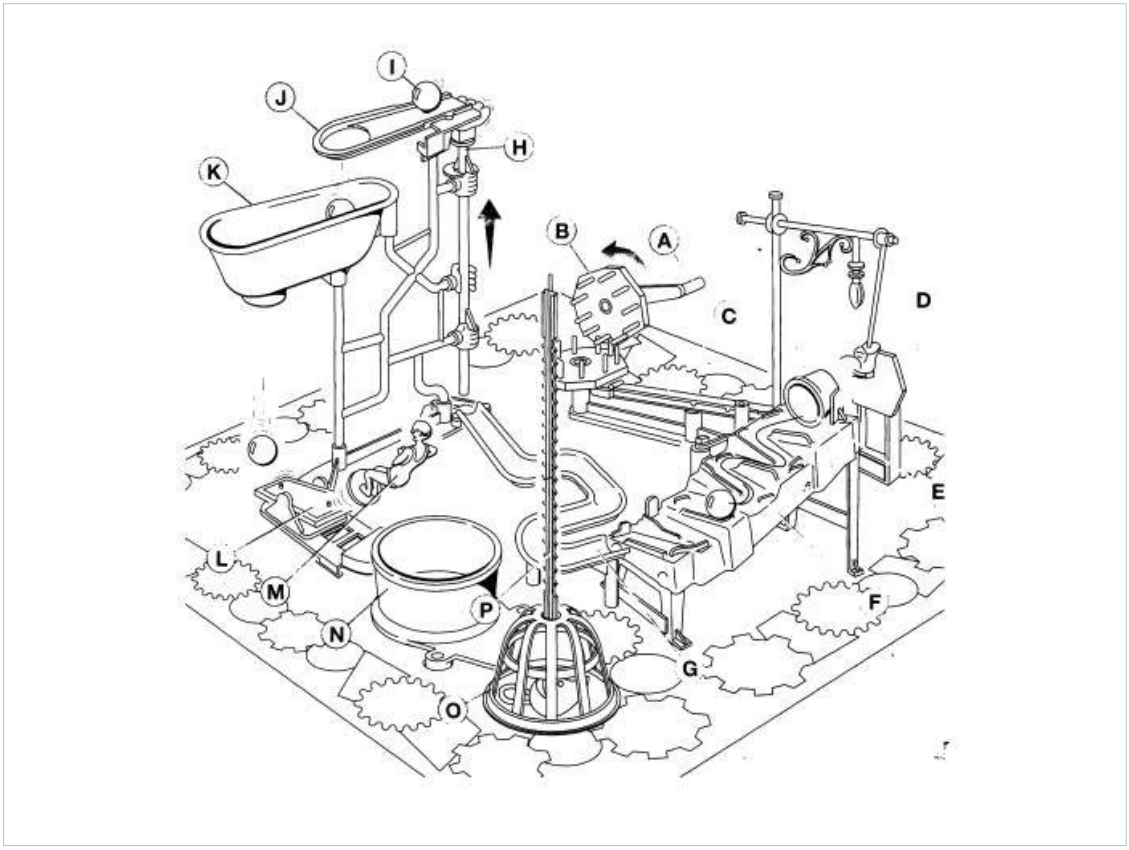
None of these are bad models, but none are grounded in what we might consider the very essence of consent. None provides a single, empirical, way to judge a given interaction or to compare it with others.

How will we build, evaluate and refine new classes of consent interaction when all our guidelines just describe what the old ones are supposed to look like?

What I think we really care about, is not whether the user has opted in or out, explicitly or implicitly, what colour the text was or how big the box was.

We should care, fundamentally, about whether what actually happened is what the user expected to happen (or at least broadly compatible with their hopes) and the degree of control that was provided.

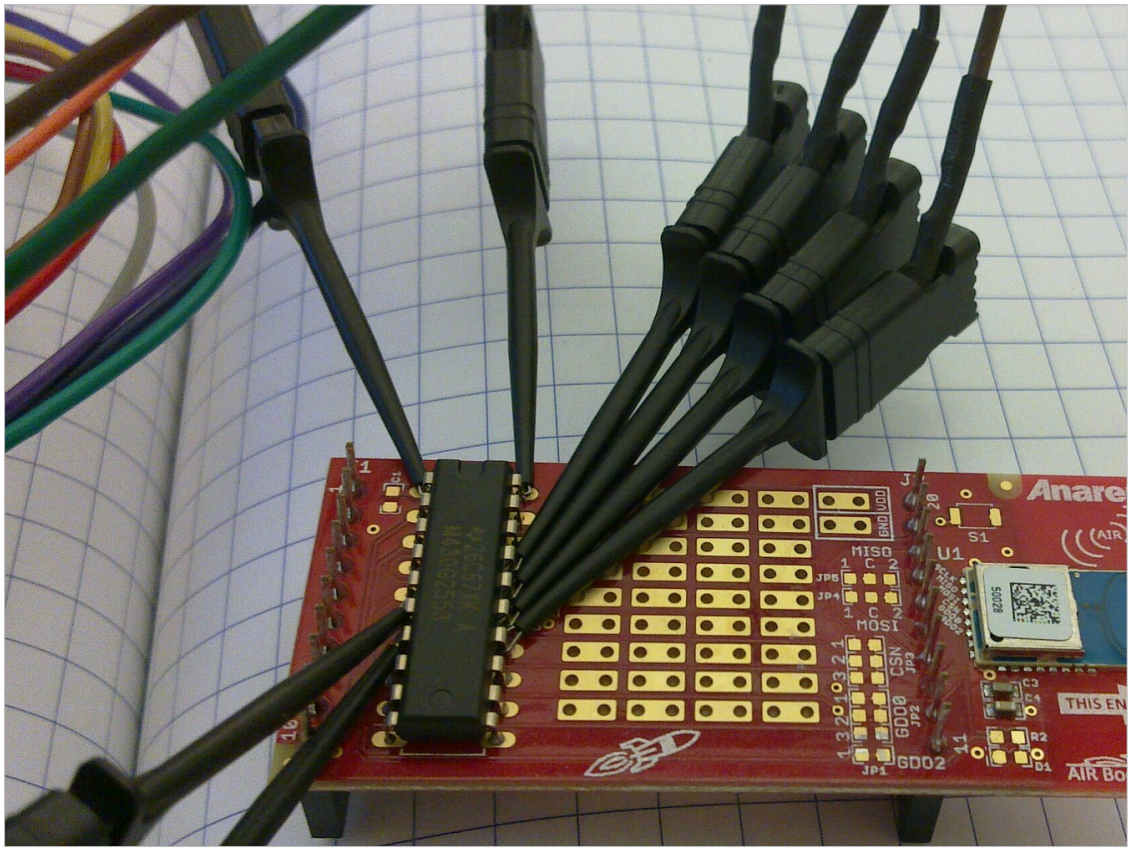
Essentially, consent is a mechanism for managing SURPRISE. A user who has given consent may end up impoverished, miserable or in prison; but they shouldn't be surprised about it. That's what it means to be empowered.



The idea of consent as surprise management opens the possibility of measuring how “consentful” a particular system or individual interaction mechanism is.

Essentially, consent is a point at which a user becomes involved in the causal chain that leads to some process occuring. It is only with their assent that the process takes place.

Consent interactions are break points in the digital systems around us.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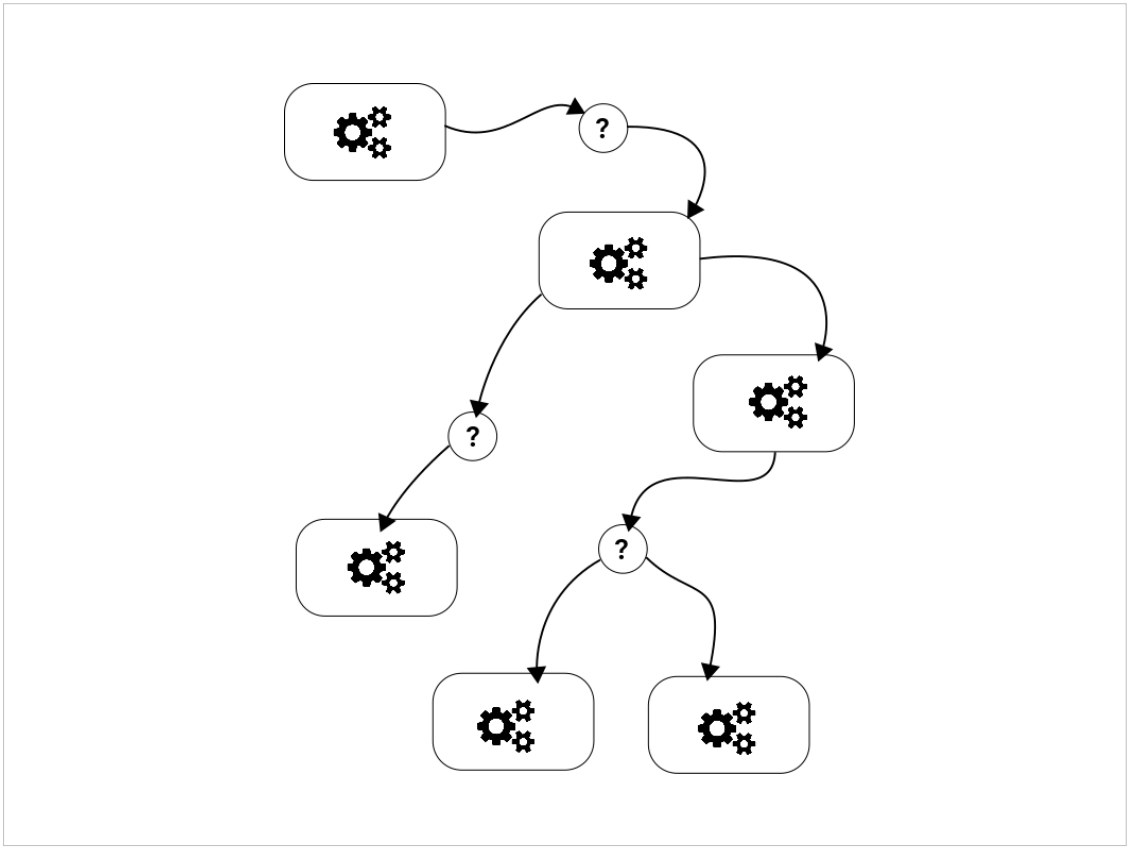
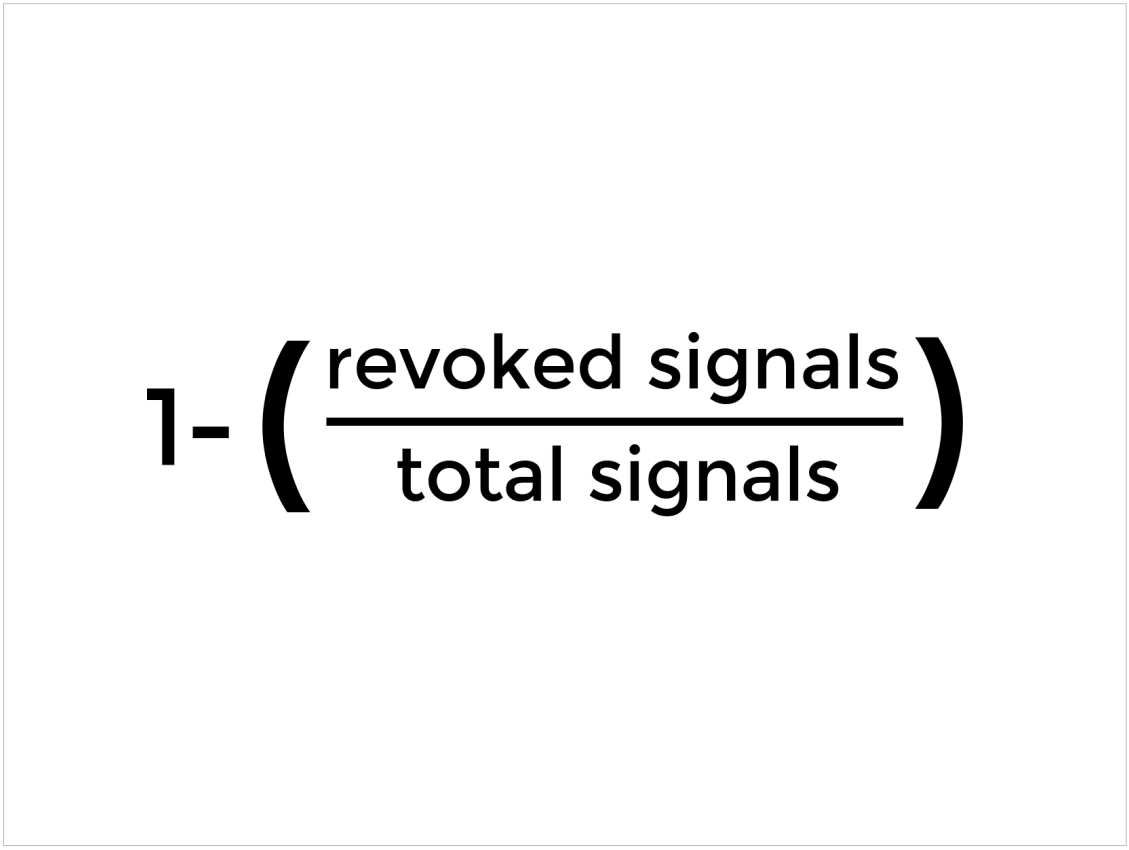


Consentfulness, then, is (abstractly) the inverse degree to which a future-user chooses (or would choose, given full information) to REVERT the decisions of past-user.



Then, the consentfulness of the system is the number of revoked consent signals, divided by the total number of consent signals. Then subtracted from one, so that a bigger number means more consent.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A CONSENTOSCOPE?

2-Way Measures (Happiness + Permission/Expectation)

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Quite pragmatically, from a business perspective, consent is also a regulatory challenge. It has been identified (rightly or wrongly) by policy makers as one mechanism through which digital citizens can be given control over their personal data and, where controllers can't rely on a legiitmate interest justification, it's what they'll be using as the basis for data processing from 2018 onwards.

There are, therefore, compliance questions both in terms of actually doing consent correctly, and showing that you are (and have been) doing consent correctly.

Today I want to talk about how 'token-based' consent platforms can help with citizen empowerment AND compliance.

INTERACTION

Fundamentally, though, consent is transactional, it necessarily involves multiple parties interacting. It is not just a legal problem, it is an **interaction problem**. It requires interaction designers and behavioural science.

Compare the idea of a consent architecture with the Thaler and Sunstein's “choice architecture”

Getting the interaction right is fundamental to realising consent in practice; although exactly how we do that is an open question.

We have some ideas, but, again, not today...

By consent management, I mean the process of collecting, auditing and reasoning about data subject consent in parallel with data processing operations themselves.

This is a broad topic and one where multiple approaches are possible; but there are a few key challenges that need to be addressed:

As I alluded to previously, auditing collected consent and showing compliance will be a major use case for these systems. In fact, it's probably the number one reason that organisations will make the investment in them.

Any platform needs to be flexible and responsive enough to deal with regulatory change;

Not, primarily, huge changes like the GDPR, but constant change in best-practice, opinion and case law. We have to expect that some of the consent interactions that we deploy – some kinds of tickbox, or wording, will be found inadequate later on.

The system itself needs to be flexible enough to change, and crucially businesses need to be able to identify which consent among all of their customers is no longer valid; and, preferably, be able to revisit that.

CITIZEN CONTROL

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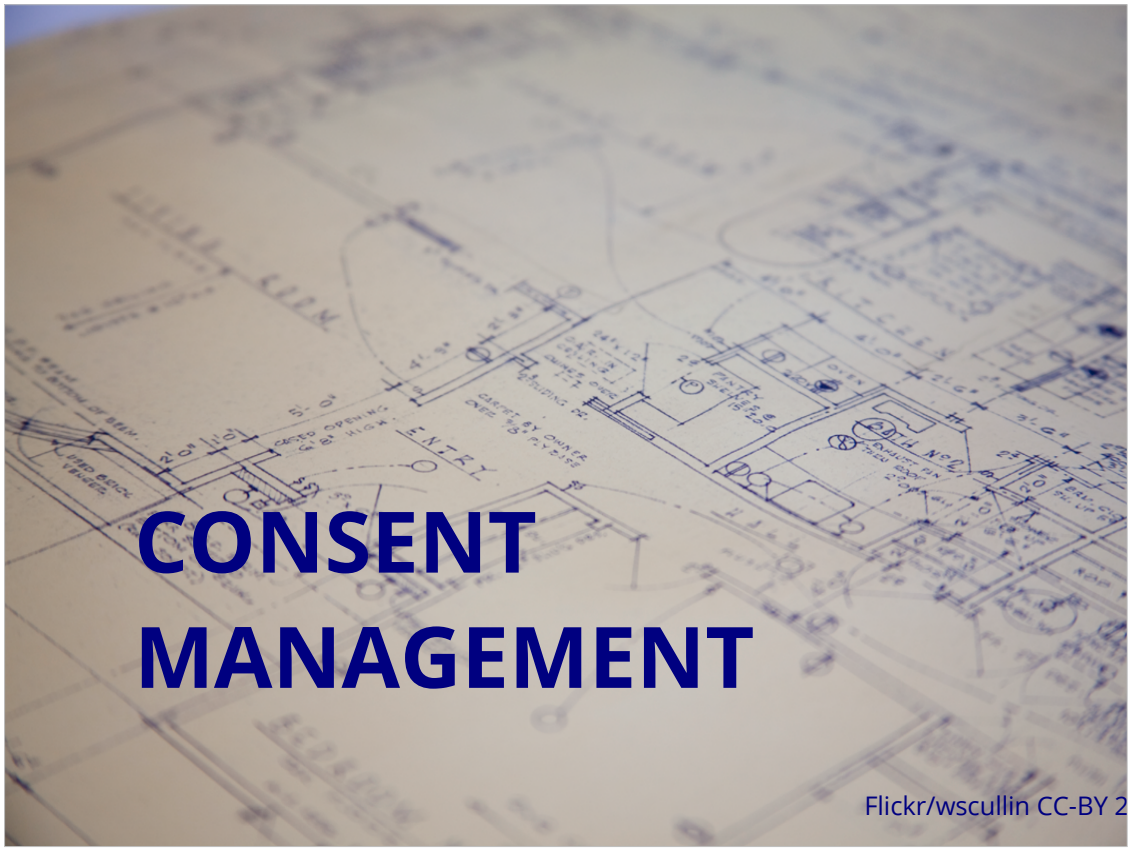
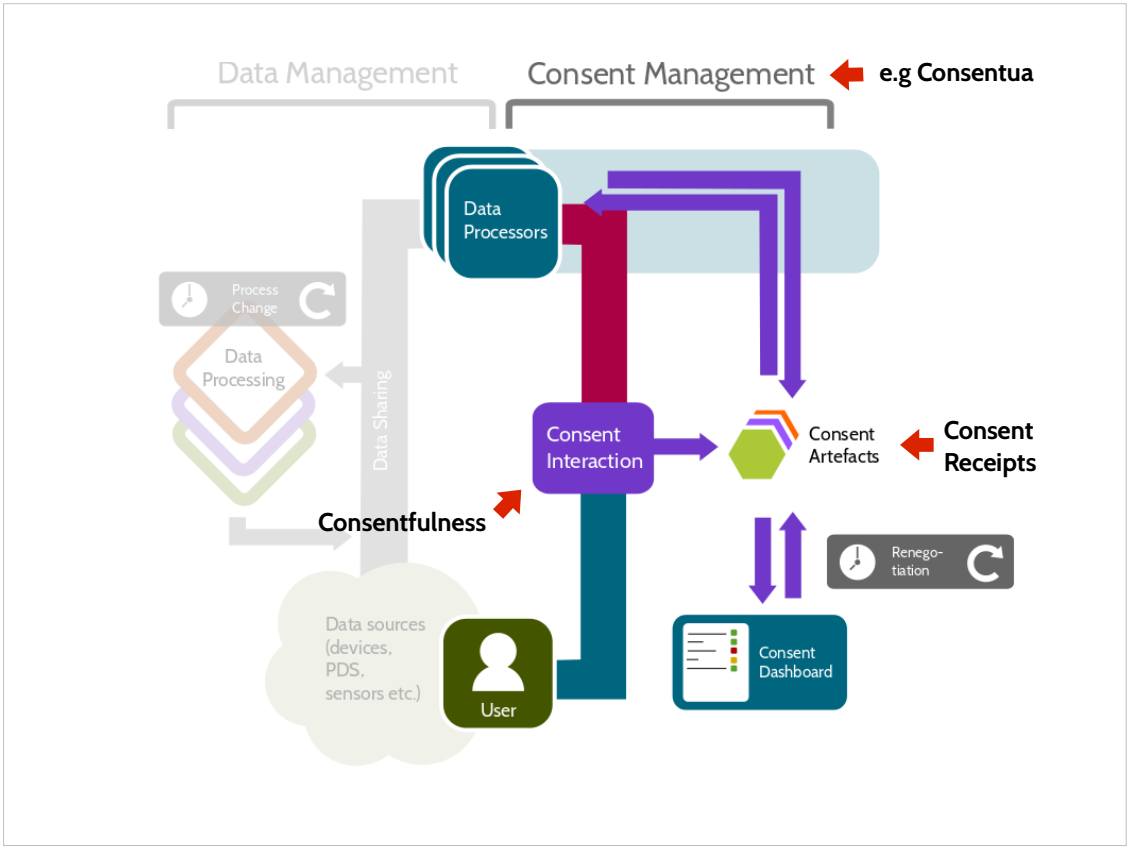
From a citizen perspective, theses systems have to provide control to data subjects in order to realise the empowering potential that consent is supposed to have.

There is also a compliance angle to this, though – organisations need to make it easy for customers to withdraw consent; and effective, easily accessed, controls will make that possible.



With those challenges in mind , I want to introduce “token-based” consent as an approach to the problem of consent management.

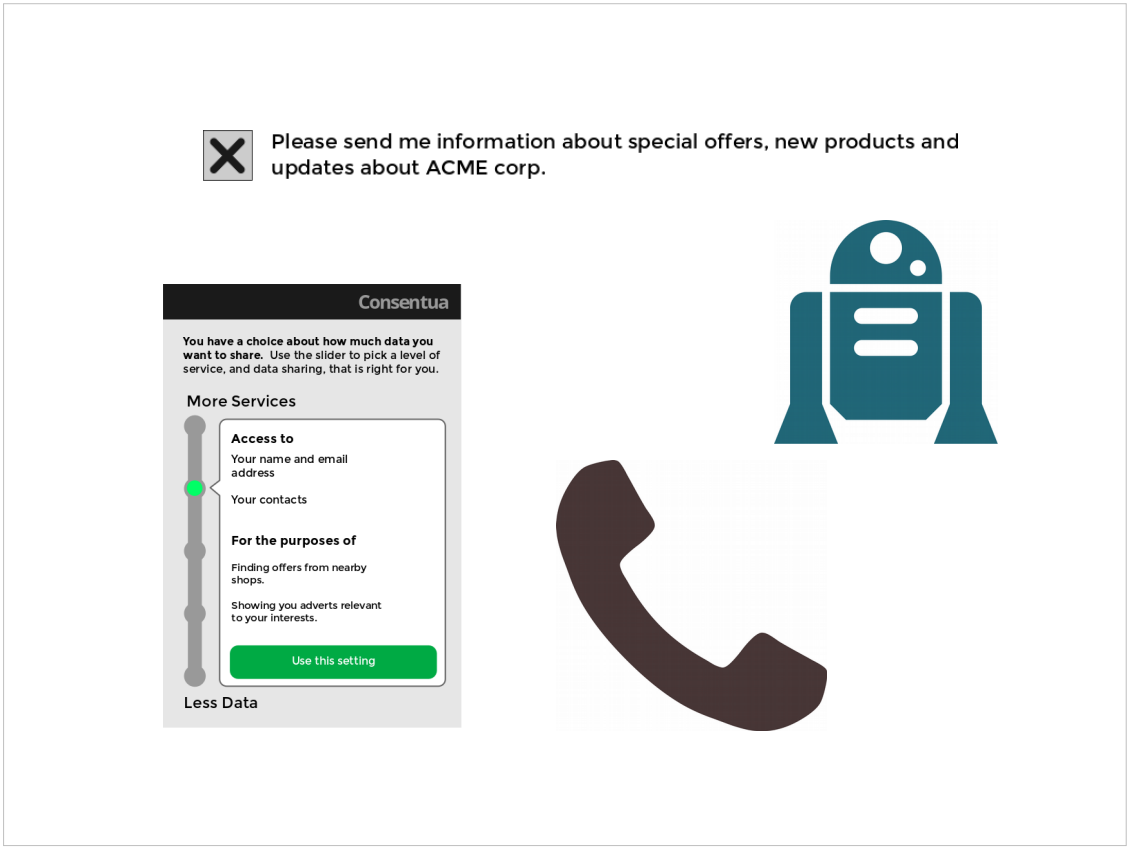


This is a simple diagram of what we mean;

Essentially, consent management is happening in parallel to actual data processing and is realised as two-party agreement between the data controller and the data subject; arrived at through a consent interaction and crucially resulting in some kind of digital artefact; the consent token.

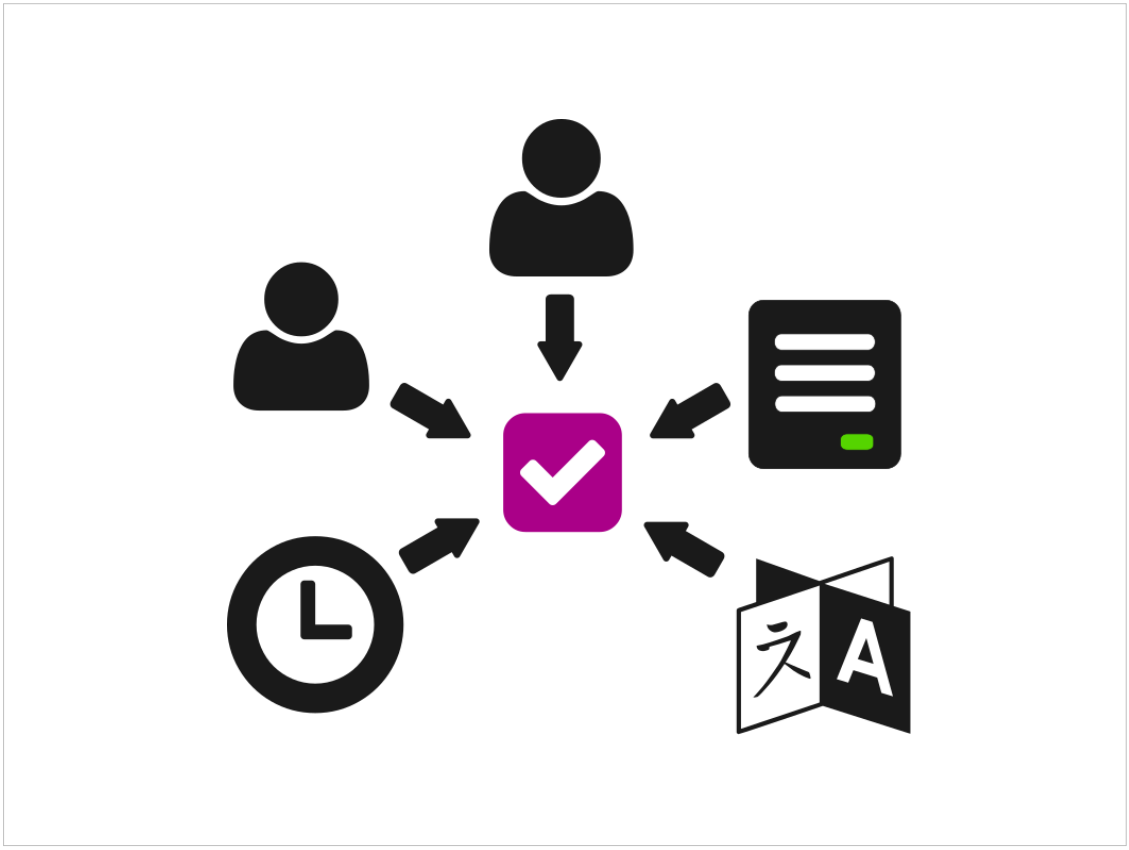
Other groups, such as the Kantara working group, call this a consent receipt.

Both parties have access to this token; allowing them to review the consent that was given. The subject can modify that token, and the controller can check, in real-time, what consent they currently have.



Importantly, this framework is interaction agnostic. The consent interaction that produces the token could be implemented in many ways, depending on the exact requirements of the processing itself (for instance the legal requirements around opt-in and opt-out consent) or based on the medium through which the interaction is being carried out. In some cases, consent will be sought over the phone, on paper, or in automated contexts where there is no screen or conventional input devices.

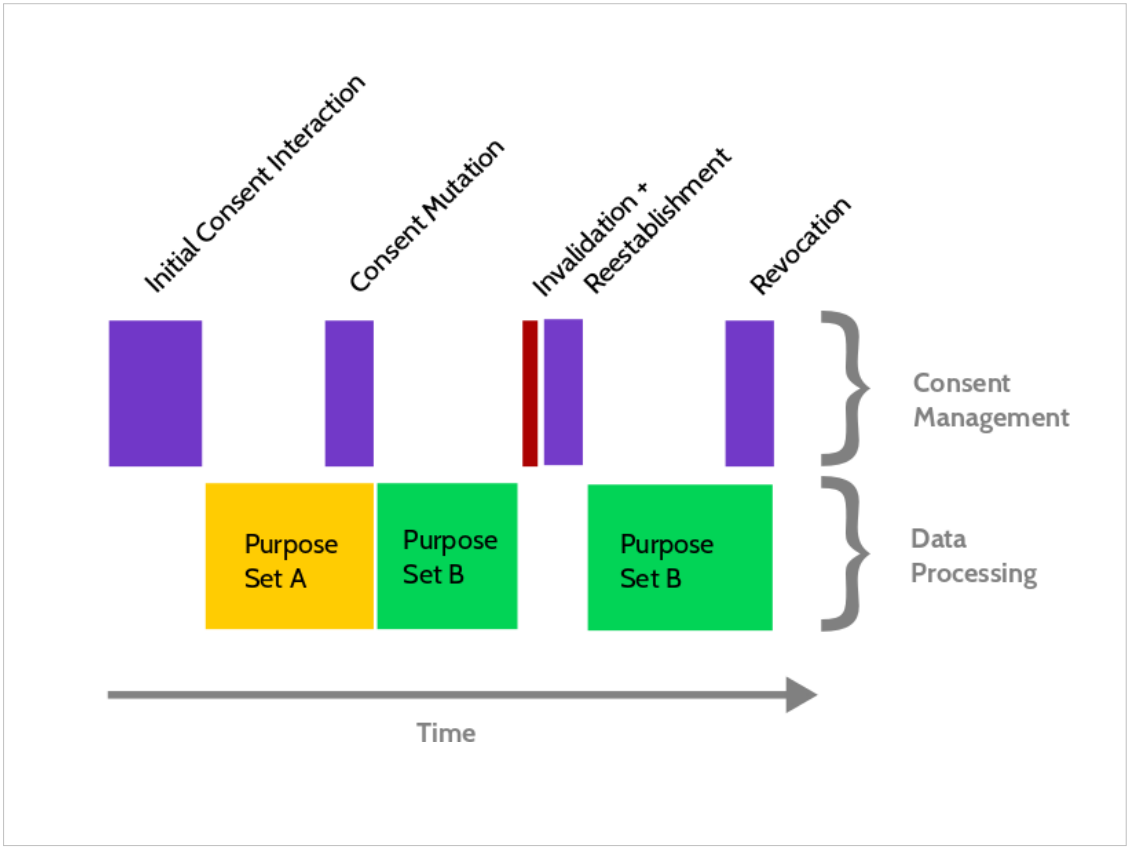
In future, consent may even be given on a user's behalf by a semi-autonomous agent acting for them.



The job of the consent token is to act as a record of WHAT was consented to, and HOW it was consented to.

IT needs to include all the important aspects of the consent interaction, which means at least:

1. Party Ids; who consented to a request by whom.
2. When that consent took place, and any expiry dates etc.
3. The type of interaction that was used, and any important details about that interaction.
4. The concepts and language used in the interaction as may have legal implications later on.



Data processing can then be attached to that consent token, as shown here.

An initial consent interaction generates the token and allows processing by the service provider. Later on, that token is mutated somehow; either by the subject or at the request of the controller, and the purposes for which the data can be processed are altered slightly. Because data processing is contingent on the token, those processes start or stop automatically.

Perhaps later on the initial consent mechanism is determined to be insufficient. All the consent that was sought through that mechanism can be invalidated and – if possible – re-established.

Finally, a data subject can choose to withdraw all consent, or the consent can EXPIRE.

SUMMARY

- First-principle definition of consent supports empirical investigation
- Develop a re-usable theory of consent
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There is obviously still some way to go before we have such a metric, but I hope you are at least intrigued at prospect if not convinced on the theory!

I hope that this venue may be one avenue to take this work forward, and open up some genuine innovation in consent interaction.