e-SIDES
Ethical and Societal Implications of Data Sciences

What is e-SIDES?

- Horizon 2020 grant, running for 3 years
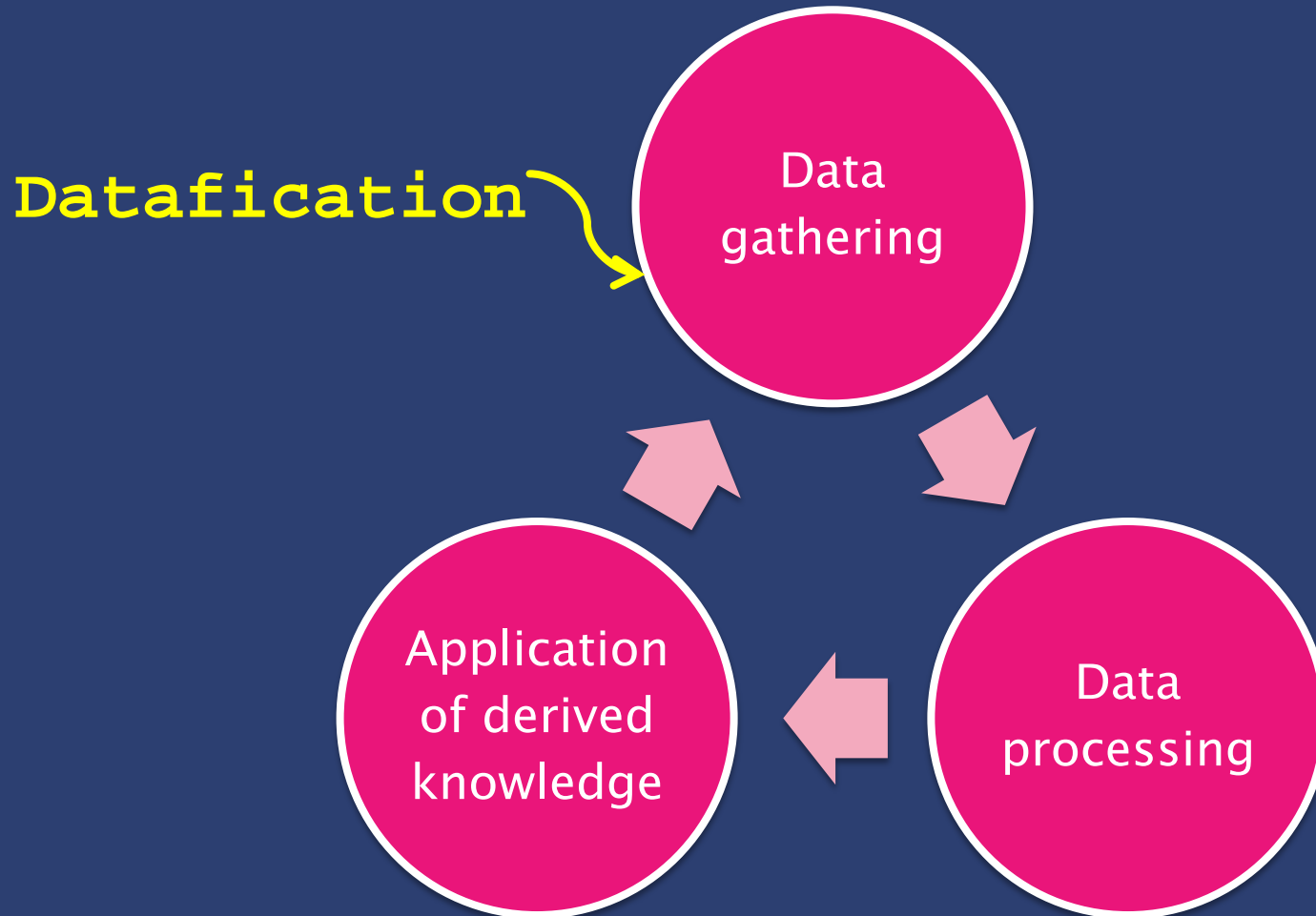
- Three partners in consortium:

eLaw team

Planned results

- 7 community events;

- Final conference;

- 7 white papers;

- Final community position paper;

- Various journal articles and international conferences presentations;

Big data: opportunities and challenges

'Datafication'

- Putting different phenomena in quantified format so that they can be tabulated and analyzed;

- Everything becomes data (words, interactions, emotions, habits, locations)

Applications of big data technologies - examples

- Predicitve decision making (for example policing, judiciary, epidemies, natural disasters);

- Tailor made services (for example digital butlers, marketing)

- AI based technology (for example self driving cars, robotics)

Google's algorithm shows prestigious job ads to men, but not to women. Here's why that should worry you.

By Julia Carpenter July 6, 2015

A recent screenshot of Google images for "CEO."

Fresh off the revelation that Google image searches for "CEO" only turn up pictures of white men, there's new evidence that algorithmic bias is, alas, at it again. In a paper published in April, a team of researchers from Carnegie Mellon University claim Google displays far fewer ads for high-paying executive jobs...

... if you're a woman.

Bernard Parker, left, was rated high risk; Dylan Fugett was rated low risk. (Josh Ritchie for ProPublica)

Machine Bias

There's software used across the country to predict future criminals. And it's biased against blacks.

by Julia Angwin, Jeff Larson, Surya Mattu and Lauren Kirchner, ProPublica
May 23, 2016

O N A SPRING AFTERNOON IN 2014, Brisha Borden was running late to pick up her god-sister from school when she spotted an unlocked kid's blue Huffy bicycle and a silver Razor scooter. Borden and a friend grabbed the bike and scooter and tried to ride them down the street in the Fort Lauderdale suburb of Coral Springs.

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Give everyone the power to share
anything with anyone.

Stephen Lam / Reuters

Facebook Purges Journalists, Immediately Promotes a Fake Story for 8 Hours

Why did the company trend a false article about Megyn Kelly?

ROBINSON MEYER | AUG 29, 2016 | TECHNOLOGY

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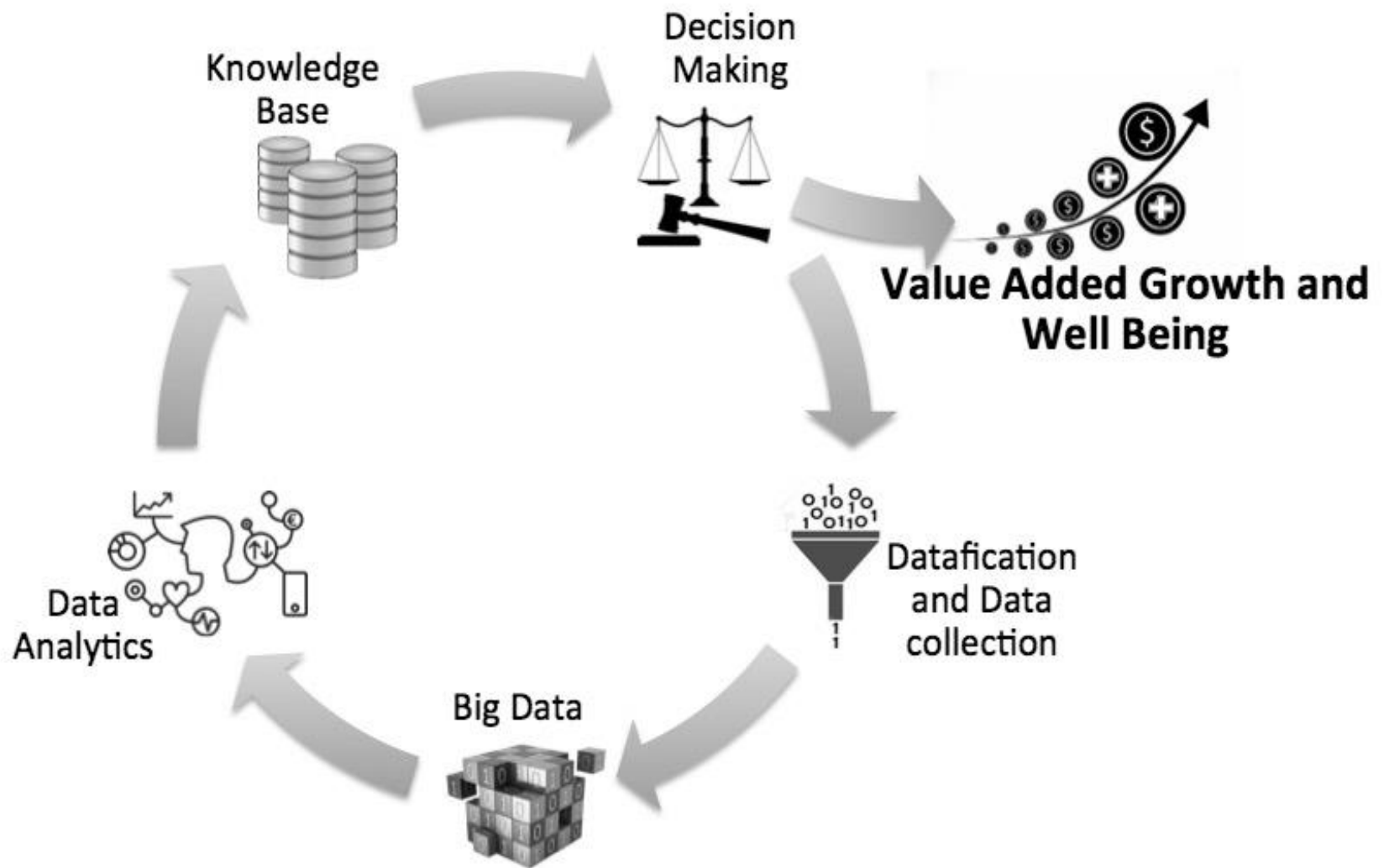Daily, our free weekday email newsletter.

Email   SIGN UP

Oh, Facebook. Just when the company seems to have avoided the responsibility of

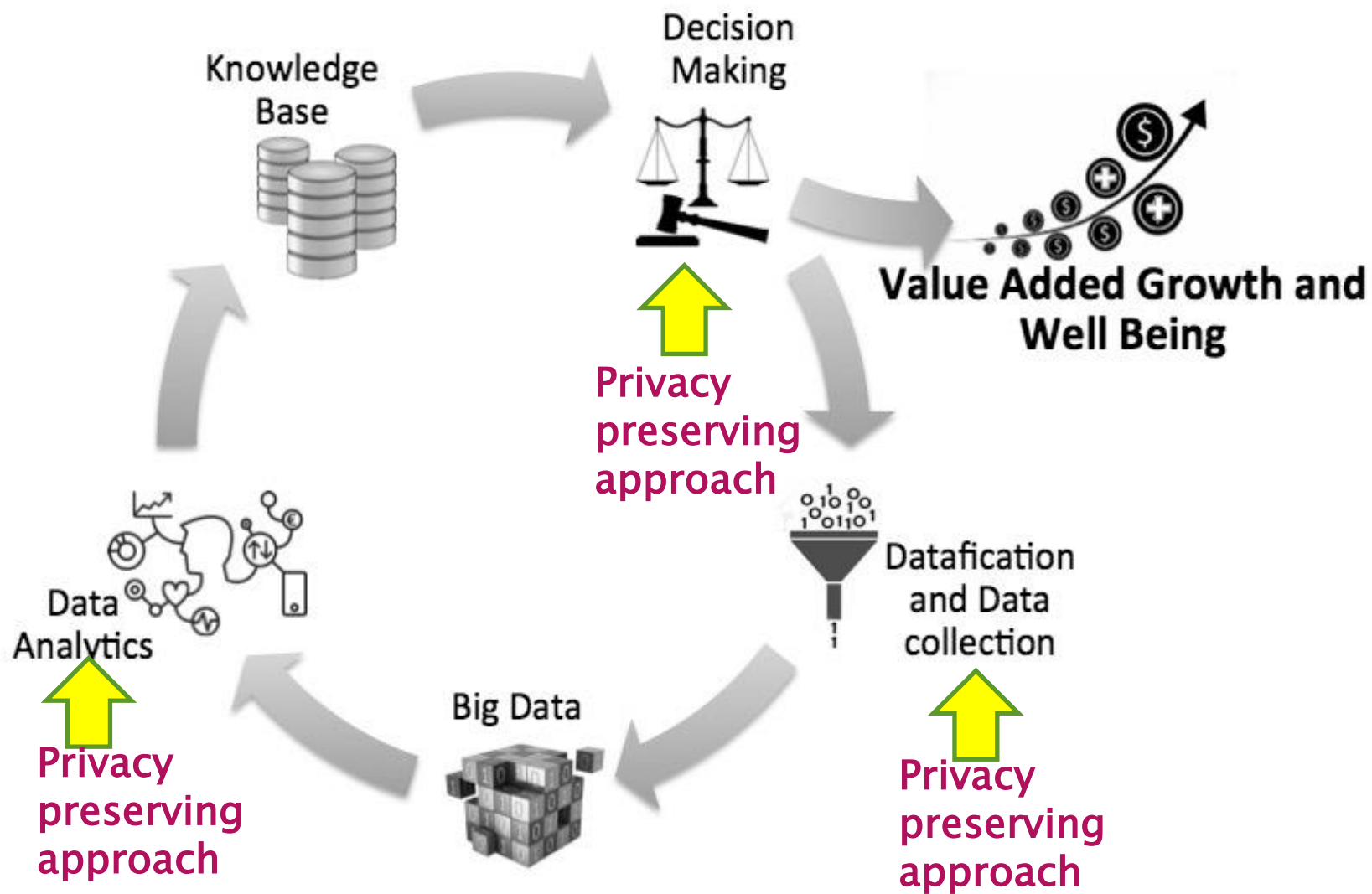fewer ads for high-paying executive jobs...

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Big data and privacy preserving technologies

Source: Data Driven Innovation OECD Oct. 2015

Knowledge Base

Decision Making

Value Added Growth and Well Being

Privacy preserving approach

Datafication and Data collection

Privacy preserving approach

Big Data

Data Analytics

Privacy preserving approach

Source: Data Driven Innovation OECD Oct. 2015

What is the goal of e-SIDES?

Premise

- Big data technologies offer very promising opportunities, but may have several negative side effects when not used properly;

- Maximising the benefits of big data technologies while minimising negative side effects calls for privacy-preserving big data technologies;

Main objectives

- Developing a coherent assessment and validation framework that will help the researchers and innovators to develop privacy-preserving technologies responding to the main societal, legal, ethical and economic challenges raised by big data;

- Promoting dialogue between data subjects and big data communities and improving the confidence of citizens towards big data technologies;

Stages of the project
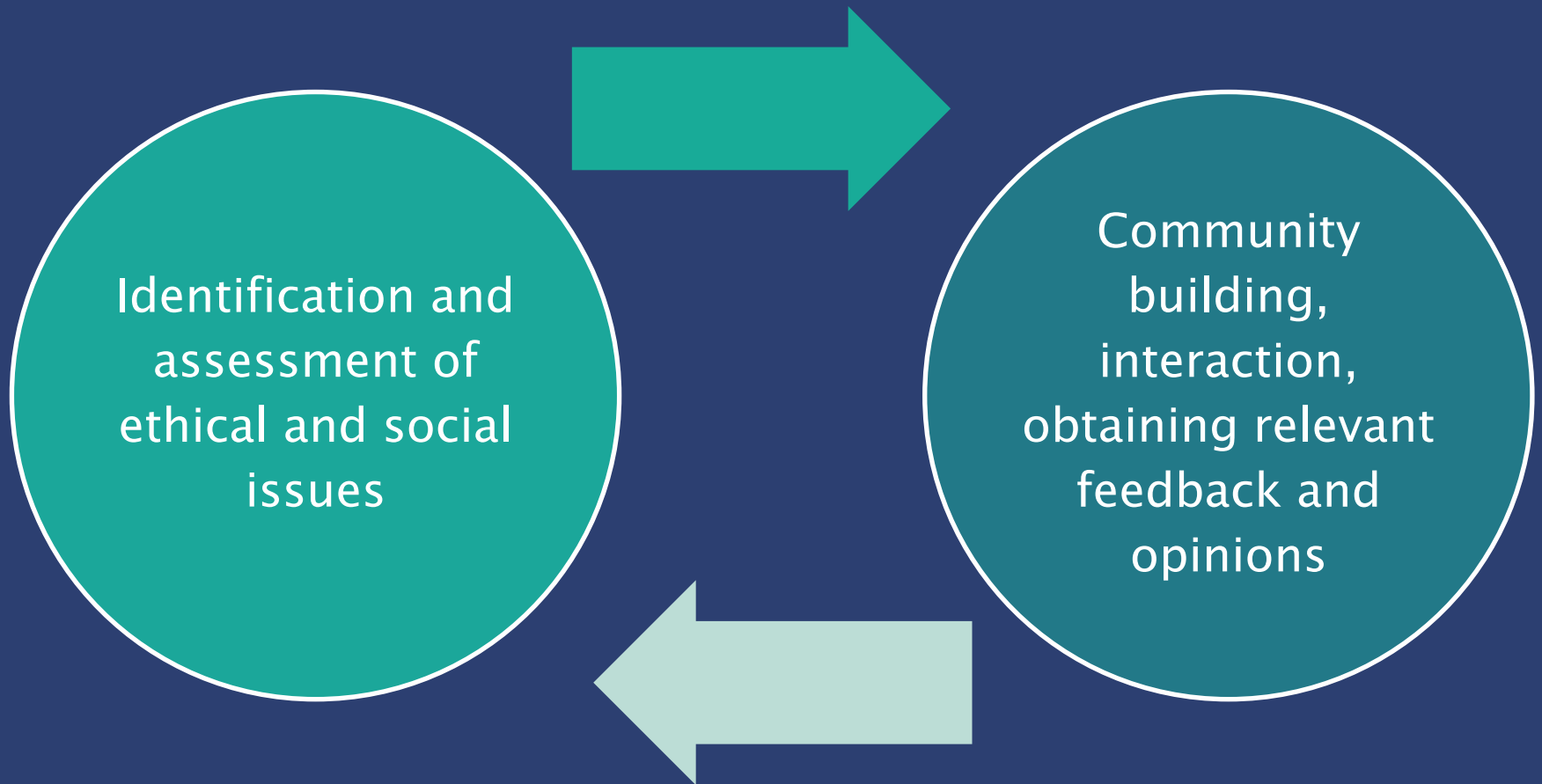
Research agenda:

1. Identifying main ethical, legal, societal and economic issues in the context of big data technologies;

2. Overview of the current privacy preserving big data technologies and their implications from the point of view of four perspectives;

3. Preparing gap analysis (which issues are not yet addressed by design?) and design requirements;

4. Assessment of ethical, legal, societal and economic implications of technologies under development;

5. Determining implementation barriers, making recommendations and drafting community position paper.

Big data and challenged values: ethical framework

e-SIDES: values for big data technologies	Issues putting pressure upon values in the context of big data technologies
Human welfare	Detrimental implications can emerge in the contexts of employment, schooling or travelling by various forms of big data-mediated unfair treatment of citizens.
Autonomy	Big data-driven profiling practices can limit free will, free choice and be manipulative in raising awareness about, for instance, news, culture, politics and consumption.
Non-maleficience	Non-transparent data reuse in the world of big data are vast and could have diverse detrimental effects for citizens.
Justice	Systematic unfairness can emerge, for instance, by generating false positives during preventative law enforcement practices or false negatives during biometric identification processes.
Accountability **(incl. transparency)**	For instance, in the healthcare domain patients or in the marketing domain consumers often do not know what it means and who to turn to when their data is shared via surveys for research and marketing purposes.
Trustworthiness	Citizens often do not know how to tackle a big data-based calculation about them or how to refute their digital profile, in case there are falsely accused, e.g.: false negatives during biometric identification, false positives during profiling practices. Their trust is then undermined. The technology operators trust at the same time lies too much in the system.
Privacy	Simply the myriad of correlations between personal data in big data schemes allows for easy identifiability, this can lead to many instances for privacy intrusion.
Dignity	For instance, when revealing too much about a user, principles of data minimization and design requirements of encryption appear to be insufficient. Adverse consequences of algorithmic profiling, such as discrimination or stigmatization also demonstrate that dignity is fragile in many contexts of big data.
Solidarity	Big data-based calculations in which commercial interests are prioritized rather than non-profit-led interests, are examples of situations in which solidarity is under pressure. For instance, immigrants are screened by big data-based technologies, they may not have the legal position to defend themselves from potential false accusations resulting from digital profiling which can be seen as a non-solidair treatment.
Environmental welfare	Big data has rather indirect effects on the environment. But for instance, lithium mining for batteries is such.

Big data and fundamental rights: legal framework

Relevant human rights	ECHR	EU Charter	List of legal issues
Right to Privacy	Art. 8	Art. 7	Lack of transparency
Right to personal data protection	N/A	Art. 8	Vagueness of the concept of harm and lack of individually attributable harm
Freedom of expression	Art. 10	Art. 11	Proportionality
Freedom of assembly and association	Art. 11	Art. 12	Accountability
Right to non-discrimination	Art. 14	Art. 20 Art. 21	Establishing the adequate regulatory framework
Right to effective remedy and fair trial	Art. 6 Art. 13	Art. 47 Art. 48	The role of private actors in the context of human rights framework
Consumer protection	N/A	Art. 38	

Next steps

How to get informed about the results of our research

@eSIDES_eu

http://www.e-sides.eu/

Thank you!