Data for the Benefit of the People

Recommendations from the Danish Expert Group on Data Ethics

The Expert Group on
DATA ETHICS

Contents

# Development requires us to think

We currently find ourselves at a point in history where technology and data volumes have developed to such an extent that they provide us with almost endless opportunities, both in our society and in the business community. But right now, we also need to watch our step if we are to ensure that our technological progress achieves the common goals we set ourselves as a society and as citizens. Losing focus here could have serious consequences, which could easily overwhelm us.

Data, data analysis, business intelligence, big data, advanced analytics, deep learning and artificial intelligence could potentially deliver major benefits for individual citizens, consumers, organisations, companies and society as a whole. Digital technologies and data use could lead to a significant shift both in the way citizens, consumers and companies interact, and in the way in which companies recruit, work, collaborate and compete .

Table 1: Data communication via the Internet per minute, 2018
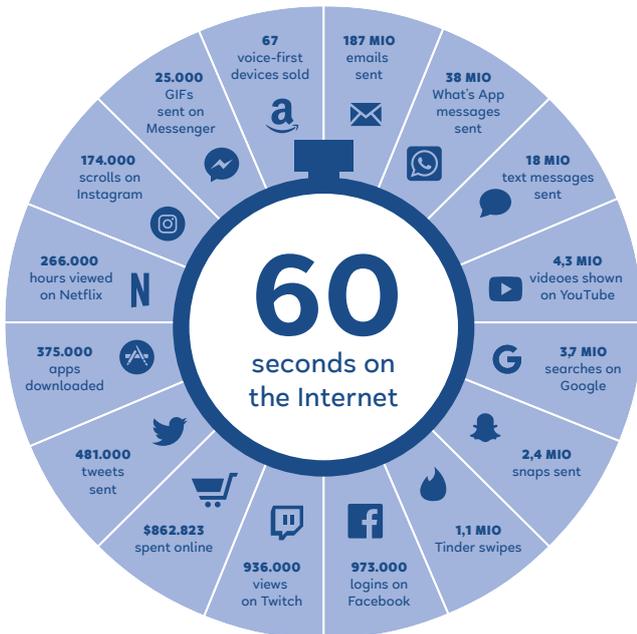
Based on a graphic originally designed by @LoriLewis and @OfficiallyChadd.

Source: wearesocial.com/us/blog/2018/01/global-digitalreport-2018

Using digital solutions and data presents a number of ethical dilemmas. If data is to be exploited to its full potential, it is essential that we, as a society, trust that our data is being used responsibly.

"If data is the new oil then data ethics is the new green"

——ÅSE ZETTERBERG, CHIEF DIGITAL OFFICER, SWEDISH MINISTRY OF ENTERPRISE AND INNOVATION

In Denmark, we have a high level of digitisation readiness and we are good at exploiting new opportunities. Denmark is also a nation that builds on values such as trust, democracy, responsibility and self-determination. Denmark is therefore well-placed to become a digital frontrunner, which is why we also have a particular responsibility to make an impact on European and international developments. Denmark has a strong foundation from which we can spearhead the work with data ethics.

"Senior executives highlight consumer trust as an essential competitive parameter."

——ALTIMETER (2015), THE TRUST IMPERATIVE: A FRAMEWORK FOR ETHICAL DATA USE

The debate on data ethics is wide-ranging. It concerns the use of data both by the public and private sectors, the large tech giants and their dominant market positions, the fusion of our critical infrastructure via the Internet, micro-targeting users, fake news and a number of other issues which, in the worst case scenario, could pose a challenge to our democracy.

The Expert Group has focused on how companies can handle the ethical challenges of using data, cf. the commission for the Expert Group on Data Ethics. The Expert Group is fully aware that the public

debate on data ethics is also heavily focused on data ethics in the public sector. The Expert Group therefore believes that we also need to address data ethics issues in the public sector.

Health is an area that has received particular focus when it comes to the potential of using data. The use of health data can, in many cases, be of great benefit to patients, efficiency in the healthcare sector and the life science industry. Safeguarding patients' health data and ensuring it is not misused is essential for gaining citizens' continued support and trust when it comes to collecting health data. Health data has therefore been a specific focus area for the Expert Group.

Working with data ethics is both a sprint and a marathon. The Expert Group is now taking its first steps with a number of specific and actionable recommendations on data ethics, so that companies can start to tackle data ethics dilemmas. The Expert Group's ambition is to formulate recommendations that will help companies make an abstract concept more tangible. The Group began by preparing and navigating this area using a basic value compass:

"Denmark could create a gold standard for data ethics."

—— SACHIN LODHA, TATA CONSULTANCY SERVICES, INDIEN

The Expert Group believes that responsible decisions from companies require qualified knowledge and insight. That is why the recommendations also include measures to build awareness and transparency in the wider public around data ethics. This concerns both consumers, who need to learn to make demands on services and navigate new opportunities, and companies, who need to take responsibility and spot the business potential of responsible data use.

It is important that data ethics retains a high position on the national and international agenda. Several of the recommendations focus on ensuring this.

The Expert Group's draft recommendations for data ethics were

discussed by the Danish Disruption Council on 13 September 2018. This is the Expert Group's final report and recommendations, hereby forwarded to the Danish government.

A unanimous Expert Group presents the following recommendations on data ethics.

Data Ethics Value Compass

Data ethics is defined as an active decision and action to ensure that knowledge obtained through data is not used against the legitimate interests of an individual or group. With data ethics, organisations work actively to address data ethics issues in design, innovation and business processes. When we talk about data ethics in relation to companies, responsibility lies beyond what is stated in data protection legislation (e.g. GDPR). Data ethics is about doing the right thing, even when no one is watching. As a basis for the implementation of data ethics in practice, the Expert Group has identified a number of overarching values to inform their work.

This means that:

1. The following values must act as the foundation for the design of data driven systems,

2. The following values are to be the foundation of new policy and possible legislation, and

3. The following values must be integrated into daily activity around data and use of data driven systems.

"Ethical behavior is about doing the right thing even when no one is watching – even when doing the wrong thing is legal."

——SACHIN LODHA, TATA CONSULTANCY SERVICES, INDIEN
(Originally coined by Aldo Leopold)

SELF-DETERMINATION

People must retain the most control possible over their own data.

EQUALITY AND FAIRNESS

Technology must not discriminate.

DIGNITY

Human dignity outweighs profit.

PROGRESSIVENESS

Societal progress in using data can be achieved though data ethical solutions.

RESPONSIBILITY

All sides must be responsible for the consequences of their technological solutions.

DIVERSITY

When developing technological solutions, involve as many trade groups of different genders, ages, ethnicities etc. as possible.

SELF-DETERMINATION

People's self-determination must be prioritised in all data processes. It is the individual person who should have the ultimate control over what their data is used for and in which contexts.

DIGNITY

Human dignity must be respected in all data processes, i.e. data should not be used to exploit knowledge against the user's long-term interests. This includes, for example, use of the latest new technology and encryption methods to protect privacy data from leaks and misuse, and organisational processes any data analysis and correlation that protect people from discrimination and misuse of their data.

RESPONSIBILITY

Responsibility is a company's "due diligence" in relation to data collection and processing. Responsibility and co-responsibility must therefore exist in all links of the data processing chain. This includes co-responsibility from business partners and third-party processing and any future data storage.

EQUALITY AND FAIRNESS

Strive for a fair balance in data processing. When using machine learning and algorithms for processing data, active work is being done to prevent undesired bias in data (such as when manually sorting and tidying data), as well as to work towards designs that avoid categorisation that discriminates between e.g. population groups. In regard to this, the rationale and criteria for methods that reduce bias and discrimination will always be explicit and open to revision.

PROGRESSIVENESS

Advanced data use can help bring significant progress to our society. To achieve this progress, technical and organisational solutions need to be created to support ethically-responsible data processing.

DIVERSITY

Diversity (demographic and professional) in teams working with data systems is essential. Diversity helps ensure a mix of skills, beyond the purely technical, for identifying and tackling the social and ethical consequences of data processing, and to ensure that a representative section of the needs, values and interests of population groups in society is taken into account right from the start when data systems are designed.

9 recommendations on data ethics

The Expert Group recommends the following:

1. COUNCIL FOR DATA ETHICS

The government needs to establish an independent Council for Data Ethics. The purpose of the council is to support an ongoing focus on data ethics.

2. THE DATA ETHICS OATH

Company directors and employees actively address and take responsibility for questions and dilemmas around data ethics by taking a data ethics oath.

3. DYNAMIC TOOLBOX

The dynamic toolbox for data ethics should support the oath and provide tools and aids to help raise awareness and for specific activities in Danish companies.

4. DECLARATION OF COMPANIES' DATA ETHICS POLICIES

Denmark should be the first country in the world to demand that its biggest companies incorporate an outline of their data ethics policies in their management reviews as part of their annual financial statement.

5. A DATA ETHICS SEAL

A data ethics seal should be introduced as proof that a product meets data ethics requirements. A data ethics seal would make it easier for consumers to navigate digital products, and for companies to identify responsible partners.

6. NATIONAL KNOWLEDGE BOOST

The knowledge and insight into data ethics issues of the general population and the business community need to be boosted so that we as a society gain a greater understanding of the opportunities and consequences of using data.

7. DENMARK AS A FRONTRUNNER

Denmark should be visible in and impact European and global development in data ethics by being a frontrunner on the international scene.

8. STIMULATING INNOVATION AND ENTREPRENEURSHIP

Innovation and entrepreneurship with a focus on new data ethics business models are stimulated through co-financing, earmarking of funds and innovation contests.

9. DATA ETHICS IN PUBLIC SECTOR PROCUREMENT

It must be a requirement that digital solutions that are procured or developed by the public sector are data-ethical, so that the public sector drives demand for innovative and data-ethical solutions from companies.

Recommendation no. 1

Council for Data Ethics

The government should establish an independent Council for Data Ethics.

PURPOSE

The purpose of the Council for Data Ethics is:

- To support innovation that focuses on new data ethical business models.

- To support the use of data ethics in the Danish business community, so that more companies work consciously and purposefully with data ethics.

- To work towards ensuring that a responsible approach to data ethics becomes a competitive advantage, both locally and internationally.

- To work towards ensuring that data ethics in the private sector tie in with data ethics in the public sector.

HOW

Members of the council will act as ambassadors for data ethics in

the business community and should represent a cross-section of skills and experience within areas such as technology, business operations, philosophy and ethics.

The council must:

- Build up specialist knowledge and gain insight into current issues surrounding data ethics.

- Support innovation that focuses on new data ethics business models, such as through innovation contests, cf. recommendation no. 8.

- Provide recommendations for e.g. the Danish Growth Fund, Trade Council and the new Danish Business centres about how to stimulate product and business development by earmarking resources for data ethics concepts, as well as screening the concepts based on a data ethics angle, cf. recommendation no. 8.

- Develop, update and ensure visibility of the data ethics oath and the data ethics toolbox, cf. recommendations 2 and 3, to ensure continual support of the objective of the recommendations.

- Help develop a data ethics seal, cf. recommendation no. 5.

- Advise the government on issues relating to data ethics and our critical data infrastructure within certain sectors, such as transport, utilities and communication.

- Investigate data ethical dilemmas in different industries, such as the healthcare sector. The area of health data contains major health and innovation potential if data is used appropriately for research and development. However, there are important considerations to be made regarding data sharing, anonymising, encrypting, ownership of one's own health data and, secure data processing.

- With an outward focus, both nationally and internationally, promote debate-stimulating activities that contribute to public awareness and increased knowledge within the area, cf. recommendations 6 and 7.

- Initiate recommendations for new measures that push companies towards ever more conscious and responsible data processing and data use.

- Submit an annual report to the government, explaining what has happened in the area in recent years, including any recommendations and activities the council has launched.

- The council must plan its work in such a way that it is incorporated with data ethics in the public sector.

- The council must plan its work so that it is incorporated with other relevant initiatives. As the council works within an area that is constantly developing, the council's tasks must be regularly assessed and adapted.

WHY

Data use in the business community is developing rapidly. This is why it is essential to maintain an ongoing focus on the connection between advanced data use and trust in the fact that companies are processing data responsibly, to create opportunities for innovation and growth. The above requires a long-term anchoring of relevant initiatives and knowledge-building.

If sustainable data use is to be a competitive parameter for Danish companies, there must be a sustained focus on converting the business community, including developing new business models that are data ethical.

Based on its mission, the Expert Group has worked solely with the business-oriented aspect of data ethics. The recommendation for a Council for Data Ethics also has this focus. The Expert Group is fully aware that the public debate on data ethics also involves the public sector. The Expert Group has also found similarities between data ethics in the private and public sectors, and that issues relating to data ethics cannot always be separated. The Expert Group therefore believes that it is essential to also address data ethics issues in the public sector.

"Why would ethics ever be a finished task in business? It is an ongoing human project."

—SHANNON VALLOR, PROFESSOR – DEPARTMENT OF PHILOSOPHY, SANTA CLARA UNIVERSITY

Recommendation no. 2

The data ethics oath

Company directors and employees who work with data must take an oath on data ethics.

PURPOSE

The purpose of the data ethics oath is:

- For company directors and professionals who work with data use to consciously address and take responsibility for data ethical questions and dilemmas.

- For company directors and their employees to take ownership of a company culture that is built on conscious decisions that ensure sustainable data use.

- To give companies a specific, accessible tool for launching important internal discussions around data ethics and responsibility, with both new and existing employees.

- To enable the company to prove that responsibility and

awareness around data is a high priority both internally and externally.

HOW

With the data ethics oath, companies and the individual employees acknowledge that they will help put data ethics on the agenda and continually ask questions that ensure that decisions regarding advanced data use and artificial intelligence are made on a well-informed and ethically aware basis.

The Expert Group's proposal for the data ethics oath, which the Council for Data Ethics is responsible for developing and updating, can be found in Appendix 1, "The data ethics oath".

The toolbox for data ethics, cf. recommendation 3, will include guidelines to help understand and comply with the individual statements in the oath.

The Council for Data Ethics is responsible for maintaining the oath's content, ensuring that it follows all developments in the area and is thus updated as required so that it supports the overall purpose of the oath. The Council is also responsible for spreading and generating interest in the oath, such as by highlighting those companies working actively with the oath.

"Ethics is knowing the difference between what you have a right to do and what is right to do."

——SACHIN LODHA, TATA CONSULTANCY SERVICES, INDIEN
(Originally coined by Potter Stewart)

WHY

The data ethics oath should help ensure that data ethics values are an active and integrated part of the culture in companies that work with data. By taking the oath, company directors and professionals working with data undertake to work responsibly when processing data and displaying it to the outside world.

Recommendation no. 3

Dynamic toolbox for data ethics

Setting up a dynamic toolbox for data ethics.

PURPOSE

The purpose of the toolbox is to give professionals and companies specific tools, updated guidelines and recommendations that make it easy to incorporate and take action on data ethics in connection with products, projects and general day-to-day work.

HOW

A data ethics toolbox should contain the following elements:

- Guidelines on how to make data ethics decisions in companies, cf. recommendation no. 2 regarding the data ethics oath.

- Practical information and guide for e.g. using big data, creating algorithms and designing IT systems.

- Specific examples of how other companies have worked with data ethics, and how data ethics can be used as a competitive advantage.

- A template and guide for management reporting on data ethics.

- A collection of relevant links for research and best practice.

- Online tools for checking companies' data ethics maturity.

Companies are advised to develop competence development tracks around data ethics, identify data ethics dilemmas and issues and develop conscious and ethically correct data processing methods for new products and daily operations. Competence tracks should apply to new recruits and be an ongoing part of skills development for existing employees. The data ethics toolbox could serve as a training tool here.

The format of the data ethics toolbox must be digital, and its content must be under constant development. The format of the toolbox should take into account companies' different needs for information and guidance, depending on their industry, size, skillsets and experience. The Council for Data Ethics is responsible for establishing and maintaining the toolbox.

WHY

There is a need to quickly implement specific initiatives so that companies can start to tackle existing data ethical dilemmas as well as any that may develop as data use increases. The Expert Group has aimed to make a very abstract concept more actionable.

As part of the work with the data ethics oath, cf. recommendation no. 2, and the national data ethics knowledge boost, cf. recommendation no. 6, company directors and professionals who work with data need somewhere they can easily access specific tools and knowledge around data ethics in their everyday work. A data ethics toolbox would support this work.

Recommendation no. 4

Declaration of companies' data ethics policies

Every year, companies should declare their data ethics policy in accordance with the Danish Financial Statements Act.

PURPOSE

The purpose of extending the management review as part of the annual financial statement to include a statement on data ethics is:

- For Denmark to be the first country in the world to demand that its biggest companies actively address and take responsibility for their work with data.

- To create an incentive for working actively with data

ethics as a competitive parameter and to create transparency in the area, such as for investors and other companies. This would provide a first-mover advantage and create a breeding ground for new data ethics models to form.

HOW
In the management review, companies must provide a statement on their work with data ethics by explaining the extent to which they have chosen to focus on data ethics in their business activities. The recommendation will require a change to the Danish Financial Statements Act.

Companies that are not affected by the Danish Financial Statements Act are encouraged to voluntarily give a statement regarding their work with data ethics.

WHY
There is a need for data ethics solutions and visibility in how companies should work with data ethics. A major challenge is that companies, investors etc. struggle to see which companies use data in an ethically responsible way.

There is still no common understanding, nationally or internationally, of how a company should work responsibly with data and technology. The debate on data ethics is similar to the debate about companies' corporate social responsibility (CSR), which was a major part of the globalisation debate in the 1990s and 2000s. This was a time when companies' social responsibility and production conditions with sub-contractors around the world were heavily scrutinised. The increased international division of labour raised questions about responsible growth, but it was hard to define exactly what each company needed to do. Allowing the individual company to declare their own policy avoids pre-defining what the company should do, instead encouraging transparency and market-related pressure from other companies, including investors and suppliers.

Since 2009, around 1,200 of Denmark's biggest companies have been obliged by the Danish Financial Statements Act to provide statements on their work with corporate social responsibility in their management review. This includes how their business strategy and business activities take into account areas such as human

rights, climate and the environment.

This recommendation will oblige companies to explain to whether or not they have chosen to focus on data ethics in their business activities. The recommendation builds on a known and established method for companies in their work with corporate social responsibility, which is therefore also a benefit. The recommendation also supports Denmark's position as a leading role model in the work on data ethics.

Recommendation no. 5

A data ethics seal

A data ethics seal should be introduced as proof that a product meets data ethical requirements.

PURPOSE

The purpose of a data ethics seal is to:

- Make it easier for consumers to navigate between companies, websites, apps, services and products and to give consumers the option to select a data-ethical alternative.

- To reduce the complexity for both consumers choosing companies and for companies choosing sub-contractors.

- To make it attractive for the individual company to process data in an ethically responsible way and therefore support data ethics as a competitive advantage.

- In the short-term, it is recommended that Denmark lead with a national seal, but in the longer term, it would be important to develop a European or global seal that gives consumers in all countries the chance to identify compani-

es that process data responsibly in an otherwise immeasurable digital market.

HOW

The seal should be visible on all company websites and on individual products or services, such as purchases in app stores. The requirements that a company would need to meet to obtain a data ethics seal should be based on common industry standards, certifications or similar. The seal should contain principles for ethical data processing and be regularly updated to remain relevant. It is essential that the business community takes ownership of the data ethics seal. It is recommended that the seal is developed together with and anchored in the Council for Data Ethics, cf. recommendation no. 1, and that it builds on work carried out with other seal schemes, such as the e-mark e-commerce seal, which is run by a partnership between business organisations, user organisations and professional organisations. The seal design needs to take into account interfaces with other seal or certification schemes, as well as the fact that it will need to be developed into a European or global seal in the long-term.

WHY

Consumers struggle to see which companies use data in an ethically responsible manner, and which companies do not. The same applies to companies choosing sub-contractors. The data ethics seal makes it easier to navigate for all parties.

"We don't know enough about the technology that we are using. It is often like fast-food. We get a box with very low nutritional value and consume it without thinking too much about it. We don't know if they are harvesting data in unethical ways."

——TARIQ KRIM, ENTREPRENEUR AND FORMER DIGITAL ADVISOR TO EMMANUEL MACRON

Recommendation no. 6

National knowledge boost on data ethics

National and local initiatives will increase the population's knowledge and insight into data ethics issues.

PURPOSE

The purpose of a national boost in knowledge regarding data ethics is for us as a society to develop our understanding of how data is created and what it is used for.

The knowledge boost should focus on:
- Increasing insight into data ethics issues.
- Creating awareness about the consequences of general use of the digital world.

- Starting a debate around the expectations consumers should have of companies that have access to data generated by consumers' own digital life.

- Contribute to a wider societal debate about the issues caused by the use of data and artificial intelligence in areas such as health.

HOW

The knowledge should focus on four areas – educational institutions, research, companies and the public debate – and should be coordinated with and preferably integrated into existing initiatives.

EDUCATIONAL INSTITUTIONS

It is recommended that science education be increased, with a focus on ethics and philosophy, across all educations and levels of education, right from primary school where pupils need to learn to navigate responsibly when using new technology, to students who, via an interdisciplinary approach to learning, need to understand that they are contributing to a digital society with many data ethics pitfalls.

There is a general need at all levels of the educational system for a obligatory knowledge boost that explains what data is, how it is used, how consumers and citizens navigate their data and what the consequences for the individual and society are of opting in or out.

COMPANIES

By taking the data ethics oath, cf. recommendation no. 2, and using the toolbox for data ethics, cf. recommendation no. 3, companies can launch specific initiatives to achieve a knowledge boost among both managers and employees.

THE PUBLIC DEBATE

National information campaigns and events should be launched to spread knowledge of data ethics. The campaigns must be supported by public service media.

RESEARCH

Resources should be allocated for interdisciplinary research into data ethics and data use, including privacy-by-design and data ethics-by-design, to support the general societal knowledge boost and awareness raising.

It is therefore proposed that one day a year, perhaps under the headline DigiTalSammen ("DigiTalk Together"), there is a national focus on data ethics at all levels of society, from primary schools to Parliament and in the media, via events, debate, themed work, conferences and similar.

The Expert Group also proposes allocating resources for developing digital tools to make data ethical dilemmas relevant and accessible, such as tools that enable you to "play" your way through ethical issues.

WHY

We are still learning to navigate the digital world and trying to understand the expected and unexpected consequences of using the digital services that we surround ourselves with on a day-to-day basis. There are numerous examples of how data from unconcerned users of "free" services becomes the real product in a company's business model, without the user's knowledge.

New ways of communicating via digital platforms lead to ethical challenges regarding what you can and cannot share, and what privacy actually means.

In some cases, we risk data being used in a way and scope that we do not want to be a part of. In other contexts, we want data to be used as widely as possible, because it could help us.

We have rights to our own data, but does everyone else also have rights to our data? What are the new social contracts and what is the new balance between the individual and the community?

This is relevant in e.g. the area of health, where some believe that it is in everyone's best interests for health data to be made available for researching and developing new treatments.

As a society, we need to learn to navigate the digital world and to remain critical of where we believe the boundary should be between data use and good digital ethics.

This is why we need a national knowledge boost, where we as a society develop our basic understanding of how data is created

and what it is used for, and how we strike a balance between the individual and the community.

"Teaching ethics to technologists is particularly critical because they are building the systems that impact millions of people's life. They need to understand something about the consequences of the decisions they are making."

——MEHRAN SAHAMI, PROFESSOR – COMPUTER SCIENCE, STANFORD
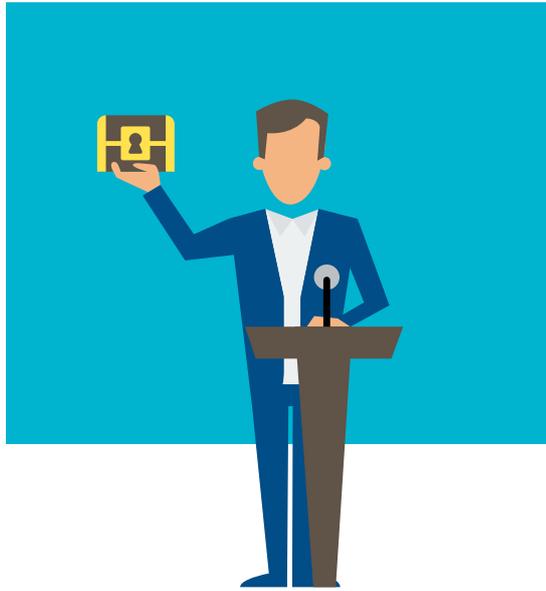
Recommendation no. 7

Denmark as a frontrunner in data ethics

Denmark leads the way and focuses on international data ethics.

PURPOSE

The purpose of this recommendation is to ensure that, as the digital frontrunner, Denmark helps to impact European and global developments in data ethics.

HOW

Denmark works actively with data ethics on an international scale. This is to be achieved via e.g. an annual international data ethics

summit in Denmark, an annual data ethics award to be given to a company that has made extraordinary progress in data ethics, and working with an international index that measures digital readiness with a focus on data ethics, as well as actively working on global standards for data ethics and algorithmic trustworthiness.

Denmark also needs to work actively to promote the Danish approach to data ethics in international fora, such as the EU, OECD, UN and World Economic Forum, with the goal of to creating international solutions to an international problem.

Creating a communications and branding strategy around Denmark as a frontrunner in data ethics should form part of this effort.

WHY

As a digital pioneer, Denmark has an excellent opportunity to help impact European and international developments towards a more responsible use of technology and data. Values such as trust, democracy and self-determination permeate Danish society. By taking the lead internationally, Denmark can ensure that these Danish values help shape the long-term international solutions in the area.

The Expert Group believes that large parts of the Danish business community would support the data ethics agenda and be able to utilise data ethics as a competitive advantage in global markets. The long-term goal is to promote a Danish approach to data ethics in an international context.

"I am really happy to see a data ethics initiative being put into action (the first of its kind?). I applaud Denmark for having such foresight to tackle this issue today."

——SHOMIT GHOSE, VENTURE CAPITALIST, SILICON VALLEY
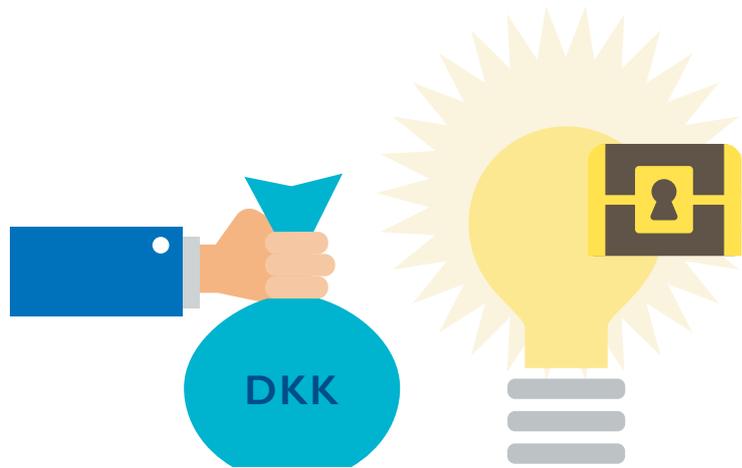
Recommendation no. 8

Stimulating innovation and entrepreneurship with a focus on data ethics

Innovation and entrepreneurship with a focus on data ethics concepts must be stimulated.

PURPOSE

The purpose of stimulating innovation and entrepreneurship with a focus on data ethics is to develop new business models that can utilise the opportunities that arise nationally and internationally as more and more consumers become interested in data ethical solutions.

HOW
The government needs to concentrate on kickstarting new data ethical business models by supporting the Danish entrepreneurial ecosystem with a special focus on data ethics. For example, the government could co-finance events, conversational salons and other private initiatives that strengthen the ecosystem and focus on data ethics. Additionally, through the existing business and innovation policy instruments in resources such as the Danish Growth Fund, the government could stimulate product and business development by earmarking funds for data ethical concepts and screening concepts that actively incorporate a data ethics angle.

Different types of innovation contests should also be launched in order to stimulate idea development and gather new, fresh skills from different areas of expertise.

A particularly interesting tool for supporting development in data ethics is innovation contests in the form of challenges. A challenge is a problem that is presented to an open audience, who participate by offering solutions. A challenge clarifier could be a private company or a public organisation. By taking part in a challenge, a company, association or other organisation can help impact the agenda for Danish innovation, provide new inspiration, and contribute thoughts and knowledge to other people's ideas. The existing platform challenges.dk already provides an opportunity for targeted activities. But data ethics issues can also be offered in other contexts, to give companies incentives to develop innovative solutions, including new business models based on data ethics.

WHY
A strong business community doesn't happen by itself. By focusing on kickstarting new data ethical business models, business support can be provided to a new and budding industry. This will help make data ethics a competitive parameter by giving Danish companies the opportunity to develop data ethical business models, which will allow consumers and businesses to opt for data ethical alternatives. This avoids the formation of data monopolies and situations where consumers and companies have no choice.
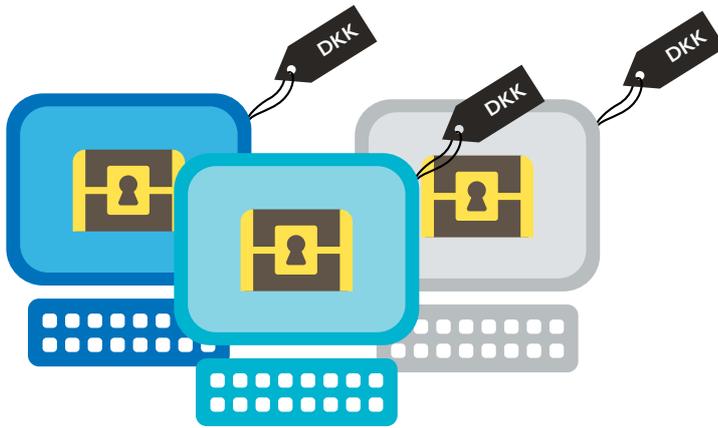
Recommendation no. 9

Data ethics in public sector procurement

Digital solutions bought or developed by the public sector must be data-ethical.

PURPOSE

The purpose is for the public sector to drive and create demand for innovative data ethics solutions. This will help create a private market for new responsible business models, to the benefit of Danish companies.

HOW

The government, municipalities and regions must be required to only buy or develop digital solutions that are data-ethical. This is achieved by imposing specific system requirements on matters such as building transparency into IT systems for advanced data use, or requirements for proof of how a given result has come to light. Another requirement could be for any digital services bought or developed by the government, municipalities and regions to carry the data ethics seal.

WHY

There is a particular challenge to promoting data ethics entrepreneurs and new business models, as public digitisation solutions are often offered in very large supply, which may make it difficult for new, smaller companies to help develop innovative solutions of the future.

Through strong demand, the public can help stimulate a market for data ethical solutions. This would establish a breeding ground for new data-ethical-by-design solutions, where Danish companies would achieve a competitive advantage that could subsequently be utilized on a global scale.

The Expert Group on Data Ethics' mission and working method

The Danish Expert Group on Data Ethics was set up in March 2018 based on a decision by the Danish Disruption Council. The Expert Group's task was to discuss how companies could handle the ethical challenges linked to the use of data and the new digital business models that are constantly evolving, and to propose recommendations that could contribute to the responsible and sustainable use of data in the business community. The recommendations had to contribute to ensuring a strong framework for companies so that Denmark maintains a competitive and digital private sector which is ready for future challenges.

Members of the Expert Group represent relevant skills in data ethics, technology use and company management.

The Expert Group has prioritised an active societal debate on the responsible and sustainable use of data. Questions about what constitutes good data ethics and what kind of world we want are best answered by first having a societal debate. To this end, the Expert Group held a number of open meetings, known as conversation salons, at e.g. the People's Political Festival, to gather knowledge and input from interested citizens, companies, researchers and other external experts in the area. Data ethics was also one of the main topics at the Techfestival in Copenhagen at the start of September 2018. Finally, the Expert Group's Chair has been active in the public debate on data ethics, including holding meetings with and giving presentations to a number of interest groups, and has even been on research trips to India and America to discuss data ethics with a wide range of experts.

To provide full transparency of the process, the Expert Group

launched a website – dataetikdk.dk – with continuous updates on the progress of the work in the Expert Group as well as a dedicated e-mail address - dataetik@erst.dk – by which the public has been able to add their input.

The Expert Group has worked according to the following principles:

INVOLVEMENT

The Expert Group wants to work actively with and get input from a wide number of stakeholders. Involvement is through open conversation salons, an open mailbox and the Chair reaching out to companies and organisations.

TRANSPARENCY

It's important that the Expert Group's work is easy to understand and that it is easy to contribute to, find information about and talk to the group about data ethics. This is why the public is invited to get involved and why many aspects of the group's work are documented on the group's blog at dataetikdk.dk and on social media.

DIVERSITY

The composition of the Expert Group and other experts, influencers and participants should be diverse to ensure that different voices and perspectives are represented and heard.

CHALLENGE

It is essential for the Expert Group to challenge perspectives, norms and habitual thinking in all phases of their work, so that their output is strong and innovative, and so that everyone who has taken part in the process has learned something new.

EXPERT GROUP'S MEMBERS

Christiane Vejlø, Chair
CEO Elektronista Media

Alice Borgen
Country Manager IBM Hybrid Cloud

Erik David Johnson
Principal AI Specialist at Delegate

Gregers Wedell-Wedellsborg
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Co-founder of the DataEthicsEU think tank

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Mikkel Holm Sørensen
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Morten Primdahl
Co-founder of Zedensk

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Professor and centre manager at the University of Southern Denmark

Thomas Damkjær Petersen
Chairman of engineering association IDA

Thomas Madsen-Mygdal
CEO for TwentyThree

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The data ethics oath

In our company, we take an active stance on questions and dilemmas concerning data ethics in order to make informed decisions on sustainable data use.

As a company, we will prioritize responsible data use. This means that we will actively address the following questions:

 - 1 -

How can we work with privacy-by-design and minimize the collection of unnecessary data when creating new products?

- 2 -

What measures do we take to ensure that our use of data is not discriminatory or biased on the grounds of sex, ethnicity or social groups?

- 3 -

How do we work with data in an open and transparent manner?

- 4 -

How do we ensure that data is not used in a way that misleads users or creates addiction?

- 5 -

How do we work to ensure that users derive maximum value from the data that we collect on them?

- 6 -

Who benefits from the decisions that we take, who are they a disadvantage for, and who can inadvertently exploit them?

- 7 -

Do our data professionals teams reflect the necessary level of diversity (in terms of skill, environment, and professional background)?

- 8 -

How do we ensure that we have the necessary know-how and that we remain up-to-date with respect to issues in data ethics?

- 9 -

How do third parties handle the data that they process for us?

Ekspertgruppen om
DATAETIK