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Public Sector Information Reuse in Denmark

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1. Executive Summary

The advent of Web 2.0 has led to the emergence of new markets for digital content and new ways to create digital solutions involving citizens. In order for Denmark to secure the future of digital products and services, and maintain its position as a lead country in digitisation of society, it is necessary to create a framework where everyone can be both consumers and creators of digital products and services.

The Danish public sector manages vast amounts of data across all aspects of society. This constitutes a valuable resource for innovation and growth that places Denmark in an excellent position to leverage PSI. However, there is a lack of uniform practice in access to public data, significant obstacles to sharing and a lack of public sector awareness of the potentials of sharing.

The Open Data Innovation Strategy (ODIS) was launched in 2009 to address these issues. Run by the Danish National IT and Telecom Agency (NITA), the aim is to work towards a consistent practice for uniform access to government data in order to enable innovation and economic growth, ensure better “smarter” public services and develop knowledge, insight, collaboration and democracy. To support this objective, NITA commissioned a report, which estimated the business potential of the reuse of public data in Denmark could be worth more than EUR 80 million a year.

The report considers legislation relating to reuse of Danish public sector information. The Danish PSI Act, unlike the PSI Directive, defines the recovery of marginal cost as the upper limit for charges on making documents available for reuse and does not allow a “reasonable return on investment”. However, because neither the PSI Directive nor the Danish PSI Act obligate public agencies to release documents or data the ODIS initiative is based on a bottom-up collaborative approach.

A key focus of ODIS has been to raise awareness and provide compelling illustrative examples of how PSI reuse can generate value and to provide simple tools demonstrate that it need not be complicated or costly. ODIS attempts to focus on specific areas in which the agencies *can* benefit from investments, financial or otherwise, in data publishing.

Identifying a lack of high level political attention, the report describes how the approach has engaged with grass root stakeholders, steering clear of bureaucracy and acknowledging reusers’ objectives, to gain trust. The work has been characterised by experiments and iterations, and networking with open data proponents and experts abroad has provided invaluable inspiration and knowledge.

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2. New Opportunities, New Challenges

With the advent of Web 2.0 and the social internet, new markets for digital content have emerged. New ways to create digital solutions, in which citizens and consumers are much more involved and participate in the development or even create solutions, have been introduced. For Denmark to secure the future of digital products and services, and maintain its position as one of the world's leading countries when it comes to the digitisation of society, it is necessary to create a framework where everyone can be both consumers and creators of digital products and services.

Government data as a key resource

Access to government data provides the basis for new services and different analyses, new information and better insights that are useful to citizens and businesses alike. ICT companies will be able to create new business in developing digital services and advanced content based on public data, and citizens can convert ideas and creativity into practical solutions to everyday problems. Open and available government data is a key resource in this process to benefit Denmark's competitiveness and strengthen openness, participation and democracy.

The 'Open Data Innovation Strategy' initiative

The Danish 'Open Data Innovation Strategy' initiative (ODIS) is about creating easier and more uniform access to public data as raw material for the private sector in the development of innovative digital products and services, useful analyses, data visualisations and data journalism. The initiative was launched in May 2009 by the Ministry of Science, Technology & Innovation and is managed by the National IT & Telecom Agency.

3. Danish Government Data

The Danish public sector is large, generally coordinated and streamlined. Public agencies perform a very wide array of tasks and public services are involved in a very high number of citizens' and businesses' activities. At the same time, the public sector is highly digitised and active use of ICT is a natural part of providing services throughout the public sector, internally as well as in the communication between citizens/businesses and the public sector being made electronically.

This applies to the local, regional and national level and it means that the Danish

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public sector collects, manages and utilises vast amounts of data across virtually all aspects of society which constitutes a valuable resource for innovation, development, insight and growth. Thus, Denmark is in an excellent position to leverage PSI as a key ingredient in business innovation, the creation of digital products and services, the implementation of “smarter” public service, and the strengthening of openness, participation and democracy.

Lack of uniform practice

However, the lack of uniform practice when it comes to access to public data constitutes a significant barrier for innovative businesses, data journalists, creative citizens and others looking to reuse data. This means, among other things, that many potential reusers of public data, e.g. businesses and entrepreneurs, do not know that specific data exist and that many public authorities are not aware of the potentials of private reuse of their data.

Moreover, among the public authorities there is considerable difference concerning whether private businesses, organisations and citizens can access data and - if they can - how easy it is, what it may cost, and under what conditions data can be used. Legal and privacy challenges must be addressed and existing financing model where some authorities sell data to generate revenue must be incorporated or changed; but most importantly, the level of awareness in the public sector of the potentials in data reuse must be raised.

4. Introduction to the 'Open Data Innovation Strategy'

With a clear aim to make available to the private sector public data as raw material for the creation of digital products and services, the Danish 'Open Data Innovation Strategy' initiative (ODIS) was launched in May 2009 by the Ministry of Science, Technology & Innovation. The initiative is run by the Danish National IT and Telecom Agency (NITA), working towards a concept and consistent practice for how a business, an entrepreneur or a citizen can access to government data in a uniform way – possibly creating a “one entry to public data reuse” policy and framework, where the legal, financial and practical aspects are dealt with in a effective and efficient manner.

Desired effects of ODIS

First and foremost, but not exclusively, ODIS focuses on ensuring easier access for the private sector to public data; however, ODIS aims at having three effects:

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- **Private innovation and growth**
Public data can be used as a key resource in private development of products and services and as “business intelligence” that can strengthen business;
- **Better and “smarter” public information and services**
Public data can be used to create better and “smarter” public information and services, e.g. through data visualisations, mash-ups and service apps
- **Knowledge, insight, collaboration and democracy**
Access to public data can help strengthen knowledge, insight, collaboration and democracy. In this way ODIS can strengthen the foundations for eDemocracy.

Inspired by, but different from, US and UK initiatives

Data initiatives in the USA have initially focused on supporting democracy, while in the UK initial focus was on improving public information and service as well as on improving transparency. In Denmark, the Open Data Innovation Strategy embraces democracy and transparency as well as public information and service in its approach; however, in the light of the financial crisis, and of decreasing productivity and increasing global competition the key focus in Denmark is on innovation and economic growth with a particular emphasis on the private sector.

5. Economic potentials

The ODIS initiative is based on the assumption that governments can stimulate ICT and content markets by making PSI available on transparent, effective and non-discriminatory terms, and that PSI is an important source of potential growth of innovative digital products and services.

To quantify the economic importance of PSI as a resource NITA has had an analysis made by Gartner Group presenting an estimate of the business potential in the reuse of public data. The estimate is that business reuse of the public data in Denmark could be worth at least DKK 600 million (more than EUR 80 million) a year. This corresponds well with the EU Commission’s estimate of an EU-wide annual potential of 27 billion EUR.

In the beginning of 2011 NITA expects to publish a business case outlining the specific economic potentials of access to relevant public sector data for selected industries in Denmark. The report will be based on interviews with representatives from the selected industries.

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6. Danish legislation

Primary laws relating to the reuse of Danish public sector information are the Act on the Reuse of Public Sector Information, the Access to Public Administration Files Act, the Copyright Act, and the Act on Processing of Personal Data.

Act on the Reuse of Public Sector Information

The Act on the Reuse of Public Sector Information (the PSI Act) implements the European Union's PSI Directive. The purpose of the law is to provide uniform rules for reuse of public sector documents and data. However, neither the PSI Directive, nor the Danish PSI Act, obligate public agencies to release documents or data; rather, this PSI legislation regulates how public agencies must ensure that their actions are non-discriminatory and non-limiting for the reuse of data if, but only if, they choose to release documents or data.

Under specific circumstances, another Danish law, the Access to Public Administration Files Act, obligates public agencies to give access to documents and release documents and data; however, invoking this right to access to documents is not a practical or feasible means to obtaining public data for reuse as it solely grants access to, but not the right to reuse, information pertaining to a specific case, i.e. not to bulk data or to continuous delivery of data, which is usually a requirement if data is to be reused in digital products and services.

High charges are a barrier for reuse of public sector information and thus the Danish PSI Act, as opposed to the PSI Directive, defines the recovery of marginal cost as the upper limit for charges on making documents available for reuse and does not allow a "reasonable return on investment" as given in the PSI Directive.

The Open Data Innovation Strategy initiative is based on the assumption that PSI plays a very important role in achieving growth in general as well as in the creation of innovative digital products and services, but as neither the PSI Directive nor the Danish PSI Act obligate public agencies to release documents or data PSI legislation is not regarded as an effective means to bringing about the policy and the actions necessary to fulfil the economic potential of the reuse of public sector information. Rather, activities to increase awareness, promote best practice and assist public agencies willing to make data available are seen as instrumental to the realisation of the potentials of PSI reuse. This is one key reason why the ODIS initiative is based on a bottom-up approach.

Access to Public Administration Files Act

The Act on Access to Public Administration Files regulates access to public files for

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persons not party to the proceedings, including journalists. The act came into force in its present form in 1985. The act includes documents drafted by all parts of public administration except the administration's internal working documents. It is required that the applicant for access is able to identify the specific case or document to which access is sought which means that applicants, e.g. journalists, must have some prior knowledge about a case to be able to request access.

The right of access does not cover information about individuals' private and financial affairs, except for those persons mentioned in the case in question. The right of access also excludes cases within the criminal justice, and other exceptions protect private companies' technical and economic details as well as information pertaining to national security, national economic conditions, and relationships with others countries.

As previously mentioned, the right of access to documents granted by the Act on Access to Public Administration Files is not a practical or feasible means to obtaining public data for reuse as it solely grants access to, but not the right to reuse, information pertaining to a specific case, i.e. not to bulk data or continuous delivery of data, which is usually a requirement if data is to be reused in digital products and services.

The Copyright Act

The Danish Copyright Act has undergone many changes in recent years because of changes in society and especially because of international commitments, including Denmark's EU membership. Copyright is now largely governed by international conventions. The Copyright Act was last revised fundamentally in 1995 but has since then undergone several minor changes, most recently in December 2009.

Most public sector information is automatically covered by copyright. Usually copyright does not constitute a barrier in terms of making PSI available for reuse as data copyright often belong to the public agencies which are then at liberty to allow reuse. However when it comes to PSI produced for a public agency by a third party where copyright has not been transferred to the public agency copyright can and does become a barrier.

The Act on Processing of Personal Data

The Act on Processing of Personal Data entered into force on 1 July 2000. The act implements Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data. Since the Act on

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Processing of Personal Data entered into force in 2000, it has been amended several times, most recently in July 2007.

The Open Data Innovation Strategy initially disregards and excludes the access to and reuse of personal data in order to establish a PSI reuse practice without having to address issues surrounding privacy protection. At a later stage, personal data may be included.

7. No high-level political attention

As opposed to the USA and the UK, Denmark does not have high-level political attention driving actions regarding PSI reuse and thus there is no national policy and no uniform practice. Some public agencies publish selected data for a variety of individual reasons, often by initiative of enthusiastic civil servants, creating a very varied and fragmented overall picture.

The Minister for Science, Technology & Innovation has launched the ODIS initiative which is managed by NITA, but so far there is no Government-adopted PSI policy in Denmark apart from the stance implied by the PSI Act. Instead, NITA drives the opening up of PSI for reuse primarily through bottom-up activities and conversation and collaboration with key stakeholders, i.e. data reusers and individual public agencies.

In certain respects, the lack of high level political attention and commitment is a barrier in relation to opening up public data; however, in other respects it may be – or at least has been until now – an advantage. Obviously, the absence of political attention means that the ODIS initiative is not in any way assisted by PSI-specific legislative action, any supportive legislation, other supportive policy measures or even high level news coverage. The negative effects of not being part of the political agenda will be described in more detail below as one of a number of barriers.

Manoeuvrability

On the other hand, the lack of political attention has, so far, allowed the ODIS initiative the freedom to develop the initiative in a highly ‘organic’ agile and collaborative way which might have been difficult to achieve had the initiative been on the political agenda. This has allowed for extensive and informal collaboration with a range of stakeholders which has built trust and a sense of shared ownership and responsibility, and for fairly loosely structured networking with open data proponents and experts abroad which has provided invaluable inspiration and knowledge. Until now the ODIS initiative has been based almost entirely on a

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bottom-up and agile approach – out of necessity, but also by intent. This approach will be described in more detail at a later point.

Having come this far outside the focus of political attention, the ODIS initiative is now about to move into a transitional phase of developing political activities and products in preparation for presentation as an official policy proposal.

8. Barriers

A number of barriers hamper the opening up of Danish PSI for private reuse. The barriers described below are the most common and significant obstacles encountered by the ODIS initiative.

No high-level political attention

As explained above, the ODIS initiative has been launched and developed to its present state without high-level political attention or commitment. These conditions have provided certain advantages in terms of manoeuvrability and informality which has helped built trust and ownership among stakeholders; but they also have negative consequences, particularly indirect derivative effects on barriers within the public agencies as barriers cannot be removed or reduced as efficiently without political commitment or supportive policy measures.

Lack of awareness of potentials of PSI reuse

At present, the most serious barrier remains the lack of awareness of PSI reuse potentials because without basic awareness dealing with all other barriers is hampered. Therefore one of the main objectives of the ODIS initiative is to raise awareness and provide compelling and illustrative examples of how PSI reuse can generate value.

Budgetary constraints

Like in many other countries, the Danish public sector experiences budgetary constraint which leads to reluctance to take on board more projects or tasks. The ODIS initiative tries to deal with this barrier by advocating a step-by-step approach to data publishing to avoid the all-or-nothing trap. This is done by demonstrating through concrete examples that data publishing need not be a complicated or costly affair and by providing simple guidelines, tools and, in some cases, practical assistance to help public agencies publish selected datasets.

No incentive models in place

It is a long existing and persistent challenge in the Danish public sector that investments in ICT made by public agencies rarely benefit those agencies financially as savings are collected and pooled to be spent in a variety of different public service

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areas. This is no different for open data.

Since this barrier arises from the basic principles of public sector economy it is difficult to address; consequently the ODIS initiative primarily attempts to circumnavigate the core problem and focus instead on specific areas within the public agencies' fields of responsibility in which the agencies *can* benefit from investments, financial or otherwise, made in data publishing, e.g. when it comes to communication and service. As previously mentioned, the initiative also works actively to demonstrate that data publishing need not entail a large investment.

Concerns about privacy and confidentiality

Concerns about privacy and, to a lesser extent, about business-related confidentiality tend to be a very significant barrier initially in the sense that public agencies worry that they may accidentally release personal data or confidential business data and believe that determining whether or not data can safely be published requires expert legal advice. However, when public agencies look into the matter it usually becomes evident that precisely datasets which contain personal data or confidential business data have already been identified and clearly marked with privacy or confidentiality flags in accordance with data protection legislation.

In order to establish a PSI reuse practice without having to deal with issues surrounding privacy protection, the Open Data Innovation Strategy initially excludes access to and reuse of personal data. At a later stage, personal data may be included.

Concerns that open data leads to increased workload

In general public agencies actively work to draw attention to their activities, products and services; however, agencies often express concern that publishing data will lead to increased workload due to enquiries related to data from the public and from the media. More enquiries *is* a likely consequence of publishing data, but it is worth remembering that as long as the number of enquiries is not overwhelming – and to some extent this can be controlled by a combination of providing adequate information and documentation and stating clearly what level of support that can be expected – increased contact with the public and the media on the basis of specific data is likely to boost an agency's positive image as well as its understanding of the state of affairs within its field of responsibility .

Cultural barriers

Cultural barriers are generally very subtle and may be difficult to identify. The most dominant cultural barrier is probably the reluctance to do what is perceived as relinquishing the power associated with data. Public agencies are not so likely to admit openly that this perception is influencing their attitude towards opening up their data; in fact, they even may not realise that this is the case, and this makes it difficult to address. However, it appears that if other barriers are removed or

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significantly reduced cultural barriers are not as powerful as to impede acceptance of the open data rationale in any serious way.

9. Drivers

As explained the approach of the ‘Open Data Innovation Strategy’ initiative is presently bottom-up without political awareness or commitment at the highest levels. However, indirect but significant drivers are in place, and awareness and commitment are expected to increase at the political level as well as within the public agencies.

Key drivers are found at a global societal level, at a local agency level, and at a political level:

The global societal level

The global Web 2.0 trend combined with the high level of digitisation in Danish society exposes civil servants, businesses and citizens alike to new possibilities and practices and this creates expectations about “public administration 2.0”. As it becomes the norm that digital content is shared, modified and shared again on the internet, and that more and more everyday activities are augmented or supported by digital products and services, the public expects government to work in similar ways. In other words, *demand* for open public data is increasing.

The local agency level

Part response to the global Web 2.0 trend and part natural inclination to showcase their work, enthusiastic civil servants in various public agencies have quietly been publishing selected datasets for some time. These local actions help create an actual *supply* of open public data which can be turned into compelling examples of PSI reuse which, in turn, can drive more data publishing.

The political level

Facing unfavourable demographics, increased globalisation and competition as well as the consequences of a global financial crisis, there is pressure to find new and smart ways to do things. Politicians become receptive to new ideas on citizens involvement and self-service, on the sharing of software, and on increased integration between private and public services and ICT systems, which can generate new value and open up new opportunities, and thus a societal *need* for open data emerges.

Based on a bottom-up approach, the Danish ‘Open Data Innovation Strategy’ initiative seeks to leverage these indirect drivers in various ways.

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10. Bottom-up Approach

The ‘Open Data Innovation Strategy’ initiative is characterised by its almost exclusive reliance on a bottom-up approach. As explained this is partly due to the lack of high-level political attention and commitment; however, it is important to stress that this approach was chosen not only out of necessity – significantly, the grass root approach of the initiative was intentional.

At the time when the initiative was only at its earliest draft stage, the National IT & Telecom Agency realised that no matter the level of political attention the success of the initiative would hinge on its ability to gain the trust of and engage the grass root-level stakeholders.

Trust, shared ownership and responsibility

The bottom-up approach allowed NITA to develop the initiative in a highly ‘organic’ agile and collaborative way which was highly responsive and inclusive. Informal collaboration with a range of stakeholders has steered clear of “mine fields” and bureaucracy with public agencies, has embraced and acknowledged reusers’ objectives, and has generally built trust and a sense of shared ownership and responsibility.

The work has been characterised by experiments and frequent iterations, and networking with open data proponents and experts abroad has provided invaluable inspiration and knowledge which has often been transformed into action within a very short timeframe. In terms of more formalised activities, networking opportunities under the auspices of the European Commission’s PSI Group have been inspiring and have played a much more important role for the success of the initiative more than have the PSI Directive and the Danish PSI Act.

In short, the ODIS initiative has been developed and is still evolving in close collaboration with a wide range of stakeholders. Key activities, products and tools are described below.

Preliminary seminars

At the time of the launch of the initiative, NITA held seminars for PSI reusers and public authorities to determine what key issues needed attention at that point and to begin building relations with key stakeholders. In general the PSI reusers and the public authorities had had no previous contact and had little knowledge about each other, and thus the seminars also served the purpose of bringing these stakeholder groups together and encouraging dialogue between them.

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A public data catalogue

In the summer of 2009 NITA launched the Public Data Catalogue, listing approximately 900 public datasets. The Data Catalogue is hosted at the public collaborative platform for digitisation, Digitaliser.dk. The platform Digitaliser.dk is a collaboration tool in the best traditions of Web 2.0 in that it enables anybody to upload and share various types of digital assets and engage in dialogue about assets and other topics. The platform is open to public users as well as private users: <http://www.digitaliser.dk> (in Danish) and <http://digitaliser.dk/resource/432461> (English 'About' page).

Data contest

In September 2009, the former Minister for Science, Technology and Innovation launched a data contest, inviting private businesses, NGOs, entrepreneurs and citizens to contribute ideas for products and services based on public sector data. The contest was managed by NITA. Three winners were selected and a prize ceremony was held as part of a conference on PSI reuse which NITA organised in February 2010. The conference programme included international speakers from the EU Commission, from the UK and the USA, as well as a number of speakers representing Danish public authorities. The conference raised the level of awareness and provided an important opportunity for network activities.

“Data hunting”

In the course of the summer 2010, NITA established a small unit of “Data Hunters” who are responsible for locating interesting public data, helping public authorities publish their data, and assisting PSI reusers in requesting data from public authorities. Another responsibility is to facilitate the publishing of all datasets in the Ministry of Science, Technology and Innovation and its agencies (including NITA).

Guidelines

NITA has recently published simple and easy-to-use technical and practical guidelines on how to publish public data to help public authorities initiate open data projects. In these guidelines, as in all other communications about data publishing, NITA stresses the importance of starting out with simple initiatives which are relatively easy and not too costly to implement, e.g. first publishing data sets which require little treatment to be ready for publication, and subsequently refining the method of data delivery according to actual demand.

Most recently NITA has published a set of legal guidelines along with a standard public data licence which agencies can, but are not obliged to, use when publishing data. The standard data licence is equivalent to the Creative Commons ‘Attribution’

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licence. NITA is also working on other guidelines and simple software tools to be used either when publishing data or when re-using data.

“Data Camp”

On 4th November the Minister for Science, Technology and Innovation hosted “Data Camp”- an open government data event. Data Camp was an active workshop, not a conference, and participants were public agencies bringing datasets to the table as well as developers, visualisation experts, analysts and data journalists who created actual products on the basis of the datasets within the timeframe of that one workday. The purpose of Data Camp was to demonstrate to potentials of public data as a resource for innovation, as well as to bring together public agencies and data reusers and stimulate dialogue, networking and collaboration.

11. Next steps

In the future NITA will continue to work to raise awareness, exemplify potentials, remove or reduce barriers, and leverage drivers. Already planned is the publication of other guidelines and simple software tools to be used either when publishing data or when re-using data, and the launch in December 2010 of a new and optimised version of the Public Data Catalogue which will help data reusers locate and access public data. The catalogue will continue to be a directory, not a repository, in the sense that data will remain on the public authorities’ own servers or chosen host servers. The Public Data Catalogue is located at Digitaliser.dk:
<http://data.digitaliser.dk/>

Transitional phase

As mentioned previously, the ODIS initiative is now about to move from outside the focus of political attention into a transitional phase of developing political activities and products in preparation for presentation as an official policy proposal. In the course of this phase, the initiative will extend its range of actions to include more policy work as political conditions permit with an aim to secure political commitment; however, the initiative will continue to nurture grass root relations as much as possible to ensure the continued support of stakeholders - PSI reusers as well as public agencies.

“Vertical focus”

On the basis of an industry-specific business case, which will be published in the beginning of 2011, NITA expects to initiate PSI projects in 2011 for one or two selected industries with a “vertical” focus, i.e. covering the entire value chain from data publishing via public-private collaboration to business reuse of public data in

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the private sector and evaluation of the effects. The aim is to evaluate within a pre-defined business area the effects of very good PSI reuse conditions in order to help determine exactly what kind of policy measures should be implemented to achieve positive effects, while facilitating actual data publishing and PSI reuse. This may help secure political awareness and commitment in the future and would provide a strong foundation for specific policy action.

12. Examples of PSI Reuse

Web of the House

Web of the House ('Husets Web' in Danish) is a data-based calculation tool for energy optimisation in private homes. The web application was made and is now run by a very small ICT company. Based on the user's address, the application draws and displays data about the building and any energy conservation improvements made on the building from various public data sources and proceeds to suggest steps to save more energy. Web of the House generates a profit by charging municipalities for use of the calculation tool website as part of local energy conservation campaigns.

See <http://www.husetsweb.dk/> (in Danish)

'Political Data API'

The idea behind 'Political Data API' is to collect and make available for reuse political data from various sources, e.g. the website of the Danish Parliament and local municipality council websites. Data is collected in a variety of formats - some data machine-readable, other data scraped from websites – and presented in a consistent and more accessible manner. This solution is made by a private citizen with professional developer skills.

See <http://folketsting.dk/> (in Danish)

Mapicture

Mapicture is the name of a small data visualisation company which provides data analysis and visualisation services. The company was established several years before the launch of the Open Data Innovation Strategy but benefits from the initiative's efforts to open up public data. Mapicture serves both private business clients and public agency clients.

See <http://www.mapicture.com> (in English)

'The National Budget Bubble'

At the Open Data Innovation Strategy initiative event 'Data Camp 2010' in November 2010, the 'National Budget Bubble' was made by Creuna, a full service

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digital agency covering Denmark, Sweden, Norway and Finland. The National Budget Bubble is a web app which allows the user to analyse the cost-revenue balance of the national budget.

See <http://blog.creuna.dk/2010/11/08/finansboblen-data-camp-2010/> (in Danish)

‘Hunters’ App’

Another solution created at Data Camp 2010, ‘Hunters’ App’ is a smart phone app for Android which allows hunters to check hunting season regulations for a variety of game and to report game harvest to the Forest and Nature Agency. The app uses the smart phone’s clock and GPS to determine current time and location when displaying hunting season details and when submitting a game harvest report. The app was developed by the Danish ICT company Silverbullet.

(not yet published)