What do we need laws for?

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ملخّص : لاحظنا في مملكة النرويج بأن وضع أسُس بناء ذات معطيات فضائية SDI على أساس طوعي قد سارت بطريقة جيّدة. لا نحتاج حتى الآن إلى إقامة إطار قانوني ، في شكل تشريع جديد أو بدلا للتشريع الحالي . نضمّت الحكومة نشاطاتها و إنضم إليها مشاركين طواعيةً ، مع مراعاة مصالحهم .
في أوروبا طبّق الإتحاد الأوروبي قانون مختلف . وضع أسُس بناء ذات معطيات فضائية SDI في إطار قانوني ، وتعليمة مستوحاة من الأنظمة التكميلية كمكمّل للقطاع الخاص ، يملك الإتحاد الأوروبي تعليمة توجيهية PSI (لإعادة الإستعمال) .
مهم أن تقارن هذه القوانين مع إحتياجات و إستعمال الإطار القانوني لوضع أسُس بناء ذات معطيات فضائية . مهم أيضا أن نرى ما يحدث عندما يعوّض حل طوعي بإصلاح قانوني .
تعّد القوانين و الأنظمة وسائل لبلوغ هدف ما وليست النهاية في حد ذاتها . والسؤال يكمن في ما إذا كان القانون التنظيمي مفيد مقارنة بالوسائل الأخرى .هي تجربة عامة ينوي التشريع المباشرة في الإصلاح على نطاق واسع في بعض المناطق ،و المتابعة الصارمة لمدة طويلة للعمل كما هو متوقع . يهم دور القطاع العمومي في دراسة كيفية وضع أسُس بناء ذات معطيات فضائية .
في هذا السياق ، لايمكننا تجنّب مسألة التمويل و الدراسة حول ما إذا كان تداول الأموال بين المنظمات يصلح لهدف ما .
من وجهة نظر شاملة من المهم التبصر إلى كيفما يسري التشريع و التعاون في مدن أخرى . هناك مدن وضعت معطيات وخدمات تعمل في إطار تكنولوجي حديث جدّ مهم من أسُس بناء ذات معطيات فضائية ، لأن أسُس بناء ذات معطيات فضائية تحتاج إلى معطيات و خدمات المعطيات كشبكة الطرق التى تحتاج إلى وجود طرق و لوحات الإشارة . يجب الأخذ بعين الإعتبار التوّق إلى أسُس بناء ذات معطيات فضائية كما هي محددة حتى الآن، يجب أن يعاد النظر فيها طبقا لوسائل تطبيق أسُس بناء ذات معطيات فضائية .

Résumé : En Norvège nous avons constaté que l'établissement d'un SDI sur une base volontaire a bien fonctionné. Nous n'avons jusqu'ici aucun besoin à instaurer un cadre légal, en forme de nouvelle législation ou en changement à législation existante. Le gouvernement règle ses propres activités et autres participants ont joint volontairement, en voyant leurs avantages.
En Europe une loi différente est utilisée par l'Union européenne. Un SDI est instauré dans un cadre légal, avec une instruction inspirée des règlements Complémentaires. En tant que complément aux besoins du secteur privé, l'UE disposa une instruction PSI (réemploi).
C'est intéressant de comparer ces lois en analysant le besoin et l'usage du cadre légal pour établir un SDI. C'est aussi intéressant de voir ce qui se passe quand une solution volontaire est prête à être remplacée par une réforme de la loi.

Les lois et les règlements sont que des moyens pour arriver au but mais pas une fin en soi. La question est si une loi réglementaire est utile que les autres moyens. C'est aussi une expérience générale pour la législation qui a l'intention d'entamer une réforme assez grande dans certaine région, suivi vigoureux pour travailler comme attendu.
Le rôle du secteur public est important dans l'étude de la question de l'établissement d'un SDI. Dans ce contexte, on ne peut pas éviter la question de financement et d'étude si la circulation d'argent entre organisations public sert à un but.
Dans une perspective globale il est intéressant de considérer comment ces deux lois, législation ou coopération fonctionneront dans d'autres villes. Il y a des villes où établir les données et les services qui fonctionneront dans un environnement technologique moderne sont plus important qu'un SDI, parce qu'un SDI a besoin des données et des services des données comme le réseau de la route qui a besoin des routes et des panneaux de signalisation. Il faut tenir compte que certaines ambitions concernant un SDI comme ils ont été définis jusqu'à maintenant, devrait être reconsidéré vu les moyens de mise en œuvre d'un SDI.

Abstract : In Norway we have found that establishing an SDI on a voluntary basis have worked well. We have had no need so far to establish a legal framework, in the form of new legislation or changes to existing legislation. The government regulates its own activities and other stakeholders have voluntarily joined in, seeing the advantages for themselves.
For Europe a different approach is used by the European Union. An SDI is being established with the use of a legal framework, the INSPIRE directive with supplementing regulations. As a supplement for the needs of the private sector, EU has the PSI (re-use) directive.
It is interesting to compare these approaches by analysing the need and use of a legal framework for establishing an SDI. It is also interesting to look at what happens when a voluntary solution is about to be replaced by a law reform.
Laws and regulations are tools for a purpose and not an end in itself. The question is whether a regulatory approach helps in a way that other tools can not. It is

also a general experience that legislation meant to initiate a fairly large reform in a certain area, needs vigorous follow up for a long time in order to work as expected.

The role of the public sector is important in the discussion of how to establish and SDI. In this context, one can not avoid the issue of funding and the discussion on whether the moving around of money between public organisations serves a purpose.

In a global perspective it is interesting to consider how these two approaches, legislation or cooperation will work in other places. There are places where establishing data and services that will work in a modern technological environment are more important than an SDI, because an SDI needs data and data services like a road network needs the roads and the road signs. It is also a consideration that some of the ambitions of an SDI as they have been defined up to now, should be reconsidered when considering the tools for implementing an SDI.

1. Introduction

I am only discussing the kind of reforms that do not necessarily involve law, i.e. reforms which does not impact on the citizens rights and obligations as such, but involves how government and society are organised and how one approach the tasks that it is given. In these cases one can really make a choice whether to apply legislation as a tool or not, whereas if one must use legislation, there is no point in discussing voluntary solutions.

Separation between law and regulation is difficult to make on a global and even on a European basis. To simplify I have applied the Norwegian legal starting point. A law is passed by the Parliament according to the Constitution, while regulations are passed according to and under the authority of a law. Simply put, anything pertaining to the rights and obligation of citizens must be handled under a law, but Parliament can apply law to other types of regulations if they find it useful. An EU directive needs to be passed by law if the Constitution requires it.

In order to discuss a legal framework for an SDI one needs to start with what an SDI is. For this paper I start with the following concept of an SDI (taken from SDI cookbook 2004, page 8).

- An SDI includes the technologies, policies and institutional arrangements to facilitate the availability of and access to spatial data.
- "Infrastructure" is used to promote the concept of a reliable, supporting environment, analogous to a road or telecommunications network, that facilitates access to spatial data using a minimum set of standard practices, protocols, and specifications.
- It should as a minimum include in addition to the data sets, metadata and means to discover, visualise and evaluate the data.
- It must include organisation agreements to coordinate and administer the SDI.

From this one can itemize some important factors that must be a part of an SDI reform, whether done by law or voluntary co-operation :

1. An infrastructure must be in place and the responsibilities for it must be agreed upon.
2. The construction of the infrastructure and responsibilities for those involved in this must be agreed upon (Technology and standards):
   - Metadata.
   - Specifications.
   - Means to discover, visualise and evaluate (network services).
3. The financing of the infrastructure must be agreed upon and provided for:
   - Governmental responsibilities and funding.
   - User payment – equivalent to toll roads.
   - Access pay on a regular basis (membership).
   - A combination of the above.
4. The use of the infrastructure must be agreed upon.
   - Restricted to certain purposes or for everyone who needs it. Could be a question of quality – "motorways" for members only.
   - Restrictions based on other legal requirements.

E-government issues will be an important part of the discussion for any SDI law reform. The OECD definition is simple: *The use of information and communication technologies, and particularly the Internet, as a tool to achieve better government*[1]. EU has set some goals for e-government (eEurope 2005) which includes:

- Broadband connection for all public administrations.
- Interoperability framework to support the delivery of pan-European e-government services to citizens and enterprises.
- Interactive public services, including access for people with special needs, such as persons with disabilities or the elderly.
- Public procurement to be carried out electronically.
- Public Internet Access Points (PIAPs) for all citizens preferably with broadband connections.

[1] http://webdomino1.oecd.org/COMNET/PUM/egovproweb.nsf

It is easy to see that these goals will have great benefits for establishing an SDI. First issue to consider is what benefits and challenges the use of legislation has, then how this can be applied to the list above. From there I will be discussing the content and scope of an SDI reform, go into the two examples and finally add a global perspective on the issues discussed and some conclusions.

2. Benefits and challenges with using legislation

Legislation is slow in the making and not easily adaptable. It tends to lag behind the technological development. This has become an even more serious problem than before, because of the speed of technological development[2]. The obvious solution is to make it technology independent, but alarmingly often this does not happen, often as a result of political compromises and lobbying from those with a vested technological interest.

A reform carried out by law can walk into many traps.

E-government has become an important word in many countries, denoting the governments wish to become "modern" and use modern technology to improve its operations and image. In this context it becomes even more tempting to formulate law with technology in mind. This is nearly always a mistake, as one rarely has the ability to foresee accurately what technology will be the best solution even in a very near future. Another issue for e-government is that the government must depend on the citizens will and ability to use the technology, and the appeal of a technology may be very different to a citizen and someone in charge of acquiring technology for the government.

It is therefore preferable to define the content of a reform in a technology neutral manner, and leave the definition of technology to regulations that are meant to handle technology in general. In our example, leave the technology out of the law that defines what the SDI should be and provide, and give regulations on the government's general use of technology for all government activities, subject to easier change as things move ahead. Alternatively, if general regulations do not exist or are not feasible at the time, one can save the technology issues for regulations and internal governmental instructions.

Laws can have beneficial effects on activities that are considered important but not presently given the necessary focus. In many European countries there is a widespread demand that INSPIRE is being used to give the country a proper "geodata law" where this is not yet in place.

The use of law to make changes in a society requires the right amount of regulation and extensive follow-up. In many cases one will regret just doing the bare minimum to make the necessary legal changes happen, as this means the issues has not been thought properly through and one is forever chasing behind new issues that needs solving. On the other hand a law reform of some scale requires a lot of resources and needs to be considered only if it will give good results. A law aiming at a large reform will simply not work by itself, no matter how good the intentions are and how thorough a work is done with drafting the law.

A voluntary solution has many advantages that reforming by law do not have. It ensures that the stakeholders not only do what is required to make the solution work, but have a vested interest in its success. It ensures that the solutions are workable because everyone involved has had their chance to influence it and it will be largely based on what already has been proven to work.

And it creates an atmosphere and a platform for further work and development which ensures the long term success of the reform.

On the downside is the time and resources needed to work with the stakeholders to ensure that they are all on board for this. Above all things one needs to establish trust and a sense of having a common goal that can only be achieved by working together. The human factor is always vital in such work, which makes lengthy, difficult and vulnerable to personnel changes.

In Norway the establishing of Norway digital is the result of more than 15 years of previous work to make the stakeholders see the common interest in working together towards a common goal.

But once that was established, the selling of rather wide reaching new ideas was much easier than it would have been without the years of hard work gone before it.

A law reform will rarely take that many years, although this can also be a long winded process, particularly since it involves at least getting the politicians of the present government on board. An important factor in both cases is to be able to provide the technological solutions that will make the SDI easy and relatively inexpensive to the users, and to enable people to use them.

3. Legislation or not for the SDI reform

Generally one can compare the use of law and regulations, and the totally voluntary solution. Law is required if you need to put legal restrictions or requirements on stakeholders that can not be

[2] A good example is the InfoSoc directive, where one totally failed to foresee the extensive use of handheld onlineconsumer devises as well as the need to establish working online services in a global perspective.

instructed to do it otherwise, i.e. are legally independent from the government on these issues. Law is also a way to get a focus on the issues, and agree generally on the principles that the government wants to apply. Regulations must be based on existing law and are usually meant to give the practical details that are not appropriate in a law. Based on the list above and these considerations, one can make an overview of the use of legislation versus no legislation.

Factors	Law	Regulation	No legislation
Infrastructure required	Useful because of its general nature and the importance of such a policy decision	If law already have a platform for such a regulation	Requires that stakeholders agree on this requirement
Construction	Responsibilities. General principles for laws and standards.	Technology and standards – Metadata and specifications, services	Requires to make all agree on a common standard and technology
Financing	If funds are required from legally independent stakeholders[3]	Detailed requirements if necessary	Requires that stakeholders are willing to provide the resources
Use	If data is required from legally independent stakeholders Adapting to already existing regulations[4]	Detailed requirements if necessary	Requires that stakeholders are willing to make data available and can agree on sharing agreements

4. Special challenges for an SDI reform

To ensure the full support not only of the present government, but also among those who may come into power, is a critical factor for an SDI law reform. This is because the extensive followup required will need funds for a long period. A look at the INSPIRE Work Programme[5] should be sufficient to document this, and INSPIRE only includes public use for environmental purposes. A change in government may kill the reform even if you have established a law that is not being changed. In the case of INSPIRE one has the added strength of this being a European initiative and therefore difficult to "ditch", but the lack of willingness to fund the necessary task can render a reform more or less useless for a long time.

Even if one is to be careful about regulating technology, this is typically a reform where certain technological platforms have to be available to make the reform work. This will apply to the law reform as well as the voluntary approach. In this context it is fair to say that the technological developments have provided the tools that can make the ambitions of a SDI much easier to fulfil. The use of Internet services (WMS/WFS), the widespread access to Internet by the public, and the increasing cheapness of hardware and storage facilities for the undou-btedly large amount of information that is required.

Another critical factor is to ensure co-operation and sympathy for the reform, because an SDI requires a lot of stakeholders to work together, many who are not under any obligation to follow government policies. It is fair to conclude that even if one chooses a legal approach rather than a voluntary approach this will require a voluntary component or at least a willingness to do more than what is specifically stated in the law. It is important to make the stakeholder see beyond their own responsibilities and towards a long term common goal. In doing this one should emphasise on how this will give more efficient use of funds and be able to demonstrate that by giving a little, you get a lot.

5. The role of the public sector

The public sector often gets a particular focus when talking about an SDI. There are several reasons for this. When you talk about an infrastructure, it is natural to see this as a public sector responsibility. If not to actually make it, at least to ensure that it exists. For an SDI, the basic data required will very often come from the public sector. Full coverage mapping for a country is a costly and rarely commercially viable investment, while the government will have a need for such coverage for important public tasks. Traditionally it is mostly for taxation or warfare, but today for an increasing amount of everyday public tasks. Traditionally it is mostly for

[3] Example: in Norway the local communities are independent and needs to be instructed by law, while governmentorganisations and government owned companies can be required to provide funds without a law present.
[4] Data protection, security, etc.
[5] http://www.ec-gis.org/inspire/reports/transposition/INSPIRE_IR_WP2007_2009_en.pdf

taxation or warfare, but today for an increasing amount of everyday public tasks. Another important factor is that a lot of the thematic data that can be used for public as well as commercial purposes are produced by the public sector. Important examples are road information, property information and land coverage. It is therefore fair to say that any SDI has to start with organising the public sector.

And last but not least, the public sector themselves will have a strong interest in making use of such an infrastructure. It will give more efficient use of public funds and allow the public bodies to focus on their core activity rather than the gathering of the information required to do it.

There are many ways of looking at how to administrate the relations between public sector bodies. In Norway a principle is applied which has become quite common in many countries, although others oppose it strongly. The idea is that any public body is given the money needed for their task, and anything they need which they do not already have ; they need to buy, including buying it from other public sector bodies. The idea with this is that it will demonstrate more clearly what certain activities costs, and give each organisation a motivation to ensure that their activities are carried out as economically as possible. The critics argue that this moving around of public funds is a process that requires a lot of public resources without demonstrating clearly its benefits. The main concern with spatial data is, as has been mentioned earlier, the costliness of establishing and maintaining these data. Experience shows that public funding is a fickle thing indeed, and without a regular demand from "paying customers", it is easy to cut these funds because the long term consequences are too long term to concern most politicians. This is also another argument for the "moving around money" policy – it focuses what is important to the government, under the assumption that if it is important for your activities ; you are also willing to pay for it.

6. From voluntary solution to law reform

Very often when a law reform is introduced, there are already in place some sort of co-operation or administration aiming at similar goals. In Europe, many countries already have an SDI of some sort, and now it is to be wholly or partly replaces by INSPIRE. Fortunately, in many countries one has already looked to the principles of INSPIRE when establishing the SDI.

However, when something is to be a matter for politicians and political interest, one needs to ensure that this comes harmoniously together and do not create the need to start from scratch.

It is very important to preserve as much as possible the voluntary elements that are already working. Still it is probable that harmonisation towards other countries in the same region may require changes, and this can be more rewarding in the long run than the cost of making these changes.

If a lot of factors are already in place, it is very tempting to try a minimum solution for the lawmakers. This is as mentioned above, a possible trap that may prove costly in the long run. The necessary legal basis for the existing solutions will not be in place. Any changes down the line will require new, scattered regulations, rather than a holistic and thorough approach to the long term solutions and the effects of these on society.

One need to take a step back and consider the fact that an SDI is meant to create a solution that is more than a collection of activities and servers, and which will give benefits way beyond a more efficient use of public funds. As an example of this one can mention the European Commissions assessment for Europe in the first draft for an INSPIRE directive (page 5)[6]: "The required investment of the preferred option - *a focused framework backed by an EU framework Directive* - will to a large extent be borne by the public sector and is estimated at an average of €3.6–5.4 million per annum per EU Member State (EU25). This would represent only 1% of the total expenditure on spatial information.

The benefits include environmental gains, wider social benefits and gains by the private sector. Only the environmental benefits have been quantified. The average annual benefits per Member State (EU25) amount to €27-42 million. Knowing that these elements only represent a partial view of the whole picture, the conclusion is that the benefits outweigh the investment requirements by a considerable amount." The public sector bodies involved in Norway digital has experienced that the costs of acquiring data becomes predictable and reasonable and the benefits increase.

7. A reform in whose interest?

The ultimate goal of an SDI as defined above is to provide access to spatial data. It is hardly possible to underestimate the importance that spatial data has come to have in a modern society.

The development of an information society depends on having the information needed available. Early on in the development of the widespread technologies of today, an undue importance was given to factors which seemed easier to understand from a traditional perspective, such as hardware and software developments. The importance of cheap and efficient hardware and software solutions are of course not to

6 http://www.ec-gis.org/inspire/proposal/EN.pdf

be underestimated, but it is vital to understand that in the information age, information and intellectual property has acquired an even more important role in many contexts than the traditional "material" values. An interesting example is the fact that intellectual property law is suddenly becoming an interesting issue to politicians. Why is that? Because people suddenly have a very acute daily interest in the use of such material, because of the now widespread use of consumer electronics that requires information for its purpose, such as mobile phones, portable music players and navigations systems. They demand easy access and fewer restrictions. Where voters go, politicians will follow.

This has for a long time also applied to businesses in the private sector. They are the ones who provide the products for the public, as well as assisting the public sector in developing their systems and tools. Again in comparison to the road network, an SDI is an infrastructure which is equally important to everyone in the society.

However, a successful reform has to have priorities as well as long term goals. One of the things that INSPIRE and Norway digital has in common is that the focus is mainly on improving the use of spatial data in the public sector. This is partially a result of the fact that most spatial data are created in the public sector, and that the private sectors are mostly users, not data providers. To accommodate the users one needs to get the data providers organised first. Another reason is that it is easier to get the necessary political backing for a more limited approach.

So far one has left the access for the private sector to public spatial data to other laws based on the EU directive on Public Sector Information (PSI). It is however clear that improved services and exchange within the public sector will improve the public sectors abilities to provide spatial data in a timely, cost-efficient and more user-friendly manner than before. Servicing the citizen is at the bottom of everything, but first one must aim to make public sector more efficient.

8. Examples of establishing SDI with or without legislation

8.1 Norway digital

From the Norwegian standpoint we have found that establishing an SDI have worked best by getting the stakeholders together and co-operating voluntarily. We have never had a geodata-law or other overall regulations on public sector spatial data ; it has however been regularly discussed and many stakeholders think it is a necessity in the long run.

Our experience is that one needs to accommodate the stakeholders need to feel that they have control over the data they use resources to establish, and that the use of their data by others gives a reward of interest to them. After a while the stakeholders see the benefits and are willing to discuss simpler rules and more expedient ways of exchanging data.

It has been done by establishing a vertical co-operation rather than going via the horizontal reporting chain. But political support from up the chains is also necessary. You need political support for your aims even if you are not aiming for a law regulated reform. It has therefore been a priority to include and interest the most important ministries involved in spatial data and e-government to ensure that the right politics are being implemented for the government authorities involved. The Ministry of Environment made a Green Paper on the issues and submitted them to the Parliament in 2003. The Parliament approved of the goals and methods to be applied, and this was the formal starting point for the co-operation[7].

A great help here has been the ability to offer the technology that will allow this. A great deal of resources has been devoted to technology development over many years, which is considered an important success factor for Norway digital.

In connection with the elements mentioned above, the following solutions can be mentioned :

- The Green Paper and the Ministry has decided it should be established and co-ordinated by the Norwegian Mapping and Cadastre Authority.
- The long term co-operation on establishing basic information (GEOVEKST) and collecting and co-ordinating thematic data (AREALIS) for the public sector, together with a national standard (SOSI), are the basis for the construction of the SDI named Norway digital. In addition WMS services are established to further the aims of the co-operation.
- Financing is a bottle party, as we call it in Norway: everyone brings their own bottle. Everyone provide the data they have and pay for usage according to what they have provided and what they need to use. The administration is funded by the Ministry of Environment.
- Norway Digital membership are restricted to public bodies, organisations with public tasks (for the public tasks only) and organisations which establish and provide data of national interest (for the purpose of this activity only). It is restricted to certain types of use and all commercial exploitation is excluded.

[7] http://www.statkart.no/Norge_digitalt/Engelsk/About_Norway_Digital/

8.2 Inspire

In Europe we are trying to establish an SDI for public sector needs with the INSPIRE directive and supplementing regulations. As a supplement for the needs of the private sector, we have the PSI (re-use) directive. It has been an important issue all through the INSPIRE process to take care of what is already there.

One thing that is clearly demonstrated with INSPIRE is how the need for political backing will change the original goals. INSPIRE came from an initiative meant to encompass all use of spatial data. To get a directive adopted it was necessary to limit it to what could be politically supported. A lot of aspects of a complete SDI will therefore still be a matter for getting people to work voluntarily.

INSPIRE regulates quite meticulously requirements for :

- Metadata and free metadata services.
- Data Specifications for harmonisation of datasets.
- Network services to discover, view, visualise and download data as well as invoking other services.
- Data and service sharing – access, usage and elimination of obstacles INSPIRE is a framework directive. One problem that some countries, like Norway, encounter with this is that we do not give framework laws. This means that implementing the directive without at least some of the regulations in the Implementation Rules, will be a potentially difficult exercise.

The relations between INSPIRE and other directives are also sources of difficulty and confusion. The grounds for an SDI for public sector information have to be clear, consistent rules for how to disseminate public information. A lot depends here on how the various countries have implemented the PSI directive and how this influences the outcome of implementing INSPIRE.

9. A global perspective

Taking a global view, it is interesting to consider how INSPIRE or Norway digital could work in other places. The first thing that comes up is that such a reform is largely based on what is already there and what is needed. Therefore in many countries where the existing situation is different, one should approach the reform with different priorities in mind. Sharing data requires data to share. Establishing an SDI without having a solid data foundation will therefore require a focus on this rather than on the sharing which will come later. However, a co-operation early on with the people you eventually will share with, may work out very well for establishing the data.

Critical voices have been raised towards the aim of amassing large amounts of information in the form of metadata as a prerequisite for an SDI. Google Maps have sailed up as an alternative method. Get the data and give access immediately, and let the users help with the metadata as things move along. One can be come too obsessed with perfection and long term solutions, and forget the fact that needs are pressing today. A large collection of metadata also requires a lot of resources in updating. Many experience that in the case of emergency, any available data can be useful and certainly more useful than no data and you do not really have the time to check the metadata anyway. It is therefore a question whether metadata should be a big priority in a reform until more pressing issues are dealt with, such as having completed the data to make the metadata for.

For the professional working on tasks requiring very accurate results, metadata is of course important. But for services to the general public it may be something they will not have any interest in at all and therefore largely be a waste of resources. The important thing is that the provider of the information has made sure the information is reliable and can provide information if needed.

Of course one can argue that one needs to educate the public in the necessity of checking accuracy of information, but this is a general issue for the information age, and a matter for schools, parents and e-government authorities to deal with.

INSPIRE has a long list of services that should be available to the public, and it is a question whether these can not be reduced to two services only, especially if one needs to make priorities. What one needs is a service that discovers and view in the same, like a long range of on-line services do today. The other thing you need is a download service, for those who are entitled to access or wants to buy.

The technological platform needed for an SDI may not necessarily be there for everyone. One can of course always make law reforms based on what is not already there with the ambition to have it in the future, but not without being willing to apply the resources necessary to ensure that it will be in a reasonably near future.

In many countries one would also need to work with existing laws to update them towards the information age. Public internet services giving access to spatial data should be available and easy to use, but then it is a question of how the data can be abused and what steps one need to take to deal with this. It is a question of data protection (privacy), public security, secrecy, etc. Lastly, priorities should be made as to where the reform is aiming in the short term and in the long term. To get the data collectors and

providers organised must be the first task. One should be careful handling out rights to the public that one is not able to fulfil later, and providing data to the private sector has little interest if you do not have a private sector to speak of.

10. Conclusions

Although one has managed to define what an SDI is for global use, it is difficult to define a common standard for what is the necessary tools and priorities for making this type of reform.

It is necessary to learn from and apply what has been experienced in establishing reforms based on voluntary co-operation, and what is pre-existing in your own country.

In each case it is a matter of what is existing data and services, how does the public sector function today and what resources one has for such a reform. On the legal side the existence of other laws and regulations are important, as well as how far the government has come in defining its policies for things like dissemination in the digital age, e-government and protection of sensitive information.

As in many other cases, it is important not to be blended by possibilities, but rather have a pragmatic approach both to the SDI and possibilities of law making.

Generally, a sound basis for a reform is that some steps already have been taken in this direction voluntarily, and that one has used the time and resources to motivate before one starts to tell people what they must do.

It is important to remember that regulations are tools for a purpose and not an end in itself. In establishing laws, administrative rules and regulations it is important to ensure that at the end of the day, the data needed is available, even if one needs to sacrifice a few principles that looks good on paper. It is useful to have freely available geodata for both public and private use. But it is even more important to actually have the data.

So do we need laws? I think the answer might be that they could come in handy, but there are alternatives, and one needs to approach any SDI reform with care and consideration.

References

Douglas D. Nebert (Editor), 2004, Developing Spatial Data Infrastructures: The SDI Cookbook, version 2.0 (http://www.gsdi.org/gsdicookbookindex.asp)

eEurope 2005: An information society for all - An Action Plan to be presented in view of the Sevilla European Council, 21/22 June 2002. (http://ec.europa.eu/information_society/eeurope/2005/all_about/action_plan/index_en.htm)