



**EU Twinning Project
IS12/ENP-APFI/o8**

**Support to the Israeli Central Bureau of Statistics
in the development of National Accounts, Education Statistics,
Survey Methodology, ICBS Website and
Coordination of Israel National Statistical System**

**Component E
Dissemination and Website**

**Activity E.2
Assessment of current situation
of dissemination and website**

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FINAL VERSION



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List of Abbreviations

BC	Beneficiary Country (Israel)
BoI	Bank of Israel
CBS	Central Bureau of Statistics (Israel)
CMS	Content Management System
CoP	Code of Practice
DDI	Data Dissemination Initiative
MS	Member State
NSI	National Statistical Institute
QAF	Quality Assurance Framework
UX	User Experience

1. General comments

This activity was the second in component E -Dissemination and Website. The first activity was a study visit to Statistics Denmark in May 2013. The next activities are scheduled for early 2014.

The Danish consultants would like to thank the Israeli side both at the CBS and at the Bank of Israel for their strong commitment to the project and for their open-mindedness resulting in both interesting and challenging discussions.

The CBS is in the middle of starting a complete renewal of www.cbs.gov.il. The renewal will include both the information architecture / website navigation, the technical infrastructure and the organization of work / work share between IT, Dissemination and subject matter divisions. A new structure of the topics (subject areas) is also required to improve usability, user orientation and clarity on the new website.

The ambitious schedule of implementing the new ICBS web site may make it difficult to carry out all of the recommendations found in this report before the tender documents must be finalized in order to follow the project plan. The analysis and workflow discussions recommended in this report are still valid and will help improve the ICBS web site even if they are concluded after the tender documents are completed.

The discussions during the E2 activity therefore focused on Statistics Denmark's experiences with these processes and CBS planning for the new website.

The Bank of Israel most kindly shared their experiences from their website upgrade project with the Twinning project. At the national level, the central bank often appears as a logical partner for mutual inspiration and discussions for the statistical office. In Denmark, the Central Bank and Statistics Denmark work closely together on dissemination of statistics.

2. Assessment and results

Three major topics were discussed during the E2 activity. These were the renewal of the CBS website, dissemination strategy, and metadata. In addition, these issues were also discussed with the Central Bank of Israel.

2.1 New website

Timing

CBS is currently planning to launch the tender for the supplier of the new website no later than at the end of 2013. The renewal will include:

- the information architecture, including website navigation
- the technical infrastructure
- the organization of work, i.e. work share between IT, Dissemination and subject matter divisions.

A new subject structure is also required to improve usability, user orientation and clarity on the new website. This is a very important but also ambitious undertaking.

At the end of this report there is a series of recommendations designed to assist ICBS 's planning and thinking about the new website, based on Statistics Denmark's experiences. As the tender documents must be prepared before the end of 2013 to follow the expected time schedule, it may be difficult for ICBS to implement all recommendations in time for these to have an impact on the tender process. The recommendations are generally valid and should

help ICBS to have a better user focus even if the recommendations are implemented after the completion of the tender documents. However it remains very important that all discussions and decisions regarding workflows and organization of how to update the web site in the future are taken in ICBS before the tender documents are finalized because these decisions / considerations will be defining the requirements for the new system.

Consultations regarding the new website

The private consultant working with the CBS presented his analysis and ideas regarding the future re-launch of the CBS website. The proposed home page seems to follow current design thinking among NSIs.

New everything – not just a “make over”

As the project was presented it appears to have 3 components:

- a new user experience (UX) including navigation and visual identity
- a new back office / technical platform
- a new work share among dissemination, IT and subject matter experts

The project organization was not discussed or presented in detail. The experience from Statistics Denmark is that it IS possible to change all 3 aspects at once. However, the MS Experts recommend that multiple changes should be considered thoroughly and implemented with great care. Concurrent changes to multiple systems and workflows introduces risks and uncertainty – Statistics Denmark have always tried to avoid this by changing only a single component at a time.

In the past Statistics Denmark has always tried to change only a single component at a time. However the changes that were made have been smaller and have been based on refining current work shares. And perhaps more importantly – Statistics Denmark’s dissemination database (www.statbank.dk) and the scheduling / calendar system (PUK) have not been changed. This means that the changes that have been implemented are minor compared to what the CBS is currently considering.

From a Danish perspective the importance of the organizational aspects of the process should not be underestimated. These organizational aspects are important not only to a successful re-launch but also to the continuous maintenance of the site.

From many systems to a single unified system

According to the consultant employed by the CBS the present website appears both visually and in the way users interacts with it as fragmented i.e. based on many different systems. Taking a closer look at the current site it is difficult to disagree with his conclusion. Integrating many subsystems or stow pipes into a single system and creating a single uniform user experience is therefore a clear goal for the new website.

Changes to back office systems / overall vision / calendar

The overall vision for the new unified system seems close to the Danish model of “Single source publishing” which was presented. Here the website gets data from a central data warehouse / data repository and reuses it in different presentations (cross tables, graphs, indicators, time series etc.). As the consultants understood it, financial constraints imply that the current Informix platform will still be used. However, a web service / API layer will isolate the website from the Informix database and allows the CBS to change to another database platform in the future.

Large parts of Statistics Denmark’s websites are calendar driven. Publishing events / updates are driven by the release calendar required to comply with EU Code of Practice and the Quality Assurance Frame Work (QAF). How the workflow in CBS regarding scheduling and calendar compliance is to be organized in the future was not entirely clear to the Danish side. From the consultants’ experience, it is recommendable to spend resources on this before

choosing the IT architecture and deciding on the organizational procedures regarding edition, updating and uploading content.

Search Engine

It appears from the discussion that the CBS has great confidence in the potential of placing an efficient search engine on the new website. It is the experience of Statistics Denmark that presenting users with high quality search results is quite difficult. In an ideal world, the choice of search engine should be made at the same time as the platform for the new web site.

The future search engine will most likely require metadata, in the form of keywords, to be attached to pages and documents in the site. It is therefore extremely important that these features are taken into account when building the new system. So requirements of the search engine need to be part of the tender material. The Bank of Israel had to some extent solved this problem by choosing both the CMS and the search engine before launching the tender.

As discussed during the E1 study visit to Statistics Denmark (6-8 May, 2013) the search facilities that are offered to the users are constantly monitored, and Statistics Denmark seeks to improve the quality and relevance of the results / queries. It is the consultants' opinion that when implementing a new search facility it is highly recommendable to discuss and decide how many staff resources can be allocated to maintain the system. In some ways this staff question is perhaps even more important than the choice of software.

New navigation tree / subject area structure

It is the intention of CBS to use the same navigation tree / information architecture on all different media / product that are to be presented on the site. The subject areas are not yet defined, and also the number of subject areas is still undecided by CBS. The Danish process and experience with changing the subject area structure from 18 to 11 subject areas was presented and intensely discussed.

The Danish experience shows that it could be a long and complicated process. Staff at all levels of the organization and even users can be expected to have strong and passionate opinions about the subject areas. The consultants see this topic as extremely important to user satisfaction and usability of the web site. Defining a new subject structure should be driven by Dissemination with the support of senior management. Procedures for making changes to it need not only to be written, they must also be formalized by senior management if the structure is to retain its integrity over time.

Changes to workflows

CBS and Statistics Denmark exchanged experience regarding organization of work in relation to uploading, editing content and data on the websites. From the presentation by the consultant, Mr Ami Goren, it was clear that responsibilities and workflows would indeed change. What was not clear was how this change should be implemented in the organization. It is the Danish experience that neither IT nor Dissemination have the organizational influence to change or interfere with the way that the subject matter divisions work. So from the consultants' perspective: if the web site / platform do require new ways of work then the implementation must have strong and explicit support from senior management.

Linkage to dissemination strategy

The current design proposal, as presented, made a lot of assumptions regarding user needs, user groups and prioritizations among needs of different users. These types of assumptions / design principles are unavoidable for those designing the information architecture (named UX-user experience in the presentation) and graphic identity. The consultants do not intend to question these assumptions, but they believe that it is extremely important that such "guidance" is external to the project rather than taken from an approved dissemination strategy.

Lessons from the Bank of Israel

During the visit to the Bank of Israel a presentation of the way they have organized their website project was presented. A valuable lesson from this project is that they had a very clear project organization for the project with a steering committee chaired by the Governor. This made the importance of the new website project very visible and gave the project the necessary resources and the necessary institutional acceptance.

In the Bank of Israel, a strategic decision had been made to use SharePoint and the search engine FAST before starting the project. Many organizations make these IT strategic decisions before choosing a company to undertake the exact implementation. But in some ways it appears backwards to choose the software before the requirements from the content are clarified. The solutions chosen by the Bank are top of the shelf / high end products thereby ensuring unlimited potential. Especially the decision to use FAST as search engine is a commitment to an absolute high end solution.

It is the experience from Statistics Denmark that the choice of content management system, CMS should mainly be dictated by its ability to integrate data / information from many different sources and to present them in a unified way.

2.2 Dissemination Strategy

The Danish side presented their thoughts on dissemination strategies. The consultants' general opinion is that a dissemination strategy is not something that should be developed from scratch. Instead, the dissemination strategy should be based on and integrated into the overall strategic planning of the NSI, and it should fulfill the main goals and mission of the organization. The part of the overall strategy of Statistics Denmark dealing with dissemination is attached in appendix E2.6¹.

QAF and CoP as natural starting points

Eurostat's Quality Assurance Framework (QAF) and also the Code of Practice (CoP) are valuable starting points for dissemination strategies as they describe certain minimum conditions that NSI's must fulfill in order to provide their users with compliant dissemination. Although the perspective is EU-centric comparable guidance can be derived from UN and IMF /WB guidelines.

Compliance must be measurable

From the consultants' perspective it is not sufficient to assume compliance. The compliance between selected guidelines and the Statistics Denmark's strategy must also be measurable and provable. As an example, principle 6 of the Code of Practice dealing with *Impartiality and Objectivity* can be used.

¹ Statistics Denmark strategy is available in its entirety from www.dst.dk/strategy

Code of practice principle	Indicator for compliance	Measure	Initiatives to improve compliance
6. Impartiality and Objectivity Statistical authorities develop, produce and disseminate European Statistics respecting scientific independence and in an objective, professional and transparent manner in which all users are treated equitably	All users have equal access to statistical releases at the same time. Any privileged pre-release access to any outside user is limited, controlled and publicised. In the event that leaks occur, pre-release arrangements are revised so as to ensure impartiality	Document on CBS website describing which external users that have access to information under embargo.	?

Danish example of Dissemination Strategy

The dissemination strategy of Statistics Denmark is included as Annex E2.6 to provide an example of a dissemination strategy based on the principles derived from QAF.

Matrix of user groups and statistical products

It is the consultants' experience that an interesting and highly relevant exercise is to compile a matrix of available statistical products and the list of identified / prioritized user groups. An example is attached in Annex E2.8. The matrix will help highlight if certain user segments are lacking dedicated information and also to clearly identify products in need of external users.

Procedures and guidelines need to be approved

The discussions indicated that the CBS has many written procedures and guidelines that are related to dissemination, meaning that the Dissemination unit clearly acts in a coordinated and uniform way. However, it is the consultants' experience that it is not sufficient to compile and follow such documents. They also need to be approved by the top management. Approval ensures the necessary support behind the principles from the entire organization, and approval ensures that all actions during communication crises are fully understood and accepted.

It seems clear that the CBS has many if not all of the ingredients to formulate a dissemination strategy – the challenge appears to be how to organize the different components and to get a formal approval.

Dissemination strategy and the renewal of website

Having been presented to the website renewal project, the consultants believe that focus should be given to the dissemination strategy. This will ensure that the renewal is driven by intentional dissemination considerations and by the CBS's overall strategic goals. Otherwise, there is a risk that changes to the website derived from use cases, and best practices taken from websites of other NSIs will be the driving force behind CBS's dissemination for years to come.

2.3 Metadata

The Danish experience regarding metadata management and how to use metadata in the dissemination process was presented to the Israeli side. Various issues related to metadata and websites were discussed in the light of Statistics Denmark's experience and current systems used by the CBS.

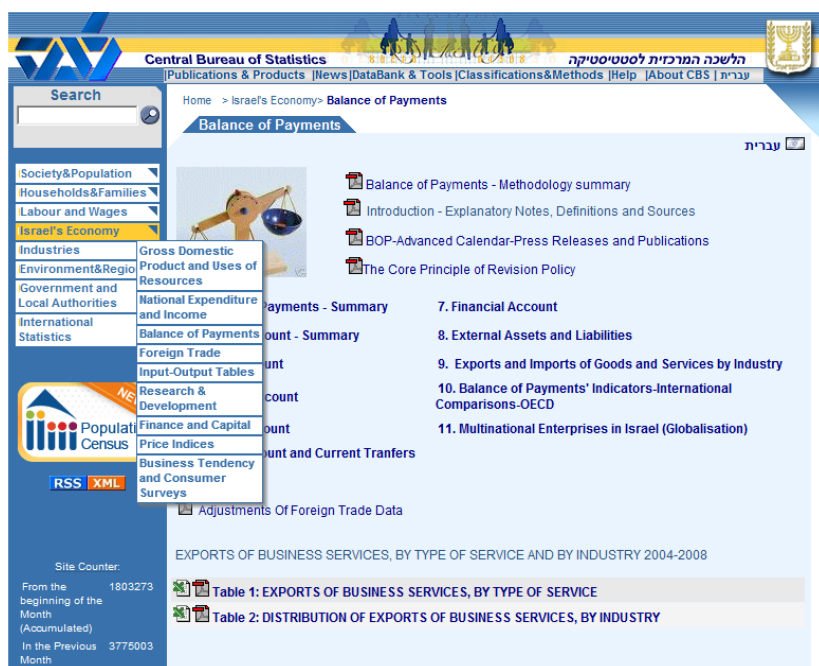
Quality declarations

Quality declarations are an important part, of the metadata that help users understand the statistics that the NSIs produce. Eurostat and IMF (SDDS) have various requirements / wishes for reporting of quality information.

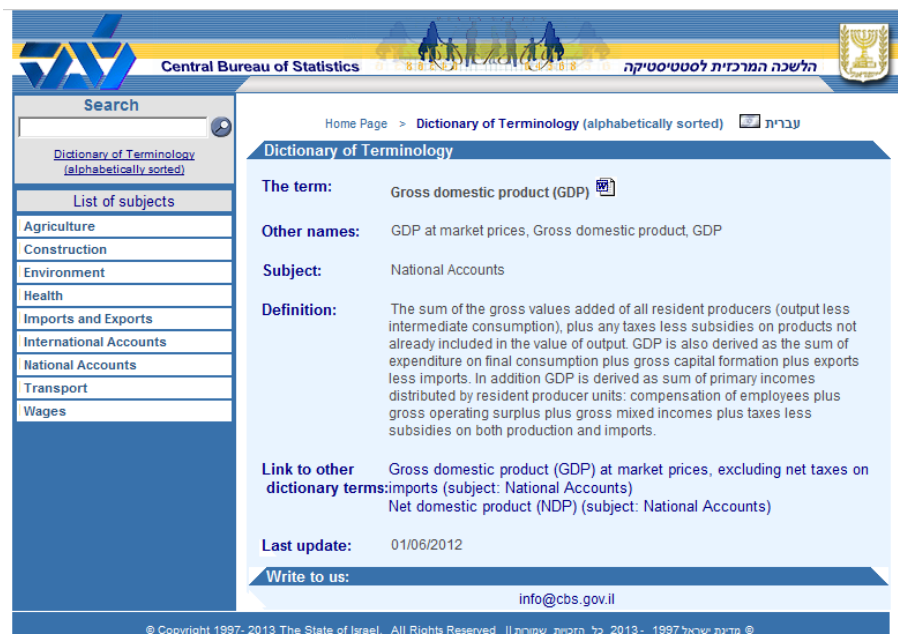
At http://www1.cbs.gov.il/reader/imf/dsbbisr_new.htm links to metadata on the IMF website are provided. At IMF the CBS supplied metadata is available both in the SDDS standard and in the DQAF format.

However, on the website under the heading Israel's Economy documentation is found both in other forms and as links to IMF sites. But the documentation compiled and supplied to the IMF does not seem to be presented at the CBS website or to be consistently available / linked from the statistics. How the SDDS /DQAF metadata is stored and processed is not clear from the web site and update procedures regarding it was not discussed during the meetings. But from an outside perspective such information should be centrally stored and managed so the information is uniform, updated and can be "mechanically" reused on the website and in other platforms related to data exchange.

Challenges found in currently disseminated descriptive metadata



Using the heading "Classifications and Methods" –Dictionary of terminology definitions of various concepts can be found.



Here the metadata in the forms of concepts and definitions exist in a vacuum. It was understood from the discussions that the Directory of Terminology is a work in progress and targeted at “tourists” and ordinary citizens. However, the terminologies found here are existing in a vacuum as there are no “links or references” from the terms to the actual data. The same thing is true for the data pages that have no links / or just an indirect reference to the Terminology.

In an ideal world, or more realistically on the re-launched CBS website, the information found in the Directory of Terminology should definitely be available on all data pages where the terms are used. The link should be directly to the term or show the definition in parts or “in toto” as an integrated part of the web page containing data.

From the MS Experts’ it’s highly recommendable that the linkage works both ways so you can jump from “Data to definition / concept” and from “Definition /concept to data”. In the long term such linkages are only possible if the website content is managed in a structured system and information is reused automatically.

Inconclusive subject matter structure

It can be discussed whether this is “just a strictly metadata question” or a user experience issue. On the web site various headings or subject areas are used. This is referred to as structural metadata designed to facilitate navigation and users’ possibilities for finding data. In the Dictionary of terminology one structure is used, in the databank another structure, a third structure is found in the left most navigation of the front page. As the MS Experts’ understood it, the briefings on the new the web site harmonizing the subject structure is a key element and highly recommendable.

Release calendar as structural metadata

In the release calendar, the upcoming release can be sorted by Subject – but the subjects are not shown together with the titles. More importantly the calendar looks only forward – if it had been based on structural metadata and an underlying data model it would be possible to link from upcoming releases to previous releases. Introducing such features should be prioritized on the new website.

Metadata supporting search engines

In web pages it's possible to include metadata that helps internal and external search engines to understand the content of the site. Also it is possible to direct the search engine to specific pages and instruct them to ignore others.

It is not clear if the present site uses metadata in this way. But for the re-launched web site the possibility of using metadata in this way should be considered.

DDI – Data Documentation Initiative

Statistics Denmark's plans to completely renew the metadata infrastructure over the coming years, starting with the system containing our current quality declarations, was presented and discussed. The new platform will be based on the Collectica software that is also being implemented in a number of other NSIs. Collectica will support the international DDI² standard and the requirements from Eurostat and other international organizations.

2.4 Other Issues

SDMX

Data exchange using SDMX was briefly discussed. Both Statistics Denmark and the CBS are involved in various pilot projects for automatic exchange of data. Currently it seems that the technical solutions are working as intended but the data structure definitions, i.e. the necessary metadata, are still lacking.

It was mentioned that a representative of the IT department could visit Statistics Denmark to have a demonstration of the Danish IT/dissemination solution – possibly in connection with other meetings in Copenhagen. This would be discussed at a later stage.

² Data Documentation Initiative –see <http://www.ddialliance.org>

3. Conclusions and recommendations

The discussions were open-minded and informative. From a Danish perspective, the following recommendations can be given:

- An approved dissemination strategy based on international requirements should be developed.
- The approved dissemination strategy should be the driver / deterministic part of the web renewal project –not the other way around.
- Organizational aspects of future web dissemination should be clarified and decided before the technology platform and content conversion is tendered.
- Organizational issues are more important than technology.
- Introduction of a new common subject structure must be anchored and accepted in the organization.
- The new subject structure must be enforced on all types of content
- Written procedures for changes to subject structure should be agreed upon and formalized.
- Search engine must be part of the web project – it should never be an afterthought
- Resources (staff time) for maintaining and developing search functions must be planned for.
- Metadata should be compiled and disseminated according to the relevant international standards. –
- Relevant metadata must be available to users to use and understand all disseminated statistics.
- Metadata should be stored in an IT solution that allows relevant metadata to be dissemination in total or partially where relevant.
- Compilation of metadata and associated systems should support the ICBS international reporting requirements.

4. Road map: work program and time plan

The next activity in component E (activity E3/E4) is currently scheduled to February 2014. To prepare this activity a number of tasks need to be completed by CBS – these tasks are included in the roadmap below.

Twinning Activities	Time frame	Tasks
E1		Final approval and adjustment of report.
E2 – June		
Report from E2: June 2013		
Follow-up on activities to be done by CBS	To be prepared before 20 October 2013	<p>Code of practice compared with CBS practices and policies – matrix</p> <p>Matrix of user groups and current available products</p> <p>Matrix of user groups and functionality of new web sites</p> <p>Identification of major focus areas that should go into the strategy:</p> <ul style="list-style-type: none"> • Draft strategy • Short term goals • Medium term goals <p>Organogram on the web project – description of process concerning decision making in the website renewal project</p> <p>(Description of the process regarding decisions similar to the slides presented on Statistics Denmark's subject areas would be helpful)</p> <p>Overview of issues from tender documents that CBS would like to have Statistics Denmark's opinion on</p> <p>Draft of subject areas to be used on the redesigned website</p> <p>Draft of paper describing how updating of new website will be organized – Roles / Responsibilities / Approval procedures - => Workflows (Organization of workflows are a dimensioning requirement to the technical platform and therefore relevant to the tender document)</p>
Preparation of E3/E4	To be prepared before 1 February 2014	<p>Status / description of the user satisfaction surveys conducted as part of the website redesign process</p> <p>Lists of typical questions asked by users of current web site (as registered by the call center)</p> <p>Define typical tasks that tourists (occasional users) undertakes on the CBS site – the tasks should be based on knowledge of what users commonly asks about</p> <p>Describe usability and user satisfaction surveys – how have they been followed up?</p> <p>Web analytics - what is available?</p>
E3/E4: February 2014		
E6: May 2014		
E5: August 2014		
October – 2014		End of Twinning Project – Mandatory Results reached

Annex E2.1. Terms of Reference

Component E Dissemination and Website

Mandatory results of the component

- Drafting of an ICBS dissemination and communication strategy document
- Establishment of mechanisms for continuous monitoring of user satisfaction with the website
- Establishment of a plan for redesigning of the website, including an improved search function
- Establishment of rules for updating of the website, including linkage of the data warehouse to the website

Activity E.2:

Assessment of current situation of dissemination and website

Terms of Reference

Subject / purpose of the E.2 activity

Assessment and discussion on the current situation of dissemination with particular focus on website; presentation and discussion on development of a dissemination strategy.

Expected output of the E.2 activity

Mission report with recommendations on short-term and long-term activities for improving dissemination and the web site.

Annex E2.2 Programme, 27-30 May 2013

Date	Place	Time	Event
Mon 24/6	CBS	09:00	Welcoming remarks <ul style="list-style-type: none"> • Mandatory results of the component • Twinning working methods
		09:30	Introduction: The dissemination department of CBS (<i>CBS</i>) <ul style="list-style-type: none"> • Current status on dissemination: Strategy and practices
		10:30	Coffee break
		11:00	Introduction to dissemination strategy (<i>Statistics Denmark</i>) <ul style="list-style-type: none"> • The concept and the ingredients of a dissemination strategy • The website and the data warehouse in the dissemination strategy • Discussion
		12:15	Lunch
		13:30	Co-ordination of on-going work regarding CBS's website (<i>CBS</i>) <ul style="list-style-type: none"> • CBS consultant and the Twinning project
		14:00	Description of the <u>present</u> CBS website (<i>Ami Goren, CBS consultant</i>) <ul style="list-style-type: none"> • Types of users and types of interaction with users • Presentation logic and structure • Coherence, uniformity, consistency • Data types covered (articles, graphs, spread sheets etc.) • Data media and data sources: files/data bases/papers; • Upload and update processes: Centralized/decentralized/ automatic/manual (for of data and metadata) • Metadata: content, accessibility, search options • Content management, monitoring tools for timeliness, punctuality...
		15:00	Coffee break
		15:15	The <u>future</u> CBS website (<i>Ami Goren, CBS consultant</i>) <ul style="list-style-type: none"> • The concept of the new website vs. the above criteria: changes planned • Discussion
Tue 25/6	CBS	09:00	Workshop (<i>CBS and Statistics Denmark</i>) <ul style="list-style-type: none"> • Dissemination structure including the Abstract / Yearbook • Data dissemination processes in CBS and Statistics Denmark • Discussion
		10:45	Approaches and principles of Bank of Israel's new website (<i>BoI, Yehudit Golan</i>)
		11:45	Lunch
		13:00	Data dissemination and the relations with CBS (<i>BoI, Izhak Frankovits</i>)
	Bank of Israel	14:00	The cooperation on dissemination between Danmarks Nationalbank and Statistics Denmark (<i>Statistics Denmark</i>)
		14:45	Coffee break
		15:00	Discussion: Implications for the website and the dissemination strategy
		16:00	Presentation of the Visitor's Center - refreshments
Wed 26/6	CBS	10:30	Meta data (<i>CBS and Statistics Denmark</i>)
		11:15	Electronic dissemination (<i>Statistics Denmark</i>)
		12:15	Lunch
		13:30	Round table discussion and preliminary conclusions <ul style="list-style-type: none"> • Inputs to the dissemination strategy for CBS • The future website of CBS as the cornerstone of the strategy
Thu 27/6	CBS	11:00	Discussion: Roadmap and time plan regarding the dissemination strategy and the website/data warehouse (<i>Statistics Denmark</i>)
		12:15	Lunch
		13:30	Ad-hoc meetings – further work on report and roadmap
		15:00	Debriefing with BC Project Leader: Recommendations, time plan and implied work programme for ICBS.

Annex E2.3 Persons met

Bank of Israel:

Izhak Frankovits, Head of Statistics Dept.,
Aviel Shpitalnik, Head of Dissemination Division,
Yehudit Golan
Yair Haim

Central Bureau of Statistics:

Olivia Blum (BC Project Leader)
Batia Attali (RTA Counterpart)
Yael Nathan, Head of Dissemination and Communication
Mirit Cohen, Web Content Manager
Sari Paz, Web-master
Orly Peles
Ami Goren, External Consultant

Statistical Products and Publications Committee of CBS

Bilha Rosenberg
Tali Tal
Sigalit Mazeh
Ari Paltiel
Dalit Cohen Lerner

Web Upgrade Committee of CBS

Liat Rehavi
Yafit Alfandari
Rachel Gur

Annex E2.4 Statistics Denmark's Strategy 2015

Statistics Denmark is guided by 5 years strategies. The latest Strategy 2015 is available from www.dst.dk/strategy. The part of Strategy 2015 dealing with dissemination is on page 19-20 and is shown below.

3.5 Dissemination of statistics

Vision and objectives The vision of SD is to be one of Europe's most user-friendly statistical institutions, an institution solving tasks digitally and the institution integrating the official statistics on social and economic conditions in Denmark.

The objectives for this action area are that:

- Statistics should be *accessible*, i.e. easy access for all users to the statistics and they are disseminated in a clear and understandable form.
- Published statistics should be *documented*, i.e. figures are supported by metadata explaining their meaning, limitations and uncertainty.

Initiatives concerning accessibility To improve accessibility a revised publishing policy is prepared comprising the following initiatives during the strategy period:

- *StatBank Denmark* stores all current official statistics published by SD and the central bank of Denmark. In the interest of users, other producers of official statistics are encouraged to make their statistics accessible from StatBank Denmark.
- The statistics stored in *StatBank Denmark* are presented in a convenient and understandable form, and StatBank Denmark is developed by including functions for calculating percentages, total sums and average figures and is also equipped with better graphs and maps. New tables with percentage distributions and growth rates for supplementing absolute figures are also developed.
- *SD's website* is – together with StatBank Denmark – SD's primary channel of disseminating statistics. The website is revised so that it is easier to browse information. The website will be more systematic and easier to use and will be continuously updated. The website will also be equipped with an interactive presentation of data, including graphs and maps.
- *SD's website* is expanded with a new entrance to all important short-term key figures presented in a clear and understandable manner. A number of newly developed thematic pages, e.g. on immigrants, the elderly, children and young people

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and tourism are developed. The calendar showing major economic and political events is made free of charge.

- The main results from all new statistics are still published in the newsletter *News from Statistics Denmark* on SD's website. *News from Statistics Denmark* is adjusted to developments in society, where the web-based media are the dominant media. The size of *News from Statistics Denmark* is made flexible in the interest of users.
- Statistical Yearbook, Statistical Ten-Year Review and Denmark in Figures appear annually as *paper publications*. A few other publications will also appear on paper. All publications are accessible in a PDF version free of charge from SD's website.
- Concurrently with the falling demand by customers and for reasons of resources most or all the series of Statistical News as well as the monthly publication Main Indicators are *discontinued*.
- In disseminating statistics, *English* is the only foreign language used by SD. The Declarations of Contents and StatBank Denmark will still be available in a fully developed English version. In addition, the parts of SD's English-language website related to the official international statistical cooperation are extended.

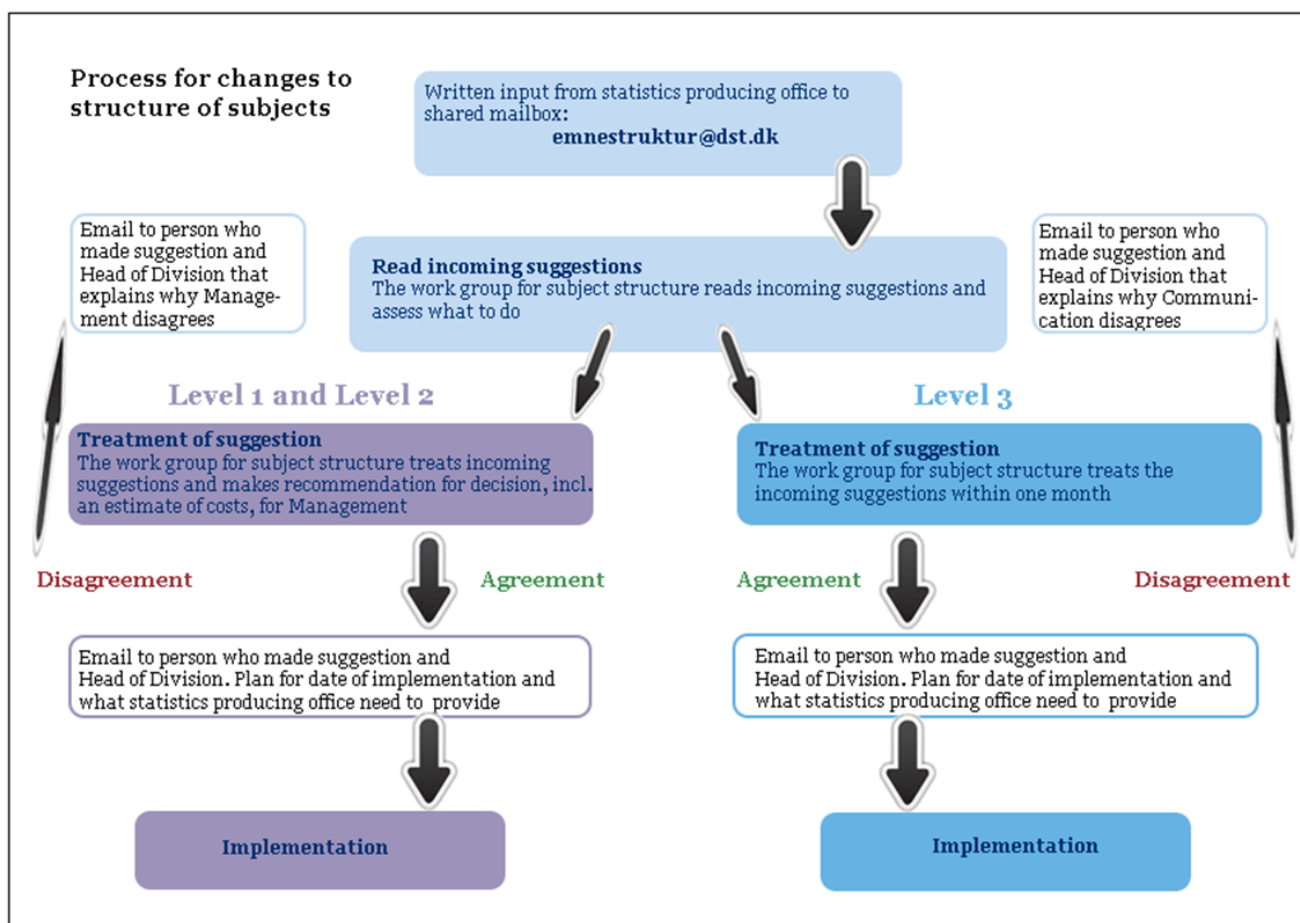
*Initiatives concerning
documentation*

The target groups of the documentation described below is users with different needs, and the level of detail of documentation is suited to official statistics. To improve this type of documentation the following initiatives are taken during the strategy period:

- *Declarations of Contents*, which were prepared and published on SD's website 1 January 1999, constitute the primary documentation of contents and quality of all statistics compiled by SD. The 300 declarations of contents are made more easily comprehensible and are extended by including more information on reliability (where relevant) as well as a general quality assessment that is easy to understand. All declarations of contents are to consist of modules and to describe all dimensions of EU's concept of quality.
- *Times* is a documentation system of data, concepts and variables included in the statistics. *Times* is expanded to cover a larger part of the statistics production.
- Today, some particularly important economic and political statistics published in *News from Statistics Denmark* are supported by *comments* on quality and other information explaining contents and limitations of the statistics. More statistics will be supported by such comments.
- A *conceptual dictionary* is developed and published. The dictionary contains definitions written in a way that is understandable to the general user. The conceptual dictionary ensures that formulations are harmonised across the various publishing types. It must be easy to users of StatBank Denmark to find a definition of the concepts applied in a given table.
- The series *Statistical News* contains a great deal of documentation. Consequently, earlier volumes are made available from SD's website free of charge. When data series in Statistical News are discontinued, it will be considered where to place the relevant documentation.
- SD's website also contains *other documentation* and classifications for certain statistical areas. This documentation is systematised and made easily accessible.

Annex E2.5 Organogram regarding subject structural decisions in Statistics Denmark

The processes regarding changes to the subject structure used by Statistics Denmark in all our publishing platforms is shown below. It is recommended to compiling and getting formal approval for a similar illustration regarding the new subject structure to be implemented by the CBS.



Annex E2.6 Description of Statistics Denmark's dissemination Strategy

The dissemination goals and objectives of Statistics Denmark are widely based upon the [European Statistics Code of Practice](#) – as a minimum. The Statistics Code of Practice is designed to boost confidence in the European statistical system and to ensure that all producers of official statistics in the EU apply the best international statistical principles and methods.

In our interpretation of the codex we are always taking two things into account:

- We strive to fulfill the user needs and still treat all users equally.
- We need to organize our work in an efficient way to reduce the costs.

Within the area of dissemination The Code of Practice includes:

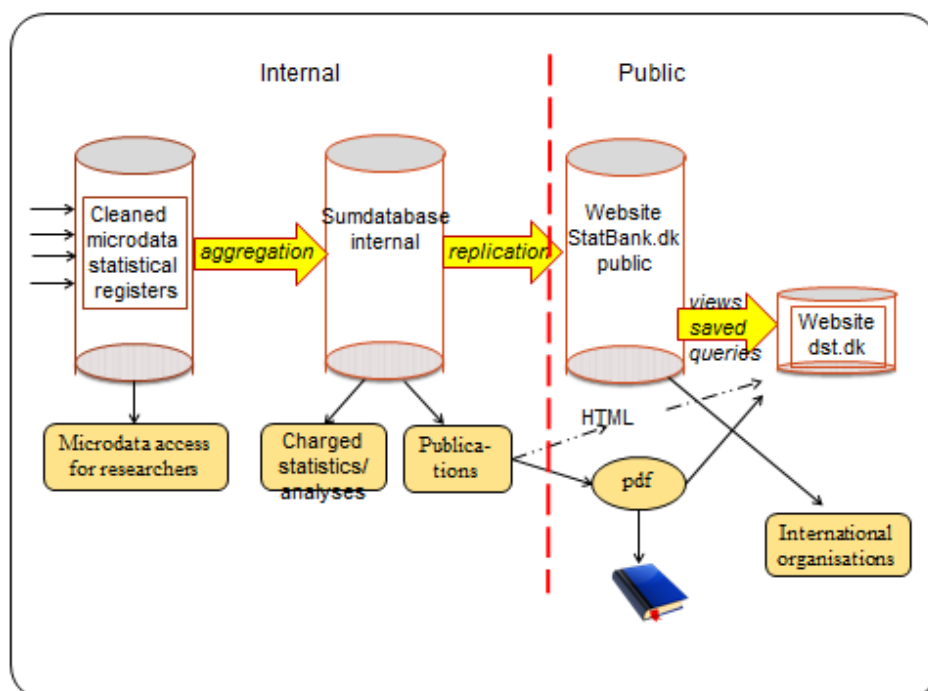
- Securing confidentiality
- Being cost effective
- Relevance of data and products
- Timely and punctual releases
- Coherence and comparability
- Accessibility and clarity

The strategy describes the different actions Statistics Denmark has taken to fulfill these goals.

The Single Source Principle

The Single Source Principle setup is not only a principle of cost efficiency but more to secure consistency across the dissemination channels and products as well as punctual releases.

The principle of a single source for all dissemination across the media channels has been a working principle for the last 8-10 years in Statistics Denmark. All official statistics (i.e. all statistics we are obliged to produce as paid by the Budget) will be disseminated through the public and free databank www.StatBank.dk, which will also be the source for any tables, graphs and saved queries displayed on the general web site www.dst.dk. Even publications can be output from this set-up.



The Single source principle in dissemination

The StatBank covers all subject areas like Population, Living conditions, Foreign Trade, National Accounts: 12 topics in total. The detail of the geographic level goes down to the municipality. It consists of 3,000 multidimensional cubes that are linked together by common metadata. Data in the StatBank will be stored in the internal database SumDatabase until release time when they are replicated to the StatBank. Some data may not be replicated but made accessible for other dissemination purposes e.g. publications or international reporting. All statistics in the topic pages under [Find statistics](#) on the website are created from the StatBank. A page showing [Short term trends](#) is another example of a page based on saved queries from the StatBank. Every single indicator is updated at the time when the “mother table” in the StatBank is updated.

Confidentiality

Only non-confidential data are accessible from the website. The StatBank contains aggregated, however, very detailed statistics. Micro data are under strict control and only accessible to acknowledged and authorised researchers holding a contract with Statistics Denmark. Contracts have been signed since 2003, around 300 new contracts every year.

Relevance, user involvement

User needs and user competences have to be taken into account when disseminating statistics. User committees representing the main users and data suppliers meet on regular basis and discuss initiatives and needs.

Regular usability tests and user satisfactions surveys are carried out and consequences and actions are planned to be taken. Moreover a survey of citizens’ view on our organisation and our products is carried out every second year, among other things to measure users’ trust in the organisation and the statistics.

Through web analytics we are studying users’ behaviour on the website and we take their search terms into account when updating the search keywords and indices.

Users are different: when we want to know about specific users’ needs (e.g., access to proper metadata or data revisions) we conduct focus group meetings. Web analytics are used as a supplement in our study of user behaviour. We follow the media use of our published statistics, collect media citations and deliver results at a daily and monthly base to all in-house interested. This is done to give the statisticians feedback on the use and interpretation of their releases.

Statistics Denmark intends to treat all users equally. Doing this we have to realise that users are different: they have different needs, different interests and different competences and knowledge in IT as well as statistics. When developing the products and services we usually do it within a frame of user types: the novice, the experienced and the expert or in the Corporate Information Factory terminology The Tourist, the Farmer and the Miner: the “*tourist*” who has a basic and broad interest in statistics, likes small applications giving a quick impression and easy understanding of the figures. There is the “*farmer*” who comes at a regular basis to “harvest” our web site and the StatBank for the same information every month. He needs efficient ways of connecting the always updated information to his own environment. Finally there is the “*miner*”, the specialist who wants to dig deep in our data – using the StatBank, the research access and the important metadata. Taking different user types into account helps developing products and services more suitable to the users.

Functionality and needs

What we call “the general web site” dst.dk is considered to be the primary source and “tool” for the novices. Around 50% of the users of dst.dk are first comers, not necessarily novices but novices on our site. They are offered an overview and access to statistical information without being too familiar with statistics and statistical terminology. They may tap in an

“every-day” search term and are led to a topic page containing statistics where the search term belongs. It is essential, however, that these users still have the possibility to get access to detailed information - in case they did not find what they needed, or if they want to go more in detail than what is shown in tables on dst.dk. This will be done via links to StatBank tables and to publications or by filtering the search. Coherence across the dissemination channels is thus important.

For the experienced user quick retrievals and alerts are valued services: e.g. saved queries, Excel web queries, data shoots, time series retrieval, xml output and API. They worship deep links to get directly to the statistics they know so we need to be aware when things are changed. Both the experienced user and the experts are in need of proper documentation and good, standardized metadata. Some expert users have a need to analyse developments in certain statistics. It is crucial for them to know what was published months ago even though the data has been revised. We shall establish a public revision database for that purpose.

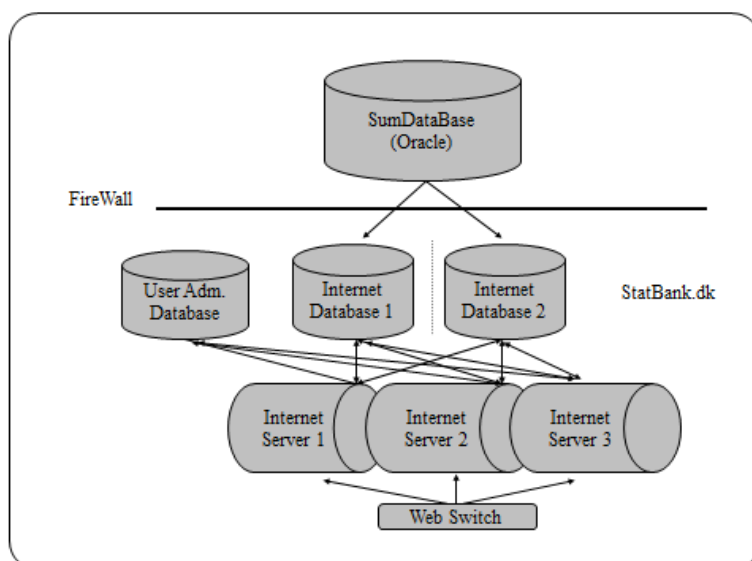
Visualizing

Visualizing statistics creates often a better understanding of the data than can be shown in a table. At least many users think so. At the same time a principle should be only to use visualization where it brings information: not making bars “jump” on the axis just to create movement. And do not use multiple layers of curves just because it creates a beautiful “landscape”. Statistics Denmark has a set of rules and guidelines to be followed when creating graphics. Maps are widely used in presentation of geographical statistics. More interactivity has been introduced: web-TV, [interactive maps \(Statistics eXplorer\)](#), and interactive, animated graphs. The NCVA Statistics eXplorer is a tool for the experienced and expert users and provides good possibilities for the making of analyses.

Timely and punctual

All releases are announced in advance in a calendar. First date is set a year in advance. This can be changed later, but only if there is a good reason for it. However, 9 days before the release date the date is fixed. Any change after that will have to be approved by the Director General and to be explained on the website calendar.

All releases take place at 9:00:00 am. This regards the News releases as well as StatBank tables. The punctual release is handled via a database system where one internet database is updated during the night, while another database is public on all the internet servers with “yesterday’s news”. At exactly 9:00:00 am a switch will give the public access to the updated version of the StatBank.



Web release set-up 9:00:00 am.

Timely data are important when statistics are used for planning purposes. Statistics Denmark requires monthly statistics being released within 62 days, quarterly statistics within 92 days and annual statistics within one year after the observation time or period. The directors get monthly reports on timeliness, which is regulated through written contracts with the divisions.

Coherence and comparability

Common metadata are essential to creating coherence across time and contents in surveys and topics. The StatBank that contains all official statistics uses a common set of metadata across the topics. International classifications are used where they exist.

Change of methodology or definitions may unfortunately create breaks that prevent full comparability over time. To minimize such disadvantages it has been agreed producing the statistics for an overlapping period: the same period presented with old and with new method, if possible, even re-calculating the whole series back in time. As a minimum the break will be explained in the quality declaration connected to the statistics. Another solution used for keeping longer time series is creating tables that eliminate the dimension that causes the break (e.g. longer series without a geographical dimension if this dimension has been changed over time).

Accessibility and clarity

One important aspect of accessibility is *findability*. It is never enough for the statistical office to claim “we have put the information on the website so it is there for you to use”. It should be structured in a logical way using understandable labels. Statistics Denmark has recently secured that all statistical products (the web site, the StatBank, the News releases, publications and the metadata) follow the same structure of topics. This makes it possible to link statistics at different levels of detail. Search is another aspect of findability and relevant indexing of the content is a priority task. All publications are available in pdf on the web site.

A [disclaimer](#) specifies the right to re-use the statistics. All official data can be accessed free of charge from our website and the StatBank. Data can be downloaded in different formats (e.g. Excel, csv, pc-axis, xml) and queries can be saved for easy re-use. Downloaded data can be re-used commercially as well as non-commercially on the condition of mentioning the source.

To encourage the public to use our statistics even more an API is being developed in 2013. This makes communication between machines possible and allows for using our data in other systems and with another user interface: a way of spreading the statistics even more. In this connection also new platforms will be taken into use. A version of the StatBank will be accessible from smartphones and tablets.

The quality and clarity of the disseminated statistics depends to a large extent on metadata: i.e., descriptions of quality, sources, definitions etc. All tables in the StatBank and all News Releases are linked to such a [quality declaration](#). Quality declarations, Classifications, Variables and concepts are all accessible from the website and are to be connected in one system based on the DDI standard.

We have written procedures for error handling. Errors in the statistics are corrected as soon as possible, and it is announced on the website either directly or with the following release. Subscribers to saved queries in the StatBank are informed directly.

In case of serious misinterpretations of our statistics in the media Statistics Denmark takes contact to get it corrected. We subscribe to media monitoring covering printed and electronic media.

Annex E2.7 Matrix of Code of Practice principles and indicators related to dissemination

Code of practice principle -	Indicator for compliance	Status / available documentation for compliance	Possible improvements to compliance
6. Impartiality and Objectivity – Statistical authorities develop, produce and disseminate European Statistics respecting scientific independence and in an objective, professional and transparent manner in which all users are treated equitably.	<p>6.1: Statistics are compiled on an objective basis determined by statistical considerations.</p> <p>6.2: Choices of sources and statistical methods as well as decisions about the dissemination of statistics are informed by statistical considerations.</p> <p>6.3: Errors discovered in published statistics are corrected at the earliest possible date and publicised.</p> <p>6.4: Information on the methods and procedures used is publicly available.</p> <p>6.5: Statistical release dates and times are pre-announced.</p> <p>6.6: Advance notice is given on major revisions or changes in methodologies.</p> <p>6.7: All users have equal access to statistical releases at the same time. Any privileged pre-release access to any outside user is limited, controlled and publicised. In the event that leaks occur, pre-release arrangements are revised so as to ensure impartiality.</p> <p>6.8: Statistical releases and statements made in press conferences are objective and non-partisan</p>		
11. Relevance European Statistics meet the needs of users	<p>11.1: Processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs, and consider their emerging needs and priorities.</p> <p>11.2: Priority needs are being met and reflected in the work programme.</p> <p>11.3: User satisfaction is monitored on a regular basis and is systematically followed up.</p>		

<p>13. Timeliness and Punctuality - European Statistics are released in a timely and punctual manner.</p>	<p>13.1: Timeliness meets European and other international release standards.</p> <p>13.2: A standard daily time for the release of statistics is made public.</p> <p>13.3: The periodicity of statistics takes into account user requirements as much as possible.</p> <p>13.4: Divergence from the dissemination time schedule is publicised in advance, explained and a new release date set.</p> <p>13.5: Preliminary results of acceptable aggregate accuracy can be released when considered useful.</p>		
<p>15. Accessibility and clarity –</p> <p>European Statistics should be presented in a clear and understandable form, disseminated in a suitable and convenient manner, available and accessible on an impartial basis with supporting metadata and guidance</p>	<p>15.1 Statistics and the corresponding metadata are presented and archived in a form that facilitates proper interpretation and meaningful comparisons</p> <p>15.2 Dissemination services use modern information and communication technology and, if appropriate, traditional hard copy</p> <p>15.3 Custom-designed analyses are provided when feasible and the public is informed</p> <p>15.4 Access to micro data can be allowed for research purposes and is subject to specific rules or protocols</p> <p>15.5 Metadata are documented according to standardised metadata systems</p> <p>15.6 Users are kept informed on the methodology of statistical processes including the use of administrative data.</p> <p>15.7 Users are kept informed about the quality of statistical outputs with respect to the quality criteria for European Statistics.</p>		

Annex E2.8 Products related to user groups / segments

The example below is from Bosnia and Herzegovina and shows the relationship between products and the user groups currently recognized.

<i>Type of media / User groups</i>	<i>Web-site</i>	<i>DEV-INFO</i>	<i>Online Data-bases</i>	<i>Twitter</i>	<i>Year-book</i>	<i>In figures</i>	<i>Publications</i>	<i>First release /release</i>	<i>Press releases</i>	<i>Press conferences</i>	<i>Personal inquiries</i>
<i>Tourists</i>											
<i>Farmers</i>											
<i>Miners</i>											
<i>Government institutions</i>	XXX	XXX	0	0	X	XXX**	XXX	XXX	XX	XX	XXX
<i>Local governments</i>	X	XX	0	0	X	X	X	X	X	X	XXX
<i>Students, researcher and educational institutions</i>	XXX	XX	0	X	XX	XX	XX	XX	0	0	XXX
<i>Media</i>	XXX	0	0	X	0	X	X	XXX	XXX	XXX	XXX
<i>Companies</i>	XX	0	0	0	0	0	X	X	0	0	XXX
<i>Non government</i>	X	XX	0	0	X	X	X	XX	0	0	XXX
<i>Statistical organisations of other countries and Eurostat</i>	XXX	X	0	X	XX	X	X	X	0	0	X
<i>Foreign users</i>	XX	X	0	X	X	X	X	X	0	0	XX
<i>Ordinary citizens</i>	X	X	0	0	X	XX	X	X	XX	XX	XXX

o= not relevant

x= limited relevance

xx= relevant

xxx= highly relevant