

# **TWINNING CONTRACT**

**JO/13/ENP/ST/23**

## **Strengthening the capabilities of the Department of Statistics in Jordan**



### **MISSION REPORT**

**on**

**Activity 4.10: Website technology - II**

Mission carried out by

Cecilia Colasanti, Istat  
Massimiliano Amarone, Istat

26<sup>th</sup> October 2014 to 30<sup>th</sup> October 2014

Version: Final



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## 1. General comments

This mission report was prepared within the Twinning Project "Strengthening the capabilities of the Department of Statistics in Jordan". It was the second mission to be devoted to Website technology within Component 4: Online Dissemination.

The purposes of the component were:

- Assessment and review on the current status of the current database structure, administration system as well as the current use of tools for online dissemination
- Priority to be given to the topics in the component
  - Database structure
  - Online dissemination
  - Website technology

The consultant would like to express their thanks to all officials and individuals met for the kind support and valuable information which they received during the stay in Jordan and which highly facilitated the work of the consultant.

This views and observations stated in this report are those of the consultant and do not necessarily correspond to the views of EU, DoS or Istat.

<b>Activity 4.10</b>	<b>Website technology – II (26th October 2014 - 30th October 2014)</b>
<b>Budget section</b>	7
<b>Subject</b>	Discussion of different options for changing the website technology to meet requirements for increased user-friendliness e.g. the need for a search engine Develop a plan for changing the website
<b>Methods</b>	Workshop and discussion with DoS. Presentations by MS and DoS
<b>Resources</b>	MS: Massimiliano Amarone, class 2 (IT), Cecilia Colasanti, class 2 (IT), RTA BC: DoS staff of the Directorate of Information Technology, RTA Counterpart, Component Counterpart Others: RTA Assistant, Language assistance Venue: DoS
<b>Duration</b>	2 STEs x 5 working days
<b>Output</b>	Recommendation prepared on how to develop further IT-system behind the DoS website.
<b>Time schedule</b>	12 <sup>th</sup> project month

## 2. Assessment and results

During the week discussions took place to let the experts have an overview of the activities:

1. Recommendations prepared on how to enhance the DOS Communication and Dissemination Policy
2. Strategies on how to improve the usability and the search function of the website
3. Recommendations prepared on how to implement WordPress as the CMS
4. Transfer of the Italian and in general the European Union, experience regarding developing and maintaining a statistical offices website
5. A lining up of work programme for the next steps towards improving the DoS website

Below the assessment results are presented.

## 1. Recommendations prepared on how to enhance the DOS communication and dissemination policy

To design a good DoS website, it is very important to invest in effective communications.

The first step starts from the strategy, by

- developing a commitment to effective communications;
- taking a holistic approach to developing the communications strategy, with a clear message.
- Effective communications is a core leadership competency for the organization, and some level of proficiency should be required at all levels of management. Adopt a strategy for communications, and engage your organization in developing this skill.

The second step is to implement a policy, by

- creating a standard template to communicate policies;
- developing a communications plan to communicate new policies to the organization;
- adopting a regularly inventory policies to ensure they continue to be relevant to the organization;
- having policy owners and users review policies at least annually to ensure they are clear about their responsibilities.

See Annex 3 for more details.

## 2. Strategies on how to improve the usability and the search function of the website

How to improve usability?

Great design is possible by ensuring that you have the following ingredients:

1. Comprehensive research on users, needs and behaviours to define high-priority usage scenarios. It should be noted that focus groups, while they have their place, are not as effective as structured observation of human behaviour. Observation, rather than solicitation, is almost a UX best practice in its own right.
2. Human-factor principles are deeply understood and appropriately applied.
3. Cohesive usage scenarios tied to organizational business value, not just user requirements.
4. Innovative rethinking of familiar concepts and approaches to redefine the product category.
5. Well-chosen design vocabulary to create solutions and rapidly iterate toward an optimal solution.
6. Validation of creative ideas via systematic usability testing and other mechanisms driven by objective data from users.
7. Limit "feature bloat" by ruthless pruning to sustain a core concept.
8. Overcome development difficulty because, although good design is invisible, achieving invisible ease-of-use can require a sophisticated technology foundation.
9. High performance, including speed, is a key factor affecting usability and high-performance results more from a broad architecture than from narrow-scope optimization.
10. Test, test, test — repeatedly.

This practice increases the odds of delivering a cohesive, compelling solution that satisfies users, while maximizing the business value of your website and of any software initiative.

Trying to avoid the top 10 mistakes in Web and User Experience Design Projects.

1. Starting a project by selecting technology
2. Failing to get a baseline measure of the system before it's replaced
3. Assuming that everyone just knows what's user-friendly
4. Believing design is only about adding features, not about careful pruning
5. Forgetting that, all else equal, speed wins
6. Failing to test with actual users in actual conditions
7. Failure to iterate
8. Designing a closed monolith, rather than an open vocabulary
9. Ignoring nonvisual parts of the design
10. Accepting political compromises as substitutes for design decisions

Do not forget the role of search engine and improve website User eXperience (UX) with Data-Driven Design (DDD)

See Annex 4 for more details.

### 3. Recommendations prepared on how to implement WordPress as the CMS

During this mission the first version of the new DoS website, based on WordPress technology, was implemented. The main goal has been to produce a website more appealing and user-friendly, by taking into consideration the role of final users.

The job was divided in different steps:

1. It were collected information and requirements from all Statistical Departments, not only through formal meetings, but also by arranging informal meetings at IT Department (with 'Agriculture Staff' and 'Economic Survey' Staff)
2. Statistical requirements were translated into IT requirements and implemented on the new web site
3. A formal meeting was arranged to present the outcome to the General Director, Statistical Directors to check the correspondence between expectations and implementation.

The new web site reflects the DoS effort to change its working flow organization. Only a strong collaboration among all DoS Directorates with IT staff has allowed this result.

For more detailed information see annex 5.

### 3 التوصيات التي يجب اتباعها في تطبيق WordPress على CMS

خلال هذه المهمة تم تطبيق النسخة الاولى من الموقع الالكتروني لدائرة الاحصاء معتمدا على نظام WordPress. الهدف الرئيسي هو انتاج موقع الالكتروني اكثر جاذبية وسهل الاستخدام اخذين بعين الاعتبار دور المستخدم النهائي.

تم تقسيم العمل على عدة مراحل:

- 1- تم تجميع المعلومات والمطلوب من جميع الدوائر في دائرة الاحصاء، ليس فقط من خلال الاجتماعات الرسمية، ولكن ايضا من خلال الاجتماعات الغير رسمية في دائرة تكنولوجيا المعلومات IT (مع موظفي قسم الزراعة و قسم المسح الاقتصادي)
- 2- الشروط الاحصائية ترجمت الى تكنولوجيا المعلومات وتم تطبيقها على الموقع الالكتروني الجديد.
- 3- تم الاجتماع بالمدير العام والمدراء الاحصائيين لاعلامهم بالنتائج و لفحص تم تنظيم اجتماع رسمي لتقديم النتائج الى المدير العام. على المدراء الاحصائيين ان يفحصوا التوافق بين التطلعات والتطبيقات.

الموقع الالكتروني الجديد يعكس جهود دائرة الاحصاء لتغيير تنظيم سير العمل فيها. وذلك لا يكون الا بالتعاون القوي بين موظفي دائرة الاحصاء مع موظفي تكنولوجيا المعلومات.

لمعلومات ادق الرجاء العودة الى Annex 5 بالتقرير المفصل.

### 4. Transfer of the Italian and in general the European Union, experience regarding developing and maintaining a statistical offices website

The Istat website is based on different technologies: the main pages are made through the Wordpress CMS, the linked websites <http://noi-italia.istat.it>, <http://www.misuredelbenessere.it>, <http://seriestoriche.istat.it>, ecc are made by Typo3 CMS and the I.Stat <http://dati.istat.it> is based on a OCSE product, based on Microsoft technology.

This web site is the result of a strong collaboration among the Directorates of the Istat Integration, Quality, Research and Production Networks Development Department (DIQR).

### 5. A lining up of work programme for the next steps towards improving the DoS website

To have a stable version of the new website, different tasks are required:

1. To consolidate the web site configuration and personalization on a stable server (IT task)
2. To migrate all textual information (news, indicators, press review, ecc) from the current web site to the new web site (IT task)
3. To decide which sort of statistical themes/surveys belong to Economic Sector and which to Social Sector (Strategy Department task). After having taken the decision, Strategy Dept communicates it at IT Staff. IT Staff translate it in a suitable menu into the website section 'Data by Sectors'

4. To implement the website Arabic version, to have Arabic/English version (IT task and, eventually, translator)
5. To decide how, eventually, to re-arrange the economical data and statistic to improve the data usability (Economic Department task). After having taken the decision, Economic Dept communicates it at IT Staff. IT Staff translate it in a suitable menu into the website section 'Data by Sectors/Economic Sector'.
6. To make a plan to migrate all DoS data from 'static data' to 'dynamic data'. To perform this task it is necessary to give a priority to the data migration. We recommend to start from data that already are into a suitable structure, then manage, in the end, the most complex situations (Statistical Depts task). After having written a priority list, IT staff gives the indications to Statistical Depts how to put their data in a convenient data structure to migrate them into the DB. To convert data in the right data structure is Statistical Dept task, under the IT supervision. After this step, IT staff put data into Web PX-Access to show them in a dynamic way and to allow to users a easier data research.

#### 5 ◀ وصف خطوات العمل للمراحل القادمة من أجل تطوير الموقع الإلكتروني لدائرة الإحصاءات

من اجل الحصول على نسخة ثابتة للموقع الإلكتروني الجديد، هنالك مهام مختلفة مطلوبة:

- 1- دعم مكونات وخصائص الموقع الإلكتروني على خادم ثابت (مهمة IT)
- 2- نقل كل المعلومات النصية (اخبار، مؤشرات، دراسات صحفية، الخ) من الموقع الحالي الى الموقع الجديد (مهمة IT)
- 3- يجب ان نقرر اي من الاحصاءات / المسوح تتبع الى الدائرة الاقتصادية واي منها الى الدائرة الاجتماعية (مهمة الدائرة الاستراتيجية). بعد اتخاذ القرار، تتصل الدائرة الاستراتيجية بدائرة تكنولوجيا المعلومات. يترجم موظفي دائرة تكنولوجيا المعلومات عن طريق قائمة مناسبة في قسم (قطاعات الدائرة) على الموقع الإلكتروني.
- 4- تطبيق الموقع باللغة العربية، الحصول على نسخة عربي/انجليزي (مهمة IT والمترجم)
- 5- يجب ان نقرر كيفية العمل على المعطيات والاحصائيات في القسم الاقتصادي لتطوير استخدام المعلومات (مهمة الدائرة الاقتصادية). بعد اتخاذ القرار، تتصل الدائرة الاقتصادية مع تكنولوجيا المعلومات، ويترجم موظفي تكنولوجيا المعلومات عن طريق قائمة مناسبة في قسم (قطاعات الدائرة / الدائرة الاقتصادية) على الموقع الإلكتروني.
- 6- لعمل خطة من اجل نقل جميع معلومات دائرة الاحصاء من الحالة الثابتة الى الحالة المتحركة (ديناميكية) من الضروري اعطاء هذه المهمة الاولوية. ننصح بالبدء من المعلومات الموجودة بشكل هيكلي مناسب ومن ثم الانتقال الى الاكثر تعقيدا (مهمة دائرة الإحصاءات). بعد كتابة قائمة بالأمر المهمة، يعطي قسم تكنولوجيا المعلومات المؤشرات الى دائرة الاحصاءات وكيفية وضع المعلومات بطريقة هيكلي مناسبة لنقلها الى قاعدة البيانات. لتحويل المعلومات الى هيكلي المعلومات الصحيحة فهي مهمة دائرة الاحصاءات، تحت اشراف دائرة تكنولوجيا المعلومات، يضع موظفي IT المعلومات في Web PX-Access لإظهارها بشكل ديناميكي وللسماع للمستخدم للحصول على المعلومات بطريقة سهلة.

#### 6. Other issues to be addressed (which are not included in the ToR)

According to the last mission, during this mission the governance process was deeper examined, at the DoS high-level management.

It is clear, at all organizational levels, the necessity to re-think the way to work together. To get more results it is required more flexibility with respect of the management of roles and responsibilities. The common sense has to drive the approach at a balanced mixture of formal and informal way to work.

In practice, referring, for example, to the migration from static to dynamic data, it is very important a high-level of collaboration among Statistical Depts and IT staff. This means work together to get a DoS goal.

#### 6 ◀ قضايا اخرى يجب معالجتها (لم تكن موجودة بالاصل في ToR)

بالرجوع الى المهمة السابقة وخلال هذه المهمة ايضا تم الدخول في موضوع عملية الادارة .

من الضروري اعادة التفكير في الية وطريقة العمل على جميع المستويات التنظيمية و للحصول على النتائج المرجوة يجب ان يكون هنالك مرونة في ادارة الادوار وتوزيع المسؤوليات بطريقة متوازنة بدمج العمل الرسمي وغير رسمي معا بالتطبيق، مثلا، نقل المعلومات من المرحلة الثابتة الى الديناميكية من الضروري التعاون بشكل كامل بين الدائرة الاحصائية ودائرة تكنولوجيا المعلومات، بما معناه العمل معا للوصول الى هدف دائرة الاحصاء.

### 3. Conclusions and recommendations

This mission was dedicated to create a new website for the DoS.

A website represents the image of an Institution and its values, so it reflects DoS' mission and vision. The website's design and implementation has required the involvement of all component of the Organization. To improve this work, it is important to be focused on the DoS working style.

From this point of view, we faced both aspects: technical and organizational.

Technical aspects: a first release of a new website was produced and approved

Organizational aspects: Formal meetings have been organized with General Director, IT Director, Statistical Directors and staff (more than 30 people) to present the new DoS website. It has been underlined the necessity to collaborate and work together, also in an informal way, regardless roles, to improve this job.

Different informal meetings between Statistical Depts and IT staff were arranged to collect the requirements and different point of views and put them into the web site.

Referring to the previous report, 'Work programme for the next activity', all tasks have been performed.

### 4. Work programme for the next activity of the project

#### Organizational level

It should be important:

- to perform a stakeholder analysis and reputation survey for the DoS, also with the support of external experts on this subject
- to invest on communication sector to improve and facilitate internal and external communication and to build a DoS image immediately identifiable

#### Technical level

It should be important:

- to invest on the security server, for example by buying a new server to put the new website on line
- to separate test and production environments
- to improve the knowledge of CMS Wordpress and to install the plug-in for the Arabic version
- to install the 'web analyzer tool' or, better, 'google analytics' to trace the number of accesses to the new web site

#### 4 ◀ برنامج العمل للمهمة القادمة من المشروع

المستوى التنظيمي:

- 1- عمل تحليل للشركاء و عمل مسح لدائرة الاحصاء بمساعدة الاخصائيين الخارجيين.
- 2- الاستثمار بقسم التواصل لتطوير وتسهيل نقل المعلومات داخليا وخارجيا وبناء صورة واضحة لدائرة الاحصاء.

المستوى التقني:

من الضروري:

- 1- الاستثمار في الخادم الامن، مثلا شراء خادم جديد لوضع الموقع الجديد.
- 2- الفصل بين بيئة الفحص و الانتاج.
- 3- تطوير معرفة CMS wordpress
- 4- تثبيت اداة (web analyser) او الافضل ('google analytics') لتتبع عدد الزيارات إلى الموقع الجديد.

## Annex 1. Terms of Reference

### Terms of Reference

#### EU Twinning Project JO/13/ENP/ST/23

26 October – 30 October 2014

#### Component 4: IT and Online Dissemination

#### Activity 4.10: Website technology - II

##### 0. Mandatory results and benchmarks for the component

- New database structure defined and online dissemination improved (Apr 2015)
- Assessment report on current situation (Jan 2014)
- Develop a plan for the database structure (July 2014)
- Improve the IT-security (Jan 2015)
- Improve the online dissemination (Apr 2015)

##### 1. Purpose of the activity

- To discuss organisational aspects of building and maintaining DoS' website, including:
  - How the DoS website can reflect DoS' mission and values
  - Communication and Dissemination policies
- To discuss technical aspects of building and maintaining DoS' website, including:
  - Increased knowledge among the DoS IT-staff about Content Management System (CMS) WordPress
  - Strategies on how to improve the usability and the search function of the website.

##### 2. Expected output of the activity

- Recommendations prepared on how to enhance the DOS communication and dissemination Policy.
- Recommendations prepared on how to implement WordPress as the CMS
- Transfer of the Italian and in general the European Union, experience regarding developing and maintaining a statistical offices website
- A lining up of work programme for the next steps towards improving the DoS website

### **3. Participants**

#### DoS

Mr Tayseer Deeb, Director of Information Technology (*Component Leader*)

Component team members...

#### MS experts

Ms Cecilia Colasanti, Head of Staff Unit of the ICT Director, ISTAT

Mr Massimiliano Amarone, Project Manager, ISTAT

## Programme for the mission

<b>Time</b>	<b>Place</b>	<b>Event</b>	<b>Purpose / detail</b>	
Sunday, morning	08.30 – 10.00	Hotel /DoS	Meeting with RTA	To discuss the programme of the week
Sunday, morning	10.00 – 12.00	DoS	Meeting with BC Component Leader and BC Experts	Discussions of the week's programme  Presentation by DoS on the current Dos website. Presentation of content as well as technology behind it.Organisational aspects. Who is responsible for which parts of the website?
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Sunday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Presentation by experts on Istat's website. Presentation of content as well as technology behind it.Organisational aspects. Who is responsible for which parts of the website?
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Monday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Discussion the Online dissemination policy.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Monday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Tuesday, morning	08.30 – 10.00	DoS	Meeting with BC Component Leader and BC Experts	Discussions of different options for changing the website technology to meet requirements for increased user-friendliness e.g. the need for a search engine
	10.00 – 12.00			
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Tuesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Wednesday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing

	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Discuss the use of CMS.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Wednesday, afternoon	01.00 – 03.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
	03.30 – 04.00		Preparations / Report writing	Preparations / Report writing
Thursday, morning	08.30 – 09.00	DoS	Preparations / Report writing	Preparations / Report writing
	09.00 – 12.00		Meeting with BC Component Leader and BC Experts	Discussions of how to prepare a plan for changing the website.
	12.00 – 01.00		Break / Preparations / Report writing	Break / Preparations / Report writing
Thursday, afternoon	01.00 – 02.30	DoS	Meeting with BC Component Leader and BC Experts	Continued.
			Ad-hoc meetings	Final clarifications with BC Experts, preparation of report and presentation for BC Project Leader
Thursday, afternoon	02.30 – 03.00	DoS	Meeting with BC Component Leader	Presentation for BC Project Leader
Thursday, afternoon	03.00 – 04.00	DoS	Debriefing with BC Project Leader	Conclusions and decisions and their consequences for the next activity and the implied work programme for BC Experts

## Annex 2. People met

### DoS:

1. Dr. Qasem Al-Zubi, Director General of DoS
2. AbdelWadood Matouk, Technical Assistant to the Director General, BC project leader
3. Tayseer Deeb, Director of Information Technology (Component Leader)
4. Ahmad Mowafi Head of the Statistical Analysis Division, RTA Counterpart
5. Rana A. Swaidat, IT/ Head of Development Unit
6. Abdullah Al –sous, Web Dissemination section/IT
7. Manal Khuffash, Web Dissemination section/IT
8. Wafa Hasoneh, Web Dissemination section/IT
9. Tamara Wadi, Web Dissemination section/IT
10. Hussam abu Shukor, Head of Electronic Dissemination/IT
11. Munther Badreah, Head of International Relations
12. Mohammad Khalaf, Head of Quality Division
13. Moawiah Alzghoul, Director of National Accounts
14. Fuad Irteimeh, Director of Agricultural Directorate
15. Mohammad Tawalbeh, Head of Agricultural Economic Division
16. Sa’ed Al-Shawareh Head of Animal Production (Livestock statistics) division
17. Shaher Alshawabkeh, Director of Economic Surveys Directorate
18. Mohammad Al Assaf Director of Population and Social Statistics
19. Amer Al-Jammal, Head of Labor Force Division
20. Nuha AbdelQader, PR
21. Mechail Ja’nenih Head of demographics and health surveys division
22. Fatima Awamreh Head of Expenditure and income survey division
23. Ahlam AL-Rousan Head of IT Division
24. Ali Jararweh economic surveys directorate
25. Othman Al-Masri Financial directorate
26. Mohammad Abu Dalo Economic surveys directorate
27. Tamam Al-Yasein Agricultural Directorate
28. Feras Moslih economic surveys directorate

### RTA Team:

Thomas Olsen, RTA

Christine Salman, RTA Assistant

Mohammad Al Junaidi, Interpreter

## Annex 3.

### Effective Communications: A Strategy

#### Key Challenges

- To deliver a great communication, organizations (General Director, Statistical Directors, CIO) must build an effective communications core, which consists of a communications strategy, a communications plan and delivery skills.
- It pays to invest in effective communications. A Watson Wyatt return on investment (ROI) study on effective communications found a correlation between communications effectiveness, organizational turnover and financial performance.
- There is more pressure on IT leaders to speak the language of the business to translate technology and process changes into everyday terms.

#### Recommendations

- Develop a commitment to effective communications.
- Take a holistic approach to developing the communications strategy. Have a clear message, and then work to adjust the message regularly to achieve maximum effectiveness.
- Effective communications is a core leadership competency for the organization, and some level of proficiency should be required at all levels of management. Adopt a strategy for communications, and engage your organization in developing this skill.

#### Analysis

Communication: To communicate is to express oneself in such a way that the message is readily and clearly understood.

The communications core consists of a communications strategy, a comprehensive plan and delivery skills. At the heart of the communications strategy is the vision for linking IT to the business and driving business outcomes. For many organizations, though, a vision simply amounts to a statement or a collection of colorful words that become "shelfware" — a document developed with good intentions at one point in time, but which lacks any credibility as being actionable. Rather, a great vision should inspire the hearts and minds of the people in the organization and be used regularly to drive outcomes across the organization. While the formal definition of "communication" captures the mechanical act of imparting information, it neglects the human elements of inspiring, exciting or calming.

It pays to invest in effective communications. A Watson Wyatt ROI study on effective communications found a correlation between communications effectiveness, organizational turnover and financial performance:

- Organizations with effective communications have a 19% higher market premium than those that do not.
- Their shareholder returns are 57% higher than those of organizations with less-effective communications.
- These organizations are 4.5 times more likely to report high levels of employee engagement than those that communicate less effectively.
- Organizations with highly effective communicators are 20% more likely to report lower turnover rates than those with less-effective communicators.

#### Components of an Effective Communications Strategy

A communications strategy comprises five key actions, illustrated by the strategic framework in Figure 1.

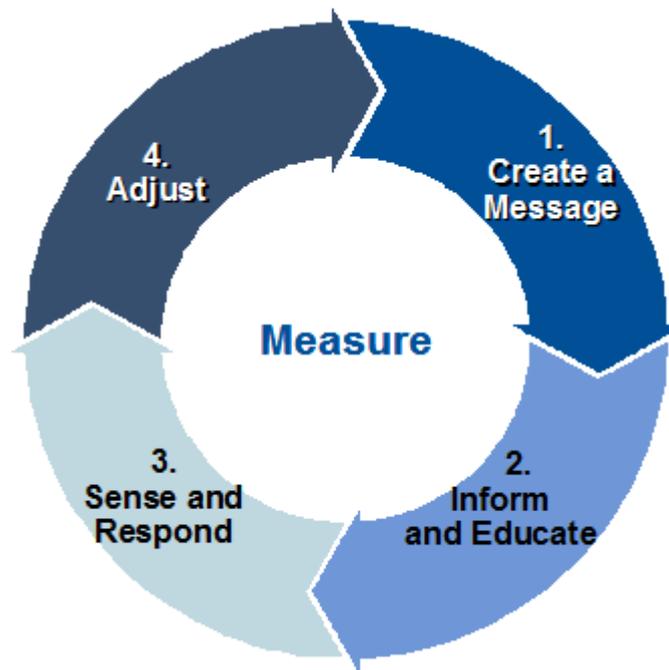


Figure 1. Framework of an Effective Communications Strategy

1. Create a message. The vision provides the context for delivering any communication. A communication can be good without a clear message; but a great communication links the IT message to business outcomes and reinforces how a person's actions directly contribute to those results. A great vision tells a story, using the language of the business, to engage the stakeholder audience to listen and act on the message.

2. Inform and educate. The process of informing and educating stakeholders is considered the "marketing roadshow" aspect of the DoS's job. This process brings the message to life in a way that addresses each type of stakeholder. A great communicator matches the depth and details of the message to specific stakeholders to facilitate learning in a way that is best suited to them.

3. Sense and respond. DoS does not intend to speak to others in a language that is foreign to them. Yet, at times, that is how DoS messages sound. A great communicator reads the audience to see how they are responding as the message is being delivered.

4. Adjust. The purpose of communicating is to help recipients internalize what is being said so they can then perform as requested. What people hear and how they internalize a message vary by stakeholder type. How people internalize a message is also influenced by their current level of understanding and experience relative to a particular topic and their culture and life experiences in general. A great communications strategy adjusts for changes along the way. The most powerful message is one that is backed by action — the communicator delivers what is promised, and the communications process is more apt to succeed.

5. Measure. Measurements are the glue that binds the process of communications. They provide a continual feedback loop throughout the communications cycle to assess effectiveness and opportunities for improvement. Great communications apply a combination of formal and informal methods to help ensure that the message has been effectively received. They also furnish communications with a guide for delivering future messages. Communicating successful results helps engage stakeholders and builds ongoing commitment to the vision.

"Determining the effectiveness of communications is both a matter of measuring what is working and noticing what is not. We conduct online surveys of the faculty and staff to determine the effectiveness of particular communications. Once a year, we conduct a ranking survey in which we ask people to rank how important something is to them and then how we did on it. This gives us an idea of where we need to improve." — Ronald Bonig, vice president and CIO, The George Washington University

**Improve Your Communications Strategy Through an Assessment**

Start by engaging your leadership team in a frank conversation about communications. Ask yourself the questions in Figure 2 to determine where you are. For any question to which you answered "No," discuss how to fill that gap, paying particular attention to questions 3, 4, 5 and 6.

	Question	Yes	No
1.	Do we recognize that effective communications can impact business results, and are we committed as an organization to improving our communications?		
2.	Does our organization have a strategy for communications, which is institutionalized across the organization?		
3.	Does our communications strategy emphasize the importance of developing clear messages, and does it have a process to ensure the messages developed are clear and appropriate to the communication?		
4.	Does our communications strategy recognize that communications are a fluid process, requiring ongoing interactions with people to help them internalize the message in order for us to achieve our objective?		
5.	Do we adjust our messages regularly in order to help people fully internalize what we are saying?		
6.	Do we measure the results of each communication in order to improve our communications process and the communications we are delivering?		
7.	Do we effectively communicate those messages that we need to, and can we substantiate this claim through either quantitative or qualitative information?		

Figure 2. A Communications Strategy Assessment

While this self-assessment is a valuable start, what is even more important is the dialogue you are beginning with your leadership team. Effective communication is a core leadership skill, and this initiates the process of developing that skill within your team. Seek to understand what is working relative to communications now and what is not. Ask open-ended questions such as:

- Where are we successful in our communication? How do we know?
- What has made us successful?
- Where are we not successful in our communications? How do we know?
- What did we do wrong?

### Develop Your Communication Skills

Communication is a core leadership competency, which balances speaking, listening and facilitating. In great leaders, these skills come together as they embark upon a journey to impart a message and engage an organization in a dialogue toward a higher purpose. Those sensitive to their audience use what they learn to alter their vision and their message and to engage others as required in the journey. Phenomenal orators are recognized for their exceptional delivery skills. One can have the best message but not the best delivery and still be great because the message is so compelling. Or one can have a less-than-compelling message and be great at delivery and still win approval — albeit with some skepticism. One can then take the opportunity to hone the message to become great over time. And, finally, there are the majority of individuals who are good communicators with moments of excellence. To increase your communications effectiveness, apply these best practices:

- Establish solid relationships within the enterprise. Don't wait for a crisis to begin communicating. Develop communications channels before you must use them. If you wait for a crisis to start communicating with a stakeholder group, there will be more questions about who you are and what you represent versus the content of the message you're trying to communicate.
- Adjust your communication style to the maturity level and culture of the organization. Understanding where the organization is today will help you chart the path to communications effectiveness. For a good result, the CEO should support the CIO in a leadership role and the lines of business should support the CIO in a business role.

- Adjust the level of message abstraction for the specific audience. At executive levels, a more strategic message is appropriate; at operational levels, a more tactical and concrete message will achieve better results.
- Adopt a fact-based approach to message construction. A message based on facts helps defuse emotion and encourages objectivity.
- Develop a ‘DoS story’ that brings the statistical vision to life. A relevant statistical story will help engage your stakeholders in a conversation and help them internalize messages.
- Develop your own communication style.
- Make it personal. Weave in personal stories and experiences to demonstrate business points, while making them more engaging and memorable. Further, communicating in a way that people can relate to will help gain their buy-in for the message.
- Invest the time upfront to prepare for every communication interaction to ensure greater success: practice, practice, practice.  
Spend time with your leadership team and assess the communication strengths within your organization by answering the following questions:
  - Who are our best communicators?
  - What do they do that is effective?
  - Where do we need to build communications skills on our team?
  - What formal and informal venues will we use to build those skills among the team?

Too often as leaders, we kill people's passions. Bosses kill the passion by saying, 'Stop doing it; you need to go this way; come and do this.' Whereas, perhaps a better approach is to guide people's passions. Don't stop them from working, but get them to work in the right direction. Let's stop killing people's passions and harness those passions instead." It pays to invest in effective communications.

## Effective Communications: Policies

### Key Findings

- DoS policies help create a consistent level of performance within DoS, and a consistent level of DoS performance contributes to DoS credibility.
- DoS policies are particularly valuable in decentralized or geographically dispersed organizations.
- Excessive proliferation of policies can suboptimize the performance of the organization.

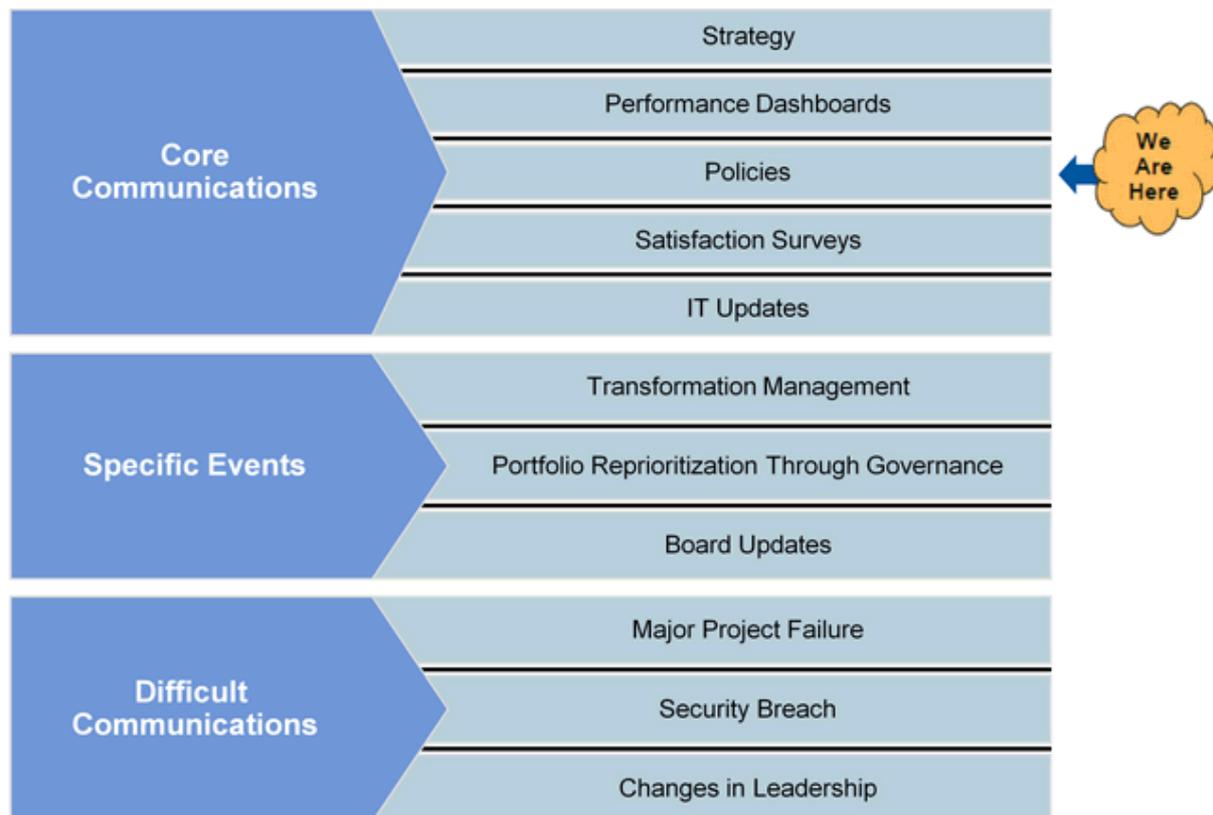
### Recommendations

- Create a standard template to communicate policies.
- Develop a communications plan to communicate new policies to the organization.
- Regularly inventory adopted policies to ensure they continue to be relevant to the organization.
- Have policy owners and users review policies at least annually to ensure they are clear about their responsibilities.

### Analysis

"Policy is the formalization of existing preferred behavior rather than the imposition of a technically preferred solution." (Christine Sexton, IT director, University of Sheffield)

Policies are codified courses or principles of action adopted by an enterprise to ensure that its affairs are appropriately and prudently conducted. They offer both a consistency of operation and, because most policies have longer lives than corporate planning cycles or disruptions, a measure of stability during change. Although many topics could be defined by policies, the focus should be on defining policies where there is significant business value from having a common approach within and across the enterprise. Policies must evolve as required to ensure that the DoS organization grows with and effectively addresses changing business needs. Keep in mind that policies establish the principles of conduct, while procedures define the methods of conducting business or accomplishing a task within the policy guidelines. Policy communications are part of the set of core communications to define and maintain DoS and IT operational effectiveness and efficiency.



The set of DoS policies, or policy framework, is used to define DoS actions in a consistent manner. It is a foundational tool in helping to build a strong DoS operational core. Mandating compliance to corporate or regional standards provides a context for local initiatives and value generation. A policy framework often encompasses the following important policies

- Sourcing policy
- Security policy (IT policies)
- Regulatory compliance

#### Quality

- Operational activities
- Contractor/employee policy, including remote working
- Procurement
- Use of electronic communications (IT policies)
- The workstation and client device environment (IT policies)
- Use of personal devices in the workplace that are connected to the enterprise's systems (IT policies)

#### Components of Policies

DoS policies establish the principles by which the doS strategy is to be carried out. The key components of an DoS policy include the following:

- **Title:** Develop a consistent method for naming policies to make them easier to search for and catalog. Names should be relatively short and specific.
- **Reference number:** A reference number or code may be added to assist with filing and identification. Follow a standard number coding if the enterprise uses one.
- **Description:** Describe the policy; include new process views if appropriate, and discuss exception processes. Clearly state the objective of the policy (for example, to ensure that the email system is secure from unauthorized access), and briefly explain the overall intent.
- **Why:** What are the objectives of this policy? What are its benefits? What results will the organization achieve from its implementation?
- **Who is impacted:** List all groups of individuals impacted by the policy.
- **When to use:** Highlight when the policy is to be used.

- **Background material and references to other documents:** References to other material that is essential to understanding the policy can be included here. It is important to ensure that these references are kept up to date, particularly when the policy is on an intranet and the references are hyperlinks that may change. It is wise to avoid putting too much background material into the policy document itself. That creates problems with updating and blurs the focus of the main policy statement. A common error is including material justifying the policy or seeking to support the authority of those issuing the policy. These things are important but have no place in the policy document itself.
- **Policy owner:** This is the job title, name and contact details of the person responsible for the implementation and enforcement of the policy. Make sure to update this when people change roles or leave the enterprise. Ownership can also reside with a particular role in the organization — for example, service desk manager. If roles are used, ensure that policy users can easily determine who is performing that specific role.
- **Date:** Provide the last update and a history of the changes made.
- **How to suggest changes:** Build in a feedback mechanism for ongoing clarification and improvements.

**Communications Plan for IT Policies**

The communications plan is designed to support the delivery of a new policy to impacted audiences. In the figure, the communication plan components are introduced.

Communications Plan								
Communication Type	Purpose	Communicator	Stakeholders	Messages	Delivery Method	Delivery Frequency	Feedback	Measures of Success

Figure2: Component of a communication plan

Consider the following communications plan components in announcing new policies or changes to existing policies:

- **Communication Type:** DoS policies.
- **Purpose:** DoS policies help create consistent action within the DoS organization. They provide a framework for daily decision making that enables the organization to continually deliver to excellent standards. To achieve these goals, those impacted by the policies must have a clear understanding of what they are supposed to do relative to each policy.
- **Communicator:** The announcement of policies can be made via email to all employees. Policies can also be announced and stored within the project management office (PMO). The most important policies should be reinforced during updates, by either the General Director, or the Departmental Director who owns the policy or the CIO
- **Stakeholders:** Stakeholder targets should include IT personnel who will be impacted by the policies and the IT organization overall in order to inform all involved about changes impacting end users relative to service-level agreements.
- **Messages:** Present a clear definition of the policy — who will use it, when and where it applies, and how results will be measured. This will help to establish consistent performance boundaries and lead to improved operational performance. Helping people understand why the procedural changes are being made and explaining any related exceptions are critical to enabling great performance. Ongoing monitoring of the policy is key to ensuring it is consistently followed and still meets business needs.
- **Delivery method:** Policies can be delivered for example via email. Push out changes via DoS update meetings and summaries to reinforce their importance and ensure that those impacted are hearing the same message. Also, consider posting policy changes in a common location so the entire IT organization can access them.

- **Delivery frequency:** DoS policies are time-sensitive and should be immediately communicated to those who will be impacted. They should also be reviewed on a regular basis by impacted department members to ensure they are continually reminded of their responsibilities. Wherever possible, build the review of DoS policies into DoS processes to create "just in time" application of relevant policies. For example, prior to implementing a change to the network, have network administrators review relevant policies.

- **Feedback:** During the development of policies, solicit feedback from a core group of individuals who will be impacted by them. Include the people you are developing to become future leaders; this is an opportunity for them to demonstrate their leadership skills and thought processes. Consider rolling out a draft version to all impacted for review and input, as well as auditing where appropriate.

- **Measures of success:** Over time, the consistent rhythm and style of delivering policies can improve the ability of the DoS organization to incorporate changes because personnel know what to do and when. Organizational performance should therefore improve as measured in the performance dashboards.

### Nuances of Communicating Policies

As with any communication, do not waste the audience's time — be direct, concise and clear. For policy communications, it is important to emphasize:

- The policy framework.
- Individual responsibilities.
- A method for simply and easily providing feedback.

In crafting your policy communications, keep the following in mind:

- Be explicit about who should take what actions.
- Be clear about what people should not do as a result of the policy.
- Keep the document short — use appendixes for detailed material.
- Avoid information that is time-sensitive or that will quickly go out of date.
- Avoid the passive voice; use active verbs instead.

### Communication in Action for Policies

One of the most common client issue encountered when discussing policies is the proliferation of policies across the enterprise. Some organizations literally have hundreds of policies located across the organization with little to no ownership. When looked at more closely, many contain overlapping information and are out of date with current practices. To alleviate or avoid this issue, consider this process when developing policies:

- **Adopt a framework.** By adopting a framework for your organization, you can ensure the policies adopted remain relevant to the organization. Review the framework at least annually to ensure it remains relevant. Look across the framework for interrelationships between policies and develop the fewest number of policies required to support the organization.

- **Less is more.** Rather than developing a policy for every incident or every form of technology, develop technology-neutral policies that cover the issue that needs to be addressed. For example, rather than writing a social media security policy, create a communications security policy that discusses all forms of employee communications. This approach will help ensure you are thinking at the appropriate level on behalf of the enterprise, and will greatly reduce the number of policies you create.

- **Do not confuse governance with management.** Ask yourself: Is a policy needed here, or do the supporting IT processes need to be improved? Often, there is a tendency to "overgovern" and "undermanage." Try to focus on "better management" instead.

- **Inventory your policies.** As with any other asset, inventory policies on an annual basis to ensure they are relevant and useful. Have employees review them at least annually to ensure they are aware of their responsibilities and expectations.

Policies are important to the success of the IT organization: They create a consistent level of IT delivery. Adopt a method that fits within your culture to achieve this goal. In organizations with well-defined roles and responsibilities and a consistent culture, often fewer policies are required to achieve the desired levels of performance because IT processes are clear and well-defined. Adapt your approach and rigor to your culture and level of process maturity.

## Effective Communications: Stakeholder Analysis (IT oriented)

This document will address the question: How do I understand my audience in order to develop effective messages for each of my stakeholder groups?

### Key Findings

- Communications that consider the specific needs of its stakeholders are considerably more effective than communications that do not.
- IT leaders can move from order takers to strategic partners by becoming more of an influencer with their key stakeholders and by understanding the influence the key stakeholders have in IT decisions.
- Great communication involves delivering the right type of communication and right amount of information to the right people at the right time, using a method that works for them.

### Recommendations

- Understand the people and groups of people you are talking to by performing a stakeholder analysis.
- Develop messages that consider the specific and unique needs of your stakeholder groups.
- Communicate with stakeholders in their language to increase your communication effectiveness. Adjust messages and refine your vision as required to continuously engage stakeholders in your mission.

### Analysis

**Stakeholder:** A person or group that has an investment, share or interest in something.

A stakeholder is an individual or a group of people who have a vested interest in what you have to say. For DoS stakeholders are individuals (citizens, journalists, investors, policy makers, ecc) and institutions who are interested in statistical data.

Based on the type of communication you want to deliver, it is critical to identify those people who care, or should care, about your message and to craft a message just for them.

A communications strategy provides the overall framework for communication, and a communications plan brings the strategy to life by addressing the specific components for each communication. The foundation of the communications plan, however, is understanding the people who have a stake in what you say.

### Know and Understand Your Stakeholders

Identifying who your communications stakeholders are is one of the key components of a communications plan.

Communications Plan							
Communication Type	Purpose	Communicator	Stakeholders	Messages	Delivery Method	Feedback	Measures of Success
IT strategy	The purpose of the IT strategy is to communicate the value of IT in business terms and to discuss the actions and plans of IT over the next XX months	CIO	<ul style="list-style-type: none"> <li>• Board of directors</li> <li>• Business executives</li> <li>• IT organization</li> </ul>	<ul style="list-style-type: none"> <li>• The IT strategy reflects the business direction</li> <li>• The IT strategy enables the enterprise to accomplish its vision in a unique way</li> <li>• Etc.</li> </ul>	<ul style="list-style-type: none"> <li>• In person: board of directors and business executives</li> <li>• Supported by a PowerPoint presentation: the IT organization</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative feedback from the board of directors and business executives</li> <li>• Online survey for the IT organization</li> </ul>	<ul style="list-style-type: none"> <li>• Extent to which people can articulate what they will be doing for the company</li> <li>• Etc.</li> </ul>

Figure 1. Example of a Communications Plan

CIOs and IT executives are in a unique role, because the business of IT impacts every area of the enterprise, from shareholders in the enterprise to the executive levels of management to the frontline employees. Technology — whether they know it or not — touches them all.

The challenge becomes focusing the effort of communication to create the highest level of impact possible. If one were to communicate every little thing about technology to every single stakeholder

touched by technology, well, each communication wouldn't have much impact at all. Instead, the challenge is about understanding the impact that technology has on the individual or groups of individuals and tailoring a message to that person or group that they need to hear. In fact, the business of technology is tricky, particularly as it relates to communication. Even though technology pervades every level of our lives, it still remains a "black box" mystery at the detailed level. To talk to a CEO about server virtualization or the complexities of designing a network is futile; talking, instead, about how actions within the department are going to save money, help grow the enterprise faster or attract more customers to the enterprise is far more compelling.

So, the critical first step is to understand to whom you are talking and to understand why they want to know or need to hear what you are going to say.

Identify the stakeholders in technology communication by listing all of the groups of people within the enterprise. Examples include:

- Board of directors, including the CEO
- Executive team — those who report directly to the CEO
- Business unit leaders
- IT leaders
- End users
- IT staff
- Vendors

While these are common examples, other stakeholders that CIOs are increasingly thinking about include customers and the media.

Communication is a leadership competency, and your role as chief leader of the IT organization is to continuously build the leadership skill within your organization, so engage your staff in this process.

Develop the list of stakeholders that you have, and facilitate a frank and open conversation, using the series of questions in figure below.

Questions for Stakeholder Groups (e.g. , the Board of Directors or Executive Team)		
1.	Why is this group a stakeholder in IT communications?	
2.	What is this group's role? For example, executive, customer, leader or staff.	
3.	What is its level of knowledge, as a group, about technology?	
4.	To what extent does this group have power or influence over technology decisions and actions?	
5.	What does this group need to know about IT to effectively perform its role within the enterprise?	
6.	What does this group say it wants to know about IT?	
7.	Where are the opportunities for technology to create advantage within its area of responsibility?	
8.	If this group was rating the IT organization today, would it be a supporter? An antagonist? Neutral? Why?	
9.	What will it take to make this group a supporter of IT?	
Questions for Individual Stakeholders		
1.	What is this person's perspective about technology?	
2.	If this person was rating the IT organization today, would he or she be a supporter? Antagonist? Why?	
3.	What is this person's role within the enterprise? What level of influence does he or she have over technology decisions and actions?	
4.	What is this person's communication style? How does he or she tend to like to see or hear information received?	
5.	Who in the IT organization has a relationship with this person?	
6.	Who in the IT organization should have primary responsibility for this relationship?	

Figure 2. Stakeholder Questions

Now that you have a better understanding of each stakeholder group and stakeholder individual within the enterprise, map each to the types of communications you plan to use within the enterprise. For each of the communications you identified for your enterprise, map the stakeholders to each type of communication in the portfolio (see the example in Figure 3).

Communications Plan							
Communication Type	Purpose	Communicator	Stakeholders	Messages	Delivery Method	Feedback	Measures of Success
Strategy	The purpose of the IT strategy is to communicate the value of IT in business terms and to discuss the actions and plans of IT over the next XX months	CIO	Board of directors Executive leadership IT leadership IT staff				
Performance dashboards			Executive leadership IT leadership IT staff				
Policies			IT leadership IT staff				
Satisfaction surveys			Executive leadership End users				
Etc.							

Figure 3. Map Stakeholders to Communication Types in the Communications Plan

### Improve Effectiveness by Developing Meaningful Messages

"Communicating is about getting agreement on what the direction and priorities for IS are, and ensuring that we understand what the key issues and needs in the business are. By accurately understanding these, we avoid confusion." — Owen McCall, CIO, The Warehouse Group

If there was a single way to impart a message, we would all be excellent communicators, yet the amorphous nature of communication makes developing a meaningful message such a challenge.

What works one day with one person may not work another day with another person.

To improve your effectiveness, begin by understanding stakeholders and their concerns. Look at things from their perspective by using the work you did in Figure 1.

Now, think about the message you want to convey, and weave a story, keeping these questions in mind:

- Why do they care?
- Why should they care if they don't care?
- What is the benefit to them?
- What is the challenge you need them to engage in?
- What is the expected outcome of the message?

As discussed before, the framework for communications is an ongoing process of creating messages, informing and educating stakeholders, and sensing and responding to how the messages are being received in order to adjust those messages to achieve success.

Effective messaging varies by industry, enterprise, stakeholder group and individual. What follows are best practices and key themes to keep in mind when constructing a message.

- Top IT leaders live and breathe the business and actually get to know critical customers or view IT through the eyes of the enterprise's customers.
- Rather than speaking in technology terms, talk in terms of business value and business benefits.
- Customize how messages are presented, based on the role and needs of the stakeholder group or individual. Work to ensure that the IT organization is delivering a consistent message. Update the messages being delivered as changes occur.
- Engage the enterprise in communications by staying engaged. Help stakeholders internalize key messages by working with them regularly to achieve the required level of internalization. While

talking is one aspect of effective communications, listening is the second aspect. Use listening skills to sense and respond to changes and needs in the enterprise.

- Segment stakeholders into groups, and develop messages for each group.
- Develop the points that need to be made, and create a story that brings the points to life.

Communication is a two-way street, requiring the ability to deliver an effective message and to listen carefully to feedback from the recipient. Great communication involves delivering the right type of communication and right amount of information to the right people at the right time, using the right method. Communicating with stakeholders in their language enables CIOs to continually monitor their effectiveness so they can adjust the messages and refine their vision. Determining when to communicate to an individual versus a group can be tricky. Some general rules can help:

- Deliver a sensitive message personally to engage the individual in a frank discussion about the issue.
- Communicate personally at the executive level. Even when preparing for an executive governance board meeting where all will be present, select a few key board members to whom you can present the ideas in advance.
- Communicate to groups when the message is a consistent communication that all in attendance need to hear. Questions raised and answered during the group meeting will help the entire group to understand and act on the message. Examples include policy or process changes and operational issues.
- Use enterprise supporters to influence other stakeholders to help engage more people across the enterprise in your purpose.

During the stakeholder analysis, you were asked to consider the influence that various stakeholders and stakeholder groups have on technology and technology decisions. It is very important to use influencers in the communications process.

The first step is to re-examine the purpose behind each of the communication types that have been identified for the enterprise.

The second step is to align each of your stakeholders and stakeholder groups to common purposes. For example, the board of directors and executive management are likely to be aligned to a communication whose purpose is to discuss the direction of technology.

Next is to identify those supporters of the messages you want and need to communicate and the relationships your stakeholders have with one another.

By leveraging the influence that various stakeholders have, you are:

- Further internalizing their appreciation of the messages you want to deliver
- Engaging more of the organization in your cause
- Building more support

People engage with people they know, people they like and people they respect. Get to know your peers in your organization and let them get to know you. Approach communication in a fact-based manner with the same integrity that you approach your life, and credibility will be established and improved with every interaction you have.

## Annex 4.

### Best Practices for Driving Business Value Through Usability and User Experience

Usability affects how customers perceive and respond to products, services and artifacts of all types, including websites and applications.

#### Key Challenges

- Organizations too often associate usability and user experience (UX) work as a nice-to-have aesthetic rather than an important business value generator. As a result, poor usability undermines business results with external and internal stakeholders.
- Internal usability improvements are often put on the back burner because a clear ROI investment is considered, incorrectly, as impossible to discern.
- All too often, projects are initiated with technology selection, rather than deferring this decision until significant progress has been made in areas such as defining a business value framework, user scenarios, design patterns, user market segmentation, personas and validation scenarios.

#### Recommendations

- Define business-relevant metrics for specific interaction scenarios in your application.
- Deliver a good UX through the systematic application of design patterns, and through a process that validates the design at every stage.
- Assess the quality of the UX of established application portfolios through metrics driven by empirical data. Iteratively refine the metrics, the process and the resulting artifact.
- Strive for a great UX by realizing that design is not just about adding features, but also is about their carefully considered removal.
- Avoid the most common mistake of selecting technology at the start of a project, rather than later in the process.

#### Introduction

Many organizations do not see the business value of a good UX. For those that recognize the UX as a valuable competitive differentiator, it often is not clear what the driving factors behind a good experience are or how to consistently arrive at that goal. Some view a good UX, such as the one found with the Apple iPhone or Google Maps, as the result of creative inspiration beyond the reach of the average designer or developer. Clearly, the spark of innovation separates the great experiences from the good, but good experiences are achievable through systematic application of design principles and a user-centered design process. The first steps are to understand what a UX is and then recognize the business value it can provide.

#### Analysis

##### Connect UX Work to Business Value Metrics

A UX is often confused with a visual experience and, consequently, with the visual design and layout of things like web pages or mobile apps. Clearly, these are all related concepts, but they are far from synonymous. Nevertheless, these experiences can blur in people's perceptions and discussions. A common inquiry is often phrased as: "Users complain that our website is hard to use. What design firms can make a better-looking site?" Or, they say: "Our CEO thinks our employee portal looks ugly. What do other organizations use as a user interface (UI) style?" These inquiries blend concerns and issues that should be kept distinct:

- The visual design and layout of the site
- The usability of the site when people try to accomplish tasks
- The overall UX
- The brand experience

Some common misconceptions are:

- Adding animation and other kinds of client-side technology improves the UX.
- The "prettier" the UI, the easier it is to use.
- It is better to have a UI with lots of dynamic menus, animation, multimedia, rich graphics and other visual effects, even if it slows down the page-load time and decreases the responsiveness of the interface.

In reality, obsessing over a visual experience can result in unnecessary development work that negatively impacts usability, UX, brand experience and overall business value.

Usability is a factor in how people relate to things they use every day, such as a car, a kitchen utensil or a piece of software. Usability results from good design, and design is being seen by more and more organizations as a source of competitive advantage and improved productivity. Usability is about fit and finish, or how well the item matches with who users are and what they are doing. Usability is related to, but not a substitute for, the fit to business requirements. Usability enables the fulfillment of business requirements by determining whether and how people use and adopt systems and applications.

The benefits of good usability affect business value by:

#### Increasing revenue

- More reputation
- Easiness to find data

#### Reducing costs

- More-efficient collaboration among colleagues
- More-efficient server use

Many organizations are understanding that the usability has a direct impact on the “core business” through:

- Increased customer satisfaction
- Direct brand value
- Positive word of mouth

Sometimes users have no dreams of a great UX, but would be satisfied simply with interfaces that are less painful to use. Enterprises that see the need for employee satisfaction and retention, and for enhanced productivity and collaboration among staff, are considering new UI technologies.

A better UX is not necessarily a worthwhile goal by itself. In fact, many organizations aspire to create better UXs, but feel stymied by the lack of direct quantifiable paybacks. As pointed out, these exist in many circumstances, but not all. Where they are less clear, UX initiatives should be tied to the organization's overall mission and goals. An enterprise should seek to elicit high-value user behavior, whether financial or nonfinancial. Examples of high-value behavior include:

- Completing a transaction (resulting in increased customer satisfaction, for example, when a user searches data and finds it quickly).
- Behavior that is measured with a nonfinancial value metric (for example, a political site seeking to influence opinion). In all cases, the general goal is to have users go from Point A to Point B. Point A is the place where the user enters the website (there can be multiple entry points or landing pages) and Point B is a high-value destination within the site (there can be multiple targets of different types).

All UX work must be tied to clear business metrics, or connected behaviors. Yet, without a full understanding of the strengths and weaknesses of these technologies, and without an awareness of the importance of usability-centered design, these initiatives have a significant risk of failure.

### **Commit to the Top 10 UX Design Best Practices**

All organizations should evolve a process that can recognize the top 10 UX mistakes and adapt appropriately to keep them from recurring. Good design can result from a systematic application of principles and consistent adherence to a process. Great design is possible by ensuring that you have the following ingredients:

1. Comprehensive research on users, needs and behaviors to define high-priority usage scenarios. It should be noted that focus groups, while they have their place, are not as effective as structured observation of human behavior. Observation, rather than solicitation, is almost a UX best practice in its own right.
2. Human-factor principles are deeply understood and appropriately applied.
3. Cohesive usage scenarios tied to organizational business value, not just user requirements.
4. Innovative rethinking of familiar concepts and approaches to redefine the product category.
5. Well-chosen design vocabulary to create solutions and rapidly iterate toward an optimal solution.
6. Validation of creative ideas via systematic usability testing and other mechanisms driven by objective data from users.
7. Limit "feature bloat" by ruthless pruning to sustain a core concept.

8. Overcome development difficulty because, although good design is invisible, achieving invisible ease-of-use can require a sophisticated technology foundation.
9. High performance, including speed, is a key factor affecting usability and high-performance results more from a broad architecture than from narrow-scope optimization.
10. Test, test, test — repeatedly.

This practice increases the odds of delivering a cohesive, compelling solution that satisfies users, while maximizing the business value of your website and any software initiative

But a key enabler in achieving these best practices is having a talented team. That does not happen accidentally, but must be built through constant, concerted recruitment efforts. For many organizations, establishing such teams — particularly within an IT organization — can be challenging, if not impossible. In such cases, IT organizations should partner with specialist design organizations. These best practices can form the basis upon which organizations can be assessed prior to any engagement.

## Top 10 Mistakes in Web and User Experience Design Projects

Often, projects fail — not because of one glaring error that everyone is aware of, but because of an aggregation of smaller, less-obvious design mistakes that, in combination, prove fatal.

### Short analysis

- Despite the maturity of web tools and platforms, many web development projects fail to achieve their goals.
- The root cause of many failures is lack of a value-driven, user-centered design process based on objective data about user behavior.
- Symptoms of root causes can have multiple manifestations, from premature technology selection to lack of validation with actual users.

### Recommendations

- Before investing in technology, invest in a design process grounded in empirical data.
- Strive for a process of continuous improvement focused on core scenarios tied to organization value.

### Analysis

An apparent paradox lies in the maturity of web versus the still-numerous failures in web and user experience design projects. Although the Web is almost 20 years old, many enterprises make mistakes in designing and building websites and applications. It is not an issue of lack of technical skill. Organizations have staff that can code HTML, design attractive graphics, and do server-side programming. Development tools and platforms are mature, reliable, and secure. But, too often, what gets built with these tools falls short of meeting user needs and organizational goals due to a lack of user-centric design discipline. These are often silent failures. Gartner has written about the "Teflon portal", the dynamic website that looks good at first glance, but is not "sticky". The project deliverable is on time, on budget, visually attractive, fulfills all the functional requirements in the voluminous documentation, and has adequate performance, reliability and security. Viewed from a distance, the project appears a success. Users, on first visit, express benignly positive statements, such as, "I am glad our company has a modern, attractive website". However, user behaviors tell a different story: They do not stick around, and few return. Often, senior management is unaware of the failure, because no metrics have been defined, no baseline measurements have been taken of the old system, and no comparison is available to measure user engagement with the new system. However, if the organization invested a significant sum and users don't return, then the project fails to gain necessary return on investment (ROI).

How does this happen? The root cause is lack of a value-driven, user-centered design process that builds on proven interaction patterns validated by objective data about user behaviors. In addition to the root cause, Gartner has identified 10 common, specific mistakes.

### Starting a Project by Selecting Technology

A common mistake is to begin with technology selection, rather than defer this until progress has been made in defining a business strategy, a business value framework, user scenarios, design patterns, user market segmentation, personas, information architecture, validation scenarios, etc.

Many projects begin with a choice of technology, without the understanding of user needs, functional requirements and business strategy that would necessitate the use of this technology. Frequently, these decisions are developer-driven (internal teams want to work with the latest and greatest technology).

Sometimes some organization has not only decided to build an application with a particular technology, but have made that decision without having any staff in place with those skills. This is a sure failure.

#### **Failing to Get a Baseline Measure of the System Before It's Replaced**

Many organizations conclude that their current website or application is outdated, unfriendly, not competitive, and/or hard to maintain. These conclusions may well be justified, but are often arrived at through intuition, anecdotal evidence, or word-of-mouth complaints. These are valid data points, but insufficient in helping formulate a strategy that would lead to an effective replacement system. What is needed before throwing out an old system and replacing it with a new one is a detailed understanding of business goals, a defined set of user scenarios or workflows that are tied to business activities, and a systematic way of gathering objective data about user behaviors. Without a baseline measurement, the organization will find it difficult to know whether the replacement system is a genuine improvement over the original. The organization is flying blind, and has forgotten the maxim, "You cannot fix what you cannot measure".

#### **Assuming That Everyone Just Knows What's User-Friendly**

If users are complaining, then it's likely true that the system is not user-friendly — for every user who complains, there may be 10 who feel the same way and do not voice their opinions. However, this does little to lead the way to a system that is user-friendly. There are still too many designers and developers who think that adding gratuitous animation, cute icons, rounded corners on panels, or splash screens improve the usability of a system. What actually helps in designing a user-friendly system is systematic research into user needs (including segmentation into personas), definition of high-value use cases and user workflows, alignment of usage scenarios with proven interaction design patterns, validation of proposed design alternatives with usability testing, and post-launch analytics of user behavior.

#### **Believing Design Is Only About Adding Features, Not About Careful Pruning**

In the world of web applications and commercial software, there is often an unconscious acceptance of the view that "more is better," that more features mean a better, more complete design. Product managers strive not to lose a feature war with a competitor. By contrast, a wellknown statement from Michelangelo about his art is that an artist (sculptor) does not create a statue, as much as remove the excess stone from the block of marble in which the creation is imprisoned. Although competent designs and usable systems can be produced by simple aggregation of features, landmark designs such as the Apple iPod find success by reducing features to the set that delivers a cohesive, compelling user experience. Great designs rethink every common assumption — for example, "Is an on/off button really necessary"?

#### **Forgetting That, all Else Equal, Speed Wins**

Speed is often the most important factor in the visible user experience. This is especially true as consumers spend more time on mobile browsers suffering from unreliable network connections. History shows that a fast and visually plain design will almost always beat an overly decorated, heavy and slow competitor — as Yahoo proved when it competed against AltaVista in the early days of business-to-consumer (B2C) portals, and as Google later proved when it competed against Yahoo at the dawn of Web 2.0 era. The conventional wisdom is that usable designs stem from user interaction sequences that are based on principles of human factors research (i.e., how humans process information), as well as proven design patterns validated both in the lab and in production. There are many design principles and heuristics that expert designers apply to solving a design problem —

principles such as the Rule of Sevens (no more than seven items in a list of menu choices), providing immediate feedback, showing context to keep the user oriented (through "breadcrumb trails"), providing an undo function (to cultivate exploratory use and to reduce user anxiety about possible actions), etc.

These are all proven best practices. However, if there is one factor that contributes to usability more than any other it, is likely the raw speed of response. A fast system can compensate for many other shortcomings in usability. Users can attempt a sequence and back out if it leads in the wrong direction. A fast system can preserve the user's train of thought without requiring the full range of contextual cues and orientation. Obviously, it is better to be both fast and well-designed. But if one is forced to sacrifice one aspect of the design, many candidates are more dispensable than fast response. It is important to note that perceived speed can be more important than real speed — in the sense that slow response can be mitigated by techniques such as progress bars or activity status indicators.

### **Failing to Test With Actual Users in Actual Conditions**

The design process is one in which design alternatives pass through phases, which can be considered as a funnel or pipeline of completeness, from numerous low-fidelity sketches on paper to multiple comps built in Photoshop to a few HTML wireframes to one or two high-fidelity prototypes built with real server-side code. The cost of making design changes increases at each stage in the fidelity pipeline. All of this represents a best practice. Where some organizations err is in evaluating possible designs. Often, organizations do not validate with actual users, but instead with proxy users — product managers or business analysts who stand in for users, sometimes with accurate results, but other times not. In some cases, truly representative users are enlisted, but there is a failure to account for the real context of use. Instead, tests are conducted in pristine

laboratory conditions: the offices of the development team, with large screen displays, fast network conditions, quiet ambient sounds. But the target system may be deployed under very different conditions: a busy office with loud background noises, older hardware and slow network connections. If all else fails (in the sense of capturing feedback early in the pipeline), the fallback solution is to instrument the production system to gather analytical data from real users.

### **Failure to Iterate**

Although the limitations and shortcomings of the classic "waterfall" design process are now pretty well-known, many organizations still fall into the trap of this approach. This is often driven by an outsourcing relationship, because the waterfall phases align well with the life cycle of engagement with an outside web design and development firm: gather requirements, design the system, test and launch. Agile processes that require close communication and collaboration among all team members are difficult to carry out in a situation where people are split into internal staff and external consultants — each set fragmented by different individual backgrounds, corporate culture, skill sets, etc. Nevertheless, organizations should strive for a process of continuous improvement. Half the project budget should be saved for after the system launch, to sustain iterative refinement.

### **Designing a Closed Monolith, Rather Than an Open Vocabulary**

Organizations often try to design a complete, closed and final solution, rather than designing a powerful, extensible vocabulary in which multiple solutions can be expressed. Key design decisions are not always about the final result, but about arriving at a set of design elements that can be easily and flexibly assembled and recombined to create a set of related solutions that can be assessed, tweaked and improved upon over time. Ideally, the lexicon should be open and extensible, resulting in an "architecture of participation." To be sure, undertaking a process of "metadesign" is a difficult challenge, and can often only be approximated.

### **Ignoring Nonvisual Parts of the Design**

Many organizations view the task of building a website or application as solving a visual design problem, or, alternatively, at arriving at a "silver bullet" technology selection decision. Yet, the most critical success factors in a user experience design project often have little to do with visual design, per se. The importance of raw speed has already been mentioned. Also important in certain scenarios is advanced server-side processing that supports a radically simple front end (such as the Google home

page, which consists of a dozen words and a single text-entry box). An emerging factor in user experience design is the design of social experiences. These nonvisual aspects of user experience design will grow in importance over time.

**Accepting Political Compromises as Substitutes for Design Decisions**

Perhaps the most common design mistake on an organization's home page is yielding to demands from various corners of the organization for "real estate" on the page — modules, navigation menu items, etc. The company website then becomes a reflection of "squeaky wheel" priorities, and becomes detached from user needs. The larger the scale and scope of a project, the more diverse the collection of stakeholders, champions and perhaps those whose needs are overlooked. Sites usually cannot be successful unless they change how people interact or work. In these circumstances, political negotiation and compromise are essential to moving a project forward. Bending a design to meet a stakeholder's agenda cannot be avoided. Even so, it is a mistake to view this as design decision. Recognize it for what it is, a political necessity.

**Rethinking navigation by thinking at the role of search engine**

Usability can be simply defined as the ability of users to accomplish what they wish quickly and in an understandable way.

**Analysis**

Historically, the majority of web sites have been designed with an approach that assumes consumers will enter the sites via the virtual "front door" or the home page. This has allowed web-designers to project their sites in a relatively linear fashion that assumed consumers would follow a navigation path through the overall site, exposing the consumer to items in a serial/linear-logic way.

The figure below illustrates the logical paths that consumers would be offered if they entered a web site via its home page as a starting point.

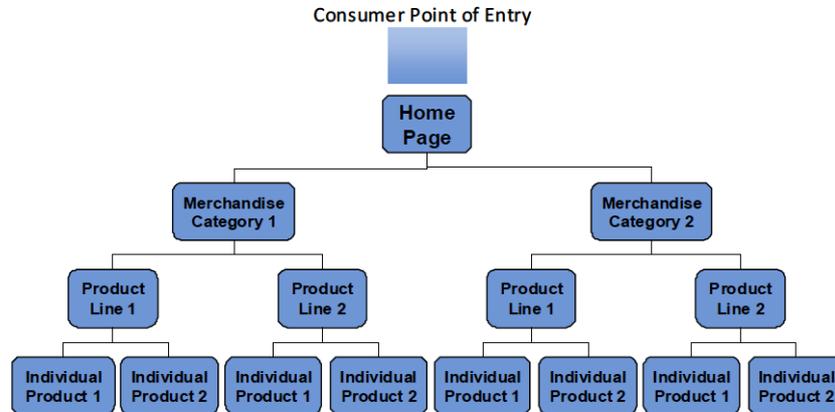


Figure 1. Logical path for consumers that enter a web site via its home page as a starting point

Nowadays, this navigation approach is no longer valid because most consumers no more enter through the front door, as intended.

Instead, users now navigate the web site through a special transporter that drops them into the middle of the site, hopefully near the information that they are looking for. This transporter is called the search engine, and these searches drive the majority of users to the web sites that offer the products they want.

While these linear layout assumptions serve the consumers that enter a site via the home page, the consumers that enter a Web site via another path are not well served.

In the example cited in Figure the consumer that enters the site at one of the individual product pages would find that at least five or more clicks may be required to get to the page that features the desired product.

Metrics from web hosting provider Akamai have consistently shown that most consumers will try as many as three clicks to get to the location on the web site that they were trying to locate. Anything more than three clicks to navigate to the page they want and consumers are likely to abandon the site and go elsewhere.

### The Impact of Search

Everyone is aware of the impact of search engines on Internet use. Many consumers actually set their home page to Google, because they believe it is the most logical place to begin web activity and it is the fastest way to locate data/information that they want. The fact that consumers are predominantly arriving at online sites from search engines, combined with the likelihood that most consumers are searching for specific products has significant implications for online navigation. The linear design that most sites have implemented under the assumption that consumers will enter the site via the home page is fundamentally flawed for consumers that enter the site at a specific product or category page.

In short, providers should assume that every page on their sites has the potential to be an initial landing page (or a home page) for consumers. This dictates a very different navigation design. As discussed earlier, consumers have limited patience when it comes to finding what they want on a web site as evidenced by the average limit of three clicks before abandoning the site. This would dictate that users need to be able to find any information in the same general category as the data they are searching for, within three clicks, no matter what page they arrive at the site.

Rather than the linear navigation scheme, consumers need to find a site that has clusters. The navigational structure might be conceived as shown in figure 2

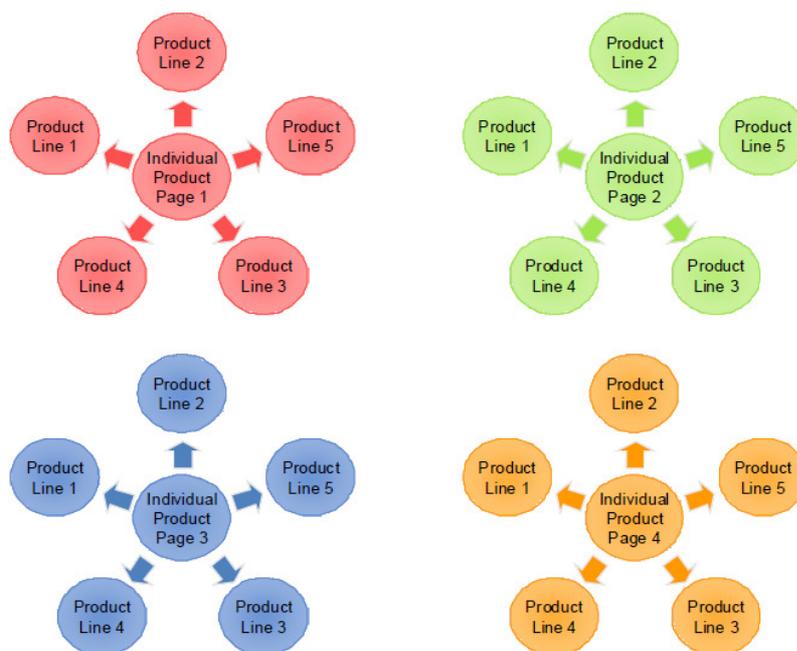


Figure 2. Web Site Cluster Navigational Structure

This navigational structure clusters individual data around similar data category lines, so that consumers can readily get from one specific product, such as 'census data', to a specific category of 'census data' without having to back up through the linear navigational tree, but only to navigate down another tree.

This navigational approach does not replace the linear navigation that the sites currently employ. Instead, this is another layer that the providers must add to enable users to easily find related information when they enter deep in the DoS site.

In other words, each page should be considered as a potential landing page that is potentially one click away from a data category landing page and two clicks away from the data that the user really wants.

To sum up

- The majority of consumers entering a web site are coming from a search engine site.

- Most consumers search for the information that they want to know via a search engine.
- These two factors mean that most consumers are entering web sites on a specific page.

### Recommendations

- It needs to rethink navigation and assume that most consumers will land on a specific page when entering their web sites. Search engines have changed the rules of web site navigation for retailers, and they need to add capabilities to their sites based on the assumption that user will enter a specific product page and will want to easily navigate to other closely related products without having to navigate through several pages just to find the desired data.
- It is important to think of every page as a home page for users entering their sites. Additionally, data providers should make it easy for users to discover the home page or other category pages easily from any individual product page on the site. This ensures that the DoS is less likely to lose the consumer that has entered the site via a search engine result.
- Data producers need to think of the pages in their web sites as a series of clusters that offer consumers the ability to get where they want to go within three clicks, no matter where they start.

## Improving website user experience with Data-Driven Design

Data-driven design uses data to inform decisions affecting user experience. Using analytics tools and defined metrics, together with controlled experiments with an A/B testing tool, web team leaders can improve their organizations' user experience efforts.

The A/B testing tool' goal to identify changes to web pages that increase or maximize an outcome of interest (e.g.,click-through rate for a banner advertisement).

### Key Challenges

- Creating a good user experience (UX) is an elusive pursuit for most IT organizations, even with sufficient investments and priority, primarily because individuals in the organization have different views of what constitutes a good UX.
- User experience decisions are frequently made on the basis of assumption, personal opinion and political considerations, leading to a continuous deterioration of user experience.
- Teams lack the ability to validate the results of decisions affecting user experience, creating false assumptions about UX quality and increasing the pace of deterioration.
- Lack of a feedback loop leads to changes being made without considering the consequences they will have on the user experience.

### Recommendations

- Establish a shared vision of success for the website, and start measuring a set of key performance indicators (KPIs) that support this vision.
- Conduct frequent experiments with an A/B testing tool to continuously improve the KPIs.
- Increase the pace and quality of improvements by increasing your Web team's autonomy in UX decisions.
- Start small by choosing one project, new or existing, as a pilot.

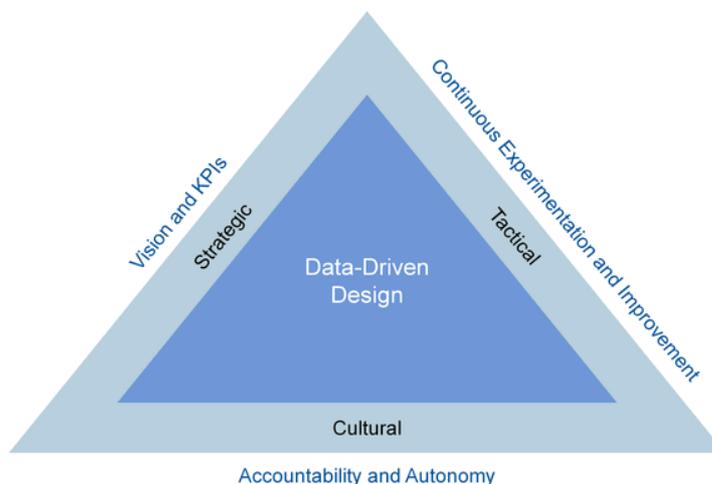
### Introduction

The ability to create a good UX remains an elusive pursuit for many IT organizations. This failure is most often seen in the customer-facing website. A surprising number of large organizations have fallen into a cycle of redesigning their websites every three to five years. After each big redesign, the website seems to enter a period of continuous deterioration, even when sufficient funds and staffing are devoted to upkeep and improvement. This deterioration continues until it becomes too embarrassing, and a new revolutionary redesign project is commissioned.

Some organizations, most notably Internet-centric companies like Amazon, Facebook, Google and Netflix, manage to avoid this revolution-deterioration cycle entirely. Using data to inform their UX decisions, these organizations are able to continuously improve their user experience. This approach is commonly called "data-driven design," or sometimes "evidence-based design," since it relies on evidence for decision support and it offers an alternative approach to IT organizations looking to improve their UX efforts. It can also be referred to as "intuition-driven design."

Organizations can adopt data-driven design as an alternative to the current state of cyclic revolutions and deterioration. With a data-driven approach, we eschew intuition and personal agendas, relying

instead on data collected from and about the behavior of users on the website to help make decisions. In addition to measuring performance, being data-driven also entails committing to continuously improving these metrics. Controlled experimentation, in the form of A/B and multivariate testing, allows Web teams to make frequent incremental changes and get continuous validation on their UX decisions. Lastly, the Web team must be organized in order to maximize the pace of experimentation. Instituting a data-driven approach requires a strategic shared direction, the tactical ability to experiment, and cultural changes (see figure below).



## Analysis

### Establish a vision and supporting KPIs

Only with a shared vision and the means to measure it can user experience decisions be validated. A good user experience is not a goal in and of itself, but a means to an end, to further business goals. The easiest and most reliable way to measure UX is to measure its effect, by measuring user actions on the website that affect business goals favorably.

The ultimate cause of the revolution-deterioration cycle is a wrong, or even lack of, direction. If the purpose of the website is not explicitly stated, individuals will assume a set of goals based on their experiences. The net effect being that individuals involved with the website will pull in different directions. They will make decisions based on private agendas, political considerations and intuition. Similarly, with explicit goals not aligning with the overall business goals, individuals will be torn between an overall strategy that says one thing and a Web strategy that says another. The resulting website will, in both cases, be as unfocused as the individuals creating and maintaining it, which means a suboptimal experience for the user.

Trying to fix the status quo, many enterprises explicitly make a good user experience the goal. While this is a clear signal of intent, it often fails to deliver any results other than a more aesthetically pleasing website. An increase in business value does not materialize.

The ultimate purpose of a website is to support the business — that is, the business has goals, which the website, in turn, should support. These goals should be expressed in a vision of the website. What does success look like? Only when the vision and goals are in place, do we have a shared understanding of what we are trying to accomplish. A vision for the website should include:

- The goal of the website should be aligned with the organization's strategy.
- It should state the purpose of the website's existence.
- It should not reinforce the status quo, but instead, focus on the future.
- It should determine a direction, but not dictate how to get there.

While a shared vision and goals are qualitative, a set of quantitative supporting KPIs must be selected. The KPIs are measures of success. Select KPIs that measure favorable user actions taken on the website. Any increase in the KPIs will then tell us that the business value of the website is increasing and that we are getting closer to the vision:

- KPIs should be as specific to the website as possible — an increase in the KPI should be largely attributable to changes made on the website.
- Keep the number of KPIs few and manageable — having too many leads to lack of direction and focus.
- Prioritize KPIs in order of importance — this provides guidance in decision making.
- Pick KPIs that have synergy between them — this helps to avoid situations where changes lead to mixed results, one improving and another impairing the UX.
- Review KPIs on a regular schedule in order to keep them appropriate and aligned with the business.

Examples of good KPIs include, but are not limited to:

- A corporate information website might measure visits to key pages, downloads of whitepapers, sign-ups for newsletters, submissions of job applications and/or traffic generated for other websites

Most organizations already have the means to gather these KPIs through their Web analytics tool. Some tools might require configuration to capture and show the selected KPIs. Consulting with specialists on Web analytics should be considered when selecting KPIs to support the vision, and configuring them in the Web analytics tool.

The important indicator of successful data-driven design is to see an increase in KPIs over time, regardless of the KPIs' initial values. In order to deliver an increase of KPIs, the Web team has to change the design, content and interaction elements on the website. These factors are all components of the user experience. Changing the user experience changes the performance of the website.

### **Conduct Frequent Controlled Experiments**

While having vision and a supporting set of KPIs will improve your website, more is needed to become truly data-driven. KPIs alone will only breed frustration, as the web team does not have a tool to validate decisions in isolation. Looking at a change in a KPI and attributing that back to a single website change is next to impossible. Data-driven web teams turn to A/B and multivariate-testing tools to help them validate changes and incrementally improve the user experience.

A/B testing works by showing two different variants of a web page to two different sets of users. By comparing a desired user action between the two variants, one variant can be declared more effective than the other. Statistical models are used by the A/B testing tools to ensure validity of the results.

Multivariate testing is an advanced version of A/B testing, where multiple changes to a page are tested at the same time. The changes are combined into all possible aggregates and shown to different sets of users. Statistical models are able to determine the best combination of changes in a much more effective way than A/B testing each change in isolation.

Typical experiments to run, using A/B or multivariate testing, are small changes. The placement, size, text or design of buttons, menus or navigation links are common, as are testing the order of elements in lists, and use of photos or textual content in headers and content. The majority of tests should be incremental optimizations and not big changes. A/B testing practitioners frequently report that even small changes can have big effects.

Both A/B and multivariate testing are used to validate changes — they are controlled experiments. In order to get maximum benefit from A/B and multivariate testing, an experiment has to be conducted correctly:

- The experiment has to be contained to as small a part of the site as possible. The ideal experiment is contained on one part of one page. This allows for multiple tests in parallel on different parts of the site.
- The experiment should be hypothesis-based. A hypothesis, in this instance, is a testable explanation of user behavior. Randomly changing colors, sizes and placement will lead to improvements, but will not be able to answer why the improvement happened. Only with a hypothesis will the team learn from each experiment, even the ones that fail.
- An experiment should have one desired outcome. A/B tests are not done against the overall KPIs of the website, but isolated to one desired outcome. In the interest of the above principle of containment, the desired outcome should be as close to the change as possible. The desired outcome can be as simple as clicks on a button or submission of a form.

Improvement to the overall KPIs will require multiple experiments that each improve an isolated step the user takes on the site.

Many enterprises have access to A/B testing as part of their web analytics tool, or to a limited degree through their web content management system. An enterprise getting serious about A/B testing should compare the tools they already have available against dedicated offerings. Example products include, but are not limited to: Adobe Target, Optimizely, Webtrends Optimize and Visual Website Optimizer. With A/B and multivariate testing, the web team is able to drive continuous improvement on the website through frequent controlled experiments. With the tools and processes in place, the organization and culture has to embrace the changes they bring.

### **Increase Team Autonomy**

Instituting a vision and supporting KPIs will make the web team more accountable. The quality of the user experience becomes transparent. If there is a lack of progress, it will be very visible. This increase in accountability has to be accompanied with an increase in decision autonomy, so the team can deliver on what they are held accountable for.

In order for teams to be effective, they need to be able to come up with hypotheses, decide on changes that will validate them and conduct the experiments as rapidly as possible. The number of experiments the team is able to conduct has a direct correlation with the amount of improvement the team is delivering. A higher pace of improvement will improve the KPIs of the website more rapidly — and in turn generate increased value.

This increased autonomy should be manifest in decisions about what to test, what variations to make and prioritization of tests. If the team is subjected to excessive bureaucracy and managerial oversight for every decision, they will not be able to create enough experiments and maintain sufficient pace. Worst case will be that the team cannot deliver sufficiently improved value on the website compared to the cost of the effort.

This iterative approach with an emphasis on pace has a lot in common with agile practices. Data-driven design practices are a good complement to agile practices

The mandate and composition of the team should be focused on autonomy and pace. With KPIs and constant user feedback on every change there should be less reason to restrict this autonomy, therefore:

- The team should be free to prioritize and operate autonomously, with little outside approval needed for UX decisions. This does not mean an absence of rules and guidelines, but rather an empowerment of the team to make decisions and involve the appropriate stakeholders when they deem necessary.
- The team needs to be able to design most of its tests without involving outside help. This requires that skills in copywriting, design, interaction and analytics are present on the team.
- Should there be outside disagreement on the tests conducted, there should be management support for resolving that after the experiment has run and data is available as to its effectiveness.

In order to get up and running quickly, it can be tempting for enterprises to contract resources in the form of consultants, freelancers or agencies. With this approach, the enterprise will not benefit from the continuous learning gained by conducting experiments because contracted team members will eventually be exchanged. To retain the knowledge generated, in-house resources are preferred for a majority of the team.

### **Start Small and Grow the Effort**

Data-driven design uses data to inform decisions affecting user experience. It requires KPIs derived from a shared vision of success, an A/B testing tool to make improvement incrementally through controlled experiments, and a team with the necessary support.

This approach is radically different from the way most enterprises currently maintain and evolve their websites. Getting away from the traditional revolution-evolution cycle as fast as possible can be tempting. A "big bang" approach is risky. A more appropriate approach will be to start small, by either selecting a new project or taking an existing website in need of improvement.

The existing customer-facing website is a good place to start — it is visible within the organization, improvements have business value, and there are probably already resources dedicated to maintenance. The following steps can be followed to transition this or other existing websites:

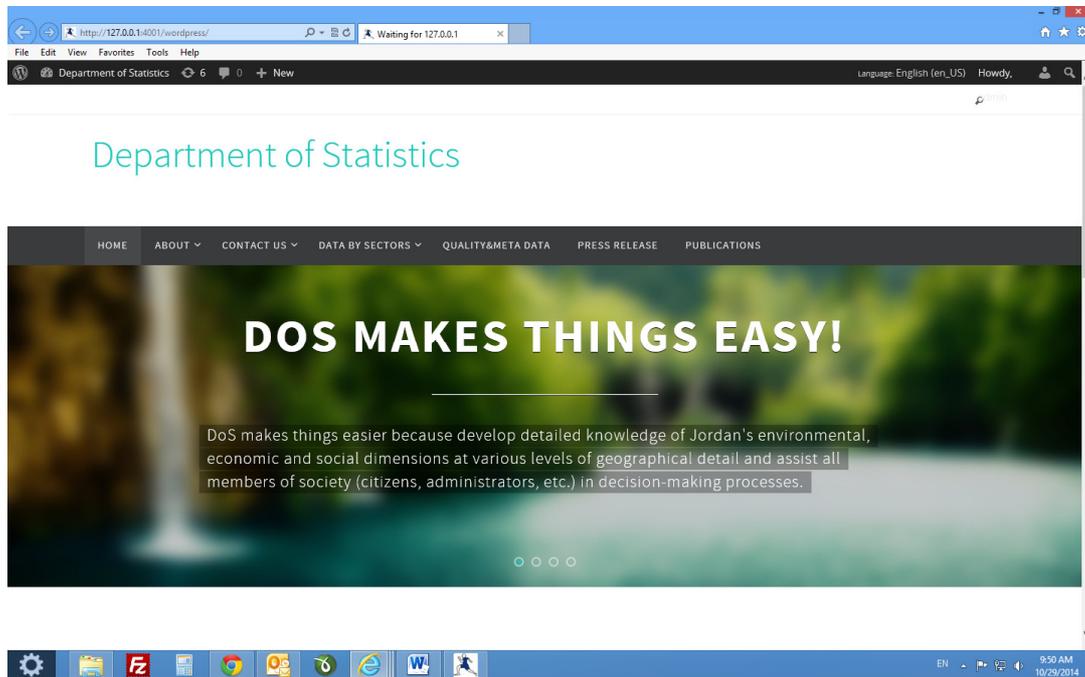
1. Retrofit a vision for the website — make the current implicit vision explicit.
2. Create KPIs that align with the vision and start tracking them in the current web analytics tool.
3. Use an existing, or install a new, A/B testing tool.
4. Create a team from the existing resources dedicated to the maintenance of the website.

Data-driven design's inherent ability to measure its own success should then be used to create an internal pilot. With this pilot in hand, the effort can be replicated across suitable projects in an organic manner.

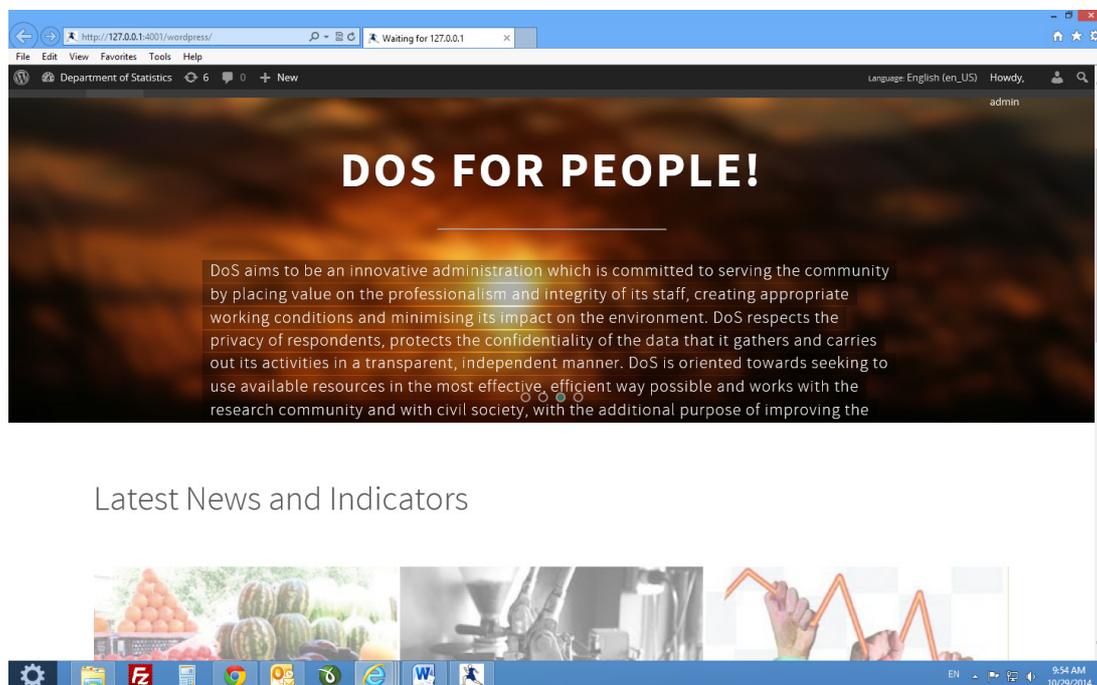
## Annex 5.

### Presentation of the new DoS website

#### Home page

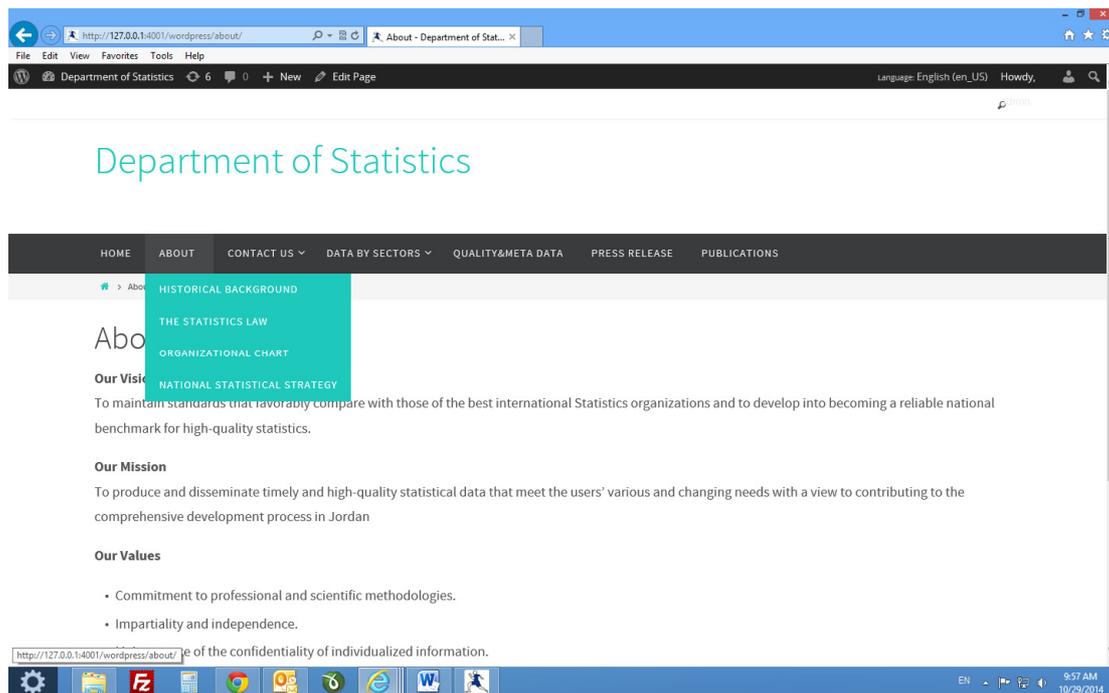


At the top of the page there are 4 statements in a slide show that represent the DoS approach at statistics. A horizontal tool bar allows the navigation.



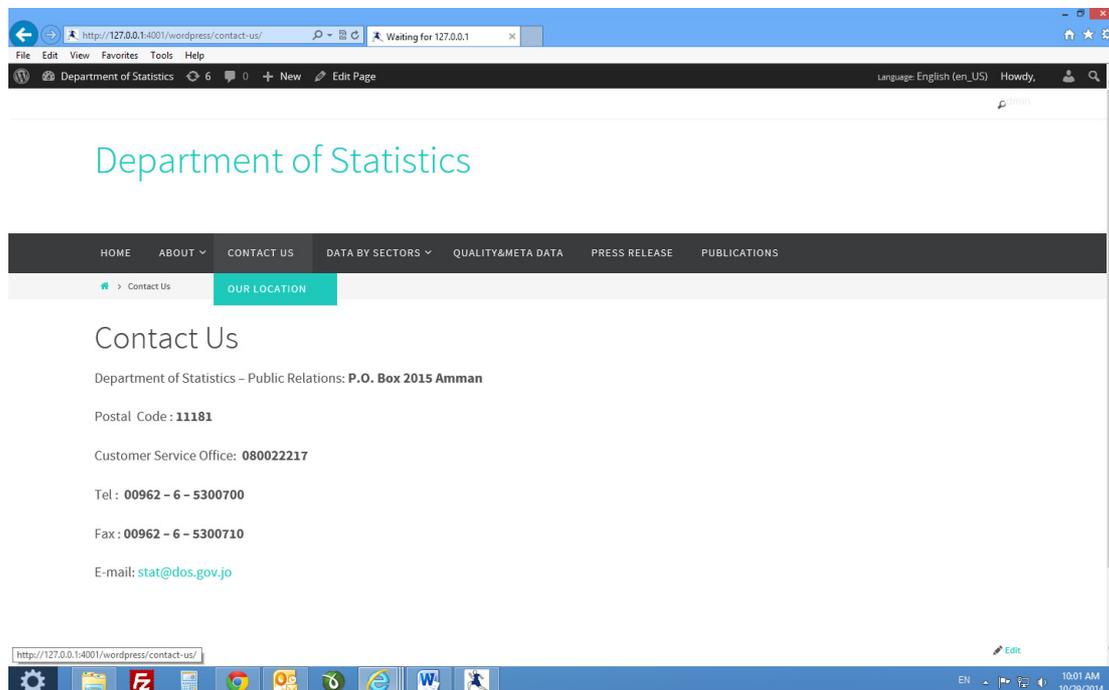
The body page is characterized by the latest news and information. In each page at the right top it is put a search engine box.

## About section

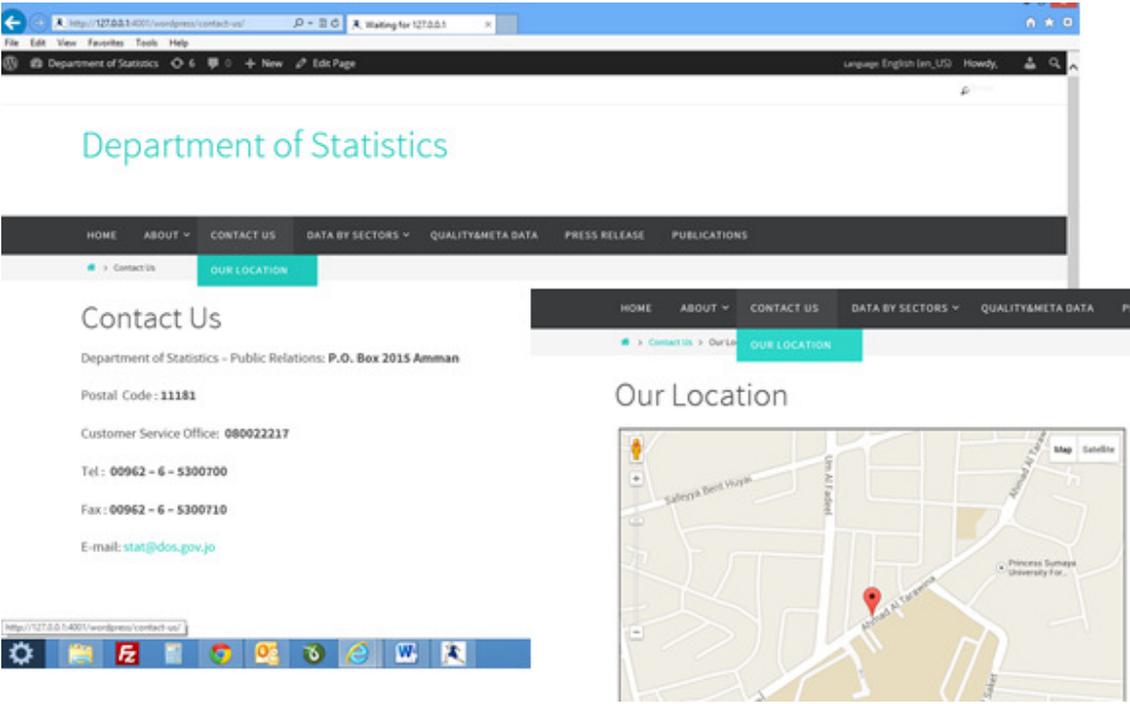


In this page DoS vision, mission and values are represented. A menu is available to get information on DoS historical background, statistical law, organizational chart, national statistics strategy.

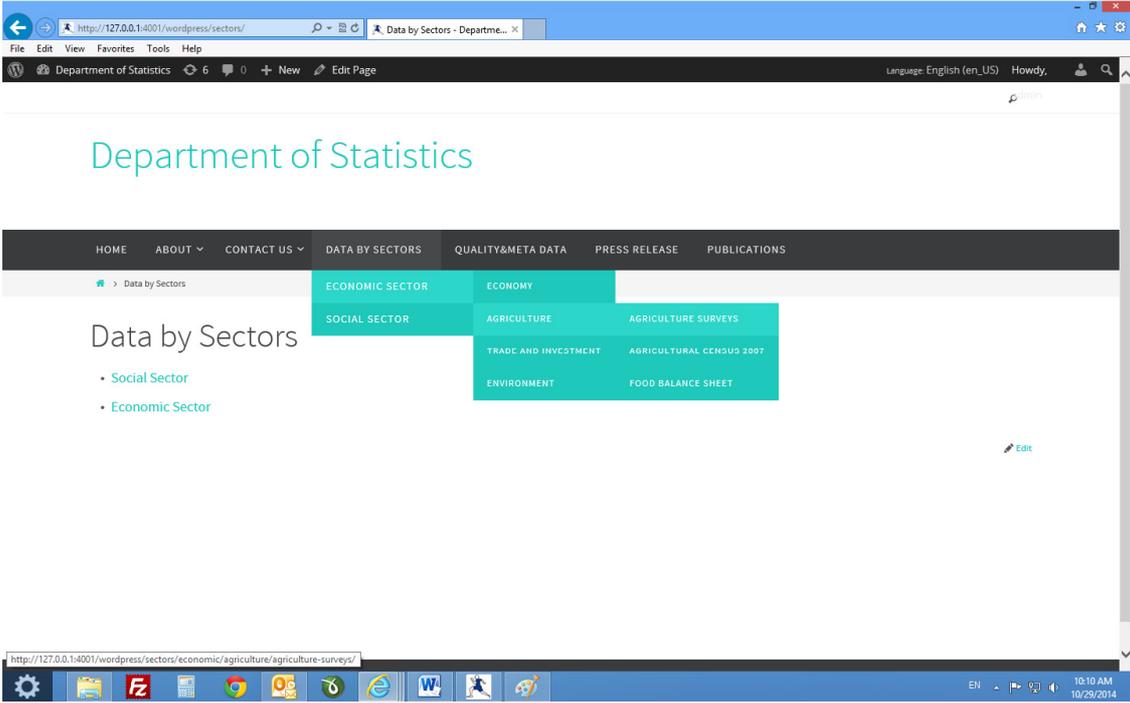
## Contact us



All DoS contacts are shown, also with the Google map indications, in the section 'our location'

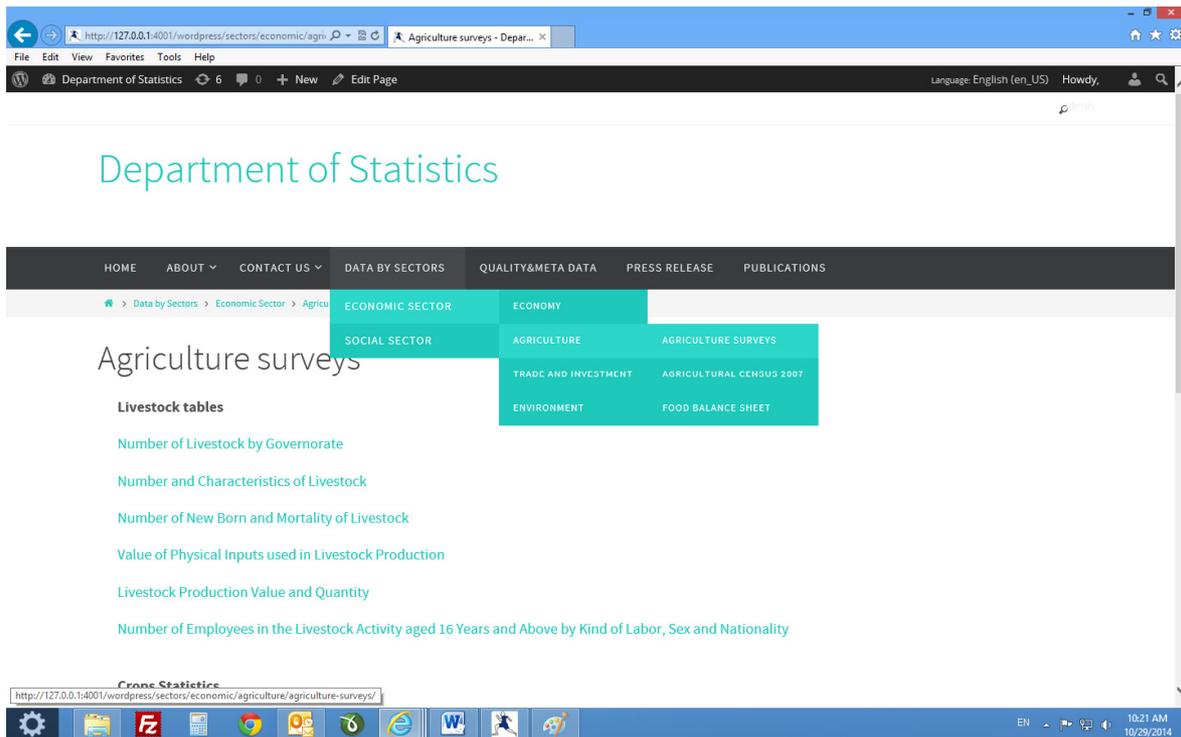


Data by sector

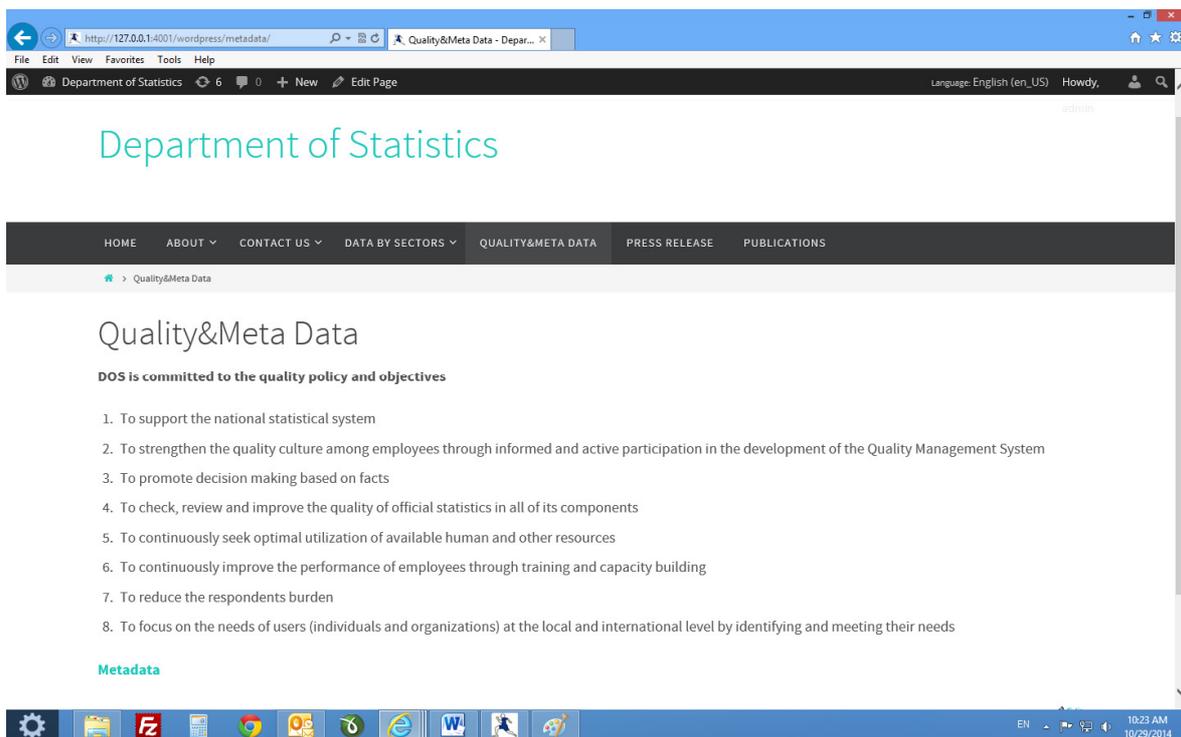


This is the core section of the web site. Statistics are divided in two main groups: Economic and Social, with a sub-menu for each group. The section is ‘work in progress’ because Statistical Depts, with the support of the Strategy Dept, should have improve the statistical content and data organization.

As an example, the **Agriculture Sector** was implemented, as shown below



## Quality&Meta Data



Press release



The 'latest indicators' are shown and are described by category, content and date. It is possible to find and to order them by category, content and date.

Publications

