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**Comparative analysis of the original IBM website and its localized versions
for different Anglophone countries and Italy**

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INDEX OF ABBREVIATIONS

CAT	Computer-assisted translation
CTR	Computing-Tabulating-Recording Company
FAQ	Frequently Asked Questions
FIGS	France, Italy, Germany, and Spain
G11n	Globalization
GALA	Globalization and Localization Association
GMT	Greenwich Mean Time
HTML	Hypertext Markup Language
I18n	Internationalization
IBM	International Business Machines Corporation
ILE	International Language Engineering Corporation
ISO	International Standards Organization
IT	Information technology
MLVs	Multi-language vendors
L10n	Localization
LISA	Localization Industry Standards Association
LSPs	Language Service Providers
LTO	Long-Term Orientation
RLVs	Regional-language vendors
SIC	Standard Industrial Classification
SLVs	Single-language vendors
ST	Source text

TL	Target language
TSC	Translation Services Center
TT	Target text
UT	Universal Time
XML	Extensible Markup Language
W3C	World Wide Web Consortium

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RESUMEN

El presente trabajo tiene como objetivo analizar las estrategias y patrones de localización que ha seguido IBM a la hora de localizar su sitio web de Estados Unidos en los siguientes países: Canadá, Australia, Nueva Zelanda, Reino Unido, Irlanda e Italia. Para alcanzar este objetivo, la primera parte del trabajo incluye un marco teórico en el que se define el concepto de localización y la historia de la localización, se describe el proceso GILT y las características y el proceso de localización de sitios web, se enumeran los elementos que se deben localizar en un sitio web y se identifican los aspectos culturales y grados de localización de sitios web. El trabajo continúa con una evaluación del sitio web de Estados Unidos de IBM y un análisis comparativo de este sitio y los sitios web localizados que se han seleccionado. Finalmente, se presentan los resultados y conclusiones del análisis.

Palabras clave: localización, sitio web, IBM, Estados Unidos.

ABSTRACT

Questo progetto a l'obiettivo di analizzare le strategie e gli schemi di localizzazione che ha utilizzato IBM per localizzare il suo sito web statunitense nei seguenti paesi: Canada, Australia, Nuova Zelanda, Regno Unito, Irlanda e Italia. Per raggiungere questo obiettivo, la prima parte del progetto include un quadro teorico dove si definisce il concetto di localizzazione e si descrivono le sue origini, si illustra il processo GILT, si identificano le particolarità e il processo di localizzazione dei siti web, si enumerano gli elementi che devono essere localizzati nei siti web e si descrivono gli aspetti culturali e i livelli di localizzazione dei siti web. Il progetto continua con una valutazione del sito web degli Stati Uniti di IBM e un'analisi comparativa tra questo sito e i siti web localizzati che sono stati selezionati. Si presentano infine i risultati e le conclusioni dell'analisi.

Parole chiavi: localizzazione, sito web, IBM, Stati Uniti.

ABSTRACT

This study aims to analyze the localization strategies and patterns which IBM has followed to localize its US website for the following countries: Canada, Australia, New Zealand, the UK, Ireland, and Italy. In order to achieve the aforementioned purpose, the first part of the study includes a theoretical framework which provides a definition of the concept of localization, the history of the localization industry, a description of the GILT process, a description of the particularities and the workflow of website localization, a list of the main elements which should be localized on a website, the identification of some important cultural aspects which affect the localization of websites, and the different degrees of website localization. The study continues with an evaluation of the US website of IBM and a comparative analysis of this website and the selected localized websites. Finally, we present the results and conclusions of the analysis.

Key words: localization, website, IBM, United States.

INTRODUCTION

As long as different languages have existed, translation has been necessary. It has been useful for centuries as a method for expanding knowledge around the world and helping writers to reach global audiences. The recent digital revolution has brought changes in the way texts are presented to readers, and thus a new process for transferring digital texts into other languages was needed. This fairly new process, which was suddenly visible in central discussions on translation, marketing and technology (Birthe, 2008), is called 'localization'.

There are many types of digital products (software, videogames, applications, websites, etc.), and each of them has its own particularities regarding localization. The localization of websites is a specific genre of localization, given that websites are texts written for the Internet environment, and they involve a type of translation and localization with special features related to the form in which they are published and read.

With the incredibly growth of the Internet and the World Wide Web, the process of website localization has become an important economic issue. Its significance is attested by the increasing body of research devoted to localization, and it deserves to receive some attention from a scholarly perspective (Jiménez-Crespo, 2013: 1). This is the reason why localization and website localization in particular, have been chosen as the core concepts of this study.

In fact, the study of localization forms part of the curriculum of the Degree in Translation and Interpreting of the University of Valladolid. This Degree includes some optional subjects, such as 'Localization', 'ICT for translators', 'CAT', or 'Terminology management', which prepare students to specialize in the field of localization. In addition, both the Degree in Translation and Interpreting of the University of Valladolid and the Degree in Linguistic and Cultural Mediation of the University of Milan include many subjects aimed to help students to better understand the peculiarities of their languages of study and their cultures, which are essential aspects to take into account when translating and localizing. On the other hand, both Universities allow students to specialize in many different areas, which is useful from the point of view of website localization because the web content may cover any field of knowledge.

In this study, we have decided to focus on the evaluation and analysis of IBM's commercial website. The reason for this is that IBM is an important technology corporation with a long history. The company has been addressing the need for localization since the birth of this phenomenon. Consequently, IBM has become a reference point in this field and it is particularly interesting to study how its website has been localized.

The IBM website is analyzed in this study by evaluating the US website and then comparing it to some localized versions of the website. The US website of IBM is considered the 'original website' given that IBM is a US company. It is compared to the localized websites for Italy

and some Anglophone countries (Canada, Australia, New Zealand, the UK, and Ireland). The comparison of the original website with the localized websites of other Anglophone countries will help us to understand that localization does not only deal with the differences among languages, but also with the many cultural differences that exist among countries which share the same language. On the other hand, Italy has been added to the comparison as a way of studying the translation and localization needs of the website of a country which is culturally and also linguistically different from the original website of study.

This study starts with a theoretical explanation of the concept of 'localization', its history, and its main characteristics, focusing in particular on the localization of websites. Then, an evaluation of the US website and a comparative analysis of the selected localized websites are performed. In this way, we want to study the function and characteristics of the IBM website, the extent of the localization of the content, the localization decisions which have been taken to localize those websites, and the level of cultural and linguistic adaptation achieved.

PURPOSES

The main purpose of this study is to analyze the localization strategies and patterns which IBM has followed to localize its website for Italy and some Anglophone countries (Canada, Australia, New Zealand, the UK, and Ireland). In order to contextualize the study, some secondary purposes include:

- To define the concept of localization, identify its origins and its main characteristics.
- To determine the peculiarities of website localization and how the process is performed.
- To identify the main cultural features related to the process and the existing degrees of localization of websites.

Additionally, the analysis of the selected IBM websites will be used to achieve the following specific purposes:

- To determine the function and characteristics of the US website of IBM.
- To analyze the extent of the localization of the website content for each locale.
- To evaluate the localization decisions which have been taken to localize the websites studied, as well as the level of cultural and linguistic adaptation of the selected localized websites.

METHODOLOGY AND WORK PLAN

In this section of the project, we explain the methodology and the work plan that we have followed to achieve the aforementioned purposes.

Firstly, we have made a general scheme of the main aspects which will be studied within this project. Once the main topics have been determined, we have performed an exhaustive documentation work in order to extract the most relevant information.

Before starting to write the actual project, we have established its main purposes. We have written a detailed introduction with the justification of the topic, the context of the study, and its relation to the studies of Translation and Interpreting. Then, we have continued with the methodology and the work plan. The compiled documentation and the schemes of the main aspects of the study have been used to write the theoretical framework, which will sustain the empirical analysis. In the theoretical framework, we have included the definition of the concept of localization, the history of the localization industry, a description of the GILT process, a description of the particularities and the workflow of website localization, a list of the main elements which should be localized on a website, the identification of some important cultural aspects which affect the localization of websites, and the degrees of website localization defined by Pym.

Once the theoretical framework has been established, we have chosen to analyze the IBM website and some localized versions of the website. The studied localized websites correspond to the following locales: Canada, Australia, New Zealand, the UK, Ireland, and Italy. We have chosen the websites of a company with a lot of experience in the field of localization and with many localized versions of its website.

After choosing the websites, we have started out analysis by evaluating the original US website of IBM on the basis of Kotler's/Fill's evaluation method called the 7Cs (Kotler and Keller 2006: 569-571; Fill 2006: 584-589). We have then analyzed to what extent the content has been localized by studying the pages of the localized websites which have been removed, kept without changes, translated, adapted, replaced, or created in comparison with the original US website. We have continued the study by analyzing in more detail the elements of the localized pages and the decisions which have been taken to localize them. We have also evaluated the cultural adaptations of the websites and the degree of website localization according to Pym's categorization.

We conclude the study by explaining the results and conclusions of the analysis, and we present the references which have been used to write this project.

THEORETICAL FRAMEWORK

1. Understanding the concept

1.1. Where does the word localization come from?

The word localization comes from locale, a word which, in the context of localization, is used to describe «a set of attributes specific to a language and geographical region, e.g. date format, currency format etc» (Ford, 2015).

«A locale is not a culture since a culture is more comprehensive, much more rooted and much less volatile than a locale. [...] A locale is not a language, though language is a vital part of a locale». A locale is a combination of a language, a geographical region, and a culture. It can make reference to a country, a region or a city, which have specific local conventions and adaptation requirements (Sandrini, 2008).

«Technically, locales are represented by the two-letter code for the representation of languages (ISO 639-1) combined with the standardized country codes (ISO 3166-1)» (Sandrini, 2008). For example, en-US refers to English spoken in the United States and en-GB refers to English in the United Kingdom.

1.2. Definition of localization

Localization is defined in many different ways. Each organization, association or dictionary has its own definition of this concept. For example, the Localization Industry Standards Association (LISA) defines localization as: «taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold» (Esselink, 2000: 3).

Other important association, the Globalization and Localization Association (GALA) says about localization that its aim is «to give a product the look and feel of having been created specifically for a target market, no matter their language, culture, or location» (GALA, 2016).

And the W3C offers the following description: «localization makes reference to the adaptation of a product, application or content of a document, in order to respond to the linguistic, cultural, and other exigencies of a particular market» (Ishida and Miller, 2015).

To sum up, every definition we can find makes reference to the fact that localization is about the linguistic and cultural adaptation of a product (which is mainly referred to digital products, such as software applications or websites) for a specific target market. For these products, it means that users should not only be able to access, but also to interact with the product features as if they had been originally designed in their own language (Ford, 2015).

2. A brief history of localization

2.1. Origins and need for technology adaptations

Considering that it is a subject related to digital content, its origins are logically related to the birth and expansion of computing technologies. More specifically, the localization industry emerged in the mid 1980s as a consequence of the development of some computing companies, such as Sun Microsystems, Oracle or Microsoft. The products of these companies were already popular in North America and then they started to expand in the international markets, initially spreading across the richest countries of Europe: France, Italy, Germany and Spain (the so-called FIGS) (Schäler, 2010: 209).

Computing companies wanted to become globalized, so they needed to adapt their products to the linguistic and cultural features of other countries. In this context, the new translation-mediated practice, localization, stood out as the necessary tool to unlock the global market.

2.2. Evolution of the localization industry

The first companies that needed to localize their products started by using individual freelance translators, single-language vendors (SLVs) or in-house translator departments. However, these departments grew quickly, as well as the volume of translatable content, and soon it became difficult for the companies to manage all the translation departments. Thus, they decided to focus on their core business and outsource the translation activities to Language Service Providers (LSPs). (Esselink, 2003: 83)

It resulted in the launch of the first multi-language vendors (MLVs), who translated large-volume projects into multiple languages (especially from English into other languages), and also offered engineering, testing, desktop publishing, printing, and support services. (Esselink, 2003: 83)

With the MLVs and other LSPs, the localization sector grew rapidly and was consolidated as an industry in the 1990s. It expanded to cover all sorts of digital texts, from software products to websites and videogames (Jiménez-Crespo, 2013: 7).

2.3. Language Service Providers (LSPs): the localization market nowadays

Since the establishment of the industry in the 1990s, many vendors have emerged. Some of them were acquired by others in order to achieve a bigger market share, like ILE/IC by L10nbridge and ITP and AlpNet by SDL (Esselink, 2003: 83)

In fact, L10nbridge and SDL are still some of the biggest localization companies in the world: they are in the Top 5 of the largest LSPs according to a market report of the Common Sense Advisory (GALA, 2016b)

Furthermore, the localization industry continues to grow rapidly and has a great impact on both global and regional economies. The global database of the Common Sense Advisory indicates that today there are more than 18,000 firms worldwide, employing hundreds of thousands of people (GALA, 2016b).

However, the market is not solely controlled by large localization companies like the MLVs. SLVs and freelancers are also an important part of the market. They are sometimes presented as opposing models, but the reality is that they are not direct competitors. They work in a different way and their target markets are different (Figueroa, 2008).

2.3.1. MLVs

The main characteristic of MLVs is that they offer a wide range of language services (translation, localization, interpretation, etc.) which involve many source or target languages (RixTrans, 2016). In order to cover all the languages, they sometimes subcontract SLVs or freelancers.

MLVs have the necessary resources to handle large-scale projects and ensure consistent translations and quality standards, meeting deadlines and having fewer coordination problems; some attributes that allow them to work with large international corporations. (Figueroa, 2008).

2.3.2. SLVs and Regional Language Vendors (RLVs)

SLVs and RLVs are very similar. SLVs offer only one language combination (Italian into English, for example) and RLVs provide services in two or more languages or dialects from their own geographic location (for example, Portuguese and Spanish in Latin American countries) but they can also handle large projects. Their simpler processes and easier project management often mean lower costs and a more individualized attention. They typically work for small companies, local clients and MLVs (Cid, 2014).

2.3.3. Freelancers

Freelance translators and localizers are individuals who work with two or more languages and typically work for MLVs, SLVs or local clients.

2.3.4. Volunteers and Open Communities

Some translation and localization projects (such as localization of open-source software, subtitling of online videos or volunteer localization of websites, especially for nonprofit and charitable organizations), are carried out by volunteers and open communities. They usually dedicate less hours to projects than freelancers and it can take months to complete a project (Filip and Ó Conchúir, 2011: 13-14).

3. The GILT process

Localization is not the only step to adapt a product or service for a global audience. It forms part of an ensemble of interrelated processes called GILT (Globalization, Internationalization, Localization and Translation). This process requires a global adaptation of business structures to prepare for localization from the first stages of the development of a product (Jiménez-Crespo, 2013: 24).

The GILT process is a cycle which involves the collaborative work of many people (developers, managers, localization engineers, localizers, translators, etc.), whose cooperation is essential for the success of the process (Anastasiou and Schäler, 2014).

3.1. Globalization

Globalization, or G11n, consists in integrating a company in the global market so that they are able to spread their products to different countries, making them applicable and usable in those countries (Cadieux and Esselink, 2004).

It is mainly focused on some organizational issues which allow a company to become truly international. It includes «technical, financial, managerial, personnel, marketing, and other enterprise decisions» (Jiménez-Crespo, 2013: 24-25).

This part is not separated from the others, but it is a cycle that covers all of them (Anastasiou and Schäler, 2014).

3.2. Internationalization

Internationalization, or I18n, aims mainly to facilitate translation and localization (Cadieux and Esselink, 2004). It is done by abstracting the functionality of a product away from the cultural and linguistic features, which means that less time and resources will be required and a higher quality will be achieved during the translation and localization stages (Jiménez-Crespo, 2013: 25-26).

In a certain way, it can be seen as the opposite trend of localization. In a search for cost-efficiency, the internationalization discourse «seeks to neutralize culture-specific features so as to make localization easier, often mentioning the goal of achieving the maximum possible cultural neutrality». In fact, it has also been called “reverse localization” (Jiménez-Crespo, 2013: 32).

Internationalization occurs during the development and design stages of a digital product and it is done by software developers and authors of digital content (Anastasiou and Schäler, 2014).

A great example of a company which is successful at Internationalization is Ikea. In their instructions, they use graphics without text embedded and this generic content can be easily used for all markets with almost no need of localization efforts (GILT Services, 2016).

3.3. Localization

Localization, or L10n, is the actual process of adapting products, services and digital content to the linguistic and cultural specifications of a concrete region (JR Language, 2012). This is the starting point for small website localization projects (Jiménez-Crespo, 2013: 26).

Localization is considered a separate part of the translation stage, but the boundaries between them are rather fuzzy. It is true that localization is related to some typical translation tasks, like terminology mining, managing, translating text itself and revising (Austermühl, 2006), but it is seen as a more complex process which goes beyond translation. It implies the cultural adaptation of some elements other than text (Ishida and Miller, 2015) and it is related to more specialized tasks like software development and engineering, desktop publishing, the editing of graphic files and functionality testing (Austermühl, 2006). It is predominantly performed by localization engineers, managers, and quality testers, while translators-localizers have more relevance in the translation phase (Jiménez-Crespo, 2013: 26).

3.4. Translation

Translation is the actual transfer of text from a source language to a target language and it is performed by translators-localizers (Anastasiou and Schäler, 2014). It is also related to cultural adaptation, but cultural adaptation in this process is only limited to the text itself (Lee, 2013).

As it was said before, it is often outsourced to MLVs, SLVs or RLVs, freelancers, volunteers or open communities, depending on the size of the project and the required number of languages.

3.4.1. Translation strategies

Translation is carried out through the use of some translation strategies. There exist some general translation strategies which are also useful in the field of localization. Some of these strategies are the following (Byrne, 2014: 118-130):

- Literal translation: it involves producing a target text (TT) which reflects the content and features of the source text (ST) as closely as possible and deviates little from this.
- Borrowing: it involves transferring an SL lexical item into the TT without modification. Some examples are: Internet, email or pixel.
- Calque: it involves the literal translation of the components of an SL word or phrase to create a new term, or neologism, in the target language (TL). There are some different types of calque (semantic, morphological, etc.). An example of morphological calque is the Italian word *grattaciello*, which derives from the English word 'skyscraper'.

- **Equivalence:** this is the process of replacing elements in the ST with corresponding elements in the TT in order to replicate the same situation as in the original, but using completely different wording. Some examples would be the replacement of 'danger' with 'risk of death' or the replacement of 'wet paint' with 'freshly painted'.
- **Transposition/Recategorization:** this is the process of replacing one type of word in the ST with another type of word in the TT whilst keeping the same meaning. It includes the use of nominalizations, the change from passive to active voice, etc.
- **Modulation:** it consists in presenting the information from a different point of view. Some modulations might involve changing a sentence from a positive to a negative (for example, replacing 'easy' with 'not difficult'), replacing abstract concepts with concrete concepts (for example, replacing 'reboot' with 'restart'), or other changes.
- **Adaptation:** it involves a great deviation from the ST. This strategy makes use of three important procedures: cultural substitution, paraphrasing and omission. It is used for overcoming culture-specific problems in the ST, improving the quality of the text, etc.
- **Transcreation:** this is an extremely free form of translation (even more than regular adaptation). This consists in totally recreating the content for a specific target audience. Transcreation is especially useful when translating advertising and marketing materials.
- **Expansion and contraction:** expansion, also known as explicitation, consists in making something which is implicit in the ST explicit in the TT. On the contrary, contraction involves making something less detailed in the TT.
- **Generalizing and particularizing:** these strategies make reference to the level of precision and specificity of a text. Generalizing consists in making information in the ST less specific when it is transferred to the TT, and particularizing is the opposite trend.
- **Compensation:** this is the process of making up for the loss of certain ST features in the translation by introducing other features elsewhere in the TT which are not necessarily present in the ST. The aim of this strategy is redistributing textual features and information throughout the text so as to balance out the information load or make the style more consistent.
- **Restructuring:** it consists in changing the sequence in which information is presented to readers in a text.

- Iconic Linkage: it is done by reducing the number of ways in which the same information is presented in a text.

4. Particularities of website localization

Localization is the process of adapting a product to make it understandable, usable, and appealing to their international audiences. However, there are a lot of digital products (software products, videogames, applications, websites, etc.) and each of them has its own particularities regarding localization, although they all share the necessity of collaboration among translators-localizers, localization engineers, managers, testers, and developers.

The translation and localization of websites is a specific genre of translation and localization, given that websites are texts written for the Internet environment, and they involve a type of translation and localization with special features related to the form in which they are published and read.

The Directorate-General for Translation of the European Commission (2009) explains the main characteristics of website texts, which should be taken into account when translating and localizing them:

4.1. Completion of tasks

An important aspect of website texts is that they must enable visitors «to complete the tasks that bring them to the site, whether the task is to find information, buy something or fill an administrative form». Apparently, average website visitors stay little time on a website, so website texts have to be prepared to allow the visitor to find the information and get the job done as fast as possible.

This can be achieved with:

- Individual paragraphs and short texts: this strategy is necessary because «reading on screen is slower than reading on paper and people tend to "scan" web pages to check quickly if they contain anything useful».
- Ability to stand alone: context should be understandable without the need of consulting other pages on the website.
- Keywords: they allow users to find the information quickly through search engines.
- Correct organization: the content and structure of the website should be built around the real needs of the users. It implies that it is also essential to use good and unambiguous labels, navigation menus and links.

4.2. Attractiveness and visibility

The style and general appearance of the website should not simply be functional and usable, but also appealing, so as to be able to attract new visitors. In addition, to improve the visibility of the website, translators-localizers should «place important words in the title, at the beginning of the text and in the invisible metadata in order to improve the page's chances of appearing near the top of the Google results list».

4.3. Updating

Websites should be updated frequently in all the languages of the different versions in order to offer information of current relevance.

4.4. Variety of texts

Website texts include many different text types, styles, and topics, aimed at diverse target audiences. It is important for the translator-localizer to be aware of all these aspects of website texts to choose the correct translation and localization strategy and ensure a successful result.

4.5. Freedom

The variety and flexibility of website texts make it possible for translators-localizers to have a certain degree of freedom to adapt the different language versions to better suit their readerships and their national environments.

Translators-localizers can check other national websites, similar to the one they are working with, and use them as a reference to adapt and improve the structure, the level of detail given to the reader or the style to match with the expectations of the reader.

4.6. Feedback

Visitors may react quickly to possible mistakes on the web, so translators-localizers can receive quick feedback and improve the website when necessary.

4.7. Text format

Website text, that is, the actual translatable content, is usually formatted in HTML or XML. Website translators use specialized tools, such as SDL Trados or OmegaT, to translate this type of file formats. Translators who understand the code may edit the metadata on the attributes and functions of text elements, modify tags, and modify the code to improve the readability of the text in the target language. However, it is recommended to protect from any changes the elements that should not be translated.

5. Website localization workflow

The website localization workflow is not the same for every project. The order and number of steps in the process may vary depending on the size and the scope of the project and the

agent who performs the work (MLVs, SLVs, RLVs, freelancers, volunteers or a single individual). The following model presents a generic localization process and covers its major issues (I18n, 2015):

5.1. Scope considerations

The scope of the project is defined. Factors affecting the scope are the previously achieved level of internationalization, the wished degree of adaptation and the target audience (Jiménez-Crespo, 2013: 29).

5.2. Analysis, research and change detection

An analysis of the architecture of the website, its functions and operation (searching for possible errors or functionality problems) and third-party components (such as e-commerce platforms) is performed (Jiménez-Crespo, 2013: 29). Then, the localization needs of every target locale are investigated and the elements requiring changes are identified (Aaron, 1999).

5.3. Job creation

The necessary steps to fully localize the website are planned in advance; tasks are distributed and deadlines are established (Argos, 2016).

5.4. Extraction, segmentation and localization packaging

The website is broken down into the different components. The website text that needs to be translated is extracted and divided into segments, and the media content with embedded text is identified. A localization pack is created with all the necessary files, instructions, and deliverables. Then, this localization pack is subdivided into homogeneous packs to assemble similar components (text, media files with embedded texts, scripts, frames, etc.) (Jiménez-Crespo, 2013: 30).

5.5. Pre-design

The future architecture of the site is designed, and a clone of the future website is created. A global gateway, which will allow users to access the localized version, is also created, and links are readdressed (Jiménez-Crespo, 2013: 30).

5.6. Leveraging and preparation of reference material

Reference material which will be used for translation and localization is prepared, including glossaries and termbases (Argos, 2016). Leveraging is carried out if possible. It consists in using computer-assisted translation (CAT) tools to find exact or fuzzy matches in translation memories or glossaries of previous, similar translations (I18n, 2015).

5.7. Actual translation and localization

The website text is translated, and the media content with embedded text is localized. Localization may even need the full adaptation of some elements or the creation of new ones. In

addition to that, «a new set of keywords and/or description might be prepared to allow for properly indexing the site in the target locale» (Jiménez-Crespo, 2013: 30-31).

5.8. Review

The translation is edited and proofread (I18n, 2015).

5.9. Reintegration of elements and testing

The translated text, the localized elements and the new or fully adapted components are reintegrated into the website structure and the links within the localized files are changed. Then, a functional quality test is performed in as many formats, screen and navigator configurations as possible. It is followed by a cultural acceptability and efficiency test, often performed in the target country. Any necessary changes are made (Jiménez-Crespo, 2013: 31).

5.10. Work completion

The definitive version of the website is created and validated. This is when the translation and localization work is considered correct and the glossaries, termbases, and translation memories are updated for future use (I18n, 2015).

5.11. Delivery to the client and posting online

5.12. Ongoing maintenance work and updating

6. Content that needs to be localized in a website

Websites are made up of many different elements. Website texts are obviously an important part of them, but there are many other aspects which require adaptations as well. The main aspects that have to be localized on a website can be divided into the following categories (Jiménez-Crespo, 2013: 32):

6.1. Visual aspects

6.1.1. Images, icons, graphics and other multimedia content

The internationalization stage is useful to reduce localization efforts in this kind of content by making it less culture-specific and avoiding the use of text within graphics. The localization of images, icons, graphics, music, videos, etc. can be very expensive and cause delays in the launch of the different language versions. In any case, it should be revised and adapted for the international audience during the localization stage as well (Microsoft, 2015).

6.1.2. Colors, shapes, sizes, styles

These aspects may affect the mood of the website visitors. Colors, shapes, sizes, and styles can stir emotions among users, and these emotions usually vary across cultures. It is important to think about it while localizing and make the right choices for every target locale in

order to evoke good feelings and create positive associations in the minds of the target audience, enhancing in this way the user experience (Lee, 2016).

6.1.3. Font

It can be necessary to resize the font when the translated text is longer than the original one. However, there are other reasons why thinking about the font is important. Firstly, translators-localizers should choose a font type which ensures that the content will be easily readable. Secondly, they should take into account the fact that other languages may use another alphabet or special characters or write in a different direction. This problem can be solved by using a Unicode font «which supports the most characters, including letters, digits, glyphs, and symbols» (Lee, 2016).

6.2. Cognitive aspects

6.2.1. Layout

Layout «serves as a communication bridge between the user and the system», and involves the placement of banners, menu items, and orientation among others (Shah, 2013).

Layout requires localization because different locales may have different cultural expectations and may interact with the website in different ways. Other reasons to localize the layout is that the translated text is usually longer than the original one, which can make necessary the relocation and resizing of some elements and the reduction of font size and spacing. Again, the previous phase of internationalization may simplify this process by designing websites with these possible changes in mind (Microsoft, 2015).

In some websites, global templates are used on the various multilingual versions. They «increase efficiencies, manage text expansion, help the localization team maintain control over visual presentation» and ensure a consistent global brand image despite all the required changes among versions (Crowther, 2015).

6.2.2. Support content, community forums and FAQ sections

These sections contain relevant and helpful information. They allow users to answer their own questions, see the contributions of other users and experience a greater sense of personalization. Localizing them is a way of increasing customer satisfaction (Lee, 2016).

6.2.3. Marketing

In company websites, providing users with marketing content in their own language allows them to «engage with the website more intuitively, truly understanding the brand and thus creating the opportunity to turn them into brand advocates and a great source for referrals». This is important because nowadays a lot of customers look to other people's opinions on the Internet before they decide what to buy (Lee, 2016).

Localizers may use webmaster tools to understand which pages and products are the most popular and how customers interact with the site on every locale. This is useful for identifying the pieces of content which should be prioritized when localizing (Lee, 2016).

6.2.4. Legal exigencies

Legal exigencies differ across countries. They affect the website localization because they concern some «transactional, e-commerce, technology, privacy, Internet, advertising, regulatory, and consumer legal matters» (Fishman Stewart, 2016). Consequently, localizers should take them into consideration to avoid problems in different markets.

6.3. Functional aspects

6.3.1. Menus, hyperlinks, and navigation buttons

Website menus, hyperlinks, and navigation buttons lead to other parts of the website or to different websites. They should be readdressed to allow every locale user to easily navigate through the pages localized for their own language and region (Pym, 2010).

6.3.2. Web forms

Web forms are tools which serve to collect information from users. Some examples include registration, feedback or job application forms. They are composed of fields created to be fulfilled by the user. These fields are affected by locale-sensitive formats (explained in the following section) and they should be adapted to allow locale users to introduce their data in a clear, efficient and intuitive way (Smartsheet, 2016).

6.3.3. Locale-sensitive formats, which include:

6.3.3.1. Date

In order to localize correctly a website or any other digital product, date's elements (month, day, and year) have to be placed in a way that is understandable to the reader (Beatrous and Bouedo, 2013), and they have to be separated by the correct punctuation marks (spaces, dashes, periods or slashes).

However, there are many types of date notations. They vary from one country to another, and even in the same country, some different date formats can coexist. This fact can create a great level of uncertainty among users, and cost a lot of money to companies (ISO, 2016).

There is not an ideal solution for this problem. Developers and localizers of websites and other digital contents may choose a different date format depending on their particular context, communication situation and preferences. If they consider that data can be ambiguous for the user, it is recommended to use the whole names of the months, four digits to represent the years or, at least, a note on how the date should be read (Ishida and Miller, 2015).

It is possible to choose the standard notation ISO 8601 as well. This notation was created to avoid the above-mentioned confusion in international communication. The ISO representation of dates is: YYYY-MM-DD (ISO, 2016).

6.3.3.2. Time of day

Time formats also differ culturally and present similar problems to those of the date formats. For example, some English speaking countries prefer to use the 12-hour time notation, while other countries of the world prefer to use the 24-hour time notation. (Beatrous and Bouedo, 2013).

Developers and localizers may use the more appropriated format for their purposes and target audience, or just use the international standard notation for the time of day, which is: hh:mm:ss, in a 24-hour time format (Kuhn, 2004).

6.3.3.3. Time zone

Time zones are artificially created zones to manage time. They also vary from one country to another and even inside the same country. Moreover, there are some countries which change their time zone during the year (Hoyos, 2015).

"Universal Time" (abbreviated UT) and "Greenwich Mean Time" (abbreviated GMT) refer to time kept on the Greenwich meridian (longitude zero), five hours ahead of Eastern Standard Time. A capital Z can be appended to a time to indicate that it is measured in UT (USNO, 2013).

Local time zones can be described by specifying the numerical difference of local time to UTC. It can be done by adding +hh:mm, +hhmm or +hh to indicate that the used local time zone is hh hours and mm minutes ahead of UTC. For time zones west of the zero meridian, which are behind UTC, the notation -hh:mm, -hhmm, or -hh is used instead (Kuhn, 2004).

6.3.3.4. Numbers

It is also important to adapt number formatting in order to avoid miscommunication (Beatrous and Bouedo, 2013). The main cultural differences regarding this aspect are (Singh, 2011: 136-137):

- The thousand separators: they can be commas, periods or spaces depending on the locale language.
- The decimal separators: they can be commas or periods depending on the locale language.
- Digit grouping: in most languages, digits are grouped in sets of three. However, in other languages, they are grouped in sets of pairs.
- Percentage sign: depending on the locale language, it can be placed before the number, after the number (separated by a space or not) or with the abbreviation pct placed after the number.

6.3.3.5. Currency

When formatting currency, it is important to take into account currency symbols, negative amounts and punctuation marks. Depending on the language and the country, currency symbols may be placed before or after the number; the negative sign may be placed before or after the currency symbol and the number; and currency can be presented with commas, periods or spaces. The international standard ISO 4217 assign three-letter codes to various world currencies (Singh, 2011: 136).

6.3.3.6. Addresses

Address formats are different in many countries. The elements of an address; i.e. flat, apartment, building, number, street, postal code, city, country, name, title, etc., can vary in order, length or style. They have to be presented in a cultural appropriate way, so digital contents and products have to be able to handle a variety of formats (Singh, 2011: 137).

6.3.3.7. Telephone numbers

Similarly to address formats, phone number formats can vary a lot. Different locales use different separators, different groupings, different country and area codes and have different total number of digits. That is why digital contents and products have to be flexible regarding phone number formats (Singh, 2011: 137).

6.3.3.8. Units of measurement

Most countries have now adopted the metric system, but others continue to use the imperial system. Units of measurement include weight, length, volume, area, temperature, etc. It is important to ensure that digital contents and products can accommodate the units of every locale (Singh, 2011: 137).

6.4. Linguistic and textual aspects

6.4.1. Dialects

When translating and localizing websites, it is necessary to choose the dialect or language version which best suits the expectations of the target locale (Rozwens, 2014).

6.4.2. Grammar, capitalization, punctuation, and other linguistic rules

They obviously vary from one language to another, but this is not the only issue. Other aspect to take into account when localizing is that some brands use particular style guides, phrasing, and messaging without following all the linguistic rules of a language in order to create a special and easily identifiable brand image (Language Solutions, 2015).

6.4.3. Register

It may be necessary to modify the text register in order to satisfy the expectations of the reader. The revision of the register requires some linguistic research and a study of other locale

websites which may share similar register values (field, tenor, and mode). All changes in the register should be consistent through the whole website (Lepič, 2010).

6.4.4. Intertextuality

Intertextuality is a concept which describes the «process by which individuals come to know a particular text through their prior experiences with other texts» (Radcliff Clark, 2014).

This means that readers have prior knowledge of the characteristics of texts in their sociocultural context. Consequently, texts which are similar to others in that context can activate the prior knowledge of the readers and enable them to engage more with the text and understand it better. The adaptation of the text to the characteristics of other similar texts in the locale context can be achieved by using narrative structures, styles, strategies, references, and information which are typical of a particular society (Panagiotidou, 2011: 174).

6.4.5. Consistency

The consistency in dynamic websites is a particularly complex issue. The reason is that websites are made up of many different texts and media elements, placed in a non-linear way and updated frequently and separately, making it difficult to maintain coherence and consistency through all the parts of the website (Nauert, 2007: 2).

7. Culture and website localization

Cultural adaptations play a key role on website localization. They improve navigation, facilitate interaction and enhance the user experience. The implications of culture on website localization and the level of cultural adaptation of websites may be studied by using the Hofstede's cultural dimensions and the work of Singh and Pereira.

Hofstede's cultural dimensions illustrate the main features that define any culture (Jiménez-Crespo, 2013: 32). It is worth mentioning that Hofstede created this model by analyzing a large database of employee value scores collected within IBM in more than 70 countries (The Hofstede Centre, 2016a). Using Hofstede's model, Singh and Pereira analyzed the cultural aspects of websites (Jones, 2012).

To better understand the significance of culture on website localization, the dimensions used by Singh and Pereira and the cultural aspects of websites that they identified will be described (Jones, 2012).

7.1. Power Distance

This aspect refers to the way in which users perceive the unequal distribution of power.

High power distance countries are more autocratic. They place importance on expertise, authority, certifications, official stamps and logos and national symbols. Specific website features

for these cultures are: formal layouts, vivid visuals, limited choices and a restricted access to information, informative elements, clear indicators of navigation, and elements with authoritative body language.

On the contrary, low power distance countries are more democratic. Specific website features for these cultures are: informal layouts, a less dense and informally organized structure, images, colors, and symbols representing activities of daily life, multiple choices, and flexible interactions encouraging exploration.

7.2. Individualism vs. Collectivism

This refers to the degree of integration of individuals into groups or collectives.

Individualistic cultures emphasize personal achievements and individual rights, and they prefer content based on materialism and consumerism. Specific website features for individualistic cultures are: privacy statements (to protect personal information), emphasis on product uniqueness, use of “you”, and representations of individual success.

On the other hand, collectivist societies emphasize group affiliations and loyalty, and they prefer content based on community and harmony. Specific website features for collectivist cultures are: references to family and group activities, references to wise leaders, use of “we” (Akben-Selçuk, Aydın-Altınoklar, and Karaçay-Aydın, 2010).

7.3. Femininity vs. Masculinity

This is related to the distribution of emotional roles between genders.

High masculinity cultures give importance to traditional gender, family, and age distinctions, and they are more competitive, assertive, and materialistic. In this context, it is a good option to use content with references to competition, meetings, success, personal gratification, results, and objectives. Specific website features for masculine cultures are: emphasis of product effectiveness, clear gender roles depicted in images, aggressive promotions, and incorporation of trivia, games, and quizzes.

The blurring of gender roles stands out in more feminine cultures. In these societies, it is better to use content with references to relationships, quality of life, family, social activity, and interactions.

7.4. Uncertainty Avoidance

This dimension refers to the level of tolerance for uncertainty and ambiguity.

High uncertainty avoidance cultures are more emotional and tend to control changes with rules, laws, and regulations. They appreciate clear visuals concretely associated with lives of individuals, and clean and distinct choices. Specific website features which help to reduce uncertainty are: access to the history of the company, incorporation of a customer service to

provide information and help to the customer, transnational testimonials, guided navigation with clear paths and buttons, a sitemap, and a search engine.

Low uncertainty avoidance cultures are more pragmatic and tend to have few rules. They value general and symbolic messages with less detail, and redundant cues in color and typography that increase ambiguity.

7.5. Long vs. Short-Term Orientation

This is related to the time horizon of a society.

High LTO cultures are more pragmatic and oriented to the future. They appreciate rewarding, persistence and saving. Successful content for these societies should be based on long-term development and goals, virtuous behavior, relationships, and practical values.

Low LTO cultures are oriented to the present and the past. They value the fulfillment of social obligations and reciprocity in social relations. Successful content for these societies should be based on immediate gratification and results, truth, and rules.

8. Degrees of website localization

Website localization is not always complete. According to the scope (and the budget) of the localization project, localization may be carried out in different degrees, being total or limited to some elements of the website. The degrees of website localization are the following (Pym, 2010):

- Standardized: the website is not localized at all and there is only one website for all the locales.
- Semi-localized: there is only one website which gives information on many countries.
- Localized: there is a whole translated version of the website for each locale.
- Highly localized: the website is translated and also culturally adapted for each locale.
- Culturally customized: the website is completely regenerated and adapted to the target locales.

There are some intermediary stages among these degrees. For example, it might be decided to only translate the general information of a website but not the specific technical information. In some cases, hybrid strategies are used as well. They consist of moving some communicative decision-making to the user's side. As an example, links can be added to allow users to look for some additional cultural information when something may be difficult for them to understand (Pym, 2010).

Hybrid strategies are particularly useful given that nowadays the world is globalized and there exist many complex cultural identities; with some people traveling, living, and working

outside their country of birth. This implies that some users may be living in a specific region but prefer to visit a localized website which corresponds to a different region. Many users are also polyglot and do not need translation and localization, although they may prefer to visit a localized website. Thus, this is important to allow users to choose the localized version that they prefer to visit. However, there are some websites which use systems that identify the user's locale and automatically direct them to the localized version of their region, whether they want to go there or not. (Pym, 2010).

COMPARATIVE ANALYSIS

9. Some considerations about IBM

Before starting with the actual comparative analysis of the original IBM website and its localized versions for different Anglophone countries and Italy, it is necessary to explain some aspects of this corporation in order to better understand the context of the websites.

9.1. What exactly is IBM?

IBM is an acronym for International Business Machines Corporation. This is an information technology (IT) company, which operates in five segments: Global Technology Services, Global Business Services, Software, Systems and Technology, and Global Financing (Barchart, 2016a).

Its Standard Industrial Classification (SIC) code is 3570, which indicates that the company's type of business is classified as Computer and Office Equipment. Other companies with the same classification and in direct competition with IBM are: Lexmark International, Hewlett-Packard, and Xplore Technologies (Barchart, 2016b)

IBM was established in 1911 in the United States of America. It started as a producer of tabulating machines and its original name was Computing-Tabulating-Recording Company (CTR). In 1914, CTR had 1,346 employees and \$9 million in revenues (IBM, 2008).

During the years after 1914, CTR turned into a rapidly emerging leader of innovation and technology. This shift was signaled in 1924, when the company's name changed to its current name: IBM. During the 20th century IBM continued growing, and by the end of the century it had more than 300,000 employees and \$75 billion in revenues (IBM, 2008).

9.2. Translation and localization at IBM

As was said before, IBM is a large multinational corporation with more than 100 years of experience in the field of technology. Consequently, it has been dealing with the need of translation and localization of digital products for a long time, and it has become a benchmark in these subjects.

Translation and localization are so important for IBM that it has even participated in some conferences and exhibits about it, such as the Localization World Conference which took place on 2012 in Seattle, Washington (Localization world, 2012). In addition to that, on its website the company has made available some information, resources, and tools related to these topics.

Besides that, IBM has its own translation department, which is called Translation Services Center (TSC). It uses an internal translation system, Translation Manager, and has extensive internal style guides and glossaries. When the volume of translation and localization work is too high, it is outsourced to some MLVs, such as Think global, Sajan, or Interpro, but they still need to respect the specifications of the company (Think global, 2010).

9.3. IBM website: grounds for comparison

IBM has its own commercial website, which contains information about the company and its products and services. The IBM's main website corresponds to the US version, and it has been localized for 134 countries and translated into 35 different languages.

The current study presents a comparative analysis of the IBM's main website and its localized versions for Italy and some Anglophone countries (Canada, the UK, Ireland, New Zealand, and Australia).

The IBM website is huge: it is composed of thousands of pages. This fact makes it very difficult to present an analysis of the whole website. Thus, the analysis is focused on the homepage and some relevant pages directly linked to the homepage. Appendix 1 includes a list of the studied web pages of the US website and the selected localized websites.

As indicated in the methodology and work plan of the project, we start the empirical analysis by evaluating the original US website of IBM according to the Kotler's/Fill's evaluation method called the 7Cs (Kotler and Keller 2006: 569-571; Fill 2006: 584-589). Then, we analyze to what extent the content has been localized. We do it by studying the pages of the localized websites which have been removed, kept without changes, translated, adapted, replaced, or created in comparison with the original US website. We continue the study by analyzing in more detail the elements of the localized pages and the decisions which have been taken to localize them. We also evaluate the cultural adaptations of the websites and the degree of website localization according to Pym's categorization.

10. Evaluation of the US website

Firstly, we evaluate the original US website in order to define its function and its main characteristics. The original IBM website is analyzed according to Kotler's/Fill's evaluation method called the 7Cs, which is shown in the following figure (Kotler and Keller 2006: 569-571; Fill 2006: 584-589)

:

Criteria	Description
Context	Layout and design of the website.
Content	Text, visual elements, and multimedia content.
Community	Site-enabled user-to-user communication.
Customization	Site facilities to tailor itself to user needs and users' possibilities to personalize the site.
Communication	The way in which two-way communication is enabled, e.g. site-to-user or user-to-site, or dialogue.
Connection	The number of other linked sites.
Commerce	Capacity to enable commercial transactions.

Figure 1: Kotler's 7 Cs

After evaluating the website according to Kotler's/Fill's evaluation method, we analyze its level of cultural adaptation according to Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira.

10.1. Context: layout and design of the website

Regarding the website layout, a distinction can be made among aesthetically dominant, functionally dominant, and integrated websites. Aesthetically dominant sites focus on the visual impact; functionally dominant sites have the purpose of guiding the user, and the integrated sites concentrate on the interaction with the user (Birthe, 2008). Both the aesthetic and functional contexts are present on the IBM website, whereas the integrated function appears less frequently.

The IBM website is updated several times per month and the content is constantly changing, although the layout tends to remain unaltered. However, the most important aspect of the analysis of the IBM website will be the content.

10.2. Content

10.2.1. Description of the main constituents of the web pages

Most of the pages of the IBM website analyzed have a similar structure and share some key elements. In general, on the top of the page, it is possible to find the IBM logo, a navigation bar, a search engine, a Sign-In button, and a menu button. Below all these elements, the pages tend to present the information in clearly divided sections, from the top to the bottom. These

sections often contain graphical illustrations and/or videos, written content, and navigation buttons. At the bottom of the page, there is usually a section with multiple links, ordered by content. In addition to that, the majority of the pages include contact information, links to the IBM profiles on social media sites, and an option menu allowing the user to visit other localized versions of the website, on the top or at the bottom of the page.

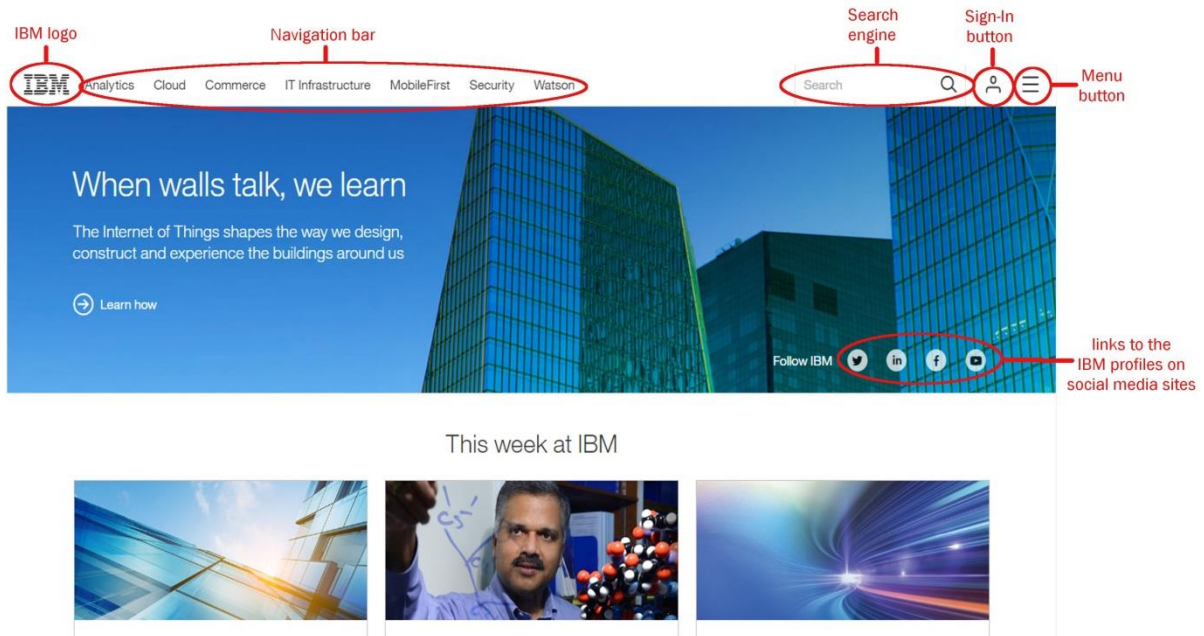


Image 1: screenshot of the US homepage which shows some of its constituents

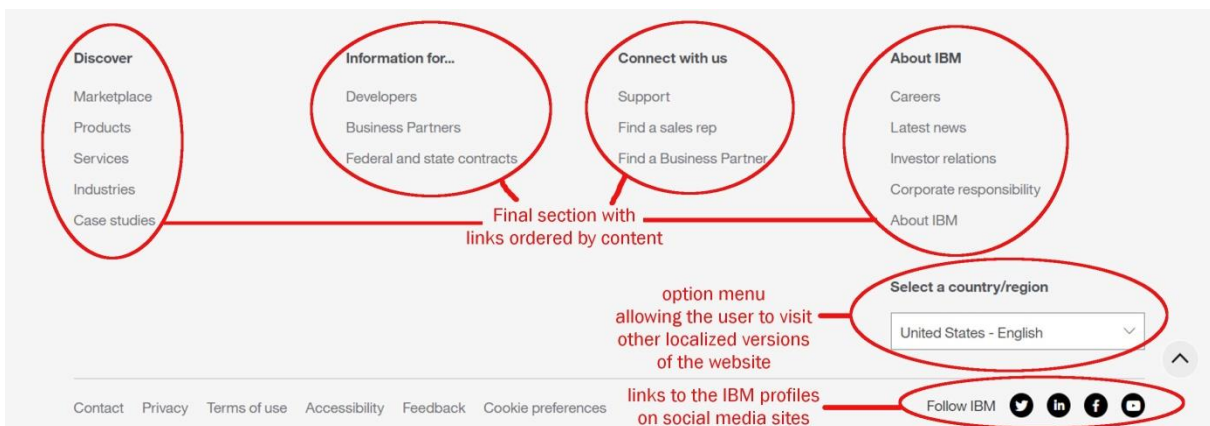


Image 2: screenshot of the final section of the US homepage

The Sign-In page is very different since it only contains a web form to introduce the IBM id and password and some links to restore the id or the password and create an account. Once registered, it is possible to manage a personal profile, receive IBM notifications, buy products online, get product trials, access the communities, and pay to access some private pages in the communities and forums. The IBM profiles on social media sites follow the structure of that third-party websites.

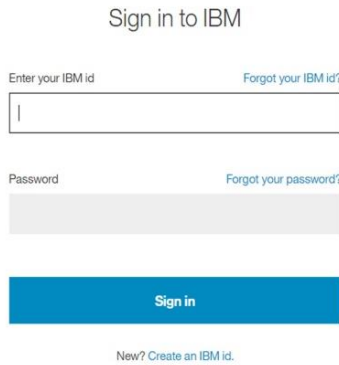


Image 3: screenshot of 'Sign-In' page

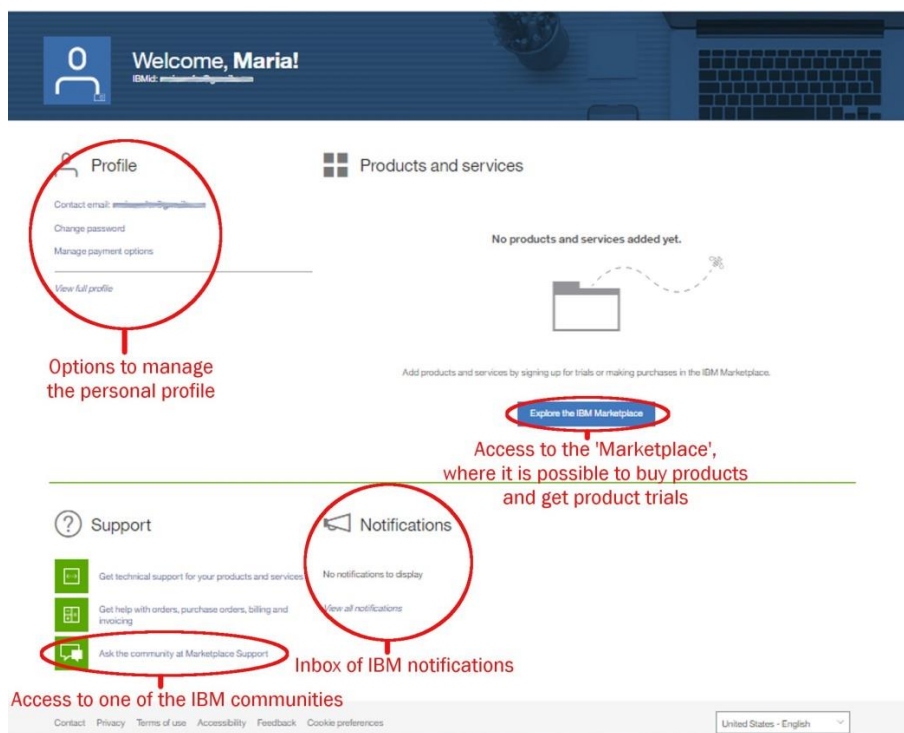


Image 4: screenshot of the personal page in the IBM website

10.2.2. Text

In this section we will study the main aspects which affect the text of the IBM website. Thus, we will analyze the web genres, some common linguistic features, the register, intertextual features, and the consistency of the texts.

10.2.2.1. Web genres

According to the categorization of web genres proposed by Jiménez-Crespo (2013: 100), web texts may belong to the following genres:

- Informational genres: texts in this category have an expositive function (as they provide information) and an exhortative function (as they modify the user's behavior). This kind of

texts predominates in the IBM pages which contain legal exigencies, support content, contact information and information for specific target audiences.

- Advertising genres: the majority of the texts within the studied IBM web pages belong to the advertising category. The texts of this category have an exhortative primary function. Some indicators of advertising genres include the use of colorful and attractive pictures, explicitly promotional headings, and positive and attractive descriptions of the products and services (Bhatia, 2004: 134). Even the news articles and the case studies included in the IBM website belong to the advertising category, given that they only emphasize the positive aspects of IBM, without including any negative element.
- Instrumental genres: the text incorporated to navigation buttons and web forms belong to this category. Their primary function is expositive, although they also have an exhortative function.
- Communication-interaction genres: Texts within this category have both expositive and exhortative functions. Blogs, communities, profiles on social networks, FAQ sections, and notifications on the IBM personal area are examples of these texts which can be accessed through the studied IBM pages.
- Entertainment genres: texts within this category have both expositive and exhortative functions. Trivia, games, and quizzes belong to this category. However, they are almost no present on the IBM website.

10.2.2.2. Common linguistic features

As mentioned before, most of the IBM texts studied belong to the advertising genre. That is why there is a predominant use of the active voice and a direct language, with imperative forms and second person pronouns. Imperative forms are also used in the navigation buttons, which try to encourage exploration through the use of verbs such as 'learn', 'find', 'search', 'connect', 'see', 'read', and 'explore'.

Regarding the use of adjectives, the superlative form is commonly used in order to emphasize the product uniqueness. Some examples are: 'latest', 'best', 'highest', 'greatest', 'newest', 'toughest', 'smartest', or 'fullest'.

Regarding the use of nouns, we observe that a wide variety of specific words belonging to the field of economics and technology, as well as a great number of noun clusters can be found in the text.

Clusters and nominalizations are used in order to make the texts shorter. In addition, some specific terms are included in the website. They could be divided into three groups: terms which refer to some IBM products and services and are exclusive of IBM; terms which belong to the field of digital technologies; and terms which belong to the fields of business and finances.

- Specific IBM terms: Some terms of the website refer to specific IBM products and services and they can only be understood within the commercial context of IBM. Some of the most important IBM terms and their definitions are listed below:
 - Analytics: This term refers to a category of IBM products. The products within this category have the particularity of being useful to integrate new data, analyze data, leverage open source technologies and take advantage of cloud service models (IBM, 2016b).
 - Cognitive: This term refers to a series of IBM solutions related to cognitive systems. According to IBM, cognitive systems can be described as «a category of technologies that uses natural language processing and machine learning to enable people and machines to interact more naturally to extend and magnify human expertise and cognition» (IBM, 2015a).
 - Watson: Watson is the first cognitive system of IBM. IBM continues to research on cognitive computing in order to constantly improve and develop Watson (IBM, 2015a).
 - Bluemix: This is the name of an IBM product which «enables organizations and developers to quickly and easily create, deploy, and manage applications on the cloud» (IBM, 2015b).
 - SoftLayer: This is the name of an IBM cloud platform which «takes data centers around the world that are full of the widest range of cloud computing options, and then integrates and automates everything» (IBM, 2014).
 - ThinkLab: ThinkLab is the name of an IBM laboratory where IBM professionals conduct some researches in order to develop some technology innovations (IBM, 2015c).
- Terms which belong to the field of digital technologies: IBM is a company which develops innovative technology products, so its website contains some terms related to this field. We have extracted some of these terms by using the AntConc program. Some relevant terms of the IBM website which belong to the field of digital technologies are listed below:

Application	Developer	Hardware	Software
Blog	Devices	Internet	Storage
Browser	Domain	Link	Synchronization
Cloud	Download	Networking	System

Computing	E-commerce	Notifications	Technology
Cookies	Electronics	Online	Trial
Crawler	Email	Portal	Tutorial
Database	Feedback	Program	Web
Design	Forum	Server	Webcast

- Terms which belong to the fields of business and finances: IBM offers some products and services aimed to improve the business performance of the companies. Consequently, the IBM website also contains terminology related to the fields of business and finances. We have extracted some of these terms by using the AntConc program. Some relevant terms which belong to these fields and appear in the IBM website are listed below:

Administration	Contract	Investor	Recruitment
Affiliate	Copyright	Leadership	Regulations
Agreement	Corporation	Leverage	Report
Assessment	Costs	Management	Representative
Banking	Customer	Market	Revenue
Benefits	Earnings	Marketing	Startup
Chairman	Economy	Merchandising	Statistics
Charts	Employee	Organization	Stock
Chief executive officer (CEO)	Enterprises	Partner	Stockholder
Client	Executives	Partnership	Trademark
Consulting	Finance	Payment	Transaction
Company	Growth	President	Transparency
Competitive	Guarantees	Procurement	Warranty

10.2.2.3. Register

Generally, web texts tend to be more informal than other kinds of texts. Some authors maintain that a personal, informal tone improves the credibility of written messages and is more inviting, although such a tone may not be effective in all the situations, and readers from different cultures may judge tone differently (Nirban and Raman, 2013).

The degree of informality of web texts can be categorized as follows (Moreda and Mosquera, 2012):

The first level is still informal in comparison with non-Internet texts, but with slightly formal characteristics like the use of the passive voice and semi-elaborated sentences, with a high frequency of stop words and the presence of formal words.

The second level is an intermediate level. Both formal and informal features appear, but with prevalence of informal content. There is a frequent use of contractions and the first and second person pronouns.

The third level congregates the more informal and low quality texts, with high presence of slang, offensive and unknown words, short words and sentences, wrong-constructed sentences and short distance with the reader.

Given that the IBM website has commercial purposes and is aimed to executives, professionals, and investors, the use of very informal texts would be inappropriate. However, there exists a certain degree of informality, with the use of contractions, second person pronouns, and short words and sentences, together with more formal strategies. Thus, the studied IBM texts can be included in the second level of informality.

10.2.2.4. Intertextuality

As we already know, intertextuality makes reference to the similarity between texts which belong to the same sociocultural context. In this sense, it is possible to observe that the US version of the IBM website shares some characteristics with the websites of its competitors.

Navigating through the pages of Lexmark International, Hewlett-Packard, and Xplore Technologies, we can see that the structure of the content is analogous and most of the elements are placed in the same way. Moreover, as they present similar products aimed to equivalent audiences, they often use the same narrative styles, vocabulary, and strategies, with short texts, a great visual impact, and a direct language. Such a degree of intertextuality helps to activate the prior knowledge of the readers and enable them to engage more with the text and understand it better.

10.2.2.5. Consistency

Although consistency in dynamic websites is a particularly complex issue, there is consistency in both the content and the layout of the IBM website. In the pages which mainly contain advertising content, most of the sections have a headline, a brief description, and some navigation buttons that lead the visitor on to the various options. The texts are usually very short, with paragraphs which do not exceed the 50 words in most of the pages and rely on the visual impact of the pictures they accompany. Such a design clearly eases the localization process.

The IBM pages which contain more informative content, such as legal exigencies or support content, have longer paragraphs and fewer images. In these pages, cohesive markers are used for connectivity of message chunks; present perfect and simple past tenses are used to convey a continuous and sustained growth; and sentence variety and paragraph cohesion are used to achieve effective style of composition (Nirban and Raman, 2013).

10.2.3. Font

The IBM pages use a Unicode font, which eases the process of adapting the content to other locales. Although the size and color of the font varies through the different pages in order to emphasize specific sections of the text, the texts are clear, the headlines are big, and the space among paragraphs and sections helps to facilitate readability and navigation

10.2.4. Images, icons, graphics and other multimedia content

The IBM website is rich in these elements. They are used to reinforce the concepts expressed in the texts, increase the visual impact of the website, and facilitate the understandability of the content. Examples of the connection between the concepts expressed in the text and the images are: an image in the page titled 'Security', which shows a police car and is accompanied by a text titled 'Ottawa police'; an image in the page named 'IT Infrastructure' which shows a man thinking and poses a question in the headline; or an image in the page named 'MobileFirst' which shows two men looking at a mobile phone and a text inviting to deliver mobile applications (these examples and the other examples included in the next sections of the analysis have been taken from the website version of June 14, 2016).



Image 5: screenshot exemplifying the connection between the text and the images

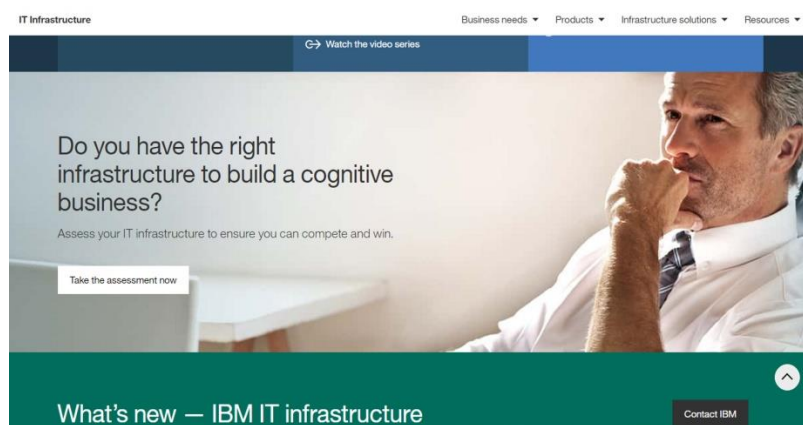


Image 6: screenshot exemplifying the connection between the text and the images

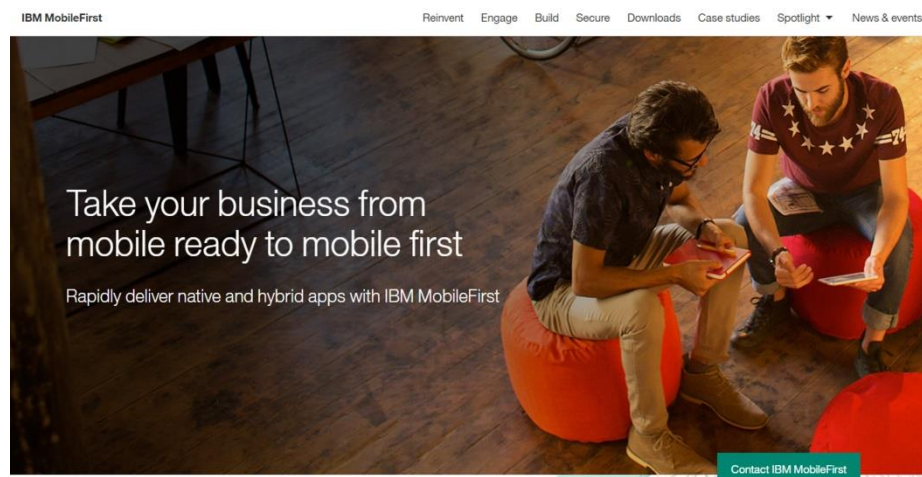


Image 7: screenshot exemplifying the connection between the text and the images

It is also noticeable that the images depicting people tend to represent them in a context of daily activities. Most of the people in the images are working or using technology devices such as mobiles, computers, or tablets. In addition to that, pictures of individuals are usually accompanied by texts with references to individual success and immediate gratification, as well

as the positive aspects of the products. In the images, the people may appear alone or interacting with other people. Women and men appear almost in the same proportion and doing the same activities. People of different ages and nationalities are depicted, reinforcing the international approach of the company.

There is an extensive use of conceptual images as well. These images represent buildings, objects, landscapes, diagrams, or drawings. Some of these images are animated. Besides that, icons are frequently used, often accompanying the navigation buttons.



Image 8: screenshot exemplifying the use of conceptual images, such as diagrams

Videos are another important element in the IBM website. They are not only used for promoting the products and services of IBM, but also for creating a public image of an international company which develops tools to increase efficiency, improve success possibilities, and help people all around the world. To do it, most of the videos present client success stories, with testimonials from customers and explanations of the characteristics of the products from IBM experts and experts from other organizations. They show how the products work and how they can be useful for individuals and companies. In some of the videos, IBM even uses the image of some celebrities, such as Serena Williams, to make the promotional content more effective.

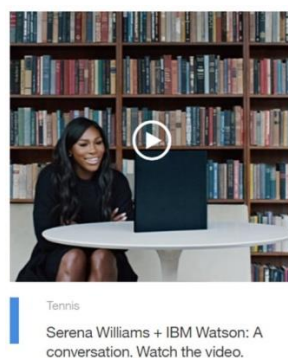


Image 9: screenshot of the promotional video where Serena Williams appears

Some videos try to instill the philosophy of the company as well. An example is one of the videos in the ‘Careers’ page, which shows a woman who works for IBM. In this video, the woman explains the satisfaction she gets from her job at IBM and the kind of things she does there.



Image 10: screenshot of the video which shows a woman explaining her job at IBM

Other videos are focused on IBM research in the field of technology, as well as IBM’s collaboration with external organizations. These videos try to show the importance of IBM’s developments, and how they are contributing to technological progress.



Image 11: screenshot of a video which shows the collaboration between IBM and an external organization

10.2.5. Colors

The dominant colors in all the pages are blue, white, and black to a lesser extent. Blue is a cool color, which means that it is relaxed and subdued, and transmits peace and calm (Lim, 2010). This color is typically used by western corporations (Kyrnin, 2015). Other cool colors used in the IBM pages are violet, green, and yellow. The use of warm colors, such as red and orange, which are vibrant and active, is minimal.

10.3. Community

Community covers the interaction among users (Birthe, 2008). In fact, the IBM website includes some pages which allow user-to-user interaction in the form of blogs, communities, forums, and wikis. Within these pages, users can create posts, add comments, and share ideas.

Some of these pages are public and others are private, and there are different possibilities of registration which allow users to enter private pages. It is worth mentioning that IBM is still the decision-maker when it comes to sorting what should be uploaded on the Internet. Besides that, users can also interact among them and with the company within the IBM profiles on social media sites such as Twitter, LinkedIn, or Facebook.

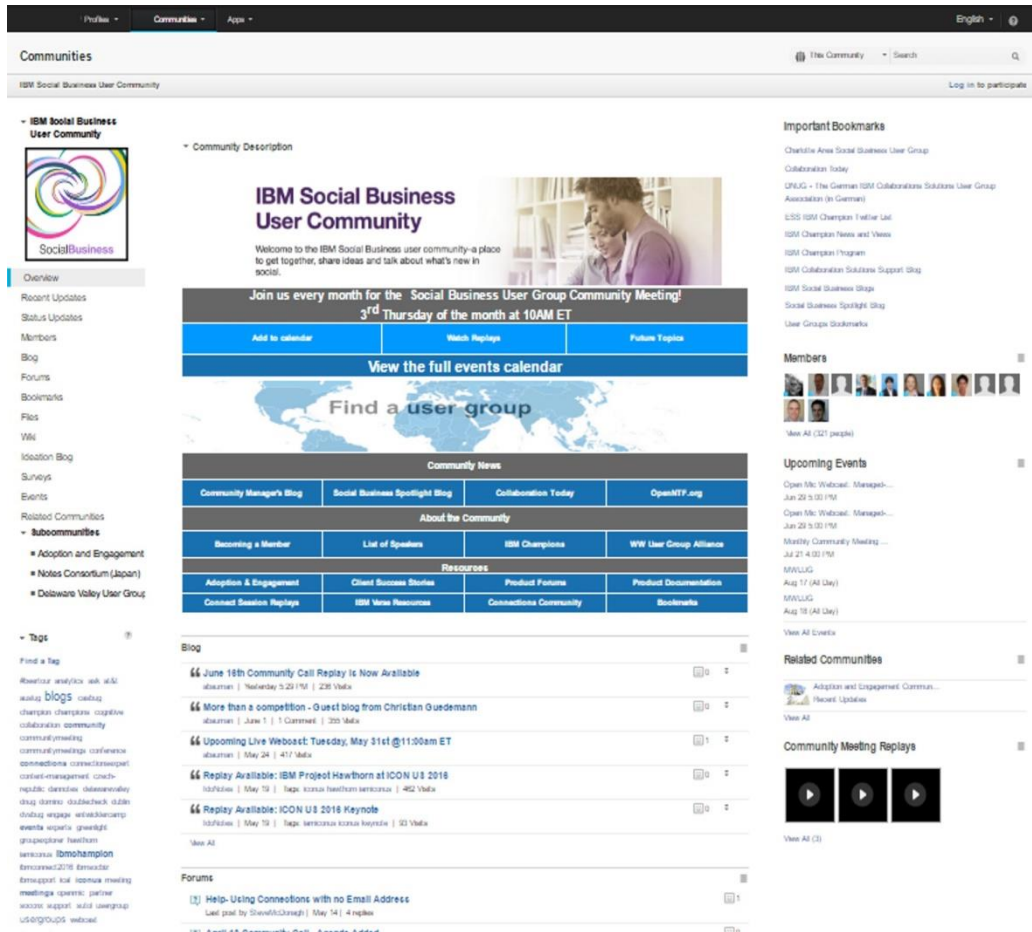


Image 12: screenshot which shows one of the communities of the IBM website

10.4. Customization

Customization covers the site's ability to tailor itself to different users or to allow users to personalize the site (Birthe, 2008). As highlighted before, the website contains promotional content and general information which is meant for everyone, but it also includes pages for specific target audiences, such as developers, investors, the federal and the state governments, and people looking for a job. In addition, registered users can pay to access private pages in the communities and forums.

Most of the pages include a menu to change the language version. The pages are also accessible for people with disabilities or impairments that occur with aging, given that IBM follows the accessibility best practices and standards defined by the US government and the W3C (IBM, 2012).



Image 13: screenshot of the menu which allows users to change the language version of the website

10.5. Communication

Communication covers how the site enables site-to-user, user-to-site, or two-way communication (Birthe, 2008). Communication on most of the pages has a site-to-user direction, which can be ascribed to the mainly promotional and informative nature of the IBM website. In addition to the conventional content of the website, this kind of communication includes the FAQ sections, the IBM notifications that registered users can receive, and the possibility of subscribing to the IBM newsletter and receive news information from the company.

User-to-site communication occurs in the communities and blogs, where users can ask questions to IBM experts and add comments. Some pages give the possibility of providing feedback about the IBM website as well. In addition, social media sites allow users to communicate with IBM. Two-way communication in the form of ongoing dialogue is also possible. Some pages include the possibility of chatting online with experts in order to receive help and advice, and most of the pages include contact information to call or email IBM representatives.

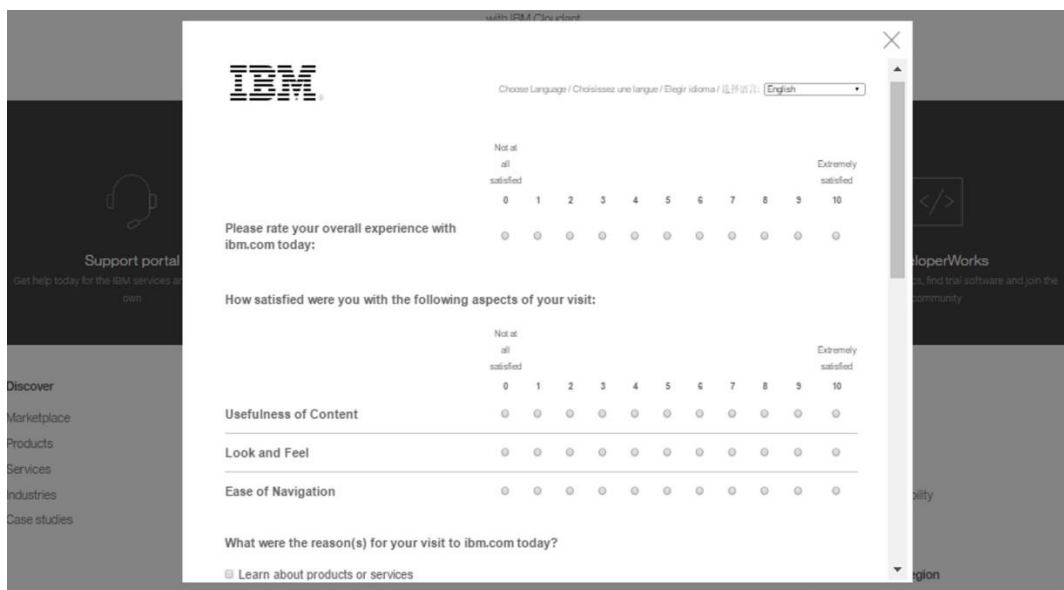


Image 14: screenshot of the survey to provide feedback about the IBM website

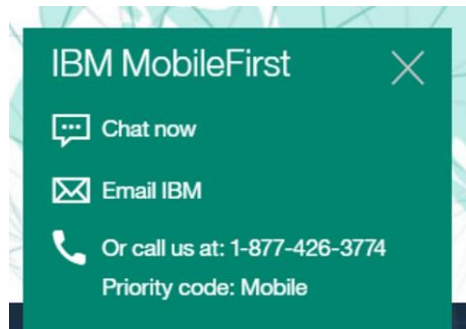


Image 15: screenshot of contact information to call, email, or chat online with IBM experts

10.6. Connection

Connection covers how and to what extent the site is linked to other sites (Birthe, 2008). There are many links on the IBM website which allow users to easily navigate through the IBM web pages. However, there are neither links from the IBM website to other companies or to government sites. Articles and press releases about IBM are written by internal authors and shown on the IBM pages. No links exist to articles about IBM in external media. The only links that redirect users to third-party pages are the links to the IBM profiles on social networks such as Twitter, Facebook, etc.

10.7. Commerce

Commerce contains the site's capabilities to enable commercial transactions (Birthe, 2008). In fact, it is possible to buy products and get product trials within the IBM website after registering with an IBM id. In addition, customers can ask for pricing using the contact information, which is present in most of the pages.

A screenshot of a web form titled 'Billing Details'. At the top, there is a progress bar with four steps: '1. Create Order', '2. Billing Details' (which is highlighted), '3. Confirm Order', and '4. Order Receipt'. Below the progress bar, the form is divided into sections. The 'Payment method' section has two radio buttons: 'Invoice Billing' (selected) and 'New credit card'. Below this is a 'Purchase Order Number' input field. The 'Billing Contact' section contains several input fields: 'Address*', 'Address 2', 'City*', 'Country*' (a dropdown menu with 'United States' selected), 'State / Province*' (a dropdown menu with 'Chesapeake' selected), and 'Postal / Zip Code*'. The 'Company address' section contains identical input fields for 'Address*', 'Address 2', 'City*', 'Country*' (dropdown with 'United States'), 'State / Province*' (dropdown with 'Chesapeake'), and 'Postal / Zip Code*'. At the bottom left of the form is a 'Back' link, and at the bottom right is a 'Continue' button.

Image 16: screenshot of the form to purchase products within the IBM website

10.8. Level of cultural adaptation of the US website

Once the general characteristics of the US website have been evaluated, we can define the level of cultural adaptation of the website in relation to the Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira.

To analyze the cultural features of the website, it is necessary to determine in the first place how the United States scores on the Hofstede's cultural dimensions. These scores are represented in the following chart. The scores are measured in a scale from 0 to 100. (The Hofstede Centre, 2016b):

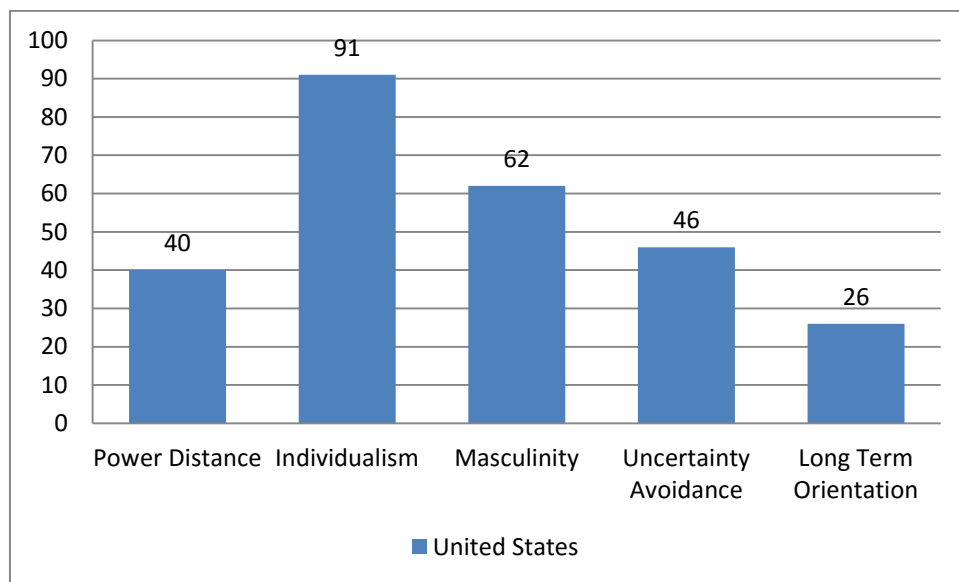


Figure 2: US scores in Hofstede's cultural dimensions

According to the cultural features of websites described by Singh and Pereira, a culturally adapted website for a locale with those scores would contain the following characteristics:

- Medium-low power distance: informal layout, images representing activities of daily life, and multiple links.
- High individualism: privacy statement, emphasis on product uniqueness, use of "you", and representations of individual success.
- Medium-high masculinity: emphasis on product effectiveness, clear gender roles depicted in images, aggressive promotions, and incorporation of trivia, games, and quizzes.
- Medium-low uncertainty avoidance: general and symbolic messages with less detail, and redundant cues in color and typography that increase ambiguity.
- Low long term orientation: references to immediate gratification and results.

After observing the US version of the IBM website, it is possible to say that most of the aforementioned characteristics appear on the website, but not all of them. Firstly, the website does not contain some characteristics which would correspond to masculine cultures such as the

US culture: there are not clear gender roles depicted in images and there are almost no trivia, games, and quizzes. This can be attributed to the fact that nowadays western cultures tend to blur the differences between genders and represent them as equal.

Secondly, although the US scores medium-low on the uncertainty avoidance scale, the website also presents some characteristics of high uncertainty avoidance cultures: access to the history of the company in the page titled 'About IBM', incorporation of a customer service to provide information and help to the customer, transnational testimonials, guided navigation with clear paths and buttons, a sitemap, and a search engine. This fact can contribute to ease the localization process as high uncertainty avoidance cultures are already represented in the original US website.

We can conclude this section of the analysis by saying that the US version of the IBM website is not really culturally adapted. It is true that the US website includes some features which correspond to its scores on the Hofstede's cultural dimensions, but IBM has an international approach, and thus it has included in the website some features which are useful for all types of cultures, independently from their scores on the cultural dimensions. In fact, the IBM strategy is to focus on the globalization of the content, reducing in this way the need of internalization and localization, as the company explains in the IBM website (IBM, 2016a). As we will see in the analysis of the localized versions of the website, this fact implies that all the versions are very similar among them, and little cultural changes are needed.

11. Analysis of the selected localized versions of the IBM website and comparison with the original US website

After having evaluated the US version of the IBM website, we study the selected localized versions in comparison to the original US website in order to know to what extent the content has been localized and what the achieved level of cultural adaptation is. To do it, we start by identifying the pages of the localized versions that have been removed, kept without changes, translated, adapted, replaced, or created in comparison to the studied pages of the US version. Once the pages are categorized, we will look at them in more detail in order to analyze the decisions that have been made during the localization process to remove, keep, translate, adapt, replace, or create those pages and their elements. Then, we will study the level of cultural adaptation of the localized versions of the website in relation to the Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira, in comparison to the results of the US website. Finally, we will determine the degree of website localization in relation to Pym's categorization.

The different categories of pages (removed, kept without changes, translated, adapted, replaced, or created) can be described as follows (Birthe, 2008):

Removed pages: this category implies the identification of content that only belongs to the US website and cannot be accessed from the localized versions. This content is not transferred at all and is considered unique to the US website.

Pages that have been kept without changes: this category includes the pages that can be accessed from the localized versions but have exactly the same content than the US pages, without being translated or adapted.

Translated pages: this category is only applicable to the Italian version of the website. This implies the transfer of texts from the US website to the Italian website. These texts have similar ideational content and text-linguistic expression on the two websites.

Adapted pages: this category implies the transfer of content from one locale to another locale, but with an omission, adaptation, or addition in the content.

Replaced pages: this category includes the pages that express a similar ideational content but differ in terms of semantic content and linguistic expression.

Newly created pages: this category implies the creation of content that only belongs to the target locale. This content is not transferred at all and can be considered unique to the target locale.

11.1. Canada

11.1.1. Categories of the localized pages

The analysis of the localized IBM websites starts with the Canadian website. As it was said before, the first step is to identify the web pages of the Canadian site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. This is shown on the table included in the appendix 2.

11.1.2. Localization decisions

Once we have analyzed the categories of the localized Canadian web pages, we will look at them in more detail in order to study the decisions that have been made during the localization process to remove, keep, adapt, replace, or create those pages and their elements. This analysis will be focused on the localized Canadian website for the English speaking area of Canada, although there exists another version of the website for the French speaking area of this country.

11.1.2.1. Removed pages

The only page of the US website that has been removed from the Canadian website is the page titled 'Federal and State Contracts'. This is a culturally oriented page which allows the

federal and the state governments of the US to sign contracts with IBM. The company offers some products that can be useful for governments all around the world, but this specific page was aimed to the US government, and consequently it does not appear either in the Canadian IBM website, or the other localized versions of the website.

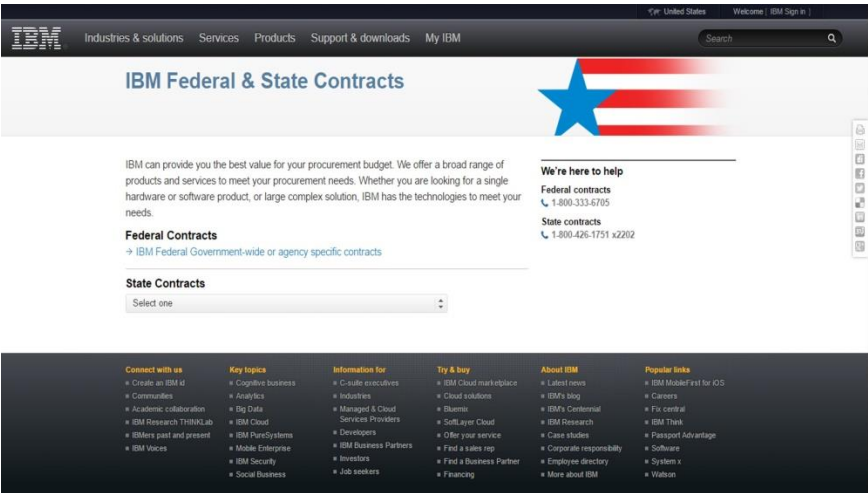


Image 17: screenshot of the US page titled 'Federal and State Contracts'

11.1.2.2. Pages kept without changes

A total of 13 of the pages studied have been kept without changes in the Canadian IBM website. This means that these pages can be accessed from the localized Canadian website but they have not been adapted at all and belong to the original US website. In most of the cases, the navigation buttons in the Canadian website indicate the pages that belong to the US website with the word 'US' in brackets next to the text of the navigation button.

It is worth mentioning that currencies, date formats, and numerical expressions have also been kept the same within these pages of the US and the Canadian websites. In the English speaking area of Canada, it is accepted to write numerical expressions and dates with the same format which is used in the US: when writing numerical expressions, numbers are separated every three digits, commas are used as thousand separators, and periods are used as decimal separators; when writing dates, the month-day-year format is used (Translation Bureau, 2015). However, when writing currencies, there is a difference between the US and the Canadian dollars. According to the Bank of Canada, 1 US dollar is equal to 1.31 Canadian dollars (Bank of Canada, 2016), but this conversion has not been performed in these pages of the Canadian IBM website.

Moreover, in the page titled 'Marketplace', even the telephone number to contact IBM is the same for the US and the Canadian websites. This is a toll free number, which means that calls to this number are paid for by the receiver of the call (IBM) and they are free for the caller (International Calling Guide, 2016). However, Canada and the US share the North American Numbering Plan for toll free numbers, so this number is valid in both countries.

11.1.2.3. Adapted pages

A total of 11 of the studied pages have been adapted in the Canadian IBM website. As it was previously said, a page is adapted when the content has been transferred from one locale to another locale, but with an omission, adaptation, or addition in the content. Regarding these differences in the content, the text and the multimedia content (images, videos, icons, etc.) are analyzed separately.

11.1.2.3.1. Written text

- Omissions: in the majority of the cases, omissions in these pages only affect the navigation buttons. Some navigation buttons are not relevant for the Canadian website because they are linked to pages which are not adapted or do not exist in this site. For example, in the page titled 'Support', a section with a navigation button giving access to the 'Marketplace' appears in the US website. This section has been omitted in the Canadian website. The 'Marketplace' page has not been adapted for Canadian users, and that is probably the reason why the navigation button to this page has been omitted in this area of the Canadian website.
- Adaptations: most often, adaptations in these pages are aimed to change out of some general content into more relevant content for Canadian users. Some examples are listed below:
 - In the page titled 'About IBM', the news articles that appear on the top of the page have changed. In the US version, some of these articles talk about general IBM technology developments. However, in the Canadian version, there are some articles that mention IBM innovations, events, researches, investments, or case studies specifically related to Canada. This also happens with some news articles which appear in the homepage and the other adapted pages.



Welcome to the era of cognitive business

From Watson apps to full-scale solutions, IBM's cognitive technologies understand, reason and learn.

[Explore the possibilities](#)



20 billion transistors on a chip

Forget the challenges of physics. The big news is that chips could get even smaller.

[Read the interview](#)



Image 18: screenshot of some news releases of the US page titled 'About IBM'



Canadian innovation made possible with IBM
 Research and partnerships helping to build a strong Canadian economy
[See innovation in the making](#)



IBM in Canada
 Helping to make business and society work better together
[Watch the video \(00:05:43\)](#)



Image 19: screenshot of some news releases of the Canadian page titled 'About IBM'

- Again in the page titled 'About IBM', there is a quote from a person working for IBM. In the US version, the quote has been said by a general manager. In the Canadian version, the quote is different and comes from the president of IBM Canada.
- Regarding the telephone numbers, all the numbers which are not toll free numbers and thus are not included in the North American Numbering Plan have been adapted for Canada. Other contact information, such as addresses, has also been adapted to include country-based contacts.

Corporate headquarters:	Mailing Address:
IBM Corporation	IBM Canada Corporate offices
1 New Orchard Road	IBM Canada Ltd.
Armonk, New York 10504-1722	3600 Steeles Avenue East
United States	Markham, Ontario L3R 9Z7
914-499-1900	Tel. (905) 316-5000

Image 20: screenshot of the difference between the US and the Canadian contact information

- For what concerns currencies, these have only been partially adapted. Most of the pages include currencies in US dollars, but some of them include currencies in Canadian dollars as well. When a conversion has been performed, it is indicated in the text.

IBM in Canada at a glance
\$477M in R&D spending

\$1.45B in exports

For the year ending Dec. 31, 2015
 Dollar figures are CDN

\$4.959M in charitable giving (corporate and employee giving, including cash, technology and gifts of service)

100K+ hours of employee volunteerism

For the year ending Dec. 31, 2015
 Dollar figures are CDN

Image 21: screenshot of currencies adapted to Canadian dollars in the page titled 'About IBM'

Besides the changes aimed to include information specifically related to Canada, there exist some adaptations in the content that are not culturally related and are common to other localized versions of the IBM website. Most often, these changes involve the news releases, but also the general design and structure of the pages. For example, in the page titled 'IT Infrastructure', some news releases have changed, but they still contain general information about IBM and some of them have been reused in other localized versions.

- Additions: there are some additions in the Canadian website. One important addition occurs in the page titled 'Industries'. This page presents the IBM products and services ordered by industry, and the Canadian Oil and Gas industry has been added to the list in the Canadian website.

11.1.2.3.2. Images and other multimedia content

Images and icons accompany the text and reinforce its message. In general, when the same written content appears in both the US and the Canadian websites, images and icons related to that content remain the same. Following this logic, when the written content changes or is removed in the localized websites, the same happens with the images and icons. However, there are some exceptions to this general rule and there are some changes in the visual elements which are independent from the text. Some examples are listed below:

- Omissions:
 - In the page titled 'IT Infrastructure', there is a section with the headline 'What's new' in both the US and the Canadian pages. In the US web page, this section contains eight news releases, and each one is accompanied by an image. In the Canadian web page, this section contains the same news releases, except one, but none of them is accompanied by an image. There is not an evident reason for this, since those images are not culturally oriented and the Canadian web page has enough space to include them.
 - Again in the page titled 'IT Infrastructure', there is a section with the headline 'Integration for mobile services'. This section has the same written text in the two studied pages, but the US version includes an explanatory video which has been removed from the Canadian version.
- Adaptations:
 - In the page titled 'Connect with a sales representative', the written text is exactly the same in both the US and the Canadian pages, but there is an image of a map which changes. The US web page shows a map of the US, because this page is aimed to users who live in the US, while the Canadian web page shows a map of Canada, because this page is aimed to users who live in Canada.

Get in touch with an IBM Digital Sales representative.



The IBM team best aligned to your business will understand your business needs. They will connect to both our technical and business teams to develop affordable, high quality solutions. If you know your rep's name, you can [search the employee directory](#).

My objective is:

Get in touch with an IBM Digital Sales representative.



The IBM team best aligned to your business will understand your business needs. They will connect to both our technical and business teams to develop affordable, high quality solutions. If you know your rep's name, you can [search the employee directory](#).

My objective is:

Image 22: screenshots of the maps of the US and the Canadian pages titled 'Connect with a sales representative'

- The size of the icons, the images, and the fonts of the written text are mostly the same in both websites. In addition, the dominant colors of the pages are the same in both the US and the Canadian pages.
- Additions:
 - One example of a relevant addition regarding the multimedia content can be found in the Canadian homepage. This page includes a video which does not appear in the US page, and this video contains information about IBM investments in Canada.

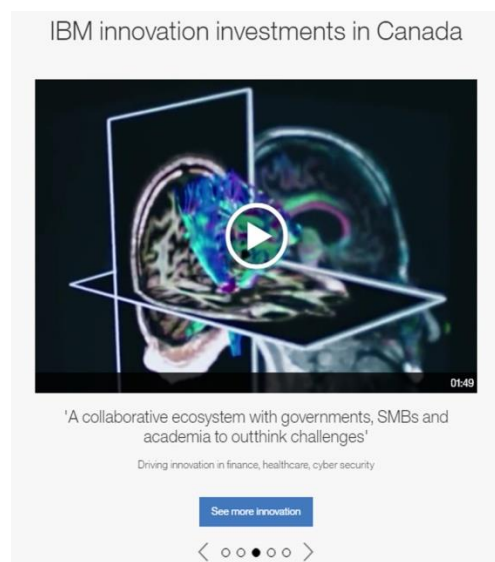


Image 23: screenshot of a video which has been added to the Canadian homepage

11.1.2.4. Replaced pages

A total of 8 of the studied pages have been replaced in the Canadian IBM website. These pages of the Canadian website express a similar ideational content to the correspondent pages of

the US website, but they differ in terms of semantic content and linguistic expression. Within these pages, the general idea and the communicative purpose is the same for both websites, but the content differs so much that these pages cannot be labelled as adapted pages.

The replacement category is analyzed on an exemplary basis. The example has been taken from the page titled 'Careers'. The common aim of this page in both the US and the Canadian websites is to allow users to look for a job or an internship offer at IBM, and be informed about its philosophy and values. In this analysis, we will study the similarities and differences between the US and the Canadian 'Careers' pages. The other replaced pages could be analyzed in the same way as the 'Careers' pages.

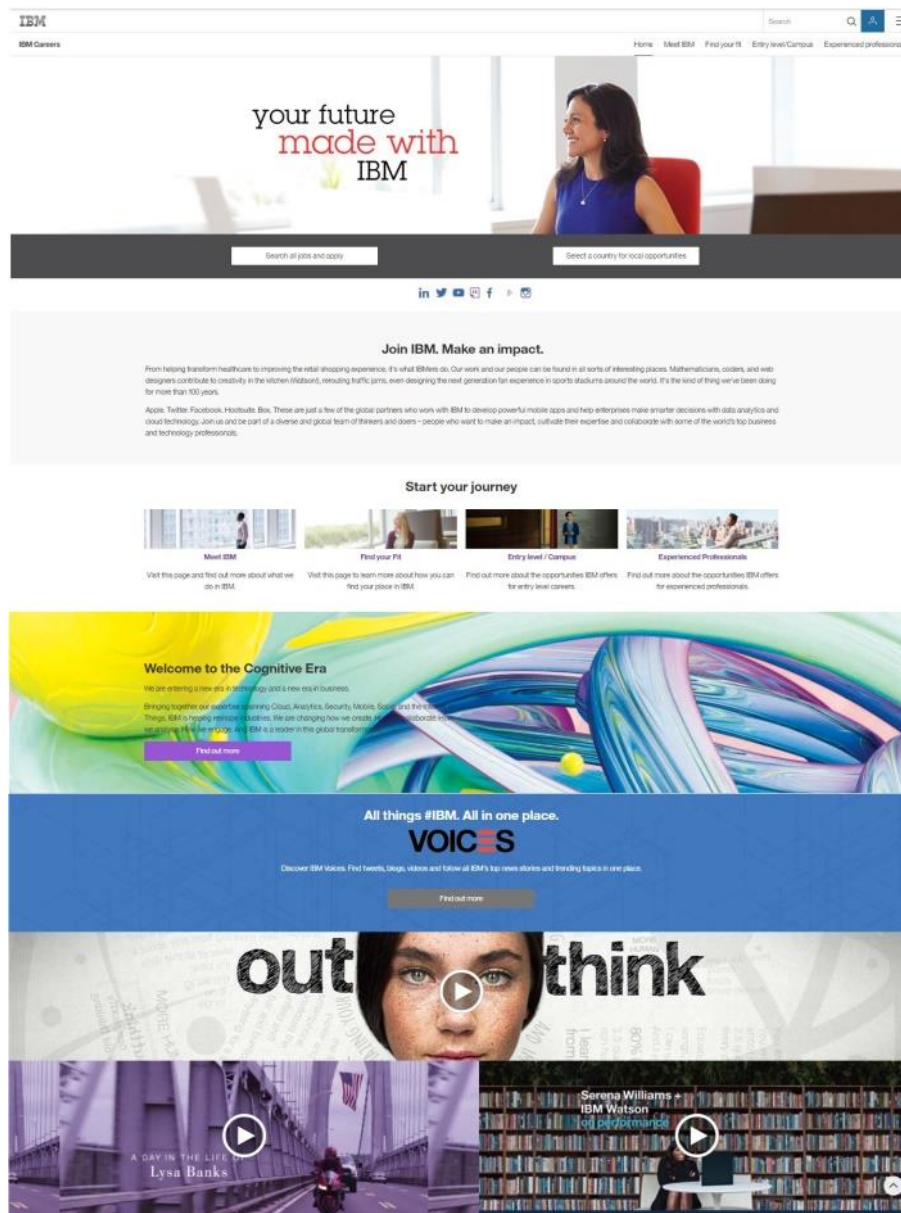


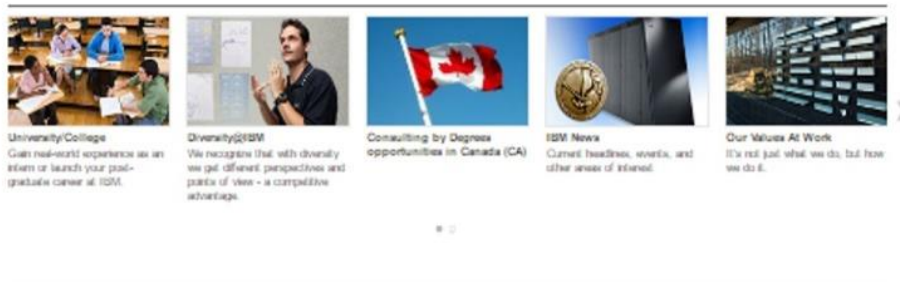
Image 24: screenshot of the US 'Careers' page



 **Select your country**
Global

[Search for jobs at IBM](#)

Why IBM?
Be IBM's next great hire.



IBMers in Action

IBM is filled with smart people, each of whom are actively involved in helping industries around the world do something better, more efficiently and more productively. Meet IBMers who are helping to build a smarter planet in their own unique ways.

Build Your Career at IBM

From consulting to research, software to sales, there is bound to be an opportunity for you to build the career you want at one of the most successful companies in history.

We are "Equal Opportunity" Employers

IBM is committed to creating a diverse environment and is proud to be an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, gender, gender identity or expression, sexual orientation, national origin, genetics, disability, age, or veteran status. IBM is also committed to compliance with all fair employment practices regarding citizenship and immigration status.

IBM is committed to compliance with the [Accessibility for Ontarians with Disabilities Act \(AODA\)](#) and [Human Rights Code](#) in the recruitment process. If you are an individual with a disability that requires a reasonable accommodation or are unable or limited in your ability to use or access our recruitment tool as a result of your disability, you can request reasonable accommodations in the recruitment process by sending an email to recruiting@ca.ibm.com.

Image 25: screenshot of the Canadian 'Careers' page

Similarities

Under the common references in the content, a number of examples stand out. One example is the slogan that we can find on the top of the page. This slogan says 'your future made with IBM' in both pages. Other examples include the search engine to look for a job, the menu to select a country, or the links to access the profiles of IBM on social media sites.

Navigating through the page and using the buttons of the navigation bar, it is possible to find other common references. Both pages include a section aimed to students and people who have never worked before. They also include descriptions of the IBM values, the main developments of the company, the positive aspects of working for IBM, and how IBM is contributing to make the world a better place. Other common ideational reference is the

description of the types of works which can be done at IBM and the inclusion of testimonials from current IBM employees.

As we can see, the central ideas remain the same in both the US and the Canadian web pages, but these ideas have been expressed with very different texts. In addition, the structure of the content, the use of images and videos, and the emphasis on the main ideas differ.

Differences

Omissions in the Canadian 'Careers' page include the access to the IBM jobs blog and the videos explaining some IBM developments or containing testimonials from people who work at IBM. Other omission affect a questionnaire in the section 'Find your fit' which allows people to know which job would be the most suitable for them.

Besides that, one important difference involves the perspective of the descriptions and explanations used to convince people to work at IBM. In this sense, the US page has a more aggressive promotional content, with emphasis on the developments and achievements of IBM. On the other hand, the Canadian page has a bigger emphasis on the personal benefits that an IBM employee would obtain, and the positive social aspects of the company: the communities for IBM employees and interns, the positive environment which allows employees to feel at ease within the company, the diversity and inclusion policies, the philosophy of the company, etc.

Regarding the additions in the Canadian page, it is also possible to find a link to consult specific job opportunities in Canada, a link to the 'Latest news' web page, and a whole section dedicated to the diversity and inclusion policies and minority groups.

Within the 'Careers' pages, it is possible to see that the changes in the content are deeper than the changes found in terms of adaptation. The main ideas are the same, but the texts and other elements used to express that ideas differ, as well as the perspective used to present those ideas. In addition, differently from the adapted pages, there is almost no content which remains without changes in both the US and the Canadian web pages.

11.1.2.5. Newly created pages

In this section, we analyze one of the web pages that have been specifically created for the Canadian website. This created page can be accessed from the list of links of the homepage, as well as the rest of the studied pages.

The created page of the Canadian website is titled 'Info Hub'. The particularity of this page is that it contains information about technology developments and industry-specific news related to Canada. Only by reading the headlines of the news releases, it is obvious that most of them are specifically related to this country. Some examples of these headlines include: 'Interac is bringing

Apple Pay to Canada'; 'Three Canadian universities to help IBM Watson tackle cybercrime'; 'Canadian Innovation Made Possible With IBM', etc.

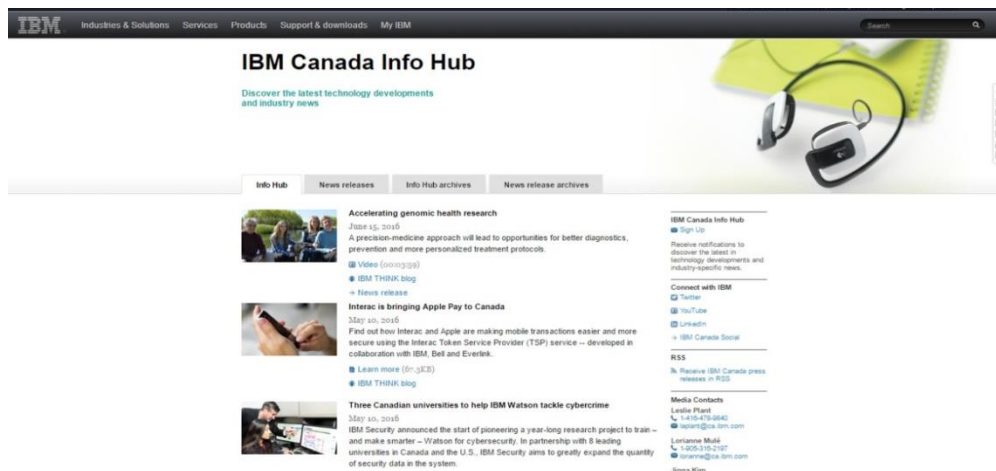


Image 26: screenshot of the Canadian page titled 'IBM Canada Info Hub'

The 'Info Hub' page is different from the page titled 'Latest news', which also exists in the US website. The page titled 'Latest news' contains general news releases about IBM, and the difference between this US page and the Canadian page is that the US 'Latest news' page is much more frequently updated and thus include a lot more news releases than the same Canadian page. On the contrary, the page titled 'Info Hub' is exclusive of the Canadian website and it includes news releases related to the researches and developments of IBM in Canada.

11.1.3. Level of cultural adaptation

As was done with the US version of the IBM website, we will analyze the level of cultural adaptation of the website in relation to the Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira. The score of Canada on the Hofstede's cultural dimensions is very similar to the score of the United States, as we can see in the following chart (The Hofstede Centre, 2016b):

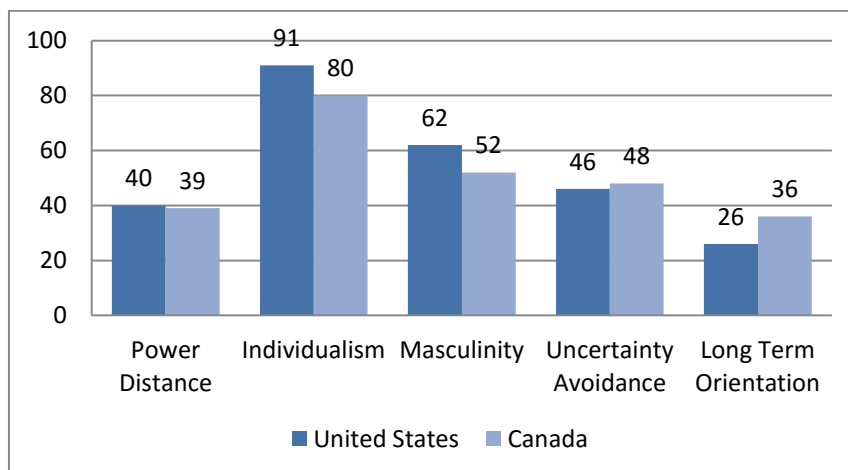


Figure 3: scores of Canada in Hofstede's cultural dimensions in comparison with the scores of the US

Given that the scores are very similar, there should not be great differences between both websites. Canada has a bit lower score on the individualism and masculinity scales, which means that the Canada website should have less aggressive promotional content, and more references to groups, social activities and interactions. As we have seen in the category of replaced pages, this is represented in the 'Careers' page. An analysis of the other pages shows that this trend is generalized in the Canadian website. Another difference affects the long term orientation, which is a bit higher in Canada. Again, this difference involves the references to relationships and social values, which are more represented in the Canadian website.

11.1.4. Degree of website localization

As mentioned in the theoretical framework, there are five degrees of website localization according to Pym's categorization: standardized, semi-localized, localized, highly localized, and culturally customized. As we have seen within this comparative analysis of the Canadian and the US websites, some cultural adaptations have been performed in the Canadian website, and some pages have been completely regenerated, although some pages have remained without any changes at all and some important cultural aspects, such as currencies, have not been totally adapted. Linguistic differences are not relevant in this analysis since the Canadian and the US English dialects are very close to each other.

Looking at the adaptations performed in the Canadian website, it is possible to say that this is a highly localized site, but this cannot be considered a culturally customized site since it has not been completely regenerated and adapted for the target locale.

11.2. Australia

11.2.1. Categories of the localized pages

The analysis of the localized IBM websites continues with the Australian website. As it was indicated before, the first step is to identify the web pages of the Australian site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. This is shown on the table included in the appendix 2.

11.2.2. Localization decisions

Once we have analyzed the categories of the localized Australian web pages, we will look at them in more detail in order to study the decisions that have been made during the localization process to remove, keep, adapt, replace, or create those pages and their elements.

11.2.2.1. Removed pages

As it happened with the Canadian IBM website, the only original web page that has been removed from the localized Australian website is the page titled 'Federal and State Contracts'. As it was previously explained, this specific page is aimed to the US government, and consequently it

does not appear either in the Australian IBM website, or the other localized versions of the IBM website.

11.2.2.2. Pages kept without changes

A total of 9 of the pages studied have been kept without changes in the Australian IBM website. This means that these pages can be accessed from the localized Australian website but they have not been adapted at all and belong to the original US website. In most of the cases, the navigation buttons in the Australian website indicate the pages that belong to the US website with the word 'US' in brackets next to the text of the navigation button.

As it was explained before, currencies, date formats, and numerical expressions are important culturally-related issues which do not change within these pages. The conventions to write numerical expressions are the same for the US, Australia, and other countries such as New Zealand and the UK (Williamson, 2008), so there is no problem with their adaptation for these locales. However, the conventions to write dates are different: in the US, dates are commonly written using the month-day-year format, while the preferred date format in Europe, Australia, and New Zealand is the day-month-year format. Despite the existing difference, date formats have not been adapted within these pages of the localized Australian website. Within these pages, currencies have not been adapted neither. They are kept in US dollars, although 1 US dollar is equal to 1.38 Australian dollars (News.com.au, 2016).

Differently to the Canadian website, all the telephone numbers to contact IBM have been adapted for the localized Australian website, and some pages include linguistic adaptations. This implies that some pages which were under the category of pages kept without changes do not belong to this category in the Australian website.

11.2.2.3. Adapted pages

A total of 13 of the studied pages have been adapted in the Australian IBM website, including the pages titled 'Terms of use' and 'Marketplace', which were considered pages kept without changes in the Canadian website. As it was previously said, a page is adapted when the content has been transferred from one locale to another locale, but with an omission, adaptation, or addition in the content. Regarding these differences in the content, the text and the multimedia content (images, videos, icons, etc.) are analyzed separately.

11.2.2.3.1. Written text

- Omissions: as it occurs with the localized Canadian website, omissions in these pages mostly affect the navigation buttons. Some navigation buttons are not relevant for the Australian website because they are linked to pages which are not adapted or do not exist in this site. Some examples include the omission of the link to the not adapted 'Watson' page in the main navigation bar, or the omission of the link to some not adapted

'Customer stories' in the page titled 'Commerce'. However, omissions may also affect other elements, such as news articles, as it occurs in the page titled 'About IBM'.

- Adaptations: adaptations within these pages include some linguistic changes related to the differences between the US and the Australian English dialects. These changes also affect the localized websites for New Zealand, the UK, and Ireland. Some examples include:
 - Changing the 'z' by an 's', in words such as 'organization' or 'personalize'.
 - Changing the double 'l' by a single 'l', in words such as 'fulfill'.
 - Changing the word 'color' by 'colour', and 'program' by 'programme'.
 - Using the word 'cheque', instead of 'check'.
 - Separating prefixes from the root term, as in the word 'reimagine', changed by 're-imagine'.

Other adaptations are related to the content and are aimed to include more relevant content for Australian users. Some examples are listed below:

- In the homepage, the first section has changed to include the announcement of an event which takes place in Australia on June.



Image 27: screenshot of the Australian homepage which shows the announcement of an event which takes place in Australia

- In the page titled 'Contact', addresses and telephone numbers have been adapted to the target locale.

Corporate headquarters:	Address
IBM Corporation	Australian Head Office
1 New Orchard Road	IBM Australia Ltd
Armonk, New York 10504-1722	Level 13
United States	IBM Centre
914-499-1900	601 Pacific Highway
	St Leonards NSW 2065.

Image 28: screenshot of the difference between the US and the Australian contact information

As it was indicated in the analysis of the Canadian website, there are other content adaptations which are not culturally related and are common to other localized versions of the IBM website.

- Additions: additions also occur within these pages. One important addition occurs in the page titled 'About IBM'. In this page, a text about IBM Australia has been added. This text includes one of the few currencies which appear in Australian dollars within the studied pages. In addition, the page titled 'Latest news' includes some news related to Australia that do not appear in the US website. This did not occur in the Canadian website because, as we have seen, the Canadian website included a completely new page for Canadian news.

11.2.2.3.2. Images and other multimedia content

Images, videos, and icons accompany the text and reinforce its message. In general, when the same written content appears in both the US and the Australian website, images, videos, and icons related to that content remain the same. Following this logic, when the written content changes or is removed in the localized websites, the same happens with the images and icons. Contrarily to the Canadian website, in the Australian website there are no important culturally related changes regarding the use of images and icons.

However, an important issue concerns the non-adaptation of the videos. Most of the videos remain the same in both the US and the Australian websites, and this means that the people talking in those videos have an American accent, which differs from the Australian accent. This is not a fundamental issue, since the content is still understandable, but this reduces the user's feeling of personalization and engagement with the website. This fact also occurs in the other localized websites.

11.2.2.4. Replaced pages

A total of 10 of the studied pages have been replaced in the Australian IBM website. These pages of the Australian website express a similar ideational content than the correspondent pages of the US website, but they differ in terms of semantic content and linguistic expression. Within these pages, the general idea and the communicative purpose is the same for both websites, but the content differs so much that these pages cannot be labelled as adapted pages.

As it was done with the Canadian pages, the replacement category is analyzed on an exemplary basis. This time, the example has been taken from the page titled 'Corporate responsibility'. This page was kept without changes in the Canadian website, but it has been replaced in the Australian website. The aim of this page is to instill the values of IBM and to show its compromise with societal issues, including the environment, community economic

development, employee well-being and diversity, etc. In this analysis, we study the similarities and differences between the US and the Australian 'Corporate responsibility' pages. The other replaced pages could be analyzed in the same way as the 'Corporate responsibility' pages.

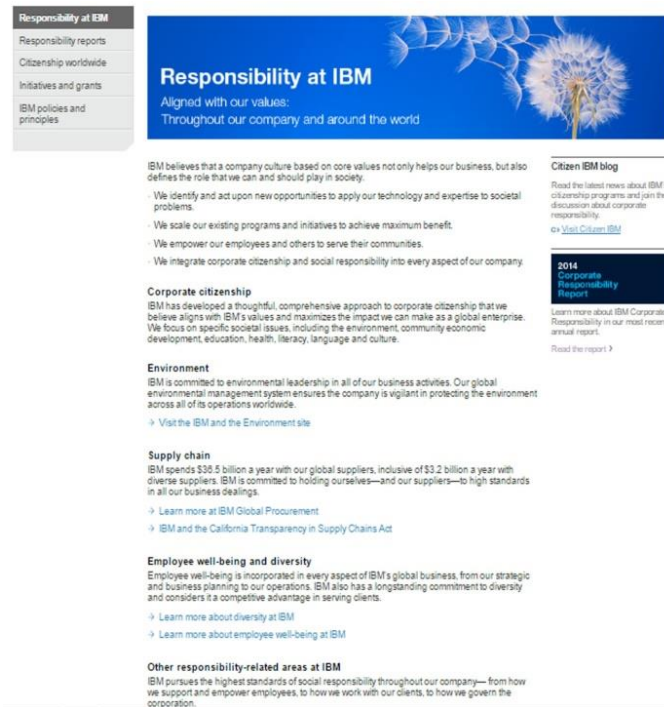


Image 29: screenshot of the US 'Corporate responsibility' page

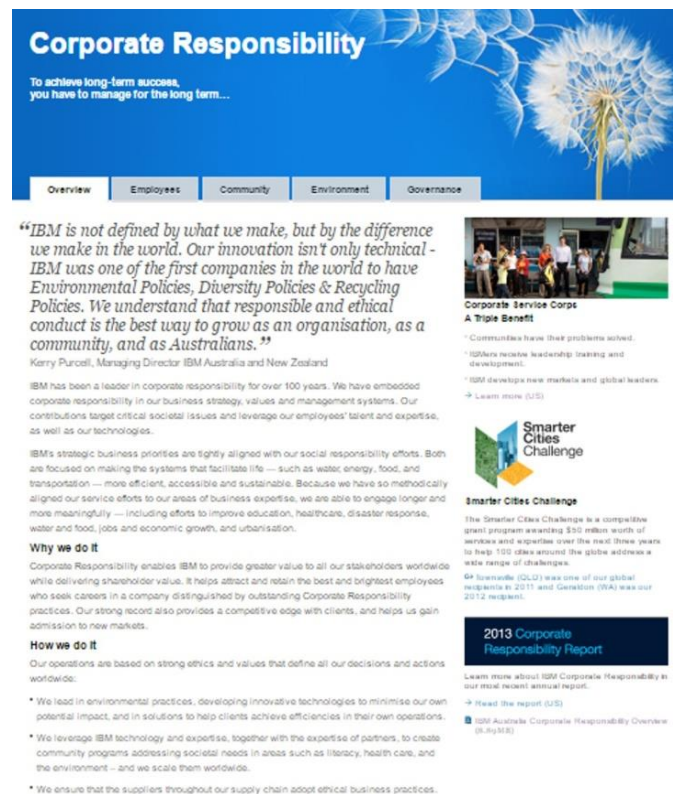


Image 30: screenshot of the Australian 'Corporate responsibility' page

Similarities

The US and the Australian 'Corporate responsibility' pages share some characteristics. They present the role of the company towards society and its main social fields of activity. They also include the corporate responsibility annual report, although it is from the year 2014 in the US page, while it is from the year 2013 in the Australian page. In addition, the main image on the top of the page, which shows a dandelion, is the same in both pages, although it is bigger in the Australian page. Despite the similarities in ideational content and the aim of the pages, there are a lot of differences regarding the structure, the texts, and the use of images and videos.

Differences

Differences between these pages start with the subtitle of the page. This subtitle makes reference to the long-term orientation approach in the Australian page. Other difference involves the addition of a quote from a Managing Director of IBM Australia and New Zealand in the Australian page.

The link to visit the Citizen IBM blog has been omitted in the Australian page, but other elements have been added. For example, there is a link to visit the page of the Corporate Service Cops, which are teams of IBM executives who help communities to grow economically; there is also a text and a link with information about a grant program and two Australian recipients of the grant; and there is a link to an overview of the Australian corporate responsibility program.

Other differences involve the perspective of the descriptions and explanations used to present the social concerns of IBM. In this sense, the US page is focused on presenting the main areas of social activity of the company, while the Australian page includes texts about why and how they are involved with social problems, giving more importance to the ethical values of the company. In addition, the US page includes more technical information, with more responsibility reports, descriptions of initiatives and grants, and the IBM policies and principles, while the Australian page omits that content and is more focused on directly explaining how they are improving society, with examples of actual projects, testimonials, and the presentation of several social initiatives ordered by area (employees, community, environment, and governance). The Australian page also includes photographs of people actually helping in social activities.

Within the 'Corporate responsibility' pages, it is possible to see that the changes in content are deeper than the studied changes for the adapted pages. The main ideas are the same, but the texts and other elements used to express that ideas differ, as well as the perspective used to present those ideas. In addition, differently from the adapted pages, there is almost no content which remains without changes in both the US and the Australian web pages.

11.2.2.5. Newly created pages

In this section, we comment one of the web pages that have been specifically created for the Australian website. This created page can be accessed from the list of links of the homepage, as well as the rest of the studied pages.

The created page is titled 'Australia Development Laboratory (ADL)'. IBM has some software development laboratories in different countries, and one of them is located in Australia, so a page for this laboratory has been created in the Australian website. This page contains information about the patents, developments, and services of the Australian laboratory. It also contains the possibility of applying for a job at the laboratory.

11.2.3. Level of cultural adaptation

As was done with the US and the Canadian versions of the IBM website, we analyze the level of cultural adaptation of the website in relation to Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira. The scores of Australia on Hofstede's cultural dimensions are very similar to the scores of the United States, as we can see in the following chart (The Hofstede Centre, 2016b):

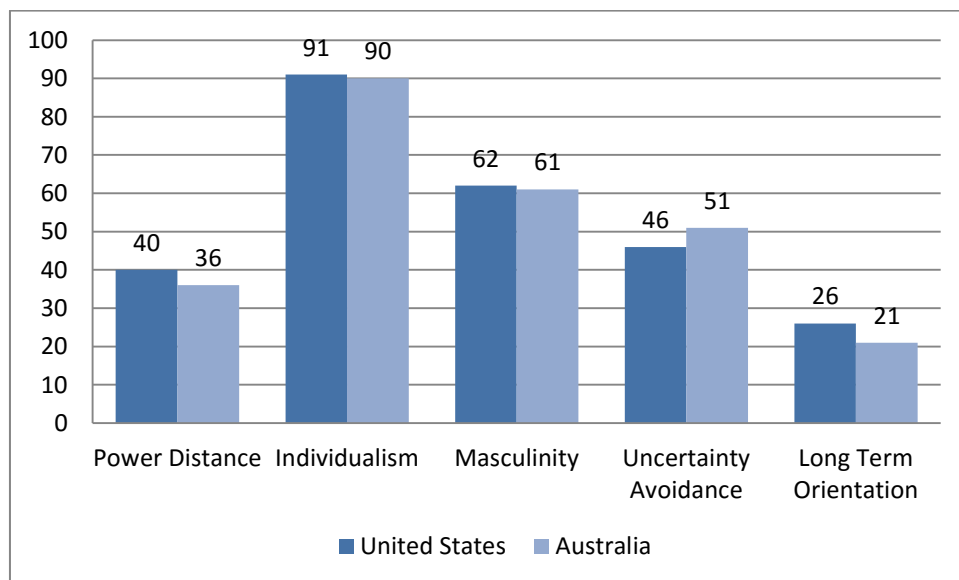


Figure 4: scores of Australia in Hofstede's cultural dimensions in comparison with the scores of the US

Given that the scores are very similar, there should not be great differences between both websites. However, we have seen in the category of replaced pages that the Australian website contains some features correspondent to high long-term orientation cultures: references to long-term success, emphasis on ethical values, and examples of virtuous behavior in photographs. This may seem strange, because those changes do not correspond to an increase in the long-term orientation score.

As we will see in the analysis of the New Zealand's website, New Zealand has a much higher score on the long-term orientation scale. However, the Australian and the New Zealand's websites have been adapted in a very similar way. It seems that both the Australian and the New Zealand's websites have been localized almost identically, and this implies that both websites share the cultural features for long-term orientation cultures, although these features only correspond to the New Zealand's culture.

11.2.4. Degree of website localization

As it was said in the theoretical framework, there are five degrees of website localization according to Pym's categorization: standardized, semi-localized, localized, highly localized, and culturally customized. As we have seen within this comparative analysis of the Australian and the US websites, some cultural adaptations have been performed in the Australian website, and some pages have completely changed. Some changes include linguistic adaptations and specific references to Australia. However, some pages have remained without any changes at all, and some important cultural aspects, such as currencies, have not been totally adapted. In addition, some cultural features for long-term orientation cultures, which only correspond to the New Zealand's characteristics, also appear in the Australian website.

Looking at the adaptations performed in the Australian website, it is possible to say that it is highly localized, but this cannot be considered a culturally customized site since it has not been completely regenerated and adapted for the target locale.

11.3. New Zealand

11.3.1. Categories of the localized pages

The analysis of the localized IBM websites continues with the New Zealand's website. As it was indicated before, the analysis of each localized version starts by identifying the web pages of the studied localized site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. This is shown on the table included in the appendix 2.

11.3.2. Localization decisions

Once we have analyzed the categories of the localized New Zealand's web pages, we will look at them in more detail in order to study the decisions that have been made during the localization process to remove, keep, adapt, replace, or create those pages and their elements.

11.3.2.1. Removed pages

As it happened with the Canadian and the Australian IBM websites, the only original web page that has been removed from the localized New Zealand's website is the page titled 'Federal and State Contracts'. As it was previously explained, this specific page is aimed to the US

government, and consequently it does not appear either in the New Zealand’s IBM website, or the other localized versions of the website.

11.3.2.2. Pages kept without changes

A total of 9 of the studied pages have been kept without changes in the New Zealand’s IBM website. This means that these pages can be accessed from the localized New Zealand’s website but they have not been adapted at all and belong to the original US website. In most of the cases, the navigation buttons in the New Zealand’s website indicate the pages that belong to the US website with the word ‘US’ in brackets next to the text of the navigation button.

As explained before, currencies, date formats, and numerical expressions are important culturally-related issues which do not change within these pages. It was already said that the conventions to write numerical expressions are the same for the US, New Zealand, and other countries such as Australia and the UK (Williamson, 2008), so there is no problem with their adaptation for these locales. However, the conventions to write dates are different: in the US, dates are commonly written using the month-day-year format, while the preferred date format in Europe, New Zealand, and Australia is the day-month-year format. Despite the existing difference, date formats have not been adapted within these pages of the localized New Zealand’s website. Within these pages, currencies have not been adapted neither. They are kept in US dollars, although 1 US dollar is equal to 1.44 New Zealand dollars (News.com.au, 2016).

11.3.2.3. Adapted pages

A total of 13 of the pages studied have been adapted in the New Zealand’s IBM website. They are the same pages that have been adapted in the Australian website and the changes are very similar. In fact, all the localized versions have been adapted by following similar patterns, and there are little culturally relevant changes in the New Zealand’s website, apart from the linguistic changes commented in the analysis of the Australian website. Moreover, some pages belong to the Australian website, and it is indicated in the navigation buttons which give access to those pages with the abbreviation ‘AU’ in brackets next to the text of the navigation button. The most relevant changes included in the New Zealand’s adapted pages are:

- The contact information (telephones, addresses, etc.), which have been adapted for New Zealand.

Corporate headquarters:	Auckland
IBM Corporation	IBM Centre
1 New Orchard Road	82 Wyndham Street
Armonk, New York 10504-1722	Auckland City 1010
United States	
914-499-1900	0800 746 748

Image 31: screenshot of the difference between the US and the New Zealand’s contact information

- The news articles in the page titled 'Latest news', which include some news related to New Zealand.
- The text about IBM New Zealand and its managers in the page titled 'About IBM'.
- The inclusion in the homepage of the announcement of an event which takes place in Australia on June.

11.3.2.4. Replaced pages

A total of 10 of the pages studied have been replaced in the New Zealand's website. As it happened with the adapted pages, the replaced pages of the New Zealand's website are almost identical to the replaced pages of the Australian website. Consequently, we take the same example used to analyze the replaced pages in the Australian website, and we study the differences between the Australian and the New Zealand's 'Corporate responsibility' pages, instead of comparing them to the US pages. The reason is that we have already seen the main localization changes which were performed within these pages, and we will complete it with the specific changes of the New Zealand's pages.

11.3.2.4.1. Differences between the Australian and the New Zealand's 'Corporate responsibility' pages

It was mentioned that the Australian 'Corporate responsibility' page included a quote from a Managing Director of IBM Australia and New Zealand. This quote has been changed by another quote said by another Managing Director of IBM New Zealand. It was also mentioned that the Australian page included a text and a link with information about a grant program and two Australian recipients of the grant. The text has remained and the link has changed to include a New Zealand's recipient of the grant. These may seem little changes, but they are important to increase the user's feeling of personalization and improve their engagement with the website.

Navigating through the links of the page, we can find some texts where the content has remained the same, but the references to Australia or New Zealand have changed. Some illustrative examples are listed below:

- In the Australian page, we can read: « Helping Australia's not-for-profit and educational organisations take advantage of these technologies requires more than cheque book philanthropy».
- However, in the New Zealand's page, we can read: «Helping New Zealand's not-for-profit and educational organisations take advantage of these technologies requires more than cheque book philanthropy».
- In the Australian page, we can read: «By fusing our technology and volunteering efforts with our partners' expertise, we are improving the lives of our communities throughout Australia».

However, in the New Zealand's page, we can read: «By fusing our technology and volunteering efforts with our partners' expertise, we are improving the lives of our communities throughout New Zealand».

- Apart from the direct references to the countries' names, the numbers of employees and volunteers participating in the IBM social projects have been adapted for the target locale, while the rest of the text remains without changes.

For example, in the Australian page, we can read: «In Australia, more than 5,200 employees have been engaged in the program, providing over 415,000 volunteer hours since program inception in 2003».

However, in the New Zealand's page, we can read: «In New Zealand, more than 300 employees have been engaged in the program, providing over 25,000 volunteer hours since the program inception in 2003».

Other changes involve the photographs used to illustrate the IBM social projects. Some of them show people collaborating in social projects in Australia, and they have changed to show people collaborating in social projects in New Zealand.

In summary, the Australian and the New Zealand's replaced pages have a very similar content and share the majority of texts and images. Changes only involve the specific references to each country, while the rest of the content remains the same. However, both the Australian and the New Zealand's websites are very different from the US website, as we saw before.

11.3.2.5. Newly created pages

In the New Zealand's website, there are no pages specifically created for the target locale.

11.3.3. Level of cultural adaptation

As it was done with the other versions of the IBM website, we analyze the level of cultural adaptation of the website in relation to the Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira. The scores of New Zealand on the Hofstede's cultural dimensions are represented in the following chart (The Hofstede Centre, 2016b):

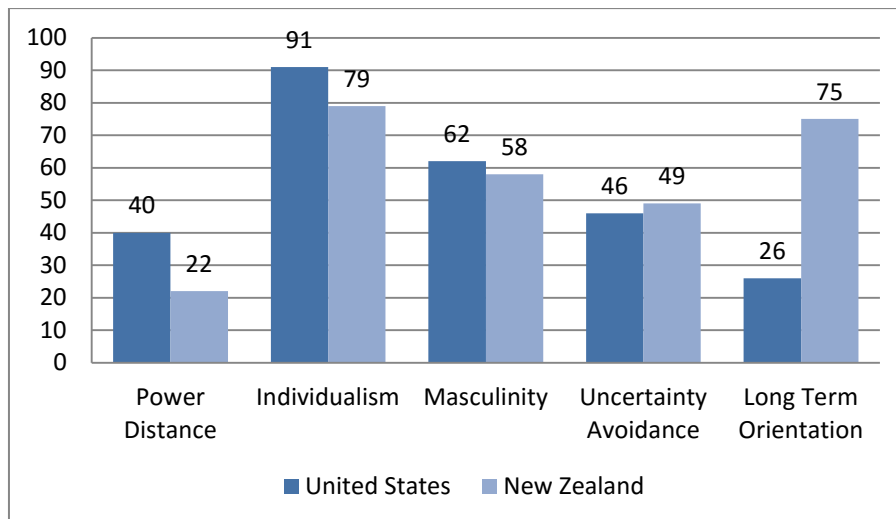


Figure 5: scores of New Zealand in Hofstede's cultural dimensions in comparison with the scores of the US

As we can see, New Zealand has a much greater score than the US in the long-term orientation scale. As we commented in the analysis of the Australian website, some cultural features corresponding to long-term orientation cultures appear in both the Australian and the New Zealand's website, although these cultural features should only appear in the New Zealand's website: references to long-term success, emphasis on ethical values, and examples of virtuous behavior in photographs.

11.3.4. Degree of website localization

As it was said in the theoretical framework, there are five degrees of website localization according to Pym's categorization: standardized, semi-localized, localized, highly localized, and culturally customized. As we have seen within this analysis of the New Zealand's website, some cultural adaptations have been performed, and some pages have been completely regenerated. Some changes include linguistic adaptations, specific references to New Zealand, and cultural adaptations for long-term orientation cultures. However, some pages have remained without any changes at all, and some important cultural aspects, such as currencies, have not been totally adapted.

Looking at the adaptations performed in the New Zealand's website, it is possible to say that it is highly localized, but this cannot be considered a culturally customized site since it has not been completely adapted for the target locale.

11.4. United Kingdom

11.4.1. Categories of the localized pages

The analysis of the localized IBM websites continues with the UK website. As it was indicated before, the analysis of each localized version starts by identifying the web pages of the studied localized site that have been removed, kept without changes, adapted, replaced, or

created in comparison to the studied pages of the US site. This is shown on the table included in the appendix 2.

11.4.2. Localization decisions

Once we have analyzed the categories of the localized UK web pages, we will look at them in more detail in order to study the decisions that have been made during the localization process to remove, keep, adapt, replace, or create those pages and their elements.

11.4.2.1. Removed pages

As it happened with the other localized websites, the only original web page that has been removed from the localized UK website is the page titled 'Federal and State Contracts', which was aimed to the US government.

11.4.2.2. Pages kept without changes

A total of 9 of the studied pages have been kept without changes in the UK website. This means that these pages can be accessed from the localized UK website but they have not been adapted at all and belong to the original US website. In most of the cases, the navigation buttons in the UK website indicate the pages that belong to the US website with the word 'US' in brackets next to the text of the navigation button.

The pages which are kept without changes in the UK website are the same that were kept without changes in both the Australian and the New Zealand's websites. Consequently, they share the same problems with the conventions to write dates and the conversion of currencies. The preferred format to write dates in Europe is the day-month-year format, but it has not been adapted. Within these pages, currencies have not been adapted neither. They are kept in US dollars, although 1 US dollar is equal to 0.69 British pounds (News.com.au, 2016).

11.4.2.3. Adapted pages

A total of 15 of the studied pages have been adapted in the UK website. As it was said before, all the localized versions have been adapted by following similar patterns, and there are little culturally relevant changes in the UK website, apart from the linguistic changes commented in the analysis of the Australian website. The most relevant changes included in the UK adapted pages are:

- The contact information (telephones, addresses, etc.), which have been adapted for the UK.

Corporate headquarters:

IBM Corporation
1 New Orchard Road
Armonk, New York 10504-1722
United States
914-499-1900

Mailing address:

UK Head Office
IBM United Kingdom Limited
PO Box 41, North Harbour
Portsmouth
Hampshire, PO6 3AU
Tel: +44 (0) 23 92 56 1000

Image 32: screenshot of the difference between the US and the UK contact information

- The news articles in the page titled 'Latest news', which include some news related to the UK.
- The text about IBM United Kingdom and its managers in the page titled 'About IBM'.
- The adaptation of the image of a map in the page titled 'Connect with a sales representative'. As it happened with the Canadian website, the image has changed to represent the map of the target country.

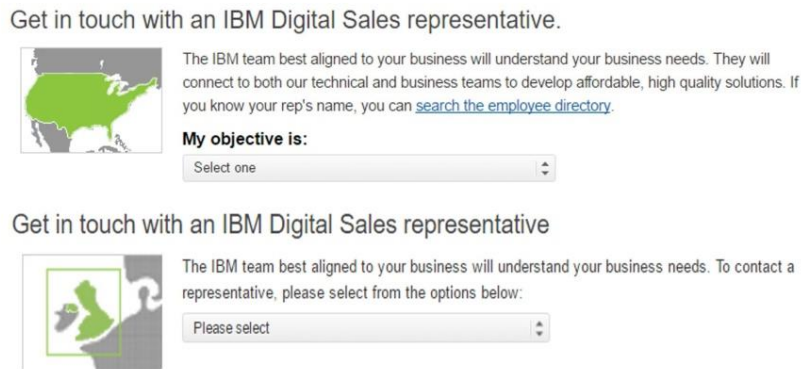


Image 33: screenshots of the maps of the US and the UK pages titled 'Connect with a sales representative'

- The inclusion in the homepage of the announcement of an event which takes place in London on June.



Image 34: screenshot of the UK homepage which shows the announcement of an event which takes place in London

11.4.2.4. Replaced pages

A total of 8 of the studied pages have been replaced in the UK website. These pages of the UK website express a similar ideational content than the correspondent pages of the US website, but they differ in terms of semantic content and linguistic expression. Within these pages, the general idea and the communicative purpose is the same for both websites, but the content differs so much that these pages cannot be labelled as adapted pages.

As it was done with the other localized pages, the replacement category is analyzed on an exemplary basis. Again, the example has been taken from the page titled 'Corporate responsibility'. This page has also been replaced in the UK website, but it is different from the Australian and the New Zealand's pages that we studied before. The aim of this page is to instill the values of IBM and to show its compromise with societal issues. In this analysis, we will study the similarities and differences between the US and the UK 'Corporate responsibility' pages. The other replaced pages could be analyzed in the same way as the 'Corporate responsibility' pages.



About IBM | **UK Corporate Citizenship**

How we support local communities | IBM Retirees | Schools | Charities

IBM has a long standing history of supporting and empowering local communities through its corporate responsibility strategy and a variety of focused programmes. We use our technology and business skills innovatively to make a difference and improve quality of life for communities. We focus on regions of the UK that are in close proximity to an [IBM office](#) and those that are disadvantaged through strategic, long term programmes that use IBM employees' time, skills and expertise.

We concentrate on providing support to the **education** and **not for profit sectors**. Below are key priorities – although this is not an exhaustive list.

- Transforming education for 21st century jobs:
 - Providing young people with relevant knowledge and skills needed to be successful today.
 - Engaging and inspiring the next generation in order to pursue a career in the technology industry.
 - Providing educational resources for teachers to support them in classrooms with a strong focus on STEM (Science, Technology, Engineering and Maths) education.
- Helping build the capacity of the not for profit sector (i.e. registered charities and social enterprises) by sharing the knowledge and skills of IBM volunteers so they are enabled to better support their communities and service users.

world community grid

Anyone can support this programme - which harnesses spare computing power from people's computers/smartphones/tablets and donates it directly to humanitarian research projects around the world. It does this by distributing millions of small data-based computer-based experiments to thousands of people's devices. It gathers the results and sends them back to researchers, who analyse the data for patterns, getting them closer to those world-changing results - faster.

Find out more or get started today by signing up [here](#) and downloading a free, small software agent (similar to a screensaver) onto your PC/laptop. We'd also love you to spread the word with friends, family and colleagues.

Overview of IBM's Approach to Corporate Responsibility

Watch the video (00:02:12)

IBM Robo Challenge 2014

Watch the video (00:04:28)

Contact us:

Enquire

Follow us:

Twitter
Flickr

Related Links

- IBM Corporate Responsibility Report
- IBM and the environment
- IBM Recruitment
- Responsibility at IBM (US)

Image 35: screenshot of the UK 'Corporate responsibility' page

Similarities

The US and the UK 'Corporate responsibility' pages share some characteristics, but they are limited to the aim of presenting the role of the company towards society and its main social fields of activity. Apart from that, the texts, images, videos, and other elements are different, although they are used to present similar ideas of social problems which are important for IBM.

Differences

The US page is focused on presenting the main areas of social activity of the company, and it provides some responsibility reports, descriptions of initiatives and grants, and the IBM policies and principles. The UK page omits most of the reports, general descriptions, and policies to focus on the main IBM social programs in the UK, including explanations on how they are helping with their programs, examples of some actual social programs, and images and videos which allow us to see some of their programs in action, with explanations from IBM employees. In summary, the US page provides more general information, while the UK page explains their programs in more detail. Besides that, it is worth mentioning that this page contains some of the few videos which have been recorded by British people, with British accent, being adapted for the target locale.

In addition, the main social concerns differ from one page to another. The US page gives more importance to the areas of corporate citizenship, environment, supply chain, and employee well-being and diversity. These areas also had some importance in the Australian and the New Zealand's pages, but not so much in the UK page. The UK page is mainly focused on helping communities, which have a great importance within this page, improving education, helping not for profit sectors, and providing volunteering options for IBM retirees. Apart from that, the UK page also calls the user to participate, and give them the option to donate to humanitarian research projects around the world.

Within the 'Corporate responsibility' pages, it is possible to see that the changes in the content are deeper than the studied changes for the adapted pages. The main ideas are the same, but the texts and other elements used to express that ideas differ, as well as the perspective used to present those ideas. In addition, differently from the adapted pages, there is almost no content which remains without changes in both the US and the UK web pages.

11.4.2.5. Newly created pages

In this section, we comment on two of the web pages that have been specifically created for the UK website. These newly created pages can be accessed from the list of links of the homepage, as well as the rest of the studied pages.

The first of these newly created pages is titled 'Computer Services Industry (CSI)'. This page is aimed to CSI firms which are willing to collaborate or are currently collaborating with IBM.

This page provides information on IBM capabilities, offerings, skills enablement and support, and enables CSI firms to understand how they can work with IBM. The information of this page is not specific for the UK, given that its content is also useful for other locales. However, this page did not appear in the previous studied websites.

The second created page is titled ‘Managed Service Provider’. This page is aimed to enterprises which offer technology services. The page offers information on the services and solutions which IBM can provide to this kind of enterprises. Again, this page is not specific for the UK, because its content is useful for other locales as well. However, this page did not appear in the previous studied websites, but we will see that a very similar page also exists in the Italian website.

Although these two pages are only available in the UK website, it is worth mentioning that the other localized websites included information about the Computer Services Industry and the Managed Service Providers in other pages which were not included in this study.

11.4.3. Level of cultural adaptation

As it was done with the other versions of the IBM website, we will analyze the level of cultural adaptation of the website in relation to Hofstede’s cultural dimensions and the cultural website features identified by Singh and Pereira. The scores of the UK on the Hofstede’s cultural dimensions are represented in the following chart (The Hofstede Centre, 2016b):

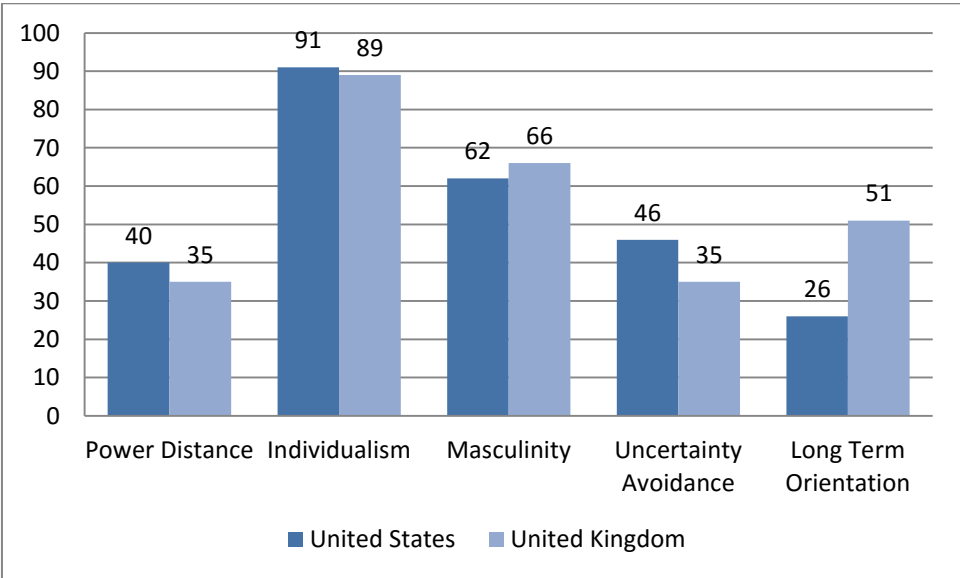


Figure 6: scores of the UK in Hofstede’s cultural dimensions in comparison with the scores of the US

As we can see, the UK has a greater score than the US in the long-term orientation scale. As it happened with the Australian and the New Zealand’s websites, there are some cultural features in the UK website which correspond to long-term orientation cultures: as we saw in the

studied replaced page, the emphasis on communities, ethical values, and virtuous behavior is bigger in the UK website than in the US website.

11.4.4. Degree of website localization

As it was said in the theoretical framework, there are five degrees of website localization according to Pym's categorization: standardized, semi-localized, localized, highly localized, and culturally customized. As it happened with the other localized websites, the UK website may be considered as highly localized, but it is not a culturally customized site. The reason is that some cultural adaptations have been performed, but some pages have remained without any changes at all, and some important cultural aspects, such as currencies, have not been totally adapted.

11.5. Ireland

11.5.1. Categories of the localized pages

The analysis of the localized IBM websites continues with the Irish website. As it was indicated before, the analysis of each localized version starts by identifying the web pages of the studied localized site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. This is shown on the table included in the appendix 2.

11.5.2. Localization decisions

Once we have analyzed the categories of the localized Irish web pages, we will look at them in more detail in order to study the decisions that have been made during the localization process to remove, keep, adapt, replace, or create those pages and their elements.

11.5.2.1. Removed pages

It is worth mentioning that the Irish IBM website is the most different site of all the studied sites. However, this does not mean that this is more culturally adapted. In fact, the Irish website is a simplified version of the US website, with less content and images. This is why 4 pages have been removed from the Irish website.

11.5.2.2. Pages kept without changes

A total of 11 of the studied pages have been kept without changes in the Irish website. This means that these pages can be accessed from the localized Irish website but they have not been adapted at all and belong to the original US website. In most of the cases, the navigation buttons in the Irish website indicate the pages that belong to the US website with the word 'US' in brackets next to the text of the navigation button.

The pages which are kept without changes in the Irish website share the same problems than the Australian, the New Zealand's, and the UK websites: the conventions to write dates and the conversion of currencies. The preferred format to write dates in Europe is the day-month-year

format, but it has not been adapted. Within these pages, currencies have not been adapted neither. They are kept in US dollars, although 1 US dollar is equal to 0.88 euros (currency in Southern Ireland) or 0.69 British pounds (currency in Northern Ireland) [07/06/2016] (News.com.au, 2016b).

11.5.2.3. Adapted pages

A total of 8 of the studied pages have been adapted in the Irish website. As it was said before, all the localized versions have been adapted by following similar patterns, and there are little culturally relevant changes in the Irish website, apart from the linguistic changes commented in the analysis of the Australian website. The most relevant changes included in the Irish adapted pages are:

- The contact information (telephones, addresses, etc.), which have been adapted for Ireland.

Corporate headquarters:	Mailing address
IBM Corporation	IBM House
1 New Orchard Road	Shelbourne Road,
Armonk, New York 10504-1722	Ballsbridge,
United States	Dublin 4
914-499-1900	Phone number
	01-8154000

Image 36: screenshot of the difference between the US and the Irish contact information

- The news articles in the page titled 'Latest news', which include some news related to Ireland.
- The text about IBM Ireland and its managers in the page titled 'About IBM'.

11.5.2.4. Replaced pages

A total of 10 of the studied pages have been replaced in the Irish website. These pages of the Irish website express a similar ideational content than the correspondent pages of the US website, but they differ in terms of semantic content and linguistic expression. Within these pages, the general idea and the communicative purpose is the same for both websites, but the content differs so much that these pages cannot be labelled as adapted pages.

However, the case of the Irish website is different from the rest of the localized websites. The replaced Irish pages can be divided into two categories: pages that have been replaced exactly in the same way that the pages of other localized sites ('Analytics', 'Cloud computing', 'MobileFirst', 'Security', 'Social business', 'Careers', and 'Accessibility'), and pages that have been replaced by simplifying them ('Homepage', 'Products', 'Services', and 'Industries'). Moreover, a page of the first group, 'MobileFirst', belongs to the UK website. As it happens with the pages kept without changes, it is indicated in the navigation button which gives access to the page with the

word 'UK' in brackets next to the text of the navigation button. Other pages, not included in this study, also belong to the UK website. On the other hand, the second group of pages has practically become a mere list of links, with few images and almost no text.

11.5.2.5. Newly created pages

The Irish homepage may seem a mere bunch of links. Most of these links give access to pages that also exist in the other localized sites, although they appear in different places of the websites. However, after investigating the links of the homepage, it is possible to find that they give access to some pages which are exclusive to the Irish website. Two of these newly created pages are titled 'IBM Ireland Lab' and 'IBM Research – Ireland'. These pages are dedicated to the development laboratory of IBM in Ireland, offering information about their research programs, developments, and employees, and giving the option of applying for a job at the laboratory. They are similar to the Australian page which was dedicated to the laboratory of IBM in Australia. Another created page is titled 'IBM locations in Ireland', and it offers information about the IBM offices in Ireland. A similar page exists in the UK website, but it is not accessible from the homepage.

11.5.3. Level of cultural adaptation (Hofstede)

As it was done with the other versions of the IBM website, we analyze the level of cultural adaptation of the website in relation to the Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira. The scores of Ireland on the Hofstede's cultural dimensions are represented in the following chart (The Hofstede Centre, 2016b):

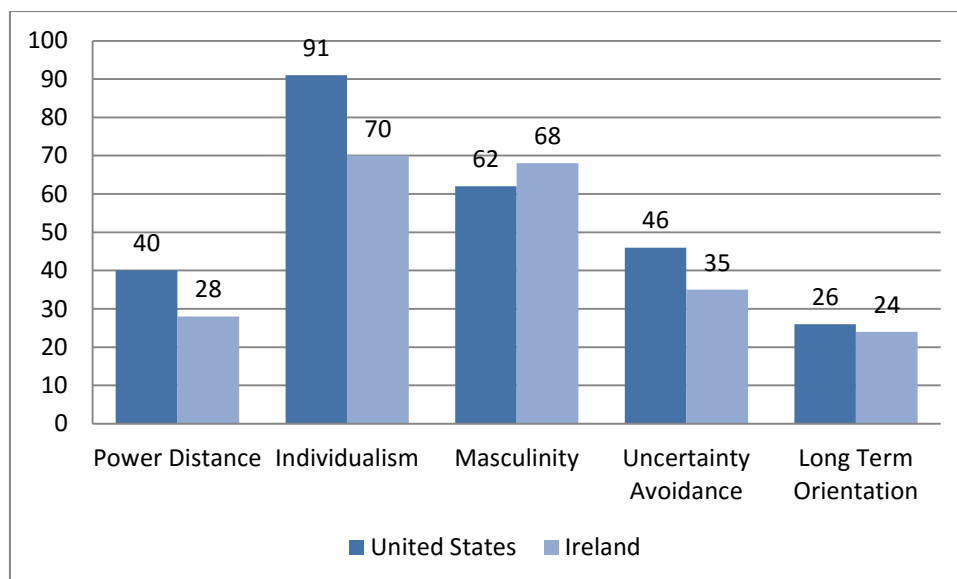


Figure 7: scores of Ireland in Hofstede's cultural dimensions in comparison with the scores of the US

As we can see, the most relevant difference between the scores of the US and the scores of Ireland occurs in the individualism scale. However, as it was said before, the Irish website is

very simple and only basic cultural changes have been performed. It could be said, maybe, that the newly created pages for the IBM laboratory in Ireland use some cultural features related to more collectivist cultures, such as the 'we approach', but this is not relevant since the use of the 'we approach' is due to the fact that the page is presenting the IBM laboratory and it needs that resource to explain its characteristics. That is not culturally related, and it also occurs in the page of the Australian laboratory, although this is a more individualistic culture.

11.5.4. Degree of website localization

As it was said in the theoretical framework, there are five degrees of website localization according to Pym's categorization: standardized, semi-localized, localized, highly localized, and culturally customized. As we have seen, the Irish website is different from the other localized websites, since it is very simple and it has little cultural adaptations, even less than the other localized websites. This is why it can be considered that the Irish website has been localized, since there are linguistic adaptations, adaptations for the contact information and the news, and there are some newly created pages, but the rest of the content is a simplified version of the US website or comes from the other localized websites.

11.6. Italy

11.6.1. Categories of the localized pages

The analysis of the localized IBM websites continues with the Italian website. As it was indicated before, the analysis of each localized version will start by identifying the web pages of the studied localized site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. This time, the category of translated pages has been added to the list. This is shown on the table included in the appendix 2.

11.6.2. Localization decisions

Once we have analyzed the categories of the localized Irish web pages, we will look at them in more detail in order to study the decisions that have been made during the localization process to remove, keep, translate, adapt, replace, or create those pages and their elements.

11.6.2.1. Removed pages

As it happened with the other localized websites, the only original web page that has been removed from the localized Italian website is the page titled 'Federal and State Contracts', which was aimed to the US government.

11.6.2.2. Pages kept without changes

A total of 9 of the studied pages have been kept without changes in the Italian website. This means that these pages can be accessed from the localized Irish website but they have not been adapted at all and belong to the original US website. In most of the cases, the navigation

buttons in the Italian website indicate the pages that belong to the US website with the word 'US' in brackets next to the text of the navigation button.

The pages which are kept without changes in the Italian website do not only present problems with the conventions to write dates and numerical expressions and the conversion of currencies. In fact, these pages have not even been translated, which means that Italian users have to understand English in order to have full access to the IBM website. In addition, the forms to create an account in the page titled 'Sign-In' or purchase a product in the page titled 'Marketplace' remain in English as well.

11.6.2.3. Translated pages

A total of 5 of the studied pages have been translated in the Italian website. This category is exclusive to the Italian website, given that this is the only studied localized website where the language changes. It is important to remind that one page is considered translated when there is a transfer of texts from the original website to the localized website. These texts must have similar ideational content and text-linguistic expression on the two websites. This is different from the category of adapted pages, because those pages also include the transfer of content from one website to another website, but with an omission, adaptation, or addition in the content.

These pages can be analyzed through their translation strategies:

In general, the translation of these pages in the Italian website reflects the content and features of the source text (ST) very closely and deviates little from this. Consequently, the translation of some sentences of the text may rely under the category of 'literal translation'. Some examples include:

- IBM Knowledge Center: The central location for finding and organizing information about IBM products. -> IBM Knowledge Center: L'ubicazione centrale per trovare e organizzare le informazioni sui prodotti IBM.
- IBM may also make improvements or changes in the products, services, or programs described in this site at any time without notice. -> IBM può anche apportare miglioramenti o modifiche ai prodotti, servizi o programmi descritti in questo sito in qualsiasi momento, senza preavviso.

However, some changes in the sentences are frequently necessary, although the texts continue to deviate little from the ST. These changes involve the use of the following strategies:

- Transposition/Recategorization, as in the following example, which includes a nominalization:
 - Explore how IBM Knowledge Center *has improved and changed* -> Guarda i *miglioramenti ed i cambiamenti* di IBM Knowledge Center.

- Expansion, as in the following examples:
 - To contact you for customer satisfaction surveys, market research or in connection with certain transactions. -> *Qualora tu abbia espresso il tuo consenso, per contattarti e sondare il tuo grado di soddisfazione, per ricerche di mercato o nell'ambito di determinate transazioni.*
 - By accessing, or using this Web site, you acknowledge that you have read, understand, and agree to be bound by these terms. -> *Accedendo, visionando o utilizzando questo sito Web, il licenziatario accetta di aver letto, compreso ed accettato tali clausole.*
- Contraction, as in the following examples:
 - Learn more about *my* support programs -> *Scopri di più sui programmi di supporto.*
 - *In addition*, we may also collect information relating to your use of our Web sites through the use of various technologies -> *IBM raccoglie anche le informazioni relative all'uso dei siti Web tramite varie tecnologie.*
- Particularizing, as in the following example:
 - The following are terms of a legal agreement between *you* and IBM. -> *Di seguito sono elencate le clausole di un accordo legale tra il licenziatario e IBM.*
- Restructuring the sentences, as in the following examples:
 - By IBM and selected organizations for marketing purposes if you have permitted such use. -> *Qualora tu abbia espresso il tuo consenso, per contattarti direttamente o attraverso terze parti selezionate, ai fini di marketing.*
 - If you do not agree to these terms, please do not use this Web site. -> *Si prega di non utilizzare questo sito Web se non si accettano tali clausole.*
 - From time to time, this Web site may contain technical inaccuracies or typographical errors, and we do not warrant the accuracy of any posted information. -> *Non è assicurata o garantita la correttezza, l'attualità o la completezza delle informazioni su questo sito Web, e questo sito potrebbe contenere inesattezze tecniche o errori tipografici.*

Other important aspect of the translation of these pages is the phenomenon of borrowing some terms from the source language. Commonly, the borrowed terms belong to the field of digital technologies. Some examples are listed below.

- You may also turn off *cookies* in your *browser*. -> *Puoi anche disattivare i cookie del browser.*

- IBM may block any *crawlers* in its sole discretion. -> IBM può bloccare in qualsiasi momento e a sua unica discrezione ogni *Web crawler*.
- Provide *feedback* -> Fornisci *feedback*
- IBM *Online Privacy Statement Highlight*. -> Punti salienti delle Norme di tutela della *privacy online IBM*

Despite the fact that most of the elements have been translated, some of them have remained untranslated. For example, the names of IBM products and services have been kept the same in the Italian version. In addition, some navigation buttons in the page titled 'Support portal' have not been translated. Some of them are: Download fixes & PTFs (Fix Central); Service requests for hardware and software (PMRs); Support handbooks; Support notifications; Support registrations; Warranty lookup; Directory of worldwide contacts; Site assistance; and Current site availability.

The use of other translation strategies, such as adaptation or transcreation, which involve a greater deviation from the ST, is much more common in the adapted and the replaced pages. However, it is worth mentioning that the date format in the page titled 'Terms of use' has been adapted in the Italian website: *Date, August 15, 2015* -> *Data, 15 agosto 2015*. The Italian website is the only localized website where this adaptation has been performed, although this date format is also preferred in other countries, such as Australia, New Zealand, the UK, and Ireland.

11.6.2.4. Adapted pages

A total of 7 of the studied pages have been adapted in the Italian IBM website. As it was said before, these pages have been translated as well, but they also include some omissions, adaptations, or additions in the content. However, it was already explained that all the localized versions have been adapted by following similar patterns, and there are little culturally relevant changes in the Italian website. The most relevant changes included in the adapted pages of the Italian website are:

- The contact information (telephones, addresses, etc.), which have been adapted for Italy.

Corporate headquarters:	Sede azienda:
IBM Corporation	Circonvallazione Idroscalo
1 New Orchard Road	20090 Segrate (MI)
Armonk, New York 10504-1722	Italy
United States	Numeri di telefono
914-499-1900	Tel: +39-02-7031-2168

Image 37: screenshot of the difference between the US and the Italian contact information

- The news articles in the page titled 'Latest news', which include some news related to Italy.
- The inclusion in the homepage of some information about an event which took place in Milan, Italy, on May.



Image 38: screenshot of the Italian homepage which shows the announcement of an event which took place in Italy

- The inclusion in the homepage of a text and a video which explain that the so called 'Fabbrica del Duomo' has developed an application by using the IBM Cloud platform.



Image 39: screenshot of a video about the 'Fabbrica del Duomo' in the Italian homepage

Despite the mentioned changes in the adapted pages, it is worth mentioning that most of the videos within the Italian homepage have not been localized and remain in English, with the exception of the video with information about the 'Fabbrica del Duomo'. As it was said before, this means that Italian users have to understand English in order to have full access to the content of the IBM website.

11.6.2.5. Replaced pages

A total of 11 of the studied pages have been replaced in the Italian IBM website. These pages of the Italian website express a similar ideational content than the correspondent pages of the US website, but they differ in terms of semantic content and linguistic expression. Within these pages, the general idea and the communicative purpose is the same for both websites, but the content differs so much that these pages cannot be labelled as adapted pages.

The replacement category is analyzed on an exemplary basis. This time, the example has been taken from the page titled 'Connect with an IBM representative'. The common aim of this page in both the US and the Italian websites is to allow users to contact sales representatives of IBM who can help them with their purchases and answer their questions. In this analysis, we study the similarities and differences between the US and the Italian pages titled 'Connect with a sales representative'. The other replaced pages could be analyzed in a similar way.



Image 40: screenshot of the US page titled 'Connect with a sales representative'



Image 41: screenshot of the Italian page aimed to connect with sales representatives

Similarities

Both the US and the Italian pages titled 'Connect with a sales representative' have the common aim of allowing users to contact IBM sales representatives who can help them with their purchases and answer their questions. In order to do that, both pages include the option of searching representatives by business category. However, the similarities stop there.

As we can see, the central idea remains in both the US and the Italian web pages, but this idea has been expressed with very different texts. In addition, the structure of the content and the use of images and videos differ.

Differences

The US page has a very short description of the aim of the page and a menu which allow users to choose a business category to find a sales representative. It is simple and functional. However, the Italian web page is much more informative and includes a more detailed description of the page and all the available categories. In addition, the categories to look for a sales representative are different in both pages. The categories included in the US page are: large enterprise, small and medium business, federal government, state and local government, personal computers, software subscription, and support renewal. On the other hand, the categories included in the Italian page are: industry sector, small and medium enterprises, products and services, and private digital commerce.

Besides the mentioned changes, the Italian page includes other links and information which is not available in the US page. For example, the Italian page gives the option of downloading a study with information about social media, analytics, and fashion; includes a calendar of IBM events, news from IBM, a link to see the profile of IBM in Tumblr, and other additional content. In summary, the Italian web page is much more complete than the US web page.

11.6.2.6. Newly created pages

In this section, we comment two of the web pages that have been specifically created for the Italian website. These newly created pages can be accessed from the list of links of the homepage, as well as the rest of the studied pages.

The first of these newly created pages is titled 'Settore pubblico', and it is aimed to the different sectors of the Italian public administration. It explains that IBM has an 'Open Solution Center' in Rome, Italy, which is dedicated to conduct some researches and develop innovative technology solutions in order to improve and modernize the Italian public administration. This page is very different from the US page titled 'Federal and State Contracts', because the aim of that page was to establish contracts between IBM and the US governments, but it had nothing to

do with the existence of a research center of the development of technology solutions for the public administration.

The second created page is titled 'Managed Service Provider'. A very similar page was also available within the UK website. This page is aimed to enterprises which offer technology services. The page offers information on the services and solutions which IBM can provide to this kind of enterprises. As it was already said, this page is not specific for Italy or the UK, because its content is useful for other locales as well. However, this page did not appear in other studied websites. Although this page is only available in the UK and the Italian websites, it is worth mentioning that the other localized websites included information about the Managed Service Providers in other pages which were not included in this study.

11.6.3. Level of cultural adaptation

As it was done with the other versions of the IBM website, we will analyze the level of cultural adaptation of the website in relation to the Hofstede's cultural dimensions and the cultural website features identified by Singh and Pereira. The scores of Italy on the Hofstede's cultural dimensions are represented in the following chart (The Hofstede Centre, 2016b):

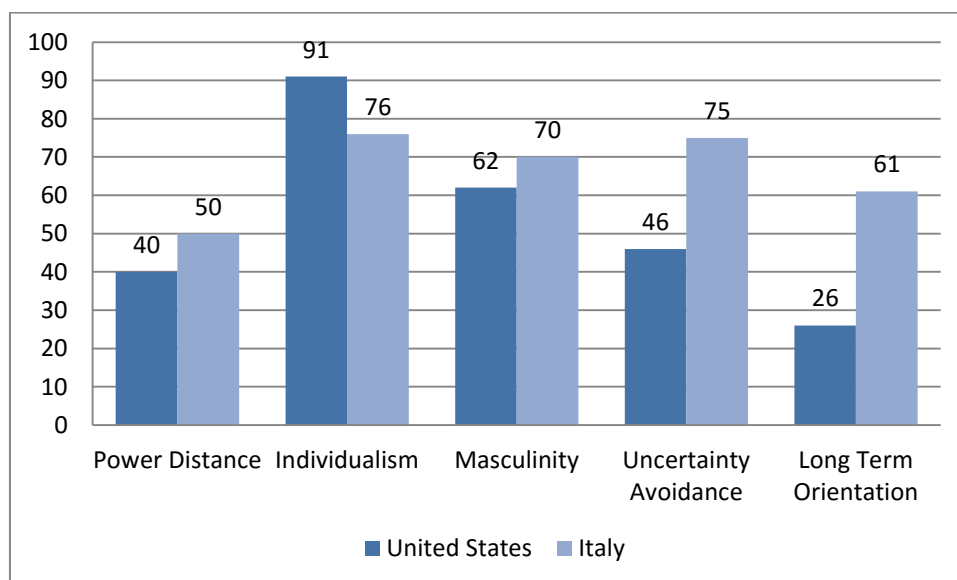


Figure 8: scores of Italy in Hofstede's cultural dimensions in comparison with the scores of the US

As we can see, the most relevant differences between the scores of the US and the scores of Italy occur in the Uncertainty Avoidance scale and the Long Term Orientation scale. Little cultural changes have been performed regarding these aspects, but we can mention some of them.

Regarding the Uncertainty Avoidance scale, the Italian website has not been adapted at all for this cultural aspect. High uncertainty avoidance cultures, such as Italy, prefer some website features which help to reduce uncertainty. Some of them were already included in the US website:

incorporation of a customer service to provide information and help to the customer, transnational testimonials, guided navigation with clear paths and buttons, a sitemap, and a search engine. However, the possibility of accessing the history of the company is another website feature which helps to reduce uncertainty, and it has been removed from the Italian website.

Regarding the Long Term Orientation scale, the only relevant change in the Italian website has been the fact of giving more importance to all the aspects related to social media. Social relations are especially valuable for long-term orientation cultures, and the Italian website includes more information and links related to the social media, as we have seen in the studied replaced page.

11.6.4. Degree of website localization (Pym)

As it was said in the theoretical framework, there are five degrees of website localization according to Pym's categorization: standardized, semi-localized, localized, highly localized, and culturally customized. As we have seen, the Italian website is only partially translated and culturally adapted, so it is difficult to place this website under one of the Pym's categories. It is not semi-localized, since there is a new version of the IBM website for Italian users, but it is not localized or highly localized neither, since the website is not totally translated or culturally adapted. Consequently, it may be considered that the Italian IBM website has only been partially localized.

RESULTS

This project has the aim of analyzing the localization patterns which IBM has followed to localize its website for Italy and some Anglophone countries (Canada, Australia, New Zealand, the UK, and Ireland). In order to do this analysis, we have evaluated the US website of IBM and we have compared it with the selected localized websites. In this way, we have identified to what extent the selected websites have been localized, which decisions have been taken to localize them, and what the achieved level of adaptation is. In this section of the project, we will study the obtained results to reach to a conclusion:

It is important to recall that the IBM strategy is to focus on the globalization of the content, reducing in this way the need of internalization and localization. This fact implies that all the versions are very similar among them, and little cultural changes are needed. As we have seen within the analysis, all the versions of the IBM website have been localized in a very similar way. Frequently, the same decisions have been taken to localize the different elements of the various pages.

For what concerns the localization decisions and the localization patterns of the IBM website, we have seen that all of the selected websites have been localized by following similar templates. Firstly, the same page ('Federal and State Contracts') has been removed from all of these websites for cultural reasons. Secondly, the formats that appear within these websites have not been completely localized: telephones have been localized, but dates (with the exception of Italy), numerical expressions, and currencies have not been adapted for the locales which needed it. In addition, most of the videos have not been localized neither, and remain with the original American accent.

Besides that, the performed adaptations are mostly the same in all of the websites: the linguistic adaptations related to the English dialects, the adaptation of the contact information, the news releases of the page titled 'Latest News', and the addition of some events, texts, or news related to the target locale. Moreover, it is possible to notice by visiting the websites that the adapted and the replaced pages mostly contain the same changes for all the locales, including not culturally-related changes, and only the information directly related to the target locale differs among them. This fact is not only due to the approach of IBM towards localization, but also to the fact that the studied websites are commercial websites, and this kind of websites usually require less adaptations than other types of websites, given that they contain little culturally-related elements.

The exception to the rule of taking the same decisions to localize all the websites has been the Irish website. In the analysis, we could see that this website has been localized differently, but the reason was not to make it more culturally adapted. On the contrary, the Irish website is a simplified version of the original US website, and some of its pages have been reduced to a mere bunch of links.

Other important issue stands out in the Italian website. This website not only required cultural adaptations, but also the translation of the texts included in the homepage. However, not all the pages of the website have been translated, making it necessary for Italian users to understand English in order to have full access to the website.

Regarding the level of cultural adaptation of the websites, it is true that some cultural changes related to the Hofstede's cultural dimensions have been performed, but they were not of much relevance. The original US website was already internationalized, and the general approach has been to keep a standard website for all the locales, reducing the required changes to the minimum. The degree of website localization may be considered as highly localized in most of the websites, given that little changes were needed and some cultural adaptations were performed. However, it is not culturally customized, given that none of the websites has been completely regenerated for the target locale.

CONCLUSIONS

After analyzing the localization of the selected IBM websites, we can say that we have found some general strategies and patterns which have been used to localize the elements of the websites. Firstly, all of the websites share a similar structure and contain common sections and texts. Little adaptations have been performed in the localized websites and the adapted elements are mostly the same for all of them (contact information, some news releases, announcement of events, etc.) although there are some replaced and newly created pages which contain deeper changes. On the other hand, some important cultural elements, such as currencies, tend to remain without changes in all of the localized versions. In addition, some elements which were described in the evaluation of the US website (register, intertextuality, consistency, fonts, icons, colors, communities, and other ways of communication) tend to remain without changes in the localized versions as well.

Regarding the linguistic adaptations, the texts of the websites which correspond to Australia, New Zealand, the UK, and Ireland, contain the same changes, like the use of the letter 's' instead of a letter 'z' in words such as 'organisation'. Regarding the translation of the pages of the Italian website, not all the pages have been translated. The translated pages, which include terminology related to the field of digital technologies, have been translated by deviating little from the ST, with the preferred use of literal translation and borrowing some terms.

In addition to the fact that we have found some general strategies and patterns of localization in the IBM websites, we have achieved the secondary purposes of this project. We have defined the concept of localization, identified its origins and its main characteristics, determined the particularities and workflow of website localization, identified the main cultural features related to the process, and the existing degrees of localization of websites. In summary, we can affirm that we have achieved all the purposes of this project.

Nowadays, we live in the era of globalization. A lot of companies are expanding their business into new markets, and most of them have a website where they promote and sell their products and services. This fact implies that they need to localize their websites in order to reach global audiences. As we have seen, adaptations within these websites are also important for locales which share the same language. In this sense, localization is a complex process which goes beyond translation, given that there are more aspects to be aware of.

Within this project, we have identified some aspects which should be considered when localizing websites for the selected target locales. In addition, we try to show how an important international company with a lot of experience in the field of localization has decided to localize its commercial website. As we have seen, IBM has focused on globalization and internationalization stages and has created some general content for its websites. This strategy

may seem logical from an economic point of view: it clearly eases the process of translation and localization, reduces the need of cultural changes to the minimum, and allows the company to update the website more frequently (especially when the website is as big as the IBM website). However, it is possible to think that IBM has gone too far with their economic strategy given that the company has omitted the adaptation of some important cultural elements during the localization process. Probably, deeper adaptations, such as localizing all of the required formats to the needs of the various locales or adapting all of the videos to the different accents of the target audiences, would help users to engage more with the pages and be more prone to buying some products. It is clear that ignoring some elements when localizing a website in order to ease the process and save some money is not the ideal situation, particularly when it comes from a company which should be an example in the field of localization, but this is something that a big corporation such as IBM can afford because it is already at the top of the market of innovation and digital technologies and its products are already known worldwide among the professionals of this sector. Maybe, smaller or newer companies should be more aware of all the details when localizing their commercial websites in order to better engage with their clients and have more opportunities of growth.

In this sense, this project may be useful for translators and localizers of websites. It shows some aspects which should be considered when localizing websites, as well as an empirical study of the strategies and patterns of the localization of a particular website. This project may provide the basic knowledge to successfully localize a website and decide, for each particular case, whether it is more convenient to keep some general content in the websites or to perform a more detailed localization process. However, this project is only a starting point which could be widened. For example, it would be interesting to add some other cultures to the study or to analyze the localization of the commercial websites of other companies in order to establish broader strategies and patterns of the localization of this type of websites. In addition, the studied localization parameters could be applied to other types of websites in order to study the particularities of different websites.

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APPENDIX 1

This appendix contains a list of the studied web pages of the US website and the localized IBM websites.

- US website:

Homepage	http://www.ibm.com/us-en/
Analytics	https://www.ibm.com/analytics/us/en/
Cloud computing	http://www.ibm.com/cloud-computing/
Commerce	http://www.ibm.com/commerce/us-en/
IT Infrastructure	http://www.ibm.com/it-infrastructure/us-en/
MobileFirst	http://www.ibm.com/mobilefirst/
Security	http://www-03.ibm.com/security/
Watson	http://www.ibm.com/smarterplanet/us/en/ibmwatson/
Marketplace	https://www.ibm.com/marketplace/cloud/us/en-us?lnk=hmpmp
Products	http://www.ibm.com/products/en-us/?lnk=hmpmp
Services	http://www.ibm.com/services/en-us/
Industries	http://www.ibm.com/industries/en-us/
Social business	https://www.ibm.com/social-business/us-en/
Careers	http://www-03.ibm.com/employment/
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif
Investor relations	http://www.ibm.com/investor/
DeveloperWorks	http://www.ibm.com/developerworks/

Federal and State Contracts	http://www-304.ibm.com/shop/americas/content/home/en_US/government-contracts.html?lnk=fif
Privacy statement	http://www.ibm.com/privacy/us/en/
Terms of use	http://www.ibm.com/legal/us/en/
About IBM	http://www.ibm.com/ibm/us/en/
Corporate responsibility	http://www.ibm.com/ibm/responsibility/
Contact	http://www.ibm.com/contact/us/en/
Accessibility	http://www.ibm.com/accessibility/us/en/
Redbooks	http://www.redbooks.ibm.com/
Support	http://www.ibm.com/support/en-us/
Support portal	https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2&lnk2=support
Knowledge Center	http://www.ibm.com/support/knowledgecenter/
Connect with a sales representative:	http://www.ibm.com/connect/ibm/us/en/
Find a business partner	https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw
Case studies	http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi
Latest news	http://www-03.ibm.com/press/us/en/index.wss?lnk=fab
Sign-In	https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser

- Canadian website

Homepage	http://www.ibm.com/ca-en/
Analytics	http://www.ibm.com/analytics/ca/en/
Cloud computing	http://www.ibm.com/cloud-computing/ca/en/
Commerce	http://www.ibm.com/commerce/ca-en/
IT Infrastructure	http://www.ibm.com/it-infrastructure/ca-en/
MobileFirst	http://www.ibm.com/mobilefirst/ca/en/
Security	http://www-03.ibm.com/security/ca-en/
Watson	http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=buwa-caen
Marketplace	https://www.ibm.com/marketplace/cloud/us/en-us?lnk=fdi-caen
Products	http://www.ibm.com/products/ca/en/?lnk=fdi-caen
Services	http://www.ibm.com/technologyservices/ca/en/?lnk=fdi-caen
Industries	http://www.ibm.com/solutions/ca/en/?lnk=fdi-caen
Social business	http://www.ibm.com/social-business/ca/en/?lnk=hmbuso
Careers	http://www-03.ibm.com/employment/ca/en/?lnk=fab-caen
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif-caen
Investor relations	http://www.ibm.com/investor/?lnk=fab-caen
DeveloperWorks	http://www.ibm.com/developerworks/?lnk=caenhpv18hcwh4
Privacy statement	http://www.ibm.com/privacy/ca/en/?lnk=flg-priv-caen?lnk=flg
Terms of use	http://www.ibm.com/legal/ca/en/?lnk=flg-tous-caen?lnk=flg

About IBM	http://www.ibm.com/ibm/ca/en/?lnk=fab-caen
Corporate responsibility	http://www.ibm.com/ibm/responsibility/?lnk=fab-caen
Contact	http://www.ibm.com/contact/ca/en/?lnk=flg-cont-caen?lnk=flg
Accessibility	http://www.ibm.com/accessibility/ca/en/?lnk=flg-acce-caen?lnk=flg
Redbooks	http://www.redbooks.ibm.com/
Support	http://www.ibm.com/support/ca/en/?lnk=fcw-caen
Support portal	http://www-05.ibm.com/support/operations/ca/en/overview.html?lnk=caenhpv18hcwh1
Knowledge Center	http://www.ibm.com/support/knowledgecenter
Connect with a sales representative:	http://www.ibm.com/connect/ibm/ca/en/?lnk=fcw-caen
Find a business partner	https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw-caen
Case studies	http://www-03.ibm.com/software/businesscasestudies/ca-en/corp/?lnk=fdi-caen
Latest news	http://www.ibm.com/news/ca/en/?lnk=fab-caen
Sign-In	https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser
Info Hub	http://www.ibm.com/news/ca/en/info_hub.html?lnk=fab-caen

- Australian website

Homepage <http://www.ibm.com/au-en/>

Analytics	https://www.ibm.com/analytics/au/en/?Ink=buu-auen
Cloud computing	http://www.ibm.com/cloud-computing/au/en/?Ink=bucl-auen
Commerce	http://www.ibm.com/commerce/au-en/?Ink=buco-auen
IT Infrastructure	http://www.ibm.com/it-infrastructure/au-en/?Ink=buit-auen
MobileFirst	http://www.ibm.com/mobilefirst/au/en/?Ink=bumf-auen
Security	http://www-03.ibm.com/security/au/en/?Ink=buse-auen
Watson	http://www.ibm.com/smarterplanet/us/en/ibmwatson/?Ink=hmbuwa-auen
Marketplace	https://www.ibm.com/marketplace/cloud/au/en-au?Ink=hmmp
Products	http://www.ibm.com/products/au/en/?Ink=hmm-auen
Services	http://www.ibm.com/technologyservices/au/en/?Ink=hmm-auen
Industries	http://www.ibm.com/solutions/au/en/?Ink=hmm-auen
Social business	http://www.ibm.com/social-business/au/en/?Ink=hmbuso
Careers	http://www-07.ibm.com/employment/au/?Ink=fab-auen
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?Ink=hmm-auen
Investor relations	http://www.ibm.com/investor/?Ink=fab-auen
DeveloperWorks	http://www.ibm.com/developerworks/?Ink=fif-auen
Privacy statement	http://www.ibm.com/privacy/au/en/?Ink=flg-priv-auen?Ink=flg
Terms of use	http://www.ibm.com/legal/au/en/?Ink=flg-tous-auen?Ink=flg
About IBM	http://www.ibm.com/ibm/au/en/?Ink=fab
Corporate	http://www-07.ibm.com/ibm/au/responsibility/

responsibility

Contact <http://www.ibm.com/contact/au/en/?Ink=flg-cont-auen?Ink=flg>

Accessibility <http://www.ibm.com/accessibility/au/en/?Ink=flg-acce-auen?Ink=flg>

Redbooks <http://www.redbooks.ibm.com/>

Support <http://www.ibm.com/support/au/en/?Ink=hmm-auen>

Support portal <https://www-947.ibm.com/support/entry/portal/support?Ink=auhqv18hcwh2>

Knowledge
Center <http://www.ibm.com/support/knowledgecenter>

Connect with a
sales
representative: <http://www-07.ibm.com/au/myrep/>

Find a business
partner <https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?Ink=fcw-auen>

Case studies <http://www-03.ibm.com/software/businesscasestudies/au/en/corp/?Ink=fdi-auen>

Latest news <http://www-03.ibm.com/press/au/en/index.wss?Ink=fab-auen>

Sign-In <https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser>

Australia
Development
Laboratory (ADL) <http://www-07.ibm.com/au/adl/>

- New Zealand's website

Homepage <http://www.ibm.com/nz-en/>

Analytics <https://www.ibm.com/analytics/nz/en/?Ink=bua-nzen>

Cloud computing <http://www.ibm.com/cloud-computing/nz/en/?Ink=bucl-nzen>

Commerce <http://www.ibm.com/commerce/nz-en/?Ink=buco-nzen>

IT Infrastructure	http://www.ibm.com/it-infrastructure/nz-en/?Ink=buit-nzen
MobileFirst	http://www.ibm.com/mobilefirst/nz/en/?Ink=bumf-nzen
Security	http://www-03.ibm.com/security/nz/en/?Ink=buse-nzen
Watson	http://www.ibm.com/smarterplanet/us/en/ibmwatson/?Ink=hmbuwa-nzen
Marketplace	https://www.ibm.com/marketplace/cloud/nz/en-nz?Ink=hmmp
Products	http://www.ibm.com/products/nz/en/?Ink=hmm-nzen
Services	http://www.ibm.com/technologyservices/nz/en/?Ink=hmm-nzen
Industries	http://www.ibm.com/solutions/nz/en/?Ink=hmm-nzen
Social business	http://www.ibm.com/social-business/nz/en/?Ink=hmbuso
Careers	http://www-07.ibm.com/employment/nz/?Ink=fab-nzen
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?Ink=fif
Investor relations	http://www.ibm.com/investor/
DeveloperWorks	http://www.ibm.com/developerworks/
Privacy statement	http://www.ibm.com/privacy/nz/en/?Ink=flg-priv-nzen?Ink=flg
Terms of use	http://www.ibm.com/legal/nz/en/?Ink=flg-tous-nzen?Ink=flg
About IBM	http://www.ibm.com/ibm/nz/en/?Ink=fab
Corporate responsibility	http://www-07.ibm.com/ibm/nz/responsibility/
Contact	http://www.ibm.com/contact/nz/en/?Ink=flg-cont-nzen?Ink=flg
Accessibility	http://www.ibm.com/accessibility/nz/en/?Ink=flg-acce-nzen?Ink=flg

Redbooks	http://www.redbooks.ibm.com/
Support	http://www.ibm.com/support/nz/en/?lnk=hmm-nzen
Support portal	https://www-947.ibm.com/support/entry/portal/support?lnk=nzhpv18hcwh2
Knowledge Center	http://www.ibm.com/support/knowledgecenter/
Connect with a sales representative:	http://www-07.ibm.com/nz/myrep/
Find a business partner	https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw-nzen
Case studies	http://www-03.ibm.com/software/businesscasestudies/nz/en/corp/?lnk=fdi-nzen
Latest news	http://www-03.ibm.com/press/nz/en/index.wss?lnk=fab-nzen
Sign-In	https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser

- UK website

Homepage	http://www.ibm.com/uk-en/
Analytics	https://www.ibm.com/analytics/uk/en/?lnk=buu-uken
Cloud computing	http://www.ibm.com/cloud-computing/uk/en/?lnk=bucl-uken
Commerce	http://www.ibm.com/commerce/uk-en/?lnk=buco-uken
IT Infrastructure	http://www.ibm.com/it-infrastructure/uk-en/?lnk=buit-uken
MobileFirst	http://www.ibm.com/mobilefirst/uk/en/?lnk=bumf-uken
Security	http://www-03.ibm.com/security/uk/en/?lnk=buse-uken
Watson	http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=hmbuwa-uken

Marketplace	https://www.ibm.com/marketplace/cloud/uk/en-uk?Ink=hmp
Products	http://www.ibm.com/products/uk/en/?Ink=hmm-uken
Services	http://www.ibm.com/technologyservices/uk/en/?Ink=hmm-uken
Industries	http://www.ibm.com/solutions/uk/en/?Ink=hmm-uken
Social business	http://www.ibm.com/social-business/uk/en/?Ink=hmbuso
Careers	http://www-05.ibm.com/employment/uk/?Ink=fab-uken
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?Ink=fif-uken
Investor relations	http://www.ibm.com/investor/
DeveloperWorks	http://www.ibm.com/developerworks/
Privacy statement	http://www.ibm.com/privacy/uk/en/?Ink=flg-priv-uken?Ink=flg
Terms of use	http://www.ibm.com/legal/uk/en/?Ink=flg-tous-uken?Ink=flg
About IBM	http://www.ibm.com/ibm/uk/en/?Ink=fab
Corporate responsibility	http://www-05.ibm.com/uk/ondemandcommunity/?Ink=fab-uken
Contact	http://www.ibm.com/contact/uk/en/?Ink=flg-cont-uken?Ink=flg
Accessibility	http://www.ibm.com/accessibility/uk/en/?Ink=flg-acce-uken?Ink=flg
Redbooks	http://www.redbooks.ibm.com/
Support	http://www.ibm.com/support/uk/en/?Ink=hmm-uken
Support portal	https://www-947.ibm.com/support/entry/portal/support?Ink=ushpv18hcwh2
Knowledge	http://www.ibm.com/support/knowledgecenter/

Center

Connect with a sales representative: <http://www.ibm.com/connect/ibm/uk/en/?Ink=fcw-uken>

Find a business partner <https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?Ink=fcw-uken>

Case studies <http://www-03.ibm.com/software/businesscasestudies/uk/en/corp/?Ink=fdi-uken>

Latest news <http://www-03.ibm.com/press/uk/en/index.wss?Ink=fab-uken>

Sign-In <https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicdapuser>

Computer Services Industry (CSI) <http://www-935.ibm.com/industries/uk/en/CSI/?Ink=fif-uken>

Managed Service Provider <http://www.ibm.com/connect/ibm/access/msphub/uk/en/>

- Irish website

Homepage <http://www.ibm.com/ie-en/>

Analytics <https://www.ibm.com/analytics/ie/en/?Ink=bua-ieven>

Cloud computing <http://www.ibm.com/cloud-computing/ie/en/?Ink=bucl-ieven>

Commerce <http://www.ibm.com/commerce/ie-en/?Ink=buco-ieven>

MobileFirst <http://www.ibm.com/mobilefirst/ie/en/?Ink=bumf-ieven>

Security <http://www-03.ibm.com/security/ie/en/?Ink=buse-ieven>

Watson <http://www.ibm.com/smarterplanet/us/en/ibmwatson/?Ink=hmbuwa-ieven>

Marketplace <https://www.ibm.com/marketplace/cloud/ie/en-ie?Ink=hmmp>

Products <http://www.ibm.com/products/ie/en/?Ink=hmm-ieven>

Services <http://www.ibm.com/technologyservices/ie/en/?Ink=hmm-ieven>

Industries	http://www.ibm.com/solutions/ie/en/?Ink=hmm-ieven
Social business	https://www.ibm.com/social-business/us-en/
Careers	http://www-05.ibm.com/employment/ie/
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public
Investor relations	http://www.ibm.com/investor/
DeveloperWorks	http://www.ibm.com/developerworks/
Privacy statement	http://www.ibm.com/privacy/ie/en/
Terms of use	http://www.ibm.com/legal/ie/en/
About IBM	http://www.ibm.com/ibm/ie/en/
Corporate responsibility	http://www.ibm.com/ibm/responsibility/
Contact	http://www.ibm.com/contact/ie/en/
Accessibility	http://www-03.ibm.com/able/?Ink=flg-acce-ieven?Ink=flg
Redbooks	http://www.redbooks.ibm.com/
Support portal	https://www-947.ibm.com/support/entry/portal/support?Ink=ushpv18hcwh2
Knowledge Center	http://www.ibm.com/support/knowledgecenter/
Find a business partner	https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?Ink=fcw-uken
Case studies	http://www-03.ibm.com/software/businesscasestudies/ie/en/corp/?Ink=fdi-ieven
Latest news	http://www-03.ibm.com/press/ie/en/index.wss

Sign-In	https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicdapuser
IBM Ireland Lab	https://www-01.ibm.com/software/ie/irelandlab/
IBM Research – Ireland	http://www.research.ibm.com/labs/ireland/index.shtml
IBM locations in Ireland	http://www-05.ibm.com/ie/ibm/codetail.html
- Italian website	
Homepage	http://www.ibm.com/it-it/
Analytics	http://www.ibm.com/analytics/it/it/?lnk=bua
Cloud computing	http://www.ibm.com/cloud-computing/it/it/index.html?lnk=bucl
Commerce	http://www.ibm.com/commerce/it-it/?lnk=buco
IT Infrastructure (<i>Infrastruttura IT</i>)	http://www.ibm.com/it-infrastructure/it-it/?lnk=buit
MobileFirst	http://www.ibm.com/mobilefirst/it/it/?lnk=bumf
Security (<i>Sicurezza</i>)	http://www-03.ibm.com/security/it/it/?lnk=buse
Watson	http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=hmbuitm
Marketplace	https://www.ibm.com/marketplace/cloud/us/en-us?lnk=fdi-itit
Products (<i>Prodotti</i>)	http://www.ibm.com/products/it/it/
Services (<i>Servizi</i>)	http://www.ibm.com/technologyservices/it/it/
Industries (<i>Settori</i>)	http://www-935.ibm.com/industries/it/it/index.html
Social business	http://www.ibm.com/social-business/it/it/?lnk=hmbuso

Careers (<i>Lavora con noi</i>)	http://www-05.ibm.com/employment/it/
PartnerWorld	https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public
Investor relations (<i>Per gli investitori</i>)	http://www.ibm.com/investor/
DeveloperWorks (<i>Sviluppatori</i>)	http://www.ibm.com/developerworks/
Privacy statement	http://www.ibm.com/privacy/it/it/?lnk=flg
Terms of use (<i>Condizioni di utilizzo</i>)	http://www.ibm.com/legal/it/it/?lnk=flg-tous-itit?lnk=flg
About IBM (<i>Informazioni su IBM</i>)	http://www.ibm.com/ibm/it/it/?lnk=fab
Corporate responsibility (<i>Corporate citizenship in IBM</i>)	http://www.ibm.com/ibm/responsibility/?lnk=fab
Contact (<i>Contatta</i>)	http://www.ibm.com/contact/it/it/?lnk=flg
Accessibility (<i>Accessibilità</i>)	http://www.ibm.com/accessibility/it/it/?lnk=flg-acce-itit?lnk=flg?lnk=flg
Redbooks	http://www.redbooks.ibm.com/
Support (<i>Supporto</i>)	http://www-935.ibm.com/services/it/gts/html/maintenance_tech_support.html

Support portal (<i>Portale di supporto</i>)	https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2
Knowledge Center	https://www.ibm.com/support/knowledgecenter/it/?lnk=ushpv18hcwh4
Connect with a sales representative (<i>Trova un responsabile delle vendite</i>)	http://www-935.ibm.com/industries/it/it/insidesales/index.html
Find a business partner (<i>Trova un business partner</i>)	https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?search_cc=it&lnk=fcw
Case studies	http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi
Latest news (<i>Ultime novità</i>)	http://www-03.ibm.com/press/it/it/index.wss
Sign-In	https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicdapuser
Settore pubblico Managed Service Provider	http://www-05.ibm.com/it/egov-center-rome/ http://www.ibm.com/connect/ibm/access/msphub/it/it/

APPENDIX 2

This appendix includes the categorization of the studied web pages of the localized IBM websites.

- Canada: the following table shows the web pages of the Canadian site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. A √ is inserted under the correspondent categories of pages.

US website	Canadian website	Removed pages	Pages kept without changes	Adapted pages	Replaced pages	Newly created pages
Homepage: http://www.ibm.com/us-en/	Homepage: http://www.ibm.com/ca-en/			√		
Analytics: https://www.ibm.com/analytics/us/en/	Analytics: http://www.ibm.com/analytics/ca/en/				√	
Cloud computing: http://www.ibm.com/cloud-computing/	Cloud computing: http://www.ibm.com/cloud-computing/ca/en/				√	
Commerce: http://www.ibm.com/commerce/us-en/	Commerce: http://www.ibm.com/commerce/ca-en/			√		
IT Infrastructure: http://www.ibm.com/it-infrastructure/us-en/	IT Infrastructure: http://www.ibm.com/it-infrastructure/ca-en/			√		
MobileFirst:	MobileFirst:				√	

http://www.ibm.com/mobilefirst/	http://www.ibm.com/mobilefirst/ca/en/					
Security: http://www-03.ibm.com/security/	Security: http://www-03.ibm.com/security/ca-en/		√			
Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/	Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=buwa-caen		√			
Marketplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=hmmp	Marketplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=fdi-caen		√			
Products: http://www.ibm.com/products/en-us/?lnk=hmpr	Products: http://www.ibm.com/products/ca/en/?lnk=fdi-caen				√	
Services: http://www.ibm.com/services/en-us/	Services: http://www.ibm.com/technologyservices/ca/en/?lnk=fdi-caen			√		
Industries: http://www.ibm.com/industries/en-us/	Industries: http://www.ibm.com/solutions/ca/en/?lnk=fdi-caen			√		
Social business:	Social business:				√	

https://www.ibm.com/social-business/us-en/	http://www.ibm.com/social-business/ca/en/?lnk=hmbuso					
Careers: http://www-03.ibm.com/employment/	Careers: http://www-03.ibm.com/employment/ca/en/?lnk=fab-caen				√	
PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif	PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif-caen		√			
Investor relations: http://www.ibm.com/investor/	Investor relations: http://www.ibm.com/investor/?lnk=fab-caen		√			
DeveloperWorks: http://www.ibm.com/developerworks/	DeveloperWorks: http://www.ibm.com/developerworks/?lnk=caenhpv18hcwh4		√			
Federal and State Contracts: http://www-304.ibm.com/shop/americas/content/home/en_US/government-contracts.html?lnk=fif	-	√				
Privacy statement:	Privacy statement: http://www.ibm.com/privacy/ca/en/?lnk			√		

http://www.ibm.com/privacy/us/en/	=flg-priv-caen?lnk=flg					
Terms of use: http://www.ibm.com/legal/us/en/	Terms of use: http://www.ibm.com/legal/ca/en/?lnk=flg-tous-caen?lnk=flg		√			
About IBM: http://www.ibm.com/ibm/us/en/	About IBM: http://www.ibm.com/ibm/ca/en/?lnk=fab-caen			√		
Corporate responsibility: http://www.ibm.com/ibm/responsibility/	Corporate responsibility: http://www.ibm.com/ibm/responsibility/?lnk=fab-caen		√			
Contact: http://www.ibm.com/contact/us/en/	Contact: http://www.ibm.com/contact/ca/en/?lnk=flg-cont-caen?lnk=flg			√		
Accessibility: http://www.ibm.com/accessibility/us/en/	Accessibility: http://www.ibm.com/accessibility/ca/en/?lnk=flg-acce-caen?lnk=flg				√	
Redbooks: http://www.redbooks.ibm.com/	Redbooks: http://www.redbooks.ibm.com/		√			
Support: http://www.ibm.com/support/en-	Support:			√		

us/	http://www.ibm.com/support/ca/en/?lnk=fcw-caen					
Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2&lnk2=support	Support portal: http://www-05.ibm.com/support/operations/ca/en/overview.html?lnk=caenhpv18hcwh1				√	
Knowledge Center: http://www.ibm.com/support/knowledgecenter/	Knowledge Center: http://www.ibm.com/support/knowledgecenter/		√			
Connect with a sales representative: http://www.ibm.com/connect/ibm/us/en/	Connect with a sales representative: http://www.ibm.com/connect/ibm/ca/en/?lnk=fcw-caen			√		
Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw	Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw-caen		√			
Case studies: http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi	Case studies: http://www-03.ibm.com/software/businesscasestudies/ca-en/corp/?lnk=fdi-caen		√			
Latest news: http://www-03.ibm.com/press/us/en/index.wss?lnk=fa	Latest news: http://www.ibm.com/news/ca/en/?lnk=f			√		

b	ab-caen					
Sign-In: https://idaas.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser	Sign-In: https://idaas.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser		√			
-	Info Hub: http://www.ibm.com/news/ca/en/info_hub.html?lnk=fab-caen					√
Total in each category		1	13	11	8	1

Table 1: categories of the pages of the Canadian website studied

- Australia: the following table shows the web pages of the Australian site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. A √ is inserted under the correspondent categories of pages.

US website	Australian website	Removed pages	Pages kept without changes	Adapted pages	Replaced pages	Newly created pages
Homepage: http://www.ibm.com/us-en/	Homepage: http://www.ibm.com/au-en/			√		
Analytics:	Analytics: https://www.ibm.com/analytics/au/en				√	

https://www.ibm.com/analytics/us/en/	/?Ink=bua-auen					
Cloud computing: http://www.ibm.com/cloud-computing/	Cloud computing: http://www.ibm.com/cloud-computing/au/en/?Ink=bucl-auen				√	
Commerce: http://www.ibm.com/commerce/us-en/	Commerce: http://www.ibm.com/commerce/au-en/?Ink=buco-auen			√		
IT Infrastructure: http://www.ibm.com/it-infrastructure/us-en/	IT Infrastructure: http://www.ibm.com/it-infrastructure/au-en/?Ink=buit-auen			√		
MobileFirst: http://www.ibm.com/mobilefirst/	MobileFirst: http://www.ibm.com/mobilefirst/au/en/?Ink=bumf-auen				√	
Security: http://www-03.ibm.com/security/	Security: http://www-03.ibm.com/security/au/en/?Ink=buse-auen				√	
Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/	Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/?Ink=hmbuwa-auen		√			

Marketplace: <a href="https://www.ibm.com/marketplace/clo
ud/us/en-us?lnk=hmp">https://www.ibm.com/marketplace/clo ud/us/en-us?lnk=hmp	Marketplace: <a href="https://www.ibm.com/marketplace/cl
oud/au/en-au?lnk=hmp">https://www.ibm.com/marketplace/cl oud/au/en-au?lnk=hmp			√		
Products: <a href="http://www.ibm.com/products/en-
us/?lnk=hmp">http://www.ibm.com/products/en- us/?lnk=hmp	Products: <a href="http://www.ibm.com/products/au/en/
?lnk=hmm-auen">http://www.ibm.com/products/au/en/ ?lnk=hmm-auen				√	
Services: http://www.ibm.com/services/en-us/	Services: <a href="http://www.ibm.com/technologyservic
es/au/en/?lnk=hmm-auen">http://www.ibm.com/technologyservic es/au/en/?lnk=hmm-auen			√		
Industries: http://www.ibm.com/industries/en-us/	Industries: <a href="http://www.ibm.com/solutions/au/en
/?lnk=hmm-auen">http://www.ibm.com/solutions/au/en /?lnk=hmm-auen			√		
Social business: <a href="https://www.ibm.com/social-
business/us-en/">https://www.ibm.com/social- business/us-en/	Social business: <a href="http://www.ibm.com/social-
business/au/en/?lnk=hmbuso">http://www.ibm.com/social- business/au/en/?lnk=hmbuso				√	
Careers: <a href="http://www-
03.ibm.com/employment/">http://www- 03.ibm.com/employment/	Careers: <a href="http://www-
07.ibm.com/employment/au/?lnk=fa
b-auen">http://www- 07.ibm.com/employment/au/?lnk=fa b-auen				√	
PartnerWorld: https://www-	PartnerWorld: https://www-			√		

356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif	356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=hmm-auen					
Investor relations: http://www.ibm.com/investor/	Investor relations: http://www.ibm.com/investor/?lnk=fab-auen		√			
DeveloperWorks: http://www.ibm.com/developerworks/	DeveloperWorks: http://www.ibm.com/developerworks/?lnk=fif-auen		√			
Federal and State Contracts: http://www-304.ibm.com/shop/americas/content/home/en_US/government-contracts.html?lnk=fif	-	√				
Privacy statement: http://www.ibm.com/privacy/us/en/	Privacy statement: http://www.ibm.com/privacy/au/en/?lnk=flg-priv-auen?lnk=flg			√		
Terms of use: http://www.ibm.com/legal/us/en/	Terms of use: http://www.ibm.com/legal/au/en/?lnk=flg-tous-auen?lnk=flg			√		

About IBM: http://www.ibm.com/ibm/us/en/	About IBM: http://www.ibm.com/ibm/au/en/?Ink=fab			√		
Corporate responsibility: http://www.ibm.com/ibm/responsibility/	Corporate responsibility: http://www-07.ibm.com/ibm/au/responsibility/				√	
Contact: http://www.ibm.com/contact/us/en/	Contact: http://www.ibm.com/contact/au/en/?Ink=flg-cont-auen?Ink=flg			√		
Accessibility: http://www.ibm.com/accessibility/us/en/	Accessibility: http://www.ibm.com/accessibility/au/en/?Ink=flg-acce-auen?Ink=flg				√	
Redbooks: http://www.redbooks.ibm.com/	Redbooks: http://www.redbooks.ibm.com/		√			
Support: http://www.ibm.com/support/en-us/	Support: http://www.ibm.com/support/au/en/?Ink=hmm-auen			√		
Support portal: https://www-947.ibm.com/support/entry/portal/sup	Support portal: https://www-947.ibm.com/support/entry/portal/su		√			

port?lnk=ushpv18hcwh2&lnk2=support	pport?lnk=auhpv18hcwh2					
Knowledge Center: http://www.ibm.com/support/knowledgecenter/	Knowledge Center: http://www.ibm.com/support/knowledgecenter		√			
Connect with a sales representative: http://www.ibm.com/connect/ibm/us/en/	Connect with a sales representative: http://www-07.ibm.com/au/myrep/				√	
Find a business partner: https://www-356.ibm.com/partnerworld/wps/blocator/search.jsp?lnk=fcw	Find a business partner: https://www-356.ibm.com/partnerworld/wps/blocator/search.jsp?lnk=fcw-auen		√			
Case studies: http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi	Case studies: http://www-03.ibm.com/software/businesscasestudies/au/en/corp/?lnk=fdi-auen		√			
Latest news: http://www-03.ibm.com/press/us/en/index.wss?lnk=fab	Latest news: http://www-03.ibm.com/press/au/en/index.wss?lnk=fab-auen			√		
Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security	Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security		√			

ty:authentication:asf:basicdapuser	rity:authentication:asf:basicdapuser					
-	Australia Development Laboratory (ADL): http://www-07.ibm.com/au/adl/					√
Total in each category		1	9	13	10	1

Table 2: categories of the pages of the Australian website studied

- New Zealand: the following table shows the web pages of the New Zealand's site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. A √ is inserted under the correspondent categories of pages.

US website	New Zealand's website	Removed pages	Pages kept without changes	Adapted pages	Replaced pages	Newly created pages
Homepage: http://www.ibm.com/us-en/	Homepage: http://www.ibm.com/nz-en/			√		
Analytics: https://www.ibm.com/analytics/us/en/	Analytics: https://www.ibm.com/analytics/nz/en/?lnk=bua-nzen				√	
Cloud computing: http://www.ibm.com/cloud-computing/	Cloud computing: http://www.ibm.com/cloud-				√	

	computing/nz/en/?lnk=bucl-nzen					
Commerce: http://www.ibm.com/commerce/us-en/	Commerce: http://www.ibm.com/commerce/nz-en/?lnk=buco-nzen			√		
IT Infrastructure: http://www.ibm.com/it-infrastructure/us-en/	IT Infrastructure: http://www.ibm.com/it-infrastructure/nz-en/?lnk=buit-nzen			√		
MobileFirst: http://www.ibm.com/mobilefirst/	MobileFirst: http://www.ibm.com/mobilefirst/nz/en/?lnk=bumf-nzen				√	
Security: http://www-03.ibm.com/security/	Security: http://www-03.ibm.com/security/nz/en/?lnk=bus-e-nzen				√	
Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/	Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=hmbuwa-nzen		√			
Marketplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=hmmp	Marketplace: https://www.ibm.com/marketplace/cloud/nz/en-nz?lnk=hmmp			√		

Products: http://www.ibm.com/products/en-us/?lnk=hmpr	Products: http://www.ibm.com/products/nz/en/?lnk=hmm-nzen				√	
Services: http://www.ibm.com/services/en-us/	Services: http://www.ibm.com/technologyservices/nz/en/?lnk=hmm-nzen				√	
Industries: http://www.ibm.com/industries/en-us/	Industries: http://www.ibm.com/solutions/nz/en/?lnk=hmm-nzen				√	
Social business: https://www.ibm.com/social-business/us-en/	Social business: http://www.ibm.com/social-business/nz/en/?lnk=hmbuso				√	
Careers: http://www-03.ibm.com/employment/	Careers: http://www-07.ibm.com/employment/nz/?lnk=fab-nzen				√	
PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif	PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif				√	

Investor relations: http://www.ibm.com/investor/	Investor relations: http://www.ibm.com/investor/		√			
DeveloperWorks: http://www.ibm.com/developerworks/	DeveloperWorks: http://www.ibm.com/developerworks/		√			
Federal and State Contracts: http://www-304.ibm.com/shop/americas/content/home/en_US/government-contracts.html?lnk=fif	-	√				
Privacy statement: http://www.ibm.com/privacy/us/en/	Privacy statement: http://www.ibm.com/privacy/nz/en/?lnk=flg-priv-nzen?lnk=flg			√		
Terms of use: http://www.ibm.com/legal/us/en/	Terms of use: http://www.ibm.com/legal/nz/en/?lnk=flg-tous-nzen?lnk=flg			√		
About IBM: http://www.ibm.com/ibm/us/en/	About IBM: http://www.ibm.com/ibm/nz/en/?lnk=fab			√		
Corporate responsibility:	Corporate responsibility: http://www-				√	

http://www.ibm.com/ibm/responsibility/	07.ibm.com/ibm/nz/responsibility/					
Contact: http://www.ibm.com/contact/us/en/	Contact: http://www.ibm.com/contact/nz/en/?lnk=flg-cont-nzen?lnk=flg			√		
Accessibility: http://www.ibm.com/accessibility/us/en/	Accessibility: http://www.ibm.com/accessibility/nz/en/?lnk=flg-acce-nzen?lnk=flg				√	
Redbooks: http://www.redbooks.ibm.com/	Redbooks: http://www.redbooks.ibm.com/		√			
Support: http://www.ibm.com/support/en-us/	Support: http://www.ibm.com/support/nz/en/?lnk=hmm-nzen			√		
Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2&lnk2=support	Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=nzhpv18hcwh2		√			
Knowledge Center: http://www.ibm.com/support/knowledgecenter/	Knowledge Center: http://www.ibm.com/support/knowledgecenter/		√			

Connect with a sales representative: http://www.ibm.com/connect/ibm/us/en/	Connect with a sales representative: http://www-07.ibm.com/nz/myrep/				√	
Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw	Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw-nzen		√			
Case studies: http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi	Case studies: http://www-03.ibm.com/software/businesscasestudies/nz/en/corp/?lnk=fdi-nzen		√			
Latest news: http://www-03.ibm.com/press/us/en/index.wss?lnk=fab	Latest news: http://www-03.ibm.com/press/nz/en/index.wss?lnk=fab-nzen			√		
Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser	Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser		√			
Total in each category		1	9	13	10	0

Table 3: categories of the pages of the New Zealand's website studied

- United Kingdom: the following table shows the web pages of the New Zealand's site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. A ✓ is inserted under the correspondent categories of pages.

US website	UK website	Removed pages	Pages kept without changes	Adapted pages	Replaced pages	Newly created pages
Homepage: http://www.ibm.com/us-en/	Homepage: http://www.ibm.com/uk-en/			✓		
Analytics: https://www.ibm.com/analytics/us/en/	Analytics: https://www.ibm.com/analytics/uk/en/?lnk=buu-uk-en				✓	
Cloud computing: http://www.ibm.com/cloud-computing/	Cloud computing: http://www.ibm.com/cloud-computing/uk/en/?lnk=bucl-uk-en				✓	
Commerce: http://www.ibm.com/commerce/us-en/	Commerce: http://www.ibm.com/commerce/uk-en/?lnk=buco-uk-en			✓		
IT Infrastructure: http://www.ibm.com/it-infrastructure/us-en/	IT Infrastructure: http://www.ibm.com/it-infrastructure/uk-en/?lnk=buil-uk-en			✓		

MobileFirst: http://www.ibm.com/mobilefirst/	MobileFirst: http://www.ibm.com/mobilefirst/uk/en/?lnk=bumf-uken				√	
Security: http://www-03.ibm.com/security/	Security: http://www-03.ibm.com/security/uk/en/?lnk=bus-e-uken				√	
Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/	Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=hmbuwa-uken		√			
Marketplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=hmp	Marketplace: https://www.ibm.com/marketplace/cloud/uk/en-uk?lnk=hmp			√		
Products: http://www.ibm.com/products/en-us/?lnk=hmpr	Products: http://www.ibm.com/products/uk/en/?lnk=hmm-uken			√		
Services: http://www.ibm.com/services/en-us/	Services: http://www.ibm.com/technologyservices/uk/en/?lnk=hmm-uken			√		
Industries:	Industries:			√		

http://www.ibm.com/industries/en-us/	http://www.ibm.com/solutions/uk/en/?lnk=hmm-uken					
Social business: https://www.ibm.com/social-business/us-en/	Social business: http://www.ibm.com/social-business/uk/en/?lnk=hmbuso				√	
Careers: http://www-03.ibm.com/employment/	Careers: http://www-05.ibm.com/employment/uk/?lnk=fab-uken				√	
PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif	PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif-uken			√		
Investor relations: http://www.ibm.com/investor/	Investor relations: http://www.ibm.com/investor/		√			
DeveloperWorks: http://www.ibm.com/developerworks/	DeveloperWorks: http://www.ibm.com/developerworks/		√			
Federal and State Contracts: http://www-304.ibm.com/shop/americas/content/home/en_US/government-	-	√				

contracts.html?lnk=fif						
Privacy statement: http://www.ibm.com/privacy/us/en/	Privacy statement: http://www.ibm.com/privacy/uk/en/?lnk=flg-priv-uken?lnk=flg			√		
Terms of use: http://www.ibm.com/legal/us/en/	Terms of use: http://www.ibm.com/legal/uk/en/?lnk=flg-tous-uken?lnk=flg			√		
About IBM: http://www.ibm.com/ibm/us/en/	About IBM: http://www.ibm.com/ibm/uk/en/?lnk=flg			√		
Corporate responsibility: http://www.ibm.com/ibm/responsibility/	Corporate responsibility: http://www-05.ibm.com/uk/ondemandcommunity/?lnk=flg-uken				√	
Contact: http://www.ibm.com/contact/us/en/	Contact: http://www.ibm.com/contact/uk/en/?lnk=flg-cont-uken?lnk=flg			√		
Accessibility: http://www.ibm.com/accessibility/us/en/	Accessibility: http://www.ibm.com/accessibility/uk/en/?lnk=flg-acce-uken?lnk=flg				√	

Redbooks: http://www.redbooks.ibm.com/	Redbooks: http://www.redbooks.ibm.com/		√			
Support: http://www.ibm.com/support/en-us/	Support: http://www.ibm.com/support/uk/en/?lnk=hmm-uken			√		
Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2&lnk2=support	Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2		√			
Knowledge Center: http://www.ibm.com/support/knowledgecenter/	Knowledge Center: http://www.ibm.com/support/knowledgecenter/		√			
Connect with a sales representative: http://www.ibm.com/connect/ibm/us/en/	Connect with a sales representative: http://www.ibm.com/connect/ibm/uk/en/?lnk=fcw-uken			√		
Find a business partner: https://www-356.ibm.com/partnerworld/wps/blocator/search.jsp?lnk=fcw	Find a business partner: https://www-356.ibm.com/partnerworld/wps/blocator/search.jsp?lnk=fcw-uken		√			
Case studies: http://www-03.ibm.com/software/businesscasestudies	Case studies: http://www-03.ibm.com/software/businesscasestudies		√			

dies/us/en/corp/?lnk=fdi	udies/uk/en/corp/?lnk=fdi-uken					
Latest news: http://www-03.ibm.com/press/us/en/index.wss?lnk=fab	Latest news: http://www-03.ibm.com/press/uk/en/index.wss?lnk=fab-uken			√		
Sign-In: https://idaas.iam.ibm.com/idaas/mtfism/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicdapuser	Sign-In: https://idaas.iam.ibm.com/idaas/mtfism/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicdapuser		√			
-	Computer Services Industry (CSI): http://www-935.ibm.com/industries/uk/en/CSI/?lnk=fif-uken					√
-	Managed Service Provider: http://www.ibm.com/connect/ibm/access/msphub/uk/en/					√
Total in each category		1	9	15	8	2

Table 4: categories of the pages of the UK website studied

- Ireland: the following table shows the web pages of the Irish site that have been removed, kept without changes, adapted, replaced, or created in comparison to the studied pages of the US site. A √ is inserted under the correspondent categories of pages.

US website	Irish website	Removed pages	Pages kept without changes	Adapted pages	Replaced pages	Newly created pages
------------	---------------	---------------	----------------------------	---------------	----------------	---------------------

Homepage: http://www.ibm.com/us-en/	Homepage: http://www.ibm.com/ie-en/				√	
Analytics: https://www.ibm.com/analytics/us/en/	Analytics: https://www.ibm.com/analytics/ie/en/?Ink=bua-ieen				√	
Cloud computing: http://www.ibm.com/cloud-computing/	Cloud computing: http://www.ibm.com/cloud-computing/ie/en/?Ink=bucl-ieen				√	
Commerce: http://www.ibm.com/commerce/us-en/	Commerce: http://www.ibm.com/commerce/ie-en/?Ink=buco-ieen			√		
IT Infrastructure: http://www.ibm.com/it-infrastructure/us-en/	-	√				
MobileFirst: http://www.ibm.com/mobilefirst/	MobileFirst: http://www.ibm.com/mobilefirst/ie/en/?Ink=bumf-ieen				√	
Security: http://www-03.ibm.com/security/	Security: http://www-03.ibm.com/security/ie/en/?Ink=buse				√	

	-ieen					
Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/	Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=hmbuwa-ieen		√			
Marketplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=hmmp	Marketplace: https://www.ibm.com/marketplace/cloud/ie/en-ie?lnk=hmmp			√		
Products: http://www.ibm.com/products/en-us/?lnk=hmpr	Products: http://www.ibm.com/products/ie/en/?lnk=hmm-ieen				√	
Services: http://www.ibm.com/services/en-us/	Services: http://www.ibm.com/technologyservices/ie/en/?lnk=hmm-ieen				√	
Industries: http://www.ibm.com/industries/en-us/	Industries: http://www.ibm.com/solutions/ie/en/?lnk=hmm-ieen				√	
Social business: https://www.ibm.com/social-business/us-en/	Social business: http://www.ibm.com/social-business/us-en/?lnk=hmbuso		√			

Careers: http://www-03.ibm.com/employment/	Careers: http://www-05.ibm.com/employment/ie/				√	
PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif	PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public			√		
Investor relations: http://www.ibm.com/investor/	Investor relations: http://www.ibm.com/investor/		√			
DeveloperWorks: http://www.ibm.com/developerworks/	DeveloperWorks: http://www.ibm.com/developerworks/		√			
Federal and State Contracts: http://www-304.ibm.com/shop/americas/content/home/en_US/government-contracts.html?lnk=fif	-	√				
Privacy statement: http://www.ibm.com/privacy/us/en/	Privacy statement: http://www.ibm.com/privacy/ie/en/			√		
Terms of use: http://www.ibm.com/legal/us/en/	Terms of use: http://www.ibm.com/legal/ie/en/			√		

About IBM: http://www.ibm.com/ibm/us/en/	About IBM: http://www.ibm.com/ibm/ie/en/			√		
Corporate responsibility: http://www.ibm.com/ibm/responsibility/	Corporate responsibility: http://www.ibm.com/ibm/responsibility/			√		
Contact: http://www.ibm.com/contact/us/en/	Contact: http://www.ibm.com/contact/ie/en/			√		
Accessibility: http://www.ibm.com/accessibility/us/en/	Accessibility: http://www-03.ibm.com/able/?lnk=flg-accessible?lnk=flg				√	
Redbooks: http://www.redbooks.ibm.com/	Redbooks: http://www.redbooks.ibm.com/			√		
Support: http://www.ibm.com/support/en-us/	-	√				
Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2&lnk2=support	Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2			√		
Knowledge Center: http://www.ibm.com/support/knowledgecenter/	Knowledge Center: http://www.ibm.com/support/knowledgecenter/			√		

ecenter/	gecenter/					
Connect with a sales representative: http://www.ibm.com/connect/ibm/us/en/	-	√				
Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw	Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw-uken		√			
Case studies: http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi	Case studies: http://www-03.ibm.com/software/businesscasestudies/ie/en/corp/?lnk=fdi-ieven		√			
Latest news: http://www-03.ibm.com/press/us/en/index.wss?lnk=fab	Latest news: http://www-03.ibm.com/press/ie/en/index.wss			√		
Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser	Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:basicldapuser		√			
-	IBM Ireland Lab: https://www-01.ibm.com/software/ie/irelandlab/					√
-	IBM Research – Ireland: http://www.research.ibm.com/labs/ir					√

	eland/index.shtml					
-	IBM locations in Ireland: http://www-05.ibm.com/ie/ibm/codetail.html					√
Total in each category		4	11	8	10	3

Table 5: categories of the pages of the Irish website studied

- Italy: the following table shows the web pages of the Italian site that have been removed, kept without changes, translated, adapted, replaced, or created in comparison to the studied pages of the US site. A √ is inserted under the correspondent categories of pages.

US website	Italian website	Removed pages	Pages kept without changes	Translated pages	Adapted pages	Replaced pages	Newly created pages
Homepage: http://www.ibm.com/us-en/	Homepage: http://www.ibm.com/it-it/				√		
Analytics: https://www.ibm.com/analytics/us/en/	Analytics: http://www.ibm.com/analytics/it/it/?lnk=bu					√	
Cloud computing: http://www.ibm.com/cloud-computing/	Cloud computing: http://www.ibm.com/cloud-computing/it/it/index.html?lnk=bucl					√	

Commerce: http://www.ibm.com/commerce/us-en/	Commerce: http://www.ibm.com/commerce/it-it/?lnk=buco				√		
IT Infrastructure: http://www.ibm.com/it-infrastructure/us-en/	<i>Infrastruttura IT:</i> http://www.ibm.com/it-infrastructure/it-it/?lnk=buit				√		
MobileFirst: http://www.ibm.com/mobilefirst/	MobileFirst: http://www.ibm.com/mobilefirst/it/it/?lnk=bumf					√	
Security: http://www-03.ibm.com/security/	<i>Sicurezza:</i> http://www-03.ibm.com/security/it/it/?lnk=buse					√	
Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/	Watson: http://www.ibm.com/smarterplanet/us/en/ibmwatson/?lnk=hbuitm		√				
Marketplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=hmmp	Markeplace: https://www.ibm.com/marketplace/cloud/us/en-us?lnk=fdi-itit		√				

Products: http://www.ibm.com/products/en-us/?lnk=hmpr	Prodotti: http://www.ibm.com/products/it/it/					√	
Services: http://www.ibm.com/services/en-us/	Servizi: http://www.ibm.com/technology/services/it/it/					√	
Industries: http://www.ibm.com/industries/en-us/	Settori: http://www-935.ibm.com/industries/it/it/index.html					√	
Social business: https://www.ibm.com/social-business/us-en/	Social business: http://www.ibm.com/social-business/it/it/?lnk=hmbuso					√	
Careers: http://www-03.ibm.com/employment/	Lavora con noi: http://www-05.ibm.com/employment/it/					√	
PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public?lnk=fif	PartnerWorld: https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/partnerworld-public		√				
Investor relations:	Per gli investitori:		√				

http://www.ibm.com/investor/	http://www.ibm.com/investor/						
DeveloperWorks: http://www.ibm.com/developerworks/	Sviluppatori: http://www.ibm.com/developerworks/		√				
Federal and State Contracts: http://www-304.ibm.com/shop/americas/content/home/en_US/government-contracts.html?lnk=fif	-	√					
Privacy statement: http://www.ibm.com/privacy/us/en/	Privacy statement: http://www.ibm.com/privacy/it/it/?lnk=flg			√			
Terms of use: http://www.ibm.com/legal/us/en/	Condizioni di utilizzo: http://www.ibm.com/legal/it/it/?lnk=flg-tous-itit?lnk=flg			√			
About IBM: http://www.ibm.com/ibm/us/en/	Informazioni su IBM: http://www.ibm.com/ibm/it/it/?lnk=fab				√		
Corporate responsibility: http://www.ibm.com/ibm/respon	Corporate citizenship in IBM: http://www.ibm.com/ibm/respo		√				

sibility/	nsibility/?lnk=fab						
Contact: http://www.ibm.com/contact/us/en/	<i>Contatta:</i> http://www.ibm.com/contact/it/it/?lnk=flg				√		
Accessibility: http://www.ibm.com/accessibility/us/en/	<i>Accessibilità:</i> <a href="http://www.ibm.com/accessibility/it/it/?lnk=flg-acce-
itit?lnk=flg?lnk=flg">http://www.ibm.com/accessibility/it/it/?lnk=flg-acce- itit?lnk=flg?lnk=flg					√	
Redbooks: http://www.redbooks.ibm.com/	Redbooks: http://www.redbooks.ibm.com/		√				
Support: http://www.ibm.com/support/en-us/	<i>Supporto:</i> http://www-935.ibm.com/services/it/gts/html/maintenance_tech_support.html					√	
Support portal: https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2&lnk2=support	<i>Portale di supporto:</i> https://www-947.ibm.com/support/entry/portal/support?lnk=ushpv18hcwh2			√			
Knowledge Center: http://www.ibm.com/support/kn	Knowledge Center: https://www.ibm.com/support/k			√			

nowledgecenter/	nowledgecenter/it/?lnk=ushpv18hchw4						
Connect with a sales representative: http://www.ibm.com/connect/ibm/us/en/	<i>Trova un responsabile delle vendite:</i> http://www-935.ibm.com/industries/it/it/in-sidesales/index.html					√	
Find a business partner: https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw	<i>Trova un business partner:</i> https://www-356.ibm.com/partnerworld/wps/bplocator/search.jsp?lnk=fcw			√			
Case studies: http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi	Case studies: http://www-03.ibm.com/software/businesscasestudies/us/en/corp/?lnk=fdi		√				
Latest news: http://www-03.ibm.com/press/us/en/index.wss?lnk=fab	<i>Ultime novità:</i> http://www-03.ibm.com/press/it/it/index.wss				√		
Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:	Sign-In: https://idaas.iam.ibm.com/idaas/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:		√				

asicldapuser	asf:basicldapuser						
-	Settore pubblico: http://www-05.ibm.com/it/egov-center-rome/						√
-	Managed Service Provider: http://www.ibm.com/connect/ibm/access/msphub/it/it/						√
Total in each category		1	9	5	7	11	2

Table 6: categories of the pages of the Italian website studied