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**Sustainability plan**

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# Summary

The present report on the Sustainability Plan is developed as a deliverable D8.4 under WP8 “Dissemination and Exploitation” of the ATLAS project.

The Sustainability Plan describes the activities undertaken in order to guarantee the exploitation and sustainability of the ATLAS platform after the end of the project. It presents a comprehensive strategy that has been developed on how software platform can best be used and exploited within the ATLAS communities: by large firms, by SMEs, by NGOs, by the broader open source developer community, by academia.

The main objectives of the deliverable are to:

* provide sustainability strategy on how both ATLAS results and software platform can best be used and exploited within the ATLAS communities
* ensure that the ATLAS platform will be used as the basis for non-commercial activities by the partners, users, new projects
* ensure that this product will be market realized.

Successful sustainability of the ATLAS results is one of the key objectives of the project. To enable sustainability, this plan includes all the most important aspects: the results to be sustained, the potential customers, an analysis of existing business models and proposals for prospective ATLAS business models, respective exploitation plans and plans for noncommercial use.

Each partner has specified own plan to take advantage of both the knowledge acquired throughout the project and its tangible results. The ATLAS partners’ individual plans are presented in the Sustainability Plan.

While dissemination activities were planned to be performed from the beginning of the ATLAS project, the sustainability strategy concentrates on the project’s results during the last phase and afterward to reach sustainability after the project expiration.

***The plan had to be regularly reviewed on the basis of the project’s evolution and of the acquired new knowledge that allow adding new exploitation opportunities.***

# 1. Introduction

The ATLAS project sustainability plan aims to develop a map for further exploitation and improvement of project results after the end of the planned project activities. That is why, the project sustainability plan investigates different approaches and mechanisms to enable project partners as a consortium, project partners alone or in partnership with other organizations and third parties to further use, implement in practice, extent the use, and finally improve and enhance project products and services. Therefore the present document will outline the general framework for exploitation of project products and services, the IPR policy, the mechanisms for commercial and non-commercial exploitation and use of project outcomes.

## 1.1. Sustainability principles

The main principles for development of the sustainability plan for ATLAS project results are identified to be:

1. Strive for increasing number of end-users of the ATLAS project outcomes, products and services;
2. Keep continuous improvement and enhancement of the ATLAS products and services` functionality.
3. Hold up high interest and motivation of the different commercial and non-commercial partner organizations to further improve and use ATLAS project products and services.

The first principle aims to ensure that there will be enough end-users of project products and services. If not used on practice, ATLAS products and services will soon become obsolete. This principle will lead all activities and assumptions in the sustainability plan.

The second principle states that only a product that is evolving and improving with the time will attract end-users. That is why the second fundamental principle for development of sustainability plan will be to assure mechanisms for improvement of products and services.

The third principle is related with protection of commercial and non-commercial interests of project partners. If there are not clearly specified the business models for exploitation of ATLAS products and services, project partners and other interested parties will not identify further motivation for working on ATLAS.

## 1.2. Aims and objectives

The sustainability strategy aims to further extend the use, implementation and development of ATLAS, and to propose specific activities for its further exploitation.

The sustainability plan has three main objectives, in coherence to the identified principles:

1. To guarantee further use of ATLAS products and services, after the end of the project;
2. To propose commercial and non-commercial exploitation cases;
3. To propose mechanism to extend and improve Atlas products and services after the end of the project.

Moreover, the sustainability plan describes the general framework for exploitation of ATLAS products and services and proposes finally further specific implementation activities for interested parties.

Therefore, in coherence with these objectives three main groups of activities are identified in the process of ensuring sustainability of the ATLAS project results:

1. Wide dissemination and promotion of the ATLAS services in order to raise awareness among potential users;
2. Ensuring further development and improvement of the ATLAS product and services using different methods, as for example partner involvement and involving end-users as co-creators in the product improvement;
3. Clear community building strategy to ensure community growth and strategy to increase the role of networking within Living labs after the project end.

## 1.3. ATLAS Exploitation strategy

As a general framework, the present document traces out 3 main lines for ATLAS products exploitation:

* Commercial exploitation
* Non-commercial exploitation
* Community exploitation

Commercial exploitation proposes appropriate business model for offering services to interested business organizations based on ATLAS products and services and to bring income from selling them on respective markets. The ATLAS partners investigate the opportunity to propose a suitable model for cooperation, allowing other companies and organizations to exploit as well commercially ATLAS products and services. This increases the motivation of different actors to further extend and exploit services and functionality of ATLAS software.

The non-commercial exploitation outlines exploitation mechanisms for educational, research and NGO organizations. It will guarantee wider use of ATLAS for non-commercial purposes, as well extending research, experiments, tests and improvement of ATLAS products functionality, usability and others. Educational and research institutions as well as libraries and other NGO organizations will provide more case studies, comparative analysis and exploration studies, highlighting the way for implementation and improvement of ATLAS products and services. The implementation of ATLAS products in education institutions will further improve educational services and will bring more interested partners in ATLAS communities.

The community exploitation strategy outlines different activities and lines of action to develop an active and interested community of developers and end-users that contribute for further extension of software functionality. Community- building strategy will be developed as part of the Living labs activities.

## 1.4. Sustainability plan structure

The **first** chapter describes the main sustainability principles, aims and objectives of the sustainability planning and associated exploitation strategy.

The **second** chapter of Sustainability plan presents in general the ATLAS products and services. Some of their main characteristics and functionalities as well as some of their competitive advantages are outlined.

The **third** chapter includes description of the ATLAS target users and respective use cases.

The **forth** chapter describes market of web content management systems, market trends and main players on the market. Comparative matrix for products, available on the market and ATLAS is proposed as well. The chapter ends up with generic SWOT analysis of ATLAS products.

The **fifth** chapter is concentrated on the IPR policy in the sustainability strategy of the ATLAS consortium.

The **sixth c**hapter presents cases for commercial exploitation of ATLAS products and services.

The **seventh** chapter discusses non-commercial exploitation cases. It provides specific use-cases for potential non-commercial users: teachers, trainers, researchers and others.

The **eighth** chapter identifies the community building strategy, including description of communities, tools for interaction and knowledge transfer.

The **ninth** chapter describes the promotion activities, tools and plans associated with sustainability strategy and exploitation.

The **last** chapter presents partners` exploitation plans.

# 2. ATLAS exploitable results

The first chapter aims to provide a detailed presentation of expected final ATLAS products and services. Therefore it will outline its main functionality, competitive advantages, end-users benefits and will end-up with conclusions.

ATLAS is an open-source software platform for multilingual web content management, containing i-Publisher and ASSET.

## 2.1. i-Publisher

i-Publisher (i-publisher.atlasproject.eu) is a web-based instrument for creating, running and managing dynamic content-driven web sites. It allows both small and large organizations to deploy and manage multilingual web sites without spending time and effort for installing and maintaining a content management system. This service assists organizations in retrieving, unifying, and packaging heterogeneous pieces of content, and dynamically rendering them on multiple web sites. I-Publisher fosters collaboration in content creation by enabling authors, editors, and other contributors to work together. It also facilitates the process by automatically categorizing, summarizing, and tagging the newly created content. Furthermore, web sites may be built with i-Publisher with a point-and-click graphical user interface by people with different expertise but no programming experience – publishers, information designers and graphic designers. The service leverages the full benefits of the ATLAS platform and becomes an ideal choice for promoting any type of organization on the Web. Web sites created with i Publisher offer to end-users multilingual full-text and similarity search, and clustered, summarized and annotated content.

## 2.2. ASSET

ASSET is a linguistic framework that enriches the content in the web sites, produced with –Publisher, with automatic annotation of important names and concepts, suggestions for categories and keywords, summary generation and computer-aided translations in English, Bulgarian, German, Greek, Polish and Romanian.

The linguistic platform ASSET employs:

* Natural Language Processing tools
* Categorization tool
* Summarisation tool and
* Machine translation engine.

## 2.3. ATLAS services

The Atlas consortium has delivered web-based services produced with the multilingual platform Atlas:

* ***i-Librarian – www.i-librarian.eu***

i-Librarian is a free online library that assists authors, students, young researchers, scholars, librarians and executives to easily create, organise and publish various types of documents in English, Bulgarian, German, Greek, Polish and Romanian. Currently, a sample of the publicly available library contains over 20 000 books in English.

On uploading a new document to i-Librarian, the system automatically provides the user with an extraction of the most relevant information (concepts and named entities, keywords). Later on, the retrieved information is used to generate suggestions for classification in the library catalogue, containing 86 categories, as well as a list of similar documents. Finally, the system compiles a summary and translates it in all supported languages.

Microsoft Office documents, PDF, OpenOffice documents, books in various electronic formats, HTML pages and XML documents are among the supported formats. Users have exclusive rights to manage content in the library at their discretion.

* ***EUDocLib – eudoclib.atlasproject.eu***

EUDocLib is a publicly accessible repository of EU law documents from the EUR-LEX collection. This web site (online service) provides enhanced navigation and easier access to relevant documents in the user's own language. The implementation of EUDocLib is done entirely with i-Publisher as a proof of concept. All documents of the EUR-LEX collection, available in English, that are added up to January 1, 2011 are imported into ATLAS (resp. into EUDocLib).

This service allows you to retrieve information, to easily navigate through content, to search, to find similar documents from the EUR-LEX collection in English, Bulgarian, German, Greek, Polish and Romanian in an intelligent way. The service automatically compiles a summary of each document, featuring all relevant information about it - common words and phrases, capitalized phrases, URLs, similar documents, extractive summary etc.

Every document is catalogued in the Eurolex major classification systems: eurovocTree, eurovocdescriptor and eurovocDirectoryCodeTree. In addition, our service “automatically” suggests topics the document most likely belongs to. The classification is based on the extracted information for the document.

After a document is processed, it is indexed by a full-text search engine, based on Lucene. Using a simple, Google-like search form, you can quickly find words or phrases in all documents. The search results show excerpts from the text, best matching the search terms.

# 3. ATLAS users

## 3.1. Target users

ATLAS platform provides unique combination of web services and products targeted at both – individuals and organizations. The following users of ATLAS services can be identified:

1. Organizational users:
   1. Web design companies and hosting companies;
   2. Online bookstores, digital Libraries and public repositories;
   3. Publishing companies, news agencies, news websites and web media;
   4. Universities, Bulgarian academy of sciences, research organizations, schools;
   5. NGOs, libraries (state, university libraries, associations of libraries;
   6. State institutions, government institutes;
2. Individual users:
   1. Web Developers, Content providers, Software Developers, IT Engineers;
   2. Publishing Managers, Editors, Authors, Publishers, Editorial Director, Digital Publishing Director;
   3. Librarians, Library Managers, Digital Repository Managers, Expert and consultants;
   4. Editors, Authors, Editorial Director;
   5. Students, Researchers, Authors, Teachers, Scholars, Research managers;
   6. General public.

ATLAS is offered to the potential customers as a free software-as-a-service solution and as a product.

|  |  |
| --- | --- |
| **Component** | **Target Customers** |
| **ATLAS as a product (to be installed)**  **(**i-Publisher and ASSET) | Corporate clients, companies, universities, digital libraries, media agencies, publishing houses, online bookstores, web design companies, web hosting company offering website creation |
| **ATLAS as a SaaS** | Small enterprises, young scientists, students, passionate web users, people little web experience |
| **ASSET** | Online bookstores, Digital Libraries, Media agencies/websites  Libraries, Publishing houses |
| **i-Librarian** (thematic content-driven web site built with i-Publisher) | Students, Researchers, Readers, Authors  Consultants, Lawyers |
| **EUDocLib**(thematic content-driven web site built with i-Publisher) | The general public |

## 3.2. ATLAS use cases

There are different benefits of ATLAS results for different target groups, which are shown in the use cases presented below.

i-Publisher - intuitive tool for building websites – is offered as:

* Simple Mode containing ready-to-use web sites and templates;
* Advanced Mode with functionalities to manage and publish multilingual content;
* A web site, created by i-Publisher, can be further enhanced through the ASSET -Linguistic Framework. Reading the website, a visitor can:
  + easily find documents kept in order via the automatic classification;
  + easily find content sensitive content;
  + find similar documents in a large multilingual content;
  + spot information from a multilingual content by means of short summaries and their translation in different languages.

### 3.2.1 Small enterprises, non-profit organizations

For small enterprises, non-profit organizations, i-Publisher provides:

* ability to build content-driven web sites via point-and-click user interface;
* wide set of predefined functionalities;
* have full control over shared, private, publicly available content;
* no installing and maintenance overhead;
* aiding translation to other languages.

|  |  |
| --- | --- |
| ***User group*** | **Small enterprises, non-profit organizations** |
| ***Description*** | * An organization does not currently have a content-driven web site and decides to create one with i Publisher. A team member is authorized to create an account with the service and start working on the project. * After authorisation, they choose several predefined content item types (e.g. publications, news, events), decide on a visualization theme (e.g. styles, logo, page layout), and select desired functionality for the web site. * In less than an hour, the team member can preview and deploy the web site. * Finally, they create accounts for their fellow team members who will be responsible for creating, editing and publishing content (possibly in different languages) on the newly created web site. |
| ***Benefit*** | Authors and editors will greatly benefit from i-Publisher as it saves them valuable time by automatically categorizing, summarizing and annotating content as well as aiding its translation into other languages. |

### 3.2.2 Corporate clients, companies, universities

For corporate clients, companies, universities, i-Publisher provides:

* granular user access rights that ensure fluent and secure workflows;
* publishing of multilingual content to different output channels. As a result content is available at different locations and in different formats;
* document workflow that is organised so that the newly added content is automatically categorised, annotated and translated;
* a preview of a newly created website in a matter of minutes.

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| ***User group*** | **Corporative clients** | |
| ***Description*** | 1. A corporative client needs several websites to present its businesses. The client has to unify, classify, retrieve, store, reuse, and package heterogeneous information items, which are then rendered dynamically on several websites. 2. The Atlas software is installed on a server in the client's Intranet. 3. An administrator from the IT department creates accounts for team members who will be responsible for the different phases of creating and managing websites and their content. 4. Content designers create content types or choose from predefined types (e.g. products, clients, news, events, documents, offices), define relations between them and design the fill-in forms. Then editors can start entering the information filling in the forms. 5. Graphical designers choose a visualization theme (e.g. styles, logo, page layout). 6. Page designers create pages and define the dynamic content that will be presented there. The information organised in content types can be presented in different styles and formats on one or more websites. 7. Page designers build the web site navigation. In addition to the static navigation, designers create dynamic navigation blocks. These blocks contain navigation links to contextually relevant information. 8. An administrator or another user with special access rights configures the functionalities for the websites like Search, Text Mining, Categorisation, etc... 9. Finally, the administrator publishes the websites on the hosting servers. | |
| ***Benefit*** | * The corporative client can be very quick and efficient to deliver relevant information that is precisely targeted and up-to-date, without spending many man-hours to update its numerous web pages on a daily basis. * In addition to the static navigation blocks, the websites contain dynamic context blocks. The blocks contain information on a given topic. The links that are listed in the block have similar keywords attached to them, enabling the user to quickly access information that is currently important to him. | |
| ***User group*** | | **Multinational companies, universities** | |
| ***Description*** | | * Trained personnel from the organization customize Atlas so that it reflects the structure and internal workflows of the organization. * A system administrator creates user groups and user accounts that reflect the security restrictions in the organization. * A publisher defines several output publishing channels (e.g. web sites, blocks of content in existing sites). * Graphic designers customize the look and feel of each output publishing channel. * Information designers define specific page and contextual navigation. * After all these tasks have been completed, staff from different departments may start creating and manipulating heterogeneous multilingual content. Text content is automatically categorized, summarized, and annotated but is not published before being approved. * Quality assurance staff review content and approve it for publishing. | |
| ***Benefit*** | | The hierarchical structure of the organisation is properly mapped. The granular user access rights ensure the fluent and secure workflows. The content editors work only on the content they are responsible for; the approval editors further process the content and after the last approval stage the content is made available online. In addition, the document workflow is organised so that the newly added content is automatically categorised, annotated and translated. | |
| ***User group*** | **Web design companies, Web hosting company offering website creation** | |
| ***Description*** | * An organization does not have a web site and commissions a web design company to build one. * After authentication, a team member of the web design company chooses several predefined content item types (e.g. publications, news, events), decides on a visualization theme (e.g. styles, logo, page layout), and selects desired functionality for the web site. * In less than an hour the organisation can preview the web site and give feedback to the web design company. * Then the team member build the web site implementing the feedback and publishes it on the host server. | |
| ***Benefit*** | The web design company makes fast prototyping and easy implements updates of the websites | |

### 3.2.3 Libraries, publishing houses, media agencies, online bookstores

For Libraries, Publishing houses, Media agencies, Online bookstores and newspapers, i-Publisher:

* reduces the manual work of classification editors by using the automatic classification;
* provides better publication overview with revealing details;
* offers better navigation presenting context sensitive content like “Similar items” and “Hot topics” dynamic blocks.

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| --- | --- | --- |
| ***User group*** | **Publishing house, media agency, library** | |
| ***Description*** | * A publishing house publishes daily vast amounts of information like publications, books, articles, bulletins, etc. which have to be annotated, categorised and made available online. * A team member of the publishing house builds a website powered by Atlas or integrates the Text Mining Tools in an existing software system. * The team member trains a model for the categorisation of the digital content using already categorized data or integrates an already trained model. As a result newly added content will be automatically categorised according to that model. * The newly added content is enriched with automatically compiled annotations such as excerpts of the most-commonly used noun phrases in the text, dates, links, name entities, together with a detailed extractive summary. In addition, the annotations are machine- translated in the available for the web site languages. | |
| ***Benefit*** | Classification editors's manual work will be reduced as the system will automatically suggest categories for the content items. The user will benefit from the better publication overview due to the extended information published on the website. In addition, the suggested similar documents can be very useful in finding relevant information on a topic. | |
| ***User group*** | | **Online bookstore** |
| ***Description*** | | * A digital edition needs to be represented in an appealing way in order to attract the readers' attention. * The bookstore uses I-Publisher service to process the digital content and as a result to enrich the available information for the book. In addition to the bibliographic information like author, name, year of publication etc, every edition is presented with a summary generated by the i-Publisher so that the reader can get a quick overview of the book content. * The reader is provided with most frequently used noun phrases, names, links, dates for this book. Clicking on a phrase, for example, the reader finds the list of books in which this phrase is featured. * The reader is presented with a list of digital books that are similar to the one currently viewed. |
| ***Benefit*** | | The user is navigated through content relevant to the one he is initially interested in. In addition, the user chooses easily the books due to the additional information for every book. The bookstore will capitalize on extended book sales since users find it easier to locate relevant information i.e. find books on very specific topics. It will also benefit from the bulk sales that will be increased by the suggested similar documents, enabling readers to find and purchase multiple books on their favorite topics. |
| ***User group*** | **Newspapers** | |
| ***Description*** | * The newspaper IT team utilizes the Atlas system to create the newspaper online edition or integrates the Text Mining engine in an existing software system. * The content is processed by Atlas and as a result the reader is presented with additional information about the article such as: the most important phrases, name entities, dates, links in this article. Clicking on a a chosen phrase for example, he gets a list of all articles in which that phrase is featured. * The reader finds topic-relevant content clicking on a “similar” link under the article. * In addition to the static navigation, the user will be able to browse the newspaper using dynamically built navigation blocks like: “Hot topics”, “Most popular”etc... The content shown in these blocks is a result of the article text processing functionality. If a phrase is used more often than others over a weekly period it becomes a “Hot topic phrase”. Furthermore, the “Hot topic block” consists of articles that feature the 'Hot topic phrases'. | |
| ***Benefit*** | Similar to the Online bookstore case, the user navigates quickly through the specific content he is interested in. However, here the user is also presented with information that is 'hot' throughout the website, information that he would not have been necessarily interested in at first. This way it is much easier to keep up to date with the important topics that are of global interest. | |

# 4. Competitive positioning of ATLAS services

## 4.1. Market analysis

There are many web content management systems, available on the market, including commercial products, open source tools and software-as-a-service solutions.

In order to investigate the market of web content management systems, a short overview of main industry trends and reports is presented below. As ATLAS products will be realized as an open source solution, specific attention is paid on analysis of most popular open-source solutions for CMS.

Gartner has released in 2011 their annual Magic Quadrant for Web Content Management (WCM)[[1]](#footnote-1), a report that helps businesses to make purchase decisions about leading WCM software vendors. Gartner’s Magic Quadrant for Web Content Management also reports on industry trends. The year (2011) four major trends were identifed[[2]](#footnote-2):

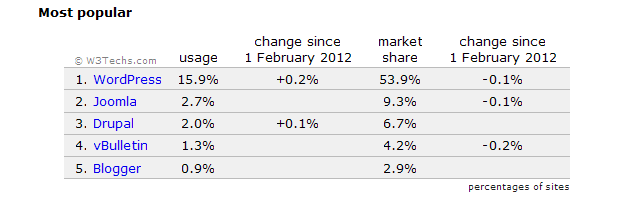
1. Businesses are looking for their CMS to impact not only their internal productivity, but revenue and profit as well1.
2. Businesses are aware that their customers are reaching them through multiple channels (mobile, social, etc.) and they want a CMS that will not only work across all these channels, but that will also optimize these different interactions with customers1.
3. Customers want their CMS to integrate with related technologies, like analytics1
4. With a growing interest in cloud computing, many companies are looking to have an off-site or combination option for their WCM solution1

The 2011 Open Source CMS Market Share Report[[3]](#footnote-3) points three open source services - Joomla!, WordPress, and Drupal, to dominate today’s market. Figure below provides a comparison of the download numbers for the most recent major releases from each of the systems.



Source: 2011 Open Source CMS Market Share Report

According to BuiltWith Trends[[4]](#footnote-4), Joomla!, WordPress, and Drupal are among top 5 of the most popular CMS technologies on the internet.



Source: W3Techs.com

As a conclusion from presented data and reports, it can be stated that end-users realize the role of web content management systems as substantial factor for development of successful web presence. Business users expect to find more advantages and services, leading to larger functionality of CMS. Another interesting fact is that WordPress dominates the market by end-users downloads. However, it must be recognized that WordPress is focused on individuals, developing personal web blogs, and this results in bigger individual number of end-users downloads.

More interesting for ATLAS products will be to analyze the share of application of the above mentioned systems in business and commercial projects. There the expected changes are smooth as business projects are more conservative and do react slowly on sharp market disproportions.

Both Joomla and Drupal are more used in business settings and should be more carefully investigated.

## 4.2. Main players on the market

In order to understand the market of ATLAS products and services, a specific analysis of existing products and services is investigated below. Their main features and differences from ATLAS are outlined.

Similar products to **i-Publisher** **Advance Mode** are:

1. **WordPress** (<http://wordpress.org/>). WordPress is open source software for creating websites. It is focused mainly on individuals, developing personal web blogs.
2. **Drupal** (<http://drupal.org/>). Drupal is an open-source platform and content management system for building dynamic web sites offering a broad range of features and services including user administration, publishing workflow, discussion capabilities, news aggregation, metadata functionalities using controlled vocabularies and XML publishing for content sharing purposes. With Drupal users can easily build many different types of web pages - from simple web blogs to large online communities. Drupal design is very easy to customize, has built-in search tool and search-engine friendly URL's as an extra module, discussion capabilities and news aggregator.

Drupal is an open-source software distributed under the GPL ("GNU General Public License") and is maintained and developed by a community of thousands of users and developers.

***Main target users:*** *developers, programmers, content providers, media agencies, publishing houses, universities, NGOs, government, SMEs and corporate business.*

1. **Joomla!** (<http://www.joomla.org/>). It is an open source CMS application, suitable for creating personal and corporate websites and online magazines. But Joomla! is offered only as a product to be installed and not as a SaaS. It has numerous build-in features as well as a large selection of extra modules and components, which enhance the value of user website and will enrich user experience.

***Main target users:*** *corporate business, online magazines, newspapers, and publications, e-commerce companies, government, small businesses, NGOs, community-based portals, schools, churches and personal or family homepages.*

Similar products to **i-Publisher** **Simple Mode** are:

1. **Weebly** (<http://www.weebly.com>) is an online, free widget-based website creator. It uses a widget-style format, allowing users to create pages by dragging and dropping different page elements (images, text, or interactive content, etc.) onto a page and filling in the content. It is offered only as a SaaS.

***Main target users:*** *non technical**users, website builders, teachers, students, small companies, hosting companies, NGOs*

1. **Yola** (<http://www.yola.com/>) is a website builder and website hosting company headquartered in San Francisco. People without programming skills and a limited knowledge of HTML and graphic design can make web sites using Yola. Its drag and drop system allows users to incorporate widgets without knowing HTML. Yola also integrates e-commerce and blog software and acts as a domain registrar.

***Main target users:*** *groups, non technical users, teachers, students, small companies, hosting companies, NGOs.* ***Revenue:*** *domain sales, value added services, domain based email, e-commerce platform, market place, advertising network.*

Similar products to **i-Librarian** are:

1. **Zotero** (<http://www.zotero.org/>) is a free, easy-to-use tool to help user collect, organize, cite, and share research sources. Zotero is a research tool that automatically senses content, allowing the user to add it to his personal library with a single click. It collects all research in a single, searchable interface.

***Main target users:*** *researchers, professors, master and PhD students*

1. **Calibre** (<http://calibre-ebook.com/>) is a free open source e-book library management application that uses a large number of other open source libraries and is developed on Linux.

***Main target users:*** *readers, authors, general public*

1. **LibraryThing** (<http://www.librarything.com/>) is an online service to help people to catalogue their books easily. The user can access his/her catalogue from anywhere—and from the mobile phone. Because everyone catalogs together, LibraryThing also connects people with the same books, comes up with suggestions for what to read next, and so forth. LibraryThing is a cataloguing application, searching the Library of Congress, all five national Amazon sites, and more than 690 world libraries. The user can edit your information, search and sort it, "tag" books with your own subjects.

***Main target users:*** *readers, authors, librarians, publishers, general public, libraries, bookstores, publishing houses.*

## 4.3. Positioning to the Competitive products

The table below presents the positioning of i-Publisher to the competitive products:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Service**  **Functionality** | **i-Publisher** | **Weebly** | **Yola** | **Drupal** | **Joomla** |
| Software-as-a-service | + | + | + | - | - |
| Hosting services | + | + | + | - | - |
| Export and import functions | + | ? | **?** | **-** | **-** |
| Number of published sites | ? | 1 | 2/5/25[[5]](#footnote-5) | unlimited | unlimited |
| Available templates | + | 100 | 100 | + | + |
| Selection of Themes | + | + | + | + | + |
| Drag & drop | - | + | - | - | - |
| Customizable design and layout of web pages | + | + | + | + | + |
| Text redactor - WYSIWYG | + | + | + | + | + |
| Picture editor | + | + | ? | + | - |
| **User management** | | | | | |
| Add, edit, delete user | + | + | - | + | + |
| Set users rights (security policies for groups and users) | + | - | - | + | + |
| **Manage content (add, edit, delete)** | | | | | |
| URLs, Pages, Files | + | + | + | + | + |
| Predefined content types (documents, events) | + | + | + | + | + |
| News | + | + | - | + | + |
| **Search** | | | | | |
| Simple | + | - | Google | + | + |
| Advance | + | - | - | + | - |
| **Text mining features** | | | | | |
| Automatic categorization | + | - | - | - | - |
| Automatic summarization in various formats | + | - | - | - | - |
| Automatic extraction of phrases, names, noun phrases | + | - | - | ? | - |
| Dynamically interlinking of content | + | - | **-** | **-** | **-** |
| **Collaboration features**  **(blogs, discussions, social networks, voting, rating, polls)** | - | + | + | + | + |
| Widgets | + | - | + | + | - |
| Machine translation of content | + | - | - | **-** | - |
| Statistics | - | + | + | + | + |
| Automatic mobile sites | + | + | **-** | + | **-** |
| E-commerce features | - | ☺- partial | ☺- non free | + | + |
| Multilingual support | + | - | - | + | + |
| **Help/tutorials/documentation** | | | | | |
| Online help | + | + | + | + | + |
| Video tutorials | + | + | + | - | + |
| Contextual help | + | - | - | - | + |

The table below presents the positioning of i-Librarian to the competitive products:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Service**  **Functionality** | **i-Librarian** | **Zotero** | **Calibre** | **LibraryThing** |
| SaaS | + | - | + | + |
| Standalone application | - | + | + | - |
| **OS** | | | | |
| Windows | + | + | + | + |
| Unix/Linux | + | + | + | + |
| Mac OS X | + | + | + | + |
| Mobile version | + | ? | + | ? |
| **Manage Content** | | | | |
| Add, edit, delete content | + | + | + | + |
| **Search** | | | | |
| Simple search | + | + | + | + |
| Advanced (by title, author, date) | + | + | + | + |
| Saved search | - | + | - | - |
| Sort option | + | + | + | + |
| **Tags extraction** | | | | |
| Automatic | + | + | + | + |
| Manual | + | + | + | + |
| **Comments, Rating** | | | | |
| Comments, Reviews  (add, edit, delete) | - | + | + | + |
| Rates (add, edit, delete) | - | - | + | + |
| Rating quality of automatic translations | + | - | - | - |
| **Categorization, Collections** | | | | |
| Automatic | + | + | **?** | + |
| Manual | + | + | **?** | + |
| **Citing** | - | + | - | - |
| **Machine translation** | + | - | - | Via Google |
| **Summarization** |  |  |  |  |
| Automatic | + | + | + | + |
| Manual | + | ? | + | + |
| **Convert** | - | - | + | **-** |
| **Multilingual support** | + | + | + | + |
| **Support of different file formats** (pdf, doc, odt, txt, rtf, html, epub) | + | pdf | + | + |
| **Meta-data extraction** | | | | |
| Automatic | + | + | + | + |
| Manual | + | + | + | + |
| **Integration with other applications**  **(word editors)** | - | + | **-** | **-** |
| **Social networking services (talk, groups, recommendations…)** | - | + | - | + |
| **Help** | | | | |
| Online help | + | + | + | + |
| Video tutorials | + | + | + | - |
| Contextual help | + | **-** | - | - |

## 4.4. SWOT analysis

|  |  |  |
| --- | --- | --- |
|  | **Positive** | **Negative** |
| **INTERNAL FACTORS** | **Strengths:**   * Ready-to-use web sites and templates for non technical users * Advance Mode, including functionalities to manage and publish multilingual content for professionals * Flexible user access rights system * Mass content export/import * No software installation * Users can find the most essential texts from large document collections * Improves content navigation by interlinking content items based on text annotations from different documents * New linguistic platform * Automatically generated summary of every piece of content * Automatic classifier can be used as a software-as-a-service solution * Classification tool automatically organises the books, emails, documents, notes, splitting them into groups. * Flexible customization in response to the specific functionalities requested by clients | **Weaknesses:**   * New product entering the market * Lack of social networking features * Community need to be kept active after the project end * Relatively small strategic partnerships |
| **EXTERNAL FACTORS** | **Opportunities:**   * Increasing interest in multilingual content management systems * Increased interest in open source solutions and increased ROI * Integration with wider number of products and services * Involving more users in the co-creation process in order to improve the ATLAS products * Integration of new languages into the common software platform and as a result into the online services * Automatic (multilingual) plagiarism detection | **Threats:**   * Market situation and economic downturn. Decreased economic activity and less web services and Internet presence. Reducing budget for web presence and the general downturn lead to impact on costs of NGOs, public organizations and non-business institutions. * Well-established competitive CMS. Popular, free and widely used web services * Rapid development of Linguistic tools. Inadequate quality of linguistic tools. |

# 5. IPR AND LICENSING

The IPR issues, related to the ATLAS tools and services are described in the **Deliverable 8.2 Commercial agreement** agreed between the partners.

Multilingual Content Management will be distributed under the terms of GPL 3.

Text Analysis Tools, including Text Analysis Platform, Summarization, Categorization, Cross-lingual semantic search engine will be distributed under the terms of GPL 3.

Services will be distributed:

* i-Publisher (ATLAS KMS visualization layer) – free/subscription for Commercial Use, and free for Non Commercial Use;
* i-Librarian - free/subscription for Commercial Use and for Non Commercial Use;
* EUDocLib - free

The following table contains licensing details of Language packs:

|  |  |  |  |
| --- | --- | --- | --- |
| **Tool** | **Source code** | **Commercial Use** | **Non Commercial Use** |
| Bulgarian LP | Closed source | Commercial agreement | Commercial agreement |
| English LP | Open source /GPL 3 license | free | free |
| Greek LP | Closed source | Commercial agreement | Commercial agreement |
| German LP | Free as Web services/closed source | Commercial agreement | Free on request (only for academic partners) |
| Polish LP | Open source/GPL 3 license | Free/Commercial agreement*[[6]](#footnote-6)* | free |
| Romanian LP | Free as Web services/closed source | Commercial agreement | Free on request |
| Translation models | Closed source | Commercial agreement | free on request (only for academic partners) |
| Test /evalution corpora developed during the project | Closed source | Commercial agreement | free on request (only for academic partners) |

# 6. Commercial exploitation

## 6.1. Commercial Services

Providing support services to the enterprise customers is the main revenue generator in the business model built around the open source software.

ATLAS partners will target the relevant markets by offering the following services separately and/or in commercial packages:

* *Constant maintenance and support*: the ongoing maintenance of the online services as well as the provision of adequate user support play an important role in meeting user expectations and preserving the initial user base;
* *Further development and improvement*: the online services and the ATLAS platform will be constantly enhanced in order to meet the changing user needs and expectations. Special attention should be paid to interoperability in order to allow functionalities of the ATLAS platform to be reused in other applications and services;
* *Customization* of the Atlas platform to the specific client`s needs (development of new functionalities, adding new languages to the platform…);
* *Consultancy* and project implementations based on the services provided to end-users;
* *Training* to organizations who want to use the platform.

### 6.1.1. Commercial packages

Commercial packages, offered on the market, include service based on the ATLAS platform and products (installation, support, customization, updates and etc):

* **Basic,** including installation, support, bug fixes and security updates
* **Gold,** including installation, support 24/7, new features and upgrades
* **Platinum,**  including hardware, set-up services, installation, support, updates

### 6.1.2. Consulting services

The consulting services will be offered to all potential customers – organizations.

The consultancy services may involve the custom installation of ATLAS platform, which is only available to the employees of the organization, or may involve the training and integration the ATLAS processes within an organization. This will be exploited by the relevant partners within the consortium as consultancy services.

### 6.1.3. Training services

To fulfill the needs of the organizations in using the ATLAS platform and services the consultants or IT consultants will need to provide training to the users.

In general three types of training can be distinguished, tailored to different target groups.

* *Training of Users*: This is the most direct form of training targeted at content providers information managers in the organization which will use ATLAS platform respectively i-Publisher.
* *Train the Trainer*: These special seminars are targeted towards other consultants and distributors whose customers prefer to have in house training done by their IT consultant instead of sending the staff to offsite training facilities. The consultants are both trained on how to use the ATLAS platform as well as train others. It differs in the depth of the training about the platform and includes access to the general training material afterwards. The technical partners in the project will most likely execute this kind of training, as they are highly knowledgeable about the system.
* *Train the IT consultant/developers*: The target audiences of this training are IT experts and developers in the organizations willing to use ATLAS products and services. On the job training with many case studies will be the method of choice for the technical partners in disseminating the knowledge to the IT consultants.

## 6.2. Long-term viability

Consortium members have thoroughly examined various measures for ensuring project sustainability and have put special emphasis on the following:

* ***Availability:*** The online services must be available to whoever needs them, whenever they need them. i-Publisher, i-Librarian and EUDocLib should be available twenty-four hours a day, seven days a week. Therefore, adequate user support is crucial for the success of the services and should be put into consideration.
* ***Privacy and security***: Issues such as the ownership of proprietary data, control over published content, intellectual property rights, and data integrity should be specifically addressed.
* ***Advancements in technology***: The ATLAS platform should reflect recent advancements in technology as well as the changing user needs and expectations. The software platform and the online services are compatible with the latest browsers.

# 7. Non-commercial exploitation

ATLAS partners, especially academic partners, will exploit non-commercially ATLAS technology solutions. Non-commercial exploitation options include:

* *Research and development projects* – use of ATLAS technologies for continued research activities and projects;
* *Transfer of knowledge* – use of knowledge gained within the project in formal learning curricula with a long-term effect for a variety of target groups;
* *Educational and training activities* about ATLAS technologies (for example in schools, universities, adult education).

# 8. Community building

## 8.1 ATLAS Communities

The Communities are important to the achievement of the ATLAS sustainability. The main objective of the strategy for community building is to achieve:

* **Deep level of user engagement**;
* **Transparency**: being open in what the community is undertaking and the way decisions are made;
* **Collaboration**: a means of working within a diverse group of people;
* **Agility**: once work begins and there is a serious engagement with users, ideas and plans may need to change;
* **Sustainability**: having the capacity to keep developing an application solution over the necessary period of time;
* **Tools**: wikis, bug- and version-trackers and email lists to support the development of the community.

ATLAS communities are composed by individuals and organizations, willing to cooperate to perform specific tasks and activities, suitable for supporting the project dissemination and exploitation.

ATLAS communities will typically develop three types of participation:

* Core group: these are the initiators and eventually the managers of a community
* Active group: participate regularly, but not with the same intensity as the core group.
* Peripheral group: those who participate on an irregular basis.

Community members frequently move between these levels of participation, depending on the focus and development of the domain or activities at any given point. The movement between the different levels of participation should be seen as healthy and welcome. Rather than forcing participation, communities should “build benches” to secure future increased involvement.

The members of the Open Source Communities are activated by the ATLAS project partners within the project implementation and will be enlarged by establishment of a network of strategic partnerships from where the early adopters of ATLAS will emerge after the project expiration.

The Open Source Communities include Developers` Communities and End-users` Community[[7]](#footnote-7).

**Developers` Community**

Developers` Group consists of contributors who share broad commit access to the open source ATLAS platform and includes:

* Core co-developers – people whose main participation implements, evolves and maintains the ATLAS source code;
* Extending co-developers– people who co-develop ATLAS platform that builds on or aggregates the work in the commons, for example making extensions, plug-ins, and distributions.

**End-users Community**

End-users Group is where the main engagement with the code involves a running instance that is configured and run by the community members in conjunction with other software and includes:

* Developers – people who take the contents of the ATLAS platform and configure and customize it for deployment;
* Users – people who use – and whose employers may pay for – the work of deployer-developers and put it to productive use.

## 8.2. Knowledge Transfer

The transfer of knowledge between ATLAS and members of the communities will be performed during the project and after its end and will be achieved by the following planned activities:

* Design of Web Materials, targeted at ATLAS communities, presenting their community role and explaining their benefits of belonging to the Atlas communities;
* Presentation in appropriate way of the Software documentation;
* Organization of training programs;
* Design of certification programs;
* Publishing product demos.

## 8.3. Community Tools

Community communication has two forms: dissemination and discussion. The users and contributors may not be in the same place at the same time very often, or even at all. It is therefore important to have a communication infrastructure that allows people to work on the project when they want and how they want in order to be able to collaborate.

Tools that can be used for collaborating in the Community are:

* **Developer mailing list.** It is used for discussion, ongoing exchange of ideas, consensus building, and information-sharing and public recognition. It documents the project's development path, provide a written record of instructions, and support for those new to the project. Mailing lists are considered as the most important tool in the entire community development.
* **Forums**. Forums have the advantage of being easy to use. While mailing lists are the best communication device for technical people, it is often argued that users will be less technical and therefore need a different communication mechanism.
* **Website**. It is used for communicating the intention and status of the project at any time as well as publishing cases studies

During the project duration communication and interaction with the different communities is achieved by a number of coordinated workshops with both international and national scope, hosted by various partners of the consortium.

# 9. Marketing and promotion

A widespread dissemination of the ATLAS services is considered as crucial for the success of the project, as it will facilitate the commercial exploitation (market introduction) and deployment of the project’s developments.

In order to reach out the ATLAS communities and to maximize the visibility of the project, ATLAS uses a number of channels and cooperates with other relevant national and international organizations, projects, and research and support actions sharing similar objectives.

The main interest of ATLAS is to propagate benefits of ATLAS platform, and to enhance wider dissemination of ATLAS among developers and end-users. One of the most important channels for disseminating information will be through a carefully chosen list of events and conferences that bring together the relevant stakeholders.

## 9.1. Promotion planning

The most common dissemination actions that are used for marketing and promotion of the project results among potential customers and communities are:

* Participation in national and international conferences/workshops
* Publications for reach target audiences over a long time
* Organisation of targeted workshops as an interactive way to discuss ATLAS services and future opportunities
* Exhibitions and fairs - extremely effective to present and demonstrate ATLAS services and to establish personal contacts with potential customers
* User evaluation exercises – for establishing User community
* Website - guarantees a large visibility and contains a whole range of information and products
* Marketing activities – marketing brochures, demonstration posters for targeting certain customers, demonstration cases
* Dissemination kit - A specially prepared kit containing dissemination materials like flyers, brochures and posters will be made available in all partner languages to raise awareness among potential end-users and facilitate their access to project services. The kit will also include software and documentation made available so as to facilitate and promote expansion of the core ATLAS services. The main channels for distributing the kit will be the project national and international dissemination events.

## 9.2. Promotional Tools

The main promotion tools targeted to attract potential customers are:

* Project website;
* ATLAS Demonstration cases;
* ATLAS brochures.

### 9.2.1 Project website

The ATLAS project website is: <http://www.atlasproject.eu/>

The ATLAS project website is one of the main dissemination tools. The aim of the website is to raise awareness about the project goals and results among public. ATLAS website is dynamically updated.

Furthermore, the website presents the main ATLAS services, target groups and benefits and provides direct access to the websites of the ATLAS services, resulting from the project.

### 9.2.2 ATLAS Demonstration cases

ATLAS demonstration websites are demo cases produced with i-Publisher and demonstrating the functionalities provided by ATLAS and ASSET to different target customers - Publishing, Enterprise, Security Services, Media, Life Science, Multilingual International organizations.

* MediaTalk service (<http://mediaimage.tetracom.com/>). Customers of this service can sample the media flow for their public image in the press.The news is screened in real time using the company’ s profile so that the user can get company related news only. This approach differs significantly from the current one which matches keywords to filter the news. ASSET monitors the company’s website to detect changes that automatically affect the company’s profile. Any news reporting the appointment of a new CEO or the start of a new project will be acknowledged by ASSET.
* Video materials demo version, <http://videodemo.atlasproject.eu/>
* Plagiarism service: <http://textmatch.eu/>
* News Service is another service developed and a demo of it is available at: <http://newsdemo.atlasproject.eu/>. News service demo is multilingual. It presents news in English, Bulgarian, and Greek languages. News service is suitable for media.
* Both demonstrations of News service and World Health Organization website (<http://asset.atlasproject.eu/who>) show semantic indexing and automatic categorization of ASSET Language Framework. The automatically generated blocks “Topics in the focus", “Hot Regions, "People in the focus” are based on the text analysis. Every publication is enriched with a list of similar items, together with the list of people, organizations and important concepts used in the text which increases the reader's receptive capacity.
* Another demo web site presents a set of news, publications, and events from UNESCO website, which have been semantically annotated and structured in dynamic blocks by the linguistic platform ASSET: <http://unesco.atlasproject.eu/>
* Demo of the UNESCO Interfaculty Chair website is available at: <http://i-publisher.atlasproject.eu/itd/unesco_chair/en>. A multilingual website of UNESCO Interfaculty Chair "ICT in Library Studies, Education and Cultural Heritage" was created with i-Publisher. It presents the Department activities, maps the education workflow and organizes multilingual digital content in a library. The granular user access rights ensure the fluent and secure workflows. The content editors work only on the content they are responsible for.
* Icon-painters from Bundovtsi family website – (<http://www.atlasproject.eu/asset_demo/icons/bg/index.html>) is made using i-Publisher and the technologies of the ATLAS platform.

### 9.2.3 ATLAS brochures

The brochures of ATLAS are available at: http://www.atlasproject.eu/

The brochure includes description of the advantages of ATLAS technologies and services offered to the specific target users and customers.

## 9.3. Promotion activities

During the 1st project year, the Dissemination activities included preparation of brochures and website development. Partners mainly distributed dissemination materials and presented the ATLAS project at national and international events. The objective was to raise awareness of the ATLAS by presenting the achievements of the project to the content providers, linguists, relevant representatives of the scientific community and potential users.

During the 2nd year, the results of the Atlas project were made available through scientific papers to the target users. Newsletters and articles address the users and the public as well. Through technology and tool demonstrations, case studies presentations, the ATLAS services were presented at relevant exhibitions and fairs in order to explore possible ways of their exploitation by demonstrating their real benefits to the different target groups.

ATLAS partners also organized different events and workshops:

* International workshops for:
  + Industry, IT community, policy makers for presenting the achievements of the project and sensitizing the industry about prospects on the European market, dynamic networked organizations and the value of strategic international partnerships
  + Scientific community to present the achievements of the project to the content providers, linguists, relevant representatives of the scientific community.
* User-targeted events at national level for potential users
* User evaluation workshops
* Smaller adhoc workshops for target users as forums for discussion, information sharing, and social exchange, experience sharing, and collecting (external) advice.

During the 3rd year, ATLAS partners continued ATLAS services` presentations, demos and scientific papers at national and international events (conferences and exhibitions) and organization of events ad meetings at national level, targeted at potential users and customers. The aim of these events is to present the ATLAS services, their real benefits to the different target groups and exploring possible ways of their exploitation and collaboration. During the events, representatives of the ATLAS target users will be invited.

# 10. Partners exploitation plans

## 10.1. Atlantis Consulting SA, Greece

Project Partner: ATLANTIS Consulting S.A.

Person in Charge: P. Raxis

Date: 14/02/2013

**Exploitation Targets**

ATLANTIS foresees two exploitation directions for the efforts and resources invested in the ATLAS project:

* 1. Enhancing the commercial value of other corporate systems and services
  2. Offering commercial ATLAS system packages and related services

(a) Enhancing the commercial value of other corporate systems and services

There are two ATLAS components suitable to be included in other commercial systems and services ATLANTIS is offing to the market. These are the:

* + Summarization module:
    - In the context of the eTender online service, the component will be used in order to summarize the OVERVIEW section of each tender description.
    - In the content of the GRASP MED project ATLANTIS will customize and integrate the ATLAS summariser to summarise automatically short texts of green tendering procedures. Six Mediterranean public authorities and an NGO from Cyprus could be the first candidate users.
    - In the context of the eConsultancy online service, the component will be used to summarize the text of a call document and the text of the “guide for proposers” call document. Currently, these documents are summarized manually, a process which requires one staff member to work full-time on this.
  + Automatic Classification module:
    - In the context of the new release of ***Jobical*** (the e-recruitment service of ATLANTIS), the module could be used to automatically classify the CVs as well as the job offerings into several subcategories (apart from the existing static categories) extracted from the text semantics. The objective will be to spot common mismatches in required and offered expertise and identify gaps in the market.

The idea is to integrate the above ATLAS components in our bespoke systems and services that we offer to our existing and new client base, in order to increase our market share in terms of both service provision activities and commercial sales. We expect to achieve this by making our products and services more appealing, competitive and feature-rich; thus attracting new customers and penetrating new markets (Cyprus, Italy and other Mediterranean countries, Turkey, Balkans, etc).

(b) Offering commercial ATLAS system packages and related services

An additional exploitation target for ATLANTIS includes the sales of the ATLAS premium version (as opposed to the basic free version) to interested organizations on a commercial basis. These organizations could be local authorities, documentation centers, museums, libraries, educational or nongovernmental organizations, etc.

Apart from the sales of the ATLAS premium integrated system package, ATLANTIS foresees also a demand for associated services. These could be customization, configuration, evolutive maintenance to meet specific customer needs, etc. To this end, ATLANTIS will exploit their experience gained throughout the project life-cycle and the partnership with the rest of the consortium organizations, in order to offer competent ATLAS related services.

**Environment for exploitation**

Although there are many CMS systems (e.g. Joomla, Genesis, ACOOS, etc.) available, we expect that if a CMS, like ATLAS, offers services that are not provided by the competitive CMSs (or if it offers services of higher quality), it still can claim a market share. The significant competitive advantage of ATLAS is the

1. Multilingual support (EN, DE, RO, BG, GR) which has to be extended in order to cover additional EU languages (i.e. FR, ES, IT). The majority of the competitive CMSs do not support multilinguality in the content, or if they support it, this is through external stand-alone tools.
2. Automatic summarization. Competitive CMSs do not support automatic summarization and need to be integrated with external 3rd party tools in order to provide this feature.

The above offer a competitive advantage both at the national and the European level of exploitation environment, for the time being, until the competitors realize the niche and move towards the same direction. Moreover, an important factor that may affect the exploitation environment is the pricing policy. It is already agreed that the basic ATLAS system will be offered, as an open source system, free of any charge. This does not cancel the exploitation potential. On the contrary, this could create a critical mass of users and a “brand labeling”; and could make exploitation of the premium version accomplishable. In addition, if the free version of the product becomes popular, it is expected to create a significant demand for custom services (maintenance, support, etc.).

**Exploitation activities**

Approaching the end of the project, ATLANTIS commit resources to bring all exploitable project results into a Market Deployment, following 2 main distinct phases:

* *Phase 1: Market Exploration*. We collect input from potential users (also in the framework of the user acceptance evaluation activities) and commercial clients, including public entities, in order to realize the range and the scope of the short-medium term sales targets. Effectively, during this phase, the market will be examined in order to decide on the marketing mechanisms that could facilitate the effective uptake of the ATLAS exploitable results.
* *Phase 2:* *Regional Market Penetration*. We plan to leverage the business network of ATLANTIS that covers several regions in Greece and abroad, in order to succeed in market penetration at regional level in Greece and neighbor countries (Italy, Cyprus, Turkey, Balkans, etc).

Some already identified “first round” specific exploitation leads and early results, include:

* + Possibility of selling the enhanced Jobical service, as a white label service to organizations such as the Greek Institute for the Unemployment (OAED), the Greek Life Long Learning Institute (OEEK), the Organisation of Tourism Education and Training (OTEK), and the Hellenic Technology Clusters Initiative (Corallia). Towards this direction, we have already made business discussions with Corallia for the implementation of the miClusterJobs online service (the estimated value of the business case is in the order of magnitude of 50.000 €) which will encompass ATLAS technologies (CMS, categorization).
  + Selling ATLAS to regional and local public authorities, especially the ones that are located cross-border (i.e. multilinguality is a priority for any online published content), or having national / international coverage in their activities. There is a positive financial circumstance for this, as the Greek government has launched the framework program Digital Convergence to enable public entities, regional and local authorities to publish content based services. Towards this direction, we have already committed resources to participate in a consortium providing services to the National Documentation Center (EKT) on electronic document management and archiving and online publishing of dynamic user content (potential offer value 390.000, ATLANTIS possible share 88.000 €).
  + Expanding the scope of the provided electronic online services (eTender , eConsultancy, etc.) to cover other countries in Europe and in the Balkan area. Towards this direction we have already i) started the design of a new ATLAS based eConsultancy service which we expect to generate annual revenues (starting from Q1, 2014) of some 400.000 €, with the benefit from the ATLAS summariser estimated to be some 66.000 € annually (1/6 of the new service annual revenue), ii) offered an enhanced eTender service to the Greek Public Properties Company (ETAD), with an estimated offer value of 60.000 € and an estimated benefit from the ATALS summariser of some 5.500 € (i.e. if the offer is accepted and a new project start in 2014), iii) planned to integrate the ATLAS summariser into the new green e-procurement service that we design for the GRASP MED project - benefit from ATLAS estimated to some 16.000 € (distributed over 2 years, starting from 2014).

**Exploitation Channels**

ATLANTIS exploits the ATLAS results through its established exploitation network. This includes all the company’s offices and branches in various locations in Greece (Thessaloniki, Athens, Agrinio, Ioannina, Patra, Lamia, Crete) and in Cyprus, business representatives and affiliates, business networks and associations (Hellenic Society for Technology Assessment & Evaluation, European Science & Technology Observatory (ESTO), TII – a European professionals’ association occupied in technology transfer and innovation support) that ATLANTIS actively participates, the HAMAC Cluster, etc.

Moreover, ATLANTIS will promote ATLAS through its popular WEB Site and its periodic (i.e. every 15 days or earlier, if there is a need) newsletter with some 60.000 active subscribers, as well as with its annual MOVING AHEAD newsletter (about 60.000 recipients in Greece and 2.500 in EU).

**Linkage to Dissemination**

ATLANTIS has performed or participated in several dissemination activities for promoting ATLAS (conferences, business meetings, project events, fund raising workshops, scientific publications, etc). Until now, these activities are concentrated on the increase of the public awareness about the ATLAS platform among the various target groups (librarians, IT specialists, students, innovation experts, local and regional authorities, business experts and entrepreneurs, fund operators, cluster members, etc). Our chief objective for the dissemination is to pave the way for the exploitation activities, and this is a significant part of our exploitation strategy.

## 10.2. Tetracom Interactive Solutions ltd, Bulgaria

***Exploitation strategy***

1. Process of standardization

The product platform ATLAS, as a standalone, customizable content management system, features a new linguistic platform and a separate software-as-a-service solution for web publishing. Targeting the former at professional customers and the latter at individual clients, Tetracom used its previous experience to trim and redesign the strictly specific and complex functionalities of their existing content management platform and simplify its interface in order to extend the target user base to a larger group of potential clients and significantly reduce the need for future individual requirements management and client maintenance.

* The company adopted an agile development philosophy and the existing customization processes were reduced and the standardization of the core product platform began. The core focus of the company shifted towards the timely delivery of the product to the market, with development teams focusing on product requirement and feature selection by analyzing both external and internal opinions and it resulted in the implementation of road mapping practices and core market and competitor analysis in order to identify future product lines, positioning, pricing and product strategies.
* The company began using its core platform to develop customized software-as-a-service products targeted at specific markets. The specificities of the SaaS allowed the company to introduce a Continuous Integration release heartbeat across all of its products, with new releases becoming instantly available to each product customer and being fully standartized, with a small customizable layer available for customers who required specific functionalities.

1. Derivative products

The Consortium successfully completed the development of the core product platform in the summer of 2012 and began developing a stream of derivative products deriving from the linguistic and content management components that were developed during the scope of the project stage. The rapid emergence of competitive content management services such as Facebook and the ongoing contractual obligation preventing the commercialization of the CMS platform led to a shift in focus from marketing its content management solutions to building automated linguistic technology products using the functionalities developed as features of the CMS platform. Five lines of customizable software products, each aimed at a specific market segment, were created based on the market analysis and living lab evaluation of these core functionalities - a press clipping service, a business intelligence service, a plagiarism detection tool, an online digital library and an audio and video categorization product.

***Exploitation activities***

***ATLAS as a product***

Following an evaluation of the current competing software platform available, the company decided to focus on further development and exploitation of ATLAS as a product. As an open-source multilingual content management system with plug-in architecture, it is suitable for both usage as a main platform to managing multilingual data or integration of some of the linguistic tools and services to already existing CMS. The successful application of the company’s content management solutions is already announced to its major clients:

**ISN at ETH Zurich** - the institute was presented with the ATLAS multilingual content management system. The implemented test service shows the application of using linguistic techniques that will lead to significant improvement in the ISN document workflow as the Institute manages 34 websites showing content from more than 300 content providers.

* i-Publisher - the institute will use all content management functionalities to manage their multilingual websites such the page rendering, content editing and site configuration, search configuration and scheduling, etc. It can replace the existing platform for content management - KMS.
* Search - this component groups all search backend functionality such as Lucene index management and actual search. The search results are returned to i-Publisher to be further visualised in List widgets and enhanced with the sorting and grouping settings.
* Linguistic platform - this component contains the text extraction, semantic analysis and annotations storage functionality. The linguistic extracts will form an alternative way of navigating the reader and will improve the search capabilities
* Automatic categorisation - this component will replace the existing backend automatic categorisation engine. The tasks to build a categorisation model and to use such models are configured and triggered from i-Publisher.
* Automatic summarisation - this component provides the short extractive summaries of the content items based on the text analysis. The summaries can replace the abstracts which now are written manually. The usage of the module will increase rapidly the time to publish a content ite, to the ISN websites.

**NATO** - an introduction to ATLAS product was done to the IT department at NATO. The possibility to use text analysis when mapping different content blocks was discussed on a conceptual level. The sensitivity of the data maintained at NATO software systems still prevents from building a test service yet.

***Derivative products***

**MediaTalk - building a press clipping service in Bulgarian and English**. Mediatalk studies the user’s preset business profile daily and compares it with relevant, incoming online media. The service functions across languages and sources: including, digital media, social networks, text, audio and video which all undergo a semantic analysis in real time. As a result the user gets content relevant to their scope of interest only. The two prototype services can be accessed at: <http://mediaimage.tetracom.com/>

The Account Manager at M3 Communications Group, Inc. , A Hill+Knowlton Strategies Affiliate ([www.m3bg.com](http://www.m3bg.com)) showed interest in the prototype and provided valuable feedback.

**TextMatch - building a plagiarism service.** The service calculates the similarity between two texts. The service will be extended to support the comprising of many texts, clustering the similar texts and visualisation of the parts with high similarity. The prototype is accessible at: tetxmatch.eu  
The CEO of  "Educational programmers" Foundation (cei-bg.org) showed interest to the service and discussed the possibility for the service to be extended with an API to Moodles. Many educational entities like schools, universities, e-learning facilities will gain benefit from the service form a very big customer group.

**Demo web site for media providers.** The demo web sites present news from the training corpora of CETimes which have been annotated and structured in dynamic blocks. The selection in the “Hot topics/regions/organisation, people” blocks is based on text analysis performed by ASSET.For every information item ASSET spots the main participants and activities which increases the reader's receptive capacity. The reader can then follow the lead suggested by ASSET to find similar content from thousands of publications otherwise hidden from view. The service is accessible at: <http://newsdemo.atlasproject.eu/>

Meeting with the Head of the Department in Journalism, Sofia University and with a political observer from Bulgarian National Television showed that the service can be of a great use to televisions, radio station websites and online editions of newspapers and magazines.

**Building a demo website for video materials.** The challenge to organise and manage video materials at the Bulgarian National television led us to build a service similar to the media providers. The text analysis is performed on the script associated with the video material and the selection in the “Hot topics/regions/organisation, people” blocks is based on text analysis performed by ASSET in real time. Consequently, the selection is fluid and recalculated against new data. In this way the video materials can be categorised and put in order and the journalists have an access to similar video materials to a given one.

***Integration of the linguistic platform ASSET into existing systems and services***

**ASSET integration for ALFRESCO Document Management System**. An integration module for one of the most popular open-source content management system Alfresco was done. The module provides the linguistic annotations in XML and/or JSON format; the annotations are parsed by the implemented Alfresco extensions;

**Building a demo service for World Health Organisation.** An interestto initiate an automatic text analysis in the WHO content was shown by the head of Multilingual techologies department at World Health Organisation Yousef Elbes on a meeting held at IKS Workshop "Semantic Enterprise Technologies in Action", June, Salzburg.

The demo service created by Tetracom, accessible at: <http://asset.atlasproject.eu/who> was presented at the WHO office in Geneva on 08.10.2012 to 30 staff members. The discussed topics were: the usage of external to the website content, semantic enrichment of the existing content shown on the WHO website, semantic enrichment of non English content via cross lingual search, building a website/websites powered by ATLAS, alternative to [www.who.int](http://www.who.int/), improvement of the content overview, automatic classification and improvement of the search results.

**Building a demo service for UNESCO**

<http://unesco.atlasproject.eu/>  
The demo website presents the content of the UNESCO website enriched with most significant phrases, places, people and provides suggestion for similar content . It was presented by prof. Rumen Nikolov at UNESCO IITE and UNITWIN/UNESCO Chairs International Conference "UNESCO Chairs Partnership on ICTs use in Education", 5 – 10 September 2012 St.-Petersburg, Russian Federation

**ATLAS as a SAAS**

SMEs, scientific groups and institutes, NGO’s, individual professionals are within the customer user group using the ATLAS SAAS. The company has preliminary meetings with:

1. Gracher Unternehmensgruppe for creating a multilingual website.
2. A website for an NGO “The Trench”.
3. The website of ACL 2013

***Exploitation Channels***

***International fairs***

Tetracom presented ATLAS project and software platform at CeBIT 2012 in Hanover, Hall 2, stand 58. All visitors were able to sample the content management platform i-Publisher and Linguistic Platform ASSET, which processes and analyses text.

Reference URL-s: Atlas: <http://www.cebit.de/product/atlas-build-your-website-at-no-cost/291713/C913812>

Asset: <http://www.cebit.de/product/asset-adds-value-to-your-content/291715/C913812>

News and pictures of the event is published on: <http://www.atlasproject.eu/atlas/project/dissemination/en>

***International conferences***

Demonstration and presentation of NLP processing in ATLAS at EACL 2012 (<http://eacl2012.org/system-demonstration/index.html>)

ATLAS was demonstrated by Tetracom in the most prestigious linguistic event for 2012 in Europe – the annual conference of the European chapter of the Association for Computational Linguistics on 25.04.2012 in Avignon , France. The demonstration aimed to prove that people reading websites powered by our multilingual web management platform can easily find documents, kept in order via the automatic classification, find context-sensitive content, find similar documents in a massive multilingual data collection, and get short summaries in different languages that help the users to discern essential information with unparalleled clarity.

## 10.3. Institute of Computer Science of the Polish Academy of Sciences, Poland

Person in Charge: Maciej Ogrodniczuk

Date: 2013-02-11

***Exploitation Targets***

The Polish language processing chains included in ATLAS are the core resources of ICS PAS and will be maintained and exploited both internally and in other research projects. A recently finished CIP-ICT-PSP EU-co-funded project CESAR (Grant Agreement 271022, duration: February 2011 – January 2013) had already created synergy in development and mutual usage of the tools and resources for Polish which improves their long-term sustainability, interoperability, reusability in different contexts as well as offers their potential deployment in multilingual applications. Basing on Polish LPC components used in ATLAS, clean and reusable resources have been made available through the open digital exchange channel META-SHARE provided by META-NET.

As agreed at the mid-January 2011 meeting between representatives of Natural Language Processing groups of ICS PAS, Wroclaw University of Technology and Poznan University, the tools and resources will be further upgraded, extended, linked and aligned to provide the linguistic community high quality resources binding together other prominent Polish tools produced by the above-mentioned institutions.

***Environment for exploitation***

The business situation in Poland is very difficult since many open source systems have already taken over the market. ATLAS platform can only be successful when it offers significant advantage over such popular CMS systems as Drupal or Joomla and is effectively advertised (which in turn requires considerable expense).

Similarly, technological advantage of ATLAS does not seem to be the factor which would trigger replacement of currently used systems with ATLAS-based solutions. The only opportunities are, in our opinion:

* + raising the quality of the integrated linguistic tools,
  + concentrating on open source community which could advertise the system to other target groups and eventually produce its commercial version.

The risks of integration of linguistic tools are related to their rapid development which would require frequent redeployment of their new versions into ATLAS platform. Risks related to moving from open source model to business model result from constant improvement of competitive systems and their established position.

***Exploitation activities***

ICS PAS concentrated its promotion activities on including ATLAS resources into the CLIP (Computational Linguistic in Poland) Web portal connecting institutions, people, resources, projects and publications related to language technology. The portal facilitates bringing together linguistic community, industry key players and representatives of administration offering them clear recommendations on state-of-the-art language resources and technologies for Polish.

The popularity of ATLAS platform will be measured by the number of logins and downloads to verify results of exploitation activities. The site will be frequently updated with new versions of the platform.

A specially designed version of ATLAS platform (similar to EUDocLib) with Polish legal content has been produced for demonstration purposes. This version will be presented in the Legislative Office of the Polish Sejm to promote NLP-enabled content management solution based on ATLAS.

***Exploitation Channels***

ICS PAS major exploitation channel will be the above-mentioned CLIP Web portal brought together by all interested language-related Polish organizations (which itself creates an internal promotional channel among representatives of the research community). ATLAS materials will be also available at events and conferences organized by ICS PAS (such as Intelligent Information Systems).

***Linkage to Dissemination***

Until now the dissemination activities concentrated on distribution of the initial information on the project and raising project awareness among different target groups (IT scientists, linguists, representatives of humanities, students as well as general public informed about the project by means of a general electronic brochure prepared with the National Contact Point and other ICT-PSP Polish project partners). The awareness of the project seems sufficient, yet it is difficult to promote the IT system without demonstrating its full functionality, so we expect to arouse more interest after completion of the project.

To make the dissemination an integral part of ICS PAS exploitation strategy, all members of ICS PAS NLP group are asked to provide information on ATLAS to interested parties basing on produced dissemination materials.

Throughout the project ICS PAS carried out around 40 dissemination activities, starting from distribution of project leaflets through publication of project-related articles, up to wide dissemination of ATLAS-based resources e.g. via META-NET channels.

## 10.4. University of Hamburg - Research Group "Computer philology", Germany

Person in Charge: Cristina Vertan

Date: 2013-02-17

***Exploitation Targets***

The German language processing chains included in ATLAS will be used in further activities at the University Hamburg, both in the Department of Computer Science, as well as the faculty for Humanities. In the department of Computer Science, the language processing chains will be used in student projects related with different NLP techniques, as well as in further research projects. In the faculty for Humanities the language chins will be used in projects related to Digital Humanities, and will be further maintained within the recent constituted Center for Language Corpora. The language chains will be available as open source. They will be further developed in order to sustain historical variants of German language. The language chains will be used also in the computing Center for extracting Content- related metadata from Documents.

The Machine Translation system and the cross-lingual search Engine will be used within eLearning Platform at the University: Commsy, Agora, Michel, and the Lectured2Go Portal.

The machine Translation models developed withitn the project will be used as baseline for further research in the area for domain adaptation. During the project already two PhD started in this research direction and are using the ATLAS data.and environment

***Environment for exploitation***

There are already a quite high numbers of linguistic tools for German, most part of them however working as independent unit. The pipelining is an important feature which could be stressed on further exploitation. However, the success of such action depends on the final performance, acquired by the linguistic chain.

The exploitation of machine Translation system can be targeted on Institutions maintaining contacts with East-European Countries. This could play a major role in the exploitation of the system as it involves so called less resourced languages for which up to now, no satisfactory solutions were provided

From recent attended conferences in the field of digital editions it seems that a good exploitation environment for ATLAS could be libraries which administrate a large number of digital books. However the performance of the system and the user interface and manipulation have to be convincing for such institutions.

A drawback in this scenario is that most libraries collect books from different time periods, facing small to severe alterations from the current language. This linguistic variation will not be supported the ATLAS-Tool (I.e. the linguistic tools) by the end of the project.

***Exploitation activities and Channels***

University of Hamburg plans exploitation activities around the ATLAS platform on following channels:

* + GSCL: German Society for Computational Linguistics
  + several Networks in Digital Humanities which are now aggregating in Germany
  + D-SPIN and its follow-up channels, as well as the follow-up CLARIN project.

Information about ATLAS will be posted on the portals of the above mentioned Networks. ATLAS Materials will be distributed at events organized by the University of Hamburg as well as on other events where members of the ATLAS Team will participate.

***Linkage to Dissemination***

In the first year the dissemination activities concentrated on the distribution of ATLAS materials at relevant events in digital humanities and language technology.

An article about ATLAS was included in the winter-term edition of the university magazine.

The awareness of the project seems to grow, as we received an invitation to present the project at a EU-Information Days for small and medium companies in North-Germany. The ATLAS-Project will be the only concrete project to be presented. We hope that this will open further exploitation channels.

In the second year the project was presented mainly to conferences, as it was in the development phase. In the third year results were presented in different research centers and universities in Europe and also in South America. Especially the presentations in south America were very important as they raised further cooperation’s possibilities.

## 10.5. UAIC, Department of Computer Science, Romania

Person in Charge: Deliu Sabina

Date: 28.10.2012

Revision: 31.01.2013

***Exploitation Targets***

The Romanian language-processing chains included in ATLAS, as well as the English one, will be further used in diverse projects at UAIC, much in the Department of Computer Science, as in the faculty for Humanities. In the Department of Computer Science, the language-processing chains will be either a starting point for various components in student projects, either ready to use components, for research projects. In the faculty for Humanities, the language-processing chains will be used, to analyze and manipulate different corpora, and in web-based projects.

ATLAS tools will be presented to potential users, publishers, publishing Houses, libraries, with the end purpose of commercialization.

The Department of Computer Science will provide consulting services based on the prototype developed for ATLAS, for other similar projects. As well as, providing consulting services based on the knowledge gained.

***Environment for exploitation***

ATLAS platform on the Romanian market has a good stand, among other professional software systems, which offer similar services, as the translation module.

On the market, ATLAS tools will be, at first, targeting users from the publishing domain. UAIC, will give demonstrations of the language-processing chains to potential users, exploring ways for business and scientific partnerships.

The knowledge gained working on ATLAS tools, will be of valuable help, in the pursuit of future projects, not to mention the educational and consulting aspects, used in the faculty, for students, and the projects they work at.

Another opportunity are the foreign students, coming every year to universities. ATLAS tools, especially the translation module, will be properly advertised among these groups.

***Exploitation activities and Channels***

UAIC, Department of Computer Science, plans exploitation activities for ATLAS tools on channels:

* ConsILR: Linguistic Resources and Tools for Processing the Romanian Language .
* CLRE: the Essential Romanian Lexicographic Corpus
* various projects in the Faculty for Humanities
* publishing houses and libraries follow-up channels

Information about ATLAS will be made public, on a website. Different information materials will be distributed at events organized by the Faculty of Computer Science, and those in collaboration with the Romanian Academy.

UAIC plans to make the public widely aware of ATLAS system and utility. In doing so, the market will be easily approached for commercialization.

***Linkage to Dissemination***

This year, there have been activities promoting ATLAS tools:

* **Conference on Resources and Tools for Processing Romanian Language – ConsILR (2011 - 2012)**

Cristea, D., Ignat, E., Anechitei, D.: "ATLAS Project - the summarisation system", at ConsILR - The International Conference on "Resources and Tools for Romanian Language", Bucharest, April 2012.

Cristea, D., Ignat, E., Anechitei, D.: "ATLAS Project - the language pocessing chain", at ConsILR - The International Conference on "Resources and Tools for Romanian Language", Bucharest, December 2011.

Anechitei, D., Cristea, D., Ignat, E.,: "Clause Level Multilingual Segmentation", at ConsILR - The International Conference on "Resources and Tools for Romanian Language", Bucharest, December 2011.

* **NLP Seminars on Computational Linguistics, Faculty of Computer Science, "Al. I. Cuza" University of Iasi (for Master students in Computational Linguistics)**
* **Crosslingual Language Technology 2012**
* **Poster and article in Bring IT on! 2012 Catalog:**

Cristea, D., Ignat, E., Anechitei, D.: "ATLAS Project: The romanian Component", in BringITon! 2012 Catalog. Edited by Alboaie, L., Cristea, D., Forăscu, C., Gîfu, D. ISSN 2285-0929, ISSN-L: 2285-0929, Pp. 8-9, Iasi, 17-18 May, 2012.

* **Exposing the services included in ATLAS on the NLP-Group@UAIC-FII website:**

<http://nlptools.info.uaic.ro/WebClauseSplitterRo/>

<http://nlptools.infoiasi.ro/WebDiscourseParser/>

* **Language Technologies in Romanian and Diaspora Research & Development, Bucharest:**

Ignat, E. and Anechitei, D.: "Multilingual summarisation system based on analising the discourse structure" in Language Technologies in Romanian and Diaspora Research & Development. Edited by Forăscu, C., Ioniţă, A., Tufiş, D., Cristea, D. ISBN 978-973-703-813-5, Pp 34-35, Bucharest, 26-27 September, 2012.

* **Springer publications:**

Daniel Anechitei, Dan Cristea, Ioannidis Dimosthenis, Eugen Ignat, Diman Karagiozov, Svetla Koeva, Mateusz Kopeć, Cristina Vertan (2013, to appear). Summarizing Short Texts Through a Discourse-Centered Approach in a Multilingual Context. In Neustein, A., Markowitz, J.A. (eds.), Where Humans Meet Machines: Innovative Solutions to Knotty Natural Language Problems. Springer Verlag, Heidelberg/New York.

* **International Exhibition of Software Bucharest (7-8 november):**

The Binary Conferences are a series of events that aim to present speciﬁc IT&C solutions for the SMB sector. Binary targets decision makers and IT managers from diﬀ erent areas.

<http://binary.aries.ro/en/>

The dissemination activities concentrated on making ATLAS platform popular, through relevant events in digital humanities and language technology and participation in events (focus on exhibitions), continues. The awareness of ATLAS platform will grow even more, being used by publishing houses and libraries. Presentations are available on DropBox.

## 10.6. Institute of Technology and Development, Bulgaria

Project Partner: ITDF

Version of Document/ Period: v01

Person in Charge: Roumen Nikolov

Date: 23/01/2013

**Exploitation Targets for your organization**

The Institute of Technology and Development (ITD) is a non-profit, non-governmental organization dedicated to do applied research and to develop innovative business and technology ideas and systems, supporting the main corporate and industries in their growth and empowerment. The main activities of the ITD include training and educational activities supporting the applications of new technologies in education, in community development, and in corporate information systems, focusing on the methodological research and dissemination of the best practices related to ICT and providing consultancy.

Within the ATLAS project, ITD will contribute to the **commercial, non-commercial and community exploitation** of ATLAS results, independently or in collaboration with other partners in Bulgaria and abroad and to propagate its wider implementation and use for commercial and non-commercial services.

The Dissemination and exploitation targets of ITD are developed in three main directions: awareness, involvement and exploitation:

1. Conducting coherent dissemination plan and activities for raising awareness and informing the target audience about the project, the project outcomes and the possible benefits for different target groups.
2. Activities for involving end-users in the prototype testing and collecting end-user experiences;
3. Defining exploitation goals and involvement of commercial, non-commercial and community users in ATLAS outcomes use, implementation and further development.

The exploitation plan aims to set up clear objectives about the further project outcomes implementation. As ITD is a NGO organization, this provides a good opportunity to become a centre of dialogue and connecting point between commercial, non-commercial and community interests. Therefore ITD plans to work for project exploitation in the following directions:

ITD main activities will concentrate in the following domains:

* Identify a list of specific Target groups – including companies, organizations, institutions and evaluate local/regional/global market environment;
* Identify Unique value proposition for any of them, estimate product competitive advantages and elaborate specific targets and goals;
* Identify specific business models, responding on customers’ needs and preferences;

It should be clarified that market environment is highly competitive and turbulent. In the last few years many free services and low-cost service providers introduced taxes and fees, and this open new opportunity for commercial exploitation of new products and services. Moreover, nowadays the patterns of Internet content consumption is changing and more than 44% of Internet consumption is due of Asian countries. Therefore, the potentials of multilingual content is increasing.

***Commercial exploitation by***:

* Providing consulting services and direct collaboration with companies. ITD can work with Tetracom (as a service provider) in direct collaboration with companies in order to develop new products, services and applications based on the ATLAS results.
* Providing consulting and training services based on the ATLAS services and knowledge gained.

***Non-commercial exploitation by:***

* Contributing to the use of ATLAS for non-commercial purposes for educational, research and NGO organizations. It will guarantee wider, as well extending research, experiments, tests and improvement of ATLAS products functionality, usability and others. The implementation of ATLAS products in education institutions will further improve educational services and will bring more interested partners in ATLAS communities.

***Community building by:***

* Engagement of developers and end-users who contribute for further extension of software functionality through Living labs activities.

***Environment for exploitation***

There are many web content management systems, available on the market in Bulgaria, including commercial products, open source tools and software-as-a-service solutions. WordPress (http://wordpress.org/) and Drupal (http://drupal.org/) are products which are the preferable for use in Bulgaria by individual users or education institutions and small companies.

The ATLAS advantage against traditionally used products is the ASSET Linguistic platform, which employs Natural Language Processing tools, a categorisation tool, a summarisation tool and a machine translation engine. These tools offer real benefits to the customers - ***publishing houses, media agencies and online bookstores***: reducing the manual work of classification editors by using automatic classification; providing better publication overview with revealing details; better navigation through context sensitive content like “Similar items” and “Hot topics” dynamic blocks.

ITD will focus on offering the ATLAS platform to the potential clients:

* publishing houses, online media, TV and online newspapers
* non-profit organizations and education institutions

***Exploitation activities***

ITDF plans to do the following activities in order to exploit the ATLAS results:

1. Identification of potential interested customers:
   * the online media - Bulgarian National TV (BNT)
   * non-profit organizations – UNESCO, UNIBIT (UNESCO Interfaculty Chair)
2. Organisation of bilateral meetings with BNT, UNESCO, UNIBIT between Tetracom and interested users for identification of users needs and showing demonstration websites made by Tetracom:
   * news media: http://newsdemo.atlasproject.eu
   * UNESCO organisation: http://unesco.atlasproject.eu
   * World Health Organisation: http://asset.atlasproject.eu/who
3. Creation of **A multilingual website of UNESCO Interfaculty Chair** "ICT in Library Studies, Education and Cultural Heritage" using ATLAS (i-Publisher)

***Exploitation Channels***

During exploitation, ITDF uses the following exploitation channels:

* direct communication methods - meetings and presentations;
* indirect communications – on-line and offline materials, use in-class, developing case studies, increasing visibility and proficiency of methods;

Among exploitation channels there will be identified:

* + Active list of potential interested partners;
  + Specific analysis of their benefits;
  + Specific analysis of appropriate business models for different users.

***Linkage to Dissemination***

ITD dissemination activities, useful for planned exploitation, aim at:

* raising awareness for the ATLAS platform and services among the target group by *organization of annual ATLAS workshops*. Three workshops were organized in 2010, 2011 and 2012.
* exploring opportunities for developing joint products, services and applications based on the ATLAS results by conducting *joint workshops* with other relevant projects and/or organisations. Two joint workshops were conducted:
  + Workshop on the Process of creation and development in Living Labs, 19 September 2012, Veliko Tarnovo.
  + Joint Workshop on Multilingual Digital Repositories and Services, 3 May 2012, Sofia at State University of Library Sciences and IT.
* presenting ATLAS at *international exhibition*: Webit Congress 2011. The participants in the Webit 2011 were companies from online media, social media, hosting companies offering web CMS to their customers.
* establishing contacts with interested users and demonstrating services by conducting face-to-face meetings with: Bulgaria Television, Journalists, UNESCO Interfaculty Chair in UNIBIT, UNESCO.

## 10.7. Department of Computational Linguistics - IBL, Bulgaria

Project Partner: DCL

Person in Charge: Prof. Svetla Koeva

Date: 27/02/2013

***Exploitation Targets***

ATLAS services are part of growing and promising market of web based content management. ATLAS platform significantly differs from the similar products in offering natural language processing and suggesting domain based classification, automatic extraction of short summaries, retrieval of important phrases and named entities, etc. The DCL IBL as an academic partner is determined to exploit the project results to their maximum potential. The following main targets for exploitation can be distinguished:

Industrial partners - which can use ATLAS platform, its components or customised combinations of them. The DCL IBL will use its experience in the project to establish and support co-operation with local industries, media, content providers, etc.

Academic partners - which can gain by using or further developing scientific results achieved in the scope of the project. The Bulgarian language-processing chains included in ATLAS, as well as the English one, will be used in diverse projects at the Institute for Bulgarian, much at the Department of Computational Linguistics, but also at the Department of Lexicology and Lexicography.

***Exploitation Strategy***

The Department of Computational Linguistics at the Institute for Bulgarian Language, Bulgarian Academy of Sciences (BAS), is committed to developing high-quality linguistic resources and high-performing language technologies for natural language processing.

The maintenance and exploration of the linguistic resources and technologies for Bulgarian included in ATLAS is one of the strategic long-term tasks ensuring sustainability and continuity in the development of language processing tools the future. The results of ATLAS are closely interrelated with the project CESAR (Competitiveness and Innovation Framework Programme under Grant Agreement 271022, duration: 01/02/2011 to 31/01/2013). Various resources and tools have been made available through the open digital exchange channel META-SHARE provided by META-NET.

***Exploitation activities***

A highly scalable web service based infrastructure was developed to provide easy access to the tools for text processing and annotation of Bulgarian. Three different types of access is provided to facilitate the user access to the system: online access; access via RESTful API; asynchronous access. Online access is suitable for users who need processing of relatively small amount of data occasionally. RESTful API access is suitable for software developers who can integrate the processing tools in high level applications. Asynchronous access is aimed for processing large corpora – the user uploads the archived corpus and it is processed on the server.

The tools for processing Bulgarian can find a wide range of applications for research in the Humanities, Computational Linguistics, NLP, etc. Further, the ATLAS platform, employing a categorisation tool, a summarization tool and a machine translation engine, can support research activities by allowing the processing of large amounts of multilingual information in researching sources in a given area.

The PhD students at the Institute for Bulgarian Language and DCL in particular, will be given access to the resources and tools included in ATLAS and they can be used in various research projects.

In the future, it is possible to consider integrating ATLAS or certain modules into the systems of DCL. The integrability and flexibility of the tools are a prerequisite for their wide exploitation.

The technological properties of ATLAS need to be regularly revised, and upgrades need to be performed and released accordingly. Moreover, the improvement of the integrated tools for linguistic analysis is among the top priorities. Improved versions of the tools will be considered for redeployment and testing at each (formal) release.

***Indirect exploitation of results***

DCL has long-term research interests in the area of multilingual NLP, machine translation, etc. The following research directions can be considered as a continuation of the research activities related to the ATLAS project:

(1) Monitoring and information extraction from multilingual and multimodal content – analysis of text, audio, video, social media communication. This research is used in developing applications for press-clipping, monitoring and analysis, automatic summarization, etc.

(2) Building relevant models for a text and a domain based on semantic and other available information, as well as efficient methods for comparison between the models. Further, this can be applied for text classification, automatic (multilingual) plagiarism detection, etc.

(3) Developing multilingual resources and tools, as well as extending and improving the NLP tools for processing of Bulgarian; exploring advanced methods for machine translation; summarization of multilingual content.

***Risks***

The risks can be summarized as follows:

(a) There are advanced and well-established competitive content management systems such as Drupal, Joomla and others. Quality needs to be constantly improved to ensure ATLAS is competitive and for it to find its place on the market. Moreover, an extensive advertising campaign can significantly improve market opportunities.

(b) There is a risk of inadequate quality of linguistic tools. It is important to implement advanced methods for linguistic analysis and constantly improve them, to ensure that ATLAS corresponds to or outperforms the state of the art.

(c) The risk of inadequate or insufficient maintenance and management is related to the need to ensure there are highly qualified staff who can ensure regular updates, extensions and upgrades.

1. www.gartner.com [↑](#footnote-ref-1)
2. http://www.oshyn.com/\_blog/Web\_Content\_Management/post/Oshyn's\_Review\_of\_the\_2011\_Gartner\_Magic\_Quadrant/ [↑](#footnote-ref-2)
3. http://www.waterandstone.com/book/2011-open-source-cms-market-share-report. This paper is about the brand strength and market share of 20 open source web content management systems. [↑](#footnote-ref-3)
4. http://trends.builtwith.com/cms/top [↑](#footnote-ref-4)
5. Yola Free/Yola Bronze/Yola Silver [↑](#footnote-ref-5)
6. GPL 3 does not prevent the code from commercial usage provided that the source code of the commercial system is provided. This is probably not usually the case, so putting “commercial agreement” here informs potential commercial users that there can be separate commercial licenses when needed. [↑](#footnote-ref-6)
7. http://webmink.com/essays/community-types/ [↑](#footnote-ref-7)