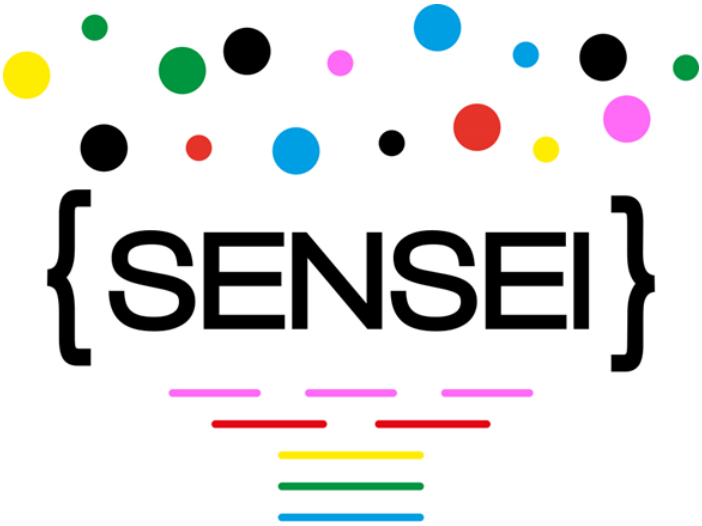

D7.5 – Interim Report on Dissemination, Exploitation and Intellectual Property

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0.6	30.08.2016	Draft	B. Favre (AMU)	Added details to 3.1 and 3.2.1
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0.9	08.09.2016	Draft	R. Gaizauskas (USFD)	Added USFD dissemination activities
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2.0	27.10.2016	Final	G. Riccardi, E. Chiarani , C. Ferrante (UNITN)	Final version ready for submission

Executive Summary

The document reports on the dissemination, exploitation and intellectual property (IP) activities accomplished during the third Period of SENSEI. In this deliverable we report on the dissemination products we have delivered and events we have organized to reach out both the scientific and technology community as well as the end-users. In particular we report on the success of the SENSEI-based monitoring system of the BREXIT referendum conversations. The last part of the document includes the achievements and the exploitation plan of SENSEI outputs.

Table of Content

1. Introduction

This document reports on the a) dissemination activities b) cooperation with external entities c) exploitation plans and d) management of intellectual property.

In the following section, we briefly describe how the recommendations from second year review related to WP7 have been addressed. In Section 2 we present Period 2 achievements related to task 7.1 namely the web site updates and analytics. In Section 3, we outline the dissemination events and activities that the SENSEI consortium has participated to or organized (Task 7.2) and a sub-section is dedicated to the Brexit use case that was a special event and beyond the activities planned in the DOW. In Section 4 we outline the exploitation activities and events delivered in this period. In Section 5 the exploitation plan is described, as well as the steps taken towards the implementation of future steps (Task 7.3). In Section 5, we briefly report on updates related to intellectual property management (Task 7.4).

1.1 Follow up to Recommendations from the First Review

Recommendation: The partners have addressed the copyright and ethical issues raised in the RP1 review. All SENSEI data sources have been assigned a Data Usage Level (DUL) code based on their category of terms and conditions. Four levels have been identified. This scheme is actually worked out considerably well and could be used in other projects for data classification, release and redistribution. It would be commendable if this work could be shared, not only via the project website, but also via other websites that reach a bigger audience in the research community.

The document discussing intellectual property issues related to sharing social media and web data (including the discussion about the Data Usage Level (DUL) classification schema) has been distributed and shared on the SENSEI website. Furthermore e-mail announcements was made to several academic e-mail distribution lists about this.

Recommendation: It would be commendable if the partners could organize follow-up challenges to the ones organized at MultiLing 2015, as a lot of time went into the compilation of the resources and there is still need for new competitions in this emerging field. It would also keep the project and its accomplishments in the spotlight.

We plan on organizing a follow up to the Multiling'15 shared tasks sponsored by the SENSEI project. We will rerun the online forum summarization (OnForumS) and call-centre conversation summarization (CCCS) tasks with set-aside and newly collected data. Our collaboration with the Multiling organizers lead to the submission of a workshop proposal at EACL'17 to support the shared task, but not limited to it.

Recommendation: The partners are strongly encouraged to finalize the exploitation plan before the end of RP3. Please describe the exploitation plan in detail in D7.5.

The exploitation plan is presented in Section 5 of this deliverable. The industrial partners Teleperformance and Websays strongly collaborated on exploitation during Period 3.

2. Project website

SENSEI's website has been developed using WordPress and registered under the domain http://www.sensei-conversation.eu in accordance with the EU recommendation.

The website purpose is twofold. The main purpose is to provide information about the SENSEI project and demos to viewers. The other purpose is to internally share, store and exchange files between the partners involved in the project. Hence, the website platform includes a web interface, which is optimized for mobile, and a back office, which is accessible only to the partners of the SENSEI project.

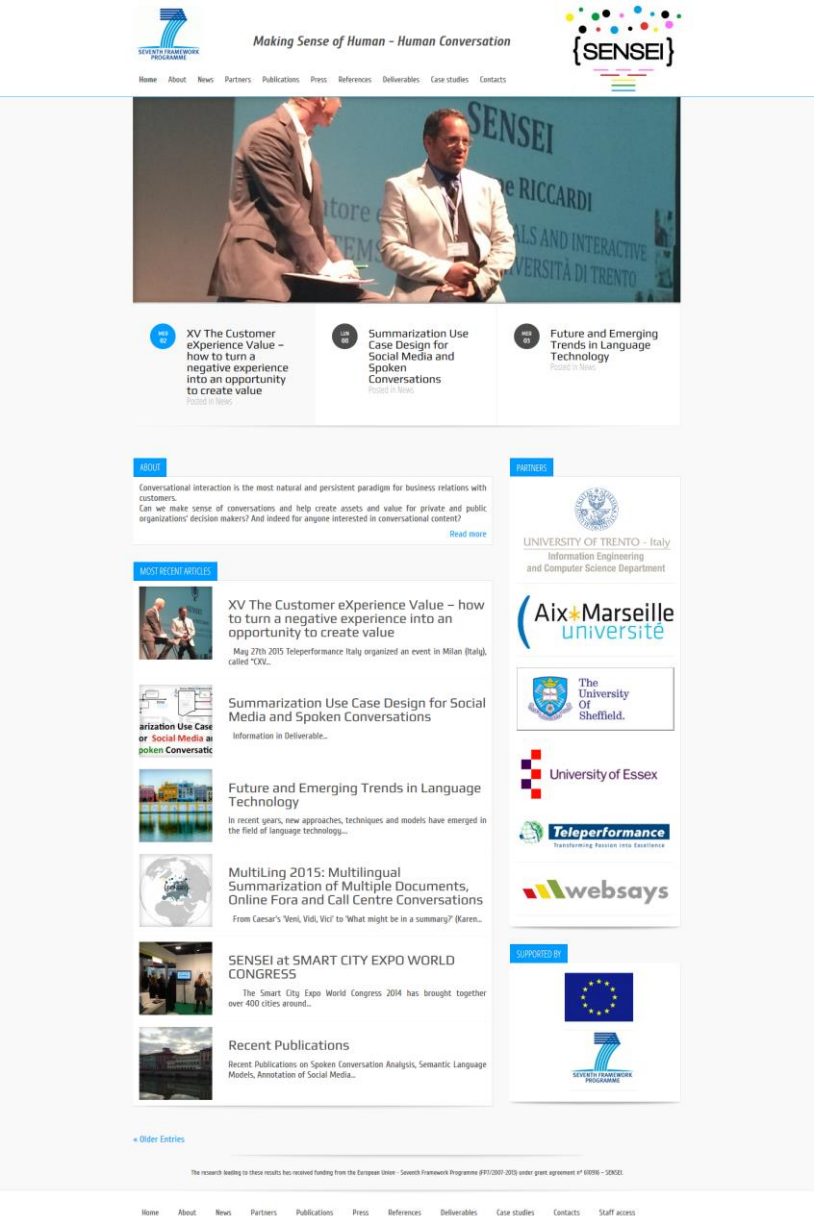


Figure 1 - SENSEI website home page

The website has been updated, by adding news about events and dissemination activities that took place in Period 3, publications, press releases and more.

Deliverables submitted in Period 1 and 2 have been released through the website; they can be downloaded in pdf format. From the same page it is possible to download the public compressed archive of the deliverable 2.1 containing sample data.

In the Section “Deliverables” some videos illustrate the prototypes of multilingual summarisation systems and its application to spoken conversations (call centres) as well as news and social media conversations.

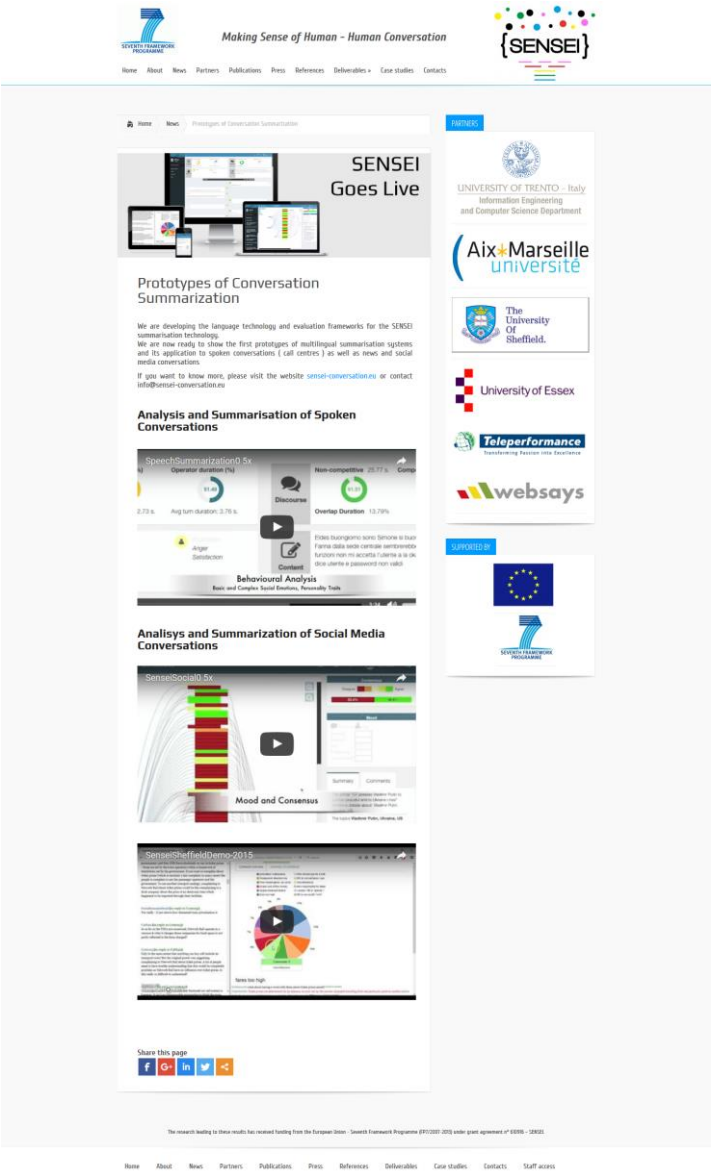


Figure 2 - SENSEI Prototypes

Furthermore, Data Use Level (DUL) classification used to identify which data sources had common IPRs scenarios regarding the source own data and its user-generated content (UGC) was extrapolated from the deliverable D8.2 and we made it available on the website in a specific window in order to easily distribute and share it.

Figure 3 – DUL classification

Flyers and posters have been published in low resolution on the page “about” so that they can be freely seen by interested people.

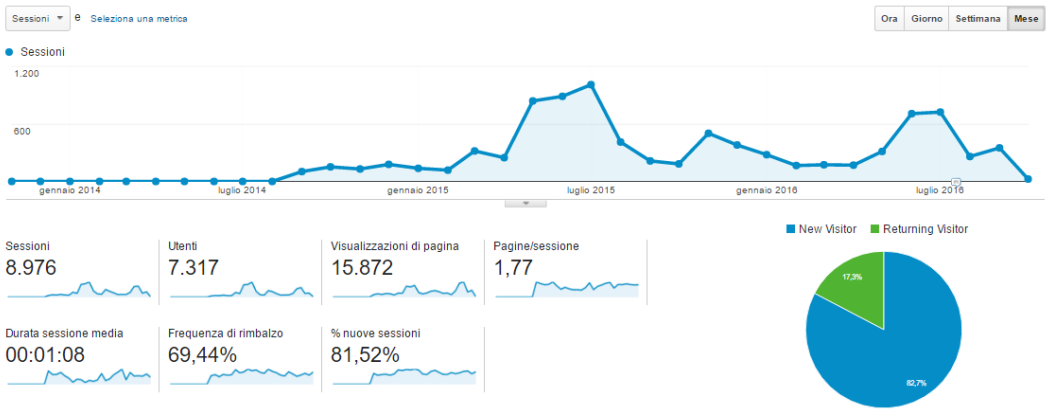
Project’s general contact email is freely visible so that anyone can write us to ask for information and updates.

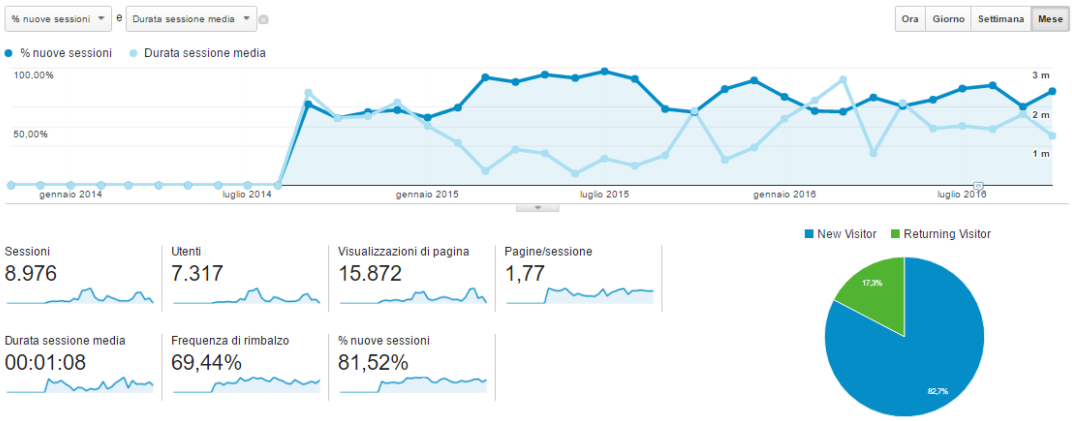
Recently a statistics plugin have been installed to monitor visits and events on the website to check the interest in the internet world about the project and the different contents of the website.

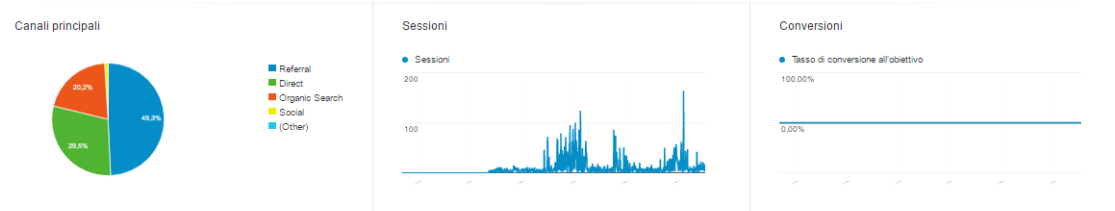
Since the beginning of the project (1st November 2013) we have had [1]:

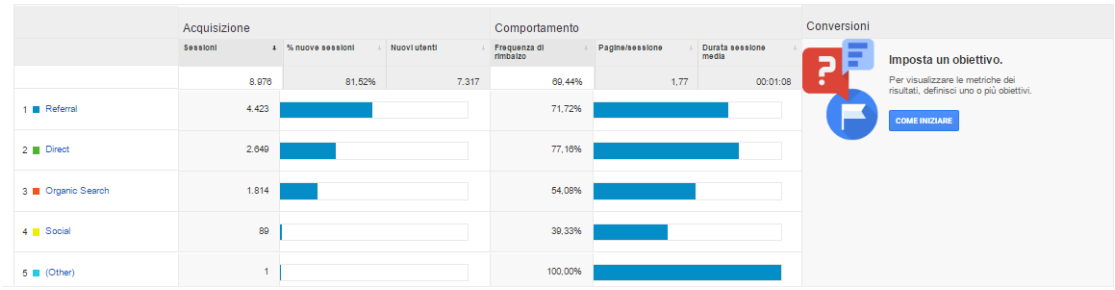
- 8976 visite
- 1m 08s is the average duration of a session
- 1.77 pages the average of pages visited in a session
- 1993 visits come from US
- 4423 visits from links in other websites (referral)
- 2649 visits from direct address box
- 1814 organic visits from research motors

[1] Last update on 4.10.2016


Sessioni
Seleziona una metrica
Ora
Giorno
Settimana
Mese
Sessioni
1.200
600
gennaio 2014
luglio 2014
gennaio 2015
luglio 2015
gennaio 2016
luglio 2016
Sessioni
8.976
Utenti
7.317
Visualizzazioni di pagina
15.872
Pagine/sessione
1,77
Durata sessione media
00:01:08
Frequenza di rimbalzo
69,44%
% nuove sessioni
81,52%
New Visitor
Returning Visitor
17,3%
82,7%


% nuove sessioni
Durata sessione media
Ora
Giorno
Settimana
Mese
% nuove sessioni
Durata sessione media
100,00%
50,00%
3 m
2 m
1 m
gennaio 2014
luglio 2014
gennaio 2015
luglio 2015
gennaio 2016
luglio 2016
Sessioni
8.976
Utenti
7.317
Visualizzazioni di pagina
15.872
Pagine/sessione
1,77
Durata sessione media
00:01:08
Frequenza di rimbalzo
69,44%
% nuove sessioni
81,52%
New Visitor
Returning Visitor
17,3%
82,7%


Canali principali
20,2%
49,3%
29,6%
Referral
Direct
Organic Search
Social
(Other)
Sessioni
Sessioni
200
100
Conversioni
Tasso di conversione all'obiettivo
100,00%
0,00%


Acquisizione
Comportamento
Conversioni
Sessioni
% nuove sessioni
Nuovi utenti
Frequenza di rimbalzo
Pagine/sessione
Durata sessione media
8.976
81,52%
7.317
69,44%
1,77
00:01:08
1 Referral
4.423
71,72%
2 Direct
2.649
77,16%
3 Organic Search
1.814
54,08%
4 Social
89
39,33%
5 (Other)
1
100,00%
Imposta un obiettivo.
Per visualizzare le metriche dei risultati, definisci uno o più obiettivi.
COME INIZIARE

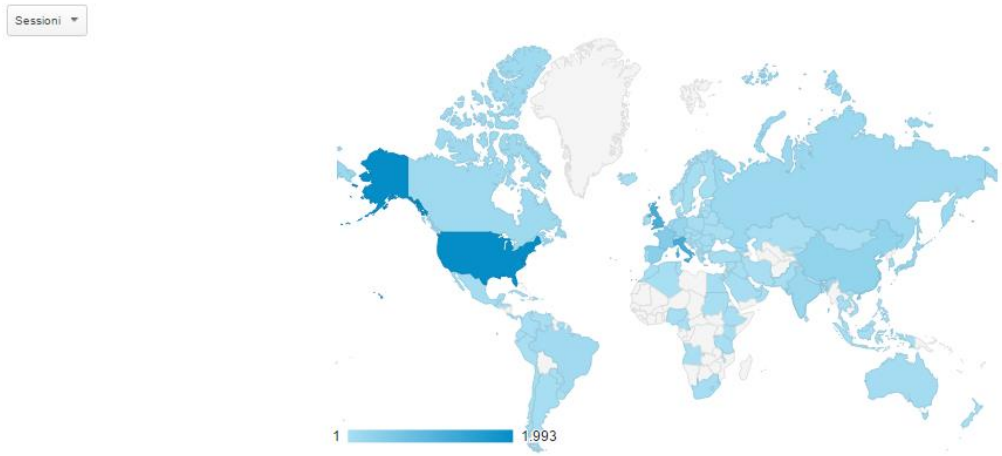


Figure 4: SENSEI Website statistics 1 November 2013 – 31October 2016

3. Dissemination and communication

3.1 Shared Task

In 2015, SENSEI organised two shared tasks as part of a larger event on Multilingual Summarization, MULTILING, which every two years brings together diverse communities interested in Summarization (for more details see deliverable D7.4).

The two tasks delivered by SENSEI were the Online Forum Summarization task (ONFORUMS) and the Customer Call-Center Conversation Summarization task (CCCS). Both attracted reasonable number of participants and data preparation and plans are currently underway for organising them again in 2017, potentially once again jointly with the MULTILING community. Current activities on these are briefly outlined below (a more detailed report is included in D7.6).

For the next edition of ONFORUMS in collaboration with USFD a larger data set than the one used for ONFORUMS'15 was collected from The Guardian. For SENSEI purposes it was hand-annotated with gold clusters and topic labels and a subset of it was annotated with coreferences. Current discussions revolve around what part of such annotation can be reused for the purposes of ONFORUMS'17 and what new annotation may be needed (more details included in D7.6).For the next edition of CCCS, The SENSEI group has set aside a number of conversations from the DECODA and LUNA corpora to be used to reiterate the evaluation. For the DECODA corpus, 500 conversations have been transcribed and annotated with synopses, they are unreleased and could be used to create a new test set. For the LUNA corpus, 100 conversations have synopses which have not been shared with the community, and 300 conversations have new synopses which target a longer length and include more details. We have not yet secured funding for additional translations to English (and those won't be funded by the SENSEI project) but we are considering the ICSI and AMI corpora for inclusion as they contain meeting summaries focused on specific aspects which are similar to the conversation synopses of the LUNA and DECODA corpora. Under those conditions, we can do a rerun of the task for CCCS'17 or pursue a cheaper option which would rely on ICSI and AMI data for English. This would allow to perform extensive manual evaluation which was lacking in CCCS'15.

Besides the organization of the ONFORUMS and CCCS shared tasks, the SENSEI team has created ties with the summarization community which we are planning on extending. A group formed of John M. Conroy (Center for Computing Sciences Institute for Defense Analyses, USA), Marina Litvak (Sami Shamoon College of Engineering, Israel), Elena Lloret (University of Allicante, Spain), George Giannakopoulos (University of Demokritos, Greece), Josef Steinberger (University of West Bohemia, Plzeň, Czech Republic), Mijail Kabadiov (U. Essex / SENSEI), Benoit Favre (AMU / SENSEI) started meeting regularly with the objective of proposing a COST action to foster the community are organize a European network for summarization-related tasks.Dissemination activities (Fred, Rob, Massimo, Vincenzo G., Hugo)

3.2 Dissemination activities

3.2.1 Conferences, Workshops, Presentations, Events

Table 1 shows the Conferences, Workshops and events in which SENSEI project's work and objectives were disseminated through papers and presentations during Period 3.

Table 1 – Conferences and Workshops Period 3

Type of activity	Main Leader (Partner)	Title / Name of the event	Date	Place	Type of Audience: Scientific community	Size of Audience	Countries addressed	Purpose / Justification / Outcomes	Name of the attendees/speaker
Business Show	Websays	SmartCities	Nov. 2015	Barcelona	Business, Administrations	Very Large Business Show	International	Presentation of SENSEI prototypes	H. Zaragoza M. Poch
Conference	UESSEX	FIRE 2015	4-6 December	Gandhinagar (India)	Scientific Community	60	International	Presentation of OnForumS: The Shared Task on Online Forum Summarisation at MultiLing'15	M. Kabadjov
Workshop presentation	AMU	SLU-NIPS (collocated with NIPS 2015)	5-10 December 2015	Montreal, Canada	Scientific Community	50-100	International	Presentation of the paper: Lexical embedding adaptation for open-domain spoken language understanding	B. Favre, F. Bechet J. Tafforeau
Conference	AMU	JEP-TALN 2016	5-10 December 2015	Paris, France	Scientific Community, industry	300	France	Poster presenting the SENSEI project	Frederic Bechet
Presentation	TP	Sensei meets TP Customer Account Managers	14 December 2015	Rome – Taranto (Italy) – Barcelona (Spain)	Business Community	20	Italy, EU	The web monitoring tool and Sensei outputs were shown	V.Giliberti, L. Molinari, H. Zaragoza
Workshop	UNITN	IEEE Automatic Speech Recognition and Understanding Workshop (ASRU 2015)	13-17 December 2015	Scottsdale, Arizona (USA)	Scientific Community	50-100	International	Presentation of paper: Automatic Summarization of Call-center Conversations	G. Riccardi, F. Beche, B. Favre
Workshop	AMU	IWSDS 2016	13-16	Saariselkä,	Scientific	50-100	International	Presentation of the paper: CallAn: A	B.Favre, F.

Type of activity	Main Leader (Partner)	Title / Name of the event	Date	Place	Type of Audience: Scientific community	Size of Audience	Countries addressed	Purpose / Justification / Outcomes	Name of the attendees/speaker
presentation			January 2016	Finland	Community			Tool to Analyze Call Center Conversations	Bechet
Business Show	Websays	4YFN 2016	Feb. 2016	Barcelona	Investors, Businesses	Large Business Show	International	Presentation of SENSEI prototypes	H. Zaragoza O. Aguilar
Conference	UNITN	ICASSP. IEEE, 2016,	20-25 March 2016	Shanghai (China)	Scientific Community	50-100	International	Presentation of poster: Discourse Connective Detection in Spoken Conversations	G. Riccardi, F. Beche, B. Favre
Conference	USFD	ECIR 2016	21-23 March, 2016	Padova (Italy)	Scientific Community	60	International	Presentation of the paper: A Graph-based Approach to Topic Clustering for Online Comments to News	A. Aker
Workshop	TP	Workhop at the Politecnico in Bari	4 May 2016	Bari (Italy)	Scientific & SME Community	30	Italy, EU	Workshop on Speech Analysis from technological development to business advantages	V. Giliberti
Seminar	USFD	NLP Seminar Series: Making Sense of Multi-Party Conversations in Reader Comments on On-line News	20 May 2016	University of Sussex	Scientific Community	15	UK	Talk about the SENSEI results	R. Gaizauskas
Workshop	TP	Workshop at University La Sapienza	23 May 2016	Rome (Italy)	Scientific & SME Community	30	Italy, EU	Workshop on Speech Analysis Solutions	V. Giliberti
Conference presentation	UNITN	LREC 2016	23-28 May, 2016	Portorož (Slovenia)	Scientific Community	30	Slovenia, EU	Poster presentation: Multilevel Annotation of Agreement and Disagreement in Italian News Blogs". Related to WP4	F. Celli
Conference presentation	UNITN/AMU	LREC 2016	23-28 May, 2016	Portorož (Slovenia)	Scientific Community	50	Slovenia, EU	Presentation of paper: Summarizing Behaviors: An Experiment on the Annotation of Call-Centre Conversations	S. A. Chowdhury
Conference	UNITN	LREC 2016	23-28 May 2016	Portorož (Slovenia)	Scientific Community	50-100	International	Presentation of paper: Transfer of Corpus-Specific Dialogue Act	S. A. Chowdhury

Type of activity	Main Leader (Partner)	Title / Name of the event	Date	Place	Type of Audience: Scientific community	Size of Audience	Countries addressed	Purpose / Justification / Outcomes	Name of the attendees/speaker
								Annotation to ISO Standard: Is it worth it?	
Conference Presentation	UESSEX	LREC 2016	23-28 May, 2016	Portorož, Slovenia	Scientific Community	50-100	International	Presentation of the poster: The OnForumS corpus from the Shared Task on Online Forum Summarisation at MultiLing 2015" related to WP4: Extraction of Argument Structure	U. Kruschwitz, M. Poesio
Conference	USFD	LREC 2016	25 May, 2016	Portorož (Slovenia)	Scientific Community	50-100	International	Presentation of a paper: A Document Repository for Social Media and Speech Conversations	R.Gaizauskas
Conference	USFD	LREC 2016	26 May, 2016	Portorož (Slovenia)	Scientific Community	50-100	International	Presentation of a paper: What's the Issue Here?: Task-based Evaluation of Reader Comment Summarization Systems	R.Gaizauskas
Workshop	TP	Workshop on Speech Analysis Solutions & Sensei Project	30 May 2016	Taranto (Italy)	Scientific & SME Community	15	Italy, EU	Workshop on Speech Analysis Solutions & Sensei Project	V.Giliberti
Presentation	TP	Sensei meets Infinity CCS	9 June 2016	Birmingham (UK)	Business Community	-	England, EU	TP Italy & Websays showed the objectives and the main results of the Project; the Infinity CCS Researchers & Sales showed the Infinity platform & tool used by many customers worldwide. Possibility of integrations.	V. Giliberti, H. Zaragoza
Workshop Presentation	UESSEX	CORBON 2016 (co-located with NAACL)	16 June, 2016	San Diego, CA, USA	Scientific Community	50-100	International	Presentation of the poster: Coreference Resolution for the Basque Language with BART, related to WP4: Intra-doc coreference domain and language adaptation	M. Poesio
Presentation	Websays	Sensei meets Teleperformance Portugal	23 June 2016	Lisbon (Portugal)	Business Community	-	Portugal, EU	In the meeting the Sensei partner Websays showed the objectives and the main results of the Project. This business event was of great	H. Zaragoza

Type of activity	Main Leader (Partner)	Title / Name of the event	Date	Place	Type of Audience: Scientific community	Size of Audience	Countries addressed	Purpose / Justification / Outcomes	Name of the attendees/speaker
								importance for Sensei because it showed what could be developed in term of business to TP Europe.	
Presentation	Websays	Websays presents SENSEI to the PRISA group	June – July 2016	Madrid (Spain)	Business Community	-	Spain, EU	PRISA would be an excellent partner to deliver prototypes and show the potential of some of SENSEI's technology.	H. Zaragoza
Workshop presentation	UNITN	NLPMJ, in conjunction to IJCAI 2016	10 July 2016	New York, US	Scientific Community	50	US, worldwide	Presentation of paper: Tell me who you are, I'll tell whether you agree or disagree: Prediction of agreement/disagreement in news blog. Related to WP4	G. Riccardi
Presentation	TP	Sensei meets GN Research	27 July 2015	Trento (Italy)	Business Community	1	Italy, EU	UniTN and TP Italy showed the Sensei outputs and GN Research showed the Analytics tools for Contact Center field.	V. Giliberti, G. Riccardi, Righetti
Conference presentation	UNITN	CoNLL 2016	11-12 August 2016	Berlin (Germany)	Scientific Community	30	Europe	Presentation of paper: UniTN End-to-End Discourse Parser for CoNLL 2016 Shared Task	E. Stepanov
Workshop presentation	USFD	3rd Workshop on Argument Mining, at ACL 2016	12 August, 2016	Berlin (Germany)	Scientific Community	50-100	International	Presentation of a paper: Summarizing Multi-Party Argumentative Conversations in Reader Comment on News	R.Gaizauskas
Conference presentation	USFD	INLG 2016	5-8 September, 2016	Edinburgh (UK)	Scientific Community	20	International	Presentation of a paper: Automatic label generation for news comment clusters	A.Aker
Conference presentation	AMU	Interspeech 2016	8-12 September 2016	San Francisco, USA	Scientific Community	100-500	International	Presentation of the paper: Joint syntactic and semantic analysis with a multitask Deep Learning Framework for Spoken Language Understanding	B. Favre, F. Bechet
Conference presentation	AMU	Interspeech 2016	8-12 September 2016	San Francisco, USA	Scientific Community	100-500	International	Presentation of the paper: Beyond utterance extraction: summary recombination for speech summarization	B.Favre, F. Bechet

Type of activity	Main Leader (Partner)	Title / Name of the event	Date	Place	Type of Audience: Scientific community	Size of Audience	Countries addressed	Purpose / Justification / Outcomes	Name of the attendees/speaker
Event	TP, Websays	E-Commerce Multichannel European Global Event	12 September 2016	Paris (FR)	Business Community	1000	France, EU	The industrial Sensei partners TP & Websays showed together the objectives and the main results of the Project in an exhibition stand an also in a specific workshop for many European companies interested in the customer experience services	V. Giliberti, H. Zaragoza
Conference	UNITN	INTERSPEECH 2016	8-12 September 2016	San Francisco (USA)	Scientific Community	50-100	International	Presentation of paper: Predicting User Satisfaction from Turn-Taking in Spoken Conversations	G. Riccardi
Conference	USFD	SIGDIAL	13-15 September , 2016	Los Angeles (USA)	Scientific Community	50-100	International	Presentation of a paper: The SENSEI Annotated Corpus: Human Summaries of Reader Comment Conversations in On-line News	R. Gaizauskas
Event	USFD, UESSEX Websays	Media/Text Analytics Customer Dissemination Event	19 September 2016	London (UK)	Media professionals	35	International	Presentations were made by project covering SENSEI work on summarisation and on the Brexit poll predictions. In addition, a lively round table discussion was held in which participants at the event as well as the presenters were able to share views on the current state of play with respect to user-generated content in the news as well as future directions	R. Gaizauskas, M. Hepple, J. Foster, U. Kruschwitz, M. Poch
Conference	UNITN	CogInfo.com 2016	16-18 October 2016	Wroklav (Poland)	Scientific Community	50-60	International	Presentation of paper: Can We Detect Speakers' Empathy?: A Real-Life Case Study	S. A. Chowdhury
Workshop	UNITN	PEOPLES Workshop at COLING 2016.	11-12 December 2016	Osaka (Japan)	Scientific Community	-	International	Predicting Brexit: Classifying Agreement is Better than Sentiment and Pollsters	G. Riccardi
Workshop	UNITN	PEOPLES Workshop at COLING 2016	11-12 December 2016	Osaka (Japan)	Scientific Community	-	International	The Social Mood of News: Self-reported Annotations to Design Automatic Mood Detection Systems	G. Riccardi
Conference	UNITN	COLING, 2016.	13-16	Osaka	Scientific	-	International	How Interlocutors Coordinate with	G. Riccardi

Type of activity	Main Leader (Partner)	Title / Name of the event	Date	Place	Type of Audience: Scientific community	Size of Audience	Countries addressed	Purpose / Justification / Outcomes	Name of the attendees/speaker
			December 2016	(Japan)	Community			each other within Emotional Segments?	

3.2.2 Publications Period 3

All the publications are open access and can be downloaded in pdf-format from the SENSEI website.

Details of the publications funded by the project have been uploaded to the agreed Bibliographic social network http://www.mendeley.com/ and tagged with the tag "SENSEI- 610916".

Table 2 – Publications Period 3

Title of the article	Name of Authors and Organisation	Publication	Relevant pages	Year of Publication	Permanent identifiers	Can be open access provided to this publication?	Relevance for SENSEI
Automatic Summarization of Call-center Conversations	E. A. Stepanov, B. Favre, F. Alam, S. A. Chowdhury, K. Singla, J. Trione, F. Bechet, G. Riccardi (UNITN and AMU)	Proceedings of IEEE Automatic Speech Recognition and Understanding Workshop (ASRU 2015)	-	2015	-	Yes	WP4
Lexical embedding adaptation for open-domain spoken language understanding	Jeremie Tafforeau, Frederic Bechet, Benoit Favre, Thierry Artieres (AMU)	Proceedings of NIPS Workshop on Spoken Language Understanding (SLUNIPS), 2015	-	2015	-	Yes	WP3
CallAn: A Tool to Analyze Call Center Conversations	Balamurali A R, Frédéric Béchet, Benoit Favre (AMU)	Proceedings of the 7th International Workshop on Spoken Dialogue Systems (IWSDS 2016).	-	2016	-	Yes	WP3, WP6

Title of the article	Name of Authors and Organisation	Publication	Relevant pages	Year of Publication	Permanent identifiers	Can be open access provided to this publication?	Relevance for SENSEI
A Graph-based Approach to Topic Clustering for Online Comments to News	Ahmet Aker, Emina Kurtic ,Balamurali Andiyakkal Rajendran, Monica Paramita, Emma Barker, Mark Hepple, Robert Gaizauskas (USFD)	Proceedings of the 38th European Conference on Information Retrieval (ECIR 2016)	15-29	2016	DOI: 10.1007/978-3-319-30671-1 2	Yes	WP5
Discourse Connective Detection in Spoken Conversations	Giuseppe Riccardi, Evgeny A. Stepanov and Shammur Absar Chowdhury (UNITN)	Proceedings of ICASSP IEEE, 2016	6095-6099	2016	10.1109/ICASSP.2016.7472848	Yes	WP4
Transfer of Corpus-Specific Dialogue Act Annotation to ISO Standard: Is it worth it?	Shammur Absar Chowdhury, Evgeny A. Stepanov and Giuseppe Riccardi (UNITN)	Proceedings of 10th edition of the Language Resources and Evaluation Conference (LREC 2016)	132-135	2016		Yes	WP4
The OnForumS corpus from the Shared Task on Online Forum Summarisation at MultiLing 2015	M. Kabadjov, U. Kruschwitz, M. Poesio (UESSEX), J. Steinberger (U. West Bohemia), M. Poch, H. Zaragoza (Websays)	Proceedings of 10th edition of the Language Resources and Evaluation Conference (LREC 2016)	814-818	2016	-	Yes	WP4
Multilevel Annotation of Agreement and Disagreement in Italian News Blogs	Fabio Celli, Giuseppe Riccardi, Firoj Alam (UNITN)	Proceedings of 10th edition of the Language Resources and Evaluation Conference (LREC 2016)	p 2829-2832	2016	-	yes	WP4
A Document Repository for Social Media and Speech Conversations	Adam Funk, Robert Gaizauskas (USFD, Benoit Favre (AMU)	Proceedings of 10th edition of the Language Resources and Evaluation Conference (LREC 2016)	436-440	2016	-	Yes	WP5, WP6

Title of the article	Name of Authors and Organisation	Publication	Relevant pages	Year of Publication	Permanent identifiers	Can be open access provided to this publication?	Relevance for SENSEI
Summarizing Behaviours: An Experiment on the Annotation of Call-Centre Conversations	Morena Danieli, Balamurali A R, Evgeny Stepanov, Benoit Favre, Frederic Bechet, Giuseppe Riccardi	Proceedings of 10th edition of the Language Resources and Evaluation Conference (LREC 2016)	4430-4433	2016	-	Yes	WP1, WP3
What's the Issue Here?: Task-based Evaluation of Reader Comment Summarization Systems	Emma Barker, Monica Paramita, Adam Funk, Emina Kurtic, Ahmet Aker, Jonathan Foster and Mark Hepple and Robert Gaizauskas (USFD)	Proceedings of 10th edition of the Language Resources and Evaluation Conference (LREC 2016)	3094-3101	2016	-	Yes	WP1
Tell me who you are, I'll tell whether you agree or disagree: Prediction of agreement/disagreement in news blog.	Fabio Celli, Evgeny A. Stepanov, Giuseppe Riccardi (UNITN)	In Proceedings of NLPMJ, in conjunction to IJCAI 2016.	-	2016	-	Yes	WP4
Summarizing Multi-Party Argumentative Conversations in Reader Comment on News	Emma Barker and Robert Gaizauskas (USFD)	In Proceedings of the ACL 2016 3rd Workshop on Argument Mining (ArgMining 2016)	12-20	2016	DOI: 10.18653/v1/W16-2802	Yes	WP5
UniTN End-to-End Discourse Parser for CoNLL 2016 Shared Task	Evgeny A. Stepanov and Giuseppe Riccardi (UNITN)	Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics	85-91	2016		Yes	WP4
Automatic label generation for news comment clusters	Ahmet Aker and Monica Paramita and Emina Kurtic and Adam Funk and	In Proceedings of the 9th International Natural Language Generation Conference (INLG16)	61-69	2016	-	Yes	WP5

Title of the article	Name of Authors and Organisation	Publication	Relevant pages	Year of Publication	Permanent identifiers	Can be open access provided to this publication?	Relevance for SENSEI
	Emma Barker and Mark Hepple and Robert Gaizauskas						
The SENSEI Annotated Corpus: Human Summaries of Reader Comment Conversations in On-line News	Emma Barker, Monica Paramita, Ahmet Aker, Emina Kurtic, Mark Hepple, Robert Gaizauskas	In Proceedings of the 17th Annual SIGdial Meeting on Discourse and Dialogue (SIGDIAL 2016)	42-52	2016	-	Yes	WP1, WP5
Beyond utterance extraction: summary recombination for speech summarization	Jérémy Trione, Benoit Favre, Frédéric Béchet	In Proceedings of Interspeech 2016	-	2016	-	Yes	WP5
Predicting User Satisfaction from Turn-Taking in Spoken Conversations	Shammur Absar Chowdhury, Evgeny A. Stepanov, and Giuseppe Riccardi	Proceedings of Interspeech-2016	2919-2914	2016	DOI: 10.21437/Interspeech.2016-859	Yes	WP4
Joint syntactic and semantic analysis with a multitask Deep Learning Framework for Spoken Language Understanding	Jeremie Tafforeau, Frederic Bechet, Thierry Artiere, Benoit Favre	In Proceedings of Interspeech 2016	-	2016	-	Yes	WP3
Coreference Resolution for the Basque Language with BART	Soraluze, A., Arregi, O., Arregi, X., Diaz de Ilarraza, A., Kabadjov, M., Poesio, M.(UESSEX)	In Proceedings of CORBON'16	67-73	2016	-	Yes	WP4
Predicting Brexit: Classifying Agreement is Better than Sentiment and	Celli F., Stepanov A. E., Poesio M. and Riccardi G.	Proc. PEOPLES Workshop at COLING 2016.	-	2016	-	Yes	WP6

Title of the article	Name of Authors and Organisation	Publication	Relevant pages	Year of Publication	Permanent identifiers	Can be open access provided to this publication?	Relevance for SENSEI
Pollsters							
The Social Mood of News: Self-reported Annotations to Design Automatic Mood Detection Systems	Alam F., Celli F., Stepanov A. E., Ghosh A. and Riccardi G.,	Proc. PEOPLES Workshop at COLING 2016	-	2016	-	Yes	WP2, WP5
How Interlocutors Coordinate with each other within Emotional Segments?	Alam F. , Chowdhury S., Danieli M.. and Riccardi G.,	Proc. COLING, 2016.	-	2016	-	Yes	WP1
How Interlocutors Coordinate with each other within Emotional Segments?	Alam F. , Chowdhury S. , Danieli M.. and Riccardi G.	In Proceedings of COLING'16	-	2016	-	Yes	WP3
Can We Detect Speakers' Empathy? A Real-Life Case Study	Alam F. , Danieli M.. and Riccardi G.,	In Proceedings of Cog Info'16	-	2016	-	Yes	WP3
Semantic Language Models with Deep Neural Networks	Ali Orkan Bayer, Giuseppe Riccardi (UNITN)	Computer Speech and Language	1-22	2016	http://dx.doi.org/10.1016/j.csl.2016.04.001	No	WP3
The SENSEI Project: Making Sense of Human Conversations	Giuseppe Riccardi, Frederic Bechet, Morena Danieli, Benoit Favre, Robert Gaizauskas, Udo Kruschwitz, and Massimo Poesio	Future and Emergent Trends in Language Technology, Lecture Notes in Computer Science, Springer International Publishing	10-33	2016	DOI: 10.1007/978-3-319-33500-1 2	No	WP1-WP6

3.2.3 Press releases and articles

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	Automatic polling using Computational Linguistics: more reliable than traditional polling?	8.7.2016	*EU Referendum Analysis 2016: Media, Voters and the Campaign*	Article on Brexit prediction and the approach used in SENSEI	UK, Europe	http://www.referendumanalysis.eu/eu-referendum-analysis-2016/section-7-social-media/automatic-polling-using-computational-linguistics-more-reliable-than-traditional-polling/
Press release	EU Researchers Saw Brexit Coming	8.7 2016	*Cordis Website*	Based on information from the project.	Europe	http://cordis.europa.eu/news/rcn/125739_en.html
Press release	EU Researchers Saw Brexit Coming	11.7.2016	*ACM TechNews*	A copy of the press release on CORDIS	World	http://m.acmwebvm01.acm.org/news/204612-eu-researchers-saw-brexit-coming/fulltext
Article	Nella sede di Taranto, il meeting internazionale per Sensei	June 2015	*Blog Teleperformance Italia*	Article on the project meeting.	Italy	http://www.teleperformanceitalia.it/2015/06/18/sede-taranto-meeting-internazionle-sensei/
Article	Sensei: il software che capisce le conversazioni da call center	January 2016	*Il Rottamatore*	Article on SENSEI project in the call center use case	Italy	http://www.ilrottamatore.it/sensei-il-software-che-capisce-le-conversazioni-da-call-center/
Article	Sensei, premiata la sinergia con le università europee	January 2016	*Blog Teleperformance Italia*	Article on SENSEI project results	Italy	http://www.teleperformanceitalia.it/2016/01/14/sensei-premiata-sinergia-universita/
Newsletter	Speech Analysis Dallo Sviluppo Tecnologico ai Vantaggi di Business	May 2016	*Blog Teleperformance Italia + Newsletter*	Article on the Seminar on Speech Analysis at the University of Bari	Italy	http://www.teleperformanceitalia.it/2016/05/13/speech-analysis-sviluppo-tecnologico-business/
Article	How to make sense of long comment threads on newspaper websites	8.12. 2015	*The Guardian*	Discusses SENSEI Approach to summarising reader comment in on-line news. Includes link to video of demo.	UK, World	https://www.theguardian.com/media/greenslade/2015/dec/08/how-to-make-sense-of-long-comment-threads-on-newspaper-websites?CMP=Share_iOSApp_Other
Press release	Can the EU's Sensei project predict Brexit by data-mining social media chatter?	31.05.2016	*ZDNet*	Includes all the information from the press release as well as more detailed information about the Sensei project overall, taken from the Sensei website.	World	http://www.zdnet.com/article/can-the-eus-sensei-project-predict-brexit-by-data-mining-social-media-chatter/
Press release	Can the EU's Sensei project predict Brexit by	31.05.2016	*AITopics*	An extract from the above ZDNet article, with a link to it. Mentions Websays.	World	http://aitopics.org/news/can-eus-sensei-project-predict-brexit-data-mining-social-

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
	data-mining social media chatter?					media-chatter
Press release	Can the EU's Sensei project predict Brexit by data-mining social media chatter?	31.05.2016	*TechSite*	An extract from the above ZDNet article, with a link to it. Mentions Websays, University of Essex and Teleperformance.	World	http://www.techsite.io/p/350880
Press release	Humans and machines team up to predict Brexit campaign result by analysing UK social chatter	31.05.2016	*LinkedIN - pulse*	A copy of the original press release	World	https://www.linkedin.com/pulse/humans-machines-team-up-predict-brexit-campaign-result-riccardi
Press release	Humans and machines team up to predict Brexit campaign result by analysing UK social chatter	01.06.2016	*Adkronos*	A copy of the original press release – with no omissions	World	http://www.adnkronos.com/immediapress/ict/2016/06/01/humans-and-machines-team-predict-brexit-campaign-result-analysing-social-chatter_HVwotkEs5LTWjnFLxTtEAN.html
Press release	Humans and machines team up to predict Brexit campaign result by analysing UK social chatter	01.06.2016	*PadovaNews*	A copy of the original press release – with no omissions	Italy	http://www.padovanews.it/2016/06/01/humans-and-machines-team-up-to-predict-brexit-campaign-result-by-analysing-uk-social-chatter/
Article	Scouring social media on EU referendum – will it be more accurate than polls?	10.06.2016	*The Conversation*	Focuses on the project's methodology and why its results could be better than traditional polling and social media analysis.	World	http://theconversation.com/scouring-social-media-on-eu-referendum-will-it-be-more-accurate-than-polls-60662
Article	Scouring social media on EU referendum – will it be more accurate than polls?	10.06.2016	*EconoTimes*	Exact copy of The Conversation's article	World	http://www.econotimes.com/Scouring-social-media-on-EU-referendum-%E2%80%93-will-it-be-more-accurate-than-polls-220284
Press Release	Brexit or Remain? Ecco cosa ne pensa la rete	15.06.2016	*University of Trento*	Includes all the information from the press release as well as more detailed information about the Sensei project	Italy	http://webmagazine.unitn.it/news/ateneo/10304/le-intenzioni-di-voto-dei-britannici-brexit-or-remain-ecco-cosa-ne-pensa-la-

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
				overall, taken from the Sensei website.		rete
Article	Czy będzie Brexit – co mówią analizy big data prowadzone online?	16.06.2016	*IT-Filolog.pl*	Includes all the information from the press release, including the fact that the project is funded by the European Commission, as well as more detailed information about the Sensei project overall, taken from the Sensei website.	Polland	http://it-filolog.pl/czy-bedzie-brexit-co-mowia-analizy-big-data-prowadzone-online/
Article	Brexit: na dwoje babka wróżyła	16.06.2016	*IT Polka News*	An exact copy of the IT-Filolog.pl article above	Polland	http://www.itpolska-news.pl/brexit-na-dwoje-babka-wrozyla/
Article	Czy będzie Brexit – co mówią analizy big data prowadzone online?	16.06.2016	*Reseller News*	An exact copy of the IT-Filolog.pl article above	Polland	https://resellernews.pl/bedzie-brexit-mowia-analizy-big-data-prowadzone-online/
Post	EU referendum – some predictions	16.06.2016	*Staff Blog of University of Leicester, England*	University staff blog post. Very short summary. Explains project and names partners.	UK	http://staffblogs.le.ac.uk/socscilibrarians/2016/06/17/eu-referendum-some-predictions/
Article	Brexit, il progetto «Sensei» analizza post e siti web	16.06.2016	*Il Trentino*	Short summary of the aims of the project, how it works, its funding and where to get more information. Italian language: Local newspaper for the Trentino region of Italy	Italy	http://trentinocorrierealpi.gelocal.it/trento/cronaca/2016/06/16/news/brexit-il-progetto-sensei-analizza-post-e-siti-web-1.13675177
Article	Università di Trento: Brexit, il sito in tempo reale con le intenzioni di voto	16.06.2016	*L'Indipendenza Nuova*	Explains how the project works, focusing on the University of Trento. Mentions that the project is EU-funded. Italian language: Online newspaper from the Lombardo Veneto region of Italy.	Italy	http://www.lindipendenzanuova.com/universita-di-trento-brexit-in-tempo-reale-le-intenzioni-di-voto/

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	Big Data tries to predict Britain's EU Referendum	16.06.2016	*Steemit*	Mentions the SENSE-EU project and Professor Massimo Poesio and Professor Udo Kruschwitz of the University of Essex. Compares the methodology with that of Equimedia.	UK	https://steemit.com/brexit/@alyssas/big-data-tried-to-predict-britains-eu-referendum
	L'ateneo di Trento: testa a testa sul Brexit	16.06.2016	*Corriere del Trentino*	Explains the SENSEI project, details the partners involved and its European funding. Interview with Prof. Riccardi	Italy	 CORRIERE DEL TRENTINO L'ateneo di Trento: testa a testa sul Brexit L'università guida un progetto europeo. Analizzati 200.000 post al giorno
Podcast	SENSEI: il software che coglie il sentiment della rete Sensei: the software that captures the sentiment of the network	22.06.2016	*Radio 24*	Podcast with Professor Giuseppe Riccardi. Written introduction explains what the project aims to do and details its funding Italian language: An Italian national all-news radio station, owned by the newspaper Il Sole 24 Ore.	Italy	http://www.radio24.ilsole24ore.com/programma/smart-city/sensei-software-coglie-sentiment-175042-gSLAz0eYhB?refresh_ce=1
Press release	Brexit or Remain? Ecco cosa ne pensa la rete	15.06.2016	*La Voce del Trentino*	Explains the SENSEI project, details the partners involved and its European funding. Notes that SENSEI predicted the Spanish general election correctly. Italian language: Online newspaper covering the Trento region of Italy.	Italy	http://www.lavocedeltrentino.it/2016/06/15/brexit-or-remain-ecco-cosa-ne-pensa-la-rete/
Article	Empat tècnic a la xarxa en el referèndum del Brexit	23.06.2016	*Catalunya Radio*	Gives a brief explanation of the project, with the article concentrating more on its findings at that point, in line with the main messaging of the press release. Catalan language: Publicly owned local	Catalunia, Spain	http://www.ccma.cat/324/empat-tecnic-a-la-xarxa-en-el-referendum-del-brexit/noticia/2737861/

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
				radio station with news website.		
Article	Espanya, el país que més piula del Brexit (Spain, the country that tweets most about Brexit)	23.06.2016	*Via Empresa*	Gives a brief explanation of the project, with the article concentrating more on its findings at that point, in line with the main messaging of the press release. Catalan language: Online news website for Catalan business.	Catalunia, Spain	http://www.viaempresa.cat/ca/notices/2016/06/espanya-el-pais-que-mes-piula-del-brexit-19994.php
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*Ansa.it*	Explains the result, how the project works, partners and the European Commission funding programme. Focuses on the University of Trento's involvement. Italian language: Italy's leading news agency, Agenzia Nazionale Stampa Associata.	Italy	http://www.ansa.it/trentino/notizie/2016/06/24/brexit-universita-trento-progetto-sensei-dava-uscita-a-52_22c29a2d-e319-422c-a5e9-2d66f43ab03e.html
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*Tiscali Notizie*	Exact copy of the ANSA article, but without the quote	Italy	http://notizie.tiscali.it/permalink/brexit-universita-trento-progetto-sensei-dava-uscita-52/
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*Libero*	First part of the ANSA article, with link to it. Italian language: Italian newspaper based in Milan.	Italy	http://247.libero.it/rfocus/26443341/1/brexit-universit-trento-progetto-sensei-dava-uscita-a-52/
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*italy.s5.webdigital.hu website*	First part of the ANSA article, with link to it. Italian language: Italian news	Italy	http://italy.s5.webdigital.hu/notizie/brexit-universita-trento-progetto-sensei-dava-uscita-a-52

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
				aggregator.		
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*Make Me Feed website*	First part of the ANSA article, with link to it. Italian language: Italian news aggregator.	Italy	http://www.makemefeed.com/2016/06/24/brexit-universita-trento-progetto-sensei-dava-uscita-a-52-2059436.html
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*Virgilio Notizie website*	Exact copy of the ANSA article, but without the quote Italian language: Italian news aggregator.	Italy	http://tuttosu.virgilio.it/detail/Brexit%3A-Universit%26agrave%3B-Trento-progetto-Sensei-,IWN_49101838.html
Article	Brexit: Università Trento, progetto Sensei dava uscita a 52%	24.06.2016	*News Locker*	Exact copy of the ANSA article, but without the quote Italian language: Italian news aggregator.	Italy	http://www.newslocker.com/it-it/regione/trento/brexit-universit-trento-progetto-sensei-dava-uscita-a-52-ansait/view/
Article	Twitter anticipó el brexit (Twitter anticipated Brexit).	24.06.2016	*El Periodico*	SENSEI got the result right, when most other predictions were wrong. Explains the background to the project, names the partners and notes it is financed by Europe. Spanish and Catalan language: Spain's fifth highest-circulated daily newspaper, published in Barcelona.	Spain	http://www.elperiodico.com/es/noticias/economia/twitter-anticipo-brexit-5226565

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	Print article headline: Twitter va anticipar el resultat del referendum	25.06.2016	*El Periodico – Catalan edition – print edition*	States that the SENSE-EU project got the result exactly right and mentions SENSEI, university partners and Websays. Catalan language: Spain's fifth highest-circulated daily newspaper, published in Barcelona.	Spain	 serrells Twitter va anticipar el resultat del referèndum TECNOLOGIA ▸ Sense-eu.info, un programa de seguiment de comunicacions de lliure accés, com Twitter, Youtube, part de Facebook o els correus electrònics dels lectors als diaris, va encertar el resultat de la consulta amb una mínima desviació d'una centèsima. El van elaborar el consorci Sensei Team, integrat per les universitats de Trento, Marsella, Sheffield i Sussex, i l'empresa catalana Websays. J.-M. U.
Tweet	Tweet text: L'empresa catalana @websays va predir el #BREXIT que les enquestes i els experts no van veure.	25.06.2016	*Twitter*	States that the SENSE-EU project got the result exactly right and mentions SENSEI, university partners and Websays. Article tweeted by Bruno Sokolowicz @Sokolowicz, a Barcelona-based journalist.	Spain	https://twitter.com/sokolowicz/status/746781629381746688
Article	Brexit.- Una monitorización de las redes sociales predijo el resultado con precision (Brexit.- A monitoring of social media networks predicted the result with precision)	24.06.2016	*EuropaPress*	Explains that SENSEI got the result right and how the project worked. Names Websays and says SENSEI is a European public-private alliance. Spanish language: A Spanish independent, privately held news agency.	Spain	http://www.europapress.es/catalunya/noticia-brexit-monitorizacion-redes-sociales-predijo-resultado-precision-20160624180744.html
Article	Una monitorización de las redes sociales predijo el	24.06.2016	*La Vanguardia*	Exact copy of the Europe Press article above.	Spain	http://www.lavanguardia.com/vida/20160624/402737035441/una-monitorizacion-

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
	resultado con precision (A monitoring of social media networks predicted the result with precision)			Spanish language: Spain's fourth highest-circulated daily newspaper.		de-las-redes-sociales-predijo-el-resultado-con-precision.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Diario de Avisos*	Exact copy of the Europe Press article above Spanish language: A daily newspaper from Santa Cruz de Tenerife, Spain.	Spain	Article http://diariodeavisos.elespanol.com/2016/06/una-monitorizacion-las-redes-sociales-predijo-resultado-precision/
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*La Voz Libre*	Exact copy of the Europe Press article above. Spanish language: An online independent Spanish newspaper.	Spain	http://www.lavozlibre.com/noticias/ampliar/1238650/una-monitorizacion-de-las-redes-sociales-predijo-el-resultado-con-precision
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*El Dia*	Exact copy of the Europe Press article above. Spanish language: A daily newspaper from Spain.	Spain	http://web.eldia.es/tecnologia/2016-06-24/2-monitorizacion-redes-sociales-predijo-resultado-Brexit-precision.htm
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Deia*	Exact copy of the Europe Press article above. Spanish language: A daily newspaper from Spain.	Spain	http://www.deia.com/2016/06/24/ocio-y-cultura/internet/una-monitorizacion-de-las-redes-sociales-predijo-el-resultado-con-precision-
Article	Una monitorización de las redes sociales predijo el resultado con precision (A	24.06.2016	*Deia*	Exact copy of the Europe Press article above.	Spain	http://www.eldiario.es/politica/monitorizacion-sociales-predijo-resultado-precision_0_530197935.html

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
	monitoring of social media networks predicted the result with precision)			Spanish language: An online Spanish newspaper.		
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Deia*	Exact copy of the Europe Press article above. Spanish language: An online Spanish news website.	Spain	http://noticias.lainformacion.com/arte-cultura-y-espectaculos/internet/monitorizacion-sociales-predijo-resultado-precision_0_929008639.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*El Diario*	Exact copy of the Europe Press article above. Spanish language: An online Spanish newspaper.	Spain	http://www.eldiario.es/politica/monitorizacion-sociales-predijo-resultado-precision_0_530197935.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*LaInformacion.com*	Exact copy of the Europe Press article above. Spanish language: An online Spanish news website.	Spain	http://noticias.lainformacion.com/arte-cultura-y-espectaculos/internet/monitorizacion-sociales-predijo-resultado-precision_0_929008639.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*El Economista*	Exact copy of the Europe Press article above. Spanish language: A daily newspaper from Spain focusing on business.	Spain	http://www.eleconomista.es/espana/noticias/7661750/06/16/Una-monitorizacion-de-las-redes-sociales-predijo-el-resultado-con-precision.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Gente*	Exact copy of the Europe Press article above. Spanish language: An online Spanish newspaper, with local editions. The article appeared in the Barcelona edition. focusing on business.	Spain	http://www.gentedigital.es/barcelona/noticia/1938418/una-monitorizacion-de-las-redes-sociales-predijo-el-resultado-con-precision/

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Yahoo News Spain*	Exact copy of the Europe Press article above. Spanish language: Online news aggregator.	Spain	https://es.noticias.yahoo.com/monitorizaci%C3%B3n-redes-sociales-predijo-resultado-precisi%C3%B3n-161403044.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Yahoo News Spain*	Exact copy of the Europe Press article above. Spanish language: Online news channel for Spanish national TV station.	Spain	http://www.telecinco.es/informativos/nacional/monitorizacion-sociales-predijo-resultado-precision_0_2200800527.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Cronica de Cantabria*	Exact copy of the Europe Press article above. Spanish language: Local online and print newspaper for the Cantabria area of Spain.	Spain	http://cronicadecantabria.com/cr/una-monitorizaci-n-de-las-redes-sociales-predijo-el-resultado-con-precisi-n/
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Diario Siglo XXI*	Exact copy of the Europe Press article above. Spanish language: An online Spanish newspaper.	Spain	http://www.diariosigloxxi.com/texto-ep/mostrar/20160624181403/monitorizacion-redes-sociales-predijo-resultado-precision
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Bolsamania*	Exact copy of the Europe Press article above. Spanish language: Website with stock market news, data and analysis.	Spain	http://www.bolsamania.com/catalunya/noticies/politica/una-monitorizacion-de-las-redes-sociales-predijo-el-resultado-con-precision--1223617.html
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the	24.06.2016	*Diario Multimedia*	Exact copy of the Europe Press article above. Spanish language: An online Spanish newspaper.	Spain	http://www.diariomurciamultimedia.com/?_0G6-IE391009004

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
	result with precision)					
Article	Una monitorización de las redes sociales predijo el resultado con precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*Sabor 809*	Exact copy of the Europe Press article above. Spanish language: Online news portal.	Spain	http://www.sabor809.com/tecnologia/74-redes-sociales/247595-una-monitorizacion-de-las-redes-sociales-predijo-el-resultado-con-precision
Article	¿Cuánta efectividad tiene la monitorización de las redes sociales?	24.06.2016	*Matia Costa Blog*	Rewrite of the Europa Press article, which includes all of the same information. Spanish language: Blog and website of a Spanish digital sector journalist and consultant.	Spain	http://www.matiacosta.com/cuanta-efectividad-tiene-la-monitorizacion-de-las-redes-sociales/
Article	Brexit.- Una monitorització de les xarxes socials va predir el resultat amb precision (A monitoring of social media networks predicted the result with precision)	24.06.2016	*VilaWeb*	Exact copy of the Europe Press article above, but in Catalan.	Spain	http://www.vilaweb.cat/noticies/brexit-una-monitoritzacio-de-les-xarxes-socials-va-predir-el-resultat-amb-precisio/
Article	Buon web non mente	29.06.2016	*Vita Trentina*	Interview with Professor Giuseppe Riccardi, project coordinator for the University of Trento. Detailed explanation of the SENSEI project, its funding and the University of Trento's part in it. Highlights that SENSEI got the result, while others didn't. Italian language: Online version of a weekly newspaper published in Trento, Italy.	Italy	http://www.vitatrentina.it/Politica-Societa/Buon-web-non-mente

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	Open: What did you learn from the outcome of Britain's referendum on EU membership?	04.07.2016	*Good Judgment Open*	Mentions the SENSEI project and the fact that its prediction for Brexit was more accurate than others. English language: An open website for predictions and forecasting techniques	World?	https://www.gjopen.com/comments/comments/273601
Article	Automatic polling using Computational Linguistics: more reliable than traditional polling?	04.07.2016	*EU Referendum Analysis 2016*	Written by Prof Massimo Poesio and Dr John Bartle of the University of Essex. Explains the theory, methodology and purpose of the SENSE-EU and SENSEI projects. Analyses why results may have been better than traditional polls English language: Print and online publication featuring the early thoughts of 80 UK academics on the referendum result.	World	http://www.referendumanalysis.eu/eu-referendum-analysis-2016/section-7-social-media/automatic-polling-using-computational-linguistics-more-reliable-than-traditional-polling/
Article	Automatic polling using Computational Linguistics: More reliable than traditional polling?	04.07.2016	*CulturaCRM*	SENSEI is the lead in a wider story about big data in Brexit. Concentrates on the roles of Massimo Poesio and Udo Kruschwitz at the University of Essex. Spanish language: Online magazine about technology and data in business and marketing.	Spain	http://culturacrm.com/big-data/analisis-brexit-con-big-data/
Video	The SENSEI Brexit Monitoring System : The Story	07.07.2016	*YouTube*	YouTube video: the story of the SENSEI monitoring system that predicted with high accuracy the outcome of the referendum.	World	https://youtu.be/55lqj6-pKps
Article	EU researchers saw Brexit coming	08.07.2016	*Cordis*	SENSEI got the result right, when most other predictions were wrong. Explains	Europe	http://cordis.europa.eu/news/rcn/125739_en.html

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
				the background to the project in detail and notes it is financed by Europe. English language: News from the European Community's CORDIS.		
Article	EU researchers saw Brexit coming	11.07.2016	*Phys.org*	Exact copy of the CORDIS article. English language: Major international online science, research and technology news service.	World	http://phys.org/news/2016-07-eu-brexit.html
Article	EU researchers saw Brexit coming	11.07.2016	*Communica-tions of the ACM*	Abstract of the CORDIS article which includes the main points and a link to the CORDIS article. English language: A leading print and online publication for the computing and information technology fields.	World	http://cacm.acm.org/news/204612-eu-researchers-saw-brexit-coming/fulltext
Article	Investigadores de la UE previeron el Brexit (EU researchers predicted Brexit)	11.07.2016	*Catalunya Vanguardista*	A slight rewrite of the Spanish version of the CORDIS article. Includes all the main points. Spanish language: online magazine about issues in Catalunya.	Spain	http://www.catalunyavanguardista.com/catvan/investigadores-de-la-ue-previeron-el-brexit/
Article	Közösségimédia-elemző EU-projekt pontosan előrejelezte a Brexitet	12.07.2016	*Mandiner*	Summary of the CORDIS article. SENSEI got the result right, when most other predictions were wrong. Includes link to full CORDIS article. Hungarian language: Hungarian news portal.	Hungary	http://digit.mandiner.hu/cikk/20160712_kozossegimedia_elemzo_eu_projekt_pontosan_elorejelezte_a_brexitet
Article	EU researchers saw Brexit coming	13.07.2016	*Ibercampus*	Exact copy of the CORDIS article English language: A digital newspaper about European educational issues.	Europe	http://www.ibercampus.eu/eu-researchers-saw-brexit-coming-4020.htm

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	Una herramienta europea detectó en las redes sociales el resultado del referéndum sobre el Brexit	14.07.2016	*Tendencias21*	A slight rewrite of the Spanish version of the CORDIS article. Includes all the main message points. Spanish language: A digital magazine with audiovisual material focusing on science, technology, society and culture.	Spain	http://www.tendencias21.net/notes/Una-herramienta-europea-detecto-en-las-redes-sociales-el-resultado-del-referendum-sobre-el-Brexit_b9845692.html
Article	Predicen el Brexit gracias a las redes sociales (Brexit predicted thanks to social networks)	18.07.2016	*La Razon*	A slight rewrite of the Spanish version of the CORDIS article. Includes all the main message points. Spanish language: A Spanish national daily newspaper.	Spain	http://www.larazon.es/tecnologia/predicen-el-brexit-gracias-a-las-redes-sociales-EF13166156#.Ttt1asfuuwQevUB
Article	EU researchers predicted Brexit	18.07.2016	*Horizon 2020 Projects*	Explains that SENSEI got the result right, how the project worked and its purpose. Notes that SENSEI was funded under the Seventh Framework Programme. English language: News service for Horizon 2020 projects.	Europe	http://horizon2020projects.com/il-ict/eu-researchers-predicted-brexit/
Newscast	Brexit, l'Università l'aveva prevista	21.07.2016	*TGR*	Video on local newscast in Trentino, Italy.	Italy	https://www.facebook.com/TgrRaiTrentino/videos/859828494161871/

Press release/Article	Title	Date	Publication	Brief Description of the content	Countries addressed	Link (if any)
Article	I nostri dati sono diventati così smart che hanno previsto anche la Brexit	27.07.2016	*La Stampa*	Print article. Interview to Fabio Celli (University of Trento). . Explains the theory, methodology and purpose of teh Machine Learning and how it was applied in SENSEI project. National Italian Newspaper	Italy	 LA STAMPA TuttoScienze "I nostri dati sono diventati così smart che hanno previsto anche la Brexit"
	Did social media call Brexit?	01.09.2016	*CorpComms Magazine*	Interview to Hugo Zaragoza. monthly magazine targeted at the in-house communicator	World	http://www.corpcommsmagazine.co.uk/features/4990-did-social-media-call-brexit
Article	Come i Big Data hanno anticipato la vittoria della Brexit	17.09.2016	*StampToscana*	Explains that SENSEI got the result right, how the project worked and its purpose. Italian News Portal	Italy	http://www.stamptoscana.it/articolo/innovazione/come-i-big-data-hanno-anticipato-la-vittoria-della-brexit
Article	Il Progetto Sensei all'evento e-commerce Parigi 2016	October 2016	*Blog Teleperformance Italia*	Explains the Sensei results at Paris 2016 e-commerce global event	Italy	http://www.teleperformanceitalia.it/blog/
Article	Sensei-TP al global event e-commerce multichannel di Parigi 2016	October 2016	*TP Newsletter*	Explains the Sensei results at Paris 2016 e-commerce global event	Italy	-

3.2.4 Contacts and Cooperation

Table 3 shows the cooperation activities and external contacts taken during Period 3 of SENSEI project.

Table 3: external contacts and cooperation activities Period 3

Type of activity	Main Leader (Partner)	Date	Place	Type of Audience: Scientific community	Purpose / Justification / Outcomes	Relevance for SENSEI	Name of the attendees/speaker
Collaboration with University of West Bohemia (Czech Republic)	UESSEX	Ongoing	-	Scientific Community	We are collaborating with Josef Steinberger and Peter Krejzl on Argument structure extraction and the shared task ONFORUMS.	Relevance for SENSEI WP4 on argument structure and WP7 on dissemination.	Mijail Kabadjov, Udo Kruschwitz, Massimo Poesio, Josef Steinberger and Peter Krejzl.
Collaboration with EHU (University of the Basque Country)	UESSEX	November 2015 – May 2016	-	Scientific Community	We collaborated with Ander Soraluze, Olatz Arregi and Xabier Arregi from the University of the Basque Country (EHU) on adapting our Coreference Resolution system, BART, to Euskara language (Basque). A joint paper was published in CORBON'16.	Relevance for SENSEI WP4 on coreference domain and language adaptation, strengthening and complementing work on coreference for English, Italian and French.	Mijail Kabadjov, Udo Kruschwitz, Massimo Poesio, Ander Soraluze, Olatz Arregi and Xabier Arregi
Collaboration with LIUM, Université du Maine	AMU	2015-2016	-	Scientific community	Collaboration with LIUM on annotation (transcription, synopsis) of the DECODA corpus, and ASR and word embedding extraction systems.	Relevance to WP3 and WP5 by improving the coverage of DECODA annotations	Benoit Favre, Frederic Bechet, Yannick Esteve, Natalie Camelin, Carole Lallier
Collaboration with Digifrance	AMU	2016	-	Industry	Collaboration with the company Digifrance for the detection of atypical conversations in call centers and emergency centers	Relevance to WP1/WP2 as potential usecase and data provider, and WP7 for exploitation of SENSEI technology	Benoit Favre
Collaboration with The Guardian News and	USFD	July 5, 2016	-	Industry	Information exchange with key Guardian staff, both editorial and technical, responsible for user generated content.	Dissemination of SENSEI work to industry; feedback on SENSEI activities from industry; discussion and laying	Robert Gaizauskas, Jonathan Foster

Type of activity	Main Leader (Partner)	Date	Place	Type of Audience: Scientific community	Purpose / Justification / Outcomes	Relevance for SENSEI	Name of the attendees/speaker
Media Limited						groundwork for potential exploitation of SENSEI technology or future collaborative activities.	
Collaboration with Applied Computational Linguistics Lab (Fachbereich für Informatik und Mathematik, Goethe University, Frankfurt am Main, Germany)	UNITN	September 2015 - May 2016	-	Scientific Community	We collaborated with Niko Schenk and Christian Chiarcos from Goethe University on discourse parsing.	A joint paper was published in CoNLL 2016. Relevance for SENSEI: WP4 on discourse parsing.	E. Stepanov, G. Riccardi

3.3 Brexit Use Case

The UK Referendum on the EU ("Brexit") seemed like a perfect opportunity to test and show-case some of the SENSEI technologies. Although this was not anticipated as a use case, it seemed a great opportunity to give visibility to the project. Furthermore the development cost was relatively low since Websays had already developed several websites tracking elections, SENSEI repository and pipeline was partly completely and ready for the type of analysis required, and U. Trento research team was ready to undertake the challenge of applying (in a very short time) the algorithms of agreement/disagreement, mood and polarity analysis to yield different types of summaries and a prediction on vote intent.

The decision was to make a web page that was sufficiently simple to appeal the general public, yet showcasing two of the most advanced technologies in SENSEI: mood and polarity detection.

The web page was public during the month of June and achieved high visibility, as detailed in the following sections.

3.3.1 Press Releases and Communication

During the SENSEI Brexit PR campaign, four press releases were distributed:

1. 30 May: An initial press release, aiming to introduce and explain the project.

2. 21 June: A pre-result release, with the main message that the result was too close to call.

3. 24 June: An immediate post-result release, highlighting that the SENSEI method had worked, in contrast to traditional methods.

4. 5 July: A follow-up release, reiterating the success of the SENSE-EU project.

For the purpose of this analysis, the coverage of releases 3 and 4 have been combined – it has not been possible to confidently state which of these two press releases resulted in which articles, as the links to SENSE-EU webpages in the releases were to pages that were being updated with new information as the project continued.

Overall, the campaign was featured in 62 online media outlets – with websites that have combined monthly visits of about 225 million (Source: SimilarWeb). Articles appeared in six European languages: Catalan, English, Hungarian, Italian, Polish and Spanish.

Language	**Number of Articles**	**Monthly Website readership**
Catalan	5	7.432.000
English	18	45.357.000
Hungarian	1	6.000
Italian	12	39.001.000
Polish	3	22.000
Spanish	23	133.419.000

Coverage was received from a wide range of media outlets, including:

- **Mainstream media**, including: Radio 24 and Tiscali Notizie of Italy, El Periodico, La Vanguardia, Yahoo News, Telecinco and La Razon of Spain.
- **Local media**, including: Trentino, La Voce del Trentino, Libero and L'Indipendenza Nuova of Italy, Catalunya Radio, Cronica de Cantabria, VilaWeb and Diario de Avisos of Spain.
- **Science and technology media**, including: ZDNet, with an article that was retweeted 294 times, Phys.org, The Conversation, Communications of the ACM and Spain's Tendencias21.
- **Business media**, including: El Economista of Spain, Good Judgment Open and EconoTimes.
- **News agencies**, including: Agenzia Nazionale Stampa Associata and Adnkronos of Italy, Europa Press of Spain.
- **Blogs and smaller news media**, including: IT-Filolog.pl of Poland, University of Leicester, England, Matia Costa of Spain, Mandiner of Hungary.

Articles received significant shares around social media: 458 on Twitter, 133 on LinkedIn, 119 on Facebook and 14 on Google+ (Source: Buzzsumo).

Table 4: Articles shared onsocial media

Social Media	Release 1	Release 2	Releases 3 and 4	Total
Twitter	321	1	136	458
Facebook	60	1	58	119
LinkedIn	111	0	22	133
Google+	7	1	6	14
Total	**499**	**3**	**222**	**724**

The vast majority of the articles were solely about the SENSEI Brexit project, with all the key messages of the press releases being included in the coverage and including quotes from participants. 24 of the articles included images or logos provided by the SENSEI project.

Much of the coverage included links to the websites of the project and its participants, or to further information about them.

Table 5: Links to the project website and participants

Links to	Release 1	Release 2	Releases 3 and 4	Total
SENSE-EU	17	2	29	48
SENSEI	5	0	6	11
Websays	1	1	1	3
Teleperformance	1	0	0	1
Total	**24**	**3**	**36**	**63**

3.3.2 SENSE-EU.INFO Website

The Brexit prediction platform has been published on the website www.sense-eu.info .

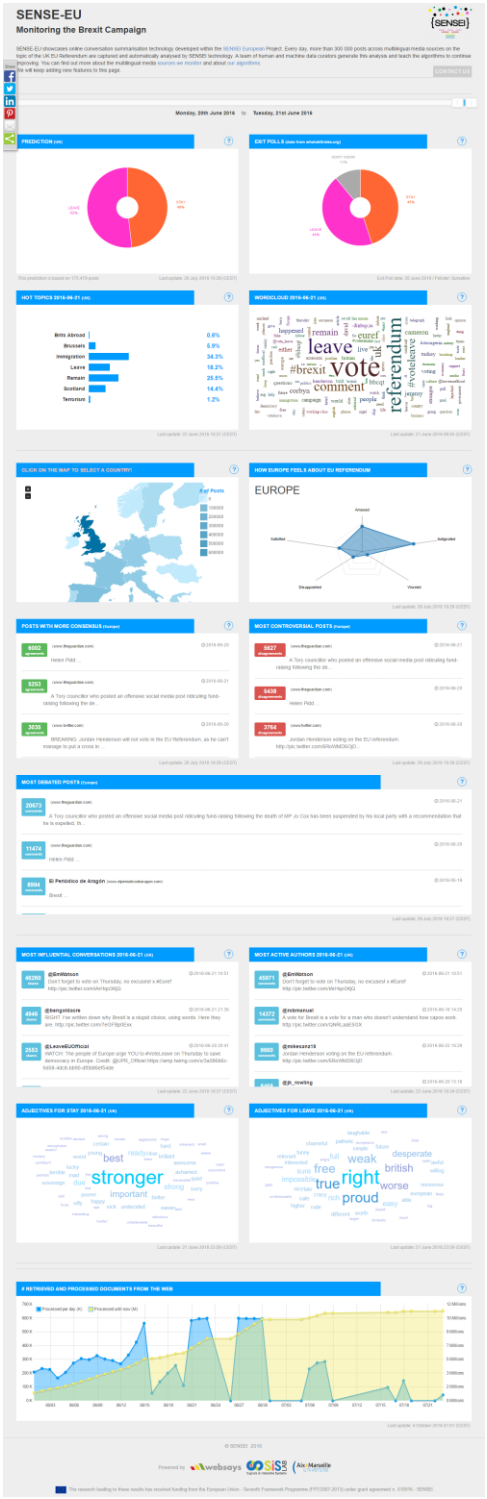


Figure 5: SENSEI-EU.INFO

The website has been developed using a responsive modified bootstrap theme and javascript plugins to render charts and allow filter modification.

It was conceveid to be read by sectors. In the first sector there were the prediction and exit polls with the meaning clouds, in the central section the geographically filtered charts and then the social extractions and the description of the collected data. All the visualized data could be filtered and recalculated by dates.

During and after the referendum the website home page has been changed to show prediction and results, removing the filterable section.

In June it has reached more than 3000 visits and more than 2m 30s average duration of the session.

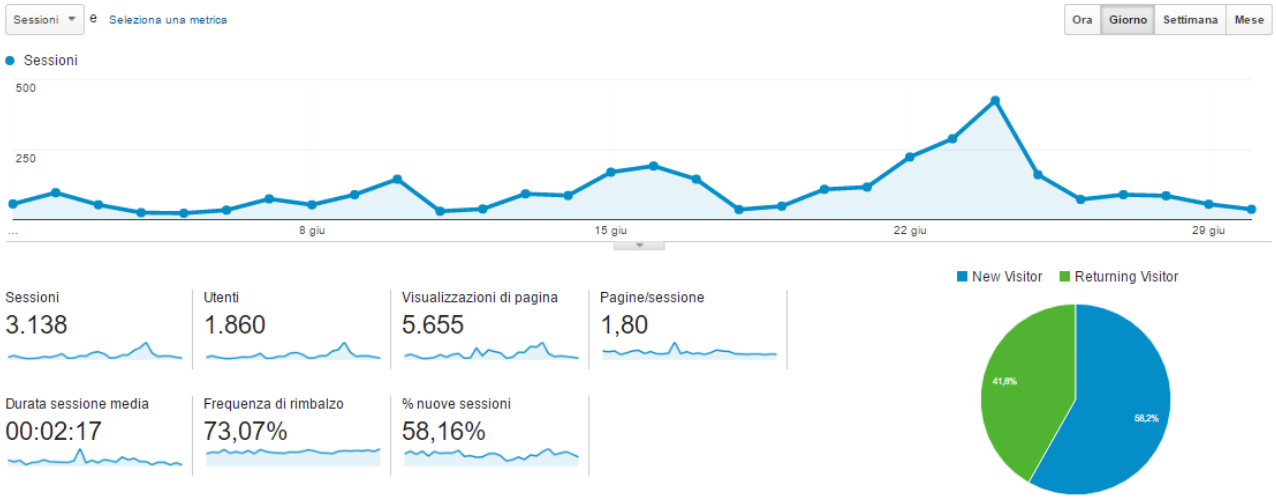


Figure 6: SENSEI-EI.INFO Website statistics June 2016

4. Exploitation activities Period 3

In Period 3 our industrial partners, TP and Websays, have working together on ramping up the internal and external exploitation activities following described.

4.1 Internal Exploitation Events

2015 December, in Roma and via webinar with Taranto (IT) and Barcelona (SP), the **SENSEI team** Vincenzo Giliberti (TP), Letizia Molinari (TP) and Hugo Zaragoza (Websays) **met TP Italy Customer Account Managers**. In the meeting Hugo Zaragoza showed the web monitoring tool and Sensei outputs. This exploitation activity it is relevant to the Sensei because the TP Customer Account Manager are in daily contact with managed customers and can see if there are real business opportunities.

- 2016 June, in Lisbon (Portugal) Hugo Zaragoza (Websays) met TP Portugal, in particular Catarina Esteves, Events Manager, & Rafael Martins Vieira, Social Media and Mobile Global Products Manager. Besides being a leader in the Portuguese market, Teleperformance Portugal is also a leader in Portugal in the export of Customer Experience Management services and shared services to customers all over the world. Of 4,600 employees, over 1,800 are integrated in service provision projects for nearly 50 countries in 25 different languages. TP Portugal offer innovative contact centre solutions, representing the most prestigious Portuguese and international brands and covering a wide range of activity sectors. Teleperformance Portugal was nominated an excellence centre of the Teleperformance Group in Europe, Middle East and Africa. In the meeting Websays showed the objectives and the main results of the Project; the TP Portugal showed the progress into the Social Media channels to customer clients. This exploitation activity it can be of great importance for Sensei because what developed the potential business in TP Europe.

4.2 External Exploitation Events

- 2016 May, in Bari (IT) at the **Polytechnic University of Bari**, TP organized a “Workshop on Speech Analysis from technological development to business advantages”, speaker Vincenzo Giliberti (TP) for students & researchers of Polytechnic University of Bari (Professor Michele Gorgoglione, Professor Umberto Panniello, Professor Pierpaolo Pontrandolfo) and for **Small Medium Enterprises (Res Novae,** engineer Domi Bufi, **Pugliautomazione** engineer Francesco Saverio Lovecchio and others) focused on Energy Industry.
- 2016 May, in Roma (IT) at the **University Roma III**, TP organized a “Workshop on Speech Analysis Solutions”, speaker Vincenzo Giliberti (TP) for students & researchers of University (Professor Paolo Merialdo, founder of InnovaAction Lab in Roma) and **Enel**, the Italian leader in Energy industry and main TP Client in Italy (engineer Giuseppe Razzicchia).
- 2016 June, in Birmingham (UK) the SENSEI team Vincenzo Giliberti (TP), Vincenzo Lanzolla (TP) and Hugo Zaragoza (Websays, via webinar) met **Infinity CCS Contact**

Center Solutions (Matteo Belardi, Sales Manager and R&D Team). Infinity Contact Center Solution has over 20 years' experience working with Contact Centre Outsourcers, and the Infinity Platform is deployed across more than 12,000 outsourced seats in 10 countries. Infinity's technology and services unlock the ability to win clients, retain them and maximize their profitability, by empowering to deliver exceptional customer experiences, across multiple client projects, with ultimate efficiency. In the meeting the Sensei partner TP Italy & Websays showed the objectives and the main results of the Project; the Infinity CCS Researchers & Sales showed the Infinity platform & tool used by many customers worldwide. There is some interest from Infinity to integrate new technology as Artificial Intelligence, Whatsapp, …in Infinity platform. Websays proposed again the idea of capturing costumer care comments from social media This exploitation activity it can be of great importance for Sensei because what developed in the project could be proposed to the Infinity customers.

- 2016 June, in Madrid (SP) the SENSEI team Hugo Zaragoza (Websays) met **PRISA Group**, one of the largest Spanish media conglomerates, with multiple newspapers, magazines, radio and TV channels. Websays presenting the SENSEI vision and technology to the Chief Digital Transformation Officer and the Chief Information. A new meeting is scheduled for September 2016. PRISA would be an excellent partner to deliver prototypes and show the potential of some of SENSEI's technology.
- 2016 September, TP organized the SENSEI participation into the **"E-Commerce Multichannel European Global Event" in Paris (FR), with 500 participating companies**, 4 exhibition areas (customer experience, digital marketing, technologies and logistics) and a "Start-Up Village" giving 50 exhibiting companies the opportunity to present their innovative solutions. There was a stand dedicated to the Sensei Project. Vincenzo Giliberti (TP) and Hugo Zaragoza (Websays) were speaker in a workshop on "Social Media + Learning Machine = The new Customer Experience. The Sensei Project".

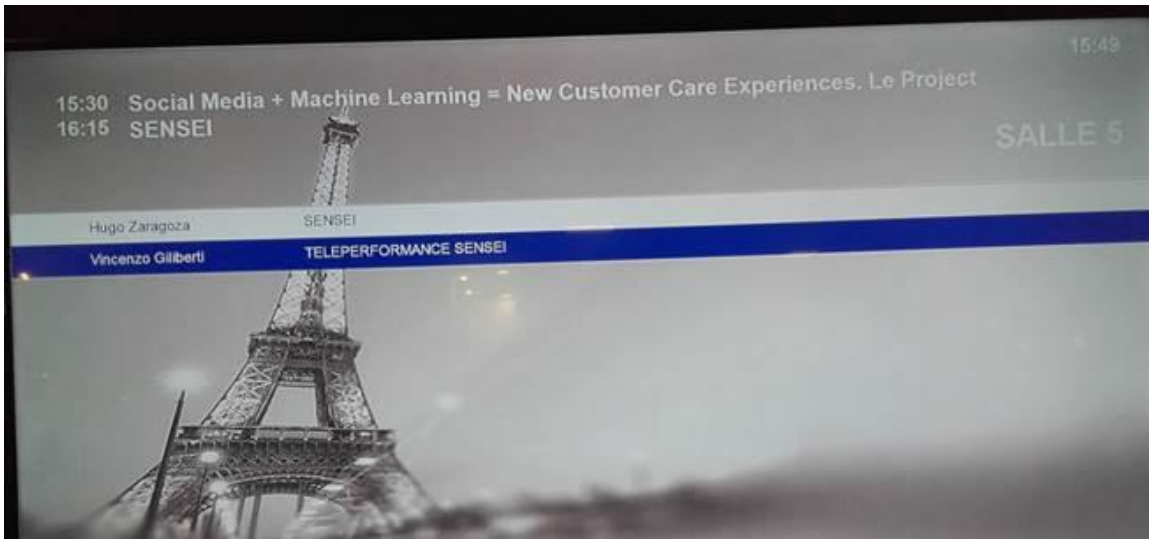


Figure 7 – Industrial Event – Ecommerce Customer Experience - Paris 2016

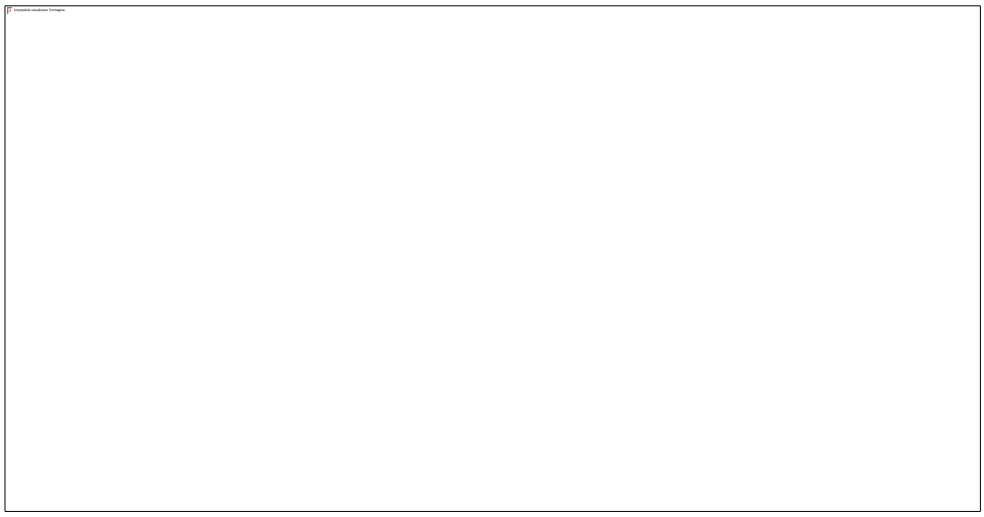


Figure 8 – Industrial Event – Ecommerce Customer Experience - Paris 2016

Table 6: – Industrial Event – Ecommerce Customer Experience - Paris 2016 – SENSEI WORKSHOP PARTECIPANTS

Social Media + Machine Learning = New Customer Care Experiences. Le Project SENSEI				
Societé	**Conference**	**IdSalle**	**HeureDebut Conference**	**HeureFin Conference**
TELEPERFORMANCE SENSEI	2016/09/12	5	15:30	16:15

NOM	PRENOM	FONCTION	SERVICE	SOCIETE	CP	VILLE	PAYS
ALLIONE	Pascal	CHEF DE PRODUIT / PROJET	R&D / ETUDES	ESSILOR INTERNATIONAL	94000	CRETEIL	FR
AZANCOT	Salomé	ETUDIANT / JEUNE DIPLÔMÉ	MARKETING / MARKETING DIGITAL	EUROPEAN BUSINESS SCHOOL	75015	PARIS	FR
BARNIER	Thierry	CHEF DE PRODUIT / PROJET	FINANCE / COMPTABILITÉ / GESTION	INTERSEC GROUP	92000	NANTERRE	FR
BERNARD	Antoine	ETUDIANT / JEUNE DIPLÔMÉ	E-COMMERCE	MOET HENNESSY DIAGEO FRANCE	92400	COURBEVOIE	FR
BOSSAN	Anthony	CONSULTANT	E-COMMERCE	CONTENTSQUARE	75008	PARIS	FR
BRAYER	Marie	DIRECTEUR / CHEF DE SERVICE	DIRECTION GÉNÉRALE	SERENA CAPITAL	75009	PARIS	FR
CANDELORO	Valentina	DIRECTEUR / CHEF DE SERVICE	MARKETING / MARKETING DIGITAL	MOOD MEDIA	EC2A 3BX	LONDON	UK
DE SANOIT	Héloïse	CONSULTANT	E-COMMERCE	CONTENTSQUARE	75008	PARIS	FR
DEQUEANT	Marie-laure	DIRECTEUR / CHEF DE SERVICE	MARKETING / MARKETING DIGITAL	METRO CASH AND CARRY	92000	NANTERRE	FR
GELY	Lionel	CONSULTANT	DIRECTION GÉNÉRALE	EYONUS CONSEIL	92100	BOULOGNE BILLANCOURT	FR
GOSSART	Eric	CHEF DE PRODUIT / PROJET	FINANCE / COMPTABILITÉ / GESTION	SERENA CAPITAL	75009	PARIS	FR
GREFFET	Delphine	DIRECTEUR / CHEF DE SERVICE	MARKETING / MARKETING DIGITAL	LOCAL.FR SA	01000	BOURG EN BRESSE	FR
GRIMAUD	Nathalie			WOLTERS KLUWER FRANCE			FR
HETRE	Margot	ETUDIANT / JEUNE DIPLÔMÉ	COMMERCIAL	EBS PARIS	75016	PARIS	FR
ISLEK	Reha	DIRECTEUR / CHEF DE SERVICE	DIRECTION GÉNÉRALE	BARTEK	94400	VITRY SUR SEINE	FR
KEO	Soksovann	CHEF DE PRODUIT / PROJET	MARKETING / MARKETING DIGITAL	RIGHETTI	54710	FLEVILLE DEVANT NANCY	FR
KHEMIRI	Mohamed Mehdi	PDG / DG / GÉRANT	DIRECTION GÉNÉRALE	VONGO	1053	TUNIS	TN
KHEYAR	Nelly			ABBOTT			FR
KOCHER	Marie-laure	CHARGÉ / AGENT DE MAÎTRISE	E-COMMERCE	WOLF LINGERIE	67610	LA WANTZENAU	FR
LE BRAS	Mikael	DIRECTEUR / CHEF DE SERVICE	MARKETING / MARKETING DIGITAL	PACK EQUIPEMENTS SA	1242	SATIGNY	CH
LIU	Yan	DIRECTEUR / CHEF DE SERVICE	LOGISTIQUE / SUPPLY CHAIN	LOGISTICS DIGEST	93150	LE BLANC MESNIL	FR
LORENTZ	Franck			CCI PORTES DE NORMANDIE			FR
MALO	Frédéric			OPTIMAL WAYS			FR
MARTI	Sébastien	WEBMASTER / DÉVELOPPEUR	INFORMATIQUE / SI	ORANGE	06250	MOUGINS	FR
MAYEUR	Didier			OXATIS			FR
PESTEL	Eric	DIRECTEUR / CHEF DE SERVICE	DIRECTION GÉNÉRALE	LOOKADOK	75009	PARIS	FR
PETROVITCH	Marie-anne	DIRECTEUR / CHEF DE SERVICE	COMMUNICATION / PRESSE / RP	COLLECTIF 360	75018	PARIS	FR
PIVARD	Ludivine	CHARGÉ / AGENT DE MAÎTRISE	E-COMMERCE	EUROPCAR INTERNATIONAL	78960	VOISINS LE BRETONN	FR
SALFATI	Julia	CONSULTANT	MARKETING / MARKETING DIGITAL	SALFATIX MEDIA	75015	PARIS	FR
SEZNEC	Bruno	CONSULTANT	R&D / ETUDES	META AND CLOUD PROCESS	92100	BOULOGNE BILLANC	FR
SPINDLER	Frederic	PDG / DG / GÉRANT	DIRECTION GÉNÉRALE	PROMOVEO	68350	DIDENHEIM	FR
THOMAS	Aurore	ETUDIANT / JEUNE DIPLÔMÉ	INFORMATIQUE / SI	CONTENT SQUARE	75008	PARIS	FR
TINTHOIN	David	PDG / DG / GÉRANT	DIRECTION GÉNÉRALE	ABC MAILS	75003	PARIS	FR
VAGNEUX	Cécile	ETUDIANT / JEUNE DIPLÔMÉ	MARKETING / MARKETING DIGITAL	EUROPEAN BUSINESS SCHOOL	75015	PARIS	FR
WILMORE	Meg			CONTENT SQUARE			FR

5. Exploitation Plan

Moving forward the industrial partners have prepared an exploitation plan that identifies products and services that can be presented to their organizations to improve the portfolio offering or improving the internal costs of process development and execution.

5.1 Conversation Analytics

5.1.1 SENSEI Technology Solutions and Benefits for Contact Center

The prototype of "SENSEI ACOF – Agent Conversation Observation Form tool" developed within the SENSEI Project provides Quality Assurance supervisors of contact center companies with a user friendly web interface to fill for each conversation:

- the monitoring forms "AOF - Agent Observation Form";
- the synopsis called "COF - Conversation Oriented Form".
- In order to improve search performance, all data are saved in Elastic Search, a search server extremely efficient on full-text search, based on schema-free json documents. The prototype of SENSEI ACOF provides automation in both forms: AOF – Agent Observation Form and COF – Conversation Oriented Form.

The target benefits of the SENSEI ACOF Annotation tool are:

- to improve first the productivity and accuracy of quality assurance professionals, with increase of quality in the behavior of agents, in the training and in the motivation program and finally in the contact center performance.
- to increase the 1st call resolution.
- to build a collection of annotated data that are ready to detailed analysis finalized to " to identify the reason of the every call and to know what the client think, directly from the client voice, which opens up great business scenarios. In this way it is possible to increase up-sale and cross-sale.
- Consequently to previous items, to increase the revenue and the margin in the contact center.

5.1.2 Contact Center New Market Scenarios

In the SENSEI Project Teleperformance has analyzed and shared with the Sensei partners the results of different recent reports on contact center market scenarios and technology trends, by Gartner ("Magic Quadrant for Customer Management Contact Center BPO" - Published: 28 January 2016), Ovum ("CRM Outsourcing Business Trends 2015") and Cerved Data Bank ("Smart Call Center", Published: 2015).

The worldwide market for contact center in outsourcing:

- ***"It expanded in the past 12 months to become a $38 billion business in 2015.*** *While some aspects of these contact center services are mature, it is important to evaluate service providers that closely match their requirements in terms of geographical positioning, expertise in their particular industry vertical, and* ***high focus on fast-growing innovative services, such as Speech Automation, Speech Analysis, Web Chat and Video Chat, Web Monitoring, Web -based self-services, Social CRM."***

- *"It is forecast to grow steadily at a 5.6% compound annual growth rate (CAGR) from 2015 through 2020.* ***By the end of 2020, Gartner estimates the contact center in outsourcing industry will achieve a market size of $46.7 billion.*** *Therefore, Gartner believes the opportunities for growth in this market are robust for both clients and service providers, especially those that are willing to aggressively make investments in marketing, sales and customer service that* ***leverage digital, multichannel, automation and analytics services beside the traditional agent-based voice services.*** *Today the industry is at the forefront of business, managing important "moments of truth" for global brands and governments across multiple channels of interactions from the traditional calls to Web chat or mobile services to automated virtual agents — with some engaged in cognitive self-learning."*
- ***"The industry's mantra today is "customer experience," "customer journey" and "customer engagement life cycle"*** *to name a few, far sweeter that the decades-old chants of "cost savings" and "cost optimization." Though the mantra has changed, some old habits die hard, such as the continued reliance on average handle time (AHT), the industry's most loved and hated measurement metric. "*
- *"****Of particular importance to contact center digital business operations is the impact of the Internet of Things****.(…) Digital business is unique in that there must be business operational changes enabled by things and technologies, and these changes must be internal and external to the enterprise."*

5.1.3 Contact Center Segmentations and SENSEI

The contact center domain could be categorized in four subsegments:

- CSE - Customer Selection

  Customer selection services include the market segmentation and data analysis, campaign design and communication planning and other customer selection (e.g. brand planning, account/territory planning, product introduction) .

- CAC - Customer Acquisition

  Customer acquisition services include telesales, telemarketing, Web sales, Web marketing, mobile sales, mobile marketing, social marketing, crowdsourcing platforms, lead management and field sales automation.

- CEX - Customer Extension

  Customer extension services include customer upsell/cross-sell (identifying existing products and services purchased by a customer and using that information to influence the purchase of associated products and services) across all channels — voice, Web and Video chat, email, SMS, Istant Messaging, Web-based self-service, Mobile Apps, Social CRM.

- CRE - Customer Retention

  Customer retention services include customer service processes for inquiry handling/problem resolution, field service automation and customer self-service functions, through outbound or inbound communications over the telephone, Internet or mobile devices or face-to-face.

The SENSEI Project provides strategic insights that become powerful business tools by addressing two main questions: “How are the Companies interacting with the Customers” and “How do Customers really want to interact”. The SENSEI Project outcomes, as an efficient tool for analyzing the conversations between customers and agents and agents' behavior to improve the perceived quality and the performance of the contact center, and consequently their benefits are applicable at all the Contact Center segments, because to know in depth what they said customers facilitates directly the customer extension (upsell/ cross sell), the customer retention and helps the customer selection and consequently the customer acquisition.

The Gartner Analysts evaluate the Contact Center Companies in four main categories:

- Contact Center Leaders

  “Leaders demonstrate market-defining vision and the ability to execute against that vision through contact center services, a superior market share, and solid references for contact center services worldwide, including a cross section of vertical industries. Leaders also have superior investments in innovative contact center solutions, business/pricing models and service delivery models. They have a superior understanding of client needs and of current market conditions, and they are actively building competencies to sustain their leadership position in the contact center market across multiple regions. The contact center Leaders quadrant also have strong global and regional service delivery operations and deep technology to leverage, and they deliver above-average customer experience.”
- Contact Center Challengers

  “Challengers display sound vision and a strong ability to execute against the vision, but they have a less-defined view of market directions. The Challengers have a relatively good level of market understanding, a growing volume of sales and a sizable market share in key regions/markets for contact center services, as well as a good understanding of their clients' evolving needs. They also have a strong operational execution but might lack geographical presence, depth in vertical industry, and technology capabilities and assets.”
- Contact Center Visionaries

  “Visionaries have strong vision and the ability to execute well against this vision. Visionaries are ahead of potential competitors in delivering innovative services, business/pricing models and/or delivery models. They anticipate emerging or changing market and customer needs, and they move into new opportunities quickly. They have a strong potential to influence the direction of the worldwide contact center market, but they may struggle to meet the needs of all organizations because of some limitations — geographical coverage, technology, marketing and brand awareness, or vertical industry knowledge. Visionaries must also focus on sales and marketing execution and customer experience to help improve their overall position.”
- Contact Center Niche Players

  Niche Players focus on a particular segment of the market — as defined by characteristics such as size, vertical industry market, geographical region and project complexity — or they provide only a select number of services among overall contact center services. They may offer components of the complete service portfolio but demonstrate limitations in one or more important service areas. Among the worldwide contact center Niche Players strengths in market responsiveness and track record, innovation, marketing and brand awareness are bigger considerations.

The Teleperformance participation in the SENSEI Project is really strategic because in the 2016 Gartner Report on The Contact Center, TP is describe as

- *‘‘a Leader in this year's report. Teleperformance is the largest contact center BPO service provider in the world, by revenue — estimated at $4 billion, and by geographical footprint. (…). The company has more than 190,000 FTE agents who support 75 languages and dialects from more than 270 centers in 62 countries. (…) TP continues to focus on the following vertical industries: financial services, communications, travel and transportation, technology, healthcare, and retail. The company possesses a diversified vertical/industry and client base, with nearly 750 clients across several industry segments. (…) Teleperformance has a strong corporate social responsibility program that is sponsored globally but is led and delivered locally (that is, Citizen of the World and Citizen of the Planet) (…) and continues to invest in its R&D capabilities. (…). Teleperformance has strong local leadership, with extensive local knowledge and business acumen that is supported by an experienced global organization and leadership team. It provides multilingual services and has an extensive social CRM and concierge service offering.”*

5.1.4 Contact Center Channels and SENSEI

The subsegments previously described are executed across the following channels:

1. Voice with contact center Human Agents
2. Voice with automatic IVR - Interactive Voice Response
3. Voice with Natural Language IVR - Interactive Voice Response – with Virtual Agents
4. Email
5. SMS
6. Istant Messaging (as “What App”, “We Chat”,…)
7. Mobile Apps
8. Web chat and Video chat
9. Social CRM
10. Web-based Self-Service

The Ovum Analysts evaluate in this field:

- The Increase in the number of Contact Center indicating their use of social CRM.
- That across all contact channels, voice and email continue to be the most pervasive.
- The marked growth the number of Contact Center that have adopted web chat and video chat, SMS and Instant Messaging.

These varied channel deployments should be “a clear indication of the extent that outsourcers need to demonstrate robust multichannel non-voice offerings in order to remain competitive when scoping new enterprise business.” These recent reports of authoritative market confirm the market opportunities of the **SENSEI** Project, to increase the competitiveness of companies, enabling them to offer services with high added value and managing multi-channel; to increase the use of automation technologies and speech recognition, automatic systems response to no human activities; to increase the integrations with omnichannel solutions. The output of the **SENSEI** project

can become a key factor for companies who want to adopt, because it is natively multi-channel with an emphasis on voice channels and social media. In particular the goal of **SENSEI** is to provide a unified data view of “conversations”, both from speech dialogues and online (social media) dialogues to improve contact center efficiency and productivity. Also in the “channel field” Teleperformance is a strategic **SENSEI** partner, because TP is the worldwide leader in omnichannel customer experience management and each year, TP interact, engage and learn with more than 38% of the population of the Planet.

5.1.5 Teleperforance – Websays – Inifnity Exploitation Effort

In this context the SENSEI consortium (specially Teleperformance, Websays and UTrento) has began brainstorming meetings and prototype definition efforts within the consortium, with Teleperformance Portugal and France, and with the UK technology provider Infinity (see D7.6 Chapter 4). Infinity is specially interested by the possibility of integrating into their customer care conversation platform (a traditional ticketing system) conversations form Social Media, chat applications such as Telegram or Whatsapp, etc.

After the first meetings we began a phase of prototype definition with them. In this context, the first milestone has been the demo of integration into their conversation platform of semantically classified sentences via de Websays API (see net chapter for a description of this). Infinity has already started testing the API in the hotel customer care domain, and has produced an early prototype of integration.

Figure 9 shows several screen capture of their prototype. At the top, the entry to the standard Infinity Customer Service Platform for a hotel. At the bottom, a customer comments entry box connected to the Websays Hotel aspect classification platform. As the user or agent types the complain, a categorization box appears at the bottom. Technically the Infinity dashboard has been connected to the Websays REST API using Infinity’s extended functions, so they can be called from within the agent workflow. This is a standard .NET DLL that implements an interface to call methods on an external DLL and allows Infinity to easily plug in additional functionality without having to modify core code.

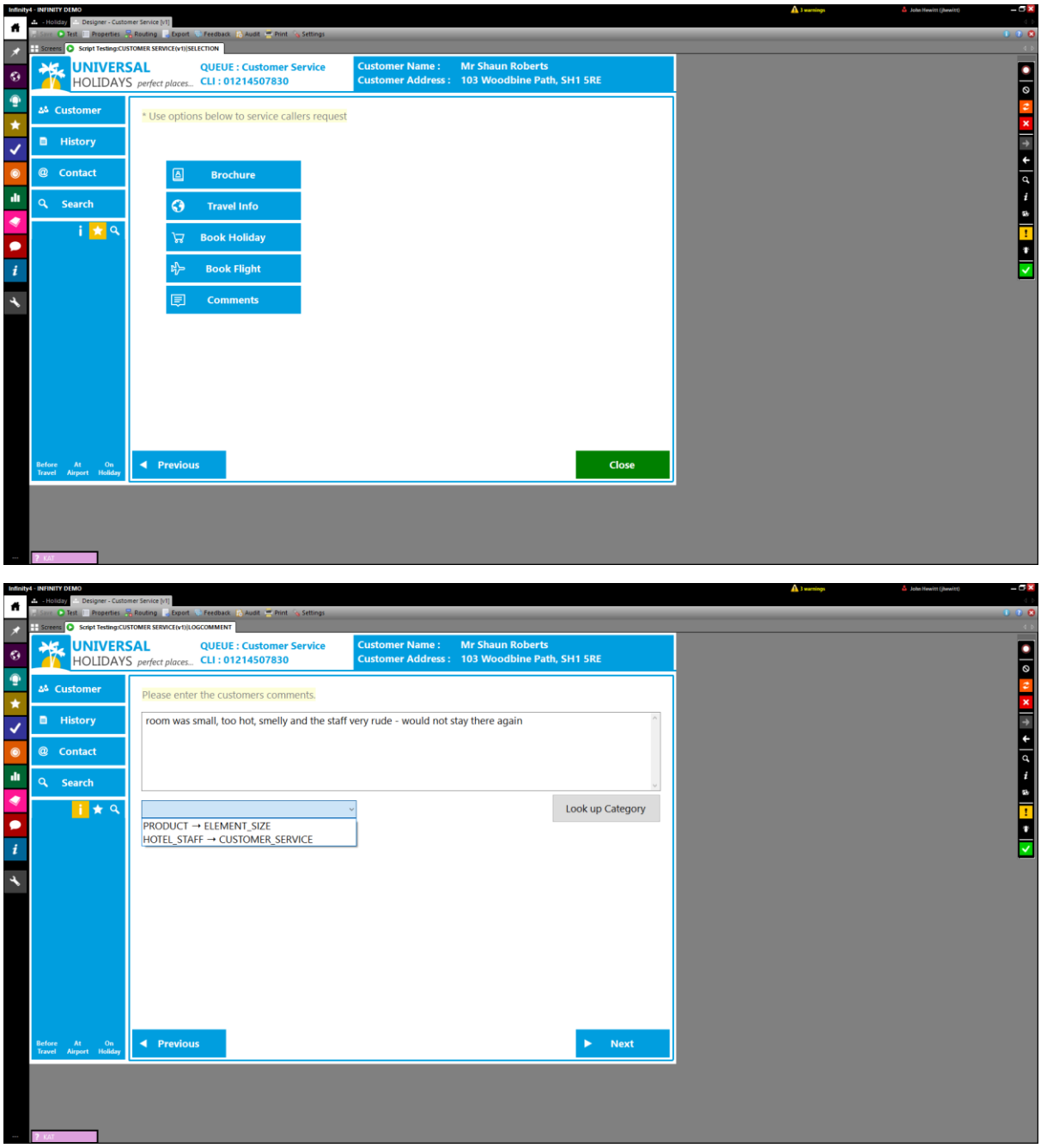


Figure 9: Screen capture of Infinity's Customer Care Platform connected to Websays' Hotel aspect classification API

5.2 Social Media Analytics

5.2.1 Direct Exploitation of SENSEI R&D into Websays Products

Since the beginning of the SENSEI project, a number of developments have led directly to improvements in Websays' pipeline and product offering.

In the first year of the project, the development of the asynchronous crawler for SENSEI (see D2.1) led to the widespread use of this crawler in Websays. Since its introduction in the main Websays pipeline in 2014, **all clients** benefit now from this development.

This is a back-end improvement, which enables new forms of crawling and indexing. Because of its nature, the client is not perceive this feature directly. However, this technology allows us to improve the data quality and freshness in two very important ways:

- Real time indexing of external links.
- Pagination of Comment pages.

In Period 2 of the project, the development of the "conversation size" metric for SENSEI (D2.2) opens a new venue in ranking content in Websays. Again, this was introduced in the main Websays pipeline, and today 50% of clients benefit from this development. Due to performance constrains, we cannot yet bring this feature to our largest costumers (in terms of volume of data), so R&D continues on this front.

This is a feature improvement which finds its way in several Websays tools:

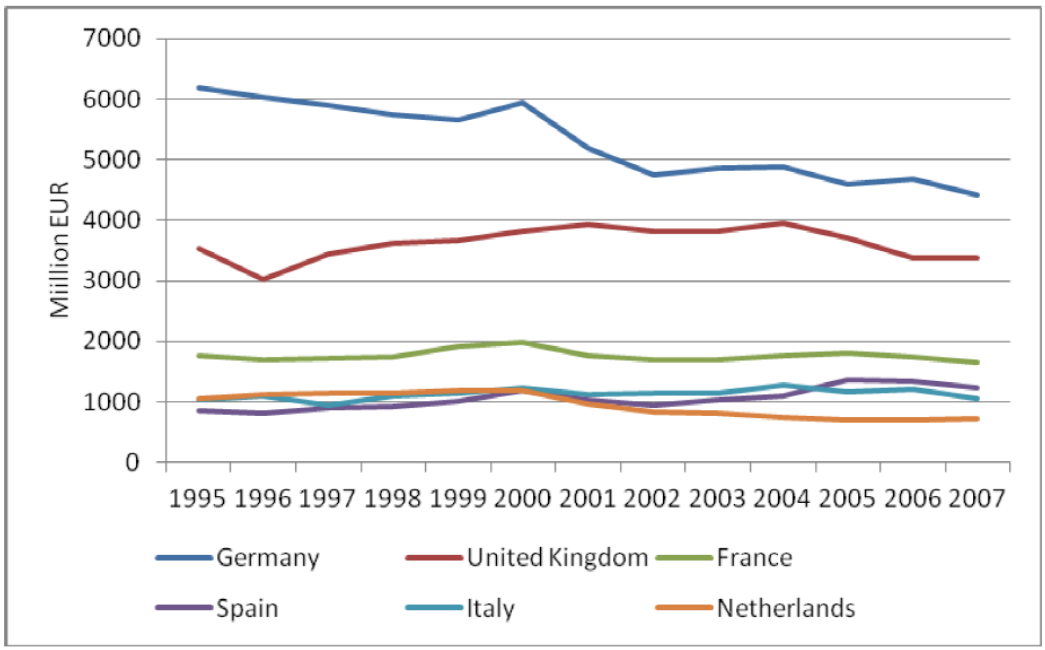
- New "Sort By" option sorting by conversation size allows client to quickly view the social media items of most current impact and engagement.
- New "Top-10" report shows to our clients the top-10 items (sorted by conversation size) of each of their social media channels
- New Alerts: when then conversation-size metric grows beyond a certain threshold (increasing over time) the client receives an SMS and/or email alert.

5.2.2 NewsPapers Market trends and relationship with SENSEI's results

The Newspaper Market Industry has been tremendously slow at realizing the impact of the Internet in people's needs for information, and this has hurt them in all dimensions: market share, client base, influence and authority, and revenue. Despite this there have been little changes in the industry over the last 15 years, as the information landscape changed radically changed under their feet.

Up until today, global newspaper revenue depends for more than half (57%) on advertising and for 43% on direct income from readers who have a subscription or buy single copies (PwC, 2009; OECD, 2010). Online advertising revenue is only slowly increasing and worldwide accounted in 2009 for approximately 4 of newspaper publishers' revenues and 6% of total advertising revenue (OECD, 2010). Both of these sources of income are under serious threat.

European Publishing companies generate an overall revenue of approximately 50 bln€. However their annual average decline in the average firm size (-15.9%) and in the number of employees (-1.4%) clearly shows their current state of crisis.



Source: TNO, 2011, based on Eurostat.

Figure 10: Six largest EU Member States in terms of share in total EU value added in newspaper publishing, period 1995-2007

Figure 14 shows how the total valued added of the six EU Member States with the largest share in value added in the publishing of newspapers developed between 1995 and 2007. After 2000, the value added of the German and Dutch newspaper publishing industries decreased with respectively 1.5 billion and 467 million EUR to a total value added of 4.4 billion and 720 million EUR respectively in 2007.

In the recent years the decay seems only to have accelerated (although we do not have figures to back this) with the rapid growth of Internet usage hurting the newspaper industry in several fronts: fragmenting young audiences and brining new online players such as Google or Yahoo News.

In the past 6 years the most forward-thinking newspapers have been experimenting with novel ways to “bring people in”, to engage with their audience in new ways not available before the Internet. The solutions have been:

- Private Blogs: spaces where journalists can extend their news and give a more personal view to better engage with their audience.
- Infographics and Interactive Visualizations: to better explain the data.
- User Generated Content: allowing readers to provide pictures, viedeos or even stories to the newspaper.
- Article Commentaries: spaces were the audience can directly comment on the articles
- Social-media driven news and editorials: listening to the social media trends and events similarly to how they would listen to the “streets” events.

All of these attempts have been partial, with both positive and negative effects on the audience and the advertising revenue.

5.2.3 Technology products for the NewsPapers Exploitation Plan

It is clear from the first evaluation of SENSEI NewsPaper prototypes that there is a clear interest by the Newspaper industry in advanced technology for summarization and visualization of user comments and ongoing social trends. We develop here a simple business model which will serve as a basis of discussion with The Guardian and other newspapers and the prototypes mature and their added value to the companies becomes clearer. The revenue model would be cloud SaaS, with a subscription fee structured around the following parameters: volume (in terms of posts) and user licenses. The actual pricing will depend on the final products developed after the prototype phase, and in particular will depend on the added value that these products bring to journalists.

Although it is hard at this early stage to estimate the revenue per contract, based on current experiences with Marketing Agencies and Newspapers we estimate a monthly recurrent revenue (MRR) for a single NewsPaper of 50k-100k € per year, and for a publishing group of 100k to 250k€ per year. Assuming they keep this service an average of 3 years (being conservative), this leads to a lifetime value (LTV) of 150k-750k€, although it is hard at this point to determine if the average LTV will be closer to the lower or the higher end of this range. Given the very high gross margin for this type of SaaS business (around 80%), this leads to a very profitable business.

The cost of customer acquisition (CAC) is likely to be high; requiring extended trial periods and negotiations with the publishing groups. This is a risk to take into account and a factor that implies high Marketing costs and slow initial growth. Nevertheless, even with a relatively long customer acquisition time (e.g. 8 months), the LTV:CAC ratio would be high, well above the typical recommended threshold of 3.

The Road to Market can be structured in two phases: an initial market test where the road will based on direct connections to European Newspapers, and an expansion phase where the road to market will be through traditional SaaS methods: targeted email and web campaigns and specialist shows and events. In this second phase there is no reason to restrict ourselves to the European market, since all Newspapers around the world have the same needs. The only constrain in terms of market expansion is the languages supported by the technology.

Development Plan

The cost and time needed for moving form prototypes to a final first version ready for the market are estimated (grossly) as follows:

Front-End:	50K€
Back-End:	100K€
Design:	50K€

The required development time is estimated in 12-18 months. This shows that with a relatively small investment in capital and time we would be ready to launch a product world-wide. More importantly, we see that the required R&D investment in this product is marginal (< 1 LTV). However the overall expected return of the investment (ROI) depends completely on the expected sales and the CAC. It is too early to develop realistic sales and CAC figures, until SENSEI research does not mature and the prototypes are not validated.

5.2.4 Review Analytics market trends and relationship with SENSEI's results

As social marketing assumes a more integrated role in multichannel marketing organizations, the need for social data and insights to extend to new use cases and other marketing tools increases, as does the importance of social media measurement.

Market Guide for Social Analytics, Gartner ID: G00276077, November 24th 2015.

In this section we present a brief overview of analytic market trends in relationship with SENSEI's results.

Social Media Analytics continue to be a young market, driven by early adopters. The market has not matured yet since its early start 2010, and although it continuous to show great promise, it has not matured yet its market size is in continuous expansion.

It is clear that the needs for measurement increase as Marketing moves towards quantitative analytics and direct ROI optimization, but this natural move is contrasted by an over-complexification of the medium, with hundreds of social media platforms (or new pdoucts by existing platforms) appearing every year.

So far technology has not been a principal differentiator: market wars are waged by products that are very similar in their offering to the client (e.g. Brandwatch vs. SalesForce's Radian6), the main differentiators being in cost structure. This is undestanbdable since most of the industry continues to rely in human analysis aided by simple and very cheap automation tools (e.g. Hootsuite, Mention) and are only slowly moving towards business intelligence tools.

In a similar way there has been very small growth of Cloud based API services for social media intelligence in the last 3 years. Although some market places have been created and serveral applications have appeared, they remain the exception, used only by a handful of early adopters.

We anticipate that technology innovation will come to play a bigger role as the market settles in the next few years, and it becomes more clear what the value added is of these technologies, and therefore the service and prize offering. Companies like Websays and others are indeed counting on this.

As an example, consider the analytics features proposed by the main vendors as reported by the Gartner study cited.

Table 7: analytics features proposed by the main vendors

Vendor	NLP (Proprietary)	NLP (Via Partner)	Keyword-Based Sentiment Analysis	Pattern-Based Analysis	Location-Based Analysis	Social Network Analysis	Machine-Learning: Active Learning	Image Analytics
Brandwatch	X	X	X	X	X	X		X
Clarabridge	X		X	X	X	X	X	X
Crimson Hexagon	X	X	X	X	X	X	X	X
Geofeedia	X	X	X	X	X	X	X	X
NetBase	X	X	X	X	X	X		
Oracle	X		X	X	X		X	X
Salesforce	X	X	X	X		X		
Simply Measured		X	X		X	X		X
Socialbakers		X		X	X	X		
Synthesio	X		X	X	X	X		X
Sysomos	X							X
Talkwalker	X		X	X	X	X	X	X
Tracx	X		X	X	X	X		X

Some state-of-the-art techonologies appear such as NLP, Sentiment Analysis, Active Learning and Image Analytics, and it seems all vendors are making use of them. However the actual use of these technologies in the features offered is very limited and opaque, and do not constitute today a differentiator.

In relationship with SENSEI's results, we see a large technological gap between today's products and todays' technology potential. This has a positive and negative side: on the positive side, the potential for impact remains large, as has been demonstrated by the exploitation activities with partners external to the SENSEI consortium such as Infinity. On the negative side, the market is clearly inmature yet, and technological differentiators are not seen as business drivers in the short term.

5.2.5 Technology products for the Review Analytics Exploitation Plan

Over the last year Websays has started commercializing a new product which has been developed partly within the SENSEI project: an API for semantic classification of opinions.

Internally Websays uses a Machine Learned model to classify sentences into categories pre-defined for each application. Externally a REST API provides clients with an easy way to classify and access statistics.

Business Model

The initial Business Model here is DaaS: the client subscribes to a data plan which allows a fixed number of API calls per month.

Websays API plan already live as shown in the following figure:

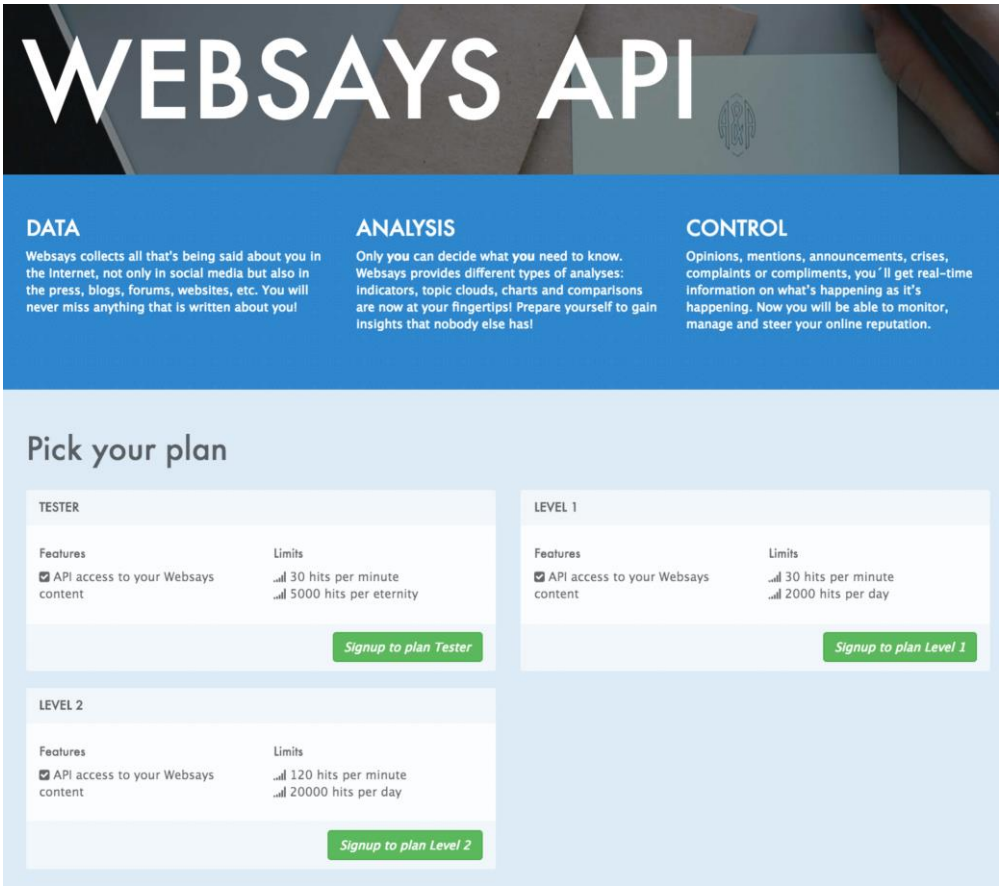


Figure 11: Websays API page. See more details at: https://websays.3scale.net/#plans

Websays is still experimenting with the best bundling of data plans and their pricing. Currently a price is negotitated separately for each deal, depending on the complecxity of the training needed to reach the required accuracy, and the volume of data to process per month.

Hotel Intelligence

The first client for this technology has been the hotel chain NH Hotel Group (http://www.nh-hotels.com/), third in the European ranking for business hotels, with 380 hotels in 29 countries.

NH has contracted the aspect classification API to categorize over 25000 hotel reviews in 6 languages every month. Figure 12 shows a snapshot of the public Websays API hosted at 3Scale.

- You can see a youtube video demoing the classifier here: https://www.youtube.com/watch?v=sLs1qYxNpll
- You can see the documentation for the REST API here: https://websays.3scale.net/docs#/

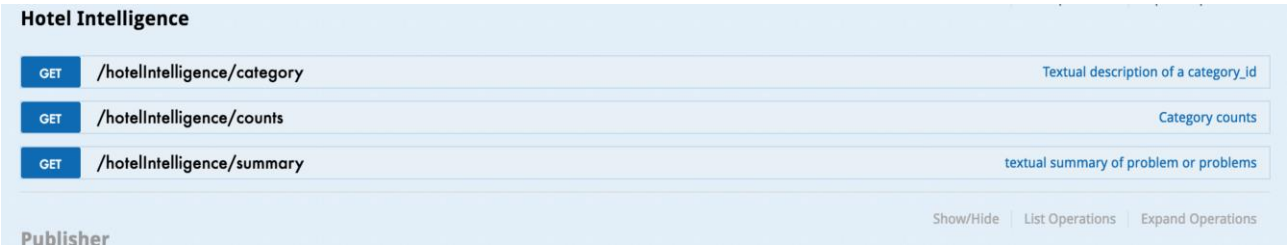


Figure 12: Websays REST API for Hotel Intelligence (Semantic Classification of Hotel Reviews).
See more details at https://websays.3scale.net/docs#/

Evaluations carried out by the NH customer care reviewers show an accuracy of 0.85 micro average precision and recall (evaluated by the client on 5 languages and 150 hotel review categories):

Language	Avg. Prec	Avg. Recall	# Comments	Avg. Prec*	Avg. Recall*
Spanish	77%	83%	600	86%	92%
German	70%	76%	300	78%	84%
English	69%	77%	300	77%	86%
French	87%	84%	300	97%	93%
Italian	79%	79%	300	88%	88%
Dutch	77%	81%	300	86%	90%
Total	**77%**	**80%**	**2.100**	**85%**	**89%**

Other Applications

The medium term potential for this product is larger, and already conversations have started with SENSEI partners to extend the use of this product to other business applications. In particular, working together with Teleperformance, Websays has initiated discussions with the UK customer care technology company Infinity to partner in the creation of a new product for customer care and conversation analytics (see previous chapter and D7.6 Chapter 4)

Infinity has already started testing the API in the hotel customer care domain, and has produced an early prototype of integration.

6. Intellectual Property Status of Technology for Exploitation

The IP produced during the SENSEI project follows several models, from full open source (as is the case of some of the research work at the Universities, and the development of extractros by Websays) to fully proprietary (as is the case for the Teleperformance prototype and Websays indexing technology).

Similarly, as we move towards the exploitation phase, a number of models co-habit. Although this makes perhaps the adoption more complex, we thinks this is preferred as it means that some stake-holders have invested in technology they now own and wish to make profitable by exploiting it effectively.

In particular, SENSEI is making open source components of the pipeline, such as infrastructure and core conversation analysis and summarization technologies and associated models.

This software forms a platform sufficient on its own for third parties to develop their own technology on top, and as such it provides an environment for creation of value. The released components are described in D6.3.

The Teleperformance prototype on the other hand will not be available as open source since it tightly integrates with existing Teleperformance processes. It is being used to demo the potential of the technology internally within Teleperformance sales teams and large clients, and outside to other partners.

Similarly, Websays indexing and ranking technology will not be made open source since it is tightly integrated with the rest of the Websays pipeline. This technology is being used already in production to speed up and provide new features to Websays clients.

7. Conclusions

The third year of the SENSEI project we have had a tremendous ramp-up in terms of scientific, technological and business outreach. We have had more than SENSEI-related thirty scientific papers and presentations, dozens of press releases though the websphere where SENSEI's project awareness was raised in conjunction with the success of the Brexit referendum monitoring campaingn. Last but not least, there were several events and opportunities for industry partners to support the convergence of the contact center and social media analytics product propositions.