

## DELIVERABLE SUBMISSION SHEET

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**From:**  
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### The deliverable is:

- a document
- a Website (URL: .....)
- software (.....)
- an event
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FP7-ICT Strategic Targeted Research Project PHEME (No. 611233)

Computing Veracity Across Media, Languages, and Social Networks



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D9.4 Dissemination and Exploitation Report

Kalina Bontcheva (USFD)

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Abstract

FP7-ICT Strategic Targeted Research Project PHEME (No. 611233)

Deliverable D9.4 (WP 9)

This document summarises the activities carried out by the PHEME consortium members, in order to disseminate and commercially exploit the output of the project. It describes the efforts to be made to reach as wide an audience as possible, and the multiple exploitation strategies employed by the individual partners, as well as by the consortium as a whole.

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## **Executive Summary**

This document describes the dissemination and exploitation activities that have been carried out for the PHEME project. This document reports extensively on the state of potential individual and joint exploitation paths, as well as in the identification of the exploitable results, licensing schemas, etc.

The PHEME project is primarily focused on research and development of the computational methods needed to model, identify, and verify phemes (internet memes with added truthfulness or deception), as they spread across media, languages, and social networks. However, in order to be effective it must reach out to a wide range of potential users both within the academic and commercial sectors. Thus, as well as extensive digital dissemination efforts, project partners will be presenting papers, posters and demos at a number of relevant scientific conferences and industry events, and have already started publishing papers describing the project and its results.

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## **1 Relevance to PHEME**

One of the aims of the PHEME project is to ensure the widest possible dissemination and use of the project results, as well as establishing collaborations with other relevant projects and initiatives. This makes dissemination and exploitation activities of vital importance to the overall project success.

### **1.1 Purpose of this document**

The purpose of this document is to provide the consortium with a first overview of the dissemination and exploitation strategy of PHEME.

The objectives of the dissemination and exploitation plan can be summarized as follows:

- Communication of project results to the general public, scientific communities, and potential adopters through various dissemination channels.
- Dissemination of the project results to the partners' research and business associates, clients and public through media and existing and future contacts.
- Identification of user communities for potential academic and commercial exploitation.
- Development of an exploitation strategy in order to bootstrap the use of rumor-detection techniques on the web and the usage of PHEME tools in research and commercial environments.
- Creation of a business plan for commercial exploitation of the developed end-user prototypes in the areas of digital journalism and health.
- Establishment of the appropriate metrics and indicators in order to assess the success of the dissemination and outreach of the project results.

### **1.2 Relevance to project objectives**

Dissemination and exploitation of the project results are key activities to reach the project objectives. The focus of PHEME is on research and development of the computational methods needed to model, identify, and verify phemes (internet memes with added truthfulness or deception), spreading across media, languages and social networks. The research methods are of especial relevance to academia, but also open interesting market and commercial opportunities. Therefore, a careful planning of the actions to be taken both for dissemination and exploitation is of the highest importance to PHEME.

### **1.3 PHEME project description**

The PHEME project aims to build new methods that will automatically verify online rumours as they spread across media, languages, and social networks. The term phemes comes to describe internet memes, which are enhanced with truthfulness information.

The original idea in PHEME is to classify online rumours into four types: speculation, controversy, misinformation (something untrue is spread unwittingly) and disinformation (it's done with malicious intent). In order to do that, PHEME needs to acquire data from social networks to get the raw data. The system will also automatically categorize sources to assess their authority, such as news outlets, individual journalists, experts, potential eyewitnesses, members of the public or automated 'bots'. It will also look for a history and background, to help spot where Twitter accounts have been created purely to spread false information. PHEME will search for sources that corroborate or deny the information, and plot how the conversations on social networks evolve, using all of this information to assess whether it is true or false. The results will be displayed to the user in a visual dashboard, to enable them, to easily see whether a rumour is taking hold.

Therefore, PHEME will deliver several results for rumour detection in covering aspects such as:

- i) social networks' data acquisition,
- ii) automatic classification and NLP,
- iii) annotation of rumours,
- iv) semantic enrichment of the data,
- v) visualization dashboard, and finally
- vi) several datasets providing labelled and annotated data,

### 1.4 Relation to other workpackages

Dissemination and exploitation are horizontal activities that last for the entire duration of the project. Therefore, there is a clear interaction with all work packages.

It is worth mentioning that the relation of dissemination and exploitation with other work packages is planned as a two-way interaction. On the one hand, all work packages provide feedback, both for dissemination (partners from technical and use case work packages to provide ideas, presentations, papers, news, etc.) and exploitation (potential results of each work package, licensing approaches, etc.). On the other hand, WP9 aims to provide feedback to the rest of the work packages in order to influence their work at multiple levels: watching what is going on in the market to drive the research in the right and timely direction, suggesting changes on the licensing of different components to ensure the complementarity of the results, offering ideas on how small enhancements could be better perceived by the market, etc.

### 1.5 Structure of the document

The document is categorized into four different sections:

**Section 1** gives a brief introduction, outlines the major purpose of the document and explains the relevance to PHEME.

**Section 2** of the document addresses the dissemination activities of the PHEME project. It gives an overview of dissemination details, the partner's roles, outlines the dissemination channels used and provides insight into our dissemination activities. The last part of section 2 addresses project indicators which have been used to measure the progress of the dissemination activities.



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**Section 3** of this document outlines the exploitation activities. It particularly addresses a summary of competing technologies and outlines our exploitation activities. The report includes the project results, the overall and individual exploitation plans of all partners as well as an update to the licensing strategy.

**Section 4** of the document concludes with consolidated findings.

## 2 Dissemination report

### 2.1 Dissemination specification

#### 2.1.1 Overview of the PHEME dissemination baseline

For maximum impact, PHEME has adopted a multi-channel dissemination approach.

We have pursued a full programme of scientific papers and presentations at technical and scientific conferences. These were aimed at sharing the results of PHEME with the scientific community, particularly the European scientific community, to encourage their incorporation into the work of other scientists and technologists. Example conferences that we targeted were:

- **Language Processing and Computational Linguistics:** (E) ACL, COLING, CONLL, EMNLP, RANLP
- **Social Media and social science:** ICWSM, WSDM, WebScience, Social Computing
- **Reasoning and Linked Data:** WWW, ISWC, ESWC, EKAW, Web Science
- **Intelligent User Interfaces and Information Visualisation:** CHI, IUI, Inf. Visualisation

Complementing this, we delivered a programme of papers and articles in the information technology and general business literature, as well as presentations at IT and business seminars and conferences. We also targeted key stakeholder groups for our two case studies. Again, this was primarily directed towards the EC and associated countries. Conferences targeted included:

- **General IT, language technologies, knowledge management:** Online Information, SemTech, Text Analytics Summit, European Semantic Technology Conference;
- **Biomedical Informatics:** IHI, ICCABS, IEEE BIBM, iHealth
- **Digital media and journalism:** Online Information, FT Digital Media, DigitalMedia Europe

The project set up and maintained a **public project web site**. It functions both as a project dissemination tool and as a server running some of the software produced by the project. The website also provides examples, API documentation and video tutorials explaining how the software tools can be used by end users, integrated into applications, or used as component services by SMEs. For further details see Section 2.2.2.

In addition to a project web site, PHEME has also exploited via **social media as a dissemination channel** and has continually actively promoted the project and its results to the largest online communities in the areas of language processing, text analytics, semantic web, business intelligence, new media, and other relevant groups on LinkedIn, Twitter, Facebook, and blogs (see Section 2.2.4 for details).

Both the industry and the academic partners have continued to play active roles in dissemination. The industrial partners also formed a key part of the dissemination activity, as they have provided **outreach towards businesses in diverse sectors**. Both individual and joint dissemination and exploitation actions have been undertaken, as detailed below.

### 2.1.2 Promotional activities

**A range of other instruments** have also be employed for dissemination, including press and media, participation in appropriate networks of excellence and, offering training activities, aimed at both the academic and industrial sectors (e.g. delivery of lectures at summer schools, industry-oriented dedicated workshops, etc.). More specifically, we **collaborated with initiatives such as the LT-Innovate** as part of joint dissemination events such as info days for researchers and businesses, workshops and conferences.

PHEME became a member of the European Centre for Social Media<sup>1</sup>, which is an online forum that supports the collaboration, alignment, and promotion of social media technologies and marketing activities arising from the member European research projects, as well as offering and promoting training and dissemination opportunities.

PHEME also became an academic partner in the First Draft News network. The First Draft News partner network furthermore includes the likes of Facebook, Twitter, YouTube as vital social networks, and media organisations such as The New York Times, BuzzFeed News, the Washington Post and CNN, among many others. Having a direct working relationships with First Draft News partners has given us an ideal dissemination channel of the project results. Furthermore, it is an ideal platform and forum for the continued publication of project results and the recruiting of external testers of the PHEME tools and technologies.

### 2.1.3 Collaboration with other initiatives

PHEME has also produced results relevant to other ongoing projects, with which we have **cooperated**. In addition, project partners established links to complementary projects in all key RTD areas:

- **Language Technologies:** ARCOMEM, TRENDMINER, ANNOMARKET, OPENER, UCOMP;
- **Social Media Analysis:** EXCITEMENT, REVEAL, X-LIKE, OpeNER, ROBUST, Sensei, DecarboNet, SocialSensor
- **Linked Data, Reasoning, and Semantics:** LARKC, LOD2, ROBUST
- **Use cases:** EU-PATI, SELCOH, ANNOMARKET, VISTA-TV, KCONNECT

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<sup>1</sup> <http://www.socialmediacentre.eu/>

### 2.1.4 *Community building and outreach*

The PHEME consortium includes leaders in the provision of open source software for text mining (GATE by USFD), crowdsourcing (iHub), information visualisation (MOD), and curated information management of media streams (SwiftRiver). Most of the core outputs of the project are open source.

Open source alone is not enough – the software needs to be supported, maintained and promoted, and the communities of developers nurtured and organised. PHEME partners (USFD, iHub, ONTO) have a proven track record in this area over the past 15 years and have continued to perform these functions during the project lifetime as part of the exploitation and dissemination activities, and beyond.

### 2.1.5 *Other activities (training, conferences...)*

Within the limitations imposed by appropriate protection of intellectual property, **all scientific results of this project have been made available to the research community**. In addition, a number of content analytics tools and resources from PHEME have been made available as **open-source** to facilitate take-up. Another vital part of the dissemination and exploitation activities has been through the **support of a community of early adopters** of the open-source technology, through a mailing list, code examples, training workshops, etc.

**Training materials** (e.g. state-of-the-art reports) resulting from the project has been gathered and used by the academic partners as part of their course materials at postgraduate level, as well as, used by all partners to provide courses to companies. In addition, the research activities in the project has involved Ph.D. students for some of the participants (e.g. USFD, USAAR).

## 2.2 **Dissemination channels**

Based on the identification of key stakeholders and the associated key messages for each target group, PHEME has developed a set of tools and techniques that have been used to carry out diverse and novel activities and create compelling events and workshops that have lived-up to the wide-ranging challenges arising in social data analytics. The material's content and design has been adapted to the needs, expertise and focus of the different target groups and dissemination channels as detailed below. Our dissemination and communication tools has include a balanced mix of traditional (workshops, summer schools, conferences and scientific publications) and innovative methods (online videos, social media presence, specialist web dashboards) which promoted take-up and had the widest possible impact. Diverse media engagement has continued to be an essential component, including press releases, social media (e.g. Twitter, Facebook, LinkedIn, project news and blog), online videos (e.g. YouTube), and other promotional materials, such as a project logo, presentation and factsheet/brochure.

The PHEME Dissemination and communication kit, was created, and updated annually. The different parts of this kit are detailed in the rest of this section.

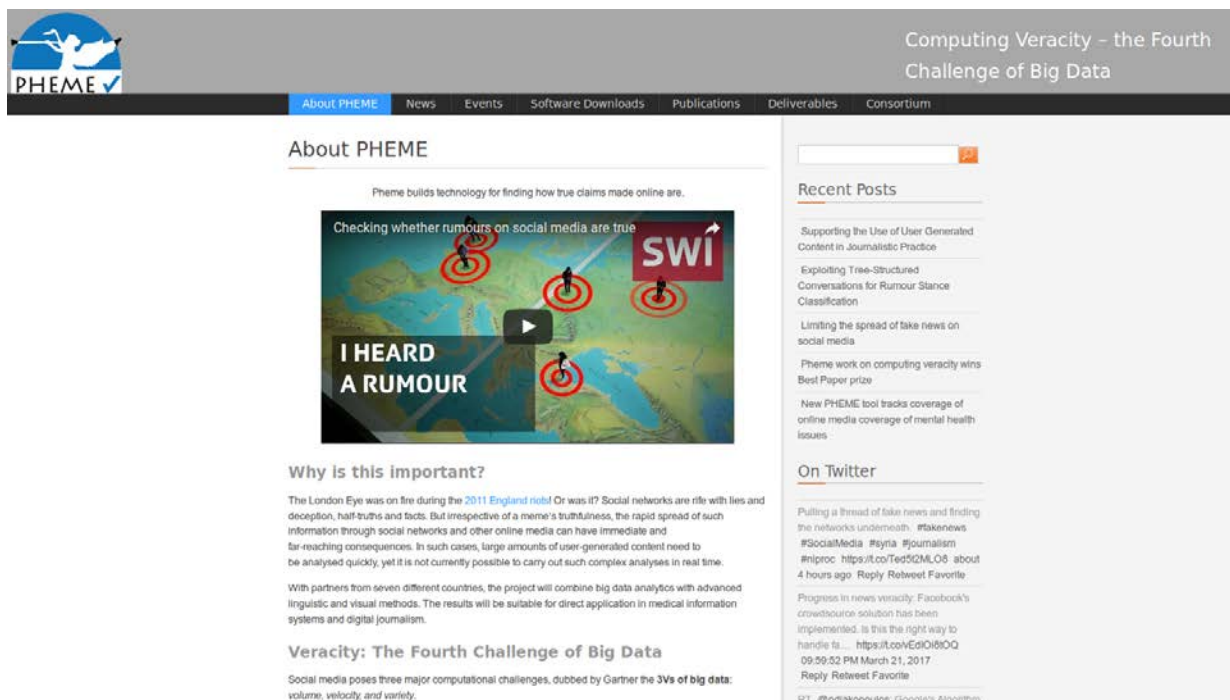
### 2.2.1 Project branding (logo, fact sheet, presentation...)

For the sake of creating a graphic identity for PHEME, the following items have been generated:

- **Project logo:** Was created early in the project by ATOS and has been used to establish the visual identity of the project. It has appeared on all project presentations, online videos, web pages, training materials, etc.
- **A deliverable template:** USFD created both Word and Latex deliverable templates, including the project logo, listing all project partners, and an executive summary, which has been used for the creation of news updates and in blog posts.
- **Project Presentation<sup>2</sup>:** USFD created and have continuously updated during the project a public, high-level presentation of PHEME's aims and objectives; research activities and results achieved; training materials and software offered; contact details and how to become a member of the PHEME community.
- **Presentation template:** USFD created a presentation template that includes the project logo and visual identity, as well as funding acknowledgements. This has been used by all partners when creating dissemination and training materials arising from the project.

### 2.2.2 Project web site










The project web site (<http://www.pHEME.eu>) was set up at the start of the project and has been updated periodically, as new deliverables and project results became available. It is the web face of the project, where stakeholders have found information about the project, publications, public deliverables, training materials, open source software results and project demos. The web site was designed following standard Web technology, including RSS feeds (to subscribe, go to <http://www.pHEME.eu/feed/atom> or <http://www.pHEME.eu/feed/rss>), social sharing and bookmarking, news and blog, tagging, and a contacts section.



<sup>2</sup> Available at <http://www.pHEME.eu/?p=95>

*Figure 1: Project web site*

Google analytics statistics have been collected, since the web site was launched in January 2014. Until March 31<sup>st</sup> 2017, there have been just over 52,310 page views in just over 30,840 distinct user sessions. The breakdown per country is shown below. As can be seen, interest is global, going well beyond EU countries and project partners.

Country	Sessions	% Sessions
1.  United States	3,958	12.83%
2.  United Kingdom	3,513	11.39%
3.  Mexico	2,475	8.02%
4.  Germany	2,232	7.24%
5.  France	2,092	6.78%
6.  Italy	1,423	4.61%
7.  Spain	1,242	4.03%
8. (not set)	1,086	3.52%
9.  Japan	866	2.81%
10.  India	849	2.75%

*Figure 2: Google analytic statistics*

For internal communication, the project has utilised Google Drive, with areas only available to the consortium partners, the EC, and project reviewers. This acts as a document sharing and collaboration platform, including all non-public deliverables, administrative and financial information, minutes from project meetings, and a project management wiki.

### 2.2.3 Dissemination material (brochures, newsletters, press releases... )

This section describes some of the dissemination materials generated so far:

- **Project brochure/factsheet:** USFD created a project factsheet (D9.1), with similar content to the project presentation, but in a foldable brochure design.
- **Contacts database:** all partners have been active in collecting a shared database of contacts interested in the project's progress. These contacts have been updated following the PHEME media and community engagement strategy.
- **Press releases and media coverage:** Most PHEME partners issued press releases upon project start, which attracted exceptionally strong media interest and coverage, **including TV and radio interviews**, interviews for online news and media sites, and invitations to participate and discuss PHEME as part of specialised TV and news programmes (e.g. the BBC Radio 4 Digital Human programme). Section 2.3.3 below lists many of the publications with URLs, where these are available.

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### 2.2.4 *Communication channels (social, press, web...)*

Within a month of project start, we set up a Twitter account and a Facebook presence was introduced shortly after. These communication means are promoted through the more traditional channels (factsheet, web site, presentations and posters) and all partners have ensured that the project has been active in social media engagement. Conversely, social media has been used to promote actively, the other communication tools, e.g. web site, publications, deliverables, software releases, press releases, calls for transnational access projects, blog posts, and other news.

## **2.3 Dissemination activities and indicators**

### 2.3.1 *Activities carried out*

The following tables include all academic papers and/or events with PHEME related presence.

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Scientific (peer reviewed) publications								
No.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Year of publication	Article type	Permanent identifier
1	<a href="#">Passive-Aggressive Sequence Labeling with Discriminative Post-Editing for Recognising Person Entities in Tweets</a>	L. Derczynski	Proceedings of the meeting of the European chapter of the Association for Computational Linguistics (EACL)	2014	ACL	2014	conference	doi:10.3115/v1/E14-4014
2	Visualizing Contextual Information in Aggregated Web Content Repositories	Scharl, A.,	9th Latin American Web Congress (LA-WEB 2014). Ouro Preto, Brazil: Forthcoming	2014	IEEE	2014	conference	P114-118
3	Efficient F Measure Maximization Via Weighted Maximum Likelihood	Georgi Dimitroff,	Machine Learning Journal	2014	Springer	2014	journal	doi:10.1007/s10994-014-5439-y
4	<a href="#">Spatio-temporal grounding of claims made on the web, in Pheme.</a>	L. Derczynski	Proceedings of the 10th Joint ACL - ISO Workshop on Interoperable Semantic Annotation (ISA)	2014	ACL/ISO	2014	workshop	
5	Overview of TweetLID: Tweet Language Identification at SEPLN 2014	Arkaitz Zubiaga, Iñaki San Vicente, Pablo Gamallo, José Ramon Pichel, Iñaki Alegria, Nora Aranberri, Aitzol Ezeiza, Víctor Fresno	Proceedings of the TweetLID workshop	2014		2014	workshop	
6	Visualizing Contextual Information in Aggregated Web Content Repositories	Arno Scharl, Ruslan Kamolov, Daniel Fischl, Walter Rafelsberger and Alistair Jones	Proceedings of the 9th Latin American Web Congress (LA-WEB 2014)	2014		2014		
7	Pheme: Veracity in Digital Social Networks.	Leon Derczynski, Kalina Bontcheva	Proceedings of the UMAP Project Synergy workshop (UMAPProS	2014	CEUR-WS	2014	workshop	



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Scientific (peer reviewed) publications								
No.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Year of publication	Article type	Permanent identifier
			2014)					
8	<a href="#">Processing and Normalizing Hashtags.</a>	T. Declerck, P. Lendvai.	Proceedings of the conference on Recent Advances in Natural Language Processing (RANLP). 2015.	01/09/2015	INCOMA	2015	conference	
9	<a href="#">An OWL Ontology for Biographical Knowledge. Representing Time-Dependent Factual Knowledge..</a>	H. Krieger, T. Declerck	Proceedings of the First Conference on Biographical Data in a Digital World. 2015	01/03/2015	Ceurs	2015	conference	
10	Classifying Tweet Level Judgements of Rumours in Social Media	Michal Lukasik, Trevor Cohn and Kalina Bontcheva.	Proceedings of Empirical Methods of Natural Language Processing, EMNLP	2015	ACL	2015	conference	doi:10.3115/v1/D15-1311
11	Modeling Tweet Arrival Times using Log-Gaussian Cox Processes	Michal Lukasik, P.K. Srijith, Trevor Cohn and Kalina Bontcheva.	Proceedings of Empirical Methods of Natural Language Processing, EMNLP	2015	ACL	2015	conference	doi:10.3115/v1/D15-1028
12	Point Process Modelling of Rumour Dynamics in Social Media	Michal Lukasik, Trevor Cohn and Kalina Bontcheva	Proceedings of the 53rd annual meeting of the Association for Computational Linguistics, ACL	2015	ACL	2015	conference	doi:10.3115/v1/P15-2085
13	Enhanced Information Access to Social Streams through Word Clouds with Entity Grouping	Martin Leginus, Leon Derczynski, Peter Dolog	Proceedings of the International Conference on Web Information Systems and Technologies (WEBIST)	2015	INSTICC	2015	conference	
14	Tune Your Brown Clustering, Please	Leon Derczynski, Sean Chester, Kenneth S. Bøgh	Proceedings of the conference on Recent Advances in Natural	2015	INCOMA	2015	conference	doi:10.3115/v1/R15-1016

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Scientific (peer reviewed) publications								
No.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Year of publication	Article type	Permanent identifier
			Language Processing (RANLP)					
15	Crowdsourcing the Annotation of Rumourous Conversations in Social Media	Arkaitz Zubiaga, Maria Liakata, Rob Procter, Kalina Bontcheva, Peter Tolmie	WWW Web Science Track	2015		2015	conference	
16	Temporal Relation Classification using a Model of Tense and Aspect	L Derczynski, R Gaizauskas	Recent Advances in Natural Language Processing conference	2015	INCOMA	2015	conference	doi:10.3115/v1/R15-1017
17	<a href="#">Analysis of Named Entity Recognition and Linking for Tweets</a>	L. Derczynski	Information Processing and Management journal (IPM).	2014	Elsevier	2015	journal	doi:10.1016/j.ipm.2014.10.006
18	Time and information retrieval: Introduction to the special issue	Leon Derczynski, Jannik Strötgen, Ricardo Campos, Omar Alonso	Information Processing and Management Journal	2015	Elsevier	2015	journal	<a href="#">doi:10.1016/j.ipm.2015.05.002</a>
19	Sematic Systems and Visual Tools to Support Environmental Communication	Arno Scharl	IEEE Systems Journal	2015	IEEE	2015	journal	doi:10.1109/JSYST.2015.2466439
20	<a href="#">Towards the Representation of Hashtags in Linguistic Linked Open Data Format.</a>	T. Declerck; P.Lendvai	Proceedings of the Second Workshop on Natural Language Processing and Linked Open Data., Hissar, Bulgaria	01/09/2015	INCOMA	2015	workshop	
21	<a href="#">Similarity-Based Cross-Media Retrieval for Events.</a>	P. Lendvai, T. Declerck.	Proceedings of the LWA Workshops. 2015.,	01/10/2015	GSCL	2015	workshop	
22	Bootstrapped Extraction of Index Terms from Normalized User-	P. Lendvai, T. Declerck.	Proceedings of NLP4CMC-15, at GSCL 2015	01/09/2015	GSCL	2015	workshop	

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<b>Scientific (peer reviewed) publications</b>								
<i>No.</i>	<i>Title</i>	<i>Main author</i>	<i>Title of the periodical or the series</i>	<i>Number, date or frequency</i>	<i>Publisher</i>	<i>Year of publication</i>	<i>Article type</i>	<i>Permanent identifier</i>
	Generated Content							
23	Analysis of Temporal Expressions Annotated in Clinical Notes	Hegler Tissot, Angus Roberts, Leon Derczynski, Genevieve Gorrell, Marcos Didonet del Fabro	Proceedings of the joint ISO-ACL workshop on Interoperable Semantic Annotation	2015	ACL/ISO	2015	workshop	doi:10.3115/v1/W15-0211
24	SemEval-2015 Task 6: Clinical TempEval	Steven Bethard, Leon Derczynski, Guergana Savova, James Pustejovsky, Marc Verhagen	Proceedings of the workshop on Semantic Evaluation	2015	ACL	2015	workshop	doi:10.3115/v1/S15-2136
25	USFD: Twitter NER with Drift Compensation and Linked Data	Leon Derczynski, Isabelle Augenstein, Kalina Bontcheva	Proceedings of the ACL workshop on Noisy User-generated Text	2015	ACL	2015	workshop	doi:10.3115/v1/W15-4306
26	Towards Detecting Rumours in Social Media	Arkaitz Zubiaga, Maria Liakata, Rob Procter, Kalina Bontcheva, Peter Tolmie	AI4Cities Workshop	2015		2015	workshop	
27	Making the Most of Tweet-Inherent Features for Social Spam Detection on Twitter	Bo Wang, Arkaitz Zubiaga, Maria Liakata, Rob Procter	WWW Workshop on Making Sense of Microposts	2015		2015	workshop	
28	Overview of TweetMT: A Shared Task on Machine Translation of Tweets at SEPLN 2015	Iñaki Alegria, Nora Aranberri, Cristina España-Bonet, Pablo Gamallo, Hugo Gonçalo Oliveira, Eva Martínez Garcia, Iñaki San Vicente, Antonio Toral, Arkaitz Zubiaga	Proceedings of the TweetMT workshop	2015		2015	workshop	
29	UFPRSheffield: Contrasting Rule-based and Support Vector Machine Approaches to Time Expression Identification in Clinical TempEval	H Tissot, A Roberts, G Gorrell, L Derczynski, M Didonet del Fabro	Proceedings of the workshop on Semantic Evaluation	2015	ACL	2015	workshop	doi:10.3115/v1/S15-2141

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<b>Scientific (peer reviewed) publications</b>								
<i>No.</i>	<i>Title</i>	<i>Main author</i>	<i>Title of the periodical or the series</i>	<i>Number, date or frequency</i>	<i>Publisher</i>	<i>Year of publication</i>	<i>Article type</i>	<i>Permanent identifier</i>
30	PHEME: Computing Veracity --- the Fourth Challenge of Big Social Data	Leon Derczynski, Kalina Bontcheva, Michal Lukasik, Thierry Declerck, Arno Scharl, Georgi Georgiev, Petya Osenova, Tomas Pariente Lobo, Anna Kolliakou, Robert Stewart, Sara-Jayne Terp, Geraldine Wong, Christian Burger, Arkaitz Zubiaga, Rob Procter and Maria Liakata.	Proceedings of the ESWC EU Project Networking Session.	2015		2015	workshop	
31	Semantic Systems and Visual Tools to Support Environmental Communication	Arno Scharl, David Herring, Walter Rafelsberger, Alexander Hubmann-Haidvogel, Ruslan Kamolov, Daniel Fischl, Michael Föls and Albert Weichselbraun	IEEE Systems Journal	2015	IEEE			
32	Analyzing the Public Discourse on Works of Fiction – Detection and Visualization of Emotion in Online Coverage about HBO’s Game of Thrones	Arno Scharl, Alexander Hubmann-Haidvogel, Alistair Jones, Daniel Fischl, Ruslan Kamolov, Albert Weichselbraun and Walter Rafelsberger	Information Processing & Management, Vol. 52	2015	Elsevier			
33	Entity Grouping for Accessing Social Streams via Word Clouds.	Martin Leginus, Leon Derczynski, Peter Dolog	Lecture Notes in Business Information Processing	2015	Springer	2016	book chapter	
34	Generalised Brown Clustering and Roll-Up Feature Generation	Leon Derczynski, Sean Chester	Proceedings of the conference of the Association for the Advancement of Artificial Intelligence	2016	AAAI	2016	conference	
35	Ontological Modelling of Rumors	T. Declerck et. al	Proceedings of Workshop on Social	01/07/2015	Springer	2016	workshop	

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<b>Scientific (peer reviewed) publications</b>								
<i>No.</i>	<i>Title</i>	<i>Main author</i>	<i>Title of the periodical or the series</i>	<i>Number, date or frequency</i>	<i>Publisher</i>	<i>Year of publication</i>	<i>Article type</i>	<i>Permanent identifier</i>
			Media and the Web of Linked Data					
36	GATE-Time: Extraction of Temporal Expressions and Events.	Leon Derczynski, Jannik Strötgen, Diana Maynard, Mark A. Greenwood, Manuel Jung	Proceedings of the 10th Conference on International Language Resources and Evaluation (LREC 2016)	2016	ELRA	2016	conference	
37	TweetMT: A Parallel Microblog Corpus	Iñaki San Vicente, Iñaki Alegria, Cristina España-Bonet, Pablo Gamallo, Hugo Gonçalo Oliveira, Eva Martinez Garcia, Antonio Toral, Arkaitz Zubiaga	Language Resources and Evaluation Conference	2016		2016	conference	
38	TweetLID: A Benchmark for Tweet Language Identification	Arkaitz Zubiaga, Iñaki San Vicente, Pablo Gamallo, José Ramon Pichel, Iñaki Alegria, Nora Aranberri, Aitzol Ezeiza, Víctor Fresno	Language Resources and Evaluation	2016		2016	journal	
39	Analysing How People Orient to and Spread Rumours in Social Media by Looking at Conversational Threads	Arkaitz Zubiaga, Maria Liakata, Rob Procter, Geraldine Wong Sak Hoi, Peter Tolmie	PLoS ONE	2016	PLOS	2016	journal	doi:10.1371/journal.pone.0150989
40	Hawkes Processes for Continuous Time Sequence Classification: an Application to Rumour Stance Classification in Twitter	Michal Lukasik, P. K. Srijith, Duy Vu, Kalina Bontcheva, Arkaitz Zubiaga, Trevor Cohn	ACL	2016	ACL	2016	conference	
41	Stance classification in Rumours as a Sequential Task Exploiting the Tree Structure of Social Media	Arkaitz Zubiaga, Elena Kochkina, Maria Liakata, Rob Procter, Michal Lukasik	COLING	2016	ACL	2016	conference	

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<b>Scientific (peer reviewed) publications</b>								
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	Conversations							
42	Broad Twitter Corpus: A Diverse Named Entity Recognition Resource	Leon Derczynski, Kalina Bontcheva, Ian Roberts	Proceedings of the International Conference on Computational Linguistics (COLING)	2016	ICCL	2016	conference	
43	Novel psychoactive substances: an investigation of temporal trends in social media and electronic health records	Anna Kolliakou, Michael Ball, Leon Derczynski, David Chandran, George Gkotsis, Paolo Deluca, Richard Jackson, Hitesh Shetty, Robert Stewart	European Psychiatry	2016	Elsevier	2016	journal	
44	Extracting Information from Social Media with GATE	Kalina Bontcheva, Leon Derczynski	Working with Text: Tools, Techniques and Approaches for Text Mining	2016	Elsevier	2014	book chapter	
45	Towards a Formal Representation of Components of German Compounds	Thierry Declerck, Piroska Lendvai	Proceedings of the 14th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology	2016	ACL	2016	Workshop	
46	Ontological Modelling of Rumors	Thierry Declerck, Petya Osenova, Georgi Georgiev, Piroska Lendvai	Chapter in Book "Linguistic Linked Open Data"	2016	Springer	2016	Book Chapter, extended version of a selected workshop paper	
47	Monolingual Social Media Datasets for Detecting Contradiction and Entailment	Piroska Lendvai, Isabelle Augenstein, Kalina Bontcheva, Thierry Declerck	Proceedings of the Tenth International Conference on Language Resources	2016	LREC	2016	Conference	

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<b>Scientific (peer reviewed) publications</b>								
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			and Evaluation (LREC'16)					
48	Representation of Polarity Information of Elements of German Compound Words	Thierry Declerck	Proceedings of LDL 2016 5th Workshop on Linked Data in Linguistics: Managing, Building and Using Linked Language Resources	2016	LREC	2016	Workshop	
49	Joint Proceedings of the 2th Workshop on Emotions, Modality, Sentiment Analysis and the Semantic Web and the 1st International Workshop on Extraction and Processing of Rich Semantics from Medical Texts	Mauro Dragoni, Diego Reforgiato Recupero, Kerstin Denecke, Yihan Deng, Thierry Declerck (eds.)	Editors of the proceedings	2016	ESWC	2016	Workshop	
50	Towards the Harmonization and Segmentation of German Hashtags	Thierry Declerck, Piroska Lendvai	Proceedings of NLP4CMC III: 3rd Workshop on Natural Language Processing for Computer-Mediated Communication	2016	Konvens	2016	Workshop	
51	Factuality Drift Assessment by Lexical Markers in Resolved Rumors	Piroska Lendvai, Uwe Reichel, Thierry Declerck	Proceedings of the 1st Int. Workshop on Semantic Change & Evolving	2016	Semantics	2016	Workshop	
52	Veracity Computing from Lexical Cues and Perceived Certainty Trends	Uwe Reichel, Piroska Lendvai	Proceedings of the 2nd Workshop on Noisy User-generated Text (W-NUT)		COLING	2016	Workshop	
53	Contradiction Detection	Piroska Lendvai,Uwe	Proceedings of the	2016	COLING	2016	Workshop	

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<b>Scientific (peer reviewed) publications</b>								
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	for Rumorous Claims	Reichel	COLING 2016 Workshops: Extra-Propositional Aspects of Meaning (ExProM) in Computational Linguistics					
54	Towards a Sense-based Access to Related Online Lexical Resources	Thierry Declerck, Karlheinz Mörth	Proceedings of the XVII EURALEX International Congress	2016	Euralex	2016	Conference	
55	Visualising the Propagation of News on the Web	Svitlana Vakulenko, Max Göbel, Arno Scharl and Lyndon Nixon	Proceedings of the 1st International Workshop on Recent Trends in News Information Retrieval, 38th European Conference on Information Retrieval (ECIR-2016)	2016				
56	Detection of Valid Sentiment-Target Pairs in Online Product Reviews and News Media Coverage	Svitlana Vakulenko, Albert Weichselbraun and Arno Scharl	Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence (WI-2016)	2016	IEEE			
57	Scalable Knowledge Extraction and Visualization for Web Intelligence	Arno Scharl, Albert Weichselbraun, Max Göbel, Walter Rafelsberger and Ruslan Kamolov	Proceedings of the 49th Hawaii International Conference on System Sciences (HICSS-2016)	2016	IEEE			
58	The Generation of a Corpus for Clinical Sentiment Analysis	Yihan Deng, Thierry Declerck, Piroska Lendvai and Kerstin Denecke	Chapter in Book "The Semantic Web Volume 9989", Springer	2017	Springer	2016	Book Chapter, extended version of selected workshop papers	
59	Supporting the use of	Peter Tolmie, Rob Procter,	ACM CHI conference	2017	ACM	2017	conference	



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<b>Scientific (peer reviewed) publications</b>								
<i>No.</i>	<i>Title</i>	<i>Main author</i>	<i>Title of the periodical or the series</i>	<i>Number, date or frequency</i>	<i>Publisher</i>	<i>Year of publication</i>	<i>Article type</i>	<i>Permanent identifier</i>
	user generated content in journalistic practice	Dave Randall, Mark Rouncefield, Christian Burger, Geraldine Wong Sak Hoi, Arkaitz Zubiaga, Maria Liakata						
60	Using Fuzzy Logic to Leverage HTML Markup for Web Page Representation	Alberto P. García-Plaza, Víctor Fresno, Raquel Martínez, Arkaitz Zubiaga	IEEE Transactions on Fuzzy Systems	2017	IEEE	2017	journal	
61	TDParse: Multi-target-specific Sentiment Recognition on Twitter	Bo Wang, Maria Liakata, Arkaitz Zubiaga, Rob Procter	EACL	2017	ACL	2017	conference	
62	Analysing the social fingerprints of pro-independence movements	Arkaitz Zubiaga	Politics, Protest, Emotion: Interdisciplinary Perspectives	2017	PressBooks	2017	book chapter	
63	Automatically ordering events and times in text	Leon Derczynski		2017	Springer	2017	book	
64	Generalisation in Named Entity Recognition: A Quantitative Analysis	Isabelle Augenstein, Leon Derczynski, Kalina Bontcheva	Computer Speech and Language	2017	Elsevier	2017	journal	
65	SemEval-2017 Task 8: RumourEval: Determining rumour veracity and support for rumours	Leon Derczynski, Kalina Bontcheva, Maria Liakata, Rob Procter, Geraldine Wong Sak Hoi, Arkaitz Zubiaga	Proceedings of the workshop on Semantic Evaluation	2017	ACL	2017	workshop	
66	Twitter Geolocation Prediction Shared Task of the 2016 Workshop on Noisy User-generated Text	Bo Han, Afshin Rahimi, Leon Derczynski, Timothy Baldwin	Proceedings of the 2nd Workshop on Noisy User-generated Text (WNUT)	2017	ACL	2017	workshop	
67	Microblog Analysis as a Programme of Work	Peter Tolmie, Rob Procter, Mark Rouncefield, Maria	ACM Transactions on Social Computing		ACM		journal (accepted)	

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<b>Scientific (peer reviewed) publications</b>								
<i>No.</i>	<i>Title</i>	<i>Main author</i>	<i>Title of the periodical or the series</i>	<i>Number, date or frequency</i>	<i>Publisher</i>	<i>Year of publication</i>	<i>Article type</i>	<i>Permanent identifier</i>
		Liakata, Arkaitz Zubiaga					subject to minor revision)	
68	Towards Real-Time, Country-Level Location Classification of Worldwide Tweets	Arkaitz Zubiaga, Alex Voss, Rob Procter, Maria Liakata, Bo Wang, Adam Tsakalidis	IEEE Transactions on Knowledge and Data Engineering		IEEE		journal (accepted subject to minor revision)	
69	Using Gaussian Processes for Rumour Stance Classification in Social Media	Michal Lukasik, Kalina Bontcheva, Trevor Cohn, Arkaitz Zubiaga, Maria Liakata, Rob Procter	ACM Transactions on Information Systems		ACM		journal (under review, major revision submitted)	
70	Learning Reporting Dynamics during Breaking News for Rumour Detection in Social Media	Arkaitz Zubiaga, Maria Liakata, Rob Procter	Natural Language Engineering		Cambridge University Press		journal (under review, major revision submitted)	
71	Stance Classification of Social Media Users in Independence Movements	Arkaitz Zubiaga, Bo Wang, Maria Liakata, Rob Procter	IEEE Intelligent Systems		IEEE		journal (under review)	
72	Discourse-Aware Rumour Stance Classification in Social Media Using Sequential Classifiers	Arkaitz Zubiaga, Elena Kochkina, Maria Liakata, Rob Procter, Michal Lukasik, Kalina Bontcheva, Trevor Cohn, Isabelle Augenstein	Data Mining and Knowledge Discovery		Springer		journal (under review)	
73	Detection and Resolution of Rumours in Social Media: A Survey	Arkaitz Zubiaga, Ahmet Aker, Kalina Bontcheva, Maria Liakata, Rob Procter	ACM Computing Surveys		ACM		journal (under review)	

Table 1: Scientific (peer-reviewed) Publications

## D9.4 / Dissemination and Exploitation Report

PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/Period	Place
1	Press Release	A. Scharl	<a href="#">Gerüchteküche 2.0: Wahrheitsgehalt von Social Media-Information automatisch beurteilt 7-Nationen--Forschungsprojekt der MODUL University Vienna gestartet</a>	January 2014	
2	Press Release	A. Scharl	<a href="#">Rumor Mill 2.0: Automatic Assessment of the Veracity of Social Media Information 7-Country Research Project Powered by Web Intelligence Technologies of MODUL University Vienna</a>	January 2014	
3	Newspaper Interview	T. Pariente	La ciencia diseña un detector para cazar mentiras en internet	10 March 2014	<a href="#">El Periódico newspaper</a>
4	Presentation	K. Bontcheva	<a href="#">Natural Language Processing for Social Media</a>	April 2014	EACL'2014
5	Invited Talk	A. Scharl	Messung von Kommunikationserfolg	April 2014	FWF Event "Big Data Chancen und Risiken", Vienna, Austria
6	Workshop	L. Derczynski	<a href="#">Network Science and online Social Network Analysis</a>	May 2014	PhD school course, <a href="#">Uppsala Universitet</a> , Sweden
7	Presentation	R. Procter	Big Data and the Co-Production of Social Scientific Knowledge	May 2014	Digital Scholarship Day of Ideas, Edinburgh University
8	Workshop	K. Bontcheva	<a href="#">Mining social media with GATE</a>	June 2014	7th GATE summer school, Sheffield, UK
9	Workshop	L. Derczynski	<a href="#">Practical Social Media Analysis: finding utility in trivia</a>	June 2014	LREC'2014
10	Presentation	L. Derczynski	Leveraging the Power of social media	June 2014	Second <a href="#">University of Sheffield Engineering Symposium</a> , Sheffield, UK
11	Presentation	A. Kolliakou	PHEME: Computing veracity in social media	June 2014	<a href="#">Department of Digital Humanities</a> , King's College London
12	Presentation	L. Derczynski	<a href="#">PHEME: Veracity in Digital Social Networks.</a>	July 2014	<a href="#">UMAP Project Synergy workshop</a>
13	Presentation	L. Derczynski	Human Information Networks	August 2014	<a href="#">ESSLLI</a> , University of Tübingen, Germany
14	Interviews	R. Procter	PHEME project overviews	August 2014	Interviews with various media outlets: Estado de S. Paulo; Columbia Journalism Review; Science and Vie Junior; BBC Arabic; ResonanceFM
15	Conferences	Boris Velichkov	SU-FMI: System Description for SemEval-2014 Task 9 on Sentiment Analysis in Twitter	August 2014	Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014)
16	Presentation	L. Derczynski	Social Media: a Microscope for Public Discourse	September 2014	<a href="#">Digital Humanities Congress</a> , Sheffield, UK
17	Presentation	L. Derczynski	How to analyse social media content	September	<a href="#">Universität der Bundeswehr München</a> , Munich, Germany

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PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/ Period	Place
				2014	
18	Presentation	A. Kolliakou	Social media platforms and clinical records: trend detection and intervention	September 2014	5th ANNIVERSARY, NIHR Maudsley Biomedical Research Centre Nucleus
19	Presentation	R. Procter	Social media and crisis management	September 2014	British Bankers Association
20	webLyzard Newsletter	A. Scharl	webLyzard Newsletter 17 Decision Support	September 2014	
21	Presentation	A. Scharl	Visualizing Contextual Information in Aggregated Web Content Repositories	October 2014	9th Latin American Web Congress, Ouro Preto, Brazil
22	Interview	G. Wong	PHEME project objectives	October 2014	Interview with France Inter radio show (Secrets d'info) -- in French
23	Invited talk	A. Kolliakou	Social media platforms and clinical records in PHEME: Trend detection and intervention for mental health.	December 2014	TELL ME conference, Venice, Italy
24	Invited Lectures +Radio Interview	Thierry Declerck	USAAR	January 2015	Invited lectures at UNED, Madrid
25	Invited talk	L. Derczynski, K. Bontcheva	<a href="#">Frontiers in Named Entity Recognition and Linking</a>	January 2015	University of Cambridge
26	Invited talk	K. Bontcheva	Presenting PHEME	January 2015	British Telecom, Adastral Park, UK
27	Presentation	A.Zubiaga	AAAI Workshop on AI for Cities	January 2015	Towards detecting rumours in social media
28	Poster presentation	A. Kolliakou	Mephedrone use and its characteristics in mental health records	March 2015	BRC Annual Retreat
29	PHEME dissemination and presentation	T. Declerck		March 2015	third edition of the News Impact Summit (NIS Hamburg, 31.03.2015: on the theme "Verification, Investigation and Digital Ethics".
30	Poster presentation	T. Declerck	PHEME poster	April 2015	the Riga Summit on the Digital Single Market (April 27-29, 2015; <a href="http://www.rigasummit2015.eu/">http://www.rigasummit2015.eu/</a> )
31	Press article on Technologies of the future	Mentioning PHEME and Thierry Declerck	USAAR	April 2015	"Lügendetektor", in the Süddeutsche Zeitung
32	Invited talk	M.Liakata	Towards analysing rumours in social media	April 2015	University of Pennsylvania
33	TV Interview	Thierry Declerck	Interview on PHEME	May 2015	Interview on PHEME for the "Aktueller Bericht", SR3

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PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/Period	Place
34	Presentation	T.Declerck	Invited talk on PHEME	May 2015	Invited talk on PHEME at: the 2nd workshop on Web and Data Science for News Publishing (collocated with WWW 2015, May 19, 2015; <a href="http://ailab.ijs.si/~marko/NewsWWW/">http://ailab.ijs.si/~marko/NewsWWW/</a> )
35	Tutorial	L Derczynski	<a href="#">Practical Annotation and Processing of Social Media with GATE</a>	May 2015	ESWC 2015
36	Presentation	K Bontcheva	Workshop: Rumors and Deception on Social Media: Detection, Tracking, and Visualization (#RDSM2015)	May 2015	WWW 2015
37	webLyzard Newsletter	Arno Scharl	webLyzard Newsletter 24 Automated Rumor and Emotion Detection	May 2015	
38	Tutorial	A.Zubiaga	IkerGazte, the 1st conference of Basque researchers	May 2015	<a href="#">Research based on data mined from social media</a>
39	Invited talk	A.Zubiaga	University of the Basque Country	May 2015	<a href="#">Detecting and Analysing Rumours on Twitter</a>
40	Presentation	A.Zubiaga	WWW Workshop on Microposts	May 2015	Making the Most of Tweet-Inherent Features for Social Spam Detection on Twitter
41	Presentation	A.Zubiaga	WWW Web Science Track	May 2015	Crowdsourcing the annotation of rumourous conversations in social media
42	Presentation and poster	T. Declerck, L. Derczynski	presenting PHEME at the European Session of ESWC 2015 in Portoroz, June 3rd 2015 ( <a href="http://2015.eswc-conferences.org/program/eu-project-networking">http://2015.eswc-conferences.org/program/eu-project-networking</a> )	June 2015	
43	Plenary talk	T. Declerck	USAAR presenting in a talk PHEME at the ARD/ZDF symposium on big data, Berlin.	June 2015	<a href="http://www.ard-zdf-medienakademie.de/AZM-Webseite/Artikel/Medienakademie/Symposium_Big_Data.html">http://www.ard-zdf-medienakademie.de/AZM-Webseite/Artikel/Medienakademie/Symposium_Big_Data.html</a>
44	Invited talk	M.Liakata	University of Cambridge	June 2015	Crowdsourcing the annotation of rumours in social media
45	Workshop	L Derczynski	<a href="#">GATE and Social Media</a>	June 2015	8th GATE summer school, Sheffield, UK
46	Networking	Tomas Pariente	Networking with the MixedEmotions and Reveal EU projects	June 2015	BDVA Summit - Networking in the "Social Networks" session
47	Workshop/Networking	All PHEME	PHEME: Computing Veracity - the Fourth Challenge of Big Social Data	June 2015	ESWC EU Project Networking
48	Radio Interview	Thierry Declerck	USAAR	August 2015	"Die Wahrheit im Digitalen". in Deutschlandfunk

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PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/Period	Place
49	Presentation	L. Tolosi	PHEME: algorithms for rumor classification	September 2015	<a href="http://lml.bas.bg/ranlp2015/start1.php">http://lml.bas.bg/ranlp2015/start1.php</a>
50	Workshop presentation	A.Kolliakou	RCPsych Child and Adolescent psychiatry	September 2015	Big data in CAMHS: what is it, and can it improve mental health care?
51	Presentation	Ch Burger	Research Network SRG SSR	September 2015	SRG Big Data Workshop
52	Presentation	A. Scharl	Web Intelligence and Visual Analytics to Reveal the Impact of Online Communication	September 2015	SONIC Speaker Series, Chicago, USA
53	Booth presence	T.Declerck, K.Bontcheva, D. Losada	USAAR, USFD, USH at the PHEME booth at ICT-2015	October 2015	<a href="http://ec.europa.eu/digital-agenda/en/ict2015-innovate-connect-transform-lisbon-20-22-october-2015">http://ec.europa.eu/digital-agenda/en/ict2015-innovate-connect-transform-lisbon-20-22-october-2015</a>
54	Radio Interview	T. Pariente	Interview at M80 Radio in the program “Ya Veremos” about PHEME: “¿Fin de los bulos en redes sociales?”. In Spanish	October 2015	Podcast available at: <a href="http://www.ivoox.com/entrevista-tomas-pariente-fin-bulos-en-audios-mp3_rf_8998857_1.html">http://www.ivoox.com/entrevista-tomas-pariente-fin-bulos-en-audios-mp3_rf_8998857_1.html</a>
55	Presentation	A.Kolliakou	IFPE Conference	October 2015	Mephedrone use and its characteristics in mental health records
56	Presentation	M. Ball	IFPE Conference	October 2015	Volume and context of mental health drug discussion in social media
57	Invited talk	A.Zubiaga	Signal Media Ltd.	October 2015	News Mining and Analytics from Real-Time Social Media
58	Presentation	A. Scharl	Analyzing Facts, Future Events and Communication Trends	October 2015	Eye on Earth Summit 2015, Abu Dhabi, UAE
59	Presentation	A. Scharl	A Knowledge Co-Creation and Visual Analytics Platform for Environmental Communities	October 2015	Eye on Earth Summit 2015, Abu Dhabi, UAE
60	Presentation	Lyndon Nixon	Visual Analytics for Big Data Applications	October 2015	EMC2 Bootcamp, Vienna, Austria
61	Networking	T. Declerck	USAAR present and networking at the big data event “Making Sense of Big Data, including a meeting with the German Google News group.	November 2015	<a href="http://www.hiig.de/events/making-sense-of-big-data/">http://www.hiig.de/events/making-sense-of-big-data/</a> ,
62	Networking	T. Declerck, T. Pariente Lobo	Present and networking at the EDF event in Liuxemburg	November 2015	<a href="http://2015.data-forum.eu/">http://2015.data-forum.eu/</a>
63	Presentation	G.Georgiev, L.Tolosi	Social Media Rumor analysis by PHEME - applications in journalism	November 2015	At Journalistika 2.0, a conference organized by the European Association of Journalists, Bulgaria. <a href="http://www.aej-bulgaria.org/bul/p.php?post=7009">http://www.aej-bulgaria.org/bul/p.php?post=7009</a>
64	TV interview	G. Georgiev, L. Tolosi	Bulgarian TV channels: Bloomberg,	November 2015	Presentations of the PHEME project, with accent on the rumor identification algorithms and applications to journalism

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PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/Period	Place
			Bulgarian National TV, Bulgarian National Radio, Nova TV, BulgariaOnAir	December 2015	
65	Newspaper Interview	T. Pariente	Una 'Máquina de la verdad' para Internet	28 September 2015	<a href="#">El Mundo newspaper</a>
66	Networking	K.Bontcheva	Allan Turing Institute, London, UK	December 2015	<a href="#">The Foundations of Social Data Science workshop</a>
67	Lecture	A.Kolliakou	King's College London	January 2016	Social media platforms and clinical records: Trend detection and intervention
68	Invited talk	L. Derczynski	Interacting minds centre, Aarhus, Denmark	February 2016	Presentation on social media and its utility as a sensor
69	Guest lecture	A.Zubiaga	University of Warwick	February 2016	Stance Classification in Rumourous Twitter Conversations
70	Invited talk	M. Ball	King's College London	February 2016	Data mining, social media and medical records
71	Permanent videos	R.Stewart, M. Ball, A. Kolliakou	King's College London		<a href="http://www.slam.nhs.uk/research/cris/cris-videos">http://www.slam.nhs.uk/research/cris/cris-videos</a>
72	Invited Talk	A. Scharl	Invited Talk: Semantic Systems and Visual Tools to Analyze Climate Change Communication	May 2016	Invited Talk at the Barcelona Supercomputing Center
73	Podcast	G. Wong, A. Zubiaga, A. Kolliakou, SWI journalists	Interviews featured in a podcast by swissinfo.ch on PHEME project goals and tasks	May 2016	swissinfo.ch in English
74	Presentation	A. Scharl	Live Demo at the Plenary Session of the Science Policy Forum	May 2016	United Nations Environment Assembly (UNEA-2), Science Policy Forum, Nairobi, Kenya

D9.4 / Dissemination and Exploitation Report

PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/Period	Place
75	Presentation	A. Scharl	UNEP Live Web Intelligence - A Big Data Approach to Analyzing and Visualizing Stakeholder Communication from Online Sources	May 2016	United Nations Environment Assembly (UNEA-2), Sustainable Innovation Expo Nairobi, Kenya
76	Booth	Thierry Declerck	<i>USAAR contributing to the PHEME booth at the LREC 2016 HLT Village</i>	May 2016	LREC 2016
77	Workshop Organisation	Thierry Declerck	<i>USAAR co-organizing the ESWC 2016 Workshop on Extraction and Processing of Rich Semantics from Medical Texts (RichMedSem), at ESWC 2016</i>	May-June 2016	ESWC 2016
78	Video	G. Wong, SWI journalists	Video produced by swissinfo.ch explaining the goals of the project in journalism use case	June 2016	swissinfo.ch production in English, subtitles in 9 other languages; pHEME.eu website
79	Presentation	A. Scharl	UNEP Live Web Intelligence - Dashboard Presentation	June 2016	Eye on Earth Community
80	Press	G. Wong	Interview for an article published by journalism.co.uk on PHEME and verification tools for journalists	June 2016	journalism.co.uk
81	Workshop presentation	Anna Kolliakou	Social media platforms and clinical records: Trend detection and intervention	June 2016	ESWC 2016
82	Booth	K. Bontcheva, Thierry Declerck	<i>Contributing to the PHEME booth at the European Data Forum 2016.</i>	June 2016	European Data Forum 2016, Eindhoven
83	Poster Presentation	Thierry Declerck	<i>USAAR presenting a poster at the CLARIN Workshop in Hamburg, June 2016</i>	June 2016	CLARIN event
84	Press Release	A. Scharl	<a href="#">US Election 2016 Web Monitor: Forschungsteam aus Österreich präsentiert neue Online Plattform zur Analyse des US-Wahlkampfs</a>	June 2016	
85	Press Release	A. Scharl	<a href="#">The Virtual Road to the White House: US Election 2016 Web Monitor Tracks Online</a>	June 2016	



## D9.4 / Dissemination and Exploitation Report

PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/ Period	Place
			<a href="#">Perceptions of the Presidential Race</a>		
86	Presentation	K. Bontcheva	Presenting PHEME.	July 2016	NESTA, London
87	Workshop Panel Discussion	K. Bontcheva, G. Wong	Guests of a panel on verification and reporting on social web	September 2016	Reveal Project final workshop
88	Networking	K. Bontcheva	Presenting PHEME.	September 2016	ICT Information Day, Bratislava, Slovakia
89	Networking	A. Scharl	Networking at Northwestern University, Chicago	September 2016	Northwestern University, Chicago, USA
90	Seminar	Anna Kolliakou	Social media platforms and clinical records: Trend detection and intervention	October 2016	BRC Youth Awards
91	Presentation	A. Scharl	Analyzing the Digital Talk: Visual Tools for Exploring Global Communication Flows	October 2016	TedX Talk MODUL University Vienna
92	Presentation	Svitlana Vakulenko	Detection of Valid Sentiment-Target Pairs in Online Product Reviews and News Media Coverage	October 2016	2016 International Conference on Brain Informatics & Health, Omaha, USA
93	Media interview	K. Bontcheva	Here's Why Facebook's Trending Algorithm Keeps Promoting Fake News	26 October 2016	<i>BuzzFeedNews</i> <a href="https://www.buzzfeed.com/craigsilverman/can-facebook-trending-fight-off-fake-news">https://www.buzzfeed.com/craigsilverman/can-facebook-trending-fight-off-fake-news</a>
94	Flyer in event take-away bag	All PHEME (focus on WP7 and WP8)	PHEME: Computing Veracity across Media, Languages and Social Networks	November 2016	MIND Media Awards
95	Press Release	A. Scharl	<a href="#">Der US-Wahlkampf im virtuellen Showdown</a>	November 2016	
96	Newspaper Interview	T. Pariente	Facebook cede y vetará las noticias falsas	21 November 2016	<a href="#">El Periódico newspaper</a>

D9.4 / Dissemination and Exploitation Report

PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/Period	Place
97	Presentation	Anna Kolliakou	Healthcare events and mental health-related tweets: time series analyses in EHR and social media	December 2016	EPA Gothenburg 2016
98	Poster presentation	Anna Kolliakou	PHEME: Computing Veracity across Media, Languages and Social Networks	November 2016	King's Big Data Day
99	TV Interview	Tomas Pariente	Interview in one of the major national TV chains in Spain (La Sexta TV) in prime time. El Objetivo program.	November 2016	Recording available at <a href="http://www.lasexta.com/programas/el-objetivo/como-frenar-la-expansion-de-bulos-en-redes-sociales_2016120458440ade0cf245500ad2dcf3.html">http://www.lasexta.com/programas/el-objetivo/como-frenar-la-expansion-de-bulos-en-redes-sociales_2016120458440ade0cf245500ad2dcf3.html</a>
100	Presentation	K. Bontcheva	<i>Presenting PHEME</i>	November and December 2016	<i>BDVA Summit, Valencia, Spain</i>
101	Media Interview	K. Bontcheva	3 Million Brexit Tweets Reveal Leave Voters Talked About Immigration More Than Anything Else	9 Dec 2016	<i>BuzzFeed News</i> <a href="https://www.buzzfeed.com/jamesball/3-million-brexit-tweets-reveal-leave-voters-talked-about-imm">https://www.buzzfeed.com/jamesball/3-million-brexit-tweets-reveal-leave-voters-talked-about-imm</a>
102	Participation on invitation	Thierry Declerck	<i>USAAR present at a Rudolf Augstein Stiftung Event (journalismus, social media and democracy), Berlin, December 2016</i>	December 2016	<i>Rudolf Augstein Association</i>
103	webLyzard Newsletter	A. Scharl	<i>webLyzard Newsletter 30 Echo Chambers and Post-Truth Campaigns</i>	December 2016	
104	Press	G. Wong	Published an article on combating fake news, featuring PHEME and interview with K. Bontcheva	December 2016	swissinfo.ch in 10 languages (inc. English)
105	Lecture	Anna Kolliakou	Social media platforms and clinical records: trend detection and intervention	January 2017	King's College London - Big Data Module
106	Press	G. Wong	Interview featured in an article by Digiday on PHEME and combating fake news	January 2017	Digiday.com

D9.4 / Dissemination and Exploitation Report

PHEME -Dissemination Activities					
No.	Type of activities	Main leader	Title	Date/ Period	Place
107	Press	G. Wong	Interview with Le Temps newspaper for an article on how PHEME is tackling misinformation on the web	February 2017	Le Temps newspaper (French-language Swiss daily)
108	Lecture	Anna Kolliakou	Social media platforms and clinical records: trend detection and intervention	March 2017	King's College London - Epidemiology and Statistics for Mental Health Research
109	Video	swissinfo.ch	Video on the PHEME journalism dashboard, featuring interview with K. Bontcheva, Peter Tolmie, clips of journalists evaluating the tool	April 2017 (forthcoming)	swissinfo.ch
110	Invited talk	Arkaitz Zubiaga	Stance classification in social media	February 2017	University of the Basque Country
111	Media Interview	K.Bontcheva	Wie sich Lüge vor die Wahrheit legt	14 Feb 2017	<i>Frankfurter Allgemeine</i> <a href="http://www.faz.net/aktuell/feuilleton/debatten/projekt-pheme-geht-kampf-gegen-fake-news-maschinell-an-14870038.html?printPageArticle=true#pageIndex_2">http://www.faz.net/aktuell/feuilleton/debatten/projekt-pheme-geht-kampf-gegen-fake-news-maschinell-an-14870038.html?printPageArticle=true#pageIndex_2</a>
112	Interview	Rob Procter	Rumours and fake news	March 2017	Parliamentary Office of Science and Technology, UK
113	Press	SWI	swissinfo produced a news story on PHEME's affiliation to the new Academic partnership at First Draft News	March 2017	SWI swissinfo.ch
114	webLyzard Newsletter	A. Scharl	<i>webLyzard Newsletter 31 TEDx - Ideas Worth Spreading</i>	March 2017	<i>webLyzard</i>

Table 2: Dissemination Activities

2.3.2 *Press coverage*

At the start of the project partners issued a number of press releases, which attracted strong media attention. The tables below provide information broken down by countries and languages, where known. In a nutshell, the project has been front-page news in the Times newspaper in the UK, which then sparked an exceptionally strong media coverage including numerous mainstream and online media in the UK, Germany, Austria, Bulgaria, Switzerland, Spain, France, Ireland, Kenya, Canada, USA, Belgium, Hungary, Poland, India, Arab Emirates, Japan, South Africa, Australia, Bangladesh, Nigeria, Russia, Argentina, Peru, Uruguay, Mexico, and other countries.

During an early plenary meeting, the consortium discussed and agreed the following future media engagement strategy, which enabled us to capitalise strongly on the already established press release and media engagement strategy, as well as connections with strongly interested, partner journalists and news media:

1. Prior to putting online demos, software releases, or new press releases, all partners discussed their plans with the rest of the consortium, either during the monthly teleconference meetings or they requested a dedicated virtual partner meeting.
2. This strategy enabled us to engage and target first our strategic partner media and journalists from the Guardian, the New York Times, the BBC, the Bulgarian National Radio, and others. They have not only provided us with early feedback and acted as early adopters, but they were also strongly interested in covering exciting project developments as exclusive news articles.

The aim was to have a high profile, exclusive news article published by one or more of these media, which was then followed by a general press release and coordinated Twitter and website promotion. This was the strategy followed by the partner press offices at the start of the project, with excellent results, which we have managed to repeat during the project.

PHEME - Web & news Articles in English		
No.	Publication	Source
1	About Time Magazine	<a href="http://www.abouttimemagazine.co.uk/think/to-tell-the-truth/">http://www.abouttimemagazine.co.uk/think/to-tell-the-truth/</a>
2	AIT News	<a href="http://bit.ly/1E5ok8H">http://bit.ly/1E5ok8H</a>
3	All4Women	<a href="http://www.all4women.co.za/lifestyle/gadgets/social-media-lie-detector-could-help-quash-malicious-rumours">http://www.all4women.co.za/lifestyle/gadgets/social-media-lie-detector-could-help-quash-malicious-rumours</a>
4	AlleyWatch	<a href="http://www.alleywatch.com/2014/03/researchers-building-social-media-lie-detector/">http://www.alleywatch.com/2014/03/researchers-building-social-media-lie-detector/</a>
5	ArabNews	<a href="http://www.arabnews.com/news/528436">http://www.arabnews.com/news/528436</a>
6	BBC News	<a href="http://www.bbc.co.uk/news/technology-26263510">http://www.bbc.co.uk/news/technology-26263510</a>
7	British Council	<a href="http://www.britishcouncil.org/cubed/future-technology/checking-internet-rumours">http://www.britishcouncil.org/cubed/future-technology/checking-internet-rumours</a>

PHEME - Web & news Articles in English		
No.	Publication	Source
8	Broadstuff.com	<a href="http://www.broadstuff.com/archives/2799-Lies,-Damn-Lies-and-Social-Media.html">http://www.broadstuff.com/archives/2799-Lies,-Damn-Lies-and-Social-Media.html</a>
9	Business Community 2	<a href="http://www.business2community.com/social-buzz/false-tweets-lie-detector-sort-bs-0785532#!bGF8Du">http://www.business2community.com/social-buzz/false-tweets-lie-detector-sort-bs-0785532#!bGF8Du</a>
10	Cambodian Times	<a href="http://www.cambodiantimes.com/index.php/sid/220160269/scat/63e88d54af0cf473">http://www.cambodiantimes.com/index.php/sid/220160269/scat/63e88d54af0cf473</a>
11	CISTIB	<a href="http://www.cistib.org/cistib_shf/">http://www.cistib.org/cistib_shf/</a>
12	Click	<a href="http://www.clickonline.com/tech/social-media-lie-detector-in-development/23214/">http://www.clickonline.com/tech/social-media-lie-detector-in-development/23214/</a>
13	CNET	<a href="http://www.cnet.com/news/snakes-invade-casino-ask-the-social-media-lie-detector/">http://www.cnet.com/news/snakes-invade-casino-ask-the-social-media-lie-detector/</a>
14	Complex.com	<a href="http://www.complex.com/pop-culture/2014/02/lie-detector-tweets-twitter">http://www.complex.com/pop-culture/2014/02/lie-detector-tweets-twitter</a>
15	Compute Scotland	<a href="http://www.computescotland.com/veritas-for-pHEME-6940.php">http://www.computescotland.com/veritas-for-pHEME-6940.php</a>
16	CorpComms	<a href="http://www.corpcommsmagazine.co.uk/news/3472-a-lie-detector-that-tests-social-media-rumours-is-on-its-way">http://www.corpcommsmagazine.co.uk/news/3472-a-lie-detector-that-tests-social-media-rumours-is-on-its-way</a>
17	Daily Mail	<a href="http://www.dailymail.co.uk/sciencetech/article-2562919/A-lie-detector-TWEETS-Scientists-develop-tell-fact-fiction-140-characters-less.html">http://www.dailymail.co.uk/sciencetech/article-2562919/A-lie-detector-TWEETS-Scientists-develop-tell-fact-fiction-140-characters-less.html</a>
18	Daily Mirror	<a href="http://www.mirror.co.uk/news/technology-science/technology/twitter-lie-detector-scientists-hoping-3161951">http://www.mirror.co.uk/news/technology-science/technology/twitter-lie-detector-scientists-hoping-3161951</a>
19	Degree Escape	<a href="http://www.degreeescape.com/social-media-lie-detector-pHEME/">http://www.degreeescape.com/social-media-lie-detector-pHEME/</a>
20	Descrifier	<a href="http://descrifier.co.uk/technology/social-media-lie-detector-development/">http://descrifier.co.uk/technology/social-media-lie-detector-development/</a>
21	Discovery News	<a href="http://news.discovery.com/tech/apps/social-media-lie-detector-sorts-fact-from-fiction-140221.htm#mkcpgn=rssnws1">http://news.discovery.com/tech/apps/social-media-lie-detector-sorts-fact-from-fiction-140221.htm#mkcpgn=rssnws1</a>
22	Domain-b	<a href="http://www.domain-b.com/technology/20140221_researchers.html">http://www.domain-b.com/technology/20140221_researchers.html</a>
23	Dot.Social	<a href="http://dot-social.co.uk/coming-soon-online-lie-detector-to-test-social-media-rumours/">http://dot-social.co.uk/coming-soon-online-lie-detector-to-test-social-media-rumours/</a>
24	EFY Times	<a href="http://www.efytimes.com/e1/fullnews.asp?edid=130742">http://www.efytimes.com/e1/fullnews.asp?edid=130742</a>
25	Electronic Products	<a href="http://www.electronicproducts.com/Software/Test_and_Measurement_Software/Social_media_lie_detector_on_its_way_will_decipher_truth_from_fiction.aspx">http://www.electronicproducts.com/Software/Test_and_Measurement_Software/Social_media_lie_detector_on_its_way_will_decipher_truth_from_fiction.aspx</a>
26	Electronics Weekly	<a href="http://www.electronicweekly.com/university-electronics/university-of-sheffield/social-media-truth-2014-02/">http://www.electronicweekly.com/university-electronics/university-of-sheffield/social-media-truth-2014-02/</a>
27	Engadget	<a href="http://www.engadget.com/2014/02/19/twitter-lie-detector/">http://www.engadget.com/2014/02/19/twitter-lie-detector/</a>
28	EngageWeb	<a href="http://www.engageweb.co.uk/twitter-lie-detector-in-development-8842.html">http://www.engageweb.co.uk/twitter-lie-detector-in-development-8842.html</a>
29	Euronews	<a href="http://www.euronews.com/2014/02/20/a-lie-detector-for-social-media-is-coming-soon/">http://www.euronews.com/2014/02/20/a-lie-detector-for-social-media-is-coming-soon/</a>
30	Fashion Times	<a href="http://www.fashiontimes.com/articles/2771/20140221/social-media-lie-detector-pHEME.htm">http://www.fashiontimes.com/articles/2771/20140221/social-media-lie-detector-pHEME.htm</a>
31	First Coast News	<a href="http://www.firstcoastnews.com/story/news/features/2014/02/26/social-">http://www.firstcoastnews.com/story/news/features/2014/02/26/social-</a>

PHEME - Web & news Articles in English		
No.	Publication	Source
		<a href="http://media-lie-detector/5844399/">media-lie-detector/5844399/</a>
32	Fox News	<a href="http://www.foxnews.com/tech/2014/02/19/lie-detector-for-tweets-researchers-working-on-it/">http://www.foxnews.com/tech/2014/02/19/lie-detector-for-tweets-researchers-working-on-it/</a>
33	Gadgets and Gizmos	<a href="http://www.gadgetsandgizmos.org/the-social-media-lie-detector-project/">http://www.gadgetsandgizmos.org/the-social-media-lie-detector-project/</a>
34	Global Newsline	<a href="http://www.gnewsline.com/researchers-to-create-pHEME-a-lie-detector-for-twitter-and-facebook-605">http://www.gnewsline.com/researchers-to-create-pHEME-a-lie-detector-for-twitter-and-facebook-605</a>
35	Headlines & Global News	<a href="http://www.hngn.com/articles/24848/20140220/facebook-soon-know-youre-lying-researchers-develop-social-media-lie.htm">http://www.hngn.com/articles/24848/20140220/facebook-soon-know-youre-lying-researchers-develop-social-media-lie.htm</a>
36	Health Canal	<a href="http://www.healthcanal.com/mental-health-behavior/47861-new-project-to-identify-how-online-rumours-affect-our-health.html">http://www.healthcanal.com/mental-health-behavior/47861-new-project-to-identify-how-online-rumours-affect-our-health.html</a>
37	Here is the City	<a href="http://hereisthecity.com/en-gb/2014/02/21/plans-for-twitter-lie-detector-announced/">http://hereisthecity.com/en-gb/2014/02/21/plans-for-twitter-lie-detector-announced/</a>
38	Homland Security	<a href="http://www.homelandsecuritynewswire.com/dr20140220-building-a-lie-detector-for-social-media">http://www.homelandsecuritynewswire.com/dr20140220-building-a-lie-detector-for-social-media</a>
39	IBN Live	<a href="http://ibnlive.in.com/news/scientists-developing-an-online-lie-detector-for-twitter-facebook/453395-11.html">http://ibnlive.in.com/news/scientists-developing-an-online-lie-detector-for-twitter-facebook/453395-11.html</a>
40	Independent	<a href="http://www.independent.co.uk/life-style/gadgets-and-tech/features/rhodri-marsden-twitter-says-my-local-primark-is-on-fire-but-im-not-so-sure-9155594.html">http://www.independent.co.uk/life-style/gadgets-and-tech/features/rhodri-marsden-twitter-says-my-local-primark-is-on-fire-but-im-not-so-sure-9155594.html</a>
41	Index	<a href="http://index.hu/tech/2014/02/20/keszul_a_facebookos_hazugsagvizsgalo/">http://index.hu/tech/2014/02/20/keszul_a_facebookos_hazugsagvizsgalo/</a>
42	International Business Times	<a href="http://www.ibtimes.co.uk/twitter-lie-detector-identify-hoax-tweets-1437203">http://www.ibtimes.co.uk/twitter-lie-detector-identify-hoax-tweets-1437203</a>
43	International Business Times	<a href="http://www.ibtimes.co.in/researchers-develop-lie-detector-pHEME-to-counter-hoax-reports-on-twitter-facebook-539768">http://www.ibtimes.co.in/researchers-develop-lie-detector-pHEME-to-counter-hoax-reports-on-twitter-facebook-539768</a>
44	IOL Scitech	<a href="http://www.iol.co.za/scitech/technology/internet/spreading-rumours-online-1.1649999#.URzMsV90ek">http://www.iol.co.za/scitech/technology/internet/spreading-rumours-online-1.1649999#.URzMsV90ek</a>
45	IT Pro Portal	<a href="http://www.itproportal.com/2014/02/19/twitter-lie-detector-aims-separate-wheat-chaff/">http://www.itproportal.com/2014/02/19/twitter-lie-detector-aims-separate-wheat-chaff/</a>
46	IT Today	<a href="http://www.ittoday.co.kr/news/articleView.html?idxno=44108">http://www.ittoday.co.kr/news/articleView.html?idxno=44108</a>
47	ITV	<a href="http://www.itv.com/news/update/2014-02-19/scientists-developing-twitter-lie-detector-test/">http://www.itv.com/news/update/2014-02-19/scientists-developing-twitter-lie-detector-test/</a>
48	Japan Today	<a href="http://www.japantoday.com/category/technology/view/researchers-working-on-social-media-lie-detector">http://www.japantoday.com/category/technology/view/researchers-working-on-social-media-lie-detector</a>
49	Journalism.co.uk	<a href="http://www.journalism.co.uk/news/social-lie-detector-will-help-journalists-verify-online-rumours/s2/a555974/">http://www.journalism.co.uk/news/social-lie-detector-will-help-journalists-verify-online-rumours/s2/a555974/</a>
50	KCL	<a href="http://www.kcl.ac.uk/iop/news/records/2014/February/New-project-to-identify-how-online-rumours-affect-our-health.aspx">http://www.kcl.ac.uk/iop/news/records/2014/February/New-project-to-identify-how-online-rumours-affect-our-health.aspx</a>
51	Khaleej Times	<a href="http://www.khaleejtimes.com/kt-article-display-1.asp?xfile=/data/technology/2014/February/technology_February28.xml&amp;section=technology">http://www.khaleejtimes.com/kt-article-display-1.asp?xfile=/data/technology/2014/February/technology_February28.xml&amp;section=technology</a>

PHEME - Web & news Articles in English		
No.	Publication	Source
52	Kompasiana	<a href="http://teknologi.kompasiana.com/internet/2014/02/26/pHEME-akan-mampu-mengenali-berita-hoax-di-twitter-635758.html">http://teknologi.kompasiana.com/internet/2014/02/26/pHEME-akan-mampu-mengenali-berita-hoax-di-twitter-635758.html</a>
53	Mashable	<a href="http://mashable.com/2014/02/25/pHEME-twitter-lie-detector/?utm_medium=feed&amp;utm_source=rss">http://mashable.com/2014/02/25/pHEME-twitter-lie-detector/?utm_medium=feed&amp;utm_source=rss</a>
54	Med India	<a href="http://www.medindia.net/news/lie-detector-named-after-rumor-fuelling-greek-goddess-to-catch-out-fake-tweets-132184-1.htm">http://www.medindia.net/news/lie-detector-named-after-rumor-fuelling-greek-goddess-to-catch-out-fake-tweets-132184-1.htm</a>
55	Menafn.com	<a href="http://www.menafn.com/1093774412/Researchers-working-on-social-media-039lie-detector039">http://www.menafn.com/1093774412/Researchers-working-on-social-media-039lie-detector039</a>
56	Metro	<a href="http://metro.co.uk/2014/02/19/coming-soon-a-lie-detector-for-twitter-4309908/">http://metro.co.uk/2014/02/19/coming-soon-a-lie-detector-for-twitter-4309908/</a>
57	Modul University	<a href="http://www.modul.ac.at/article/view/rumor-mill-20-automatic-assessment-of-the-veracity-of-social-media-information/">http://www.modul.ac.at/article/view/rumor-mill-20-automatic-assessment-of-the-veracity-of-social-media-information/</a>
58	MostEpicStuff.com	<a href="http://mostepicstuff.com/twitter-liar-detector/">http://mostepicstuff.com/twitter-liar-detector/</a>
59	MSN News	<a href="http://news.msn.co.nz/worldnews/8802450/social-media-lie-detector-planned">http://news.msn.co.nz/worldnews/8802450/social-media-lie-detector-planned</a>
60	Multimedia Musings	<a href="http://sjfcmultimediaspring14.blogspot.co.uk/2014/02/pHEME-social-media-lie-detector.html">http://sjfcmultimediaspring14.blogspot.co.uk/2014/02/pHEME-social-media-lie-detector.html</a>
61	Mybroadband	<a href="http://mybroadband.co.za/news/internet/97105-researchers-working-on-social-media-lie-detector.html">http://mybroadband.co.za/news/internet/97105-researchers-working-on-social-media-lie-detector.html</a>
62	NDTV	<a href="http://www.ndtv.com/article/world/scientists-develop-lie-detector-for-social-media-488517?pfrom=home-rightnow">http://www.ndtv.com/article/world/scientists-develop-lie-detector-for-social-media-488517?pfrom=home-rightnow</a>
63	NDTV Gadgets	<a href="http://gadgets.ndtv.com/internet/news/lie-detector-pHEME-smokes-out-the-fake-tweets-486045">http://gadgets.ndtv.com/internet/news/lie-detector-pHEME-smokes-out-the-fake-tweets-486045</a>
64	News Plexer	<a href="http://www.newsplexer.com/2014/if-eu-funded-pHEME-and-other-future-tech-can-verify-online-credibility-the-role-of-journalists-changes-again/">http://www.newsplexer.com/2014/if-eu-funded-pHEME-and-other-future-tech-can-verify-online-credibility-the-role-of-journalists-changes-again/</a>
65	News Track India	<a href="http://www.newstrackindia.com/newsdetails/2014/02/20/315--Online-lie-detector-that-would-catch-your-fake-tweet-.html">http://www.newstrackindia.com/newsdetails/2014/02/20/315--Online-lie-detector-that-would-catch-your-fake-tweet-.html</a>
66	News Track India	<a href="http://www.newstrackindia.com/newsdetails/2014/02/20/74-Soon-lie-detecting-system-for-social-media.html">http://www.newstrackindia.com/newsdetails/2014/02/20/74-Soon-lie-detecting-system-for-social-media.html</a>
67	News.com.au	<a href="http://www.news.com.au/technology/online/pHEME-plans-to-stop-twitter-facebook-untruths/story-fnjwmwrh-1226833765617">http://www.news.com.au/technology/online/pHEME-plans-to-stop-twitter-facebook-untruths/story-fnjwmwrh-1226833765617</a>
68	Orange	<a href="http://web.orange.co.uk/article/news/scientists_plan_lie_detector_for_tweets">http://web.orange.co.uk/article/news/scientists_plan_lie_detector_for_tweets</a>
69	Perth Now	<a href="http://www.perthnow.com.au/technology/pHEME-plans-to-stop-twitter-facebook-untruths/story-fnjwnorc-1226833765617?nk=5424143f9bc359c6880fd1adbdcc0b4">http://www.perthnow.com.au/technology/pHEME-plans-to-stop-twitter-facebook-untruths/story-fnjwnorc-1226833765617?nk=5424143f9bc359c6880fd1adbdcc0b4</a>
	Physicsworld.com	<a href="http://blog.physicsworld.com/2014/01/23/uncovering-the-truth-in-social-media/">http://blog.physicsworld.com/2014/01/23/uncovering-the-truth-in-social-media/</a>
70	PR Examples	<a href="http://prexamples.com/2014/02/social-media-polygraph-finds-truth-on-twitter/">http://prexamples.com/2014/02/social-media-polygraph-finds-truth-on-twitter/</a>

PHEME - Web & news Articles in English		
No.	Publication	Source
71	Press Gazette	<a href="http://www.pressgazette.co.uk/content/boffins-developing-twitter-lie-detector-so-journalists-can-tell-if-tweet-telling-truth">http://www.pressgazette.co.uk/content/boffins-developing-twitter-lie-detector-so-journalists-can-tell-if-tweet-telling-truth</a>
72	Professional Security Magazine	<a href="http://www.professionalsecurity.co.uk/news/interviews/taking-on-the-whispers/">http://www.professionalsecurity.co.uk/news/interviews/taking-on-the-whispers/</a>
73	Raw Story	<a href="http://www.rawstory.com/rs/2014/02/19/real-time-fact-checking-european-researchers-developing-a-bullshit-detector-for-facebook/">http://www.rawstory.com/rs/2014/02/19/real-time-fact-checking-european-researchers-developing-a-bullshit-detector-for-facebook/</a>
74	Red Orbit	<a href="http://www.redorbit.com/news/technology/1113075812/lie-detector-online-rumors-development-022014/">http://www.redorbit.com/news/technology/1113075812/lie-detector-online-rumors-development-022014/</a>
75	RT.com	<a href="http://rt.com/news/social-media-lie-detector-964/">http://rt.com/news/social-media-lie-detector-964/</a>
76	RTT News	<a href="http://www.rttnews.com/2276162/pHEME-to-detect-lies-on-twitter-facebook.aspx?type=tech">http://www.rttnews.com/2276162/pHEME-to-detect-lies-on-twitter-facebook.aspx?type=tech</a>
77	Scoop Online	<a href="http://centreforjournalismprojects.co.uk/scooponline/?p=2475">http://centreforjournalismprojects.co.uk/scooponline/?p=2475</a>
78	SemanticWeb.com	<a href="http://semanticweb.com/tag/pHEME">http://semanticweb.com/tag/pHEME</a>
79	Server Managers	<a href="http://www.servermanagers.co.uk/controlling-chinese-whispers-social-media-lie-detector/">http://www.servermanagers.co.uk/controlling-chinese-whispers-social-media-lie-detector/</a>
80	Sheffield Tab	<a href="http://sheffield.tab.co.uk/2014/02/26/trending-for-truth-university-researchers-call-bullshit-on-twitter-rumours/">http://sheffield.tab.co.uk/2014/02/26/trending-for-truth-university-researchers-call-bullshit-on-twitter-rumours/</a>
81	Silicon Republic	<a href="http://www.siliconrepublic.com/new-media/item/35863-researchers-developing-a-so">http://www.siliconrepublic.com/new-media/item/35863-researchers-developing-a-so</a>
82	Simply Communicate	<a href="http://www.simply-communicate.com/news/simply-news/pHEME-social-media-lie-detector">http://www.simply-communicate.com/news/simply-news/pHEME-social-media-lie-detector</a>
83	Sky News	<a href="http://news.sky.com/story/1214023/scientists-plan-lie-detector-for-tweets">http://news.sky.com/story/1214023/scientists-plan-lie-detector-for-tweets</a>
84	Social Barrel	<a href="http://socialbarrel.com/pHEME-social-media-lie-detector-built-eu-researchers/55003">http://socialbarrel.com/pHEME-social-media-lie-detector-built-eu-researchers/55003</a>
85	SocialTimes	<a href="http://socialtimes.com/scientists-develop-social-media-lie-detector_b143239">http://socialtimes.com/scientists-develop-social-media-lie-detector_b143239</a>
86	Tech Forever	<a href="http://techforever.co.uk/tag/pHEME/">http://techforever.co.uk/tag/pHEME/</a>
87	Tech President	<a href="http://techpresident.com/news/wegov/24766/building-automatic-lie-detector-twitter">http://techpresident.com/news/wegov/24766/building-automatic-lie-detector-twitter</a>
88	TechieNews	<a href="http://www.techienews.co.uk/976689/social-media-lie-detector-developed-spot-hoax-tweets/">http://www.techienews.co.uk/976689/social-media-lie-detector-developed-spot-hoax-tweets/</a>
89	Techlicious	<a href="http://www.techlicious.com/blog/researchers-building-social-media-lie-detector/">http://www.techlicious.com/blog/researchers-building-social-media-lie-detector/</a>
90	Technologia	<a href="http://tecnologia.it.msn.com/notizie/pHEME-il-fact-checking-arriva-su-twitter">http://tecnologia.it.msn.com/notizie/pHEME-il-fact-checking-arriva-su-twitter</a>
91	Technology Everyday	<a href="http://technology.indiaeveryday.in/fullnews-lie-detector-to-weed-out-truth-from-social-media-1364-6571440.htm">http://technology.indiaeveryday.in/fullnews-lie-detector-to-weed-out-truth-from-social-media-1364-6571440.htm</a>
92	Technology Everyday	<a href="http://technology.indiaeveryday.in/fullnews-researchers-are-working-on-a-lie-detector-to-sniff-out-1423-6564348.htm">http://technology.indiaeveryday.in/fullnews-researchers-are-working-on-a-lie-detector-to-sniff-out-1423-6564348.htm</a>



PHEME - Web & news Articles in English		
No.	Publication	Source
93	TechTimes.com	<a href="http://www.techtimes.com/articles/3621/20140221/its-a-hoax-new-lie-detector-spots-social-media-fibs.htm">http://www.techtimes.com/articles/3621/20140221/its-a-hoax-new-lie-detector-spots-social-media-fibs.htm</a>
94	Tempo.co	<a href="http://www.tempo.co/read/news/2014/02/19/072555636">http://www.tempo.co/read/news/2014/02/19/072555636</a>
95	The Daily Dot	<a href="http://www.dailydot.com/technology/pHEME-lie-detector-for-twitter/">http://www.dailydot.com/technology/pHEME-lie-detector-for-twitter/</a>
96	The Guardian	<a href="http://www.theguardian.com/tv-and-radio/2014/apr/24/digital-human-radio-review">http://www.theguardian.com/tv-and-radio/2014/apr/24/digital-human-radio-review</a>
97	The Inquirer	<a href="http://www.theinquirer.net/inquirer/news/2330175/lie-detector-developed-for-social-networking-websites">http://www.theinquirer.net/inquirer/news/2330175/lie-detector-developed-for-social-networking-websites</a>
98	The Japan Times	<a href="http://www.japantimes.co.jp/news/2014/02/20/world/social-media-lie-detector-in-the-works/#.URywMV90ek">http://www.japantimes.co.jp/news/2014/02/20/world/social-media-lie-detector-in-the-works/#.URywMV90ek</a>
99	The Korea Herald	<a href="http://nwww.koreaherald.com/view.php?ud=20140221000828">http://nwww.koreaherald.com/view.php?ud=20140221000828</a>
100	The News Class	<a href="http://www.thenewsclass.com/lifestyle/2014/pHEME-a-lie-detector-developed-for-social-media-websites/">http://www.thenewsclass.com/lifestyle/2014/pHEME-a-lie-detector-developed-for-social-media-websites/</a>
101	The Register	<a href="http://www.theregister.co.uk/2014/02/20/social_media_twitter_lie_detector_project/">http://www.theregister.co.uk/2014/02/20/social_media_twitter_lie_detector_project/</a>
102	The Sydney Morning Herald	<a href="http://www.smh.com.au/digital-life/digital-life-news/researchers-working-on-social-media-lie-detector-20140223-33618.html">http://www.smh.com.au/digital-life/digital-life-news/researchers-working-on-social-media-lie-detector-20140223-33618.html</a>
103	The Telegraph	<a href="http://www.telegraph.co.uk/technology/social-media/10647974/Scientists-develop-a-lie-detector-for-tweets.html">http://www.telegraph.co.uk/technology/social-media/10647974/Scientists-develop-a-lie-detector-for-tweets.html</a>
104	The Times of India	<a href="http://timesofindia.indiatimes.com/tech/social-media/Soon-a-lie-detector-to-test-social-media-posts/articleshow/30764268.cms">http://timesofindia.indiatimes.com/tech/social-media/Soon-a-lie-detector-to-test-social-media-posts/articleshow/30764268.cms</a>
105	The Vice	<a href="http://www.refresh.vice-motherboard-test.appspot.com/blog/a-social-media-lie-detector-hopes-to-quash-viral-rumours">http://www.refresh.vice-motherboard-test.appspot.com/blog/a-social-media-lie-detector-hopes-to-quash-viral-rumours</a>
106	The Week	<a href="http://www.theweek.co.uk/technology/57386/twitter-lie-detector-will-combat-false-internet-rumours">http://www.theweek.co.uk/technology/57386/twitter-lie-detector-will-combat-false-internet-rumours</a>
107	The Yorkshire Post	<a href="http://www.yorkshirepost.co.uk/news/main-topics/lies-damned-lies-and-tweets-how-to-spot-those-urban-myths-1-6449104">http://www.yorkshirepost.co.uk/news/main-topics/lies-damned-lies-and-tweets-how-to-spot-those-urban-myths-1-6449104</a>
108	Time	<a href="http://techland.time.com/2014/02/20/researchers-building-social-media-lie-detector/">http://techland.time.com/2014/02/20/researchers-building-social-media-lie-detector/</a>
109	Times Higher Education	<a href="http://www.timeshighereducation.co.uk/news/the-week-in-higher-education-27-february-2014/2011628.article">http://www.timeshighereducation.co.uk/news/the-week-in-higher-education-27-february-2014/2011628.article</a>
110	Ulitzer	<a href="http://buyersteps.ulitzer.com/node/2979674">http://buyersteps.ulitzer.com/node/2979674</a>
111	Us vs the3m.com	<a href="http://usvsth3m.com/post/77288441122/beep-beep-the-twitter-lie-detector-is-coming">http://usvsth3m.com/post/77288441122/beep-beep-the-twitter-lie-detector-is-coming</a>
112	USA Today	<a href="http://www.usatoday.com/story/news/nation-now/2014/02/26/lie-detector-social-media-twitter/5701895/">http://www.usatoday.com/story/news/nation-now/2014/02/26/lie-detector-social-media-twitter/5701895/</a>
113	USFD	<a href="http://www.sheffield.ac.uk/news/nr/lie-detector-social-media-sheffield-twitter-facebook-1.354715">http://www.sheffield.ac.uk/news/nr/lie-detector-social-media-sheffield-twitter-facebook-1.354715</a>
114	V3	<a href="http://www.v3.co.uk/v3-uk/the-frontline-blog/2330268/twitter-lie-detector-aims-to-catch-out-malicious-rumour-mongers">http://www.v3.co.uk/v3-uk/the-frontline-blog/2330268/twitter-lie-detector-aims-to-catch-out-malicious-rumour-mongers</a>

PHEME - Web & news Articles in English		
No.	Publication	Source
115	WebLyzard.com	<a href="http://www.weblyzard.com/pHEME/">http://www.weblyzard.com/pHEME/</a>
116	Webnews	<a href="http://www.webnews.it/2014/02/20/pHEME-la-macchina-della-verita-per-twitter/?utm_source=feedburner&amp;utm_medium=feed&amp;utm_campaign=Feed%3A+Webnews">http://www.webnews.it/2014/02/20/pHEME-la-macchina-della-verita-per-twitter/?utm_source=feedburner&amp;utm_medium=feed&amp;utm_campaign=Feed%3A+Webnews</a>
117	Yahoo	<a href="https://uk.news.yahoo.com/scientists-plan-lie-detector-tweets-121649354.html#lnTvJbD">https://uk.news.yahoo.com/scientists-plan-lie-detector-tweets-121649354.html#lnTvJbD</a>

Table 1: Press and news articles in English

Other media Coverage by Country and Language	
Publication	Source
Austria: APA Science	<a href="https://science.apa.at/dossier/Wie_Algorithmen_beim_Faktencheck_auf_Social_Media_helfen/SCI_20170126_SCI171594344034081268">https://science.apa.at/dossier/Wie_Algorithmen_beim_Faktencheck_auf_Social_Media_helfen/SCI_20170126_SCI171594344034081268</a>
Austria: APA Science	<a href="https://science.apa.at/dossier/Big_Data_fuer_Marktforschung_und_soziale_Innovation/SCI_20140528_SCI57912627218541162">https://science.apa.at/dossier/Big_Data_fuer_Marktforschung_und_soziale_Innovation/SCI_20140528_SCI57912627218541162</a>
Austria: APA Science	<a href="https://science.apa.at/rubrik/kultur_und_gesellschaft/Wiener_Forscher_entwickeln_Luegendetektor_fuer_Social_Media/SCI_20140116_SCI39351351616484904">https://science.apa.at/rubrik/kultur_und_gesellschaft/Wiener_Forscher_entwickeln_Luegendetektor_fuer_Social_Media/SCI_20140116_SCI39351351616484904</a>
Austria: Computerwelt.at	<a href="http://www.computerwelt.at/news/detail/artikel/100654-luegendetektor-fuer-social-media/">http://www.computerwelt.at/news/detail/artikel/100654-luegendetektor-fuer-social-media/</a>
Austria: Der Kurier	<a href="http://kurier.at/lebensart/technik/auf-der-jagd-nach-nachrichten-enten/48.773.705">http://kurier.at/lebensart/technik/auf-der-jagd-nach-nachrichten-enten/48.773.705</a>
Austria:DerStandard	<a href="http://derstandard.at/1389857285394/Luegendetektor-fuer-soziale-Netzwerke">http://derstandard.at/1389857285394/Luegendetektor-fuer-soziale-Netzwerke</a>
Austria:DerStandard	<a href="http://derstandard.at/2000027544469/EU-Projekt-will-Authentizitaet-von-Amateur-Nachrichtenvideos-pruefen">http://derstandard.at/2000027544469/EU-Projekt-will-Authentizitaet-von-Amateur-Nachrichtenvideos-pruefen</a>
Austria:DerStandard	Das Internet lügt - oder nicht? 02/04/2016 p.19
Austria: futurezone.at	<a href="http://wkw.ereader.tailored-apps.com/pdfs/1002.pdf">http://wkw.ereader.tailored-apps.com/pdfs/1002.pdf</a>
Austria: futurezone.at	<a href="https://futurezone.at/science/wiener-forscher-arbeiten-an-luegendetektor-fuer-memes/45.960.749">https://futurezone.at/science/wiener-forscher-arbeiten-an-luegendetektor-fuer-memes/45.960.749</a>
Austria: FWF Info	<a href="https://www.fwf.ac.at/fileadmin/files/Dokumente/info-Magazin/info89-14-02.pdf">https://www.fwf.ac.at/fileadmin/files/Dokumente/info-Magazin/info89-14-02.pdf</a>
Austria: Kärntner Tageszeitung	Lügendetektor für Soziale Netzwerke 15/01/2015 p.14-15
Austria: Krone.at	<a href="http://tablet.krone.at/tablet/kmm_1/story_id_389879/sendung_id_96/story.phtml">http://tablet.krone.at/tablet/kmm_1/story_id_389879/sendung_id_96/story.phtml</a>

<b>Other media Coverage by Country and Language</b>	
<i>Publication</i>	<i>Source</i>
Austria: Krone.at	Lügendetektor für Twitter-Meldungen 21/02/2014 p. 14
Austria: Kurier.at	Forscher suchen nach Lügen im Netz 15/04/2014, p.17
Austria: Medianet.at	<a href="http://medianet.at/front/index/8339/search">http://medianet.at/front/index/8339/search</a>
Austria: Monitor.at	<a href="http://www.monitor.at/index.cfm/storyid/15251">http://www.monitor.at/index.cfm/storyid/15251</a>
Austria: Oberösterreichisches Nachrichtenmagazin	Forschungsprojekt deckt Lug und Trug im Netz auf. 15/02/2014, p.36
Austria: Relevant.at	<a href="http://relevant.at/wirtschaft/pr/1261473/geruechtekueche-2-0-wahrheitsgehalt-social-media-information-automatisch-beurteilt.story">http://relevant.at/wirtschaft/pr/1261473/geruechtekueche-2-0-wahrheitsgehalt-social-media-information-automatisch-beurteilt.story</a>
Austria: Salzburg24.at	<a href="http://www.salzburg24.at/der-luegendetektor-fuer-social-media/3827527">http://www.salzburg24.at/der-luegendetektor-fuer-social-media/3827527</a>
Austria: Salzburger Nachrichten	<a href="http://www.salzburg.com/nachrichten/wissen/sn/artikel/klimawandel-und-mehr-ein-luegendetektor-fuer-facebook-90951/">http://www.salzburg.com/nachrichten/wissen/sn/artikel/klimawandel-und-mehr-ein-luegendetektor-fuer-facebook-90951/</a>
Austria: Tiroler Tageszeitung	<a href="http://www.tt.com/lebensart/12639934-91/fakes-und-fakten-wie-man-falschmeldungen-erkennt.csp">http://www.tt.com/lebensart/12639934-91/fakes-und-fakten-wie-man-falschmeldungen-erkennt.csp</a>
Austria: Vienna.at	<a href="http://www.vienna.at/der-luegendetektor-fuer-social-media/3827527">http://www.vienna.at/der-luegendetektor-fuer-social-media/3827527</a>
Austria: Wien.at	Lüge oder nicht? 16/09/2016 p.26
Austria: Wiener Wirtschaft	<a href="http://wkw.ereader.tailored-apps.com/pdfs/1002.pdf">http://wkw.ereader.tailored-apps.com/pdfs/1002.pdf</a>
Austria: Wiener Zeitung	<a href="http://www.wienerzeitung.at/nachrichten/kultur/medien/600718_Das-juengste-Geruecht.html">http://www.wienerzeitung.at/nachrichten/kultur/medien/600718_Das-juengste-Geruecht.html</a>
Austria: Wiener Zeitung	<a href="http://www.wienerzeitung.at/themen_channel/wz_digital/digital_life/633816_Ein-Luegendetektor-fuer-Social-Media.html">http://www.wienerzeitung.at/themen_channel/wz_digital/digital_life/633816_Ein-Luegendetektor-fuer-Social-Media.html</a>
Austria: Wiener Zeitung	<a href="http://www.wienerzeitung.at/themen_channel/wissen/technologie/627304_Big-Data-Chancen-und-Risiken-durch-grosse-Datenmengen.html">http://www.wienerzeitung.at/themen_channel/wissen/technologie/627304_Big-Data-Chancen-und-Risiken-durch-grosse-Datenmengen.html</a>
Austria: Wirtschaftsblatt, 20/01/2014	Lügendetektor für Facebook und Co
Belgium: Knack.be	<a href="http://datanews.knack.be/ict/nieuws/leugendetector-voor-sociale-media-in-de-maak/article-4000499437267.htm">http://datanews.knack.be/ict/nieuws/leugendetector-voor-sociale-media-in-de-maak/article-4000499437267.htm</a>
Belgium: LeVif.be	<a href="http://datanews.levif.be/ict/actualite/un-detecteur-de-mensonges-pour-medias-sociaux-en-preparation/article-4000499604063.htm">http://datanews.levif.be/ict/actualite/un-detecteur-de-mensonges-pour-medias-sociaux-en-preparation/article-4000499604063.htm</a>
Bulgaria: itjobs.bg (29-01-2014)	<a href="http://news.itjobs.bg/blog/news/nosyat-se-sluhove-evropeyskiat-proekt-pheme-shte-obhozhda-sotsialnata-mrezha-i-avtomatichno-shte-razpoznava-dali-edin-sluh-e-veren-ili-ne/">http://news.itjobs.bg/blog/news/nosyat-se-sluhove-evropeyskiat-proekt-pheme-shte-obhozhda-sotsialnata-mrezha-i-avtomatichno-shte-razpoznava-dali-edin-sluh-e-veren-ili-ne/</a>
Bulgaria: Union of Bulgarian	<a href="http://sbj-bg.eu/index.php?t=21599">http://sbj-bg.eu/index.php?t=21599</a>

Other media Coverage by Country and Language	
<i>Publication</i>	<i>Source</i>
Journalists	(31.01.2014)
Bulgaria: Standart Newspaper	<a href="http://www.standartnews.com/svyat-svyat/softuer_zasicha_sluhove_v_internet-223847.html">http://www.standartnews.com/svyat-svyat/softuer_zasicha_sluhove_v_internet-223847.html</a> (29.01.2014)
Bulgaria: Mediapool.bg	<a href="http://www.mediapool.bg/softuer-shte-razpoznava-nevernite-sluhove-v-internet-news216147.html">http://www.mediapool.bg/softuer-shte-razpoznava-nevernite-sluhove-v-internet-news216147.html</a> (29.01.2014)
Bulgaria: Standart Newspaper	(30.01.2014) <a href="http://paper.standartnews.com/bg/article.php?d=2014-01-30&amp;article=480381">http://paper.standartnews.com/bg/article.php?d=2014-01-30&amp;article=480381</a>
Bulgaria: Dnevnik Newspaper	(29.01.2014) <a href="http://www.dnevnik.bg/pr_sfera/2014/01/29/2230315_nosiat_se_sluhove_evropeiskiat_proekt_pHEME_shte/">http://www.dnevnik.bg/pr_sfera/2014/01/29/2230315_nosiat_se_sluhove_evropeiskiat_proekt_pHEME_shte/</a>
Bulgaria: PC World IT magazine	(29.01.2014) <a href="http://bit.ly/1GdCns9">http://bit.ly/1GdCns9</a>
Bulgaria: CIO	(29.01.2014) <a href="http://cio.bg/6055_ontotekst_shte_izsledva_sluhovete_v_internet">http://cio.bg/6055_ontotekst_shte_izsledva_sluhovete_v_internet</a>
Bulgaria: Computer World	(29.01.2014) <a href="http://computerworld.bg/45464_ontotekst_shte_proveryava_dostove_rnostta_na_internet_sluhove">http://computerworld.bg/45464_ontotekst_shte_proveryava_dostove_rnostta_na_internet_sluhove</a>
Bulgaria: InfoWeek.bg	(31.01.2014) <a href="http://infoweek.bg/tab_it/it.php?show_category=1&amp;show_sub_category=1&amp;id=19097">http://infoweek.bg/tab_it/it.php?show_category=1&amp;show_sub_category=1&amp;id=19097</a>
Bulgaria: Techno Mobile	(29.01.2014) <a href="http://www.techno-mobile.eu/item/19047">http://www.techno-mobile.eu/item/19047</a>
Bulgaria: 4press	(29.01.2014) <a href="http://4press.idg.bg/8205_proektat_pHEME_shte_izsledva_sluhovete_v_internet">http://4press.idg.bg/8205_proektat_pHEME_shte_izsledva_sluhovete_v_internet</a>
Bulgaria: press.dir.bg	(29.01.2014) <a href="http://press.dir.bg/_wm/news/news.php?nid=354895&amp;df=769141&amp;df_lid=3">http://press.dir.bg/_wm/news/news.php?nid=354895&amp;df=769141&amp;df_lid=3</a>
Bulgaria: doker.biz	(29.01.2014) <a href="http://doker.biz/news/business/ontotekst-shte-izsledva-sluhovete-v-">http://doker.biz/news/business/ontotekst-shte-izsledva-sluhovete-v-</a>

Other media Coverage by Country and Language	
Publication	Source
	<a href="#">internet-biznes</a>
Bulgaria: luboslovie.bg	<a href="http://bit.ly/1O9SZYW">http://bit.ly/1O9SZYW</a>
Bulgaria: o.radost.bg	(29.01.2014) <a href="http://bit.ly/1E5osou">http://bit.ly/1E5osou</a>
Bulgaria: Bulgarian National Radio. Български учени работят върху създаването на детектор на лъжливите постове в мрежата	(24.02.2014) <a href="http://bnr.bg/post/100335898/balgarski-ucheni-rabotat-varhu-sazdavaneto-na-detektor-na-lajlivite-postove-v-mrejata">http://bnr.bg/post/100335898/balgarski-ucheni-rabotat-varhu-sazdavaneto-na-detektor-na-lajlivite-postove-v-mrejata</a>
Bulgaria: Trud Newspaper. Българи правят детектор на лъжата във фейсбук и туйтър	(20.02.2014) <a href="http://www.trud.bg/Article.asp?ArticleId=3330259">http://www.trud.bg/Article.asp?ArticleId=3330259</a>
Bulgaria: Desant: Нашенка сътвори „Детектор на лъжата” за интернет	(31.03.2014) <a href="http://www.desant.net/show-news/29841/">http://www.desant.net/show-news/29841/</a>
Bulgaria: Webnovinar. Българи правят детектор на лъжата във Фейсбук	(20.02.2014) <a href="http://bit.ly/1DHdq7y">http://bit.ly/1DHdq7y</a>
Bulgaria: Blitz. Българи правят детектор на лъжата във Фейсбук	(20.02.2014) <a href="http://www.blitz.bg/news/article/251713">http://www.blitz.bg/news/article/251713</a>
Bulgaria: 24 chasa “Детектор за лъжи” сочи кой мами в социалните мрежи	(25.02.2014) <a href="http://www.24chasa.bg/Article.asp?ArticleId=3400407">http://www.24chasa.bg/Article.asp?ArticleId=3400407</a>
Bulgaria: Fakti.bg Български учени работят върху създаването на детектор на лъжливите постове в мрежата	(24.02.2014) <a href="http://fakti.bg/bulgaria/89266-balgarski-ucheni-rabotat-varhu-sazdavaneto-na-detektor-na-lajlivite-postove-v-mrejata">http://fakti.bg/bulgaria/89266-balgarski-ucheni-rabotat-varhu-sazdavaneto-na-detektor-na-lajlivite-postove-v-mrejata</a>
Bulgaria: Bulgarian National Television (BNT) Истина или лъжа? Как уникална българска разработка разкрива измамите в социалните мрежи?	(25.02.2014) <a href="http://bnt.bg/part-of-show/istina-ili-la-zha-kak-unikalna-ba-lgarska-razrabotka-razkriva-izmamite-v-sotsialnite-mrezhi">http://bnt.bg/part-of-show/istina-ili-la-zha-kak-unikalna-ba-lgarska-razrabotka-razkriva-izmamite-v-sotsialnite-mrezhi</a>
Bulgaria: pik.bg Детектор на лъжата - вече и във фейсбук!	(20.02.2014) <a href="http://bit.ly/1cUf2Cm">http://bit.ly/1cUf2Cm</a>
Bulgaria: agencia.bg Българи създават детектор на лъжата	(02.03.2014)

Other media Coverage by Country and Language	
Publication	Source
3a Facebook и Twitter	<a href="http://bit.ly/1bo4YB9">http://bit.ly/1bo4YB9</a>
France: Archimag.com	<a href="http://www.archimag.com/reseaux-sociaux/2014/01/27/d%C3%A9tecteur-mensonges-r%C3%A9seaux-sociaux-info-intox">http://www.archimag.com/reseaux-sociaux/2014/01/27/d%C3%A9tecteur-mensonges-r%C3%A9seaux-sociaux-info-intox</a>
France: LeParisien.fr	<a href="http://www.leparisien.fr/high-tech/des-chercheurs-veulent-passer-les-reseaux-sociaux-au-detecteur-de-mensonges-19-02-2014-3606345.php">http://www.leparisien.fr/high-tech/des-chercheurs-veulent-passer-les-reseaux-sociaux-au-detecteur-de-mensonges-19-02-2014-3606345.php</a>
Germany: Wochenwebschau	ARD <a href="http://www.ardmediathek.de/radio-bremen-tv/wochenwebschau/luegendetektor-fuer-social-media-inhalte?documentId=19144456">http://www.ardmediathek.de/radio-bremen-tv/wochenwebschau/luegendetektor-fuer-social-media-inhalte?documentId=19144456</a>
Germany:Badische-Zeitung.de	<a href="http://www.badische-zeitung.de/ratgeber/computermedien/forscher-wollen-social-media-luegen-automatisch-identifizieren--79631543.html">http://www.badische-zeitung.de/ratgeber/computermedien/forscher-wollen-social-media-luegen-automatisch-identifizieren--79631543.html</a>
Germany: basicthinking.de	<a href="https://www.basicthinking.de/blog/2014/01/14/pheme-internationales-forschungsprojekt-arbeitet-an-luegendetektor-fuer-social-media-inhalte/">https://www.basicthinking.de/blog/2014/01/14/pheme-internationales-forschungsprojekt-arbeitet-an-luegendetektor-fuer-social-media-inhalte/</a>
Germany: bigdataforbusiness.net	<a href="http://bigdata-xpert.com/2014/01/14/wissen-sie-welche-social-media-informationen-fakt-oder-fake-sind/">http://bigdata-xpert.com/2014/01/14/wissen-sie-welche-social-media-informationen-fakt-oder-fake-sind/</a>
Germany: Bild.de	<a href="http://www.bild.de/digital/internet/facebook/kommt-derfacebook-luegendetektor-uni-projekt-will-aufklaeren-34246554.bild.html">http://www.bild.de/digital/internet/facebook/kommt-derfacebook-luegendetektor-uni-projekt-will-aufklaeren-34246554.bild.html</a>
Germany: CIO.de	<a href="http://www.cio.de/a/social-media-luegen-automatisch-identifizieren,2943975">http://www.cio.de/a/social-media-luegen-automatisch-identifizieren,2943975</a>
Germany: Computerwoche.de	<a href="http://www.computerwoche.de/a/forscher-wollen-social-media-luegen-automatisch-identifizieren,2552435">http://www.computerwoche.de/a/forscher-wollen-social-media-luegen-automatisch-identifizieren,2552435</a>
Germany: DerWesten.de	<a href="http://www.derwesten.de/wr/agenturmeldungen/forscher-wollen-social-media-luegen-automatisch-identifizieren-id8870974.html">http://www.derwesten.de/wr/agenturmeldungen/forscher-wollen-social-media-luegen-automatisch-identifizieren-id8870974.html</a>
Germany: Die Presse	Uni beurteilt Wahrheit von Facebook-News 18/01/2014
Germany: Die Presse	<a href="http://diepresse.com/home/science/4779463/Meinungsforschung-auf-Knopfdruck">http://diepresse.com/home/science/4779463/Meinungsforschung-auf-Knopfdruck</a>
Germany: fluxfm.de	Lügendetektor für Twitter Twitter.
Germany: Heute.de	<a href="http://www.giuseppe-paletta.de/?p=643">http://www.giuseppe-paletta.de/?p=643</a>
Germany: Horizont	Wird Offline wieder cool werden? 02/05/2016, p.4
Germany: IT-Daily.net	<a href="https://www.it-daily.net/shortnews/13734-der-us-wahlkampf-im-virtuellen-showdown">https://www.it-daily.net/shortnews/13734-der-us-wahlkampf-im-virtuellen-showdown</a>

Other media Coverage by Country and Language	
Publication	Source
Germany: Jetz.de/Süddeutsche Zeitung	<a href="http://jetzt.sueddeutsche.de/texte/anzeigen/585271/Ein-Luegendetektor-fuer-Twitter">http://jetzt.sueddeutsche.de/texte/anzeigen/585271/Ein-Luegendetektor-fuer-Twitter</a>
Germany: Netzpiloten	<a href="http://www.netzpiloten.de/pheme-lugendetektor-fur-twitter-in-arbeit/?utm_source=feedburner&amp;utm_medium=feed&amp;utm_campaign=Feed%3A+blogpiloten+%28Blogpiloten+-+Rastlose+Blogger+durchstreifen+f%C3%BCr+euch+die+aufregendsten+Orte+der+digitalen+Welt.%29">http://www.netzpiloten.de/pheme-lugendetektor-fur-twitter-in-arbeit/?utm_source=feedburner&amp;utm_medium=feed&amp;utm_campaign=Feed%3A+blogpiloten+%28Blogpiloten+-+Rastlose+Blogger+durchstreifen+f%C3%BCr+euch+die+aufregendsten+Orte+der+digitalen+Welt.%29</a>
Germany: Radio Berlin	<a href="http://www.radioeins.de/programm/index.htm/psdoc=!content!rbb!rad!programm!sendungen!sendungen!15!1402!140222_eins_die_profis_9199.html">http://www.radioeins.de/programm/index.htm/psdoc=!content!rbb!rad!programm!sendungen!sendungen!15!1402!140222_eins_die_profis_9199.html</a>
Germany: Rhein Zeitung	<a href="http://www.rhein-zeitung.de/nachrichten/netzwelt/news_artikel.-Pheme-mometer-Forscher-arbeiten-am-Tweet-Luegendetektor-arid,1107697.html">http://www.rhein-zeitung.de/nachrichten/netzwelt/news_artikel.-Pheme-mometer-Forscher-arbeiten-am-Tweet-Luegendetektor-arid,1107697.html</a>
Germany: Silicon.de	<a href="http://www.silicon.de/41593876/luegendetektor-fuer-soziale-netzwerke/">http://www.silicon.de/41593876/luegendetektor-fuer-soziale-netzwerke/</a>
Germany: SpringerMedizin	<a href="http://www.springermedizin.at/artikel/39738-wahrheitsgehalt-von-web-informationen">http://www.springermedizin.at/artikel/39738-wahrheitsgehalt-von-web-informationen</a>
Germany: TAZ	<a href="http://www.taz.de/!133864/">http://www.taz.de/!133864/</a>
Germany: Unternehmer	Uni beurteilt Wahrheit von Facebook News 15/03/2014 p.36
Germany: Wissensmagazin.net	<a href="http://www.wissensmanagement.net/news/einzelansicht/article/geruechtekueche_20_der_luegendetektor_fuer_social_media.html">http://www.wissensmanagement.net/news/einzelansicht/article/geruechtekueche_20_der_luegendetektor_fuer_social_media.html</a>
Germany: ZDF heute.de	<a href="http://www.heute.de/Europ%C3%A4ische-Union-Pheme-Internet-Forschungsprojekt-EU-32199156.html">http://www.heute.de/Europ%C3%A4ische-Union-Pheme-Internet-Forschungsprojekt-EU-32199156.html</a>
Hungary: HVG.hu	<a href="http://hvg.hu/tudomany/20140119_kiszurhetik_aki_hazudik_facebookon">http://hvg.hu/tudomany/20140119_kiszurhetik_aki_hazudik_facebookon</a>
Hungary:sg.hu	<a href="http://sg.hu/cikkek/102615/automatikusan-kiszurhetok-a-kozossegi-mediaban-a-hazugsagok">http://sg.hu/cikkek/102615/automatikusan-kiszurhetok-a-kozossegi-mediaban-a-hazugsagok</a>
Italy: www.giornalettismo.com	La macchina della verità di Facebook
Netherlands: automatiseringsgids.nl	<a href="http://agconnect.nl/artikel/leugendetector-voor-sociale-media">http://agconnect.nl/artikel/leugendetector-voor-sociale-media</a>
Netherlands: Couturekrant.nl	<a href="http://www.couturekrant.nl/8-columns/nieuws-a-tv/2300-leugendetector-voor-sociale-media.html">http://www.couturekrant.nl/8-columns/nieuws-a-tv/2300-leugendetector-voor-sociale-media.html</a>
Poland: Wyborcza.pl	<a href="http://wyborcza.pl/1,75476,15291602,PHEME_czyli_jak_UE_chce_stworzyc_wykrywacz_Facebookowych.html">http://wyborcza.pl/1,75476,15291602,PHEME_czyli_jak_UE_chce_stworzyc_wykrywacz_Facebookowych.html</a>

Table 4: Other media Coverage by Country and Language

Reactions and interviews in Spain and Latin America	
Publication	Source
Spain: El confidencial 27-02-2014: Elconfidencial.com	<a href="http://www.elconfidencial.com/tecnologia/2014-02-27/pheme-un-detector-de-mentiras-para-las-redes-sociales_94300/">http://www.elconfidencial.com/tecnologia/2014-02-27/pheme-un-detector-de-mentiras-para-las-redes-sociales_94300/</a>
Spain: Actualizable (25-02-2014): Investigadores están trabajando en un detector de mentiras para Twitter	<a href="http://www.actualizable.com/2014/02/Detector-de-mentiras-para-Twitter.html">http://www.actualizable.com/2014/02/Detector-de-mentiras-para-Twitter.html</a>
Spain: Enter.co (26-02-2014): Investigadores planean un detector de mentiras para Twitter	<a href="http://www.enter.co/cultura-digital/redes-sociales/investigadores-planean-un-detector-de-mentiras-para-twitter/">http://www.enter.co/cultura-digital/redes-sociales/investigadores-planean-un-detector-de-mentiras-para-twitter/</a>
Spain: Animal Político vía BBCWorld(21-02-2014): Un detector de mentiras para redes sociales	<a href="http://www.animalpolitico.com/2014/02/un-detector-de-mentiras-para-redes-sociales/#axzz2uWgmCUIk">http://www.animalpolitico.com/2014/02/un-detector-de-mentiras-para-redes-sociales/#axzz2uWgmCUIk</a>
Spain: Marketing hoy (25-02-2014): Un detector de mentiras para redes sociales trataría de detener la difusión de noticias falsas	<a href="http://www.emarketinghoy.com/detector-de-mentiras-para-redes-sociales-trataria-de-detener-la-difusion-de-noticias-falsas/">http://www.emarketinghoy.com/detector-de-mentiras-para-redes-sociales-trataria-de-detener-la-difusion-de-noticias-falsas/</a>
Spain: Día a Día (24-02-2014): Detector de mentiras para redes sociales	<a href="http://www.diaadia.com.pa/notas/1706008-detector-mentiras-redes-sociales">http://www.diaadia.com.pa/notas/1706008-detector-mentiras-redes-sociales</a>
Spain: El Ibérico (24-02-2014): Investigadores británicos inventan un detector de mentiras para redes sociales	<a href="http://www.eliberico.com/actualidad/actualidad/reinounido/6747-investigadores-britanicos-inventan-un-detector-de-mentiras-para-redes-sociales.html">http://www.eliberico.com/actualidad/actualidad/reinounido/6747-investigadores-britanicos-inventan-un-detector-de-mentiras-para-redes-sociales.html</a>
Spain: ABC Tecnología (20-02-2014): Desarrollan un detector de mentiras para redes sociales	<a href="http://www.abc.es/tecnologia/redes/20140220/abci-detector-mentiras-internet-201402201237.html">http://www.abc.es/tecnologia/redes/20140220/abci-detector-mentiras-internet-201402201237.html</a>
Spain: Terra (21-02-2014): Detector de mentiras para Facebook	<a href="http://noticias.terra.es/detector-de-mentiras-para-facebook,6b3641df0d354410VgnVCM3000009af154d0RCRD.html">http://noticias.terra.es/detector-de-mentiras-para-facebook,6b3641df0d354410VgnVCM3000009af154d0RCRD.html</a>
Spain: Diario Registrado (21-02-2014): Crean un detector de mentiras para redes sociales	<a href="http://www.diarioregistrado.com/mundo-bizarro/87565-crean-un-detector-de-mentiras-para-las-redes-sociales.html">http://www.diarioregistrado.com/mundo-bizarro/87565-crean-un-detector-de-mentiras-para-las-redes-sociales.html</a>
Spain: Puro Marketing (20-02-	<a href="http://www.puromarketing.com/16/19303/desarrollo-detector-">http://www.puromarketing.com/16/19303/desarrollo-detector-</a>



Reactions and interviews in Spain and Latin America	
<i>Publication</i>	<i>Source</i>
2014): El desarrollo de un detector de mentiras en redes sociales ya está en marcha	<a href="#">mentiras-redes-sociales-esta-marcha.html</a>
Spain: El Nuevo día (21-02-2014): Detector de mentiras para rumores en redes sociales	<a href="http://www.elnuevodia.com/detectorde mentiraspararumoresenlasredes sociales-1716673.html">http://www.elnuevodia.com/detectorde mentiraspararumoresenlasredes sociales-1716673.html</a>
Lavanguardia.com (20-02-2014): Investigadores desarrollan un detector de mentiras para redes sociales	<a href="http://www.vanguardia.com/actualidad/tecnologia/247748-investigadores-desarrollan-un-detector-de-mentiras-para-redes-sociales">http://www.vanguardia.com/actualidad/tecnologia/247748-investigadores-desarrollan-un-detector-de-mentiras-para-redes-sociales</a>
Spain: iProfesional (20-02-2014): Investigadores trabajan en un detector de mentiras para redes sociales	<a href="http://www.iprofesional.com/notas/181018-Investigadores-trabajan-en-un-detector-de-mentiras-para-redes-sociales">http://www.iprofesional.com/notas/181018-Investigadores-trabajan-en-un-detector-de-mentiras-para-redes-sociales</a>
Spain: Geek Noticias (21-02-2014): Un detector de mentiras a través de internet para Facebook, Twitter y otras redes sociales	<a href="http://www.geeknoticias.com/un-detector-de-mentiras-a-traves-de-internet-para-facebook-twitter-y-otras-redes-sociales/6819/">http://www.geeknoticias.com/un-detector-de-mentiras-a-traves-de-internet-para-facebook-twitter-y-otras-redes-sociales/6819/</a>
Spain: Abre la Boca (25-02-2014): Diseñan un detector de mentiras para redes sociales	<a href="http://www.abrelaboca.com/detector-mentiras-redes-sociales/">http://www.abrelaboca.com/detector-mentiras-redes-sociales/</a>
Spain: BBC Mundo (20-02-2014): Un detector de mentiras para redes sociales	<a href="http://www.bbc.co.uk/mundo/noticias/2014/02/140220_tecnologia_de_detector_mentiras_redes_sociales_aa.shtml">http://www.bbc.co.uk/mundo/noticias/2014/02/140220_tecnologia_de_detector_mentiras_redes_sociales_aa.shtml</a>
Spain: Marketing Directo (26-02-2014): Con este detector de mentiras a los pinochos de las redes sociales les crecerá la nariz	<a href="http://www.marketingdirecto.com/actualidad/social-media-marketing/con-este-detector-de-mentiras-a-los-aprendices-de-pinocho-en-las-redes-sociales-les-crecera-la-nariz/">http://www.marketingdirecto.com/actualidad/social-media-marketing/con-este-detector-de-mentiras-a-los-aprendices-de-pinocho-en-las-redes-sociales-les-crecera-la-nariz/</a>
Spain: Teinteresa.es (20-02-2014): Detector de mentiras para redes sociales	<a href="http://www.teinteresa.es/tecno/internet/Internet-redes_sociales-detector_de_mentiras-rumores_0_1088292968.html">http://www.teinteresa.es/tecno/internet/Internet-redes_sociales-detector_de_mentiras-rumores_0_1088292968.html</a>
Spain: Ideas e Inventos: Dispositivo para detectar mentiras en redes sociales	<a href="http://www.ideaseinventos.es/2014/02/25/desarrollan-dispositivo-para-detectar-mentiras-en-las-redes-sociales/">http://www.ideaseinventos.es/2014/02/25/desarrollan-dispositivo-para-detectar-mentiras-en-las-redes-sociales/</a>
Spain: Dlifemagazine: Crean el primer detector de mentiras para redes sociales	<a href="http://www.dlifemagazine.com/index.php/menu-tendencias/item/3343-crean-el-primer-detector-de-mentiras-para-redes-sociales#.UxBnXPI5Oi0">http://www.dlifemagazine.com/index.php/menu-tendencias/item/3343-crean-el-primer-detector-de-mentiras-para-redes-sociales#.UxBnXPI5Oi0</a>
Spain: IT Noticias (20-02-	<a href="http://www.itnoticias.com/tecnologia/desarrollan-un-detector-de-">http://www.itnoticias.com/tecnologia/desarrollan-un-detector-de-</a>

<b>Reactions and interviews in Spain and Latin America</b>	
<i>Publication</i>	<i>Source</i>
2014): Desarrollan un detector de mentiras para redes sociales	<a href="http://mentiras-para-las-redes-sociales_71774.html">mentiras-para-las-redes-sociales_71774.html</a>
Latin America: Escuela de Bibliotecnología Dr. M.M. (21-02-2014): Crean un detector de mentiras para redes sociales	<a href="http://escueladebibliotecologia-sanjuan.blogspot.com.es/2014/02/crean-un-detector-de-mentiras-para.html">http://escueladebibliotecologia-sanjuan.blogspot.com.es/2014/02/crean-un-detector-de-mentiras-para.html</a>
Latin America: El Mundo al instante (21-02-2014): En Europa están creando un detector de mentiras para redes sociales	<a href="http://www.elmundoal instante.com/contenido/titulares/en-europa-est-an-creando-un-detector-de-mentiras-para-redes-sociales/">http://www.elmundoal instante.com/contenido/titulares/en-europa-est-an-creando-un-detector-de-mentiras-para-redes-sociales/</a>
Perú: Deperu.net (21-02-2014): Detectar mentiras en las redes sociales	<a href="http://www.deperu.net/2014/02/detectar-mentiras-en-la-redes-sociales.html">http://www.deperu.net/2014/02/detectar-mentiras-en-la-redes-sociales.html</a>
Argentina: Universal Medios (22-02-2014): Crean detectores de mentiras para redes sociales	<a href="http://universalmedios.com.ar/sitios/crean-detectores-de-mentiras-para-redes-sociales/">http://universalmedios.com.ar/sitios/crean-detectores-de-mentiras-para-redes-sociales/</a>
Cuba: Cubadebate (21-02-2014): Diseñan un detector de mentiras para redes sociales	<a href="http://www.cubadebate.cu/noticias/2014/02/21/disenan-detector-de-mentiras-para-redes-sociales/#.Uw81Ovl5Oi0">http://www.cubadebate.cu/noticias/2014/02/21/disenan-detector-de-mentiras-para-redes-sociales/#.Uw81Ovl5Oi0</a>
Latin America: El Nacional (21-20-2014): Crean un detector de mentiras para redes sociales	<a href="http://www.el-nacional.com/gda/Crean-detector-mentiras-redes-sociales_0_359964064.html">http://www.el-nacional.com/gda/Crean-detector-mentiras-redes-sociales_0_359964064.html</a>
Mexico: Debate (22-02-2014): ¿Detector de mentiras para redes sociales?	<a href="http://www.debate.com.mx/eldebate/noticias/default.asp?IdArt=14084693&amp;IdCat=17402">http://www.debate.com.mx/eldebate/noticias/default.asp?IdArt=14084693&amp;IdCat=17402</a>
Uruguay: Lr21 (21-02-2014): Facebook, Twitter y otras redes sociales tendrán un detector de mentiras	<a href="http://www.lr21.com.uy/tecnologia/1160404-facebook-twitter-y-otras-redes-sociales-tendran-un-detector-de-mentiras">http://www.lr21.com.uy/tecnologia/1160404-facebook-twitter-y-otras-redes-sociales-tendran-un-detector-de-mentiras</a>
Perú: Diario Correo (20-02-2014): Crearán un detector de mentiras para redes sociales	<a href="http://diariocorreo.pe/ultimas/noticias/8573929/edicion+lima/crearan-un-detector-de-mentiras-para-redes-s">http://diariocorreo.pe/ultimas/noticias/8573929/edicion+lima/crearan-un-detector-de-mentiras-para-redes-s</a>
Argentina: AIM (02-2014): Detector de mentiras en las redes sociales	<a href="http://www.aimdigital.com.ar/2014/02/24/detector-de-mentiras-en-las-redes-sociales/">http://www.aimdigital.com.ar/2014/02/24/detector-de-mentiras-en-las-redes-sociales/</a>
Mexico: La Vanguardia MX (21-02-2014): Crean el primer detector de mentiras para redes sociales	<a href="http://www.vanguardia.com.mx/creanelprimerdetectordementiraspararedessociales-1952387.html">http://www.vanguardia.com.mx/creanelprimerdetectordementiraspararedessociales-1952387.html</a>

Reactions and interviews in Spain and Latin America	
Publication	Source
Latin America: Semana.com (20-02-2014): El detector de mentiras para redes sociales	<a href="http://www.semana.com/tecnologia/novedades/articulo/el-detector-de-mentiras-para-redes-sociales/377897-3">http://www.semana.com/tecnologia/novedades/articulo/el-detector-de-mentiras-para-redes-sociales/377897-3</a>
Latin America: Diario Veloz (21-02-2014): Crean un detector de mentiras para las redes sociales	<a href="http://www.diarioveloz.com/notas/117864-crean-un-detector-mentiras-las-redes-sociales">http://www.diarioveloz.com/notas/117864-crean-un-detector-mentiras-las-redes-sociales</a>
Latin America: El Intransigente (22-02-2014): Se acabó el chamullo en las redes sociales: inventaron un detector de mentiras	<a href="http://www.elintransigente.com/notas/2014/2/22/acabo-chamullo-las-redes-sociales-inventaron-detector-mentiras-232504.asp">http://www.elintransigente.com/notas/2014/2/22/acabo-chamullo-las-redes-sociales-inventaron-detector-mentiras-232504.asp</a>
Latin America: Entorno Inteligente (21-02-2014): Facebook, Twitter y otras redes sociales tendrán un detector de mentiras	<a href="http://www.entornointeligente.com/articulo/2084896/Facebook-Twitter-y-otras-redes-sociales-tendran-un-detector-de-mentiras-21022014">http://www.entornointeligente.com/articulo/2084896/Facebook-Twitter-y-otras-redes-sociales-tendran-un-detector-de-mentiras-21022014</a>
Mexico: PC World Mexico (21-02-2014): Primer detector de mentiras para internet	<a href="http://www.pcworld.com.mx/Articulos/31775.html">http://www.pcworld.com.mx/Articulos/31775.html</a>
Uruguay: El País Uruguay (21-02-2014): Crean un detector de mentiras para redes sociales	<a href="http://www.elpais.com.uy/vida-actual/crean-detector-mentiras-redes-sociales.html">http://www.elpais.com.uy/vida-actual/crean-detector-mentiras-redes-sociales.html</a>
Spain: El Periódico de Cataluña interview to Tomas 27/02/2014	<a href="http://www.elperiodico.com/es/noticias/sociedad/ciencia-disena-detector-para-cazar-mentiras-internet-3171071">http://www.elperiodico.com/es/noticias/sociedad/ciencia-disena-detector-para-cazar-mentiras-internet-3171071</a>
Spain: News based on El Periodico de Catalunya interview	<a href="http://es.noticiasde.net/la-ciencia-disena-un-detector-para-cazar-mentiras-en-internet/">http://es.noticiasde.net/la-ciencia-disena-un-detector-para-cazar-mentiras-en-internet/</a> <a href="http://iberoamerica.net/espana/prensa-generalista/elperiodico.com/20140310/noticia.html?id=cKcZnN4">http://iberoamerica.net/espana/prensa-generalista/elperiodico.com/20140310/noticia.html?id=cKcZnN4</a> <a href="http://www.solucionatic.com/internet/la-ciencia-disena-un-detector-para-cazar-mentiras-en-internet-el-periodico-de-catalunya/">http://www.solucionatic.com/internet/la-ciencia-disena-un-detector-para-cazar-mentiras-en-internet-el-periodico-de-catalunya/</a> <a href="http://www.elperiodicodearagon.com/noticias/sociedad/ciencia-disena-detector-cazar-mentiras-internet_927788.html">http://www.elperiodicodearagon.com/noticias/sociedad/ciencia-disena-detector-cazar-mentiras-internet_927788.html</a>

Table 5: Press and news articles in Spanish

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### 2.3.3 Dissemination indicators

The success of the communication activities is being monitored closely and reported in the periodic activity deliverables. In more detail, the success indicators, detailed below were assessed continuously and reported annually.

The following table gives a detailed overview of the Pheme project's dissemination indicators during each year of the project.

Component	Metrics	Y1 (2014)	Y2 (2015)	Y3 (2016 onwards)
Publications	Number of published / submitted (i.e. peer-reviewed) publications in journals or conferences	Target: 10 Actual: 7	Target: 10 Actual: 26	Target: 10 Actual: 40
Presentations	Number of presentations	Target: 1 Actual: 15	Target: 2 Actual: 23	Target: 5 Actual: 16
Media articles	Number of articles in print and online media	Target: 16 Actual: 236	Target: 15 Actual: 4	Target: 15 Actual: 7
Interview / Meeting request	Number of interviews and/or requests for establishing contact to Pheme	Target: 4 Actual: 5	Target: 5 Actual: 12	Target: 10 Actual: 20
Size of the end-user community	Number of individuals/organisations in the Pheme community	Target: 100 (2014); 150 (2015); 200 (2016) <b>Actual:</b> PHEME joined the First Draft News Initiative, which has hundreds of members and an active workspace where we disseminate papers and other information about the project. The PHEME Twitter account has 536 followers.		

Table 6: Project dissemination indicators

Channel	URL Address	Objective	Indicators		
			Y1	Y2	Y3
News/blog posts	www.pheme.eu/feed/rss	News/blog entries on the project web site	Target: 10 Actual: 6	Target: 12 Actual: 4	Target: 12 Actual: 23
Twitter	@PhemeEU	Short project updates	Target: 40 tweets/300 followers Actual: 284 tweets / 563 followers		
Project Web site	www.pheme.eu	Number of visits Page views Pages/Visit	Y3 Target: 450; Actual: 30,840 Y3 Target 200; Actual: 52,310 Y3 Target: 1.5; Actual: 1.69		

Table 7: Social channels indicators

### 3 Exploitation plan

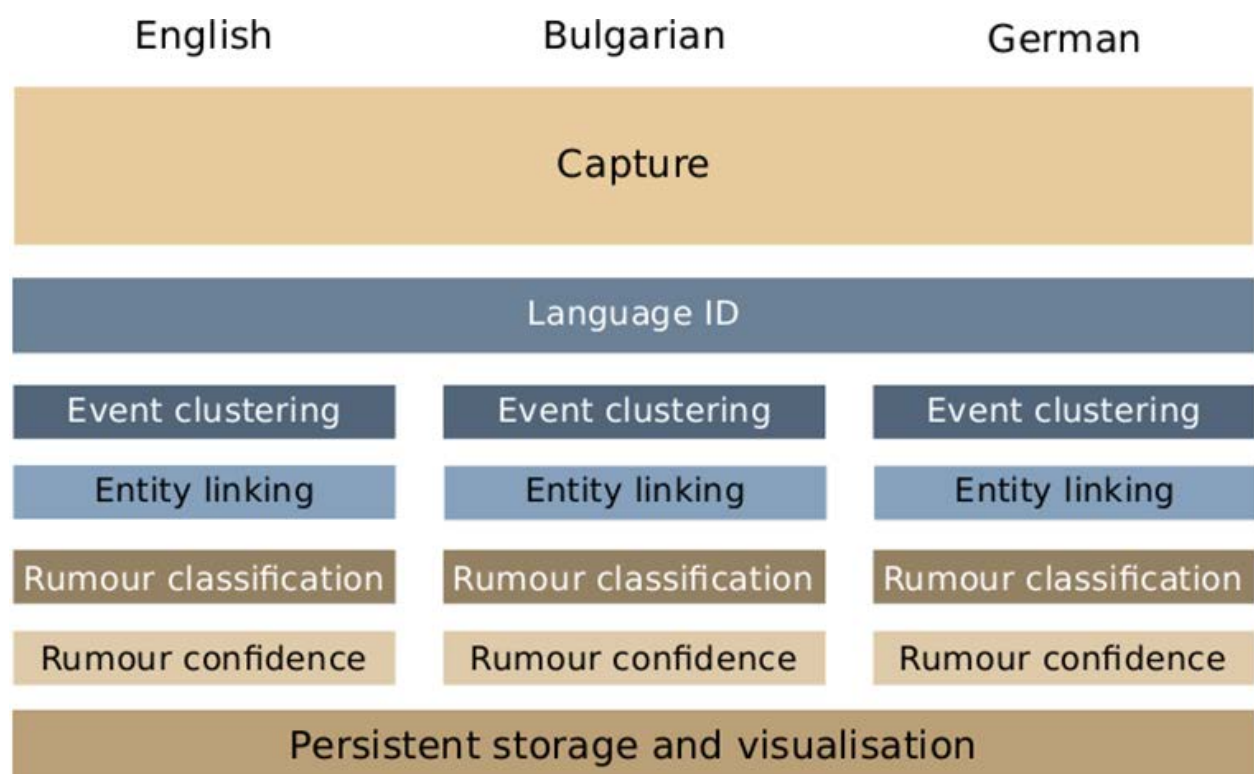
#### 3.1 Exploitation plan specification

##### 3.1.1 Summary of the main outcomes

The PHEME project aims to build new methods to automatize as much as possible the process of verifying online rumours as they spread across media, languages, and social networks. The term “phemes” comes to describe internet memes, which are enhanced with truthfulness information.

Identifying potential rumours and assessing their veracity pose several challenges. As rumours in social networks cannot be generally identified at a document level (i.e. looking at a single tweet), PHEME had first to identify rumorous threads within specific topics. Then comes the problem of the assessment of the rumour stance: For each post, the system has to determine whether it confirms, denies, questions or simply makes a comment. And finally one of the main questions to answer is how accurately can rumour veracity be estimated, based on rumour stance. Based on our most recent evaluations (see D6.2.2 for details), the veracity classification achieved so far is below 75% of accuracy, which means that PHEME should be seen as a tool to assist, rather than replace human judgement.

In order to achieve this objective, project’s partners have utilised, devised and implemented a set of artefacts for gathering raw data from social networks, annotate datasets manually for training purposes, create clever algorithms and chain them into pipelines, build user-oriented dashboards to display the results to end-users, etc. Figure 1 below shows a high-level overview of the main elements of the cross-lingual and cross-media real-time rumour detection pipelines showing some of the steps followed to achieve that objective.



*Figure 3. High level description of the PHEME veracity-detection pipelines*

Therefore, PHEME delivered several results for rumour detection covering aspects such as i) social networks' data acquisition, ii) automatic tumorous thread detection and rumour stance classification based on Natural Language Processing (NLP) and Machine Learning (ML) techniques, iii) annotation of rumours, iv) semantic enrichment of the data, v) visualization dashboards, and finally vi) several datasets providing labelled and annotated data,

This document will present this results and how partners plan to exploit them in the future.

### *3.1.2 Potential benefits and impact*

PHEME benefits can be firstly perceived on its two use cases: **healthcare** and **digital journalism**.

In the healthcare use case, PHEME shows how intelligence from social networks can be integrated with public health monitoring to help professionals track online news regarding trending mental health topics and discussions, and therefore revising clinical care and practice earlier than normally making patient-clinician interactions more timely and successful.

On the digital journalism use case, results like the annotated corpora, which can be used on academic spectrums, the PHEME open-source digital journalism tool prototype, and the methodological aspects on how journalists can benefit from tools like the one proposed by PHEME are of great interest for the media companies and raised huge attention from the press and other media, as explained in the dissemination sections of this document. In this context, fake news such as the ones related to the Brexit or to the candidates to the recent elections in the US made the fact-checking and veracity aspects tackled by PHEME an important driver for the exploitation, as it is clear that the project is delivering results demanded by the society and the market.

Besides healthcare and digital journalism, the commercial partners in PHEME aim to apply the project results in other key corporate applications and commercial offerings. These applications may include business intelligence, market research, campaign and brand reputation management, customer relationship management, knowledge management, and semantic search, among others.

As mentioned above, in addition to its high commercial relevance, the project will also benefit society and citizens by enabling government organizations (e.g. citizen advice, emergency services) to keep track of rumours and misinformation spreading online. This is even more relevant today than it was when the project started. PHEME results can help to uncovering phemes, and therefore enable citizens to take informed decisions and act to prevent rumour spread across media. As it will be explained afterwards, there are plans for keeping the PHEME infrastructure alive for some time after the end of the project and even showcase some specific interesting tumorous threads as they appear in the future.

PHEME could potentially be also used by existing tools and applications related to social networks by third-parties. Many of the algorithms and methods in PHEME will be delivered as open source, making possible for other researchers or organizations to make use of them in multiple environments.

### 3.2 Exploitation results

Since the beginning of the project, exploitation of the project’s results has been under continuum discussion among partners. Since year 1, we have made the exercise of trying to identify the potential project results in a living document that suffered continuous updates. The identification of exploitable results led during the project life-time to gain a better understanding of the PHEME potential impact and at the same time started interesting discussions on how to implement the software solutions in a way that the impact could be maximized. Partners have discussed the list since the first project meeting. All face to face consortium meetings since then had a long dedicated session for exploitation, impact and sustainability, most notably the ones held in Sofia (September 2014) and Athens (June 2016).

The result of this exercise is now final and is summarized on the table below:

Description	Target market	Result owner(s)	Exploitation path	Similar solutions - Comparison
PHEME framework	Commercial / Research	ALL	The complete framework will be sustained on Sheffield infrastructure for 2 years. Many OS components available	See market watch for more details
<b>Datasets</b>				
Social media datasets for mental health care	For research purposes mostly	KCL / Other partners involved	Mostly for research purposes	Twitter datasets in the domain
Social media datasets for digital journalism	For research purposes mostly	SWI / Other partners involved	Mostly for research purposes	Twitter datasets in the domain
Annotated veracity corpus for patient care	For research purposes mostly	KCL	Mostly for research purposes	Twitter datasets in the domain
Annotated veracity corpus for digital journalism	For research purposes mostly	SWI	Mostly for research purposes	Twitter datasets in the domain
Datasets of contradictions in social media threads	For research purposes mostly	USAAR, USFD, UWAR	To be used in the context of Textual Entailment tasks. This is a technology specific data set. This is related to WP4, task 4.2	-
Multilingual Ontologies as a result of the project.	Research and commercial	ONTO, USAAR	This work will build partly on existing thesauri, taxonomies and ontologies. And providing for extensions, also in term of multilingual labels. Project specific ontologies might be	-

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Description	Target market	Result owner(s)	Exploitation path	Similar solutions - Comparison
			developed as well, in dependency of requirements.	
<b>Methods</b>				
Multilingual methods for spatio-temporal grounding	Commercial / Research	USFD	Open source; mostly for research purposes	
Methods for cross-media linking	Commercial / Research	USAAR	Mostly for research purposes, but algorithms and models can be used as well for innovation or commercial solutions	COMM ontology framework, SMARTWeb, provenance ontology, work in TrendMiner, Xlike
Methods for story detection in social media streams	For research purposes mostly	USFD	Open source; mostly for research purposes	
Methods for longitudinal modelling of users, trust, and authority	For research purposes mostly	USFD	Open source; mostly for research purposes	
Methods for detection of mis- and disinformation	Commercial / Research	USFD	Mostly for research purposes, but could also be elaborated and integrated in commercial solutions	Only some research papers
Methods for controversy detection	Commercial / Research	USAAR	Mostly for research purposes, but could also be elaborated and integrated in commercial solutions	Only a handful of research papers
Algorithms for implicit information diffusion networks	Commercial / Research	MOD	For research purposes and possible commercialization, stand-alone or as part of the veracity intelligence framework.	
Several analyses applied to social media (sentiment, stigma app...)	Research	KCL /Others	Many sentiment-related tools and methods in the market. Need of setting them for health records, which is less explored.	Many similar solutions in the market, but especially trained for the domain
Open-source Visual Analytics Tools:	Commercial / Research	MOD	For research purposes or integration into commercial solutions	Other visualization commercial tools
<b>Storage</b>				
The large-scale content storage tools (Based on Capturean)	Innovation, commercial	ATOS	For research and commercial purposes. Technology transfer to other Atos units	Many. Cloud storage provides (Amazon...). Data centres.
The large-scale semantic storage tools	Innovation, commercial	ONTO	OntoText commercial exploitation	Other Triplestores
<b>Tools</b>				
Capturean: The Data Collection Tools for	Innovation, commercial	ATOS	Pre-existing work in RSS feeds acquisition and Twitter. Now	Several frameworks for acquisition. In our



Description	Target market	Result owner(s)	Exploitation path	Similar solutions - Comparison
social networks and RSS			available as Open Source including Reddit. Atos foresees using it in other innovation projects and also some enhancements will end up in the commercial Capturean tool.	case the strength is the depth of acquisition: Network of the user, user profile, etc., and the usage of NoSQL and big data technology to ensure future scalability
Pheme Dashboard: Visual analytics dashboard to analyse the gathered content and the extracted metadata; available in a desktop version (multiple coordinated views) and a mobile version (HTML5)	Commercial /	MOD	Extensions to the pre-existing dashboard from MODUL, which will be made available through MOD's webLyzard spin-out	There are other dashboards, but this one is quite unique and has been enhanced with multiple widgets adding veracity scores and other related metadata
Online news media monitoring tool for mental health issues	Innovation	KCL/MOD	Snapshot of existing dashboard focusing on news media only. Stored in KCL and freely available to all users	
Open visualization widgets	Innovation, commercial	MOD / ATOS	Set of open visualization tools to be exploited in the scope of the integrated veracity intelligence framework	
Journalist Dashboard	Research / Non-profit / Commercial	USH	Digital journalism, others	Hercule (Ontotext) revealproject.eu
Hercule; Fact-checking dashboard	Innovation, commercial	ONTO / ATOS	Digital journalism, others	Journalist dashboard
Use Cases				
Use case prototype in patient care	Research & innovation in eHealth	KCL	Web page in KCL pointing to specific results and visualisation through the PHEME dashboard	Not many existing applications in the domain trying to make use of social networks data, and especially veracity
Adaptation of the digital journalism to the SwissInfo infrastructure	Digital Journalism in Swiss Info or others	SWI / USH	Usable in the day-to-day work within SWI. Enhancements to the SwiftRiver platform expected from the use case feedback.	There are applications in the domain using social media, but only few tackle both important task of uncovering and verifying potential news. We expect to go further and being able to support journalistic day to day work

Description	Target market	Result owner(s)	Exploitation path	Similar solutions - Comparison
				substantially.

Table 8: Exploitable results

### 3.3 Licensing strategy

The licensing schema for PHEME has been discussed throughout the project. Following the commitments in the DoW, many of the results of the project are under some kind of Open Source (OS) license, although in some cases existing previous IPR and licensing strategies from the organisations involved in the project lead to a proprietary or commercial licensing. The results are summarized in the table below:

Description	Result owner(s)	Dependencies	Proposed License
PHEME framework	veracity ALL	Most of the PHEME components	Combined license
<b>Datasets</b>			
Social media datasets for mental health care	KCL / Other partners involved	Since many of these will contain tweets, there are dependencies on Twitter's Terms of Service - re-distribution 50000 tweets in one batch	Mephedrone app and annotated mephedrone dataset freely available online
Social media datasets for digital journalism	SWI / Other partners involved		CC-BY
Annotated veracity corpus for patient care	KCL		TBD (perhaps CC)
Annotated veracity corpus for digital journalism	SWI	Should have same licence as WP4, should allow commercial usage	CC-BY
Datasets of contradictions in social media threads	USAAR, USFD, UWAR	Based on data from SWI	CC-BY
<b>Methods</b>			
Multilingual methods for spatio-temporal grounding	USFD		Apache 2.0
Methods for cross-media linking	USAAR	For the time being using the eventRegistry platform for searching the Web. See <a href="http://eventregistry.org/">http://eventregistry.org/</a>	EventRegistry API has The MIT License. The license for the PHEME part, CC BY
Methods for story detection in social media streams	USFD	GenSim	CC BY; GenSim is LGPL

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Description	Dependencies		Proposed License
	Result owner(s)		
Methods for longitudinal modelling of users, trust, and authority	USFD		Creative commons license
Methods for detection of mis- and disinformation	USFD	GATE, including various plugins such as the GATE learning framework	GPL
Methods for controversy detection	USAAR	GATE and other tools, like NooJ, Unitex, SCHUG, all open source.	Open for research and for project partners for any use.
Algorithms for implicit information diffusion networks	MOD	graphyte Library; D3.js	SaaS
Several analyses applied to social media (sentiment, stigma app...)	KCL /Others	None	Under discussion
Open-source Visual Analytics Tools:	MOD	<u>D3.js</u>	BSD 3-Clause
<b>Storage</b>			
The large-scale content storage tools (Based on Capturean)	ATOS	HBase. Storage infrastructure associated costs.	Costing as part of the Atos Codex solution. Subject to discussion with customers for specific projects
The large-scale semantic storage tools	ONTO	GraphDB	There is a free light version of the system. Other versions are commercial
<b>Tools</b>			
Capturean: The Data Collection Tools for social networks and RSS	ATOS	Twitter API (and other APIs for other networks)	Dual. Open Source. License AGPL V3, free for research. For commercial purposes subject to agreements with Atos. Parts of Capture not developed in PHEME (dashboard and some analytics modules) will remain ATOS proprietary
PHEME Dashboard: Visual analytics dashboard to analyse the gathered content and the extracted metadata; available in a desktop version (multiple coordinated views) and a mobile version (HTML5)	MOD	JQuery, Vert.x	Free public access to the light version of the system. Premium versions for commercial exploitation; free for charities.
Online news media monitoring tool for mental health issues	KCL/MOD	Reliant on visual analytics dashboard functionalities	Free public access
Open visualization widgets	MOD / ATOS	<u>D3.js</u>	SaaS

Description	Dependencies		Proposed License
	Result owner(s)		
Journalist Dashboard	USH	Capturean , GraphDB	GPL 3
Hercule; Fact-checking dashboard	ONTO / ATOS	Capturean , GraphDB	Free usage of the core functionality. Commercial services
Use Cases			
Use case prototype in patient care	KCL	Most of the PHEME components and pipelines	Used internally in KCL
Adaptation of the digital journalism to the SwissInfo infrastructure	SWI / USH	SwiftRiver. USH	OS - Code is free; pay-for services and deployment and customization

Table 9: Licensing strategy

### 3.4 Exploitation plans

The exploitation strategy and plans have been in constant evolution during the project life-time, in line with the identification of exploitable results and the market watch (see D9.5.2). The overall exploitation strategy has been based in three main pillars:

1. Built on top of **existing collaboration between partners**.
2. Exploring **different possibilities and business models**.
3. Focusing in the **sustainability** of the project results.

In this section we will describe in more detail the current ideas based on these pillars.

#### 3.4.1 Individual exploitation plans

The individual exploitation plans from each of the members of the consortium are important to understand what the partners would like to use and exploit from PHEME. However, this cannot be understood without knowing the existing collaborations and alliances between project partners.

For example, USFD has many ties with other partners especially in the use of the GATE platform. For instance, USFD, ONTO and USAAR are working together towards adding veracity methods into GATE and their respective tools. KCL is also using GATE for many applications in the eHealth domain. SWI, USH have also interest of using and adapting SwiftRiver with PHEME to provide tools for journalists, also in collaboration with other partners such as USFD, ONTO and UWAR. ATOS and ONTO are working together in the deploying of the Hercule fact-checking platform. Several EU-funded proposals have been sent by some of the project partners in the last months in order to continue the work started in PHEME. All in all, this is a clear indicator that the synergy between partners has led to mutual benefits and is the seed for a solid exploitation strategy.

3.4.1.1 USFD exploitation plan

USFD	Description
<p><b>Partner Profile</b></p>	<p>The Natural Language Processing (NLP) group at the University of Sheffield is one of the largest and most successful research groups in language and information in the EU. The group is based in the Department of Computer Science, and includes world-class teams in the areas of speech, language, knowledge and information processing, biotechnology, and machine learning for medical informatics. The Department of Computer Science was founded in 1982 and since then has established national and international renown for its teaching and research. It was awarded a top Grade 5 in the most recent nationwide Research Assessment Exercise.</p> <p>The Natural Language Processing Group has focused on robust engineering of open source NLP software and on quantitative evaluation and repeatability. The group has extensive experience in the fields of NLP infrastructures (GATE), information extraction, machine learning methods, dialogue systems, question answering, terminology extraction, and NLP methods for Knowledge Management and the Semantic Web. USFD has a world-leading research record on human language technologies, developed within national and international research projects in these areas. Past experience from the Arcomem (opinion mining from social media), TRENDMINER (mining and summarising trends in media streams), AnnoMarket (text mining services marketplace), and LARKC (large-scale reasoning and web search) projects formed a solid base for the PHEME work.</p>
<p><b>Identification of PHEME business/transfer opportunities</b></p>	<p>USFD has proven track record in developing and promoting open-source content analytics and language technologies, as well as providing training and consultancy services around these. Over the past 15 years, USFD has developed the world-leading open-source GATE NLP toolkit (<a href="http://gate.ac.uk">gate.ac.uk</a>), which has thousands of users at hundreds of sites. USFD provides annual training courses and certification in its technology, attended by 50 participants from industry and academia each year. A number of new tools for content analytics will be developed in PHEME and released as plugins within the GATE platform. This will ensure automatically that PHEME results are compliant with relevant text and data standards, such as ISO 24611 and 24615, TEI, OASIS UIMA, RDF, and OWL. USFD also plans to pursue further business opportunities via the Sheffield University Knowledge Transfer Partnerships (KTP) account and EpiGenesys (the Computer Science spin-out company).</p> <p>Secondly, the new veracity intelligence methods and services from</p>

	<p>PHEME will be deployed and promoted as freemium services on the GATE Cloud text analytics as a service platform <a href="https://cloud.gate.ac.uk/">https://cloud.gate.ac.uk/</a>. These will be promoted to companies and government organisations, and will be accompanied with documentation and examples.</p> <p>Further knowledge transfer opportunities arise through the Sheffield University connections to the digital and new media industries in the Sheffield city region, which are growing at a faster rate than anywhere else in the UK in terms of specialist companies and new jobs. A unique opportunity arises also from the £100m South Yorkshire Digital Region project.</p>
<p><b>Potential Addressable Market and Customers</b></p>	<p>We will target key growth areas for real-time intelligence solutions, such as semantic publishing and data journalism; healthcare and bio-informatics; voice-of-the-customer applications; online brand, product, and reputation management; digital archives and eGovernment; and companies providing internet privacy and security products.</p> <p>Major beneficiaries are the Digital Economy sectors identified above, as well as policy makers and health and well-being practitioners. In addition to the project partners, through UK and international research projects USFD have built successful industrial collaborations with other large companies (BT, The Stationery Office, Elsevier, Thompson Reuters, Nokia, Yahoo, Dassault Aviation, Elsevier, NICE, MPS Bank, Creditreform, the British Library) and SMEs (Innovantage, Ontotext, Text Mining Solutions, Mondeca, Ontoprise, ISOCO, Playance, ELDA), many of whom are already using GATE-based text processing solutions and can therefore benefit directly from the new results arising from this project.</p>
<p><b>Customers' Needs and Expectations</b></p>	<p>Customers increasingly expect text analytics solutions to be provided through the software-as-a-service model or to be easily deployable on their own HPC or cloud computing platforms. Scalability and near real-time processing are frequently required, as well as easy adaptation to new applications and domains. All of these challenges were a key focus in PHEME.</p>
<p><b>Value Proposition</b></p>	<p>Highly scalable methods and tools for deeper social media analytics, going beyond named entity recognition and sentiment detection, are still in their infancy. Therefore, USFD, together with ONTO and USAAR are in a unique position to offer companies and other stakeholders the new PHEME veracity intelligence methods and tools, for wide use and adaptation.</p>

**3.4.1.2 USAAR exploitation plan**

<b>USAAR</b>	<b>Description</b>
<b>Partner Profile</b>	<p>University of Saarland (USAAR) is represented by the faculty of computational linguistics and phonetics (COLI). Internationally renowned, the faculty and its staff have made Saarbrücken one of the leading centres for language science study and research worldwide. Focus is on computational linguistics, psycholinguistics, phonetics, and spoken language systems.</p> <p>Complementary to these, there are four independent research groups (Cognitive Models of Human Language Processing, Computational Modelling of Discourse and Semantics, Machine Learning for Natural Language Processing and Multimodal Speech Processing) focusing on further aspects of NLP.</p> <p>The department offers international degree programs at all levels, with state-of-the-art courses and ample opportunities to work with leading researchers.</p> <p>The department's internationally leading research projects are supported by a range of national and European funding agencies. It is part of the Cluster of Excellence "Multimodal Computing and Interaction" at Saarland University. USAAR also has a long-standing collaboration with the German Research Center for Artificial Intelligence (DFKI).</p> <p>Project management at COLI is conducted by a professional office; <a href="http://eurice.eu/about/">http://eurice.eu/about/</a> European research and project office GmbH.</p>
<b>Identification of PHEME business/transfer opportunities</b>	<p>USAAR is making use of well-established transfer channels with non-profit research organizations established on the campus in Saarbrücken. Promising industrial and commercial outcomes of research work can lead to the creation of spin-offs, something also supported by the government of Saarland and the University, in collaboration with Business Angels. A Science Park building with shared administrative facilities and personal is situated on the campus in order to support the creation of such spin-offs.</p> <p>At the time, the most visible potential industrial take-offs for industrial exploitation of results of work by USAAR is the so-called "data-journalism" field and the pharmacovigilance domain.</p> <p>Beyond this, USAAR will contribute to the open-source deployment of the NLP resources involved in the project and of all multilingual knowledge objects that will result from the work in PHEME.</p>
<b>Potential addressable Market and</b>	<p>In the pharmacovigilance domain, we are thinking that both government agencies and the pharmaceutical industry can potentially benefit from our work consisting in discovering how</p>

<b>Customers</b>	<p>medication (prescribed or self-medication) is discussed and judged in the context of user generated context.</p> <p>In the context of “data journalism”, the partners noticed that there is a huge interest from the Press community in the topics addressed in Pheme. USAAR has committed to demo results of Pheme to 3 major newspapers in German.</p>
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3.4.1.3 MOD exploitation plan

<b>MOD</b>	<b>Description</b>
<b>Partner Profile</b>	<p>The Department of New Media Technology at MODUL University Vienna (MOD) conducts cross-disciplinary research on the integration of semantic and geospatial visualisation technologies, human-computer interaction and visual analytics, with a special focus on large-scale media monitoring and Web intelligence applications. The research group develops Web intelligence applications for government agencies and corporate partners in both Europe and the United States, for example, and showcases its applied research results through award-winning Web and social media applications including the Media Watch on Climate Change and related crowdsourcing applications. MOD’s group of researchers has extensive experience in managing large-scale research projects and couples technological expertise with a strong background in the social and economic sciences.</p>
<b>Exploitation Overview</b>	<p>MOD is committed to exploit PHEME results and translate them into new information services. It has directly benefited from PHEME by advancing its research and commercial spin-out portfolio and by enriching its Master and PhD curricula. MOD plans to pursue joint exploitation activities with its spin-outs <i>MODUL Research</i> and <i>webLyzard technology</i> (see section below), as well as other consortium partners, both in terms of follow-up research collaboration and providing visualization services in commercial scenarios.</p>
<b>Expertise and Technology Showcase</b>	<p>MOD has been able to apply and extend its expertise in Web Intelligence and visual analytics, with a focus on graph-based approaches to visualize public dialogues and the evolution of social networks. The <i>Media Watch on Climate Change</i> (MWCC)<sup>3</sup> as a public showcase of MOD's technology stack has been complemented by the PHEME dashboard<sup>4</sup> on mental health and the pharmaceutical industry. We will continue to maintain the PHEME dashboard beyond the end of the project, providing</p>

<sup>3</sup> [www.ecoresearch.net/climate](http://www.ecoresearch.net/climate)

<sup>4</sup> [pheme.weblyzard.com](http://pheme.weblyzard.com)



	regular content updates and aiming to offer premium services for corporate users to help maintain the platform.
<b>Curriculum Development</b>	New insights into data stream clustering, natural language processing and social network analysis have been incorporated into the research-driven curricula of MOD's PhD program. Conceptual progress in visualizing large (unstructured) content archives has also been used to enrich its MBA program, for example the annual core unit on "Social Media Intelligence".
<b>Spin-Outs</b>	Two spin-outs of MOD, webLyzard and MODUL Research, will also benefit from the research output of PHEME by diversifying and attracting new clients, improving existing solutions for national and international partner organizations (for example, the Austrian Economic Chamber or NOAA, the U.S. National Oceanic and Atmospheric Administration), or additional opportunities to offer consultancy services accompanying the deployed platforms.

3.4.1.4 ONTO exploitation plan

<b>ONTO</b>	<b>Description</b>
<b>Partner Profile</b>	<p>Ontotext is a semantic technology lab of Sirma Group. It was founded in year 2000 and at present employs over 60 researchers and engineers. Ontotext is focused on research and core technology development for knowledge discovery, management, and engineering, Semantic Web and Web Services. Ontotext's technology delivers real-world applications in Web Services and Enterprise Application Integration, Knowledge Management and Text-mining, Business Intelligence, Life Science, and Media Research. Ontotext is developer of several outstanding Semantic Web tools, including: the KIM semantic annotation platform and GraphDB– the fastest and most scalable OWL semantic repository. Ontotext is also a major contributor to few of the most popular open-source projects in the area: GATE (language engineering platform) and Sesame (RDF semantic repository).</p> <p>SIRMA (<a href="http://www.sirma.com">www.sirma.com</a>), established in 1992, is a group of diverse, privately-owned software businesses with major offices in Bulgaria (Sofia, Plovdiv, Varna, Rousse), Canada (Montreal).</p> <p>It includes more than 10 companies and business units. Sirma is one of the oldest and biggest software houses in Bulgaria, at present top-3 software producer with around 200 employees. In 2008 Ontotext secured external funding – NEVEQ (a VC fund) acquired a minority share in a deal for 2.5M€ Based on public information, this is the biggest investment in semantic technologies in Europe for the year.</p>

<p><b>Identification of PHEME business/transfer opportunities</b></p>	<p>Ontotext has been developing state-of-the art solutions for Semantic Technology and Text Analytics in the areas of Publishing and Live Sciences. Its know-how has been concentrated mainly on annotation and extraction of named entities, relations among them, named entities mapping to ontologies and LOD, sentiment analysis in Digital Journalism (Finance, Sport, etc.), Government Administration and Medical Domain.</p> <p>The results from the PHEME project will broaden and enrich Ontotext services with trust-oriented information over the data sources and opinion streamlines on various topics from the social networks. The ontologies and data mining will be adapted with respect to these new social dimensions. Also, the RDF in-house repository GraphDB will add a socially-based reasoning dimension into its semantic architectural design.</p>
<p><b>Potential Addressable Market and Customers</b></p>	<p>The potential Market includes the following agents:</p> <ul style="list-style-type: none"> <li>- <b>News Media and Publishing:</b> improved personalization services and tools for verification of the presented information</li> <li>- <b>Live Science:</b> filtering the data sources through trust labels and socially-based recommendations</li> <li>- <b>Policy Making:</b> identification of trustful companies and stakeholders as well as identification of well-behaved markets and businesses</li> </ul>
<p><b>Customers' Needs and Expectations</b></p>	<p>Customers in all of the above mentioned areas would expect the following solutions:</p> <ul style="list-style-type: none"> <li>- <b>data filtering and packaging,</b> based on reliable differentiation of trusted vs. non-trusted sources of information</li> <li>- <b>authoring services,</b> based on accessing veracity in the information flow</li> <li>- <b>personalization services,</b> based on opinion mining in social networks</li> </ul>
<p><b>Value Proposition</b></p>	<p>Ontotext, together with USFD and USAAR will be able to deliver Semantic Technology services of next level, which consider also the veracity dimension of the data.</p>

**3.4.1.5 ATOS exploitation plan**

ATOS	Description
<p><b>Partner Profile</b></p>	<p>Atos SE is a leader in digital services with pro forma annual</p>

	<p>revenue of circa € 12 billion and circa 100,000 employees in 72 countries. Serving a global client base, the Group provides Consulting &amp; Systems Integration services, Managed Services &amp; BPO, Cloud operations, Big Data &amp; Cyber-security solutions, as well as transactional services through Worldline, the European leader in the payments and transactional services industry. With its deep technology expertise and industry knowledge, the Group works with clients across different business sectors: Defense, Financial Services, Health, Manufacturing, Media, Utilities, Public sector, Retail, Telecommunications, and Transportation.</p> <p>ATOS acquired Bull, the French company specialized on Big Data and HPC, strengthening its position in those fields.</p> <p>Atos Research &amp; Innovation (ARI) is the R&amp;D hub for emerging technologies and a key reference for the whole Atos group. With more than 28 years of experience in running Research, Development and Innovation (RDI) projects, we have become a well-known player in the EU context. Our multidisciplinary and multicultural team has the skills to cover all the activities needed to run projects successfully, from scientific leadership to partnership coordination, from development of emerging technologies to the exploitation of project outcomes, with a strong focus on dissemination, innovation adoption and commercialization.</p> <p>Atos is member of many international research initiatives and communities, and is founding member and holds a Secretary in the Big Data Value Association (BDVA). As a major IT player in Europe, the access to its clients in the financial sector is key for the dissemination and exploitation of the PHEME results.</p>
<p><b>Identification of PHEME business/transfer opportunities</b></p>	<p>The main project results exploitable for Atos are:</p> <ol style="list-style-type: none"> <li>1. The data acquisition tool Capturean (previously known as Capture). Capturean has been enhanced to cope with Reddit data as well as improved its functionality for handling data channels.</li> <li>2. Enhancements of Capturean for business analytics, especially in the scope of veracity. When dealing with social media intelligence, our customers are generally concerned about the truthfulness of the data and therefore its degree of usefulness. With PHEME we expected to integrate that into our software as an added value to our customers.</li> </ol>
<p><b>Potential Addressable Market and Customers</b></p>	<p>Atos covers multiple markets such as media, banking, financial services, insurance, oil and industry, public sector, retail, telecom, transport, utilities and health. As a major software integrator, Atos develops every day millions of code lines within the different sectors.</p> <p>Atos is using OSS tools to perform its own developments. The</p>

	<p>know-how gained in building such environments can be used to build similar platforms for customers. Atos also provide support on the most used OSS. As an example Atos is supporting JBoss for the French Ministry of Finance.</p> <p>Specific division within Atos is the Offer &amp; Development division, which mission is to build the company’s overall software offer. ARI is also heavily involved in the ATOS Scientific Community, a global innovation board taking research results to a commercial level.</p> <p>Big Data and the use of advanced analytics are also of the utmost interest for Atos. In this sense, PHEME will bring a powerful tool for social data analytics, especially targeting the veracity dimension. The improvements to our current acquisition tool will be therefore taken to our big data offering.</p> <p>The PHEME results are addressable a twofold market: Atos customers and Atos own software development.</p> <p>With the objective to manage costs, ensuring regulatory compliance and to optimize productivity, Atos aims at exploiting research in application fields, where customers face massive amounts of heterogeneous data streams. Therefore, Atos exploitation plan is to lead the knowledge and experience acquired to concrete projects with corresponding clients. The PHEME data acquisition tool enhanced within the project will provide an important piece of software in our strategy to engage customers.</p> <p>By its Research and Innovation Division, Atos furthermore will initiate future research activities in this field.</p> <p>Atos is negotiating an agreement with ONTO in order to exploit common results from PHEME.</p>
<p><b>Customers’ Needs and Expectations</b></p>	<p>Atos is building a strong strategy towards offering Big Data analytics to our customers. With the recent acquisition of BULL (as summer 2014) is one step more in that direction. With PHEME we expect to bring analytics in social media adding the veracity dimension, which is one of the main concerns of our customers when dealing with social media. Therefore, PHEME veracity framework could become a cornerstone in our strategy to approach customers and ease the fears that still exist in many organizations to use social media for the decision making process.</p>
<p><b>Value Proposition</b></p>	<p>The main advantage of PHEME from the Atos perspective is the possibility of offering a veracity framework for social media usage in the decision making process of many organizations.</p> <p>Atos always tries to solve the business problems of our clients, not bound to a specific market solution. Therefore PHEME could fit in a number of future developments and in our offering to our customers, not only for the media and health sectors, but to our big</p>

	data offering as a whole.
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3.4.1.6 KCL exploitation plan

<b>KCL</b>	<b>Description</b>
<b>Partner Profile</b>	<p>King’s College London (KCL) is one of the top 30 universities in the world (2012/2013 QS international world rankings), is in the top seven UK universities for research earnings, and is the fourth oldest in England. King’s has an outstanding reputation for providing world-class teaching and cutting-edge research. In the 2014 Research Assessment Exercise for British universities, King’s rose to 6<sup>th</sup> position nationally.</p> <p>KCL links closely with South London and Maudsley NHS Foundation Trust (SLAM) and with its two other neighbouring Acute Healthcare providers at Guys and St Thomas’ Hospitals and Kings College Hospital under the Kings Health Partners Academic Health Sciences Centre – one of only five national centres dedicated to bringing together academic research with clinical practice. The close KCL-SLAM links on the NIHR Biomedical Research Centre for Mental Health (BRC) will bring the needs of mental healthcare practitioners into a tight loop with the project’s science and technology development programme. SLAM is one of the largest mental healthcare providers in Europe, serving a geographic catchment of 1.2 million residents, and plays a significant role in the development of health policy at a national level. The SLAM electronic health record (EHR) thus forms the basis of Europe’s largest mental health case register. The Clinical Record Interactive Search (CRIS) allows databases to be assembled from the fully electronic patient records system which has been operating across all services provided by SLAM since 2006, extracting bespoke anonymised data for secondary analysis including de-identified free text fields, if required. The data resource contains full anonymised patient records on over 280,000 service users, over 35,000 of whom are receiving active case management at any given time. The total size of the database in SQL is approximately 135GB, of which 60% corresponds to text fields. The BRC has demonstrated long-standing commitment to developing CRIS and a wider Clinical Informatics programme, including the incorporation of external data linkages, the development of a shared electronic record (in collaboration with Microsoft), and the application of natural language processing to derive structure from patient records using GATE, the latter being the product of a long-standing and productive collaboration with the University of Sheffield (USFD) team. PHEME will show how the technologies developed can be applied to a mental health-related use case, and how social media analysis can be integrated with public health monitoring and with analysis of the EHR.</p>

<b>Identification of PHEME business/transfer opportunities</b>	<p>Industry collaboration is a key imperative at the Biomedical Research Centre where PHEME-related EHR work is hosted. We will utilise local resources, as well as the wider networks offered through the PHEME collaboration to identify potential business / transfer opportunities. These are likely to focus on applications arising from the relationships examined between information on social media and occurrences within mental healthcare - for example: i) how the emergence of ‘legal highs’ mentioned on social media might be expected to be relevant to clinical services and justifying an alerting system automated within the EHR and ii) how new waves of anti-stigmatising comments, and those relating to self-harming and suicidal behaviour on social media might be identified and fed back in a useful alerting system to clinicians.</p>
<b>Potential Addressable Market and Customers</b>	<p>The primary markets are envisaged to be mental health services using EHRs and the agencies supporting these (i.e. EHR manufacturers and companies marketing ancillary decision-support software). There may also be a Public Health market (e.g. those agencies/charities responsible for combating stigma and misinformation relating to health matters in the public domain and the media organisations with which they interface).</p>
<b>Customers’ Needs and Expectations</b>	<p>PHEME has provided the necessary case studies to support the dashboard development and the deployment of an additional online news media monitoring tool hosted on the BRC website. Both the full dashboard and brief tool are publicly available for use by healthcare professionals, service users and the general public. For the utilisation of the full dashboard to its maximum potential, a training session is recommended.</p>
<b>Value Proposition</b>	<p>To our knowledge, there are no comparable solutions available and thus any output from this aspect of PHEME work will be internationally novel. EHRs in mental healthcare are increasingly widely used so the applicability of derived business opportunities is very large.</p>

#### 3.4.1.7 iHUB exploitation plan

iHUB	Description
<b>Partner Profile</b>	<p>iHub - Nairobi's Innovation Hub for the technology community is an open space for the technologists, investors, tech companies and hackers in the area. This space is a tech community facility with a focus on young entrepreneurs, web and mobile phone programmers, designers and researchers. Two of iHub’s divisions are relevant to PHEME: iHub Consulting and the iHub Cluster. iHub Consulting pools together top talent from the community to</p>

	<p>help organizations develop and implement technology strategies and solutions for long term growth.</p> <p>We leverage local skills to deliver tech innovation to organizations where it is needed. In this way, we believe we are catalysing the movement of innovation to where it matters most. The iHub Cluster is building an HPC cluster to achieve: ACCESS - Bringing Super Computing technology and knowhow that is high in academia or deep in institutions to iHub projects; SCALE - To be at the forefront of the changing computing landscape in Africa that delivers on the technology and develops the human capacity to maximise the technology iHub Consulting is part of the community behind the Ushahidi Platform: free, open source, web-based software for leveraging crowdsourced data for crisis response, civic engagement, and more. The roots of Ushahidi are in the collaboration of Kenyan citizen journalists during a time of crisis. The current team comprises individuals with a wide span of experience ranging from human rights work to software development.</p> <p>iHUB brings into the project expertise in developing and integrating Ushahidi 3.0, along with new versions of Crowdmap and SwiftRiver, newer and complimentary software products, aimed at making sense of social data at large scale.</p>
<p><b>Identification of PHEME business/transfer opportunities</b></p>	<p>The PHEME journalism dashboard is based on the Ushahidi platform and is open source. The exploitation opportunities here are in the ability to provide better validation and verification tools to communities and organisations using this toolset. Specifically, the addition of PHEME’S verification algorithms, methods for creating verification ontologies (Ushahidi tool users work in many languages, several of which have no text processing ontologies yet), and links to other PHEME tools will give users of e.g. CurrentEngine a more powerful way to vet incoming messages and memes.</p>
<p><b>Potential Addressable Market and Customers</b></p>	<p>Already existing market: communities and organisations crowdsourcing and monitoring diverse topics including regional elections, crises, conflicts, healthcare, agriculture, and data journalists covering fast-moving topics where rumour, speculation and deliberate injection of false information are not uncommon.</p>
<p><b>Customers’ Needs and Expectations</b></p>	<p>Customers need to verify and validate incoming messages, the sources of those messages, and the themes that are emerging from processing the entire message stream. Customers expect to be able to do this in near-real-time, often with a message stream too large for a human team to process by hand.</p>
<p><b>Value</b></p>	<p>We use PHEME techniques and technologies to improve access to</p>

<b>Proposition</b>	better validation and verification for communities and organisations across a range of subjects and countries.
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3.4.1.8 SWI exploitation plan

<b>SWI</b>	<b>Description</b>
<b>Partner Profile</b>	<p>swissinfo.ch is the international service of the Swiss Broadcasting Corporation (SBC). Since 1999, swissinfo.ch has fulfilled the federal government’s mandate to distribute information about Switzerland internationally, supplementing the online offerings of the radio and television stations of the SBC. Today, the international service is directed above all at an international audience interested in Switzerland, as well as at Swiss citizens living abroad.</p> <p>The online service offers a Swiss view of current affairs and highlights Swiss positions on international events and developments, while reflecting the view of Switzerland from abroad. swissinfo.ch’s coverage focuses on politics, business, culture, society and research. swissinfo.ch also provides specific information for the Swiss abroad to assist them in exercising their political rights in Switzerland (vote dossiers).</p> <p>swissinfo.ch has been reporting in Russian since 2013 – in addition to English, German, French, Italian, Spanish, Portuguese, Chinese, Arabic and Japanese – thereby reaching more than 80% of the world’s internet users.</p> <p>swissinfo.ch has offices in Bern (headquarters), Geneva and Zurich, and is represented in parliament’s media centre in the nation’s capital. swissinfo.ch offers mobile apps for Apple, Android and Windows.</p>
<b>Identification of PHEME business/transfer opportunities</b>	<p>Together with other PHEME partners (e.g., USFD), SWI can help to demonstrate the various functionalities of the journalism dashboard to interested parties that have expressed an interest in the technology (primarily media organisations). It can also explore knowledge transfer possibilities related to the dashboard and sharing of techniques for fact checking: e.g., training end users; customisation expertise; sharing list of credible sources.</p> <p>Moreover, the SBC/SWI might include partners in exploiting PHEME-developed social media analytics technologies, such as for the analysis of social media activities around nation-wide votes.</p> <p>Annotated corpora of rumours has been made available open source for research purposes and as training data</p>
<b>Potential</b>	Digital journalism dashboard: Mainly other news organisations



<p><b>Addressable Market and Customers</b></p>	<p>that have expressed an interest in the technology; sister organisations within the Swiss Broadcasting Corp. family; stakeholders who need to make quick sense of a fast-developing discussion on social media, such as administrative departments reacting to emergencies, large corporations, human rights organisations.</p> <p>Annotated corpora: academic institutions (universities), developers, journalism research institutes, other news organisations</p>
<p><b>Customers' Needs and Expectations</b></p>	<p>Journalists would expect the technology to be reliable and efficient and to be adaptable across much larger newsrooms than SWI; the data streams would need to be quick, as close to real-time as possible. The dashboard should provide a quick visual overview of unfolding events/discussions and the ability to drill down. Using the dashboard should be relatively easy and easily integrated into the workflow.</p>
<p><b>Value Proposition</b></p>	<p>Give users ability to harness the abundant amount of information on social media for timely and accurate reporting of the news. Ability to identify and verify content and sources quickly, in near real time, going beyond a small newsroom's human resource capacity.</p>

3.4.1.9 UWAR exploitation plan

<p><b>UWAR</b></p>	<p><b>Description</b></p>
<p><b>Partner Profile</b></p>	<p>The University of Warwick is one of the UK's leading research-led universities and was ranked seventh overall in the UK by the latest Research Assessment Exercise (2008), and is consistently ranked in the Top Ten UK Universities in other league tables. Recent large-scale funding has resulted in the establishment of cross-faculty centres of research, which bring together emergent technologies and target disciplines. The Department of Computer Science is one of the leading Computer Science Departments in the UK for both research and teaching.</p> <p>The Department was awarded international excellence status in the last three UK Research Assessment Exercises (1996, 2001 and 2008) and has the state-of-the-art computing facilities to support the needs of the project. Research in the Department encompasses a variety of topics, ranging from advancing the foundations of computing to exploring novel, interdisciplinary applications. The activity is strengthened by a range of collaborations, including within the University, nationally and internationally. The department is a partner in the Centre for Urban Studies and</p>

	<p>Progress (CUSP), a research institute created by New York University in conjunction with a consortium of world-class universities and world-leading tech companies, to tackle the array of complex challenges facing cities in the 21st Century.</p> <p>The Social Informatics Group (SIG) is a research group with the Department of Computer Science, led by Prof Rob Procter. The group’s research focuses on the sociology of technology and innovation, in particular, how cognitive, organisational and social factors shape the design, development, adoption and use of information and communication technologies (ICTs). The applications strand of this research seeks to work with user organisations to develop and deploy innovative applications of distributed, digital infrastructure and tools. The social shaping strand adopts social studies of science and technology approach to understand how distributed, digital infrastructure and tools are being developed, how they are used and their implications for individuals, organisations and communities. Prof. Procter will be playing a leading role in Warwick University’s contribution to CUSP.</p> <p>A major focus of current work is on social media analysis. Procter’s work with the Guardian Newspaper, which focused on analysing tweets from the time of the August 2011 riots in England, has been widely cited and has led to collaborations with various UK government agencies, including police forces (via the National Policing Improvement Agency), Scottish Government Justice Analytic Services Unit, the BBC World Service and several third sector organisations. SIG has funding from the UK JISC to develop a scalable social media analysis workbench for harvesting and analysing social media for use by academic researchers. Procter has also worked with the Guardian Newspaper in a study of how journalists use social media as source of information for news stories and with the BBC World Service in an analysis of the use of social media as a tool for increasing audience engagement and programming impact.</p>
<p><b>Identification of Theme business/transfer opportunities</b></p>	<p>UK news media: Guardian, BBC WS</p> <p>UK business: financial sector, agriculture</p> <p>‘Smart Cities’</p> <p>Government agencies, emergency services, etc.</p>
<p><b>Potential Addressable Market and Customers</b></p>	<p>News media: tools for tracking social media: story detection, verification</p> <p>Government agencies, emergency services: crisis management</p> <p>Banking, agriculture: brand and customer relations management</p>
<p><b>Customers’</b></p>	<p>News media: assess veracity of stories</p>

<b>Needs and Expectations</b>	<p>Government agencies, emergency services: crisis response decision-making</p> <p>Banking, agriculture: monitoring relevant social media content, informing responses</p>
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### 3.4.2 Domain Exploitation

Digital Journalism and Healthcare have been chosen as use cases as they are domains where users are already engaged heavily in monitoring and analysing media streams, as well as correlating that to information from authoritative sources (e.g. established news organizations, scientific papers, and grey literature). These are also domains where the practices currently employed are largely manual and are therefore becoming increasingly expensive and less efficient to perform, as content volumes continue to grow. However, apart from healthcare and digital journalism, the project results can be also applied in other domains. A non-exhaustive list comprises applications and domains such as business intelligence, market research, campaign and brand reputation management, finance, smart cities, customer relationship management, knowledge management, semantic search and government organizations. Being the core of PHEME domain-agnostic, we would like to share some preliminary ideas by the consortium in how to approach exploitation in other domains.

#### 3.4.2.1 Digital journalism

A summary of the main exploitation on this domain can be visualized on the table below:

Expected results	Potential benefits	Exploitation Prospects
Digital journalism application Identify newsworthy rumours, verify content and sources, separate relevant and credible info from 'phemes'	Save journalists time; elevate quality and reliability of journalism output; help with identifying credible sources and relevant, reliable content; understand how rumours develop	Make application available to other news organisations, including other departments of SRG (Swiss Broadcasting Corp.), with possibility for customisation; Guardian newspaper, BBC World Service
Annotated corpora for journalism use case, for future research needs	Having a repository of rumour corpora that can be easily retrieved and analysed, even adapted to specific research requirements	Make corpora available (as open source) for research purposes by academic institutions, other news organisations.
Better understanding of rumour life cycles & verification.	Better and faster coverage of relevant rumours, ability to identify misinformation / disinformation.	Transfer knowledge, best practices on how to treat rumours
Lessons learned can be adapted to SWI's workflow needs SWI has introduced a Fact Check dossier, whereby SWI journalists check claims made by public	These fact check articles are being published periodically, usually in several or all (10) languages of the service.	Fact checkers will use the PHEME tool to help them in their work

Expected results	Potential benefits	Exploitation Prospects
figures in Switzerland.		
Ontotext and Atos reached an agreement to work together on improving the fact check tool called Hercule for potential commercial uptake, mainly in the journalism and media domains	Results from PHEME will be showcased and potentially marketed	In a first phase, the showcase will be free to attract potential customers. If this is successful, Ontotext plans to invest on the tool to offer commercial services

*Table 10: Digital Journalism Exploitation*

**Potential impact of PHEME in digital journalism use case**

The primary impact of PHEME in the digital journalism use case will be the deployment and exploitation of the dashboard in swissinfo’s Production Room, a combination of the newsdesk and quick story production teams, and by in-house fact checkers. The deployment will take place during the time that the tool is being hosted by partner organisations and may be extended following discussions in-house and with project partners. In the Production Room, PHEME will be a primary resource for identifying newsworthy storylines and potential rumours, determining the origin of tweets being widely shared, and obtaining an indication of the levels of controversy and veracity of Phemes (or rumours story clusters). It will also support further (manual) verification steps for content and sources along the journalism workflow, including by fact checkers working on verification stories.

In addition, SWI and partners will explore the possibility of deploying the tool on a trial basis to swissinfo’s sister companies within the Swiss Broadcasting Corp. The tool could also be deployed on a trial basis to other news organisations that have expressed an interest in it and where partners are planning tool demonstrations at the end of the project: namely, BuzzFeed News and the BBC. While swissinfo is a non-profit company and the scope for its involvement in the commercialisation of PHEME tools is limited at best, it could participate actively in the transfer of know-how and the dashboard to these and other news outlets.

The annotated corpus of rumours to which SWI contributed is now available open source to academic and other research institutions for research intended to further the understanding of how rumours function and to serve as training data.

Most recently, SWI trialled with users the Hercule fact-checking assistant, prototyped in the last 6 months of the project. The results were very promising and SWI and ONTO are planning in continued collaboration around this post- PHEME.

Finally, the lessons learned about rumours and verification learned over the course of the PHEME project has led SWI to introduce a Fact Check dossier, whereby SWI journalists check claims made by public figures in Switzerland. These fact check articles are being published periodically, usually in several or all (10) languages of the service. As stated above, following the end of the project, fact checkers will use the PHEME tool to help them in their work. SWI journalists have also produced two original videos, a podcast and a feature story that explain

the goals and tasks of the project in English (see dissemination table). The videos and feature story have been translated into several languages.

### 3.4.2.2 Healthcare

The exploitation on this domain can be easily visualized on the table below:

Expected results	Potential benefits	Exploitation Prospects
<p>An analysis of the temporal relationship between ‘legal highs’ being mentioned on social media and related occurrences in the clinical record (extent of co-occurrence and profile of cases in which this is observed). Development of applications to automatically identify mephedrone mentions on social media and in the clinical record.</p>	<p>To inform mental health services about the extent to which legal highs are routinely recorded the temporal association between their appearance on social media and reporting in the clinical record and the profile of patients for whom this occurs.</p>	<p>The use case could potentially provide the evidence base for a monitoring system, identifying new agents from social media and targeting automated warnings to clinical teams for whom this information is most valuable.</p>
<p>An investigation of how medication is discussed about on social media. Development of application to automatically identify medication-related advertisements.</p>	<p>To assist public health stakeholders and industry in filtering out irrelevant information related to medication which could interfere with opinion mining.</p>	<p>The application could potentially contribute towards applications designed for tracking social media conversations on medication so that these focus on genuine content.</p>
<p>An investigation of anti-stigmatising comments/rumours in social media (as a proxy for periods when stigmatising events occur) in relation to mental health conditions - the extent of this exposure, its variability over time and the relationship between peak periods of ‘stigma’ and adverse outcomes in people with the conditions in question. Development of application to automatically identify anti-stigmatising expressions in tweets.</p>	<p>To evaluate the extent to which periods of heightened stigma might contribute to adverse mental health outcomes and to identify the groups most vulnerable to this.</p>	<p>Monitoring systems for heightened stigma could be incorporated into routine mental health care, particularly if tailored to groups known to be vulnerable.</p> <p>Public mental health bodies and others responsible for countering stigma could benefit substantially from a product which monitored this and provided alerts.</p>
<p>An investigation of comments on social media concerning self-harm and suicide. As with stigma, the study would investigate periods of heightened comment and their relationship with adverse outcomes in potentially vulnerable groups ascertained from mental health records. Development of application to automatically identify tweets relevant expressing self-harming and suicidal</p>	<p>To evaluate the extent to which periods of heightened comment on self-harm and/or suicide might contribute to adverse mental health outcomes and to identify the groups most vulnerable to this.</p>	<p>Monitoring systems for heightened comment could be incorporated into routine mental health care, particularly if tailored to groups known to be vulnerable.</p> <p>As mentioned, a more general alerting system would be potentially of interest in public mental health.</p>

Expected results	Potential benefits	Exploitation Prospects
intentions/practices.		

Table 11: Healthcare Exploitation

### 3.4.2.3 Potential exploitation in other domains

The exploitation on different domains can be easily visualized on the table below:

Domain	Usage	Potential benefits	Exploitation Prospects
Marketing, brand and reputation management	Managers are constantly looking for innovative ways of capturing individual and public viewpoints to guide their strategic and operative decisions. PHEME will develop methods for these managers to "listen" to their customers on both the micro and the macro level by gathering and analysing rumours being spread through user-generated content across social media platforms.	As demonstrated by Toyota's unnecessary recall, arising from the rumour of Prius has breaking problems, identifying, monitoring, and reacting to rumours in a timely fashion is absolutely essential. PHEME will demonstrate how automated content analytics and the automated tracking of rumours can provide valuable marketing intelligence - e.g. by investigating how brand image and perceived product quality can be inferred from social media, including rapid feedback on the origin and drivers of perceptions and observable misconceptions.	ONTO, MOD and ATOS already have clients in this vertical, which will be the first impact targets.
Search and knowledge management	USFD's and ONTO's existing text mining tools are already used in electronic archives and digital libraries to enable more powerful, semantic searchers, e.g. for person names and locations. For instance, USFD and ONTO completed recently a project with the UK National Archives, which developed a bespoke 'intelligent discovery tool' to improve searches of archived UK Government websites (around 7TB of data). Secondly, USFD is currently working with the British Library on customising and integrating LOD-based information extraction tools into their Envia information	All these projects involved search over trusted, internally held content. There is now strong market interest in linking such content to relevant social media and social networks, which is the focus of PHEME.	ONTO and USFD will seek to attract further significant industrial interest and generate exploitation opportunities, firstly by presenting project results to existing industrial contacts and secondly, by targeting new ones through webcasts, YouTube presentations, and participation in relevant industry-oriented forums (e.g. Intelligent Content, Text Analytics, KDNuggets).

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Domain	Usage	Potential benefits	Exploitation Prospects
	discovery tool.		
Society and Citizens	In addition to its high commercial relevance, the project will also benefit society and citizens by enabling healthcare professionals, politicians and government representatives to monitor social media and respond to circulating misinformation and rumours.	PHEME will show how phemes circulate in social networks, how they are understood, remembered, and propagated. By uncovering rumours and authoritative sources, it will engage stakeholders and reveal hidden knowledge to decision makers.	Development of applications that alert citizens to rumours circulating online and/or helping them verify content on their personal timelines.
Smart Cities	The project has prospects for engaging with a range of smart cities initiatives in the UK and internationally. UWAR is the UK partner of the New York-led Center for Urban Science and Progress and so is well-positioned for developing applications  On the other hand, social networks data acquisition and analysis is being tested in the scope of proof-of-concept by ATOS in specific cities.	PHEME would enable city authorities to detect citizens' concerns more quickly and to respond to them more effectively.  The data acquisition framework from PHEME will be a key enabler for social network data acquisition and analysis in the scope of the Atos' exploitation in this domain.	Development of applications that alert city authorities to monitor public discourse about public service issues, health and well-being.  ATOS is planning to reuse the data acquisition and analytical framework for crowd monitoring and alerting.
Emergencies	Government agencies and services lack the tools and skills to monitor social media for breaking news about possible emergencies. UWAR has partnerships with emergency services through its previous work and through its smart cities programme.	PHEME would enable more rapid identification of potential threats to public safety, whether real or just rumour and the monitoring of the effectiveness of interventions through social media.	Development of applications that enable early detection of potential threats to public safety and monitoring of interventions.
Banking and financial	Banks and financial services firms face a range of threats, ranging from large scale geopolitical risks to localized problems. Social media's capacity to crowd-source reports rapidly from observers on the ground has seen it play an increasingly important role.	PHEME would enable more rapid response to potential threats and the monitoring of the effectiveness of interventions through social media, brand management.	UWAR is planning meetings with the British Banking Association to discuss possibilities for collaboration.
Agriculture and food industries	Agriculture and food industries generally face problems in detecting and responding effectively to rumours about e.g. health, nutritional value and safety issues relating to food. Larger enterprises are typically bound to feedback mechanisms dominated	PHEME would enable early detection of food health, nutrition and safety issues and monitoring of interventions, supporting more fleet-of-foot brand management.	UWAR has links with food industry and will follow up on possibilities for collaboration.

Domain	Usage	Potential benefits	Exploitation Prospects
	by food outlets and marketing organisations. They are therefore increasingly looking to social media to provide a more direct and immediate line of feedback from consumers.		

*Table 12: Other Domains Exploitation*

### 3.5 Sustainability of project results

As hinted in the previous section, the key of the exploitation is related to a good strategy to make the results of the project sustainable. This is not an easy task, as most research projects fail to provide a solid and credible strategy to fulfil this goal.

It is the understanding among project partners that the results from PHEME are interesting both for the scientific community and the market. As already mentioned fake news in social media is now a trending topic and is attracting the attraction of the media and the public in general. Therefore partners acknowledge that continue working in PHEME related results is a good move, both from the research and commercial aspects.

Having said so, we have explored several possibilities and business models. We looked at success stories in previous cases in seek of inspiration. Examples of these are the NeOn foundation, creation of successful spin-offs from research projects, bilateral or multilateral agreements among partners, etc. It is also of crucial interest to think on a clear business model to try to monetize the project results, without ruling out the academic exploitation for further research.

During the project we discussed many different exploitation and business possibilities, some of them were ruled out because they proved to be difficult to achieve, while others emerged successfully. Historically, we contemplated the following opportunities:

- Veracity framework in an active Open Source model. We didn't pursue this model as it involved the creation of a vibrant community of developers around it or piggybacking with existing similar successful initiatives. However, our OS results are publicly available from the PHEME web site.
- Veracity framework in the GATE community. This has been partially achieved thanks to Sheffield. The GATE Summer School 2016 showcased some of the PHEME results for developers, and part of the PHEME implementations have been advertised to the GATE community. The stance and veracity classifiers will be deployed on GATE Cloud by mid 2017, with the intention of making these available freely to researchers and on a freemium model for companies.
- Contributions to standards related to veracity in social networks. No standardization has taken place during the project life-time.
- Creation of Spin-offs: This issue requires individual people to take the opportunity and fund a new company or start-up. This did not happen during the project, but instead,



partners preferred to build on the track record and reputation of their respective organisations, while building solutions based on joint work, through use of web services.

- Potential interest in existing domains and organizations in taking results from PHEME. In this sense, besides the obvious usage in the scope of eHealth and digital journalism areas, UWAR has already detected interest in the financial sector and in the usage in the scope of smart cities. More information can be found in section 3.4.2.
- Establishing a Foundation around PHEME results. This didn't happen during the project.

At the end of the project, in terms of sustainability, the main actions come from multilateral agreements among partners. One example of this is the agreement between ONTO and ATOS to keep a separate PHEME instance in ONTO showcasing Hercule. This will be explained further in the following sections. Besides that, PHEME pipelines and components will be kept available for the next two years on the Sheffield infrastructure. More information about it is given in the next section.

### **3.6 Main exploitation outcomes**

#### *3.6.1 PHEME Dashboard*

The dashboard of PHEME, publicly available at <http://pheme.weblyzard.com> and shown in the screenshot below, is a visual analytics tool to interactively explore the veracity intelligence collected in WP6. It includes visualisations of geospatially and semantically referenced information across news media and social networks, tightly coupled by means of high-performance synchronisation mechanisms to quickly adapt the dashboard configuration according to the specific requirements of a user, and to show context information across various semantic dimensions.

MOD is committed to maintain the dashboard for at least two years after the completion of the project, enabling insight into popular issues that are being discussed related to the health domain, with a special focus on rumours and misconceptions, mental health and the pharmaceutical industry. Together with KCL and other consortium partners, MOD aims to attract financial support by commercial organizations in order to maintain and extend the platform. While registered access to the dashboard will remain free for charity organizations, specific add-on tools to monitor the perceptions of pharmaceutical brands, specific products (e.g., different antidepressants) or persons (e.g., a company's managing director) will be offered as a premium feature.

At the same time, the dashboard presents automatically extracted metadata such as veracity, stance, sentiment, geographic location, or references to other social media authors within a specific use case. Enriching the display through color-coded visualizations that convey these metadata dimensions represents a functionally rich and interactive way to present the PHEME data services, paving the way for joint exploitation activities together with the consortium partners who provide these data services.

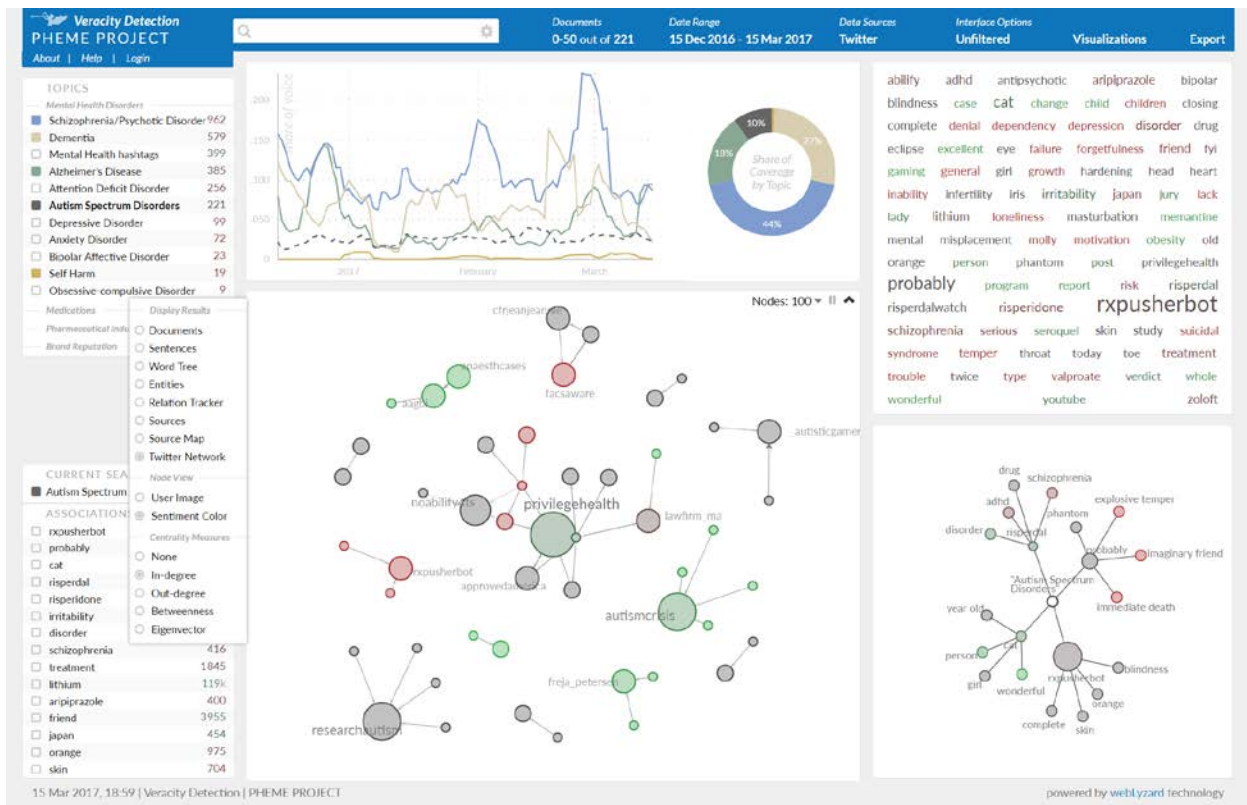


Figure 4: Screenshot of the PHEME Dashboard (<http://pHEME.weblyzard.com>)

### 3.6.2 ONTO's services

Besides its work in several algorithms and components integrated in the PHEME pipelines, ONTO developed a complementary tool to PHEME for fact-checking called Hercule. Hercule uses Capturean functionality to get the social media data and the PHEME integration framework based on Apache Kafka, and develops on top of it algorithms for fact-checking and a new dashboard. The figure below shows a high level overview of the elements of Hercule:

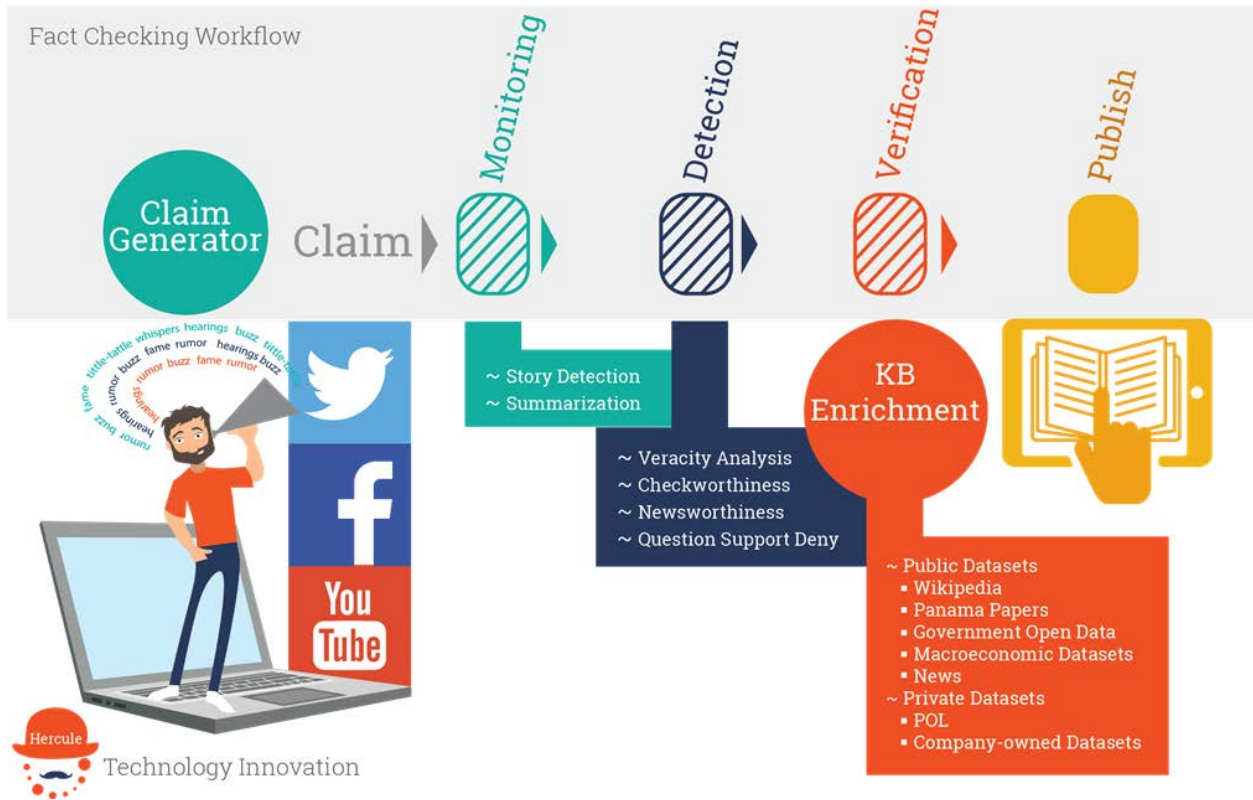


Figure 5: High level overview of Hercule

The figure below shows a screenshot of the home page of Hercule.

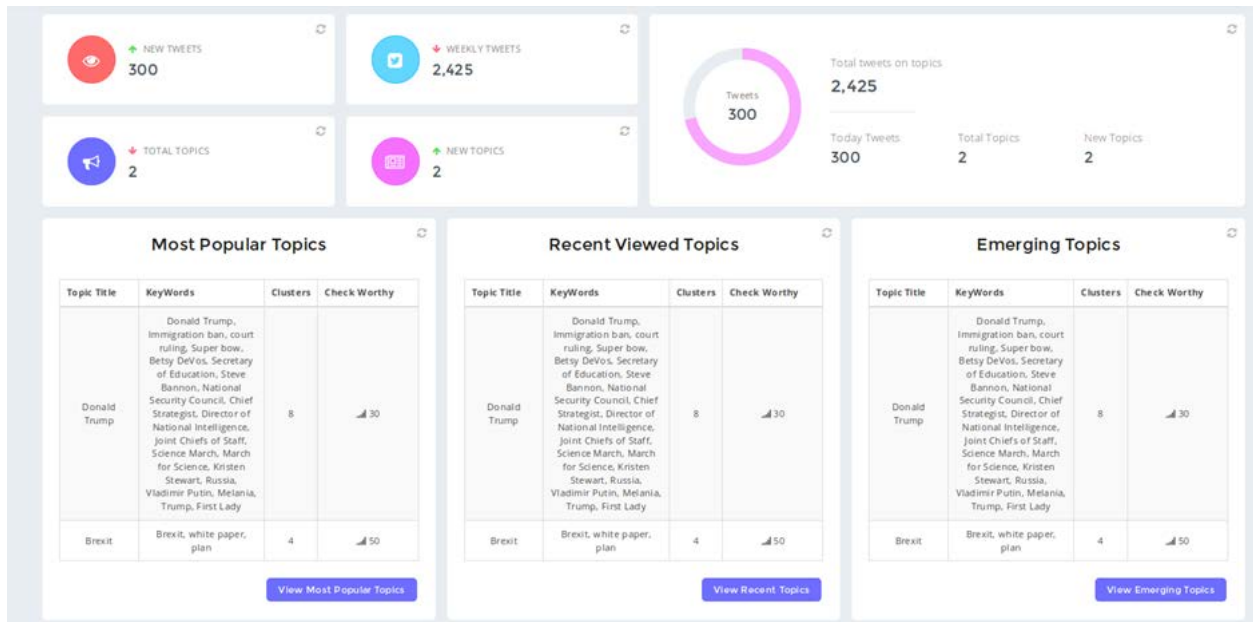


Figure 6: Hercule screenshot

ONTO plans to follow a proven business model: mix of free, freemium and on-demand services. The free version will be community driven, providing community fact checking to

help people. The initial idea is that the open community will not create topics, but a community manager at ONTO will create a few interesting topics on a daily basis and share them in the open tool. The expectation is to create a user base with this open showcase, and therefore tap into the demand. If the open version attracts the demand expected, Hercule will be enhanced and start the commercialisation.

The commercial tool is expected to offer added value over the free version, with a paid service. Functionalities such as text analytics, link to other documents, link the clusters to organizations and people and other statistical data, usage of OpenCorporates.com to add other data (such as companies' addresses, phone numbers,,), would be provided.

The free version will be hosted at least for one year. Then the potential commercialisation will be assessed. This hosting will count with the support from ATOS regarding the usage of Capturean and the PHEME integration framework. ATOS and ONTO are currently in the process of negotiation of a Memorandum of Understanding and in case of commercialisation will negotiate a shared revenue business model.

### 3.6.3 *Journalism Dashboard*

As an assistive tool designed to complement existing verification methods and human judgement, the dashboard will be deployed in the SWI Production Room, which encompasses the newsdesk and multimedia and data journalists responsible for quickly turning around stories in several languages. The deployment will be a limited trial and will help to validate the usefulness of the tool for discovering and verifying storylines within an international news event or a broader, long-running topic. SWI will examine how well the English-language tool can be integrated into the daily work flow. Fact checkers at SWI working on verification stories in the lead-up to nationwide votes will also use the tool for a limited time, to help them identify potential claims to check.

This component will be run by USFD, for two years following the project end. ATOS and ONTO have committed to providing technical advice and support in case of outage in their respective components.

### 3.6.4 *KCL Web page*

Online news media monitoring tool for mental health issues will continue to be hosted on the Maudsley BRC webpage (<http://www.maudsleybrc.nihr.ac.uk/research/engagement-population-and-informatics/pheme/>)

The sustainability of the tool depends on full functionality of the visual dashboard, which is assured at least for 2 years, as explained before. Technical issues are jointly dealt with by Maudsley BRC and MODUL infrastructure.

The tool will remain freely accessible to all users.

### 3.6.5 *Sheffield installation*

As hinted before, PHEME pipelines and components will be kept available as live services at least for two years, as a research-oriented deployment on the Sheffield PHEME infrastructure. All partners agreed to keep their components alive at least for that period of time. This will give use case partners (SWI and KCL) the possibility of using PHEME results beyond the duration of the project. To this extent, ONTO granted free licenses of GraphDB to USFD for two years. The Journalist dashboard will be installed also on the USFD servers, and the PHEME dashboard will be kept alive by MOD for two years on their own servers. The rest of the partners are committed to maintaining their components (commitment from ATOS, ONTO, and USFD to fix any issues, up to 1 day per month). Some enhancements are foreseen for the next years, such as some algorithms that will be improved further in the COMRADES project for the next 2 years, or in the scope of planned GATE Cloud deployments.

## 4 Conclusion

This document presents the initial Dissemination and Exploitation plan of PHEME. It aims to detail the dissemination strategy to be adopted throughout the project lifetime and the first version of the exploitation plan.

From the exploitation point of view we have specified a plan, from the point of view of individual partners' expectations, and outlined the most interesting combined exploitation avenues and potential sustainability of the project results. The main exploitation results have been structured in tables, as well as the licensing applied to each of them. More details about the main exploitation results and their sustainability have been given, being the most important the commitment from all partners to keep the platform alive as well as the dashboards associated to it.

Last but not least, it is important to point out that the project is right in time. Detecting rumours in social media and fact checking are now hot topic. Therefore, we expect to follow up with the project results both from the research perspective (as foundation of new research proposals) as well as commercial (such as the joint efforts from ONTO and ATOS or the commercialisation of the PHEME Dashboard by MOD).