

Grant Agreement No: 687591

Big Data Analytics for Time Critical Mobility Forecasting

datAcron

D7.2 Dissemination Report (interim)

Deliverable Form	
Project Reference No.	H2020-ICT-2015 687591
Deliverable No.	D7.2
Relevant Work Package:	WP 7
Nature:	Report
Dissemination Level:	Public
Document version:	1.0
Due Date:	M18
Date of latest revision:	July 12, 2017
Completion Date:	July 12, 2017

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Document description:	Mid-term report on the datAcron dissemination activities organised within the Task 7.1 "Dissemination".
Document location:	/Users/aiserver/Documents/datAcron/WP7/Deliverables/D7.2_Dissemination_report_interim

History of changes

Version	Date	Changes	Author	Remarks
0.1	01 June 2017	Deliverable Template, including Dissemination plan	EC	
0.2	20 June 2017	Draft of dissemination activities	EC	
0.3	21 June 2017	Updated dissemination activities records	EC	
0.3	22 June 2017	Updated dissemination activities records with statistics	EC	
0.4	22 June 2017	Draft distributed to partners	EC	
0.5	23 June 2017	Updated dissemination activities record and statistics (WP1), QR-code image, updated TOCs, executive summary	EC	
0.6	28 June 2017	Included George and Maria's feedback	ALJ	
1.0	12 July 2017	Final version	ALJ	

EXECUTIVE SUMMARY

This document reports on the status of the dissemination activities of the H2020 datAcron project. The report is issued at M18, and is a mid-term report of the activities organised within Task 7.1 “Dissemination”, which started at M01 and will last until the end of the project at M36. The document includes the datAcron communication and dissemination strategy and plan, and preliminary reports on the dissemination activities organised and planned until M18 to support the project exploitation strategy described in deliverable D7.3 “Exploitation Strategy”, which is delivered at the same time of this document.

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TERMS & ABBREVIATIONS

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1. INTRODUCTION

This deliverable presents the communication and dissemination strategy and plan of the H2020 datAcron project, and reports on the status of the dissemination activities organised and planned at project mid-term (M18) within Task 7.1 “Dissemination”, until the end of the project (M36). Activities organised within Task T7.1 are meant to support Task 7.3 “Exploitation and Standardisation” and the corresponding exploitation strategy presented in deliverable D7.3 “Exploitation Strategy”.

The objective of the datAcron dissemination strategy is to introduce the innovations of the project to the relevant stakeholders as identified by the project partners and the wider European business and research communities, to reinforce the project impact and the exploitation of the project results.

The communication strategy supports the work of exploiting project results, focusing on the coordination of the outreach and dissemination activities necessary to achieve the project exploitation targets and promoting the work done during the project by using appropriate tools, methods and channels. Media plan and Social media plan are also detailed in the document.

This document concludes with a detailed description of the planned dissemination activities, reporting on the achieved results.

2. COMMUNICATION AND DISSEMINATION STRATEGY

This section presents the communication and dissemination strategy of the datAcron project. The dissemination activities and plan for implementation is presented in the next section.

2.1 Project overview

The datAcron vision is to advance the management and integrated exploitation of voluminous and heterogeneous data-at-rest (archival data) and data-in-motion (streaming data) sources, so as to significantly advance the capacities of systems to promote safety and effectiveness of critical operations for large numbers of moving entities in large geographical areas.

datAcron has been developing novel methods for real-time detection and prediction of trajectories and important events related to moving entities, aiming at increasing the **safety, efficiency and economy** of operations concerning critical operations (e.g. surveillance, forecasting of trajectories, characterisation of maritime traffic, etc.) in the Air-Traffic Management and Maritime domains, as well as other domains involving voluminous number of moving entities in large geographical areas.

datAcron objectives address challenges in data management and processing architectures, pattern detection and trajectory analysis, predictive analytics and visual analytics. More specifically, the goals of datAcron can be summarised as follows:

- Scalable integration and management of data from disparate and heterogeneous sources.
- Real-time detection and forecasting of moving entities' trajectories
- Real-time event recognition and forecasting
- Real-time interactive analytics
- Validation and evaluation of the datAcron system and individual components on the surveillance of moving entities in the air-traffic management (ATM) and maritime domains.

2.2 Dissemination objectives

*The precise objective of the datAcron dissemination strategy will be **to introduce the innovations of the project to the relevant stakeholders as identified by both the project partners and the wider EC business and research communities**. The intended impact of the dissemination strategy will cut across several areas considered crucial to the successful exploitation of the datAcron project offering. **These will include research and commercial as well as standard setting and educational training**. Where it becomes pertinent this may also extend to **policy-making (social and industrial), skills and investment communities** who may benefit from datAcron project results.*

*The core of the dissemination strategy will be based around an **exploitable items list** produced during the projects' lifetime which in turn will be augmented based on the impact of engagement strategies focused on gathering the latest and most relevant market information through the lifetime of the datAcron project.*

The communication strategy will support the work of exploiting project results, focusing on the coordination of the outreach and dissemination activities necessary to achieve the project exploitation targets and promoting the work done during the project by using appropriate and useful tools, methods and channels. The Dissemination and Exploitation work package will ensure these results are communicated through dedicated presentations, publications, participation in and organisation of workshops and conferences.

The Key objectives of datAcron dissemination are:

- **Creating awareness and reasoning behind the project objectives, concepts and relevant results.**
Activities planned to accomplish this objective are, for instance:
 - activities targeted to specialised media in order to reach industry, big-data players, including key messages on the potential benefits of project objectives and results for the communities referring to use cases and applications.
 - activities targeted to generalised media in order to reach general public and European citizen, focusing on potential benefits for solving societal challenges, referring to use cases and applications

- promotion on social media addressing relevant networks of interest for the project (big data, aviation, maritime, EU projects groups and research communities)
- **Understanding datAcron targets groups and how they stand to benefit from the project results.** *The consortium will develop an acute understanding of the relevant stakeholders in both commercial , operational (domain-specific) and research settings through outreach activities, as well as through the expertise of the project consortium and knowledge transfer within the relevant communities. This will be achieved through direct dissemination activities and by leveraging the individual skills and community memberships of the project partners.* Activities that will be carried out to reach this goal are, among the others:
 - Activities entailing the direct participation of stakeholders: meetings with stakeholders and interest groups, specialised workshops and participation in specialised events, white papers, preparation of questionnaires, bi-lateral project collaborations
- **Actions to receive feedback on the project in the form of validation of results, alternative approaches and industrial advice from within the project expertise or the wider project community.** Dissemination activities aiming at receiving feedback from key stakeholders are very close to the previous categories, and include:
 - Demonstrations of project prototype to scientific and industry dominated events
 - Activities entailing the direct participation of stakeholders: validation meetings with stakeholders and interest groups, specialised workshops and participation in specialised events, white papers, questionnaires and analysis of results
- **Promote understanding** of project visions and innovative methods and **actions** to pave the way to knowledge transfer of project results and foresight, through:
 - Activities directed to educational training and academia (publications, workshops, trainings, data challenges)
 - Demonstrations of project prototype to scientific and industry dominated events
 - Activities entailing the direct participation of stakeholders: meetings with stakeholder and interest groups, specialised workshops and participation in specialised events, white papers, bi-lateral project collaborations.

The impact of all activities in project dissemination and exploitation will be regularly analysed and evaluated.

2.3 Target Audience

datAcron addresses a variegated audience, ranging from communities to acquire knowledge from and to boost adoption of knowledge, approaches and methods developed by the project, to communities to raise awareness on the project vision, objectives and results, including:

- the *commercial Big Data community*, e.g., scalable analytics providers, data integration solution providers, big-data solution developers, in particular related to the aviation and maritime domain;
- the *scientific community active in Big Data and visual analytics*, machine learning, Big Data and information management, maritime security and signal processing;
- *standardisation and regulatory bodies* drafting interoperability standards for Maritime Security;
- *education and training programmes* targeting to students (MSc & Phd), industry and domain-specific communities;
- the *Maritime Situation Awareness* community as represented by the different nations of the NATO body;
- *air traffic management* community.

Besides the aforementioned communities, datAcron dissemination strategy exploits media and social media as a means to reach the key communities for transfer of knowledge, in particular towards the commercial community and the scientific community, as well as networking with European programmes and projects of interest for the project and promoting awareness at citizen level. Other dissemination activities are meant to promote the participation of the domain interest user groups, in order to validate and maybe enrich operational requirements and use case specific experiments for validating/evaluating datAcron scientific results.

2.4 Communication

Project representatives and Spokespersons

The Project Coordinator and the representatives of the WP7 leader, in quality of **project spokespersons**, are officially entitled to act as representatives of the project and the consortium for media engagement activities (cf. Media Plan).

Partners invested in a leading role for special activities, such as the local host of a workshop, the organiser of a demonstration etc., act as representative for the project and the consortium for the specific activity. In addition to that, any partner being disseminating project activities in scientific events, bi-lateral meetings or public events act on behalf of the project and as project representatives for the specific activity.

Internal communication activities and tools

Internally to the consortium, day-to-day communication is achieved via project mailing list. Meetings are planned by the PC and inserted in the project calendar. In addition, a *FileStore* set up by UPRC is used for sharing documents, storing project reports, deliverables, datasets for internal use and any other type of digital material, including this document.

Internal point of contacts

Internal day-to-day communications regarding dissemination are handled among dissemination points of contact (POCs), at least one per partner. Each POC represents his/her organisation when deciding on organisational aspects of dissemination, and is responsible for collecting information at partner side reporting regularly to WP7 leader through monthly highlight reports on the status of dissemination activities his/her organisation participates in.

2.5 Dissemination and Exploitation roles

The datAcron communication strategy is organised according to communication and dissemination roles, which are specific to the organised activities. The partners should refer to the corresponding roles and responsibilities for their organisation, as detailed in the datAcron Dissemination Plan shared and agreed among the partners.

The main roles for dissemination and exploitation activities are reported in **Table 1**. Additional roles are defined in Table 2 for the development of the specific dissemination activities.

As an overall approach, all activities are led by activity *managers*, who, in close collaboration with the WP7 leader and the PC, are responsible for the main aspects of the activity's organisation, communication and dissemination strategy and will guarantee that the consortium as a whole is represented and that all the partners contribute to the activity execution. Moreover, for groups of similar activities, each single activity may have a *leading* partner, who will be responsible for the execution of the specific activity in close collaboration with the activity manager, the WP7 leader and the PC. This is the case of the local organiser of a workshop, a partner giving a demonstration or a conference presentation. In such cases, the manager will guarantee that organisation, communication and dissemination strategy of the group of activities is harmonised, and each single activity has the right visibility. In cases of activities whose organisation is closely correlated and coordination is required, such as the social media and the blog, roles are merged. In some cases, such as the visual identity, a role can be assigned to one or more partners working in close collaboration.

Table 1 Communication, Dissemination and Exploitation roles

Roles	Responsibilities
Project coordinator	Partner coordinating the execution of project
WP7 leader	Coordinating the preparation of WP7 Dissemination and Exploitation deliverables
Dissemination manager	Managing dissemination strategy and activity, leading activity throughout consortium and reporting on impact against agreed quantitative and qualitative dissemination targets Producing and updating communication and dissemination plans and reporting on impact

	Creation of feedback and audience intelligence documents
Exploitation manager	Managing exploitation strategy and activity, leading activity throughout consortium and reporting on impact
	Creation of feedback and audience intelligence documents
Collaboration manager	Managing collaboration with stakeholders strategy and activity, leading activity throughout consortium and reporting on impact
Outreach responsible for Commercial Big-data community	Responsible for outreach activities addressing the commercial big data community
Outreach responsible for Commercial ATM community	Responsible for outreach activities addressing the ATM community
Outreach responsible for Commercial Maritime Surveillance community	Responsible for outreach activities addressing the maritime surveillance community
Outreach responsible for Research Community	Responsible for outreach activities addressing the research and scientific community
Outreach responsible for Standard Settings	Responsible for outreach activities addressing the standardisation community
Outreach responsible for Educational Training	Responsible for outreach activities addressing training stakeholders

Table 2 Dissemination activities and responsibilities

Activity	Manager	Leading partner
Media engagement	<p>Project public affair Coordinates and organises the media engagement activities, managing contacts with media, interviews, press releases, videos production</p>	<p>Project spokespersons People officially entitled to speak on behalf of the project in media engagement activities.</p> <p>Partners spokespersons People entitled to act as partner representatives in media engagement activities.</p> <p>Activity representatives People responsible for the organisation of the execution of dissemination activities, acting as project representative for the specific activity (e.g., scientific expert, workshop organiser)</p>
Visual identity	<p>Visual identity manager Coordinates visual/brand identity tasks, such as definition of logo, templates, gadgets</p>	
Website	<p>Website manager Defines the website structure and graphical layout, coordinates and harmonises the preparation of the content. Report the partners on website analytics updating the dissemination plan. Records analytics for deliverable reports.</p> <p>Web master Registers the website. Partner responsible for the implementation of the website structure and of the technical administration of the project website and blog. Establishes and reports on website analytics.</p>	
Factsheet	<p>Factsheet manager Coordinates and harmonises the preparation of the content of the factsheet Produces the factsheet</p>	
Project posters and flyers	<p>Poster and flyer manager Defines the layouts of project posters, flyers, informative brochures and coordinates the preparation of the content. Produces the material</p>	
Social media and blog	<p>Social Media and Blog manager Manages social media and blog schedule updates, using a project calendar to ensure there is the correct volume of dissemination coverage during important/relevant periods of the project lifetime. Registers social media profiles and groups and updates them with branded imagery and logos. Manages invitations to social media groups. Establishes and reports on analytics through the FileStore and updating the dissemination plan. Records analytics for deliverable reports. Calls for content from partners and update the social media profiles with <u>consortium-sourced content</u>. Coordinate discussions, coordinating <u>posts from consortium partners</u>, looking for responses from collaboration partners and recording results. Following the project and dissemination calendar, <u>in</u></p>	

Activity	Manager	Leading partner
		<p><u>collaboration with partners</u> plans relevant commercial/research topics for discussion on social media groups.</p> <p>In collaboration with partners, coordinates the updates of the blog with news on project events, related events.</p>
Mailing list	<p>Mailing list manager</p> <p>Creating and technically administering the project mailing list</p>	
FileStore	<p>FileStore manager</p> <p>Creating and technically administering the project Filestore</p>	
Telco	<p>Telco manager</p> <p>Coordinating the organisation of partner teleconference meetings</p> <p>Telco minute managers</p> <p>Produces minutes for telco partner meetings.</p> <p>Recording action points from work package teleconferences and distributing to partners (through the FileStore)</p>	
Workshops manager	<p>Workshops manager</p> <p>Coordinates the organisation of project workshops, ensuring all workshops have updated and high quality dissemination material, adopt project visual identity and branding, and the project consortium is fully represented. In collaboration with partners and workshop organisers, call for contributions from partners and scientific and industrial collaborators and, <u>in collaboration with partners</u>, coordinates the selection of contributions.</p>	<p>Workshop organiser</p> <p>Responsible for the local organisation of workshops.</p> <p>Supports the workshop manager in calling for contributions from partners and scientific and industrial collaborators and in the interaction with local companies and entities involved in the organisation of the event.</p> <p>Supports the project public affair in the organisation of media engagement activities, providing local contacts of relevant media and helping in the organisation of press releases and interviews with media.</p>
Scientific papers	<p>Scientific papers coordinator</p> <p>In <u>collaboration with partners</u>, decides the list of topics and relevant scientific events/journals that datAcron related papers shall be submitted (per year).</p>	
Whitepapers and technical papers manager	<p>Whitepapers and technical papers manager</p> <p>In <u>collaboration with partners</u>, decides the list of issues and topics for whitepapers and technical papers and coordinates their preparation, coordinating and calling for <u>contributions from partners</u></p>	
Technical demonstrations	<p>Demonstrations manager</p> <p>In collaboration with partners, coordinates the overall preparation of technical demonstrations Coordinating contributions from partners</p>	<p>Demonstration organisers</p> <p>In collaboration with partners, responsible for the preparation of technical demonstrations</p>
Meetings and collaborations	<p>Meetings and collaborations manager</p> <p>In collaboration with partners, coordinates bi-lateral collaborations with stakeholders, coordinating the organisation of specialised meetings for standardisation and exploitation and with user interest groups. Coordinating and calling for contributions from partners</p>	
Training manager	<p>Training manager</p> <p>In collaboration with partners, coordinates the organisation of training activities</p>	

3. DISSEMINATION PLAN

The datAcron dissemination plan drafted at the beginning of the project included a variegated series of activities to achieve the strategic communication and dissemination objectives presented in the previous section. Table 3 and Table 4 overview the planned activities and compare them with respect to their specific dissemination objectives and target audiences. Indeed, in order to boost the project impact and promote the adoption of datAcron methods and results in the relevant research, industrial and standardisation areas, it is necessary to differentiate the activities to target the different target communities and towards achieving as much objectives as possible. The plan is periodically evaluated by the consortium and updated with new activities and material, to steer it on the most effective ones.

As detailed below, activities are scheduled around a calendar, which is based on project milestones and important events. To assess the dissemination and evaluate its effectiveness, measures for the evaluation of activities are also provided, together with estimation of expenses. The dissemination plan included a blog and social media plan and a media plan for media engagement activities.

Table 3 Objectives of dissemination activities (Aw: Awareness, U: Understanding, Ac: Action to receive feedback; Pu: Promote Understanding; Pa: Promote Actions)

Materials and activities	Objectives				
	Aw	U	Ac	Pu	Pa
Visual identity (logo, templates)	X				
Website (factsheet, news)	X			X	
Social media	X			X	
Media engagement (with publicity material, e.g., videos)	X			X	
Flyers, posters, printed materials	X				
Scientific Publications and Presentations (Journal, Conferences, Open Access)	X			X	X
Organisation of Workshops, Specialised events	X	X	X	X	X
Meetings (with stakeholders, bi-lateral H2020 projects)	X	X	X	X	X
Technical Publications, White papers	X			X	X
Datasets publication	X				X
Demonstrations (scientific, for industry)	X			X	X
Trainings (Courses, Tutorials, Lectures, Schools)				X	X
Deliverables				X	X

Table 4 Audience of Dissemination activities

Materials	Audience							
	Media	Commercial	Science	Standard	Education	H2020	Citizen	User groups
Visual identity	X	X		X				
Website	X	X	X	X	X	X	X	X
Social media			X		X	X	X	X
Media engagement	X	X		X		X	X	
Videos	X	X				X	X	
Flyers, posters, printed materials	X	X		X				X
Scientific publications and Presentations			X	X	X			X
Organisation of Workshops	X		X	X	X	X		X
Organisation of Specialised Events		X		X		X		
Meetings (with stakeholders, bi-lateral H2020 projects)						X		X
Technical Publications, White papers		X		X		X		X
Datasets publication		X	X		X	X		
Demonstrations		X	X		X			
Trainings			X		X			X

Deliverables	X	X	X	X	X	X	X
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3.1 Dissemination calendar

To ensure an effective dissemination, the activities are organised on a calendar built around project milestones, which reflects important events of the project, such as project meetings, relevant scientific, standardisation and industrial events on Big Data, Maritime and Aviation Security where the partners showcase the project vision, approach and results. Milestones such as relevant conferences or events with an audience suitable for disseminating effectively project results and approaches are proposed individually by the partners in the consortium based on their expertise, but joint work is encouraged. Jointly, the project consortium organises targeted activities, such as workshops, meetings with stakeholders and open sessions in relevant events, to enhance the dissemination towards the potential event’s audience. To increase the impact of the dissemination activities scheduled in the calendar, the web and social media channels are used for marketing. News and events are inserted in the project website as soon as an event is scheduled, and posts and tweets are scheduled around important event’s dates (e.g., workshop announcement, call for paper, open submissions). In correspondence of important project milestones, such as project reviews and demonstration, media engagement activities are also planned and included in the calendar. The dissemination calendar is constantly updated, based on dissemination milestones proposed by the partners and in coordination with the Project Coordinator and the WP7 leader. Dissemination activities are also revised during project meetings; in particular the organisation of joint activities is agreed at consortium level.

3.2 Dissemination budget

The consortium has agreed for evaluating, on a case by cases basis, whether the expenses for an activity will be shared among the partners. For the planned activities, an estimation of the necessary budget is also included in the plan (see Table 5).

Table 5 Budget estimated for dissemination activities

Material or activity		Estimated budget
Visual identity	Logo	Ex:
	Templates	t-shirt 7-25 euros/each
	Gadgets	USB key 4-8 euros Pen: from 3 euros Mug: 4 euros
Website	Hosting	0-50 euros / year
	Domain registration	16 euros / 2years
	Analytics	Free
Social media	Profiles	Free
	Analytics	Free
Press releases		
Leaflets, brochures	Editing	NA
	Printing	1,1-1,5 euro each
Poster	Editing	NA
	Printing	From 5-6 euros /m2
Publications, Presentation	Open Access	Free (green and gold with Zenodo)
	Data registration	Free (green and gold with Zenodo)
White papers	Editing	NA
	Printing	1,2-1,3 euros each
Meetings, Workshops and Specialised Events	Location	200-500 euros
	Catering	
	Consumables	
	Gadgets	See gadgets
	Pool	Tent 4mx4m 200-300 euro Panels: 80-350 euros
Demonstrations	Editing	NA
	Video production	See video
Media engagement		Depending on the ambition
Video	Editing	From 3000 euro
	Distribution	

3.3 Measures for evaluation

Quantitative measures for evaluation of dissemination activities as included in the project proposal are reported in Table 6. These measures are used to evaluate the progress of the activities and assess the dissemination along the duration of the project.

Table 6 Dissemination measurable goals

Dissemination goal	Target Quantity
Publications	Open access will be granted to all scientific publications resulting from datAcron
Papers at scientific conferences appearing in proceedings	At least 20
Papers in Journals	At least 10 submissions to journals of high impact
Workshop organised at a scientific event	At least 6
Publications (technically interested community as large)	At least 6
datAcron white papers	At least 3
Press releases	At least 2
Web Site visits	800 p.a. with 1/3 spending more than 2 minutes on the site
Social Media Presence	Established groups in at least 2 networks (e.g. LinkedIn, Twitter) with <i>regular</i> updates. <i>Evidence of engagement with target audience – demonstrated via comments, sharing of relevant content, retweets</i>
Stakeholders interest groups and meetings with stakeholders	At least 4 (2 per use case: one for validating the use case requirements and one for validating the project outcomes)
Demonstrations of prototypes at industry-dominated events	At least 3 (one big-data event, one maritime and one aviation related event)
Bi-lateral collaboration with other projects working in the field established	<i>Measured by existing exchange of knowledge and/or models or implementations. Target is 0 but collaboration and exploiting synergies is a clear datAcron target</i>

3.4 Social Media Plan

The datAcron dissemination strategy leverages social media channels to promote project activities and to potentially get a direct feedback from the target audience. Twitter and LinkedIn have been chosen because they enable to reach different and complementary audience. Twitter enables immediate communication and may be used for fast and wide spreading of project news, as well as for creating live tweets of project events. LinkedIn, being more oriented to professionals, may be used for effective advertising of project achievements, to share dissemination materials, videos and presentations as well as for open discussions on project topics. ResearchGate is similar to LinkedIn, for targeting researchers and people in academia.

The project blog/news and the website are the primary source of information for the social media channels and scheduling must be planned accordingly.

To network with relevant organisation and profiles of interest for the datAcron activities, an initial list of potentially interesting Twitter profiles and LinkedIn groups is listed in Table 7. However, to obtain a solid engagement, the social media activity needs the active participation of partners in the consortium to leverage on individual networks (e.g., for retweeting project posts on events, news). Contents of interest from groups in the network or suggested by partners must also be shared, as well as achievements related to the project, including links to relevant media (papers, presentations, leaflets, posters, pictures, videos).

The frequency of updates for the social profiles must be increased around project milestones, to emphasise their effect. Around project milestones, in particular before and after workshops, open discussions will be organised on the LinkedIn group on workshop topics to gather questions, involve audience, involving project partners and their networks.

Analytics will be used for evaluating impact, mainly Twitter analytics, while LinkedIn does not provide any more analytics.

Table 7 Social profiles for networking and exploitation

Topic	Name	Twitter	LinkedIn ([https://www.linkedin.com])
EU	Digital Single Market ec.europa.eu/digital-agenda	@DSMeu	[...]/groups/3812290/profile
	European Commission ec.europa.eu	@EU_Commission	
	Horizon 2020 ec.europa.eu/programmes/horizon2020	@EU_H2020	
	EU Data Ecosystem ec.europa.eu/digital-single-market/en/big-data	@EUDataEcosystem	
	EU Maritime & Fish http://ec.europa.eu/dgs/maritimeaffairs_fisheries/index_en.htm	@EU_MARE	
	EU Transport http://ec.europa.eu/transport/index_en.htm	@Transport_EU	
BigData	BDA Big Data Alliance www.bigdata-alliance.org		[...]/company/big-data-alliance
	Alliance Big Data www.alliancebigdata.com	@AllianceBigData	
	Big Data Value www.bdva.eu	@BDVA_PPP	[...]/groups/8299467
	Big Data Europe www.big-data-europe.eu	@BigData_Europe	
	European Data Forum www.data-forum.eu	@EUDataForum	
	Big Data, Analytics, Business Intelligence & Visualisation Experts Community		[...]/groups/23006
	Big Data, Business Analytics, Data Mining, and Data Visualisations - Data Informed		[...]/groups/4298775/profile
	Big Data and Analytics		[...]/groups/4332669/profile
	Big Data Group		
	Big Data Economics		[...]/groups/7477307
	Big Data Forum big-dataforum.com	@Big_DataForum	
	The Big Data Institute thebigdatainstitute.wordpress.com/institute	@BigDataBody	
	Distributed Computing Masters: Apache Spark Hadoop YARN Flink Storm Kafka AWS NoSQL Mesos DevOps IoT		[...]/groups/2390941/profile
	IBM Big Data Analytics	@IBMbigdata @IBM @IBMAalytics	[...]/groups/4014567/profile
	Innovation Enterprise Big Data Analytics Strategy Finance Innovation		[...]/groups/1814785/profile
Analytics, Big Data Data Science and Business Intelligence in Greece		[...]/groups/1814769/profile	

	Data Mining, Statistics, Big Data, Data Visualisation, and Data Science		[...]/groups/152247/profile
	European Association for Data Science EuADS	@EuADSorg	
	Big Data Community		[...]/groups/4520336/profile
Maritime surveillance	Maritime Surveillance		[...]/groups/1545967/profile
	European Maritime Safety Agency EMSA Maritime Safety emsa.europa.eu	@EMSA_LISBON	
	Coastal Surveillance Network		[...]/groups/1987085/profile
Aviation	European Airlines & Aviation		[...]/groups/1574127/profile
	Aviation Safety Network		[...]/groups/1435667/profile
	European Aviation Safety Agency www.easa.europa.eu	@EASA	
	EUROCONTROL Eurocontrol.int	@eurocontrol	
	SESAR http://www.sesarju.eu/	@SESAR_JU	
Standardisation	Object Mgmt Group omg.org	@ObjectMgmtGroup	
	Open Geospatial: OGC	@opengeospatial	
EU	Digital Single Market ec.europa.eu/digital-agenda	@DSMeu	[...]/groups/3812290/profile
	European Commission ec.europa.eu	@EU_Commission	
	Horizon 2020 ec.europa.eu/programmes/horizon2020	@EU_H2020	
	EU Data Ecosystem ec.europa.eu/digital-single-market/en/big-data	@EUDataEcosystem	
	EU Maritime & Fish http://ec.europa.eu/dgs/maritimeaffairs_fisheries/index_en.htm	@EU_MARE	
	EU Transport http://ec.europa.eu/transport/index_en.htm	@Transport_EU	

3.5 Media Plan

datAcron media plan is part of the datAcron dissemination plan and it aims to raise awareness and promote understanding with targeted audiences about the project as per the dissemination/exploitation goals detailed by the communication strategy. In particular, the media plan supports the stakeholders' engagement effort based on the exploitable items list created through the lifetime of datAcron.

The overall approach is ACTIVE. The media plan covers datAcron development from M1 to M36 but media engagements activities will be further clustered around the project's milestones. Media engagement activities is conducted through any suitable channel.

The plan was drafted by CMRE Public Affairs Office (PAO) as WP7 Project Leader, with the aim of being implemented in collaboration with the Project Coordinator and all Project Partners.

Media trends and assumptions

Currently, there is a general, positive appetite for news related to big data. No heavy bias against this particular kind of activities is being observed. Media trends in targeted specialised audiences would be anticipated as positive. As regards the general public, the high specialisation of datAcron goals would require some additional educational efforts from the consortium when/if addressed. Particular attention should be posed in any case on provision/production of suitable and effective imagery from all Partners.

Executive Summary

As detailed in WP7, the Project's dissemination activities and thus the media engagement activities are instrumental to the stakeholders' engagement foreseen as part of the exploitation effort. Dissemination goals are to be achieved through the promotion of the datAcron concept and vision by highlighting its competitive advantage against existing approaches.

According to the Project proposal, two press releases are going to be organised to disseminate aims and results of the main datAcron demonstrations (maritime and aviation domains). Further media engagements opportunities will be identified through the lifetime of datAcron and they may result in additional releases and/or media days/press conferences. At least one "launch" press release at the first datAcron milestone and one "end" press release at the last milestone are recommended.

Media activities will be coordinated by WP7 Leader in collaboration with the Project Coordinator. Each partner is anyway requested to cooperate by:

- Fostering and sharing media opportunities;
- Supporting media engagements, especially when hosting local events;
- Producing and sharing relevant contents and imaging.

As based on a consortium of partners, datAcron is not subject to stringent restrictions, if not specified otherwise: nevertheless the Partners involved are expected to pass through the Project Coordinator and the WP7 Leader before releasing any information on the project, and report to the Consortium in real time any event occurring that would result in an issue with severe impact in the project, or would give the possibility to gain a positive media coverage. In case of inquiries from the media, the Project Coordinator and the WP7 Leader may, at a point agreed with the Projects' partners, release additional statements or feature story. The media and the social media plans will be mutually adapted to follow the project's developments in a coordinated manner.

Audience

Consistently with the exploitation targeted audiences, key media outlets to be targeted will be identified.

Project Spokespersons

The Project Coordinator is the designated datAcron spokesperson; all media or public contact should be coordinated through the Project Coordinator and the WP7 Leader. Where the contact is at the national level, the Partners concerned may have their own spokesperson, but communication with media should still be coordinated with the Project Coordinator and the WP7 Leader. All media contact should be coordinated with the PC and the WP7 Leader, or any designated spokespersons that are authorised to speak on behalf of the Project. Spokespersons should stick to the key messages that should be conveyed to the media/public.

Key Messages and Guidelines on Handling the Media/Public

In order to ensure coordination in terms of media/public relations, guidelines are prepared for speaking to the media or the public, covering routine public interactions as well as crisis communication. These guidelines were issued to the Project's partners and collaborators and refer to Themes and Key messages, which give short descriptions of the project, its vision, objectives, and of the project consortium, and are ready to be used when interacting with the media. The themes are agreed between all the Project's partners and provide the framework from which key messages are derived in occasion of each media engagement opportunity.

Themes

- **(Overall presentation)** datAcron addresses core challenges related to the European Big Data Vision towards increasing our abilities to acquire, integrate, process, analyse and visualise data-in-motion

and data-at-rest in integrated manners, validating and evaluating the technological developments in real-life scenarios targeting to improving maritime and aviation operations for large number of entities in large geographical areas

- **(Vision)** The datAcron vision is to advance the management and integrated exploitation of voluminous and heterogeneous data-at-rest (archival data) and data-in-motion (streaming data) sources, so as to significantly advance the capacities of systems to promote safety and effectiveness of critical operations for large numbers of moving entities in large geographical areas.
- **(Scientific objectives)** datAcron aims to develop novel methods for real-time detection and prediction of trajectories and (b) detection and prediction of important events related to moving entities, together with (c) advanced visual analytics methods, over multiple heterogeneous, voluminous, fluctuating, and noisy data streams from moving entities, via the (d) real-time in-situ processing of multiple data streams, (e) the provision of integrated views of streaming data with archival data expressing entities' characteristics, geographical information, patterns of mobility in specific areas, regulations, intentional data (e.g. planned routes) etc., and (f) the provision of advanced solutions for managing spatio-temporal data.
- **(Societal Impact)** datAcron will address requirements from the air-traffic management and maritime domains by developing advanced tools for detecting and visualising threats, abnormal activity, increasing the safety and efficiency of operations related to vessels and airplanes, and further reducing the impact of these operations on the environment.
- **(Consortium)** datAcron brings together partners from academia and industry to develop novel methods for threat and abnormal activity detection in very large fleets of moving entities in sea and air, together with user and data-provision partners from the maritime and air traffic domains, focusing on real-life, industrial and user-defined operation challenges (e.g. surveillance, forecasting of trajectories, characterisation of maritime traffic, etc.).
- datAcron project is funded by the European Union's Horizon 2020 Programme under grant agreement No. 687591. The datAcron consortium, led by the University of Piraeus Research Center (Greece), has been awarded funding to develop novel methods for real-time detection and prediction of trajectories and important events related to moving entities in the Air-Traffic Management and Maritime domains.
- The datAcron consortium is made by 8 Partners from 6 Nations: the University of Piraeus Research Center (Greece) which is also the Project Coordinator, the Fraunhofer-Gesellschaft (Germany), the National Center for Scientific Research "Demokritos" (Greece), the Ecole Navale Groupement Interet Public (France), the NATO Centre for Maritime Research and Experimentation (Italy), the Boeing Research and Technology Europe (Spain), the ATM R&D Center CRIDA (Spain), and the IMIS Global Limited (United Kingdom).
- datAcron aims at increasing the safety, efficiency and economy of operations concerning large number of moving entities in large geographical areas. Integration of systems and interoperability are the key to advance current technologies for anomaly detection and identification of threats.
- datAcron focuses on challenging technical priorities and datAcron Partners work directly with relevant stakeholders in order to identify gaps and priorities, and advance the big data technologies in Europe.

Key messages

A set of key messages will be compiled for each milestone to be used during media engagement activities. The themes presented above can be further extended with reference to each milestone. For example: "The current demo demonstrates that the new tool is able to..." or "In this application, datAcron offers a competitive advantage against existing approaches because....".

4. DISSEMINATION ACTIVITIES AND MATERIALS

The datAcron dissemination activities organised and planned up to M18 (June 2017) are described in this section. The status of the activities is reported, and evaluated according to the measures for evaluation described above. The section concludes with an overall evaluation of the current status of the activities.

4.1 Visual Identity

Related material: Logo, Templates for presentations, project documents and deliverables, flyers, posters

Optional material: Gadgets

Planned deadline: M01 for logo and templates

Estimated budget: Example of prices for gadgets: t-shirt 7-25 euros/each, USB key 4-8 euros, Pen: from 3 euros, Mug: 4 euros



Figure 1 The datAcron logo

The visual identify activity and the corresponding dissemination material is meant to raise awareness on the project. The project templates for presentations and documents use the datAcron logo and the Neuropol X font whenever the name of the project appears in a document.

The logo should appear in printed materials such as project posters, flyers, technical publications, as a marking for original project pictures (beside the logo of the partner organisation(s) that created it), as well as in the project website and social media, and in technical and scientific presentations. Gadgets such as t-shirts, bags, etc. may be prepared to be distributed at relevant project events.

4.2 Project Website

Material: Project website using logo and branding, with areas for sharing project information and news (e.g., factsheet, consortium and contact information, publications, presentations, software, videos, leaflets, posters), networking to online communities, and analytics.

Additional features: areas for media engagement activities, multi-media, software

Planned deadline: M03 (website online with news and publications section)

Evaluation: Web Site visits: 800 p.a. with 1/3 spending more than 2 minutes on the site

Estimated budget: Hosting from free to 50 euros/year depending on features. Domain registration ca. 16,00 euros / 2 years.

The datAcron website is online at the address www.datacron-project.eu. The detailed technical details, including website analytics, are described in deliverable D7.1 "Project Website, Wiki and Social Media Channels".

The website structure includes:

- Factsheet: description of project vision and objectives, presentation of the partners in the consortium, contact details
- News & events page: for outreach and recording of project activities such as project meetings and workshops, events, trainings, meetings with stakeholders, participation to events, presentations, promotion of projects, events, calls of interest. News are in evidence in the home page and a RSS feed is created with the same content
- Publications: page listing and hosting all public project deliverables, publications, talks and presentations. Self-archiving of publications (green open access) is enabled. When publishers open access is available, publication records may link directly to publisher website. The open access repository Zenodo is also used with for the same purpose, the publication page in the datAcron website may link directly to the repository.
- Blog and Social media highlights in the home page, including the feed of the last tweets from the project Twitter profile.



Figure 2 QR-code to www.datacron-project.eu

A QR-code pointing to datacron-project.eu has been created (cf. Figure 2), to be included in printed project material and in presentations for an easy access to the datAcron website using smartphone bar-code readers. The website is updated constantly along the project by the project partners, who may insert directly information about the project activities scheduled in project calendar, news about events, and may upload directly their publications. New features and sections may be created and the website layout is updated accordingly.

4.3 Website Analytics

In Figure 3, Figure 4, Figure 5, and Figure 6 it is possible to see some statistics on the usage of the datAcron website on one year period (from May 2016 to May 2017). On one year period, visits were more than 1400, with people spending more than 3 minutes on average browsing the website. Visits range from few seconds (less than 10) up to 30 minutes, doing 3.5 actions per visit (page views, downloads, outlinks and internal site searches). From Figure 4, we can see that there is an increment of activities in correspondence to the project meetings (May and October 2016, January and May 2017), and in correspondence to dissemination activities (e.g. Spring 2017), likely due to updates on the website content to advertise them and upload the related material. Main activity occurs during Europe working time (Figure 6) even if from Figure 5 the website is accessed often from outside Europe.

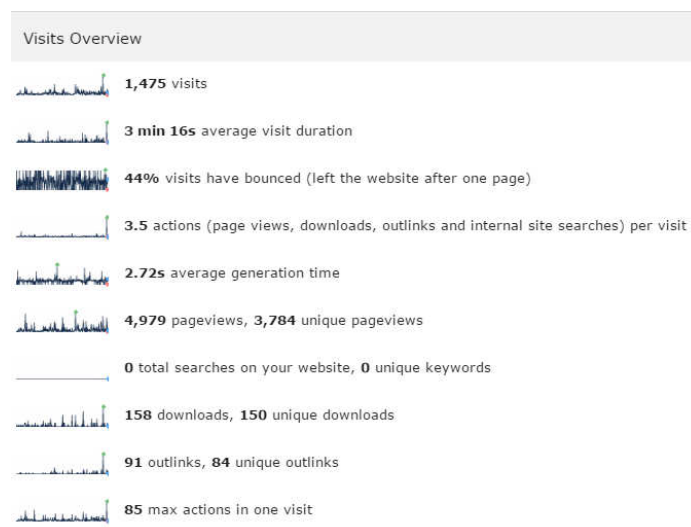


Figure 3 Website analytics: Overview of visits (period: 1st of May 2016 - 1st of June 2017)

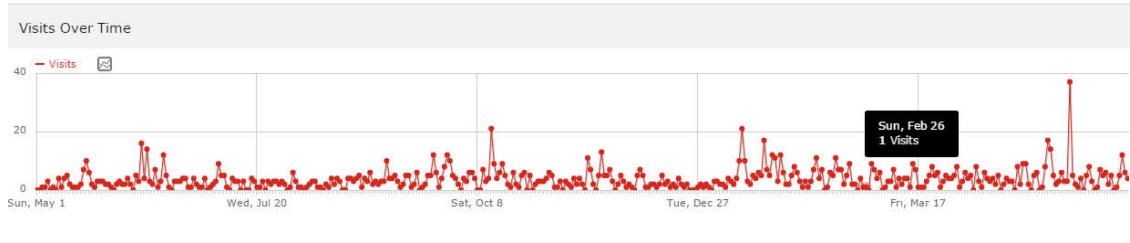


Figure 4 Website analytics: Overview of visits over time (period: 1st of May 2016 - 1st of June 2017)

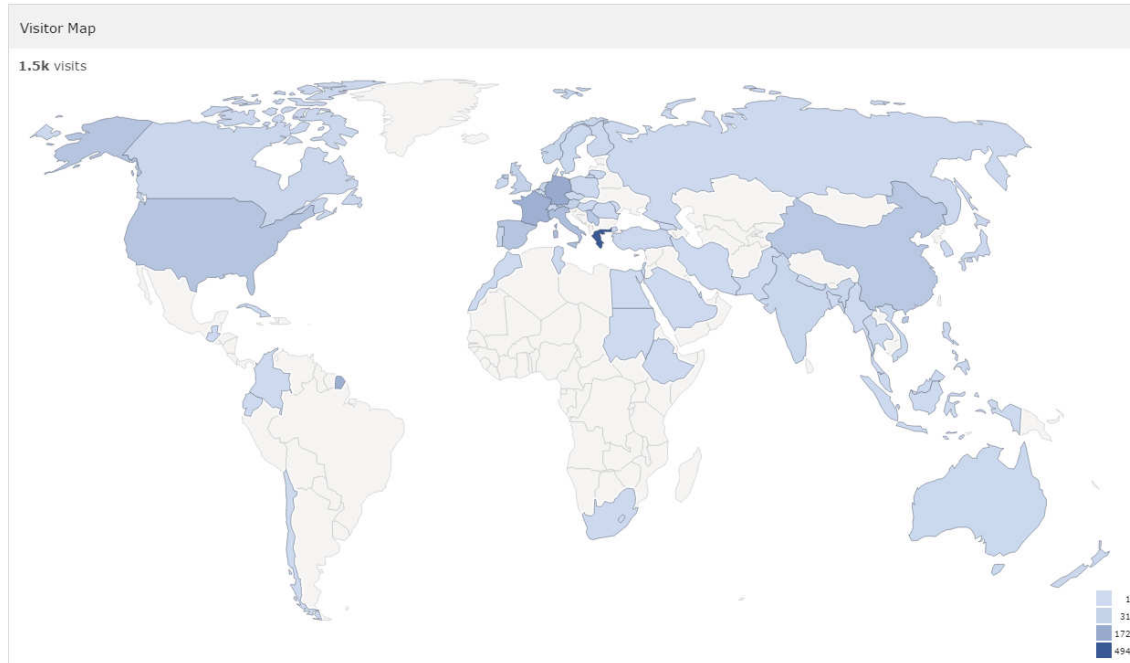


Figure 5 Website analytics: Visitor Map (period: 1st of May 2016 - 1st of June 2017)

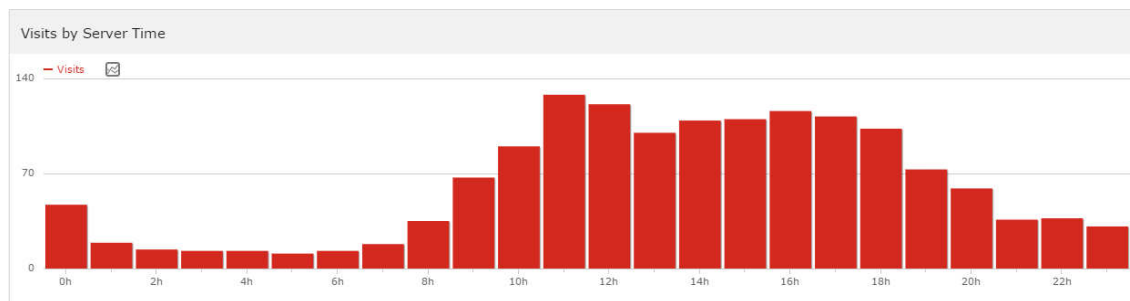


Figure 6 Website analytics: Visits by time of the day (period: 1st of May 2016 - 1st of June 2017)

4.4 Social media

Related material: Social media profiles for project dissemination and communication, updated with branded imagery and logos, updated with consortium-sourced content and recording analytics

Additional features: Along the course of the project, other social media channels may be registered, or the existing ones may be adapted, in order to increase project visibility

Planned deadline: M03 for registering two social media channels

Evaluation: Established groups in at least 2 networks with regular updates. Evidence of engagement with target audience – demonstrated via comments, sharing of relevant content, re-tweets etc.

Analytics: Twitter analytics

The datAcron project has four social media channels:

- a Twitter profile (@datacron_eu)
- a LinkedIn Group (<https://www.linkedin.com/groups/8495216>)
- a ResearchGate project has been also registered (<https://www.researchgate.net/project/H2020-EU-datAcron-at-http-datacron-projecteu>)
- a Zenodo community https://zenodo.org/communities/h2020_datacron/?page=1&size=20

The first two social media channels are described in detail in deliverable D7.1 “Project Website, Wiki and Social Media Channels”. The Twitter profile is managed by the WP7 coordinator and used to promote project activities, retweet of content of interests for networking with related projects and initiatives, news on project topics, and creating live chronicles during project events. The consortium partners provide content and contribute to advertising project news, events and achievements through their personal networks. Twitter analytics is used for monitoring and evaluation.

The LinkedIn group was created starting from registered project partners, in order to leverage their personal professional networks for networking. Beyond the promotion of project activities, the group may be used for creating discussions on relevant commercial and research topics. Similarly, the ResearchGate project has been registered (<https://www.researchgate.net/project/H2020-EU-datAcron-at-http-datacron-projecteu>) and involves academic project partners, who may insert updates on the projects and upload relevant publications. The datAcron Zenodo community is curated by the WP7 leader and has been created for hosting open access project publications and related material (presentation, software, datasets). The material uploaded may be easily shared through the main social media channels (LinkedIn, Twitter, Facebook, Mendely, etc.), enhancing the visibility of the datAcron scientific achievements. Moreover, DOI may be created as necessary, improving author recognition, and each contribution may be directly linked to the datAcron grant during insertion.

Twitter Analytics

Figure 7 shows the temporal trend of the activity of the @datacron_eu twitter profiles, including monthly number of Tweets, Profile Visits, Tweets Impressions (i.e., number of accounts potentially reachable, divided per 100) and Mentions (number of tweets that mention @datacron_eu). The graphs show that impressions and profile visits (graph in the middle) increase in correspondence of periods of more activity (Tweet graph, at the bottom), which occur around project milestones, while mentions seems to follow a delayed trend (graph on top). The profile has a stable number of followers (65), with no or little variations, since October 2016.

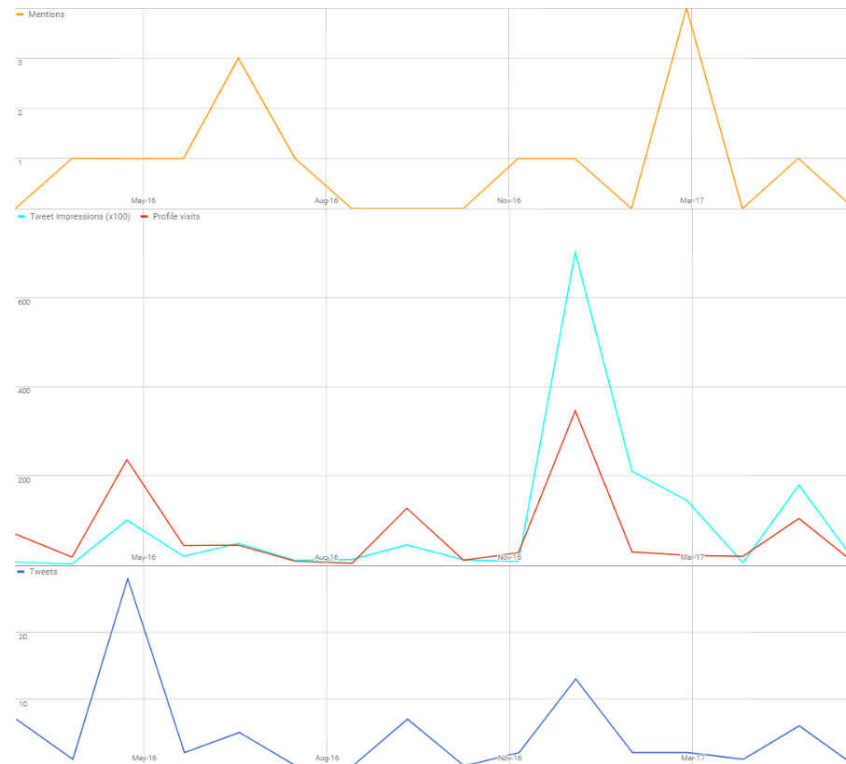


Figure 7 Twitter @datacron_eu profile statics: Mentions (on top), Tweet impressions and profile visits (in the middle), Number of Tweets (at the bottom). Monthly values. Period: March 2016 - June 2017

4.5 Media engagement

Related material: Planning media coverage of relevant project events, communicating with media, delivering key messages, distributing material (brochures, video), issuing press releases, organising media events, getting media feedbacks.

Additional features: publicity material (publications, videos, presentations) addressing broad communities.

Planned target: 2 press releases.

Media engagement activities are to be organised together with important project milestones, workshops and events open to specialised communities, to promote awareness on the project approaches, developments and results.

The first datAcron press release is planned in correspondence of the 1st project review meeting, when a demo showing the datAcron technological developments will be issued. A second press release will be organised for the closure of the project. The organisation of media engagement activities is detailed in the datAcron media plan. Videos and presentation may be prepared to be shown at specialised events and shared through scientific channels (e.g., YouTube science) and advertised via social media.

One video interview presenting the project has been delivered to present an open session organised at a scientific event (video is available on the web, see below) and a publicity publication presenting the project is going to be delivered.

Project Presentations to media

- Christophe Claramunt, interview with brest.fr and presentation of the datAcron Open Session at Sea Tech Week Event (**video available** at <https://vimeo.com/161443056>)

Publicity Publications, addressing media and broad communities

- "Adding significant value to real-time tracking and forecasting mobility", in Impact - European Research Fostering Open Science journal
- "Big Data heralds new era for time-critical mobility forecasting and situation awareness", Interview to datAcron project coordinator in Impact - European Research Fostering Open Science journal.

4.6 Flyers, posters, printed materials

Related material: Project flyer and poster to be displayed at relevant public events, to facilitate media engagement and distributed online.

Related features: Publications in project dissemination journals

Planned deadline: M06 for flyers

Estimated budget: Leaflets, brochures printing: from 1,10 to 1,50 euro each. Poster printing from 5-6 euros /m²

A project flyer and a brochure have been prepared to be distributed at project events and at any dissemination opportunity. The brochure includes a technical paper, prepared for an enlarged technical and research community, presenting the project and including an interview of the datAcron Project coordinator. The same brochure, as a technical article to be delivered to research institutions across Europe, is going to be published by Impact European Research Fostering Open Science journal (<https://impact.pub>). Scientific posters have been prepared for presenting scientific achievements in two scientific events, and will be used for showcasing project achievements during jointly organised events (e.g., in pools).

Flyers and brochures

- "datAcron: Big Data Analytics for Time Critical Mobility Forecasting"
- "Adding significant value to real-time tracking and forecasting mobility"

Posters

- C. Claramunt, C. Ray, E. Camossi, A-L. Jouselme, M. Hadzagic, G. Andrienko, N. Andrienko, Y. Theodoridis, G. Vouros, L. Salmon : "Maritime data integration and analysis: recent progress and research challenges [Vision paper]", Poster presented at the 20th International Conference on Extending Database Technology (EDBT 2017), Venice, Italy, March 21-24, 2017
- G. M. Santipantakis, G. A. Vouros, A. Glenis, C. Doukeridis, A. Vlachou: "The datAcron Ontology for Semantic Trajectories" Poster presented at the 14th European Semantic Web Conference (ESWC 17), Portoroz, Slovenia, May 28 - June 1 2017

4.7 Scientific Publications and Presentations

Related material: Peer-review papers in high-impact scientific journals and in conference proceedings, presented at relevant events on Big-Data Analytics, Interactive Visual Analytics, Machine Learning, Data and Information management.

Additional features: Publication of scientific datasets

Planned target: 10 paper submissions to relevant journals and 20 publications included in proceedings of relevant conferences. Open access to all datAcron publications (read, download, print).

All along the duration of the project, the datAcron consortium has been publishing scientific publications targeting, as detailed in the deliverable D7.3 "Exploitation strategy" and as suggested by the project scientific committee and managers, Big-Data Analytics, Interactive Visual Analytics, Machine Learning, Data, Information management, Maritime and Aviation Safety and Security research communities. Please refer to deliverable D7.3 "Exploitation strategy" for a detailed description of the exploitation strategy and the corresponding dissemination plans including potential target conferences, events and journals.

As specified in the grant agreement, the mandatory statement for acknowledgement is included in all publications, referring explicitly to the grant number, specifically: "This work was [partially] supported by project datAcron, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 687591".

All scientific publications, as per grant agreement (art. 29) are open access. The consortium has adopted multiple sharing solutions for publications; this approach is meant to facilitate the circulation of the publications, which may be hosted on different sites in multiple copies. A datAcron publication may be:

- Open Access: if open access is agreed with the publisher, the main electronic version of the publication is freely accessible directly from the publisher's website
- GREEN Open Access: if the publication camera ready is not open access, the publication's pre-print is hosted on the datAcron website
- GOLD Open Access: in the same case as above, the publication's pre-print may be hosted on the datAcron Zenodo community and shared through OpenAIRE

The last solution, in particular, was encouraged because it guarantees the publications will remain freely available also after the conclusion of the project. All publication references are recorded on the project website, at the page Publications. References link to the most convenient repository. Open access publications may be shared also on ResearchGate, linked to the individual partners' profiles and shared through the project page.

In case the consortium agrees on dataset publications, several services may be used, including Zenodo, DataCite and ResearchGate.

At the time this document is delivered, the status of scientific publications and presentations is as follows:

- 8 journal papers have been already published or are accepted for publication, 1 is under submission
- 13 papers included in published conference proceedings or accepted for publication, 1 is submitted
- 15 presentations delivered at conferences, including 2 keynote talks
- 1 scientific video contribution
- 1 award for 1 scientific challenge

Journal Publications

1. G. Andrienko, N. Andrienko, and G. Fuchs: "Understanding movement data quality", *Journal of Location Based Services*, Taylor & Francis 2016, 10(1):31-46, DOI: 10.1080/17489725.2016.1169322
2. K. Patroumpas, E. Alevizos, A. Artikis, M. Vodas, N. Pelekis, Y. Theodoridis: "Online Event Recognition from Moving Vessel Trajectories", *Geoinformatica 21:389–427*, SpringerLink 2016. DOI: 10.1007/s10707-016-0266-x
3. N. Pelekis, S. Sideridis, P. Tampakis, Y. Theodoridis: "Simulating our LifeSteps by Example", *ACM Transaction. Spatial Algorithms Systems*, ACM 2016, 2(3), DOI: 10.1145/2937753
4. S. Sideridis, N. Pelekis, Y. Theodoridis: "On Querying and Mining Semantic-aware Mobility Timelines" *International Journal of Data Science and Analytics*, 2(1), 29-44, SpringerLink 2016, DOI: 10.1007/s41060-016-0030-1
5. N. Andrienko, G. Andrienko, E. Camossi, C. Claramunt, J. M. Cordero Garcia, G. Fuchs, M. Hadzagic, A-L. Jousseme, C. Ray, D. Scarlatti, G. Vouros: "Visual exploration of movement and event data with interactive time masks", *Visual Informatics 1(1):25-39*, DOI: 10.1016/j.visinf.2017.01.004
6. N. Pelekis, Panagiotis Tampakis, Marios Vodas, Christos Doukeridis, Y. Theodoridis: "On Temporal-Constrained Sub-Trajectory Cluster Analysis", *Data Mining and Knowledge Discovery Journal*, Springer 2017, DOI:10.1007/s10618-017-0503-4
7. G. Andrienko, N. Andrienko, W. Chen, R. Maciejewski, Y. Zhao: "Visual Analytics for Transportation: State of the Art and Further Research Directions", *IEEE Transactions on Intelligent Transportation Systems*. DOI: 10.1109/TITS.2017.2683539
8. G. Andrienko, N. Andrienko, G. Fuchs, J. M. Cordero Garcia. "Clustering Trajectories by Relevant Parts for Air Traffic Analysis". In *IEEE Transactions on Visualization and Computer Graphics, 2017 (accepted for publication)*
9. E. Alevizos, A. Skarlatidis, A. Artikis, G. Paliouras. Probabilistic Complex Event Recognition: A Survey. Submitted to ACM Surveys.

Publications included in conference and workshop proceedings (with presentations)

1. G. Andrienko, N. Andrienko, C. Claramunt, G. Fuchs, C. Ray: "Understanding movement data quality" (VCMA 2016), co-located with the 19th AGILE Conference on Geographic Information Science AGILE 2016: Geospatial Data in a Changing World. 14 June 2016, Helsinki, Finland

2. G. Andrienko, N. Andrienko, C. Claramunt, G. Fuchs, C. Ray: "Visual Analysis of Vessel Traffic Safety by Extracting Events and Orchestrating Interactive Filters" In proceedings of Maritime Knowledge Discovery and Anomaly Detection Workshop, Ispra, Varese, Italy, July 5-6 2016. p. 44-47.
3. A.-L. Jusselme, E. Camossi, M. Hadzagic, C. Ray, C. Claramunt, E. Reardon, K. Bryan, M. Ilteris, "A Fishing Monitoring Use Case in support of collaborative research". In proceedings of Maritime Knowledge Discovery and Anomaly Detection Workshop, Ispra, Varese, Italy, July 5-6 2016. p. 57-61.
4. M. Hadzagic and A.-L. Jusselme, "Contextual Anomalous Destination Detection for Maritime Surveillance". In proceedings of Maritime Knowledge Discovery and Anomaly Detection Workshop, Ispra, Varese, Italy, July 5-6 2016. p. 62-65.
5. L. Salmon, C. Ray, C. Claramunt: "Continuous detection of Black Holes for moving objects at sea" 7th ACM SIGSPATIAL International Workshop on GeoStreaming (IWGS'16), Burlingame, CA, USA, 31st October 2016.
6. P. Nikitopoulos, A.-I. Paraskevopoulos, C. Doulkeridis, N. Pelekis, Y. Theodoridis: "BigCAB: Distributed Hot Spot Analysis over Big Spatio-temporal Data using Apache Spark (GIS Cup)", - 24th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, Burlingame, CA, USA, Oct 31-Nov 3 2016. **Third runner-up award at the 5th ACM SIGSPATIAL Cup**
7. C. Claramunt, C. Ray, E. Camossi, A.-L. Jusselme, M. Hadzagic, G. Andrienko, N. Andrienko, Y. Theodoridis, G. Vouros, L. Salmon: "Maritime data integration and analysis: recent progress and research challenges [Vision paper]", In proceedings of the 20th International Conference on Extending Database Technology (EDBT 2017), Venice, Italy, March 21-24, 2017
8. N. Pelekis, P. Tampakis, M. Vodas, C. Panagiotakis, Y. Theodoridis. In-DBMS Sampling-based Sub-trajectory Clustering. Proceedings of the 20th International Conference on Extending Database Technology, EDBT 2017, Venice, Italy, March 21-24, 2017
9. C. Doulkeridis, N. Pelekis, Y. Theodoridis, and George Vouros: "Big Data Management and Analytics for Mobility Forecasting in datAcron", In proceedings of EuroPro workshop@EDBT-ICDT: "Big Data Management Challenges and Solutions in the Context of European Projects, Venice, Italy, March 21, 2017.
10. G. A. Vouros; C. Doulkeridis; G. Santipantakis; A. Vlachou: "Taming big maritime data to support analytics", In proceedings of the 8th International Symposium "Information Fusion and Intelligent Geographical Information Systems 2017" (IF&IGIS'17) (**Invited talk**)
11. G. M. Santipantakis, G. A. Vouros, A. Glenis, C. Doulkeridis, A. Vlachou: "The datAcron Ontology for Semantic Trajectories" In proceedings of the 14th European Semantic Web Conference (ESWC 17), Portoroz, Slovenia., May 28 - June 1 2017
12. E. Alevizos, A. Artikis, G. Paliouras: "Event Forecasting with Pattern Markov Chains". In Proceedings of the 11th ACM International Conference on Distributed and Event-Based Systems (DEBS17), Barcelona, Spain, 19-23 June, 2017, Pages 146-157 DOI: 10.1145/3093742.3093920
13. G. Andrienko, N. Andrienko, G. Fuchs, J. M. Cordero Garcia: "Clustering Trajectories by Relevant Parts for Air Traffic Analysis". To be presented at the IEEE Conference on Visual Analytics Science and Technology (IEEE VAST 2017), Phoenix, Arizona, USA, 1-6 October 2017. Journal proceedings (IEEE Transactions on Visualization and Computer Graphics, 2017)
14. N. Katzouris, A. Artikis, G. Paliouras. Distributed Online Learning of Event Definitions. Submitted to the 2017 International Conference on Inductive Logic Programming (ILP2017).

Scientific Presentations at conferences

1. M. Hadzagic and A.-L. Jusselme, "Where is it sailing to: Benefits of Contextual and Prediction Information in Detecting Anomalous Destination" Decision Support and Risk Assessment for Operational Effectiveness (DeSRA) Conference, La Spezia, Italy, July 26-28 2016
2. Ernie Batty: "Data Analytics enables advanced AIS applications". Keynote talk at Mobility Analytics for Spatio-temporal and Social Data (MATES) Workshop, co-located with VLDB'17 conference, Munich, 1 Sep, 2017 (**Invited talk**)

4.8 Organisation of Workshops and Specialised Events

Related material: Scientific and technical workshops organised at scientific and technical or industrial events on project topics

Additional features: Need templates, posters, brochures, demos, gadgets

Planned target: 6 workshops

An open session co-located with an industry event (SeaTech) on maritime has been organised in 2016, and one scientific workshop on Big Data integration from disparate, heterogeneous sources will be organised together with one of the most important database conference. Four potential venues for workshops and open session have been identified for 2018 (on Big Data analytics, Aviation and Maritime).

Workshops

- Mobility Analytics for Spatio-temporal and Social Data (MATES) Workshop, co-located with Very Large Database (VLDB'17) conference (<http://www.vldb.org/2017/>), Munich, 1 Sep, 2017. Workshop web page: <http://ai-group.ds.unipi.gr/mates17/>
- BIG mobility analytics: Detection and forecasting of moving entities trajectories, workshop co-located with EDBT 2018, Vienna, Austria, March 26-29, 2018 (*tentative*)
- Workshop on Big Data exploitation for advancing the efficacy of operations in maritime security, CMRE, La Spezia, Italy, May 2018 (*tentative*)
- Workshop on Big Data exploitation for advancing the efficacy of operations in Aviation, co-located with ICRAT 18, Barcelona June 26-28 2018 (*tentative*)

Open Sessions

- datAcron Project Open Session at SeaTech week, Brest, France, 13 October 2016
- Challenges to Exploit Big Maritime Data, Open Session @ Hellenic Forum 2017, June 2017.
- Mobility at sea and in the air, Open Session @ European Big Data Value Forum, Versailles, France, November, 21-23, 2017 (*tentative*)

4.9 Participation to specialised scientific events and meetings

Related material: Participation and presentation of datAcron at specialised scientific events and meetings for networking with industrial, commercial and standardisation initiatives, towards exploitation, transfer of knowledge, for developing bi-lateral collaborations. Meetings with stakeholders Interest Groups for the validation of the maritime and aviation use case requirements and prototypes.

Planned target: 4 meetings with Interest User Groups (2 per use case: one for validating the use case requirements and one for validating the project outcomes)

Evaluation: Bi-lateral collaborations with other projects working in the field established are measured by existing exchange of knowledge and/or models or implementations. Target is 0 but collaboration and exploiting synergies is a datAcron target.

Events of interest include Big Data, Maritime and Aviation commercial and industrial events, meetings with standardisation committees, participation in open sessions organised by European projects on topics of interest for datAcron. Meetings with stakeholders Interest Groups should be organised to validation of the requirements and of the project outcomes for the datAcron use cases.

The datAcron project has been presented 4 times at specialised scientific events and 7 times at specialised meetings, and 1 video presentation of the project has been issued.

Presentations at specialised scientific events

1. G. Fuchs: "EU H2020 Big Data Analytics for Time Critical Mobility Forecasting", WTD 71 - COE CSW Workshop: Impact of Offshore Facilities on Maritime Situational Awareness, Hamburg, Germany, May 3-4 2016
2. D. Scarlatti: "Big Data Analytics for Time Critical Mobility Forecasting" Complex World Event, Data Science in Aviation Workshop, Cologne, Germany, September 8-9 2016. (**video available** at <https://vimeo.com/album/4328818/video/197373375>)
3. D. Scarlatti: "Assessment of airline's operational efficiency and ANSP performance in Europe". Boeing Technical Excellence Conference (BTEC) Charleston, USA. May 15-18, 2017.
4. C. Claramunt and C. Ray: "Traitement des données dans le cadre du projet européen datAcron" Journées scientifiques du projet NOUMEA, Brest, France, May 31 - June 1 2017

Presentations at specialised meetings

1. Y. Theodoridis: "datAcron: Big Data Analytics for Time Critical Mobility Forecasting – a Horizon2020 Big Data project", ETH Zurich, January 2016
2. E. Camossi: "Visual Analytics for Maritime Security and Maritime Situational Awareness", which includes a presentation of datAcron project. NATO IST 141/RTG 66 on Exploratory Visual Analytics, First meeting. NATO CSO, Paris, France, 26-29 April 2016
3. A-L. Joussetme: "A Fishing Monitoring Use Case in Support to Collaborative Research". NATO RTO Task Group SCI-280 on System-of-systems approach to task driven sensor resource management for maritime situational awareness (SoSMSA) Meeting. La Spezia, Italy, September 1, 2016
4. datAcron Open Session at Sea Week Tech 2016. Presentation of datAcron at the Maritime Interest User Group (Ecole Nationale Supérieure de la Marine Marchande, DCNS group), for validating use case requirements and scenarios. Brest, France, 13 October 2017
5. E. Camossi: "Maritime Security. Maritime Situational Awareness. Visualization, Formal Knowledge Representation and Evaluation", including a presentation of the datAcron maritime use case and scenarios. NATO IST 141/RTG 3rd meeting, May 14-19 2017, Valcartier, Quebec, Canada
6. A-L Joussetme: datAcron maritime use case and scenarios. Meeting with Maritime Security Experts participating in the NATO Table Top eXercise (TTX) in support to Maritime Situation Awareness (MSA). May 15-18 2017, CMRE, La Spezia, Italy
7. E. Batty: presentation of the datAcron project at the IALA Meeting, Paris, 20 Sep 2016

Meetings with Interest User Groups

- Presentation of datAcron at the Maritime Interest User Group (Ecole Nationale Supérieure de la Marine Marchande, DCNS group), for validating use case requirements and scenarios. Brest, France, 13 October 2016 during the datAcron Project Open Session at the SeaTech event (<http://www.seatechevent.eu>).
- Presentation of the "datAcron maritime use case and scenarios" to Maritime Security Experts participating in the NATO Table Top eXercise (TTX) in support to Maritime Situation Awareness (MSA). May 15-18 2017, CMRE, La Spezia, Italy.

4.10 Technical Publications and White Papers

Related material: Whitepapers and Publications for technically interested community at large.

Planned target: 6 technical publications, 3 whitepapers

Technical publications and white papers will be prepared to increase project understanding. Potential topics for technical publications are:

- "Management of spatio-temporal Big Data"
- "Integrating big data from disparate, heterogeneous sources"
- "Detection and forecasting of moving entities trajectories"
- "Recognition and forecasting of events concerning moving entities"
- "Big Data exploitation for advancing the efficacy of operations in maritime/aviation" (1 per use case)

Identified white papers titles are:

- "datAcron Big Data for Moving Entities"
- "datAcron Big Data for Moving Entities in the Aviation Domain"
- "datAcron Big Data for Moving Entities in the Maritime Domain"

Although at this stage of the project no technical publications nor white papers have been issued, initial versions of technical papers with initial project results are expected on M20 (Sept. 2017), and white papers are scheduled on M22 (Dec. 2017).

Datasets publications

Related material: datasets produced during the course of the project and released as open data, to be used for benchmarking of methods, and published with DOI for recognition

Planned target: no target

The datAcron consortium will evaluate if some of the datasets shared within the consortium, which are used for testing methods and for demonstrating results that are published in open literature, may be released as open data and published with appropriate references and identifiers for guaranteeing recognition to the data producers. To most of the datasets used in the project, confidentiality issues may arise. In some cases, anonymisation may be applied.

According to the datAcron executive board decisions, publication of datasets will be decided on a case-specific basis, according to a well defined procedure also described in the datAcron Data Management Plan.

Demonstrations

Related material: Demonstrations of prototypes at scientific and industry dominated events

Planned target: 3 demonstrations

Demonstrations are going to be organised for showcasing the technical and scientific advancement of the project, to encourage networking and promote collaboration. Demonstrations may be organised at relevant scientific and industrial big-data, maritime and aviation events.

During the project review prototype demonstrations will be delivered, showing the technical project advancements of datAcron for the two project use cases, for the most representative of the domain-specific scenarios specified. The team also targets the World ATM demonstration event, a participation that needs to be confirmed.

Training activities

Related material: Transfer of knowledge activities, integration of datAcron results into MSc and PhD curricula, organisation of courses, schools, visiting research programmes.

Training activities are organised according to the strategy presented in deliverable D7.3 “Exploitation strategy”. Despite the training task (T7.3 “Training”) officially started at M12 of the project, the training activity leverage existing on-going activities the datAcron partners are already involved, and joint training activities have been organised since the first months of the project. In summary, the training activities organised (issued and planned) so far include:

- 12 training modules and full courses on datAcron topics in MSc and undergraduate curricula;
- 3 lectures in training curricula, including 1 summer school’s lecture
- 2 tutorials for researchers at relevant scientific events, 2 tutorial organised internally to the consortium
- 9 students’ mobility, within the consortium
- 1 student’s mobility grant obtained on a project proposal based on datAcron topics
- 4 final year projects co-supervised by partners within the consortium
- 1 MSc thesis on datAcron topics
- 1 datAcron Big Data summer school, including a Big Data science camp, to be organised in 2018 (tentatively during June-July 2018).

Training activities are discussed in detail in the confidential deliverable D7.4 “Training report (interim)”.

4.11 Overview of the status of dissemination

The status of the outreach activities organised within Task 7.1 for disseminating datAcron achievements supporting the exploitation of project results is summarised in Figure 8 and Figure 9. Figure 10 and Figure 11 breakdown the groups of activities to each specific category, distinguishing also planned activities. Figure 11 shows also the status of the specific activities (in blue) with respect to the expected targets (in orange).

Dissemination Activities M18

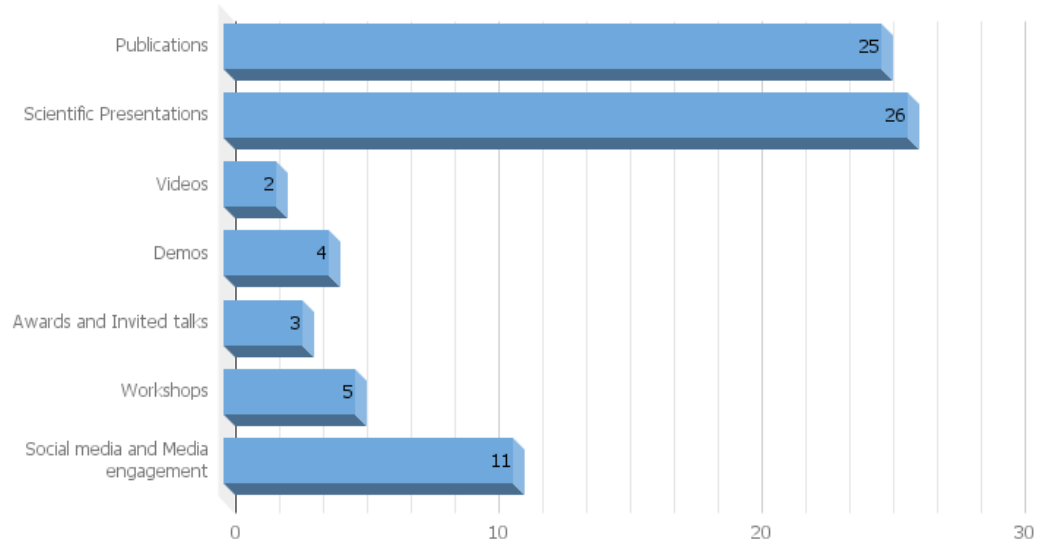


Figure 8 datAcron Dissemination: overview of activities at M18

Dissemination Activities M18

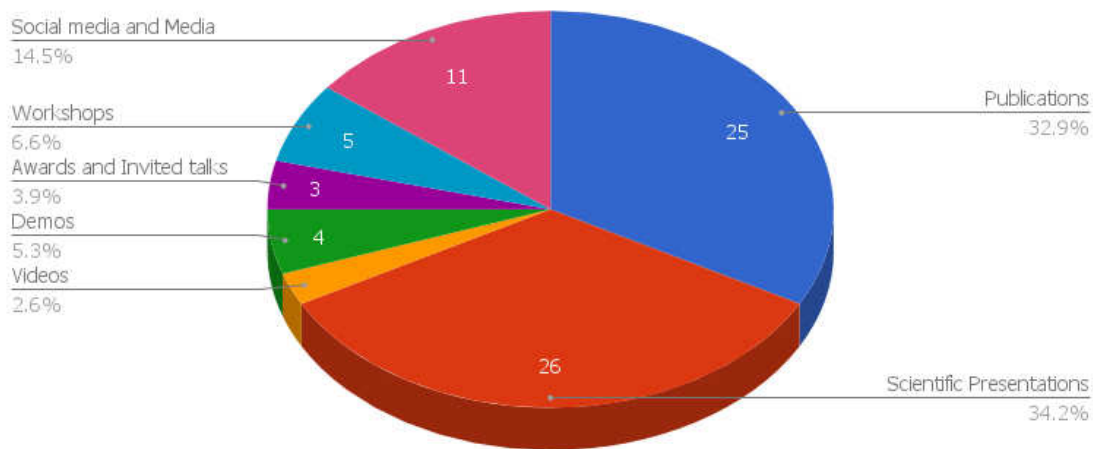


Figure 9 datAcron Dissemination: overview and distribution of activities

As expected from a Research and Innovation project, most of dissemination activity has focused so far on the preparation of scientific publications: target on journal papers is almost achieved (8 papers accepted, 1 submitted, comparing with 10 submissions expected) and the goal on conference proceeding publications is feasible (at project mid term, 13 publications comparing with the 20 expected). Breaking down the delivery of presentations, from Figure 10 is evident that there is a significant effort to deliver presentations in scientific conferences (14 presentation), and in specialised meetings and scientific events (7 and 4 presentations, respectively), to support the exploitation towards industry and standardisation. To reinforce industrial exploitation, effort must be put in the preparation of technical publications and white papers. The target on

workshop is ambitious, but the plan for workshop organisation for the second half of the project is dense. The media engagement and the social media engagement activities must be planned accordingly, to further reinforce the strategy.

datAcron Dissemination Activities and Targets (M18)

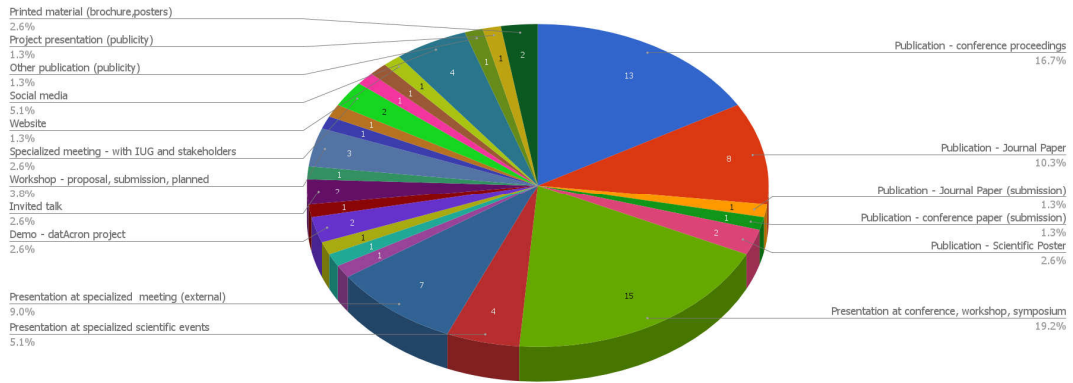


Figure 10 datAcron Dissemination: Distribution of activities at M18

datAcron Dissemination Activities and Targets (details) M18

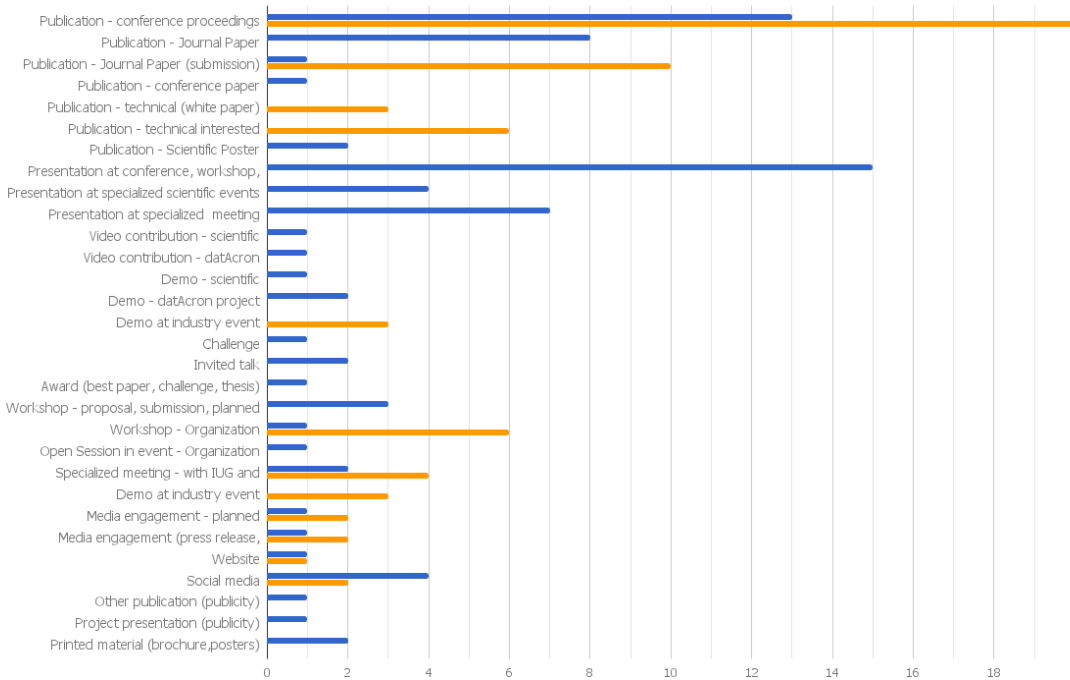


Figure 11 datAcron Dissemination: Activities at M18 (in blue) with targets (in orange)

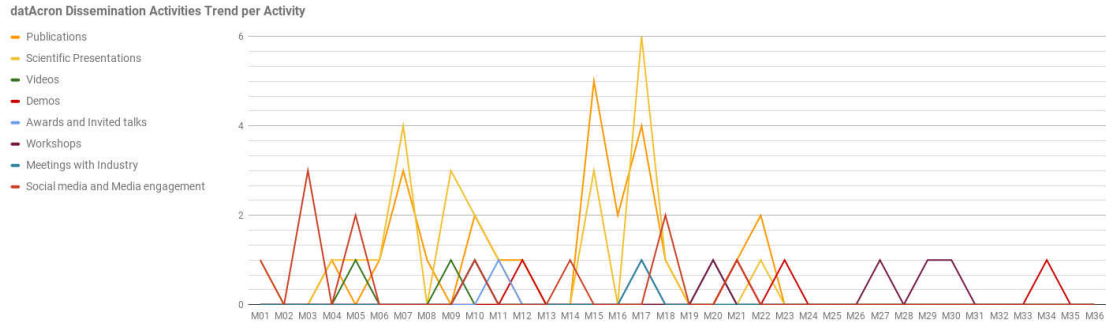


Figure 12 Temporal distribution of dissemination activities

Finally, Figure 12 shows that activities are already distributed along the duration of the project. During the first year of the project, a peak of activities was observed in the second part of the year, and the same trend is expected for this year, with increased values.