

Deliverable D8.4

Dissemination, Communication and Networking reporting period 2

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Abstract:	This deliverable will explain the dissemination and communication activities followed during the reporting periods as well as the results from these activities and will update project's dissemination and communication plan respectively. This report will also contain the relevant activities executed to foster a close collaboration with projects related to DECIDE, as well as future networking plans. This deliverable corresponds to period 2 (M19-M36).	
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Table of Contents

Tak	ole of 0	Contents	4
List	of Fig	gures	5
List	of Tal	bles	ε
Ter	ms an	nd abbreviations	6
Exe	cutive	e Summary	7
1	Intro	oduction	8
1	l. 1	About this deliverable	8
1	L.2	Document structure	8
2	Ovei	rall DECIDE results	10
2	2.1	Dissemination results	10
2	2.2	Communication results	11
2	2.3	Networking results	12
3	Crea	ation of dissemination material	14
3	3.1	Brochure	14
3	3.2	Newsletter	15
3	3.3	General Presentation	15
3	3.4	Posters	16
3	3.5	Press Release	16
3	3.6	Showcases	17
3	3.7	Merchandising	18
4	Disse	semination Activities	20
2	1.1	Overview	20
5	Com	nmunication activities	24
Ę	5.1	DECIDE Digital Strategy	24
	5.1.1	1 Project Website	25
	5.1.2	2 Blog	27
	5.1.3	3 KPIs	29
Ę	5.2	Activity in Social Networks	31
	5.2.1	1 Twitter	31
	5.	.2.1.1 Twitter KPIs	32
	5.2.2	2 DECIDE LinkedIn Group	34
	5.	.2.2.1 LinkedIn KPIs	34
	5.2.3	3 YouTube	34
	5.2.4	4 SlideShare	35
6	Netv	working activities	37
7	Revi	ising the dissemination strategy and the associated KPIS	40

7.1 Planned Vs. actual work	40
8 Conclusions	42
9 References	43
Annex 1 – Detailed information on dissemination	44
A1.1 Newsletters	
A1.2 Press Release	45
A1.2.1. English version	45
A1.2.2 Spanish version	
A1.2.3. Basque version	
A1.2.4. German version	
A1.2.5. Dutch version	
A1.2.1.6. Polish version	
A1.2.1.7 Italian version	
A1.2.1.8 Press releases publications	
·	
A1.3 Scientific Publications to Journals and Conferences	
A1.4 General and Business Publications	
A1.5 Attended events: Conferences, Seminars, Workshops and Webinars	
A1.6 Other Dissemination Activities	68
List of Figures	
FIGURE 1. DECIDE EDITORIAL CALENDAR	10
FIGURE 2. DECIDE SOCIAL MEDIA AND WEB DASHBOARD.	
FIGURE 3. CUSTOMER JOURNEY MODEL.	
FIGURE 4. ICT EVENT NETWORKING SESSION LED BY DECIDE	
FIGURE 5. DECIDE BETA TESTER CAMPAIGN ON REACHOUT.	
FIGURE 7. 2018 AND 2019 DECIDE NEWSLETTERS	
FIGURE 8. DECIDE GENERAL PRESENTATIONS	
FIGURE 9. DECIDE POSTERS	
FIGURE 10. DECIDE PRESS RELEASE	
FIGURE 11. SCREENSHOTS OF THE DECIDE PROMOTIONAL VIDEO	18
FIGURE 12. DECIDE PEN FIGURE 13. DECIDE FOLDER	
FIGURE 14. NOTEBOOK. FIGURE 15. DECIDE BUSINESS CARDS.	
FIGURE 16. DECIDE STICKERS	
FIGURE 17. ICT 2018: IMAGINE DIGITAL CONNECT EUROPE.	
FIGURE 18. FRAUNHOFER PRESENTED DECIDE IN OW2CON'19	
FIGURE 19. DECIDE DEMO SESSION IN WEBIST 2019	
FIGURE 21. ENPRESADIGITALA COURSE	
FIGURE 22. A POSTER OF DECIDE WAS PRESENTED AT A H2020 EVENT IN TOLEDO, SPAIN.	
FIGURE 23. DECIDE DIGITAL STRATEGY	
FIGURE 24 DECIDE NEW SECTION ON THE WERSITE: OPEN SOURCE IN DECIDE	

FIGURE 25. DECIDE LIBRARY: PUBLIC DELIVERABLES, INCLUDING SOURCE CODE, AVAILABLE FOR DOWNLOAD	26
FIGURE 26. DECIDE BLOG	27
FIGURE 27. USERS IN DECIDE WEBSITE	30
FIGURE 28. TRAFFIC IN DECIDE WEBSITE	30
FIGURE 29. PUBLICATION ON DECIDE POST BLOG	30
FIGURE 30. MOST VISITED PAGES OF THE WEBSITE	31
FIGURE 31. USERS BY COUNTRY	31
FIGURE 32. DECIDE TWITTER ACCOUNT	32
FIGURE 33. DECIDE TWITTER ACCOUNT MOST SIGNIFICANT FIGURES	32
Figure 34. 2017 Twitter activity registry	33
Figure 35. 2018 Twitter activity registry	33
FIGURE 36. 2019 TWITTER ACTIVITY REGISTRY TOP TWEETS	33
FIGURE 37. 2019 TOP TWEET	34
FIGURE 38. DECIDE LINKEDIN GROUP	34
FIGURE 39. DECIDE YOUTUBE PROFILE	35
Figure 40. SlideShare DECIDE	35
Figure 41. Newsletter 2018	44
Figure 42. Newsletter 2019	45
FIGURE 43. PRESS RELEASE IN ENGLISH	47
FIGURE 44. PRESS RELEASE IN SPANISH	49
Figure 45. Press release in Basque	51
Figure 46. Press release in German	53
Figure 47. Press release in Dutch	55
Figure 48. Press release in Polish	57
Figure 49. Press release in Italian	59

List of Tables

TABLE 1. SECOND PERIOD DECIDE BLOG POSTS	28
TABLE 2. COLLABORATION CLASSIFICATION	37
TABLE 3. IDENTIFIED INITIATIVES FOR COLLABORATION	38
TABLE 4. DISSEMINATION KPIS	40
TABLE 5. COMMUNICATION KPIS	40
TABLE 6. LIST OF PRESS RELEASES	60
TABLE 7. LIST OF SCIENTIFIC PUBLICATIONS TO JOURNALS AND CONFERENCES	62
TABLE 8. GENERAL AND BUSINESS PUBLICATIONS	65
TABLE 9. ATTENDED EVENTS DURING THE SECOND REPORTING PERIOD	66
TABLE 10. OTHER DISSEMINATION ACTIVITIES DURING THE SECOND REPORTING PERIOD	68

Terms and abbreviations

D8.x	Deliverable 8.x	
EC	European Commission	
KPIs	Key Performance Indicators	
Mx	Month x	

Executive Summary

This document, *D8.4 Dissemination, Communication and Networking reporting period 2,* is the second progress report on dissemination, communication and networking activities for the DECIDE project. These activities, which are essential for the success of the project, allow different stakeholders to gain awareness of the achievements of the project and of hoe to use its results. This deliverable shows the activities performed during the second eighteen months of the project, namely, from June 2018 to November 2019.

This deliverable is the last of a series of four reports:

- D8.1 DECIDE brochure and public website,
- D8.2 Communication Plan, Networking Plan and Dissemination Strategy,
- D8.3 Dissemination, Communication and Networking reporting period 1,
- D8.4 Dissemination, Communication and Networking reporting period2.

This deliverable explains the dissemination and communication activities followed during the second reporting period and shows the overall achievements of the project. This report also contains the relevant activities executed to foster a close collaboration with projects related to DECIDE, as well as future networking plans.

The deliverable D8.2 [1] proposed the detailed plan and list of dissemination activities, including mainly the organization of classical dissemination channels such as scientific and professional publications, organization and participation to workshops and events. The previous deliverable D8.3 described the results of such actions during the first reporting period. This deliverable D8.4 describes the results of actions during the second reporting period.

Communication and networking activities during the second eighteen months of the project were executed as planned in deliverable D8.2 and in the revised actions in D8.3. The key performance indicators established were mostly achieved, while in some cases, surpassing the target values. The deliverable at hand includes the recommendations implemented in the second period as result of the first project review held in July 2018 in Brussels.

As highlights, the project partners have been accepted 12 scientific papers, have published two press releases in 7 languages (English, Spanish, Basque, German, Dutch, Polish, and Italian) and released in multiple media across Europe, 35 blog posts have been published, which have been used to bring traffic to the website, and have participated in several events and clustering activities. The social media profiles are used following the approach of inbound marketing, using the blog posts, written by all partners, as the core around which the other tools revolve.

1 Introduction

DECIDE provides a set of architectural patterns and the needed supporting tools to develop and operate (following the DevOps philosophy) multi-cloud aware applications that can be dynamically self-adapted or be re-deployed using different cloud services.

The focus of this work package is to maximize the impact of the project by ensuring proper communication and dissemination of the project results and subsequently to raise awareness to the scientific, industrial, and general public communities.

This deliverable reports the activities in reference to the deliverables of Work package 8 (*D8.1 DECIDE brochure and public website* and *D8.2 Communication Plan, Networking plan and Dissemination Strategy* [1]) whose goals were to set the common ground and plan the proper dissemination, communication and networking actions to raise awareness to the scientific, industrial, and general public communities. Besides, this deliverable includes the recommendations implemented in this second period as result of the first project review held in July 2018 in Brussels after the previous deliverable D8.3 which described the results of such actions during the first reporting period (M1-M18).

Furthermore, this deliverable reports the status of Key Performance Indicators (KPIs) related to dissemination, communication and networking, which helped to monitor the status of the activities and, in case of need, apply actions to improve the impact of results.

The dissemination, communication and networking work in DECIDE is directly related to all technical work packages of the DECIDE project as its goal is to maximize the impact that the project results by ensuring proper communication and dissemination of the project results and subsequently to raise awareness to the scientific, industrial, and general public communities. Particularly, the work is aligned with the exploitation activities of the project performed in WP7.

All the content about the activities described in this document have been collected by the dissemination, communication and networking reports provided to DECIDE partners, as well as for the information transmitted in the general monthly calls for each one. All DECIDE partners have contributed to the execution of the dissemination, communication and networking activities in the project, and therefore contributed to this deliverable.

1.1 About this deliverable

This deliverable explains the dissemination and communication activities followed during the second report period as well as the results from these activities.

This report also contains the relevant activities executed to foster a close collaboration with projects related to DECIDE. This deliverable corresponds to period 2 (M19-M36).

1.2 Document structure

This deliverable is structured as follows:

- Chapter 1, "Introduction", gives a general introduction, scope and structure of this deliverable.
- Chapter 2, "Overall results project", focuses on the final results of the project.
- Chapter 3, "Creation of Dissemination material", describes in detail the dissemination material that was created during the project.
- Chapter 4, "Dissemination Activities", shows an overview of the performed dissemination activities, including among others, events, conferences, scientific journals and general/business publications.

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- Chapter 5, "Communication activities", focuses on the DECIDE digital strategy with its tools (web, blog and social networks) that were updated after the first review with the recommendations implemented.
- Chapter 6, "Networking activities," presents de collaboration activities with ICT projects during the second reporting period.
- Chapter 7, "Revising Dissemination Strategy (KPIS)", compares planed against actual work by considering the key performance indicator defines in the DoA [2]
- Chapter 8, Conclusions.

2 Overall DECIDE results

The DECIDE project has ended and dissemination has played a very important role in achieving its objectives. A well-organized dissemination plan was depicted at the beginning of the project and revisited (and updated when needed) to be adjusted to the requirements of the project and the recommendations of the reviewers after the first project review held in July 2018 in Brussels.

A thorough and continue monitoring procedure has been followed along the project by the dissemination team and thanks to the contribution of all partners. Easy-to-collect and complete templates have been used to record all the dissemination actions on monthly basis the: Dissemination Monthly Report, Editorial Calendar, Social Media Dashboard and Web Dashboard.



	2017	2018	2019
AIMES	September	April	January/September
ARSYS	October	May	February/October
CLOUDBROKER	November	June	March/November
FRAUNHOFER	December	July	April/December
EXPERIS IT	September	January/October	May
HP	October	February/November	June
TIME.LEX	November	March/December	July
TECNALIA	October /Dec.	March/July/Sept./Dec.	March/July/Sept./Dec.

Figure 1. DECIDE Editorial Calendar





Figure 2. DECIDE Social Media and Web Dashboard.

Through these, all partners were monthly updated about what actions have been done as well as the upcoming events and activities. In addition, quarterly all actions and KPIs were reviewed and debated in the respective general assemblies.

2.1 Dissemination results

During this second period, the major focus of dissemination activity has been on the promotion of project results, released under an open source. DECIDE has been active in the release of general and business publications, as well as scientific papers. Moreover, DECIDE has participated with active roles in several events and workshops.

Due to the fact that the project was more advanced than in the first period, it has been possible to devote a greater effort in dissemination to achieve the objectives set in the KPis. The releases of the second and final versions of the source code and the evaluation of the DECIDE tools by the use cases were used as input for the sales argument, to demonstrate the benefits that DECIDE provides. The main message was to demonstrate the benefits to multi-cloud application developers and operators.

During the last review we were advised that it was necessary a "greater segmentation of our target and more presence of the private company. The strategy must increase the interaction with cloud actors in the commercial world." After the review we analysed the Dissemination and Communication strategy and adopted two urgent measures:

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- Apply the Customer Journey Model in our Communication Strategy.
- Get closer to the private company through a greater interaction with them thanks to the attendance to more industrial related congresses and whenever possible to attend with a booth.

To this end, we have doubled the participation in events and almost half of them with stand. The result has been very positive since we have received valuable feedback which has allowed us to update the Dissemination and Communication Strategy.

Respect to the general public, less expert in the technologies the project is focusing on, DECIDE's video is allowing us to reach them more easily and helping the understanding of the project.

2.2 Communication results

The results of the communication activities and the digital strategy have been very satisfactory. During this second period our objectives were:

- Achieve "loyalty" and consolidate the DECIDE community.
- Increase the interaction with cloud actors in the commercial world.

The evaluation of the DECIDE tools (M24 and M30) by the use cases were used as input for the sales argument, to demonstrate the benefits that DECIDE provides to multi-cloud application developers and operators.

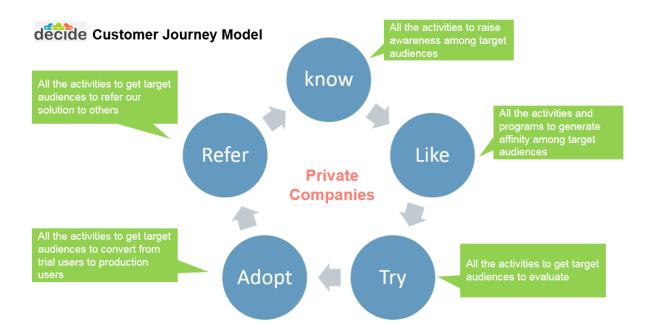
The Digital Strategy continued focusing on the diffusion of DECIDE tools, use cases and papers. The main message was to demonstrate the benefits that DECIDE provides to multi-cloud application developers and operators.

As mentioned above, after the last review the communication strategy was revised, and it was decided to adapt the Customer Journey Model to the project in order to reach to the cloud actors in the commercial world.



Figure 3. Customer Journey Model.

The Customer Journey Map is a Design Thinking tool that allows to incorporate in a map each one of the interactions and points of contact of the client with the company during the whole process of purchase. In the case of DECIDE, it would not be a purchase process but an adoption of the technology. It was adapted to our model and resulted in the following process:



2.3 Networking results

During this second period we had different levels of collaboration:

 DECIDE led the networking session "Learn how to select the most appropriate cloud offerings for your app" that took place in the ICT event in Venna on 5.12.2018. This session was done in collaboration with CLOUDPERFECT, ACTICLOUD, MELODIC, RESTASSURED and COLA.

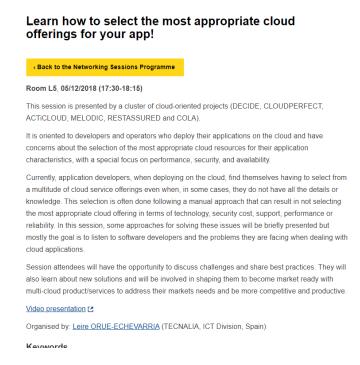


Figure 4. ICT Event Networking session led by DECIDE

Moreover, DECIDE co-led and participated in other networking sessions in the ICT event, such
as the one organized by the SE4SA and in the DSM Cloud Stakeholder meeting.

Contract No. GA 731533 Page 12 of 68

- Networks: DECIDE partners have disseminated the project results in the networks they belong to, such as The Data Centre Alliance and Cloud 28+.
- We have written an article in collaboration with the projects: MELODIC, BigDataStack, and Mosaic, included in the Proceedings of the 14th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC-2019)
- DECIDE project coordinator has participated in all DSM cloud stakeholders meeting organized by the European Commission (December 2017, April 2018, July 2018, October 2018, December 2018, February 2019, April 2019, June 2019, September 2019) and in the high-level conference on data economy held in Helsinki in November 2019.
- DECIDE is part of the beta testing campaign of the ReachOut project until March 31st, 2020, at https://www.reachout-project.eu/#

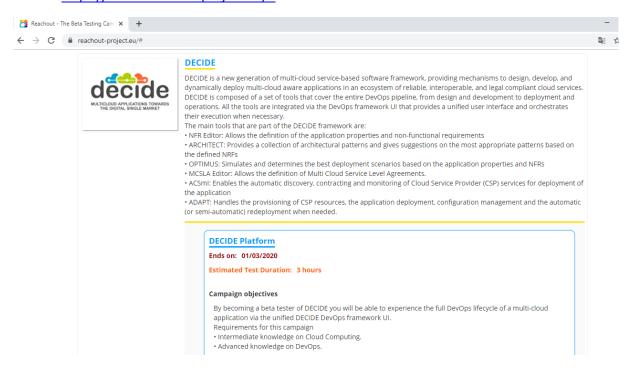


Figure 5. DECIDE Beta Tester Campaign on ReachOut

3 Creation of dissemination material

During this second reporting period, the project has prepared several kinds of dissemination material. In line with the plan in D8.2 [1], the main materials that have been prepared are presented along this section.

3.1 Brochure

The evolution and advances in the project made it necessary to update the information and generate a second version of the brochure with the progress made. The second brochure has been disseminated in the different social media networks of the project as well as at the boots of the congress in which we have participated.

This brochure is available at: https://www.decide-h2020.eu/documents2/decide-brochure-2018



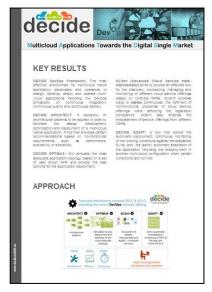






Figure 6. Second version of the DECIDE brochure

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3.2 Newsletter

DECIDE has planned the release of several newsletters, one per year. The goal of the newsletter is to describe the project's achievements and innovations reached during each year. The main benefit of newsletter is to keep DECIDE stakeholders informed about the current status of the project.

In this second period DECIDE released two more newsletters. The second and third Newsletter are shown below and can be found at: https://www.decide-h2020.eu/content/decide-2018-newsletter and https://www.decide-h2020.eu/content/decide-2019-newsletter





Figure 7. 2018 and 2019 DECIDE Newsletters

The newsletters are structured as follows:

- General introduction to the project: project goal and results, where these will be validated.
- Information about the different consortium meetings held and the main conclusions.
- Information about relevant events attended where DECIDE outcomes were presented.
- Availability of the source code.
- Tools and use cases.

3.3 General Presentation

The objective of the general presentation of DECIDE is to prove a project overview, background information, objectives, rationale, partners and results. That is why it has been growing and updating according to the results of the project

At this stage, four general presentations of the DECIDE project have been created. This presentation has been continuously updated during the project and are complemented with more dedicated and specialized ones.

The general presentations, as well as any other presentation generated for any event, are uploaded to SlideShare and available at: http://www.slideshare.net/Decideh2020



Figure 8. DECIDE General Presentations

3.4 Posters

DECIDE's poster aims to identify the goals of the project, the approach, the expected results and benefits. The main purpose of the poster is to capture the audience's attention.

During this second period, the project has made one poster more. We have three in total. They show different maturity degrees. The poster has evolved as the project has progressed and results are available.

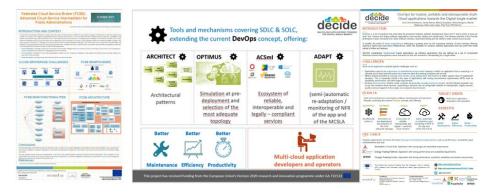


Figure 9. DECIDE Posters

3.5 Press Release

DECIDE published two press releases and we are preparing the last one focusing on the results of the project.

The second press release of DECIDE described the released of its third version of the individual tools that compose the DECIDE DevOps Framework and how they are available on the project's public GitLab repository. This press release has been released in June of this year.

DECIDE's press release has been translated it into the official languages of the partners: English, Spanish, French, German, Italian, Basque and Dutch in order to be disseminated by the partners in their countries. All versions are uploaded and available at the project's website.

Hereby, only the English version is shown. The other linguistic versions can be found in Annex A1.2 and online at: https://www.decide-h2020.eu/public-tags/press-release-2019

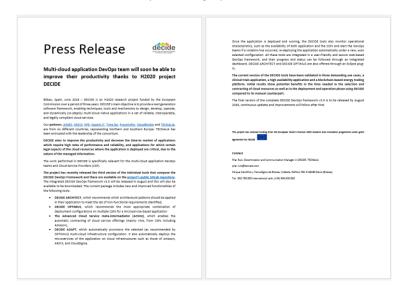


Figure 10. DECIDE Press Release

3.6 Showcases

During this second reporting period, DECIDE team has produced a promotional video which presents the value proposition of the project, who is it for and what are the benefits.

Apart from this kind of video, as we indicated in the previous deliverable 8.3 (M1-M18), two more types of videos were created depending on the target audience.:

- Specialized videos, showing the features of the tools. These videos can be used as support, tutorial and demos for anyone wishing to use the DECIDE tools. To this end, five demo videos of the M12 DECIDE tools have been created.
- **Dissemination videos,** it was the one presented in the application for a networking session in the ICT event 2018.



During M18 the project created a small dissemination team to create the story board for the project video and the result was very satisfactory. The video helps us get closer to the most complicated target in such technical projects, the general public. Therefore, we have tried to use a simplified storyboard that helps to understand the project to the less technical public and at the same time incorporate a visual explanation of each of the tools to also reach our most technical target.



Figure 11. Screenshots of the DECIDE promotional video

The YouTube channel where all showcases and videos are available is: https://www.youtube.com/channel/UCQ59BWyOcp7-mIrH1ZtfssA

3.7 Merchandising

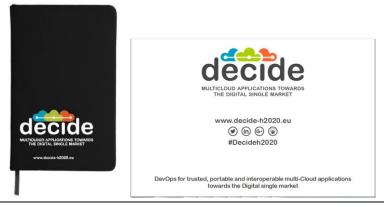
DECIDE merchandising was created in the first phase of the project but it has been in this second period that the greatest use has been made in the different events and booths in which we have participated. They are an excellent element that are used to promote the communication of DECIDE as a brand.

The DECIDE Merchandising products consist on: pen with pen drive, folder, notebook, business cards and the stickers with the logo.



Figure 12. DECIDE pen

Figure 13. DECIDE folder



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Figure 14. Notebook. Figure 15. DECIDE business cards.



Figure 16. DECIDE stickers

4 Dissemination Activities

4.1 Overview

This section summarizes the dissemination activities that DECIDE partners have carried out throughout the second reporting period of the project and are split into the following categories:

- Scientific publications to journals and conferences.
- General and business publications.
- Participation in events, conferences, workshops, focus-group, seminars and webinars, Including presentations and project-related material like brochures, posters, etc.
- Other dissemination activities.

During the second reporting period, DECIDE has been active in the release of general and business publications, as well as scientific papers. Moreover, DECIDE has participated with active roles in several events and workshops.

• Scientific papers:

- 7 papers, presented in the conferences: ICSOFT 2018, EuroSPI 2018, SWISM 2019,
 ICCBDC 2019, WEBIST 2019, 3PGCIC 2019 and PROFES..
- 3 Journal publications, in legal journals related to the legal work performed to determine the legal level of a cloud service
- 17 General and business publications on partners' websites (TECNALIA web, TECNALIA Express, Fraunhofer FOKUS website, CloudBroker website, Arsys website), newsletters (EnpresaDigitala, GAIA, Basque Technology Park) and magazines (datacenter magazine).
- Events: By events the project understands conferences, seminars, webinars and workshops. In these we could give a conference, a course, make a presentation or have a booth where DECIDE was present. DECIDE has participated in more than 15 events, namely:
 - o *ICT 2018: Imagine Digital Connect Europe*. We participated in networking sessions with the SE4SA, DSM Cloud Stakeholders meeting and led a networking session with a set of projects. (See Figure 15)
 - o *LIBRECON 2018,* a reference hub for the dissemination of the avant-garde technologies based on open code. DECIDE was present at the Booth of TECNALIA.
 - #MeetUptheExpert: presentation of existing solutions for DevOps and how DECIDE aims to progress beyond them. Event organized by TECNALIA.
 - DECIDE was presented as use case at the event: "DevOps as a strategy for the servitization of software applications" held at Tecnalia.
 - o Hannover Messe 2019. CloudBroker presented DECIDE.
 - Arsys presented DECIDE in 3SMADRID2019 during the panel "The Hybrid Cloud and the boom of #MultiCloud environments" in Madrid.
 - Fraunhofer presented DECIDE in OW2con'19 June 12-13, Paris: Open Source Toward Industry Maturity. Orange Garden, Paris. (See Figure 16)
 - TECNALIA presented DECIDE in the event organized by the Basque PMI Branch with the session "DevOps y el rol del Project Manager" (6.6.2019)
 - o Paper and Demo session at WEBIST 2019, 18-20 September in Vienna. (See Figure 17)
 - o DECIDE presentation by AIMES in the Data Centre Ireland in Dublin on 19/20
 - Paper and Demo session at PROFES2019, European project space, 27.11.2019 in Barcelona (Spain).

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- Talk "The Automated Deployment of Micro Services Based Applications into Multi-Cloud Environments – Threat or Opportunity" at DataCenters Ireland, 2019
- DECIDE was presented in the TECNALIA booth of the following congresses: (See Figure 18)
 - XI International Congress of Industrial Cybersecurity in Europe. Madrid
 - Bilbao Data Protection Congress organizer by Wolters.
 - IT.SA The IT Security Expo and Congress. Nuremberg, Germany. 8-10 October.
 - 13ENISE International Information Security Meeting. León, Spain.
 - Basque Industry 4.0 Congress. Bilbao, Spain.



Figure 17. ICT 2018: Imagine Digital Connect Europe.



Figure 18. Fraunhofer presented DECIDE in OW2con'19



Figure 19. DECIDE demo session in WEBIST 2019.



Figure 20. Tecnalia booths at the different congresses.

• Other dissemination activities include:

- Monthly meeting of the UK Innovate UK
- EnpresaDigitala course: DevOps como estrategia para la servitización de aplicaciones software. DECIDE was exposed as a successful use case. (See Figure 19)
- o A poster of DECIDE was presented at a H2020 event in Toledo, Spain. (See Figure 20)
- The DECIDE project coordinator participated in the DSM Cloud stakeholders meetings organized in December 2017, April 2018, October 2018, December 2018, February 2019, April 2019, June 2019, September 2019, and November 2019.



Figure 21. EnpresaDigitala Course



Figure 22. A poster of DECIDE was presented at a H2020 event in Toledo, Spain.

All dissemination activities were notified in the Dissemination Monthly Report that is updated on monthly basis by all partners of the consortium.

In the Annex, Table 7 presents DECIDE scientific publications to journals and conferences released during the second reporting period. Table 8 presents the General and business publications, Table 9 presents the attended events and Table 10 other dissemination activities performed by DECIDE during the second reporting period.

5 Communication activities

During this period the Communication Strategy was focused on the diffusion of DECIDE tools, use cases and papers. The main message was to demonstrate the benefits that DECIDE provides to multi-cloud application developers and operators.

Communication forms an integral part of engaging with target communities. It ensures that DECIDE project activities, progress, results etc can be made available and effectively disseminated to the target communities.

The project identified as key target audiences the following: multi-cloud application developer and operators, multi-cloud application providers, scientific-technical community and the general public (non-specialized audiences) [1].

As it was mentioned before, after the last review the communication strategy was revised, and it was decided to adapt the Customer Journey Model to the project in order to reach to the cloud actors in the commercial world, with very positive results as follows.

During this second period, the awareness of the project and the level of engagement with the target communities was improved (see table 5 in section 7.) This can be attributed to the increase in the number of DECIDE project research publications and the dissemination, communication and networking events attended by the DECIDE consortium. The events were mainly targeted at professionals from the DevOps, security and multi-cloud communities and they provided an opportunity for DECIDE consortium partners to interact with them, showcase different DECIDE tools and get beneficial feedback.

Communication activities are managed and reported in the same way as the dissemination activities are, namely through the dissemination monthly report and the editorial calendar. Monitoring the communication activities and the achieved KPIs is a continuous activity performed in a monthly basis. This continuous monitoring allows the dissemination manager, project coordinator, technical coordinator and all project partners correct and steer the communication activities to achieve maximum awareness of the project outcomes.

5.1 DECIDE Digital Strategy

During the whole project, it can be affirmed that the Digital Strategy has worked in a satisfactory way. It has revolved around the project's website, especially the Blog and the social media profiles, with a focus on Twitter, SlideShare, YouTube, and LinkedIn. The goals of DECIDE's digital strategy are as follows: Branding, Engage and Coordinate.

The revision of the Communication Strategy rather than affecting the Digital strategy, it complemented it. Inbound Marketing, in which content is king, is the food of the Customer Journey Model.



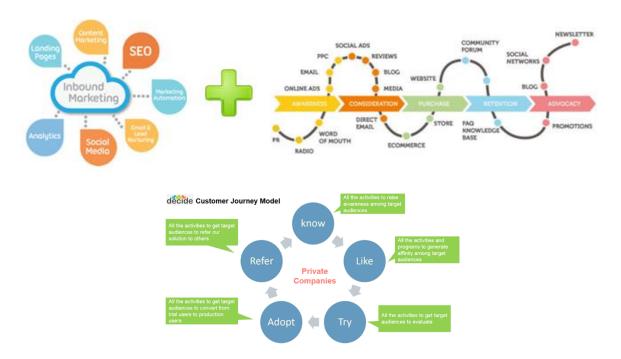


Figure 23. DECIDE Digital Strategy

As previously mentioned, the main players for the digital strategy are the DECIDE Blog and the social media profiles. All partners are involved in these activities.

Social media profiles and Blog entries are used with a double purpose. On one hand, to engage stakeholders and on the other, to generate traffic to the website and its contents. Every time a post is published on the blog, or any content is uploaded to SlideShare or YouTube, it is announced on Twitter and LinkedIn, with the associated link to the content.

Important information such as DECIDE tools update and releases, tools demo videos, public deliverables, press releases, general assemblies and all DECIDE activities have all been made available to the DECIDE target communities through efficient communication channels like the DECIDE website, its blog and DECIDE social media profiles. This has made it easy for the target communities to understand and follow the DECIDE project.

5.1.1 Project Website

The DECIDE website is a platform for disseminating and communicating DECIDE project information (project developments, results, events...) to the DECIDE stakeholders. The website was created in the inception of the project and has been an efficient tool in reporting DECIDE project activities as well as in communicating with people outside the project.

The initial structure of the website presented in [3] remains valid. However, as the project progressed, the content of the sections has been updated with the new communication materials (brochures, newsletter, video, articles, etc.) Besides, in this second period a new section has been added 'Open Source in DECIDE.' This is linking to the GitLab where the open source code has been released and is already accessible at: https://git.code.tecnalia.com/DECIDE Public/DECIDE Components



Figure 24. DECIDE new section on the website: Open Source in DECIDE

All public deliverables released have also been added to the 'Deliverables' section under the Library menu item. Both the document in pdf format and the source code in zip format can be downloaded.

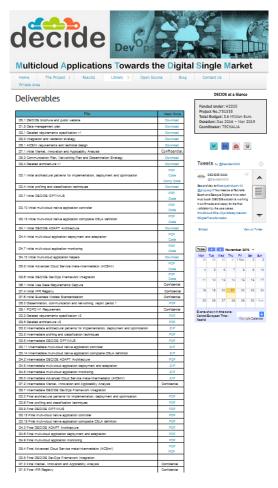


Figure 25. DECIDE Library: public deliverables, including source code, available for download

At the time of writing this report, the number of visits to the DECIDE website was 3.380 (15/11/19.) This number has finally doubled the average of 1500 expected annual visits (see table 5 in section 7.)

5.1.2 Blog

As explained beforehand, the blog is used as the lead generator for the project. Blog posts are published approximately on a bi-weekly basis and all partners contribute to it. The posts have been dedicated to the challenges and motivations to develop a multi-cloud application, purpose of architectural patterns, legal aspects of cloud computing, GDPR, the DECIDE use cases, cloud and DECIDE, progress achieved in the consortium meetings, and presentation in events.



Figure 26. DECIDE Blog

DECIDE blog is used, as explained beforehand, also in coordination with the social media profiles. This strategy is showing that the project is on the right track, as indeed, during all project, whenever a blog post is published, the visit number to the DECIDE website peaks.

The blog posts and their specialized contents are also helping to position the project and its SEO. Besides, the blog posts favour the development of the Customer Journey Model as it provides the content for the rest of the communication tools (social networks, emailing's, informal talks, newsletters, etc.)

Next, the posts created during this second period so far are detailed:

Table 1. Second period DECIDE blog posts

Date	Post	Category	Author	Target Audience
12.06.2018	DECIDE improves the efficiency of the	Project	AIMES	Developer and
	AIMES Streamline application	News		operators / Providers/
				Scientific-technical community/ General
				Public General
10.07.2018	Current status of the DECIDE project	Project	TECNALIA	Developer and
		News		operators / Providers/
				Scientific-technical
				community/ General
				Public
07.08.2018	DECIDE project will be present at	Project	TECNALIA	Developer and
	EuroAsiaSPI 2018	News		operators / Providers/ Scientific-technical
				community/ General
				Public
03.10.2018	CloudBroker: integration chronicles	Project	CloudBroker	Developer and
		News		operators / Providers/
				Scientific-technical
				community/ General Public
05.11.2018	DECIDE's 6th GA IN MADRID: Preparing	Project	TECNALIA	Developer and
	the next set of DECIDE prototypes for	News		operators / Providers/
	<u>M24</u>			Scientific-technical
				community/ General
11.12.2018	DECIDE ADAPT Deployment	Project	HPE	Public Developer and
11.12.2018	Orchestrator from multi-cloud to Hybrid	News		operators / Providers/
	Cloud			Scientific-technical
				community/ General
				Public
15.01.2019	Making informed decisions on design	Project	Fraunhofer	Developer and
	pattern adoption	News		operators / Providers/ Scientific-technical
				community/ General
				Public
30.01.2019	Legal levels of Cloud Services in DECIDE	Project	TimeLex	Developer and
	<u>explained</u>	News		operators / Providers/
				Scientific-technical
				community/ General Public
12.02.2019	Deciding on DECIDE	Project	AIMES	Developer and
		News		operators / Providers/
				Scientific-technical
				community/ General
				Public

Date	Post	Category	Author	Target Audience
26.03.2019	From monolith to microservice-based application: Arsys Use Case in DECIDE	Project News	Arsys	Developer and operators / Providers/ Scientific-technical community/ General Public
30.05.2019	CloudBroker announces release of initial version of Billing component as a part of DECIDE framework	Project News	CloudBroker	Developer and operators / Providers/ Scientific-technical community/ General Public
03.07.2019	DECIDE project presented in OW2Con 19	Project News	Fraunhofer	Developer and operators / Providers/ Scientific-technical community/ General Public
8.07.2019	The present is Hybrid but the future is MultiCloud	General	Arsys	Developer and operators / Providers/ Scientific-technical community/ General Public
23.07.2019	Legal compliance made easy: the legal level concept in ACSmI has been finalized	Project News	TimeLex	Developer and operators / Providers/ Scientific-technical community/ General Public
19.09.2019	DECIDE DevOps framework ready for the final validation	Project News	TECNALIA	Developer and operators / Providers/ Scientific-technical community/ General Public
28.10.2019	I've looked at Clouds from both sides now - from a DECIDE perspective-	Project News	AIMES	Developer and operators / Providers/ Scientific-technical community/ General Public
18.11.2019	DECIDE's last general assembly in Milano	Project News	TECNALIA	Developer and operators / Providers/ Scientific-technical community/ General Public

5.1.3 KPIs

DECIDE uses Google Analytics to monitor the behaviour of the website. This allows the project to steer the strategy with the main aim of reaching the right audience and stakeholders.

From the analytics collected, the average annual number of visits to the DECIDE website is about 3380 with an average session duration of 00:02:46.

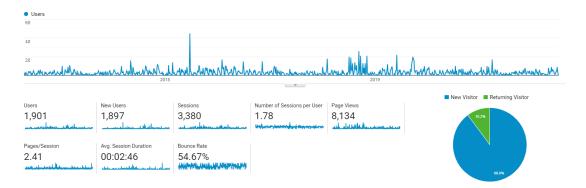


Figure 27. Users in DECIDE website

The SEO, as explained before, is improving on a continuous basis thanks to the provisioning of dedicated and targeted content through the blog. The visits coming from direct search queries have increased along the timeframe of the project, as shown next. Now 37% of the visitors to the DECIDE website come through organic searches.

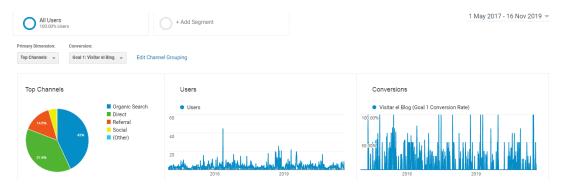


Figure 28. Traffic in DECIDE website

New blog posts publications mark often the highest number of visits to the DECIDE website.

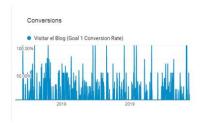


Figure 29. Publication on DECIDE post blog

Other data that confirm this trend is that the blog is the second most visited page after the homepage, with 9% of the visitors going directly to that site. The third most visited is the one with the public deliverables, the open-source section and the partners information. However, during the first period the brochure and press release had the second and third place. This evolution underlines the interest in the tools, evolution and results of the project.



Figure 30. Most visited pages of the website

The next figure shows the percentage of visits per country. The United States occupies the first place due to the great interest that the topics of cloud, DevOps and multi-cloud generate. Respect to the first period, we have improved our presence in Europe thanks to the efforts of our partners in their local diffusion.



Figure 31. Users by Country

5.2 Activity in Social Networks

DECIDE project continues to leverage on the use of social media platforms to reach out to our target audience available in different parts of the world. It has enhanced our disseminations as well as communication and interaction with our target communities, other research projects and people from the general public who are enthusiastic about Cloud, DevOps, GDPR etc.

The selected media are Twitter, SlideShare, YouTube and LinkedIn. The messages launched revolve around the topics on #CloudComputing, #MultiCloud, #DataProtection and #DevOps and are used to attract traffic to the project's website, the main means for dissemination.

In the next sections, how each social network is used is explained.

5.2.1 Twitter

Twitter has been extensively utilized by the DECIDE project to disseminate information and communicate with our target communities. On a weekly basis, DECIDE makes about 3-5 tweets which focuses on project activities, project-related news and information. In addition, tweets about important topics regarding multi-cloud, DevOps and Data protection, GDPR (or legal issues in cloud computing) are made available to our target communities. This makes it possible to provide them with

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DECIDE project updates as well as latest events, news and happening in our interest fields. It also allows us to interact with them and get meaningful feedback.



Figure 32. DECIDE twitter account

Whenever a certain happening has occurred, such as a blog post, the publication of the deliverables on the website, a presentation uploaded to SlideShare, the project's tweet account includes always detailed information, the URL to the information on the website and relevant hashtags. The objective of including the URL to the information on the website is to generate interest also on additional content of the website, and thus increase awareness of the project.

In addition to the above, DECIDE partners use their respective Twitter channels to directly promote events and news concerning DECIDE. The DECIDE profile then functions as a central hub, retweeting mentions from partners, and ensures a centralized distribution of all news related to the project.

5.2.1.1 Twitter KPIs

DECIDE's Twitter account has, as of 15th of November, 727 tweets and 189 followers.



Figure 33. DECIDE Twitter account most significant figures

The following figures depict the activity of the project's account during 2017, 2018 and this year 2019. In Twitter as on the web, the blog posts mark the periods of greatest impact:

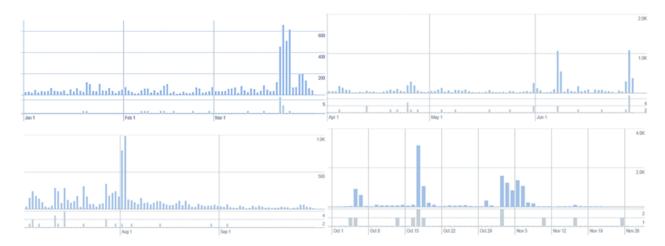


Figure 34. 2017 Twitter activity registry

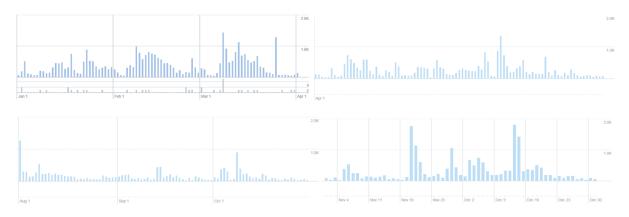


Figure 35. 2018 Twitter activity registry

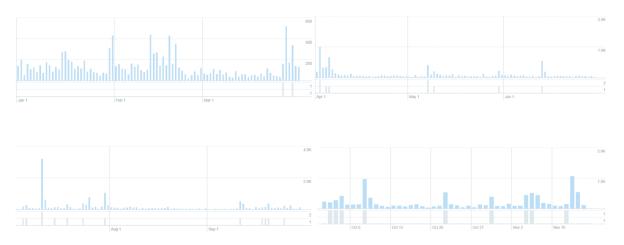


Figure 36. 2019 Twitter activity registry Top Tweets

Especially significant is that the tweets related to the general assemblies of the project and its advances generate great interest to our followers. The tweet with the larger number of impressions is related to Berlin GA with 2,708 impressions.



Figure 37. 2019 Top Tweet

5.2.2 DECIDE LinkedIn Group

The LinkedIn Group of DECIDE can be found at: https://www.linkedin.com/groups/8602459

LinkedIn is utilised for publishing DECIDE project news, activities and events. LinkedIn also provides functionality for our target audience to give their feedback regarding any information or materials published on the platform.

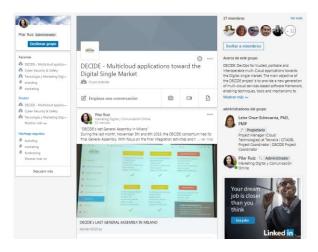


Figure 38. DECIDE LinkedIn Group

5.2.2.1 LinkedIn KPIs

The DECIDE LinkedIn group currently (as of November 15th, 2019) has 37 members and 35 posts.

5.2.3 YouTube

The YouTube channel can be found at: https://www.youtube.com/channel/UCQ59BWyOcp7-mlrH1ZtfssA

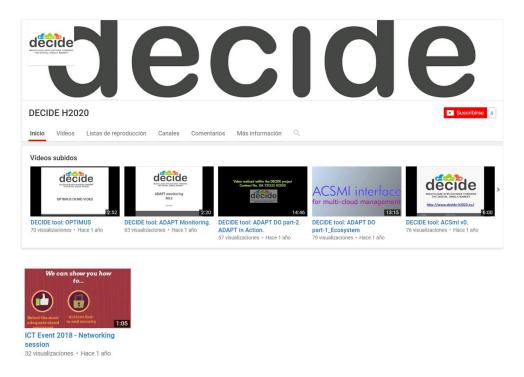


Figure 39. DECIDE YouTube profile

In principle, the aim of the YouTube profile is not to generate direct traffic to the project's website as with other social media but rather to use it as a channel in which to place all videos generated during the project. Videos have a great communication and positioning value and can be used to communicate key messages with bigger impact.

The YouTube profile of DECIDE hosts the demo videos of the M12 tools, the video for the application to the networking session in the ICT event 2018 and the general video of DECIDE. More videos will be published soon, even after the end of the project, with demos showcasing the DECIDE DevOps framework.

5.2.4 SlideShare

The SlideShare profile for the project can be found at: http://www.slideshare.net/Decideh2020

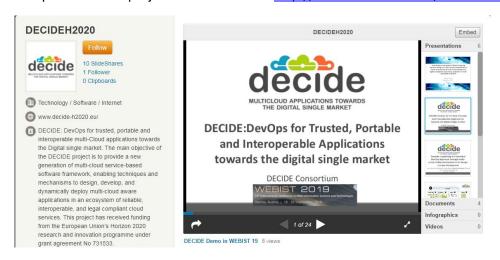


Figure 40. SlideShare DECIDE

Contract No. GA 731533 Page 35 of 68

The SlideShare account has been defined to contain relevant presentations of DECIDE, brochures and posters. SlideShare is used to spread the project achievements to all target groups. Currently it contains 6 presentations of DECIDE, 2 brochures and 2 posters.

6 Networking activities

Following the collaboration approach presented in D8.3 [4], the networking activities performed in this reporting period is shown next. The legend of colours is as follows: Continuous collaboration is shown in green, frequent collaboration in blue and punctual collaboration in red.

Table 2. Collaboration classification

		Collaboration level	
Collaboration Type	Project	Organization	Interest Group
Technical	COLA, (through Cloudbroker) SHIELD, (DevOps practices) MELODIC, BigDataStack, mOSAIC (joint paper published) ReachOut (Betatesting campaign)	OW2	Inter-cloud cluster Software Engineering for Software Applications (contributed to the position paper for the workprogamme beyond 2020) ERRIN Network The Data Centre Alliance Cloud 28+
Promotional	ACTICLOUD, MELODIC, RESTASSURED, CLOUDPERFECT	-	Inter-cloud cluster (application for a networking session in the ICT event) Software engineering for software applications (co- led a networking session at the ICT event)
Commercial	-	-	-

As it can be seen, the collaboration activities until now have been performed on a frequent basis. In the case of the SHiELD project, this is so because both TECNALIA and AIMES are also partners of SHiELD. In the case of TECNALIA, the DECIDE team is supporting the SHiELD team in the creation and development of the SecDevOps environment to be developed in the context of the SHiELD project with the lessons learned from DECIDE.

Networking activities in collaboration with other H2020 projects are also put in place. To this end,

• **DECIDE has led the organization for a networking session in the ICT event** that was celebrated in Vienna, on 5th December 2018, along **with 5 more projects**, namely ACTICLOUD, MELODIC, RESTASSURED, CLOUDPERFECT. All these projects are active in multi-cloud, and improvement of non-functional requirements (e.g. performance, security), and are therefore complementary to DECIDE. The title for the proposed session is: "Learn how to select the most appropriate cloud resources for your app" and a participatory approach, with round tables and

Contract No. GA 731533

- cafés, has been foreseen. In the event the session is approved, DECIDE will lead the session in collaboration with the aforementioned multi-cloud related projects.
- DECIDE also co-led the networking session from the Software Engineering for Service applications (SE4SA), held in Vienna on 6.12.2019.
- **DECIDE** wrote a **joint paper** with the projects MELODIC, mOSAIC and BigDataStack, as they all have similarities and are complementary to each other.
- DECIDE is one of the projects featured in the Beta Testing Campaign of ReachOut

The following table shows the collaboration activities already performed.

Table 3. Identified initiatives for collaboration

Who	Domain Area	Collaboration type	Topics for collaboration	Collaboration status
COLA project	Cloud orchestration	Technical, promotional	ACSmI	Started. Periodic meetings through common partner (CloudBroker), exchange of technical documentation, joint events planned.
SHIELD project	(Sec)DevOps	Technical, Promotional (through the CDB)	DevOps	Technical alignment of both projects, with frequent communication exchange
ACTICLOUD, MELODIC, RESTASSURED, CLOUDPERFECT	Simulation, Non- functional requirements compliance	Promotional	OPTIMUS, DevOps	Networking session in the ICT event 2018
Data Centre Alliance	Promotion of the data center industry	Technical, Promotional	Dissemination, also used as focus group to gather feedback on the ACSmI solution	Well established communication
SE4SA cluster	Software Technologies and software engineering	Technical	Software Technologies and software engineering	Position paper for the EC on the vision beyond 2020
mOSAIC, BigDataStack, MELODIC	Patterns	Technical, promotional	Software Technologies and software engineering, cloud resource discovery and orchestration	Joint paper

Who	Domain Area	Collaboration type	Topics for collaboration	Collaboration status
ReachOut	Validation	Technical, promotional	Beta testing of the results	Campaign started and ongoing until 30.3.2020

7 Revising the dissemination strategy and the associated KPIS

7.1 Planned Vs. actual work

In the following section, the KPIs and the values achieved with respect to the project communication and dissemination activities are presented.

Legend of the used symbols

V	Criterion has been met
*	Some actions have already been done
×	Nothing to report yet

Next, the achievement for the dissemination KPIs is shown.

Table 4. Dissemination KPIs

Dissemination tool	KPI	Target	Period 1 y 2 (M1 – M36)	
Brochures	Number	>3	2	
Conference/Journal	Scientific journals:	2	3	4/
publications	Scientific conferences:	15	12	
Project posters	Number of posters	1-2	3	1
Press releases	Number of specialized press releases	2	3	*
Project showcases	Number of demonstration videos produced	3	6	1
Project newsletters	Number of newsletters	1 per year	3	
Attendance of events	Number of events attended	5 per year	23	
Organization of events	Number of organized events	1	2 (1 workshop and 1 training)	1
Cloud Community	Number of references in external	+20	32	1
Software and	magazines (Collaboration and			***
Services Publications	Support Actions, EC)			

The following table presents the achievement of the communication KPIs

Table 5. Communication KPIs

Communication tool	KPI	Objective	Period 2	
DECIDE Website	Yearly visits	>1500	3.385	*
	Duration of visits	More than 2 min.	00:03:43	V
	Monthly downloads: Posters, flyers Public reports	35 50	>35 >50	√
	Reference from external pages	20 (excluding partner webs)	>40	V

Contract No. GA 731533

Communication tool	KPI	Objective	Period 2	
Twitter Feed	Regular tweets or when a relevant milestone is taking place	>150 followers	190	√
LinkedIn Group	Number of group member in LinkedIn	30	38	V
SlideShare	Number of presentations in SlideShare	4	6	√
Mass Media	Number of press releases	2 per country in the project	3	₩
DECIDE Blog	Number of entries	5	35	√

8 Conclusions

Dissemination, Communication and networking activities during the second period of the project were carried out as presented in deliverable D8.2 [1]. The achievement of the KPIs (many exceeded), for the current period demonstrate that the strategy followed is successful. The entire consortium has engaged in collaborative and coordinated actions.

During this second period, the major focus of dissemination activity has been the promotion of project results, released under an open source. DECIDE has been active in the release of general and business publications, as well as scientific papers. Moreover, DECIDE has participated with active roles in several events and workshops.

The results of the communication activities and the digital strategy have been very satisfactory during this second period. The Digital Strategy continued focusing on the diffusion of DECIDE tools, use cases and papers. The main message was to demonstrate the benefits that DECIDE provides to multi-cloud application developers and operators. After the last review the communication strategy was revised, and it was decided to adapt the Customer Journey Model to the project in order to reach to the cloud actors in the commercial world.

Regarding Networking and collaboration, DECIDE has consolidated several of the one-time collaborations into a more frequent one, with the result of writing a joint paper with several H2020 projects, such as MELODIC, BigDataStack and mOSAIC. Furthermore, DECIDE was rather active in the largest ICT event organized by the European Commission, with a leadership of a networking session, a co-leadership of another, and a participation in a third one.

9 References

- [1] DECIDE Consortium;, "D8.2 Communication Plan, Networking Plan and Dissemination Strategy," 2017.
- [2] DECIDE Consortium, "Description of Action," 2016.
- [3] DECIDE Consortium;, "D8.1 DECIDE brochure and public website," 2017.
- [4] DECIDE consortium, "D8.3 Dissemination, communication and networking (RP1)," 2018.

Annex 1 - Detailed information on dissemination

A1.1 Newsletters

Available at: https://www.decide-h2020.eu/documents2

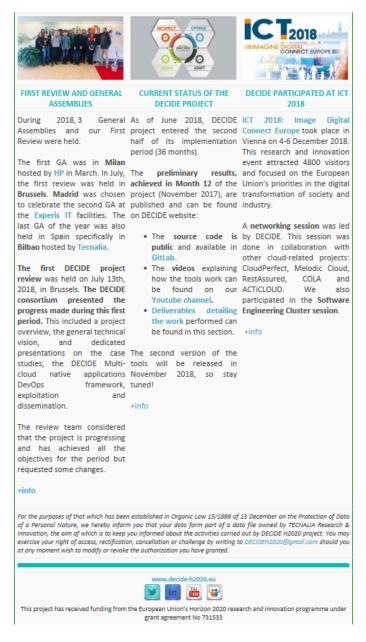


Figure 41. Newsletter 2018



Figure 42. Newsletter 2019

A1.2 Press Release

Available at: https://www.decide-h2020.eu/documents2

A1.2.1. English version

Contract No. GA 731533

Press Release



Multi-cloud application DevOps team will soon be able to improve their productivity thanks to H2020 project DECIDE

Bilbao, Spain, June 2019 – DECIDE is an H2020 research project funded by the European Commission over a period of three years. DECIDE's main objective is to provide a next generation software framework, enabling techniques, tools and mechanisms to design, develop, operate, and dynamically (re-)deploy multi-cloud native applications in a set of reliable, interoperable, and legally compliant cloud services.

Our partners, AIMES, ARSYS, HPE, Experis IT, Time.lex, Fraunhofer, CloudBroker and TECNALIA, are from six different countries, representing Northern and Southern Europe. TECNALIA has been entrusted with the leadership of the consortium.

DECIDE aims to improve the productivity and decrease the time-to market of applications which require high rates of performance and reliability, and applications for which certain legal aspects of the cloud resources where the application is deployed are critical, due to the nature of the managed information.

The work performed in DECIDE is specifically relevant for the multi-cloud application DevOps teams and Cloud Service Providers (CSP).

The project has recently released the third version of the individual tools that compose the DECIDE DevOps Framework and these are available on the <u>project's public GitLab repository</u>. The integrated DECIDE DevOps framework v3.0 will be released in August and this will also be available to be downloaded. The current package includes new and improved functionalities of the following tools:

- DECIDE ARCHITECT, which recommends which architectural patterns should be applied in their application to meet the set of non-functional requirements identified,
- DECIDE OPTIMUS, which recommends the most appropriate combination of deployment configurations on multiple CSPs for a microservice-based application
- The Advanced Cloud Service meta-intermediator (ACSmI), which enables the automatic contracting of cloud service offerings (mainly VMs, from CSPs including Amazon).
- DECIDE ADAPT, which automatically provisions the selected (as recommended by OPTIMUS) multi-cloud infrastructure configuration. It also automatically deploys the microservices of the application on cloud infrastructures such as those of Amazon, ARSYS, and CloudSigma.

Once the application is deployed and running, the DECIDE tools also monitor operational characteristics, such as the availability of both application and the CSPs and alert the DevOps teams if a violation has occurred, re-deploying the application automatically under a new, auto selected configuration. All these tools are integrated in a user-friendly and secure web-based DevOps framework, and their progress and status can be followed through an integrated dashboard. DECIDE ARCHITECT and DECIDE OPTIMUS are also offered through an Eclipse plug-in

The current version of the DECIDE tools have been validated in three demanding use cases, a clinical trials application, a high availability application and a blockchain-based energy trading platform. Initial results show potential benefits in the time needed in the selection and contracting of cloud resources as well as in the deployment and operation phase using DECIDE compared to its manual counterpart.

The final version of the complete DECIDE DevOps framework v3.0 is to be released by August 2019, continuous updates and improvements will follow after that.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant

agreement No 731533

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Figure 43. Press release in English

A1.2.2 Spanish version

Nota de Prensa



Los equipos de DevOps pronto podrán mejorar su productividad en el despliegue multi-cloud de aplicaciones gracias al proyecto H2020 DECIDE

Bilbao, España, Junio 2019 – DECIDE es un proyecto de investigación H2020 financiado por la Comisión Europea durante un período de tres años. El objetivo principal de DECIDE es proporcionar un marco de trabajo de software de última generación para desarrollar técnicas, herramientas y mecanismos que permitan diseñar, desarrollar, operar y (re) desplegar dinámicamente aplicaciones nativas multi-cloud en un conjunto de servicios cloud confiables, interoperables y legalmente compatibles.

Los partners de DECIDE son <u>AIMES</u>, <u>Arsys</u>, <u>HPE</u>, <u>Experis IT</u>, <u>Time.lex</u>, <u>Fraunhofer</u>, <u>CloudBroker</u> y <u>TECNALIA</u>, procedentes de seis países diferentes, en representación del norte y sur de Europa. TECNALIA es el socio encargado de liderar este consorcio.

DECIDE tiene como objetivo mejorar la productividad y reducir el tiempo de comercialización de las aplicaciones que requieren altos índices de rendimiento y fiabilidad, así como de las aplicaciones para las que resultan críticos ciertos aspectos legales de los recursos cloud en los que se despliega la aplicación, debido a la naturaleza de la información gestionada.

Este objetivo en el que está trabajando DECIDE resulta específicamente relevante para los equipos de DevOps encargados de desplegar aplicaciones multi-cloud y los Proveedores de Servicios Cloud (CSP, por su acrónimo en inglés).

El proyecto ha lanzado recientemente la tercera versión de las herramientas individuales que componen el marco de trabajo DECIDE DevOps y están disponibles en el <u>repositorio público</u> <u>del proyecto en GitLab</u>. El marco integrado de DECIDE DevOps v3.0 será lanzado en agosto y también estará disponible para ser descargado. El paquete actual incluye funcionalidades nuevas y mejoradas de las siguientes herramientas:

- DECIDE ARCHITECT, que recomienda qué modelos de arquitectura deben utilizarse en las aplicaciones para cumplir con el conjunto de requisitos no funcionales identificados.
- DECIDE OPTIMUS, que recomienda la combinación más apropiada de configuraciones de implementación en múltiples CSP para una aplicación basada en microservicios.
- El meta-intermediador de Servicios Cloud Avanzados (ACSmI), que permite la contratación automática de servicios cloud, principalmente máquinas virtuales (VM por su acrónimo en inglés) de CSP, entre los que se encuentra Amazon,
- DECIDE ADAPT, que provisiona automáticamente la configuración de la infraestructura multi-cloud elegida (según las recomendaciones de OPTIMUS). También despliega automáticamente los microservicios de la aplicación en infraestructuras cloud de proveedores como Amazon, ARSYS y CloudSigma.

Una vez que la aplicación está desplegada y operativa, las herramientas de DECIDE también monitorizan las características operativas, como la disponibilidad de la aplicación y de los CSP y avisan a los equipos de DevOps en caso de incidentes, desplegando nuevamente la aplicación de manera automática en una nueva configuración seleccionada también automáticamente. Todas estas herramientas están integradas en un marco de trabajo DevOps basado en la web, seguro y fácil de utilizar, y su evolución y estado se puede visualizar a través de un panel de control integrado. DECIDE ARCHITECT y DECIDE OPTIMUS también están disponibles a través de un plug-in de Eclipse.

La versión actual de las herramientas de DECIDE ha sido validada en tres exigentes casos de uso: una aplicación de pruebas clínicas, una aplicación de alta disponibilidad y una plataforma de compra-venta de energía basada en blockchain. Utilizando DECIDE y en comparación con los procesos manuales, los resultados iniciales demuestran ventajas potenciales en el tiempo destinado a la selección y contratación de los recursos cloud, así como en las fases de despliegue y operación.

La versión final del marco de trabajo completo de DECIDE DevOps v3.0 se lanzará en agosto de 2019, a la que seguirán continuas actualizaciones y mejoras.

Este proyecto ha recibido financiación del programa de investigación e innovación Horizon 2020 de la Unión Europea en virtud del acuerdo de subvención número 731533.

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Figure 44. Press release in Spanish

A1.2.3. Basque version

Prentsa-oharra



H2020 DECIDE proiektuari esker, DevOps taldeek hodei anizkoitzeko aplikazioak hedatzeko duten produktibitatea hobetu egingo da laster

Bilbo, Espainia, 2019ko ekaina— DECIDE Europako H2020ko ikerketa-proiektu bat da, eta Europako Batzordeak finantzatu du hiru urtez. DECIDEren helburu nagusia da softwarerako azken belaunaldiko lan-esparru bat eskaintzea, hodei anizkoitzeko berariazko aplikazioak diseinatzeko, garatzeko, haiekin eragiteko eta dinamikoki hedatzeko aukera ematen duten teknikak, tresnak eta mekanismoak garatzeko, hodeiko zerbitzu-multzo fidagarri, elkarreragingarri eta legez bateragarri batean.

Hauek dira DECIDEko kideak: <u>AIMES, Arsys, HPE, Experis IT, Time.lex, Fraunhofer, CloudBroker</u> eta <u>TECNALIA</u>. Europako sei herrialdetakoak dira, eta Europaren iparraldea eta hegoaldea ordezkatzen dituzte. TECNALIA da partzuergoaren buru.

DECIDEk helburu du produktibitatea hobetzea eta aplikazio batzuk merkaturatzeko behar den denbora murriztea —bai errendimendu eta fidagarritasun handiak behar dituzten aplikazioena, bai kudeatzen duten informazioaren izaeragatik hodeiko baliabideen legealderdi oso garrantzitsuak dituztenena—.

DECIDE lantzen ari den xedea bereziki garrantzitsua da hodei anizkoitzeko aplikazioak hedatzen dituzten DevOps-eko lantaldeentzat eta hodeiko zerbitzuen hornitzaileentzat (CSP, cloud service provider).

Proiektuak oraintsu zabaldu du DECIDE DevOps lan-esparrua osatzen duten tresnen hirugarren bertsioa, eta <u>GitLab-en daude eskura, proiektuaren biltegi publikoan</u>. DECIDE DevOps v3.0 esparru integratua abuztuan argitaratuko da, eta deskargatzeko moduan egongo da. Gaur egungo paketeak tresna hauen funtzionalitate berri eta hobetuak ditu:

- DECIDE ARCHITECT: aplikazioetan zer arkitektura-eredu erabili behar diren aholkatzen du, identifikatutako baldintza ez-funtzionalak betetzeko.
- DECIDE OPTIMUS: hodeiko zerbitzuen hornitzaile batean baino gehiagotan inplementatzeko konfigurazio-konbinazio egokiena gomendatzen du mikrozerbitzuetan oinarritutako aplikazio baterako.
- Hodeiko zerbitzu aurreratuen metabitartekaria (ACSmI): hodeiko zerbitzuak automatikoki kontratatzeko aukera ematen du, batez ere CSP edo hodeiko zerbitzuen hornitzaileen makina birtualak (VM, virtual machine), hala nola Amazon.
- DECIDE ADAPT: aukeratutako hodei anizkoitzeko azpiegituraren konfigurazioa automatikoki ematen du (OPTIMUSen aholkuen arabera). Halaber, aplikazioaren mikrozerbitzuak ere automatikoki hedatzen ditu Amazon, ARSYS, CloudSigma eta halako hornitzaileen hodeiko azpiegituretan.

Aplikazioa hedatu ondoren, martxan dagoela, DECIDEren tresnek eragiketa-ezaugarriak monitorizatzen dituzte, hala nola aplikazioaren eta CSPen disponibilitatea; gorabeherak daudenean, DevOps taldeei jakinarazten diete, eta aplikazioa automatikoki hedatzen dute berriro, automatikoki hautatutako konfigurazio berri batekin. Tresna guztiak DevOps lanesparru seguru eta erabilerraz batean txertatuta daude, zeina webean oinarritzen baita; haien bilakaera eta egoera kontrol-panel integratu baten bidez ikus daiteke. Orobat erabili ahal izango dira DECIDE ARCHITECT eta DECIDE OPTIMUS Eclipseren plugin baten bidez.

DECIDEren tresnen gaur egungo bertsioa hiru erabilera-egoera zorrotzetan eman da ontzat: proba klinikoen aplikazio bat, disponibilitate handiko aplikazio bat eta energia-salerosketako plataforma bat, bloke-kateetan oinarritua. DECIDE erabiliz lortutako lehen emaitzek erakusten dute, eskuzko prozesuekin alderatuta, badaudela abantaila potentzialak hodeiko baliabideak hautatzeko eta kontratatzeko erabiltzen den denboran, hedatzean eta jardunean.

DECIDE DevOps v3.0 lan-esparru osoaren azken bertsioa 2019ko abuztuan argitaratuko da, eta etengabe hobetuko eta eguneratuko da.

Proiektu honek Europar Batasuneko ikerketa eta berrikuntzako H2020 programaren finantziazioa jaso du, 731533 zenbakiko diru-

laguntzaren bidez.

Harremanetarako

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Figure 45. Press release in Basque

A1.2.4. German version

Pressetext



Produktivitätssteigerung bei Multi-Cloud Application DevOps-Teams dank des H2020 Projekts DECIDE

Bilbao, Spanien, Juni 2019 – DECIDE ist ein H2020-Forschungsprojekt, das von der Europäischen Kommission über einen Zeitraum von drei Jahren finanziert wird. Ziel des Projektes ist es, ein Software-Framework der nächsten Generation bereitzustellen. Dessen Techniken, Tools und Mechanismen sollen das Designen, Entwickeln, Bedienen und dynamische (Wieder-)Anwenden von Multi-Cloud Native-Applications ermöglichen – in einer zuverlässigen, interoperablen und rechtskonformen Cloud Service-Umgebung.

Unsere Partner: <u>AIMES, ARSYS, HPE, Experis IT, Time.lex, Fraunhofer, CloudBroker</u> und <u>TECNALIA</u> stammen aus sechs verschiedenen Ländern und repräsentieren sowohl Nord- als auch Südeuropa. TECNALIA hat den Vorsitz inne.

DECIDE will sowohl die Produktivität als auch die Martkeinführungszeit von Multi-Cloud-Anwendungen verbessern. Im Fokus stehen dabei Anwendungen, die eine hohe Performance und Zuverlässigkeit erfordern. Einen weiteren Schwerpunkt bilden Applikationen bei denen, aufgrund der verwalteten Informationen, ein besonderes Augenmerk auf die rechtlichen Aspekte der Cloud-Ressourcen gelegt werden muss.

Insbesondere für Multi-Cloud Application DevOps-Teams und Cloud Service-Provider (CSP) ist die Arbeit von DECIDE hochrelevant.

Das Projekt veröffentlichte vor Kurzem die dritte Version der einzelnen Tools, die gemeinsam das DECIDE DevOps-Framework bilden und im öffentlichen <u>GitLab Archiv</u> des Projekts zur Verfügung stehen. Das integrierte DECIDE DevOps-Framework v3.0 wird im August veröffentlicht und ist dann ebenfalls als Download verfügbar.

Drei anspruchsvolle Use Cases validieren die aktuelle Version der DECIDE-Tools: Eine klinische Studie, eine hochverfügbare Anwendung und eine Blockchain-basierte Energiehandelsplattform. Die ersten Ergebnisse zeigen unter anderem eine Zeitersparnis von 60 Prozent im Vergleich zur manuellen Bereitstellung.

Das aktuelle Paket enthält neue und verbesserte Funktionalitäten der folgenden Tools:

- DECIDE ARCHITECT empfiehlt "architectual patterns", die bei der Anwendung beachtet werden müssen, damit die nicht-funktionalen Anforderungen erfüllt werden können.
- DECIDE OPTIMUS schlägt die am besten passende Kombination von Bereitstellungskonfigurationen auf verschiedenen Cloud-Service-Providern für eine Microservice-basierte Anwendung vor.
- Der Advanced Cloud Service meta-intermediator (ACSmI) ermöglicht es, automatisch Verträge über Cloud Service-Angebote – hauptsächlich Virtual Machines – mit Cloud Service-Providern wie Amazon zu schließen.

 DECIDE ADAPT stellt die gewählten (von OPTIMUS vorgeschlagenen) Multi-Cloud-Infrastruktur-Konfigurationen automatisiert zur Verfügung. Zudem stellt es – ebenfalls automatisch – die Microservices der Anwendung auf Cloud-Infrastrukturen wie beispielsweise Amazon, ARSYS und CloudSigma bereit.

Sobald die Anwendung bereitgestellt ist und ausgeführt wird, bewachen die DECIDE-Tools verschiedene Faktoren wie zum Beispiel die Verfügbarkeit der Anwendung und des Cloud-Service-Providers. Wird ein Verstoß registriert, schicken die Tools einen Alarm an die DevOps-Teams und stellen die Anwendung automatisch mit einer neuen, ausgewählten Konfiguration bereit. Alle Tools sind in einem nutzerfreundlichen und sicheren DevOps-Framework integriert. Ihr Fortschritt und Status kann mit Hilfe eines Dashboards kontrolliert werden. DECIDE ARCHTITECT und DECIDE OPTIMUS werden auch als Eclipse Plug-In angeboten.

Auch nach Veröffentlichung des gesamten DECIDE DevOps-Framework v3.0 im August 2019 wird die Software kontinuierlich verbessert und Updates werden bereitgestellt.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731533

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Figure 46. Press release in German

A1.2.5. Dutch version

Persbericht



DevOps teams die specifiek voor Multi-Cloud geschikte applicaties maken of gebruiken zullen binnenkort kunnen genieten van een hogere productiviteit dankzij het Horizon 2020 project DECIDE

Bilbao, Spanje, juni 2019 - DECIDE is een H2020-onderzoeksproject dat door de Europese Commissie over een periode van drie jaar wordt gefinancierd. De belangrijkste doelstelling van DECIDE is het opleveren van een nieuw vooruitstrevend DevOps-softwarekader, dat technieken, tools en mechanismen bevat die het mogelijk maken om speciaal voor Multi-Cloud geschikte applicaties te ontwerpen, te ontwikkelen, te exploiteren en dynamisch opnieuw op te zetten, waarbij enkel betrouwbare, interoperabele (compatibele) en juridisch conforme Clouddiensten in aanmerking komen, die uit een geverifieerde catalogus te kiezen zijn.

Onze partners, <u>AIMES</u>, <u>ARSYS</u>, <u>HPE</u>, <u>Experis IT</u>, <u>Time.lex</u>, <u>Fraunhofer</u>, <u>CloudBroker</u> and <u>TECNALIA</u>, komen uit zes verschillende landen die Noord- en Zuid-Europa vertegenwoordigen. TECNALIA is belast met de leiding van het consortium.

DECIDE streeft ernaar de productiviteit te verbeteren en de time-to-market te verkorten van toepassingen die hoge prestaties en betrouwbaarheid vereisen, en toepassingen waarvoor bepaalde juridische aspecten van de Clouddiensten die worden ingezet om de applicatie ter beschikking te stellen, gezien de aard van de beheerde informatie, van cruciaal belang zijn.

De resultaten van DECIDE zijn specifiek relevant voor DevOps teams die specifiek voor Multi-Cloud geschikte applicaties ontwikkelen en aanbieders van Cloudcomputerdiensten.

Het project heeft recent de derde versie van de individuele ondersteunende tools gepubliceerd, die samen het DevOps-kader vormen. Het is beschikbaar op de <u>publieke GitLab opslagruimte van het project</u>. Het volledig geïntegreerde Devops-kader (waarbij alle individuele tools samen komen), wordt in v3.0 gepubliceerd in augustus 2019 en kan op dezelfde plaats gedownload worden. Het huidige pakket omvat nieuwe en verbeterde functionaliteiten van de volgende tools:

- DECIDE ARCHITECT, dat aanbeveelt welke architecturale patronen moeten worden toegepast bij het bouwen van een applicatie om te voldoen aan de geïdentificeerde niet-functionele vereisten,
- DECIDE OPTIMUS, dat de meest geschikte combinatie van implementatieconfiguraties toont voor een applicatie gebaseerd op micro-diensten, waarbij diensten van verschillende aanbieders van Cloudcomputerdiensten betrokken kunnen zijn,

- De Advanced Cloud Service meta-Intermediator (ACSmI), die het mogelijk maakt om automatisch het dienstenaanbod (vooral VMs) van verschillende aanbieders van Cloudcomputerdiensten, zoals Amazon, in kaart te brengen en te contracteren,
- DECIDE ADAPT, dat automatisch de geselecteerde multi-Cloud infrastructuurconfiguratie (zoals aanbevolen door OPTIMUS) activeert, waarbij de microdiensten automatisch gebruik maken van de Cloud-infrastructuur van aanbieders zoals Amazon, ARSYS, en CloudSigma, afhankelijk van de gekozen configuratie.

Zodra de applicatie is opgezet en draait, monitoren de DECIDE tools ook kenmerken zoals beschikbaarheid, zowel van de applicatie als van de aanbieders van Cloudcomputerdiensten, en waarschuwen ze de DevOps-teams als er een overtreding van de SLA (gelinkt aan de nietfunctionele vereisten van de applicatie, zoals beschikbaarheid) heeft plaatsgevonden, waarbij de applicatie automatisch opnieuw wordt ingedeeld in een nieuwe, automatisch geselecteerde configuratie die wel aan de gestelde vereisten voldoet. Al deze tools zijn geïntegreerd in een gebruiksvriendelijk en veilig online DevOps-kader, en hun voortgang en status kunnen worden gevolgd via een geïntegreerd dashboard. DECIDE ARCHITECT en DECIDE OPTIMUS worden ook aangeboden via een Eclipse plug-in.

De huidige versie van de DECIDE tools is gevalideerd in drie veeleisende gebruikssituaties, een applicatie voor het voeren van klinisch onderzoek en verwerken van resultaten, een toepassing met hoge beschikbaarheidsvereisten en een op blockchain gebaseerd energiehandelsplatform. De eerste resultaten tonen bijvoorbeeld een besparing van 60% van de tijd die nodig is om een Multi-Cloud toepassing op te zetten wanneer men DECIDE gebruikt in plaats van dit manueel te doen.

De definitieve versie van het volledige DECIDE DevOps-kader v3.0 zal in augustus 2019 worden uitgebracht. Niettemin zullen er daarna nog steeds updates en verbeteringen volgen.

Dit project is gefinancierd door de Europese Unie in het kader van het Horizon 2020 onderzoeks- en innovatieprogramma onder subsidieovereenkomst nummer 731533.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant

agreement No 731533

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Figure 47. Press release in Dutch

A1.2.1.6. Polish version

Press Release



Zespół DevOps aplikacji wielochmurowych wkrótce będzie w stanie poprawić swoją produktywność dzięki projektowi DECIDE H2020

Bilbao, Hiszpania, czerwiec 2019 – DECIDE to projekt badawczy finansowany przez Komisję Europejską w ramach programu H2020 przez okres trzech lat. Głównym celem DECIDE jest dostarczenie platformy programistycznej nowej generacji, umożliwiające techniki, narzędzia i mechanizmy do projektowania, rozwijania, obsługi i dynamicznego (ponownego) wdrażania wielochmurowych aplikacji natywnych w zestawie niezawodnych, interoperacyjnych i zgodnych z prawem chmur.

Nasi **partnerzy**, <u>AIMES</u>, <u>ARSYS</u>, <u>HPE</u>, <u>Experis IT</u>, <u>Time.lex</u>, <u>Fraunhofer</u>, <u>CloudBroker</u> i <u>TECNALIA</u>, pochodzą z sześciu różnych krajów, reprezentujących Europę Północną i Południową. TECNALIA jest przydzielona jako lider konsorcium.

DECIDE ma na celu poprawę wydajności i skrócenie czasu wprowadzania na rynek aplikacji, które wymagają wysokiej wydajności i niezawodności, i dla aplikacji, dla których niektóre aspekty prawne zasobów w chmurze, w których aplikacja jest wdrażana, są krytyczne ze względu na charakter zarządzanych informacji.

Prace wykonane w DECIDE są szczególnie istotne dla zespołów DevOps pracujących z aplikacjami wielochmurowymi, i dostawców usług w chmurze (Cloud Service Providers - CSP).

Projekt opublikował ostatnio trzecią wersję indywidualnych narzędzi, które tworzą DECIDE DevOps Framework i są one dostępne w publicznym <u>repozytorium GitLab projektu</u>. Zintegrowany DECIDE DevOps Framework v3.0 zostanie wydany w sierpniu i będzie dostępny do pobrania. Obecny pakiet zawiera nowe i ulepszone funkcje następujących narzędzi:

- DECIDE ARCHITECT, który zaleca, jakie wzory architektoniczne powinny być stosowane w ich aplikacjach aby sprostać zestaw wymagań niefunkcjonalnych,
- DECIDE OPTIMUS, który zaleca najbardziej odpowiednią kombinację konfiguracji wdrażania w wielu CSP dla aplikacji opartych na mikroserwisach,
- The Advanced Cloud Service meta-intermediator (ACSmI), który umożliwia automatyczne kontraktowanie ofert usług w chmurze (głównie maszyn wirtualnych od CSP, w tym Amazon),
- DECIDE ADAPT, który automatycznie zapewnia wybraną (zgodnie z zaleceniami OPTIMUS) konfigurację infrastruktury w środowisku wielochmurowym. Automatycznie wdraża także mikroserwisy aplikacji w infrastrukturach chmury, takich jak Amazon, ARSYS i CloudSigma.

Po wdrożeniu i uruchomieniu aplikacji narzędzia DECIDE monitorują charakterystyki operacyjne, takie jak dostępność aplikacji i CSP, powiadamiają zespoły DevOps o wystąpieniu naruszenia, automatycznie wdrażając aplikację w nowej, automatycznie wybranej konfiguracji. Wszystkie te narzędzia są zintegrowane w przyjaznej dla użytkownika i bezpiecznej platformie DevOps, ich postępy i status można śledzić za pomocą zintegrowanego pulpitu nawigacyjnego. DECIDE ARCHITECT i DECIDE OPTIMUS są również oferowane przez wtyczke Eclipse.

Contract No. GA 731533

Aktualna wersja narzędzi DECIDE została zweryfikowana w trzech wymagających przypadkach użycia: w aplikacji do badań klinicznych, w aplikacji o wysokiej dostępności i na platformie handlu energią opartej na blockchain. Wstępne wyniki pokazują potencjalne korzyści w czasie potrzebnym na wybór i kontraktowanie zasobów chmurowych i w czasie potrzebnym na fazę wdrożenia i eksploatacji przy użyciu DECIDE w porównaniu z ręcznym odpowiednikiem.

Ostateczna wersja DECIDE DevOps framework v3.0 ma zostać wydana do sierpnia 2019 roku. Ciągłe aktualizacje i ulepszenia nastąpi potem.



Projekt otrzymał dofinansowanie z programu badań i innowacji Horizon 2020 Unii Europejskiej w ramach umowy o dotację No 731533

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Figure 48. Press release in Polish

A1.2.1.7 Italian version

Comunicato Stampa



I team DevOps che sviluppano applicazioni multi-cloud potranno migliorare la loro produttività grazie al progetto H2020 DECIDE

Bilbao, Spagna, Giugno 2019 – DECIDE è un progetto di ricerca finanziato su un periodo di tre anni dalla Commissione Europea nell'ambito del programma Horizon 2020 (H2020). L'obiettivo di DECIDE è di offrire un ambiente software di nuova generazione, oltre che tecniche e strumenti adeguati, per progettare, sviluppare, gestire, e mettere in esercizio dinamicamente applicazioni multi-cloud nel contesto di un insieme di servizi cloud affidabili, interoperabili e conformi alle normative esistenti.

Il progetto è sviluppato da un consorzio composto da otto partner, <u>AIMES</u>, <u>ARSYS</u>, <u>HPE</u>, <u>Experis</u>
<u>IT</u>, <u>time.lex</u>, <u>Fraunhofer</u>, <u>CloudBroker</u> e <u>TECNALIA</u>, che provengono da sei differenti nazioni, in rappresentanza sia del Nord che del Sud Europa. La guida del consorzio è affidata a TECNALIA.

DECIDE punta a migliorare la produttività e ridurre il time-to-market nello sviluppo di applicazioni, sia quelle che richiedono alte prestazioni ed elevata affidabilità, che quelle per cui –data la natura delle informazioni gestite– risultano critici certi aspetti legali relativi alle risorse cloud utilizzate.

La ricerca sviluppata da DECIDE è particolarmente rilevante per sviluppatori e gestori (DevOps) di applicazioni multi-cloud e per fornitori di servizi cloud.

Il consorzio ha recentemente rilasciato la terza versione degli strumenti che compongono l'ambiente DECIDE, scaricabili dal <u>repository GitLab</u> del progetto. La versione 3.0 dell'ambiente integrato DECIDE DevOps Framework verrà rilasciata in Agosto e sarà scaricabile dallo stesso repository.

La versione rilasciata include miglioramenti e nuove funzionalità per i seguenti strumenti:

- DECIDE ARCHITECT, che suggerisce i modelli architetturali da adottare nelle applicazioni per soddisfare un dato insieme di requisiti,
- DECIDE OPTIMUS, che propone le combinazioni più adatte di servizi cloud per un'applicazione basata su micro-servizi,
- DECIDE ACSMI, che permette di automatizzare la fase di adesione ad offerte di servizi cloud pubblici (principalmente macchine virtuali, da fornitori come Amazon),
- DECIDE ADAPT, che automatizza sia la fase di acquisizione delle risorse multi-cloud selezionate (proposte da OPTIMUS), sia la fase operativa di distribuzione ed esecuzione dei micro-servizi su infrastrutture cloud di fornitori quali Amazon. ARSYS. e CloudSigma.

Una volta che l'applicazione è in esercizio, gli strumenti DECIDE sono anche in grado di monitorare caratteristiche come la disponibilità delle risorse sia applicative che infrastrutturali e, in caso di violazioni SLA, avvertire gli operatori (DevOps) e riconfigurare automaticamente l'applicazione in modo che utilizzi altre risorse più adeguate suggerite dallo stesso DECIDE. Tutti gli strumenti elencati sopra sono integrati in un ambiente grafico web, sicuro e di facile utilizzo, comprensivo di diverse dashboard per visualizzare stato e progresso delle attività. ARCHITECT e OPTIMUS sono disponibili anche come estensioni per l'ambiente di sviluppo Eclipse.

La versione corrente degli strumenti DECIDE è stata validata tramite tre casi d'uso piuttosto esigenti: un'applicazione per gestire sperimentazioni cliniche, un'applicazione ad alta disponibilità e una piattaforma di trading energetico basata su blockchain. I primi risultati di queste validazioni mostrano che l'utilizzo di DECIDE offre potenziali riduzioni del tempo impiegato sia per la selezione ed adesione ad offerte cloud, sia per la distribuzione ed esecuzione dei micro-servizi, rispetto all'esecuzione manuale delle stesse attività.

La versione 3.0 dell'ambiente DECIDE DevOps Framework, completo degli strumenti descritti sopra, verrà rilasciata in Agosto 2019, e ulteriori aggiornamenti seguiranno a cura della comunità open source.



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Figure 49. Press release in Italian

A1.2.1.8 Press releases publications

Table 6. List of press releases

Partner	Languag e used	Contacted entity (Name)	Entity contact type	Entity web site	Press Release publication date
TECNALIA	Spanish	TECNALIA	TECNALIA Blog	http://info.tecnalia.local/express/2019/10/03/los-equipos-de-devops-pronto-podran-mejorar-su-productividad-gracias-a-decide/	30.07.2019
TECNALIA	Spanish	GAIA	Telecom Cluster	http://www.gaia.es/Los-equipos-de-DevOps-pronto-podran-mejorar-su-productividad-en-el-despliegue-multi-cloudde-aplicaciones-gracias-al-proyecto-H2020-DECIDEproyecto-liderado-por-TECNALIA.html	23.07. 2019
TECNALIA	Spanish	Parque Tecnologico Bizkaia	Parque Tecnológico Bizkaia	https://parke.eus/alava/es/los-equipos-de- devops-pronto-podran-mejorar-su- productividad-en-el-despliegue-multi-cloud- de-aplicaciones-gracias-al-proyecto-h2020- decide/	23.07. 2019
TECNALIA	Spanish	Madrid+d	Fundación para el conocimient o I+D+i	http://www.madrimasd.org/mensaje- confirmacion	23.07. 2019
Arsys	Spanish	Arsys	Arsys Blog	https://www.arsys.es/blog/soluciones/decide- devops/	12.07. 2019
Arsys	Spanish	Arsys	Arsys Facebook	https://www.facebook.com/arsys.es/posts/10 157377752871575	12.07. 2019
CloudBroker	English	Cloudbroker	Cloudbroker Blog	https://cloudbroker.com/cloudbroker- announces-release-of-initial-version-of-billing- component/	23.07. 2019

A1.3 Scientific Publications to Journals and Conferences

Next, the table indicating the details of the scientific publications.



 Table 7. List of Scientific Publications to Journals and Conferences

Title	Main author	Title of the periodical or series	Nº, date or frequency	Publisher	Place of publication, year	Relevant pages	Permanent identifiers	Is/Will open access provided to this publication ?
Towards Supporting the Extended DevOps Approach through Multicloud Architectural Patterns for Design and Pre-deployment - A Tool Supported Approach	Leire Orue- Echevarria, Juncal Alonso, Marisa Escalante, Lena Farid, Simon Dutkowski.	ICSOFT2018	978-989- 758-320-9	TBD	TBD	TBD	10.5220/000 6856008130 823	Yes
Agile development and operation of complex systems in multitechnology and multicompany environments DevOps approach	Gorka Benguria, Juncal Alonso, Iñaki Etxaniz, Leire Orue- Echevarria, Marisa Escalante	EuroAsiaSPI 2018	ISBN 978-3- 319-97924- 3	Springer	TBD	pp 15-27	10.1007/978 -3-319- 97925-0_2	Yes
Legal Aspects of Multi- Cloud: More Clouds, More Problems?	Time.lex	C.T.L.R. Issue, 2019	TBD	TBD	TBD	TBD	TBD	TBD
DECIDE: An Extended DevOps Framework for Multi-cloud Applications	Juncal Alonso, Kyriakos Stefanidis, Leire Orue- Echevarria, Lorenzo Blasi, Michael Walker, Marisa Escalante, María	ICCBDC 2019 Conference	ISBN: 978- 1-4503- 7165-0	ACM	Oxford, United Kingdom		10.1145/335 8505.335852 2	Yes

© DECIDE Consortium Contract No. GA 731533 Page 62 of 68



Title	Main author	Title of the periodical or series	Nº, date or frequency	Publisher	Place of publication, year	Relevant pages	Permanent identifiers	Is/Will open access provided to this publication ?
	José López, Simon Dutkowski							
Contribution to the Uptake of Cloud Computing Solutions: Design of a Cloud Services Intermediator to Foster an Ecosystem of Trusted, Interoperable and Legal Compliant Cloud Services. Application to Multi-cloud Aware Software	Juncal Alonso	WEBIST 2019	TBD	TBD	Vienna, Austria	TBD		Yes
Dynamic Patterns for Cloud Application Life-Cycle Management	Geir HornLeire Orue-Echevarria ArrietaBeniamino Di Martino, Dimosthenis Kyriazis	3PGCIC-2019	TBD	Springer	University of Antwerp, Antwerp, Belgium		10.1007/978 -3-030- 33509-0_59	Yes
Managing the legal implications of multi-Cloud: how to DECIDE on the right approach (part 1),	Pieter Gryffroy	Computer and Telecommunic ations Law Review 2020(1)	TBD		2020			
Managing the legal implications of multi-Cloud: how to DECIDE on the right	Pieter Gryffroy	Computer and Telecommunic ations Law	TBD		2020			

© DECIDE Consortium Contract No. GA 731533 Page 63 of 68



Title	Main author	Title of the periodical or series	Nº, date or frequency	Publisher	Place of publication, year	Relevant pages	Permanent identifiers	Is/Will open access provided to this publication ?
approach (part 2), Computer and Telecommunications Law Review, 2020 (2)		Review 2020(2)						
DECIDE: DevOps for Trusted, Portable and Interoperable Multi-Cloud Applications towards the Digital Single Market	Leire Orue- Echevarria, Juncal Alonso, Marisa Escalante, Kyriakos Stefanidis, Lorenzo Blasi	20th International Conference on Product- Focused Software Process Improvement. PROFES 2019 (European Project Space).	TBD	TBD	Barcelona, Catalunya, Spain	TBD	TBD	

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A1.4 General and Business Publications

Table 8. General and Business Publications

Title	Link or reference	Date	Partner/Authors (organisations)
ARSYS Web: Retos de seguridad en entornos MultiCloud	https://www.arsys.es/blog/soluciones/infraestructura/retos-de-seguridad-en-entornos-multicloud/	02.04.2019	ARSYS
ARSYS Web: La combinación de Nubes protagoniza la participación de Arsys en Smart Data Spain Summit	https://www.arsys.es/blog/nosotros/eventos/smart-data-spain-summit- 2019/	06/05/2019	ARSYS
ARSYS Web: Las nuevas herramientas de DECIDE DevOps ya están disponibles	https://www.arsys.es/blog/soluciones/decide-devops/	12.07.2019	ARSYS
Managing the legal implications of multi- Cloud: how to DECIDE on the right approach (part 1), Computer and Telecommunications Law Review 2020(Part 1)	N/A	January 2020	TIMELEX
Managing the legal implications of multi- Cloud: how to DECIDE on the right approach (part 2), Computer and Telecommunications Law Review, 2020 (Part 2)	N/A	January 2020	TIMELEX
La prima versione di DECIDE ADAPT Deployment Orchestrator è stata ufficialmente rilasciata. HPE Pointnext Italy Internal newsletter #12	N/A	20/07/2018	HPE
CloudBroker: integration chronicles	http://cloudbroker.com/cloudbroker-integration-chronicles/	16/08/2018	CloudBroker
os equipos de devops pronto-podran mejorar su productividad-gracias a decide	http://info.tecnalia.local/express/2019/10/03/los-equipos-de-devops- pronto-podran-mejorar-su-productividad-gracias-a-decide/	30/07/2019	TECNALIA
DECIDE's last general assembly in milano	N/A	18/11/2019	TECNALIA

A1.5 Attended events: Conferences, Seminars, Workshops and Webinars

Table 9. Attended events during the second reporting period

Date	Name and type	of audience	Countries addressed	Size of audience	People attending
4-6 December.	Researchers,	Developers,	EU28	<1000	TECNALIA
Vienna, Austria	Industry		(mostly)		
21–22 November.	Researchers,	Developers,	EU28	<1000	TECNALIA
Bilbao, España.	Industry		(mostly)		
20-24 Abril.	Researchers,	Developers,	EU28	>2000	Coudbroker
Hannover, Germany	Industry		(mostly)		
06 Mayo	Researchers,	Developers,	EU28	<1000	ARSYS
	Industry		(mostly)		
12-13, June. Orange	Researchers,	Developers,	International	>2000	Fraunhofer
Garden, Paris.	Industry				
ARSYS	Researchers,	Developers,	EU28	<1000	ARSYS
	Industry		(mostly)		
June	Researchers,	Developers,	EU28	<1000	TECNALIA
	Industry		(mostly)		
24-25 September	Researchers,	Developers,	EU28	<1000	TECNALIA
2019,	Industry		(mostly)		
Madrid, Spain					
4 October 2019,	Researchers,	Institutions,	EU28	<1000	TECNALIA
Bilbao, Spain	Industry		(mostly)		
8-10 October,	Researchers,	Developers,	International	>2000	TECNALIA
Nuremberg, Spain	Industry				
	4-6 December. Vienna, Austria 21–22 November. Bilbao, España. 20-24 Abril. Hannover, Germany 06 Mayo 12-13, June. Orange Garden, Paris. ARSYS June 24-25 September 2019, Madrid, Spain 4 October 2019, Bilbao, Spain 8-10 October,	4-6 December. Vienna, Austria 21–22 November. Bilbao, España. 20-24 Abril. Hannover, Germany O6 Mayo Researchers, Industry 12-13, June. Orange Garden, Paris. ARSYS Researchers, Industry June Researchers, Industry ACCTOBER RESEARCHERS, Industry Researchers, Resear	4-6 December. Vienna, Austria 21–22 November. Bilbao, España. 20-24 Abril. Hannover, Germany 06 Mayo Researchers, Industry 12-13, June. Orange Garden, Paris. ARSYS Researchers, Industry Researchers, Industry Researchers, Industry Developers, Industry ARSYS Researchers, Industry Developers, Industry Developers, Industry A October 2019, Madrid, Spain Researchers, Industry Institutions, Industry Bilbao, Spain Researchers, Developers, Institutions, Industry Developers,	4-6 December. Vienna, Austria Industry 21–22 November. Bilbao, España. 20-24 Abril. Hannover, Germany Of Mayo 12-13, June. Orange Garden, Paris. ARSYS Researchers, Industry Developers, EU28 (mostly) Developers, International Developers, EU28 (mostly) ARSYS Researchers, Developers, EU28 (mostly) Developers, EU28 (mostly) ACCTOBER 2019, Industry ACCTOBER 2019, Industry Researchers, Institutions, EU28 Bilbao, Spain Industry Developers, Institutions, EU28 (mostly) ACCTOBER 2019, Researchers, Institutions, EU28 (mostly) Bilbao, Spain Industry Developers, International	4-6 December. Vienna, Austria 21–22 November. Bilbao, España. 1ndustry 20-24 Abril. Hannover, Germany 12-13, June. Orange Garden, Paris. ARSYS Researchers, Industry Developers, EU28 (mostly) February EU28 (mostly) EU28 (mostly) February EU28 (mostly) February EU28 (mostly) February EU28 (mostly) EU28 (mostly) EU28 (mostly) February EU28 (mostly) EU28 (mostly) February EU28 (mostly) EU28 (mostly) February EU28 (mostly) February EU28 (mostly) EU28 (mostly) February Febru

© DECIDE Consortium Contract No. GA 731533 Page 66 of 68



Event	Date	Name and type	of audience	Countries addressed	Size of audience	People attending
13ENISE International	22-23 October,	Researchers,	Developers,	EU28	>2000	TECNALIA
Information Security Meeting.	León, Spain	Industry		(mostly)		
Datacenter Dynamics	5-6 November,	Researchers,	Developers,	EU28	<1000	AIMES
	November, London	Industry		(mostly)		
Data Centre Ireland	19-20 November,	Researchers,	Developers,	EU28	<1000	AIMES
	Dublin	Industry		(mostly)		
Data Centre World – Paris	27-28 November,	Researchers,	Developers,	EU28	<1000	AIMES
	Paris	Industry		(mostly)		
Basque Industry 4.0 Congress.	20-21 November,	Researchers,	Developers,	EU28	<1000	TECNALIA
	Bilbao, Spain	Industry		(mostly)		
20th International Conference	27 November,	Researchers,	Developers,	EU28	<1000	TECNALIA, FhG, HPE
on Product-Focused Software	Barcelona, Spain	Industry		(mostly)		
Process Improvement, PROFES						
2019 (European Project Space)						
Multi-cloud deployment for	Orlando, Florida,	Researchers,	Developers,	EU28	<1000	HPE
cloud native applications. Tech	February 3-7 [HPE	Industry		(mostly)		
Con 2020	internal technical					
	conference]					

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A1.6 Other Dissemination Activities

Table 10. Other Dissemination Activities during the second reporting period

Name	Partners	Link if appropriate
AIMES raised DECIDE at the monthly	AIMES	N/A
meeting of the UK Innovate UK.		
"DevOps as a strategy for the servitization	TECNALIA	N/A
of software applications"		
DevOps	TECNALIA	N/A
	TECNALIA	N/A
• • • • • • • • • • • • • • • • • • • •		
Big Data, Software Engineering-Devops"		
NI/A	LID	NI/A
N/A	пР	N/A
H2020conf2019	TECNIALIA	https://twitter.com/EsHorizonte2020/status/1064806034236157953
HZ020C0IIIZ018	TECNALIA	
DevOns como estrategia nara la	TECNALIA	https://www.spri.eus/euskadinnova/es/enpresa-
	ILCIVALIA	digitala/agenda/devops-como-estrategia-para-servitizacion-
30. Vicización de apricaciónes sortware		aplicaciones-software/14850.aspx
We participate in the DSM cloud	TECNALIA	https://twitter.com/Decideh2020/status/1052104573345779712
·	I LCIVILLII	1111ps, j timeter 15011ij Deciden 2020j statusj 1032104373343773712
	AIMES raised DECIDE at the monthly meeting of the UK Innovate UK. "DevOps as a strategy for the servitization of software applications" DevOps	AIMES raised DECIDE at the monthly meeting of the UK Innovate UK. "DevOps as a strategy for the servitization of software applications" TECNALIA "Project Management facing new technological challenges: Cybersecurity, Big Data, Software Engineering-Devops" N/A HP H2020conf2018 TECNALIA TECNALIA TECNALIA TECNALIA TECNALIA TECNALIA

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