



Dependable Real-time Infrastructure for Safety-critical Computer

Project number: 869945

Project acronym: De-RISC

<http://www.derisc-project.eu/>

D5.2 Communication and Dissemination Plan and Report, First Update

Work Package	WP5	Lead Beneficiary	BSC
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Brief description

This report summarizes the dissemination activities carried out by the De-RISC project from October 2019 to September 2020. After the rejection of this deliverable, it has been updated in April 2021 with the review recommendations.

This document includes a complete list of project's coverage in press and social media, as well as other dissemination activities such as related projects. Additionally, graphic resources from the project are presented in order to create a complete brand strategy. Over the first year of the project, the consortium participated in a total of 10 conferences, workshops or seminars disseminating the project. With the aim of building a community around the project, the dissemination team posted regular updates on the official website and the project's dedicated LinkedIn and



Twitter channels; the strategy of this social media networks is also reflected on this report.

Document control page

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The De-RISC Consortium comprises the following partners:

#	Partner legal name	Short name	Acronym	Country
1	FENT INNOVATIVE SOFTWARE SOLUTIONS SL	fentISS	FEN	Spain
2	BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACIÓN	BSC	BSC	Spain
3	THALES SA	THALES	TRT	France
4	COBHAM GAISLER AB	COBHAM GAISLER	CG	Sweden



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1. Executive summary

This report summarises the dissemination activities carried out by the De-RISC project from October 2019 to the end of September 2020. After the rejection of this deliverable, this report has been updated in April 2021 addressing the review recommendations.

This report delves into the development of a complete communication and dissemination campaign which highlights the benefits of the De-RISC's technology to be shared with all stakeholders. This includes, all dissemination tools and activities implemented in the online and offline strategy displayed in [D5.1] (M3).

Over the first year of the project, the consortium participated in a total of 11 events disseminating the project. With the aim of building a community around the project, the dissemination team posted regular updates on the project's dedicated LinkedIn and Twitter social media channels. All the communication and dissemination activities exposed in this report were carried out to show the impact of the project and establish the De-RISC brand.

The dissemination team has successfully carried out the dissemination plan [D5.1].

2. Introduction

The objective of this report is to present a detailed list of dissemination activities, which took place during the initial 12-month period, as planned in deliverable [D5.1].

The activities were carried out to achieve fast time to market with our innovative solution. Our dissemination priority is to engage industries and institutions who can become customers of the solution developed in the De-RISC project.

3. Applicable and reference documents

3.1. Applicable documents

Reference	Document information
[DoA2019]	De-RISC Consortium: GRANT AGREEMENT NUMBER 869945 — De-RISC, 2019.
[D5.1]	Communication and Dissemination Plan

4. Terms, definitions and acronyms

4.1. Terms and definitions

Term	Definition
Description of Action	Also known as “Technical Annex” or “Annex I to the Grant Agreement.” It is an annex to the contract (aka “Grant Agreement”) signed between the Project Consortium and the European Commission describing the technical content of the work to be carried out by the beneficiaries of the funding under the European Union's Horizon 2020 Programme.
Horizon 2020	It is the biggest EU Research and Innovation Programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. The purpose of Horizon 2020 is to foster the growth of breakthrough technologies, inventions and advanced developments by the promotion of scientific ideas from the laboratories to the market.
RISC-V	Pronounced "risk-five". It is an open-source hardware instruction set architecture based on established reduced instruction set computer principles.

4.2. Acronyms

Acronym	Definition
ADCSS	Avionics, Data, Control and Software Systems
API	Application Programming Interface
BSC	Barcelona Supercomputing Center
CG	Cobham Gaisler
CNES	Centre National d'Études Spatiales
DASIA	Data Systems in Aerospace
DATE	Design, Automation, and Test in Europe
DoA	Description of Action
DSN	Dependable Systems and Networks
EC	European Commission
EU	European Union
ESA	European Space Agency
FEN	fentISS
FPGA	Field Programmable Gate Array
FTI	Fast Track to Innovation
GA	Grant Agreement
H2020	Horizon 2020



HW	Hardware
IAB	Industrial Advisory Board
IEEE	Institute of Electrical and Electronics Engineers
IFIP	International Federation for Information Processing
ISA	Instruction Set Architecture
ISD	Industrial Space Days
KPI	Key Performance Indicator
MBSE	Model Based Space Systems and Software Engineering
MPSoC	Multi-Processor (Multi-Core) SoC
NoC	Networks-on-Chip
RISC	Reduced Instruction Set Computer
RISC-V	Reduced Instruction Set Computer Five
SoC	System-on-Chip
SW	Software
TC	Telecommand
TM	Telemetry
TRT	Thales Research & Technology
WP	Work Package
XNG	XtratuM Next Generation

5. General objectives

WP5 is a set of Dissemination and Communication tasks led by fentISS (FEN) and in which all the partners from the consortium participate (FEN, BSC, CG and TRT). Dissemination activities will support all work packages ensuring maximum visibility from all the actions of the entire project.

The Work Package activities will be aligned with the main objective of an FTI project: *to achieve fast time to market with our innovative solution*. To this end, the main purpose of the Dissemination, Communication and Commercialization work package (WP5) is to maximize the visibility of the project to multiple target audiences in order to engage industries and institutions who can be customers of the solution developed in the project.

For that purpose, the general objectives of WP5 are:

- ◆ To create awareness of De-RISC technology targeting three different audiences: (1) technical experts in the target domains, (2) managers in the target domains and (3) audiences in closely-related domains, including a variety of technical and non-technical profiles.

- ◆ To identify and perform communication and dissemination activities in order to maximize the impact of the project.

To identify the upcoming trends in the application domains addressed by De-RISC and to identify key actors and stakeholders.

6. Corporate image

In accordance with [D5.1] “Communication and Dissemination Plan”, the first step was to define a common graphic identity. The brand of De-RISC project (including brand and style, font, project templates defined for presentation, poster, etc.) was established and its guidelines have been correctly implemented accordingly by all partners in this first year.

In order to build a strong corporate image, a project logo has been designed by Cobham Gaisler (CG) with the purpose of communicating technological feelings together with space applications. As the use case of the project will be an TM/TC application of a satellite, the main figure of the logotype is a (cubed) satellite, which draws in two of its borders the letter V, linking to RISC-V architecture. Colours blue and yellow were selected to match the main colours of the RISC-V logo, also to strengthen the relationship with the RISC-V architecture:

The following versions were selected as official project logo (rectangle and flattened versions):



Figure 1: De-RISC logo rectangle version



Figure 2: De-RISC logo flattened version



Figure 1 shows the primary and preferred version of the logo (in terms of color and shape). There are some other variants, useful in other situations, like a printing version for ink saving (Black and White), or a white background to make more contrast when placing in dark areas (reversed). All variants and basic guidelines available in Appendix I – Corporate image: Logo.

7. Dissemination tools

During the first year of the project, dissemination tools have consolidated the visible part of De-RISC. This section provides the channels through which the project is able to reach its audience. The main dissemination activity to take into account during this 12-month period is the creation of the website, as the main scenario for all De-RISC dissemination activities. What is more, the project already offers different social media accounts that provide instantness in the message and useful visibility for the project.


7.1. De-RISC website

The first version of De-RISC website was created in M1 (October, 2019) with a static HTML design (Figure 3). The objective of the early creation of a simple version of the website was the early communication and dissemination activities focused on the engagement of the stakeholders. In M7 (April, 2020), the definitive website (<https://derisc-project.eu/>) was developed and launched to the public with a more complex and user-friendly design (Figure 4). This new version was built in WordPress and satisfied the technical requirements of performance and security. The main objectives of De-RISC website are:

- ◆ Being the main source of information of the project.
- ◆ Providing relevant and veridical data about the project from a primary source.
- ◆ Building confidence and transparency around the project.
- ◆ Being a common repository for public deliverables, public documentation, activities, news, publications, etc.
- ◆ Providing information about the project to a global audience.



D5.2. Communication and Dissemination Plan and Report, First Update



De-RISC EU Project

De-RISC: Dependable Real-time Infrastructure for Safety-critical Computer

Project Information	Dates	Programmes	Topic	Call for proposal	Funding Scheme
EU Grant Agreement ID: 869945	Start date: 1 October 2019	H2020-EU.3. - PRIORITY Societal challenges	EIC-FTI-2018-2020	H2020-EIC-FTI-2018-2020	IA - Innovation action
De-RISC in EU CORDIS website	End date: 31 March 2022	H2020-EU.2.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and Industrial technologies	Fast Track to Innovation (FTI)		

Objective

De-RISC is a proposed project where an international consortium will introduce a hardware and software platform based around the RISC-V standard. The work proposed in this project is to productize a multi-core RISC-V system-on-chip design already owned by Cobham Gaisler AB and to port the XrtatM hypervisor owned by fentISS SL to that design, to create a full platform consisting of hardware and software for future European developments within space and aeronautical applications.

De-RISC brings critical features to the market that make it unique in front of the competition:

- (1) No US export restrictions: most existing products use US technology, thus subject to US export control. De-RISC's IP core platform and software will not be subject to any US regulatory influence by building on RISC-V.
- (2) Multi-core interference mitigation concepts by Barcelona Supercomputer Center (BSC) integrated in the RISC-V SoC and validated by Thales SA become a unique feature, and will provide a key advantage w.r.t. competitors by limiting drastically interference while preserving high-performance operation.
- (3) Portability: The proposed development will create a RISC-V HW/SW platform that can be implemented in FPGAs and application specific standard products. This provides an edge for integrators that can adapt their choice of implementation technology based on mission requirements.
- (4) Fault-tolerance concepts: The platform will be provided by companies with experience in the space domain and with heritage in design of fault-tolerant systems.
- (5) Future-proof selection for new platforms: New software products are not being ported to SPARC and PowerPC architectures. With an established vendor providing a RISC-V platform there are guarantees of continued support for the hardware platform while developments from the commercial domain for the RISC-V architecture can be leveraged over time.

Coordinator

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For further information:
 derisc [[at]] fentiss.com

Figure 3: First website version (October 2019)



Figure 4: Current website design as of September 2020

From its creation, the website has undergone through different changes, specifically in its menu and pages sections. Currently, its menu is composed by a “Home page” and the following sections:

- ◆ **Project:** includes all relevant information about the project. This section might change during the development of the project to extend the information, if we detect such a need. The pages that can be found in this section are:
 - ▶ About us: brief description of the general overview of the project.

- ▶ **Goals and objectives:** goals and objectives as reflected in the Document of Agreement (DoA).
- ▶ **Work Packages:** summarizes the seven work packages of the work packages and their lead beneficiaries.
- ▶ **Consortium:** overview of the four partners of the consortium and their role in De-RISC.
- ▶ **Use case:** summary of the use case that will execute De-RISC in order to validate the project.
- ◆ **Results:** this section will contain the main results achieved by the project. The content of this section will increase as the project is developed due to the incorporation of new results concerning the project. The Results section includes two pages:
 - ▶ **Deliverables:** this page will work as a repository for the De-RISC public deliverables, which will be organized according to the delivery month.
 - ▶ **Publications:** publications are a relevant aspect of the project so this page will serve as a repository of any peer-reviewed scientific publication related to the project, always guaranteeing open access. These publications will be organized according to their publishing date.
- ◆ **Media:** involves all the communications tools used to deliver information about De-RISC. This section will incorporate new content or update the existing one over the development of the project. The pages which are part of this section are the following:
 - ▶ **News:** these are articles written by the consortium in order to give updates about the activities, events, or accomplishments of the project.
 - ▶ **Press clippings:** appearances of the project in professional press. The press clippings will be organized according to their publishing date.
 - ▶ **Branding:** tools used to build De-RISC brand equity. It currently includes logos, guide to use the logos, the official project presentation with its updated progress, poster, and flyer.
- ◆ **Contact:** this section offers the contact information of the project coordinator company with a contact phone number, an email and a form to get in touch with the consortium.

Moreover, the website includes links to De-RISC social media profiles in order to show interconnectivity between all dissemination tools.

The De-RISC website is regularly updated with information about the project's innovations related to hardware and software aiming towards developments for the space and aeronautical applications. As a result, the overall performance of the website has been satisfactory in this first project year.

Metrics related to the website performance until 4 September, 2020 have been obtained through Google Analytics and show the behaviour of the site in general terms:

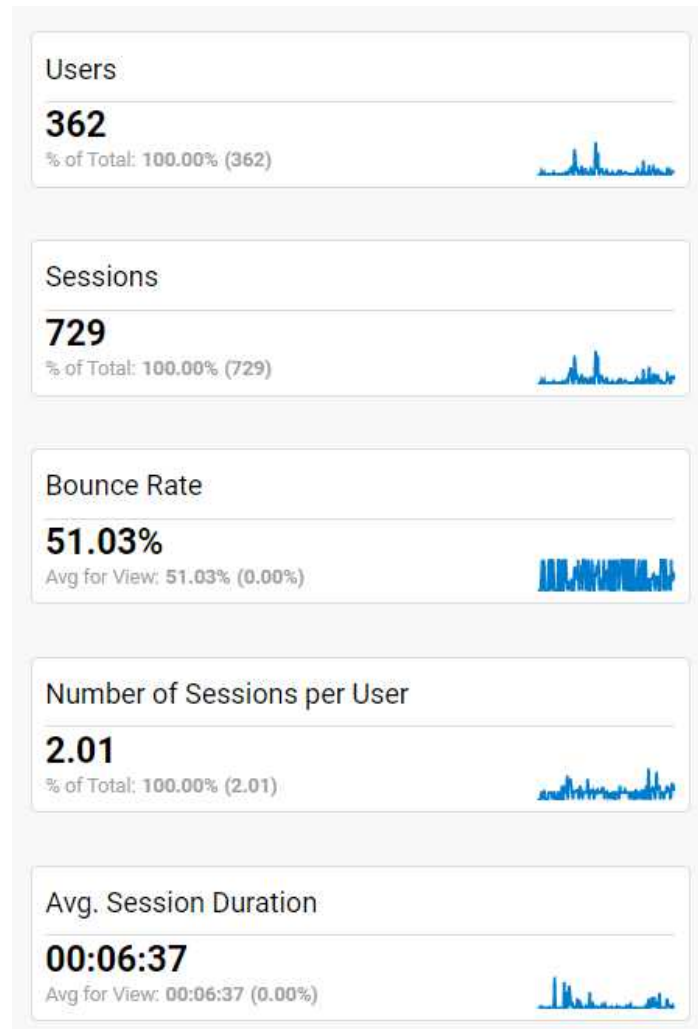


Figure 5: Main indicators of the De-RISC website since its launch. Source: Google Analytics

The main indicators of De-RISC show that the website is attaining the main objectives. The main established KPI in the [D5.1] Communication and Dissemination Plan for the website is the number of unique users. For this metric, the target value to achieve at the end of the project is 1000 unique users. Looking at the metrics obtained through Google Analytics, the total unique users achieved are 362 since the launching of the website in March 2020 (as shown in Figure 5). The total page views of the period are 729, so the number of sessions per user was 2.01. The bounce rate (51.03%) is in a correct range: over 60% would indicate that the website is not sufficiently engaging the audience.

The average duration, 6:37 minutes, reinforces this idea, with long sessions in the De-RISC website (Figure 5).

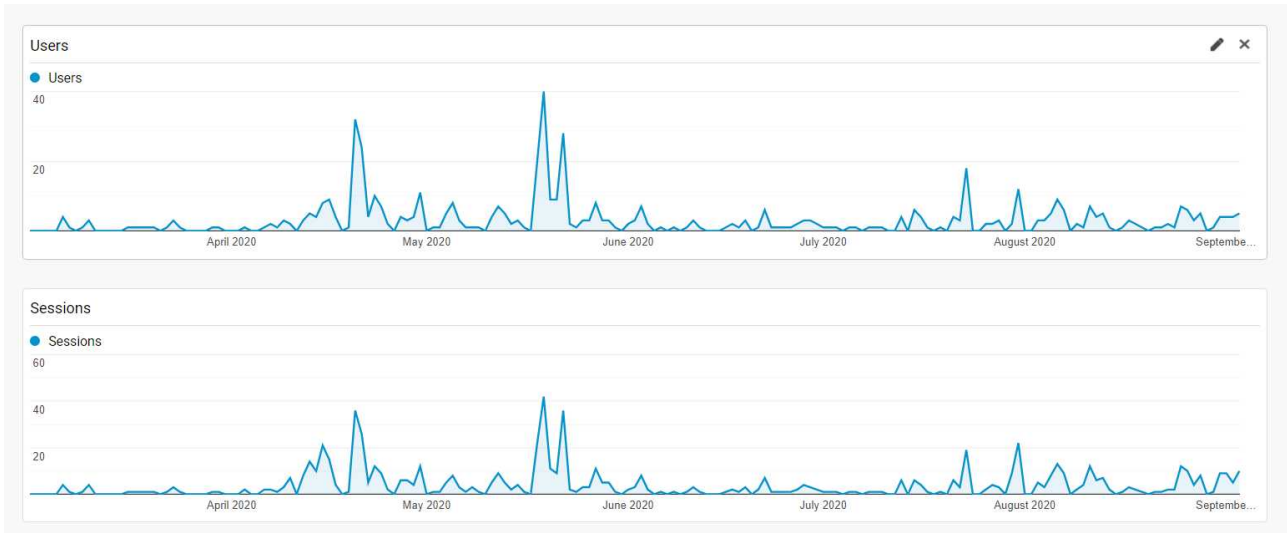


Figure 6: Flow of unique users and sessions on the De-RISC website since its launch. Source: Google Analytics

To understand the flow of sessions, Figure 6 states the progression of unique users’ and sessions’ total numbers since the creation of the website in March 2020. The peaks, which mostly coincide in both metrics, are related to specific disseminations activities, mainly the use of social media channels to relaunch the project’s website, not only through De-RISC profiles, but also thanks to the consortium profiles (20 April or 18 May).

User Type	Acquisition			Behaviour			Conversions		
	Users	New Users	Sessions	Bounce Rate	Pages/Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	362 % of Total: 100.00% (362)	362 % of Total: 100.28% (361)	729 % of Total: 100.00% (729)	51.03% Avg for View: 51.03% (0.00%)	4.51 Avg for View: 4.51 (0.00%)	00:06:37 Avg for View: 00:06:37 (0.00%)	0.00% Avg for View: 0.00% (0.00%)	0 % of Total: 0.00% (0)	US\$0.00 % of Total: 0.00% (US\$0.00)
1. New Visitor	361 (84.54%)	362 (100.00%)	362 (49.66%)	65.47%	2.04	00:01:38	0.00%	0 (0.00%)	US\$0.00 (0.00%)
2. Returning Visitor	66 (15.46%)	0 (0.00%)	367 (50.34%)	36.78%	6.95	00:11:32	0.00%	0 (0.00%)	US\$0.00 (0.00%)

Figure 7: New visitors vs Returning visitors to the De-RISC website since its launch. Source: Google Analytics

De-RISC sessions show a high number of new visitors (Figure 7) and indicates that 15% of the visitors returned to the website anytime during the examined period.

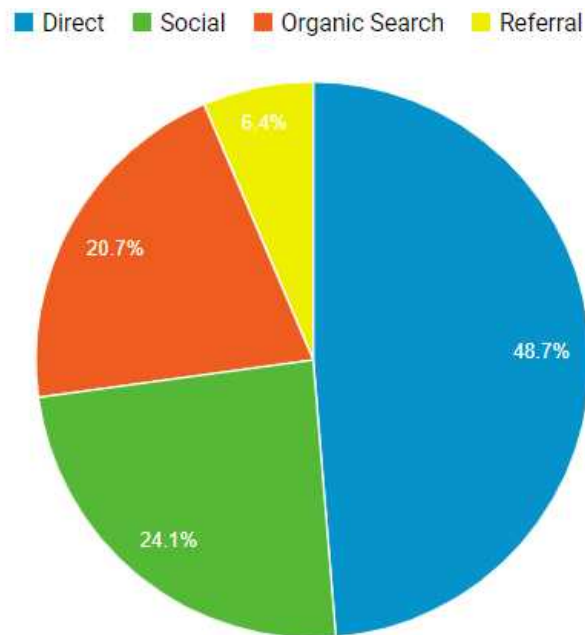


Figure 8: Traffic source channels for the De-RISC website since its launch. Source: Google Analytics.

Analysing Figure 8, it is remarkable that the main source of sessions comes from Direct traffic. These visitors come from typing or entering De-RISC website's URL on their browsers and they are represented in this project with a 48.7% of the sessions. Social media and organic search are also relevant sources of traffic for the website, with a 24.1% and 20.7%, respectively. Referral traffic does not represent a significant figure in De-RISC website traffic. This performance shows the initial stage of the project, as there is not a noteworthy number of links pointing to the website.

Even direct and social media traffic are the two main traffic sources in De-RISC website, it is organic search the source which provides higher quality of the sessions, with only a 37.75% of bounce rate (Figure 9)



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Default Channel Grouping	Acquisition			Behaviour			Conversions		
	Users	New Users	Sessions	Bounce Rate	Pages/Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	362 % of Total: 100.00% (362)	362 % of Total: 100.28% (361)	729 % of Total: 100.00% (729)	51.03% Avg for View: 51.03% (0.00%)	4.51 Avg for View: 4.51 (0.00%)	00:06:37 Avg for View: 00:06:37 (0.00%)	0.00% Avg for View: 0.00% (0.00%)	0 % of Total: 0.00% (0)	US\$0.00 % of Total: 0.00% (US\$0.00)
1. Direct	187 (49.34%)	187 (51.66%)	355 (48.70%)	53.24%	4.93	00:07:51	0.00%	0 (0.00%)	US\$0.00 (0.00%)
2. Social	113 (29.82%)	107 (29.56%)	176 (24.14%)	58.52%	2.74	00:03:35	0.00%	0 (0.00%)	US\$0.00 (0.00%)
3. Organic Search	50 (13.19%)	42 (11.60%)	151 (20.71%)	37.75%	5.73	00:07:53	0.00%	0 (0.00%)	US\$0.00 (0.00%)
4. Referral	29 (7.65%)	26 (7.18%)	47 (6.45%)	48.94%	4.06	00:04:39	0.00%	0 (0.00%)	US\$0.00 (0.00%)

Figure 9: Traffic source channels and bounce rate for the De-RISC website since its launch (March 2020). Source: Google Analytics

In terms of the most engaging pages in the website, these are the ‘About Us’ section, followed by ‘Publications’ and ‘News’, both generating similar interest (Figure 10). However, it is noticeable that the second page with the highest average time (behind of the “About Us” page) is a specific piece of news, specifically, the first one published in the website (“List off: De-RISC to create first RISC-V fully European platform for space”), with an average time of 3:10 minutes, probably due to the extension of the text.

Page	Page Views	Unique Page Views	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value
	3,289 % of Total: 100.00% (3,289)	1,918 % of Total: 100.00% (1,918)	00:01:53 Avg for View: 00:01:53 (0.00%)	729 % of Total: 100.00% (729)	51.03% Avg for View: 51.03% (0.00%)	22.16% Avg for View: 22.16% (0.00%)	US\$0.00 % of Total: 0.00% (US\$0.00)
1. /	887 (26.97%)	522 (27.22%)	00:02:22	483 (66.26%)	46.58%	33.37%	US\$0.00 (0.00%)
2. /about-us/	226 (6.87%)	129 (6.73%)	00:03:14	32 (4.39%)	53.12%	27.88%	US\$0.00 (0.00%)
3. /publications/	215 (6.54%)	101 (5.27%)	00:02:13	10 (1.37%)	30.00%	17.21%	US\$0.00 (0.00%)
4. /news/	203 (6.17%)	90 (4.69%)	00:01:24	10 (1.37%)	20.00%	13.79%	US\$0.00 (0.00%)
5. /goals/	142 (4.32%)	82 (4.28%)	00:02:03	13 (1.78%)	46.15%	22.54%	US\$0.00 (0.00%)
6. /consortium/	122 (3.71%)	80 (4.17%)	00:01:59	12 (1.65%)	50.00%	18.03%	US\$0.00 (0.00%)
7. /lift-off-de-risc-to-create-first-risc-v-fully-european-platform-for-space/	103 (3.13%)	90 (4.69%)	00:03:10	55 (7.54%)	83.64%	63.11%	US\$0.00 (0.00%)
8. /deliverables/	102 (3.10%)	55 (2.87%)	00:01:01	7 (0.96%)	14.29%	24.51%	US\$0.00 (0.00%)
9. /contact/	94 (2.86%)	58 (3.02%)	00:02:56	10 (1.37%)	70.00%	32.98%	US\$0.00 (0.00%)
10. /packages/	83 (2.52%)	59 (3.08%)	00:01:24	4 (0.55%)	50.00%	16.87%	US\$0.00 (0.00%)

Figure 10: Views and average time on the De-RISC website content since its launch. Source: Google Analytics



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Regarding visits by country, most of the sessions originate in Spain (Figure 11). Visitors from Spain coincide with the country of origin of two of De-RISC partners (BSC and fentISS), the ones with more resources dedicated to the Dissemination and Communication Work Package (WP5).

Country	Acquisition			Behaviour			Conversions		
	Users	New Users	Sessions	Bounce Rate	Pages/Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	362 % of Total: 100.00% (362)	362 % of Total: 100.28% (361)	729 % of Total: 100.00% (729)	51.03% Avg for View: 51.03% (0.00%)	4.51 Avg for View: 4.51 (0.00%)	00:06:37 Avg for View: 00:06:37 (0.00%)	0.00% Avg for View: 0.00% (0.00%)	0 % of Total: 0.00% (0)	US\$0.00 % of Total: 0.00% (US\$0.00)
1. Spain	114 (31.49%)	114 (31.49%)	408 (55.97%)	41.18%	6.60	00:10:43	0.00%	0 (0.00%)	US\$0.00 (0.00%)
2. United States	52 (14.36%)	52 (14.36%)	63 (8.64%)	77.78%	1.51	00:01:03	0.00%	0 (0.00%)	US\$0.00 (0.00%)
3. Germany	27 (7.46%)	27 (7.46%)	30 (4.12%)	70.00%	1.57	00:00:25	0.00%	0 (0.00%)	US\$0.00 (0.00%)
4. Sweden	23 (6.35%)	23 (6.35%)	37 (5.08%)	37.84%	2.54	00:02:19	0.00%	0 (0.00%)	US\$0.00 (0.00%)
5. Canada	20 (5.52%)	20 (5.52%)	22 (3.02%)	86.36%	1.23	00:01:18	0.00%	0 (0.00%)	US\$0.00 (0.00%)
6. United Arab Emirates	13 (3.59%)	13 (3.59%)	13 (1.78%)	100.00%	1.00	00:00:00	0.00%	0 (0.00%)	US\$0.00 (0.00%)
7. China	13 (3.59%)	13 (3.59%)	13 (1.78%)	92.31%	1.46	00:01:06	0.00%	0 (0.00%)	US\$0.00 (0.00%)
8. France	13 (3.59%)	13 (3.59%)	24 (3.29%)	54.17%	2.46	00:02:20	0.00%	0 (0.00%)	US\$0.00 (0.00%)
9. United Kingdom	10 (2.76%)	10 (2.76%)	11 (1.51%)	72.73%	1.27	00:00:28	0.00%	0 (0.00%)	US\$0.00 (0.00%)
10. Japan	10 (2.76%)	10 (2.76%)	10 (1.37%)	60.00%	1.80	00:00:54	0.00%	0 (0.00%)	US\$0.00 (0.00%)

Figure 11: Visits to the De-RISC website by countries in 2020. Source: Google Analytics

7.2. Social media

As previously shown in Figure 8, social media channels provide 24% of the website sessions. Twitter generated 60.80% of the traffic to the website. The LinkedIn group and page provided 33.52% of the traffic and, unexpectedly, Facebook originated 5.68% of the traffic, a surprising figure because De-RISC does not have any profile on this social media, so this could be the result of referrals from external users (Figure 12).

Social Network	Sessions	Page Views	Avg. Session Duration	Pages/Session
1. Twitter	107 (60.80%)	326 (67.63%)	00:05:03	3.05
2. LinkedIn	59 (33.52%)	145 (30.08%)	00:01:32	2.46
3. Facebook	10 (5.68%)	11 (2.28%)	00:00:02	1.10

Figure 12: Traffic to the De-RISC website referred from social media. Source: Google Analytics

De-RISC takes full advantage of social media in order to open dialogue with stakeholders and to reach a wide audience, showing that the project is dynamic and updated. The content provided by official profiles will be valuable and attractive to the receiver in order to create long-term useful connections and this content will be adapted to the context of each social media channel.

7.2.1. Twitter

Twitter is used as a platform to create synergies with other similar stakeholders and influencers in order to boost the impact of the project's dissemination activities. This network represents a good choice to spread information instantaneously and the achievement of followers can help to communicate De-RISC content into different networks. The De-RISC project is using this social media application under the account name or Twitter handle [@DeRISC_H2020_EU](https://twitter.com/DeRISC_H2020_EU).



Figure 13: De-RISC Twitter account

As seen in Figure 13, De-RISC's Twitter account includes the acknowledgement to EU funding and the project's website link. This last feature is specially relevant, as it is a way of generating website traffic. Additionally, the website works as the primary source of information of the project, so this interconnectivity represents high importance in the communication strategy. The audience of this profile is the general public, as the tweets and retweets posted will contain informative content which can be easily understood (participation events, EC news, updates, etc.) in order to create awareness about the project. Additionally, other more specific content (information about the

project, RISC-V news, etc.) will be posted with the objective of attracting the main target audience of this project: the scientific and industry community.

In order to monitor Twitter metrics, De-RISC will use Twitter API to show hashtags and Twitter Analytics to obtain monthly updates about the impressions generated with own tweets, profile visits, or top followers. (Figure 14).

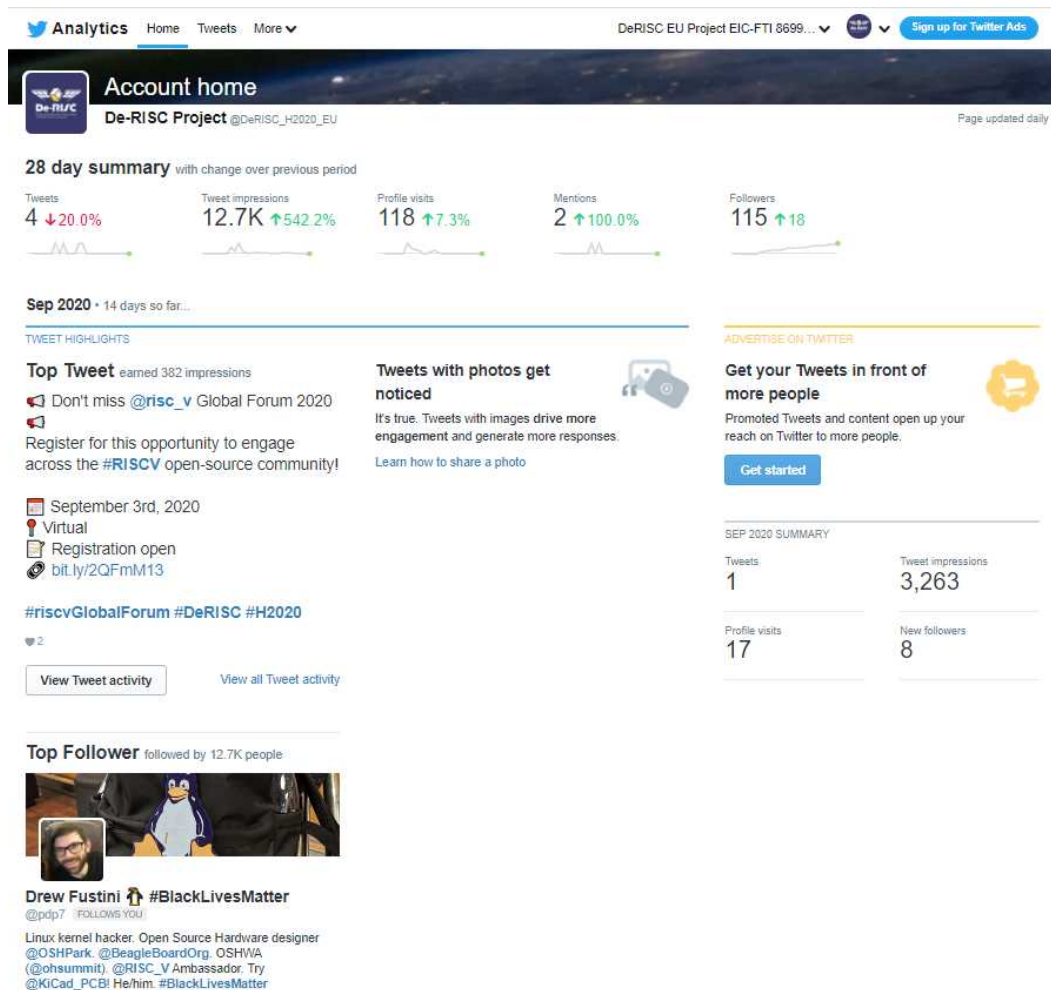


Figure 14: De-RISC Twitter analytics. Source: Twitter Analytics

Nevertheless, another analytic tool has been added to keep track of this social media network statistics: Twitonomy. This external app provides relevant figures concerning the own tweets of the profile (Figure 15).

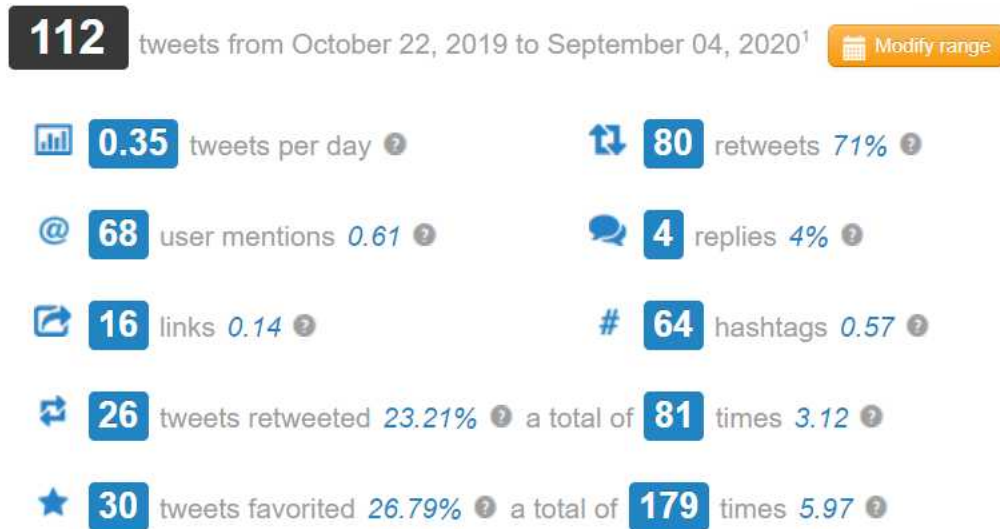


Figure 15: De-RISC Twitter analysis since profile creation (October 2019). Source: Twitonomy

As represented in Figure 15, the total number of tweets posted for this first year of the project has been 112, with an average of 0.35 tweets per day, what indicated that the profile tends to tweet once every three days. These metrics also show levels of interaction with other profiles through the number of retweets that the profile made (80), user mentions (68), and replies (4). Additionally, 23% of the tweets in De-RISC Twitter were retweeted and nearly 27% favorited. These figures show the launching stage in which is the project, as it is starting to get known and users are not engaged enough to fully interact with the account.

Twitter constitutes a very important platform for the project, as it is the primary social media application directing traffic to the website with a 60% of the social media traffic coming from here. The consortium expects to reach a broad general audience through this social media profile in order to create public engagement.

7.2.2. LinkedIn

De-RISC has a digital presence on LinkedIn as the industry is one of the main target audiences in this social media. This platform is used to share project-related content as well as other sector-related content. The goal is to share technical discussions with industry-related stakeholders in order to engage with the project. The LinkedIn activity is monitored via LinkedIn Analytics, which shows general information on followers, visitors, and visitor demographics, such as their sector background.

The consortium created, at first, a [group](#) for De-RISC, which was well received by the industry. However, this LinkedIn group showed severe limitations on simple features of the platform restricting the monitoring through LinkedIn Analytics or limiting, for example, tagging company

profiles. Due to these disadvantages found, the LinkedIn [company page](#) was created, offering a better experience for the project dissemination strategy. Currently, both sites are active, but it is the company page the main location of the communications provided from De-RISC. In order to transfer all the members from the group to the page, the consortium relaunches the existence of the company page frequently.



Figure 16: De-RISC LinkedIn company page

The LinkedIn page consists of a site containing 90 followers (Figure 16) interested in the updates of the project, targeting professional audiences to this social network. The monitoring of the project page is performed through LinkedIn Analytics, the internal metrics app of the platform.

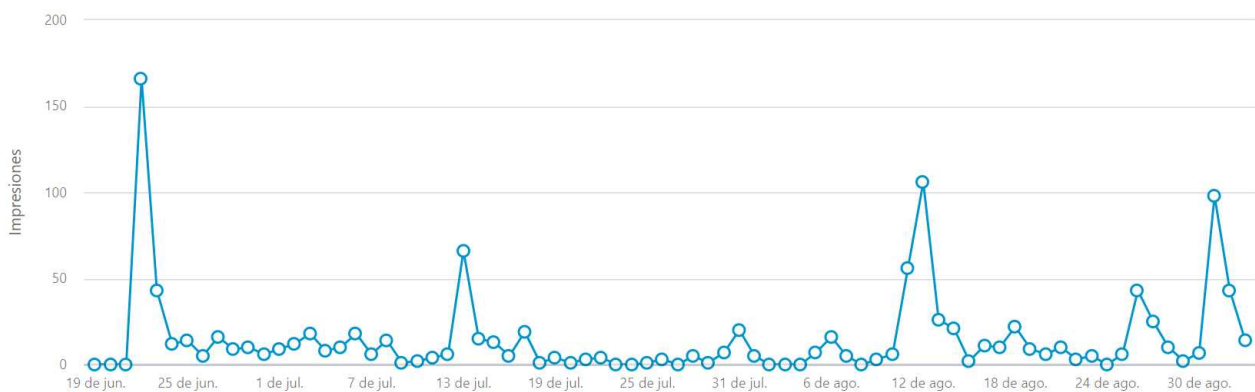


Figure 17: Impressions on posts published in the De-RISC LinkedIn page. Source: LinkedIn Analytics

As reflected in Figure 17, the main peaks in terms of impressions in the De-RISC LinkedIn page were five. These maximums coincide with the promotion of news or the relaunching of the page in



the LinkedIn group. This last fact indicates that the relocation of followers from the group to the page is being performed correctly.

Additionally, the consortium knows from the De-RISC website analytics that LinkedIn is the second social media network directing traffic with 33% of the social media traffic coming from this professional network.

7.2.3. Social media KPIs

The overall view on social media channels show a satisfactory progress of Twitter and LinkedIn through the KPIs (Table 1).

De-RISC social media key performance indicators	First year	Target for project
Number of Twitter followers	107	100
Number of LinkedIn followers in the company page	90	100

Table 1: De-RISC social media indicators. Source: Twitter Analytics and LinkedIn

As seen in Table 1, the project surpassed the targeted KPI for the number of Twitter followers and it is about to surpass the same number on LinkedIn.

8. Dissemination pack

8.1. Flyer

The general flyer provides basic information about the De-RISC project, its goals, future achievements and impacts as well as the website and the official social media profiles of the project. The format of the brochure is a double-sided A4 sheet, so that interested project partners can easily download and print for their own dissemination purposes. This tool was completed on 26 February and, due to COVID-19 global context, the consortium has not attended any event since that date and, consequently, the flyer has not been distributed physically. Instead, the file has been uploaded to the Branding page in the website (<https://derisc-project.eu/branding/>) in order to be distributed via online to the public. The partners can also download the document from the common internal repository.

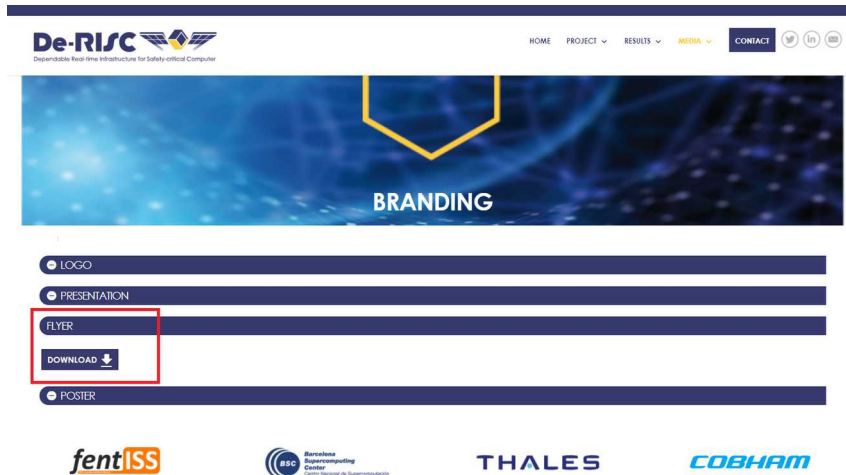


Figure 18: De-RISC website with downloadable flyer (highlighted in red)



Figure 19: Front side of De-RISC brochure

8.2. Poster

The poster of De-RISC was created on 17 January 2020, initially for the HiPEAC Conference, and provides general information about the project. This tool includes a much more detailed information than the flyer, indicating the stages, the consortium partners and their roles in De-RISC, the goals of the project, key insights, as well as the website and social media profiles. The poster has been uploaded to the Branding section of the website, where it can be downloaded, and can also be downloaded and printed out by the partners from the common internal repository. The poster was presented in two events since its creation: HiPEAC 2020 and DATE2020, in the latter event it was shown in a virtual booth.

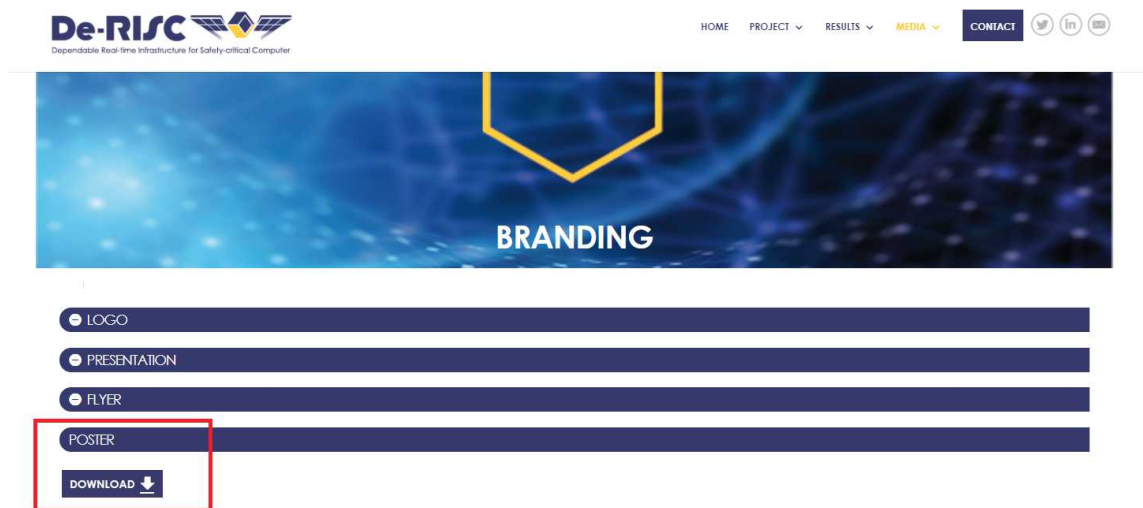
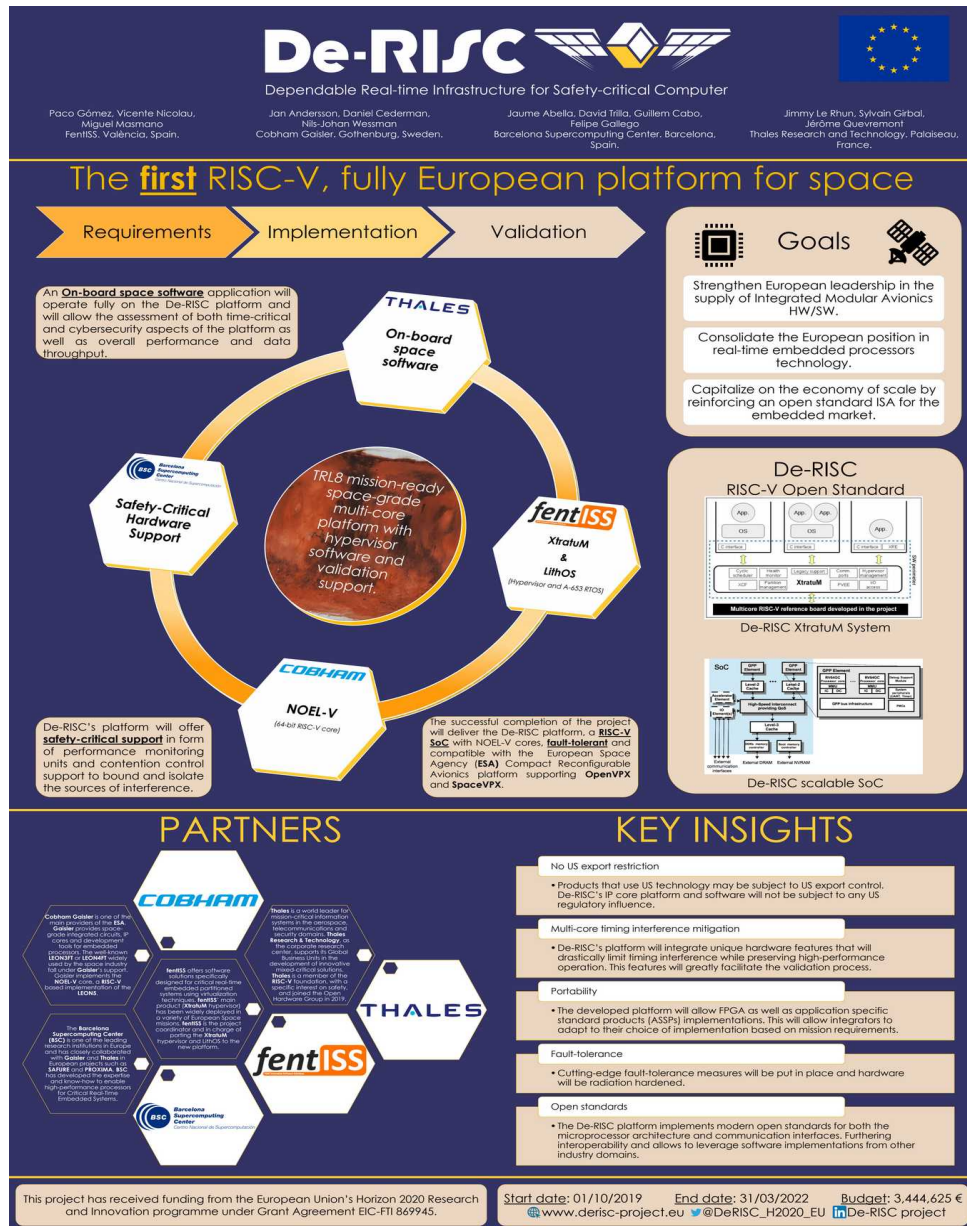


Figure 20: De-RISC website with downloadable poster (highlighted in red)



D5.2. Communication and Dissemination Plan and Report, First Update



8.3. Official project presentation and presentation templates

The project presentation templates have been distributed among the partners and are available to download from the common internal repository. The consortium has also created specific templates for Work Package presentations in progress meetings. The aim of these templates is to present the De-RISC project in a similar way and align key project messages by all the partners. These presentation templates are available in the common internal repository.



D5.2. Communication and Dissemination Plan and Report, First Update

Additionally, the consortium has created an official project presentation in order to send a homogeneous message to the public when giving an overview about De-RISC. This presentation also includes the progress of the project so it will be updated frequently. There are two versions of this file: one created in December 2019 and another updated in August 2020. These presentations can be downloaded through the common internal repository, and the last version is also available in the Branding section of the De-RISC website.

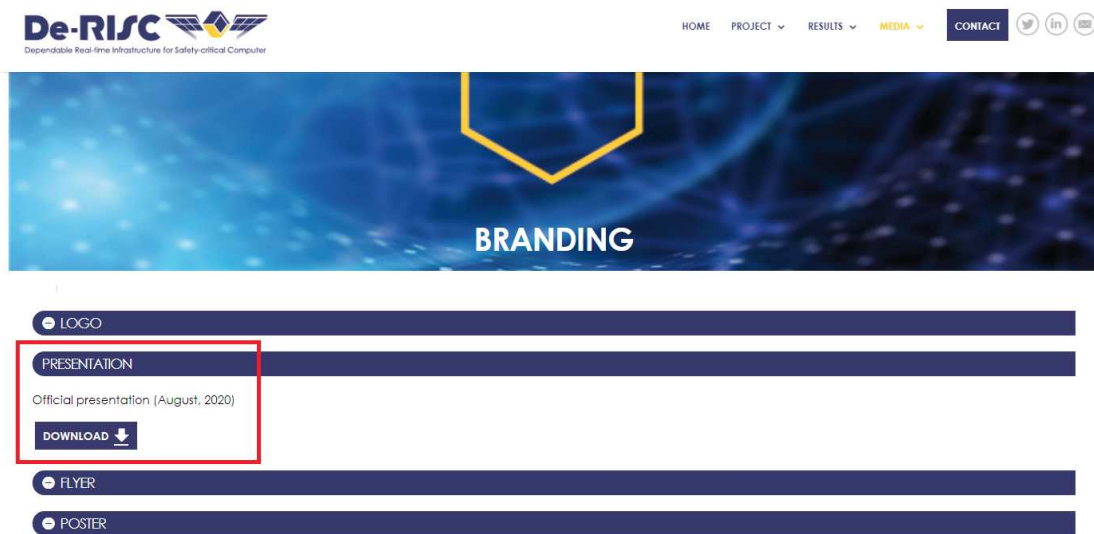


Figure 22: De-RISC website with downloadable presentation (highlighted in red)



Figure 23: De-RISC official project presentation

9. Events

All consortium partners attended events, workshops, conferences, etc. to disseminate the project. Note that, due to COVID-19, some of these events changed its face-to-face essence to a virtual modality. The full list of all dissemination activities is included below. The consortium attended a total of 11 events and disseminated the project at national and international events, which are key for De-RISC targeted audiences (see Table 2).

Type of event	Title	Details	Date	Audience Type	Audience size
Other	The 1st RISC-V week 2020	Conference where Johan Klockars (CG) had the "Development of a RV64GC IP core for the GRLIB IP Library" session and mentioned De-RISC as an upcoming project. Romain Soulat (TRT) also gave a conference titled "Formal Verification of RISC-V Implementation Designs" and mentioned De-RISC as upcoming project	3/10/2019	Scientific community (higher education/research)	50
Participation to a workshop	13th ESA Workshop on Avionics, Data, Control and Software Systems (ADCSS)	On the first day, FEN introduced De-RISC by means of networking. On the same event 2 days later, CG displayed a De-RISC information slide both in the company's exhibit booth and as part of the presentation "Introduction of Fault-Tolerant Concepts for RISC-V in Space"	12/11/2019 to 14/11/2019	Industry	162
Participation to a workshop	3rd BRAVE FPGA User Day	CG presented a De-RISC information slide during the company's vendor presentation. On the next day, FEN described De-RISC in its presentation.	26/11/2019 to 27/11/2019	Industry	200
Participation to a workshop + Organisation of a Workshop	GR740 User Day	FEN described De-RISC in its presentation. CG also mentioned De-RISC in its presentation.	28/11/2019	Industry	200
Participation to a workshop	TEC-ED & TEC-SW Final Presentation Days	FEN gave an overview of De-RISC in its presentation.	03/12/2019	Industry	50
Participation to a workshop	TRT internal dissemination event	TRT internal dissemination event about Horizon Europe. In a panel session FTI calls were explained and an overview of De-RISC given	20/01/2020	Industry	50
Participation to a conference	HiPEAC 2020	CG introduces De-RISC to the audience in its conference "New	21/01/2020 to	Industry	131



D5.2. Communication and Dissemination Plan and Report, First Update

		RISC-V Platform for Safety-Critical Applications".			
		FEN introduces De-RISC to the audience in its conference "Towards a RISC-V based solution for Aerospace Avionics Applications".	22/01/2020		
		BSC explains De-RISC to the people that approached during the poster session.			
		Introduction of De-RISC to Calista Redmon (CEO of RISC-V Foundation)			
Exhibition	Design, Automation and Test in Europe Conference (DATE 2020)	Online event (21-31 May) due to COVID-19 pandemic. De-RISC at a poster exhibition in HiPEAC booth.	21/05/2020	Any	Worldwide
Participation to a workshop	IEEE/IFIP International Conference on Dependable Systems and Networks (DSN, 2020)	Hardware Platforms Workshop as part of the virtual DSN2020 conference. During CG's presentation, the partner of the consortium explained SPARC & RISC-V architectures (1/3 of the workshop used to explain De-RISC in detail). Additionally, TRT presented the current challenges of safety and security in critical embedded systems, as well as, the advantages of Open Source architectures with an introduction of the De-RISC project.	29/06/2020	Industry, Scientific	30 live (available for playback afterwards for participants)
Participation to a workshop	Internal Workshop LVCUGEN	Workshop to present LVCUGEN to the consortium by CNES to assess the use of it within the use case. De-RISC project introduced to CNES.	02/07/2020	Scientific Community (higher education / research)	10 live
Participation to a workshop	RISC-V Global Forum	De-RISC networking done using 3 of the official channels in Slack.	03/09/2020	Industry and Scientific community	333
Participation to a conference	Industry Space Days (ISD 2020)	FEN attended to this online event organized by ESA and had 24 individual interviews with companies to present De-RISC	17/09/2020	Industry community	24

Table 2: De-RISC events during its first year

Further to the mentioned events, it was planned to participate in 2 additional conferences which were cancelled due to the COVID-19 pandemic. Additionally, the consortium sent abstracts to both of these events.

10. Publications

De-RISC has published one article in the [Ada User Journal](#) in June 2020 and another one in the conference proceedings of the 36th IEEE European Test Symposium (ETS) that will be published in May 2021. Please note that more papers will be published when more scientific results are achieved in the project.

Moreover, it is important to note that the consortium submitted 2 written abstracts for DASIA 2020 and ADA-Europe 2020 which were submitted and accepted by the organization but were not published due to the postponement of these events to 2021, considering the COVID-19 global pandemic. The De-RISC website is already prepared with a “Publications” section under the “Results” menu in order to display this content (see Figure 24) as soon as they are published according to its year of publication.



Figure 24: “Publications” section in the De-RISC website

In addition, a document containing the publication procedures has been distributed internally to all partners in order to accommodate the H2020 Publications rules (Figure 25).



Publication guidelines

V1.0
August 2020


 This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement EIC-FTI 869945

Figure 25: "Publications guidelines" file

11. Press strategy

In October 2019, a first press release titled “Lift off: De-RISC to create first RISC-V, fully European platform for space” was sent to technical media to emphasize how De-RISC plans to guarantee access to made-in-Europe technology for aerospace applications. This press release was approved by all partners. The dissemination leader encouraged the De-RISC partners to replicate this on their own partners’ channels. In total, 8 press impacts in technical media have been documented.

Media	Date	Link
EE News Europe	03/12/2019	https://www.eenewseurope.com/news/risc-v-fully-european-platform-space
Design & Reuse	03/12/2019	https://www.design-reuse.com/news/47201/risc-v-european-platform-for-space.html
HPC Wire	03/12/2019	https://www.hpcwire.com/off-the-wire/de-risc-to-create-first-risc-v-fully-european-platform-for-space/
Inside HPC	03/12/2019	https://insidehpc.com/2019/12/de-risc-computing-platform-for-space-will-be-built-with-made-in-europe-technology/
Reddit	03/12/2019	https://www.reddit.com/r/RISCV/duplicates/e5i6ot/derisc_announces_riscv_european_platform_for/
Hackster.io	04/12/2019	https://www.hackster.io/news/de-risc-project-looks-to-put-the-free-and-open-risc-v-isa-in-satellites-aircraft-24699411b6ef
Convertronic	04/12/2019	https://convertronic.net/noticias/tecnologia/8411-plataforma-con-tecnologia-europea-basada-en-risc-v-para-el-espacio.html
AB Open	04/12/2019	https://abopen.com/news/dependable-real-time-infrastructure-for-safety-critical-computer-de-risc-aims-for-the-stars/



L'embarqué	04/12/2019	http://www.lembarque.com/apercu-le-projet-europeen-de-risc-planche-sur-une-puce-systeme-multicoeur-risc-v-pour-laerospatial_009409
Heise Online	11/12/2019	https://www.heise.de/newsticker/meldung/RISC-V-fuer-den-Weltraum-4611273.html
L'embarqué	13/12/2019	https://www.lembarque.com/apercu-specialiste-des-processeurs-leon-a-architecture-sparc-pour-le-spatial-cobham-sort-un-coeur-risc-v_009444
HiPEAC Magazine 59 (Page 29)	20/01/2020	https://www.hipeac.net/magazine/7153/

Table 3: De-RISC press clippings during its first year

12. Industrial Advisory Board

The Industrial Advisory Board's (IAB) objective is to refine the product/market fit of the De-RISC solution, influencing the idea of delivering a commercially ready RISC-V platform for critical systems. Moreover, the IAB members can act as multipliers for result dissemination, communication and exploitation.

Following the Grant Agreement, the establishment of the IAB was scheduled for the first 3 months of the project. However, due to the COVID-19 situation, the professionals chosen to get involved in this organizational body sent the consortium the desire to delay the formation of the Advisory Board. The Executive Board (EB) found it relevant to delay this activity until May 2021 on time with the integration of the technology as these experts can then give feedback.

In order to determine the representatives of the IAB, the Executive Board (EB) members suggested different industrial institutions from the space market, i.e. space agencies or institutions related to space. After different EB meetings, the consortium agreed on choosing European Space Agency (ESA), Centre National d'Études Spatiales (CNES), Airbus OneWeb Satellites, and Thales Alenia Space (TAS) as follows:

- ◆ ESA and CNES are the space agencies with whom Cobham Gaisler and fentISS (project partners responsible for the platform commercialization plan) already own powerful connections.
- ◆ Airbus OneWeb represents a great opportunity, being OneWeb constellation one of the main users of XtratuM Hypervisor in the space market.
- ◆ Thales Alenia Space was chosen as it can be considered a big end-user. The potential conflict of interests (due to the participation of Thales Research and Technology in the project) was discussed and the consortium determined that the participation of TAS was fully justified as De-RISC technology would use CG's and FEN's product, companies who do not have a conflict of interest with Thales Alenia Space.



The list above features relevant organizations for the De-RISC project and the consortium identified one expert from each organization, which resulted in a total of four experts that joined and comprised the IAB. Dissemination efforts will be focused on creating a dedicated page on the project page that will include this information, as well as regular quotes from the members will be requested for dissemination purposes.

In order to achieve its objective, IAB experts will be invited to three meetings where they will provide their feedback to the consortium. These meetings are scheduled for May 2021, October 2021 and March 2022. The meeting minutes will be internally shared with all partners.

The first meeting in May 2021 will provide feedback and evaluate the application of the tasks done by De-RISC. The second meeting aims to get recommendations and input from members with an industrial and user focus about the development of the project. Finally, the third meeting will focus on providing the final project results to know about potential exploitation of the interested parties.

13. Collaborations

13.1. Collaborations with other initiatives or projects

As stated in D5.1, more collaborations are expected to occur with other research initiatives, being those where some of the De-RISC partners are involved the easiest to achieve. Among those, the consortium can already identify the following initiatives or projects:

- ◆ **H2020 SELENE**. This project, started in December 2019, targets the development of a hardware/software platform for safety-related systems with some similarities with De-RISC. In particular, it builds upon RISC-V and two of its main target markets are space and avionics. However, SELENE aims at developing a lower-TRL platform (TRL3-5) building on networks-on-chip (NoCs), with an open source software stack, targeting also domains such as automotive and robotics, and incorporating accelerators. Since both Gaisler and BSC are also partners of that project, both of them plan to leverage and adapt De-RISC technologies as much as possible to make components flexible and establish a bidirectional path between both initiatives to exchange technologies for future more-powerful products, still building on the same principles of delivering high-performance, safety-compliant RISC-V platforms for space, avionics and other safety-related markets.

More specifically, BSC has developed a component called SafeSU (Safe Statistics Unit) that is attached to the (centralized) AMBA AHB main bus to monitor and limit multicore interference. The SafeSU has been ported and integrated onto H2020 SELENE platform as the basis for a new SafeSU-2 able to operate in the context of distributed interconnects such as hierarchical buses and mesh networks-on-chip. Moreover, drivers to ease the use of the SafeSU in Linux have been developed as part of H2020 SELENE.

On the other hand, as part of the work of H2020 SELENE, a component called SafeTI (Safe Traffic Injector) is being developed. The SafeTI is a programmable hardware traffic injector that can be connected to AMBA AHB interfaces and inject parameterizable traffic in the interconnect, thus allowing to model multicore contention with high flexibility and control. An alpha version of the SafeTI has been ported and integrated onto the H2020 De-RISC platform and proven functional. During forthcoming months, the SafeTI from SELENE will be used in De-RISC as a means for validation of the performance capabilities of the multicore itself, as well as to validate the features of the SafeSU.

- ◆ **ECSEL FRACTAL**. This project started in September 2020, and BSC is also a partner of this recent project. It targets the development of highly flexible and adaptable platforms for safety-critical systems building on platform means to learn and adapt dynamically, thus letting the platform itself dynamically reconfigure its capabilities, as well as associating with other platforms for the joint delivery of high-level services. FRACTAL builds upon Xilinx Versal platforms for more mature solutions, and RISC-V platforms for long term solutions. In this last line, we aim at pushing De-RISC solutions for their adoption as baseline components for the development of FRACTAL platforms, thus easing the development of FRACTAL and increasing exploitation avenues for De-RISC technology.
- ◆ **H2020 EPI**. EPI aims at deploying a commercial high-performance processor for HPC and automotive systems by 2021, and further released beyond that date. BSC is, again, part of the consortium of this project. Part of EPI technology builds explicitly on RISC-V. Our aim is to leverage EPI learnings in De-RISC to make sure that the most critical lessons for the automotive domain in EPI are taken into account in De-RISC platform, and plan to make De-RISC solutions be visible in EPI so that the EPI processor can leverage existing technology whenever possible instead of developing it from scratch.
- ◆ **H2020 XANDAR**. The XANDAR H2020 project is an effort to improve the software tools and environment to develop real-time secure embedded systems by applying modeling techniques which take the non-functional requirements (safety, security, timing requirements) starting in the early development phases. XtratuM/XNG will be used as the software platform of the project in two domains of high relevance for De-RISC: aeronautics and automotive (The German Aerospace Agency, DLR, and the automotive manufacturer, BMW, are two reference partners for the corresponding use cases). Although the XANDAR Project has started very recently (January 2021), there has been already some exchanges between the two projects. In particular, the NOEL-V platform developed in De-RISC was introduced to BMW who showed interest in RISC-V solutions. A technical meeting between BMW and Cobham Gaisler is currently explored. From the technical perspective, some cross-fertilization is anticipated between the two projects. In particular, XANDAR will take advantage of the XNG/SMP implementation carried out in De-RISC. De-RISC in turn will benefit from the Health Monitoring features that will be implemented in XANDAR for

XNG. fentISS is a common partner in both projects and will act as connector between the corresponding teams.

- ◆ **H2020 LEGATO.** During this first reporting period, De-RISC has taken part in an event in collaboration with another H2020 project: LEGaTO. De-RISC participated in this project final event as part of the International Conference on Field-Programmable Logic and Applications (FPL) 2020. During this event, BSC introduced De-RISC to the participants and briefly explained the key aspects of the project in a presentation titled "Resilient high-performance and low-power platforms for safety-critical real-time Systems".
- ◆ **H2020 HERMES.** The HERMES project will complete the development activity of the most advanced rad-hard SoC FPGA in the world and qualify it in ceramic CGA 1760 package, addressing applications beyond the space market such as avionic, energy and transport. FentISS constitutes one of the partners of this consortium and, By getting involved in HERMES, fentISS' work will be focused on the support and qualification of XtratuM hypervisor in the new rad-hard MPSoCs of NanoXplore which are provided with general purpose microprocessor.
- ◆ **HiPEAC** (High Performance Embedded Architecture and Compilation) provides a hub for European researchers and industry representatives in computing systems with over 2.000 specialists. Being part of this network helps De-RISC to gain greater visibility in the research community while giving the project exposure to industry representatives and potential future investors (HiPEAC, 2020). De-RISC is part of this HiPEAC network (Figure 26) since 22 November 2019. In its description on the website, HiPEAC has published a brief presentation of the project including its critical features to the market, external links to the official website of De-RISC and to the CORDIS page of the project, and the partners of the consortium.



D5.2. Communication and Dissemination Plan and Report, First Update

HiPEAC The Network Events Jobs Vision Awards News Press room [Join](#) [Log in](#)

De-RISC [← Back to projects](#)

De-RISC

De-RISC: Dependable Real-time Infrastructure for Safety-critical Computer

De-RISC is a proposed project where an international consortium will introduce a hardware and software platform based around the RISC-V standard. The work proposed in this project is to productize a multi-core RISC-V system-on-chip design already owned by Cobham Gaisler AB and to port the Xtratum hypervisor owned by fentISS SL to that design, to create a full platform consisting of hardware and software for future European developments within space and aeronautical applications.

De-RISC brings critical features to the market that make it unique in front of the competition:

1. No US export restrictions: most existing products use US technology, thus subject to US export control. De-RISC's IP core platform and software will not be subject to any US regulatory influence by building on RISC-V.
2. Multi-core interference mitigation concepts by Barcelona Supercomputer Center (BSC) integrated in the RISC-V SoC and validated by Thales SA become a unique feature, and will provide a key advantage w.r.t. competitors by limiting drastically interference while preserving high-performance operation.
3. Portability: The proposed development will create a RISC-V HW/SW platform that can be implemented in FPGAs and application specific standard products. This provides an edge for integrators that can adapt their choice of implementation technology based on mission requirements.
4. Fault-tolerance concepts: The platform will be provided by companies with experience in the space domain and with heritage in design of fault-tolerant systems.
5. Future-proof selection for new platforms: New software products are not being ported to SPARC and PowerPC architectures. With an established vendor providing a RISC-V platform there are guarantees of continued support for the hardware platform while developments from the commercial domain for the RISC-V architecture can be leveraged over time.

COORDINATOR
fentISS

EXTERNAL LINKS

- [Website](#)
- [Cordis](#)

PARTNERS

fentISS **COBHAM** **THALES**

Figure 26: De-RISC page on the HiPEAC website

Additionally, this network publishes a quarterly magazine providing the latest news on the activities within the European HiPEAC network. In January 2020, the issue 59 of this magazine was published and it included an article about the De-RISC project. (see Table 3 and Figure 27). It is also expected that a new publication is published in HiPEAC magazine in the following months in its issue number 61.



Figure 27: De-RISC article in the HiPEAC magazine

- ◆ **RISC-V International** is a global non-profit association based in Switzerland. Founded in 2015 as the RISC-V Foundation with 29 members, RISC-V is now a truly global organization with over 200 member organizations in more than 30 countries, plus over 300 individual members worldwide. The RISC-V Foundation was founded to build an open, collaborative community of software and hardware innovators based on the RISC-V ISA. [De-RISC](#) has recently joined the RISC-V Foundation as community member of this



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organization (Figure 28), see information on their website here: <https://riscv.org/member/h2020-de-risc-project/>

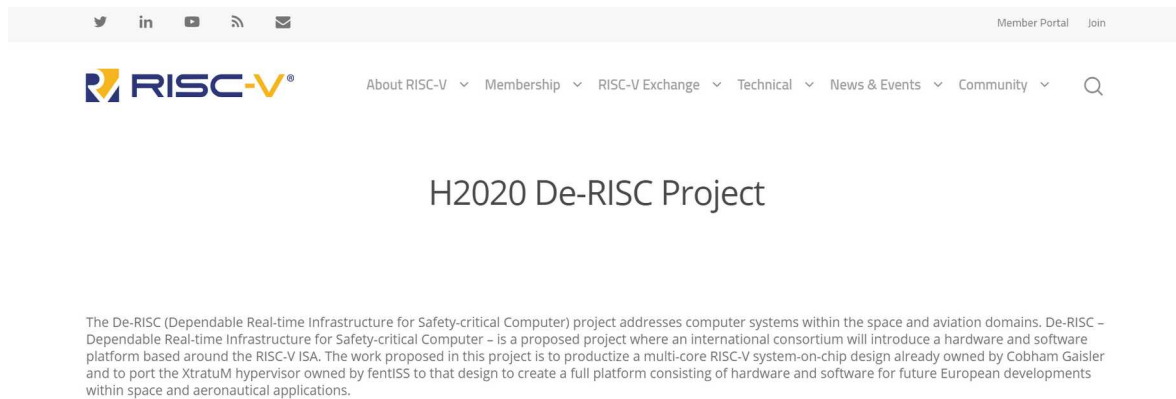


Figure 28: De-RISC page on RISC-V Foundation website

13.2. Collaborations with companies

The consortium presented De-RISC to the following companies:

- ◆ **Centre National d'Études Spatiales (CNES)**: This is the French government organism in charge of national spatial development. De-RISC consortium presented the project on 02/07/2020. They also took part in a project workshop to present LVCUGEN to the consortium in order to assess the use of it within the on-board satellite software stack use case. CNES is leading the development of on-board avionics hardware and software for satellites and aircrafts at European level thus they are strongly interested in the technology developed in the project. They are also interested in the use of LVCUGEN within the project as a means to compare the performance of the project solution with other LVCUGEN implementations that they run in other platforms, notably LEON processors and ARM-based processors. As result of the first contact, it was decided to inform them on the progress of the project in monthly meetings. Moreover, one of the CNES senior engineers and expert in satellite avionics, Mr. Julien Galizzi, accepted to be part of the De-RISC Industrial Advisory Board. CNES is a prescriptor of hardware and software used on-board satellites at aircraft for the European Aerospace industry and as such its involvement will be instrumental in the success of the project exploitation and dissemination.
- ◆ **ASTC & VLAB**: fentISS presented the project to this software and engineering services company on 18/12/2019. ASTC (Australian Semiconductor Technology Company) delivers semiconductor and systems design, embedded software development and other services

across global markets and supply chains for automotive, mobile, multimedia, transportation, and aerospace electronics and embedded software.

- ◆ **24 individual company interviews during ISD2020:** fentISS had the chance to present De-RISC to several companies in the Industry Space Days event organized by the European Space Agency. The presentation took place through individual meetings in which the project key technology developments were presented. Companies involved in New Space were a primary objective for presenting the project technology. It is worth mentioning contacts with the following companies: Exotrail, French company focused in bringing agility to Space; AiKO, an Italian SME using AI in Space who were interested in using the project solution as an on-board platform to run their deep learning algorithms; C3S, a Hungarian company who offers CubeSat platforms and microsatellites subsystems; KPLabs is a Polish SME providing on-board computers for high performance processing in microsatellite (e.g. image processing) thus they were particularly interested in the performance capacity of the platform and in the mixed criticality features of XtratuM; Space Sur is a Spanish company (also established in Argentina) with expertise in software engineering for space systems, they could be a potential partner for future cooperation in space projects; Technolution is a Dutch company who develops their own RISC-V IPs and applies their technology to high-speed signal processing in different markets, they could provide a route to exploitation beyond aerospace; SSOC is a Canadian startup who aims at providing the whole small satellite platform for smallsats companies, they expressed their interest in participant in common projects and missions for ESA. These and other similar companies will be updated with information on the De-RISC developments in further annual ESA Industry Space Days with higher probability to develop concrete exploitation actions when project results are more mature.
- ◆ **Imperas:** this is a software firm specialized in the development of embedded software and systems with particular emphasis on RISC-V simulators. fentISS presented De-RISC to this company on 04/09/2020. As result Imperas showed interest in cooperating with FEN to test the full virtualization features of their RISC-V simulator (RISC-V H extensions) using XtratuM. The company will be contacted again when the porting to the fully virtualized NOEL-V takes place in the forthcoming months.
- ◆ **Private initiative with SENER Aeroespacial:** SENER is one of the main Spanish companies in the aerospace sector. The company is very interested in the use of hypervisors in RISC-V processors because they see applicability in space and aeronautics, two markets in which the company is active. The consortium presented De-RISC to this company on 14/09/2020. As a result, they have started using XNG over a Xilinx-Zynq platform in their MFoC national R&D project. They have recently signed a support contract with FEN to evaluate other company products. This will enable FEN to keep the SENER team informed as soon as more solid De-RISC project results are available.



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As stated above, the companies contacted during the period will be addressed in future space events, notably in ISD2021, to update them on the project results and technology. Most of the companies have short and medium term needs of on-board platforms and they are expected to be a first route to exploitation for the hardware and software technologies developed in the project. In the case of CNES, they will be involved in the project IAB which will provide them additional insights to the project technology developments enabling them to act as prescriptors of the De-RISC technology for forthcoming missions and aerospace applications.

For more information about these commercialization strategies please refer to D5.5.

14. Key performance indicators (KPIs)

All dissemination activities and tasks are carefully monitored in order to achieve the Key Performance Indicators of De-RISC, some of which have already been achieved. The metrics defined in [D5.1] Communication and Dissemination Plan show the progress of the project.

KPI	Explanation	Total first year	Total target by the end of the project
Press releases	At least 1 in a year	1	3
Press clippings	Articles appearing in the press about the project	12	30
Project presentation	General overview presentation regularly updated	1	1
Events and conferences attended	Events where project researchers participate, including conferences booths, workshops, tutorials etc. (with significant attendance, i.e. above 30 people)	11	25
De-RISC dedicated social media channel	Number of followers	197	200
De-RISC & partners social media channels	Number of tweets/posts in the partners' social media channels related to De-RISC	121	500
Website	Number of unique visitors in the website	362	1000
Scientific publications	Priority will be placed on having few scientific publications with strong contributions that may serve as reference for the community during long time. The initial expectation is having one such publication led by each partner	0	4

Table 4: List of KPIs. Source: De-RISC [D5.1] Dissemination and Communication Plan

The monitorisation and contingency plan for the activities measured by KPIs (Table 4) comprises the next actions:

- ◆ **Press releases:** Once the project starts generating results, more press releases will be prepared accordingly.

- ◆ **Press clippings:** The action plan to increase the KPIs includes more frequency in sending press releases, inviting personalised interviews and news to specialised media.
- ◆ **White paper and facts sheets:** As there are not public scientific results yet, no white paper or fact sheet has been produced to date. As soon as the project gets results, the consortium will report it.
- ◆ **Project presentation:** The project presentation has been already distributed to all partners and will be updated along with the project progress.
- ◆ **Website unique users:** The website unique users number is attaining the expected outcome. However, dissemination actions such as the project video campaign, tweets and press releases will be distributed to drive traffic into the De-RISC website.
- ◆ **Events and conferences attended:** De-RISC will participate in events scheduled for 2020, such as ISD 2020 or MBSE 2020, both held online, or in ICT 2020 – Leading the Digital Age, an exhibition which gives an opportunity to show the best-in-class results accomplished in EU-funding or EU-initiatives projects. Additionally, ADA and DASIA Conferences are planned for the next year as it was expected to attend this year, but they got postponed for 2021.
- ◆ **Scientific publications:** As explained in Section 8, no publications have been done up to date. As the scientific results of De-RISC are available, the number of publications will rise.
- ◆ **Twitter:** Twitter followers are increasing in a steady manner. As seen in Table 1, Twitter works for a general audience as well as for a specialised audience. For that reason, the next steps in Twitter will include broader information about space, RISC-V to disseminate De-RISC among a wider public, but also relevant basic information about the project itself in order to raise awareness about De-RISC. The consortium expects to create more engagement between users encouraging interaction with De-RISC tweets.
- ◆ **LinkedIn:** LinkedIn social media channel is especially suitable to target a professional and industrial target, which is strategic to the dissemination and exploitation plan. One of the main objectives of the period is transferring all the members available in the LinkedIn Group to the De-RISC page, which offers better tools than the group. As seen in Table 1, numbers from the LinkedIn company page are satisfactory. The page is slowly attracting new members and inviting those users from the group to follow it thanks to frequent posts promoting the existence of this page. Additionally, some of the posts on this social media channel are starting to create engagement among users, mainly individual partners of the project.



15. Next actions

All dissemination De-RISC shows a satisfactory progress during its first year whose aim was to launch the project and built a community around the project. The commercialization activities are planned to start around M24, but they will be analysed in the D5.5 Initial Commercialization Plans and updated in the following commercialization-related deliverables.

The main dissemination tasks during this first year have involved the definition of the brand (with the development of logos, poster, brochure, official presentation, file templates, etc.), the creation of the main communication channels such as website and social media channels (Twitter and LinkedIn), the launch of a first press release followed by a satisfactory media impact, and the participation in key scientific and industry events.

The second year of the project will bring specific results after one year of research. These results will be conveniently disseminated and strategically presented via online and offline. Events being a significant communication tool for De-RISC as they are, the consortium will focus efforts on continuing being updated about relevant events. De-RISC will encourage partners to continue participating in these events, even if they are held online due to health conditions, and members will be invited to use posters, brochures and similar dissemination tools. For the following year, the consortium expects to participate in different conferences, exhibitions or workshops such as DASIA 2021 or Ada-Europe 2021, among many others, both of them bringing together scientific and industry public, as the 2020 editions were cancelled. Moreover, contacts with companies will be encouraged for all partners in the consortium, as well as the collaboration with other H2020 projects such as XANDAR, with which the consortium already has plans on presenting De-RISC.

Additionally, public results and updates about the project will also be displayed in the official project website and social media profiles in order to raise as much awareness as possible from the project. These online channels will be highly-important during this second year as more information could be shown due to the advancement of the project. In the website, the main objective of the second year will be increasing the users and session numbers, so new people are attracted to visit the page, but past visitors repeat this experience. In order to achieve this, the consortium will publish updated and engaging content in the News section. Therefore, a big focus of this new period will be the development of articles and a constant update in this section. The strategy to increase traffic to the website will rely on the immediacy that social media networks offer, advertising these website links on LinkedIn and Twitter. These two social media apps will also play a major role during the next period, as more content will be available to increase followers and keep high levels of users' activity. What is more, the consortium plans on recording a promotional video which will be launched in all the social media networks and with which it is expected to make a great impact.

The project impact after the initial phase is an optimal opportunity to disseminate the first project findings and the early scientific production, preparing the background to a next phase focused on



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transferring and exploiting the results of De-RISC, that is why the following year is a key stage for the dissemination activity of the project.



A. Appendix I – Corporate image: Logo



Figure 29: Other variants (flattened) of De-RISC logo



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Figure 30: Other variants (rectangle) of De-RISC logo



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Figure 31: Logo guidelines