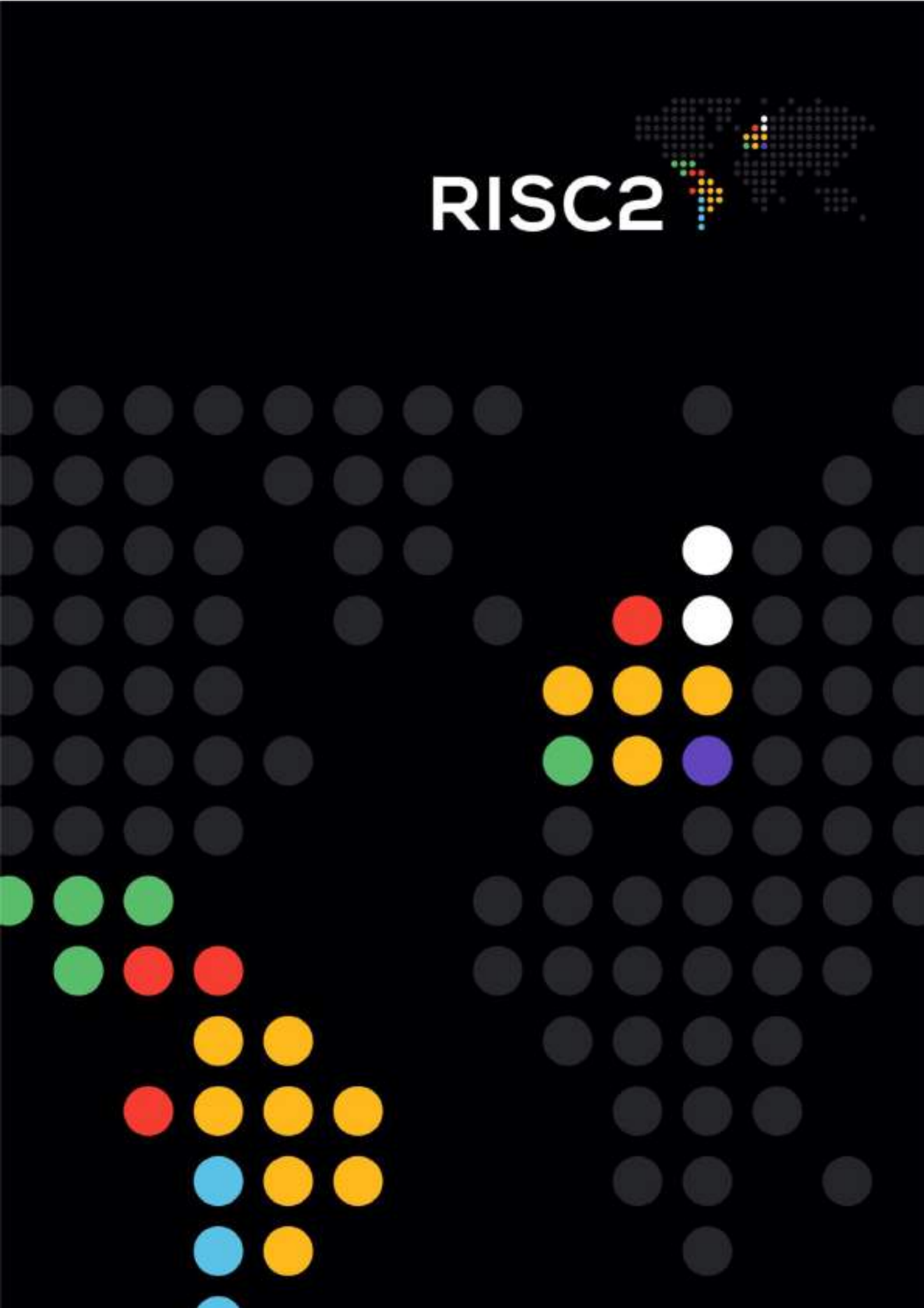
RISC2

Deliverable 2.4

The HPC Observatory (M30)

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Change Log

Version	Description Change
V0.1	First draft
V1.0	Version delivered to the European Commission

Table of Contents

1. Introduction

All regions now see intense investments in HPC as essential to compete globally. In this context, coordination and capacity sharing between allied regions are crucial. The RISC2 project gathers key European and Latin American High-Performance Computing (HPC) actors to encourage more robust cooperation between their research and industrial communities on HPC applications and infrastructure deployment.

RISC2 disseminates the activities and results through dedicated project communication tools, such as the project website and its HPC Observatory, to identify common challenges, ideas for cooperation, and critical issues.

The HPC Observatory includes relevant information to map Latin American research and industrial ICT actors, research capabilities, and collaboration needs. Moreover, the HPC Observatory facilitates access to information about collaboration opportunities with their EU counterparts in the HPC area.

2. The HPC Observatory

The HPC Observatory is one of the deliverables within WP2. The information structure and sources were presented through D2.2, delivered in February 2022. D2.3, delivered in June 2022, shows the progress made in content, including screenshots of the website, which is already accessible at https://www.risc2-project.eu/hpc-observatory/. This document, D2.4, reflects updates on the HPC Observatory's content and a website analytics report.

The HPC Observatory is dedicated to analyzing the social and research implications of HPC. The Observatory is supported by multiple RISC2 partners and is maintained using its resources to ensure its continuation past the project's end. The objective is to serve as a think tank that European and Latin American research organizations can use when looking for HPC-related information. An editorial board appointed by the RISC2 consortium identifies and assesses information and its relevance to the objectives of RISC2.

The HPC Observatory is available as a dedicated section on the project website (https://www.risc2-project.eu/).

The HPC Observatory consists of four sub-sections:

a) **About**: Brief presentation of the HPC Observatory objectives and sections ("Repository", "Centers", and "News and Events") and the Editorial Board that supports it.
b) **Repository**: This section, which will be completed after the final project review, will include a collection of the reports and training materials produced during the RISC2 project lifecycle. Reports will be published upon their approval by the project monitors. Regarding the training sessions, the training materials will be made available upon completion of the training events for which they were produced. Part of these files are already available for access on the Repository section of the HPC Observatory page, as also on the project YouTube channel.

c) **Centers**: List of relevant HPC research and industrial organizations in LATAM. The HPC Observatory collects information from national sources and each HPC-related organization's website. Details are described in section 2.2 below.
d) **News and Events**: This section offers news, information on past and upcoming events, collaboration opportunities, and relevant reports. In addition to news on the RISC2 activities, this section collects information from publicly available websites and newsletters. Data from these sources is published through the HPC Observatory, including references to the original publication. More information on the News and Events can be found in section 2.3 below.

Figure 1. HPC Observatory page

2.1. Editorial Board

The Editorial Board identifies relevant information to disseminate through the HPC Observatory.

The Editorial Board is chaired by the WP2 leads (BSC and UIS) and the WP5 lead (INESC TEC). INRIA supports the Editorial Board.

Figure 2. Editorial Board section

2.2. Repository

As mentioned above, this section will be completed after the final project review and will include a collection of the reports and training materials produced during the RISC2 project lifecycle, including reports, training materials and other relevant documents related to the centers.

Up until now, the repository has available the White Paper on HPC RDI in LATAM, which was reported on the Deliverable 2.1.

Figure 3. Repository section

2.3. HPC Centers

The main section of the HPC Observatory is a list of relevant HPC resources within research and industrial organizations in LATAM. Readers can navigate through the list, filter per country, and click on each entry to read detailed information on the system.

Figure 4. List with HPC countries available per country

Information on the HPC resources per RISC2 targeted country is displayed following a template that includes the items listed below:

- System name
- Hosting site
- Site location
- Country
- Website
- Processor architecture
- Operative system
- Vendor
- Peak performance
- Research and application domain(s)
- Access policy

These items were defined based on relevant reports on the HPC landscape: "The EuroHPC JU Supercomputers: Analysis of the Petascale and Pre-exascale systems" (September 2021) and "ETP4HPC's SRA 4 2020: Strategic Research Agenda for High-Performance Computing in Europe" (March 2020).

Figure 5. Example of sub-page within the section dedicated to HPC centers

The data to populate the section “Centers” within the HPC Observatory is based on the relevant HPC resources identified by LATAM partners when producing the D2.1 *White Paper on HPC R&D*. Additional information was sourced from publicly accessible information on each organization’s website.

Today, the HPC Centers section offers information about 59 HPC systems in Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Uruguay.

Readers can download the information about HPC centers in .csv format if desired.

2.4. News and Events

This section can be found at https://www.risc2-project.eu/news-events, a section of the HPC Observatory in the website's main page.

It includes the news produced by the consortium during the project lifecycle, information about past and upcoming events in which RISC2 partners participate, and relevant news shared by the HPC Observatory, pointing to their source.

Figure 6. Screenshot of the latest news shared through the website

Figure 7. Screenshot of the latest and upcoming events shared through the website

2.5. Target Audience

As a dedicated section within the project website, the HPC Observatory targets the audience defined in the D5.1 Dissemination, Communication and Exploitation Plan. In this vein, the Plan had defined the target audience for the communication materials by identifying four groups:

- The HPC community;
- Research actors (public and private);
- Industry;
- General public.

The section on News and Events and the Repository (focusing on training materials) could be of particular interest to the HPC community and the public. The section on Centers will likely be helpful for research and industry stakeholders since it offers an overview of the HPC landscape in LATAM, including technical and access information that might be of use when exploring potential collaboration opportunities.

Readers can subscribe to the project newsletter by filling in a subscription form, accessible at the bottom of the main page (https://www.risc2-project.eu/) and agreeing to the Privacy Policy (described in the D1.2 *Data Management Plan*). Subscribers receive one email every two months, including the updates and new information shared through the HPC Observatory and other initiatives developed and promoted by the project consortium.

Figure 8. Screenshot of the subscription form

3. HPC Observatory Analytics Report

The HPC Observatory page is one of the sections of the RISC2 website. Since October 2021 to June 2023, this page is the third project page with more views. According to the figure below, between October 2021 to June 2023, the HPC Observatory page has 983 views, which reflects 6,96% of the total website views.

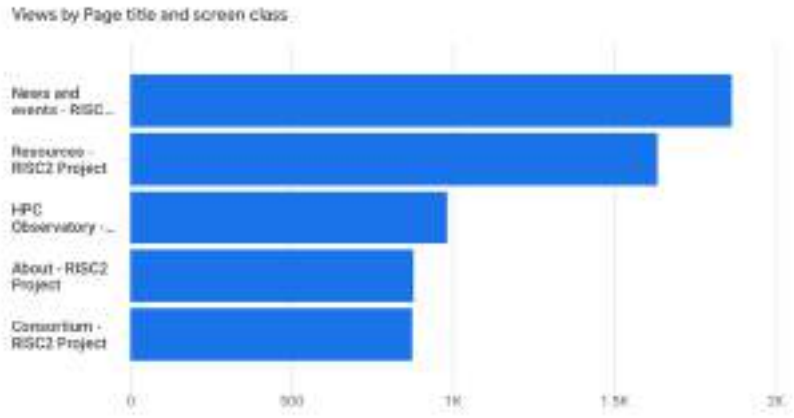

Figure 9. Screenshot of the Top 5 of the pages and screens with more views from Google Analytics

	Page title and screen class	Views	Users	Views per user	Average engagement time	Event count All events
		14,127 100% of total	3,765 100% of total	3.75 Avg 0%	1m 07s Avg 0%	46,682 100% of total
1	News and events - RISC2 Project	1,862	403	4.62	1m 25s	6,534
2	Resources - RISC2 Project	1,634	629	2.60	0m 15s	5,408
3	HPC Observatory - RISC2 Project	963	283	3.40	1m 12s	3,967
4	About - RISC2 Project	877	525	1.67	0m 32s	3,016
5	Consortium - RISC2 Project	873	465	1.88	0m 51s	3,271
6	(not set)	398	140	2.84	0m 06s	783
7	Webinar: A roadmap to quantum computing integration into HPC infrastructures - RISC2 Project	369	240	1.54	0m 33s	1,406
8	Events - RISC2 Project	352	82	4.29	2m 16s	1,006
9	Webinar #1: Getting Scientific Software Installed: From EasyBuild to EESSI - RISC2 Project	295	148	2.05	0m 45s	1,000
10	Webinar #2: Interactive High-Performance Computing with JupyterLab - RISC2 Project	270	146	1.85	0m 38s	961

Figure 9. Screenshot of the pages and screens details from Google Analytics

It is important to mention that the website, since the beginning of the project, has been visited from different parts of the world, including different continents.

According to the figure below, the website has visits from different countries and from different continents, including United States, Portugal, Spain, Brazil, Germany, Colombia, Italy, France, Mexico, and Chile. Below, the figure shows the top 10, which represents 4 different countries from LATAM and 6 different countries from Europe in the top 10.

According to these statistics, during the last months of the project, the consortium will propose a stronger dissemination effort in LATAM, in order to improve the number of visits of this content in this region.

	Country	Users	New users	Engaged sessions	Engagement rate	Engaged sessions per user	Average engagement time
		3,765 100% of total	3,756 100% of total	3,777 100% of total	52.47% Avg 0%	1.00 Avg 0%	1m 07s Avg 0%
1	United States	790	785	269	31.17%	0.34	0m 12s
2	Portugal	310	312	990	67.95%	3.19	5m 13s
3	Spain	307	304	325	53.1%	1.06	1m 08s
4	Brazil	293	289	235	52.81%	0.80	1m 02s
5	Germany	217	207	177	52.99%	0.82	0m 54s
6	Colombia	200	197	136	40.72%	0.68	0m 43s
7	Italy	186	184	380	44.24%	2.04	0m 47s
8	France	174	173	134	45.58%	0.77	0m 38s
9	Mexico	130	125	117	58.79%	0.90	1m 26s
10	Chile	97	96	109	52.66%	1.12	1m 28s

Figure 10. Screenshot of the country details from Google Analytics

5. Plans to Maintain the HPC Observatory

Looking at the future of the collaboration created under the RISC2 project, it is important to keep the project website accessible and the consortium is aligned with this point.

For that, the project partners will try to maintain the project website accessible after the project final review.

The consortium is analyzing the plan for the HPC Observatory and an option for that is to have the support by SCALAC via EuroHPCLatam collaboration with RISC2 and European partners, located in the site of SCALAC.Redclara.net. Anyway, a plan will be defined during the upcoming months, in order to guarantee that the solid and consistent information created during the project execution will be accessible in the future.

6. Summary

RISC2 included the HPC Observatory as a dedicated section within the RISC2 project website.

The HPC Observatory has three main sections, corresponding to news and events (section "News and Events"), a repository of relevant reports (section "Repository"), and information on LATAM key HPC resources (section "Centers").

This report shows the HPC Observatory's updates in terms of content and a web analytics report.

Acronyms and Abbreviations

BSC	Barcelona Supercomputing Center/Spain
ETP4HPC	European Technology Platform for High-Performance Computing
EU	European Union
HPC	High-Performance Computing
ICT	Information and Communication Technologies
INESC TEC	Institute for Systems and Computer Engineering, Technology and Science/Portugal
INRIA	National Institute for Research in Digital Science and Technology
JU	Joint Undertaking
LATAM	Latin America
SRA	Strategic Research Agenda
UIS	Universidad Industrial de Santander/Colombia
WP	Work Package
SCALAC	Advanced Computing System for Latin America and Caribbean