



**E-RIHS**

EUROPEAN RESEARCH INFRASTRUCTURE  
FOR HERITAGE SCIENCE

## **E-RIHS IP**

European Research Infrastructure for Heritage Science

IMPLEMENTATION Phase

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### **D2.3 E-RIHS Accounting Guidelines for Service Provision Costing**

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## ABSTRACT

This deliverable provides accounting guidelines for service provision costing for the E-RIHS community. Apart from some central services that are directly provided by the E-RIHS Central Hub, most services are provided by partners within National Nodes. Services can be related to providing access to one of the four E-RIHS platforms (ARCHLAB, DIGILAB, FIXLAB and MOLAB), participating in HS Academy activities, or any other activity carried out by National Nodes on behalf of the ERIC.

This report first introduces the general business model of E-RIHS and describes the different cash flows and in-kind contributions within the distributed infrastructure. It then defines different types of in-kind contributions and provides accounting guidelines for each category. It then concludes with a suggested financial validation procedure for the ERIC and reminds, in compliance with the host country applicable legislation.

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## ABBREVIATIONS

ABBREVIATIONS	EXPANSION
ARCHLAB	ARCHive LABoratory: E-RIHS access platform that brings together organized scientific information in largely unpublished datasets from archives of prestigious European museums, galleries and research institutions ( <a href="https://www.e-rihs.eu/e-rihs-catalogue-of-services/">https://www.e-rihs.eu/e-rihs-catalogue-of-services/</a> )
CNN	Committee of National Nodes
DIGILAB	DIGital LABoratory: E-RIHS access platform that provides remote access to heritage science data, supplemented with digital services and tools within a virtual research environment (under development)
DMP	Data Management Plan
EC	European Commission
ERIC	European Research Infrastructure Consortium
FIXLAB	FIXed LABoratory: E-RIHS access platform that brings together fixed research facilities and associated scientific experience of their staff that develop and maintain sophisticated state-of-the-art instrumentation for advanced diagnostics and archaeometry ( <a href="https://www.e-rihs.eu/e-rihs-catalogue-of-services/">https://www.e-rihs.eu/e-rihs-catalogue-of-services/</a> )
GA	General Assembly
HS	Heritage Science
HS	Heritage Science
IKCs	In-kind contributions
IPSAS	International Public Sector Accounting Standards
IPSASB	International Public Sector Accounting Standards Board
MOLAB	Mobile LABoratory: E-RIHS access platform that brings together European laboratories offering state-of-the-art mobile equipment and related competencies, for in-situ non-destructive measurements of artworks, collections, monuments and sites ( <a href="https://www.e-rihs.eu/e-rihs-catalogue-of-services/">https://www.e-rihs.eu/e-rihs-catalogue-of-services/</a> )
NN	National Nodes
PP	Preparatory Phase
RoP	Rules of Procedure
SLA	Service Level Agreement
WP	Work Package

## INTRODUCTION

As a distributed research infrastructure, E-RIHS is composed of various components that work together to implement a common vision and mission. E-RIHS ERIC will have diversity of actors, with the ERIC as a Central Hub based in Florence and the distributed National Nodes spread across Europe. Each component is composed of partners that provide contributions, implying a diversity of accounting regulations and practices. Although there is a central ERIC budget, and some National Nodes have their own budget, a significant part of E-RIHS activities will be carried out on partners budgets, such as providing access to the E-RIHS platforms (ARCHLAB, DIGILAB, FIXLAB and MOLAB) or providing training to the community through the HS Academy. This creates complex value flows between all E-RIHS stakeholders, as further described in Chapter 1.

These contributions are mostly provided in-kind to the ERIC, but some activities will also require financial participation from users. For example, E-RIHS Training Camps can require registration fees or, in limited cases, access providers can charge users a fraction of the total access costs. Keeping an accurate financial track of these activities is crucial for the sustainability of E-RIHS, including its National Nodes. The rationale for this system is described in Chapter 2, and the types of accepted contributions are described in Chapter 3.

It is not expected that E-RIHS partners will carry out only E-RIHS activities. Beyond their participation in E-RIHS, they will also continue to perform their own scientific activities, which are already regulated by institutional and national accounting rules. The E-RIHS community is also very active in several European research projects and is thus familiar with Horizon Europe's financial rules. Chapter 4 describes available options for accounting guidelines that strive to maintain a high-quality level without adding unnecessary administrative burden to National Nodes and E-RIHS partners. Based on this work, Chapter 5 provides accounting guidelines for all different types of contributions to E-RIHS.

Once the reporting obligations for the National Nodes and partners are clear and implemented, E-RIHS ERIC will have to process and validate the declared costs and contributions according to the procedure described in Chapter 6 before integrating them into the E-RIHS ERIC financial report. Because the ERIC will be hosted by Italy, some national rules may apply and are considered in the last chapter of this deliverable.

# 1. THE E-RIHS BUSINESS MODEL AND FINANCIAL FLOWS

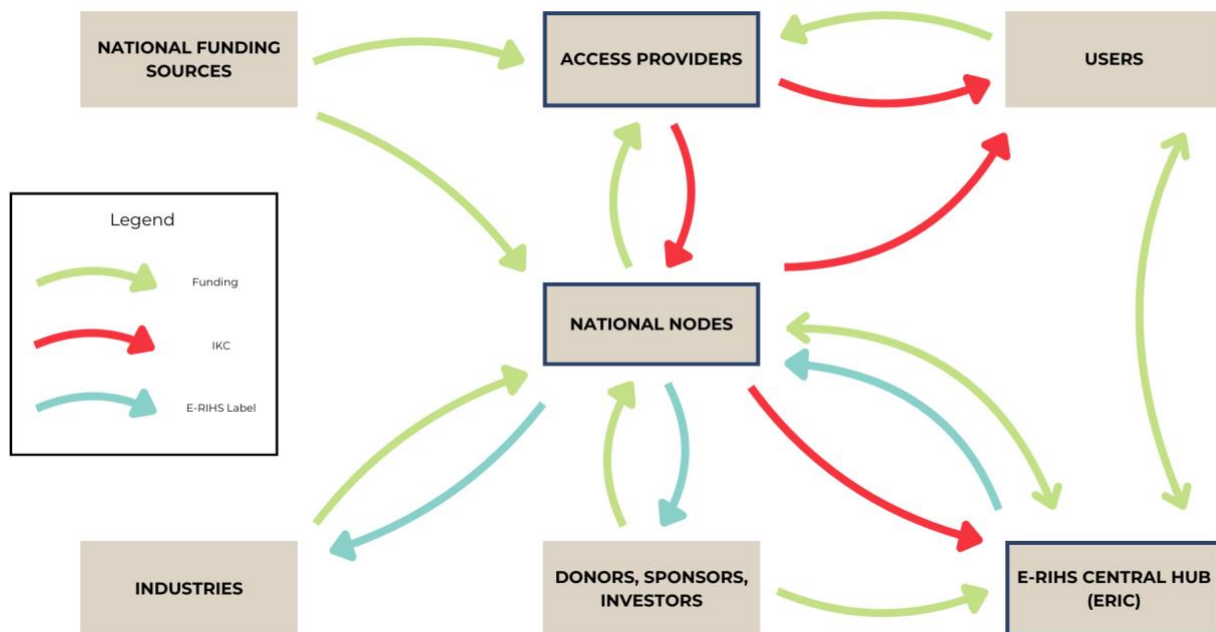


Figure 1: E-RIHS business model and financial flows.

*It is to be noted that the double arrows in the figure above do not imply equal levels of financial flows.*

The E-RIHS distributed research infrastructure is composed of several legal entities: the European Research Infrastructure Consortium (ERIC) referred to as the Central Hub, and the National Nodes formed by national consortia gathering under a common agreement the national access providers, also referred to as “E-RIHS partners”.

E-RIHS business model is based on three types of financial flows:

- Funding: Public and private funds encompassing various forms such as fees, payments, subsidies, participation in costs, grants, etc.;
- In-kind contributions;
- E-RIHS label: Although not a financial flow in itself, it can create a leverage effect and lead to additional income.

As a distributed research infrastructure, financial flows within E-RIHS gravitate around two main poles: the National Nodes and the E-RIHS Central Hub.

The E-RIHS Central Hub receives transnational funding from the members of the ERIC in the form of a membership fee, which contributes to its activities. It can receive direct payments from users in the form of registration fees for HS Academy events or conferences. If the General Assembly opens the possibility for E-RIHS access providers to deliver market-driven access, E-RIHS ERIC could also receive a share of the revenue generated by the accesses through the National Nodes. It can also directly receive donations from sponsors, either cash or in-kind.

National Nodes contribute directly to the Central Hub through in-kind contributions – for which this deliverable provides a framework and guidelines. Financial flows can also occur between the Central

Hub and the users through travel grants (granted by the Central Hub to users) and potential access fee for DIGILAB services.

The E-RIHS label, used for endorsing services, facilities, and research projects, is granted to National Nodes by the Central Hub as a reciprocity for their participation in E-RIHS and their country's membership in the ERIC. It can be used by National Nodes partners for their E-RIHS-related activities, including applying for national or European research grants. Donors, sponsors, and investors represent an additional source of funding for both the Central Hub and National Nodes through possible donations in support of specific activities or sponsorship of courses, conferences, and similar dissemination events. Although they are not allowed to use the E-RIHS label by themselves, such donors, sponsors and investors may benefit from it through their association with E-RIHS.

National Nodes receive income from their access providers through in-kind contributions to cover the costs associated with access projects and the Node's operational costs. If validated by the General Assembly, economic actors will be able to pay for E-RIHS services and will therefore benefit from the E-RIHS label. National (or regional) funding sources' grants aim to contribute to the cost of operation of the National Nodes. They can also directly fund the access providers. Users, in some cases, will contribute to access costs and pay for services offered by access providers. This will follow a strict framework based on the access providers' costs. The National Node and the access providers can be represented by one institution only – in this situation, the financial flows between them are null.

## 2. WHY USE IN-KIND CONTRIBUTIONS?

As described in the E-RIHS business model and apart from E-RIHS ERIC membership fees, a significant portion of public-facing E-RIHS activities will be carried out using in-kind contributions from National Nodes.

Although financial participation from users in some activities may be requested, users will never be asked to cover the full costs of the activity themselves. The difference between the total cost of the activity and the price paid by the user (if any) must be covered by either E-RIHS ERIC's own resources or by National Nodes' in-kind contributions.

The E-RIHS ERIC central resources come from the membership fees and may be supplemented by donations or research grants awarded to E-RIHS ERIC. These resources cover central services such as the E-RIHS Catalogue of Services, the access dashboard, the user helpdesk, communication activities, and other coordination actions that enable the delivery of scientific services by the National Nodes. As the Central Hub of a distributed infrastructure, the ERIC is primarily funded by its member countries to enable the operation of all the services provided by the national level as an infrastructure, not a network of research organisations. This funding is a long-term commitment by member countries, with a minimum commitment of 5 years, as set out in the E-RIHS ERIC Statutes.

The governance design of E-RIHS provides better geographical coverage and greater flexibility in the evolution of the services compared to a single-site infrastructure. The E-RIHS Committee of National Nodes provides a forum to address the evolving user needs and new challenges faced by Heritage Science through the update of the service offer. For example, this agile structure enables the quick inclusion of newly developed instrumentation to the E-RIHS Catalogue of Services or the withdrawal of services no longer relevant to the community.



This capacity to adapt the offer of services to a changing scientific and cultural environment is based on the use of in-kind contributions by National Nodes. In-kind contributions are, by nature, easier to change than long-term financial commitments made to the construction or operation of a very large, single-site infrastructure. In-kind contributions also have the advantage of not requiring a transfer of ownership or assets from the contributor (or the National Node) to the ERIC, only a right to use the contribution under certain conditions. Compared to a cash contribution, this makes it easier for National Node to offer new or additional services at no or limited additional cost for the partners.

Because they are result-oriented, they offer better flexibility for the research infrastructure and can be easier to manage for partners. However, this flexibility has a disadvantage: it creates additional administrative and managerial complexity for all the involved actors to act as a unified infrastructure. First, because the ERIC offers services that it does not own, there is a need for a formal agreement or contract between the Central Hub and the National Nodes to list what services will be offered to the ERIC or to users, for how long and under what conditions. Second, because the services will be mostly managed by National Nodes, there is a risk for heterogeneous administrative and management practices if the Nodes are not provided with clear guidelines. Third, because services have been developed by the partners and not by the ERIC, there is a need for the ERIC to gather information on the services and to monitor their quality before they are being offered to the user community. The use of in-kind contributions creates an additional complexity for implementing the E-RIHS quality system.

Addressing this administrative and management complexity requires several tools:

- *Service Level Agreements* (Petitcol, Cazenave & Graber-Soudry, 2024), contracts that regulate the offer of in-kind services from a National Node to the ERIC and/or to users (nature of the service, quantity to be delivered, etc.) and that create obligations for the ERIC to provide key central services (Catalogue of Services, access dashboard, etc.);
- The *Accounting Guidelines for Service Provision Costing* and other internal reporting guidelines, which ensure unified administrative practices within E-RIHS and contribute managerial excellence;
- The E-RIHS access dashboard and other tools designed to implement the *E-RIHS Quality System* (Doherty, Andrew & Virgili, 2024) provide the Central Hub with continuous information on the advancement of access provision and help National Nodes report some of their activities.

## 3. DEFINING E-RIHS SERVICE PROVISION AND OTHER CONTRIBUTIONS

E-RIHS provides a variety of services ranging from providing an online single-entry point for access operated by the Central Hub to access delivery or training activities. The repartition of roles and responsibilities for providing the services is based on the governance and financial model presented in Chapter 1.

### 3.1. Glossary

Given the complexity of identifying service categories and corresponding financing instruments, the glossary provided below builds on the E-RIHS PP deliverable *D3.5 Scenarios for In-Kind Contributions*

*and Criteria for Their Evaluation* (Santelli, Mimoso, Biljesko & De Giacomo, 2020). Initially developed as part of the E-RIHS IP deliverable *D2.1 Draft of the Service Level Agreements* (Petitcol, Cazenave, & Graber-Soudry, 2023) to address the need for a common language, it has been further expanded to incorporate insights from E-RIHS IP deliverables and the latest developments in the transition toward the ERIC.

#### **Access Fee**

A financial contribution by the person/institution requesting access either through: (i) E-RIHS ERIC Central Hub, or (ii) E-RIHS National Node. The *E-RIHS Scientific and Technical Description* mentions that there is no “application fee”, so “access fees” can only apply to granted access. National Nodes are free to ask for an application fee for “national access”, although it is not encouraged.

#### **E-RIHS ERIC Membership Fee**

A financial contribution by the E-RIHS ERIC member country to E-RIHS ERIC.

#### **E-RIHS National Node Partner Fee**

A financial contribution by the partner institution of an E-RIHS National Node. This could either be an E-RIHS National Node-related cash contribution to the lead institution/ad hoc legal entity, a regular budget in a partner institution earmarked for E-RIHS National Nodes activities, or an exceptional cash contribution dedicated to national E-RIHS activity.

#### **National Own Contribution**

A contribution in terms of person/time, infrastructure purchase or depreciation costs, material costs or other costs, that can be evaluated financially: (i) to access projects in the frame of E-RIHS National Node, or (ii) to the operations of the E-RIHS National Node (or its representatives in E-RIHS ERIC). Own contribution is normally allocated from institutional budgets.

#### **National E-RIHS Grant**

A grant by the national (or regional) funding agency specifically to cover the cost of operation of the E-RIHS National Node (or equivalent). Such grants could cover the costs of access, travel, consumables, organisational and administrative costs etc. At the national level. This terminology could also apply to grants given by the National Node to the partners to perform their duties (e.g., in the Netherlands).

#### **National E-RIHS Infrastructure Investment**

A grant or award by the national (or regional) funding agency or other funders, specifically to cover the cost of investment into physical or digital research infrastructure for the purpose of E-RIHS, either nationally or internationally.

#### **In-Kind Contribution**

A contribution in terms of person/time, infrastructure depreciation costs, material costs or other costs, that can be evaluated financially: (i) to access projects in the frame of E-RIHS ERIC, or (ii) to the operations of the E-RIHS ERIC or E-RIHS ERIC governance.

### **3.2. Categories of In-kind Contributions**

As highlighted by the definition of in-kind contributions and by Chapter 2, there are several categories of potential contributions. Based on the main contributions identified by the E-RIHS IP project, especially through task *T2.2 Support the Establishment of E-RIHS National Nodes* and work package *WP5 Access and Digital Services of E-RIHS*, and in collaboration with the interim Committee of National Nodes, E-RIHS will use the following in-kind contribution categories for its accounting, as shown in Table 1.

Table 1: E-RIHS in-kind contribution categories.

Goods	Durable	
	Non-durable	
Services	Access services	ARCHLAB
		FIXLAB
		MOLAB
		DIGILAB
	HS Academy – training activities	
	E-RIHS scientific consulting	
	Organisation of meetings or other events	
	Travel of E-RIHS Central Hub and National Nodes staff	
	Users travel	
	Personnel	Personnel working on behalf of the ERIC
Without reimbursement or compensation to the employer		
Personnel working on behalf of a National Node		With reimbursement or compensation to the employer
		Without reimbursement or compensation to the employer

## 4. THE ACCOUNTING GUIDELINES

Based on an extensive study of the relevant European-level documentation and exchanges with relevant experts from European distributed research infrastructures (ACCELERATE, 2021; Buddenbohm et al., 2021; de Leeuw et al., 2017; EMSO ERIC, 2017; EPOS ERIC, 2022; ERIC Forum, 2021; Los et al., 2024), E-RIHS will apply the following criteria to account for the different contributions made by National Nodes to the ERIC.

- (1) Applicable reporting formats (from the least to the most binding):
  - a. Narrative description of the contribution;
  - b. Statistical indicators other than financial value (e.g., time spent);
  - c. Self-declared financial value;
  - d. Auditable financial value (with supporting documents such as receipts, timesheets, pre-existing audit certificates).
- (2) Applicable cost evaluation method:
  - a. Actual costs;
  - b. Unit costs;
  - c. Fair market value.
- (3) Applicable framework for the contribution:
  - a. The contribution is described in a Service Level Agreement;

- b. The contribution is described in an ad hoc agreement;
  - c. This contribution does not require an agreement.
- (4) Applicable use of values:
- a. The contribution is used by or targeted to the ERIC only;
  - b. The contribution is used by or targeted to external users only;
  - c. The contribution is used by or targeted to both the ERIC and external users.

These criteria must be applied systematically for each type of contribution, as shown in the Table 2 on the next page.

Table 2: Criteria to account for the different National Node contributions to the ERIC.

		ACCOUNTING CATEGORY				TYPE OF COST			TYPE OF AGREEMENT			USE OF VALUES		
		Narrative	Indicative/ statistical	Declared	Auditable	Actual costs	Unit costs	Fair market value	SLA	Other agreement	No agreement	Internal use	External use	Mixed use
Goods	Durable				X	X				X		X		
	Non-durable			X		X				X		X		
Services	Access services	ARCHLAB		X			X		X				X	
		FIXLAB		X			X		X				X	
		MOLAB		X			X		X				X	
		DIGILAB		X				X	X		X			X
	HS Academy – training activities			X		X			X	X				
	E-RIHS scientific consulting		X			X					X			x
	Organisation of meetings or other events				X	X				X				X
	Travel of E-RIHS and National Nodes staff			X		X					X	X		
	Users travel			X			X			X			X	
Personnel	For the ERIC	With reimbursement			X	X				X		X		
		Without reimbursement		X			X			X		X		
	For a National Node	With reimbursement		X			X				X		X	
		Without reimbursement		X			X				X		X	

## HOW TO READ TABLE 2

**I am providing access to ARCHLAB.** I need to declare *unit costs* using the reference documentation. This information is *declarative* and does not require sending justifications to the National Node or Central Hub. This contribution is carried out in application of the *Service Level Agreement*. This ARCHLAB access will benefit *external users*.

Or

**I am organising an international conference on behalf of E-RIHS ERIC.** I need to declare the *actual costs* of the conference based on *auditable justifications* such as invoices or timesheets. This contribution is made by applying a *dedicated written agreement* between the node or the partner and the ERIC. This conference will be attended by *E-RIHS members and external participants*.

Or

**I am hosting a web service on my institutional server on behalf of E-RIHS ERIC.** I need to describe the service, *provide statistical information on its use*, and assign it a financial value *using market prices*. This contribution was included in my National Node's *Service Level Agreement*. This service will be used by *E-RIHS members and the entire Heritage Science community*.

In the case of a contribution not covered by Table 2, National Nodes should contact the Central Hub to jointly decide how best to report the contribution to the ERIC and whether financial reporting is necessary. Contributions covered by Table 2 must follow the guidelines outlined below. Although the content of the guidelines itself is subject to evolve based on changes made to the reference frameworks, the methodology should remain consistent throughout the life cycle of the infrastructure.

These E-RIHS accounting guidelines provide a framework for reporting service provision. They are not designed to include partners' investment in new equipment, services, or facilities that could eventually be made accessible through E-RIHS. Although these investments are crucial for the sustainability of E-RIHS and should, as much as possible, be made in accordance with a strategy for smart future innovation (Ropret et al., 2023) designed by E-RIHS members, they cannot be integrated into the E-RIHS accounts as such.

As a good practice, E-RIHS partners should report to the Central Hub via their National Node any investment that they deem relevant for E-RIHS when they are made. The decision to include the resulting services in the E-RIHS Catalogue will be made following the Quality Implementation System (Doherty, Andrew & Virgili, 2024), and the percentage of use of the resulting service by E-RIHS users will be fixed in Service Level Agreements (Petitcol, Cazenave & Graber-Soudry, 2024). In most cases, this process will take place years after the initial investment made by the E-RIHS partners.

The Table 2 exclusively focuses on service provision to E-RIHS. As such, it does not include accounting for revenues generated by these services. Whenever applicable (e.g., registration fees to an event or contribution to access costs), these revenues should be declared in full to the E-RIHS Central Hub through the annual National Nodes activity reports.

## 4.1. Is a Specific Agreement Needed?

As described in the Chapter 1 of this deliverable, the relationship between all entities within E-RIHS is regulated by several types of documents and agreements.

While the main rights and obligations of E-RIHS members and their National Nodes are described within the Statutes, partners' contributions to the ERIC in terms of access to the platforms and participation in the HS Academy will be described and regulated by Service Level Agreements (SLA) to be signed between National Nodes, representing all their partners, and E-RIHS ERIC. Parties to the SLAs may also decide to include other contributions provided that they are significant in time or volume. A detailed SLA template, including provisions on reporting, is available in the E-RIHS IP deliverable D2.2 (Petitcol, Cazenave & Graber-Soudry, 2024).

Contributions that are not included in the SLAs can be provided based on ad hoc agreements or, in certain cases, without the need for an agreement between National Nodes and the ERIC. Provisions of goods, whether they are durable or non-durable, are typically non-recurring and require separate, written agreements. The degree of formality of these agreements ranges from a simple email exchange describing the contribution and the acknowledgement of receipt to transfer or disposal agreements. The contributor and the receiving parties collectively decide on the best approach to select for each contribution based on their monetary and symbolic value.

All other contributions that are neither included in SLAs nor require ad hoc written agreements can be offered freely without pre-existing communication between the Nodes and the ERIC. These typically include all activities performed by partners for their own National Nodes, time spent by partners' personnel working on other E-RIHS scientific activities (e.g., conferences, networking activities), or travel and accommodation costs to attend E-RIHS activities.

## 4.2. Reporting Formats

Contributing partners will have to determine the applicable reporting format for their contribution using the Table 3. E-RIHS will use four main categories of reporting formats, from the least to the most comprehensive.

### 4.2.1. ACCOUNTING CATEGORY

Table 3: Applicable reporting formats.

NARRATIVE DESCRIPTION			
<i>Overview</i>	This is the most basic level of reporting, focusing on a qualitative account of activities and outcomes. It provides an overview of operations, achievements, and challenges in a descriptive format.		
<i>Purpose</i>	To inform E-RIHS about the progress, activities, and other qualitative impacts of the National Node without detailed financial or statistical data.		
<i>Examples of content</i>	Description of activities, projects and initiatives undertaken.	Overview of key accomplishments or milestones.	High-level insights into operational and strategic progress.
INDICATIVE OR STATISTICAL DESCRIPTION			
<i>Overview</i>	This format builds on the narrative description by incorporating quantifiable indicators or statistics related to the infrastructure's operations.		
<i>Purpose</i>	To provide a higher level of detail than a purely narrative account, enabling stakeholders to gauge performance and scale through data.		

<i>Examples of content</i>	Number of participants to a conference	Usage statistics (e.g., user access hours, datasets processed) of a DIGILAB service	Indicators of scientific output, such as publications or patents.
<b>FINANCIAL DECLARATION</b>			
<i>Overview</i>	This format introduces financial data, providing a summarized declaration of costs or resource allocation incurred to provide the contribution and. It is not subject to full auditing. Financial justification is not required by E-RIHS.		
<i>Purpose</i>	To give E-RIHS a general sense of the financial position and resource utilization without requiring formal auditing from contributors.		
<i>Examples of content</i>	Access unit costs declaration.	Travel unit costs declaration.	Basic comparison of budgeted in the SLA vs. actual contribution.
<b>AUDITABLE FINANCIAL STATEMENT</b>			
<i>Overview</i>	This is the most comprehensive reporting format, presenting detailed financial information that is ready to be verified through an independent audit. It adheres to established accounting standards.		
<i>Purpose</i>	To provide full financial transparency and accountability, ensuring E-RIHS can rely on the accuracy of financial data.		
<i>Examples of content</i>	Detailed invoices or timesheets	Notes and disclosures explaining financial statement.	Certification of compliance with relevant accounting standards and practices.

#### 4.2.2. TYPE OF COST

Based on the collective experience of E-RIHS partners in participating in European research projects, the E-RIHS guidelines for calculating costs will be based on Horizon Europe programme guidelines and will be updated in case of any relevant change in the next framework programme. The reference document for these rules is the Annotated Grant Agreement (AGA), currently in its V1.0, 01.05.2024 (European Commission, 2021).<sup>1</sup> E-RIHS accounting will follow the rules applicable to the Horizon Europe programme (HE) unless explicitly stated.

Once the applicable reporting format is identified, and only if it requires financial elements, contributing partners must select the applicable methodology from the Table 3.

E-RIHS will use three main methods to calculate the costs of a contribution as follows.

##### Actual costs

Actual costs refer to the financial value of costs that were actually spent to provide the service or other contributions. The Horizon Europe programme identifies five main categories:

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<sup>1</sup> European Commission. (2021). *Annual work programme and financial rules: 2021-2027 guidance for funding and tenders*. Available at: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf) [Accessed 8 Dec. 2024].



- *Personnel costs.* They can include employees, natural persons under direct contract, seconded persons, and SME owners and natural person beneficiaries. They are calculated using the time the person spent on the contribution and the total cost of their remuneration on the period in which the contribution was carried out. (AGA, Article 6.2.A)
- *Subcontracting costs.* They correspond to activities carried out by another entity on behalf of an E-RIHS partner. They are calculated by using invoices. (AGA, Article 6.2.B)
- *Purchase costs.* They include travel and subsistence, equipment or any other goods and services. They are calculated by using invoices. (AGA, Article 6.2.C)
- *Other Costs Categories.* They include other financial operations such as financial support to third parties or internally invoiced goods and services. They are calculated using internal invoices or other documents regulating the support to third parties. (AGA, Article 6.2.D)
- *Indirect Costs.* They are calculated by using a flat rate of 25% of personnel costs and purchase costs categories. They correspond to the administrative costs related to the provision of the service or other contributions. (AGA, Article 6.2.E)

### Unit costs

Conversely to actual costs, unit costs correspond to the allocated cost to a selected unit (e.g., one day of access to a facility, one day of personnel cost, one conference). They are typically calculated by first calculating the total cost of the service and then dividing it by the number of units produced (e.g., access days performed, days worked by a person, all organised conferences). When used correctly, unit costs greatly facilitate the accounting of repeated activities while maintaining a high level of accuracy.

E-RIHS will use unit costs for three main kinds of services: (i) Access provisions to ARCHLAB, FIXLAB and MOLAB; (ii) Distribution of E-RIHS travel grants; and (iii) seconded personnel without reimbursement to the seconding institution (except stated otherwise in the secondment agreement).

The calculation of unit costs will be based on Horizon Europe rules as described in the Annex 2a of the Annotated Model Grant Agreement (AGA Annex 2a) (EC, 2021).<sup>2</sup> This comprehensive annex includes rules on:

- *Travel and subsistence unit costs* (AGA Annex 2a, p.3). They implement the Commission Decision of 12 January 2021 (EC, 2021) authorising the use of unit costs for travel, accommodation and subsistence costs under an action or work programme under the 2021-2027 multi-annual financial framework.<sup>3</sup> Additional guidance and online tools are available

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<sup>2</sup> European Commission. (2021). *Annex 2a. Additional information on unit costs and contributions*. Available at: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/additional-information-on-unit-costs-and-contributions\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/additional-information-on-unit-costs-and-contributions_en.pdf) [Accessed 8 Dec. 2024].

<sup>3</sup> European Commission. (2021). *Commission Decision of 12 January 2021 authorising the use of unit costs for travel, accommodation, and subsistence costs*. Available at: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-travel\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-travel_en.pdf) [Accessed 8 Dec. 2024].

at *Calculate Unit Costs of Eligible Travel Costs* (EC, n.d.), which already include amended values.<sup>4</sup>

- *Personnel unit costs* (AGA Annex 2a, p.19). They implement the Commission Decision of 15 January 2024 (EC, 2024), authorising the use of unit costs for personnel costs under the Horizon Europe and Euratom Programmes.<sup>5</sup> Additional guidance, including key principles and calculation methods, is available on the EU Funding & Tenders Portal.<sup>6</sup> The “Personnel Unit Cost Wizard – Horizon Europe” can also be used to calculate unit costs based on project data.<sup>7</sup>
- *Access provision unit costs* (AGA Annex 2a, p.19). They implement the Commission Decision of 10 April 2019 authorising the use of unit costs for the costs of providing trans-national and virtual access in Research Infrastructures actions under the Horizon Europe Programme (2021-2027) and the Research and Training Programme of the European Atomic Energy Community (2021-2025).<sup>8</sup> This decision describes the applicable methodology to calculate access provision by including direct costs (the full list is available p. 5 of the decision) and indirect costs (25% of the direct costs). Capital investments of the infrastructure, such as rental or depreciation costs of buildings as well as depreciation and lease of instrumentation, are excluded.

### Fair market value

The deliverable *D3.5 Scenarios for In-Kind Contributions and Criteria for Their Evaluation* of E-RIHS PP (Santelli, Mimoso, Biljesko & De Giacomo, 2020) introduces another complementary method to assess the cost of a service or another type of contribution. This method involves using the market value of a comparable service when actual or unit costs are not applicable, such as in the case of a new service or when determining the actual costs is difficult.

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<sup>4</sup> European Commission. (n.d.). *Calculate unit costs of eligible travel costs*. European Commission. Retrieved December 11, 2024, from [https://commission.europa.eu/funding-tenders/procedures-guidelines-tenders/information-contractors-and-beneficiaries/calculate-unit-costs-eligible-travel-costs\\_en](https://commission.europa.eu/funding-tenders/procedures-guidelines-tenders/information-contractors-and-beneficiaries/calculate-unit-costs-eligible-travel-costs_en) [Accessed 11 Dec. 2024].

<sup>5</sup> European Commission. (2024). *Commission Decision of 15 January 2024 authorising the use of unit costs for personnel costs for actions under the Horizon Europe and Euratom Programmes*. Available at: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-personnel-costs\\_horizon-euratom\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-personnel-costs_horizon-euratom_en.pdf) [Accessed 8 Dec. 2024].

<sup>6</sup> European Commission. (2024). *Guidance on personnel unit costs – Horizon Europe*. Retrieved from <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon/personnel-unit-costs/guidance> [Accessed 8 Dec. 2024].

<sup>7</sup> European Commission. (2024). *Personnel unit cost wizard – Horizon Europe*. Retrieved from <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon/personnel-unit-costs/unit-cost-wizard> [Accessed 8 Dec. 2024].

<sup>8</sup> European Commission. (2019). *Unit cost decision for research infrastructures – Horizon Europe and Euratom*. Retrieved from [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-research-infrastructures\\_horizon-euratom\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unit-cost-decision-research-infrastructures_horizon-euratom_en.pdf) [Accessed 8 Dec. 2024].

The use of this accounting option should remain as limited as possible within E-RIHS, because it requires additional efforts to conduct a market study, often in complex or niche markets, and fair market value is not allowed by external funding agencies for reporting costs.

At this stage, the use of fair market value will be restricted to DIGILAB services that cannot be measured with virtual infrastructure access costs as described in the Horizon Europe rules mentioned above.

### 4.3. Who Will benefit from the Contribution?

Once the previous steps are completed, contributors will have to declare the main benefactor of the service or activity carried out. Three simple categories will be used:

- The service is used by or on behalf of E-RIHS ERIC;
- The service is used by or on behalf of E-RIHS ERIC *and* by external users;
- The service is used by external users (i.e., not working for or on behalf of ERIC, regardless of a potential affiliation of their home institution to E-RIHS).

These declarations will provide valuable information on the overall cost structure of E-RIHS and its use. While some services, such as access provision, will, by nature, fall into one category (use by external users), other services, such as participation in the HS Academy, could fall under either of three categories.

## 5. PROCESSING AND VALIDATING THE CONTRIBUTIONS

Validating a contribution once it has been provided is an essential part of the E-RIHS quality system. This section relates to the administrative validation of the services provided, which complements the scientific excellence validation described in the E-RIHS Quality System Implementation Plan (Doherty, Andrew & Virgili, 2024).

The processing and eventual validation (or rejection, meaning it is not included in the reports and accounts) of a contribution is an iterative process that involves all levels of the distributed infrastructure. These processes are carried out within different time scales: while partners process and validate contributions right after they are carried out, National Nodes, internally and through the Committee of National Nodes and the E-RIHS Central Hub, are working on an annual basis, in preparation of their activity reports and annual accounts. The E-RIHS General Assembly, as supported by the Scientific and Ethics Advisory and the Director General, is responsible for the final validation of the E-RIHS annual activity report and accounts. It also decides on the main strategic orientations on the use of contributions and defines needs for a five-year E-RIHS Members commitment cycle.

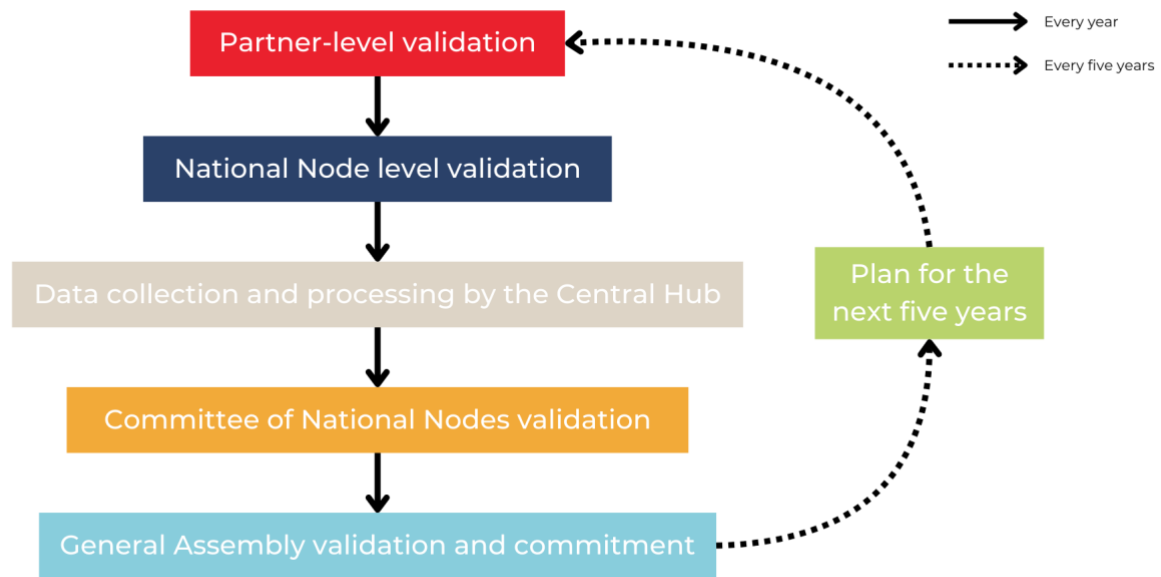


Figure 2: E-RIHS validation process of National Node contributions.

The E-RIHS administrative validation process of the National Node contributions is described below.

### 5.1. Partner-Level Validation

Service provision is performed at the level of E-RIHS partners. As the primary authors of the contribution, they are the best suited to provide a first account of the contribution using the E-RIHS accounting guidelines. The collection of any relevant data on the service performed and, if necessary, the calculation of its costs, will be performed and validated according to each E-RIHS partners' internal organisation.

### 5.2. National Node Level Validation

National Nodes are responsible for centralising all the information about their partners' contributions, checking if they follow the correct reporting rules, and ensuring the timeliness of partners' reporting. They also check if the contributions are aligned with the Service Level Agreements or additional agreements, if any. If they are not, they are responsible for collecting justifications.

The information about the contributions is transmitted annually to the E-RIHS Central Hub via an annual activity report.

### 5.3. Data Collection and Processing by the Central Hub

The Central Hub is responsible for collecting data on contributions from National Nodes. As the provider of the central services that enable national contributions (e.g., the E-RIHS access dashboard, the Catalogue of Services), the Central Hub can monitor service provision in real-time and will thus be able to verify the existence of the contributions included in National Node reports.

In case of missing or incomplete information, the Central Hub can request additional information from the National Node coordinators, who will contact the partners themselves.

Once the information from each National Node is complete, it centralises all contributions into a draft annual report to be transmitted by the Director General to the Committee of National Nodes. This draft annual report may include observations about specific contributions, especially regarding compliance with the Service Level Agreements or other agreements.

#### **5.4. Committee of National Nodes Validation**

As detailed in the E-RIHS Statutes, the Committee of National Nodes (CNN) prepares the annual offer of services of the ERIC and reports the nature and value of national in-kind contributions. Based on aggregated data related to the description and, whenever appropriate, the cost declaration of in-kind contributions, the CNN evaluates the use and provisions of the contributions against the planned offer in the Service Level Agreements or additional ad hoc agreements.

This evaluation takes into account current user demand for specific services, feedback about and from service providers and the scientific strategy of E-RIHS. It also includes a review of the financial declaration. The CNN is entitled to request additional information from partners via their National Node Coordinators, with the operational support of the Central Hub. The internal organisation of this evaluation within the CNN may take the form of an ad hoc working group following the Rules of Procedure (Waterings and Van't Hof, 2024).

The results of the evaluation are communicated to the Director General, who includes them in the E-RIHS annual report.

#### **5.5. General Assembly Validation and Commitment Cycles**

The Director General is responsible for submitting the E-RIHS annual report, which includes descriptions and, whenever applicable, in-kind values of the contributions made by the National Nodes. This annual report must be approved by the General Assembly with a two-thirds majority of the votes cast by members. This process is repeated every year and may involve requests for additional information from the Director General or consultation with the Scientific and Ethics Advisory Board.

#### **5.6. Definition of Needs for the Next Cycle**

The General Assembly is also responsible for approving the framework for in-kind contributions, five-year activity plans, and financial plans. All of these strategic documents must at least correspond to a “commitment cycle,” meaning the five-year minimum duration of an E-RIHS member’s commitment to remain a member of the ERIC. These strategic documents should include objectives for the types and number of services expected from E-RIHS partners. They will also have high-level principles and a financial strategy that may require updating the E-RIHS accounting guidelines, for example, on providing digital services.

## 6. COMPLIANCE WITH EXTERNAL STANDARDS AND HOST COUNTRY REGULATIONS

E-RIHS strives for excellence in research. This requires a comprehensive scientific quality implementation plan and also efficient administrative and financial management at all levels of the infrastructure. In order to prepare for the start of the operation of the ERIC, the participants in the E-RIHS IP work package *WP2 Governance and Structure of E-RIHS* have exchanged with several other European distributed research infrastructures and have identified good practices and international standards.

Through the 20 years of collaboration that led to the establishment of the ERIC, E-RIHS partners have worked together with the financial support of European projects under several framework programmes. They have developed a good understanding of applicable rules and regulations, and their administrative staff are trained to implement them. Aligning E-RIHS accounting guidelines as much as possible and relevant will avoid the duplication of administrative burden for partners, and will avoid a new, potentially long, training phase for partners and National Nodes staff. However, this approach will require adjustments to E-RIHS accounting guidelines whenever the framework programme rules are updated, including future changes to be adopted in the Framework Programme (FP10) covering the period 2027-2034.

E-RIHS will follow closely the development of the European Public Sector Accounting Standards (EPSAS) and, for contributions not included in the accounting guidelines table, refer to the International Public Sector Accounting Standards (IPSAS) for its financial practices. In particular, IPSAS 23 (IPSASB, 2022)<sup>9</sup> refers to Revenue from Non-Exchange Transactions (Taxes and Transfers) and thus includes in-kind contributions from National Nodes to the ERIC. This standard provides valuable recommendations to evaluate if a contribution can be categorised as revenue, how to recognise it as an asset and how to measure it. It describes obligations from both parties about the transfer of the asset (i.e., the contribution) and the tax implications of giving and receiving the asset. Additional recommendations are also given on the types of transfers covered by this deliverable, including the provision of services or goods in-kind.

The future E-RIHS ERIC management will be responsible for all obligations of any nature, including fiscal reporting requirements arising from receiving or benefitting from service provisions through National Nodes. As international organisations under European law, ERICs comply with EU and Italian regulations as regards VAT exemption practices. They also comply with specific internal ERIC rules for what concerns public procurement and financial reporting. In this context, the European and Italian ERIC Forums have proven to be valuable platforms for sharing best practices with other distributed EU infrastructures and ERICs hosted in Italy.

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<sup>9</sup> IPSASB. (2022). *2022 Handbook of International Public Sector Accounting Pronouncements*. Retrieved from <https://www.ipsasb.org/publications/2022-handbook-international-public-sector-accounting-pronouncements> [Accessed 8 Dec. 2024].

## CONCLUSION

Service provision from E-RIHS partners to the ERIC through the National Nodes are key to the successful implementation of the E-RIHS vision and mission. By providing these services in-kind or with limited participation fees from users, the E-RIHS partners make available their scientific instrumentation, their expertise, their digital tools or other resources to co-create new knowledge with its users.

The diversity of E-RIHS partners and their expected contributions create a complex environment with various financial flows. At the same time, E-RIHS partners have proved their proficiency in framework programme accounting rules in the past 20 years of cooperation within European projects. To maximise efficiency, E-RIHS will align as much as possible with those rules as long as they stay relevant to our activities.

With an easy-to-read table and references to applicable rules for each situation, these accounting guidelines for service provision costing should serve as a practical document for all people involved in managing and reporting contributions to E-RIHS ERIC. Together with the Service Level Agreements, it will provide a regulatory framework for National Node activities carried on behalf of the ERIC. With the formal establishment of the ERIC expected in early 2025 and the first service provision soon after, the year 2025 will provide a testing ground for these guidelines. With a spirit of administrative excellence and efficiency, they will be revised in 2026 based on the feedback from National Nodes after their first annual report.



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