



Portuguese **Distributed
Computing** Infrastructure

Internal Coordination and Administration Structure (Mi1.1)

Execution report

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22-Mai-2018	Catarina Ortigão	New section added (INCD Technical coordination) – suggested by Jorge Gomes.
14-Nov-2019	Jorge Gomes	Organisational structure update. Reference links update.

Cofinanciado por:





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List of Acronyms

FCT	Fundação para a Ciência e a Tecnologia
INCD	Infraestrutura Nacional de Computação Distribuída / National Distributed Computing Infrastructure
LIP	Laboratório de Instrumentação e Física Experimental de Partículas/ Instrumentation and Experimental Particle Physics Laboratory
LNEC	Laboratório Nacional de Engenharia Civil / National Laboratory of Civil Engineering
RCTS	Rede Ciência, Tecnologia e Sociedade/ National Research and Education Network
SC	Specialised Centres

References

[Ref 1] Estatutos da Associação INCD. <https://wiki.incd.pt/attachments/20>

[Ref 2] Ata da primeira Assembleia Geral da INCD. <https://wiki.incd.pt/attachments/40>



Scope and Introduction

The National Distributed Computing Infrastructure (INCD) aims to be a digital research infrastructure of reference that provides computing and data services to the national scientific and academic community in all domains.

The INCD Association was established in 2015 to pursue the actions related to research, promotion, development and international networking of advance computing activities and to accomplish the construction and operation of the infrastructure.

The association includes all members of the original project proposal, approved in 2014, and it was designed to enable the future enlargement to other entities.

The governance bodies of the INCD association are:

- General Assembly
- Directorate
- Audit Committee
- Advisory Board

The members of the INCD Association are directly involved in the coordination and development of the infrastructure. Infrastructure users do not need to be members of the INCD Association and their access will be defined through an open access policy.

This report is the project milestone **Mi1.1- Internal Coordination and Administration Structure fully operational** and provides evidence that this task/milestone has been done and it is complete.



INCD Management Structure

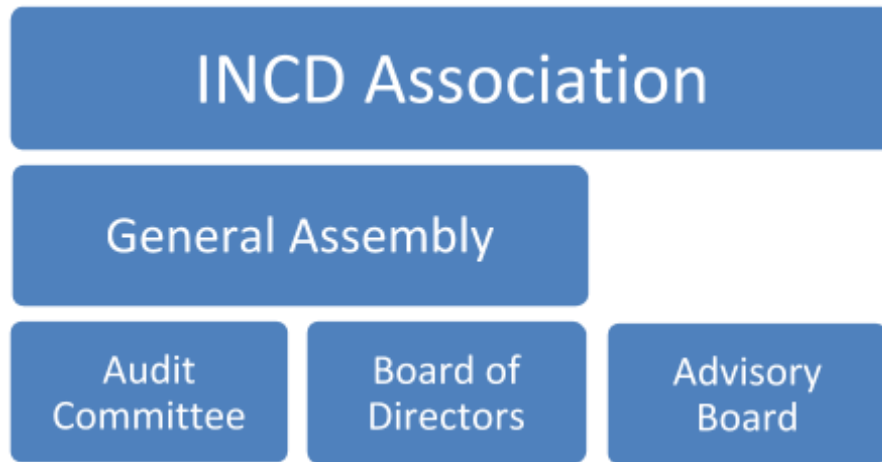
INCD uses the governance model defined for the INCD Association, described in the following table:

Body	Who	Main Responsibilities
General Assembly	INCD Association, LIP, LNEC as founding members; All admitted members.	Approve the Activity and budget plans; Approve the Strategic and relevant decisions; Approve the Activity report; Decide on the Audit Committee report; Appoint or dismiss heads of the association governing bodies; Decides on admittance or exclusion of members.
Directorate	President, 2-4 members	Define and manage the internal organisation; Administrate the Association resources; Hire, supervise and dismiss employees; Celebrate contracts, protocols and agreements with third parties; Submit the activity report to the General Assembly; Propose new members to the other bodies.
Audit Committee	Three elements (1 ROC)	Supervise the activities of the Directorate; Audits the financial reports.
Advisory Board	Several external personalities invited by the Directorate	Provides strategic guidance taking into account trends and innovations in the areas of its expertise.



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For the complete set of responsibilities, the formal document with the Association statutes can be found in [Ref 1]. The internal structure can be represented as follows:



In the first general assembly meeting the governing bodies were defined as can be consulted here [Ref 2]. For the first three-year term, the governing bodies are composed by:

Body	Who
General Assembly	President: Prof. Gaspar Pereira de Moraes Barreira (LIP) Secretary: Dr. Miguel Andrade (FCT)
Directorate	President: Eng. João Nuno Ferreira (INCD) Vocals: Dra. Maria Alzira Santos (LNEC) Eng. Jorge Gomes (LIP)
Audit Committee	Dr. João Careca (Statutory Auditor) Eng. João Cunha (in representation of LNEC) Eng. Rui Marques (LIP)
Advisory Board	Not yet defined.

The INCD accountant is Paulo Sá.

Organizational Structure

Besides the governance bodies, the INCD organizational structure includes several other elements necessary for the infrastructure coordination and management. The Figure 1 depicts the complete organisational structure.

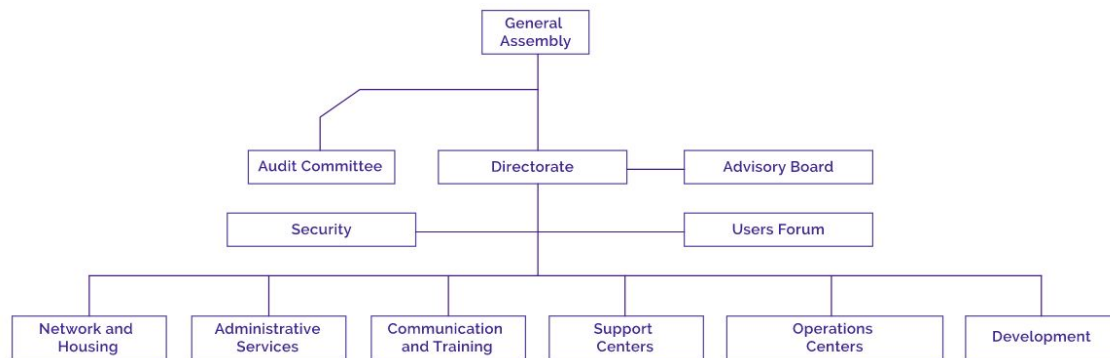


Figure 1 INCD organisational structure

The intermediate and leaf bodies:

- **Users Forum:** enables a participation of the user communities in the INCD structure, and facilitate the communication. The forum will be established and boosted during the project.
- **Security:** is transversal to the INCD structure and is present across all activities. In the organizational structure it is represented as an intermediate body. The security area includes both the roles of the security and data protection officers.
- **Administrative Services:** Administrative and managerial support to the INCD activities, including: human resources management, information management, accounting and financial management, purchase management etc.
- **Housing and networking:** Provisioning of network connectivity and network management. Management of the housing facilities (datacentres) where INCD equipment is physically installed.
- **Communication and Training:** Manage the INCD image, disseminate the INCD services, communication with the users and other stakeholders, creation of contents, support to events, social networks and web presence, training and education.
- **Development:** Definition, creation and continuous improvement of the INCD services. Ensure that the services portfolio is state of the art and addresses the user requirements. The development activities are performed by the specialised centres (support and operations) exploiting and maximizing synergies.

INCD has further decomposed the specialised centres into two types of centres:

- **Operations Centres:** Manage and provide computing and data services. They are coupled with computing and data facilities (datacentres). These centres can also operate as support centres to their users. They collaborate both in the services development and service management definition activities.
- **Support Centres:** Provide a wide range of support services including: first line support, second line specialised support, consulting, knowledge transfer, user orientation, training etc. The support centres can participate in coordination, management and policy activities and in bridging and coordinating with other national and international



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infrastructures. They cooperate closely with the Operations Centres to deliver coordinated services and support.

Specialised Centres

The INCD strategy, as defined in the FCT's Infrastructures roadmap proposal, includes the creation of specialised centres. These centres will explore knowledge across national regions and will act as the building blocks of the infrastructure. These centres will participate in the development and provisioning of services as will provide consulting, training and support to users.

In the context of the INCD Roadmap project, centres will be established in Lisbon, Centre, and Northern regions (Figure 2), where INCD members have already research centres , with running facilities and well-established relations with the academic and research communities.

Operations Centres

Operations Centre	Description
INCD-Lisboa	Delivery of advanced computing services and related support including: HPC, HTC, cloud, grid and high performance storage systems, complemented by higher level services.
INCD-Minho	Delivery of advanced computing services and related support including: HPC, HTC and parallel data storage systems. These services will be later expanded to include cloud and grid.
INCD-Coimbra	Delivery of data storage services aimed at data protection, data recovery, and long-term data storage including data archival.

Support Centres

Support Centre	Description
LIP-Lisboa	Infrastructure technical coordination. Bridge with other national and international infrastructures including: WLCG, EGI, EOSC, IBERGRID. Generic user support and guidance. Specific support to the High Energy Physics and Astroparticle Physics communities. Services security.
LIP-Minho	Specific competences and support on data analysis, artificial intelligence and machine learning.
LNEC-Lisboa	Coordination of piloting activities in partnership with the users. Specific support to the Civil Engineering and coastal modeling communities. Development of new services related to the supported domains.
RCTS-Lisboa	Bridging with other scientific infrastructures. Coordination of housing and datacentres. Advanced data network services. Network security.

This set of centres will be further expanded as needed. The creation of external centres (either operations or support) managed by organizations not directly associated to INCD are also foreseen. This approach will assist in leveraging capacity and capabilities in other academic and research organizations.



Figure 2 Distribution of the INCD specialised centres (Lisbon, North and Centre regions)

The data network between the INCD centres and Users will be provided by the National Research and Education Network (RCTS), which delivers networking services to schools,

universities, associated labs and other research institutes. The INCD facilities will be housed at RCTS managed computing centres facilities (datacentres). Adequate network connectivity is already established between the RCTS facilities housing INCD services and between these datacentres and the users (Figure 2).

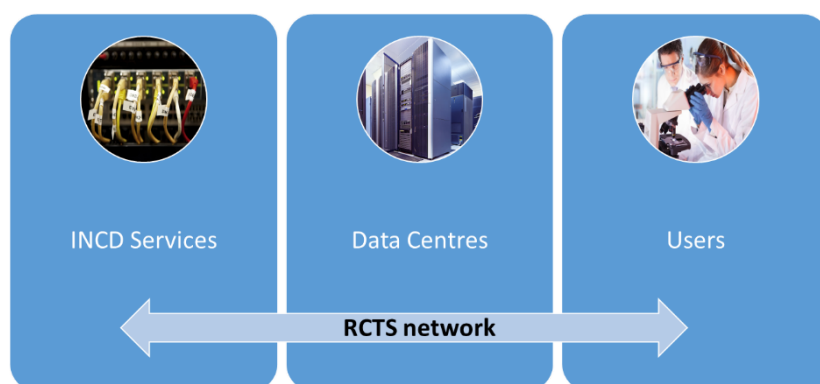


Figure 2 INCD network exploitation scheme.

INCD 01/SAICT/2016 Project Coordination

The INCD project in the context of the 01/SAICT/2016 call is the first INCD project. Through this project INCD is establishing its structures. The project is divided into eight activities whose technical coordination is defined in the next table, and which interacts closely with the remaining organization bodies.

Nº	Activity	Coordinator (Filiation)
1	Coordination	João Nuno Ferreira (RCTS)
2	Communication and Dissemination	Catarina Ortigão (INCD)
3	Relation with users	Catarina Ortigão (INCD)
4	Pilots	Anabela Oliveira (LNEC)
5	Infrastructure Development	Mário David (LIP)
6	Deployment	Jorge Gomes (LIP)
7	Housing and networking	João Pagaipe (RCTS)
8	Consulting and training	João Pina (LIP)