Portuguese **Distributed Computing** Infrastructure

All Specialized Centres established (Mi1.3)

Execution report

State:	FINAL
Dissemination:	Public
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Date	Author	Comments
3-Jul-2019	Catarina Ortigão	Initial version
11-Jul-2019	Catarina Ortigão	Added centres status
14-Nov-2019	Jorge Gomes	Updated

Contents

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

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.

This report is the project milestone **Mi1.3- All Specialized Centres established** and provides details on how this milestone was implemented.

Organizational Structure Overview

The organisational structure is detailed in Mi1.1 - Internal coordination and administration structure fully operational. The structure is depicted in Figure 1 for reference.
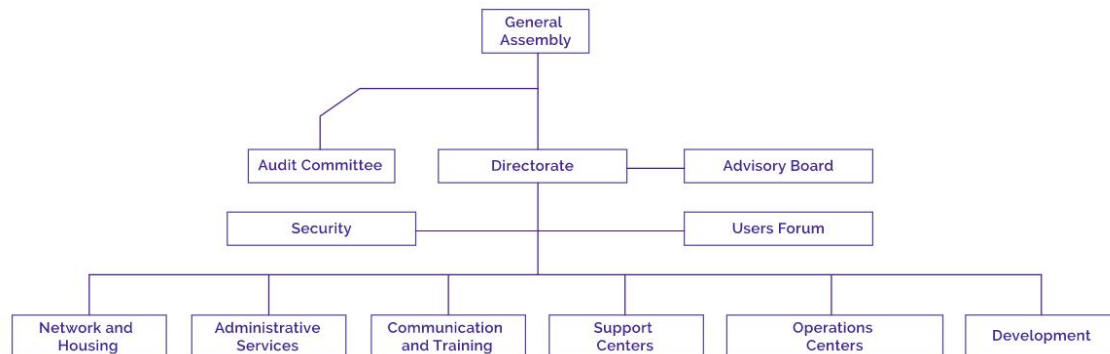

Figure 1 INCD organisational structure

Specialised Centres

The INCD development strategy included the concept of specialised centres which have been further decomposed in:

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

Operations Centres Established

Operations Centre	Description
INCD-Lisboa	It is backed by INCD and LIP technical staff. The associated datacenter is sala-grid at the LNEC campus in Lisbon. The datacenter housing is managed by FCCN, while INCD and LIP manage the computing, local area network and data storage equipment that backs the HPC, HTC, cloud and data services.
INCD-Minho	It is backed by INCD technical staff based at the LIP facilities in the University of Minho. The associated datacenter is the REN datacenter in Riba-de-Ave that hosts the BOB cluster and the INCD Minho computing and data facilities. The operations center is delivering HTC and HPC services.
INCD-Coimbra	It is backed by LIP technical staff. The centre is based at the department of physics of the University of Coimbra. It will support the deployment of data oriented services to be deployed in the last project year.

Support Centres Established

Support Centre	Description
LIP-Lisboa	It is backed by LIP technical and research staff. It is based at the LIP-Lisbon facilities in the University of Lisbon. Provides the overall infrastructure coordination. Performs the liaison with national and international infrastructures including: WLCG, EGI, EOSC, IBERGRID. Delivers generic user support and guidance. Provides specific support to the High Energy Physics and Astroparticle Physics communities. Infrastructure security and data privacy oversight.
LIP-Minho	It is backed by LIP research staff backed by the INCD technical staff. It is located at the LIP MInho centre at the University of Minho. Provides specific competences and support on data analysis, artificial intelligence and machine learning.
LNEC-Lisboa	It is backed by LNEC research and technical staff. Performs the coordination of piloting activities in partnership with the user communities. Provides specific support to the Civil Engineering and coastal modeling communities. Performs the development of new services related to the supported domains (ex. OPENCoastS, Worsika etc).
RCTS-Lisboa	It is backed by the RCTS technical staff based in Lisbon. Performs bridging with other scientific infrastructures. Performs the coordination of housing at datacentre facilities. Delivers advanced data network services. Coordinates the network security.

External Operations Centres Established

Operations Centre	Description
ISEC	Established in partnership with the Instituto Superior de Engenharia de Coimbra under a service level agreement signed between INCD and ISEC. The associated datacenter belongs to ISEC. The centre delivers HPC computing capacity integrated in the INCD portfolio of services.
U.Porto	Center integrated in the IBERGRID distributed computing infrastructure that delivers HTC computing capacity oriented to life sciences.