

2024 Activities Plan and Budget

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INTRODUCTION

In 2024, INCD will continue participating in the National Advanced Computing Network (RNCA) that joins computing centres to support research and innovation in the country. Through the RNCA protocol, INCD will continue being funded by FCT to participate in activities related to advanced computing, open science, and participation in international digital research infrastructures.

In 2024, in the framework of RNCA, the INCD infrastructure will support cloud computing and high performance computing projects submitted to the calls for advanced computing projects (CPCA) from Fundação para a Ciência e Tecnologia (FCT). In particular, INCD will support new projects from the 4th CPCA, whose execution will take place in 2024. Also included in the RNCA supported activities is the participation in international infrastructures and collaborations like EGI, IBERGRID, CERN and EOSC. This participation will happen at the level of the infrastructure services and support to international research communities, as well as in innovation projects. In this context the participation in the Horizon Europe project iMagine will continue, with INCD acting as a cloud computing provider for research in marine and freshwater science. Also in 2024, INCD will participate in the organisation of the 13th IBERGRID conference that will be held in Portugal.

The development and improvement of the infrastructure will continue in 2024. A second cloud computing and cloud storage installation will become operational in Vila Real, while in Lisbon the cloud service will be upgraded and enhanced to incorporate the same capabilities as in Vila Real. A new bare-metal Kubernetes service will become available complementing the offering of containerised services with a dedicated container orchestration system independent from the cloud service. INCD will also continue participating in the development and pilot activities towards a national catchall repository for research data for FCT. The data repository will continue supporting a range of pilots from several organisations in multiple domains. Also in the domain of open data, INCD will participate in the AGRISPACE consortium which will join several entities to establish a data space for the agriculture sector. Contacts towards collaboration with other entities in the public sector are also foreseen.

The creation of a national advanced computing centre (CNCA) under the recovery and resiliency plans is expected to materialise in 2024. INCD aims to participate in this new structure that will shape the evolution and future of the computing infrastructures in the country.

In this context we present the INCD plan of activities for 2024. This plan is conceived to further develop INCD while leveraging the infrastructure capabilities and expertise to support relevant research across all scientific domains.

Activities Plan

The activities foreseen in the plan for 2024 are split according to three levels of priority (Higher, Medium, Lower). Each activity has an intended time frame defined in months.

Higher Priority

a) Operation and maintenance of the INCD infrastructure and related services, enabling a stable environment to support usage by computational and data oriented projects. [M1-M12]
b) Participating in the bodies of the Portuguese Advanced Computing Network (RNCA). Coordination of the provisioning of computing capacity to projects and activities supported by FCT according to the RNCA protocol addenda for 2024. [M1-M12]
c) Under the RNCA protocol, support the completion of computational projects from the third Call for Advanced Computing Projects (CPCA) of FCT. [M1-M6]
d) Under the RNCA protocol, support new computational projects (both HPC and cloud) from the fourth Call for Advanced Computing Projects (CPCA) of FCT. [M1-M12]
e) Providing other services from the INCD portfolio to the Portuguese research community acting in the context of RNCA. [M1-M12]
f) Participate in coordination activities towards the realisation and engagement of INCD in the upcoming National Advanced Computing Centre (CNCA). [M3-M12]
g) Finalise the migration from CentOS to alternative Linux distributions. [M1-M8]
h) Finalise the deployment and commissioning of additional cloud computing and cloud storage services in Vila Real, increasing the infrastructure redundancy and capacity. [M1-M6]
i) Upgrade the cloud computing and cloud storage services at the Lisbon centre according to the new setup defined for Vila Real. Provide easier access to both cloud installations. [M6-M12]
j) Collaborate with Spain in terms of distributed and advanced computing within the scope of IBERGRID, as recommended in the Iberian agreements of Valladolid and supported by the RNCA protocol. Participation in common projects and activities. [M1-M12]
k) Participate in the IBERGRID and EGI federations and EOSC initiative supporting research activities of national interest, as well as provisioning and sharing of services and data, for the benefit of researchers and national priorities. [M1-M12]
l) Organisation in Portugal of the next edition of the IBERGRID conference. [M4-M11]

Medium Priority

a) Support the pilot of a catchall research data repository for FCT, based on the Dataverse software for the Portuguese research community, integrated with Ciência ID, Ciência Vitae and other science services. This activity will be developed in partnership with FCT under the RNCA protocol. [M1-M12]
b) Participate in the national activities bridging with the European partnership for agriculture of data. In particular INCD will participate in the upcoming AGRISPACE consortium towards creating a data space for the agricultural sector. [M1-M12]
c) In collaboration with LIP and other partners in the EuroCC 2 project, INCD will continue supporting the activities of the National Competence Centre (NCC) in the framework of EuroHPC. These activities include housing of web services and support to the training, dissemination and knowledge transfer. In this context INCD plans to increase its dissemination and expand the user engagement activities particularly to the public administration. [M1-M12]
d) Participate in the European project iMagine (Imaging data and services for aquatic science). iMagine provides a portfolio of image datasets, high-performance image analysis tools empowered with Artificial Intelligence (AI), and Best Practices for scientific image analysis. [M1-M12]
e) Improve the infrastructure network connectivity namely adding resiliency in Vila Real, connecting to the LHCONE network and expanding the IPv6 connectivity within the infrastructure. [M1-M8]
f) Implement a new orchestration service for containers based on Kubernetes running on bare-metal, complementing the current offering of the containers service of Kubernetes on the cloud. [M1-M12]

Lower Priority

a) Seek engagement with new user communities and use cases beyond science and academy with particular focus in the public administration and private sectors. [M1-M12]
b) Distribute commercial cloud services from the Google Cloud Platform in the context of the OCRE and EOSC-Future grant. Continue identifying mechanisms to deliver capacity to the user base maximising return while avoiding dependencies and vendor lock-in. [M1-M12]
c) Continue improving the INCD accounting and reporting mechanisms to facilitate collection of detailed usage information per service, for monitoring, resource management and reporting purposes. [M1-M12]
d) Implement and start operating a new helpdesk trouble ticketing system. This activity includes a complete reorganisation of the helpdesk structure, while preserving all data from the old helpdesk. [M1-M9]

Foreseen Budget

In terms of budget for 2024, the main funding sources include: a protocol established in the framework of the National Advanced Computing Centre (CNCA); the European project iMagine that will finish in 2025; the FCT protocol for the Iberian Advanced Computing Network (RICA) that started in 2018 and is ongoing; and the FCT protocol for the Portuguese National Advanced Computing Network (RNCA) supported by the yearly addenda of 2024, which includes both the support to the CPCA projects and to the catchall research data repository.

Expenses per project	INCD Geral	Deucalion	CEEC Instit.	Total
Human Resources	49 337,87 €	138 680,07 €	58 363,91 €	246 381,85 €
Procurement and external services	21 501,70 €	9 251,96 €		30 753,66 €
Missions	7 745,22 €	10 000,00 €		17 745,22 €
Total	78 584,79 €	157 932,03 €	58 363,91 €	**294 880,73 €**

Table 1: Foreseen budget per project for 2024

Foreseen expenses for 2024	
Description	**Value**
Human Resources	**246 381,85 €**
Procurement: Licences and electronic platforms	940,50 €
Procurement: miscellaneous supplies and equipment	19 251,96 €
External services: maintenance and accounting	10 374,00 €
Missions	17 745,22 €
Bank commissions and other taxes	187,20 €
Total expenses for 2024	**294 880,73 €**

Table 2: Foreseen Expenses for 2024

Foreseen income for 2024	
Description	**Value**
INCD general	39 101,78 €
Salary Reimbursements FCT-INCD-Deucalion (+ overheads)	173 350,09 €
Purchase reimbursements FCT-INCD-Deucalion (+ overheads)	24 064,95 €
CEEC Institucional	58 363,91 €
Total income for 2024	**294 880,73 €**

Table 3: Foreseen Income for 2024

ASSOCIAÇÃO INCD **NIF: 513919015**

Demonstração dos resultados por naturezas previsional em 31 de dezembro de 2024 **(em euros)**

Rendimentos e Gastos	Notas	2024	2023	2022
Vendas e serviços prestados		0,00	0,00	0,00
Subsídios, doações e legados à exploração		294 880,73	151 428,13	102 999,22
Variação nos inventários da produção		0,00	0,00	0,00
Trabalhos para a própria entidade		0,00	0,00	0,00
Custo das mercadorias vendidas e das matérias consumidas		0,00	0,00	0,00
Fornecimentos e serviços externos		-48 498,88	-19 230,97	-26 591,58
Gastos com o pessoal		-246 381,85	-117 793,77	-60 204,73
Ajustamento de inventários (perdas / reversões)		0,00	0,00	0,00
Imparidade de dívidas a receber (perdas / reversões)		0,00	0,00	0,00
Provisões (aumentos / reduções)		0,00	0,00	0,00
Provisões específicas (aumentos / reduções)		0,00	0,00	0,00
Outras imparidas (perdas/reversões)		0,00	0,00	0,00
Aumentos / reduções de justo valor		0,00	0,00	0,00
Outros rendimentos		429 716,03	430 180,20	472 268,63
Outros gastos		0,00	0,00	-3 049,43
Resultado antes de depreciações, gastos de financiamentos e impostos		429 716,03	444 583,59	485 422,11
Gastos / reversões de depreciação e de amortização		-429 716,03	-430 180,19	-472 268,63
Resultado operacional (antes de gastos de financiamentos e impostos)		0,00	14 403,40	13 153,48
Juros e rendimentos similares obtidos		0,00	0,00	0,00
Juros e gastos similares suportados		0,00	-14 403,40	-13 153,48
Resultado antes de impostos		0,00	0,00	0,00
Imposto sobre o rendimento do período		0,00	0,00	0,00
Resultado líquido do período		0,00	0,00	0,00

Table 4: Predicted Results by Nature for 2024

ASSOCIAÇÃO INCD **NIF: 513919015**

Balanço em 30 de abril de 2024

(em euros)

Rubrica	Notas	2024	2023
ATIVO			
Ativo não corrente			
Ativos fixos tangíveis		429.716,03	429.716,03
Bens do património histórico e cultural			
Ativos intangíveis			
Investimentos financeiros		687,71	687,71
Fundadores/ beneméritos /patrocinadores/ doadores/ associados/ membros			
Outros créditos e ativos não correntes			
Total ativo não corrente		430.403,74	430.403,74
Ativo corrente			
Inventários			
Créditos a receber			
Estado e outros entes públicos			
Fundadores/ beneméritos /patrocinadores/ doadores/ associados/ membros			
Diferimentos			
Outros ativos correntes			
Caixa e depósitos bancários		357.592,47	173.794,25
Total ativo corrente		357.592,47	173.794,25
Total ativo		787.996,21	604.197,99
FUNDOS PATRIMONIAIS E PASSIVO			
Fundos Patrimoniais			
Fundos			
Excedentes técnicos			
Reservas			
Resultados transitados			
Excedentes de revalorização			
Ajustamentos / outras variações nos fundos patrimoniais		577.679,76	577.679,76
Resultado líquido do período		182.884,26	
Dividendos antecipados			
Interesses que não controlam			
Total fundos patrimoniais		760.564,02	577.679,76
Passivo			
Passivo não corrente			
Provisões			
Provisões específicas			
Financiamentos obtidos			
Outras dívidas a pagar			
Total passivo não corrente			
Passivo corrente			
Fornecedores		7.014,73	6.023,93
Estado e outros entes públicos		3.695,18	3.772,02
Fundadores/ beneméritos /patrocinadores/ doadores/ associados/ membros			
Financiamentos obtidos			
Diferimentos			
Outros passivos correntes		16.722,28	16.722,28
Total passivo corrente		27.432,19	26.518,23
Total passivo		27.432,19	26.518,23
Total fundos patrimoniais e passivo		787.996,21	604.197,99

Table 5: Balance in April of 2024

Assinado com Assinatura Digital
Qualificada por:
NUNO FILIPE DA SILVA FERNANDES DE CASTRO
Presidente do Conselho Diretivo
Associação INCD
Data: 31-07-2024 13:26:02

Assinado por : **Paulo Jorge de Sá Rodrigues**
Num. de Identificação: BI10844090
Data: 2024.07.31 12:59:03 GMT Summer Time

Assinado com Assinatura Digital
Qualificada por:
JOÃO NUNO URBANO FERREIRA
Vogal do Conselho Diretivo
Associação INCD
Data: 31-07-2024 13:40:34

CHAVE MÓVEL

Assinado com Assinatura Digital
Qualificada por:
ANABELA PACHECO DE OLIVEIRA
Vogal do Conselho Diretivo
INCD - Infraestrutura Nacional de Computação Distribuída
Data: 31-07-2024 14:32:12