

2022 Activities Plan and Budget

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EXECUTIVE SUMMARY

The year 2022 will be particularly important for INCD, and will be marked by transitions at the management and project levels. Several bodies within the organisation have been renewed, with new members in the general assembly, audit committee and management board. Simultaneously a new role of technical coordinator has been established. A new period in the organisation's life is therefore starting.

The year of 2022 is expected to be particularly challenging. In first place, the project funded by the FCT research infrastructures roadmap that started in 2017 will finish in October 2022, effectively ending the first phase of INCD in the research infrastructures roadmap. The project sustained many of the INCD activities by providing funding for human resources and equipment. This will create a funding gap of unknown duration. Measures to address this gap will be taken including moving some of the engineering employment contracts to LIP as the main technology partner of INCD. In addition, INCD is seeking additional funding through national and European projects and initiatives. In second place, INCD will have to apply again to the FCT research infrastructures roadmap, in a context dominated by HPC and with additional competition. INCD has already prepared an answer to the FCT survey on research infrastructures stating its aim to continue in the research infrastructures roadmap. INCD will need to consolidate its position and define a strategy for a follow up proposal. In third place, the funding for equipment remaining from the first phase of the roadmap will have to be executed until 30 of October of 2022. To this end, INCD will have to execute an international public tender of over one million Euro to successfully finish the execution of the project funded under the roadmap. The new equipment will enable a substantial improvement of the computing and data services, and will require the deployment of two new operational centres at Universidade de Trás os Montes e Alto Douro (UTAD) for computing services and at LIP in Coimbra for long term data storage services. In last place, INCD will need to maintain and improve the services that are already being delivered through the Lisbon and Minho operational centres under a scenario of limited funding.

It is in this context that we present the plan of activities for 2022. The plan contains a broad range of activities to consolidate INCD as an essential research infrastructure by supporting relevant research across all scientific domains, through a comprehensive portfolio of services that includes federation in international infrastructures, backed by the expertise of an experienced support team. In this context, in 2022, INCD will start operating formally as a node of the Portuguese Advanced Computing Network (RNCA). In addition, INCD will continue executing the European projects *EOSC-Synergy*, *C-Scale*, and *EGI-ACE,* and finally will start in September 2022 the *iMagine* project focused on satellite image processing.

Activities Plan

The following activities will be developed in 2022:

a) Continue executing the project INCD P2020 nº 022153, supported by the FCT roadmap of research infrastructures of strategic interest (RNIE) that was extended until 30 October 2022. This project has as main goals the implementation and development of the infrastructure. In the context of the project INCD P2020 nº 022153 execute the remaining equipment budget through an international public tender having three independent tendering positions corresponding to equipment for the INCD operational centres in Lisbon at LNEC, North at UTAD and Centre at LIP Coimbra. The new equipment will increase the INCD computing and online storage capacity in Lisbon and in the North, while a new long term storage service will be deployed in the Centre region.
b) Participating in the coordination bodies and in the activities of the Portuguese Advanced Computing Network (RNCA), which include the provisioning of computing capacity to projects and activities supported by FCT and which are part of the RNCA protocol addenda for 2022. In this context, INCD will support projects from the Call for Advanced Computing Projects (CPCA) for 2022, and will participate in the specification of the upcoming CPCA for 2023.
c) Continue providing HPC, HTC, cloud computing and other services from the INCD portfolio to the Portuguese research community now acting within the context of the RNCA activities.
d) Continue operating the INCD partition of the Bob Supercomputer in Minho, and work to find a solution for the housing issues that affect the cluster availability since January 2021.
e) In collaboration with LIP and other partners of the EuroCC 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 activities.
f) Continue improving the INCD technical documentation including both reference documents and training materials.
g) Improve the INCD accounting and reporting mechanisms to facilitate collection of detailed usage information per service, for monitoring, resource management and reporting purposes.
h) Through the participation in the IBERGRID, EGI, EUDAT and EOSC international initiatives and infrastructure, support research activities of national interest, as well as support the provision and sharing of services and data within the scope of these initiatives, for the benefit of researchers and national priorities. Also leverage the national participation in IBERGRID, EGI and EOSC to support the participation in the European projects EOSC-Synergy, EGI-ACE, C-Scale and iMagine.

i) Participate in the European project EOSC-synergy that aims at convergence of the provision of federated services, integration of computing and data platforms, and support the development and operation of thematic services within the scope of EOSC. This project brings together European partners within the scope of EGI, IBERGRID and EOSC, as well as national partners that include INCD and the associates LIP, LNEC and FCT. The project will finish in October 2022. INCD will also work to support the SQAaaS Software Quality Assurance platform being developed in the project, aiming at providing it in the EOSC context.

j) Participate in the European project EGI-ACE whose objective is to provide an EOSC computing platform and contribute to the EOSC Data Commons through a federation of cloud computing and storage facilities, PaaS services and data spaces with analytical tools and federated access services. In this project, INCD will provide resources integrated into the EOSC computing platform, supporting computing and data services within the scope of EOSC, in addition INCD is collaborating in the integration and piloting of HPC services in EOSC.

k) Participate in the European project C-Scale (Copernicus - eoSC AnaLytics Engine). This project aims to federate European earth observation services such as Copernicus DIAS and others. This federation will capitalise on the open science and EOSC capacity and resources to support Copernicus research and operations. It aims to increase the scalability of data processing and sharing among the user community and contribute to increasing the offer of EOSC services. INCD will work in the support of use cases and will exploit the caching of earth observation images.

l) 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. These services will enable better and more efficient processing and analysis of imaging data in marine and freshwater research, accelerating our scientific insights about processes and measures relevant for healthy oceans, seas, coastal and inland waters. By building on the compute platform of the European Open Science Cloud (EOSC) the project delivers a generic framework for AI model development, training, and deployment, which can be adopted by researchers for refining their AI based applications for water pollution mitigation, biodiversity and ecosystem studies, climate change analysis and beach monitoring, but also for developing and optimising other AI based applications in this field.

m) Collaborate with Spain in terms of distributed and advanced computing within the scope of IBERGRID, as recommended in the Iberian agreements of Valladolid. Participation in common projects and activities, which also include the organisation in Portugal of the next edition of the IBERGRID conference scheduled for October of 2022.

n) Participate and support pilot activities of open data repositories, as well as the interconnection of these repositories with advanced computing means. This activity will be developed exploring collaboration with the EOSC-Synergy project and FCT under the RNCA protocol.

o) Development of tools and solutions to facilitate the use and management of advanced computing resources.
p) Seek engagement with new user communities and use cases beyond science and academy with particular focus in the public administration and private sectors.

Budget

In terms of budget for 2022, INCD has seven main funding sources that include: the project INCD P2020 nº 022153 supported by the FCT infrastructures roadmap that will finish in 30 of October; the European project EOSC-Synergy that will finish also in October 2022; the European projects C-Scale and EGI-ACE that will continue into 2023; the new European project IMagine that will start in October 2022; the FCT protocol for the Iberian Advanced Computing Network (RICA) that started in 2018 and is ongoing until the end of the budget; and the FCT protocol for the Portuguese National Advanced Computing Network (RNCA).

Budget per project	INCD P2020	EOSC-Synergy	EGI-ACE	iMagine	C-Scale	RICA	RNCA	Total
Equipment	1 036 512,75 €							**1 036 512,75 €**
Human Resources	6 421,98 €	35 573,95 €		38 332,00 €	12 024,73 €			**92 352,66 €**
Other expenses		9 413,00 €	55 863,42 €	2 000,00 €	45,038.19	119 695,03 €	97 972,00 €	**284 943,45 €**
Overheads		11 246,73 €		10 083,00 €	3 006,18 €			**24 335,91 €**
Total	1 042 934,73 €	56 233,68 €	55 863,42 €	50 415,00 €	60 069,10 €	119 695,03 €	97 972,00 €	**1 483 182,96 €**

Table 1: Available budget

Foreseen Expenses

Expenditure forecast until December 2022	
Human Resources :: salary + taxes + insurance	67 390,00 €
Procurement :: equipment	1 033 000,00 €
Procurement :: Licences and software	12 805,00 €
Procurement :: office supplies, ink cartridges	200,00 €
Missions :: daily allowance, accommodation and travels	2 670,00 €
Other expenses :: bank commisisions and expenses	30 000,00 €
Other expenses :: accounting contract	2 952,00 €
TOTAL	1 146 065,00 €

Table 2: Foreseen Expenses

ASSOCIAÇÃO INCD **NIF: 513919015**

Demonstração dos resultados por naturezas em 30 de junho de 2022 **(em euros)**

Rendimentos e Gastos	Notas	DEZ.2021	JUN.2022	2ºSEM.2022	DEZ.2022
Vendas e serviços prestados		0,00 €	0,00 €	0,00 €	0,00 €
Subsídios, doações e legados à exploração		133 607,54 €	0,00 €	104 639,17 €	104 639,17 €
Variação nos inventários da produção		0,00 €	0,00 €	0,00 €	0,00 €
Trabalhos para a própria entidade		0,00 €	0,00 €	0,00 €	0,00 €
Custo das mercadorias vendidas e das matérias consumidas		0,00 €	0,00 €	0,00 €	0,00 €
Fornecimentos e serviços externos		-5 780,69 €	-5 773,16 €	-1 476,00 €	-7 249,16 €
Gastos com o pessoal		-84 285,90 €	-37 298,19 €	-30 091,81 €	-67 390,00 €
Ajustamento de inventários (perdas / reversões)		0,00 €	0,00 €	0,00 €	0,00 €
Imparidade de dívidas a receber (perdas / reversões)		0,00 €	0,00 €	0,00 €	0,00 €
Provisões (aumentos / reduções)		0,00 €	0,00 €	0,00 €	0,00 €
Provisões específicas (aumentos / reduções)		0,00 €	0,00 €	0,00 €	0,00 €
Outras imparidas (perdas/reversões)		0,00 €	0,00 €	0,00 €	0,00 €
Aumentos / reduções de justo valor		0,00 €	0,00 €	0,00 €	0,00 €
Outros rendimentos		332 617,50 €	0,00 €	383 102,67 €	383 102,67 €
Outros gastos		-43 540,95 €	-0,01 €	0,00 €	-0,01 €
Resultado antes de depreciações, gastos de financiamentos e impostos		332 617,50 €	-43 071,36 €	456 174,03 €	413 102,67 €
Gastos / reversões de depreciação e de amortização		-332 617,50 €	0,00 €	-383 102,67 €	-383 102,67 €
Resultado operacional (antes de gastos de financiamentos e impostos)		0,00 €	-43 071,36 €	73 071,36 €	30 000,00 €
Juros e rendimentos similares obtidos		0,00 €	0,00 €	0,00 €	0,00 €
Juros e gastos similares suportados		0,00 €	0,00 €	-30 000,00 €	-30 000,00 €
Resultado antes de impostos		0,00 €	-43 071,36 €	43 071,36 €	0,00 €
Imposto sobre o rendimento do período		0,00 €	0,00 €	0,00 €	0,00 €
Resultado líquido do período		0,00 €	-43 071,36 €	43 071,36 €	0,00 €

ASSOCIAÇÃO INCD **NIF: 513919015**

Balanço em 30 de junho de 2022 **(em euros)**

Rubrica	Notas	DEZ.2021	JUN.2022	2ºSEM.2022	DEZ.2022
ATIVO		0,00 €	0,00 €		0,00 €
Ativo não corrente		0,00 €	0,00 €		0,00 €
Ativos fixos tangíveis		40 749,57 €	57 102,64 €	653 402,01 €	710 504,65 €
Bens do património histórico e cultural		0,00 €	0,00 €		0,00 €
Ativos intangíveis		3 504,68 €	3 504,68 €	-3 504,68 €	0,00 €
Investimentos financeiros		1 019,79 €	760,20 €		760,20 €
Fundadores/ beneméritos /patrocinadores/ doadores/ associados/ membros		0,00 €	0,00 €		0,00 €
Outros créditos e ativos não correntes		0,00 €	0,00 €		0,00 €
Total ativo não corrente		45 274,04 €	61 367,52 €	649 897,33 €	711 264,85 €
Ativo corrente		0,00 €	0,00 €		0,00 €
Inventários		0,00 €	0,00 €		0,00 €
Créditos a receber		0,00 €	0,00 €		0,00 €
Estado e outros entes públicos		0,00 €	0,00 €	267 000,00 €	267 000,00 €
Fundadores/ beneméritos /patrocinadores/ doadores/ associados/ membros		0,00 €	0,00 €		0,00 €
Diferimentos		0,00 €	0,00 €		0,00 €
Outros ativos correntes		0,00 €	0,00 €		0,00 €
Caixa e depósitos bancários		377 990,02 €	343 437,17 €	54 937,57 €	398 374,74 €
Total ativo corrente		377 990,02 €	343 437,17 €	321 937,57 €	665 374,74 €
Total ativo		423 264,06 €	404 804,69 €	971 834,90 €	1 376 639,59 €
FUNDOS PATRIMONIAIS E PASSIVO		0,00 €	0,00 €		0,00 €
Fundos Patrimoniais		0,00 €	0,00 €		0,00 €
Fundos		0,00 €	0,00 €		0,00 €
Excedentes técnicos		0,00 €	0,00 €		0,00 €
Reservas		0,00 €	0,00 €		0,00 €
Resultados transitados		0,00 €	0,00 €		0,00 €
Excedentes de revalorização		0,00 €	0,00 €		0,00 €
Ajustamentos / outras variações nos fundos patrimoniais		403 619,74 €	403 619,74 €	-59 320,84 €	344 298,90 €
Resultado líquido do período		0,00 €	-43 071,36 €	43 071,36 €	0,00 €
Dividendos antecipados		0,00 €	0,00 €		0,00 €
Interesses que não controlam		0,00 €	0,00 €		0,00 €
Total fundos patrimoniais		403 619,74 €	360 548,38 €	-16 249,48 €	344 298,90 €
Passivo		0,00 €	0,00 €		0,00 €
Passivo não corrente		0,00 €	0,00 €		0,00 €
Provisões		0,00 €	0,00 €		0,00 €
Provisões específicas		0,00 €	0,00 €		0,00 €
Financiamentos obtidos		0,00 €	0,00 €	1 300 000,00 €	1 300 000,00 €
Outras dívidas a pagar		0,00 €	0,00 €		0,00 €
Total passivo não corrente		0,00 €	0,00 €	1 300 000,00 €	1 300 000,00 €
Passivo corrente		0,00 €	0,00 €		0,00 €
Fornecedores		246,00 €	17 674,53 €		17 674,53 €
Estado e outros entes públicos		2 361,13 €	9 544,59 €		9 544,59 €
Fundadores/ beneméritos /patrocinadores/ doadores/ associados/ membros		0,00 €	0,00 €		0,00 €
Financiamentos obtidos		0,00 €	0,00 €		0,00 €
Diferimentos		0,00 €	0,00 €		0,00 €
Outros passivos correntes		17 037,19 €	17 037,19 €		17 037,19 €
Total passivo corrente		19 644,32 €	44 256,31 €	0,00 €	44 256,31 €
Total passivo		19 644,32 €	44 256,31 €	1 300 000,00 €	1 344 256,31 €
Total fundos patrimoniais e passivo		423 264,06 €	404 804,69 €	1 283 750,52 €	1 688 555,21 €

Tables 3 and 4: Predicted Results by Nature (top) and Balance at 30 June 2022 (bottom)

Assinado com Assinatura Digital
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NUNO FILIPE DA SILVA FERNANDES DE CASTRO
Presidente do Conselho Diretivo
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