Our experiences as a MSCA COFUND applicant - coordinator of the projects CompSci and DSTrain

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MSCA COFUND Programmes at UiO

Scientia Fellows (MED)

CompSci (MN)

DSTrain (MN)

International Postdoctoral Fellowship Programme – *in Health Life Sciences*

- SCIENTIA-FELLOWS I (2014-2019)/ SCIENTIA FELLOWS II (2019-2024)
- FP7-PEOPLE/ H2020-MSCA-COFUND-2017
- GA # 609020/ GA # 801133
- Budget SFII: € 17,700,000
- Grant SFII: € 8,850,000
- SFII: Up to 100 postdocs, a total of 3,000 fellow months
- Programme coordinator: Prof. Hilde I Nebb
- Admin. programme manager(s): Marta Lorens-Thommesen/Veslemøy Ramsfjell

Training in Computational Science

- CompSci (2021-2026)
- H2020-MSCA-COFUND-2019
- GA # 945371
- Budget: € 5,207,040 *(€ 8,623,872)*
- Grant € 2,603,520
- 32 PhDs à 3 yrs. 1,152 fellow months
- Programme coordinator: Prof. Anders Malthe-Sørensen
- Admin. programme manager: Marta Gomez Munoz
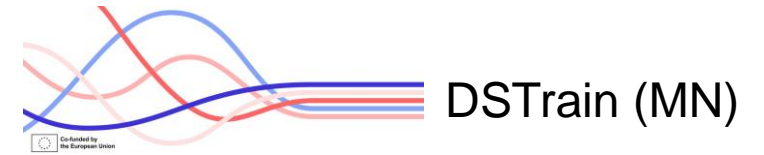
Data Science Postdoctoral Training Programme

- DSTrain (2024-2028)
- HORIZON-MSCA-2022-COFUND
- GA # 101126636
- Budget € 10,316,160 *(€ 11,227,490)*
- Grant € 5,158,080
- 36 postdocs à 3 yrs. 1,296 fellow months
- Programme coordinator: Prof. Arne Bang Huseby
- Admin. programme manager: Martha-Elisabeth Brigg

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Data Science (DS) is a fast-growing scientific area of high importance, playing a central role in all scientific investigations, and are essential to innovation in almost all domains across society. Data Science underpins the majority of today's technological, economic and societal feats. Increasing amounts of data offer enormous opportunities, but only to those who are able to harness them. In order to utilize these opportunities, skills and competences in data science are necessary. Such skills will play an essential role in shaping future technological developments. There is a massive interest both in the public sector and in the industry for candidates with excellent qualifications in data science combined with the ability to use these skills in cross-disciplinary projects.

Anchoring within the organisation

WHY apply for a COFUND? - The Intention of the CompSci programme, our 1st COFUND

- Background
  - The use of computing and data science is revolutionizing research, industry, government and society, new skills are in demand, a need for solid skills in computing and data science, in addition to disciplinary skills.
- Aligns with MN Faculty strategies and our activities:
  - strong position in natural sciences, technology and, particularly in computational science and data science (ERC, CoE)
  - strong position in education and researcher training at all levels, particularly strong in integrating programming and computing in education, researcher training and research (CCSE).
- Initiated by our Faculty Deans
  - Inspired by the Scientia Fellows Postdoctoral program at Faculty of Medicine, UiO
- Anchored with our departments, head of department meeting
  - Go/No-go decision – and whether it should be a PhD or Postdoc programme was discussed

Anchoring within the organisation

WHERE in the organisation should the project belong

The Faculty of Mathematics and Natural Sciences

CCSE Center for Computing in Science Education

dScience Centre for Computational and Data Science

- MN Faculty Administration – Research section/EU team

- CCSE - The Center for Computing in Science Education
  - a national Center for Excellence in Education at UiO
  - Goal is to integrate computing as a natural tool in basic educations, to make the education research near and to prepare students for an interdisciplinary workplace

- dScience – Centre for Computational and Data Science
  - The centre is part of the Faculty of Mathematics and Natural Sciences, but includes activities from other faculties/units at UiO
  - an interdisciplinary centre developing and supporting research within computational science and data science across UiO and together with partners in industry and public sector.

Application

Key messages

- Takes approx. 100 – 120 hrs. to write a COFUND?

- Commitment essential – and someone eager to do the work
  - One key scientist, one consultant, one research adviser, plus input from HR, PhD group, finance

- Need writing skills, knowledge of science, training and impact

- Need to decide if it should be only incoming or both incoming and outgoing

- Involvement of partners; academic/non-academic (companies/industry is important and a plus e.g. for secondments)

- COFUND's Excellence section is not only focused on the science, but much more on the feasibility of the programme.

- Need to be clear on how to handle the call process, evaluation and selection process – criteria, committees involved.

- Impact is important – on regional, national, European level – relate to policies (European, national, ..)

Application

Where to start

- Decide on type and focus of programme

  - Size of programme dependent on scientific focus, budget, financial situation

- About the programme

  - Why is it important, strategic, any relevant policies, documents – be it institutional, national, regional, international (EU/Global, UN)
  - 2 pages introduction in the proposal

- Training Programme – need defined content and proper structure – what are the key learning elements?

  - Scientific skills and generic competences
  - Secondments in non-academic/academic sector
  - Who will be involved – research groups, research areas/topics, partners, be specific.

- Partners – take time – Letters of Commitment

- Evaluation and selection process – research support/consultant contribution

  - Involve local HR – must be correct also for institution
  - EU requirements must be met; international, independent, impartial evaluations.

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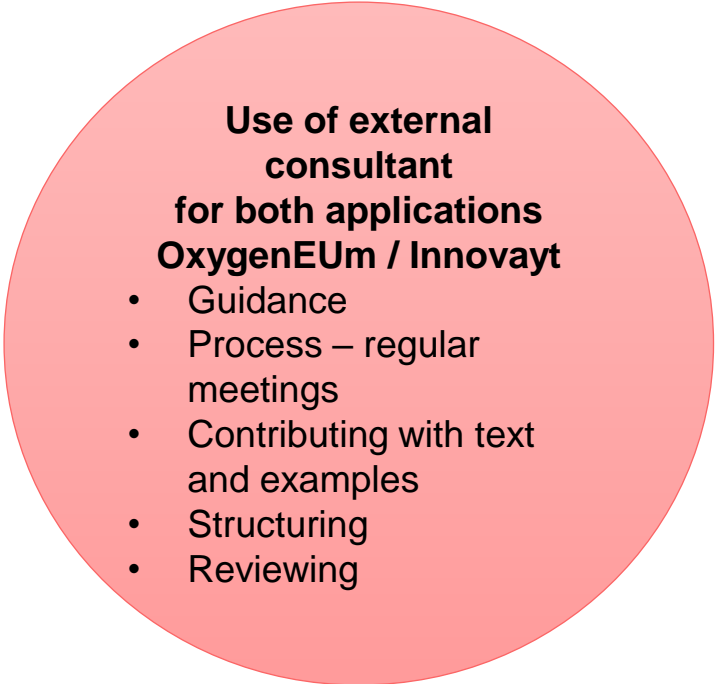
Application

Roles

Scientific coordinator

- Anchoring of project towards involved persons, involves contact with
  - Faculty Deans, Head of departments, …
  - Key scientists (professors, …)
  - Partners (non-academic/academic), in collaboration with key scientists
- Drafting the scientific background, the research focus, the training programme, …
- Overall responsibility for the writing of the whole proposal

Research adviser

- Internal coordination, HR, finances, input PhD group (if relevant), ISMO
- Providing information and short texts on:
  - existing generic/transferable skills training
  - UiO requirements, policies, available support (PhD requirements, data management, open access, employment processes, International staff mobility office, …)
  - EU requirements, policies (MSCA programme, European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers, MSCA Green charter, MSCA guidelines on Supervision, …)

Use of external consultant
for both applications
OxygenEUm / Innovayt
- Guidance
- Process – regular meetings
- Contributing with text and examples
- Structuring
- Reviewing

Application

Budget Proposal DSTrain

Beneficiary institution decides on what this covers

Table 1.1.a. Amounts provided to researchers and hosting organisation

Cost category	EU contribution (EUR/person-month)	Total cost = EU contribution + own resources (EUR/person-month)
COFUND allowance	3 980	5991
Mobility allowance	n/a	600
Research and travel costs	n/a	450
Other (training, etc.)	n/a	100
Management costs	n/a	393
Indirect costs	n/a	1130
Number of candidates	36	
Person-months	1 296	
Total amount	**5 158 080**	**11 227 490**

Based om estimated salary costs of a Postdocs incl. soc. costs (but no overhead) = 6.891 euro/month

Research costs for fellow with € 5,400/yr

Programme costs related to training, workshops, …

Programme manager salary costs, external expert fees

Set to 15% of total direct costs, to set a higher % here would just increase the own contribution. In reality i.c are much higher.

Application

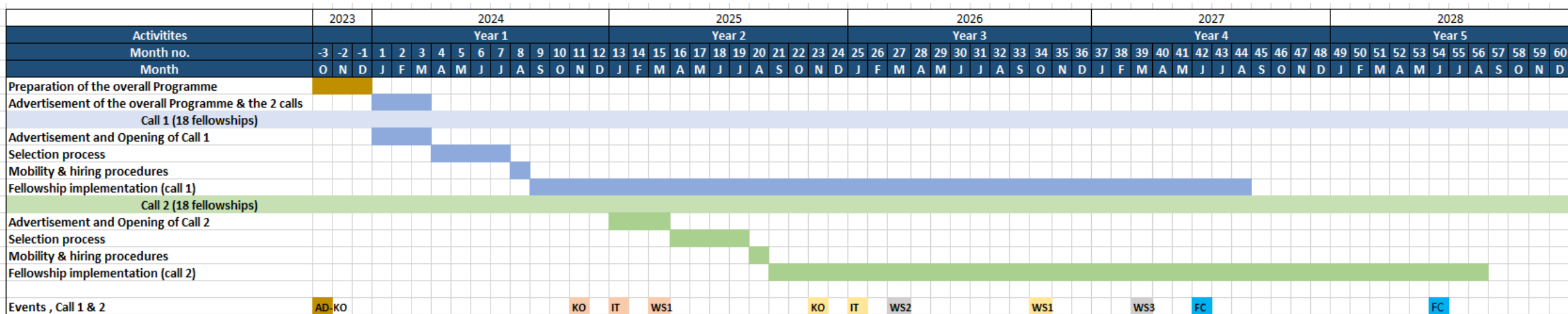| Budget DSTrain – EU Cofund allowance and own contribution | Compensation to departments to cover the total personnel costs incl. i.c., and fellows' research costs |

Left column

- EU COFUND requirement
  - minimum salary requirement must be respected - Norwegian salary is higher!

- Consider co-funding early
  - consider various types of co-funding
  - Anchor financing before applying.

- Involve key levels to set up a realistic budget
  - leadership
  - head of finance
  - research support
  - financial support

Right column

- EU Cofund allowance
  - 3980 € /fellow month for DSTrain Postdoctoral programme
  - KD-contribution, MN Faculty's KD-pool

- 1/3 KD per fellow
  - a total of funding equal to 6 + 6 positions split on the 36 DSTrain postdocs

- RBO,«Resource based redistribution»
  - Transferred to the departments annually, based on the national funding mechanism and incentives structure of universities.

- Faculty's strategic funds
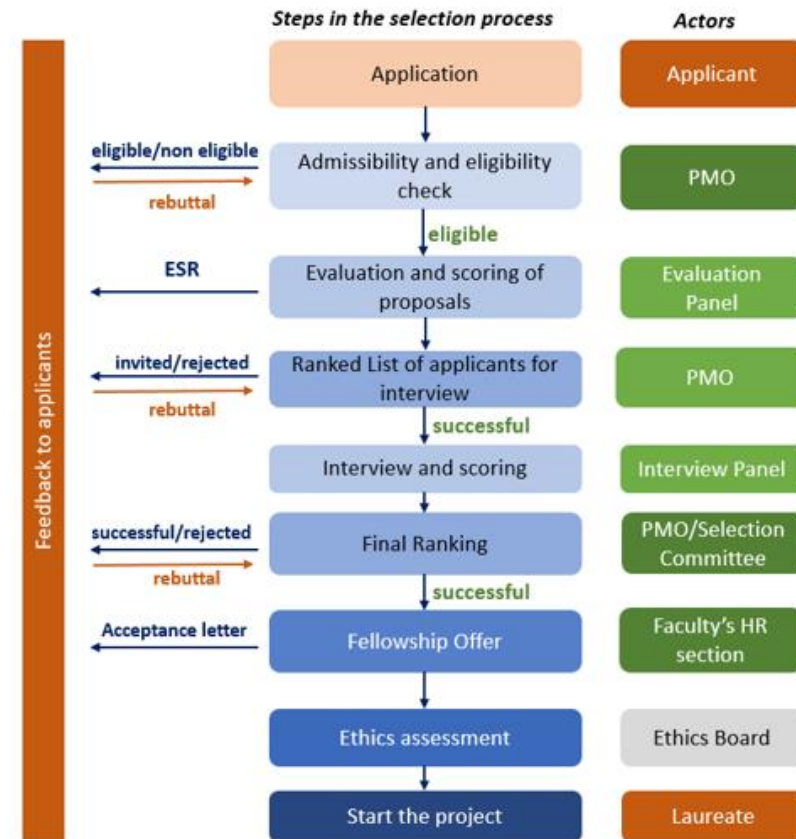
Structure

Gantt chart - timeline

Activitites	2023	2024 Year 1	2025 Year 2	2026 Year 3	2027 Year 4	2028 Year 5
Month no.	-3 -2 -1	1 2 3 4 5 6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22 23 24	25 26 27 28 29 30 31 32 33 34 35 36	37 38 39 40 41 42 43 44 45 46 47 48	49 50 51 52 53 54 55 56 57 58 59 60
Month	O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D	J F M A M J J A S O N D

Activities:
- Preparation of the overall Programme
- Advertisement of the overall Programme & the 2 calls
- Call 1 (18 fellowships)
- Advertisement and Opening of Call 1
- Selection process
- Mobility & hiring procedures
- Fellowship implementation (call 1)
- Call 2 (18 fellowships)
- Advertisement and Opening of Call 2
- Selection process
- Mobility & hiring procedures
- Fellowship implementation (call 2)
- Events , Call 1 & 2: AD-KO, KO, IT, WS1, KO, IT, WS2, WS1, WS3, FC, FC

AD-KO = Admin Project Kick off
KO = Kick-off seminar, IT = Intensiv Training, WS = Workshops 1,2,3, FC= Final Conference

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Structure

Evaluation and selection process (~16 weeks)

- Actors/committees involved

- Written assessment criteria
  - addressing excellence, impact, implementation, and application qualifications
  - with a max score of 5 for each criterion, following the standard MSCA scoring system

- Interview assessment criteria
  - Scored on 1) scientific presentation/discussion, 2) CV/match topic, and 3) motivation/interdisciplinarity
  - an average of the three scores will represent the final interview score

- The interview and written part scores are averaged
  - considering the respective weights 60% written /40% interview, and the top candidates will be offered the fellowship.

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# Structure

The training programme

- Training through research

- Scientific and Interdisciplinary training (network-wide training events)

- Transferable skills training

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- Other conferences and events

- Secondments

Table 1.3 a Main Network-Wide Training Events, Conferences and Contribution of the Beneficiary/ Partners

	Main Training Events & Conferences	ECTS (*if any*)	Lead Institution	Action Month (*estimated*)
1	*i) Kick-off seminar* (1 day) Keynote lectures by experts from academia and UiO's team of psycho-social coaches <u>Transferable skills:</u> - Building a strong interdisciplinary working environment by UiO's coaches - Brief oral presentations by each PDR covering research project plan	n.a.	UiO	M11, M23 *Nov 2024 (cohort 1), Nov 2025 (cohort 2)*
	- Definition of cross-disciplinary research teams			
2	*ii) Intensive training* (1-2 days/course) - Course 1: Introduction to scientific programming and green computing - Course 2: Data analysis and machine learning - Course 3: Architecture for sustainable data management	n.a	UiO	M13, M25 *Jan 2025 (cohort 1), Jan 2026 (cohort 2)*
3	*iii) Workshop 1* (2-3 days) Keynote lectures by experts from academia. - Main topic: Data science, methodology and applications in natural sciences - Oral presentations by the fellows of research plan - Team-building activities and cultural events <u>Transferable skills:</u> - How to conduct interdisciplinary research - Open science and strategies for data sharing	n.a	UiO	M15, M34 *Mar 2025 (cohort 1), Oct 2026 (cohort 2)*

Structure

Overall management of the programme
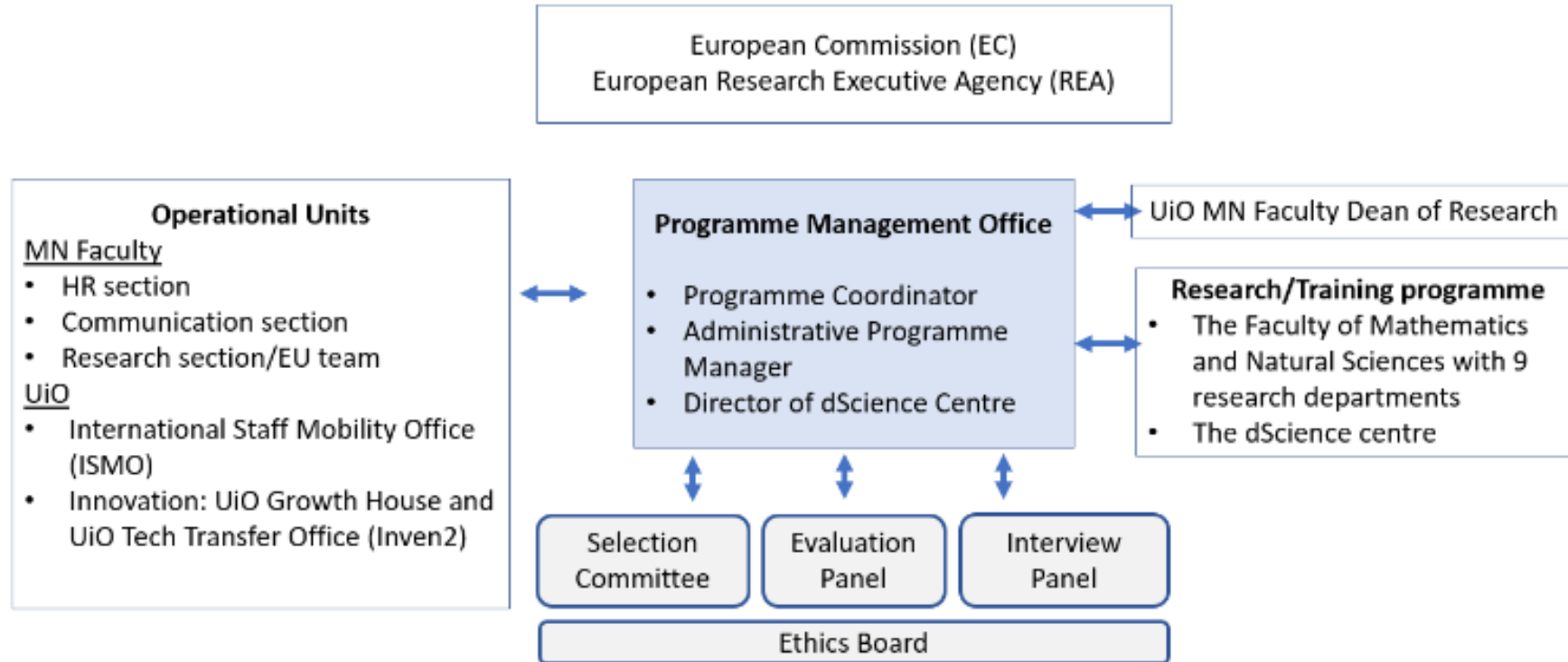
Implementation

Proposal versus Project - some observations from CompSci

- Selection and evaluation process – takes a lot of work

- Class /Cohort – positive feedback from fellows

- Interdisciplinary aspect

- Faculty adaptation of PhD regulations for the PhD Degree re. ECTS credits for the CompSci mandatory workshops.

- Secondments costly, if involve travel/accommodation

- PhDs often need prolongations – challenge – consider a later official start date

- Social programme – closer follow up - positive

- Involvement of partners throughout programme - challenge

- Understanding of compulsory courses, being part of a programme – is something more than being a regular PhD or Postdoc.

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Thanks for your attention!

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