

WP2: Training, Communication and Outreach for Accelerator Science

3 May 2022

Philip Burrows (John Adams Institute, Oxford University)

Outline

• What did we achieve?

Next steps



ARIES WP2 participants

Participants: CERN, ESS, CNRS, RTU, UOXF

Partners:

Aarhus University (AU), Univ. Helsinki, European Scientific Institute (ESI),

Univ. Oslo (UiO), Stockholm University (SU),

Univ. Lancaster (ULANC), Univ. Liverpool (UNILIV)

Affiliates:

CEA, Lund Univ, CIEMAT, GSI, KIT, INFN, PSI, Warsaw Inst. Tech.



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Affiliates:

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WP2 tasks

- Task 1: Management and coordination
- Task 2: Coordination, support and enhancement of communication/outreach activities for accelerators in Europe
- Task 3: Coordination, support and enhancement of training activities for accelerators in Europe
- Task 4: Provide an e-learning course: introduction to accelerator science, engineering and technology



Milestones & Deliverables for WP2

	T 1 .						
	Tasks						
2.2	Internal and external project communications and outreach activities						
2.3	Monitor provision for training in Europe and within a global context						
2.4	Produce an introductory e-learning course on accelerator science						
Milestones							
MS10	Project website launched	2.2	M6	Oct 2017			
MS11	Meeting to agree MOOC platform and academic structure and content of e-learning course	2.4	M12	May 2018			
MS12	Workshop on training activities in Europe in a global context	2.3	M24	April 2019			
Deliverables							
D2.1	E-learning course	2.4	M36	April 2020			
D2.2	Final report on coordination of communication/outreach activities	2.2	M37	May 2020			
D2.3	Final report on coordination of training activities	2.3	M39	July 2020			



Milestones & Deliverables for WP2

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D2.3	Figure 1 corona on Carin g ativitie	2.3	M39	July 2020				



Major Achievements

Updated survey of training provision + needs in Europe (Rutambhara Yogi)

Talk to follow

Provided an E-learning course ('MOOC') (Nicolas Delerue)

Talk to follow

Delivered communications (Jennifer Toes, Daniela Antonio, Antoine Le Gall)

- Internal + external communications, dissemination of news etc.
- Preparations for Annual Meetings + other events
- Input and editorial support for Accelerating News
- Two dedicated workshops for professional communicators from major European accelerator laboratories

Ensured a smooth transition to next set of 'TCO' actions in I.FAST

- Internal + external communications
- Challenge Based Innovation scheme
- Industrial training/knowledge transfer scheme

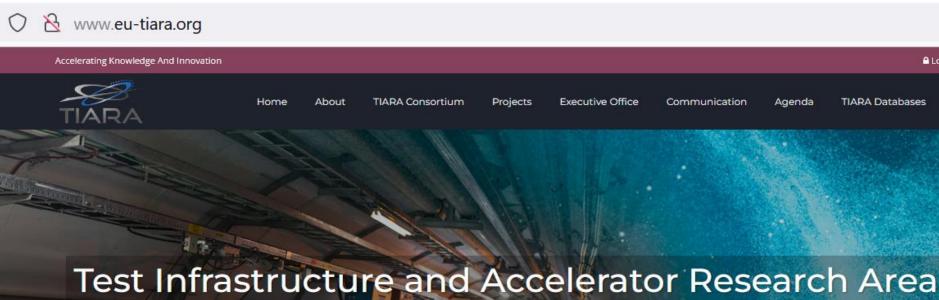
- talk by Antoine Le Gall (Thursday)
- talk by Nicolas Delerue (Wednesday)
- talk by Tord Ekelof (Wednesday)



Personal observations ... next steps

- Integrating Activity projects such as ARIES (and previously EUCARD, EUCARD2)
 provide a framework for cooperation, sharing of knowledge and resources, and
 coordination of activities, that serve the European accelerator community very
 broadly, at an under-pinning level
- Provide a platform that helps to nurture the community and provides an incubator environment for development of other focused projects/proposals (eg. Design Studies, INFRA-TECH projects, MSCI training networks ...)
- Training, communications & outreach is a prime example:
 Even though resources are limited, the value of the activities is very high
 A broad action plan was developed by TIARA PP project (2013)





Executive Office

Communication

Agenda

TIARA Databases

≜ Log In

Accelerating Knowledge And Innovation

Read More

Roy Aleksan → Jose Manuel Perez, Eugenio Nappi



Accelerator R&D covers many domains, from the concepts of acceleration themselves to the study and realization of sub-elements. TIARA aim in supporting R&D toward future Accelerator Science and Technology, promoting cooperation concerning R&D activities for the benefit of the accelerator developersamd the



Collaboration with industry

TIARA aims to provision and support industry, for accessing equipment, facilties and accelerator system at accelerator R&D at a European level. Moreover, innovation through collaboration with industry is a key item to achieve TIARA purposes.



Education & Training Programmes

Education, outreach and training programs are the base for achieving the TIARA purpose. Workshops, conferences, proposal preparation, project reviewing, etc. are the tools necessary to complete the project activities.

TIARA PP WP5 Recommendations



Test Infrastructure and Accelerator Research Area

TIARA WP5 Deliverable 5.4 Recommendations for promoting accelerator science and technology in Europe

7 November 2013

François Kircher, Phu-Anh-Phi Nghiem, Celine Tanguy, CEA, France

Roger Bailey, Louis Rinolfi, CERN, Switzerland

M. Luisa Marco Arboli (WP Deputy), Susana Falcon, Diego Obradors, CIEMAT, Spain

Catherine Clerc, Alex C. Mueller (WP Deputy), CNRS-IN2P3, France

Leonid Rivkin, EPFL, Switzerland

Sabrina Appel, Oliver Boine-Frankenheim, GSI, Germany

Francesca Galluccio, Vittorio Vaccaro, INFN Napoli, Italy

Piotr Malecki, Institute of Nuclear Physics, Polish Academy of Sciences, Poland

Søren Pape Møller, ISA, Aarhus University, Denmark

Philip Burrows (WP leader), Max Bradbury, John Adams Institute, University of Oxford, United Kingdom

Ole Petter Nordahl, University of Oslo, Norway

The research leading to these results has received funding from the European Commission under the FP7-INFRASTRUCTURES-2010-1/INFRA-2010-2.2.11 project TIARA (CNI-PP).

Grant agreement no 261905.



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TIARA proposals

	Proposal	Estimate of resources needed	Unit cost (Euro)	Number of units
Undergraduate -level training	1. 'e-learning' course, 'Introduction to Accelerator Science and Technology'.	12 months (course setup) + 5 months per annum thereafter (centralised course monitoring and support) + IT infrastructure (server, software tools etc.).	N/A	
	2. Internships at 'local', or an international, accelerator laboratory.	150,000 Euro + 3 person months, per annum.	Intern month 1,500	100
Master's-level training	3. Bursary support to attend established international and national accelerator schools.	100,000 Euro + 2 person-months, per annum.	Bursary 2,000	50
	4. European Master's fellowship scheme.	200,000 Euro (year 1), 400,000 Euro (year 2 and per annum thereafter) + 2 person months per annum.	Fellowship 20,000 Euro	10
	5. Internships for project work in support of a thesis.	300,000 Euro + 3 person months, per annum.	Intern month 1,000	300
PhD-level training	6. Bursary support to attend established international and national accelerator schools.	100,000 Euro + 2 person-months, per annum.	Bursary 2,000	50
	7. European PhD fellowship scheme.	250,000 Euro (year 1), 500,000 Euro (year 2), 750,000 Euro (year 3 and per annum thereafter) + 2 person months per annum.	Fellowship 25,000	10
Structural support	9. Enhanced accelerator schools provision.	100,000 Euro + 1 person-month, per annum.	N/A	
	10. www-portal	6 months (course setup) + 2 months per annum thereafter (centralised course monitoring and support) + IT infrastructure (server, software tools etc.).		
Outreach	11. Outreach support	1 MEuro per annum	Per country 100,000	10



ARIES

MOOC

- **Updated** training survey
- Outreach professionals workshops

Accelerating News

Master's-level training

PhD-level

Structural

support

Outreach

training

Undergraduate

-level training

3. Bursary support to

attend established international and national accelerator schools. 4. European Master's fellowship scheme.

1. 'e-learning' course,

Accelerator Science and

2. Internships at 'local',

accelerator laboratory.

or an international.

'Introduction to

Technology'.

- 200,000 Euro (year 1), 400,000 Euro (year 2 and per annum thereafter) + 2
- person months per annum. 300,000 Euro + 3 person months, per 5. Internships for project work in support annum. of a thesis. 6. Bursary support to 100,000 Euro + 2 person-months, per

schools.

schools provision.

11. Outreach support

10. www-portal

- attend established annum. international and national accelerator 7. European PhD fellowship scheme.
- 9. Enhanced accelerator
- - annum.

etc.).

(year 2), 750,000 Euro (year 3 and per annum thereafter) + 2 person months per annum. 100,000 Euro + 1 person-month, per

1 MEuro per annum

6 months (course setup) + 2 months per annum thereafter (centralised

course monitoring and support) + IT infrastructure (server, software tools

Estimate of resources needed

etc.).

annum.

annum.

12 months (course setup) + 5 months

course monitoring and support) + IT

infrastructure (server, software tools

150,000 Euro + 3 person months, per

100,000 Euro + 2 person-months, per

per annum thereafter (centralised

- 250,000 Euro (year 1), 500,000 Euro
- Fellowship 25,000 N/A

Per country

100,000

Unit cost (Euro)

Intern month

1.500

Bursary

Fellowship

20,000 Euro

Intern month

1,000

Bursary

2,000

2,000

N/A

Number of units

100

50

10

300

50

10

10

I.FAST

Industry/KT internships

	2. Internships at 'local', or an international, accelerator laboratory.	150,000 Euro + 3 person months, per annum.	Intern month 1,500
Master's-level training	3. Rursary support to attend established international and national accelerator schools.	100,000 Euro + 2 person-months, per annum.	Bursary 2,000
	4. European Master's fellowship scheme.	200,000 Euro (year 1), 400,000 Euro (year 2 and per annum thereafter) + 2 person months per annum.	Fellowship 20,000 Euro
	5. Internships for project work in support of a thesis.	300,000 Euro + 3 person months, per annum.	Intern month 1,000
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Structural support	9. Enhanced accelerator schools provision.	100,000 Euro + 1 person-month, per annum.	N/A
	10. www-portal	6 months (course setup) + 2 months per annum thereafter (centralised course monitoring and support) + IT infrastructure (server, software tools etc.).	
Outreach	11. Outreach support	1 MEuro per annum	Per country 100,000

etc.).

Estimate of resources needed

12 months (course setup) + 5 months

course monitoring and support) + IT

infrastructure (server, software tools

per annum thereafter (centralised

Unit cost (Euro)

N/A

Number of units

100

50

10

300

50

10

10

Proposal

Undergraduate

-level training

1. 'e-learning' course,

Accelerator Science and

'Introduction to

Technology'.



I.FAST	-level training	Introduction to Accelerator Science and	per annum thereafter (centralised course monitoring and support) + IT	
		Technology'.	infrastructure (server, software tools etc.).	
Industry/KT		2. Internships at 'local', or an international, accelerator laboratory.	150,000 Euro + 3 person months, per annum.	Intern month 1,500
internships	Master's-level training	3. Rursary support to attend established	100,000 Euro + 2 person-months, per annum.	Bursary 2,000
Challenge Based		international and national accelerator schools.		
Innovation		4. European Master's fellowship scheme.	200,000 Euro (year 1), 400,000 Euro (year 2 and per annum thereafter) + 2 person months per annum.	Fellowship 20,000 Euro
		5. Internships for project work in support of a thesis.	300,000 Euro + 3 person months, per annum.	Intern month 1,000
	PhD-level training	6. Bursary support to attend established international and national accelerator schools.	100,000 Euro + 2 person-months, per annum.	Bursary 2,000
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	Structural support	9. Enhanced accelerator schools provision.	100,000 Euro + 1 person-month, per annum.	N/A
ARIES		10. www-portal	6 months (course setup) + 2 months per annum thereafter (centralised course monitoring and support) + IT infrastructure (server, software tools etc.).	
ARIES	Outreach	11. Outreach support	1 MEuro per annum	Per country 100,000

Proposal

Undergraduate 1. 'e-learning' course,

Unit cost (Euro)

N/A

Number of units

100

50

10

300

50

10

10

Estimate of resources needed

12 months (course setup) + 5 months



ADIEC		Proposar	Estimate of resources needed	Unit cost (Euro)	Number
ARIES			Estimate of Tesources needed		of units
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I.FAST (-level training	Introduction to	per annum thereafter (centralised		
		Accelerator Science and Technology'.	course monitoring and support) + IT infrastructure (server, software tools		
		reciniology.	etc.).		
MOOC		2. Internships at 'local',	150,000 Euro + 3 person months, per	Intern month	100
1.1.1.1.1/1/=		or an international,	annum.	1,500	
Industry/KT	Martainland	accelerator laboratory.	100,000 F	D	50
internships	Master's-level training	3. Rursary support to attend established	100,000 Euro + 2 person-months, per annum.	Bursary 2,000	50
internsinps •	······································	international and	amum.	2,000	
Challenge Based		national accelerator			
Chancinge basea		schools.			
Innovation		4. European Master's	200,000 Euro (year 1), 400,000 Euro	Fellowship	10
		fellowship scheme.	(year 2 and per annum thereafter) + 2 person months per annum.	20,000 Euro	
		5. Internships for	300,000 Euro + 3 person months, per	Intern month	300
		project work in support	annum.	1,000	
		of a thesis.			
	PhD-level	6. Bursary support to	100,000 Euro + 2 person-months, per	Bursary	50
 Updated 	training	attend established international and	annum.	2,000	
_		national accelerator			
training surve	/	schools.			
		7. European PhD	250,000 Euro (year 1), 500,000 Euro	Fellowship	10
 Outreach 		fellowship scheme.	(year 2), 750,000 Euro (year 3 and	25,000	
professionals			per annum thereafter) + 2 person months per annum.		
professionals	Structural	9. Enhanced accelerator	100,000 Euro + 1 person-month, per	N/A	
workshops	support	schools provision.	annum.		
		10. www-portal	6 months (course setup) + 2 months		
 Accelerating N 	ews		per annum thereafter (centralised		
			course monitoring and support) + IT infrastructure (server, software tools		
4D/F0			etc.).		
ARIES	Outreach	11. Outreach support	1 MEuro per annum	Per country	10
				100,000	

Next steps?

TIARA established a vision for longer-term structural support for training, communications and outreach (TCO)

ARIES + I.FAST have addressed some of the high-priority actions within the available resources

The community, and many EU accelerator-related projects, keenly interested in TCO As we plan for successor projects to ARIES and I.FAST let's keep TCO firmly in mind

Can we (should we) aim to do more?

Can we provide more coordination + support across the community?

Discussion starting within TIARA – we welcome thoughts/ideas

