


# BigDAPHNE ... take 2 😊

# Excellence - weakness

## Weaknesses

- Data collection, data storage and data analysis are on their own not an entirely original and innovative research program. The proposal does not convincingly describe the originality of the research program with respect to the physics objectives. 
- The proposal does not sufficiently describe how a common research program in particle physics, in dark energy and in gravitational waves will be implemented beyond the aim of big data analysis. In particular, it is not clear how PhD students can be involved in so diverse areas while benefitting from the program as a whole.
- Information on the local courses and details on the training during secondments are not clearly specified.
- Some details are missing concerning supervision: e.g. to support the statement in the proposal that adequate supervisors, with complementary expertise, have already been identified for each ESR; e.g. to concertize the actual implementation of the joint supervision (reports, contacts between the two supervisors etc...).
- The potential synergies among the participants (i.e. what can be expected as an added benefit from the existence of the network, beyond actual needs) are not sufficiently addressed in the proposal.

- Need to be more specific in what aspects of the BigDATA we want to explore.

Here we need help from experts; synergies with EU-INFN projects:

- Indico DataCloud ((H2020-einfrastructures) – Stefania contact with Salomoni
  - <https://www.indigo-datacloud.eu>
- EGI Engage: <https://www.egi.eu/about/>
- **ExaNeSt** (H2020-FETHPC) EU Exascale System Interconnect and Storage
  - <http://www.exanest.eu/>
- **HNSciCloud** (H2020-ICT) Helix Nebula – The Science Cloud
  - <http://www.hnscicloud.eu/about>

Stefania, Chiara explore

# Experiments

ATLAS

Euclid

Virgo

Still ok ?

Partner Organisation number	PIC <a href="#">Search PIC</a>	Organisation legal name	Country	Academic Sector	Role of associated		
					Provide training	Host secondments	
1	995503920	ENEL Ingegneria e Ricerca SPA	Italy	No	Yes	Yes	
2	923879896	Sembient	United Kingdom	No	Yes	Yes	
3	999868920	Istituto Nazionale di Astrofisica	Italy	Yes	Yes	Yes	
4	924438616	Software Carpentry	United States	Yes	Yes	No	
5	933427509	Universite Paris-Saclay	France	Yes	Yes	No	
6	999744469	Thales Services SAS	France	No	Yes	Yes	
7	999979500	Consiglio Nazionale delle Ricerche	Italy	Yes	Yes	No	
8	999430189	Transport for London	United Kingdom	No	Yes	Yes	
9	923552521	GUARCO Interactive	Italy	No	Yes	No	
10	999988133	European Organization for Nuclear Re	Switzerland	Yes	Yes	Yes	
11	999992789	Istituto Nazionale di Fisica Nucleare	Italy	Yes	Yes	Yes	
12	923119804	NCCGROUP	United Kingdom	No	Yes	Yes	
13	999578405	Heidelberg Institute for Theoretical Stu	Germany	Yes	Yes	Yes	
14	998594922	Georgia Institute of technology	United States	Yes	Yes	Yes	

Clarify interaction

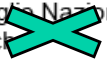
Dropped: SoBigData

Movie

Confirmed participation

Clarify interaction

# Partners

European Organization for Nuclear Research	CERN	x			CH		Alberto Di Meglio	
Consiglio Nazionale delle Ricerche 	CNR	x			IT		Fosca Giannotti	T
ENEL Ingegneria e Ricerca S.P.A	ENEL		x		IT		Matteo Masotti	T
Georgia Institute of Technology	GTECH	x			USA	Dep. of Physics / Center for Relativistic Astrophysics	James Clark	M,S
GUARCO Interactive	GUARCO		X		IT		Guido Francioni	C
Heidelberg Institute of Technology	HITS	x			DE		Andreas Bauswein	M,S
Istituto Nazionale di Astrofisica	INAF	x			IT		Roberto Scaramella	T,S

CERN: Confirmed participation.  
Consult for school ?

Change of division → will check

?

They agree to help for 2<sup>nd</sup>  
school on BigData with CERN

# Partners

Istituto Nazionale di Fisica Nucleare	INFN	x			Make INFN Beneficiary ?		Carlo Cella	T,S,M
NCC GROUP	NCC		x		UK		Lloyd Brough	T,S
Semblent	Semblent		x		UK		Harry Howard	T,S
Software Carpentry	Software Carpentry	x			Contact →			T
Transport for London	TfL		x		UK		Ben Cooper	T,S
THALES Service SAS	THALES		x		FR		Bernardo Resende	T,S

## BigDAPHNE / EJD

Université Paris Saclay	UNIPS	x		x	FR		Sylvie Pommier	T
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# Secondment projects

**Table 1.2 a – List of secondment data projects**

Stakeholder hosting secondment / Country	Subject
ENEL Energia e Ricerca SPA (ENEL) / IT	Energy Management for trading department
	Smart City Malaga – Consumption profile
	Network activity data management and online analysis
NCC Group NPC (NCC) / UK	Advanced network activity analysis
	Tools for Big Data services
Thales Service SAS (Thales) / FR	Securing IoT: data protection in new landscape
	Predicting and preventing train failures
Transport for London (TfL) / UK	Optimization of London Underground asset maintenance strategy
	Intrusion detection and alerting service
Information Technology Center of AUTH (AUTH-IT) / GR	Environmental monitoring and energy efficiency
	Auto query generation with Gremlin
Semblent / UK	Efficient export of graphs to relational data
	Big Data analytics techniques for High Energy Physics analysis
European Centre for Nuclear Research (CERN) / SW	Tools to support unsupervised machine learning
	Real time technologies for large scale analysis using Cloud deployments

Companies – (not real issues for the evaluation)

- some of the secondments not in companies
- no companies in Greece
- Stefania contact with bank ... still possible ?

# Work Packages

**Table 1.1: Work Package (WP) List**

WP number and Title		Lead Beneficiary	Start/End Month		Activity type	ESR
1	Frontier Research in Particle Physics	CEA	8	43	Research	1-9
2	Frontier Research in Cosmology and Gravitation	UCL	8	43	Research	10-15
3	Big Data Managing Tools in Research and Industry	AUTH	8	43	Research/Training	1-15
4	Big Data Analysis Tools in Research and Industry	UNIFI	8	43	Research/Training	1-15
5	Training	UNILE	7	48	Training	1-15
6	Outreach and dissemination	UCL	8	43	Dissemination/Communication	1-15
7	Management and coordination	UNIFI	1	48	Management	-

Merge 3 and 4 ?

# Training events

**Table 1.2 c - Main Network-Wide Training Events, Conferences and Contribution of Beneficiaries**

	Main Training Events & Conferences	ECTS (if any)	Lead Institution	Project Month (estimated)
1	Establishing the foundations – SW Carpentry Bootcamp		SW Carpentry/CEA	M8
2	2 week school: “Data Science – an introductory school”	10	UNIFI	M15
3	2 week school: “Data Science in research: focus on particle physics and cosmology”	10	CERN/INAF/UCL	M18
4	Workshop on “Big Data: a wide view from industrial and academic projects”		AUTH	M30
5	2 days workshop “An introduction to Hadoop”		AUTH	M30
6	2 days workshop – Instructors course for SW Carpentry		SW Carpentry	M23
7	Conference on scientific harvest		UNILE	M41
8	Statistical or High Performance Computing School		UNILE	M20-M30