

Ministero dell'Università e della Ricerca Italiadomani



WP2.2 news

Piergiulio Lenzi, Alberto Annovi 30th January 2024

MS7 deadline approaching

- MS7 will end On Feb 29th
- We have been asked to provide a report by mid March
- S The draft report is <u>here</u> and is composed of
 - A section 1 that is fixed
 - A section 2 with the targets for MS7 for each flagship. Each target is a report, either generic, or specific, in case something specific was declared for MS7 in the flagship document
 - A section 3 with checkboxes (will be green if we provide a report)
 - Action on the flagship PIs: be aware that the spoke will have to provide these reports by mid-march. Let us set a WP2 deadline end of Feb. It is going to have to be added to the flagship documents

Section 2

Ministero dell'Università

- TAR2.5 [MS report for UC2.2.1]. KPI: [Intermediate report provided];
- TAR2.6 [MS report for UC2.2.2, on approaching new interactive analysis frameworks for big data with a high throughout. This activity will be performed in synergy with WP5, regarding the infrastructural support and future upscaling with CN resources].
 KPI: [Intermediate report provided];

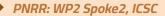
Italia**domani**

XICSC

- TAR2.7 [MS report for UC2.2.3, including identifying most suitable ML models and finalising the code development targeting the FPGA hardware in use at the moment.]. **KPI**: [Intermediate report provided];
- TAR2.8 [MS report for UC2.2.4]. KPI: [Intermediate report provided];
- TAR2.9 [MS report for UC2.2.5]. KPI: [Intermediate report provided];

Section 3

- TAR2.5 [MS report for UC2.2.1]: report included
 - KPI2.5: Spoke2_WP2_TAR2.5
- Mathematical Content of Content
 - KPI2.6: Spoke2_WP2_TAR2.6
- Market TAR2.7 [MS report for UC2.2.3, including identifying most suitable ML models and finalising the code development targeting the FPGA hardware in use at the moment.]: Intermediate report provided
 - KPI2.7: Spoke2_WP2_TAR2.7
 - TAR2.8 [MS report for UC2.2.4]: report included
 - KPI2.8: Spoke2_WP2_TAR2.8
 - TAR2.9 [MS report for UC2.2.5]: report included
 - KPI2.9: Spoke2_WP2_TAR2.9



Preparations for MS8 - 9 - 10

- A document similar to the one just presented for MS7 is needed for these milestones as well
 - ✓ Section 1, is frozen and the same for all the milestones
 - ✓ Section 2, the targets **is due on Feb 20.**
 - Current draft is <u>here</u> for MS8 (MS9 and 10 in the works), and was built extracting the relevant text (i.e. what was promised, by when) from each flagship document.

dall'Unione europe

 Between now and Feb 20 there is a window of opportunity to remodulate slightly what was promised in the flagship documents.

Ministero dell'Università

Innovation Grants/Open Calls

- S→ Innovation grants:
 - Several are related to WP2, will invite them from time to time to present their status.
 - ✓ New tranche upcoming, any interest?
- Solution Soluti Solution Solution Solution Solution Solution Solution S
 - Two for public beneficiaries (universities etc)
 - Development of data acquisition and trigger strategies in the context high background, rare event experiment, using acceleration on hybrid CPU/FPGA architectures, in the context of the activities of the Spoke2 in ICSC
 - Development of algorithms for boosted topologies at LHC/FCC, in the context of the activities of the Spoke2 in ICSC
 - ✓ 1 for industry (related to ARM)
 - Calls are being finalized these days

dall'Unione europea

Ministero dell'Università e della Ricerca

Innovation grants

TITOLO

Hammon

IDL

PIML

Predictive maintenance

Agri@Intesa

Fraud Detection

Eni@Ferrera

Federated Learning

SOW

SAFE

KICSC

WP

W6

WP5 per la parte Data: WP6 per la

parte Blockchain

WP2

WP3

WP6

WP2

WP1

Non necessario

WP6

WP2

Italia**domani**

DITTE

SOGEI+UNIPOLSAI

+IFAB

Leonardo+TASI

ENI

ENI

Intesa+TASI

Intesa

ENI

Intesa

IFAB

IFAB



Upcoming conferences

29 January 2024 to 2 February 2024, CERN, 6th Inter-experiment Machine Learning Workshop <u>https://indico.cern.ch/event/1297159/</u>

dall'Unione europe

- ➡ 4–7 Mar 2024, Clermont-Ferrand, AISSAI Anomaly Detection Workshop, <u>https://indico.in2p3.fr/event/30272/</u>
- ➡ 11 March, ACAT, Stony Brook, <u>https://indico.cern.ch/event/1330797/</u> call for abstracts closes tomorrow
- ISGC 2024: International Symposium on Grids & Clouds, 24-29 Mar 2024, Academia Sinica, Taipei, Taiwan (Taiwan) <u>https://indico4.twgrid.org/event/33/</u>
- So April 3 May 2024, Amsterdam, European AI for Fundamental Physics Conference <u>https://www.eucaif.org/</u>

Alberto Annovi (INFN Pisa)

VICSC



Tracking WP2.2 activities

➡ Tracking of WP2.2 will happen in <u>this document</u>. The document can be edited freely so you can update information. (Just the summary sheet is protected)

dall'Unione europea

- It contains also a list of conference opportunities (see next slide)
 - ✓ You are welcome to add in new conferences.

	A	В	С	D	E	F	G
	Conference	Dates	Venue	Website	comments		
	IML2024	29/1/2024 - 2/2/2024	CERN	https://indico.cern.ch/eve	Call for abstract	s closes on Nov 1	5th 2023
3	AISSAI2024	4-7/3 2024	Clermont-Ferrand	https://indico.in2p3.fr/event/30272/			
1	EuCAIFCon	30/4-3/5/2025	Amsterdam	https://www.eucaif.org/			
5	LHCP2024	3-7/6/2024	Boston	https://indico.cern.ch/eve	nt/1253590/		
6							
7							
в							
9							
0							
1							
12							
3							

30 Jan 2024

WP2.2 General Meeting

Ministero dell'Università 

Ministero dell'Università e della Ricerca

Italiadomani



Backup

Alberto Annovi (INFN Pisa)

30 Jan 2024

WP2.2 General Meeting



New procedure agreed with the referees:

For each project milestone we will need to produce a report for each flagship UC.

dall'Unione europe

Milestones are:

- $rac{1}{\sim}$ Month 18 (Feb '24) \rightarrow Milestone 7
- $rac{1}{\sim}$ Month 22 (June '24) \rightarrow Milestone 8
- \blacksquare Month 26 (Oct '24) \rightarrow Milestone 9
- $rac{1}{\sim}$ Month 36 (Aug '25) \rightarrow Milestone 10

Every two months an interim short report is needed as well for every flagship UC

Flagship use cases

PNRR: WP2 Spoke2, ICSC

Flagship documents available at these links:

- Quasi interactive analysis of big data with high throughput
 - ✓ Tommaso Diotalevi (UniBo), Francesco Gravili (UniSalento)
- Advanced ML: flash simulation and other bleeding edge applications
 - ✓ Lucio Anderlini (INFN Fi)
- Development of ultra-fast algorithms running of FPGAs
 - ✓ Bernardino Spisso (UniNa), Simone Gennai (INFN MiB)
- ➡ Porting of algorithms to GPUs
 - Adriano Di Florio (Poliba)
- Physics validation of reconstruction code on ARM
 - ✓ Francesco Noferini (INFN Bo)

Thanks to the work of the PIs over the summer and to all of your contributions

Finanziato dall'Unione europea Ministero dell'Università e della Ricerca KICSC



Flagship UC mailing lists

- Cuasi interactive analysis of big data with high throughput
 - Interpretation [cn1-spoke2-wp2-analysisfacility], subscribe
- Advanced ML: flash simulation and other bleeding edge applications
 - [cn1-spoke2-wp2-flashsim], subscribe
- Development of ultrafast algorithms running on FPGAs
 - ✓ [cn1-spoke2-wp2-fpga], subscribe

Please subscribe to the list that is relevant for the work you are doing in ICSC.

dall'Unione europea

Ministero dell'Università 

ICSC spoke 2 github organization

Available at: <u>https://github.com/ICSC-Spoke2-repo</u>

People are encouraged to add repositories with software developed in the context of ICSC - spoke 2. Send us a request for the creation of repos/moving of repos

Important: if you are not the owner of a repository (e.g. because it is the repository of an experiment and it contains code other than the one developed in the context of ICSC), we'd still be interested in forking the repo in this organization

Having spoke 2 code in this organization is important for reporting/auditing from the referees