

RIUNIONE EIC_NET- Referee

2/9/2021

RICHIESTE 2022

S. Dalla Torre

LE SINERGIE DELLE ATTIVITA' R&D

EIC.NET R&D activity	EIC.NET groups	synergistic to the INFN programme	supported within
ultra-light MAPs	BA, TS	ALICE ITS3 (CSN 3)	ALICE
aerogel studies	BA, BO, CT, FE, LNF, LNS, Roma1	ALICE 3 (CSN 3)	EIC.NET
SiPMs for single photon detection	BO, CT, FE, LNF, Roma1 TO, TS	ALICE 3, JLAB12 (CSN 3)	EIC.NET
LAPPD characterization for single photon detection	GE, TS	AMBER (CSN 1)	EIC.NET and COMPASS
pressurized gaseous RICH	LNS, TS	AMBER (CSN 1)	EIC.NET
Gaseous photodetector readout by VMM3	TS	AMBER (CSN 1)	EIC.NET
photocathodes by hydrogenated ND powder	BA, TS	IDEA (CSN 5)	IDEA

Tutto l'R&D e' in **sinergia** con altre attivita' INFN in CSN3, CSN1 e CSN 5

La tabella ed la illustrazione dettagliata nel Rapporto Annuale illustrano tali sinergie e mettoni in evidenza che non c'e' double counting nelle richieste, grazie ad accordi con gli altri esperimenti

IL NOSTRO PIANO PLURIENNALE DI RIFERIMENTO

Definito nel 2020 con la stesura della Eol dell'INFN

TABLE 1 – Labor and investment for R&D and construction in period 2021-2029.

Years	Labor, scientists	Labor, technical personnel	In-kind investment R&D	In-kind investment constructions	Travelling	Manpower	Investment, TOTAL
	(FTE)	(FTE)	(USD)	(USD)	(USD)	(USD)	(USD)
2021	10 /45		minimal		minimal	0.4 M	0.4 M
2022-2023	10		1 M		0.3 M	1.6 M	2.9 M
2024	20						
2025-2029	50 /100	10		7-8 M	0.7 M	12 M	19.7 - 20.7 M
Investment 2021-2029, TOTAL			1 M	7-8 M	1 M	14 M	23-24 M

R&D
construction

E' basato su **2 ingredienti**:

- L'evoluzione del manpower
 - Realisticamente, in media non prevede un 100% FTE su EIC
- L'investimento

L'EVOLUZIONE DEL MANPOWER

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R&D
construction

Dettaglio 2022

year	researchers	FTE
2019	45	6.20
2020	46	6.80
2021	48	9.05
2022	62	15.50

group	Local Responsible	reserchers	total FTE
BA	D. Elia	11	2.10
BO	R. Preghenella	9	2.65
CS	S. Fazio	3	0.6
CT	C. Tuvé	3	0.6
FE	M. Contalbrigo	2	0.4
GE	M. Osipenko	6	1.5
LNF	M. Mirazzita	2	0.1
LNS	F. Noto	4	1.8
PD	R. Turrisi	2	0.4
Roma1	E.Cisbani	2	0.2
Roma2	A. D'Angelo	4	0.5
TO	M. Ruspa	5	0.65
TS	S. Dalla Torre	9	4.00

La crescita del manpower e' superiore alla previsione di riferimento

IL RIFERIMENTO DELLE RICHIESTE

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R&D
construction

Cifra indicative delle richieste annuali negli anni 2022-24:

$$\sim (1 + 0.3) \text{ M\$} / 3 = 0.43 \text{ M\$} = 370 \text{ k€}$$

LE RICHIESTE NEL RAPPORTO ANNUALE

group	travelling networking USA (keuro)	travelling networking USA s. j. (keuro)	travelling Giornata Nazionale (keuro)	travelling R&D (keuro)	travelling R&D s.j. (keuro)	consumables and shipments (keuro)	consumables s.j. (keuro)	software licence (keuro)	equipment and constructions (keuro)
BA	4.5 Sec. 3.2			4 Sec. 3.4.4		8 Sec. 3.4.4			
BO	2.5 Sec. 3.2			6 Sec. 3.4.2	5 Sec. 3.4.2	20 Sec. 3.4.2	5 Sec. 3.4.2		5 Sec. 3.4.2
CS	2.5 Sec. 3.2								
CT	2.5 Sec. 3.2				2 Sec. 3.4.2				
FE	1.5 Sec. 3.2			3 Sec. 3.4.2	3 Sec. 3.4.2	15 Sec. 3.4.2			10 Sec. 3.4.2
GE	2.5 Sec. 3.2			6 Sec. 3.4.6		16 Sec. 3.4.6			2 Sec. 3.4.1
LNF	1.5 Sec. 3.2				1.5 Sec. 3.4.2				
LNS	2.5 Sec. 3.2				2 Sec. 3.4.2	3 Sec. 3.4.2		8.5 Sec. 3.4.3	10 Sec. 3.4.3
PD	2.5 Sec. 3.2								
RM1	1.5 Sec. 3.2				4 Sec. 3.4.2				
RM2	1.5 Sec. 3.2								
TO	2.5 Sec. 3.2			1.5 Sec. 3.4.2	4 Sec. 3.4.2	35 Sec. 3.4.2	30		
TS	4.5 Sec. 3.2			6 Sec. 3.4.6	2 Sec. 3.4.6	10 Sec. 3.4.2			64 Sec. 3.4.6
unsplit (BO)	15 Sec. 3.2	15 Sec. 3.2	15 Sec. 3.2		10 Sec. 3.4				

nella tabella riassuntiva c'è il puntatore alla illustrazione di ogni specifica richiesta

LE RICHIESTE IN SOMMARIO, con i commenti principali

group	keuro									TOTAL
	traveling networking USA	traveling networking USA	traveling Giornata Nazionale	traveling R&D	traveling R&D	consumables, shipment	consumables	software licence	equipment, constructions	
		s.j.			s.j.		s.j.			
BA	4.5			4		8				16.5
BO	2.5			6	5	20	5		5	43.5
CS	2.5									2.5
CT	2.5				2					4.5
FE	1.5			3	3	15			10	32.5
GE	2.5			6		16			2	26.5
LNF	1.5				1.5					3
LNS	2.5				2	3		8.5	10	26
PD	2.5									2.5
RM1	1.5				4					5.5
RM2	1.5									1.5
TO	2.5			1.5	4	35	30			73
TS	4.5			6	2	10			64	86.5
unsplit (BO)	15	15	15		10					55
TOTAL	47.5	15	15	26.5	33.5	107	35	8.5	91	379
traveling, TOTAL	47.5	15	15	26.5	33.5					137.5
consumables & equipments, TOTAL						107	35	8.5	91	241.5

Totali in linea con il nostro riferimento (Eol)

LE RICHIESTE IN SOMMARIO, con i commenti principali

group	keuro									TOTAL
	traveling networking USA	traveling networking USA	traveling Giornata Nazionale	traveling R&D	traveling R&D	consumables, shipment	consumables	software licence	equipment, constructions	
		s.j.			s.j.		s.j.			
BA	4.5			4		8				16.5
BO	2.5			6	5	20	5		5	43.5
CS	2.5									2.5
CT	2.5					2				4.5
FE	1.5			3	3	15			10	32.5
GE	2.5			6		16			2	26.5
LNF	1.5				1.5					3
LNS	2.5				2	3		8.5	10	26
PD	2.5									2.5
RM1	1.5					4				5.5
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consumables & equipments, TOTAL						107	35	8.5	91	241.5

MISSIONI:

- Per R&D, sj i test beam
- Per Giornata Nazionale (in presenza !) richieste nell'indiviso per ottimizzare l'uso a seconda della sede prescelta
- sj networking nell'indiviso

LE RICHIESTE IN SOMMARIO, con i commenti principali

group	keuro									TOTAL
	traveling networking USA	traveling networking USA	traveling Giornata Nazionale	traveling R&D	traveling R&D	consumables, shipment	consumables	software licence	equipment, constructions	
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Consumi, inventario e costruzioni:

- Giustificazione item per item nel report annuale
- dRICH & SiPM accorpati su BO, FE, TO
- LAPPD: GE, TS
- AEROGEL: BA
- HP-RICH: LNS

LE RICHIESTE IN SOMMARIO, con i commenti principali

group	keuro									TOTAL
	traveling networking USA	traveling networking USA	traveling Giornata Nazionale	traveling R&D	traveling R&D	consumables, shipment	consumables	software licence	equipment, constructions	
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traveling, TOTAL	47.5	15	15	26.5	33.5					137.5
consumables & equipments, TOTAL						107	35	8.5	91	241.5

Consumi, inventario e costruzioni:

- Le 2 cifre in verde sono richieste sui fondi INFN matching di AIDAInnova:
 - Run per chip ALCOR modificato in accordo con esigenze SiPM @EIC; assolutamente necessary per il progresso R&D
 - Oscillografo ad alta frequenza necessario per LAPPD

FINANZIAMENTI ESTERNI (con riferimento al 2021)

Table 6: *The financial support external to INFN received in year 2021 by the EIC_NET groups.*

source	project	groups	amount	period	usage
MAECI	Un sistema di acquisizione triggerless per l'EIC	GE	59.5 keuro	2021	manpower
generic R&D for EIC	eRD1 (calorimetry)	GE, RM2	20 k\$	2021	consumables
generic R&D for EIC	eRD14 (PID)	FE, RM1	76 k\$	2021	consumables
generic R&D for EIC	eRD6 (PID)	TS	22 k\$	2021	manpower
STRONG 2020		FE	30 keuro	2019-2022	manpower
STRONG 2020		BA	26.5 keuro	2019-2022	manpower
STRONG 2020		LNF	17 keuro	2019-2022	manpower
STRONG 2020		TS	54.5 keuro	2019-2022	manpower
AIDAinnova		TS	60 keuro	2021-2024	manpower
AIDAinnova		BA	25 keuro	2021-2024	manpower
AIDAinnova		BO	25 keuro	2021-2024	manpower