ITS / ITS3 / ALICE 3 Tr. INFN resource mapping

INFN resource mapping within ALICE tracker(s)

- INFN main contributor to ITS and ITS3, together with CERN
- New engagement in ITS3 and ALICE 3 Tracker has been recently proposed

- Our goals:
  - Estimate needed resources (funding and people)
  - Unlock planned funds for 2024
  - Request missing resources for 2025-2028
  - Avoid double counting

INFN resource mapping: tasks

INFN Site	ITS Task	ITS3 Task	
Alessandria	Geometry code		
Bari	QC	Sensor design, SuperALPIDE bending, bonding, APTS OA char.	
Brescia/Pavia	SRC, QC, on call		
Cagliari	QC code devel, on call	Sensor design, HW/FW/SW test- setup devel.	
Catania/Messina	QC, on call, calibration	APTS SF char.	
LNF	QC		
Padova		APTS SF char.	
Pavia	SRC, QC, on call		
Torino	On call, tracking	APTS OA char., board design,	
Trieste	On call, performance	DPTS/APTS SF char., board design, sensor bending	
Bologna*		APTS SF char.	

INFN resource mapping: tasks

INFN Site	ITS Task	ITS3 Task	Proposed (from 2024)
Alessandria	Geometry code		
Bari	QC	Sensor design, SuperALPIDE bending, bonding, APTS OA char.	ITS3 cooling & readout ALICE 3 Iris vacuum
Brescia/Pavia	SRC, QC, on call		
Cagliari	QC code devel, on call	Sensor design, HW/FW/SW test- setup devel.	ITS3 readout
Catania/Messina	QC, on call, calibration	APTS SF char.	
LNF	QC		
Padova		APTS SF char.	ITS3 readout, ALICE 3 Middle Layers
Pavia	SRC, QC, on call		
Torino	On call, tracking	APTS OA char., board design,	*ITS3 readout*
Trieste	On call, performance	DPTS/APTS SF char., board design, sensor bending	ALICE 3 Middle Layers, *ITS3 readout*
Bologna*		APTS SF char.	** will not continue in 2025*

INFN resources: ITS3 readout

Legend: Test | Hardware | Firmware | Software | Operations

Increase the current effort by ~ 4 FTE/year

NOTES:

Tasks referring to DAQ are common or adjacent to SIM development.

Existing INFN effort on other WPs is not affected by this proposal.

		2024 ITS3 FTE	2024 ITS3 Task	2025 ITS3 FTE	2025 ITS3 Task	2026 ITS3 FTE	2026 ITS3 Task	2027 ITS3 FTE	2027 ITS3 Task	2028 ITS3 FTE	2028 ITS3 Task
BA	Giuseppe d.R.	0.5	DAQ board	0.5	DAQ board	0.3	System test				
	Domenico							0.2	Comm.	0.2	Comm.
	Michele Sacchetti	0.3	DAQ board	0.3	DAQ board						
	Workshop	0.3	DAQ board	0.3	DAQ board						
CA	Gianluca										
	Gudda	0.8	CRU+DAQ f/w	1.0	CRU+DAQ f/w	0.8	CRU/system test	0.8	CRU/Comm	0.8	CRU/Int/Comm
	Davide	0.5	SIM board	0.5	SIM board	0.5	SIM system	0.5	Comm.	0.5	Integr./Comm.
	Valerio	0.5	DAQ f/w	0.8	DAQ f/w						
	Carlo	0.3	DAQ, CRU s/w	0.3	DAQ, CRU s/w	0.3	DAQ, CRU s/w	0.3	Comm.	0.3	Integr./Comm.
PD	Piero	0.3	SIM system	0.3	SIM system	0.3	SIM system	0.3	Integr./Comm.	0.3	Integr./Comm.
	Guang	0.7	DAQ f/w	0.5	DAQ f/w	0.5	DAQ f/w	0.5	Integr./Comm.	0.5	Comm.
	Postdoc (Davide)					0.3		0.3	Integr./Comm.	0.3	Comm.
	PhD	0.5	DAQ s/w	0.5	DAQ s/w	0.3	DAQ s/w				
	Workshop	0.3	SIM system	0.3	SIM system	0.2	SIM system	0.2	SIM system		
TO	Stefania							0.2	Comm.	0.2	Comm.
	Francesco							0.2	Comm.	0.2	Comm.
	Luca A. (PhD)	0.5	DAQ s/w	0.5	DAQ s/w						
	Postdoc					0.5	SIM system	0.5	Integr./Comm.		Integr./Comm.
	Workshop/Franco	0.5	SIM system	0.5	SIM system						
TS	Mino	0.2	Flex/sens integr.	0.2	Flex/sens integr.	0.2	System test	0.2	Integr./Comm.	0.2	Comm.
	Postdoc	0.2	Flex test	0.4	Flex test	0.5	System test	0.5	Integr./Comm.	0.5	Integr./Comm.
	PhD			0.3	Flex/sens integr.			0.3	Integr./Comm.	0.3	Comm.
	Workshop	0.2	Flex test	0.3	Flex test	0.3	System test				
INFN	Overall	6.6		7.5		5.0		5.0		4.3	

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Other new activities

- ITS3 mechanics effort in Bari – starting in 2024
  - Effort increase: FTE?

- ALICE 3 Tracker:
  - Iris: vacuum studies
  - Middle layers: layout proposals based on bent silicon
  - Sensor development (?)
    - How/when to fork-off ALICE 3 Tracker sensor effort