Horizon 2020

What comes after NMI3, CRISP, PANDATA, ... ?

Instrumentation

NMI3: neutron & muon

CRISP: N & X & ions & CERN & ...

IT (Computing)

PANDATA : N & X

Reminder: NMI3

- NMI3 has 3 parts: networking, research (JRA) and trans-national access (TNA).
- NMI3-II budget = 13.3M€
- ~50% for access
- **NO** neutron I3 in H2020 in 2014/5 (**no TNA**)
- Therefore aiming for 6-7M€ for networking and JRA's

Reminder: INFRADEV_4

- Data, software, instrumentation and innovation potential are mentioned/important
- 6-15M€ proposals expected
- 6M€ → neutrons and muons only
- 15M€ → e.g. N + X + …
- "…ensure coordination/synergy between largest possible number of ESFRI projects…"
- **Opportunity**: 55M€ in INFRADEV4 in 2014 and it may be that uptake/demand will be slow in the first year, especially since rules/orientation have changed since FP7.

Input from NMI3

- 'themes'
  - Instrumentation including neutronics software
  - Detectors for neutrons and muons
  - Sample environment
  - Data treatment software
  - Muons
  - Energy
  - Education, dissemination & outreach

Option 1:

- Go ahead on our own since we are a reasonable size, manageable consortium.
- **But** do neutrons and muons constitute a 'cross-cutting cluster' i.e. is the cluster big enough?

- Or go ahead with some of the CRISP partners...

CRISP

- 24/1/2014 – realised that the current consortium cannot go ahead as is – no common ground between e.g. SKA (square kilometre array) and neutrons.
- CRISP should not go ahead if IT is the only common topic

- It is likely that there will be a TIARA-based accelerator project in INFRADEV4.
- CERN is leading an IT, ESFRI wide (all 4 clusters) e-infrastructure project, for INFRADEV4
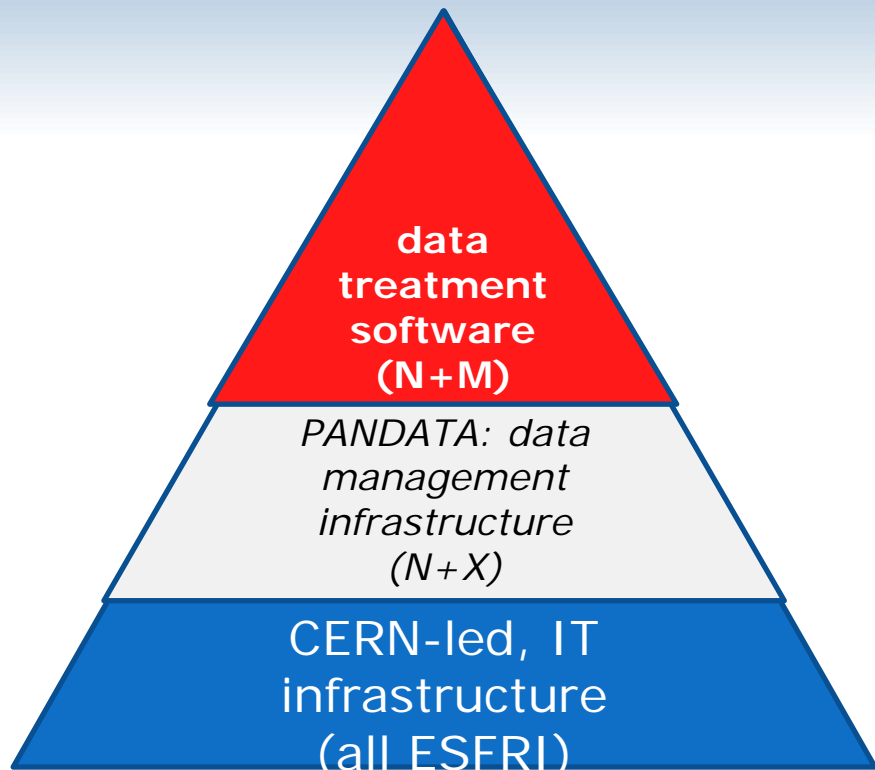
CRISP – Expressions of Interest

	Topic	CRISP questionnaire for RI's, in relation to possible topics for a proposal within Horizon2020	ELI	ESRFUP	ESS	EuroFEL	European XFEL	FAIR	ILC-HiGrade	ILL 20/20	SKA	SLHC	SPIRAL2	Sum of scores	Sum of interested partners	Active participants
1	Inst & Exp	Scientific data treatment and Analysis	2	3	3	1	1			3		3	2	18	8	6
2	IT&DM	Federated identity management	2	2	2	2	1			2		3	1	15	8	6
3	Inst & Exp	Instrumentation for sample positioning, biological scattering, and x-ray spectroscopy	2	2	2	2	3			2		1		14	7	6
4	Mobility, training best practice	Training and education, exchange of staff and young scientists	3	2	1	2	2					2	2	14	7	6
5a	IT&DM	Fast data capture (network, storage)	3	3	2	2	2					2		14	6	6
5b	IT&DM	Quick data handling and data storage	3	3		2	2					2	1	13	6	5
5c	IT&DM	High-throughput data streaming	2	3		2	2					2		11	5	5
6a	IT&DM	Novel concepts for metadata management and archiving as well as data access	2	3	2	2	2					3		14	6	6
6b	IT&DM	The data continuum	2	2		2	2			2		3		13	6	6
7	Detectors & D aq	Radiation hard and energy efficient electronics	2	1	2	1	2	2				3	1	14	8	5
8	Detectors & D aq	CVD diamond and advanced silicon beam monitors	1	2		2	2	2				3	1	13	7	5
9	IT&DM	IT management for day to day work between different dislocated pillars	3	2	2	1	1					3		12	6	4
10	Detectors & D aq	Silicon 3D pixel detectors	1	3		2	3					3		12	5	4

Scoring system
3. Top priority: willing to invest own human and capital resources and to lead the WP.
2. Important: active participation, willing to put in some resources (human or capital), but not leading WP
1. Interest as an observer
0. No interest

Option 2:
a reduced CRISP consortium

- Detectors are *the* key (non-IT) theme for ESRF, Swiss & XFEL, SLHC (CERN)

- Data handling/treatment is the primary interest in CRISP consortium

- A coherent project for *some partners* and *some topics* could be – 'FROM DETECTORS TO DATA'

- This could bring together NMI3, CALIPSO (synchrotrons and FEL) and CERN

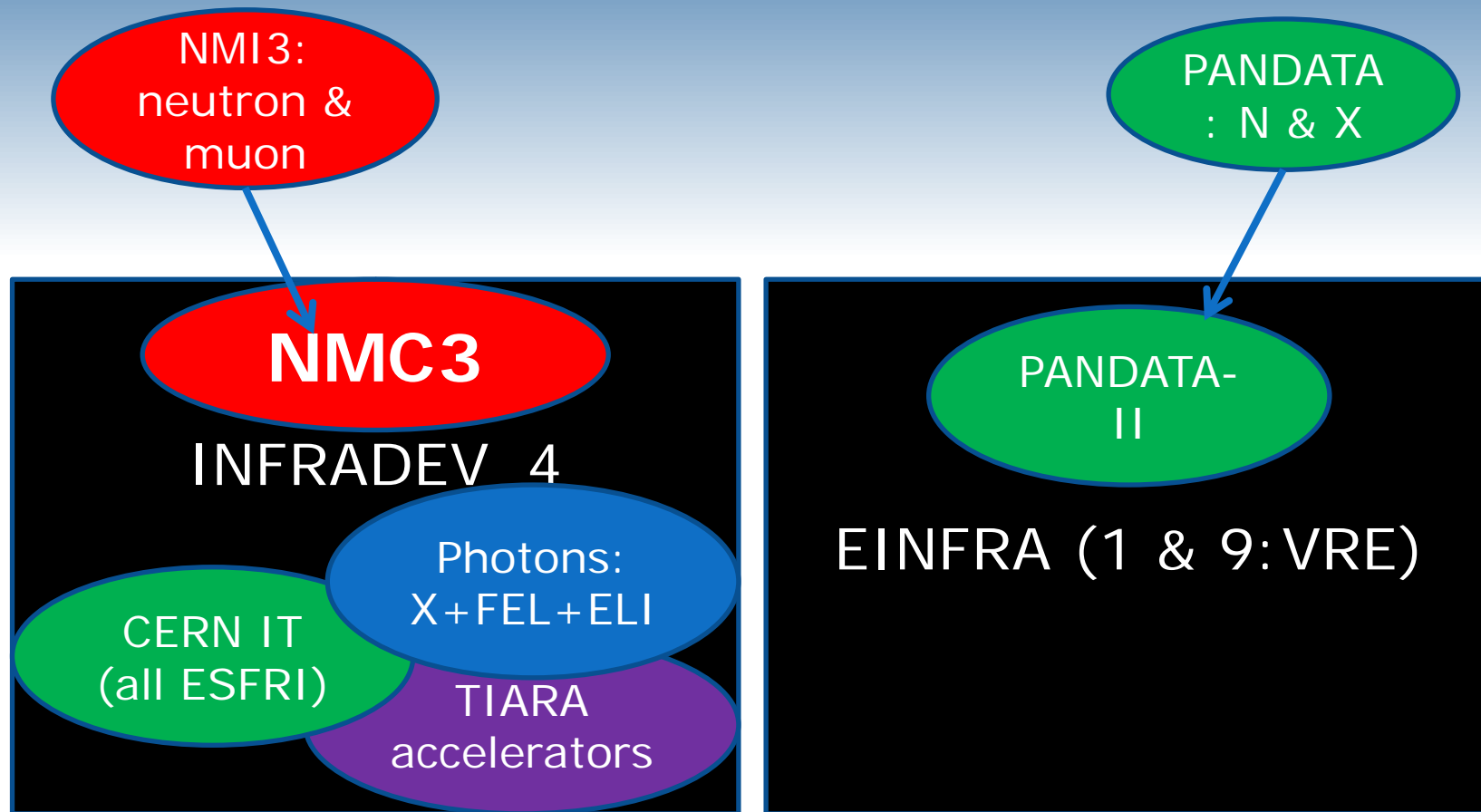- But may be overlap with PANDATA for data

IT "layers" – PANDATA

data
treatment
software
(N+M)

*PANDATA: data
management
infrastructure
(N+X)*

CERN-led, IT
infrastructure
(all ESFRI)

So PANDATA
underpins 'from
DETECTOR to
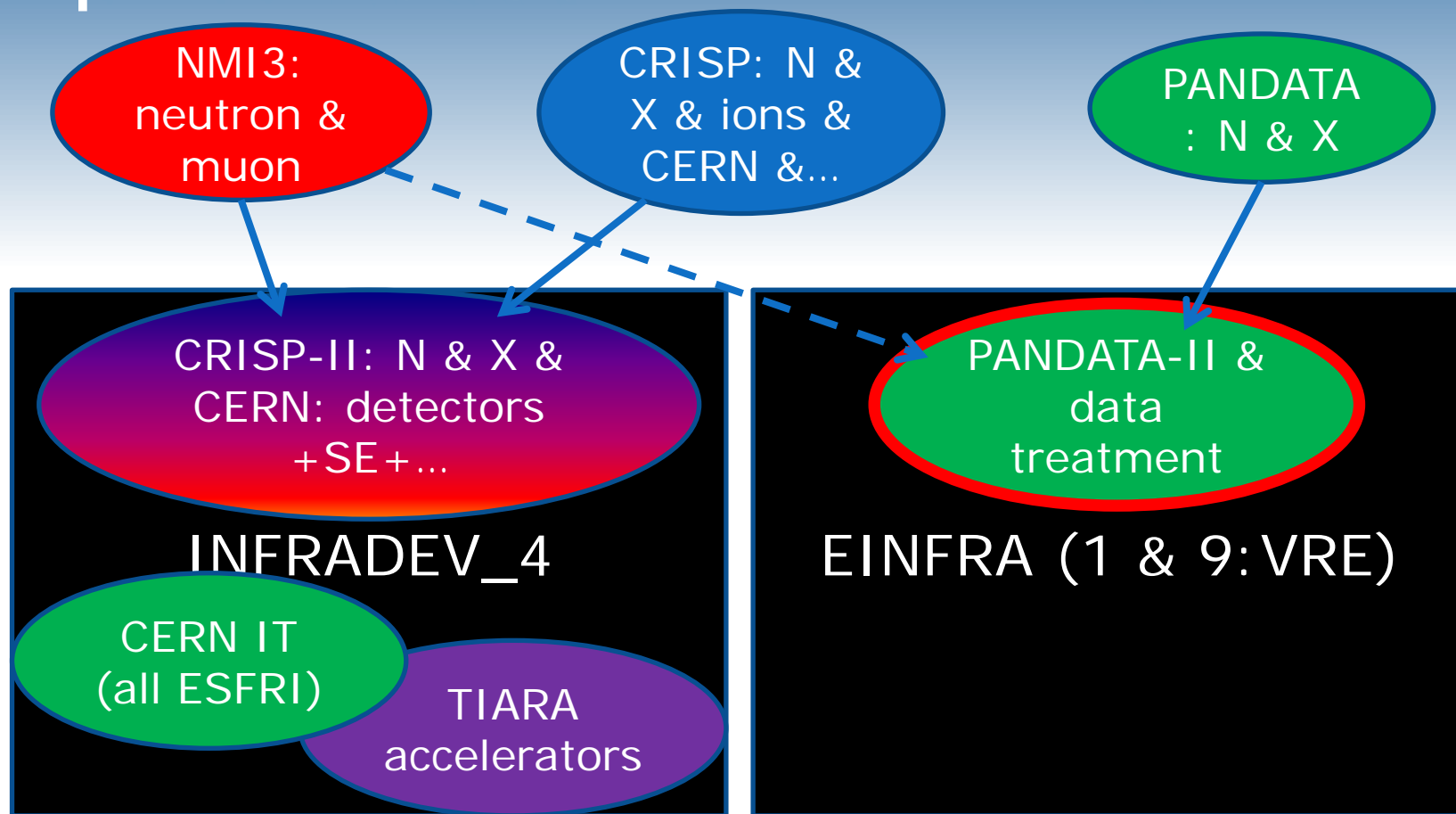DATA' for N+X+...
communities

PANDATA

- 2011-2014: Aims for a N+X federated data infrastructure (Policies, File format, Preservation, Catalogue, Common User identification ...)

- 2014/5 onwards : Federated data analysis facility (cloud-based Infrastructure, preservation of the analysis workflows, ...) - discussions on-going

- Best guess: EINFRA-9 (Jan 2015)
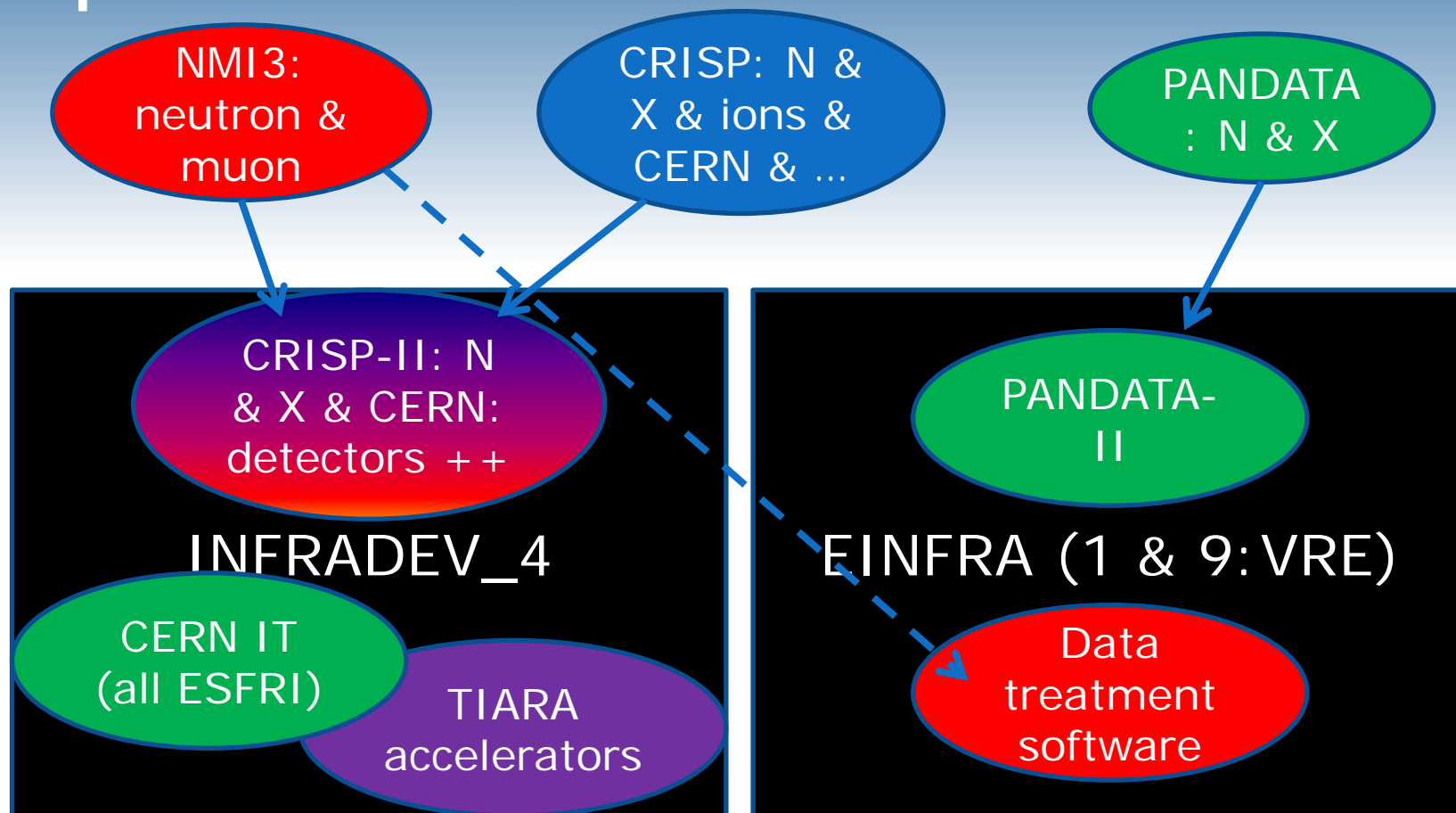
SUMMARY – 1: Neutrons and Muons only

NMI3: neutron & muon

PANDATA : N & X

NMC3

INFRADEV_4

Photons: X+FEL+ELI

CERN IT (all ESFRI)

TIARA accelerators

PANDATA-II

EINFRA (1 & 9:VRE)

NMC3 = Neutron and Muon Cross-Cutting Cluster

SUMMARY – 2: "CRISP-II" & data separate

SUMMARY – 3: "CRISP-II & data separated *more*"

NEXT STEPS

- Liaise with CRISP about another project
- Liaise with PANDATA about possibly including data treatment
- NMI3 telco: feedback on EoI exercise – Feb 10
- EC information day(s) (EINFRA) – Feb 13/14
- Neutron facilities directors meeting – March 14
- Facilities directors → 'questions and lobbying' in Brussels (< end March?)
- INFRADEV4 proposal submission – September 9
  - *April, May, June to prepare proposal*