

Particles, Universe, NuClei and Hadrons for the NFDI

PUNCH-2.0 Planning Meetings



**Register for Fankfurt, if you
have not yet done so!!!!**

April 2025



Apr 23 **PUNCH-2.0 proposal prep - 5th meeting (hybrid, FIAS-Frankfurt)**



Apr 14 **PUNCH-2.0 proposal prep - 4th meeting (virtual)**

March 2025



Mar 18 **PUNCH2.0 proposal prep - 3rd meeting**



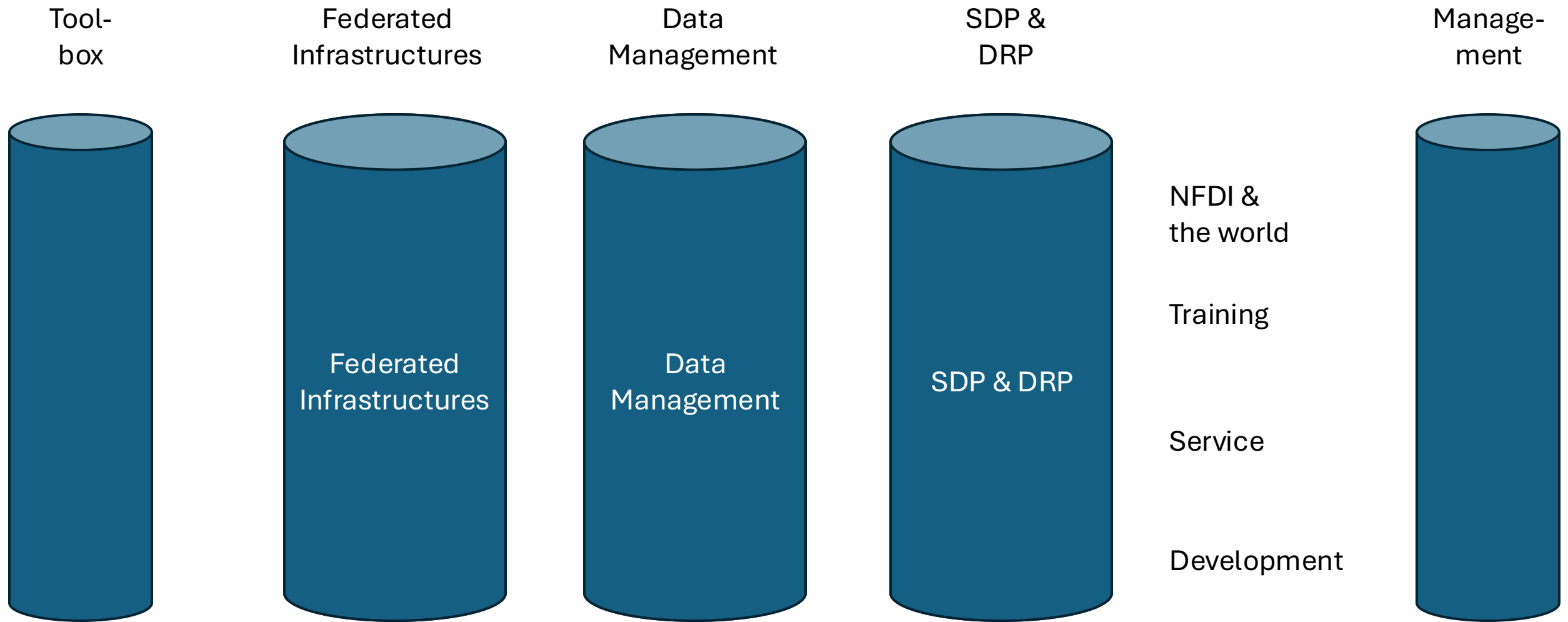
Mar 04 **PUNCH2.0 proposal prep - 2nd meeting**

February 2025



Feb 18 **PUNCH-2.0 proposal prep**

Conclusions



2:00 PM → 2:20 PM

key4HEP-based workflows

Convener: Philip Bechtle

 PBe_PUNCH_Useca...



2:20 PM → 2:40 PM

Data and workflow management chain for emerging experiments and simulations in PUNCHData generation

Convener: Susanne Pfalzner (Forschungszentrum Jülich)



2:40 PM → 3:00 PM

PUNCH data management core use case

Convener: Thomas Schörner (DESY)

 DataManagement.U...



3:00 PM → 3:20 PM

AI-based automated generation of workflows

Conveners: Dr Arman Khalatyan (AIP), Victoria Tokareva (KIT)

 AI-based assistants...



3:20 PM → 3:40 PM

Analysis of big data sets, visualization, live interaction

Conveners: Dr Elena Sacchi (AIP), Gernot Maier (DESY)

 PUNCH2.0_BigData....



3:40 PM → 3:50 PM

Short break

 10m

3:50 PM → 4:10 PM

Pheno interpretation of data

Conveners: Arnulf Quadt (II. Physikalisches Institut, Georg-August-Universität Göttingen), Joseph Mohr (LMU-Munich), Lukas Heinrich, Lukas Heinrich (CERN)

 20250318_Punch2....

 Pheno-cosmo.pdf

 PUNCHSides.pdf



4:10 PM → 4:30 PM

Workflow for future observation

Convener: Stephan Schlemmer

 PUNCH_CDMS_XCL...

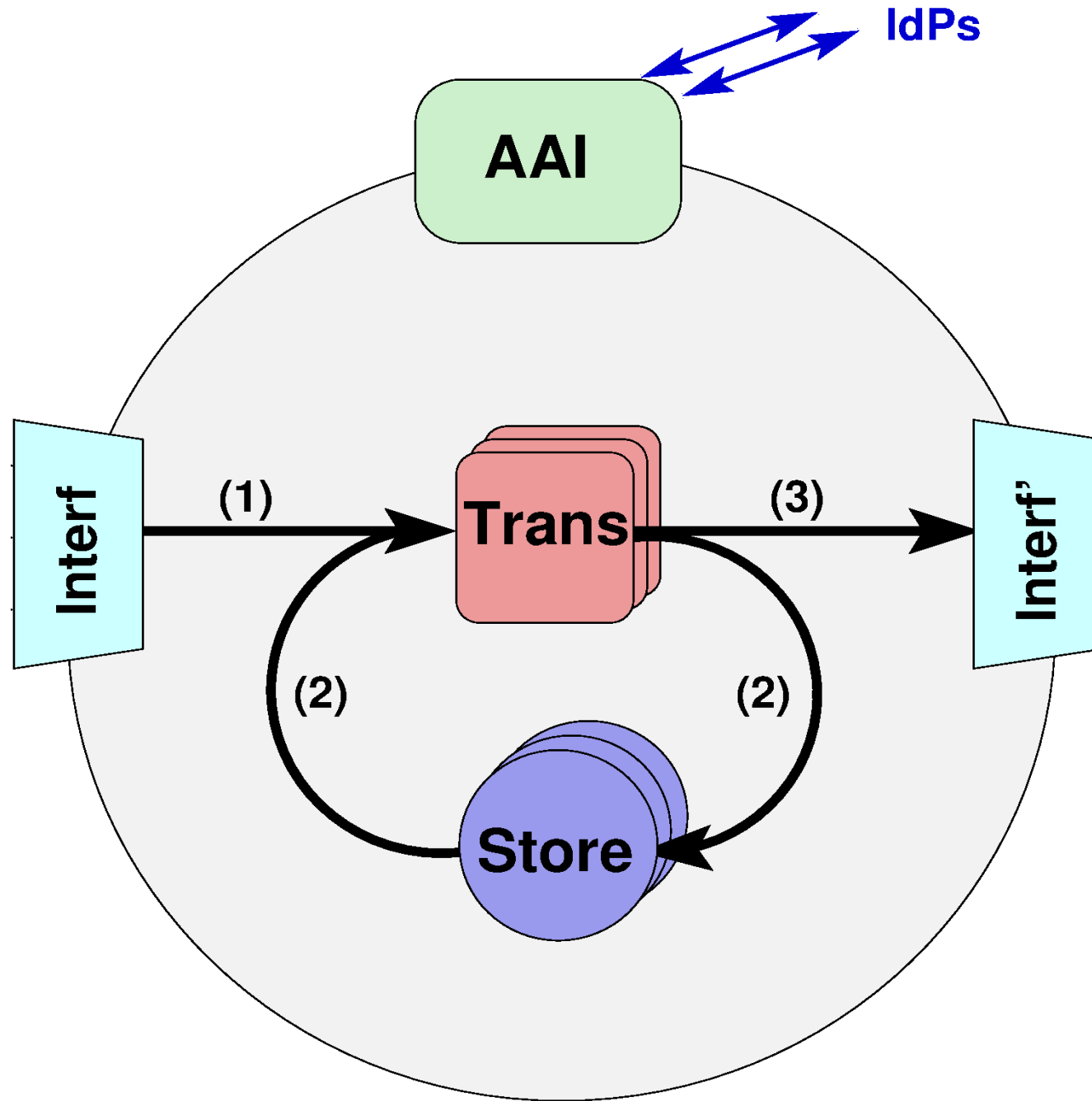
 Workflows_FutureO...

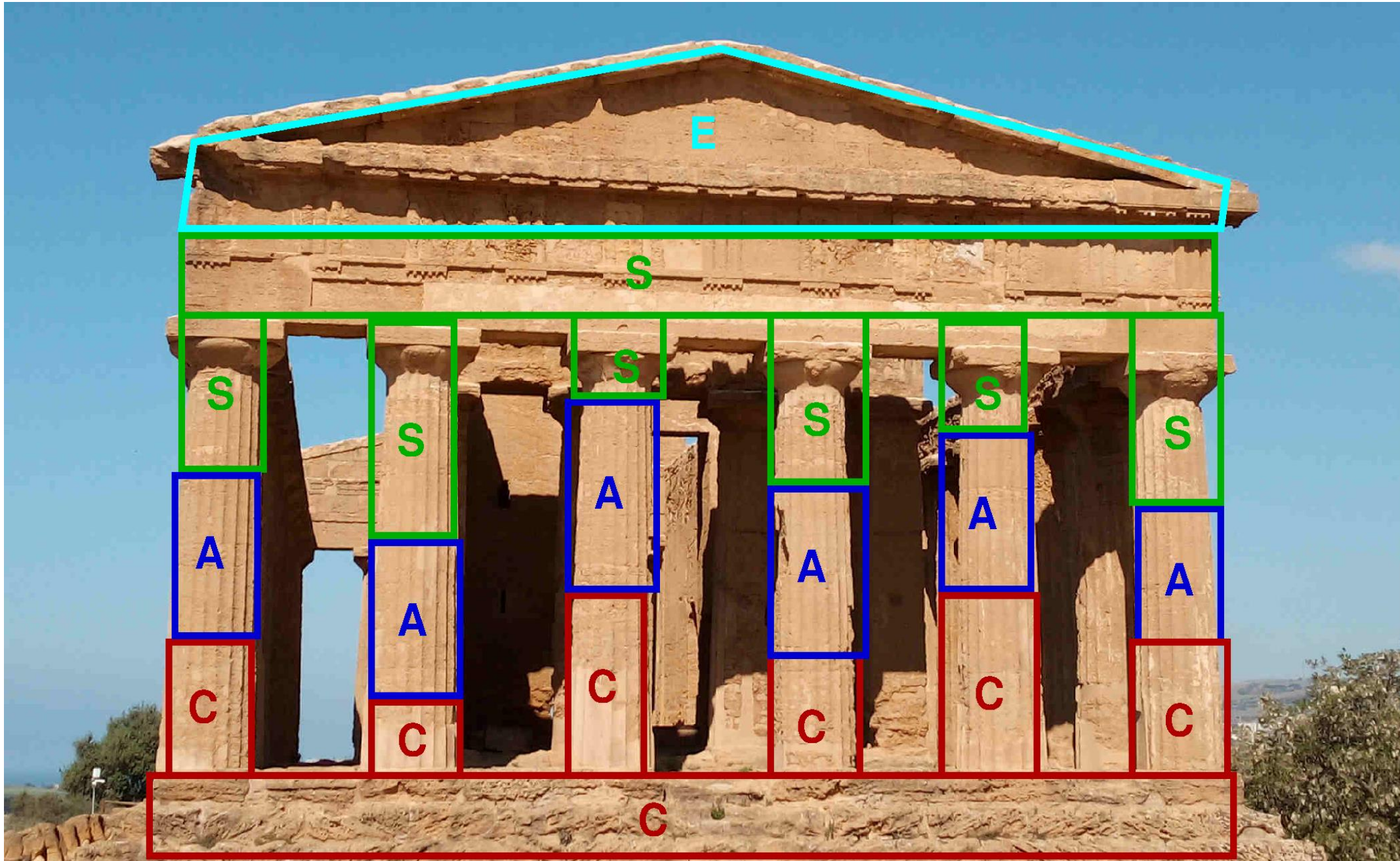


4:30 PM → 5:00 PM

Discussion







Connections

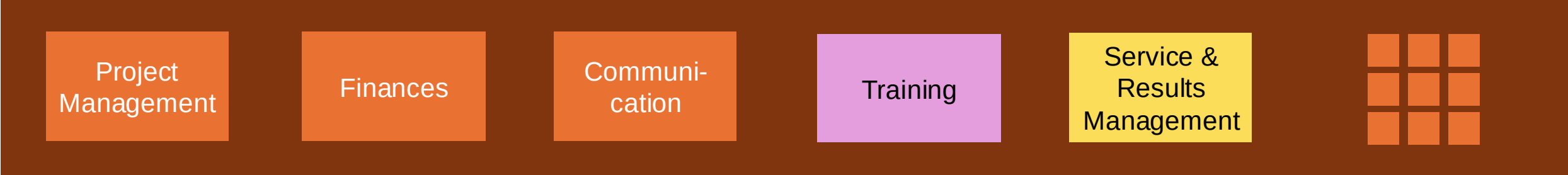
Support

Assembly

Components

Ground /
foundation

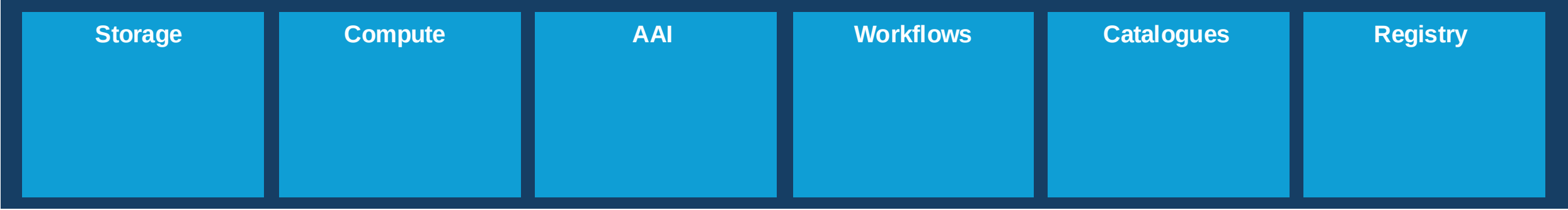
TA Management



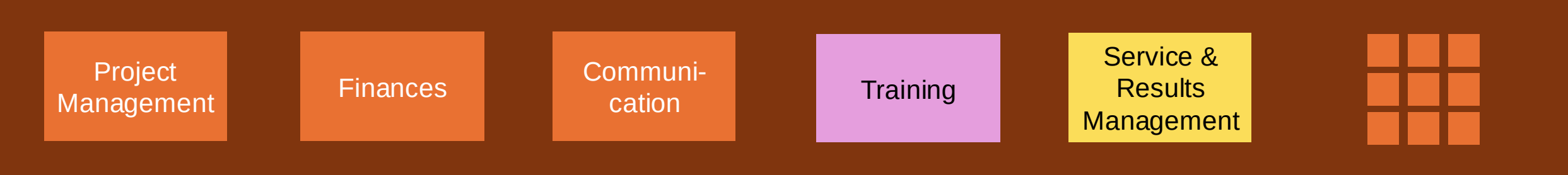
TA Assembly



TA Components



TA Management



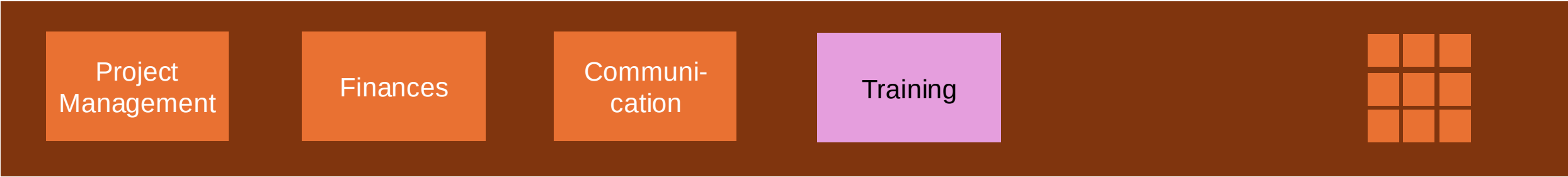
TA Assembly



TA Components

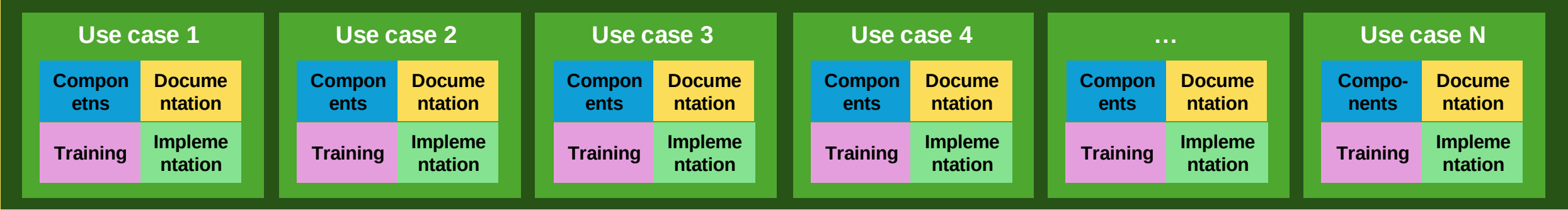


TA 4: Management

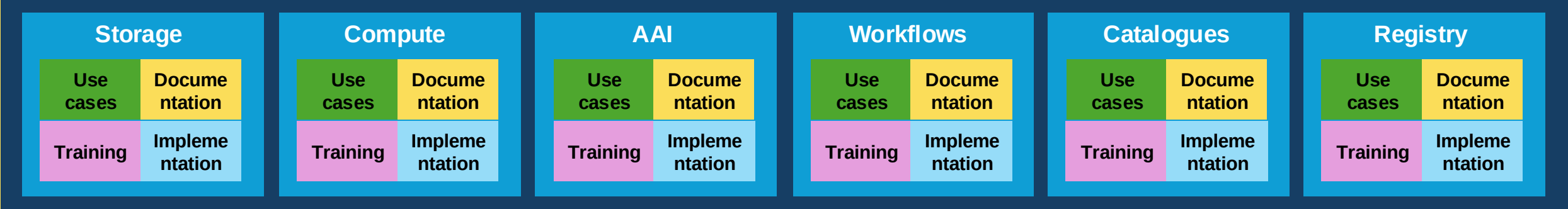


TA 3: Services and Results

TA 2: Assembly

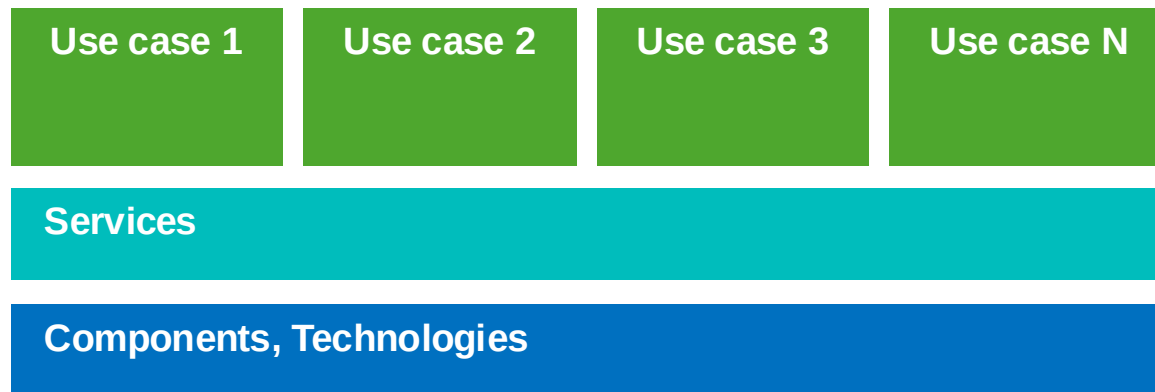


TA 1: Components





Technical
coordination



Use case 1

Use case 2

Use case 3

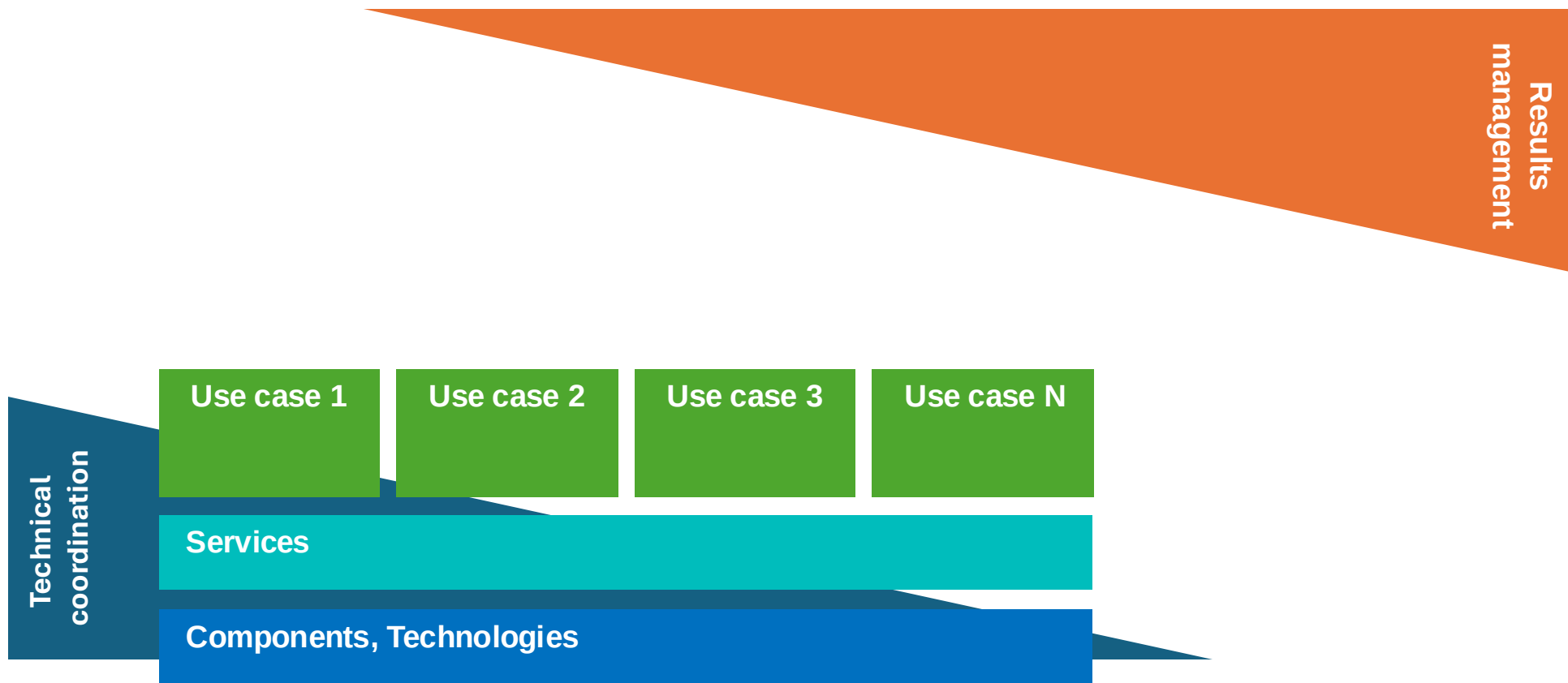
Use case N

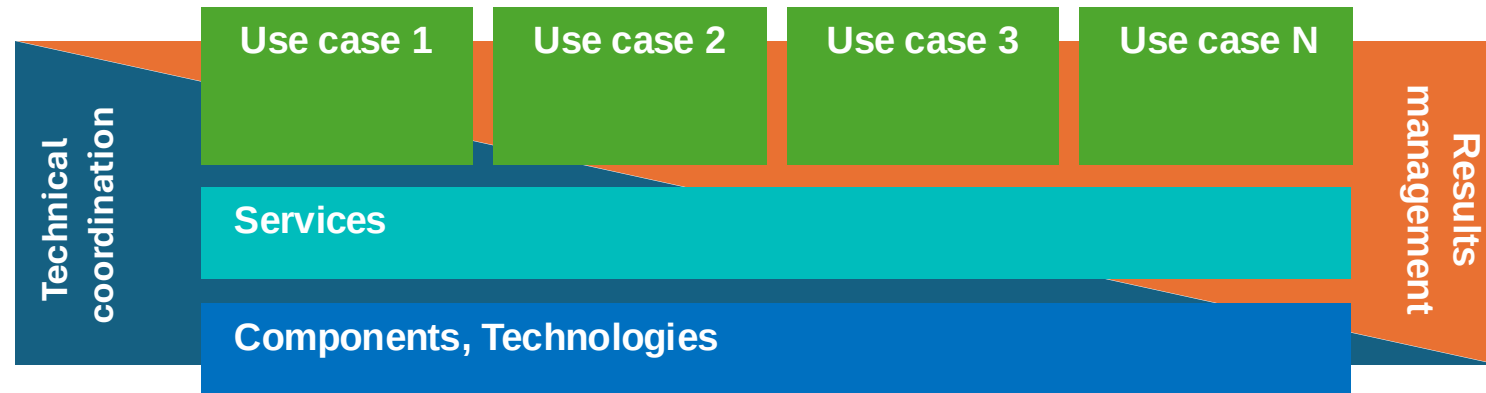
Services

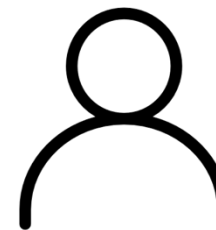
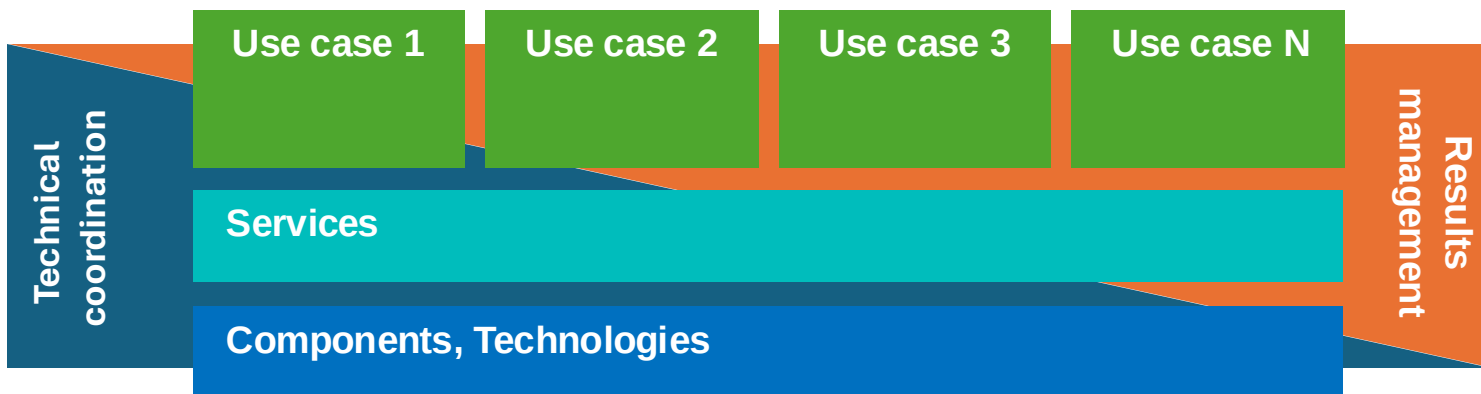
Components, Technologies

S4P, PUNCH-AAI

dCache, Unity AAI, ...







Project
Manage-
ment

Finances

Communi-
cation,
User
interaction



Technical
coordination

Use case 1

Use case 2

Use case 3

Use case N

Services

Components, Technologies

Results
management

Project
Management

Finances

Communi-
cation,
User
interaction



Storage
Catalogues

Compute

AAI

Workflows

Registry
DRP,SDP

...?

9:40 AM	→ 9:45 AM	Data management lifecycle model (Thomas, Hubert) Speakers: Alexander Paul Millar (IT (Research and Innovation in Scientific Co)), Hubert Simma (DESY), Thomas Schörner (DESY)	🕒 5m	📝
9:45 AM	→ 9:50 AM	key4HEP based workflows (Philip, Frank) Speakers: Frank Gaede (FTX (FTX Fachgruppe SFT)), Philip Bechtle (University of Bonn)	🕒 5m	📝
9:50 AM	→ 9:55 AM	Data ingestion e.g. from simulations (Susanne) Speaker: Susanne Pfalzner (Forschungszentrum Jülich)	🕒 5m	📝
9:55 AM	→ 10:00 AM	Analysis of big data sets, visualization, live interaction (Elena, Gernot) Speakers: Dr Elena Sacchi (AIP), Gernot Maier (DESY)	🕒 5m	📝
10:00 AM	→ 10:05 AM	AI workflow I (Arman, Victoria) Speakers: Dr Arman Khalatyan (AIP), Victoria Tokareva (KIT)	🕒 5m	📝
10:05 AM	→ 10:10 AM	AI workflow II (Marcus, Gregor) Speakers: Gregor Kasieczka (Universität Hamburg), Marcus Marcus Brügggen (UHH)	🕒 5m	📝
10:10 AM	→ 10:15 AM	Pheno interpretation workflow (Joe, Lukas, Arnulf) Speakers: Arnulf Quadt (II. Physikalisches Institut, Georg-August-Universität Göttingen), Joseph Mohr (LMU Munich), Lukas Heinrich	🕒 5m	📝
10:15 AM	→ 10:20 AM	Workflow for future observation (Hermann, Michael, Stephan S) Speakers: Hermann Hessling (HTW Berlin), Michael Kramer (Max-Planck-Institut fuer Radioast		

- All necessary use cases – too few / many?
Community coverage?
 - Approx. resource needs?
 - Interested players?
-
- Necessary component R&D / implementation?
 - Approx. resource needs?
 - Interested players?

10:25 AM	→ 10:30 AM	Component: compute (Manuel_ Speaker: Manuel Giffels (Karlsruher Institut für Technologie (KIT))	🕒 5m	📝
10:30 AM	→ 10:35 AM	Component: storage and catalogues (Christoph) Speaker: Christoph Wissing (DESY) Storage+CatalogsB...	🕒 5m	📝
10:40 AM	→ 10:45 AM	Component: registry (Harry) Speaker: Harry Enke (AIP) Registry-PUNCHII.p...	🕒 5m	📝
10:45 AM	→ 10:50 AM	Component: workflows (Gernot, Harry) Speakers: Gernot Maier (DESY), Harry Enke (AIP)	🕒 5m	📝
10:50 AM	→ 10:55 AM	Component: AAI (Kilian, Benoit) Speakers: Benoit Roland, Dr Kilian Schwarz (IT (IT Scientific Computing))	🕒 5m	📝