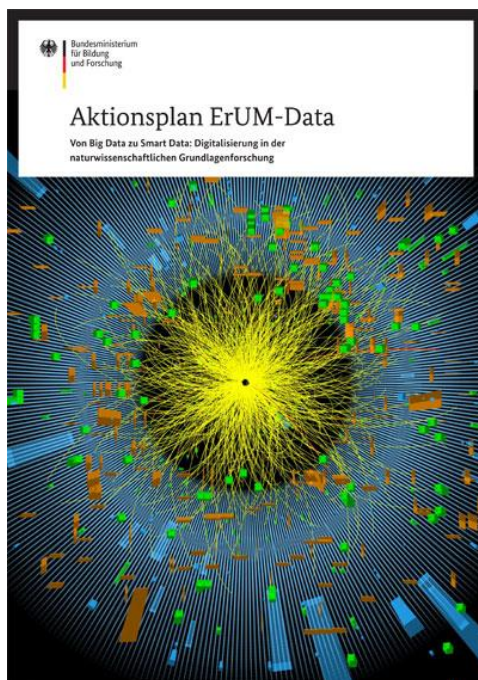
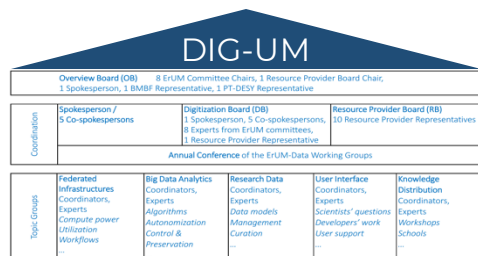




DIG-UM

ErUM-Data-Hub

ErUM-Data-Funding

Martin Erdmann & Thomas Kuhr

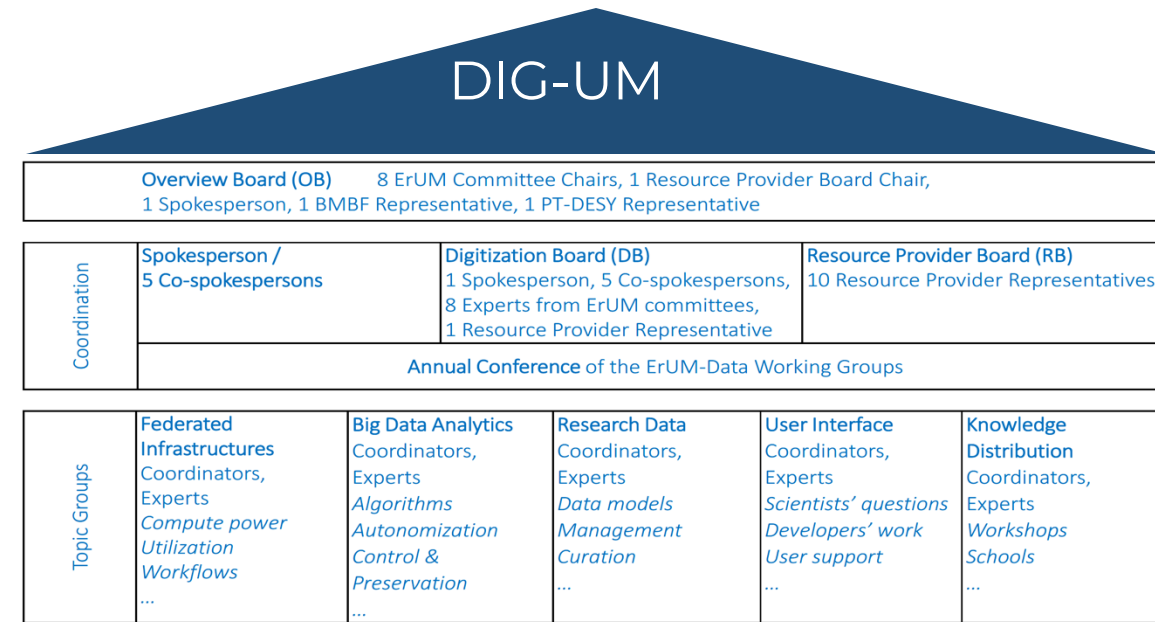
21-Nov-2025

DIG-UM strategic coordination of digital transformation efforts in ErUM

- Federated digital infrastructures
- Research data management
- Big data analytics
- User interface
- Knowledge distribution

Digitization Board Meetings – monthly
Connected to European effort EuCaif

Spokesperson: Thomas Kuhr (LMU München, KET)
Overview Board Chair: Christian Gutt (Siegen, KFS)



DIG-UM annual meeting **December 4th 2025**

DIG-UM Award

Awards granted in the following categories:

PhD Award:

up to two outstanding PhD theses, successfully defended within 18 months before the call for nominations,

Early-Career Award:

up to two outstanding contributions by early-career researchers with non-permanent positions



The 2025 awards are presented at the DIG-UM annual meeting, **December 4th 2025**

ErUM-Data-Hub: Selected Events 2025

DEEP LEARNING SCHOOL
"BASIC CONCEPTS"

5TH EDITION

LEARN ABOUT

- Neural Network Building Blocks (Dr. Ethan Simpson / CERN)
- Mastering Model Building (Dr. Maximilian Horzela | Universität Göttingen)
- Convolutional Neural Networks (Dr. Theo Heimeel | UC Louvain)
- Transformer & Prompt Engineering (Dr. Knut Zoch | Harvard University)
- Julia (Dr. Oliver Schulz | MPP)

06.05.25 - 09.05.25

Aachen
Erholungs-Gesellschaft



PYOPP
PUBLISH YOUR OWN
PYTHON PACKAGE



Transfer Workshop 6.-7. Feb. '25

ErUM-Scientists & Industry
in Dialogue

Knowledge Exchange & Networking in Aachen



**SHAPING THE DIGITAL FUTURE
OF ERUM-RESEARCH:**

SUSTAINABILITY & ETHICS



**DEEP LEARNING
TRAIN-THE-TRAINER**

Explaining the
Training Process

Workshop



ErUM-Data-Hub: Knowledge data base

New wiki launched 2/2025

- ErUM-Data projects
- ErUM contacts
- DIG-UM groups
- Calendar 2026 workshops
- Teaching material
- ...

<https://wiki.erumdatahub.de>

The screenshot shows the homepage of the ErUM-Data-Hub Wiki. The header is dark blue with the 'ERUM DATA HUB' logo and navigation links for 'Register', 'Log-in', and a search icon. A search bar is located below the header. The left sidebar contains a 'Navigation' menu with links to 'Home', 'Material collection', 'People in ErUM-Data', 'Industry meets ErUM-Data', and 'Jobs in ErUM-Data'. Below this is a 'DIG-UM' section with a list of sub-items including 'Annual Meeting', 'Boards', 'Digitization Board', 'Overview Board', 'Resource Provider Board', 'Corporate Design & Materials', 'DIG-UM Award', 'ErUM-Data Projects', 'Mailing Lists', 'Policies', 'Letters of Support', 'Publications', 'Topic Groups', 'Big Data Analytics', 'Federated Infrastructures', 'Knowledge Distribution', 'Research Data Management', and 'User Interface'. The main content area is titled 'Home' and includes a welcome message, a 'Welcome' section, and a 'What is new?' section. The 'Welcome' section states that the wiki is a place for all ErUM-Data communities to interact and share information. The 'What is new?' section lists recent updates, including the 'Material collection' of learning and teaching materials, the 'People in ErUM-Data' list of research groups, and the 'Industry meets ErUM-Data' collection of various groups in industry. The 'ErUM-Data Calendar' section shows a calendar for 2026, with the month of July selected. The calendar displays dates from January to December, with specific events marked for July 23rd (Concept Advances), July 24th (Active We), and July 32nd (Training Course). The right sidebar contains a 'Recently Visited' section, a 'Recently Modified' section, and a 'Tag Cloud' section. The 'Tag Cloud' lists various tags such as 'Advanced', 'Accelerator', 'Concepts', 'Agents', 'AI', 'ALICE', 'Analysis', 'analysis', 'facilities', 'ANTARES', 'Archive', 'Artificial', 'General Intelligence', 'Assistants', 'ATLAS', 'atomic', 'clock', 'autoencoder', 'automated', 'basic', 'bayesian', 'Belle2', 'BESSY II', 'beyond', 'ErUM', 'big bang', 'big data', 'big data analytics', 'BSM', 'C++', 'CCAT', 'CD', 'CI', 'CI/CD', 'Cloud', 'Computing', 'cloud-computing', 'CMS', 'code quality', 'collective', 'intelligence', 'computer vision', 'conference', 'convolutional', 'neural networks', 'course', 'CP', 'CPU', 'CQTA', 'CTA', 'cutting-edge', 'particle detectors', 'DAQ', 'dark matter', 'data analysis', 'Data Center', 'Data Intensive', 'Computing', 'Data Management', 'data mining', 'dCache', and 'deep'.

Suggested: ErUM-Data-Hub-2

ErUM-Data-Hub-1 active until 31-Dec-2026, located in Aachen

Working on application for 2nd generation network and transfer office

ErUM-Data-Hub with the goals to continue:

- Dialog: within the ErUM community: Knowledge database, schools, workshops
- Transfer: exchange and research with neighboring faculties, industry
- Outreach: common strategy with related offices (e.g. LHC, Belle-II offices)

Intended locations: Hub center at LMU Munich plus distributed contributors at Universities Dortmund and Wuppertal

ErUM-Data: Funded Projects 2025-2028

Consortium	Area	Contribution	Topic
DEEP	Compute	KET	Steigerung der Dateneffizienz in eingebetteten Prozessoren durch künstliche Intelligenz
FUSE	Compute	KET	Federated Unified Storage Environment
MorphoSphere	Compute		Repositorium für digitalisierte Morphologie als integrative Plattform im Dreieck von Nutzerfacilities, Speicher- und Rechenzentren ...
PEARLS	Compute	KET	Präzision in energiebewusster KI-Forschung für CO2-arme Lösungen
SUSFECIT	Compute	KET	Nachhaltige Föderierte Computing-Infrastrukturen
BRAID	Reconstruction	KET	Domänenübergreifende Vernetzung: KI-basierte, detektorunabhängige Rekonstruktions-Frameworks für unregelmäßige ...
ErUM-ARIA	Simulation	KET	Methoden zur effizienten Ressourcennutzung für physikalische Simulationen
AALearning	Analysis	KET	Adversariales Lernen als neues Werkzeug in der Grundlagenphysik und darüber hinaus
BeyondVoxels	Analysis		Hierarchical Analysis, Processing and Visualization of Large-Scale Synchrotron Radiation Imaging Data
CmarT	Analysis		Entwicklung von lokal adaptiver Tomographie für die Untersuchung von hierarchisch komplexer Materie
ErUM-IFT-2	Analysis	KET	Informationsfeldtheorie für Experimente an Großforschungsanlagen
FoMoCID	Anaysis		Basismodell zur Echtzeitinterpretation von Rohdaten in kohärenter Mikroskopie
QC4ErUM	Analysis	KET	Quantum Computing für ErUM: Aufbau eines Kompetenzzentrums, das ErUM-Wissenschaftler:innen bei Auswahl ...
SciFM	Analysis	KET	Grundlagenmodelle in Astrophysik und Teilchenphysik
AirMon-VLT	Experiment		Vorhersage von OH-Airglow Bilddaten mit KI-Modellen der Videovorhersage für eine verbesserte Beobachtungsplanung ...
DIAMOND	Experiment		Innovative inverse Software-Architekturen für das Design optischer Beschichtungen
ErUM-SESAM	Experiment		Entwicklung innovativer ML-basierter Verfahren zur seismischen Modellierung komplexer Untergründe in urbanen ...
FASTER	Experiment		Auf dem Weg zu schnellen Feedback-Mechanismen und autonomen Experimenten in der Synchrotron- und Neutronenforschung
OPTIX	Experiment		Optimale Prozessierung und Training für Intelligentes Experimentieren
DEMOS	Knowledge	KET	Demokratisierung von Modellen: Plattform für den Austausch von Forschungsmodellen
GADC	Knowledge		Aufbau des Deutschen Astronomischen Datenzentrums in Görlitz
PHOTONIC	Knowledge		Zugang zu föderierten wissenschaftlichen Daten der Photonenphysik und deren Visualisierung
Physics-LLM	Knowledge	KET	Anwendung von großen Sprachmodellen für Forschungsdatenmanagement in der Physik

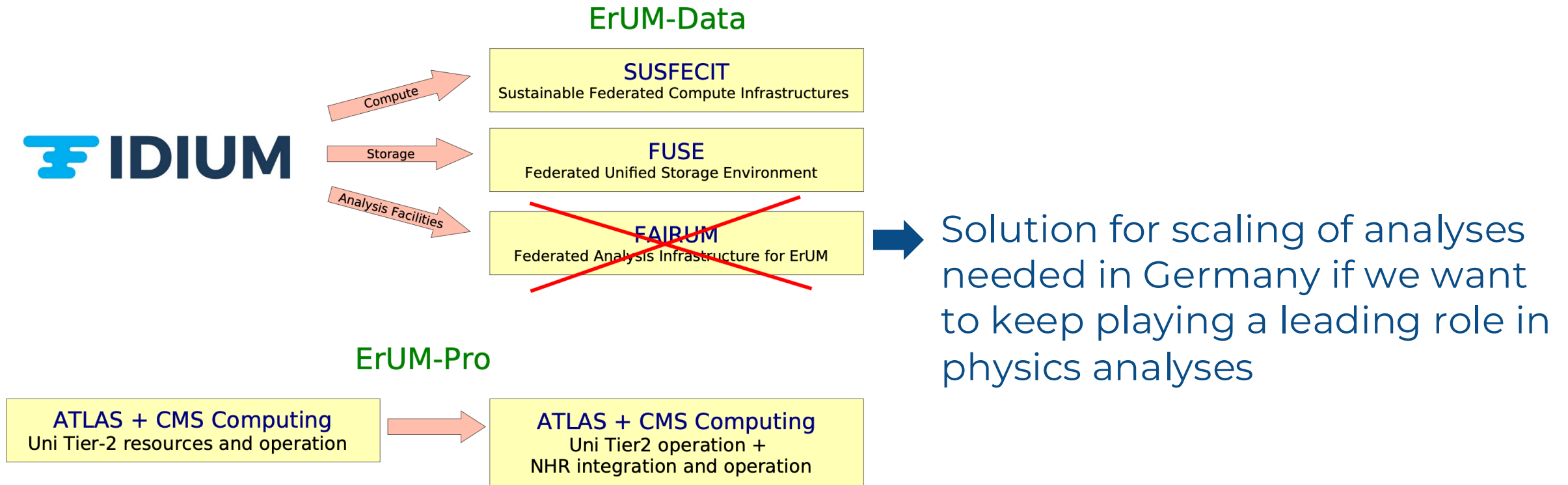
ErUM-Data Funding for KET

Period	Funding M€	KET M€	KET Share	Scientists KET/ErUM
2022-2025	20			
2025-2028	47	13	28%	15%
Action plan expected	120 / 10years			

Substantial funding for KET: equivalent of ~50 Postdocs for 3 years

KET: key responsibility for project leaders in driving the digital transformation in ErUM research and contributing to DIG-UM

Federated Infrastructure Projects



KET Strategy Workshop 2025: ErUM-Data helps to address some, but certainly not all computing and software needs of the community

Job Offers & Onboarding Meeting

Post your ErUM-Data job offer

Title	Location	Community
Filter ...	Filter ...	Click on one
Postdoc on LLM-based Agentic Systems for Scientific Workflows	Leibniz-Institut für Astrophysik Potsdam (AIP)	
IT System Architect and Data manager	University of Cologne (ITCC and PH1)	RDS
Postdoc Spectroscopy	Zeuthen / remote	KHuK
PhD student for the ATLAS Group	Hamburg	KET
Postdoc for a networked atomic clock experiment for ultralight dark matter	Zeuthen / remote	KAT
DESY-Fellowships in Photon Science	Hamburg	KFS

<https://wiki.erumdatahub.de/bin/view/Jobs%20in%20ErUM-Data>



New Postdocs & PhDs cordially invited for **25 Nov 2025, 16:30 - 18:00**

Optional: introduce your ErUM-Data project (1 Slide, 2 minutes)

<https://indico.desy.de/event/50044>

Messages

DIG-UM: Community organization:

- Very active, newly funded projects please join
- Connected to European effort EuCaif

DIG-UM annual meeting
December 4th 2025

ErUM-Data-Hub: Network and Transfer office

- Knowledge database launched
- Preparing continuation

<https://wiki.erumdatahub.de>

ErUM-Data: Funded digital transformation

- New projects with broad topics
- Lacking solution for scaling-up of analyses
- KET funding share fantastic

~50 KET-Postdocs for 3 years

Virtual Onboarding Nov. 25
<https://indico.desy.de/event/50044>