

DIGUM-Dachverband & ErUM-Data-HUB

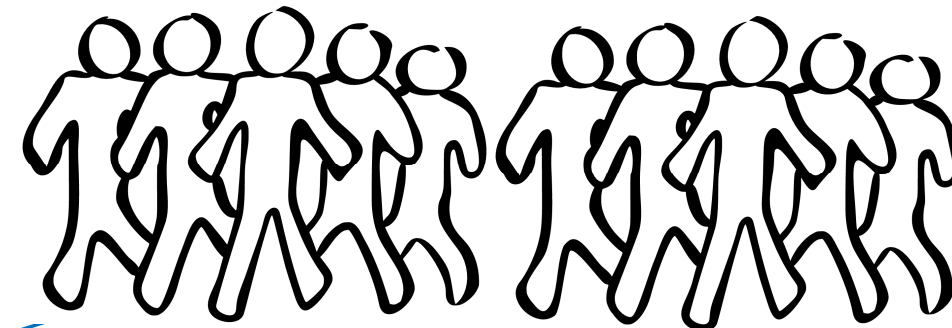
Martin Erdmann zusammen mit ganz vielen Kolleg_innen

21-Sep-2020

**Erforschung von
Universum & Materie**

KFS	2,300
RDS	1,500
KHuK	1,500
KET	1,300
KFN	1,000
KAT	500
KfB	200
KFSI	100
Scientists with doctoral degree	8,400

ErUM: Portfolio of measures to master digitization



Science community BMBF

Knowledge distribution in digitization

Tenure track programme

Challenges and Opportunities of Digital Transformation in Fundamental Research on Universe and Matter

Research Data

Data models
Management
Curation
...

Big Data Analytics

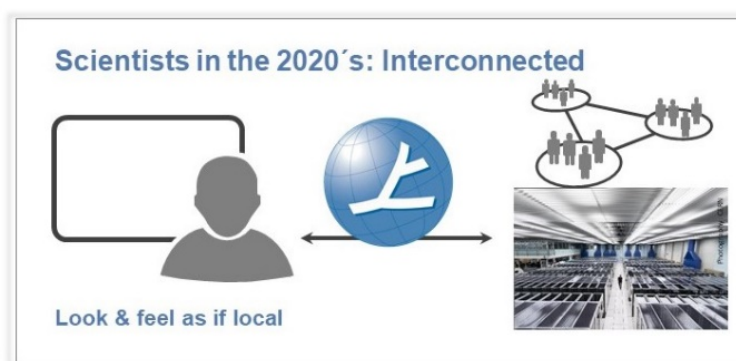
Algorithms
Automization
Control & preservation
...

Federated Infrastructures

Compute power
Utilization
Workflows
...

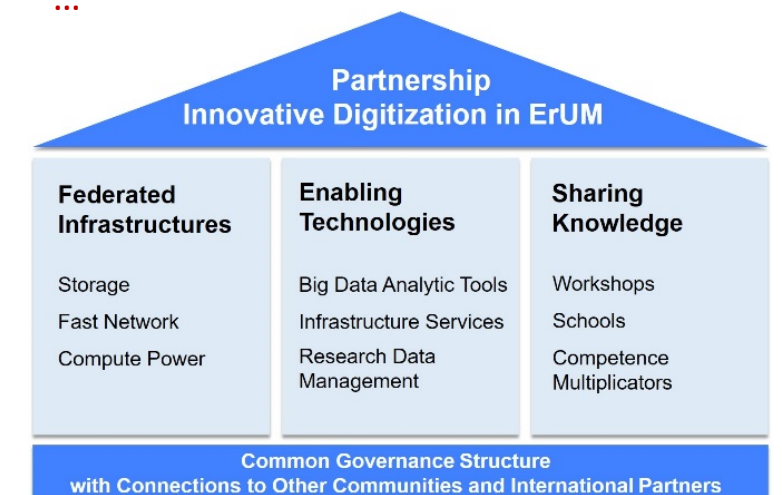
User Interface

Scientists questions
Developers work
User support
...



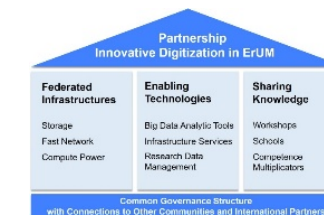
Communication

Partnership
Pioneering efforts
Training
...



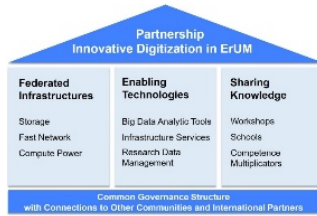
DIGUM: Digitization Board

Committee		Representative	Deputy
Forschung mit Synchrotronstrahlung	KFS	Christian Gutt	Bridget Murphy
Rat Deutscher Sternwarten	RDS	Joachim Wambsganß	Michael Kramer
Hadronen- und Kernphysik	KHuK	Kilian Schwarz	Tobias Stockmanns
Elementarteilchenphysik	KET	Markus Schumacher	Christian Zeitnitz
Forschung mit Neutronen	KFN	Klaudia Hradil	Astrid Schneidewind
Astroteilchenphysik	KAT	Andreas Haungs	Uli Katz
Beschleunigerphysik	KfB	Erik Bründermann	Oliver Boine-Frankenheim
Forschung mit nuklearen Sonden & Ionenstrahlen	KFSI	Patrick Reichart	
Projekträger DESY	PTDESY	Wolfgang Ehrenfeld	
Organisation		Martin Erdmann	
Experten	NFDI	Ralf-Jürgen Dettmar	
	Ressource Providers	Volker Gülzow	Thorsten Kollegger



**Sub-Committee:
Editorial Board
to prepare application
ErUM-Data-HUB**

Erik Bründermann
Martin Erdmann
Christian Gutt
Andreas Haungs
Bridget Murphy
Markus Schumacher
Kilian Schwarz



DIGUM: Digital transformation in ErUM, Guidelines

- KFS
- RDS
- KHuK
- KET
- KFN
- KAT
- KfB
- KFSI

DIGUM: Digital transformation in the research on universe and matter

Guidelines

DIGUM is the bottom-up consortium of ErUM working groups located at universities and research centres. The task of the consortium is the joint implementation of the objectives stated in the white paper "Challenges and Opportunities of Digital Transformation in Fundamental Research on Universe and Matter - Recommendations of the ErUM Committees" [1].

A particular challenge for this consortium of over 8,000 postdoctoral researchers is the heterogeneity of the working groups from the different areas of ErUM. This concerns first the size of the experiments, as well as the amount and type of data, second the number of actively participating scientists and their staff, third methods in the areas of data management, algorithms, computing necessary for the success of the experiment and fourth the level of knowledge and experience with these modern procedures. Under these overall circumstances, substantial improvements and acceleration of ErUM basic research through digital transformation require a suitably positioned organization that ensures national integration of developments and international connections.

DIGUM has an organizational structure (spokesperson and boards), as well as an office with staff supporting the ErUM working groups. The DIGUM Overview Board is formed by the elected chairmen of the committees and the BMBF. The Digitization Board acts as the steering committee, with representatives from the 8 ErUM communities with expertise in the field of modern digitization. The organisational structure DIGUM is reviewed by the International Advisory Board. The legal form of DIGUM is derived from the formation of consortia (research consortiums) which is common practice in project funding.

The foundation and driving force behind the joint work is the continuously evolving vision that modern digitization will substantially accelerate progress in ErUM basic research. Digitisation is a means to an end.

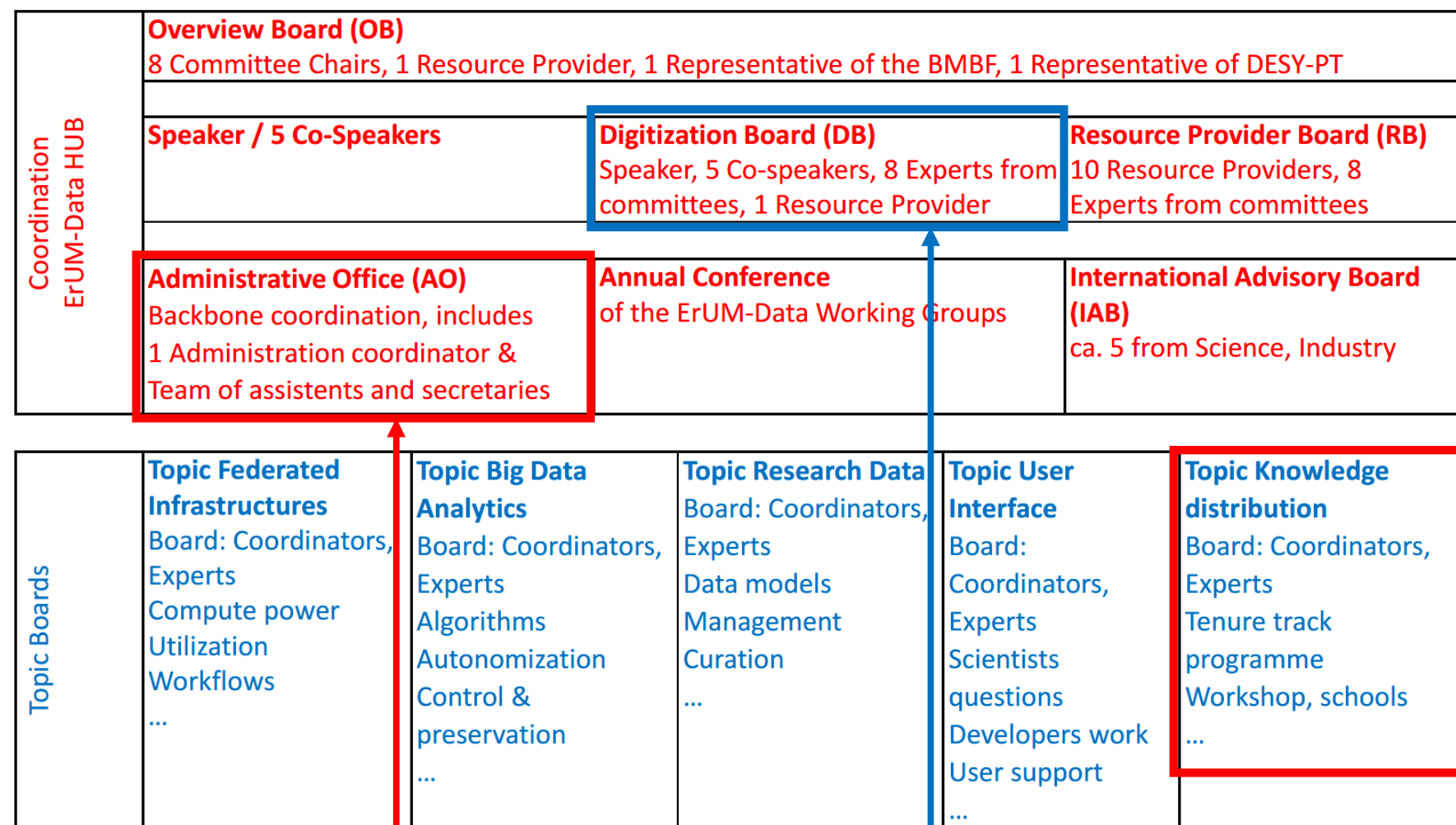
In all decisions, efforts to reach a consensus are paramount. If, in exceptional cases, a consensus decision is not possible, the responsible body will decide by simple majority.

The DIGUM office will be established in coordination with the BMBF at a German research institute within the framework of ErUM-Pro (collaborative research).

The numerous ErUM working groups join together in interest groups on specific topics of modern digitisation (Topic Boards). According to document [1], the topics are "Federated Infrastructures", "Big Data Analytics", "Research Data", "User Interface" and "Knowledge Distribution". The structure of the interest groups can be divided up or expanded according to current requirements.

October 20: meeting of Digitization Board to discuss guidelines and draft for funding application

Organization DIGUM



Currently community organized

Apply for BMBF funding

Editorial Board: Working on 2nd draft after feedback from BMBF

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Organization DIGUM

Coordination ErUM-Data HUB	Overview Board (OB) 8 Committee Chairs, 1 Resource Provider, 1 Representative of the BMBF, 1 Representative of DESY-PT				
	Speaker / 5 Co-Speakers	Digitization Board (DB) Speaker, 5 Co-speakers, 8 Experts from committees, 1 Resource Provider	Resource Provider Board (RB) 10 Resource Providers, 8 Experts from committees		
	Administrative Office (AO) Backbone coordination, includes 1 Administration coordinator & Team of assistants and secretaries	Annual Conference of the ErUM-Data Working Groups	International Advisory Board (IAB) ca. 5 from Science, Industry		
Topic Boards	Topic Federated Infrastructures Board: Coordinators, Experts Compute power Utilization Workflows ...	Topic Big Data Analytics Board: Coordinators, Experts Algorithms Autonomization Control & preservation ...	Topic Research Data Board: Coordinators, Experts Data models Management Curation ...	Topic User Interface Board: Coordinators, Experts Scientists questions Developers work User support ...	Topic Knowledge distribution Board: Coordinators, Experts Tenure track programme Workshop, schools ...

Summary

Approaching: meeting of Digitization Board to discuss
DIGUM guidelines and 2nd draft concept of BMBF application

