

ErUM: Exploration of the Universe and Matter

Annual Meeting of the ErUM-FSP LHCb

Dr. Maren Meinhard
7 October 2021



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PROJEKTRÄGER

ErUM: Exploration of the Universe and Matter

A BMBF framework programme for basic research

Strategic and thematic framework

- of the Federal Ministry of Education and Research
- for basic research at large-scale facilities

Timeframe

- 2017 - 2027



ErUM: Exploration of the Universe and Matter

Topical overview

01 Thematic framework

02 Strategic framework

03 Implementation

04 BMBF & PT.DESY

05 Current programme

Thematic framework



Thematic framework

What ErUM is about

Large-scale
research infrastructures



www.fis-landschaft.de

Topics: From astro-
to particle physics



Universe

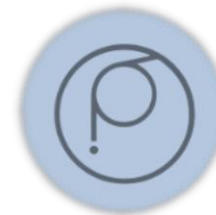


Matter



Particles

Cross-disciplinary
activities



Accelerator
development



Detector
development



Data
science

Strategic framework



Strategic framework

What ErUM achieves and in which fields it operates

Key objectives



Scientific
excellence



Future
technologies



Innovation
seeds



Talents for science and
industry



Participation

Fields of action



Large-scale
facilities



STEM
young scientists



Networking



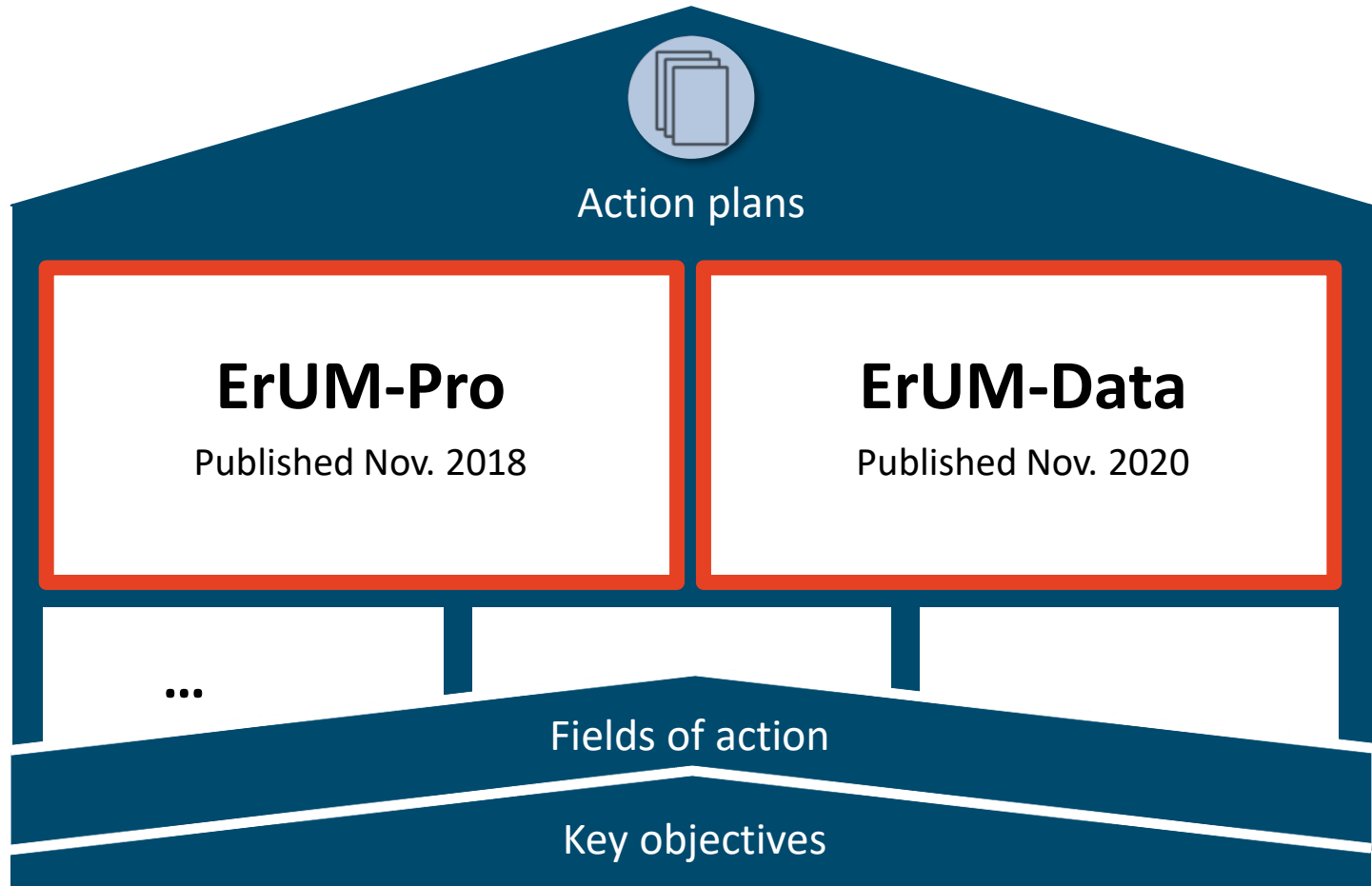
Transfer &
participation

Implementation



Action plans

Specifying and realizing ErUM



Action plan ErUM-Data

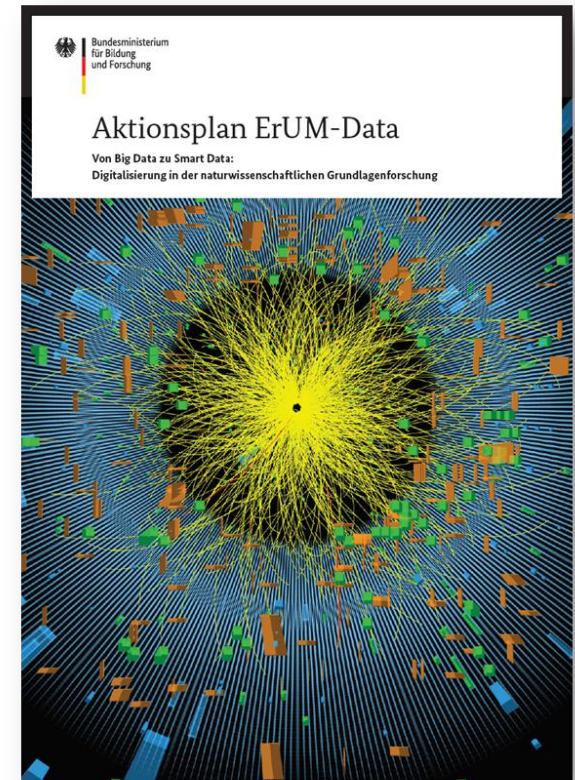
From Big Data to Smart Data: Digitalization in fundamental research

Framework for

- A coordinated and unified approach to digitalization
- New and efficient structures for interdisciplinary R&D
- Dynamic initiation, evaluation and adjustment of measures

Goals

- Address the challenges of digitalization in basic research in ErUM at research infrastructures
- Connect relevant players and structures
- Expand digital competencies in basic research
- Strengthening transfer and communication – in and beyond ErUM



Action plan ErUM-Data

Fields of action

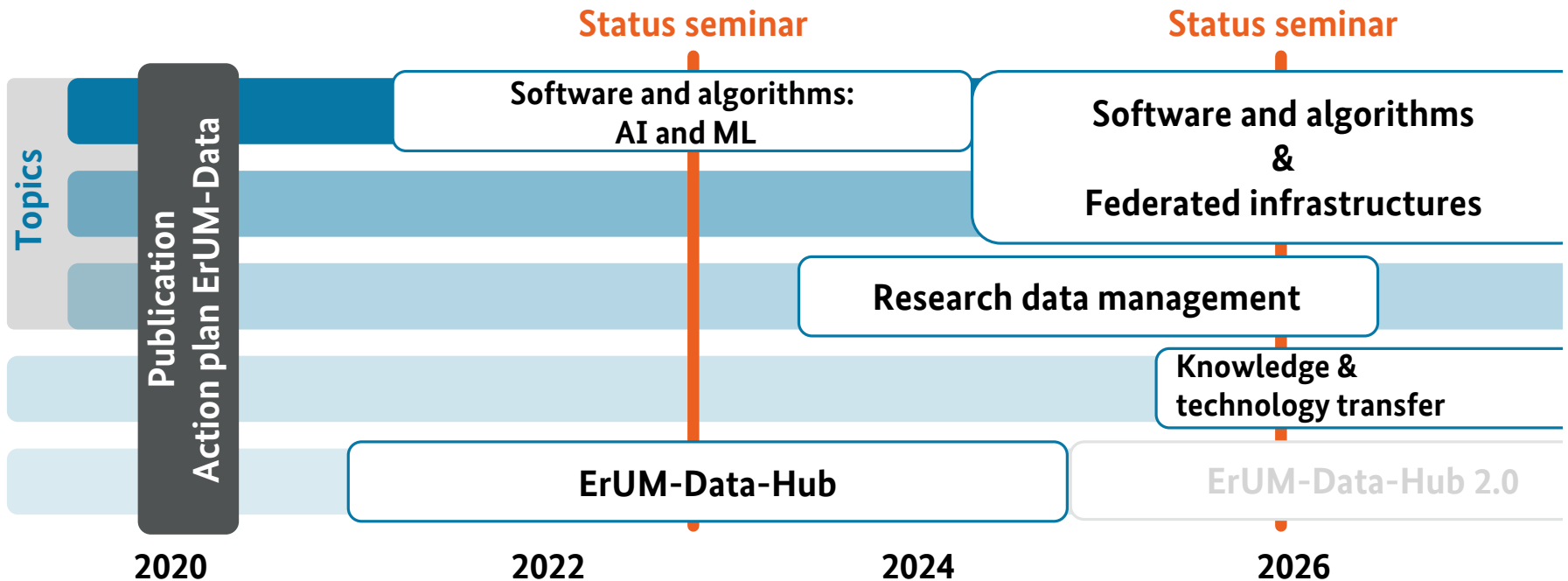
		Topics		
		Research data management	Federated digital infrastructures	Software and algorithms
Goals	Networking	○	○	○
	Digital Competencies	○	○	○
	Transfer & Communication	○	○	○



Measures in ErUM-Data

Action plan ErUM-Data

Implementation timeline



Action plan ErUM-Data

First funding call: Software and algorithms with focus on AI and ML

Overarching goals

- Addressing the challenges of digitalization in basic research in ErUM
→ thus unlocking potentials of AI and ML methods for ErUM
- Connecting relevant players and structures
→ Interdisciplinary collaborative funding:
 - within ErUM, with computer science/data science/mathematics, with industry
 - Universities and non-university research institutions
- Strengthening transfer and communication – in and beyond ErUM
→ cooperation between research and industry

Project requirements

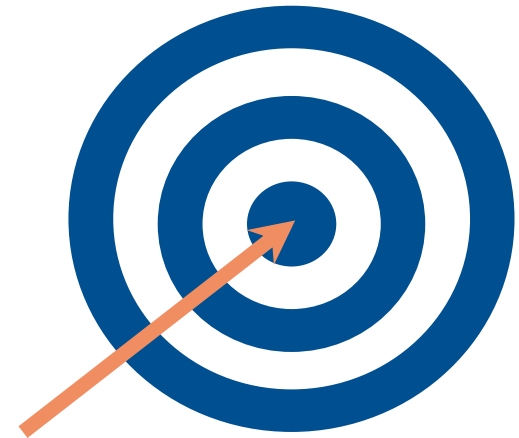
- Coordinated and broad approach
- Supporting overarching solutions

Transfer & Innovation

Preparation of an action plan

Goals

- Improve the visibility of the significance of fundamental research for the innovation chain
- Increase the scope of successful approaches of transfer initiatives
- Exploit the potential for innovations of cutting-edge research in Germany
- Promote the transfer from fundamental science into the industry and society via specific measures
- Intensify the exchange and cooperation between science and industry



BMBF & PT.DESY



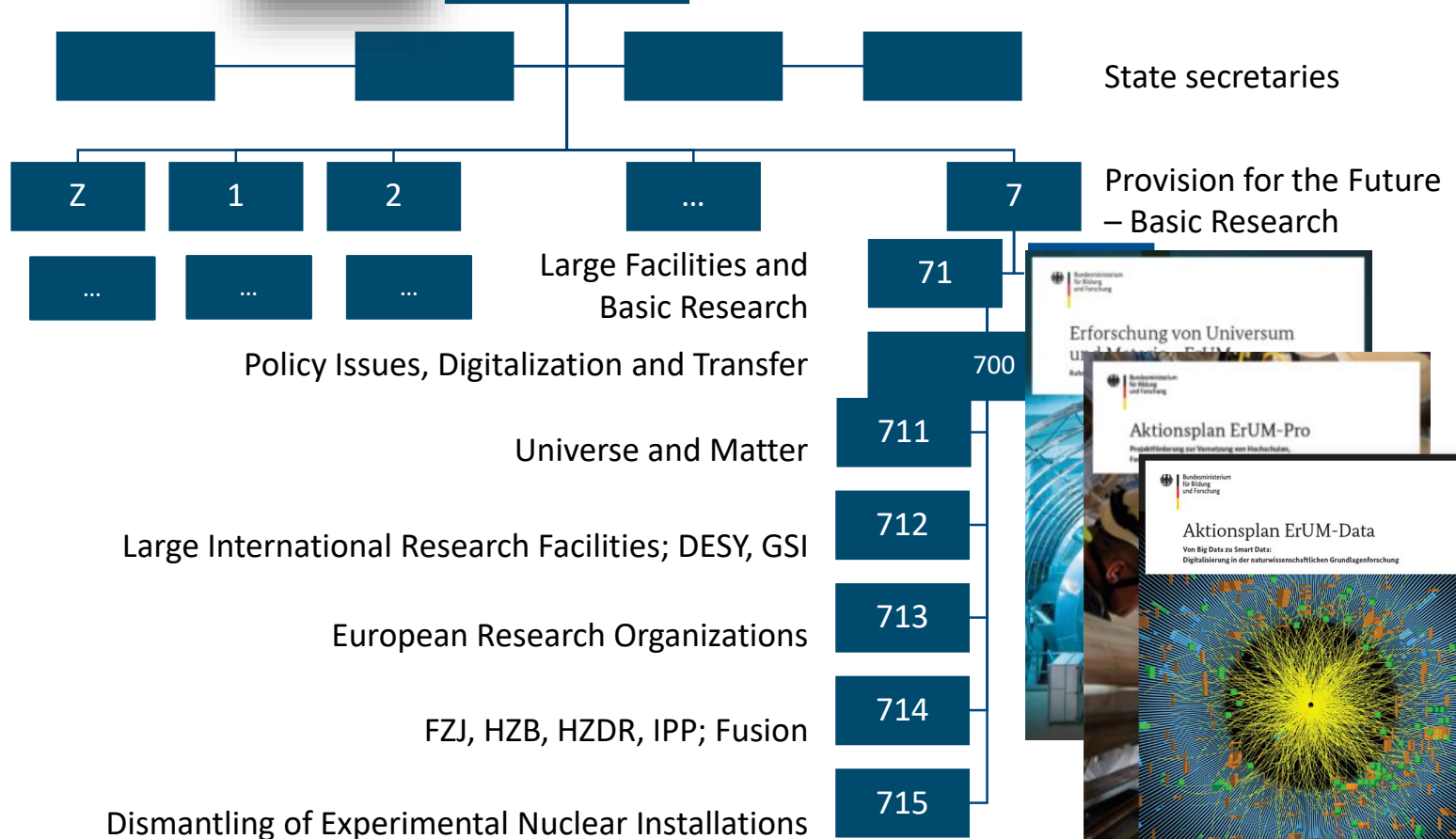
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Who is who in ErUM

The Federal Ministry of Education and Research (BMBWF)



Federal Minister
Anja Karliczek



Who is who in ErUM

DESY Projekträger: Project management for sub division 71

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Wer wir sind

Was wir leisten

Bekanntmachungen

Für Zuwendungsempfänger

Karriere

Kontakt

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Für Zuwendungsempfänger

Die Unterlagen für Anträge für internationale Reisen sowie Zwischen- und Schlussberichte Ihrer Forschungsprojekte finden Sie hier.



Zwischennachweise >

Hier finden Sie Hinweise (ZIP-Archiv)



Projektabschluss >

Hier finden Sie Hinweise und Vorlagen (ZIP-Archiv)

Infos

- > BMBF-Förderportal [↗](#)
- > easy-online Antragsystem [↗](#)
- > profi-Online Verwaltung [↗](#)
- > Upload-Server [↗](#)
- > Intern [↗](#)

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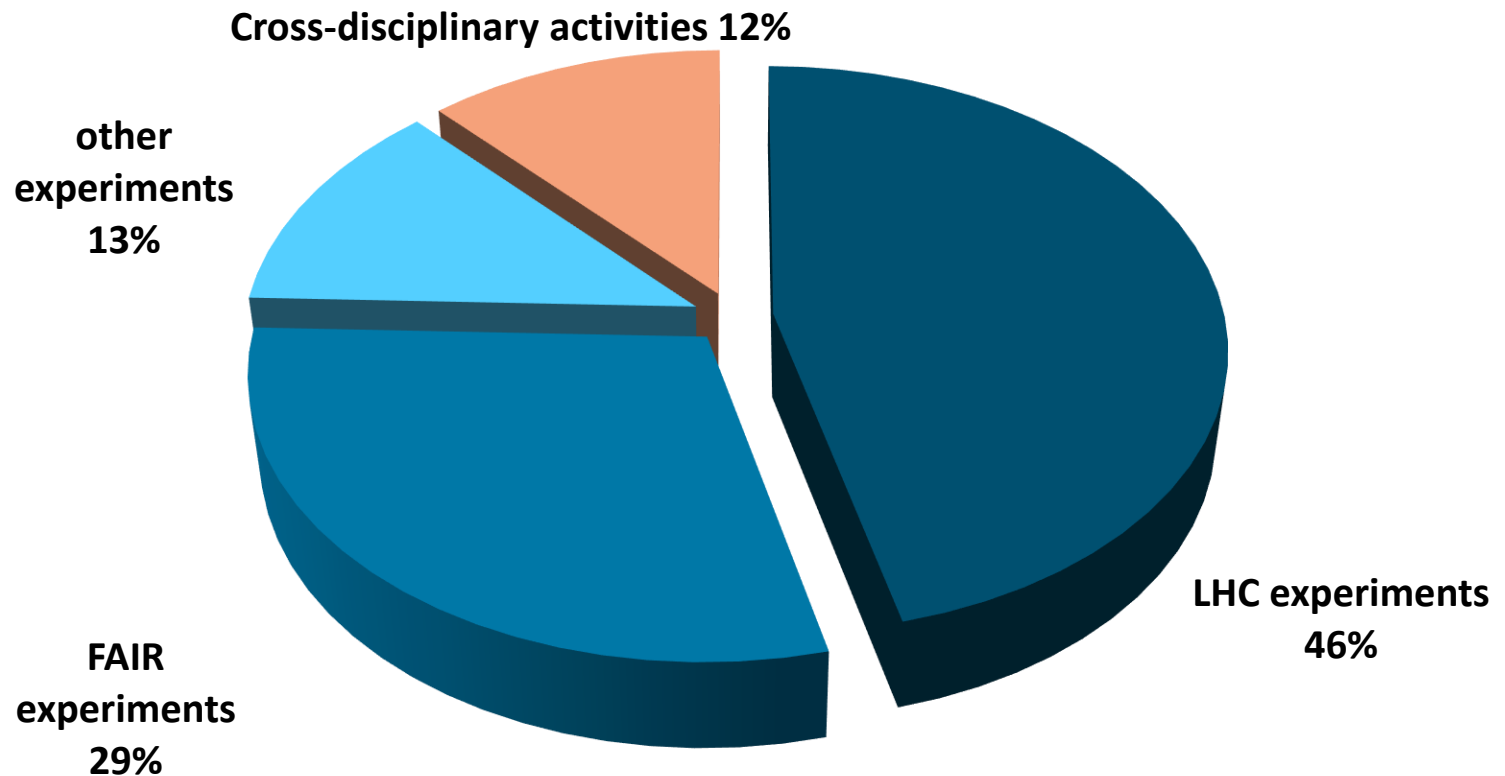
Current programme



ErUM-Pro: Programme “Particles”

Funding period 2021 - 2024

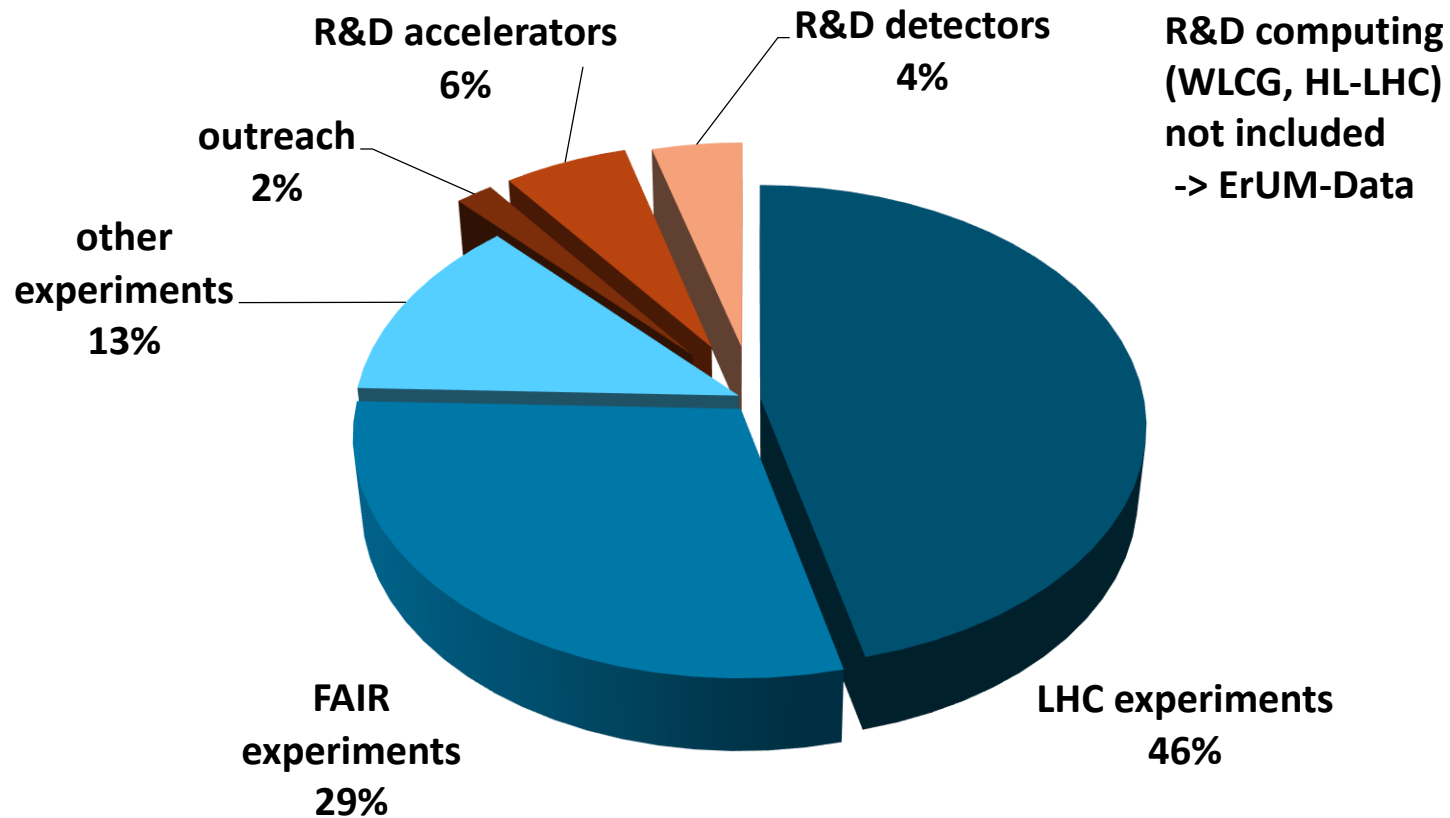
Total: EUR 104,7 million



ErUM-Pro: Programme “Particles”

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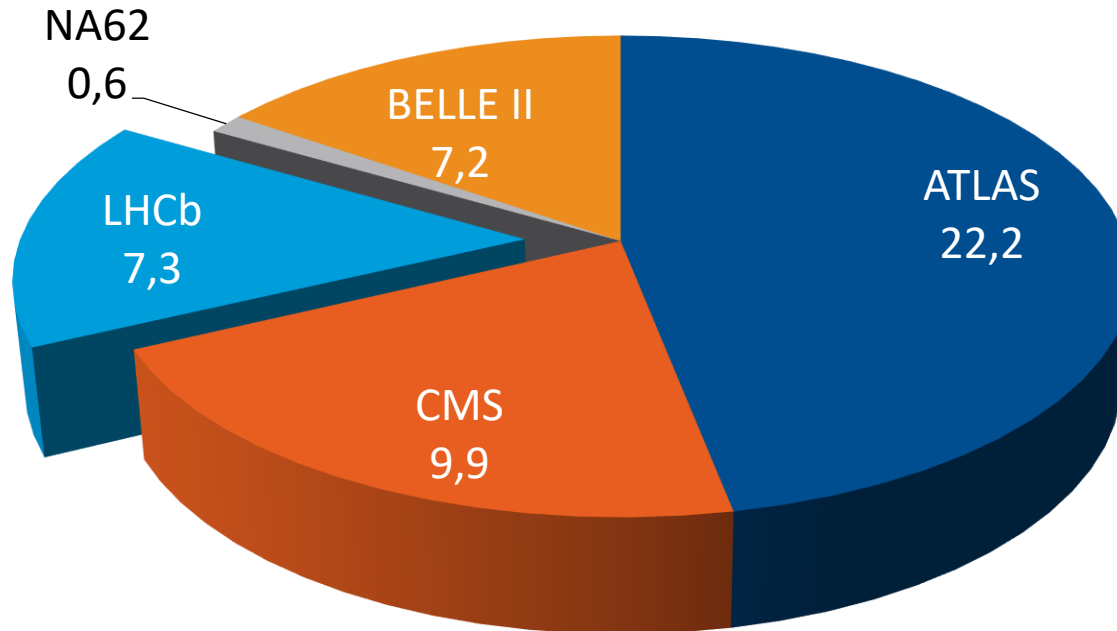
Total: EUR 104,7 million



Elementary Particle Physics

Funding period: 2021 - 2024

Total: EUR 47 million



BMBF priorities:

- upgrade phase I (Core)
- experiment: operation/service
- methods/tools for data analysis

ErUM-Pro: LHCb (incl. theory, FSP)
2021-2024: EUR 7,3 million

Thank
you



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Kontakt

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