Federal Institute
for Drugs
and Medical Devices

„*National* and *European Medicines Regulatory Network* Strategies to foster innovation and availability“

19th June 2024 | DGRA Annual Congress

Prof. Dr. Karl Broich, President BfArM

Content

Fostering research and innovation in Germany: Pharmastrategy & Medical Research Act („Medizinforschungsgesetz“)

- Related activities at BfArM

From national to joint European Medicines Regulatory Agencies Network Strategy: EMANS Update 2028 to foster innovation, digitization and availability

Leveraging Data and AI in a growing eHealth ecosystem:

Update on digitization strategy in Germany / AI projects at BfArM

Connection to the European Health Data Space (EHDS) and other EU (regulatory network) data & AI initiatives

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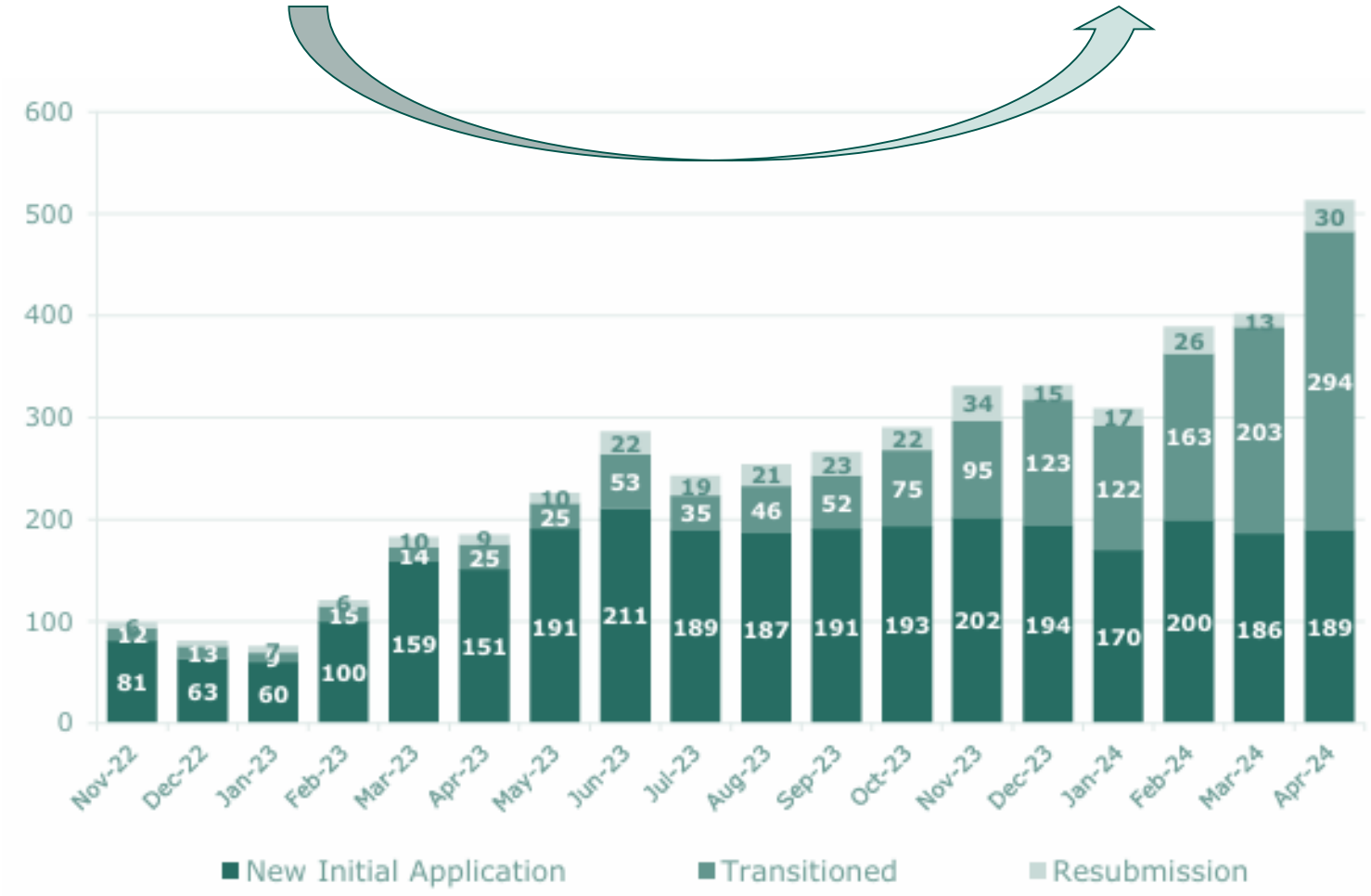
Pharmastrategy and Medical Research Act – new taks for & related activities at BfArM

Status quo – Research in Germany and EU: Clinical trials



2

Member State	Multinational Trials	
	MSC	*Of which as RMS*
Austria	225	39
Belgium	454	84
Bulgaria	230	2
Croatia	70	0
Cyprus	3	0
Czech Republic	353	72
Denmark	246	72
Estonia	43	4
Finland	97	28
France	823	139
Germany	818	252
Greece	222	2
Hungary	338	17
Iceland	5	0
Ireland	83	6
Italy	782	94
Latvia	43	3
Lithuania	58	9
Luxembourg	2	0
Netherlands	393	85
Norway	109	20
Poland	641	69
Portugal	169	8
Romania	186	8
Slovakia	129	14
Slovenia	22	2
Spain	1026	290
Sweden	198	45

EMA Homepage: Monitoring the European clinical trials environment A deliverable of the ACT EU Priority Action 2 - February 2024

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National perspective: From Pharma strategy to the draft for a „Medical Research Act“ (Medizinforschungsgesetz)

Die Bundesregierung

Strategiepapier

Verbesserung der Rahmenbedingungen für den Pharmabereich in Deutschland
Handlungskonzepte für den Forschungs- und Produktionsstandort

Ausgangslage:

Arzneimittel sind unabdingbar für die Gesundheit der Menschen und wesentlicher Faktor des medizinischen Fortschritts. Die pharmazeutische Industrie ist ein Schlüsselsektor und eine Leitindustrie der deutschen Volkswirtschaft. Eine langfristig starke pharmazeutische Industrie ist für die Gesundheitsversorgung und den Wirtschaftsstandort von großer Bedeutung. Wenn man die internen Aufwendungen für Forschung und Entwicklung am Umsatz misst, ist die Pharmaindustrie die forschungsintensivste Branche in Deutschland – sie investiert mit mehr als acht Milliarden Euro rund 15 Prozent ihres Branchenumsatzes in Forschungs- und Entwicklungsaktivitäten. Deutschland ist einer der wichtigsten Biotech-Standorte weltweit. Im europäischen Vergleich der Pharmamärkte steht Deutschland gemessen am Umsatz (56,5 Milliarden Euro im Jahr 2022) auf Platz 1 und ist mit einem globalen Marktanteil von rund 4 Prozent auch der viertgrößte Pharmamarkt der Welt.

Die Pharmabranche ist auch ein bedeutender Teil der kritischen Infrastruktur. Die pharmazeutische Industrie ist essentiell für die medizinische Versorgung und bedarf einer besonderen Betrachtung für Bedrohungen und Krisenlagen. Die COVID-19-Pandemie hat verdeutlicht, welche Stärken die pharmazeutische Industrie in der Umsetzung von Forschung und Entwicklung hin zu lebensrettenden Produkten besitzt und welche erhebliche Wertschöpfung sich daraus für den Wirtschaftsstandort Deutschland ergeben kann. Die pharmazeutische Industrie hat aber auch Abhängigkeiten und Lieferengpässe offenbart.

Deutscher Bundestag **Drucksache 20/11561**

20. Wahlperiode 29.05.2024

Gesetzentwurf

der Bundesregierung

Entwurf eines Medizinforschungsgesetzes

A. Problem und Ziel

Arzneimittel und Medizinprodukte sind unabdingbar für die Gesundheit der Menschen und wesentlicher Faktor des medizinischen Fortschritts. Zuletzt hat der Forschungs- und Produktionsstandort Deutschland im internationalen Vergleich an Attraktivität verloren. Daher hat die Bundesregierung am 13. Dezember 2023 mit ihrem Strategiepapier „Verbesserung der Rahmenbedingungen für den Pharmabereich in Deutschland“ umfassende Handlungskonzepte für den Forschungs- und Produktionsstandort Deutschland beschlossen. Der Entwurf eines Medizinforschungsgesetzes ist ein wichtiger Teil dieses Handlungskonzepts.

Mit dem Entwurf eines Medizinforschungsgesetzes sollen die Rahmenbedingungen für die Entwicklung, Zulassung und Herstellung von Arzneimitteln und Medizinprodukten verbessert werden. Dies stärkt die Attraktivität des Standorts Deutschland im Bereich der medizinischen Forschung, beschleunigt den Zugang zu neuen Therapieoptionen für Patientinnen und Patienten und fördert Wachstum und Beschäftigung.

Ein Kernstück ist die Verzahnung des strahlenschutzrechtlichen Anzeige- und Genehmigungsverfahrens für Anwendungen radioaktiver Stoffe oder ionisierender Strahlung am Menschen zum Zweck der medizinischen Forschung mit den medizinprodukterechtlichen Genehmigungs- oder Anzeigeverfahren und den Verfahren zur Genehmigung einer klinischen Prüfung mit Arzneimitteln im Sinne des § 4 Absatz 23 des Arzneimittelgesetzes (AMG). Diese Verzahnung ist auch im Strategiepapier der Bundesregierung „Verbesserung der Rahmenbedingungen für den Pharmabereich in Deutschland“ vorgesehen. Mit diesem Schritt wird einem wesentlichen Anliegen der forschenden Pharmaindustrie Rechnung getragen. Die Antragseinreichung bei verschiedenen Behörden und das zeitliche Auseinanderfallen der unterschiedlichen Verfahren wurden insbesondere von Unternehmen der Pharmaindustrie als zeitintensiv und kostenaufwändig kritisiert.

Die zwischen pharmazeutischen Unternehmen und dem Spitzenverband Bund der Krankenkassen (GKV-Spitzenverband) verhandelten Erstattungsbeträge für patentgeschützte Arzneimittel sind öffentlich zugänglich. Aufgrund der internatio-

Vorabfassung – wird durch die lektorierte Fassung e

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MFG

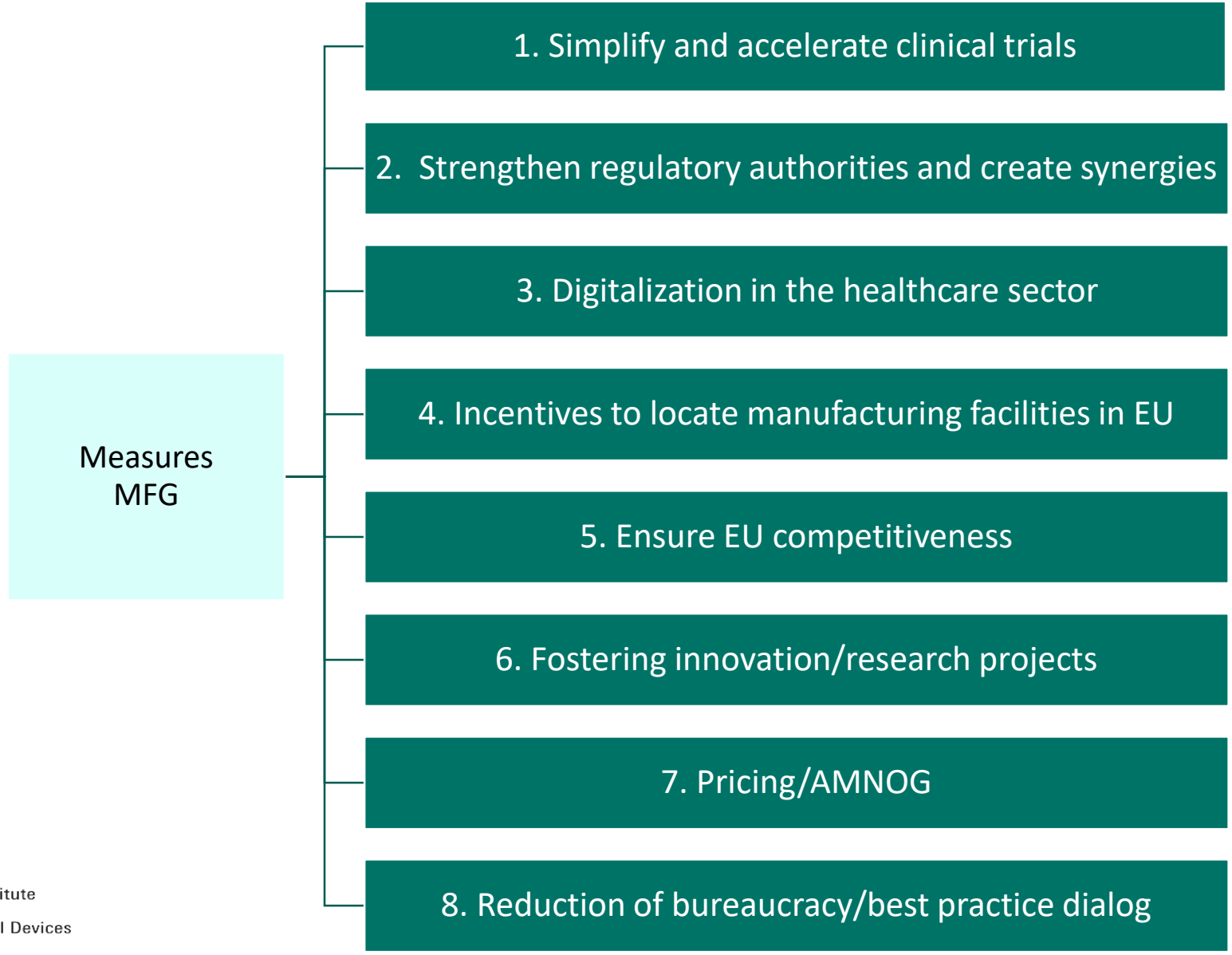
Pharmastrategy – overall objectives

Strengthening the attractiveness of Germany as a pharmaceutical location and ensuring a reliable supply

by…

- Improving the framework conditions for a strong, sustainable and internationally competitive pharmaceutical industry in DEU/EU
- Reliable market conditions as a key location factor for new investments
- Good research infrastructure with highly qualified specialists and close cooperation between the relevant research institutions
- Reduction of strategic dependencies on Germany/EU and ensuring the availability of medicines

Pharmastrategy and Medical Research Act (MFG): Overview- measures



Planned changes through Pharmastrategy and MFG – main BfArM related activitities (1)

Intensified cooperation BfArM – PEI

→ Objective:

To ensure that the pharmaceutical industry in Germany benefits from **faster processing of clinical trials and approval procedures** while **maintaining high quality.**

The technical expertise of the two higher federal authorities will remain as before and will be used in **joint project teams**.

Coordination and process management for approval procedures and applications for clinical trials (incl. ethics vote, radiation protection) for all* medicinal products: BfArM as **“single entry point”**

Planned changes through Pharmastrategy and MFG – main BfArM related activitities (2)

Changes - Radiation protection

→ Most important changes: Introduction of a "**single entry point**" approach for the notification or authorization procedure under radiation protection law:

Use of the **same electronic submission portals** as for the procedures under medical devices and medicinal products legislation.

Review of radiation protection notification procedures by the ethics committees:
BfArM or PEI become the authorities formally conducting the procedure,
→ Advantage: **Reduction of duplicate reviews**, BfS no longer reviews.

Planned changes through Pharmastrategy and MFG – main BfArM related activitities (2)

Specialized ethics committee for special procedures ("Federal Ethics Committee")

→ Office at BfArM, separate from approval body,
→ BMG appoints members,
→ Specialized Ethics Committee for Special Procedures adopts rules of procedure with the approval of the BMG,
→ Responsible for the following clinical trials:

- Studies that are dealt with in the EMA's Emergency Use Group,
- Master protocol studies
- first-in-human studies
- ATMP studies

→ Pooling of expertise for these particularly urgent or complex procedures

MFG and Pharma strategy implementation *roadmap* – status quo

Work on implementation parallel to the legislative process in close cooperation between the BMG, BfArM and PEI to achieve the objectives of the MFG/the pharmaceutical strategy

Great interest and many discussions (associations, companies, etc.)

Initial measures underway, others will follow successively before/after the MFG comes into force

Information events with the entry into force;

continuous exchange on developments under the MFG

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Regulators as Enablers, not Gatekeepers -

Das Advice portfolio along the LifeCycles of medicinal prodcuts & medical devices

Advice by the Innovation Office:
Kick-Off Meeting
- Informal exchange about innovative products
- Support and orientation about regulatory steps
- Improve awareness and understanding of regulatory requirements
- Preparatory step towards scientific advice

Scientific Advice
- Pharmaceutical / biotechnological quality
- Pre-clinical
- Clinical
- Biometrics, biostatistics
- Pharmacovigilance
- Procedural issues
- Health technology assessment (Joint Scientific Advice (EU); national: G-BA)

Idea, research, development → Non-clinical developement → Clinical developement Phase I, II, III → Marketing authorization, post-marketing monitoring

Pre-CTA advice
- Pharmaceutical / biotechnological quality
- Pre-clinical
- Clinical
- Biometrics, biostatistics
- Technical aspects of submission (CTIS)

Pre-submission advice
- Legal basis
- Structure and content of dossier
- Labelling aspects
- Procedure and timetable
- Technical aspects of the submission

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Fostering Innovation, digitization and availability – from national to European activities

BfArM active partner in EU Initiatives: ACT EU (Accelerating Clinical Trials in Europe)

Better, faster, optimised clinical trials

Improving the clinical trials environment in the European Union through harmonisation, innovation and collaboration with stakeholders.

Our purpose

The Accelerating Clinical Trials in the European Union (ACT EU) initiative will support smarter clinical trials through regulatory, technological and process innovation.

Our vision is to transform the EU into a region that supports **clinical trial development** and enables **collaboration and innovation** at all stages of the clinical research lifecycle.

Seamless coordination among stakeholders, regulators and ethics committees will lead to more cross-border collaboration.

The result will be better, more impactful clinical trials, **benefitting patients and healthcare in Europe** in the process.

Our work

Implementation of the Clinical Trials Regulation

Multinational clinical trials by non-commercial sponsors

HIGHLIGHTED

Multi-stakeholder platform

Scientific advice

Clinical trials methodologies

Clinical trials training curriculum

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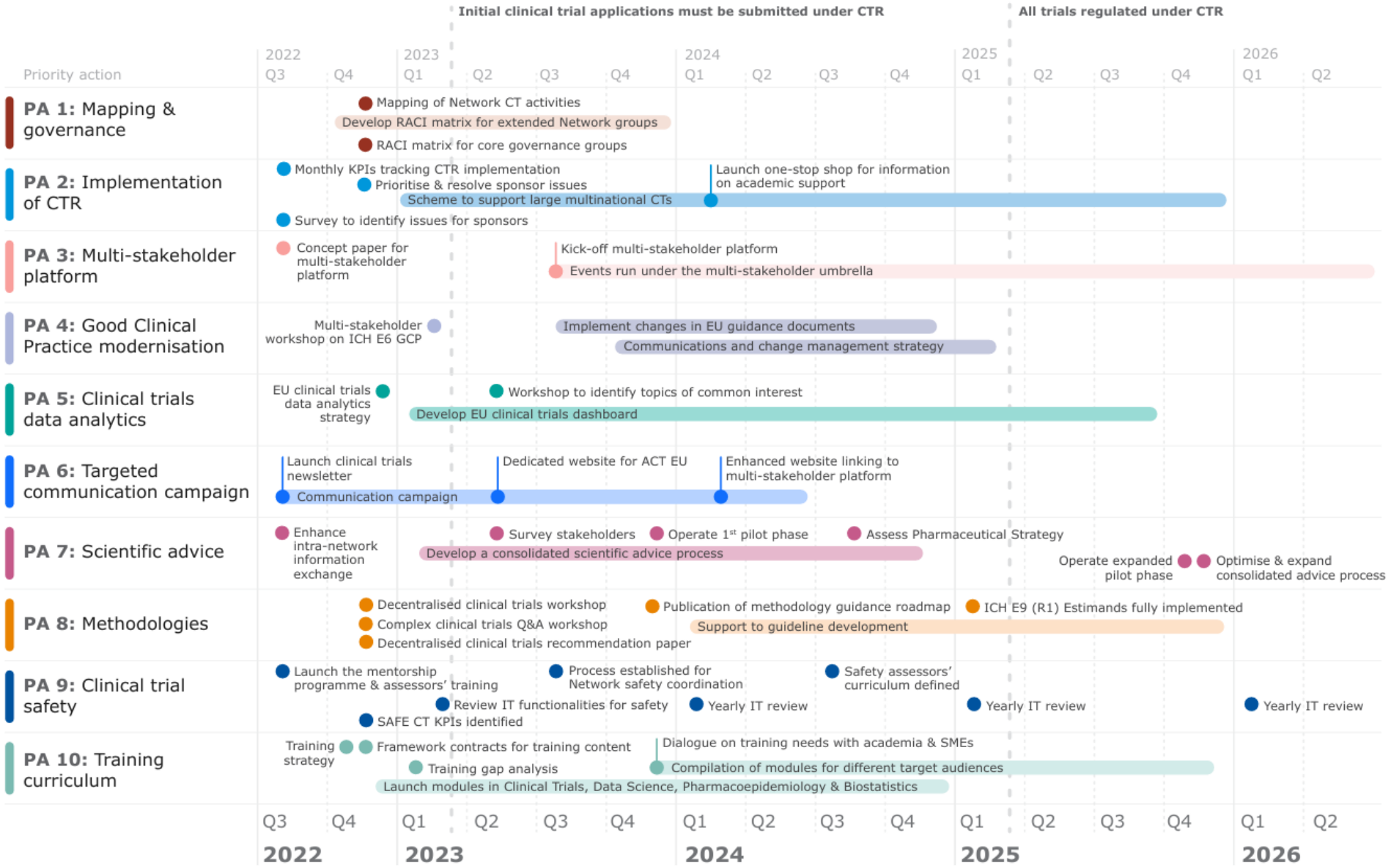
ACT EU

ACT EU MULTI-ANNUAL WORKPLAN 2022-2026



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Zoom-in: Support, Knowledge Sharing, Training – and Scientific Advice

Clinical Trials Information System (CTIS) newsflash

EMA's '**CTIS newsflash**' contains key updates on the latest developments, including system improvements, and links to useful reference materials.

CTIS newsflash - 31 May 2024
Reference Number: EMA/240597/2024

English (EN) (277.61 KB - PDF)
First published: 03/06/2024

CTIS newsflash - 17 May 2024
Reference Number: EMA/162262/2024

English (EN) (478.28 KB - PDF)
First published: 21/05/2024

CTIS newsflash – 3 May 2024
Reference Number: EMA/174397/2024

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20 December 2022
EMA/42033/2023

Accelerating Clinical Trials in the European Union (ACT EU)

Priority Action 10: Training strategy

Sent for comments to ACT EU co-leads	30 September 2022
Sent for comments to ACT EU matrix	18 November 2022
Adopted by ACT EU Steering Group	20 December 2022

10 June 2024
EMA/253080/2024

Guidance for applicants: pre-CTA advice pilot

ACT EU priority action on consolidated advice

Contents

10 June 2024
EMA/256809/2024

Guidance for applicants: SAWP CTCG pilot on scientific advice

ACT EU priority action on consolidated advice

Contents

EMANS 2028

EU Pharmaceutical Revision –joint review process and update of *European Regulatory Network Strategy (EMANS) to 2028*

What will the pharmaceutical sector reform change?

Single Market	creating a Single Market for medicines
Regulatory framework	reducing the administrative burden for medicines to reach patients faster
Medicines for all	ensuring better access to affordable medicines
Medicine supply	addressing shortages of medicines and ensuring security of supply
Innovation	promoting innovation and competitiveness
Environmentally friendly	making medicines more environmentally sustainable
Saving lives	tackling antimicrobial resistance (AMR)
Transparency	informing better about public funding used to develop medicines

HMA Heads of Medicines Agencies

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Mid-point report

Review of Strategic Focus Areas

Reflection paper

Review and update of EMANS to 2028

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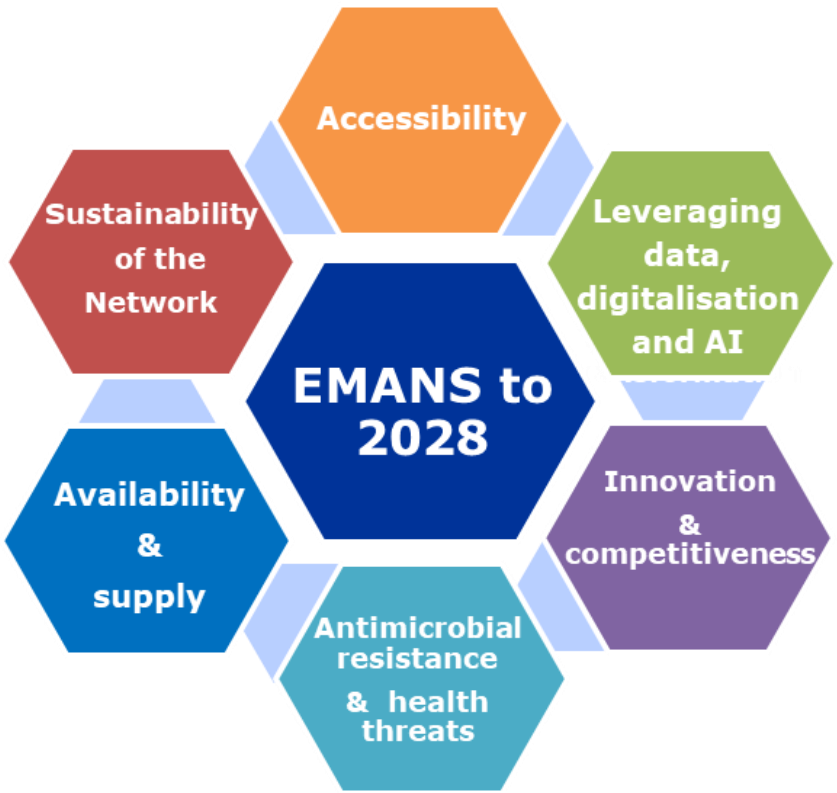
CONCLUSIONS from EMANS workshop

European Medicines Agencies Network Strategy (EMANS) to 2028

Strategic theme areas:

1. Accessibility
2. Leveraging data, digitalisation and AI
3. Innovation & competitiveness
4. Antimicrobial resistance & health threats
5. Availability & supply
6. Sustainability of the Network



Focus topic EMANS 2028 and regulatory network activities:

Availability & supply

- Pharmaceutical legislation revision
- MSSG
- CMA

EU-Activities to improve supply and availability

- BfArM actively involved in EU discussions, measures and activitites
  - In addition to helping to shape future EU pharmaceutical legislation on supply shortages, close cooperation with EMA / in the network (e.g. with HERA)
  - Development of the EMA-Database (ESMP)
  - Active contribution to all relevant EU-Working Groups, especially:
    - SPOC („Single point of contact“)
    - **MSSG** (Medicines Shortages Steering Group)

  - EU 4 Health – Joint Action on Shortages of Medicines
    - BfArM lead in WP 7: Digital Information Exchange for Monitoring and reporting medicine shortages
      - Important for future Interoperability

  - Critical Medicines Alliance (**CMA**):
- Transparent advisory platform, focus on addressing weak points in supply chains

MSSG achievements and latest updates

- Close monitoring and intensive exchange with companies and relevant stakeholders, successfull implementation of preventing measures (e.g. antibiotics)
- Based on lessons learned and best-practice-sharing, recommendations to strengthen supply chains
- Toolkit on recommendations to tackling shortages
- *Voluntary Solidarity Mechanism*
- Current activities:
  GLP1 RAs: multistakeholder workshop 1 July 2024

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

19 April 2024
EMA/44164/2024
Executive Steering Group on Shortages and Safety of Medicinal Products (MSSG)

MSSG recommendations to strengthen supply chains of critical medicinal products

Guidance document to facilitate the identification of regulatory measures to strengthen supply chains of critical medicinal products in the Union list

Step	Date
	22 March 2024
	19 April 2024

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

6 October 2023
EMA/899955/2022
Executive Steering Group on Shortages and Safety of Medicinal Products (MSSG)

MSSG Toolkit on recommendations on tackling shortages of medicinal products

Guidance document for use by the MSSG to facilitate identification of recommendations on critical shortages of medicinal products

Step	Date
Consultation with Medicine Shortages SPOC WP, CMDh, QRD, IWG	31.08.2023
Endorsement by MSSG	6.10.2023

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Critical Medicines Alliance (CMA)

- MSSG as part of the CMA Steering Board
- Key objectives of the CMA:

- Providing inclusive and transparent consultative platform to the EC
- Focusing on critical medicines that face greatest vulnerabilities, on the basis of the ongoing Commission vulnerability analysis (substances listed on the Union list of critical medicines)
- Identifying vulnerabilities in critical medicines supply chains.
- Pooling expertise and resources of members, to determine how vulnerabilities in the supply chains could be best addressed.
- Recommending priority actions and proposing new tools to address the identified challenges.
  In particular, the recommendations focus on mitigating structural risks and reinforcing supply by:
  - encouraging diversification;
  - boosting manufacturing.

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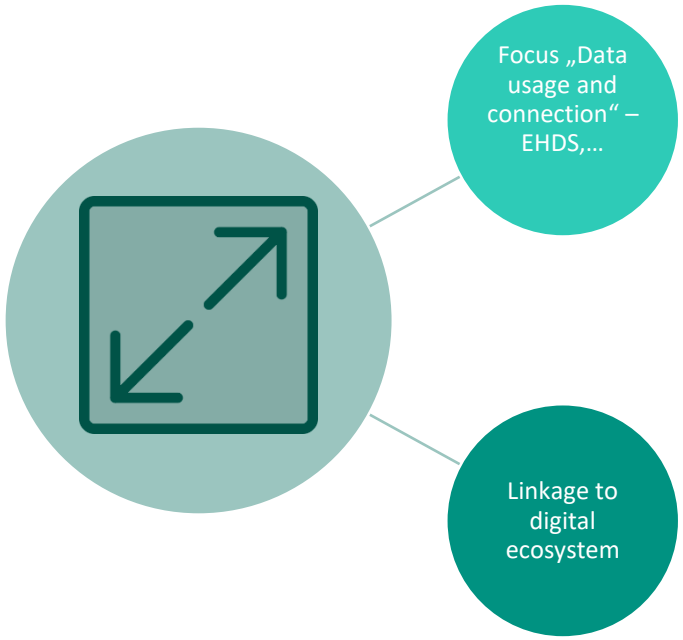
Leveraging Data and AI in a growing eHealth ecosystem:

Update on digitization strategy in Germany

AI projects at BfArM

Connection to the European Health Data Space (EHDS) and other EU (regulatory network) data & AI initiatives

Continuous further development through current digitization- and data usage-strategies (at national and European level)



DiGiG and *GDNG*

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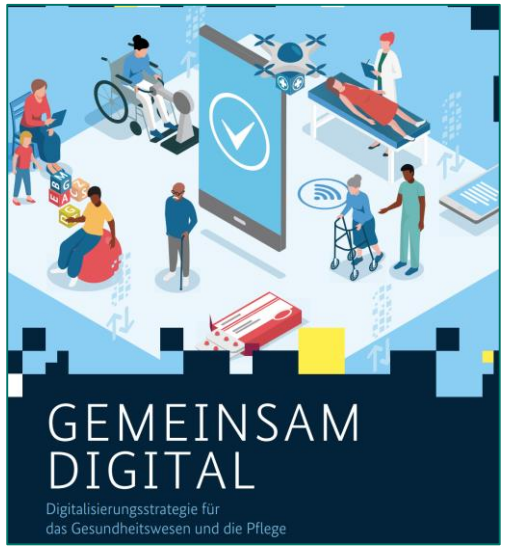

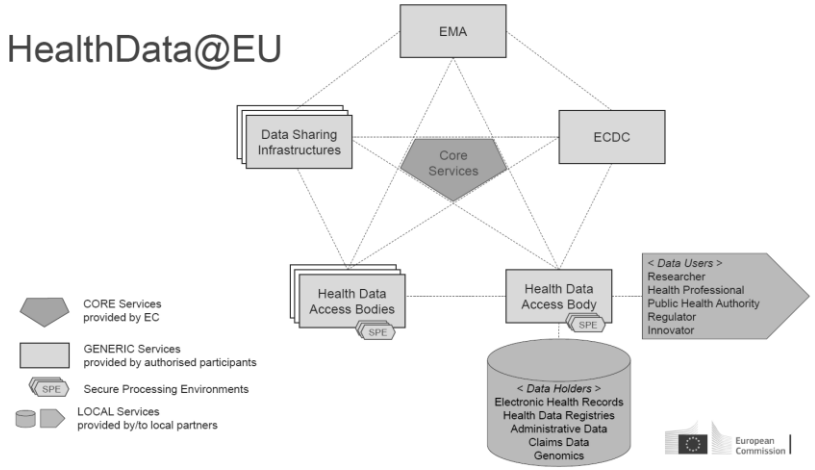

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Proposal for a regulation - The European Health Data Space **(EHDS)**

Primary use	
Patients receive access to and control over electronic health data	Establishment of a cross-border data infrastructure (***MyHealth@EU***)

Secondary use	
Processors use data for research, innovation, regulatory purposes, policy-making and statistical purposes	Establishment of a European data platform (***HealthData@EU***), accessible via data access bodies

Publication date: 3 May 2022

Source: Adapted from Federal Ministry of Health

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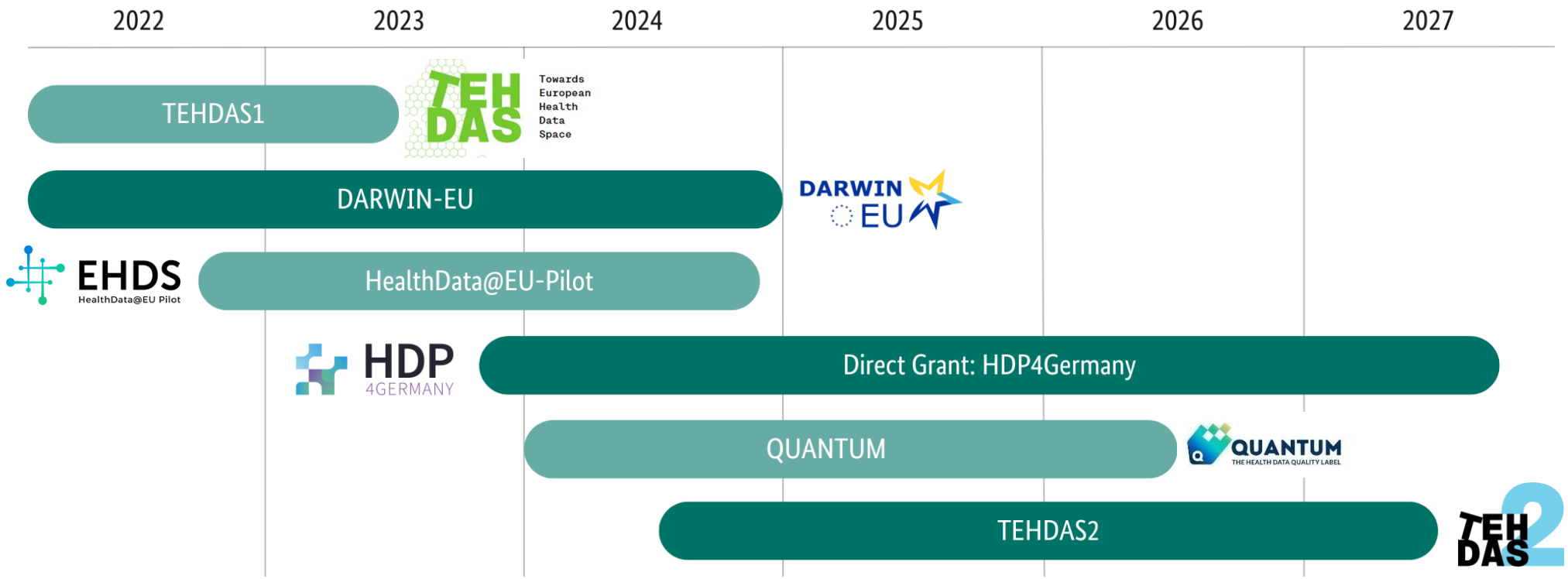
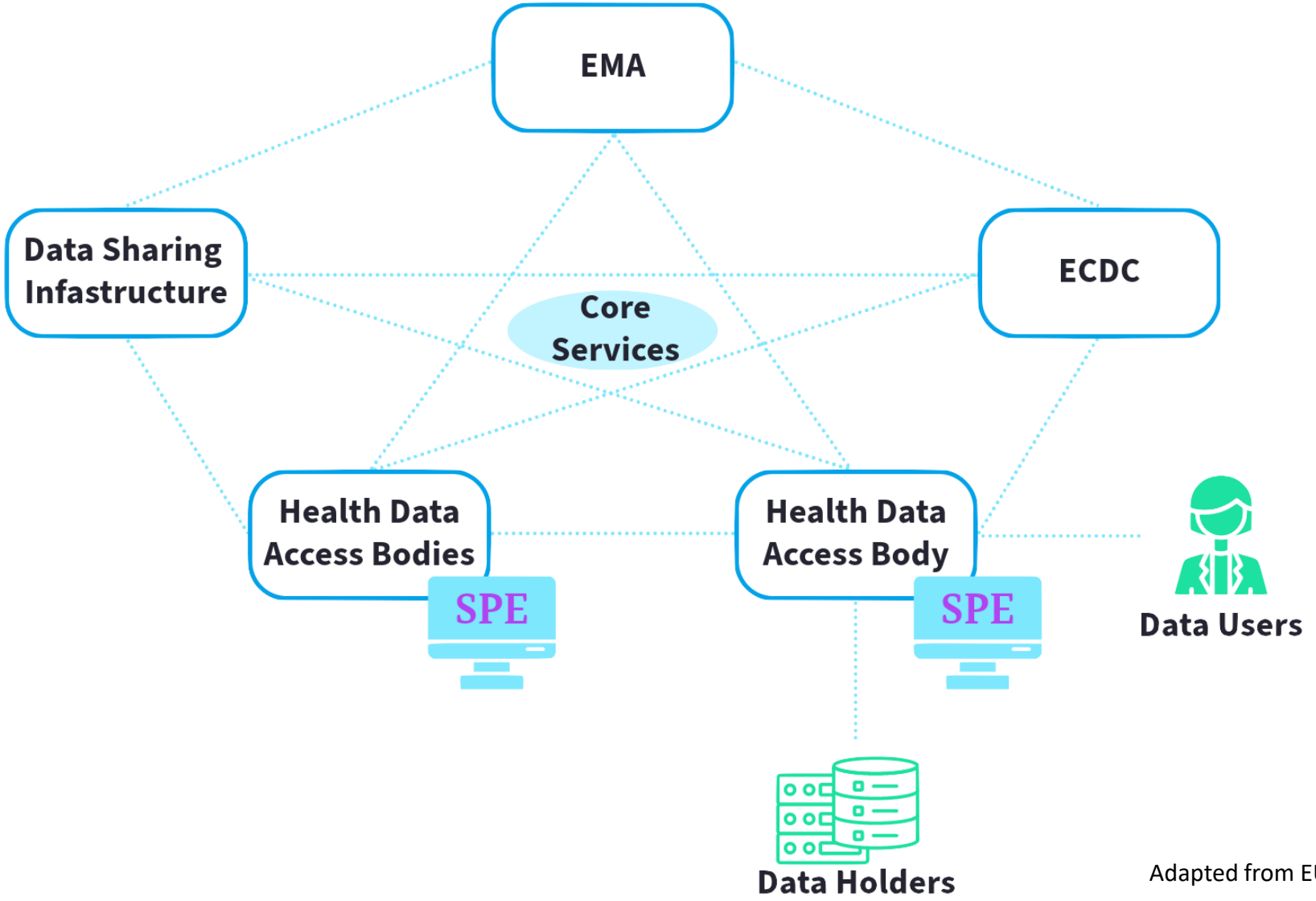
Current and previous EU projects



Focus currently: Health Data Access Bodies



Adapted from EU Commission

AI (projects) for regulatory purposes

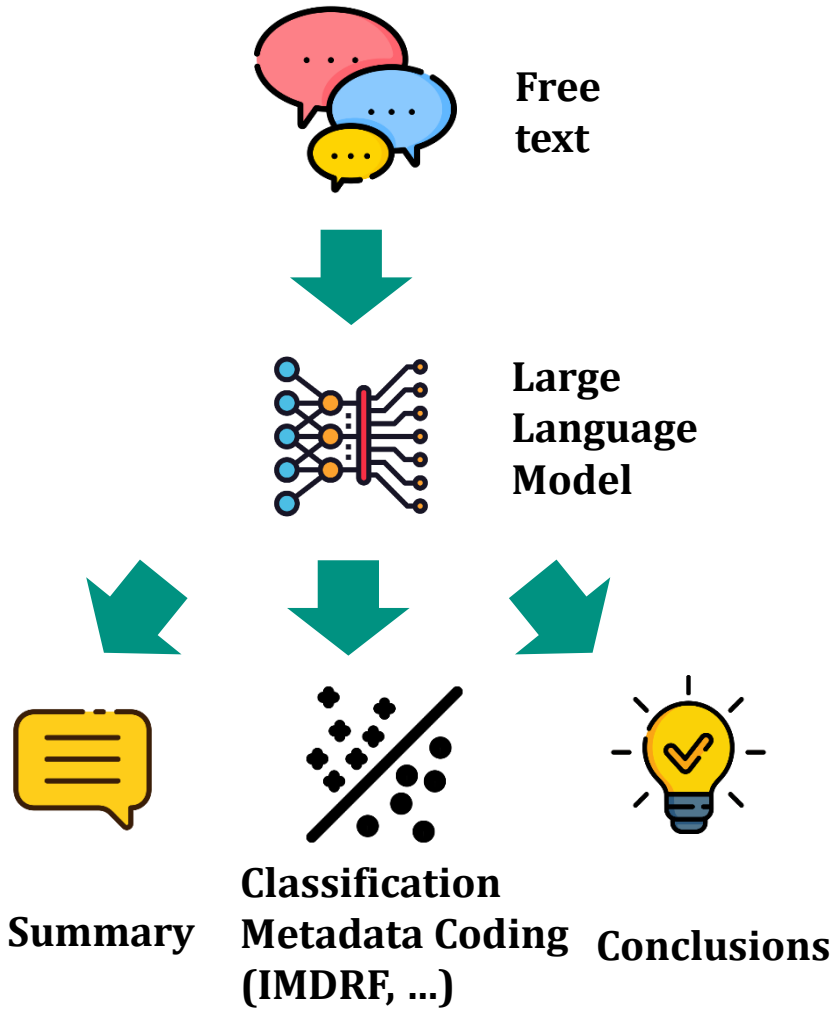
Applications of Artificial Intelligence (AI) at BfArM – in Medical Device Vigilance

- Challenge: Ever increasing numbers of incidence reports need to be processed
  - Currently more than 40,000 reports p. a.
  - Yearly increase of around 15%

- Automation of the underlying processes is required to be able to keep up with this increase.

- Challenge: Relevant information in incident reports is provided as free text, which used to be difficult to process automatically.

- New possibilities due to the advent of powerful large language models



Research and Development Projects: Artificial Intelligence (AI) in Medical Device Vigilance

JAMS 2.0

AI-assisted Certification of Medical Device Software

BfArM investigates how an ontology-based system for the approval of software-based medical technology can support regulatory processes (esp. vigilance) and vice versa.

Secure medical microsystems and communications

BfArM contributes to the development of AI-assisted regulatory processes and cybersecurity.

Reinforced market surveillance of medical devices and in-vitro (diagnostic medical) devices

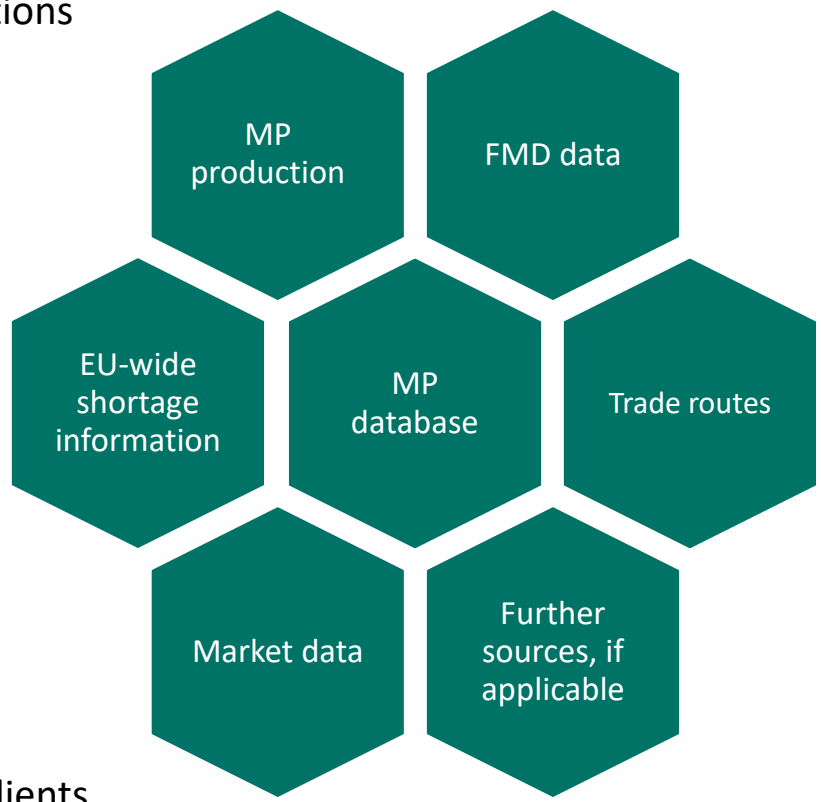
BfArM will contribute to establishing EU-wide best practice for machine learning-based automatic coding and signal detection.

AI project at BfArM to improve the supply situation: "Coordination of the production of important active substances“

- Compilation and generation of information and data through cooperation with organizations and companies in order to
  - better evaluate shortage phenomena,
  - identify risk potentials prospectively
  - find adequate solutions

- Analysis of critical points with regard to
  - supply relevance of the active ingredient
  - risk potentials
    - of the production sites
    - of the trade routes
  - Simulation of failure scenarios

- Coordination point for increasing the security of supply of identified critical active ingredients, starting materials and intermediates



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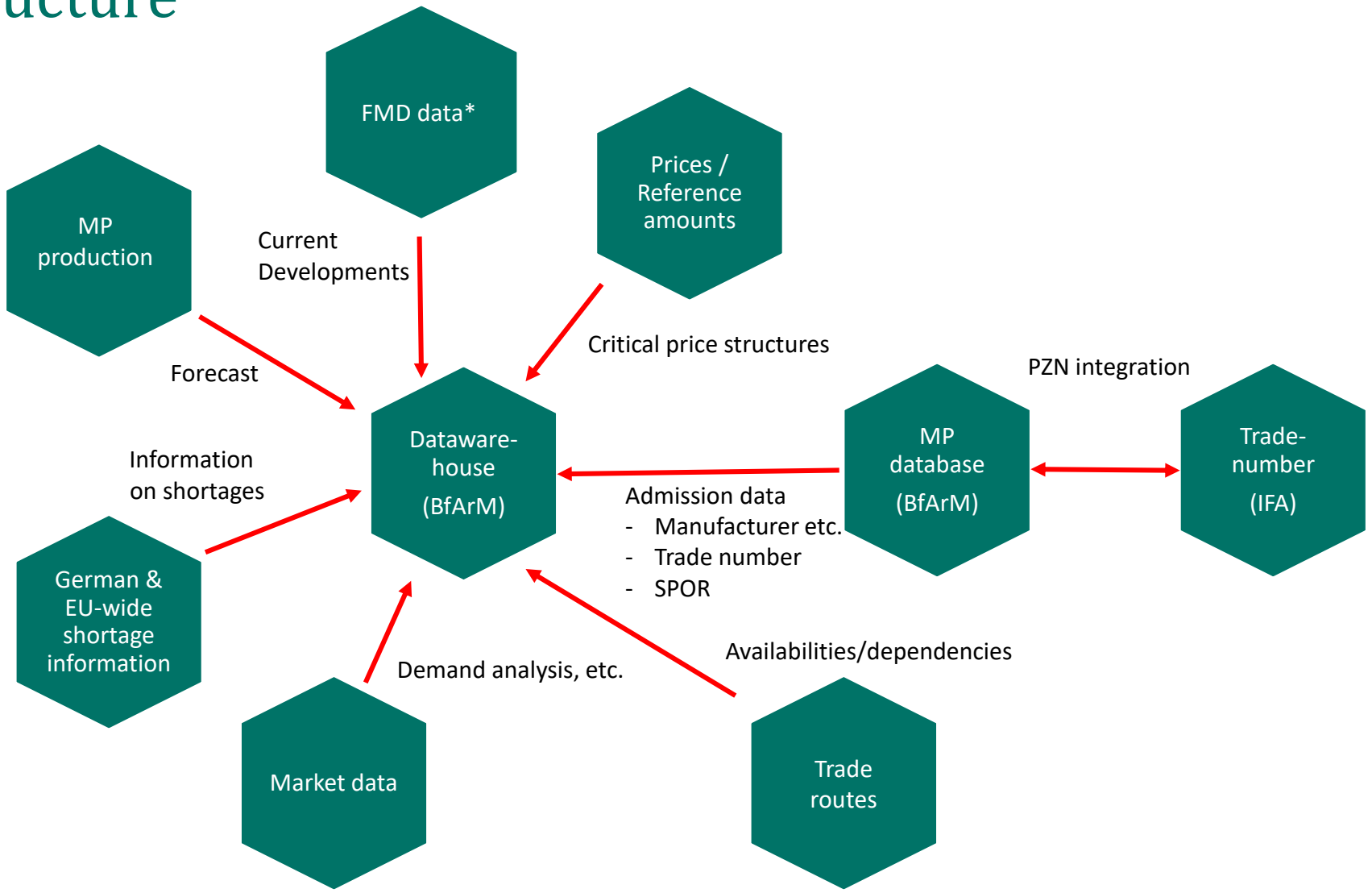
Early warning system for supply-relevant supply shortages
Provisional target structure

- Crosslinking of already existing data
- Targeted request for additional information
- Option of integrating additional data sources, such as EDQM

- Current status:
  - ➢ Cooperation agreements have been signed
  - ➢ Data warehouse in development
  - ➢ Integration of trading numbers has started



*FMD data: only in context with the reimbursement of costs

AI activities for regulatory decision making – EU level

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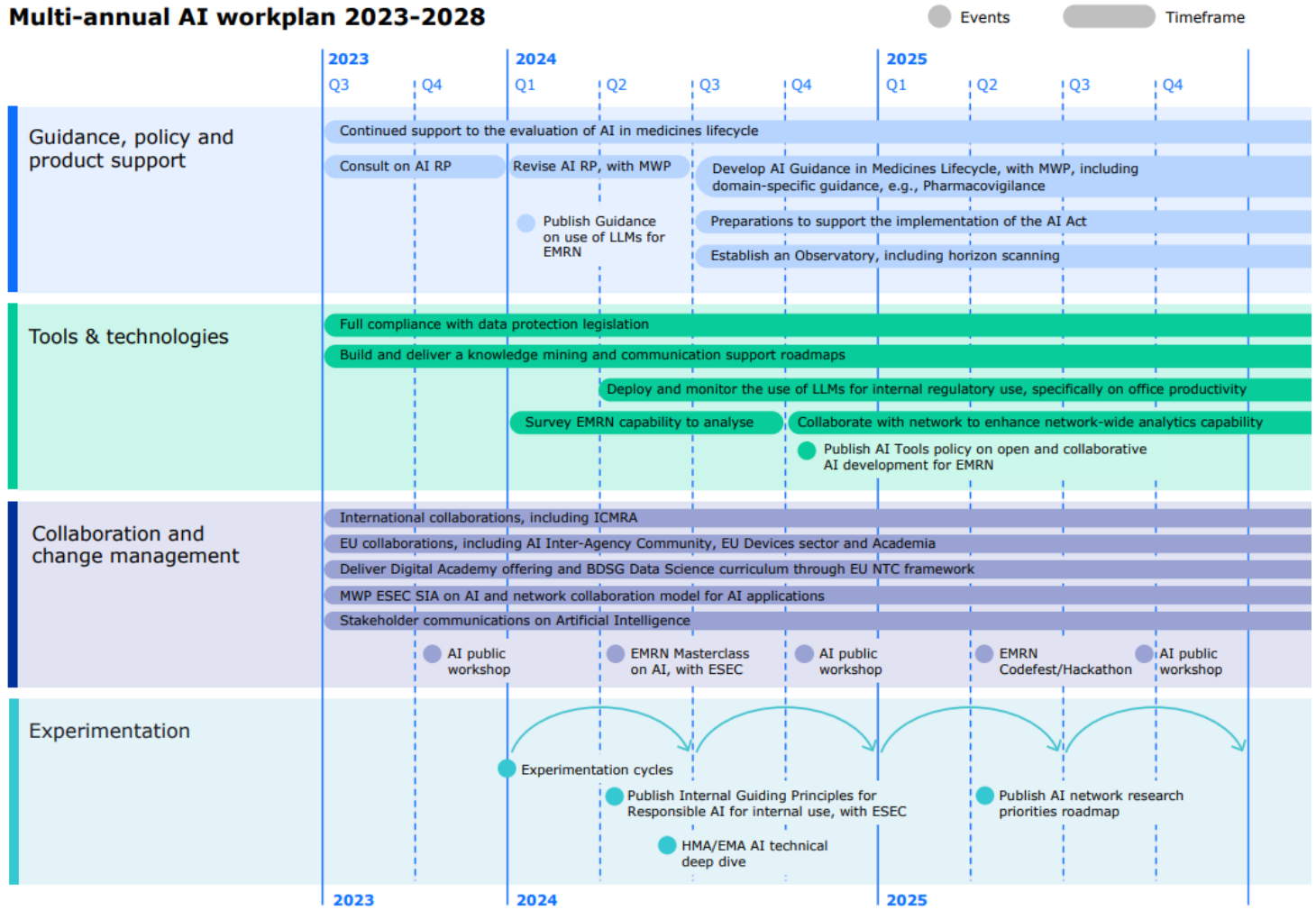
Multi-annual AI workplan 2023-2028

HMA-EMA Big Data Steering Group

VERSION 1 – NOVEMBER 2023

Bigdata@ema.europa.eu



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Our strategic answer to current and upcoming trends and challenges – BfArM, together with EMNRN, as partner and enabler

Monitoring trends and directing proactively

- Horizon scanning
- Targeted stakeholder communication
- Innovation – advice and network for successful clinical trials/ lifecycle-management

Real World Data, Real World Evidence, Digitalisation and AI

- Digital health
- Forecast shortages
- Development Health data lab (FDZ) and Data access bodies
- Integration EHDS
- RWD and AI-usage in regulatory affairs
- Harmonised European approach

Enhancing cooperations in a digital health environment

- HTA
- Interoperability
- New legislations (MFG; e.g. more intensive cooperation BfArM and PEI)
- Bringing together expertise on combinations of medicinal products and medical devices

Thank you very much for your attention!

SCIENCE. NETWORK. HEALTHCARE.
Enabling the Future of Medicine

#BfArM: Partner in Germany and Europe

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