

EPTRI General Assembly and Scientific Meeting Warsaw, 28-29 July, 2026

EPTRI Integrated Approach to Support Paediatric Research

Karel Allegaert, KU Leuven

EPTRI President

EPTRI Scientific Meeting | 28-29 July 2026 | Warsaw, Poland

A European Research Infrastructure for Paediatric Research

EPTRI is a pan-European Research Infrastructure bringing together hundreds of units to boost the paediatric research ecosystem.

EPTRI is a non-profit research organisation incorporated in the form of an *Association Internationale Sans But Lucrative* (AISBL) governed by Belgian law, based at Leuven University.

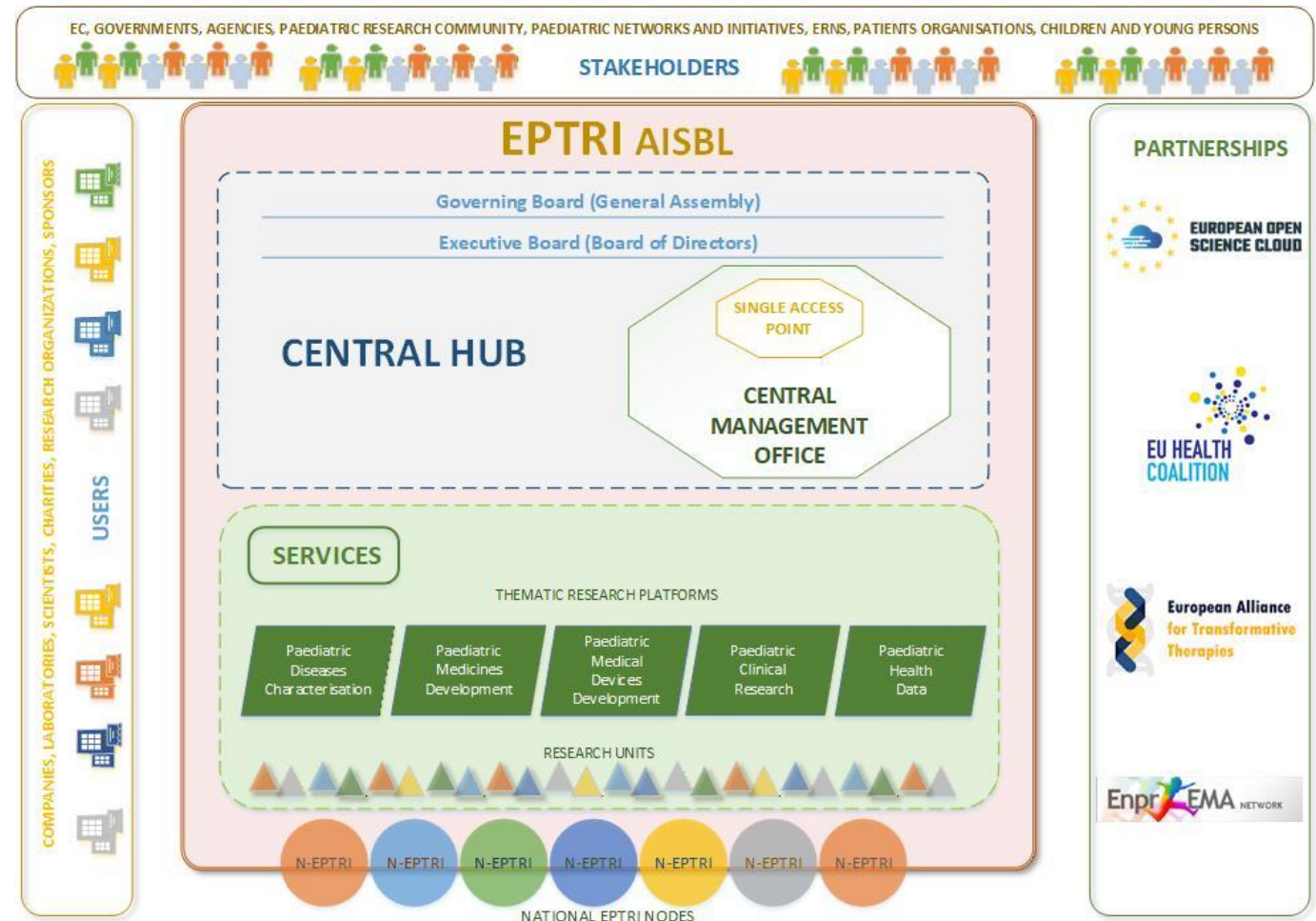
EPTRI consists of 27 members representing 15 EU and non-EU countries, bringing together a diverse range of expertise and institutions dedicated to paediatric research and innovation.



Governance and Organisational Structure

EPTRI is organised as a distributed **Research Infrastructure (RI)** according to a **Hub and Spoke model**, with a Central Management Office (CMO), interconnected with the distributed research units, grouped within **Thematic Research Platforms – TRPs** (according to the field of expertise) and **National Nodes – NNs** (according to their location).

The EPTRI governance is organised through its statutes and internal procedures, and its management involves different bodies including **General Assembly and Board of Directors** with precise roles and responsibilities.



The Journey Behind Its Creation



The **European Paediatric Translational Research Infrastructure (EPTRI)** started as a project coordinated by Consorzio per Valutazioni Biologiche e Farmacologiche (CVBF) and **funded under the H2020-INFRADEV-01-2017 programme**.



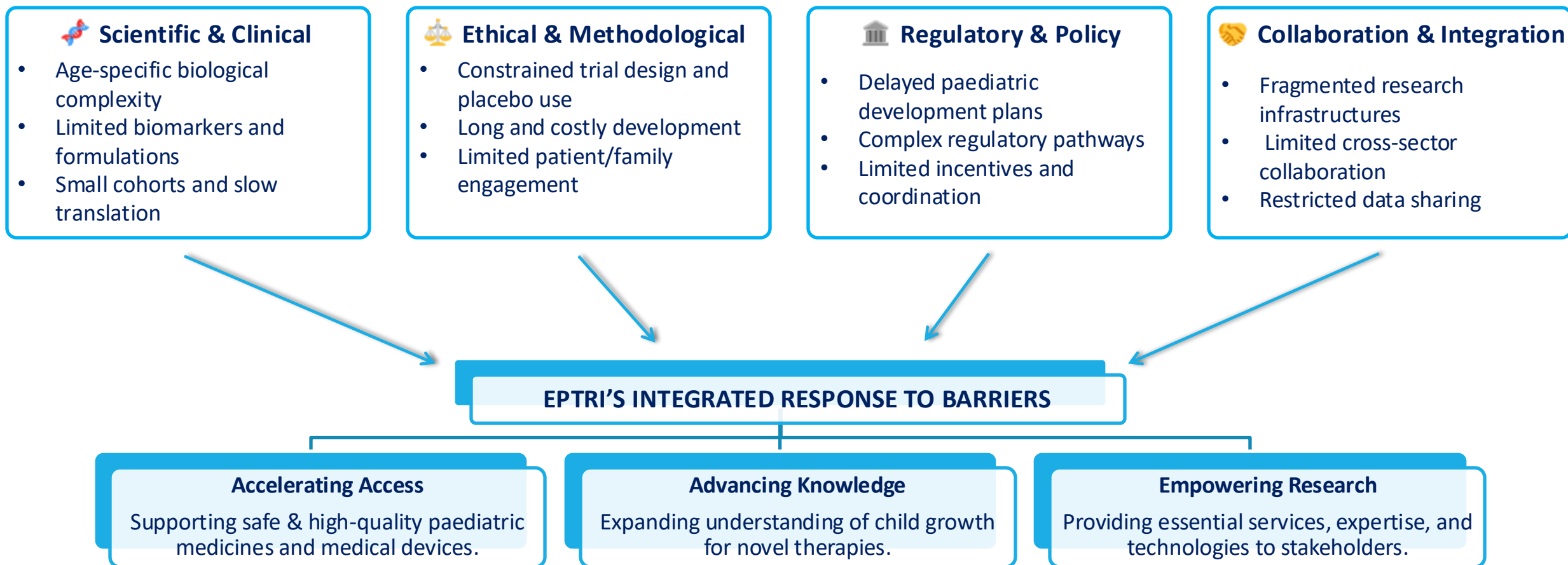
It was established to **tackle the ongoing shortage of medicines for children in the EU and worldwide**, aiming to develop models for a future paediatric research infrastructure integrating technology-driven approaches with clinical trials to accelerate the development of safe and effective treatments.

It aimed to **design the framework for the new research infrastructure (RI)** by producing a Conceptual Design Report (CDR) for EPTRI, outlining the scientific and technical requirements as well as the key components of the proposed RI.

The project involves **29 Partners from 21 EU/non EU countries and 114 research institutions as signatories of the MoU**

Translating Paediatric Research into Real-World Impact: the Value of EPTRI

EPTRI's mission is to overcome **systemic barriers in paediatric research** by supporting child-focused scientific innovation and helping shape a new EU policy framework that **advances research and paediatric product development**.



Integrated Approach to Support Paediatric Research

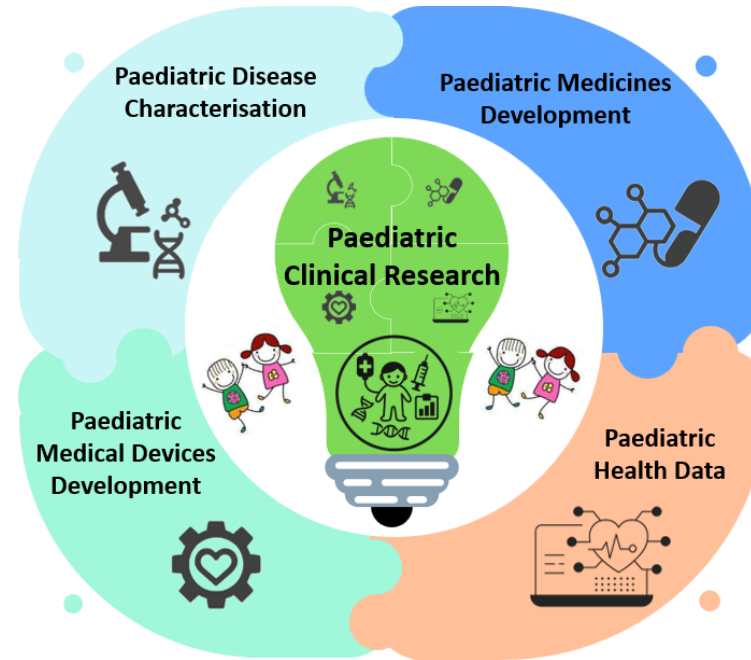


Paediatric Disease Characterisation & Medicine Development

- Age-specific disease mechanisms, biomarkers and therapeutic targets
- Drug discovery, optimisation and developmental pharmacology
- Age-appropriate formulations and preclinical evaluation using *in vitro*, *in vivo* and *in silico* approaches

Paediatric Medical Device Development

- Child-specific device design and prototyping
- Usability, safety and performance assessment
- Regulatory guidance and technology transfer



Paediatric Clinical Research

- Study design and innovative methodologies
- Regulatory, ethics and patient engagement
- Trial implementation and clinical operations

Paediatric Health Data

- FAIR and GDPR-compliant data management
- Interoperability and data integration
- Advanced analytics and AI

EPTRI connects paediatric-specific expertise, technologies and services across the full research pathway, enabling coordinated support from discovery to clinical application.

EPTRI Coordinates the OrphaDev4Kids Project



With the support of:

This Project has received funding from the European Union's Horizon Europe Framework Programme under grant agreement No 101161377

Wearable multiplexed biosensor for cyanotic congenital heart disease

Support the development of a wearable multiplexed biosensor for the prevention of lactic acidosis in children with unrepaired congenital heart defects

Medical device for non-invasive cardiac assessment in patients with Tetralogy of Fallot

Support the development of a non-invasive medical device (Videocardiograph – VCG) for the assessment of the mechanical function of the heart in real time during open-chest surgery

Medical device for Bone Fragility

Support the development of an absorbable biocompatible implant with a paediatric indication for the treatment of bone fractures in children

Dissemination and Exploitation Activities to Maximise Research Impact



EPTRI Special Issue

EPTRI has launched the research topic collection “Paediatric and Orphan Medical Devices: From Concept to Care—Transforming Innovation for Children’s Health”



EPTRI Special Issue

EPTRI has launched the research topic collection “Supporting the Pediatric Drug Development: From Basic Research to Clinical Studies and Technological Advancements”



Paediatric Research Needs Survey



EPTRI Toolkit

On Basic and Translational Paediatric Research for Patients and Families



Expanding the Horizons of Paediatric Research: Partners and Collaborations



European Research Infrastructure
for Modelling Human Diseases

INFRAFRONTIER-ERIC, through its Czech node (IMG-CCP), provides access to juvenile animal models and standardised non-clinical services.



Leading research infrastructure
in structural biology

Instruct-ERIC contributes advanced structural biology and translational research capabilities. By offering high-throughput structural biology techniques, alongside biophysical analyses, Instruct enables detailed mechanistic studies, biomarker discovery, and validation of molecular targets.



Italian Infrastructure for
Bioinformatics (IIB)

ELIXIR, via the University of Bologna (**UNIBO**), offers secure, interoperable, and FAIR-aligned bioinformatics platforms for multi-omics and real-world paediatric health data.

Through strategic collaborations with leading European research infrastructures, we expand our service offering by integrating complementary expertise in **preclinical disease modelling, structural biology, bioinformatics, interoperable health data, real-world evidence, and translational research.**

EPTRI's Positioning Within the European Research Landscape

European Network of Paediatric Research at the European Medicines Agency



Member of Enpr-EMA (under Category 3), collaborating with networks specialised in **clinical trial methodology** and **paediatric drug development** to ensure **high-quality trials**.

European Open Science Cloud Association



Member of the EOSC Association, actively working to enhance collaboration, **improve data sharing**, and **leverage open science resources** to advance paediatric research.

EU Health Coalition



Partner of the EU Health Coalition, contributing to strategic actions aimed at integrating paediatric research into **European health policies and initiatives**.

European Alliance for Transformative Therapies (TRANSFORM)



Member of TRANSFORM, actively supporting its advocacy and lobbying efforts to improve the **regulatory environment** for transformative therapies.

Collaborative Efforts Across the European Research Landscape



Modernises and strengthens the design and conduct of clinical trials.



Pan-European network for paediatric clinical trials



Optimises trial designs for rare and ultra-rare conditions using innovative methodologies



Advances regulatory science for complex diseases



Supports paediatric and orphan medicine development through modelling and simulation.



European **Rare Diseases** Research Alliance

European partnership coordinating rare disease research and innovation.



European Reference Networks

Connects centres of expertise for rare and complex diseases across European borders.



EU project enabling interoperable health-data exchange

Across Europe, initiatives address different but complementary areas. By connecting and coordinating these efforts, we can foster synergies, build on existing strengths and help advance paediatric research together.

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THANK YOU FOR THE ATTENTION!

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