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2nd Meeting

SmartBlue ZIM-Network
14.12.2022, online
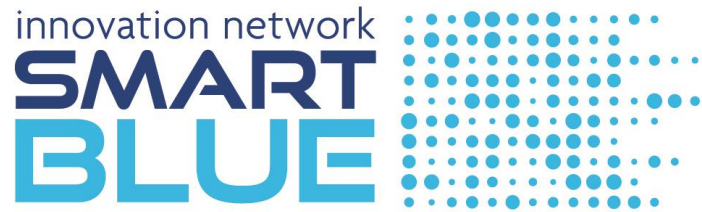
Agenda

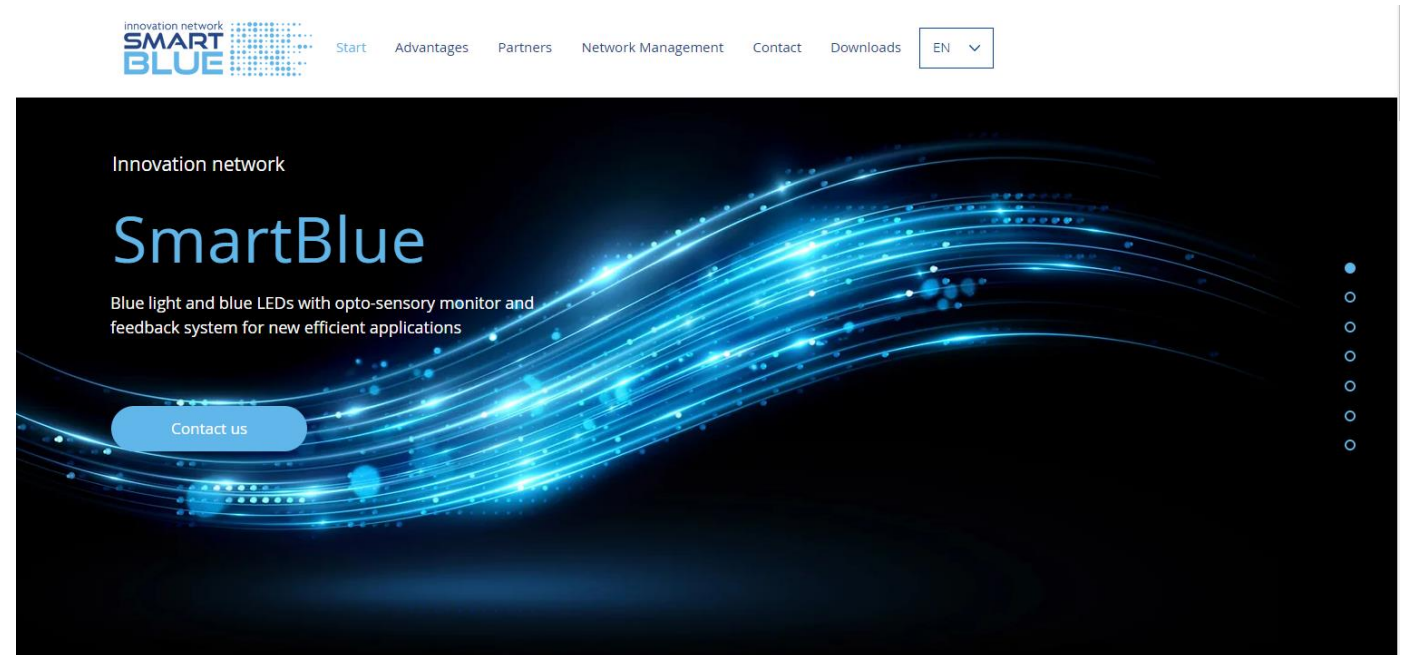| Time	Agenda Point	Referee
13:00 – 13:05	Welcome	EurA AG
13:05 – 13:20	SmartBlue Network – Status & News	EurA AG
13:20 – 13:50	Presentation of Network Partners and Project Ideas III	Network Partners
13:50 – 14:20	Funding Landscape	EurA AG
14:20 – 14:30	Coffee break	
14:30 – 15:30	Talk & Discussion: Standardization	Alexandra Horn, DIN
15:30 – 16:15	Work with Miro board	All
16:15 – 16:45	Discussion of topics in groups	All
16:45 – 17:00	Summary / next steps / closing	EurA AG

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SmartBlue Network –
Status & News

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Marketing activities

Logo

Website

[SmartBlue | Blaue LEDs (smartblue-network.com)](smartblue-network.com)

→ Shared documents in password-protected area instead of sharepoint?

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Internal interactive platform − Miro Board

https://miro.com/app/board/uXjVPcCUICE=/?share_link_id=581235379255
Password: DnNWgi05L!

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Network Management Germany

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ViProNet: „Virus Protection Network"

ViProNet
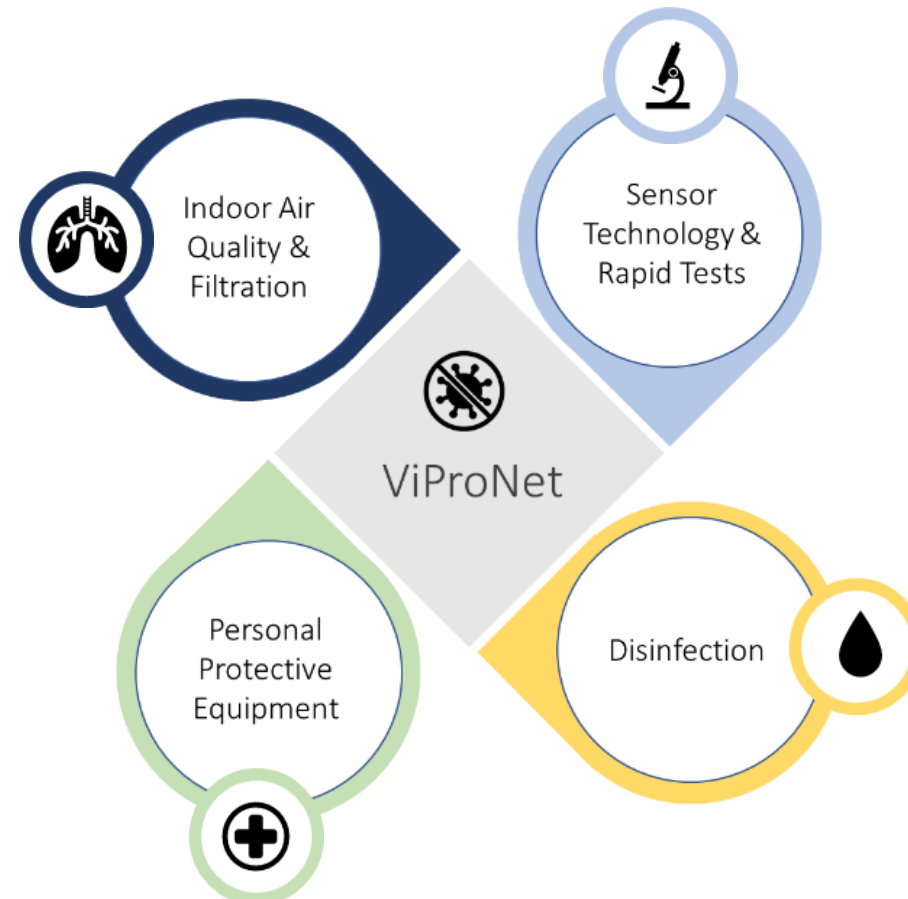Innovationsnetzwerk

TAMLINK

International Network with Finland

Innovative filter systems and developments for monitoring and improving indoor air quality

- Indoor air purification
- Virucidal/ antimicrobial coatings
- Room air filters with integrated sensors

Diagnostics, rapid tests and sensor technology

- Antigen/antibody tests
- Extension to other infections
- Contact tracing
- Room air sensing

Indoor Air Quality & Filtration

Sensor Technology & Rapid Tests

ViProNet

Personal Protective Equipment

Disinfection

Personal protective equipment, innovative textiles and coatings

- New materials
- increased wearing comfort, integrated sensors (pathogen, moisture, contamination)

Disinfection solutions for surfaces, air and the skin

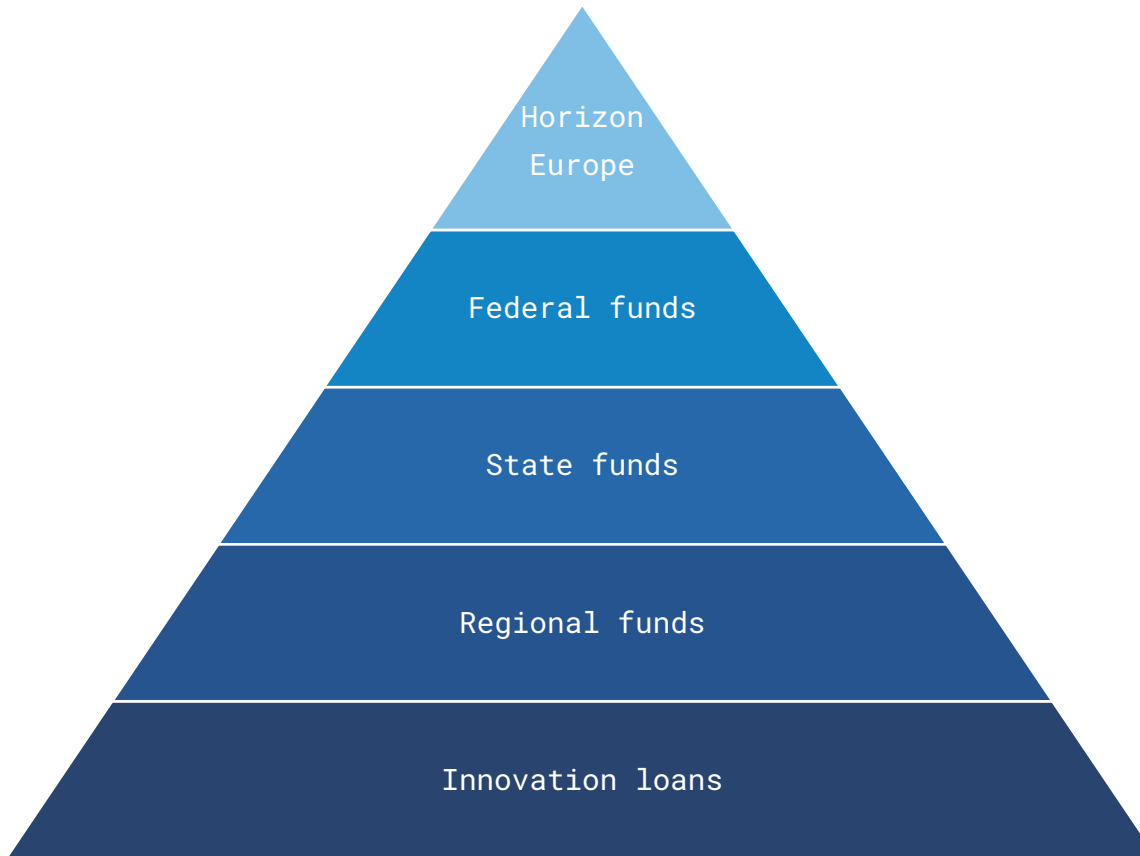- Effects of UV-C disinfection
- Automation for occupational safety

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Introduction of Network Partners and Project Ideas III

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Funding landscape

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Funding landscape

International funding programs

EIC Pathfinder
European Commission

EIC Accelerator
European Commission

Eurostars
European Commission

National funding programs

Zentrales Innovationsprogramm Mittelstand (ZIM)
Bundesministerium für Wirtschaft und Energie (BMWi)

KMU Innovativ
Bundesministerium für Bildung u. Forschung (BMBF)

Steuerliche Forschungszulage

Innovation vouchers

Go Inno
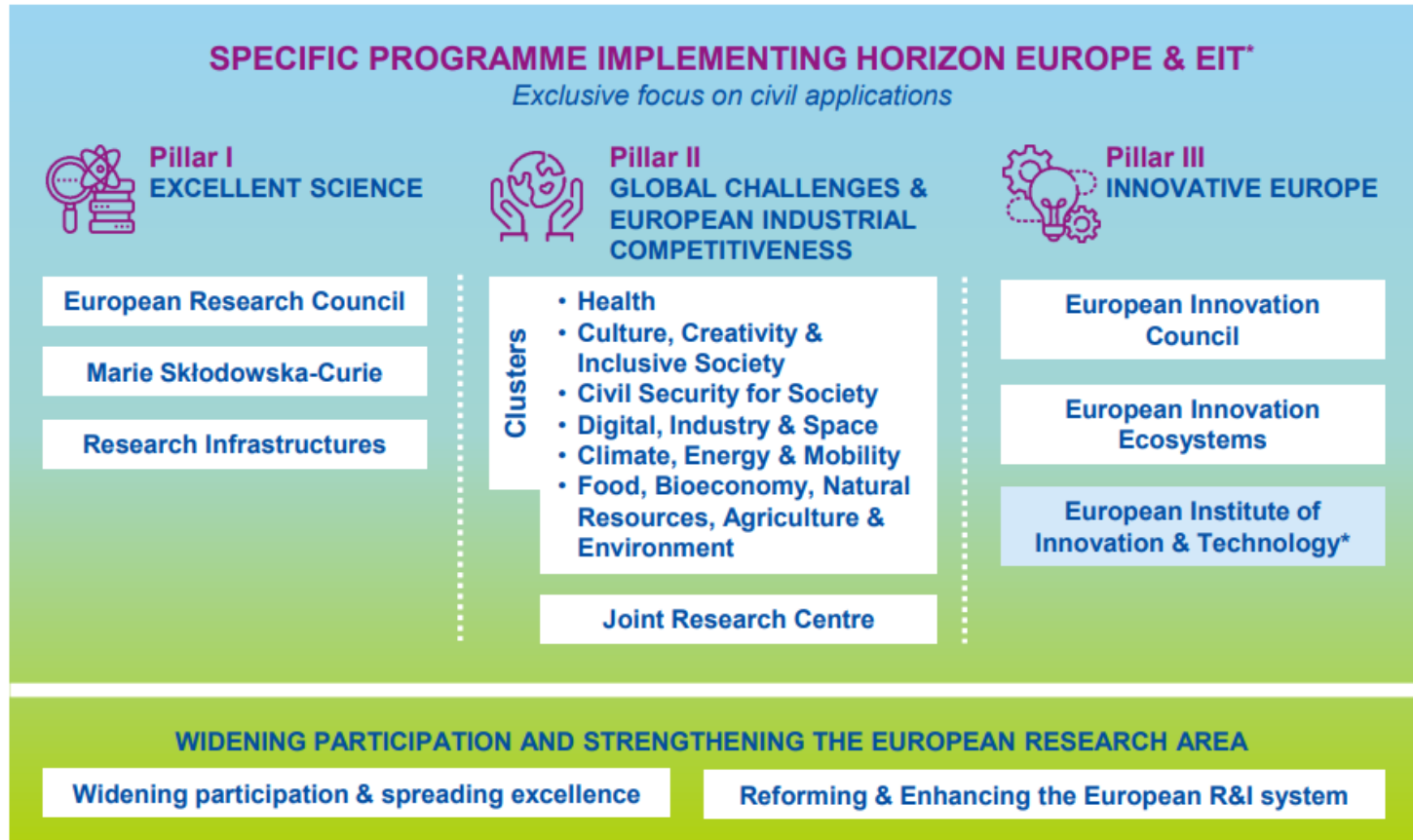Bundesministerium für Wirtschaft und Energie (BMWi)

Go Digital
Bundesministerium für Wirtschaft und Energie (BMWi)

Horizon Europe

Federal funds

State funds

Regional funds

Innovation loans

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EU funding programs

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Horizon Europe 2021-2027

EU's key framework programme for research and innovation with **~95.5 billion €** budget

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*
Exclusive focus on civil applications

Pillar I
EXCELLENT SCIENCE

- European Research Council
- Marie Skłodowska-Curie
- Research Infrastructures

Pillar II
GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters
- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre

Pillar III
INNOVATIVE EUROPE

- European Innovation Council
- European Innovation Ecosystems
- European Institute of Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

- Widening participation & spreading excellence
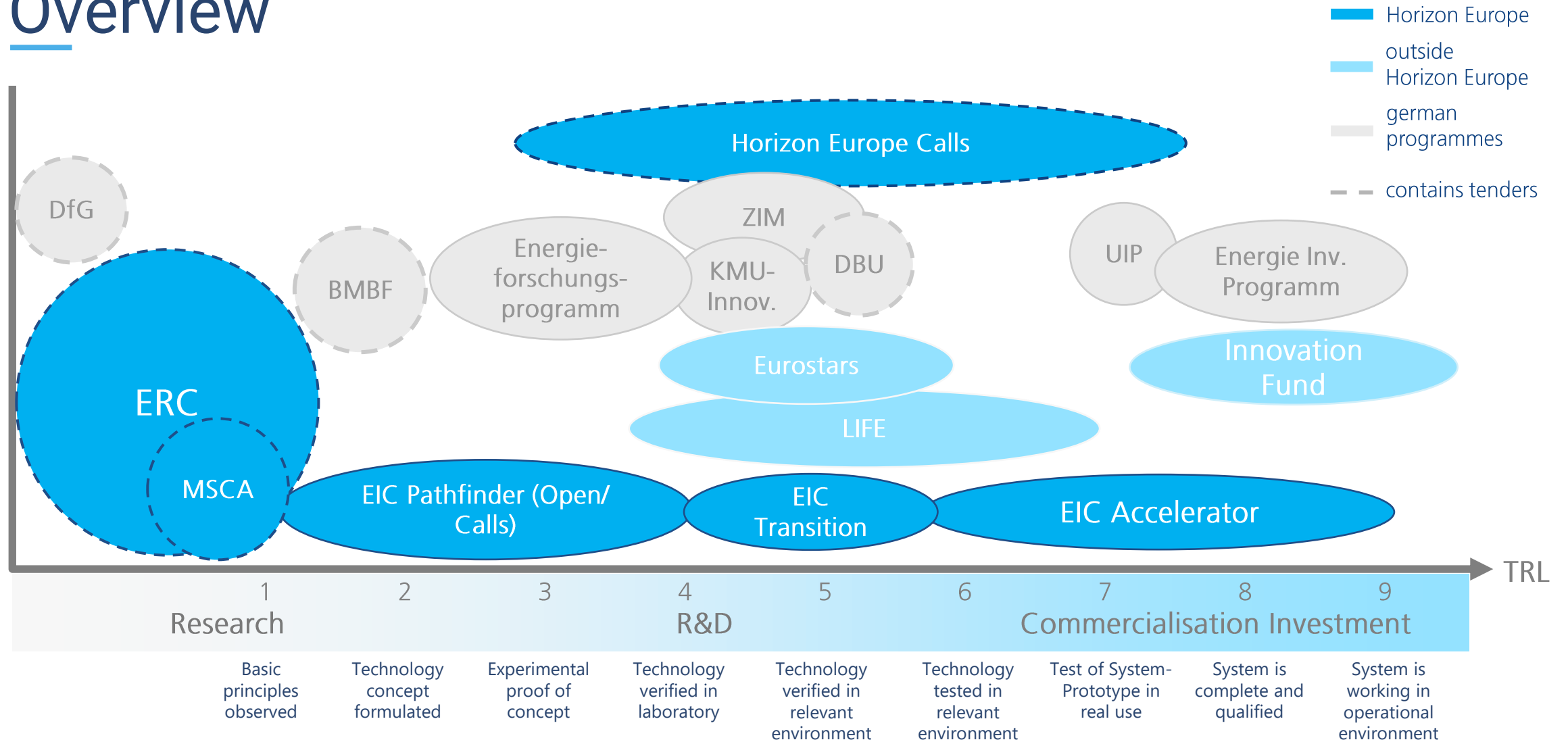- Reforming & Enhancing the European R&I system

Pillar I:
reinforcing and extending the excellence of the EU's science base

Pillar II:
boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals

Pillar III:
Stimulating market-creating breakthroughs and ecosystems conducive to innovation

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Overview

Legend:
- Horizon Europe
- outside Horizon Europe
- german programmes
- — — contains tenders

Bubbles:
- DfG
- BMBF
- Energie-forschungs-programm
- ZIM
- KMU-Innov.
- DBU
- Horizon Europe Calls
- UIP
- Energie Inv. Programm
- ERC
- MSCA
- Eurostars
- LIFE
- Innovation Fund
- EIC Pathfinder (Open/Calls)
- EIC Transition
- EIC Accelerator

TRL axis:

TRL								
1	2	3	4	5	6	7	8	9
Research			R&D			Commercialisation Investment		
Basic principles observed	Technology concept formulated	Experimental proof of concept	Technology verified in laboratory	Technology verified in relevant environment	Technology tested in relevant environment	Test of System-Prototype in real use	System is complete and qualified	System is working in operational environment

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Horizon Europe Calls – 6 Clusters

Health

Culture, Creativity and inclusive Society

Civil Security for Society

Digital, Industry and Space
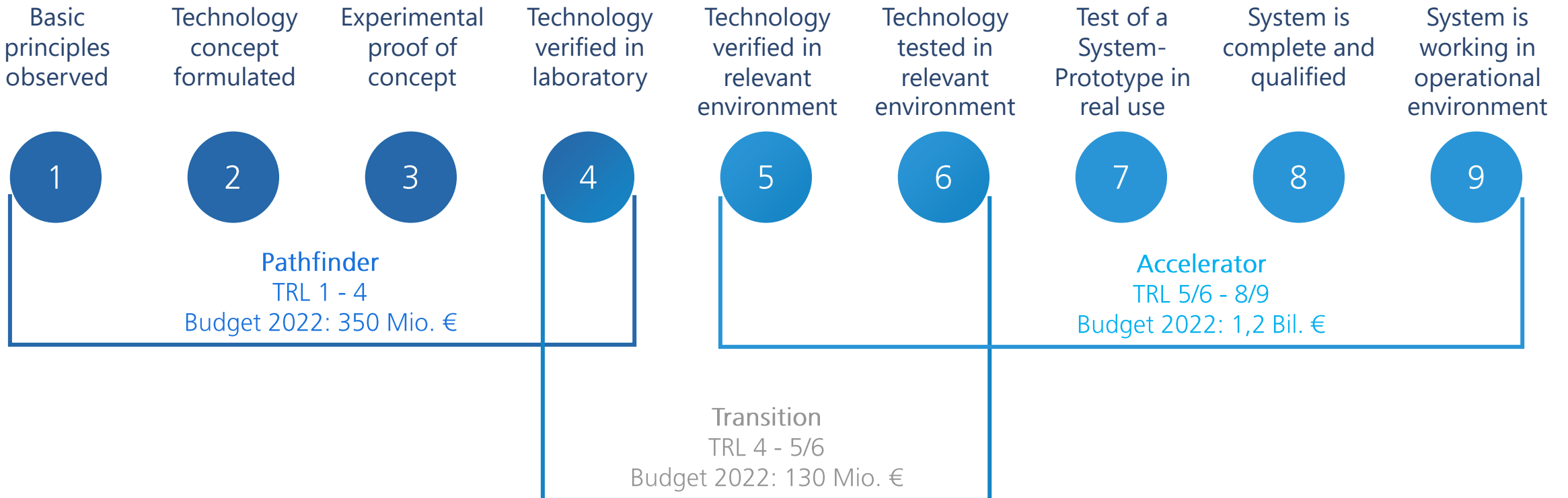
Climate, Energy and Mobility

Food, Bioeconomy, natural resources, agriculture and environment

- Budget: **53.5 billion €**
- **Cooperation projects**
- **At least 3 partners** from **at least 3 EU countries** (usually more)
- Deadline dependent on call
- Focus: more on **Research and Development**, less on scaling and market launch
- Depending on call **one-stage** (full proposal) **or two-stage** (concept note and full proposal)
- **Funding: 30%-100%** for enterprises, 100% for research institutes
- Scope: 10 pages for concept note, 45 - 100 pages for full proposal

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European Innovation Council

- Budget: 10.1 billion €
- Eligible: 27 member states + 17 associated countries

Basic principles observed	Technology concept formulated	Experimental proof of concept	Technology verified in laboratory	Technology verified in relevant environment	Technology tested in relevant environment	Test of a System-Prototype in real use	System is complete and qualified	System is working in operational environment
1	2	3	4	5	6	7	8	9

Pathfinder
TRL 1 - 4
Budget 2022: 350 Mio. €

Transition
TRL 4 - 5/6
Budget 2022: 130 Mio. €

Accelerator
TRL 5/6 - 8/9
Budget 2022: 1,2 Bil. €

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EIC Pathfinder

Advanced research on breakthrough
or game-changing technologies

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What is the program about?

Towards powerful new technologies

Exploration of bold ideas for **radically new technologies**

cutting-edge science collaborations underpinning **technological breakthroughs**

High risk, high gain, interdisciplinary

low TRL: **TRL 1 → TRL 3**

goal: proof of concept

Conditions & Topics

Conditions

- Consortia or individual applicants (challenges)
- **Consortia:** at least **3 Partners** from at least 3 **eligible countries**
- Universities, Research institutes, SMEs, Industry

- Up to 3-4 Mio. €, 100% funding
- Project duration: 3 years (open), max. 4 years (challenges)
- One-stage application
- 17 pages (open) or 25 pages (challenges)

OPEN and CHALLENGES (2023)

Topic-open Next deadline: **07.03.23**	Clean and efficient cooling
	Architecture, Engineering and Construction digitalisation for a novel triad of design, fabrication and materials
	Precision nutrition
	Responsible electronics
	In-space solar energy harvesting for innovative space applications

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EIC Transition

From Proof of Concept to Pre-Commercial

What is the motivation of EIC Transition?

"

From laboratory to industrial demonstrator
Foundation for breakthrough innovations and business models

Building on **successful EIC Pathfinder, FET or ERC-Projects**

Concretization of the application

Next step of the technology maturity **(TRL 4 → TRL 5/6)**

Further technical development steps

Building a business model

Project goal is a **Demonstrator** that has been successfully tested in an industrial environment

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Who can apply?

Small consortia or individual applicants

Consortia
- At least **2 Partners** from at least **2 eligible countries**
- With **3+ Partners**, at least **3 countries** necessary
- Max. **5 Partners**
- Universities, Research institutes, SMEs, Industry

Individual applicants
- Universities, Research institutes, SMEs
- Large enterprises <u>not</u> allowed

OPEN and CHALLENGES

Topic-open

Full scale Micro-Nano-Bio devices for medical and medical research applications

Environmental intelligence

RNA-based therapies and diagnostica for complex or rare genetic diseases

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Conditions

2,5 Mio. €	100 %	12. April, 27. September
Project volume	Funding rate	Deadlines

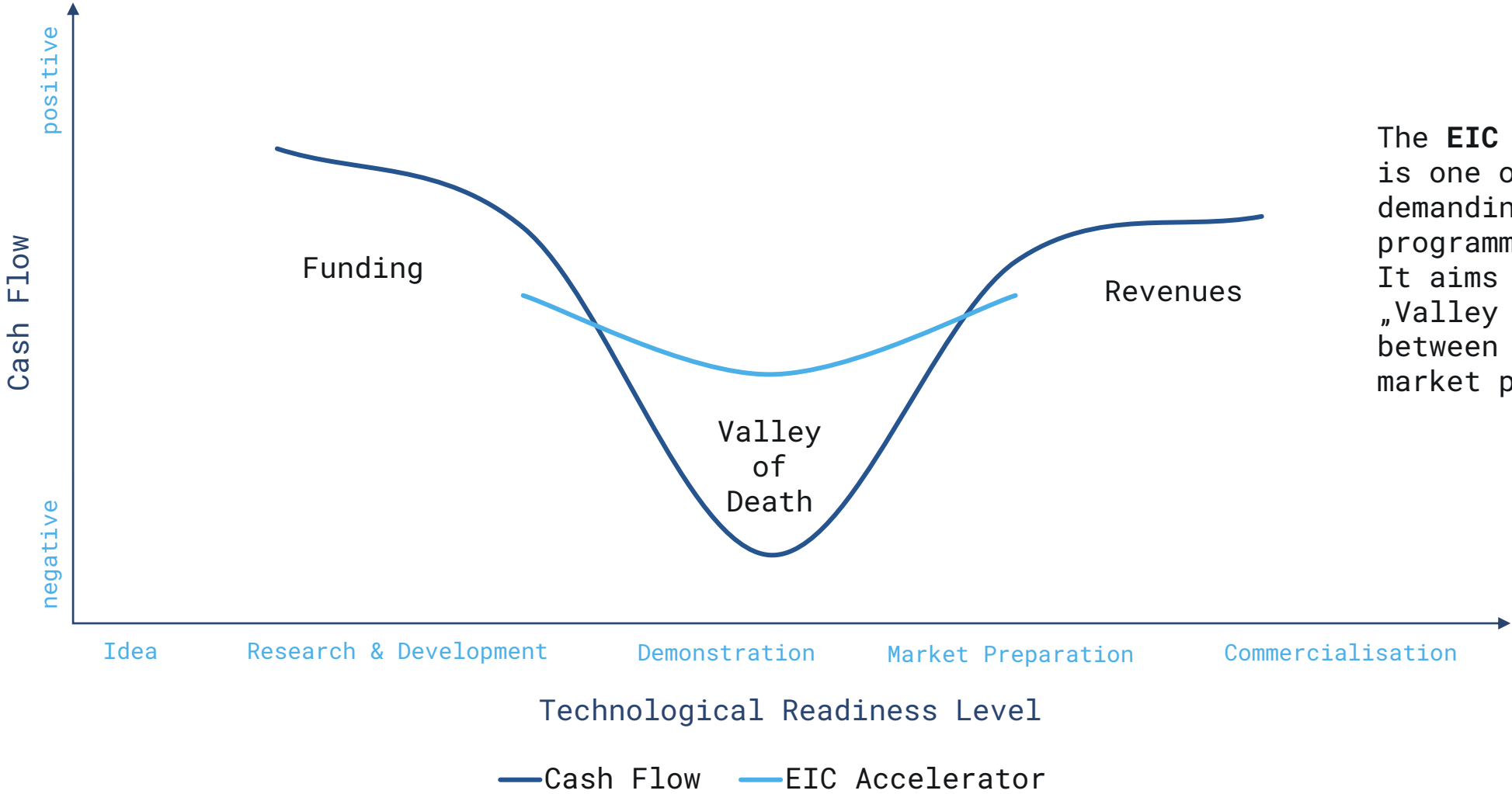| Max. 3 years	Two-stage (Interview)	20 pages
Project duration	Process	Proposal

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EIC Accelerator
The funding program to develop and scale up game changing innovations

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Where does the EIC Accelerator kick in?

The **EIC Accelerator** is one of the most demanding funding programmes in the EU. It aims to bridge the „Valley of Death" between R&D and market preparation.

Who can apply?

Start-ups and small companies (max. 500 employees)

… with **disruptive innovations** and **clear growth ambitions**. Companies with innovative ideas that trigger radical changes and can **change the market sustainably**.
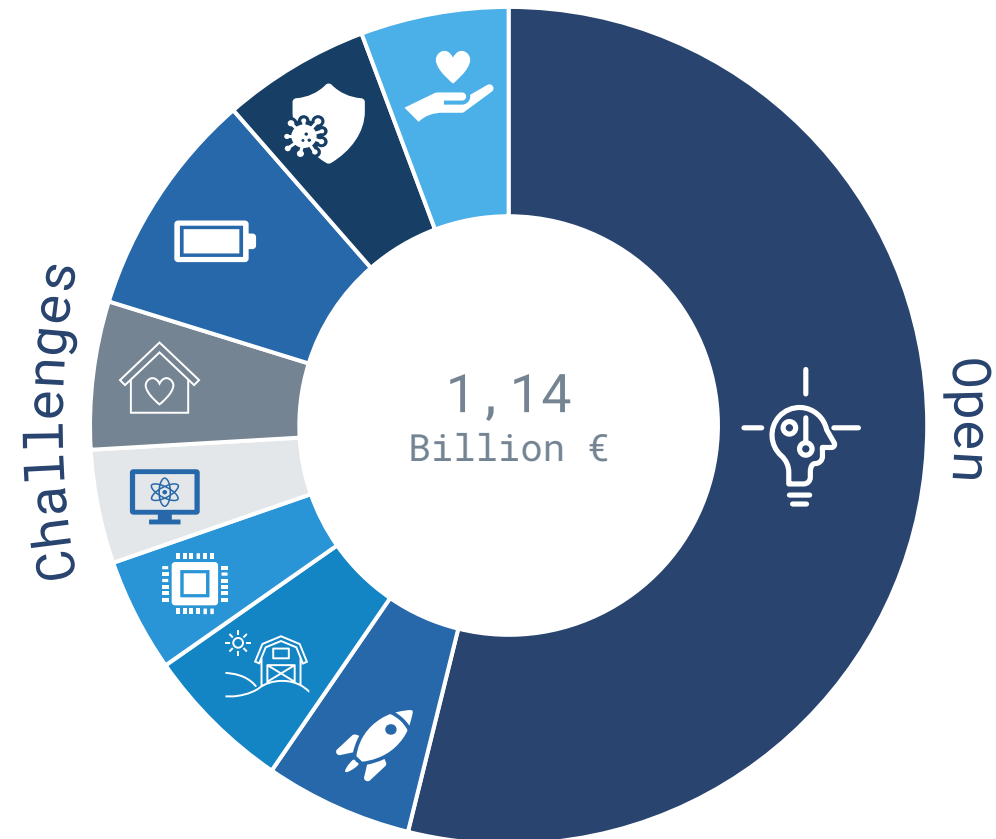
Requirement:
Existing Demonstrator (TRL 5/6)

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What topics are relevant?

The programme is **open to all topics**. In addition, there are **annually changing challenges**. There is a strong focus on **deep tech** innovations and sustainable solutions.

Challenges 2023

- Biomarker assays for cancer
- Decontamination for pandemic management
- Energy storage
- New European Bauhaus
- Quantum computers and quantum sensors
- Semiconductors
- Resilient agriculture
- Space technologies and services

Budget Distribution 2023

1,14 Billion €

Challenges

Open

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What are the underlying conditions?

Standard: Blended Finance. In special cases, however, sole funding is also possible

Funding

- Up to 2.5 Mio. Euro

- 70% Funding rate

- Eligible costs: personnel, travel, material, equipment,25% overhead, external services

- Project duration: max. 24 months

+

Equity

- Up to 15 Mio. Euro

- For 10-24.9% of the company shares

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What do you receive support for?

Funding (TRL 5-8)

Close-to-market R&D,
Demonstration as well as
Market preparation

- Demonstration & Tests
- Prototyping
- Validation
- „market replication"
- Preparation of scale-up
- Miniaturisation & Design
- Market preparation

Equity (> TRL 9)

Growth, Scale-Up, Market
Implementation

- Scale-up
- Marketing & Sales
- Serial production
- Clinical studies

**or to cover the necessary own
contribution to the project costs**

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EUROSTARS
for innovative SME

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What is the focus of the funding program?

Small international consortia under leadership of an SME
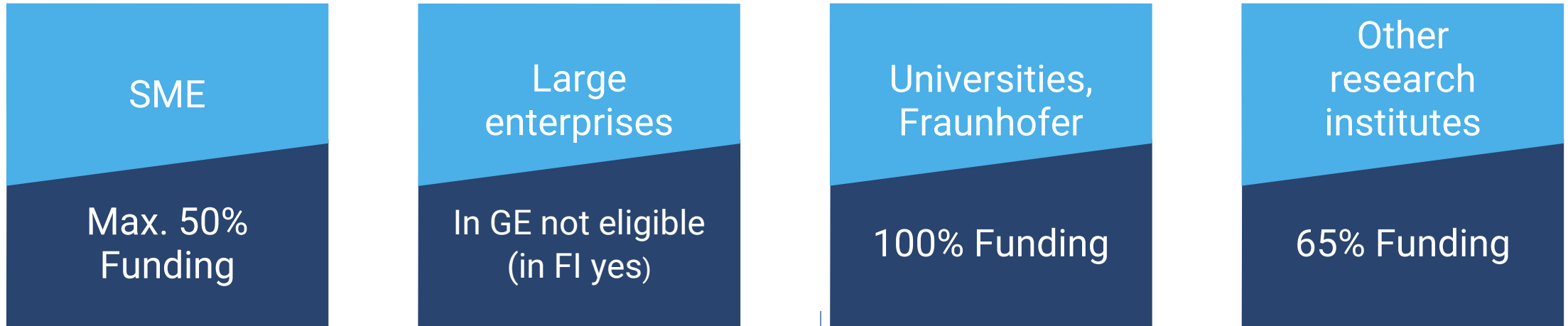
| Topic-open | Pure civil applications | Market driven: products enter market 2 years after project end | Development up to creation of a prototype (TRL4 → TRL 6) |

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What are the requirements in Eurostars?

- Consortium management by innovative SME

- At least **2 independent partners** from at least **2 Eurostars countries** (of which 1x EU)

- Possible partners: universities, research institutes, SMEs, industry

- At least 50% of the costs incurred by the SMEs

- Project duration: **maximum 3 years**

- No partner or partner country with > 70% of project volume

- Funding rate varies dependent on country and partner type

- Eurostars countries ≠ EU member states → separate list as well as non-european countries (e.g. Singapore, South Korea, Canada, South Africa)

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What are the funding requirements in Germany?

SME	Large enterprises	Universities, Fraunhofer	Other research institutes
Max. 50% Funding	In GE not eligible (in FI yes)	100% Funding	65% Funding

2 Deadlines per year: normally spring and autumn, **next: 03/23**

Requirement: german SME is part of project

All german partners (SME + research institutes) receive in total max. 500.000 € funding in one project.

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ZIM

Zentrales Innovationsprogramm Mittelstand

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ZIM

Who can apply?

- for SME with < 500 employees, or < 1000 employees in cooperation with small SME
- Research institutes

What does the program include?

- Topic-open
- Joint projects & Solo projects
- Application: single-stage (Proposal ~20 pages project description + application form („Mantelbogen"))
- No deadlines
- New since 07/22: max. 1 grant in 24 months

How much funding?

- Funding rate KMU: 25%-60%
- Eligible costs: Personnel costs, external orders, other costs
- Project volume:
  Solo proj. 550.000 €,
  Joint proj. 450.000 €,
  RI 220.000 €,
  total max. 2,3 Mio. €
- Overhead surcharge 100% (RI 85%)

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ZIM – Durchführbarkeitsstudie (Feasibility study)

Who can apply?

- Young enterprises (< 10 years), smallest enterprises (< 10 empl.) or first time beneficiaries,
- Prerequisite: Preperation of R&D Project

What does the program include?

- Topic-open
- Technical preliminary projects and studies, tests to evaluate and analyse the potential of the project
- Joint projects & solo projects
- Application: single-stage (proposal ~20 pages project description + application form („Mantelbogen"))
- No deadlines
- Duration: max. 8 months

How much funding?

- Funding rate: 50%-70%
- Eligible costs: Personnel costs, external orders (max. 2)
- Project volume: Solo proj. 100.000 €, Joint proj. 200.000 €
- Orders to RI (10%-80% of PMs)
- Overhead surcharge 30%

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ZIM – Leistungen zur Markteinführung (Market launch services)

Who can apply?

- Enterprises with approved ZIM-Project

What does the program include?

- Application up to 12 months after the end of the project
- Funding for innovation consulting services, support services, trade fair appearances, advice on product design, marketing, certification, ...)
- 3 applications per R&D project

How much funding?

- Funding rate: 50%
- Eligible costs: up to 60.000 €

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ZIM international

- Bilateral and multilateral tenders with over 20 countries worldwide
- German SMEs can receive up to 10% more funding rate
- Non-german partners must ensure their financing independently

FINLAND

Finnland

Weitere Ausschreibungen sind geplant.
Partner: Business Finland

No tender planned for 2023 due to pause and revision of funding initiatives in finland.

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KMU - innovativ

Cutting-edge research in SMEs

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Who can apply?

- Open for differently sized enterprises
- SMEs with < 250 empl., ≤ 50 Mio. € sales or ≤ 43 Mio. € balance,
- Research institutes
- SME (< 1.000 empl.) | LE (as project partner; dependent on technologie area)

What does the program include?

- Topic related: 12 specific topics, also topic-open funding possible
- Joint projects & solo projects
- Application: two-stage (draft + proposal)
- Deadlines for drafts: 15. April and 15. October
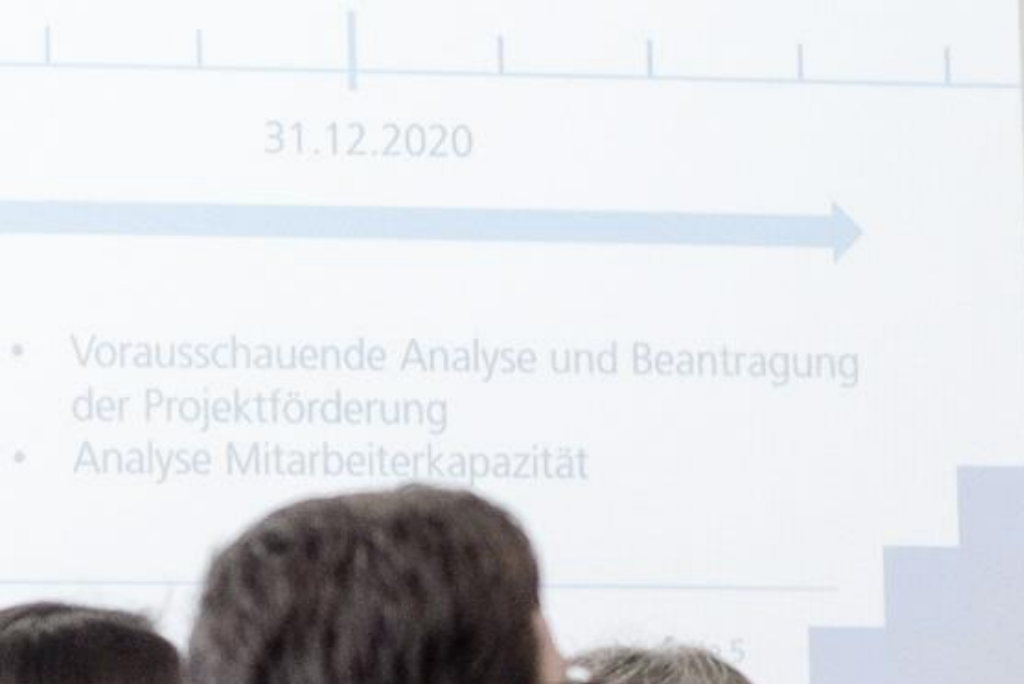
How much funding?

- Funding rate: 50% (+10% / + 20% SME-Bonus)
- Eligible costs: Personnel costs, overhead and material costs, travel costs, third-party services, investment
- Project volume: in principle unlimited / typical: up to 2 Mio. € costs

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Technology areas:

- Bioeconomy
- Biomedicine
- Electronics and autonomeous driving; supercomputing
- Research for civil security
- Medtech
- Information and communication technologies
- Material research
- Interactive Technology for health and life quality
- Photonics and Quantum technologies
- Production technology
- Resource efficiency and climate protection

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Steuerliche Forschungszulage

Yearly up to 1 Mio. € tax-free for R&D

"

No general funding of R&D expenses of companies, but concrete R&D projects must be described in detail.

„Forschungszulage" FZulG | Bundesgesetzblatt 2019 Teil I Nr. 51 | 20. Dezember 2019

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For whom?

Enterprises
Single enterprises, persons or corporations of any size

Research Associations
Enterprises in R&D-Associations

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What can be founded?

All steps of research and development, i.e. basic research, industrial research and experimental development.

It is **topic-open**. Thus, there are no specifications regarding the development topic of your project.

Also **failed development projects** can be taken into account. Nutzen Sie diese Chance! Take advantage of this opportunity!

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What is funded?

Eligible costs

- **Employer's gross salaray of employees** (including annual bonuses, performance bonuses, overtime pay, employer's expenses for securing the future)

- **60% of the remuneration** that the client has spent on an ordered development and research project
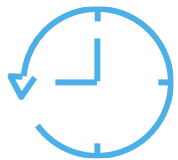
Funding

- Maximum eligible costs: **4 Mio. € per year**

- **Funding rate: 25%** → maximum 1 Mio. € (tax-free)

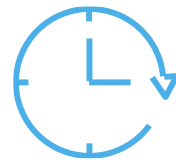**EurA**®

Structure

01.01.2020   current

With the Forschungszulage:
Retroactive application for
the Forschungszulage for
R&D projects started after
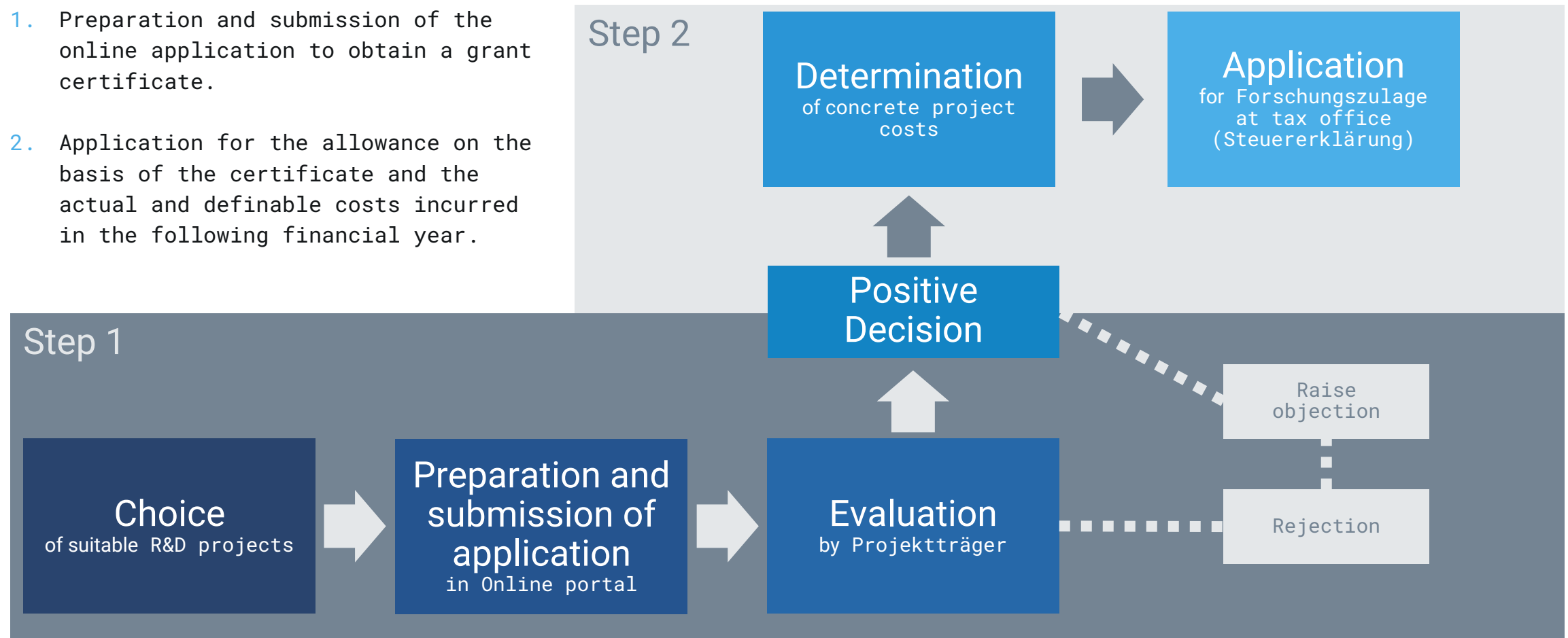01.01.2020.

With R&D Funding:
- **Forward-looking** analysis and
  application for project funding
- Analysis of employee capacity

We not only look at a small excerpt, but the entire roadmap for the best possible funding strategy.

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Procedure: Two-step application process

1. Preparation and submission of the online application to obtain a grant certificate.

2. Application for the allowance on the basis of the certificate and the actual and definable costs incurred in the following financial year.

Step 2

Determination
of concrete project costs

→

Application
for Forschungszulage at tax office (Steuererklärung)

↑

Positive Decision

Step 1

Choice
of suitable R&D projects

→

Preparation and submission of application
in Online portal

→

Evaluation
by Projektträger

↑

Raise objection

Rejection

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Coffee break

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Invited talk: Alexandra Horn

Head of Support for SME

DIN – dt. Institut für Normung e.V., Berlin

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Discussion of Project Idea

"Development of a standardized test setup to measure antimicrobial effectiveness of blue light irradiation on surfaces/liquids/air"

- Explain the idea in concrete terms (esp. measurement), DIN will look for already existing Specs, Norms
- Define consortium (GHO, GMBU, THU, ???)
- Workshops will be organized by DIN

- Determination of germ reduction (for different bacteria and viruses)
- Standardized irradiation parameters/conditions, specification of germ types

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Work with Miro Board

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Discussion in small groups

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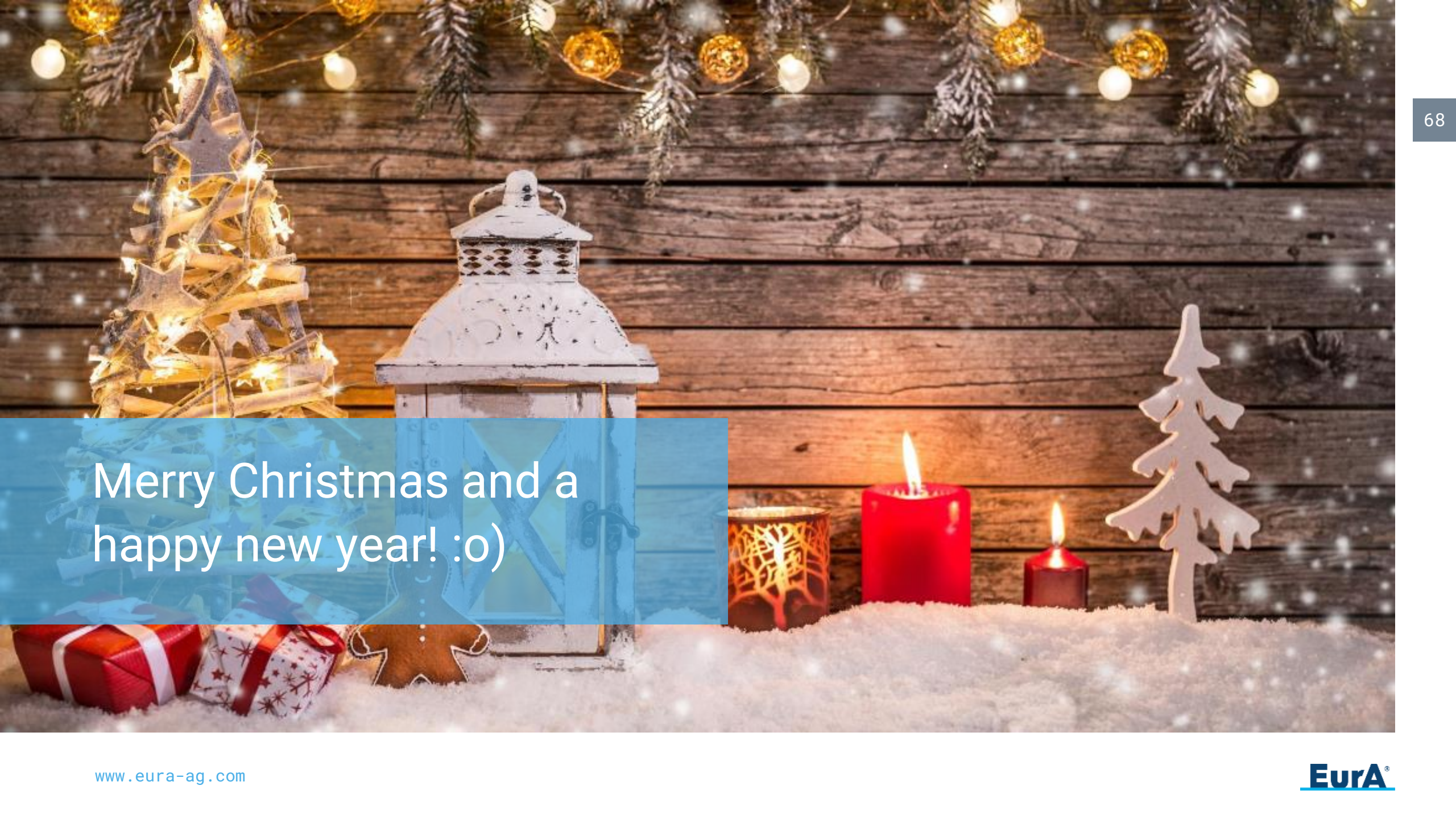# Summary / Next steps

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Summary & next steps

Summary:
- Logo and website available, flyer still to be done
- Dr. Christian Gehl will take over network management from 01.01.2023
- Funding landscape: **Any further information/support needed?**
- Miro board as interactive platform and to use also outside of network meetings

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Summary & next steps

Next steps:
- Individual meetings with partners and network management
- Next steps for Project idea „Development of a standardized test setup to measure effectiveness of irradiation": contact DIN with more details
- Project workshops will be invited
- Next network meeting: Q1/23

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Merry Christmas and a happy new year! :o)

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