



EIB Support to Investments in Proton Therapy: Key Issues and Proposed Action

**Presentation to the Steering Group on
Health Promotion, Disease Prevention and
Management of Non-communicable Diseases**

Brussels, 11 April 2018

The EIB Group: Who are we?



Provides finance and expertise for sound and sustainable investment projects



Leading developer of risk financing for innovative SMEs

The EIB: the EU bank



- ▶ Natural financing partner for the EU institutions since 1958
- ▶ Around 90% of lending is within the EU
- ▶ Shareholders: 28 EU Member States

**Investing in
Europe's growth**

EIB products

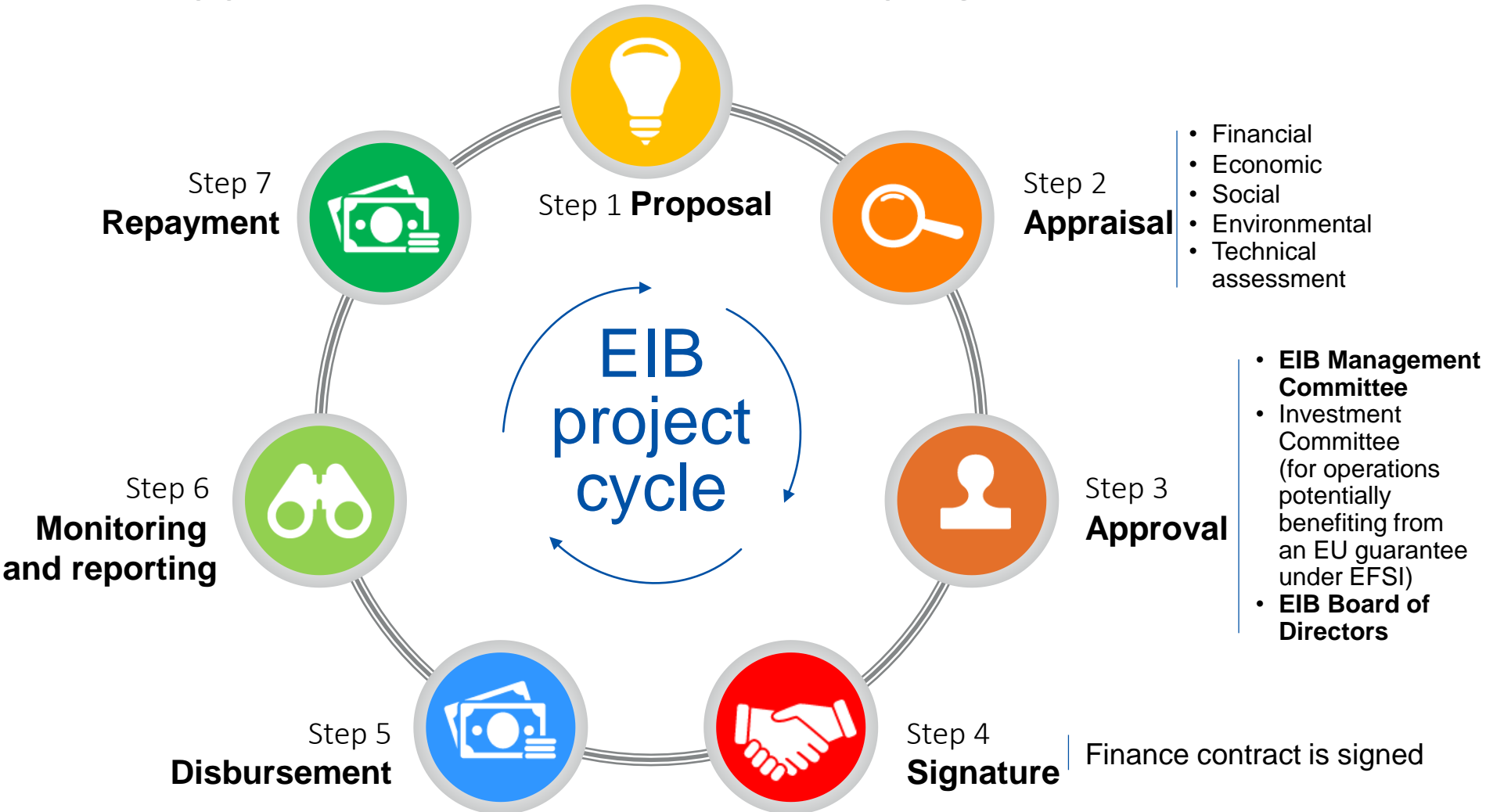
We help catalyse investment

LENDING	BLENDING	ADVISING
Loans But also: Guarantees (trade financing) Equity participation	Combining EIB finance with EU budget (Project Bond Initiative) Higher risk projects for innovation (InnovFin)	Prepare, evaluate and support the implementation of projects (JASPERS) Support for public/private partnerships (EPEC)

Attracting FUNDING for long-term growth

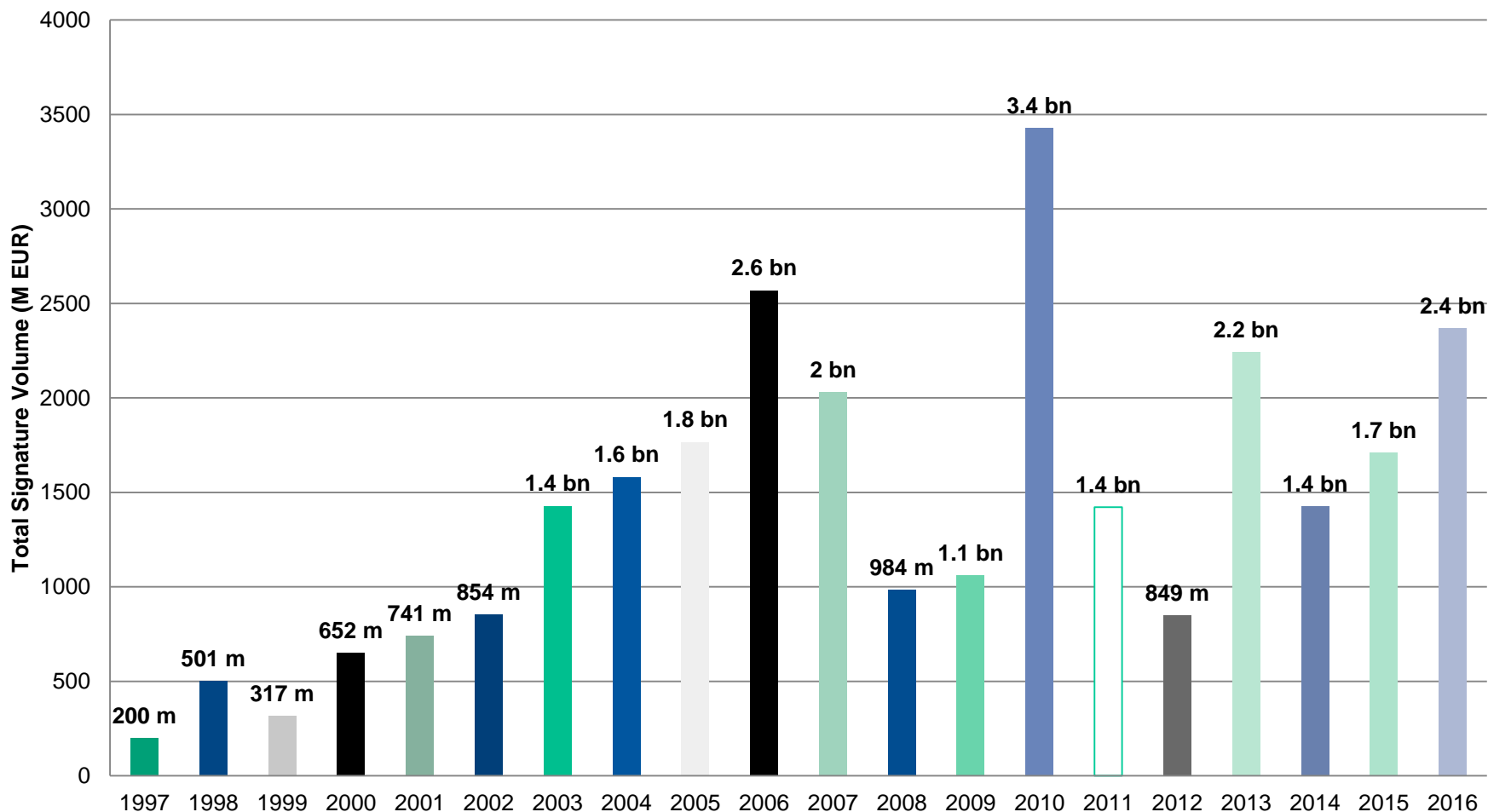
EIB project cycle

We support sound and sustainable projects



Over the last 20 years EIB has lend over 28bn into the health sector

Annual Lending in Health 1997-2016



Eligibility of Health Sector Projects

- **Health sector projects** are **eligible both within EU and outside** (under mandates)
- Health sector projects may be supported in the form of **individual loans, framework loans or programmes**
- Both **classic procurement** and **PPP** structures are possible
- Health sector projects are eligible under **EFSI**
- Health sector projects are eligible both with **public** and **private promoters**, providing that they serve general population
- Both **tangible (construction, equipment)** and **intangible (medical R&D, training)** types of project cost are eligible

The EIB's Role (I/II)

- **Health infrastructure:** hospitals are a major focus; but, integrated networks of healthcare delivery are becoming more important.
- **Innovation:** technological and non-technological innovations in the health sector derive from medical research and from structural changes in the way health is delivered and financed. The Bank is willing to encourage both the private and the public sector in their innovative approaches.
- **Health informatics:** equipment, technology, data or education, small or large scale – the Bank supports their efficient and ethical use in dedicated projects or as separate interventions.

The EIB's Role (II/II)

- **Fundamental medical research** has a high financial and economic risk and often long lead times. Research projects have very variable, but often highly valuable outcomes, from no financial or economic benefit to breakthrough discoveries for society.
- **Medical education and training:** physicians' and other medical professionals' training is costly and time-consuming. The EIB will support educational and training programs in the medical field and necessary reforms in medical education systems.

Investments in Proton Therapy Research and Treatment Infrastructure

Background

- Growing number of financing requests for high-end proton therapy treatment centres
- Public and private promoters
- Private, commercial operators' requests increasing
- Large scale, resource-intensive investments
 - Expensive equipment and buildings
 - Highly specialized human resources
- Past lending only for projects with research component
- Now appraisal guidelines need an update

The technology: Radiation therapy for cancer treatment

Photon therapy: Standard radiation therapy for most cancers

- Linear accelerator
- Gamma knife / cyber knife

Charged particle (hadron) therapy

- **Proton**
- Neutron
- Heavy Ion

Common features

- Sophisticated, but much more costly than photon therapy
- Insufficient or incomplete evidence for better results (efficacy) compared with photon therapy for most applications

Key issues

- ▶ Current indication for proton therapy for only a small number of cancers
 - ▶ Some skull, spine, eye soft-tissue cancers
 - ▶ Cancers in children (long-term side effects of radiation)
- ▶ Very costly and time consuming
 - ▶ High unit costs per treatment episode
 - ▶ Poor financial track record of commercial operators
 - ▶ Delays and obstacles in project implementation
 - ▶ Lack of established reimbursement scheme from public payers (often case by case decision)
- ▶ Geographic coverage
 - ▶ Small countries have too few patients to justify own centres
 - ▶ Access for patients from other regions / countries
 - ▶ Knowledge about technology and treatment opportunities and guidelines
 - ▶ Referral system unclear
- ▶ Limited research activity (especially for rare cancers)
 - ▶ Lack of sufficiently large patient cohorts
 - ▶ Resource limitations in financially constrained public systems
 - ▶ Few facilities with explicit research focus and programme

Opportunities and challenges: The case for a European approach

- ▶ Kick-start strategic investments:
 - Experience from technology development in the past suggests a potential for accelerated deployment of new technologies with a joint initiative
 - Exploration of economies of scale and scope
 - Improve patient access to treatment
 - Engage European industry to foster innovation and R&D
- ▶ Informed planning to guide efficient allocation of (public) investments in infrastructure
- ▶ Prepare for future growing demand due to demography
- ▶ Follow-up on basis laid by European research networks and international agencies

Suggested next steps

Establish a time-limited Sub-group with participation from

- Member States
- the European Commission and
- the EIB

to address key questions to be answered for future funding decisions:

Scope of review

- **Current state of play: Resources and stakeholder mapping**
 - Review of existing infrastructure; treatment and research capacity
 - Clinical guidelines and evidence supporting the application of proton therapy
 - Existing networks and professional societies
 - Access to treatment: patient needs; pre- and after care
 - Current research programmes
 - Manufacturing industry: Suppliers, key technologies, equipment prices
 - Cost: Capex, Opex

Suggested next steps

- ▶ **Needs assessment:**

- ▶ Demographic analysis and estimate of future treatment needs
- ▶ Human resources for service operation
- ▶ Financial needs
- ▶ Instruments for cross-border cooperation
- ▶ Regulatory aspects

- ▶ **Analysis and recommendations**

- ▶ Location, number, and scope of centres
- ▶ Organisational aspects
- ▶ Financial aspects
- ▶ Human aspects
- ▶ Synergies and benefits from a coordinated European approach
- ▶ Criteria for the assessment of funding decisions

Suggested next steps

Timeframe

- ▶ Sub group establishment: April 2018
- ▶ Mapping study (EIB/EIAH): July 2018 – October 2018
- ▶ Discussion and next steps – action plan: November 2018

Discussion



**European
Investment
Bank**



European Investment Bank
98-100 boulevard Konrad Adenauer
L-2950 Luxembourg