

# European Network for Light Ion Hadron Therapy

ENLIGHT for SEEIIIST

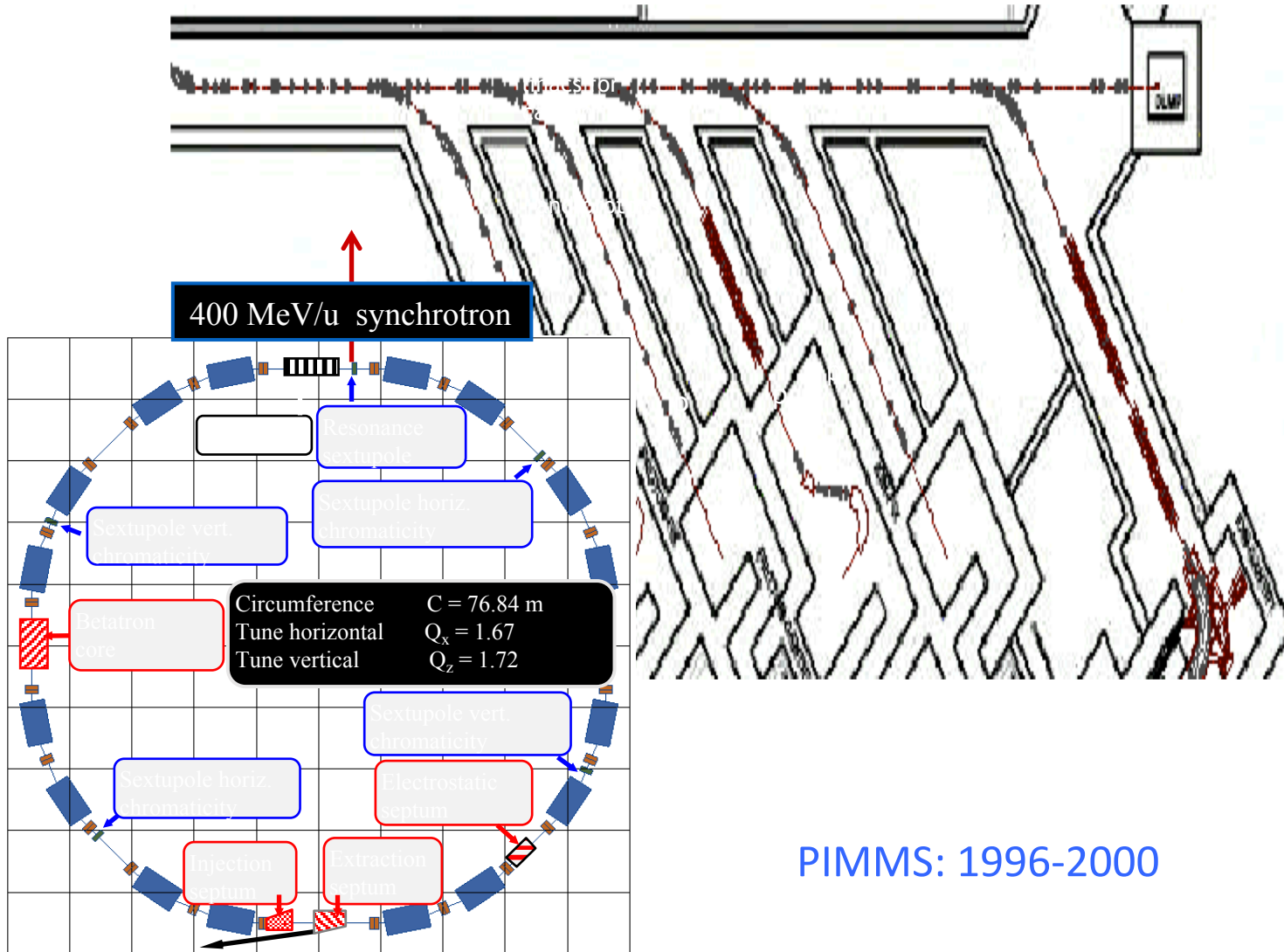
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**Manjit Dosanjh, ENLIGHT Coordinator**



# Proton Ion Medical Machine Study (PIMMS)

- the trigger for ENLIGHT



PIMMS: 1996-2000

# ESTRO Hadron Therapy Group: 2000

- In 2000 PIMMS study was presented in Vienna. After this the ESTRO HT group was proposed for creating a **joint platform** covering the different aspects of hadron therapy for the various projects in Europe which should lead to a closer **European cooperation.....**
- ESTRO HT Group met on the occasion of Med AUSTRON international advisory board meeting in 2001 and the idea was born.



*Jean-Pierre Gerard (President of ESTRO) & Germaine Heeren (ESTRO) were key*

# *The beginnings of ENLIGHT*

- The idea germinated in 2001 after ESTRO- Med-AUSTRON meeting
- In October 2001 the proposal for a Thematic Network was submitted to EC
- ENLIGHT was launched In February 2002 at CERN
- Funded: 1 million Euros in 2002



**Organised:  
Hans Hoffmann  
Manjit Dosanjh  
Ugo Amaldi**





Health and Science, can CERN contribute?

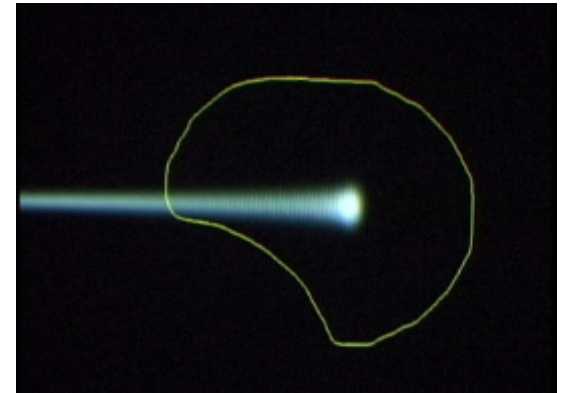
The Mission of CERN (1954):  
The Organization shall provide for collaboration among European States in nuclear research of a pure scientific and fundamental character, and in research essentially related thereto.

CERN has a good track record of managing multitechnological projects within specification and budget and in line, within CERN's competences.  
Hadron Therapy falls into these competences, given complete fulfilment of the requirements by the envisaged project.  
Following the "LIGHT" initiative possibly an "integrated project" for Hadron Therapy for several sites could be envisaged for the future.  
CERN temporarily cannot fund hadron therapy.





- Launched at CERN in 2002, following PIMMS study
- Common **multidisciplinary platform**
- Cancer treatment
- Identify **challenges**
- Share **knowledge** and best practices
- Harmonise data
- Provide **training**, education
- **Innovate** to improve
- Lobby for funding



Leveraging Physics collaboration philosophy into a multidisciplinary medical environment



# ENLIGHT++

From **2006** it became

+More than a **network**...research

+More countries, more institutions

- The community decided to **continue without funding but**
  - Develop strategies for securing the funding for specific projects under the umbrella of ENLIGHT, along two major axes
    - **Research** in areas needed for highly effective hadron therapy
    - **Networking**, to establish and implement common standards and protocols for treating patients



# Facilities in operation then – Europe (2002)

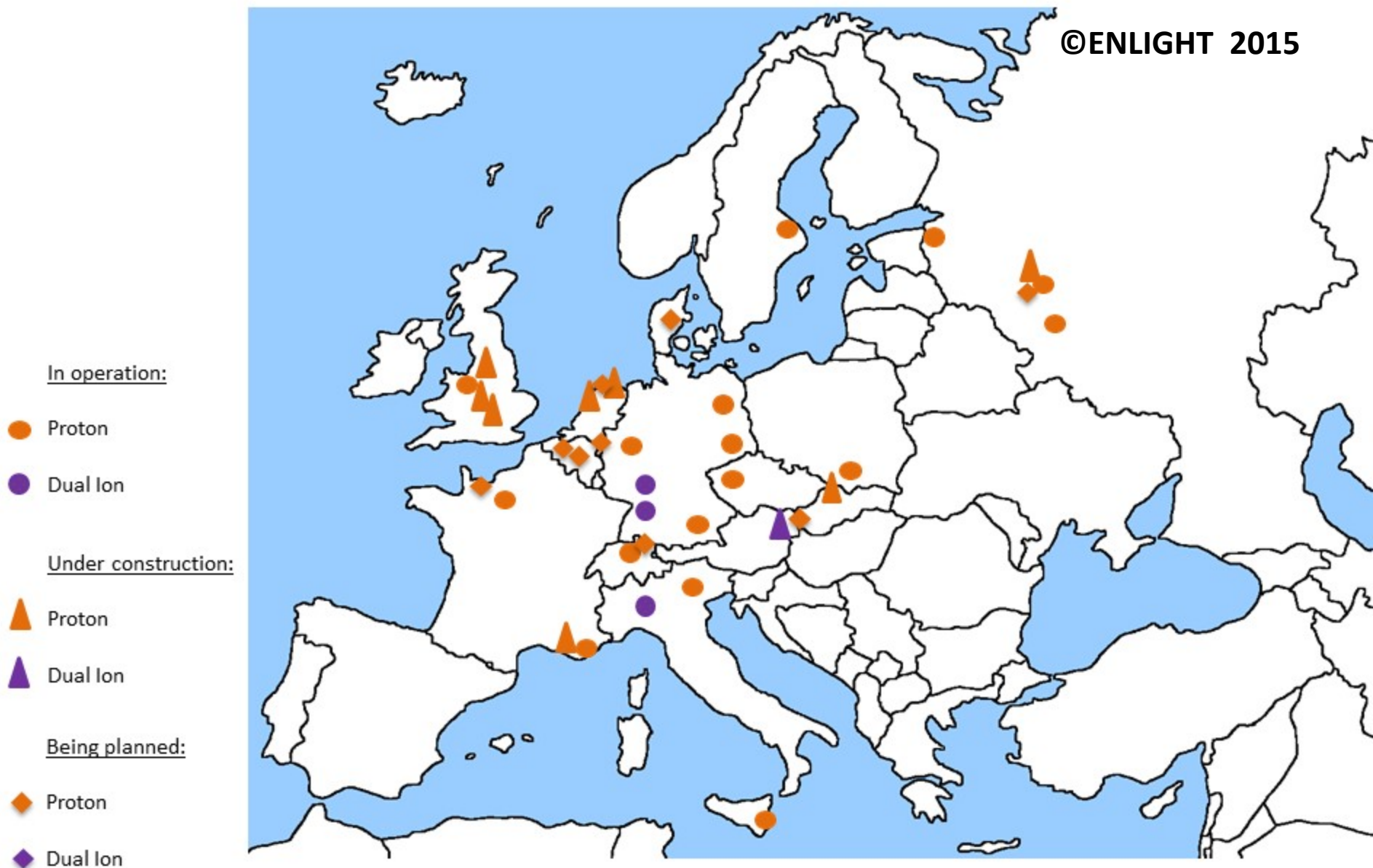
- P centres
- C-ion centres
- ▲ Dual-ion centres



Source: PTCOG



# Particle therapy centres in Europe - 2015



# Krakow Meeting 2015: was time for reflection

**Much had changed since 2002:** many centres, community was established, more than 1000 members for over 30 countries, much had been done...

- Did we still need **ENLIGHT**?
- If yes, what sort of **ENLIGHT** did we need?



# Krakow Meeting 2015 a turning point... new challenges

- Establish the ENLIGHT network as a **non-profit network/foundation** to make it sustainable since it is considered an important instrument and needs to be maintained
- Establish a Scientific Advisory Committee
- Play a key role in the **education** of the **young generation** in this rapidly growing field of particle therapy
- Help to fully exploit the **advantage of hadron therapy**: more research, better tools, clinical trials, extend collaboration
- Advise **partners** who want to have access to HT



# ENLIGHT Training

Multidisciplinary Collaboration, Networking and Training

URGENT need for increased Education & Training

**ENLIGHT** Project submitted to  
CERN & Society Foundation





**Project comprises of three types of training:**

1. Introductory Multidisciplinary Training
2. Advanced Training including hands-on
3. Individual longer-term internship

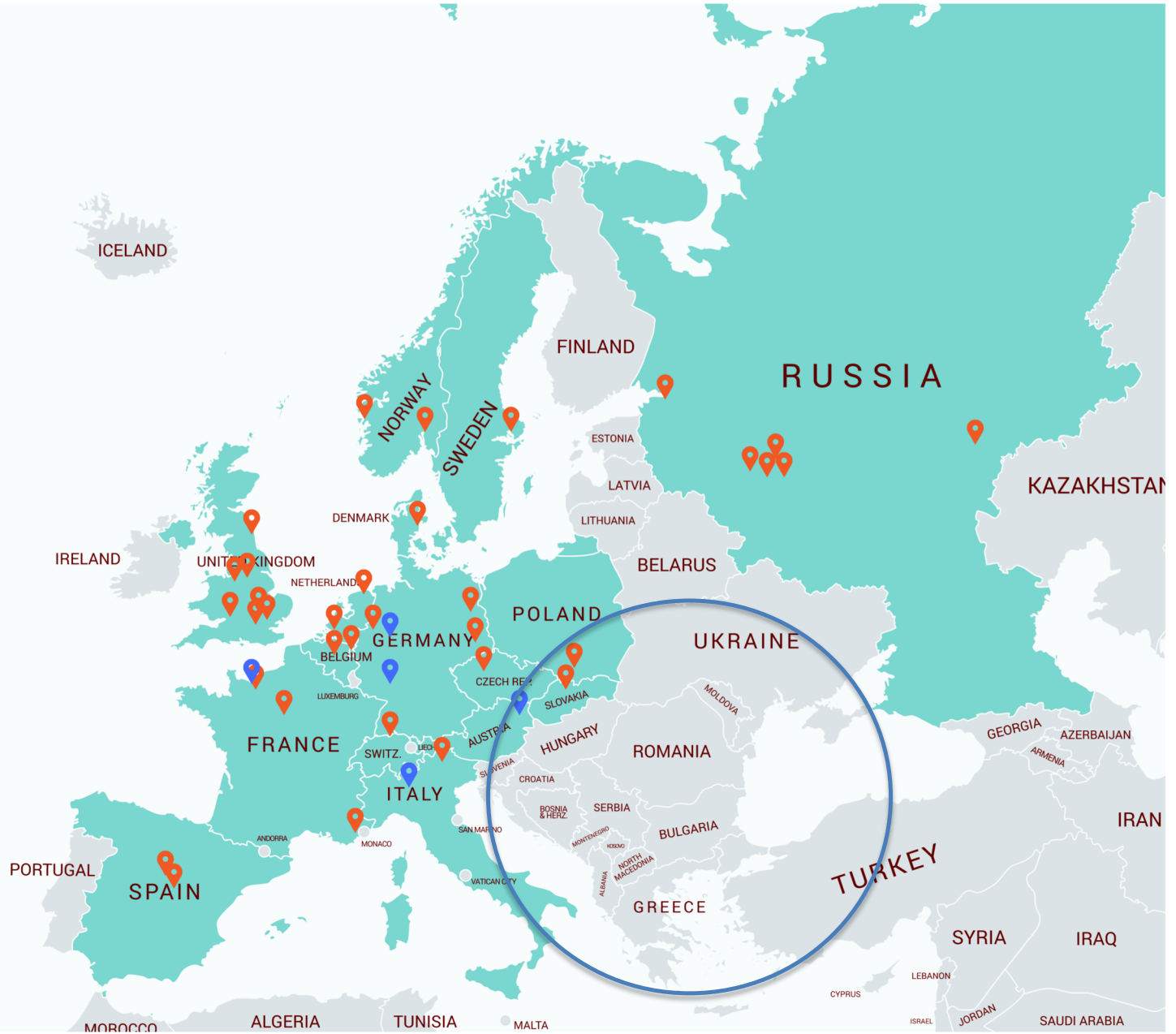


# Why do we need SEEIIST

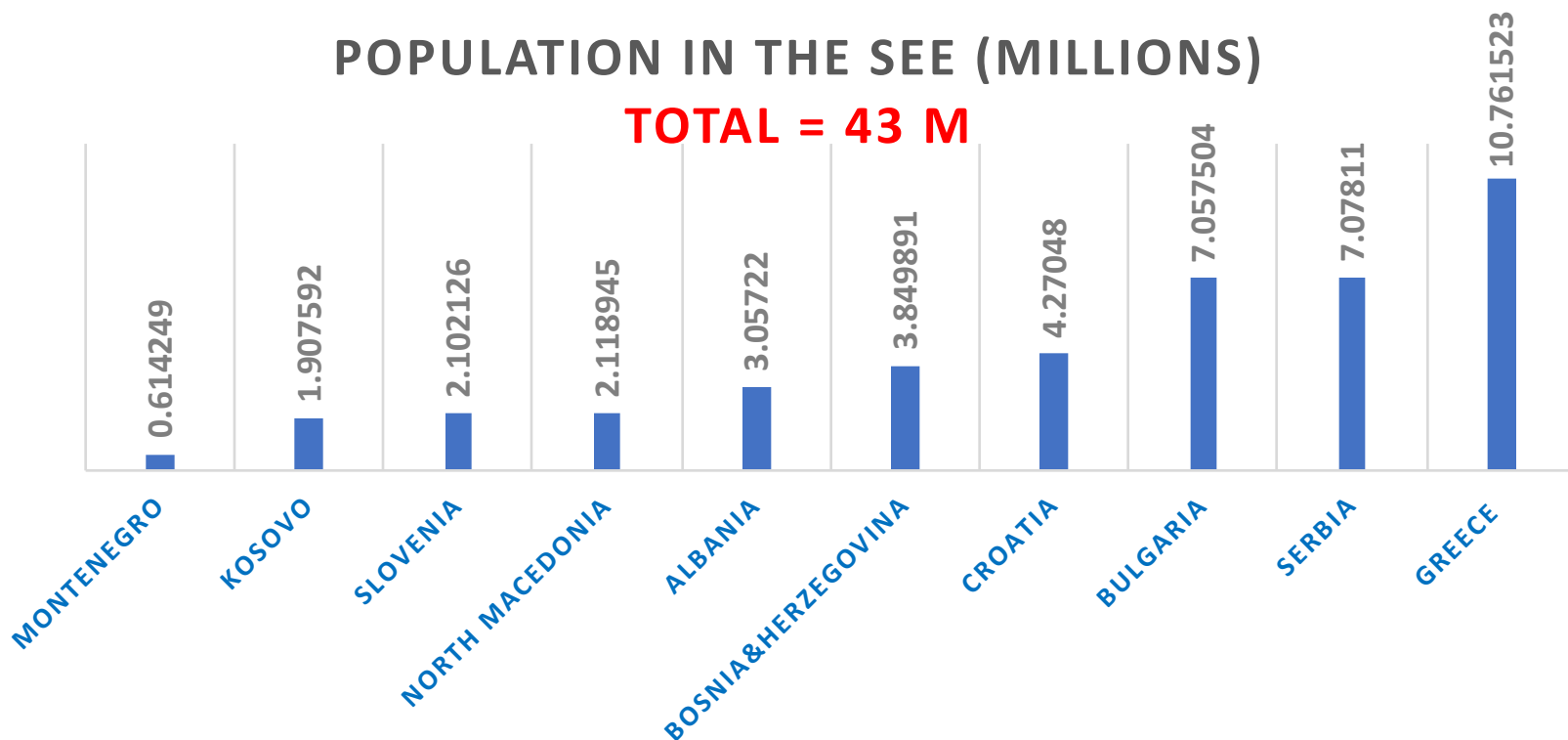


-  Proton centres
-  C-ion centres

**Facilities in operation now – 2019**



# Population in SEE region – need for HT access



# Goals and Benefits for SEE Region

- more than 40 millions people could benefit from this project
- possibility for education, training and innovation
- more effective cancer treatment using the cutting-edge technologies and innovative treatment options
- participate in clinical trials Europe-wide
- a unique facility in Europe which will have 50% time for fundamental, translational, clinical innovative research
- attractive for external research community: also cheaper research and living costs
- possibility to boost the regional development and create a new generation of young scientists, industry
- mitigate brain-drain - reverse brain in some cases

# URGENT NEEDS

- Establish a multidisciplinary network in SEEIIST
- Build on existing networks and in collaboration with existing facilities
- Raise awareness of HT via communication at all levels
- Integration across all multidisciplinary fields
- Establish a common collaborative platform for sharing data including medical data
- Promote open access to data and knowledge sharing
- Training of next generation-> developing future work force
- Involvement of all multi-stake shareholders including industry and public bodies, such as ministries of health etc



- **Annual meeting**, open, free
- Latest developments in the field
- Oral presentation for winning posters
- Networking
- Collaboration
- Exchanges
- Education and training at CERN
- Sharing and building bridges
- Raising awareness at international level
- Special day dedicated to training
- Biannual Magazine – **Highlights**
- **@ENLIGHTNETWORK**



# Thank you to the ENLIGHT Community



ENLIGHT at Caen, 2019