Building a Community in the SEE Region for the SEEIIST Facility leveraging ENLIGHT

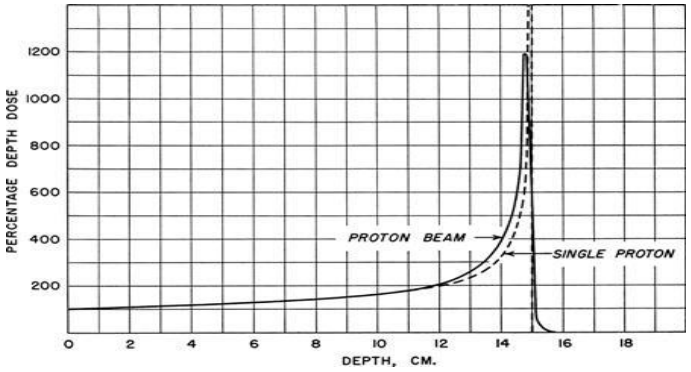
Manjit Dosanjh, 18 September 2019

CERN

ENLIGHT

1932 - E. Lawrence
First cyclotron

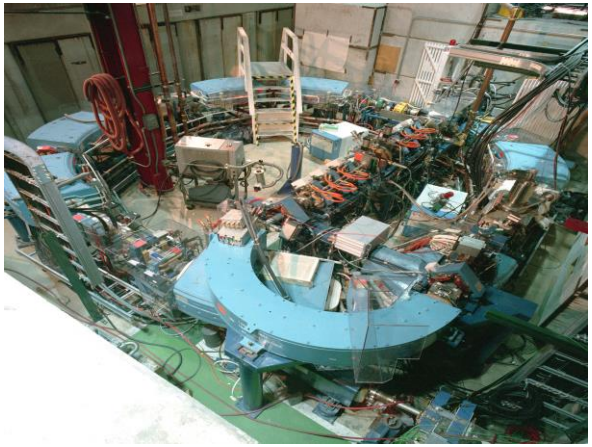
1946 – proton therapy
proposed by R. Wilson



1954 – Berkeley treats
the first patient

From physics……..

1993- Loma Linda
USA (proton)



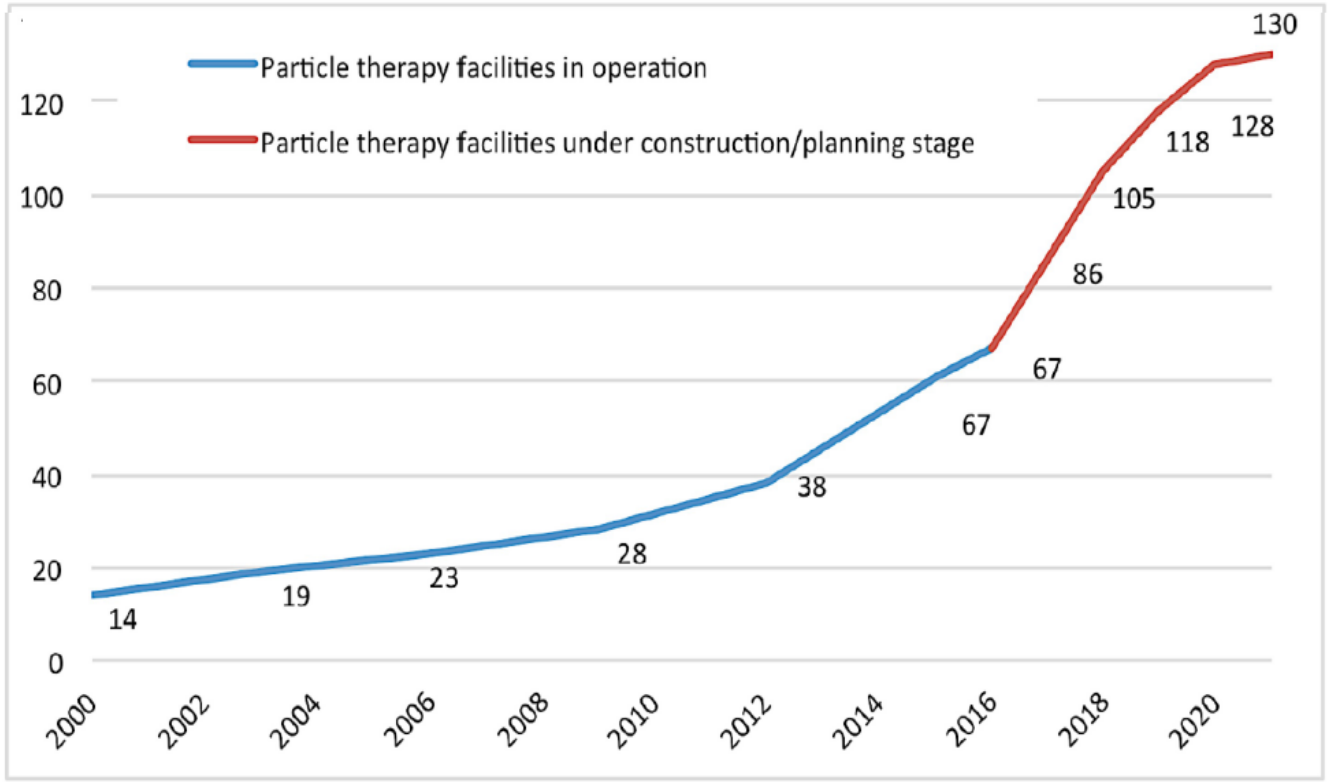
First dedicated clinical facility

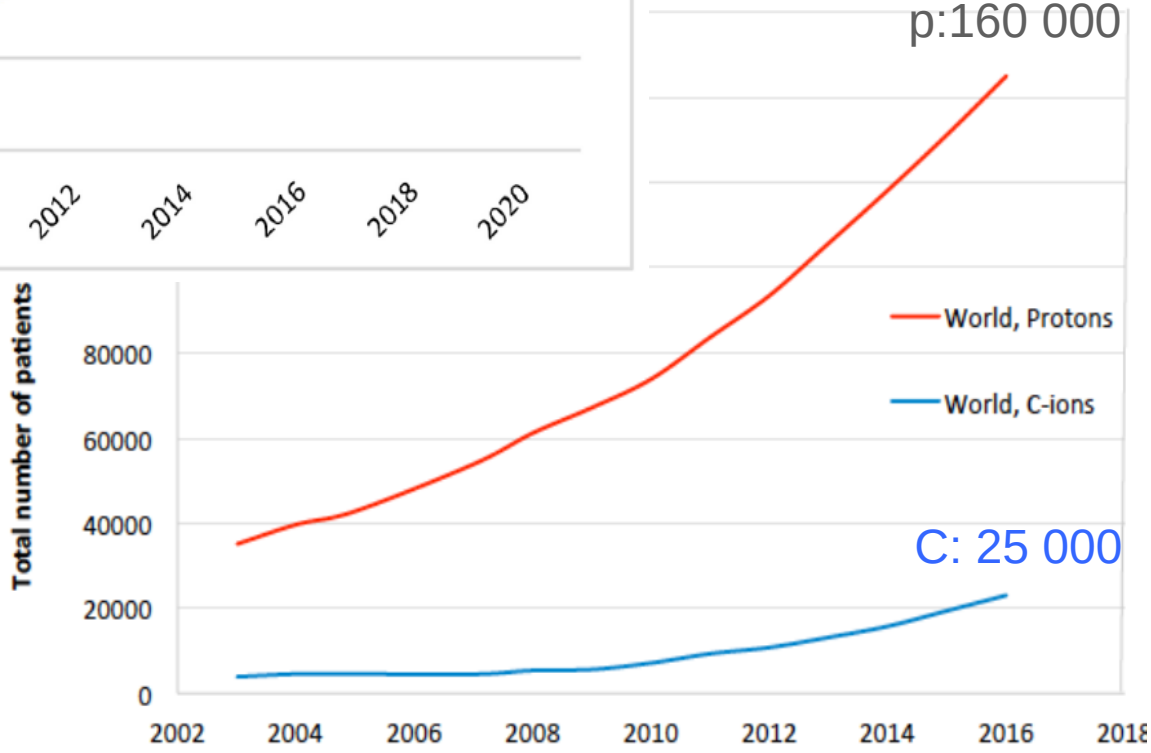
1994 – HIMAC
Japan (carbon)

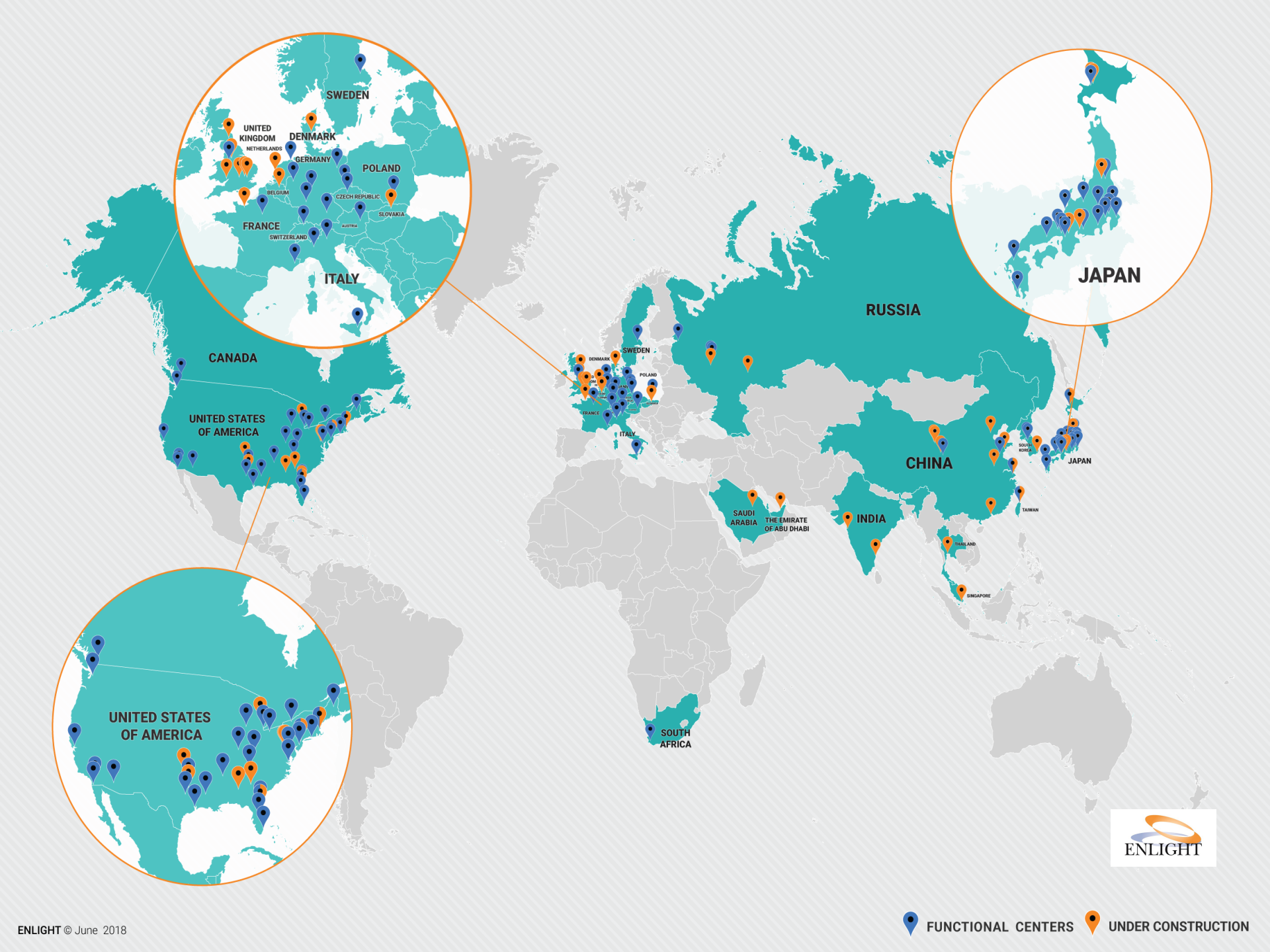
1997 – GSI
Germany (carbon)

……to clinics

PT Centres and patients worldwide

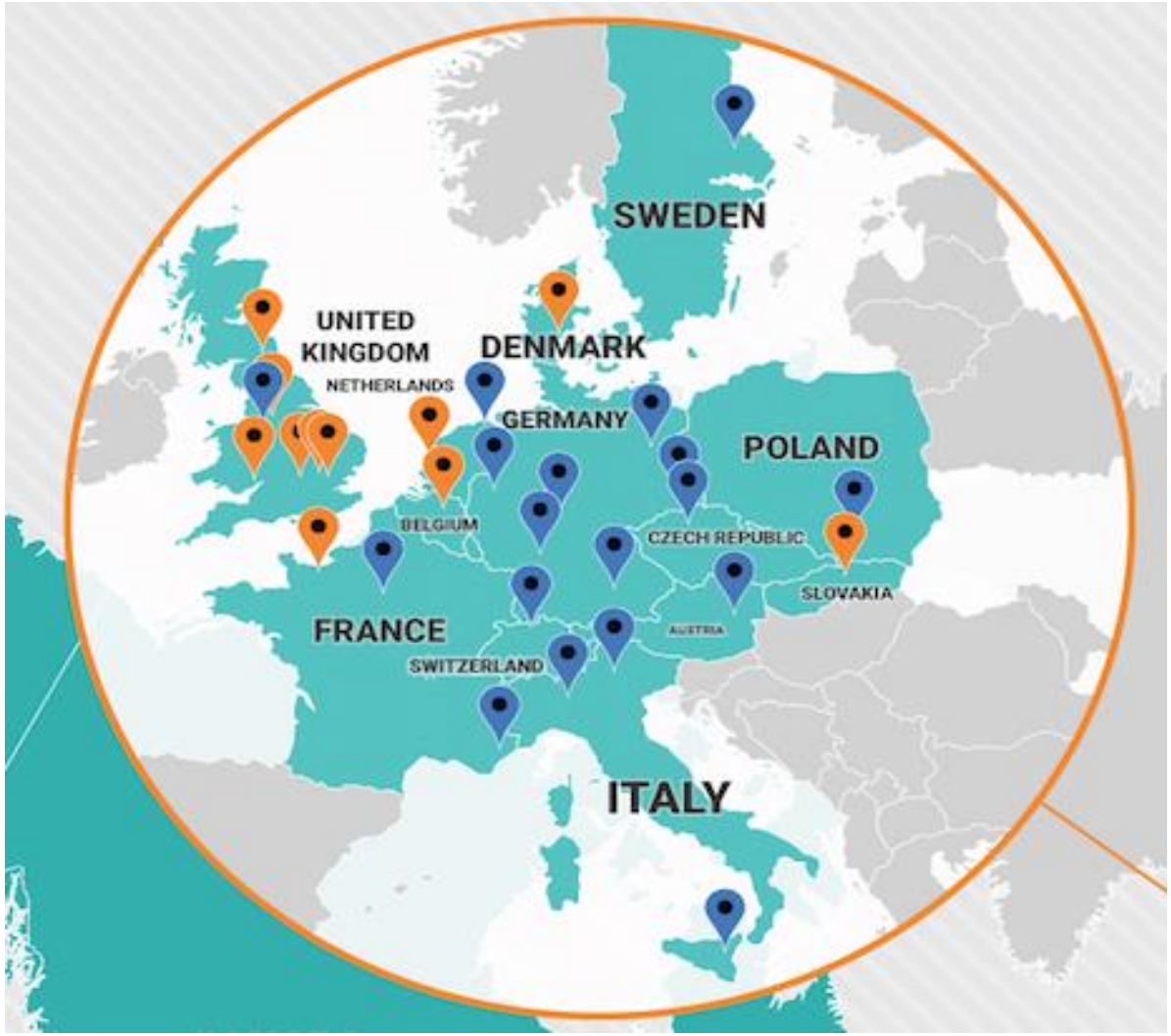






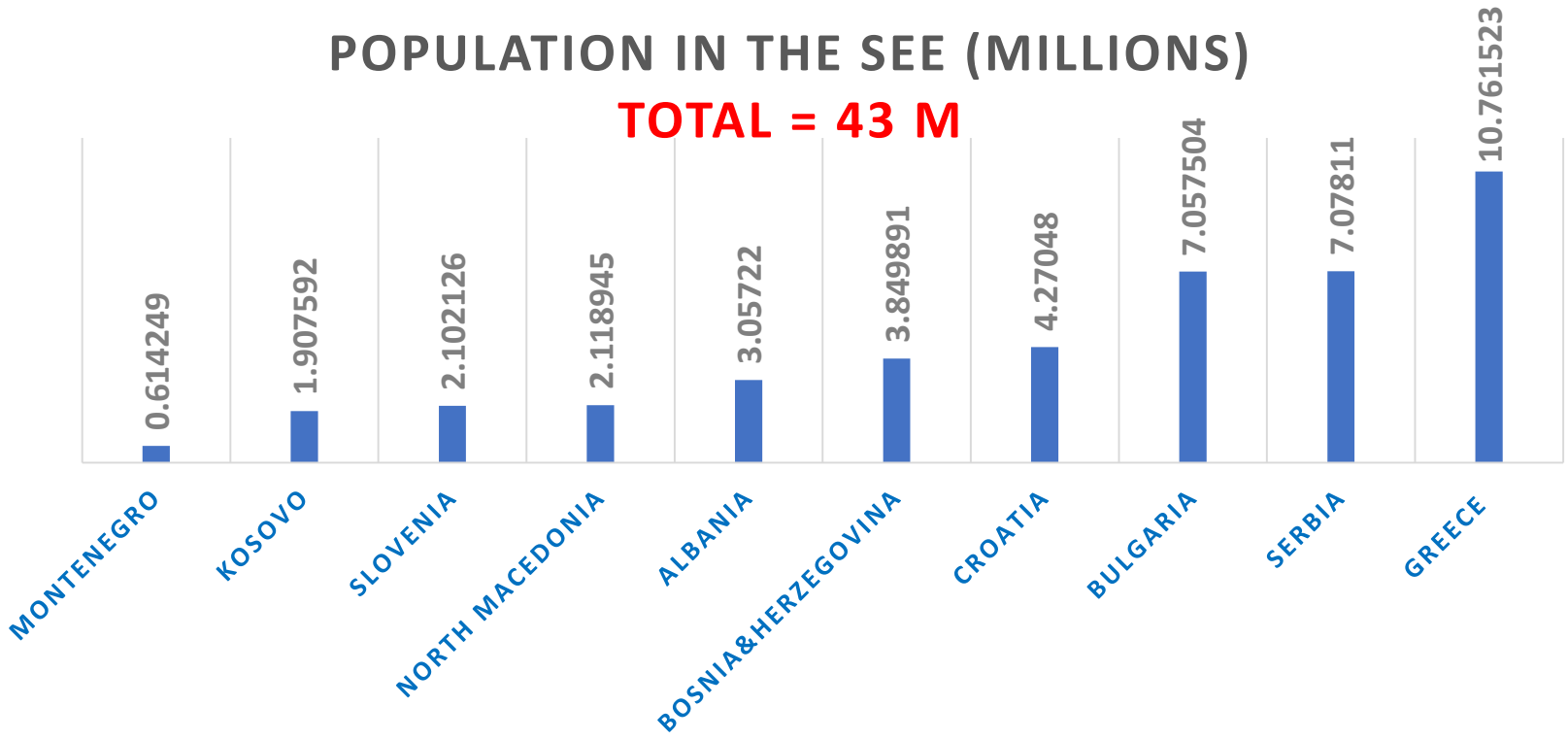
ENLIGHT © June 2018

Why we need SEEIIST

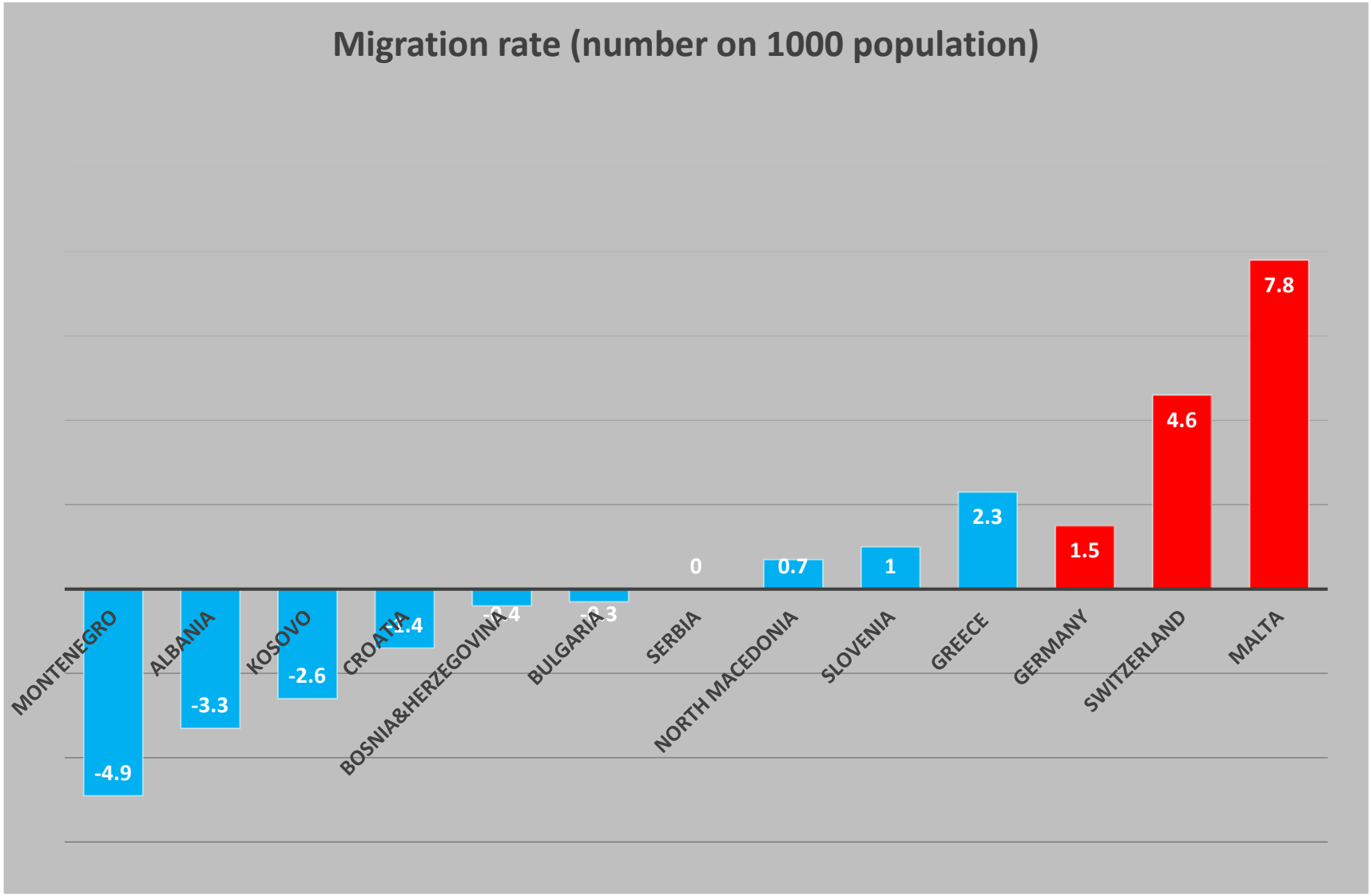


ENLIGHT

Population in SEE region – need for HT access

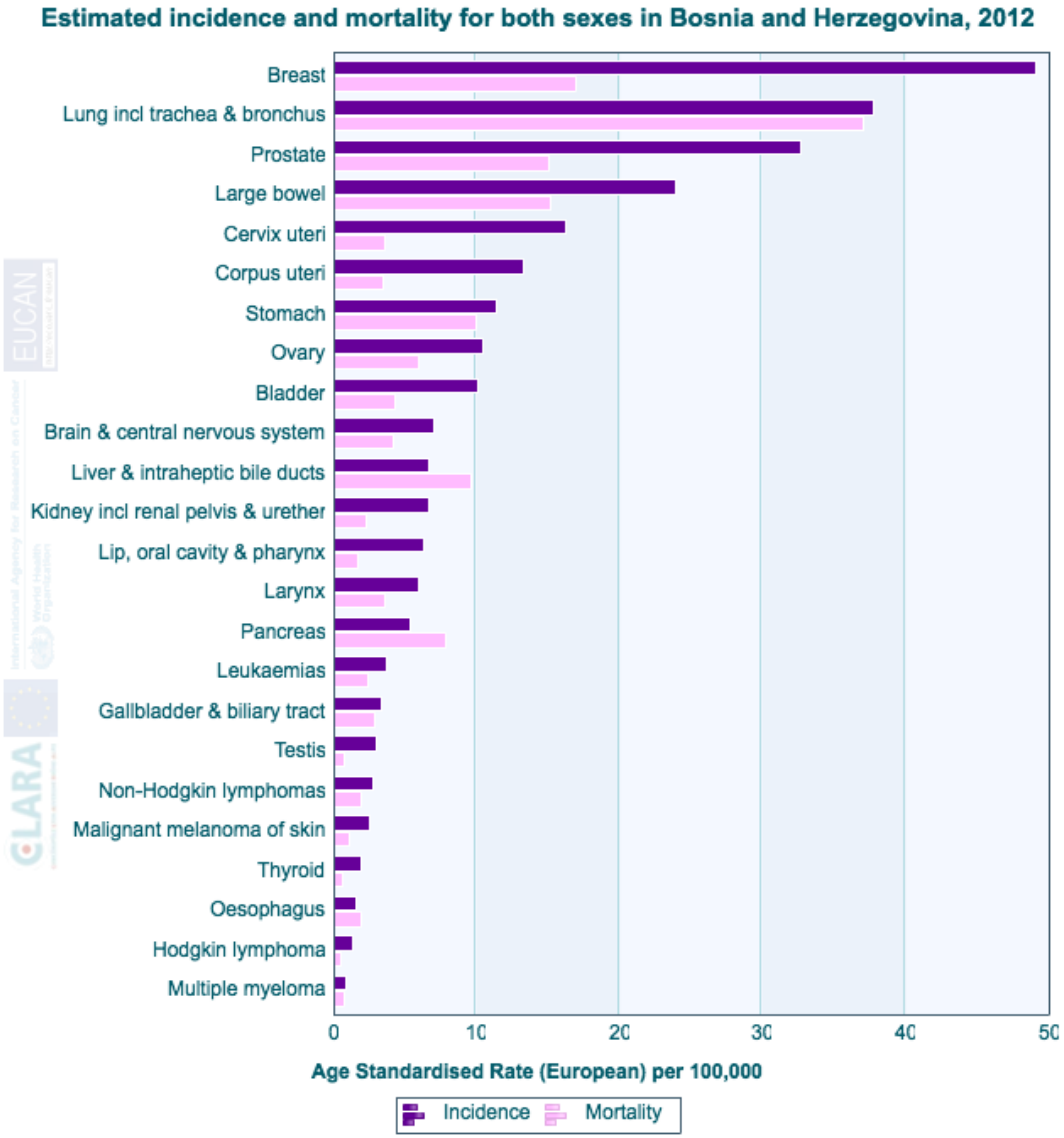


Need for brain circulation and not brain drain



Mimosa Ristova, UKIM, N. Macedonia

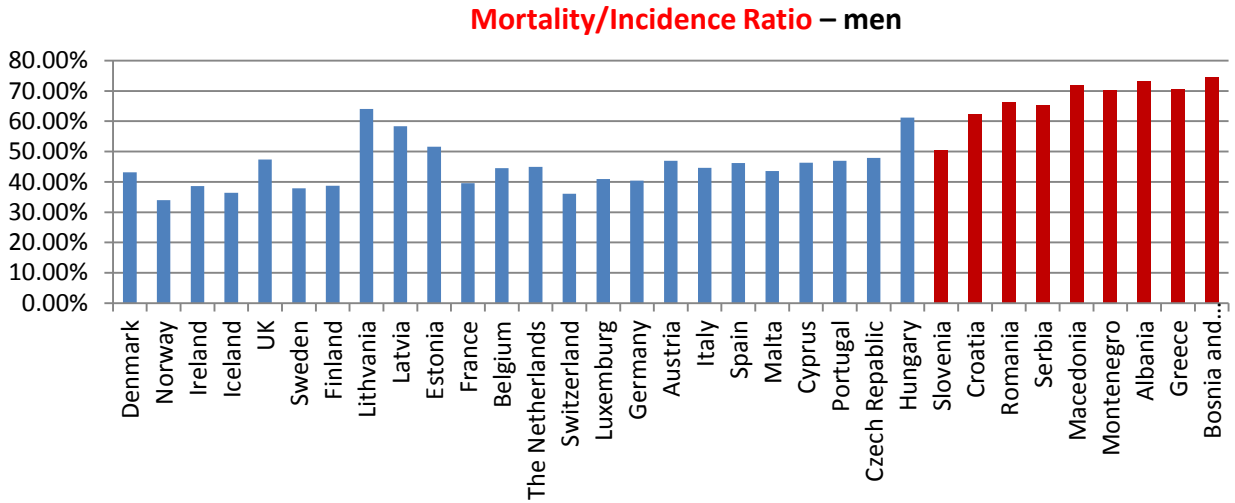
Estimated cancer incidence in Bosnia Herzegovina



Cancer statistics – mortality / incidence ratio

(all cancers, excluding non-melanoma skin cancers)

Vesna Gershan, Institute of Physics, Skopje



SEE

The highest 74 % (BIH, ALB, MKD, MNG, GR)
The lowest 50% (SLO)

EU

The highest 64% (Hungary, Lithuania)
The lowest 34% (Norway, Sweden, Switzerland)

✓ There is no cancer registry in the most of SEE countries (very often heart - lung failure is declared as a cause of death in cancer patients);

✓ Less imaging and treatment equipment – only one possible factor for higher Mortality / Incidence ratio

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

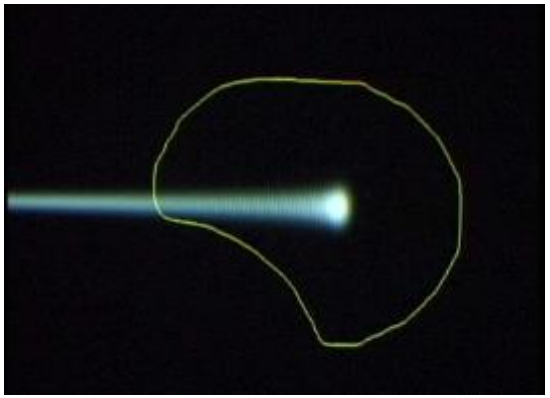
Need for data gathering and data sharing

- Need to have effective patient cancer information in SEE
- create a digital network
- regional development, communication and network faster, help handling big data
- networking with other oncological centers in the region
- networking among hadron therapy centers in Europe and beyond for trials and a shared database of all treated patients
- ensure effective patient selection and patient referral
- coordinate staging , follow-up and treatment

Leveraging the ENLIGHT Network

ENLIGHT

- 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

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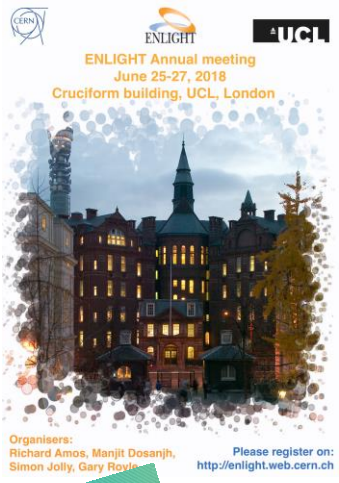


- ***Annual meeting***, open, free
- Latest developments in the field
- Oral presentation for winning posters
- Networking
- Collaboration
- Sharing and building bridges
- Raising awareness at international level
- Special session dedicated to training
- Biannual Magazine – ***Highlights***
- **@ENLIGHTNETWORK**

ENLIGHT

Linked in Groups

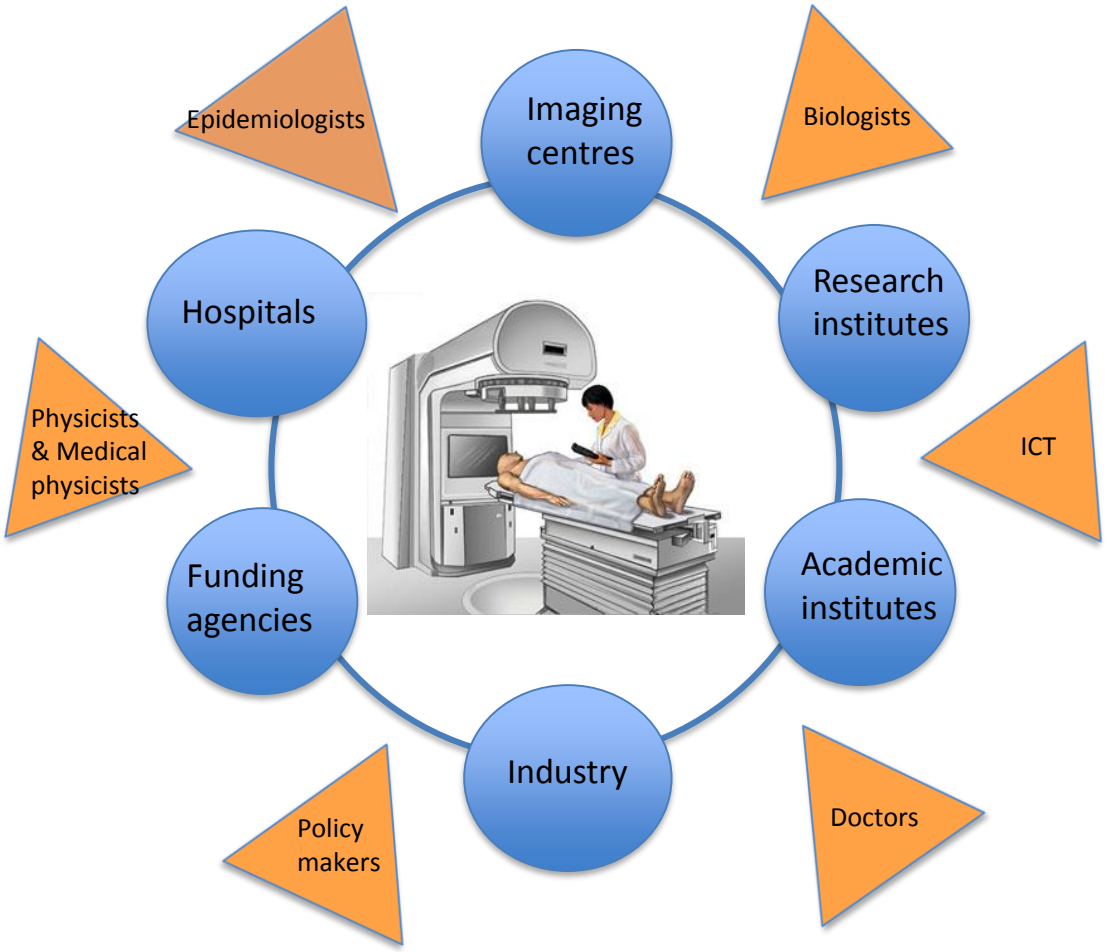
www.cern.ch/enlight

ENLIGHT Training Day, 2018

Master's students, PhD students, professional

ENLIGHT

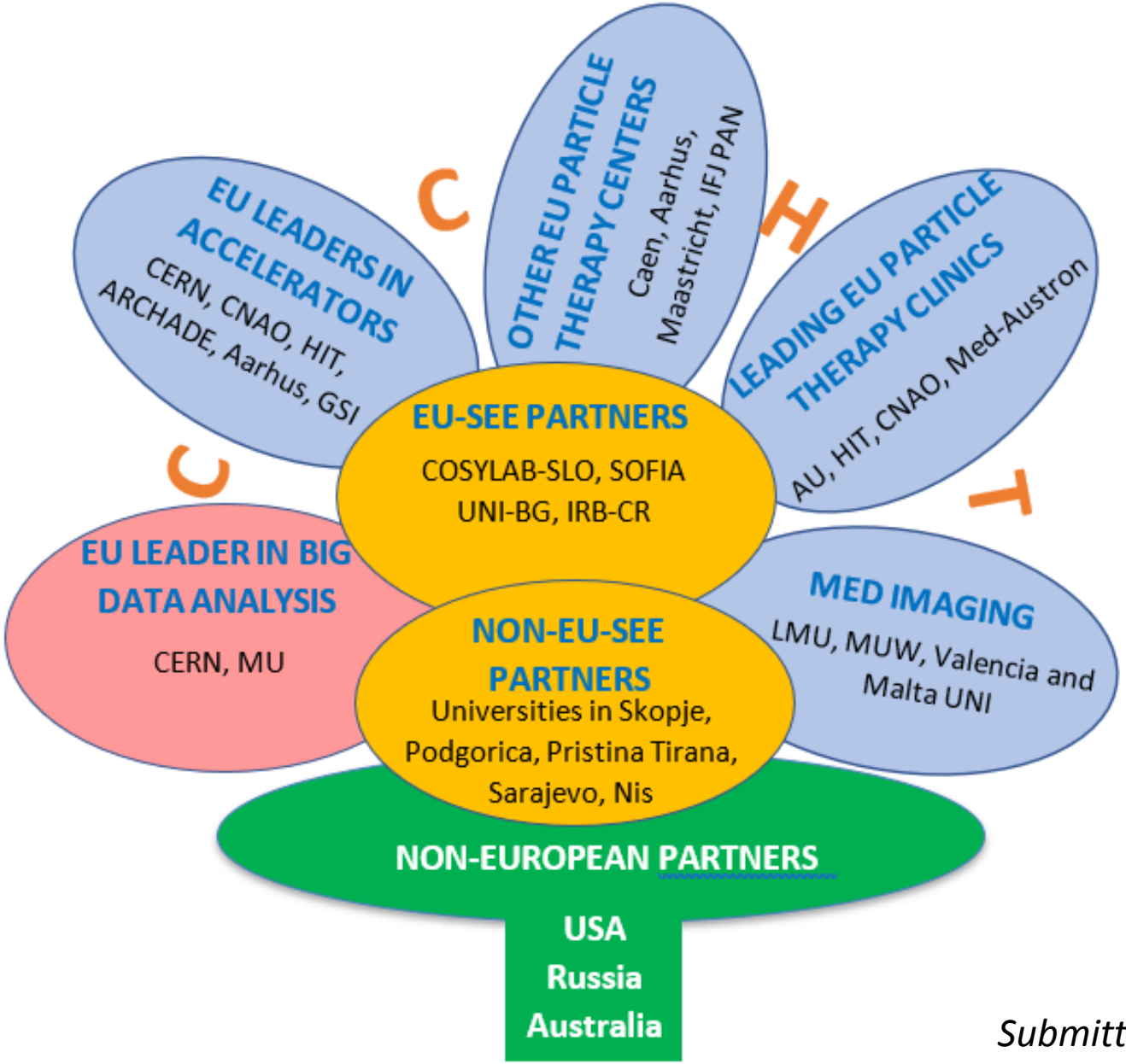
Deploy ENLIGHT for SEEIIST



Next Steps for building SEEIIST community (need resources and people)

- Preparing **a COST action** for building a network in the SEE region leveraging ENLIGHT
- Networking with the directors of the oncological centres in the SEE for starting an **epidemiological platform**
- Submission of a ITN **Marie Curie proposal in January and others**
- Leverage WP2 for the **HITRI Design Study project**
- Ensuring the participations of SEE region in the next **ENLIGHT Annual meeting 2020 in Bergen, Norway**
- Raising the role of SEEIIST and activities using ENLIGHT Highlights and various other **communication platforms.**

COST Action: Combatting Cancer Hadron Therapy



Submitted 6th September

Ideas for the future funding

- Marie Curie ITN Call open: *14 January submission deadline*

We will submit: TREASURE: **Tr**aining **R**esearchers for South **EAS**t e**UR**ope with **E**nlight for the Future

- Explore future opportunities as they arise

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 medical data including epidemiological data
- Promote open access to data and knowledge
- 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

CERN