

European Network for Light Ion Hadron Therapy ENLIGHT



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European Network for Light Ion Hadron Therapy

ENLIGHT



D'où Venons Nous / Que Sommes Nous / Où Allons Nous (Paul Gauguin)

Where Do We Come From? What Are We? Where Are We Going?

ENLIGHT: where did we come from?

- The idea germinated in **2001** by ESTRO HT group at Med-AUSTRON meeting
- ENLIGHT was launched in **2002** to coordinate European research in hadrontherapy
- The Network was funded by the European Commission between **2002 and 2005**
- In **2006** the community decided to continue with ENLIGHT even without funding since it was found to be essential catalyst for collaboration

ENLIGHT was established to

- Create common multidisciplinary platform
- Share knowledge
- Share best practices
- Harmonise data
- Provide training, education
- Identify challenges
- Innovate
- Lobbying for funding
-



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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

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Total funding of 24,6 M Euros



2008-2012

- Marie Curie Initial Training Network
- 12 institutions
- 29 trainees



2009-2013

- Infrastructures for hadron therapy
- 20 institutions



2010-2014

- R&D on medical imaging for hadron therapy
- 16 institutions

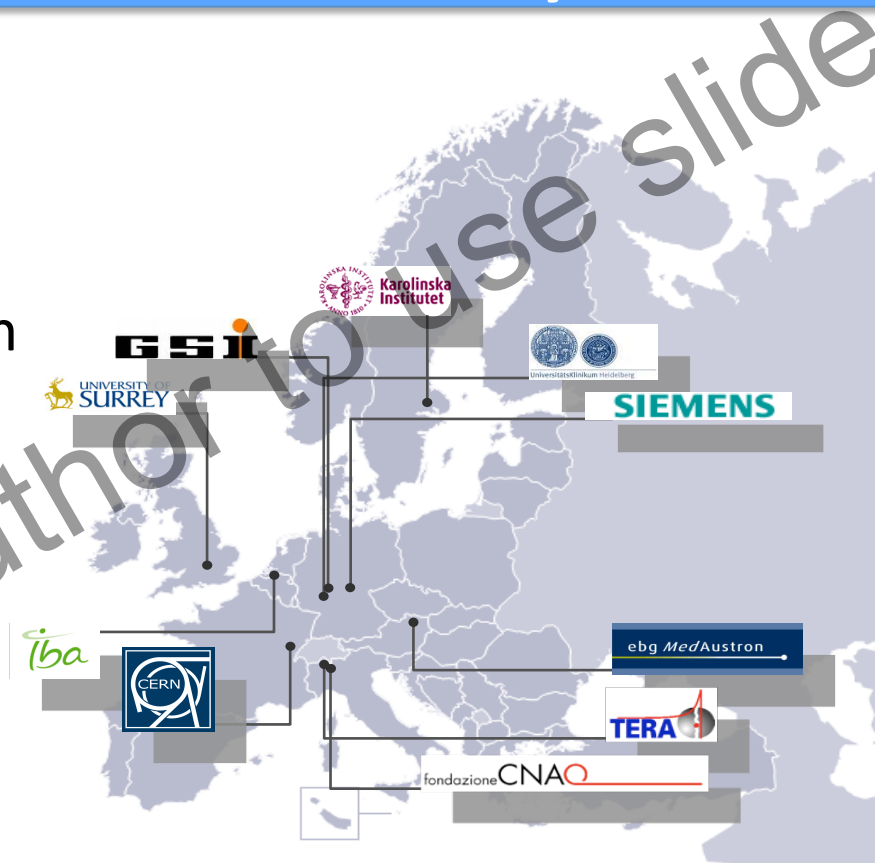


2011-2015

- Marie Curie ITN
- 12 institutions
- 16 trainees

PARTNER – a success story

- Particle Training Network for European Hadrontherapy
- 10 academic institutes, research centres, 2 leading companies
- 29 young researchers



Outcome :

- Now working around the World
- Open access PARTNER-JRR



Union of Light Ion Centre in Europe



ULICE



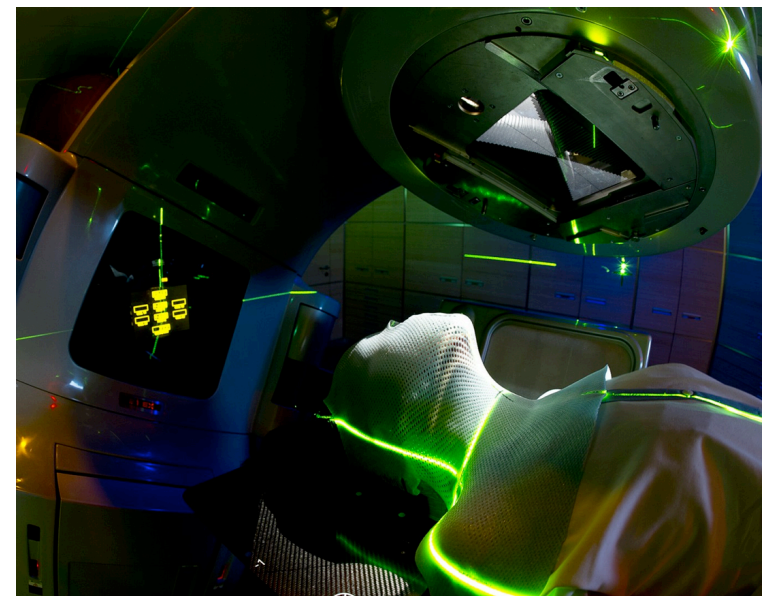
- Transnational access to beam time at HIT and CNAO successfully implemented
- Joint research activities
- Networking

Please contact author

European Novel Imaging Systems for Ion Therapy

Accurate positioning is a crucial challenge for targeting moving organs during particle treatment

- 4-year EU funded project: Budget 6M euros
- launched in February 2010
- 16 leading European research centres and industrial partners, coordinated by CERN
- R&D in real-time medical imaging for more precise and effective particle therapy
 - 2 demonstrators for real time imaging have been constructed and are being tested
 - > 40 scientific publications and 80 conference talks/posters



ENTERVISION

ENTERVISION trains researchers using ENVISION as a training platform

- Marie Curie ITN for young scientists
- 16 researchers
 - 12 Early Stage, 3 Experienced recruited
 - 9 nationalities
 - From medical physics, engineering, nuclear physics, HEP, biological physics
- Mid Term Review passed with “honours” in January 2013
- Chosen as the “gold project” in the advertising campaign of Horizon 2020 of ITN
- Comes to an end January 2015

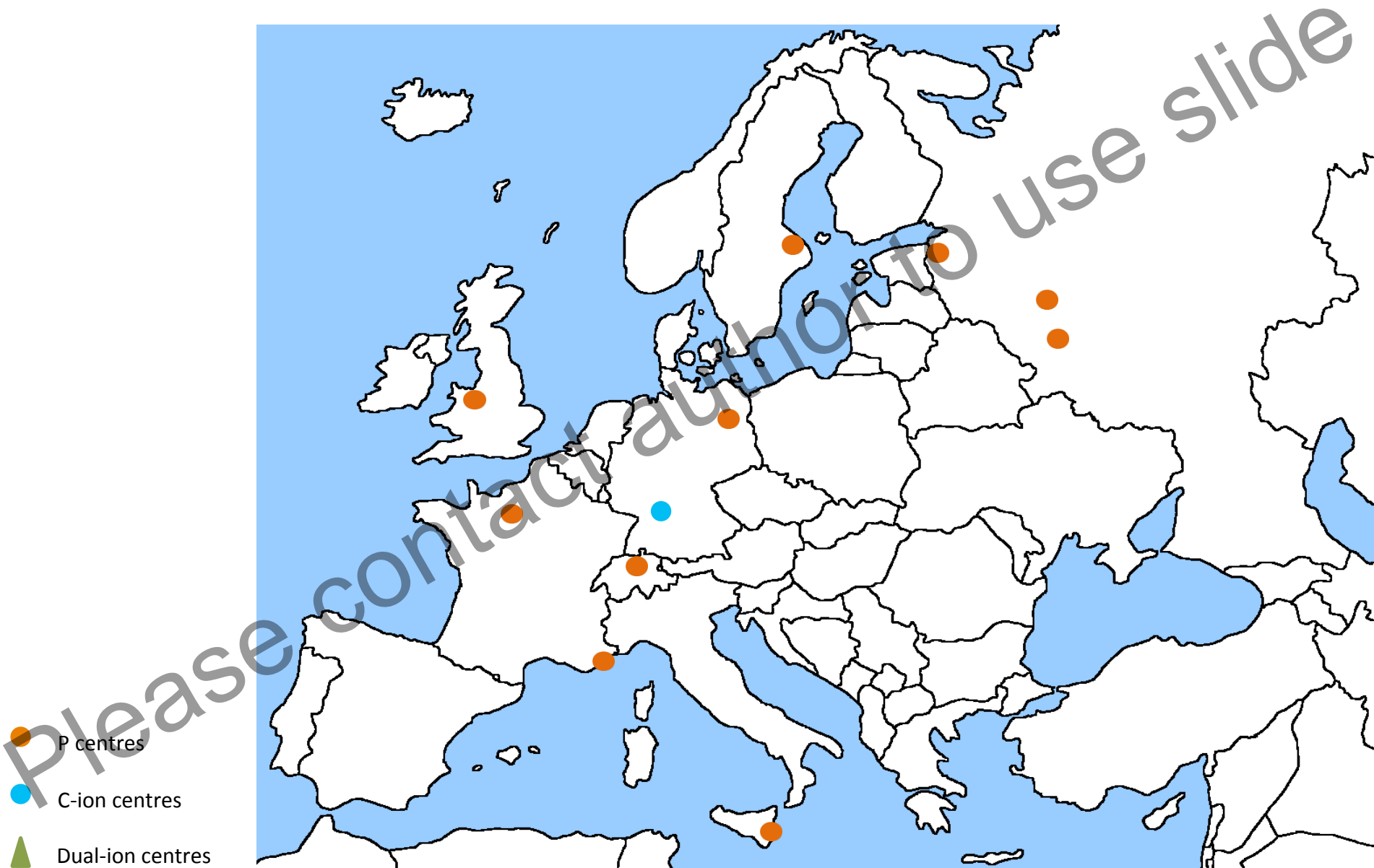


ENLIGHT Now....

- ENLIGHT is growing:
- more countries;
 - more institutions:

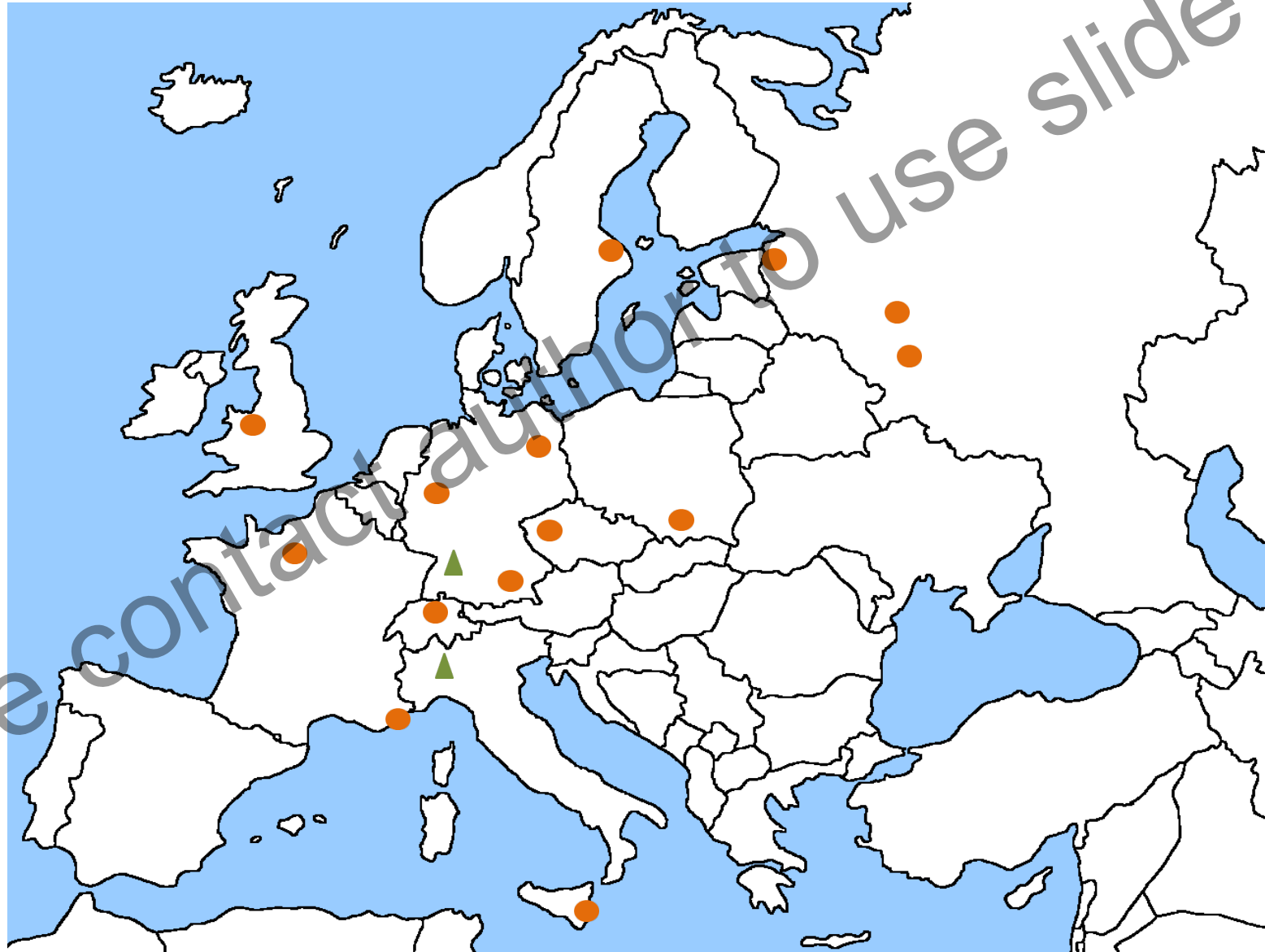


Facilities in operation **then** - Europe






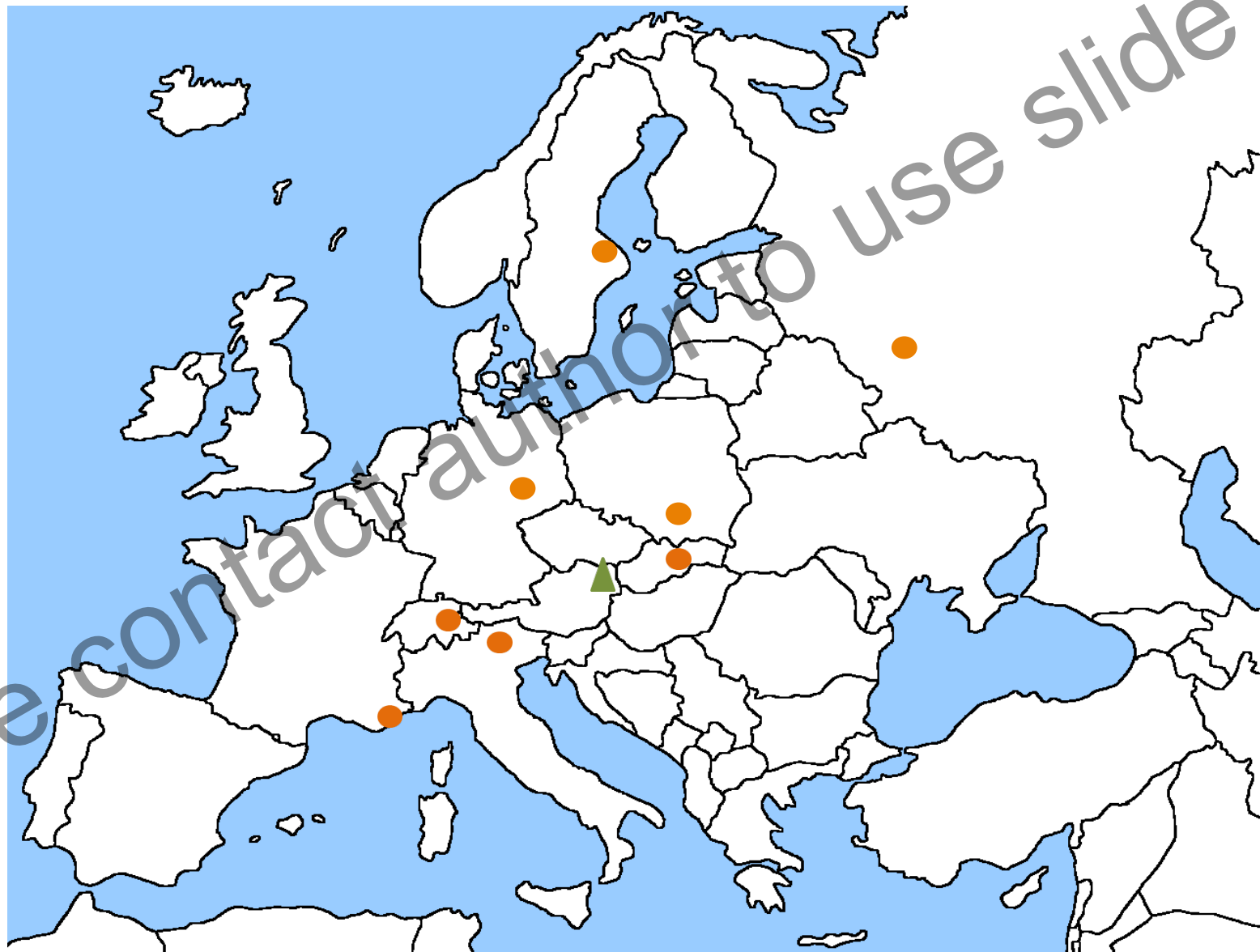
Facilities in operation **now** - Europe

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

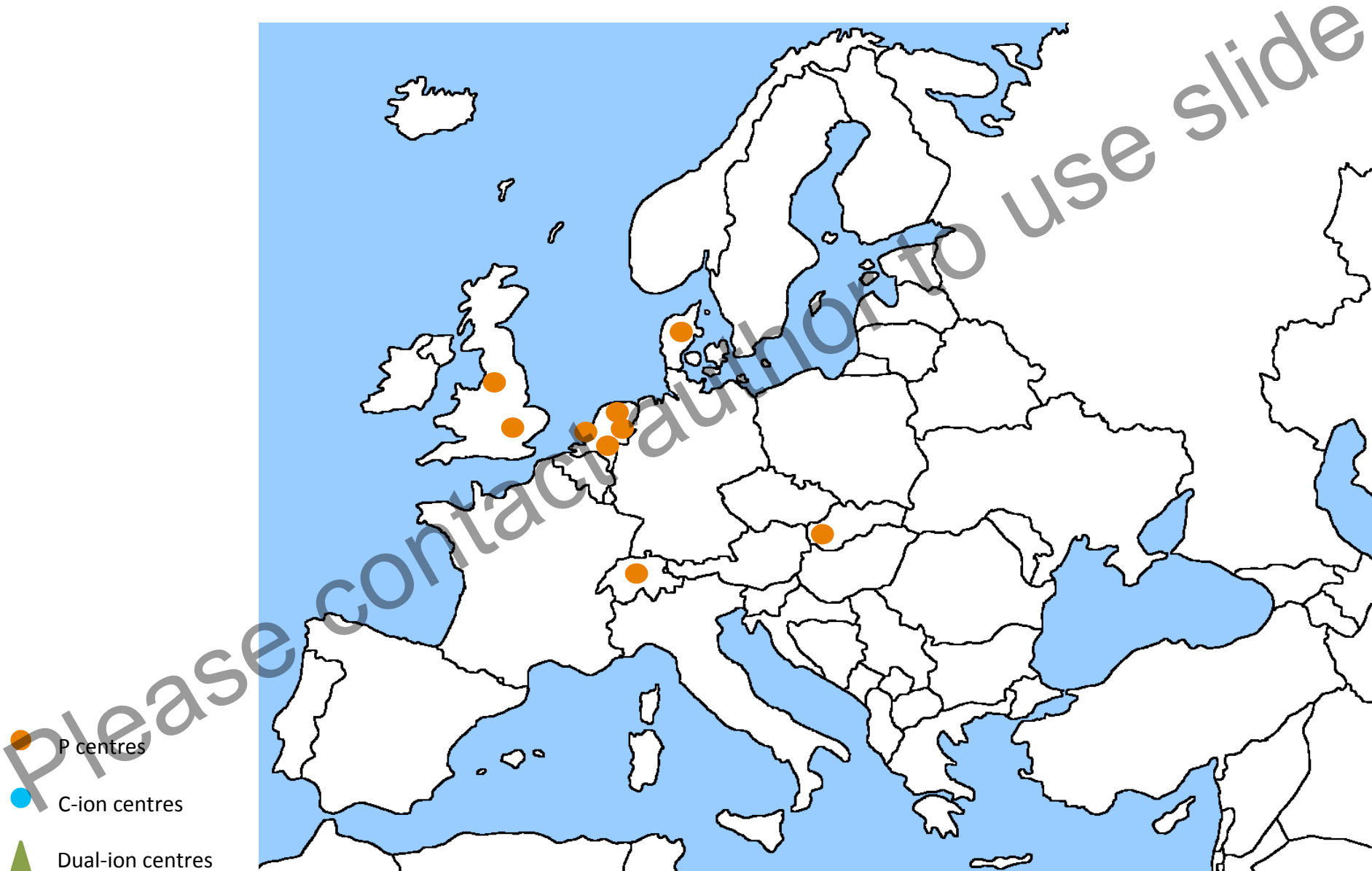


Facilities under construction- Europe

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



Facilities being planned - Europe



Source: PTCOG, June 2014

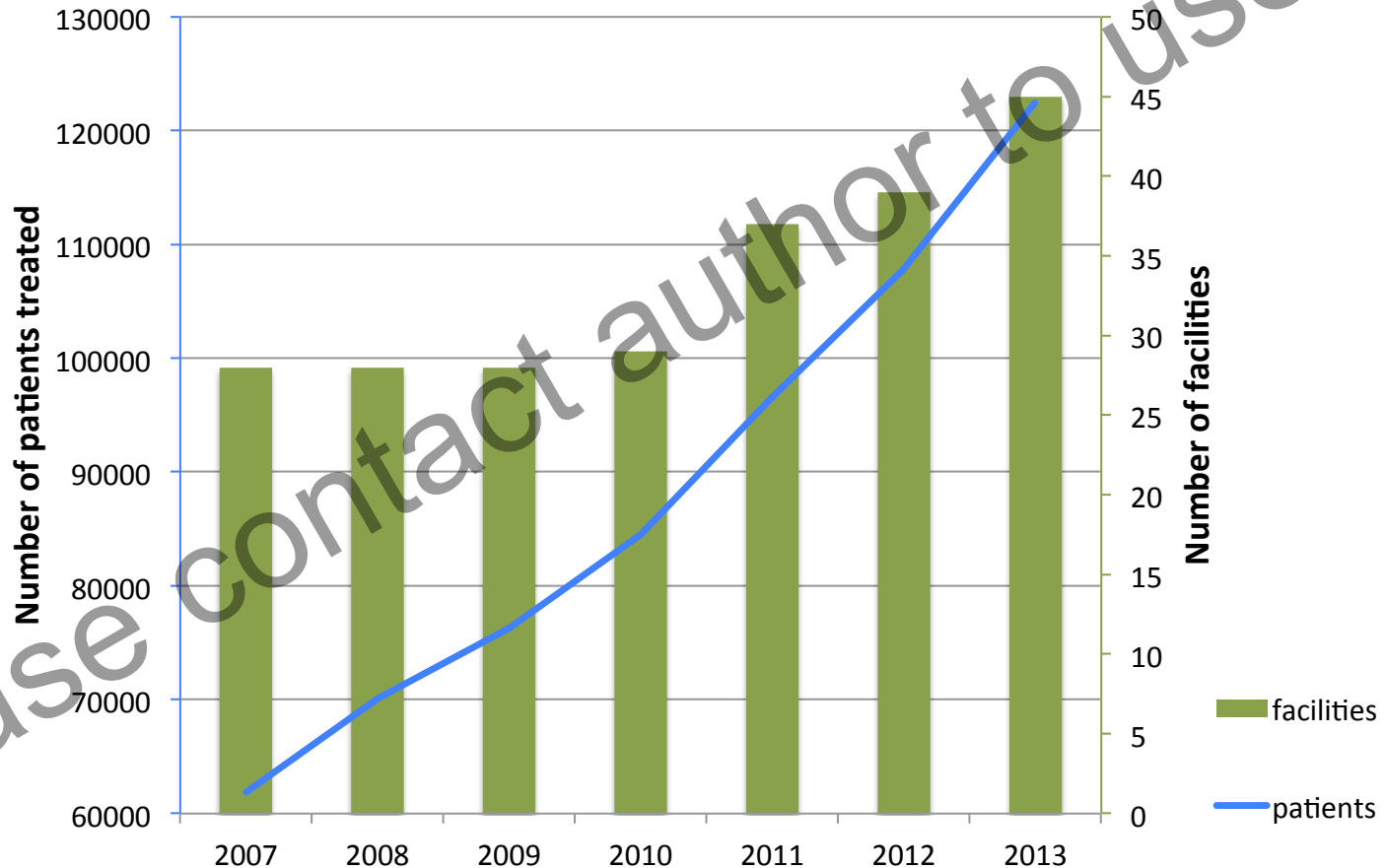
Total number of patients treated

Particle therapy - patients treated and centres



Total number of patients treated since 2007

Particle therapy - patients treated and centres



Challenges for future...

- Clinical trials
- Optimisation of the present facilities to increase patient output
- Cheaper/compact facilities easier to run, cheaper treatment
- Help countries in Europe wanting facilities
- Collaboration outside of Europe

Still on going

- Heterogeneous network: differing needs and interests
- How to balance between basic research and the clinical needs?
- Many partners. How to collaborate effectively and make progress with the key objectives?
- How to position ourselves in the EC Agenda and in Horizon2020

Vision for the next 10 years for ENLIGHT

We need young **leadership** in radiation oncology/hadrontherapy!

We need young **visionary people** to design and shape our future!

We need young **powerful people** to strengthen our interests!

We need young **collaborative people** who talk and work together!

Richard Poetter, MUW, Austria (Pavia 2012)

We need a collaborative network!

