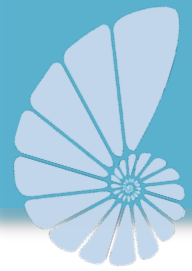


The Fibonacci Project (2010-2013)

Inspiring practices and lessons learned





Fibonacci Project overview

Objective: large-scale dissemination of inquiry-based science and mathematics education (IBSME) in Europe

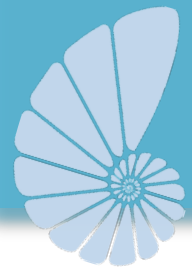
Consortium of 25 partners from 21 countries

Conception & European Coordination: Fondation La main à la pâte

High-level scientific committee

European funding : 4,78 M Euros

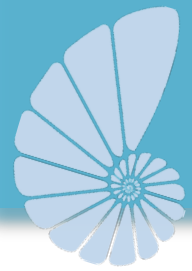




The problem to solve

How to start from 12 experienced pilot centres,
and disseminate new practice from them
without losing the quality and spirit of the
change?





Local initiatives

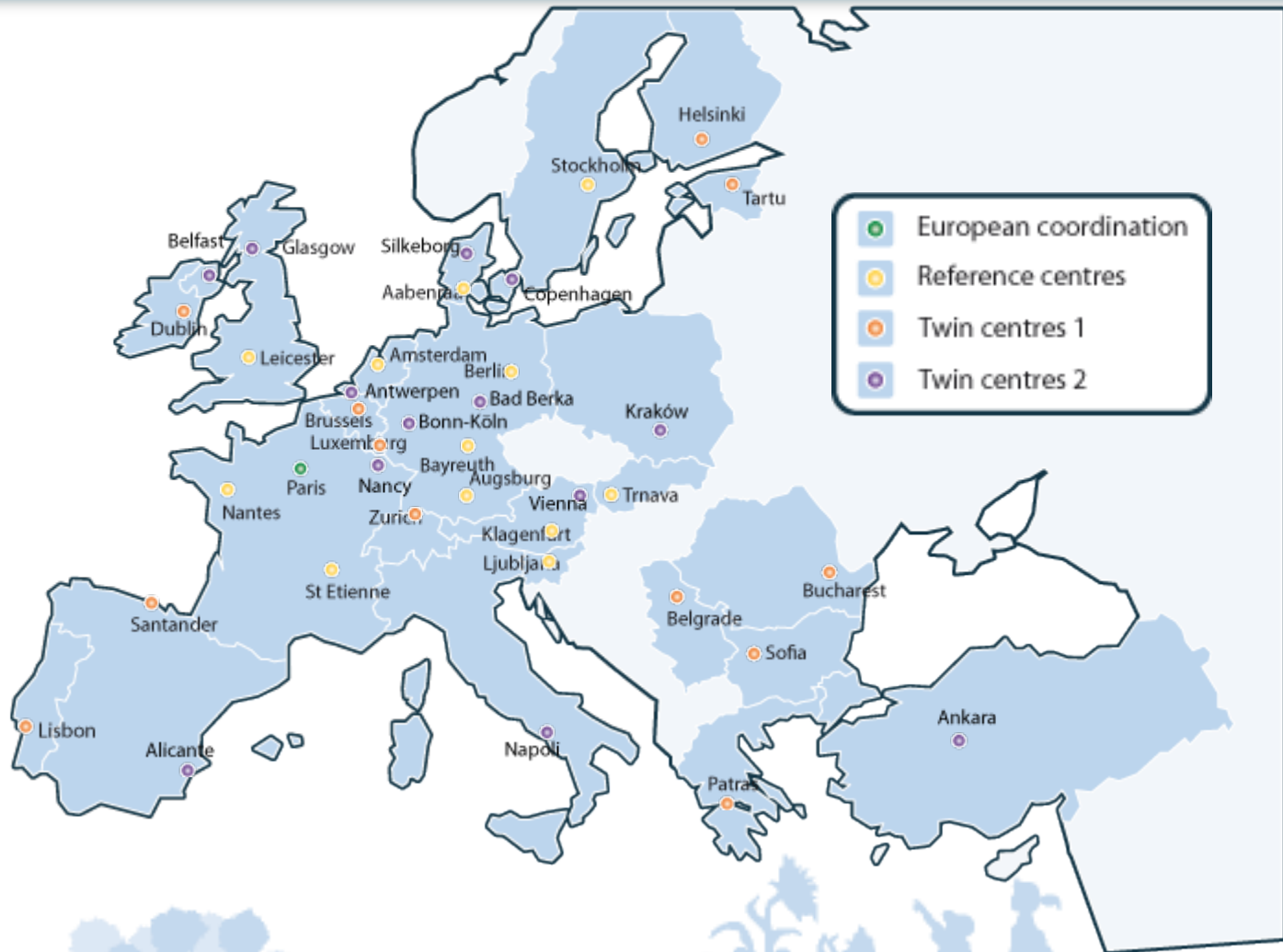
Fibonacci Centres

- Local initiatives for supporting teachers in the implementation of inquiry pedagogy
- Networks of schools in their region
- Group of teachers from each school directly involved in the project
- Links with research centres/universities in the region

Types of centres:

- **Reference Centres (RCs):** centres from which changed practice spread (previously involved in Pollen and Sinus projects)
- **Twin Centres 1 (TC1):** existing experience in IBSME
- **Twin Centres 2 (TC2):** no experience in IBSME, potential for dissemination

The Fibonacci Centres



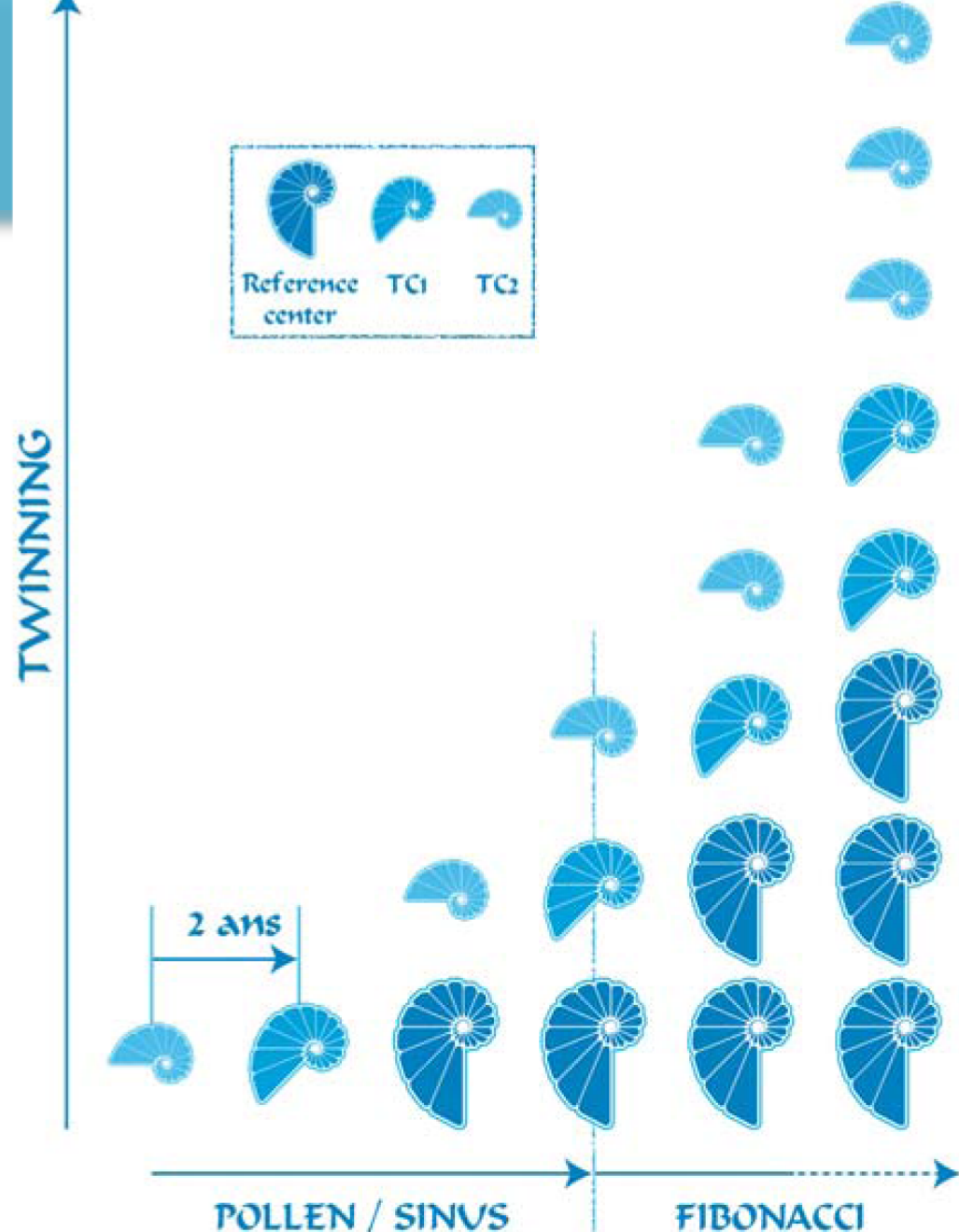
The Fibonacci sequence

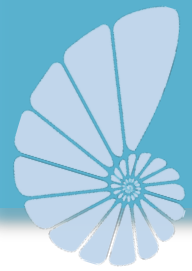
Start:

- 12 RCs
- 12 TC1
- 13 TC2

Finish:

- 24 RCs
- 13 TC1
- 24 TC3





Basic pillars

1. Inquiry-Based Science and Mathematics Education (IBSME) for scientific literacy

- Students learn through inquiry & understand science
- Teachers are experts in teaching, capable of improving their practice

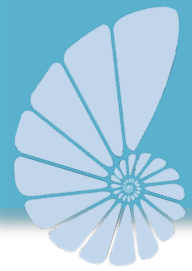
2. Building on local initiatives for innovation and sustainability

- Reduced scale
- Greater concentration of actors
- Better integration into local policy
- Enabling use of local resources
- Testing schemes and tools before scaling

3. Twinning strategy

- Transfer of semi-formalised practices and experiences
- Each Reference Centre (RC) paired with two Twin Centres (TC)
- Activities: field visits, tutoring, exchanges of good practices





Transversal activities

5 Topic Groups of 4-6 partners...

- working together on a transversal topic
- organizing a European training session (60 participants)
- writing guidelines on the topic

4 European Conferences

- **Opening** Conference – Bayreuth, Germany (Sept 21–22, 2010)
- **Follow-up** Seminar in Aabenraa, Denmark (March 2011)
- **Scientific** conference : Bridging the gap between scientific education research and practice, Leicester, UK (25-26 April 2012).
- **Closing** Seminar, Slovakia (Oct/Dec 2012).





Main outcomes

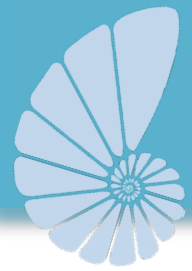
European IBSME network

- 62 Fibonacci centres
- 33 countries
- 5908 teachers
- 303'318 students

Significant rise in teachers' confidence when teaching maths/science

Collection of resources for understanding inquiry and implementing it in the classroom

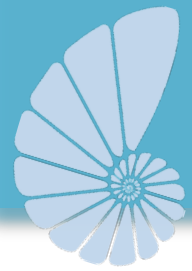




Leverage and spin-offs

- Coverage much larger than planned: 2.3 times more teachers and 6.8 times more students
- In many countries, increased awareness that inquiry pedagogy should become part of pre-service teacher education
- 12 Fibonacci partners pursued cooperation around Comenius project (inquiry pedagogy in education for sustainable development)





To go further....

- The Legacy of the Fibonacci Project to Science and Mathematics Education
- Resources for Implementing Inquiry in Science and Mathematics at School
 - *Background Resources*
 - Learning through Inquiry
 - Inquiry in Science Education
 - Inquiry in Mathematics Education
 - *Companion Resources*
 - Implementing Inquiry in Mathematics Education
 - Tools for Enhancing Inquiry in Science Education
 - Setting up, Developing and Expanding a CSME
 - Integrating Science Inquiry across the Curriculum
 - Integrating Inquiry Beyond the School

