THE ECONOMIC BENEFITS OF THE LHC RESEARCH PROGRAMME

Is it worth investing in large-scale research facilities?

Co-funded by the H2020 Programme of the European Union
WHO BENEFITS?

1. Scientists
   (basic research and publications)

2. Students and researchers
   (Education, training, competitiveness)

3. Industry
   (global network, new Products & Services more efficiency)

4. General Public
   (Culture and Education)

5. Taxpayers
   (Knowledge as public good)
1 SCIENTISTS

26.700 Publications from the LHC experiments.

242.600 Publications citing LHC experiments (P0).

862.100 Publications citing P1.

2 STUDENTS & RESEARCHERS

Education that goes beyond solving scientific problems.

- Project management
- Teamwork and Networking
- Independent thinking
- Communication
- Problem Solving
- Technical Skills
- Scientific Skills

€150,000 cumulative salary increase per student
Young researchers
(1993-2038)

34,000 Students (57%)
26,000 Post-Docs (43%)
4,204 Companies | 47 Countries | 33,414 Contracts

Technology orders as a driver of innovation

- High-field magnets: 3,000
- Materials: 2,500
- Vacuum components: 2,000
- Refrigeration: 1,500
- Electric components: 1,000
- Measuring systems: 500
- Cooling: 250
- Precision machinery: 125
- Electronics: 62


- 33% Developments
- 24% Specific Products
- 17% Customized products
- 16% Innovative products
- 11% Standard products
- 9% Innovative Products
How much does each one contribute?

**PUBLIC**

Cultural value (1993-2038)

- 5,1 Million CERN Visitors
- 1,6 Million Visitors to CERN's exhibitions
- 29,3 Millions of Social Media Users
- 775 Million of visitors to the sites

**TA XPAYERS**

430 Millions of taxpayers in 22 Member states

€ 2,50 per Person and per year
INVESTING IN FUNDAMENTAL RESEARCH - SHAPING A BETTER FUTURE

LHC Programme (1993-2038)

Benefit € 25,6 Billions

Cost € 22,3 Billions

Economic Impact

The Large Hadron Collider (LHC) research program at CERN generates approximately € 3.3 billion in net present value (investment and operating costs are deducted) for the Society in the period from 1993 to 2038.

In other words, the research infrastructure reimburses its costs with 15% surplus in the form of societal benefits.

The data of this infographic comes from a cost-benefit analysis carried out by the University of Milan and the Center for Industrial Studies in Milan (Italy). The European Union’s Investment Projects Guide to Cost Benefit analysis of Investment projects (2014) has been used for the analysis to ensure that a fact-based method is used.

The study is available at the following link: http://cds.cern.ch/record/2319300