# Chapter 11: Big science and social responsibility in the digital world

- In short, what is our Chapter about?
  - CERN's long-term history in boosting leading-edge computing, machine learning and data analytics
  - Governments with increasing expectations on responsive research and societal impacts from funding big science
  - Big science transitions towards big data and open science infrastructures and their applications and societal impact in public health and COVID-19 research => new dimensions of societal involvement, privacy issues in big data applications and societal impact

# Chapter 11: Summary Status

- Our estimate of current level of completion: 85%
- The following additions/revisions will be completed by July 31st
  - Strengthening the line of argumentation and storytelling
- (if) our chapter includes direct quotes or images/figures used from other sources, permission needs to be asked from them as follows (examples!):
  - Integration of contributions from EMBL/EBI?

# Chapter 11: Key messages, insights (possible input for other chapters)

- Needs of big science as stimulus for science-industry-interactions and impact on society (co-developers, lead users, inspiration)
- Organizational transition of multidisciplinary science-industry interactions towards openlab
- Transition from big science mindsets along scientific disciplines => from high energy physics to bioinformatics
- Interactions between scientific progress and technological needs as well as between technological solutions and new scientific pathways (mutual fertilization)
- Transition from scientific applications as testbeds towards broad societal impact, but also transition of mindsets?