

The Cost of Big Science

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The level of development and scientific progress of a country is closely related to the number of "large-scale scientific facilities", or as they are usually called "cathedrals of science", located on its own territory, or in which it participates abroad, in partnership with other countries. These infrastructures produce excellent science related to a major scientific discipline, such as astronomy with large observatories, or they can be more transversal and serve different disciplines, such as neutron sources or synchrotrons. In all cases, the construction of these large and expensive scientific facilities usually spans several decades and they always act as catalysts for high-tech companies.

In this talk, I will give some views on different issues related with these national and international analytical large-scale infrastructures (neutron sources and synchrotrons) from their decision mechanisms and roadmaps, their different governance models, their funding mechanism and budgets (building and running costs), their access models, and their scientific and industrial return.



Figure 1