

# LHC Experiments Upgrade Cost Group (UCG)

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*Mandate of the cost review group for LHC experiment upgrades*

## Introduction

As was the case for the LHC experiment construction phase with the implementation of the COSt REview (CORE) group, a similar dedicated group will be created jointly between the LHCC and the Scrutiny Group (SG) of the LHC experiments' Resources Review Boards (RRBs). The newly-created Upgrade Cost Group (UCG) will review all upgrade-related costs planned and incurred by the LHC experiments for their upgrade projects for the period after the Long Shutdown 1 (LS1).

## Composition

The group will be composed of

- Two members external to the LHCC and the RRB SG, of which one will be nominated as the Chair.
- The Chairpersons of the LHCC and the RRB SG.
- Two members each from the LHCC and the RRB SG, nominated jointly by the two respective Chairpersons and the Chair of the UCG. These members will be selected and appointed according to the TDR under consideration.
- In exceptional cases the Chair may invite external experts to seek advice on specific technical questions.
- The scientific secretariat will be under the responsibility of the Scientific Secretaries of the LHCC and the RRB SG.

The members of the UCG will be appointed by CERN's Director for Research and Scientific Computing, and all members have a standing invitation to the LHCC meetings.

## Procedure

The UCG will review project costs at the time of submission of a draft Technical Design Report (TDR) to the LHCC. In order to assess the project, the UCG requires the TDR to include, or be separately accompanied, by information on:

- The total estimated project cost, with a breakdown of this cost allowing a detailed review.
- The initial spending profile.

The UCG will meet at least once per year. As part of the standard procedure, the UCG will also meet with the Management of the LHC experiments to review and discuss the costs.

The outcome of each cost review will be submitted in a written report, together with the findings of the LHCC as regards scientific and technical issues, to the Research Board (RB) for the formal consideration and decision on approval of the TDR.

Should the TDR be approved by the RB, the project will be followed by the respective existing RRB SG in the standard scheme.

## **Reporting**

The UCG will report to the RB, together with the LHCC, as defined above.

The Chairpersons of the LHCC and RRB SG will report on the progress at the plenary meetings of their respective committees.