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Software development and deployement

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Software plays a major role in all phases of High-Energy Physics research, from the processing of the first particle collisions to the final end-user analyses. Therefore, the quality of all software products involved must be ensured in order to achieve successful results now and in the future. Quality of software is heavily correlated to multiple stages of the software development process as well as its deployment. These processes need to be built based on best practices previously agreed upon with the collaboration.

This talk highlights the pillars in which the FCC Software developments should rely on in accordance with our years of experience in the current LHC experiments. The main goal is to establish a set of common practices and conventions to develop a robust but flexible software system for the FCC detector studies. The design of such software system should allow physicists to use and develop the software for a variety of use cases such as using an existing release to do some simulation or analysis, testing and validation of new algorithms or development of final analyses. At the same time, the architecture ought to be easy to maintain and evolve over the years.

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