

Radiation Protection Awareness Challenges at CERN



HSE
Occupational Health & Safety
and Environmental Protection Unit

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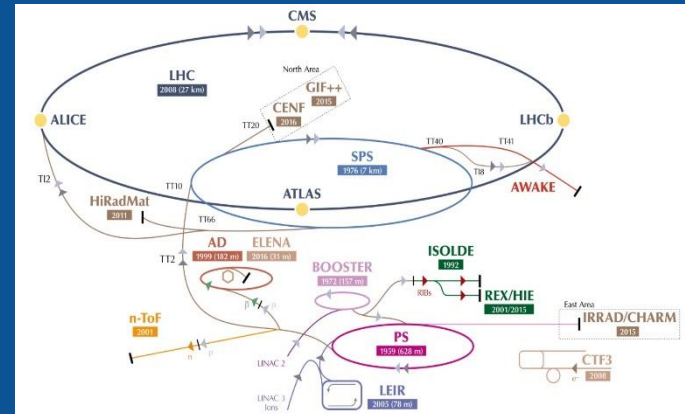
Introduction

The European Organization for Nuclear Research (CERN) operates various particles accelerators and facilities for high energy physics research.

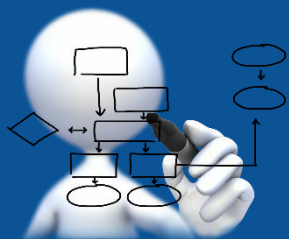
CERN's safety policy is based on raising workers' awareness of the multiple hazards they might face in a working environment as complex as that of CERN.

Over the last 20 years, more than 40 000 person have been trained. Between 2019 and 2020 major challenges are ahead with the second long shutdown (LS2) where CERN facilities will be stopped for the big work site.

With the aim of continually improving quality and to meet the requirements of the demanding long technical shutdowns, CERN has modified the radiation protection awareness approach and revised the methodology behind its design.



Radiation Protection History and Improvement



< 2012
the RP-staff In charge
of the training

Long Shutdown 1 (LS1)

2013
Controlled Area
Supervised Area

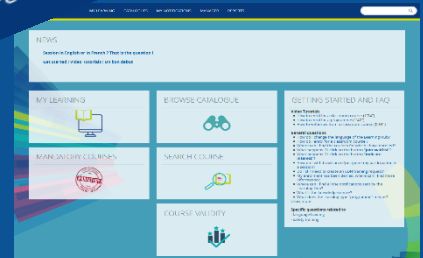
2015
Quality Insurance

2014
Controlled Area
Supervised Area
Specific experiments courses

2016
Modular approach

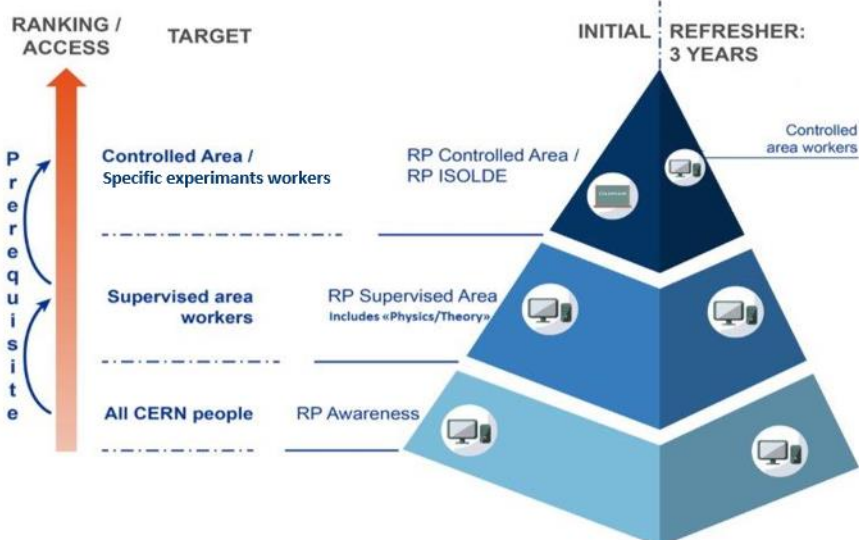
2018-2019
Modular approach
implementation ongoing
LS2 Challenges

Long Shutdown 2 (LS2)



Radiation Protection Training Challenges

Modular Approach implementation



Continuous Improvements

- The contents of the radiation protection courses (classroom and e-learning)
- The improvements of the courses :
 - ⇒Revamp of «Controlled Radiation Area» classroom course
 - ⇒Revamp of «Supervised Radiation Area» online course
 - ⇒Additional practical parts (serious game, ...)
 - ⇒New specific experiments online courses
- Translated sessions (other than the official languages)
- The organization and content of RPE*/RSSO** courses
- Feedbacks analysis, Audits,
- Dedicated courses for specific machine/experiments courses :
 - ⇒AWAKE, CMS, CHARM, IMPACT, IRRAD, ISOHALL, ISOLDE et MEDICIS, LHC large experiment, N_TOF, Na62, SPS Machine, Waste management,...

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