2.1. The Management step The Management step concerns different topics such as: ● The welcoming and training of new collaborators (every collaborator, independently from its activity, or student going to practical labs have a half-day course introducing them to the basics of safety, fire-fighting training and first-aid). ● The decentralized safety management and organization where each research and teaching unit has a safety delegate or coordinator (he acts as a first-line safety actor). ● Lab-door panels (including information on present hazards, responsible and contact persons, prohibitions and requirements, safety classification, cleaning issues, etc.) on every research and teaching lab. ● The hazard mapping of all research/teaching labs and offices based on an innovative platform. It ranks 27 hazard categories according to a 3 level control [10]. This allows identifying laboratories with a high level of danger or cumulative hazards as depicted by the example in figure 2. In fine ACHIL, as hazard mapping platform can be used by safety officers and Dean of School as decision tool to support safety management. ● Near miss, incident and accident web-based interface and database allowing analyzing and implementing adequate corrective measures in order to avoid the event's repetition. This database is open to all collaborators for safety transparence and information. According to figure 2, it could be observed that flammable is the most important hazard, in this building (only one represented), as it is present in 7 labs with levels from the lowest (1) to the highest hazard (3). The 27 hazard categories include not only chemical hazards, but also physical hazards (such as lasers, strong magnetic fields, cryogenics, ..), physico- chemicals, biological, electrical, and others hazards. 2.2. The Information and education step The Information part of the program is mainly related to targeted education or workshops for students (bachelor, master or PhD students), researchers, technicians, teachers, administrative and technical staff as well as to external contractors. Over 20 semester or short term courses, trainings or tutoring covering the main observed hazards are proposed (some of them being mandatory). The second aspect relies on written information, such as quarterly safety newsletters (electronic and print-outs), directives, check-lists, flyers. Some typical courses and training are listed in table 1. One can notice that this program tends to tackle the different activities that might be present in universities. Not all courses are listed below, but selected from the different hazards. A web site especially dedicated to safety has been developed (http://sb-sst.epfl.ch) including a comprehensive online safety manual, tutorials on different hazards that collaborators or students could face in their activities, training videos on how to behave in case of emergency, how to deal with special hazards or how to safely operate in chemical labs and where they could find help from safety specialist. Emergency equipment and their use are also depicted with training videos, operating manuals and directives.

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