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Approaches to maintaining and building organisational knowledge in a nuclear expert organisation

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The context of the presentation is an in-house nuclear design and R&D organisation whose role is to support safe and economical operation of Fortum's NPPs and to identify, maintain and develop the required knowledge. The employees are nuclear experts with engineering/science background. Managing knowledge embedded in the expert work, working culture and collaboration across the expertise areas has been found critical for the organisation.

The current KM challenges are mainly related to human resources. The turnover rate of young experts is high and considerable effort needs to be put in job induction. At the same time, due to the low number of recruitments after the Chernobyl accident, there are generation gaps in the experienced workforce. Thus knowledge is being transferred from a small experienced group to a large group with considerably less experience and high turnover rate. Consequently, strategies for maintaining knowledge and organisational learning need to be revised.

The increased attrition risk of young experts is believed to be caused by a change in the learning curve after the intense job induction phase. To maintain continuous learning the new expert needs support from the organisation e.g. in building their professional networks and finding more possibilities for developing their expertise. During the recent years, there has been more possibilities for full and small scale job rotation and the opportunity has been most popular among young experts.

It is typically believed that developing a nuclear expert takes at least 5 years. Because of the lack of experienced workforce, the new experts are, however, relatively quickly given responsibility of challenging tasks. When the working culture supports teamwork, also learning and knowledge transfer are enhanced. Thus new experts are able to perform well in demanding positions. This also provides them with more challenges and variation in tasks.

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