

When Expertise Departs



Addressing the risk of Knowledge Loss

The shortage of manpower and skills is a massive issue for Engineering and Petrochemical companies. A [recent article in the Financial Times](#) stated that

There is a missing generation in the oil industry. More than half the petro-professionals are less than 10 years away from retirement. A petroleum engineer graduating this year is likely to receive a higher starting salary than an Ivy League graduate going to Wall Street. This competition for people and equipment has driven up costs dramatically. These costs and shortages are now causing delays to new projects.

This skills shortage carries 2 risks for the companies themselves. Firstly, much of an organisation's vital knowledge can be held by single people. A single subject matter expert may hold vital operational knowledge in his or her head, representing a "single point of failure" for the organization. If the person leaves, the knowledge is at risk of leaving too. Secondly, the skills shortage means that these people are more likely than ever to leave. They are older, and they are reaching retirement age. They are valuable, and open to job offers. Job offers are higher; as the oil price soars, so do the salaries in the smaller independents.

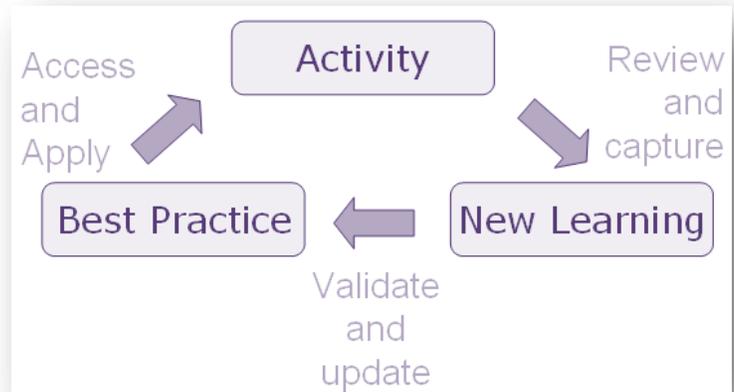
As a result, the risk of knowledge loss is higher than ever, and increasing month by month. And the consequence of that risk could be lack of crucial skills and capacity, leading to "corporate incompetence".

The risk can be addressed in 3 ways

- Eliminate the risk, by decoupling the knowledge from the heads
- Retain access to the knowledge, through retaining access to the people
- Retain the knowledge itself, as a reaction to departure

Eliminating the risk

Eliminating the risk through decoupling the knowledge, involves putting in place a routine Knowledge Management system, or organizational learning system, to gradually build up a body of knowledge both in recorded form, and shared by the team. A system such as this will require the following.



1. A place to store practice knowledge – tips, hints, manuals, guides, and other team documents. Example – a team SharePoint site, and document library
2. A set of processes for reviewing ongoing activity. These might include After Action reviews of new contracts or new projects. Learnings from these will be stored in the knowledge store (above)
3. A person to drive this system. This will not be one of the specialists, who will already be loaded with work. This “knowledge manager” role can be given to someone more junior, someone less overloaded, and potentially someone who needs to learn from the specialists. Their role is to learn themselves, and also to document the learning for others

This combination of people, process and technology creates a local knowledge management system which over time will build up the repository of knowledge, and spread learning and best practice. As a result the reliance on single specialist individuals is reduced. Rolls Royce set up a system like this, entitled KMAP (knowledge acquisition and modeling process), partly as a response to the aging workforce, and have deployed the system throughout many parts of their operation.

Retaining Access

Retaining access to the knowledge is the second approach to reducing the knowledge retention risk. If the knowledgeable person has retired, then he or she can be re-employed on a part-time basis providing advice, mentoring and solutions to problems. For example, Shell uses retirees to act as experts on their community question and answer forums. There are two main issues

which suggest that this is a short-term intervention only. The first is the fact that these retired experts, once they are no longer practitioners, will begin to lose access to up-to-date knowledge. Their knowledge goes out of date. Secondly, you are only postponing the issue. Eventually the retiree will choose to retire fully, and the source of knowledge will be gone.

If the person is moving jobs within the company, he or she can be used as a mentor for new staff, and can even help form the core of a community of practice. There will need to be a discussion with their new manager, to ensure that they are allowed time for mentorship duties, and there are two options for the mentorship program.

A regular program of mentorship, perhaps on a monthly basis, with accountability for developing the knowledge and capability of the new staff. In effect, this is an extended handover process which lasts after the job holder has moved.

Mentoring on demand. Here the previous job holders remain available to answer questions and solve problems on behalf of the new job holder. If this route is taken, then the previous job holders should be used as the core of a more extended community of practice, rather than the sole knowledge holders. Otherwise, there is a risk that the knowledge of the previous job holders will become increasingly out of date, and therefore potentially misleading.

If the person is leaving to a better paid job in another company, then it will not be possible to retain their services. If they leave to become consultants, you will be able to buy their knowledge back at a price.

Retaining the Knowledge

Retaining the knowledge itself is the final fall-back option. Here the knowledge of the leaver is documented as fully as possible, focusing on working models, approaches, tips and hints, effective practices, in knowledge of people and of reference sources. This is the sort of knowledge that can supplement existing manuals and documents, and provide guidance for people who follow on.

There are several key success factors to knowledge retention. These include the following.

High grade the risk. Not every person leaving represents the same knowledge risks to the organization. Any retention program needs to focus on those areas which represent the greatest risk to the organization.

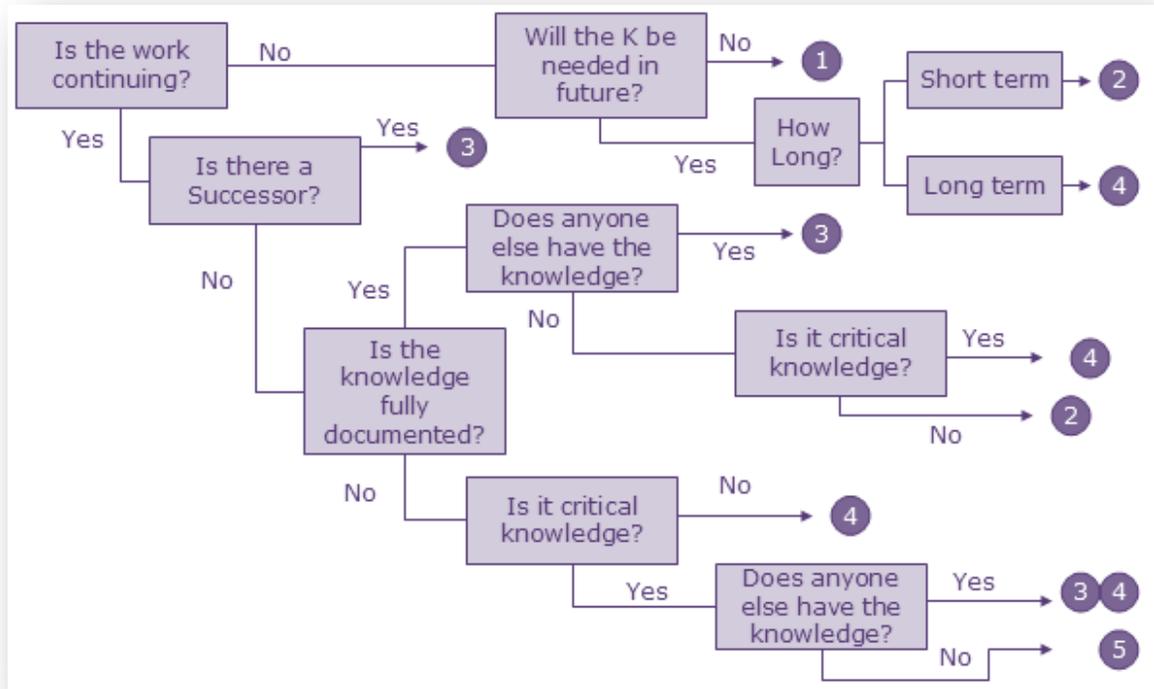


Figure 2. Decision tree for high grading retention risk

Choose a retention mechanism that fits the risk. Where the risk to the organization is low [the knowledge is not vital, is well documented, or is also held by other people who are not leaving] then little effort needs to be put into knowledge retention. Where the risk to the organization is high [the knowledge is vital, is not documented, and the leaver is the sole knowledge holder], the investment of time and resource is important.

- ① Self-help documentation, optional
- ② Self-help documentation required, support provided
- ③ Structured and documented handover period
- ④ Knowledge elicitation process and interview
- ⑤ Knowledge elicitation, high priority

Figure 3. Retention processes (see Figure 2)

Even for individuals who represent a high knowledge risk, you may not need to capture all the knowledge. Some knowledge topics will be of greater value than others, and a retention process should focus on these.

A full retention process would involve an in-depth knowledge interview with the leaver. This one to two day interview will focus on the key areas of knowledge, how the leaver approaches and addresses these, and the resources that he or she might use. These interviews are extensively used by Shell as part of their ROCK [retention of critical knowledge] program, and are stored accessibly for future reference [Shell use a system of Wikis for storing this knowledge]

If a successor in the business has been identified, then this successor needs to be involved in the retention process. The more time that can be devoted to this, the better, and in some organizations the leaver will be specifically asked to spend several months sharing their knowledge. The role of the successor should be not just to learn, but also to document the learning. This documentation can then form the basis of a local learning or KM system as described above.

Implementing a retention program requires an investment in training, and requires dedicating time to the retention process itself. However where the knowledge loss represents a significant risk, then a knowledge retention program represents the management of change necessary to reduce that risk to an acceptable level.

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