Harnessing Knowledge

"We must harness curiosity, creativity, and diverse perspectives, because today's standard knowledge will not help us handle tomorrow's surprises."

— Roger Spitz - international bestselling author, President of Techistential (Climate & Foresight Strategy), and Chair of the Disruptive Futures Institute based in San Francisco

With all the changes happening in our industry, from the influx of renewable energy to the rapid retirement of experienced personnel, it is more important than ever to harness knowledge to sustain the reliability, resilience, and security of the grid. RF's strategic plan includes harnessing knowledge to address risks to the grid creatively and comprehensively.

K. Selvavinayagam and V. Jothi Francina, define harnessing knowledge as "a process that helps organizations to generate and gain knowledge, and to select, organize, disseminate, and transfer important information and expertise owned by the organization that is necessary for … making decisions, solving problems, learning, and strategic planning."[1] Harnessing knowledge affects an organization's competitiveness. Organizations that are successful at harnessing knowledge are "better equipped to innovate, make informed decisions, and stay ahead of the curve."[2]

The basics of managing knowledge include identifying current and historical knowledge and recording it. This is a challenging undertaking, since information ranges from the development of operational procedures to the wisdom collected from storytelling of experienced employees. Knowledge management continuously improves knowledge harnessing, as it helps drive creativity and harness the best practices that are found throughout your organization.[3] Harnessing knowledge through data analytics captures a mountain of various data to develop databases and dashboards that help us see organizational and industry trends, both positive and negative. It has helped our industry be nimbler in the face of uncertainty of the future of the grid.

Tacit or Tribal knowledge

Effective knowledge management may not always address tacit, or tribal knowledge. We've heard the phrase "tribal knowledge" being used across all industries. How is it defined and what can we do better to capture this knowledge? One definition is an "amalgam of knowledge and meaning; an often-elusive elixir, [and] artfully used it can inspire groups and organizations to higher levels of collective performance and reward."[4] In our industry, knowledge is not limited to documents and data, but also includes the organization's collective knowledge, which is often undocumented and held by individuals. Your skilled and experienced workforce is constantly changing to bring in new personnel while tribal knowledge is leaving with an upsurge of retirements.

Camembert Cheese Mystery[5]

In short, the story is about a critical step in the aging process of cheese and how a seasoned chief affineur was able to tell if a wheel of cheese was ripe by simply poking at it. An apprentice with him tried it and never seemed to consistently tell the ripeness by this simple method.

They even brought in physicists to figure out the cheese's readiness and created experiments that still could not get the consistent results on par with the chief affineur.

Finally, it was found that it was unconscious knowledge at work, as a sommelier (wine steward) who spent much time on separate occasions with the chief affineur was able to smell the movement of the surface mold – they were unconsciously inhaling this movement of smell which gave them the proper assessment.

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[1] Harnessing Knowledge – a Strategic Tool for Continuous Development

[2] Harnessing Knowledge for Competitive Advantage: Strategies for effective knowledge management in organizations

[3] The secret to harnessing tribal knowledge to accelerate operational excellence

[4] The secret to harnessing tribal knowledge to accelerate operational excellence

[5] The secret to harnessing tribal knowledge to accelerate operational excellence

To ensure sustainably reliable and resilient grid operations, organizations can identify the individuals with such tribal knowledge, and identify the types of information items that may be intangible organizational knowledge. Tribal knowledge is challenging to harness due to several factors. How do you harness years of experience that have created what I call "muscle memory" in the experienced worker? See the "Camebert Cheese Mystery" as an interesting story about tacit knowledge.

So how can you harness tribal knowledge? It is a combination of:

- Interviewing your experienced operators and documenting the operator's knowledge;
- Establishing communities of practice within your organization to come together to share experiences and best practices; and
- Mentoring to pair experienced workers with the next generation that will replace them to transfer this knowledge.[6]

This doesn't come without challenges. Experienced workers may get defensive and have the thought: "this person will replace me once I give her all my secrets to success." Reassurance from the top of the organization down to the individual managers is key to getting buy-in from the experienced and seasoned worker. The experienced worker must be reassured that this is succession planning and not meant to drive them out before they are ready to leave.

Once this reassurance is accepted, don't just limit the new worker to sitting in their cubicle or office reading procedures on various subjects, or attending training after training. Sure, these things are important, but get them out there! Think of things like having new personnel shadow senior compliance personnel to help prepare for and observe compliance audits, or inviting new workers to tag along with an experienced worker to learn and participate in field walkdowns for facility ratings or winterization preparations.

Another challenge is the generation gap between experienced and new personnel. Personnel new to the workforce tend to think differently and learn in diverse ways. Understanding different learning methods will help both experienced and new personnel speak the same language.

Sources anticipate that half of the workforce in the utilities sector could retire in the coming years.To complicate things, a "June 2021 study conducted by Itron Inc. found that 88% of the 500 utility executives surveyed said they were most concerned about the impact of disasters on the power grid caused by unprecedented events such as war, wildfires and extreme weather conditions."[7] Knowledge management can mitigate the effects of these events by delivering a more prepared workforce.

You may already be capturing knowledge such as misoperations data or procedures for identifying assets to develop facility ratings. But don't forget to capture the tribal knowledge gained through decades of experience. Harnessing hard data and tribal knowledge together will put you in a good place that will contribute to your bottom line, and to the reliability, resilience, and security of our grid.

RF is always here to help. We provide outreach, training, and education and offer several services including Entity Engagement services (such as appraisals, self-assessments, and facilitation), and education/training through webinars, workshops and whitepapers.

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[6] The Power of Connections: Harnessing Tacit Knowledge Sharing for Collaborative Learning and Growth

[7] 4 Key Knowledge Management Trends within the Utilities Sector for 2023