

Case Study

Knowledge-sharing and Networking in Water Industry Operations



Introduction

In-house, knowledge-sharing and networking in the water industry

This case study demonstrates a practical approach to the application of the **70:20:10 Learning and Development (L&D) model**, in the context of water industry operations. This is illustrated through programs relating to **knowledge-capture, sharing and networking** and how it has been implemented to support the **continuing professional development (CPD)** of technical staff involved in water industry operations.

A key feature of the SUEZ Australia & New Zealand (SUEZ) program is how they leverage the knowledge embodied within a vast network of contracts and staff globally, and are able to share it via a number of modes of communication. Whilst not all water businesses have the luxury of their own in-house global network, the SUEZ case study demonstrates the power of creation of online knowledge-sharing tools and both virtual and face-to-face networking between business units and/or organisations. It also demonstrates how they encourage and support staff to get the most out of these resources.

SUEZ

SUEZ is a global company who provide water and waste management services. They employ over 88,000 employees across five continents and in the water sector they treat over 5.3 billion cubic metres of drinking water and 882 million cubic metres of wastewater every year.

In Australia and New Zealand, SUEZ employ around 2,800 people across 100 water, wastewater and waste management operations. Service activities include treatment of drinking water, desalination, wastewater treatment and re-use, biosolids management, smart water networks, oil and gas systems, waste collection, resource recovery and recycling and the processing and recovery of organics. In Australia they produce drinking water for a population of over seven million people and wastewater treatment for around 3.5 million people.



Figure C6.1: SUEZ global water and waste management activities

Key program drivers

One of the key challenges for SUEZ is how to leverage the wealth of knowledge and experience across their global operations, to innovate for the benefit of their contracts and clients at the local level.

Key Driver 1: Capturing the knowledge from global operations

Whilst SUEZ's operations are widespread and globally diverse, many of the treatment challenges and experiences that operators, engineers and managers face can be quite similar. Resources and tools such as knowledge libraries and databases are an effective way for SUEZ employees to keep up to date with information and advice on how to address challenges in; water quality, treatment, process management, assets and maintenance, just to name a few.

Key Driver 2: Innovating to stay ahead of the curve with technologies and industry trends

SUEZ has a commitment to offering customers innovative solutions that deliver efficiencies and certainty, whilst respecting the needs of communities and the environment. They support municipal clients in achieving efficiencies and cost savings as well as protecting water resources, preserving biodiversity and ultimately providing safe and reliable water and sanitation services for the community.

In order to achieve this, innovation is the key. Oftentimes some of the best and most effective innovation occurs at the local level. The important thing is to capture the value of these localised innovation efforts to provide benefit to all customers and communities that SUEZ operates in across five different continents.

Key Driver 3: A well-informed, well-resourced and engaged workforce

SUEZ see their people as the engine house of innovation. As such they have implemented various innovation challenges and initiatives to engage teams across the world to try new things and share their experiences and successes with the rest of the organisation.

In order to be innovative, employees need to be well-resourced and have access to the latest knowledge in a range of areas relating to operations, assets and maintenance. This can be facilitated by face-to-face networking and knowledge-sharing events, via online libraries and knowledge-databases and through regularly scheduled web and tele-conferencing opportunities.

The Program – Knowledge-sharing tools, resources and networks

Eureka – The SUEZ Knowledge library

SUEZ describes the online Eureka application as a technical knowledge sharing application for their treatment infrastructure. Eureka is a means for employees to access up to date technical information from across their global operations, with the benefit of it being validated and updated on a regular basis. The application can be accessed by any SUEZ employee who has a web enabled device and web connection and the appropriate authorisations to login.

Further features of the Eureka application are that there are advanced search functions for users to drill down into the information for specific applications of technologies and solutions. All the documents and information is reviewed and validated and there is document control process to make sure the most up to date versions of documents are available.

The process of review, validation and verification of information involves the entire organisation, as follows:

1. Eureka Team: Administrative management of the main documentation database. Publish documents following the appropriate validation process. Ensure consistency of published documents. Communicate to the wider organisation about usage and updates to the application.
2. Eureka Correspondents: Manage the local Eureka registered member access list and train up new employees in usage.
3. Experts and field managers: Document creation, validation and updates to local domains.
4. Everyone: refer to any mandatory flagged documentation. Participate in the continuous improvement of the technical content through feedback/opinion on existing documentation and through participation in the Return on Experience (REX) process

Information available through the Eureka application includes:

- Technical documentation
- Process calculations and notes
- Guidance on good operational practices
- Archive of technical literature
- A glossary of water treatment
- Carbon accounting tool (Lifecarbon)
- Practical information of benefit to operations
- Legal and insurance-related information
- Return on Experience (REX)

Some key statistics on the size and scope of the Eureka application are:

- Contains information and documentation across 48 different fields of practice
- In 2016 there were over 3600 documents stored and 1900 registered users.



The screenshot shows the Eureka technical documentation web application. The interface includes a top navigation bar with icons for 'Our company', 'Our locations', 'Our activities', 'News', 'My tools', and 'My communities'. Below this is a breadcrumb trail: 'Welcome > Using Btwin > EUREKA'. A left-hand navigation menu is titled 'Treatment Infrastructure' and lists various categories, with 'EUREKA' highlighted in green. The main content area is titled 'Eureka technical documentation' and features a large graphic with the word 'Eureka' in green and yellow, and a gear icon. Below the graphic, there is a section titled 'The technical expertise degrémont®' with a description of Eureka as a technical knowledge sharing application. A logo for 'access to EUREKA' is also present, along with a section for 'Access Restrictions / Access requests'.

Figure C6.2: The Eureka database – an example of a comprehensive knowledge library for water industry employees

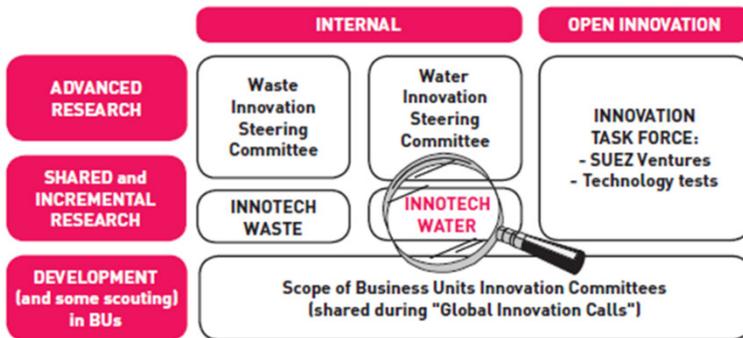
The Return on Experience (REX) is an interesting feature of the Eureka application. The REX is a formalised process of local data and knowledge capture and sharing to the broader organisation. The aim is to capture key knowledge and learnings from specific operating contracts and projects. Information is captured at the local level through structured meetings/workshops attended by operational staff and/or project participants. There are standard format templates for input to ensure consistency of information-sharing and communication, as well as a structured process review, verification and approval. Finally, the REX documentation is posted on Eureka for access by all registered users.

Supporting and resourcing innovation at the local level

As discussed in the key business drivers section of this case study, innovation is a critical part of how SUEZ delivers efficiencies and optimum service and value to its customers. Engaging staff across the business in development of innovative ideas and work practices, can provide exceptional value at both local and global levels.

An interesting initiative that SUEZ have implemented, to encourage and support teams to innovate, is InnoTech. This is a process where teams can raise their innovative ideas and put in a case for development funding and support to bring their idea to fruition. An innovation committee reviews the ideas and votes on the best ideas to be funded. The criteria for selection includes:

- Project must be delivered within a budget of no more than \$50K
- The team have one year to develop and deliver on project outcomes
- Ideas must be; relevant, innovative, achievable in the given timeframe, of interest and transposable to other business units
- The team working on the project must sign up to an agreement to deliver on the project outcomes.



InnoTech Selection Criteria

Projects are selected once per year by the Technical Directors' network and Operational Directors from SUEZ subsidiaries

In order to be selected, a project must be:



Relevant

Innovative

Achievable



Transposable

Of interest for other BUs

suez Supported by SUEZ's expertise

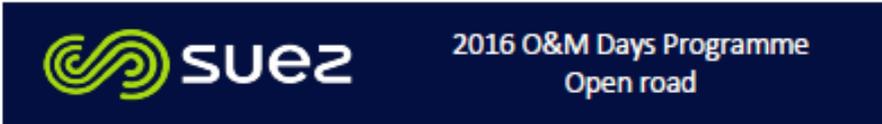
Figure C6.3 : Innovation within SUEZ, where initiatives such as InnoTech contribute to shared and incremental research driven out of local operational needs.

Knowledge sharing meetings and events

Knowledge-sharing and networking is a well-established and integral part of how SUEZ do business. This extends from major international networking events, such as the annual World Technical Congress, through to smaller local and regional events such as operational teleconferences.

The World Technical Congress is the premier technical knowledge-sharing and networking event held by SUEZ and is open to all business units around the world. Every business unit is eligible to nominate two delegates to attend the event, which is generally held in SUEZ's Paris headquarters each year. Typically around one thousand employees and important client representatives attend each year. The congress involves a range of presentations, technology displays, development opportunities over the course of one week, delivered both to attendees and also via webcast such that employees around the world can participate and learn in some capacity.

The SUEZ O&M Days are a specific operations and maintenance focused event, also targeted at the international level. Similar to the World technical Congress, business units nominate staff to attend as delegates. Presentations and topics are very focused at immediate impact and implementation at the operational level and bring together; process engineers, scientists, operators, operations supervisors and managers, and assets and maintenance staff, to share their experiences and stories.



Dates November, Tuesday 8th to Thursday 10th, 2016
Place Paris Area
Meeting Point SUEZ Treatment Infrastructure Headquarters
 183 avenue du 18 juin 1940 - 92300 Rueil-Malmaison, France
 A bus transfer is provided to and from the Seminar venue.

Tuesday, November 8th

		O&M sustained growth
Afternoon	13:15	Bus transfer departing from Rueil Malmaison / arrival and room allocation
	13:45	
	15:45	Welcome message and introduction of all participants
	16:00	
	16:00	Safety priorities
	16:30	
	16:30	Skills management system: results and feedback from Greater China
	17:00	
	17:00	Purchasing: CAPEX and OPEX optimization through common targets
	17:30	
	17:30	Break
	18:00	
	18:00	The importance of REX from O&M
	18:30	
18:30	Boost our industrial services	
19:00		
19:00	O&M development news	
19:30		
Evening	20:00	Dinner

Figure C6.4: Example program for the SUEZ O&M Days held each year



At the regional level, the Australian – New Zealand (ANZ) business unit is currently scoping up an Innovation Group. The aim of this group would be to collect and share information across ANZ around the myriad innovative ideas and activities that are occurring at the regional level.

Also at the ANZ regional level, there is currently a virtual networking initiative run by SUEZ called Sharing Time. This is an event held via the Skype videoconferencing application, at a frequency of approximately monthly. It brings together process and technical people, as well as operators, to hear presentations on practical operational challenges and solutions. Each presenter speaks for around twenty minutes on topics such as optimisation of pH meters, or polymer dosing issues and considerations. On occasion equipment suppliers may be invited to present to attendees.

The Australian region General Manager (GM) has also implemented a weekly telephone conference across the Australian operations. This teleconference brings together senior operations staff from across all of the sites to share information, issues, incidents and success stories from the past week. This also provides an opportunity for problems and questions to be raised to a national audience, to facilitate finding effective solutions at the site level.

The Australian GM also convenes a quarterly O&M meeting. This is generally held in the Australian head-office in Sydney, however from time to time can be held at regional locations. The O&M meeting is a one day event with a specific agenda, with attendees representing most business units. A number of invited speakers may be in attendance to talk about a range of topics important to operations. Key industry challenges and trends may also be raised at this event.

Discussion

Geographically distributed organisations, such as SUEZ face the challenges of unifying the knowledge and experiences of local plants and contracts and sharing this with their entire business, for the benefit of all customers and communities. Information and Communication Technologies (ICT) as well as professional networks and/or communities of practice are critical for knowledge sharing and coordination.

In recent times ICT has become an integral part of the solution for the challenge of education and knowledge-sharing. It facilitates collection of information, as well as processing and analysis, record-keeping, knowledge transfer and presentation. Not only can ICT solutions be used for storage and sharing of knowledge, but web-based networking (i.e. webinars, web-conferences) can be a fantastic opportunity for people to avoid travelling vast distances in order to meet and share experiences.

The model of various networking and knowledge-sharing resources and activities at SUEZ can be viewed as a microcosm of the wider Australian water industry. Geographically diverse water utilities all offering a similar range of products and services, have an opportunity to come together to network, knowledge share and educate each other in order to provide the best outcomes for their local communities.

Some further considerations for successful networking and knowledge-sharing are making reasonable adjustments to account for specific access constraints such as;

- geography and distance between users
- type of users (job roles, qualifications etc.),
- local law and regulatory aspects,
- language and cultural issues

In the case of SUEZ, language is an important consideration. Being a company with its headquarters in France and a significant number of operations across Europe, SUEZ still needs to cater to their employees across Asia, Oceania and the Americas. Their approach is to attempt to produce documentation in both French and English as a minimum, with capacity to offer information in other languages.

Conclusion

Tools, resources and opportunities are critical aspects of knowledge-capture, sharing and networking to support the continuing professional development (CPD) of technical staff involved in water industry operations. The SUEZ case study demonstrates that it is important to have a range of offerings to provide opportunity for employees, operations, customers and the community to benefit from knowledge-sharing. Some key of the key themes that have come out of this case study include:

- Creating a culture and environment within your organisation that facilitates open networking, discussion and knowledge-sharing conversations.
- Making the most of technologies to build knowledge libraries and repositories, and to aid in bringing people together.
- Incentivize knowledge-sharing. This may include something as simple as openly acknowledging and encouraging those people who are actively innovating. Or possibly stepping it up to create programs such as SUEZ's InnoTech, to foster and support innovative ideas.
- Find a good knowledge-sharing platform and encourage employees across the organisation to actively contribute and use it.

Acknowledgements

The authors would like to acknowledge the support of SUEZ, for contributing this case study to the Technical Competency Handbook. Special thanks to Peter Segura and Veronique Bonnelye for providing their knowledge and expertise and participating in the case study development interviews.

References

SUEZ, 2018, *Establishment of the main subsidiaries worldwide as of December 2017*, <https://www.SUEZ.com/en/Who-we-are/A-worldwide-leader/Our-global-footprint> , web page accessed 18th October 2018.

SUEZ, 2016, *2016 O&M days Program Open Road*, Program for SUEZ O&M day.

SUEZ, 2016, *10th World Technical Congress Program*, Paris, France, March 14-16th 2016.

Veronique Bonnelye, Peter Segura, 2018, *Knowledge Management and Innovation at SUEZ*, Powerpoint presentation, 10th October 2018.



Technical Competency Project Supporters

