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1. Background

In 2018, with an increasing risk of a “hard” Brexit in 2019, there was potential for disruption to water supply, without which hospitals, schools, businesses and the public in general could not function and the health of NI citizens would be at risk.

The highest risk arose from potential non-availability of chemicals for water and wastewater treatment.

To address this risk, and develop a robust picture of all NI Water’s chemical suppliers, their supply chain, their stock levels, the origins of where their chemicals are sourced from and the routes of travel in which they are transported to NI Water, a small cross functional team was established to get working on delivering the aforementioned.

2. Approach to managing the risk

Step 1 –Stakeholder Engagement – NI Water:

- Identified key suppliers, within category critical areas, to take part in workshops
- Held multiple workshops, where each of those identified suppliers attended. Each supplier’s supply chain was identified (in confidence) and generic risks were discussed openly
- Worked with a specific supplier during the workshop and one team member continued to be their point of contact in the following months.
- Worked with WaterUK to understand national picture of the chemical supply chain and played an integral part to the national UK response.

Step 2 – Stock Piling

- Additional stocks were purchased by NIW, however significant purchases could not be made due to associated storage costs
- Some chemical contractors, as per their contract, were required to hold stock at their cost, therefore NI Water incurred little extra cost in increasing chemical stocks. Only water company to do so nationally.

3. Developing the Supply Chain Mapping Tool

Following the workshops and significant ongoing engagement with suppliers, a rich picture of data was building, enabling the team to create an interactive geographical map of the entire chemical supply chain.

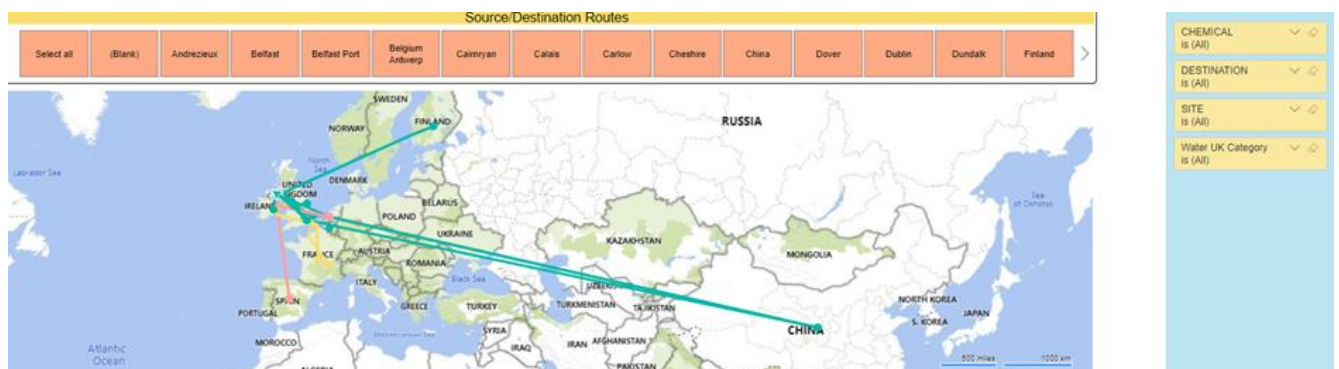
This geographic map was designed and can illustrate, for any chemical, what countries the raw materials come from, how they are shipped to the manufacturing plant, what ports are used and how the finished product is shipped to NI. For any treatment works, we know how much stock of each chemical is held there, how it is held, could it be moved to another site, average daily use of each chemical, number of days stock remaining, number of critical care customers and total number of customers depending on that works. We can answer questions like: there is disruption in lime deliveries, what sites will be affected most quickly, can we move lime from other sites, how many consumers might be affected, how many critical care customers?

The tool’s original purpose was to provide one version of the truth to produce reports, but the mapping tool exceeded expectations and was used:

- To identify chemicals at risk from: pinch-point ports in the Dover Straights, NI/RoI border controls or multiple EU/UK border crossings and talk to suppliers about how they could preplan or redirect their logistics to reduce risk for NIW and themselves.
- By the chemical category council to ask questions about how product is used differently at different works.

The overall benefit was NIW's preparedness to deal with any chemical supply chain disruption so that NI's citizens would not be affected.

A snap shot of the supply chain mapping tool is shown below:



4. Outcomes Achieved and Benefits Delivered

The three targeted objectives were and continue to be:

1. Understand and mitigate Brexit risk across the entire supply chain
2. Map chemicals supply chain in detail
3. Ensure delivery of water supply for the NI population in the event of supply chain disruption

The benefits the team have delivered and experienced are much broader than the expected outcomes. NI Water have:

- **Developed a mapping tool:** feedback from other water companies is that this far exceeds what they or WaterUK have. It continues to be updated with chemical data to support any non-Brexit incidents.
- **Better supplier relationships:** NIW now has very close relationships with its chemical suppliers and better relationships with suppliers in the other core categories.
- **Improved chemical category knowledge:** the information collated has helped the chemical category council to understand site level differences and will underpin future category analysis and initiatives.
- **Closer relationships with other water companies:** we can (and have) linked in with other water company buyers about their procurement strategies.
- **Trust and respect** from DfI and other stakeholders
- **Piloted** the tool for other categories
- **Developed colleagues’** procurement knowledge of suppliers, their supply chain and products.

5. Concluding Thoughts

Whilst a Brexit deal was agreed in December 2020 and the threat to the supply of chemicals to NI Water was minimal (due to Brexit), building on this model, engaging with the supply chain and updating the supply chain mapping tool, has enabled NI Water to have clear sight when market volatility has peaked i.e. Covid-19, Russian invasion of Ukraine.

This model, has and will continue to be used as a bench mark when continuing to build supply chain resilience and maps across multiple categories and contracts.