

Paper title: **Effective Supply Chain Management during a response**

Incident Management Stream

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Extended Abstract:

Since early 2020, international supply chains have been at the forefront of international media. The COVID-19 Pandemic, Brexit, vessel congestion in the Suez canal and a range of other issues have heavily impacted how international logistics can respond to these complex issues.

The rapid movement of equipment and people can be a critical element to responding to an incident, be it an oil spill, plastic pollution or other activity where specialist skills or hardware is required.

But, when international supply chains are at maximum capacity and passenger flights remain limited, how can response readiness be maintained? Can response plans be adapted, and should a new approach be taken when transporting goods from overseas? Response time is a critical element when mobilising resources, but sustainability and cost are also factors that impact decision making.

A clear logistics and supply chain plan will allow for minimal delay and complexity during a Tier 3 response by mapping out local, regional and international resources and the organisation's that support the supply of these services. Key planning topics include:

#### **Locally/regionally sourced equipment to minimize international transport where possible**

With international transport platforms in such high demand, it is important that they are fully utilized in the most appropriate way. Utilising platforms for goods that can be procured locally may not be the most effective tactic. However, in locations with limited resources, this may be the only effective measure to guarantee a sustained response.

#### **Specialist hardware and services that require international support**

It is possible that specialist equipment may be required to respond to an incident. Wide area aircraft dispersant application platforms with specialist hydrocarbon detection systems may be required or specialist hardware to support loss of subsea well control incident. Each of these services require specialist service providers and will have unique supply chain challenges.

#### **Re-supply and waste management**

Regardless of the size of an incident, there will likely be a need to use consumable products. This could range from simple PPE through to high volumes of dispersant to support aircraft, vessel and subsea application. As the complexity of a response increases, so could the number of personnel supporting. Setting up a rapid supply (and disposal) network will be critical to maintain response operations.

### **Complexity and expertise required to charter aircraft and vessels**

The international transport of equipment requires specialist knowledge and expertise. Platform identification, load planning, requirements for specialist equipment all takes time to join together. By engaging with specialists early and having plans in place, response time can be substantially reduced.

### **The importance of managing multiple equipment packages**

Some response tactics require multiple equipment packages to be used together (aerial dispersant and dispersant supply, subsea response equipment etc). By ensuring these packages are properly supplied with the required components being brought together from international locations allows response activity to take place.

### **Product and service quality**

The reliability and quality of any product used in a response is critical. Whilst it may be possible to source equipment and other supplies locally, they must meet minimum standards to ensure the safety of personnel and reliable operations in the field. Through pre-planning, local, regional and international suppliers can be audited ahead of time to ensure products supplied (and associated procurements standards) meet business performance needs.

### **Agile procurement systems**

A large scale response will be an intensive event for a procurement and supply chain team. Through pre-planning and emergency response training will allow a team to meet the needs of the Incident Command team and the in-field response teams

### **Overall Response Time Modelling**

The key objective for any logistics/supply chain plan is to deliver safe, high quality products in a timely fashion. A key question always asked by all stakeholders during a response is “How quickly can we start operations?”. It should be noted that a logistics plan is an evolving product and can always be improved. Response Time Models allow for critical path activities to be continuously monitored and improved to ensure the optimum response time can be achieved.

This paper will promote discussion regarding solutions for improving supply chain agility in the face of a VUCA (Volatility, Uncertainty, Complexity, Ambiguity) world and understanding if response time, sustainability and cost are competing factors during decision making, or can solutions be identified to provide synergy across all three. Subjects including researching local & regional capability and how this can be augmented with specialist equipment and subject matters from overseas will be a key discussion point within this paper. Additionally, effective contract management (including multi-contractor interaction) and understanding the capability and limitations of all service providers that would be used during emergency response activity will also be discussed.