

LOGNET
Innovating, Developing & Delivering
The Defence Support Network

on

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Transcribed from the Audio Recording

CAPTAIN (RN) DAMIAN EXWORTHY:

Thanks. General, thank you very much. Ladies and gentlemen, we now come to what's going to be the final serial for today and thankfully from my perspective as speaker, as in me, who needs absolutely no introduction and will get no introduction. I'm going to just give you two minutes before we show a video which we've referenced a couple of times. What you'll see up on the screen in 2D, and the 3D version is much, much better... please do get the chance to put the headsets on and have a look if you can... is a proof of concept video that we've just produced. It was literally finished a couple of weeks ago. We're using it in the training environment in future mixed reality technology exploitation. It reflects the concept notes that my team have written down in concepts and force development which are being brought to effect through the sub-working groups of the LOGNET Enterprise. It's a vision of the future. It tries to bring to life what we've been talking about over the past few hours and what we'll talk about tomorrow in a bit more detail. As I say, it is available in the other than 2D version, so please have the chance to look. Can we play the video, please?

VIDEO:

The defence support network DSN of 2035 combines traditional capabilities with new technology to deliver assured support to the force in a congested, cluttered, contested, connected and constrained operational environment. This briefing explains what future support could look like through potential improvements from the DSN of today. Good morning and welcome to your briefing on how we deliver support to the current operation. From the outset, we must ensure our ability to effect rapid support decisions for logistics, equipment and engineering support functions to optimise operational capability and enable the commanders freedom of manoeuvre. This virtual bird table helps us, displaying key information delivered through analysis of critical data, conducted autonomously at machine speed and capable of working independently of humans. Our network is a data driven modular and integrated system, exploiting technology which includes artificial intelligence, machine learning, additive manufacturing and robotics and autonomous systems. By integrating existing support intelligence and related sensor data, combined with an understanding of the current and future activities and operations, we can predict demand, determine optimal stockholdings and their locations to deploy capabilities for the most effective distribution solution. This is underpinned by constant modelling of our support network so that future requirements can be accurately predicted, planned for and tasked as necessary. The effect of all of this is increased operational capability and a reduction in footprint, demand and overall support cost.

Okay. Let's look at the current situation in theatre from inside the lead truck of a semi-autonomous logistics convoy. Our starting point is this temporary compound containing mobile and agile storage for local production facilities such as additive manufacturing. As we progress, you'll see a merge of old and new maritime, land and airbase monitoring capabilities operating as a coherent support system focused on anticipating and meeting the needs of the frontline user. By utilising sensor data which tracks consumption of medical supplies, artificial intelligence and machine learning has identified that a nearby medical camp will shortly need a replenishment of critical items. This demand has been automatically generated and since no local stock is available it's been sent directly to the most suitable facility for printing. Human involvement is limited to advising and selecting solution delivery with detailed analysis provided by the computer. In this case, given the speed, size and material of the required spares, the Queen Elizabeth aircraft carrier offers the best solution option and has already completed printing the items. These have been attached to an autonomous delivery drone and are on their way to the end user.

The drone is a multirole asset capable of support delivery and [kazivak? 00:19:58] extraction tasks. Its use is designed to complement, not replace, other assets. It will mesh with other tactical lift assets for operations in inaccessible or high treat environments. It's also capable of being printed or repaired locally. The medical facility has no airstrip or ground handling ability but this is not an issue as a modularised mobile warehouse capability can meet all requirements with minimal

resource, delivering bulk supplies either directly or via autonomous platforms as seen here. We're approaching an urban area where traditional platforms struggle to deal with the obstacles and threat without external assistance. More agile and self-reliant support is necessary in these scenarios. Effective equipment support is paramount to sustaining operations and senses onboard an upgraded challenger tank, accurately monitor its health and ammunition usage in real time. Scheduled maintenance has been replaced by predictive maintenance, ensuring it's only done when necessary to greatly improve platform availability.

Our convoy tasking has been reprioritised mid-route following a priority spares demand for a heavy armoured unit. The additional last mile distribution requirement will in this case be satisfied by NATO drones which will work with our own assets. The spare will be delivered directly to our vehicle to minimise transit time for rapid delivery. A new route is being processed by the onboard system. There's been an incident ahead and our route is now blocked. Command centre are advising that standard access routes ahead are blocked. AI informed processing has determined the most efficient way to meet the operational need is to deliver the ammo by aerial drone. The NATO drones join our own to deliver stores simultaneously. Delivery completed; the convoy moves to its next task with minimum human intervention. Let's return to the briefing room. The defence support network of 2035 integrates old and new technologies to generate joint and decision advantage. Information has replaced inventory to deliver a fully digitalised DSN which can react to threats and challenges. It is assured interoperability with our allies and commercial partners to increase support productivity, resilience and range and maintains appropriate readiness whilst reducing footprint, demand and associated costs. It harnesses future energy technology to ensure sustainability and reflects a quantum leap in support capability compared to that of 15 years ago.

The defence support network of 2035 delivers support advantage by being continuously competitive, information led, technology enabled, integrated, interoperable, agile, resilient and people fit. This concludes your virtual briefing session. If you have any questions, please speak to our staff.

[Recording ends]