

# Joint forces command concept (JFC)

## Integrated defence communication



### Solution requirements

In solving the problem of a common operational picture, there are eight criteria that need to be addressed to allow for a comprehensive shared situational awareness (SSA) across these armed forces. These criteria are as follows:

- 1) Maps
- 2) Friendly Force Tracking  
(also known as Blue Force Tracking)
- 3) Force classification
- 4) Sensors
- 5) Places of interest
- 6) Geographical information
- 7) Transportation
- 8) Communication

In addition, some organizations may have special requests that need to be incorporated.

Today's military forces face environments that can and will constantly change. In order to safeguard troops and their physical assets, these organizations must be able to react at a moment's notice. This is not possible without situational awareness, cooperation and collaboration. These topics are integral to a successful outcome when situations change.

### The challenge at hand

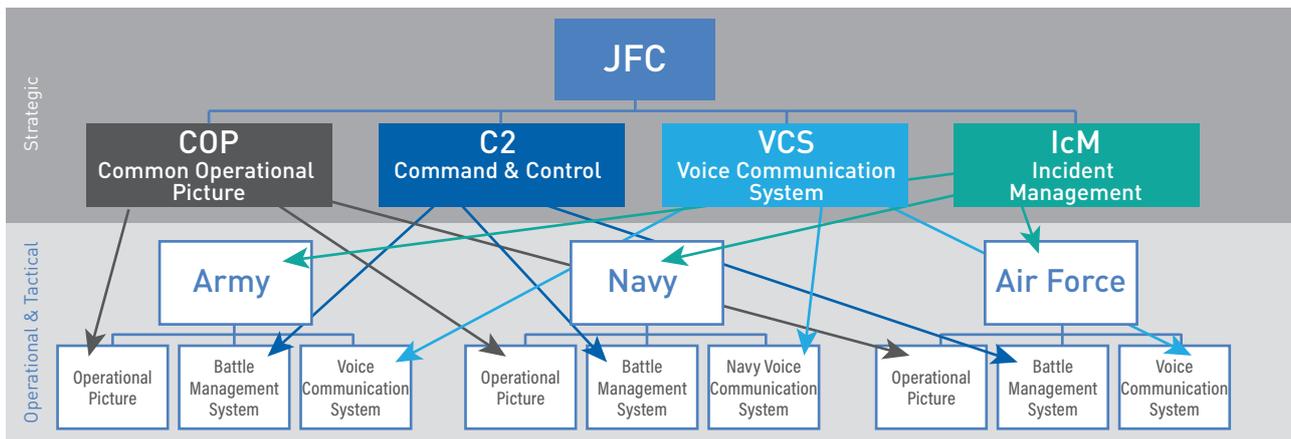
The scenario today is made up of silos for each armed force and even within their own organizations. There's not only the fact that these different organizations work with different protocols, they also work with different command and control (C2) systems on both a tactical and operational level.

### Tomorrow's solution

Bringing together all of this functionality via a scalable JFC is the goal for the future. When envisioning how the interaction of the different organizations and systems could work, the Frequentis concept would incorporate four categories which need to be addressed.

- > **Common Operational Picture (COP):** One COP with visibility across all forces and the ability to make command decisions cross-functionally.
- > **Command and Control:** One Joint Forces Command tool with force tracking and voice communications.
- > **Voice Communication System:** One voice communication system to enable consistency of contact medium across all forces.
- > **Incident Management:** One system providing customized workflow support and incident management adaptable anytime.

Each force commander will continue to use his current well-known systems and is then responsible to provide verified data to JFC on the next hierarchy level.



Let's consider the implications of being able to work with a single situational awareness solution across different forces and integrate with civil authorities. So far this document has focused on military integration, but these tools would also allow for integration with civilian aviation authorities, maritime agencies, public transportation authorities and emergency services organizations. Thus, allowing for faster and more integrated decision making when seconds count.

When a situation ultimately arises, the ability to communicate the situation and make the appropriate decisions are only the first steps along the way to resolution. An incident management workflow mechanism allows for the assignment and tracking of tasks across the military and civilian organizations involved. Additionally, the information that is transferred might require encryption and recording for future training or potential legal actions to be supported.

## Flooding use case scenario defined

A flood-related emergency situation has occurred in a densely populated area. Where to begin?

If you consider the eight criteria mentioned earlier, let's walk through a scenario:

- 1) Maps – where is the water currently flowing, where it is projected to flow, based on geographic information system (GIS) data.
- 2) Blue Force Tracking – what are the core competencies of these organizations and where are they now?
- 3) Forces – what human resources do I have at hand to assist with protecting life and infrastructure – military and civilian.
- 4) Sensors – information gathered from sources such as CCTV, UAV, radar and other monitoring equipment in order to know via live video the status of the current situation before arriving on the ground.
- 5) Places of interest – are there high risk targets for flooding damage – hospitals, schools, highways, airports, etc. that need to be prioritized.
- 6) Geographical information – topology and meteorological data to predict the potential impacts.
- 7) Transportation – in addition to human resources, what transportation resources are available to help with a possible evacuation.
- 8) Communication – the ability to share this information via voice and data communications infrastructure.

Cooperation and collaboration can allow for exponential improvements in emergency scenarios both civilian and military. Faster decision making and integrated incident management will expedite resolution of these situations when seconds count for a safer world.

**FREQUENTIS**