



## ***Network Centric Warfare / Network Enabled Capability***

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"The first qualification in a general-in-chief is to have a cool head, where the impressions he receives either successively or simultaneously in the course of a day should be classed in his memory so as to only occupy the just place due to each."

Napoleon conducted his operations in this way: from a single reference point which had to be kept "cool" at all times, which processed all information received and which made every decision.

By contrast, the network centric warfare approach, as its name implies, makes the network the ultimate focus. Platforms, systems and even operational concepts must be conceived and developed as a function of the network and of the quality and quantity of information the network makes available.

Technological progress and changes in mission scenarios in recent decades have been of such magnitude as to have forced a new military culture to develop, one in which technological potential can be maximised by redefining hierarchical chains.

In the United States, where the doctrine of network centric warfare was devised, the goal has been to develop a basic architecture in which all kinds of information can be integrated through the definition and use of common standards.

This radical approach, which in theory presumes the complete overhaul of platforms in a short space of time, is highly ambitious and will probably need to be implemented on a gradual basis.

Europe, for its part, is involved with increasing frequency in out-of-area operations and in the deployment of coalition forces to deal with crises in various parts of the world. To improve their own effectiveness and to be capable of interacting with the United States, European countries, too, must move towards a transformation.

On the other hand, European defence budgets, and Italy's in particular, are much lower than America's, especially when it comes to R&D, and leave no room for overly ambitious plans.

In Europe, therefore, the decision was made to develop a less radical and expensive concept than network centric warfare; to aim more pragmatically for network enabled capability, whose goal is to integrate existing systems and platforms into an effective communication network.

In both cases, the only way to achieve the goal is to enable government and industry to work side by side.

Government is responsible for defining the type of mission and the consequent

operational requirements, while industry's job is to translate those requirements into engineering models and complex architectures, from which systems and platforms can be built.

The natural meeting point of these two sequential processes is the simulation phase, where we can demonstrate the solidity of engineering models, define operational concepts, revisit previous missions and train personnel to use the new systems and platforms.

Finmeccanica would like to take the leading role in Europe when an NEC programme is established, and is fully qualified to do so.

In the US we have built strategic partnerships with Boeing, Northrop Grumman and Lockheed Martin, with the aim of acquiring know-how and developing our systems capabilities.

We are also a member of the Network Centric Operations Industry Consortium (NCOIC, with about 80 participating firms around the world), where we take an active part in working groups that strive to define standards—the primary goal of the consortium—and sometimes lead these groups at European level.

In the UK, Finmeccanica's strategy for NEC is to provide sensor-to-effect solutions that can integrate the sensor and platform capabilities of its companies, leveraging its status as the country's second-largest defence and security company in order to obtain increasingly prestigious roles in MoD programmes.

In Italy, Finmeccanica is conducting a feasibility study, financed by the defence

ministry, to develop and improve the interoperability of the national command and control system.

In general, the Finmeccanica group is taking a network centric approach to the design of all new defence and security systems.

However, for these efforts to bring results, the country has to develop a credible, national NEC programme of the highest level, which in turn requires closer and more effective collaboration between the defence ministry, the armed forces and industry.

A programme of this kind would need minimum funding of around EUR 200 million in the medium term (seven years). The result would be a multi-site simulation system, with real and virtual assets, that would allow the creation and the technical, operational and financial evaluation of a complete network centric architecture.

On the whole, this strategy aims to develop European network enabled capability as the only really viable solution. Finmeccanica is ready to put its expertise and its experience in the US and the UK to work, and to obtain a leading role for itself and for Italy.