

NCO in Germany: Still a Long Way to Go

by Ina Wiesner

Ina Wiesner is Social and Political Sciences Researcher at the European University Institute in Italy. She has studied the progress of network enabled and network-centric operations in several countries and here she discusses how Germany is deploying network-centricity, what the problems are and why it is taking so long.

In August 2004 – comparatively late – the German Bundeswehr officially joined the group of modern armies that are currently developing and introducing some form of network-centric warfare (NCW). Yet it took another two years before the German NCW-variant ‘Vernetzte Operationsführung’ – best to be translated as network-centric operations (NCO) – was laid out and approved by the Ministry of Defence. But even today, five years after the decision to go down the road of NCW, tangible elements of deployed network-centricity are still missing.

This paper will look at the German NCO. First, it will briefly describe the origins of NCO; second, it will assess the status of its implementation; and third, it will point out some current implementation problems. Finally, the paper will analyse the various political, bureaucratic and cultural factors that prevented (and still prevent) a smooth and pragmatic introduction of NCO into the Bundeswehr.

Transforming the Bundeswehr

NCO was officially launched in 2004 when the Bundeswehr committed itself to the project of an all-embracing military transformation (Die Transformation der Bundeswehr).¹ This was about time, as more than a decade after the end of the Cold War, after Bosnia, Kosovo and 9/11, the Bundeswehr still resembled a Cold-War army in many respects. Inspired by US and NATO thinking, the *Bundeswehrtransformation* aimed at bringing about network-centric, flexible forces, able to conduct Joint operations in a multinational framework. Hence, the network-centric capability forms one out of four pillars of German military transformation and therefore is central to any reform steps that follow.

However, it took more than two years before the conceptual underpinnings of NCO had been hammered out and were approved by the Bundeswehr Chief of Staff General Schneiderhan.² Different from the UK – whose network-enabled capability concept diverges considerably from the original US concept of NCW – the German NCO, while limited in its overall scope, shares many aspects of NCW. The German NCO focus is on the tactical level, stressing

the sensor-to-shooter link as the central feature of NCO. Moreover, and similar to US ambitions, the Bundeswehr also aims at achieving *superiority* in information gathering, C2 and mission effectiveness.

Where Does the Bundeswehr Stand Today?

But did the Bundeswehr manage to put these bold intentions into action? Where do the German Armed Forces stand six years after the NCO concept was adopted and four years after it was conceptually finalised?

To start with the good news, there is a number of big NCO projects in the realms of ISTAR and C2 that are currently under way. The most important ISTAR project is the satellite system SAR-Lupe that became operational in 2007. The SAR-Lupe consists of five small all-weather satellites with state-of-the-art radar technology. The project as such is a direct result of the Kosovo experience, when German requests for US satellite imagery were not always positively answered. As a national solution for real-time ISTAR in the operational theatre in the Northern Afghanistan region, Germany currently leases Heron UAVs.³ A number of tactical ISTAR drones are also regularly deployed in Kosovo and Afghanistan.

In 2006, the contract for a military satellite communication system (SATCOMBw2) was signed and the first of two satellites were launched in 2009 reducing the Bundeswehr’s reliance on commercial satellite capabilities. MobKommSysBw (signed in 2007, roll-out started in 2009) is the mobile communication system that will provide tactical data transfer. The trunked radio system TETRAPOL is already in service with approximately 10,000 radios. It will take some more years, however, until Software Defined Radio (SDR) will be available widely in the Bundeswehr. The Bundeswehr officially states that an initial operational SDR capability will be achieved by 2012. Yet this date is unrealistic and doubted by high-ranking officials within the Federal Office of Defence Technology and Procurement.

Finally, the Bundeswehr invested in setting-up a joint Command and Information System – the FüInfoSysSK, and a very basic version has already been deployed to Afghanistan. Yet it might take years before the full version that can link into the existing single-Service CISs is deployable. Until then the swivel-chair might still be an important feature in German HQs.

Learning from the authors of NCW theory, we know that NCW does not simply equal new and fancy computer

equipment, but rather new ways of using information technology in a military operational context. In Spring 2009, therefore, the Bundeswehr Chief of Staff decided that it was time for the Bundeswehr to demonstrate an *initial* NCO capability.⁴

This demonstration will come in the form of a joint exercise (DemoEx) in 2013. DemoEx is based on three relevant cases of military operations with regards to the sensor-to-shooter link. It will aim at providing a common operational picture with equipment that is already in use. This exercise is the final point in a series of exercises and experiments – the most important being the biannual Common Enhancement series – that paralleled the conceptualisation and implementation of NCO in Germany early on. In fact, the Bundeswehr is proud to have set-up a strong Concept Development & Experimentation (CD&E) element under the roof of the Bundeswehr Transformation Centre near Berlin.

So far, so good. But the NCO story in Germany is not as successful as the last paragraphs might have indicated and at least three problems, outlined here, will show that the road to NCO is actually rockier than suggested.

NCO Problems

First, the German approach to NCO is very conceptual and not very pragmatic. Consider, for example, the long periods of time between the approval of the concept and its finalisation, and the demonstration of some initial NCO capability. A huge amount of financial and human resource is devoted to developing the concept further to perfection instead of focusing on its rapid implementation even if this risks potential flaws. A very disillusioned civilian official in the Federal Office of Defence Technology and Procurement commented that NCO was still “a vision rather than a plan”.

That the Bundeswehr is more interested in the concept than in its actual implementation becomes obvious when, for example, the DemoEx does deliberately *not* resemble the operational reality in Northern Afghanistan but is focused on a more general military scenario. Furthermore, DemoEx is only a national exercise, yet all strategic papers claim that the Bundeswehr is solely to be deployed in a multinational context. However, the multinational dimension of the German NCO is largely missing so far, thereby failing to resemble the most likely military scenarios.

The second problem concerns equipment. To be sure, the former Bundeswehr Chief of Staff Schneiderhan was tireless in stressing that every new acquisition project had to be network-enabled. Unfortunately, ambitions and reality could not be further apart. A recent ministerial in-house assessment of all current acquisition projects revealed that only 6 out of 70 current procurement projects are in fact network-enabled, 11 are labelled as being network-enabled indirectly and the rest were found to be not network-enabled at all.⁵ A robust procurement regime with responsible managing owners, with

through-life management and the integration of projects into a coherent whole is also missing.

A third problem is the disinterest in, and even the dislike of, NCO by a large proportion of the Bundeswehr. There is no coordinated NCO awareness programme throughout the armed forces and the few NCO courses taught are still beacons in a sea of ignorance. Furthermore, opposition to NCO exists as the concept is so closely linked to the transformation project that is perceived as having caused base closures and (uncomfortable) restructuring in all the three single Services.

The question to be asked is why Germany is struggling to bring its national NCO ambitions to life. The answer to this question lies in a mix of political, bureaucratic and cultural factors that will briefly be explained in the remainder of this paper.

The Reasons Why

Let us start with the politico-strategic level. Are you familiar with the garbage can theory? It assumes that having a certain technology at hand would influence the perception of the problems an organisation is able to address. Germany is still not at ease with its role in Afghanistan nor what NATO expects of the nation. Some suggest therefore that the long delays in providing interoperability with US and NATO forces might be a scapegoat for not getting involved too much in serious fighting. A second, politico-economic reason for the delays in procurement is the preference for national solutions. The leasing of the available Heron from an Israeli company is a telling example in this regard as the Ministry for some time seriously considered having its own UAV developed by EADS which – as a consequence – would have delayed the deployment of this capability by five to six years.

There are bureaucratic hurdles to an efficient NCO programme as well. Within the German Ministry of Defence responsibilities and interests regarding NCO are widely dispersed. The need for every major project to get approval by co-signing by each of the single Services delays processes and outcomes represent the lowest common denominator. In acquisition the responsibilities are awkwardly spilt. The Directorate for Modernization in the Ministry and the subsequent IT-Office are responsible for the procurement and maintenance of all the ‘white’ IT. All other acquisition decisions including ‘green’ IT are taken by the Directorate General for Armaments and the subsequent Federal Office of Defence Technology and Procurement. Staff officers complain that this functional divide does result in an incoherency of NCO projects.

To make matters worse, there is, apart from this functional division of labour, the strict civil-military divide in the Bundeswehr, which is laid down in the Constitution. According to Article 87b of the German Basic Law, it is the federal civilian administration that has direct responsibility for the satisfaction of the procurement needs of the Armed Forces. For the NCO programme, this has at least two severe

consequences. First, there is too little knowledge transfer between military staff having operational experiences and the civilians working in the acquisition branches. Second, the civil-military divide also prevents the setting up of strong military-industrial R&T relations.

Lastly, there is a culturally grounded dislike for 'quick' solutions and risk-taking.⁶ The cliché of the orderly German seems to be a reality in the case of NCO. The Bundeswehr rather focuses on CD&E projects instead of incrementally implementing NCO as it goes along.

Moreover, the Bundeswehr currently tries to explore in advance potential repercussions of NCO on the command and control processes instead of developing these processes further if need be. Finally, the Ministry for a long time shied away from issuing a roadmap on NCO setting out tangible milestones to be achieved, thereby leaving the implementation uncoordinated and directionless.

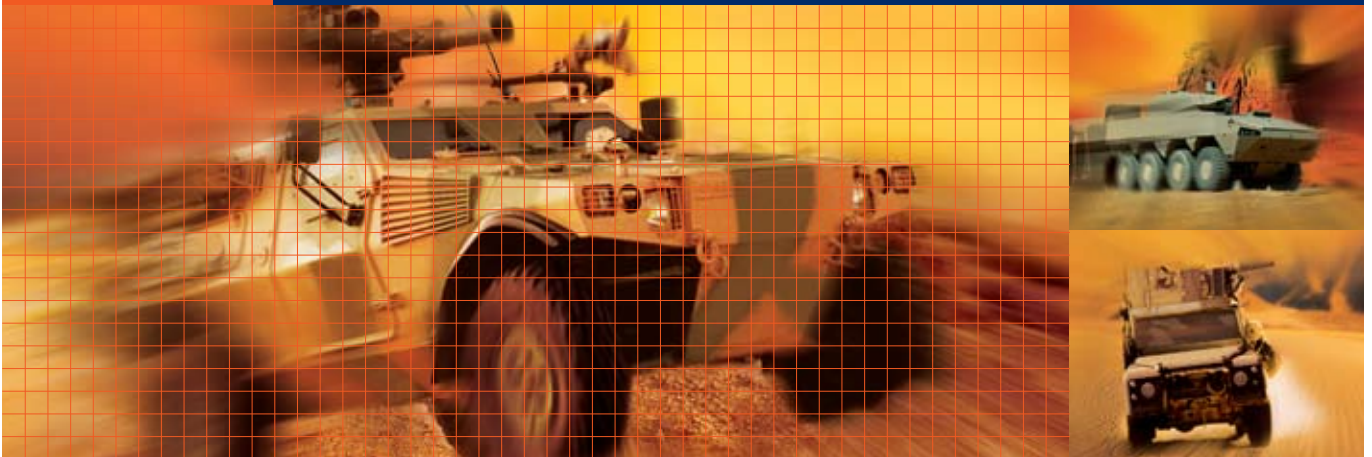
In conclusion, Germany's NCO approach currently appears to be insufficiently linked to the nation's strategic ambitions. It is still very conceptual in nature and its implementation is lagging behind. When asked what he thinks the reason might be for this unsatisfying situation in Germany, a former

civilian director of the British Defence Equipment and Support answered: "You can certainly think too much about something and lose momentum over that." Yet hope remains that under a new Minister of Defence and with an intensified deployment in Afghanistan, the Bundeswehr will finally switch to a more pragmatic approach to NCO. ■

NOTES

- ¹ Konzeption der Bundeswehr, August 2004
- ² Teilkonzeption Vernetzte Operationsführung, November 2006
- ³ <http://www.rheinmetall-defence.com/index.php?fid=5181&lang=3> (accessed 10 December 2009)
- ⁴ Generalinspekteur der Bundeswehr, Weisung Erstbefähigung Vernetzte Operationsführung in der Bundeswehr, 15 April 2009
- ⁵ http://www.geopowers.com/Machte/Deutschland/Rustung/Rustung_2009/rustung_2009.html
- ⁶ See Hughes, Kent; Werwatz, Axel (2006), Innovation in the United States and Germany, AICGS Policy Report, page 27, <http://www.aicgs.org/documents/polrep26.pdf>

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