The U.S. Army, traditionally the least platform-oriented of the U.S. military services, foresees a future in which “boots on the ground” are augmented by a sophisticated command, control, communications, computer, and intelligence (C4I) network, not to mention other new technologies that will endow soldiers with unprecedented speed, precision, situational awareness, and logistical efficiency. Developments toward this future force are being undertaken in two distinct, but complementary, phases. A division of the first phase, Army XXI, is to be in place by the end of 2000, with a corps ready by the end of 2004. The second phase, the Army After Next (AAN),\(^1\) is expected to be operational within the 2020–2025 timeframe.

The Force XXI and AAN processes are elements of the same long-term plan, but they represent different approaches to development. Army XXI will operate current systems enhanced with information age technology. It is rooted in the U.S. Army’s AirLand Battle doctrine, and some of its aspects were already fielded in Iraq in 1991. Eventually the entire Army is expected to have Force XXI capabilities.

The AAN, in contrast, will be a revolutionary change and will include organizations and systems that do not yet exist. The AAN is foreseen as a small part of the Army, comprising elite Battle Forces subdivided into Battle Units. These will be the U.S. Army’s spearhead: units

\(^1\)Just as the term Force XXI refers to the process of developing Army XXI, there is an Army After Next process that is intended to lead to the development of the AAN. This report distinguishes the analysis and evaluation program from the force that is intended to emerge from it by referring, respectively, to the AAN process and the AAN.
capable of rapid deployment, short-term sustainability, and entirely new methods of combat, with Army XXI units forming the more conventional follow-on force.

Yet, political and economic circumstances will militate more than ever against the kind of unilateral operations that can best capitalize on the anticipated Force XXI and AAN developments. Most major wars of this century have been multilateral, and international approval for the 1989 U.S. operation in Panama signaled a diminished tolerance for unilateral military action even in operations other than war. Such a tendency was mirrored in the angry international response to French unilateral activities in Rwanda in 1994 and has since been borne out by the plethora of multilateral peace, humanitarian, and noncombatant evacuation operations.

There is thus some tension between the pressure for modernization and the need to operate in a coalition environment. Multilateral operations demand a certain level of compatibility, and yet even the United States’ closest allies are not modernizing their armies apace with the U.S. Army. U.S. Army units are also just as likely to operate alongside relatively unfamiliar forces as with allied armies, further challenging their ability to achieve compatibility.

This project focused on the concept of multinational force compatibility, or MFC, rather than the narrower concept of interoperability. This approach still recognizes that disparities in technological capabilities can have technological repercussions. For example, at the technical level, technological gaps may yield “mechanical” problems: Can X-nation’s gas nozzles fit in Y-nation’s gas tanks? Can X-nation’s radios communicate with Y-nation’s? Can X-nation’s computers interface with Y-nation’s computers to share information? In an environment where U.S. forces will be relying on digital communication, operating alongside partners with incompatible hardware or software will present difficulties.

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3This does not mean, however, that ad hoc coalition operations will not involve NATO allies. In fact, as argued in this report, European allies are the most likely to participate in high-intensity operations alongside U.S. units.
But the MFC concept also incorporates the notion that technological disparities can have tactical/operational and political effects. If, for example, the United States plans to conduct night operations using its state-of-the-art night-vision equipment, will coalition partners be able to participate? If the United States plans to send small, highly mobile units to use standoff tactics on a nonlinear battlefield, will coalition partners be able to contribute? In the past, the United States has had trouble with non-European coalition partners who were not familiar with air-support operations. There appears to be high potential for problems of this nature to increase as the U.S. Army integrates new technologies.

Finally, in terms of political compatibility, sensitivities are likely to arise in response to very real divergences in capabilities. Is it likely that other nations will allow their troops onto a battlefield where U.S. soldiers—in standoff positions, operating space-based systems, or working in small, highly mobile units with minimal footprints—are nowhere to be seen? How will coalition partners respond to U.S. information dominance? The political questions likely to arise in response to technological developments and related changes in the U.S. Army’s tactics should not be discounted or overlooked.

OBJECTIVE

In light of the above considerations, the objective of this study was to examine and weigh the tension between the U.S. Army’s rapid technological development and its interests in maintaining or establishing compatibility with foreign armies. Because the AAN remains in the conceptual phase, the project team focused on Force XXI developments. The team sought to determine

- how Force XXI developments are likely to outpace allies’ or potential coalition partners’ capabilities;
- whether that will inevitably create problems for future combined efforts (and if so, what kind and under what circumstances); and
- whether steps can be taken in the short or long term to avoid, ameliorate, or resolve such problems.

The project had two specific emphases. The first was on compatibility instead of interoperability. The concept of compatibility allows
for broader analysis, to include the political and operational implications of technological development as well as the purely technical ones. That said, the project’s focus was limited to Force XXI’s implications for multilateral operations; political and operational coalition issues were addressed, but only in the context of the U.S. Army’s modernization plans. This document seeks to complement more technical analyses by examining the issue of multinational force compatibility and Force XXI in a broader context.

METHODOLOGY
The research was undertaken in three parts. The first task examined past coalition operations\(^4\) to derive lessons for multinational force compatibility. The different operational contexts of Operation Desert Storm in the Persian Gulf, Operation Uphold Democracy and the United Mission in Haiti, and NATO’s Implementation Force (IFOR) in Bosnia and Herzegovina offer useful insights into the types of compatibility problems that arose as a result of gaps in technological capabilities. The three case studies also offer insights into how past coalitions sought to eliminate or circumvent incompatibilities among their members.

The project’s second task looked forward, assessing how ongoing and anticipated Force XXI developments are likely to stress existing capability disparities between the U.S. Army and its West European counterparts. The assumption underlying this task was that compatibility problems between the United States and its fairly modern and cooperative NATO allies would in all likelihood be exacerbated in any other coalition.

The final task identified ways to deflect, mitigate, or solve anticipated coalition problems stemming from Force XXI developments. The team analyzed the findings from the first and second tasks and developed a framework for conceptualizing, anticipating, and redressing the various capability gaps and resulting compatibility issues that are likely to arise in future coalitions. This framework is

\(^4\)Our project refers to multinational operations generically, but it uses the term “alliance operations” specifically in reference to those taking place within the context of NATO or the CFC in South Korea, in keeping with the most recent draft of U.S. Army Field Manual (FM) 100-8, The Army in Multinational Operations.
intended to serve as a starting point for Army planners who need to consider how best to prepare for different types of future coalition operations.

OUTLINE

The structure of this report reflects the three project tasks described above. Chapter Two provides a summary of the compatibility issues that emerged in past operations. It is based on a detailed analysis (presented in Appendix A) of the MFC dilemmas that arose in the case study operations. Chapter Three examines the defining features of Force XXI, along with allied efforts at modernizing and digitizing their land forces. It also speculates on problems that are likely to arise as a result of the technological disparity. Chapter Four discusses how incompatibilities were addressed in past operations, then outlines a framework for tackling incompatibilities in future operations.