

**Study into the Role of European Industry
in the Development and Application of Standards
re. EDA 08-ARM-003**

Executive Summary

Introduction

This Executive Summary presents the main results of the "Study into the Role of European Industry in the Development and Application of Standards" contracted by the European Defence Agency (EDA) in October 2008 to ASD-STAN.

ASD-STAN, represented by its Director Günter Lessmann, cooperated on this study with Dr. Claudia Urbanovsky, former NATO Civil Standards Coordinator at the NATO Standardisation Agency (NSA), and with Prof. Dr. Blind from the Technical University of Berlin.

The Background provides information on the origin and the scope of the Study Report, and presents the organisations involved in the related investigations.

The Highlights provide a comprehensive overview on the issues addressed and the related findings and recommendations. Ample details on the findings and the full range of recommendations can be found in the main Study Report.

Background of the Study

In 1998, the European Commission contracted a study "On the Standardisation Systems in the Defence Industries in the European Union (EU) Member States and the USA" to a team of experts, led by the Science and Technology Policy Research Unit (SPRU) of the University of Sussex. The results of this "Sussex Study" were presented in 1999 to the European Commission.

One recommendation was, that an initiative – endorsed at the level of the European Ministers of Defence - should be undertaken to develop a European Handbook for Defence Procurement (EHDP). The work on the EHDP is now ongoing for seven years with the already EHPD representing harmonised best practices in defence procurement at European level in several fields. The work on the EHPD is still ongoing and a Phase III is expected to begin October 2009.

When, in 2004, the European Defence Agency (EDA) was created, the "Western European Armaments Group (WEAG) Standardisation Team" evolved into the "Materiel Standardisation Harmonisation Team" (MSHT).

Defence-standardisation related issues were placed within the Armaments Directorate of EDA underlining the importance given by the agency and its participating Member States (pMS) to the field of defence materiel and other standards impacting upon defence equipment and procurement, finally contributing to an overall interoperability.

In 2007 the EDA Steering Board approved the setup of an ad hoc Materiel Standardization Group (MSG) with the mission to contribute to the implementation of the European Security and Defence Policy (ESDP) and to the strengthening of the European Defence Technological and Industrial Base (DTIB) by supporting, coordinating and harmonising European defence materiel standardization.

In 2008 the MSHT, in cooperation with the MSG, elaborated a scope of areas to be reviewed in respect of the role of European Industry in the development and application of standards in order to further improve the roles of all organisations involved. EDA finally contracted this study to ASD-STAN cooperating with above mentioned study partners.

The scope of the study refers to a number of particular questions regarding industrial roles and involvement in standards activities, industrial views, preferences, problems with standards during invitation to tender (ITT) phase and the later contract life, seeking proposals from Industry towards overall improvements. It also includes questions on the future use of the EHDP and the European Defence Information System (EDSIS) only recently implemented by the EDA.

Based upon an exhaustive questionnaire, the study team evaluated and validated answers sought from a wide range of Defence Industries throughout the EDA pMS. All findings and resulting recommendations are based upon these answers, neutralized, not to disclose originating organisations or people. They do not represent the views of ASD-STAN or its study partners.

Highlights

The following highlight findings and resulting main recommendations are shown responding directly to the structure of the questions addressed in the study contract, whereas in the main study report, the recommendations are grouped into short-, medium- and long-term and into subject areas.

Industry views on the application of civil standards in the defence environment

The interviews identified a substantial application of civil standards in the defence environment: up to 90 % for naval projects, about 75% in the aeronautics and aerospace sector and about 70% in the land sector. The lowest percentage of around 20% was identified in the sector of optonics / optomechanics, though with an increasing tendency towards civil standards over the last five years.

The existing civilian standards, supported by specific standards-like military specifications, are seen as sufficient to accomplish the tasks set in MoD procurement contracts by a majority of the respondents, though with an equally high share of respondents being ambiguous.

Industry views on maintaining defence requirements in civil standards

Keeping the civilian standards defence-requirements-free and add necessary defence requirements in standards-like specifications was clearly favoured by two thirds of the respondents.

Consequently, a mere selection and tailoring of civil standards to military needs was suggested. However, no clear industry view emerged, if this tailoring should be done either as annexes to, or as specifications / requirements included in a civil standard.

Moreover, tailoring does not seem to be in the hands of industry, as about 2/3 of industrial stakeholders' standards are imposed by their administrative or MoD customer. Only minor negotiations on adoption of equivalent standards or waivers seem occasionally to be possible.

Another approach of about 1/3 industrial stakeholders is to work with a project team mapping functional and system requirements towards a set of eligible technical standards reflecting the specifications of a particular project. Where a standard does not completely fit, it is 'tailored'.

In specific cases, companies elaborate lists of standards, based on specific MoDs reference databases, which are elaborated and maintained by the MoDs with support from industry.

It was suggested that when an issue is related to a domain where the civilian/commercial market and progress are quite ahead of the defence environment, complementation of civilian standards through defence specifications could be the recommended best practice, while for purely military purposes, a specific well-defined military standard may still be the best way.

The clear advantage of the civil standard for the adequate issue is to have opportunities of better addressing the problems of obsolescence regarding the potentially more extended lifetime in the military domain.

Industry views on “prescriptive” and “performance” based standards

A clear majority of the respondents is willing to invest manpower in developing performance-based standards in order to obtain greater entrepreneurial freedom in the execution of a contract.

It has to be taken into consideration, though, that especially for SMEs it may be much more difficult to respond to performance-based rules instead of knowing exactly what to do in a contract using e.g. design standards. Other obstacles for performance-based standards might be reluctance to cultural changes in the defence-material standardisation community, especially at the level of customers (MoDs) and contractors (defence companies), used to work with the more predictable prescriptive standards.

On the other hand, expanding the use of performance-based standards promises to achieve certain procurement goals at lower costs, and encouraging technological innovation at the same time.

Extent of Industry involvement in the standards development process

The European DITB is strongly involved in civil standardisation. It is also involved in defence material standardisation, even if the forms and ways of ‘participating’ are slightly different and not always take the form of direct participation.

The extent of a company’s participation in the standardization process is primarily driven by specific economic interest, no matter if a project is strictly civil, defence-material oriented or a dual use standard.

Extent of Industry’s role in the identification of standards for use in contracts

Standards used in a contract are set by the customer, both in a civil and military environment. The extent of industry’s role in identifying contract standards is therefore secondary.

The identification of standards might be done by an MoD which will stipulate a set of standards and a contractor complying with the terms of the contract.

A preferred form of the identification process is the joint selection by customer and contractor, based on a prior strategic review of available standards through MoD and customer. This will mostly prevent difficulties with the execution of contracts.

Another process is using an MoD reference database for best practice in contracts and tenders from which the contractor can choose in compliance with the terms of the contract. Besides, standards can be imposed by regulatory compliance, customer policy or a certain design process in the public domain.

Problems encountered with standards during the “invitation to tender” (ITT) and “contractual negotiation stages”

Two thirds of the respondents are satisfied with the accessibility of defence material standards in the ‘invitation to tender’ phase.

Problems were encountered mainly in the form of

- Accessibility of NATO standards (STANAGs/APs)
- inappropriate use of standards
- referencing of standards that no longer existed
- referencing of cancelled chapters from older versions of standards
- copying from obsolete and cancelled standards
- using defence standards where better formulated civil standards would provide same end results and better value for money

Most tenders and defence projects also include too many standards on the same subjects, but from different origins. The impact of various and often contradictory legislation and national procedures has also become an increasing problem in recent defence-material related tenders, as it stresses especially Small and Medium Enterprises (SMEs) investment budgets when attempting to compete.

Problems encountered with standards during the life of the contract

Problems encountered with standards during the life of a contract are similar to those enumerated for the ITT. This was explained by the tendency, that standards in procurement contracts are often used to hinder free competition and not to add real value to the deliverables.

Additionally, redundant standards in contracts duplicate requirements and resulting efforts for compliance. The evolution of a standard during the life of a contract may generate both, a risk of non-compliance and additional overall management cost.

Problems encountered with the maintenance of old equipment built to standards that have been superseded

Industry’s problems with the maintenance of old equipment built to now obsolete and/or superseded standards are generally similar to those encountered during the life of a procurement contract, namely issues like compliance exemptions, modifications or replacement of equipment, updating of documentation and archiving standards histories from past projects for a long timeframe.

Areas where Industry should have a greater involvement in decisions relating to the standards environment

The European DTIB considers itself well involved at their national levels and mostly in a harmonious cooperation with National Standards Bodies (NSBs) and Defence Standards Organisations (DSOs) when it comes to the issue of defence standards. European DTIB confirms that NATO should continue to be the main forum for drafting international defence standards.

However, NATO’s standardisation process seems not to be sufficiently transparent to industry, and the European DTIB would welcome participating in NATO standardisation Working Groups (WGs). Furthermore, locating the right interlocutor in NATO is literally impossible for industry without the assistance of a national delegation.

A majority of companies advocate more cooperation between NATO, the European Defence Agency (EDA) and the European Standards Organisations (ESOs). NATO representatives appeared occasionally in WGs of civil Standards Developing Organisations (SDOs). In return, it is suggested to extend invitations to the civil SDOs or industry representatives to participate with their experts in NATO WGs.

Proposals to reducing the proliferation of standards

As defence equipment is rarely a mass-produced product, standardising this type of goods is less appealing to the majority of economic actors.

In order to make a standards breakdown for the defence community, it is proposed to individually evaluate standards for their usefulness and/or applicability in procurement contracts. Existing standards should be checked for applicability. A consecutive tailoring of standards may be required.

Additionally, the evaluation process should not be limited to civil standards or existing national defence standards, but also to international military alliance standards, mainly NATO's STANAGs.

Proposals for the use and maintenance of European Handbook for Defence Procurement (EHDP)

The EHDP has been designed to provide Defence Procurement Agencies (DPAs) and Defence Industry with a list of selected standards as best practice. At this moment, it is still under development and not yet fully operational.

Consequently, the EDA Steering Board should make a decision in first place that eventually pMS will regard the EHDP as the primary and mandatory source for the selection of standards when specifying defence material contracts.

Additionally, a decision should be taken regarding the further maintenance, development and improvement of the coverage of the EHDP under the roof of the EDA, and with appropriate personnel support employed at EDA. Today, the EHDP concept as a whole is not part of the EDA Standardization Policy. Finally, its design and user-friendliness should be improved decisively.

Proposals for the use of European Defence Standardisation Information System (EDSIS)

EDSIS receives only „unclassified” projects and only defence material standards, which make it a choice location for all projects with some potential for large-scale co-operation. Today, its biggest problem is the still rather limited user group. It is therefore proposed to add a secure part to the EDSIS website to encourage industrial stakeholders to share know-how.

It is equally proposed to EDA to launch a large-scale publicity campaign for EDSIS throughout the stakeholders' communities, including the regional European Standards Organisations CEN, CENELEC and ETSI.

This should be supported by hot-linking the EDSIS website and the civilian SDOs' websites in order to widen the potential access to EDSIS and its potential widened use for generally initiating standards work.

The overall cooperation of the European Telecommunications Standards Institute membership should also be reviewed as potential example of civil-military cooperation.