



An adapted version of the Concept Development Assessment Game

Experiences from the Swedish-Finnish
Naval Task Group Table-Top Discussion

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Sammanfattning

I maj 2014 undertecknade Sveriges Regering representerad av Försvarsdepartementet och Finlands Försvarsministerium ett avtal för fördjupat försvarsarbete. De två försvarsmakterna fick i uppgift att undersöka möjligheterna i ett sådant samarbete. Diskussionerna mellan respektive lands marina vapengrenar ledde till en vision och en tidsplan för etablering av en svensk-finsk marin insatsstyrka (Swedish-Finnish Naval Task Group, SFNTG). Med syfte att undersöka visionen och tidsplanen hölls ett rundabordsamtal i november 2014.

Rundabordsamtalet genomfördes som ett Concept Development Assessment Game (CDAG) men metoden anpassades för att passa för målet med rundabordsamtalet. Kortfattat byggde den anpassade metoden på att fånga upp två samarbetande parter perspektiv istället för att som i ett krigsspel använda sig av två motverkande parter. Dessutom anpassades 'confrontation and challenge phase' så att det blev en mer öppen diskussion samt att dokumentationsfasen förenklades.

Rundabordsamtalet undersökte framgångsrikt användbarheten och genomförbarheten av visionen för SFNTG och utmaningar identifierades genom att använda den anpassade versionen av CDAG. Vi visar också att metoden kan användas för att utveckla koncept i tidiga stadier eftersom SFNTG var på idéstadiet innan rundabordsamtalet.

Nyckelord: Svensk-finsk marin insatsstyrka, SFNTG, Concept Development Assessment Game, CDAG, rundabordsamtal, operationsanalys, OA-metod, spel

Summary

In May 2014 the Government of Sweden, represented by the Ministry of Defence of Sweden, and the Ministry of Defence of Finland signed an action plan for deepened defence cooperation. The two defence forces were tasked to look at opportunities resulting from the cooperation. The discussions between the navies resulted in a vision and road map for establishing a Swedish-Finnish Naval Task Group (SFNTG) and in order to explore the vision and the road map a table-top discussion (TTD) was held in November 2014.

The TTD was set up as a Concept Development Assessment Game (CDAG) although the method was adapted to suit the aims of the TTD.

In short the adapted version was set up to give perspectives from two cooperating teams rather than having two opposing teams as in a traditional war game. Furthermore, the confrontation and challenge phase was changed into a more open discussion and the documentation phase was simplified.

The TTD did successfully investigate the utility and feasibility of the vision of the SFNTG and identified challenge areas using the adapted version of CDAG as method. As SFNTG was a premature concept before the TTD we show that this method also is suitable for development of concepts in early phases.

Keywords: Swedish-Finnish Naval Task Group, SFNTG, Concept Development Assessment Game, CDAG, Table-Top Discussion, Operations Analysis, OA method, game

List of abbreviations

AAR	After Action Report
AOO	Area of Operation
AUV	Autonomous Underwater Vehicle
CDAG	Concept Development Assessment Game
CIS	Communications and Informations System
CRO	Crisis Response Operation
FISE	Finland-Sweden
FOC	Final Operational Capability
IOC	Initial Operational Capability
LEGAD	Legal Advisors
MCC	Maritime Component Command
MOC	Maritime Operations Centre
MSA	Maritime Situational Awareness
NATO	North Atlantic Treaty Organization
NORDEFCO	Nordic Defence Cooperation
OPCON	Operational Control
ORBAT	Order of Battle
RMP	Recognized Maritime Picture
ROE	Rules of Engagement
RTO	NATO Research and Technology Organization
SFNTG	Swedish-Finnish Naval Task Group
SUCFIS	Surveillance Cooperation Finland-Sweden
SWEFIN ATU	Swedish-Finnish Amphibious Task Unit
TTD	Table-top Discussion
TTW	Territorial Waters
UAV	Unmanned Aerial Vehicle

List of contents

1	Introduction	8
1.1	Aim of this report	9
2	CDAG method	10
3	Planning and preparing for the table-top discussion	14
3.1	Aim	14
3.2	Preparatory works	14
3.3	Scenario	14
3.4	Vignettes	15
3.5	Responsibilities of the operations analysts	16
4	Implementation of the table-top discussion	17
4.1	An adapted version of CDAG	17
4.2	Participants	20
4.3	Working groups	20
4.4	Facilities	21
4.5	Documentation	22
5	Outcome of the table-top discussions	23
6	Reflections	24
7	Concluding remarks	26
8	References	29
9	Appendices	30
	Appendix 1 - Questionnaires	31
	Appendix 2 – Form used for a brainstorm	35

1 Introduction

Both Finland and Sweden are non-NATO countries, although both have a deepened cooperation with NATO in the Partnership for Peace. Finland and Sweden are active partners to NATO participating in various NATO-led peacekeeping operations such as in Bosnia and Herzegovina, Kosovo and Afghanistan. Furthermore, both countries participate in NATO-led exercises and capability development.^{1, 2}

Besides the NATO partnership both Finland and Sweden are members of the Nordic Defence Cooperation (NORDEFECO) together with the three NATO-members Denmark, Iceland and Norway. The cooperation focuses on capability development, human resources and education, training and exercises, operations and armaments. The aims with NORDEFECO are to strengthen the national defence of the participating countries, to explore common synergies and to facilitate common solutions.³

The 6th of May 2014 the Government of Sweden, represented by the Ministry of Defence of Sweden, and the Ministry of Defence of Finland signed an action plan for deepened defence cooperation between the two countries on top of the existing NORDEFECO partnership.⁴ The aim of the defence cooperation between Finland and Sweden is to increase the effect and efficiency through combined use of resources, through increased operability and through closer dialogue on common challenges. The cooperation is limited to activities in peacetime.

As a result of the agreed action plan, the Defence Forces of the two countries were tasked in an implementation plan to look at the opportunities resulting from the cooperation both in a short term perspective (2014-2015) and in a long term perspective (from 2016 and beyond).⁵ The main focus is the long term perspective with the aim to increase the mutual operational effect. Specific tasks set for the Navy were to explore the possibilities of an enhanced cooperation on exercises, education and training, sea surveillance, common use of infrastructure,

¹ NATO's relations with Sweden http://www.nato.int/cps/en/natohq/topics_52535.htm (read 02/02/2015)

² NATO's relations with Finland. http://www.nato.int/cps/en/natohq/topics_49594.htm (read 02/02/2015)

³ The basics about NORDEFECO. <http://www.nordefco.org/The-basics-about-NORDEFECO> (read 02/02/2015)

⁴ Action plan for deepened defence cooperation between Sweden and Finland, The Government of Sweden represented by the Ministry of Defence and The Ministry of Defence of Finland. Attachment to decision of the Swedish Government 2014-06-19, no 13, reference number F62013/2270/SSP (2014)

⁵ Implementation plan for the deepened Defence Cooperation between Finland and Sweden. FM2014-5068:2, F6rsvarsmakten (2014)

combined units and a development of the capability to transfer operational control (OPCON) of units between the two navies.

Different kinds of cooperation between the Finnish and the Swedish navies have been present already before the action plan was signed. Operational activities include the Swedish Finnish Amphibious Task Unit (SWEFIN ATU). The ATU cooperation was established in 2001 and gives the two nations, after political decision, possibility to deploy a combined unit for crisis response operations. The two navies have also previously been running a bilateral exercise series called Loviisa with the aim to strengthen the abilities of both navies and to train cooperation for crisis management operations.

Another example is Surveillance Cooperation Finland Sweden (SUCFIS). SUCFIS is a cooperation in which the two navies share the recognized maritime picture (RMP) of defined areas of the northern Baltic Sea including the Gulf of Finland. This cooperation has been operational since 2006.

Based on the instructions in the implementation plan and on a previous vision document⁶, two workshops were held in the first quarter of 2014 resulting in a road map to establish a Swedish-Finnish Naval Task Group (SFNTG). The SFNTG will be a mission-based modular unit with capability to act in crisis management. SFNTG is planned to reach initial operational capability (IOC) in 2017 and final operational capability (FOC) in 2023 and the task group is to be activated only after political decisions.

In order to further explore the vision and road map for the SFNTG, it was decided that a table-top discussion (TTD) was going to be held with participants from the Finnish and Swedish Navy, in Stockholm November 25-28, 2014.

1.1 Aim of this report

The primary aim of this report is to describe the method used for the table-top discussion (i.e. an adapted version of the Concept Development Assessment Game, CDAG). The report also presents planning, implementation and outcome of the table-top discussion.

This report is targeted for operations analysts, officers or others involved in arranging and facilitating seminars, workshops, games or similar exercises.

⁶ Vision för Swedish Finnish Naval Task Group (SFNTG) 2023. FM 2013-2443:1 (H/R), Försvarsmakten (2013)

2 CDAG method

In order to assess the NATO maritime situation awareness (MSA) concept the NATO Allied Command Transformation in collaboration with the Netherlands Organization for Applied Scientific Research (TNO) developed the method Concept Development Assessment Game (CDAG). The method is described in detail in a technical report by NATO Research and Technology Organisation (RTO).⁷

The CDAG is a qualitative analytical method used for assessing concepts or conceptual documents. Areas of application include evaluation of applicability, assessment of completeness and exploration of options of development of a concept.

It suits best when there is a concrete product to test such as a concept paper, guidelines, organization chart etcetera. This means that development of a draft of the concept is recommended before the CDAG takes place. Furthermore, CDAG is not suitable for functional and mature concepts as then live execution of the concept in an exercise (or something similar) is usually more appropriate.

The game is played by concept developers and end users to assess concepts (or elements thereof) in an operational context. The method enables combining brainstorming with simulation and the challenge of red teaming in war games. Furthermore, the method can be described as an open table-top analytical war game that focuses on intellectual challenge and discussions.

The CDAG is conducted in a four phase repetitive process (Figure 1). The phases are (i) *briefing phase*, (ii) *planning phase*, (iii) *confrontation/challenge phase* and (iv) *formal data collection phase*. A single round of four phases is estimated to take approximately half a day to complete.

⁷ RTO Technical Report: Concept Development and Assessment Game. RTO-TR-SAS-086, NATO Research and technology organisation (2011)

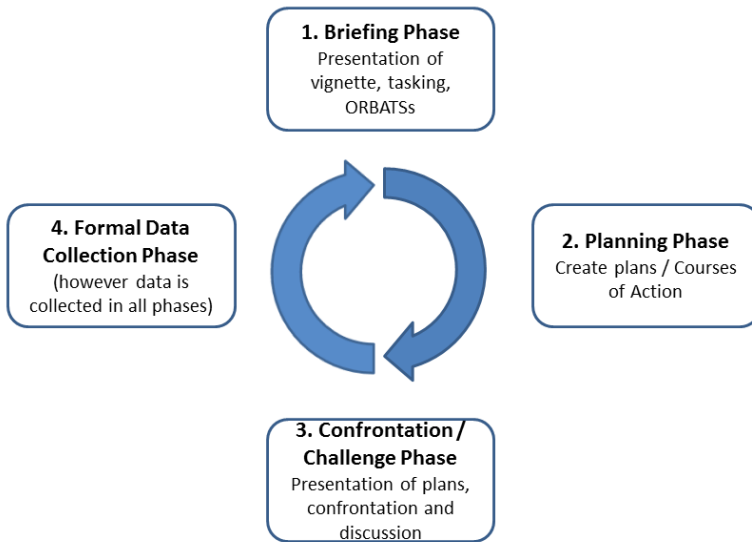


Figure 1. The CDAG process. Adapted figure, originally published by RTO/NATO in RTO-TR-SAS-086. Reprinted with permission.

The *briefing phase* should be kept short, approximately 5-10 minutes. Although the teams are briefed a scenario to get the overall operational context for the game in the initial briefing phase, thereby this briefing phase may be more time consuming. In every next round a vignette for that particular round is briefed and the teams should get more specific information on the current operation. Each team should be briefed on their individual tasking and ORBAT as well. Furthermore, the expected result of the tasking of the team should be addressed; this includes for instance how reporting forms should be filled in and how questions should be answered. All teams should be given clear information on what they are expected to produce although it is important that the specific tasking does not restrict the teams in their work.

During the *planning phase* the players complete the task given during the briefing phase. This phase could last for one to one-and-a-half hours depending on what tasks are given and the experiences of the players of the teams. Execution of the first planning phase may take longer time than the later planning phases, since the players are less familiar with the process initially than further into the game. In this phase there is also a possibility to include brainstorming to capture ideas from the whole group. Usually an analyst is

assigned to each team during the planning phase in order to observe the discussions, to ask questions and to facilitate the discussions when necessary.

The *confrontation/challenge phase* is divided into two parts and usually last for around an hour, but it can take more or less time dependent on the number of teams participating in the game. This phase usually results in the most valuable data collection as every participant will take place in the discussion and will have to agree on the important discussion points. During the confrontation phase the setting may be as described in Figure 2

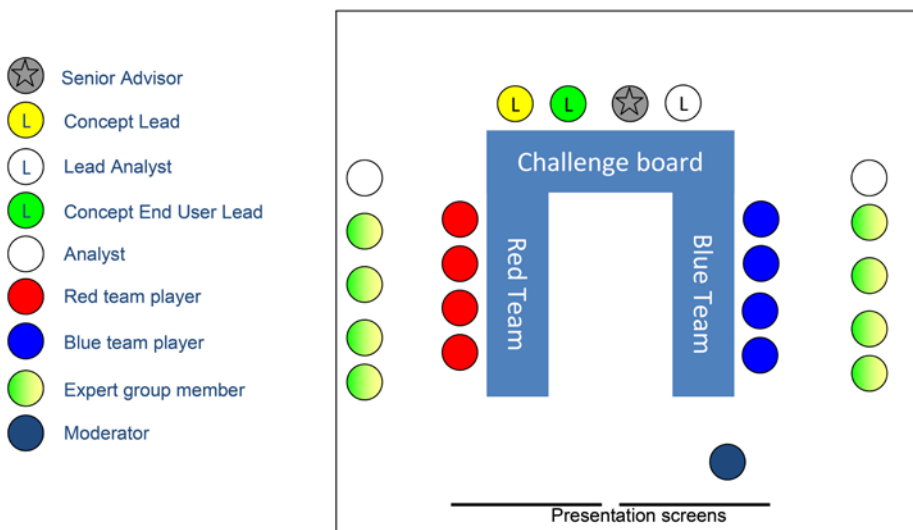


Figure 2. Suggested setting during the confrontation/challenge phase. Figure originally published by RTO/NATO in RTO-TR-SAS-086. Reprinted with permission.

Every participant in the CDAG shall take part actively during the challenge/confrontation phase. This phase is led by a challenge board consisting of a senior advisor, a senior analyst, an operational expert and a concept/technical expert. The challenge board will lead the discussions and thereby they should be fully briefed on the method and how to keep the discussions on track.

During the confrontation part, each team will brief all the participants the outcome of the tasking performed in the planning phase. After this briefing questions for clarification should be allowed but a more detailed discussion should be performed in the challenge part. After all briefings from the teams should be allowed to confront each other to generate a discussion on the briefings.

The challenge part, which is the second part of this phase, is when the challenge board and the experts are asking direct questions to the teams. The questions

should be directed towards the aims of the game. The set-up with both the confrontation and then the challenge could produce duplicate discussions. Therefore sometimes it is not necessary to run both. Although the idea is that the confrontation part should focus on the validity of the plans from the teams whereas the challenge phase should focus on the validity of the entire concept.

The confrontation/challenge phase is guided by the moderator and this person is in charge of keeping time and enforcing the rules of the game. The analysts are in charge of taking notes and asking questions when necessary.

Throughout the game data should be collected by the analyst, although during the *formal data collection phase* the participants are asked to fill in questionnaires and possibly to answer questions in interviews.

In order to set the focus of the CDAG and provide a basic simulation, *concept cards* are designed representing what to be assessed: the whole concept, parts of the concept or concept documentation. Usually a concept card covers one specific subject, preferably in a bullet point format enabling quick reading and easy understanding. The cards are designed with similar format but the need for categories can be solved by cards in different colours. Depending on type of concept to be assessed, *technical cards* can be produced. These cards represent technology relevant for the actual concept.

The CDAG is given an operational context which is represented by an overall *scenario* coupled with a set of *vignettes*. The vignettes give more specific information than the scenario, are to be relevant for the concept to be assessed and are different for each round of the CDAG. They can be related but should be independent of each other. This enables flexibility as vignettes can be exchanged or excluded depending on the progress of the CDAG.

3 Planning and preparing for the table-top discussion

3.1 Aim

The TTD aimed to investigate the utility and feasibility of the vision of the Swedish-Finnish Naval Task Group⁸. Furthermore the aim was to develop an understanding of potential bilateral approaches in addressing identified key challenge areas.

3.2 Preparatory works

Once it was decided that the TTD was to be performed, preparatory work meetings were held at the Swedish Maritime Component Command (MCC). The planning group, consisting of 3-4 officers and 2 operations analysts (OA), met at 4 occasions for approximately 1.5-2 hours each. Between the meetings, different kinds of preparatory work were executed individually. The planning phase included setting the aim with the TTD, preparing for the method (development of scenario, vignettes etc.), preparing presentations and invitations, travel arrangements and facilities. Beside these meetings, one joint meeting was held with Finnish and Swedish Navy representatives. At this meeting the agenda and scope of the TTD was decided. The analysts in respective country had a short dialogue via e-mail before the TTD.

3.3 Scenario

A scenario was developed that would set a context for various vignettes in which the concept of SFNTG was to be applied and evaluated. The scenario was an adapted version of a war-gaming scenario previously used in Sweden.

The scenario describes an increased tension in the Baltic Sea region. An example from the slide show is shown in Figure 3.

1. A large naval exercise is announced by state X to be performed in the Baltic Sea region. After the exercise their troops stay in the area. Finland and Sweden increases its presence with surface combatant ships.

⁸ Vision för Swedish Finnish Naval Task Group (SFNTG) 2023. FM 2013-2443:1 (H/R), Försvarsmakten (2013)

2. The prolonged presence of foreign ships in the Baltic Sea results in that both Germany and Great Britain establish frigates in the area and perform air surveillance. Poland launches an exercise in which Sweden participates.
3. Indications of a foreign submarine in the harbour of Göteborg lead to a Swedish anti-submarine operation in the area.
4. A Swedish corvette has a close encounter with foreign ships close to their territory. The Swedish corvette is demanded to return but Sweden refuse to call the corvette home.
5. In the next step state X stops supply routes to neighbouring countries. NATO launches a supply route to these countries and request support from Sweden when establishing this route.

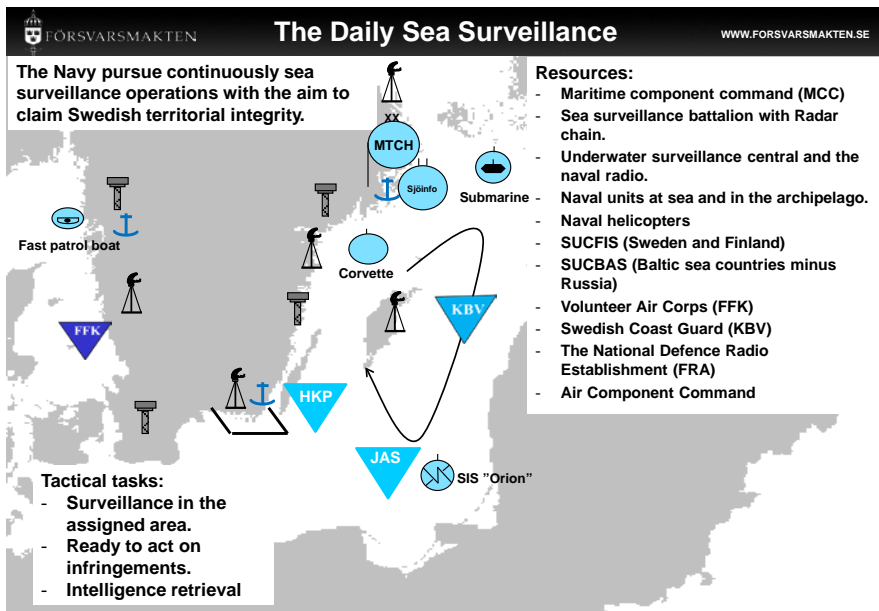


Figure 3. Example from a slide show presenting a background scenario for the table-top discussion

3.4 Vignettes

A set of different vignettes (sometimes also called situations) related to the scenario were constructed. The vignettes were chosen so to be of relevance for evaluating the SFNTG concept, describing detailed events during the whole process from the time period before SFNTG is activated (daily ordinary

operations by each country), up to more open hostile incidents (SFNTG in relation to EU or NATO).

1: There is a marked tension in the area (primarily in and close to the Baltic States). The Finnish and Swedish navy need to increase their presence in the Middle and North Baltic Sea and keep solid situation awareness in the area. A thorough monitoring of ship movements is necessary. SFNTG is not activated.

2: The strained situation in the Baltic States and increased maritime activities in the Baltic Sea have led to an activation of SFNTG. Its main purpose is increased presence in the Middle and North Baltic Sea and to enable more rigorous situation awareness and perform reconnaissance operations.

3a: A fresh mine discovered South of Hanko (Swe: Hangö). SFNTG activated to ensure shipping by safe routes towards and from Hanko, including surveillance both at sea and at land. A supposedly “civilian” ship wants to embark Hanko but is suspected to be of false intentions. It is not to be given permission to enter Finnish or Swedish territorial water.

3b: As vignette 3a but under EU or NATO flag. The harbours of Slite and Visby are to be prepared and to be kept open for possible NATO forces. SFNTG is to escort supplies to Ventspils, Latvia.

Each vignette was framed in a document in which also the following documentation could be placed (Appendix 1).

3.5 Responsibilities of the operations analysts

Two Swedish operations analysts (OA) were assigned to be involved in planning, implementation and documentation of the TTD as soon as it was decided that the Swedish Navy was going to host the TTD.

Initially the work performed was to find a suitable method so that the outcome of the TTD would be as intended. The OA came across the NATO report of the CDAG and got approval from the Swedish Navy Lead to adapt the method to suit the scope of the TTD. Also OA generated a schedule for the four days of the TTD. In addition, OA took part in the development of both the scenario and the vignettes that were to be used.

During the preparations, contact was established with the Finnish analysts. The plans for the agenda, method and roles and responsibilities for the participants were discussed and agreed upon in dialogue.

When performing the TTD, the Swedish OA and the Finnish analysts focused on supporting the moderators, facilitating the discussions and to take notes for the future documentation phase.

4 Implementation of the table-top discussion

4.1 An adapted version of CDAG

The aim of the TTD was to facilitate the ongoing preparations of the Finnish and Swedish Navy for the deepened defence cooperation, especially concerning legal, command and force contribution challenges. The TTD was set up to evaluate when and how and with what timescale SFNTG can be activated and operative. Challenges and obstacles coupled to this were to be identified. Based on earlier discussions, the focus was decided to be investigation of legal and constitutional constraints.

The group in charge of the TTD (one officer from the Swedish Naval Department, one officer from Swedish Maritime Component Command M5 [Plans] and two operations analysts) decided to try CDAG for the TTD despite no previous experience of the method. The method was chosen primarily as it was thought to stimulate good discussions in order to address the aims and questions for the TTD.

As the participants were representing two countries with different organization of their navies the initial briefing phase of CDAG was extended. In order to generate a foundation for the discussion the first day of the TTD was focused on describing the organization of the Finnish and Swedish Navies including their capabilities and cooperation with other national authorities, the legislation for using Finnish and Swedish armed forces in peace time, crisis and at war and how violation of the territories are prevented. Furthermore a detailed description of the scenario used for the game was given during these initial presentations. Further into the game the briefing phases were kept short and focused on describing the particular vignette.

For each vignette in the game a questionnaire was developed including a description of the particular vignette and directions for team documentation (Appendix 1).

During the confrontation/challenge phase the teams were first allowed to describe the result of their discussions on the vignettes and the answers to the tasked questions. Then the challenge board was allowed to take part in a more open discussion on the vignette. This allowed the Legal Advisors (LEGAD) to comment on the legal and constitutional aspects of the suggested solutions for the vignettes. The confrontation/challenge phase was more of an open discussion on the vignette rather than having the challenge board questioning the outcome from the teams.

The game was scheduled as described in Table 1. As previously mentioned the first day was used for introductions of the Finnish and Swedish Navies, legislation, the scenario and of the method used. The second and third day were used for the actual game, the briefing phase, the planning phase and the confrontation/challenge phase. Documentation took place within the teams using the questionnaires and by the analysts during the presentations and discussions. The formal data collection phase took place after the actual game. In which the analysts and a core team of officers finalised an after action report describing the outcome of the TTD.

During the TTD the schedule was changed as the teams completed their documentation earlier than expected. Therefore Thursday afternoon was used for a brainstorm activity focusing on costs, challenges, possibilities and gender issues for the following topics: exercises, education and training, sea surveillance, base infrastructure, combined units and transfer of OPCON. The teams were given questionnaires in which they were asked to complete the tasks stated (Appendix 2). The brainstorm activity was performed in order to enlighten the costs, challenges, possibilities and gender issues that specifically were stated in the action plan signed by the Government of Sweden, represented by the Ministry of Defence of Sweden, and the Ministry of Defence of Finland as well as in the implementation plan signed by the two defence forces.

Tuesday 25 Nov	Wednesday 26 Nov	Thursday 27 Nov	Friday 28 Nov
TTD 1	TTD 2	TTD 3	TTD 4 (core only)
	8:00-8:30 Intro: Rules, roles and vignette 1 8:30-9:30 Game Vignette 1 (60 min) COFFEE 10:00-10:45 Team presentations vignette 1 (2 x 20 min) 10:45-11:30 Challenge Board to respond (45 min)	8:15-8:30 Intro vignettes 3a and 3b 8:30-9:30 Game vignettes 3a and 3b (60 min) COFFEE 10:00-11:00 Team presentations vignettes 3a and 3b (2 x 30 min) 11:00-11:30 Challenge Board to respond (30 min)	8:30-11:30 TTD report writing
	LUNCH	LUNCH	
12:30-12:45 Welcome, Name and position 12:45-15:00 Brief Finnish and Swedish Armed Forces (2 x 60 min)	12:30-12:40 Intro vignette 2 12:40-13:45 Game vignette 2 (~60 min) 13:45-14:30 Team presentations vignette 2 (2 x 25 min)	12:30-13:00 Challenge cont. 13:00-14:30 Team documentation including: <i>Benefit and cost estimates</i> <i>Legal and procedural effects</i> <i>Risks</i> <i>Gender issues</i>	
COFFEE	COFFEE	COFFEE	
15:30-16:30 -Brief Finnish and Swedish LEGAD (2 x 30 min)	15:00-16:00 Challenge Board to respond (60 min)	15:00-16:00 Team documentation cont.	
16:30-16:45 Method introduction (OA)	16:00-16:30 Method evaluation	16:00-16:30 Concluding remarks	
DAY 1 WASH-UP 16:45-17:30	DINNER		

Table 1. Original schedule for the TTD.

4.2 Participants

The Finnish and the Swedish navies were represented by 10 and 11 persons respectively. The participants represented the Navy Commands and their branches for operations (no 3 in the NATO general staff system), logistics (no 4), plans and strategy (no 5) and signal communications (no 6) for both countries. Furthermore representatives from the two Swedish Naval Warfare Flotillas and the Finnish (amphibious) Uusimaa brigade (Swe: Nylands brigad) participated as well as representatives from the Swedish Naval department (Swe: PROD MARIN). Both countries also had two analysts in their team and one legal advisor. The gender advisor for the Swedish Armed Forces was on call if gender issues were going to be discussed.



Figure 4. Parts of the Swedish team during the planning phase.

4.3 Working groups

Participants were split into three groups: a Finnish team, a Swedish team, and a challenge board. The national teams consisted of representatives from the Navy commands and from the flotillas/brigade. The challenge board consisted of legal advisors, analysts and senior officers from both countries. Analysts were responsible for documentation and two moderators were assigned (Figure 5).

When processing vignette 3a/3b the teams were mixed across nations to try to challenge the participants. Instead the discussions were somewhat hampered and the national teams were reintroduced for the brainstorm activity.

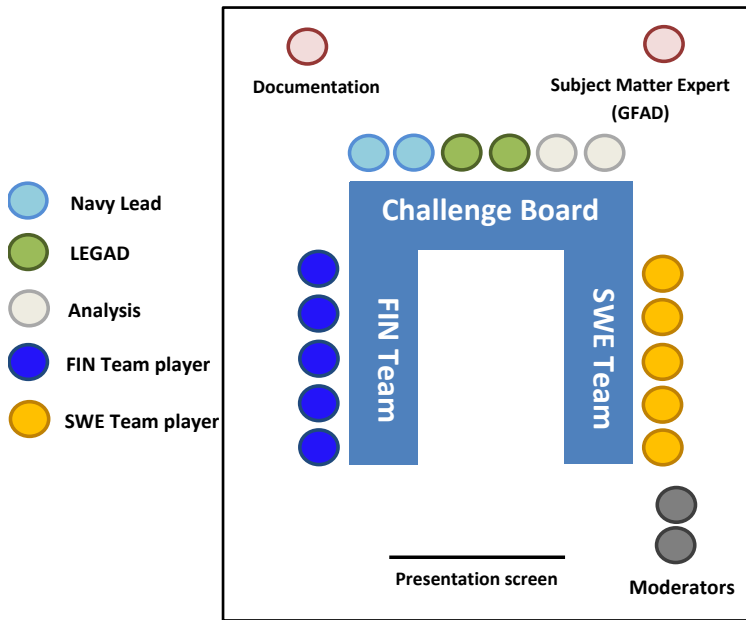


Figure 5. TTD groups and roles during the CDAG process

4.4 Facilities

The TTD took place at the Cavalry barracks (Swe: Kavallerikasernen) located next to the Swedish Armed Forces Headquarters. We had two lecture rooms available so that the Finnish and Swedish teams could be separated during their discussions (i.e. the planning phase). One of the lecture rooms were set as described in Figure 5 and was used for the confrontation/challenge phase. Every day there were breaks for coffee in the morning and in the afternoon as well as for lunch. The coffees and lunches were served in the officer's mess at the Cavalry barracks, a short walk from the lecture rooms located above the stables.

4.5 Documentation

The TTD was documented in three steps. During the planning phase the teams filled in questionnaires that they used for presentation of their discussions and these were saved. During the team presentations and during the confrontation/challenge phase at least two analysts were taking notes in parallel. During the formal data collection phase the analysts were compiling information from the questionnaires and from their notes into the after action report (AAR). The AAR described the aim of the TTD, how the game was executed and the outcome of the game split into the subheadings planning, financing, legal questions, CIS, force generation and organization, doctrine and interoperability, training and exercises, equipment and procurement, personnel, logistics and infrastructure and future work.



Figure 6. Photo from the table-top discussion.

5 Outcome of the table-top discussions

The aim of the TTD was to investigate the utility and feasibility of the vision of the SFNTG and to identify challenge areas with a special focus on legal aspects. The discussions at the TTD were compiled into the AAR, which contributed to the FISE Final report (the report given from the two defence forces to their governments).

The rules of engagement (ROE) process was a topic during the TTD and there may be differences in ROE content and procedures between the two countries and a process to investigate how to align the ROEs is needed. Furthermore, it was discussed how to increase the maritime situational awareness (MSA) and the RMP by sharing more information from the area of operation (AOO), possibly including national orders.

The legislations in both countries are the main obstacles for SFNTG at the moment. For instance, it is currently impossible for both countries to be part of a military operation within the territorial waters (TTW) of the other country. The legal aspects have to be dealt with further and a clear guidance on what is allowed and not allowed for the foreseen operations for SFNTG has to be analysed.

To simplify the process for Finnish and Swedish naval ships to enter the TTW of the other country, the application process to obtain a permission to enter has to be clarified and the possibility to allow long-term permits should be addressed.

The collaboration on CIS can be strengthened and the possibility to use military sensor systems, such as radar, radio and sonars as well as unmanned and autonomous systems (AUV and UAV) in the territorial waters of the other country was proposed to be investigated.

Furthermore it was proposed to investigate the possibility to use *ad hoc* liaison officers in respective MOCs during operations and how to use the joint capabilities (air force, army, coast guard etc.) from the different countries. Also the creation of a technical agreement to enable the base infrastructure for logistics shall be considered.

6 Reflections from participants

Commander Stefan Larsson, Head of Plans, Swedish Naval Department, acted as chairman during the TTD:

We arranged the TTD in order to try some important aspects of the SFNTG as for example force generation; when and how will this occur? We also wanted to investigate the limitations for what SFNTG can or cannot do, given the present constitutions and legislations.

I found the CDAG method valuable, but I am not sure whether we really used it as intended. The challenge board was explaining and answering questions, more than giving the teams a “challenge”. Some parts of the game lacked interactivity and would have gained by more dynamic discussions involving all participants. This originated probably more from the teams than from the method. In my opinion, we got valuable outcome from the game, resulting both in a broad and deep documentation of identified challenges for the SFNTG, as well as a better understanding of the concept by all participants.

In our planning we chose vignettes reflecting a gradually increased level of conflict and we thought this would mean different things for the SFNTG. However, we experienced unforeseen repetitions since the different vignettes rendered similar results and conclusions during the game.

Commander Juhapekka Rautava, Chief of Navy Combat Centre Finland, acted as analyst and participated in the challenge board during the TTD:

During the SFNTG Table Top Discussion – can you give some examples of things that went well (according to plan, unexpected happenings in a positive way, successful etc)?

- I believe CDAG is a powerful and useful method. It results in open discussions.

Did the TTD reach the intended purpose and goal?

- The overall goal was reached. Issues were identified and addressed. A realistic and doable action plan was created.

Is there anything that should have been made differently?

- The introduction of the different vignettes could have been more carefully thought over, as well as the content of the vignettes. The difference between different phases was sometimes hard to distinguish. One idea could be to use a technique where a scenario process would be used. This means a process where a simple task would be carried out virtually, i.e. imagining and planning of what would happen. For instance, if a Swedish ship would need to make a port visit in a Finnish naval base. On the way from international waters towards the base

there would be different obstacles one should take into consideration. The discussions and planning in respect to this event/process would create a handy list of things OK or not OK.

Lieutenant Commander Mika Raunu, Principal Scientist, Finnish Defence Research Agency, analyst during the TTD:

During the SFNTG Table Top Discussion – can you give some examples of things that went well (according to plan, unexpected happenings in a positive way, successful etc)?

- The open discussions were fruitful due to a good atmosphere and common interests. All work done in the small teams (with shared time for team work and presentations) seemed to be effective. It looked like that there were right people present (e.g. legads, heads of M5, analyst, etc.). The time was used effectively.

Accordingly, can you give some examples of things that could have been better handled (unexpected, not according to plan, unsuccessful etc)?

- I recommend evaluating the use of more structured method for feedback and information gathering. One solution could be that instead of verbal commenting and answers, an “electronic chat” function would be used.

Did the TTD reach the intended purpose and goal?

- My opinion is that it did.

Is there anything that should have been made differently?

- The method should be thoroughly evaluated before next TTD, if a tailored scenario could be developed instead of using a general national scenario. This could lead to evaluation that would support analysis covering both nations deeper.

Also, the need for verbal commenting should be evaluated. Perhaps a chat function in a shared portal (or similar) is a more effective method. It may also be considered to develop a format or template for the final report in advance.

7 Concluding remarks

The original CDAG was developed as a qualitative analytical method for assessing concepts or conceptual documents by working in an open table-top analytical war game. The method needed for the TTD had to be more focused on brainstorming as the TTD was more supposed to develop a concept rather than assessing it. As a result, the CDAG was adapted to suit our requirements.

The original CDAG is more focused on being a war game with two (for instance blue and red) or more teams (green, white, neutral, civilian organisations etc.). These teams may be tasked differently, i.e. the blue team is supposed to defend their territory from attacks of the red team. During the TTD we had two teams formed, a Swedish team and a Finnish team that were given the same tasks. Thereby, we could gain information from both the Finnish and Swedish perspective.

The briefing phase of the original CDAG is very short giving an introduction to the scenario, tasking and the ORBATs. The representatives of the Finnish and Swedish navies needed more detailed information on the capabilities of the navy of the other nation. Therefore, in order to set a foundation for the discussion and to ensure that both parties have information on each other, a longer briefing phase was needed. In this phase the navies presented their capabilities and organisation. Furthermore, the background of the TTD and an introduction to the method was given.

CDAG is flexible regarding the tasking of the teams; it can be vague or specific. During the TTD the teams were given specific tasks as we were interested in generating discussions on specific topics for each vignette. In order to simplify the documentation the teams were given a questionnaire for each vignette including a description of the vignette and the questions to address. This simplified the documentation a lot and thereby the data collection phase could be kept short, at least for the team members.

The confrontation/challenge phase of the original CDAG is strict. During the confrontation phase team representatives brief all the participants of the outcome of their work and afterwards only questions for clarification is allowed and all in-depth discussions should be saved to the challenge phase. During the challenge part the challenge board will question the teams. During the TTD a more open discussion was held during the confrontation/challenge phase. The experts in the challenge board were giving their perspective on the questions in the questionnaire and asking questions regarding the briefs from the teams. This set up was very fruitful as the experts in the challenge board included for instance the LEGADs from the two countries and thereby they could comment on the legal aspects of the vignette. As in the original CDAG the discussions during the confrontation/challenge phase were guided by a moderator.

The data collection in the original CDAG is somewhat different compared to what was pursued during the TTD. In the original CDAG the analysts collect data throughout all the phases of the game and the participants are asked to fill in a questionnaire regarding the previous rounds of the game during the formal data collection phase. The questionnaires used in this TTD simplified the documentation for the participants, worked as a guide for the discussions during the planning phase and simplified the briefs in the confrontation/challenge phase. These questionnaires were filled in by the teams during their discussions and thereby the analysts were given time to prepare for the confrontation/challenge phase and coming rounds of the game. During the confrontation/challenge phase all four analysts were taking notes that were used for compiling the AAR. The AAR was finalized in a core group, consisting of the analysts and the moderators. This small group simplified compiling the AAR.

When summarizing the outcome of the TTD there are some issues that has to be addressed. Firstly, the logistics is very important. Due to a lack of conference facilities at the Swedish Armed Forces Headquarters the TTD took place at the neighbouring Cavalry barracks. The lecture rooms there were located on top of the stables and were functional but with lower standard. The odour from the stables was strong and the analysts brought in anti-histamines in case of horse allergy among the participants. The core group and especially the analysts should have taken a more active role in the arrangement of the conference rooms. The facilities are important for generating an inspiring and creative atmosphere for a workshop such as a TTD.

Secondly, group dynamics varies among teams, especially when there are different nationalities of the team, and this phenomenon affects the discussions in the team. One difference noted was the degree of openness. The discussions in both teams were fruitful, but it is important to ensure that all team members get equal opportunities to contribute with their ideas and experiences.

For the third day of the TTD we decided to try teams with mixed nationalities, but the discussions in the teams became less active. One reason for this may be that the team members did not know each other and that they were not confident with the discussion format due to the differences listed above. Another reason contributing might be the repetition in the discussions due to similarities between the vignettes. Regardless of cause, it was decided to go back to separate Finnish and Swedish teams for the remaining TTD.

The roles of the analysts were different between the two teams. The Finnish analysts took a more active role in the discussions and took notes. The Swedish analysts did not participate in the discussions as the Swedish team sorted out the documentation itself. The reason for this difference may be that the Finnish analysts have a military background and are officers whereas the Swedish analysts are civilian without military background.

Thirdly, it is important to decide already before a similar event what the final product should be. For the TTD it was not decided until after its completion how the final document should look like. It will be easier taking notes during the discussions when the end product is known, thereby the analyst (or any other person responsible for documentation) can focus on what is important for the end product.

Fourthly, it is central to agree on which experiences and background that are needed for the discussions. This was discussed and agreed on before the TTD. The LEGADs contributed more than expected to the discussions, which was very positive. Originally they were thought to have more of an observer role to be able to contribute at a later stage after analysing the outcome of the TTD.

In conclusion, the TTD fruitfully investigated the feasibility and utility of SFNTG and identified challenge areas using the adapted version of the CDAG. Furthermore, using a NATO-based method may have increased the legitimacy and acceptance for the method used among the participants of the TTD as it has been developed in an international context with several countries involved.

Taking into consideration that the concept of SFNTG was premature before the TTD, we show that CDAG is a useful method also for development of concepts in early phases (i.e. when it is an idea or early version of a concept that lacks a thorough description). Thereby this method can also be used in future development of premature concepts.



Figure 7. The Finnish team during the planning phase.

8 References

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9 Appendices

1. Questionnaires used for documentation during the vignettes in the CDAG
2. Form used for a brainstorm after the CDAG

Appendix 1 - Questionnaires

Vignette 1 - Conducting surveillance and reconnaissance operations including intervention

There is a marked tension in the area (primarily in and close to the Baltic States). The Finnish and Swedish navies need to increase their presence in the Middle and North Baltic Sea and keep solid situation awareness in the area. A thorough monitoring of ship movements is necessary. SFNTG is not activated.

TEAM:	
<p><i>How do we act until we have a political decision/mandate (or likewise) to activate SFNTG?</i></p> <p>Answer/Comment</p>	Uncertainties
<p><i>Describe differences before IOC, between IOC and FOC, after FOC</i></p> <p>Answer/Comment</p>	Uncertainties
<p><i>How much mandate does the Finnish-Swedish cross-border cooperation gives us, until SFNTG is activated?</i></p> <p>Answer/Comment</p>	Uncertainties
<p><i>Are there any restraints according to the FIN and SWE laws? Which mandates need to be in place?</i></p> <p>Answer/Comment</p>	Uncertainties
<p><i>How can SUCFIS be developed to better handle this situation?</i></p> <p>Answer/Comment</p>	Uncertainties
<p><i>Are there any other obstacles identified that need to be handled?</i></p> <p>Answer/Comment</p>	Uncertainties

Vignette 2 - SFNTG is activated and conducts sea surveillance and reconnaissance operations

The strained situation in the Baltic States and increased maritime activities in the Baltic Sea have led to an activation of SFNTG. Its main purpose is increased presence in the Middle and North Baltic Sea and to enable more rigorous situation awareness.

TEAM:	
<i>Which tasks are given to SFNTG?</i> Answer/Comment	Uncertainties
<i>How can SUCFIS be developed to better handle this situation?</i> Answer/Comment	Uncertainties
<i>Discuss and describe – which bases are to be used; force generation including OPCON transfer (requirements for burden sharing); C2; RoE; if FIN MCC – then how is the Swedish assessment performed (and vice versa); the coordination (if any) with Coast Guard or other maritime authorities.</i> Answer/Comment	Uncertainties
<i>Which mandates are needed in FIN and SWE in order to use the task group and/or SUCFIS?</i> Answer/Comment	Uncertainties
<i>Do the FIN and SWE laws allow the suggested tasks?</i> Answer/Comment	Uncertainties
<i>Are there any other obstacles identified that need to be handled?</i> Answer/Comment	Uncertainties

Vignette 3a - SFNTG is activated and conducts operations up to protection of shipping in the Baltic Sea, both on the open sea as well as on SWE and FIN territorial water

A fresh mine discovered South of Hangö. SFNTG activated to ensure shipping by safe routes towards and from Hangö, including surveillance both at sea and at land. A supposedly “civilian” ship wants to embark Hangö but is suspected to be of false intentions. It is not to be given permission to enter Finnish or Swedish territorial water.

TEAM:	
<i>Which tasks are given to SFNTG?</i> Answer/Comment	Uncertainties
<i>How can SUCFIS be developed to better handle this situation?</i> Answer/Comment	Uncertainties
<i>Discuss and describe – are there any consequences by which country is first to engage (SWE or FIN); are we able to put Swedish forces on Finnish land (vice versa); which bases are to be used; force generation including third party (requirements for burden sharing), C2; Rules of Engagement; if FIN MCC – then how is the Swedish assessment performed (and vice versa); what if FIN fire arms on SWE territorial water or vice versa.</i> Answer/Comment	Uncertainties
<i>Which mandates are needed in FIN and SWE in order to use the task group and/or SUCFIS?</i> Answer/Comment	Uncertainties
<i>Do the FIN and SWE laws allow the suggested tasks?</i> Answer/Comment	Uncertainties
<i>Are there any other obstacles identified that need to be handled?</i> Answer/Comment	Uncertainties

Vignette 3b - As vignette 3a but under EU or NATO flag

The harbours of Slite and Visby are to be prepared and to be kept open for possible NATO forces. SFNTG to escort supplies to Ventspils, Latvia.

TEAM:	
<i>Describe differences from Situation 3a</i> Answer/Comment	Uncertainties
<i>Describe differences between activated/non-activated Host Nation Support</i> Answer/Comment	Uncertainties

Appendix 2 – Form used for a brainstorm

TEAM:

EXERCISES	
Costs <i>Increased? Why?</i> <i>Decreased? Why?</i>	
Challenges (both SUCFIS and SFNTG) (not the legal aspects) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Possibilities (both SUCFIS and SFNTG) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Gender <i>Any identified issues?</i>	

EDUCATION & TRAINING	
Costs <i>Increased? Why?</i> <i>Decreased? Why?</i>	
Challenges (both SUCFIS and SFNTG) (not the legal aspects) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Possibilities (both SUCFIS and SFNTG) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Gender <i>Any identified issues?</i>	

SEA SURVEILLANCE	
Costs <i>Increased? Why?</i> <i>Decreased? Why?</i>	
Challenges (both SUCFIS and SFNTG) (not the legal aspects) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Possibilities (both SUCFIS and SFNTG) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Gender <i>Any identified issues?</i>	

BASE INFRASTRUCTURE	
Costs <i>Increased? Why?</i> <i>Decreased? Why?</i>	
Challenges (both SUCFIS and SFNTG) (not the legal aspects) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Possibilities (both SUCFIS and SFNTG) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Gender <i>Any identified issues?</i>	

COMBINED UNITS	
Costs <i>Increased? Why?</i> <i>Decreased? Why?</i>	
Challenges (both SUCFIS and SFNTG) (not the legal aspects) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Possibilities (both SUCFIS and SFNTG) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Gender <i>Any identified issues?</i>	

TRANSFER OF OPCON	
Costs <i>Increased? Why?</i> <i>Decreased? Why?</i>	
Challenges (both SUCFIS and SFNTG) (not the legal aspects) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Possibilities (both SUCFIS and SFNTG) <i>From today up to IOC 2017</i> <i>Between IOC and FOC 2023</i>	
Gender <i>Any identified issues?</i>	

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