

SWEDISH EUROPEAN UNION BATTLE GROUP IN URBAN OPERATIONS

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ABSTRACT

SWEDISH EUROPEAN UNION BATTLE GROUP IN URBAN OPERATIONS, by
Conny M Hansen, 97 pages.

The European Union's role as a security organization in Europe is growing. The latest initiative was the decision to form a rapid reaction force, the so-called European Union Battle Groups. Sweden is the framework nation for one of these, scheduled to be operational on 1 January 2008. The spectrum of possible missions for the Battle Group ranges from humanitarian assistance to peace enforcement. This thesis focuses on the necessary capabilities a Swedish led battle group needs in order to successfully conduct offensive urban operations: seizing terrain, during a peace enforcement mission. Using the capabilities deemed as necessary by a NATO study in 2002 as a foundation, this thesis compares the suggested organization of the battle group to find any shortfalls and capability gaps, if it is to carry out a peace enforcement mission in an urban operation in 2008.

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ACRONYMS

AO	Area of Operation
C4	Command, Control, Communications and Computers
C4ISTAR	Command, Control, Communications, Computers, Intelligence (Information), Surveillance, Target Acquisition and Reconnaissance
CAS	Close Air Support
CBRN	Chemical, Biological, Radiological, and Nuclear
CC	Component Command
CMO	Civil-Military operation
COE	Contemporary Operating Environment
CS	Combat Support
CSS	Combat Service Support
CV90	Combat Vehicle 90
GO	Government Organization
EU	European Union
EUBG	European Union Battle Group
ESDP	European Security and Defense Policy
FARC	Fuerzas Armadas Revolucionarias de Colombia or the Revolutionary Armed Forces of Colombia.
HQ	Headquarters
MAGTF	Marine Air Ground Task Force
MEDEVAC	Medical Evacuation
MOOTW	Military Operations Other Than War
MOUT	Military Operations on Urbanized Terrain or the Swedish acronym that has the same meaning: “Militära Operationer i Urbaniserad Terräng” where appropriate.

NATO	North Atlantic Treaty Organization
NGO	Non Governmental Organization(s)
NIC	National Intelligence Committee
PE	Peace Enforcement
PfP	Partnership for Peace
PSO	Peace Support Operations
ROE	Rules Of Engagement
RSTA	Reconnaissance, Surveillance, Target Acquisition
UA	Unit of Action
UAV	Unmanned Aerial Vehicle
UN	United Nations
UO	Urban Operation(s)
USECT	Understand, Shape, Engage, Consolidate and Transition
TTP	Tactics, Techniques and Procedures
WMD	Weapons of Mass Destruction

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CHAPTER 1

INTRODUCTION

Background

“All set for Swedish led EU Battle Group”¹ is the title of a press announcement from the Swedish Ministry of Defense published in November 2004. This announcement marks a major step in the ongoing transformation of the Swedish Armed Forces and will be the main focus in the development of the Swedish Army in the coming years.

For some 175 years, the Swedish defense and national security policy has leaned heavily on being unaligned with the objective of maintaining the option to stay neutral in any conflicts. Since the end of the Napoleonic Wars 1815, when Sweden began this policy of staying outside of all military alliances, it has allowed Sweden to stay out of all wars, including both the World Wars. That success made the country choose the same path during the Cold War that followed. With the end of the Cold War and the dramatic changes that followed in Europe, Sweden’s long-lasting policy changed as well. The national defense policy has gone from a passive total defense concept, where the survival of the nation in a major conflict with the Soviet Union and its Warsaw Pact allies was the only focus, to a concept of international engagement using the armed forces as a key instrument of not only military, but also diplomatic and foreign policy power. This political policy change has led to a remarkable transformation of the Swedish Armed Forces in the last ten years,

Sweden has still not committed its militarily to any formal alliance; however, it joined the European Union (EU) in 1995 and more recently has moved away from a security policy that aims to be neutral in conflicts.² So even though Sweden is not a North

Atlantic Treaty Organization (NATO) member, it is a strong supporter of cooperative security measures within Europe, as well as strengthening the trans-Atlantic link. Therefore, Sweden has strongly supported the EU initiative to build a comprehensive and coordinated European security strategy.

The Swedish Armed Forces Current Transformation

The fact that Sweden will be the Framework Nation for one of the European Battle Groups (EUBG), represents the beginning of a brand new chapter of the Swedish Armed Forces. Yet, Sweden is not a new military player in the international arena. On the contrary, as a small unaligned country located close to the Soviet Union, Sweden put a lot of trust and effort in the United Nations (UN). It has been a troop-contributing nation in most UN military endeavors since the founding of that organization. The Swedish UN Secretary General, Dag Hammarskjöld, was actually the person who designed the mandate for UN military peacekeeping operations during the Suez crisis in the 1950s.³ However, since the heavy fighting under the UN flag 1960-63 in today's Democratic Republic of the Congo, Swedish Armed Forces have only participated in UN peacekeeping operations with combat troops. Thus, Sweden lacks recent experiences of major combat operations as well as experience in rapid deployment of self-sustaining forces outside its own borders.

The need for the ongoing transformation of Sweden's Armed Forces is not so much a technical question involving equipment. Even before the end of the Cold War, most of the equipment—with an important exception of the air force and ground-based air defenses—complied with NATO standardization agreement. The major transformation challenge has instead been in downsizing a large, basically conscripted,

military which was prepared to rapidly mobilize in the defense of the homeland (with the ability to deploy only a small force for UN peacekeeping missions during peacetime) to a much smaller, combat ready, fully interoperable force, capable of carrying out expeditionary missions as their main focus, and with a much broader spectrum of operations than before.⁴ This is a huge transformation that touches nearly all aspects of the Swedish Armed Forces, ranging from human resource management and logistics to integration of the services and interoperability. The Defense Resolution, which the Riksdag (Parliament) voted in favor of on 16 December 2004, emphasized this change clearly and increases the pace on the path of transformation. The ambition in the 2004 Defense Resolution is that all the necessary changes to make expeditionary operations the main capability for the Armed Forces must be taken. The EUBG will not be the only unit in this transformation or in international operations. However, according to the government and the Supreme Commander of the Swedish Armed Forces, General Håkan Syrén, the EUBG will be the priority unit for the coming years.⁵

The Swedish EU Battle Group

The Swedish goal is to have the capacity to form an EUBG entirely made of Swedish units. However, despite the ongoing transformation, this will not be reached until 2010. In the mean time, the government has made an agreement with Finland to augment the Swedish EUBG with troops.⁶ Other Scandinavian and Baltic countries are likely to contribute as well. This Swedish-led EUBG is named “the Nordic Battle Group,” and is scheduled to be one of the two designated rapid reaction units for the first half of 2008. The fact that Sweden wants to have all the necessary capabilities by itself does not mean that Sweden does not want other Scandinavian (or other) nations to

participate in the battle group in the future; it will simply allow Sweden the flexibility to act quickly and unilaterally if necessary.

Required Capabilities

For a country that has not been truly expeditionary since the Swedish King Charles XII invaded Russia in the early eighteenth century, the Swedish Armed Forces are not in a bad position, but several new capabilities are needed. Most of these capabilities are general and those needs apply independently of the type of mission, the type of terrain, and the distance from the logistical homeland bases. One of the most critical shortages is in the area of strategic lift and transport capacity. This applies not only to Sweden, but within the rest of EU as well, which makes it even more complicated.

Another general capability issue is that the EUBG is expected to be able to operate across a wide spectrum of missions, ranging from humanitarian relief work to high-intensity combat during peace enforcement missions. On the lower end of the conflict scale the interoperability has been tested and Swedish troops have experience from working with NATO, UN, and the EU in Bosnia-Herzegovina, Kosovo, Afghanistan, and other places. What is new is the higher end of the scale: peace enforcement. In order to conduct peace enforcement operations—which could unexpectedly evolve into high-intensity combat that for all practical reasons is war fighting—it takes a closer cooperation and interoperability to succeed. Therefore even though EUBG is able to carry out missions on its own, major offensive combat operations often require a larger force and therefore additional combat units as well as higher echelon units.

The 6.000 kilometer radius set to be the outer limit for the EUBG also dictates that a wide variety of geography and weather may be encountered. One terrain type emphasized in the 2004 Defense Resolution as well as in many other doctrinal manuals is the urban terrain. The capability to conduct urban operations is considered so important, that the politicians have given the Armed Forces a special mission to enhance this capability and to report its estimated progress for the 2005–2014 time period.⁷

These are just examples of issues that various headquarters (HQ) and temporary working groups from different parts of the Swedish Armed Forces currently are studying in order to have all different products solved in time to make the EUBG ready and operational by the 1 January 2008 deadline.

One of these working groups is titled: MOUT Study 2010. Their mission is to study this new battle group from an urban warfare point of view. The working group is also responsible for rewriting the doctrinal Military Operations in Urban Terrain (MOUT) tactic's manual, among other tasks. This research will be part of their report on the use of the Nordic EUBG in urban terrain, due in the summer 2005.

Research extent and thesis questions

The purpose of this thesis is to examine what specific capabilities a EUBG must have in order to operate successfully in an urban environment.

Proposed Research Question (Primary Question). What capabilities should the Swedish lead rapid reaction battle group have to operate in urban terrain?

Secondary Question. What capabilities are essential to have nationally and what can be provided by other nations?

Tertiary Question. What changes to current tactical organization are required?

Assumptions

The primary assumption is that no major combat systems will be added before 2008, due to the limited time (three years) and the constrained financial situation of the Swedish Armed Forces.

Limitations

The thesis is limited to peace enforcement missions and the capturing of urban areas during urban operations (UO); other types of missions (i.e, defensive, humanitarian support, stability operations, and defensive operations) are not specifically studied. This type of operation is on the higher end of the conflict scale for an EUBG. To include other types is not feasible within the limitations of this thesis.

The term “Urban Environment” in this study includes a wide range of terrain types, ranging from East European concrete slab, Berber villages, and Mediterranean-style towns to Middle East mega cities. To distinguish between these terrain types and examine what terrain-type specific capabilities that might be needed is not feasible within the limitations of this thesis.

Definitions

Urban Operations (UO) is any type of operation that takes place in an urban triad,⁸ where the main objectives lie within the built-up infrastructure or is part of the urban triad itself. The urban area is at least large enough to include the majority of an EUBG area of operation (AO) and may have an urban triad large enough to well exceed its AO.

¹Article downloaded from the Swedish Government's homepage:
<http://sweden.gov.se/sb/d/4582/a/34037> (2005-01-01).

²*FB 04* (Swedish Defense Resolution 2004, page 23).

³Downloaded from <http://www.sweden.se/templates/cs/BasicFactsheet>
____4327.aspx (2005-01-01).

⁴*FB 04* (Swedish Defense Resolution 2004, page 31).

⁵*FB 04* (Swedish Defense Resolution 2004, page 48, 69), <http://www.hkv.mil.se/article.php?id=12654> and *ÖB Snabbinfo vecka 441*.

⁶*FB 04* (Swedish Defense Resolution 2004, page 48).

⁷*FB 04* (Swedish Defense Resolution 2004, page 54).

⁸The three distinguishing characteristics of urban areas: complex manmade physical terrain, a population of significant size and density, and an infrastructure upon which the area depends. Definition from *JP 3-06 Doctrine for Joint Urban Operations*, page GL-11.

CHAPTER 2

LITERATURE REVIEW

The literature review is divided in three major categories. First, it will cover works dealing with the contemporary operating environment (COE), to frame what type of setting the EUBG will operate in. This will be followed by a review of literature about contemporary and future urban operations (UO) and NATO's capability tool chosen to be used in the research for comparison. The third category is the EU and Swedish framework documents, as well as other Swedish literature on the subject.

Contemporary Operating Environment

Regarding the global Contemporary Operating Environment (COE), all used literature follows the same emerging trends for this period (2008–2015). Well summarized by the researchers at the National Intelligence Committee (NIC) into three major fields. First, a general increase in the population will occur and is predicted to reach over the 7 billion mark somewhere within the timeframe 2010–2015. About 95 percent of this growth will be in developing countries. Second, there will be a general growth in per capita income, due to globalization and an increased number of market economies in the world.¹ These factors will combine to raise the demands people have on their governments regarding basic needs, infrastructure, essential services, and protection. The third trend is globalization itself. Information technology, global trade, and multinational businesses will all continue to change the nation-states. While the governments, in general, will benefit from globalization by shrinking distances, increased flow of information, and increased trade, they will also be less in control of businesses,

information, and the political agenda, as other actors take over roles previously held by the national government.²

These three trends tend to divide countries into two general groups. Because the general trend is not for all, there will be those who prosper and adjust to the changes and those who fail to do so. Some countries will try to isolate and shelter their countries from the global world, such as North Korea or Cuba. Others, like Iran and Syria, will try to walk the thin line in between.

The largest population growth can be seen in the large group of developing countries.³ It is also in these countries that the government is less likely to be able to meet the growing expectations and demands from its increased number of citizens. The combination of urbanization, changing demographics, declining economic condition, unemployment and poor education systems, and religious extremism make the probability for more failed states almost certain. The prediction by the NIC is that: “The likelihood of great power conflict escalating into total war in the next 15 years is lower than at any time in the past century.” Yet, the likelihood of internal conflicts, as well as regional unrest in states and regions that fail to change to the new world situation, is described by the same source as: “Weak governments, lagging economies, religious extremism, and youth bulges will align to create a perfect storm for internal conflict in certain regions.”⁴

Several of the developing countries in the proximity of Europe faces this challenge of rapidly increasing populations, fast growing uncontrolled urbanization, leading to an increased possibility of these states failing to meet the needs of the

population and internal conflicts, subsequently increasing the chance for conflicts in urban areas, and nonstate actors in the COE.

The Contemporary Urban Environment

From the oldest source used to the ones most stretched out into the future,⁵ the literature has a shared pattern regarding the urbanization trends and the urban area as a battle space.

The general urbanization that follows population growth is not the only factor that increases the likelihood of UO in the future. Another important factor is the movement away from the Cold War era linear battlefield. With more nonstate actors and the absence of two large, conventional forces facing each other, an enemy may not have the capability to meet a modern well-equipped army with all of its resources on the open battlefield. By a more asymmetric approach, exploiting the benefits of the urban environment an enemy can gain an advantage, and is therefore more apt to do so.⁶ However, insurgencies, organized crime organizations, or “freedom fighters,” using the urban environment to blend in, as their powerbase, and to level a conventionally stronger adversary, is not something new. C. Christine Fair points out in the monograph “Urban Battle Fields of South Asia,” that not only have insurgencies used the urban environment for decades in the countries she has studied in her research, but she also points out how they have been using their diasporas, other sympathizing organizations and created institutions on a transnational scale.⁷

What is new in the post-Cold War world is the shift from the traditional paradigm of structured nation versus nation in a full-scale war, type of scenario as was seen in both the World Wars, to a more complex use of the infrastructure by both an inferior state

actor as well as nonstate actors. The higher complexity is due to the moral and social development which has occurred since that time. This development has led to a more-restricted use of military force by Western states,⁸ an aspiration to comprise much more concern for the supportive population (your nation's, your coalition's and the general public), dependents (noncombatants, non governmental organizations, and refugees) to hostile (possibly including the local population) groups have to be taken in consideration in all military planning and execution.⁹ At the same time the enemy has become harder to identify, using an asymmetric approach both conventional and paramilitary troops often try to blend in to the urban terrain by using civilian vehicles, clothes, and other nonmilitary characteristics.¹⁰

Already by the time of the Second World War, urban areas presented a very complex and both mentally and physically demanding environment. Nothing in the reviewed literature points towards that has changed; it is still an extremely hazardous, rapidly changing, chaotic environment for the soldiers involved. Added to this are constraints of stricter rules of engagement (ROE) and legal concerns (collateral damage, multinational partners, etc). Also, as the missions performed in today's and future UO become more complex, no longer is seizure of the objective in a full-scale war the sole consideration. It has to be seized in more limited conflicts where the secondary and third order effects have to be taken in consideration and simultaneously as a multitude of other tasks that accompany the combat mission. This menagerie that is not defined as war, instead it is labeled military operations other than war (MOOTW). On top of that, the mission may be conducted in close cooperation with coalition partners who work under a different set of ROE. All this is done under today's ever-watching media eye, which turns

every decision made, even on a low level, to a possible world news event. These facts are fittingly summarized by the U.S. Marine Corps General Charles Krulak with his now so-well-known term “the strategic corporal.”¹¹

Future Urban Operations

What the reviewed literature agrees upon is that the way nations have planned and conducted urban operations has not improved considerably since the Second World War and that new approaches are necessary.¹² Where there is a divergence is among manuals, lessons-learned, similar contemporary literature, and literature that view more into the future. The future-looking, as well as nonurban specific literature generally focuses on the impact of technology and how greatly this will change modern warfare. Exemplified by this quotation, regarding the organizational design for the US Army’s Unit of Action (brigade combat team) organization, currently taking place:

Information in this organization can quickly become knowledge for leaders, tailored quickly to mission, task and purpose, distributed within the organization over premier communications systems, and networked to support commanders and leaders. Within the UA, [Unit of Action] there will be a first class Military Intelligence element along with manned and unmanned ground and air R&S. [Reconnaissance and Surveillance] The ‘triad’ of communications, analysis, and reconnaissance will take the organization to a new level of situational understanding. . . .

The UA builds lethal overmatch through a new combat power formula. In the past, combat battalions relied on Maneuver, Firepower, Protection and Leadership as the formula for combat power: $CP = M + F + P + L$. However, in the UA information raises combat power exponentially: $CP = (M + F + P + L)^{\text{Information}}$.¹³

The literature that is focusing on today and on the near future and that is urban-specific acknowledges the change of the COE and the improved capabilities technology has enabled. However, it stresses that even with a modern approach, today’s

technology will not have the same impact on UO as it might have in operations on less restricted terrain.

New technologies in the form of micro-UAVs [unmanned aerial Vehicles] and UGVs [unmanned ground vehicles] with short-range, high-resolution, penetrating sensors along with fiber-optic guided missiles able to fly through windows and sewers to deliver concussion charges will help, but the lethality of small-arms fire and antitank weapons will require even more effective lightweight body armor. Better active protection systems for armored fighting vehicles will also play a role in enabling urban operations with reduced casualties and reduced collateral damage. . . . These changes will come, but they will not transform urban warfare from something slow, costly, and politically difficult into a cakewalk. Instead, old-fashioned firepower delivered in mass, combat engineers, and traditional armored protection in the form of heavily protected tanks and armored fighting vehicles and self-propelled artillery and mortars will remain essential ingredients in the success of the close fight.¹⁴

An attempt to adapt urban operations to the same principles that apply to other operations, but nevertheless take in consideration the lessons learned and unique circumstances the urban battle space causes, has resulted in the Understand-Shape-Engage-Consolidate-Transformation (USECT) conceptual framework. The USECT framework is a term first introduced in the draft version of JP 3-06, *Doctrine for Joint Urban Operations*, from October 2000, and is now in use for UO in the U.S. Armed Forces on a joint level.¹⁵ Also the nesting US Army manual: FM 3-06, *Urban Operations 2002*, uses a compatible version in which the USECT tool has been boiled down to four essentials: assess, shape, dominate, and transition. NATO has chosen to use the USECT framework as well, and it appears there for the first time in the study *RTO-TR-71 Urban Operations in the Year 2020*.

The US publications JP 3-06 and RTO-TR-71 show an almost unanimous approach in the aspects that both publications cover. This is not so strange, since the NATO study group used the draft version of JP 3-06 as a starting point for its work.

RTO-TR-71 further emphasizes two guiding themes that will apply as important factors for the selection of an operational concept, regardless of the given mission and the situation: the maneuverist approach and to casualty minimization.¹⁶

Also the US Marine Corps is moving away from the attrition style of UO to use tactics based on the tenets of maneuver warfare.¹⁷ In its report after conducting a series of experiments named “Project Metropolis,” they stressed many of the same type of capabilities as the NATO USECT study group: situational awareness, combined arms teams integrated to the lowest level, rotary wing for vertical envelopments, as well as other functions (fire support, medical evacuation). The report mainly focuses on training and low-level improvements, but it is worth mentioning in this study since it points out how successfully combined arms teams can be, even in high-intensity UO, given the right capabilities.¹⁸

The Maneuverist Approach

The use of maneuver warfare is not new; it is probably as old as warfare itself, and much literature on the subject can be found. Its essence was captured in writing already 400 BC by Sun Zi: “The best victory is when the opponent surrenders of its own accord before there is any actual hostility. . . . It is best to win without fighting.”¹⁹

In more recent literature, an important part of the principle is commonly explained as the Observation–Orientation–Decision–Action cycle, or the *OODA-loop*, a theory invented by the US Air Force Colonel John Boyd.²⁰ However, to have a maneuverist approach is more than that. It is to shatter the enemy’s will to fight, rather than to attrite his forces in a linear fashion.²¹ That is to use an indirect approach, here described in a quote from the British military theorist B. H. Liddell Hart: “not so much to

seek battle as to seek a strategic situation so advantageous that if it does not in it self produce the decision its continuation by a battle is sure to achieve this.”²²

It is also about how to out maneuver your opponent by constantly being offensive seizing the initiative faster than he does, and by doing that, consequently cause him to react to your moves rather than to let him force his will upon you.²³

The bottom line is to cause a system shock for the enemy, to break his cohesion and make him incapable to resist your will. This does not necessarily include the destruction of his combat forces; the focus is the moral and conceptual factors rather than the destruction of the physical forces of the enemy. The Swedish *Military Strategy Doctrine 2002* lists four foundations for a maneuverist approach: (1) use the indirect method, (2) exploit the enemy’s critical vulnerabilities, (3) always keep the initiative, and (4) the use of mission type orders make it easier.²⁴

RTO-TR-71 emphasizes the use of the maneuverist approach to UO. It states that: “All NATO nations train their forces to operate in open terrain adopting the maneuverist approach in their plans to defeat the enemy.”²⁵ Swedish doctrine reads the same: “The foundation of the Swedish Armed Forces action is the maneuverist approach.”²⁶ It also stresses that this approach applies on the full spectrum of operations, as well as on all echelons. Therefore, no matter what capabilities the Nordic EUBG includes, these must emphasize or correspond to the values of the maneuverist approach.

Minimizing casualties

The second guiding theme is minimizing casualties. There are of course very obvious reasons why a modern society always wants to limit casualties regardless of the mission or situation. It is important to underline that the ambition to minimize casualties

includes all parties; combatants and noncombatants alike. The principles of proportionately, distinction, carefulness, and humanity all constitute a foundation both in Swedish national law and international law.²⁷ In the Swedish Armed Forces, this has been emphasized even further after the end of the Cold War for many reasons. Casualties in an expeditionary Peace Support Operation (PSO) are less acceptable than in a fight for ones own nation's survival. A smaller force can withstand fewer casualties. The ongoing general development of the society regarding what is acceptable, including the impact of the increased media coverage.

Despite the willingness and the increased capabilities (precision strikes, increased C4ISTAR, graded effects, etc.) to minimize casualties, the opponent's values and methods may be different. The opposing force might actively target noncombatants, international relief organizations, and civilian infrastructure. This could even be desirable for an adversary because they are easier targets, and because they may pose an indirect way for an opponent to achieve their goals.²⁸ This will Force us to tie resources to protect non-military targets and become reactive, rather than actively seeking out our adversaries, keeping the initiative, and engaging them.

Sweden

The literature produced by the Swedish Army regarding UO tends to be obsolete. Most of it is written before the transition to an expeditionary force, or is built upon that legacy. Hence it is made for the Swedish urban environment in an all out war against a massive enemy, equipped and organized in a Soviet fashion. This problem is acknowledged and the current Army MOUT doctrine,²⁹ which was published in 1998 is about to be replaced later this year.³⁰ The temporary manual: *Utbildningsanvisningar SIB*

03-04 is to be used until the more complete manual is published. Some of the content in that publication “breaths” of legacy as well; however, several steps to make the Swedish UO tactics, techniques and procedures (TTP) more interoperable and in accordance with NATO standards, have been taken.

Regarding the COE, there have been very few changes from the traditional national defense concept in the approved doctrinal manuals of the Swedish Army that are in use today. In the recent directives from the government and Joint Headquarters (HQ),³¹ the direction for the future is clear: the prioritized mission for the Armed Forces is its ability to conduct peace support operations outside the national borders. Doctrine and manuals have not yet caught up, and they therefore do not properly reflect current priorities. This points out the necessity to use other literature and studies: there is no completed official Swedish equivalent or interpretation at this moment. Furthermore, with the EU’s directive to seek common solutions and interoperability with NATO for the development of the EUBG, there are even more reasons to adopt that into Swedish doctrine as well.

Literature Summary

When the Cold War melted away like snow on a warm spring day in the early 1990s, things that had been hidden underneath or frozen in place began to thaw out. The stabile bipolar system that Europe and the rest of the world had seen for a long time was gone. Like a confused animal, recently awakened from hibernation, Europe watched the sudden changes: the fall of communism, the breakup and formation of new states, and the internationalization and globalization stretching over old boundaries. These changes have led to a situation where the threats of major conflicts among European nations are on a

historically low level. Now, there are other threats to the security and stability that became evident shortly after the awakening. Suddenly places hardly heard of before are the center of the world's attention: Kuwait City, Srebrenica, Mogadishu, Pristine, and Grozny, to mention a few. The threat to European stability has moved from central Europe to its outskirts. There is no possibility to build a new Iron Curtain, this time around Europe, to prevent anything that might threaten the stability to enter. Today, moral obligation and the globalization force Europe to be prepared to go and eliminate the source of the problem, even if the source is in the far outskirts and in places like cities, less desirable to fight in.

With armed forces' of Europe shaped for the extremely symmetric Third World War, prepared to be fought on Europe's central plains in the early 1990s, there has been an ongoing effort to transform armed forces all over Europe to fit into the new security situation. The challenges have been many, to transform to cope with an unclear threat, that is much more complex and different, or asymmetric, than during the Cold War. To do it and simultaneously undergo substantial downsizing in numbers to save money³² for this transformation as well as the implementation of the new technology that has become available in what at least used to be called "Revolution of Military Affairs" during the 1990s.³³ The aim is to create a smaller, more flexible force that is fast to move and rapidly deployable to where it is needed. To have such a capability enables the European states to take the fight to where it is needed, in time to prevent an escalation and a spillover effect on (other parts of) Europe.

To be proactive and prevent conflict escalation means taking the fight to the enemy, to his "backyard." An asymmetric enemy will try and make the best of the gaps in

technology, numbers, obligations, and constrains (imposed by media, international law or self-imposed) to achieve his goals. This, together with the increased number of nonstate actors, has made it very hard to foresee and predict future trouble spots and what capabilities that are needed to deal with them.

One effective way to minimize inferiority in numbers, technology, media attention and firepower, is to use the urban terrain to the advantage. The urban environment and its population become even more useful for an opponent that chooses to disregard human rights and laws of armed conflict, especially when the other side is constrained to obey them strictly. With the demographics in the border region around south and east Europe, the likelihood for both conflicts in general and conflicts in urban areas in particular, is increasing.

The latest step taken in Europe to increase the readiness with these kinds of threats is the forming of the EU Battle Groups. For a European country, like Sweden, that stood perplexed in the post-Cold War era with a military capability that was no longer needed, the forming of a Swedish led EUBG marks a big step on transforming into a expeditionary broad-spectrum peace support force. To make the Nordic EUBG interoperable, a framework must be set. Since EU's stability role is meant to compound the existing European cooperation within NATO, its standard should be used. For Sweden, with little experience in using NATO methods, doctrine, and procedures, it is essential to start using the common "NATO language." The desirable capabilities for UO researched by NATO should provide a workable foundation—a checklist—for Sweden to evaluate needed capabilities for peace enforcement.

In short, the used sources depict a relatively unified picture regarding the COE. UO needs to be modernized to harmonize with the ongoing transformation. However, literature provides a mixed picture how far and how fast that transformation can be achieved. The operational level capability tool, USECT, provides a useful and relevant instrument for the analysis.

¹*NIC Global Trends 2010*, “The Emerging Global Trends,” NIC 2020, p. 11

²*NIC Global Trends 2010*, “The Emerging Global Trends,” NIC 2020, p. 10 - 12

³*NIC Global Trends 2010*, “The Emerging Global Trends,” and (NATO document: *RTO-TR-71 Urban Operations in the Year 2020*, chapter 2.2.2.)

⁴*NIC 2020*, p. 14

⁵From: *A Concept for Future Military Operations on Urban Terrain*, 25 July 1997 to the NIC 2020 articles. http://www.cia.gov/nic/NIC_2020_2004_05_25_intro.html

⁶*Joint Forces Quarterly*, issue 35, p. 132 and *RTO-TR-71 Urban Operations in the Year 2020*, chapter 2.3.2 – 2.4.1, also *JP 6-03 Joint Urban Operations*, p. I-1.

⁷*Joint Forces Quarterly*, issue 35, p. 6 and p.135

⁸As pointed out in *RTO-TR-71 Urban Operations in the Year 2020* (chapter 2.3.2), the two Russian operations in Grozny, are examples of the more unlimited type of urban operations that are highly undesirable to be conducted by Western forces in peace enforcement situations today. During the Soviet war in Afghanistan in the 1980s, the Soviet troops showed a similar approach to urban operation by emptying whole sections of cities with a brutal use of firepower as for example, Kandahar in 1982. (*Firepower in Limited Wars*, p. 172 – 173)

⁹*RTO-TR-71 Urban Operations in the Year 2020*, chapter 2.3.1

¹⁰*FM 3-06 Joint Urban Operations*, page 3-7

¹¹*The Strategic Corporal: Leadership in the Three Block War* article by GEN Charles C. Krulak, U.S. Marine Corps.

¹²For an example, see: *FM 90-10 Military Operations on Urbanized Terrain* (1979) Found at: <http://www.globalsecurity.org/military/library/policy/army/fm/90-10/toc.htm>

- ¹³*Student Text 100-3: Battle Book*, page 4-28 – 4-29
- ¹⁴*Transformation Under Fire: Revolutionizing How America Fights*, page 158
- ¹⁵*JP 3-06 Joint Urban Operations 2002*, p. viii
- ¹⁶*RTO-TR-71 Operations in the Year 2020*, p 4.2
- ¹⁷*Project Metropolis*, p. 5
- ¹⁸*Project Metropolis*, p. 16
- ¹⁹*Sun Zis Krigskonst*, p. 25
- ²⁰*Maneuver Warfare Handbook*, p.5
- ²¹*RTO-TR-71 Urban Operations in the Year 2020*, chapter 3.3
- ²²*Strategy*, p. 325
- ²³*Militärstrategisk doktrin 2002*, p. 81
- ²⁴*Militärstrategisk doktrin 2002*, p. 81 (Translated from Swedish by the author.)
- ²⁵*RTO-TR-71 Urban Operations in the Year 2020*, chapter 3.1
- ²⁶*Militärstrategisk doktrin 2002*, p. 81
- ²⁷*Militärstrategisk doktrin 2002*, p. 43 – 46
- ²⁸*Militärstrategisk doktrin 2002*, p. 23
- ²⁹*FörbR SIB 1998*
- ³⁰According to a paragraph in *UtbA SIB 03-04*, and also mentioned in a telephone interview with MAJ Walldén, Swedish Army Combat School. (2005-01-15)
- ³¹Multipel sources: *Regleringsbrev för budgetåret 2004 avseende Försvarmakten, Regeringens proposition 2004/05:5; Vårt framtida försvar* and *Rapport 7; Målbildsinriktningar inför Förvarsbeslut 2004*.
- ³²The regional military expenditure in Europe in the period 1990 – 2003 has according to *Stockholm International Peace Research Institute (SIPRI)* been between - 2 % to - 8 %. However, the trend has changed to a slight increase after 11 September 2001. (http://www.sipri.org/contents/milap/milex/mex_wnr_table.html, visited 2005-02-09)
- ³³*Modern Krigskonst*, p. 173

CHAPTER 3

RESEARCH METHODOLOGY

This study aims to answer the thesis question: What capabilities should the Swedish led rapid-reaction battle group have to operate in urban terrain?

The first step in this study has been to frame the problem. By reviewing the documents and literature regarding the EUBG concept, in general, and the Nordic EUBG specifics, in particular, a number of common capabilities was found, capabilities needed regardless if the mission involves UO or not. These general capabilities lay a foundation, but they have not been further studied.

This was followed by a study to find out what specific challenges and changes the urban environment might cause. First studied was what characteristics the contemporary and near future operating environment is likely to have. Then literature, doctrine, and documents were read with the goal of finding out what capabilities can be summarized as necessary for UO. After having defined what specific capabilities UO require, these were verified against the ones described in RTO-TR-71 *Urban Operations in the Year 2020*, listed as forty-two capabilities and abbreviated as USECT. The USECT framework is an operational level NATO tool that was produced to conceptualize urban specific capabilities needed on the operational level. These studies showed that the capabilities described in RTO-TR-71 well matched what other sources indicated. The assumption was that the RTO-TR-71 study group was right and that its findings were right for Sweden as well.

Since the working group that developed USECT intended it for the full spectrum of operations and for the operational level, some adjustments and changes to the model was needed in order to make it useful for a tactical level unit, with a more narrow focus of possible missions.

The conclusion was that with these adjustments, a comparison between the general capabilities described in Swedish documents for the EUBG and the somewhat modified capabilities originated from RTO-TR-71 would provide useful to identify possible UO capability gaps between the two. The foundation of general capabilities plus the specific ones for UO should form an answer to the primary thesis question.

In order to answer the secondary and third questions: “What capabilities are essential to have nationally and what can be provided by other nations?” and “What changes to current tactical organization are required?” a closer comparison between the proposed Swedish organization and how well it matches the modified capability requirements from *RTO-TR-71* must be done. Here the capability requirements have to be converted into organizational building blocks—units. That is to be followed by matching these building blocks from RTO-TR-71 with the suggested unit registry including the core and reinforcing units for the Nordic EUBG to see if there are any differences. The conclusion from that study should reveal what capabilities and units that can be taken away and or units and capabilities that need to be added to the registry. It should furthermore indicate the level of importance and prioritize each capability.

Finally, for the third question for any shortfalls in units or capabilities that cannot be sufficiently solved with Swedish resources, there is a need to see if there is a possibility to achieve those from any of Sweden’s current partner nations or a third nation.

CHAPTER 4

ANALYSIS

The general trends of population growth, per capita income growth and globalization predicted to be seen in the near future is predicted to decrease the risk of armed conflicts between states. While this is true for the majority of countries, there is a likely number of countries that cannot or will not meet the increasing demands of its people. Therefore, the gap between “member states” of the global world arena and some of the developing countries is likely to increase. With it, there is always the risk of internal collapse and a failed state. This, in turn, can lead to a spillover effect on the region, as well. Failed or failing states that lack an effective government control of its territory can be a safe haven for international terrorist groups (as for al-Qaida in Afghanistan) or for organized crime with international dispersal (FARC-guerilla and drug cartels in Colombia). The increased importance of other actors than national governments and their organizations is not limited to legitimate businesses and communication, as both the examples of Afghanistan and Colombia show, as well as available literature.¹

It is among the nonstate actors and the failed or failing states the future areas of operations for peace support operations (PSO) most likely is found.

The 6,000 kilometer circle around Brussels includes several potential hotspots that can escalate within the covered time frame. Although other regions can be used as an example, the Muslim states in Africa and the Middle East are the most obvious. Many of these states have borders drawn by their former colonial rulers, rather than determined by ethnic, cultural, or linguistic boundaries. Furthermore, these countries have all the above-

stated ingredients of potentially failing states mentioned. They have a rapidly growing population and a changed demographic, the highest annual rate of increase in the world (2.2 to 2.7 percent), according to the UN Statistics Division.² In general they suffer from poor economic performance and problems in creating jobs for their growing population. According to LTC Ling Wee Lee's essay "*War Against Global Terrorism: Winning the Hearts, Souls and Minds of the Muslim World*," the combined gross domestic product of all the Arab countries was less than that of Spain in 1999.³ LTC Lee's list of problems in the region also includes: a low receptivity to new ideas, underdeveloped technology, and poor education and human development. His statement that this "provides fertile ground for radical Islamic groups such as al Qaeda and Jemaah Islamiah"⁴ is not very far fetched.

The contemporary urban battle space an EUBG will face is most likely a very complex circumstance with the possibility of multiple-state and nonstate actors with diverging agendas, using the "urban triad"⁵ to level the advantages of a modern military with an asymmetric approach. In a PSO the peacekeepers must be able to take the fight to the enemy and deny him these advantages. In most PSO, the population is the key for both sides, which makes the challenge of modern UO greater, by taking war to the cities in a more precise manner, with significantly fewer combatants and noncombatant casualties and less collateral damage, requiring the capability to simultaneously handle occurring events ranging from close combat to humanitarian assistance. In the words of General Krulak: the capability to fight the "three-block war".⁶

The Security Role of the European Union

The first seed that later became the EU was the European Coal and Steel Community formed in 1951. It sprung up as an attempt to prevent further wars between the countries involved by tying their economies together. Over time it evolved to be more of a trade and common market organization, rather than a security and stability organization. However, the drastic changes in Europe that followed the downfall of the Soviet Union led to the signing of The Treaty of Maastricht 1992, and the forming of the EU. Once again defense matters were emphasized in the new forms of co-operation in the post Cold War Europe. Moving gradually towards a European common foreign and security policy, several steps have been taken. The pace increased in the late 90s, and accelerated even further after 11 September 2001. One of the milestones was set during the Helsinki European Council in 1999: the decision to develop an autonomous capacity to decide, launch, and conduct EU-led military operations in response to international crisis.⁷ This was followed up in May and June 2004 by the EU council's decision to approve the document *2010 Headline Goal*.

The *2010 Headline Goal* includes the main parameters for the development of EU's military capacity in the near future. One key element in it is creation of a capability to rapidly deploy force packages as a response to crisis. These force packages are to have the capability to operate either as a stand-alone force, or as a part of a larger operation, and as an enabler for follow-on forces. Those 1,500 men strong force packages are called Battle Groups.⁸

The European Union Battle Group Concept

The need for units that give the EU the ability to be proactive rather than reactive is great. The shortfall in the EU's ability to quickly put out sparks before they turn into a conflagration became evident in the 1990s. As General James L. Jones points out: NATO's and the EU's cultural mind-set is peacekeeping operations, which is reactive in its nature. He, therefore, welcomes the ongoing process and creation of rapidly deployable expeditionary forces in Europe, which make a more proactive security policy possible. He also points out the tenfold difference in costs between being reactive rather than proactive.⁹

The operational objectives set by the European Council for the EUBG in the 2010 *Headline Goal* are

to take the decision to launch an operation within five days of the approval of the crisis management concept by the council; to deploy forces on the ground no later than 10 days after the decision to launch the operation. In addition to deployment of the whole spectrum of crisis management operations covered by the European Union Treaty, the Council considers that rapid action might also include, as indicated by the European security strategy, joint disarmament operations, support for third countries in combating terrorism and security sector reform.¹⁰

With an average military expenditure in the vicinity of 2 percent¹¹ in the EU countries and with downsized armed forces in these countries, the military is bound to be over-tasked. It is no surprise that several documents regarding the EUBG underline the importance of NATO and EU as complimentary, mutually reinforcing organization that needs to work in close cooperation.¹²

Over all, during the Capabilities Commitment Conference on 22 November 2004, the EU countries¹³ made the commitment to form thirteen battle groups, a number that well exceeded the seven to nine set as a minimum goal.¹⁴

EUBG's Missions and Tasks

The general purpose of having a rapid deployment unit like the EUBG is to be able to react fast and hopefully deescalate a situation before it turns in to something bigger. Furthermore, it can be tasked to secure a point of entry, a port or airport, for its own force build up and sustainment or for other follow-on-forces.¹⁵ To specify each and every task and capability needed is impossible in today's COE covered in the large geographical area in the 6.000 km circle designated around Brussels, and given the wide spectrum of missions that the so called Petersberg Tasks include. Missions were the capability to operate in complex urban environment is highly probable.

Some general characteristics that are of importance for this study can be found in the official documents: (1) An EUBG has to be able to conduct autonomous operations, as well as parts of a larger operation. (2) The troops must be self-sustaining in the AO for 30 – 120 days. (3) The EUBG must be capable of conducting short but demanding (high risk) operations to either support the initial phases of a new operation, or to reinforce and prevent an escalation in an ongoing. (4) EUBG standards must be harmonized with their NATO counterparts. After all, the majority of all multinational training for the EUBG will be done under NATO and or Partnership for Peace (PfP) exercises and NATO is the most likely partner during missions.

The Swedish Contribution

The studies conducted in Sweden, so far, have come up with some general characteristics that are valid for this study: (1) Once the order to deploy has been received by the battle group, there is no time to add new functions, change the organization or additional training, that is, the force package prepared is what is chosen from when

deployed; hence, the importance of having a large pool of different capabilities to allow the decision maker flexibility. (2) The EUBG must be able to recover (sustain combat power) without being pulled out of the AO. (3) High tactical mobility. (4) The company sized elements need to have the capability to operate with a high degree of independence and in, or because of, a large or dispersed AO.¹⁶

The idea is to create an organization around a core battalion-sized element, and then create a number of units with different capabilities to reinforce the core battalion depending on the current needs. See appendix B for details.

To allow maximum flexibility, a number of units will stand ready to reinforce the core battalion with capabilities needed to form the battle group. A list of the suggested Swedish capabilities to be available to reinforce the EUBG core battalion is found in Appendix B. However, it is not a set list, nor is it complete, since no finite complete list has been established yet. The EUBG is the land component of the EU rapid reaction unit, so most of the units under the EUBG Commander will be Army units; however, some may be from the Amphibious Corps¹⁷. Depending on situation and geographical location, air and naval assets, as well as strategic resources will be added under the air, maritime, Special Forces, and or other component commands, to complete the EU rapid reaction unit. Details regarding their command relationship with the EUBG Commander are not completed to this date.

Other Participating Countries

Other participating countries make it possible to fill capability gaps, share costs, and create a sense of a more unified EU effort.

There is currently no memorandum of understanding signed between Sweden and Finland.¹⁸ The capabilities offered by Finland as reinforcing building blocks to the EUBG core are: a fire support unit; a chemical, biological, radiological, and nuclear indication and decontamination unit (CBRN unit); and military intelligence units. To the EUBG core itself, they will contribute military police, logistics, and staff personnel. The estimated number of officers and enlisted is between 180 and 220.¹⁹

Since the EU also welcomed European NATO countries which are not members, Norway is able to participate. The exact capabilities and numbers are to be worked out in the future, but it is believed to be up to about 150 personnel.²⁰ This leaves the door open for the possibility to include even other nations in the future as well.²¹

NATO's USECT Tool

In an attempt to evolve from the traditional street-by-street, linear clearance methods of urban combat and to minimize the amount of close combat activities a more flexible method that took the maneuverist approach and the modern urban battle space in consideration had to be adapted. The USECT tool is an attempt to organize complex urban operations in a conceptual framework.

The five components may be sequential or parallel, or they may overlap and be simultaneous. Each component has its own characteristics and subsequently requires different capabilities; they will also be different depending on the type of mission. To make the work feasible, the study group chooses to focus and examine: "one of the most challenging missions, that of capturing an urban area."²² The reason for their choice is that capturing an urban area includes and supports most of the other possible missions and best covers all five of the USECT phases. Which is one of the reasons the author has

chosen to build his study on the closest a EUBG comes to that: capturing an urban area in a peace enforcement situation.

The traditional approach of UO focuses on three elements: (1) isolate by siege or surrounding the entire urban area, (2) remote strike, which sometimes leads to the destruction of the urban area, (3) ground assault, from one or several avenues of approach aimed to clear the entire urban area in a linear fashion. To further tie the operational-level capability requirements to the guidelines of a maneuverist approach and to limit casualties, RTO-TR-71 introduces five new concepts. Those are more surgical and more suited for today's smaller numbers and restricted urban combat operations: (1) nodal isolation (replaces the siege), (2) precision strike (instead of excessive collateral damage), (3) nodal capture and expansion, which allows the focus on key areas and critical facilities, rather than all urban terrain, (4) soft-point capture and expansion, which is focused on the enemy's weaknesses, rather than the critical infrastructure, and it is (5) segment and capture or isolate, where the city is divided in segments and dealt with individually after it has have been separated.²³

Even though the US is not using the exact same terminology, the same approach and concepts can be found, which brings further credibility to the use of the concept. JP 3-06 states the importance of identifying nodes, to apply strength against an adversary's weakness, and to shatter his cohesion and psychological balance.²⁴ Furthermore, it describes the same desire to minimize collateral damage with the use of precision strikes.²⁵

Key Capabilities

With a list of total 42 capabilities deemed as necessary for UO there is a need for prioritization. The writers of RTO-TR-71 have done this in order to focus future efforts on what they saw as the most important ones. Their criteria for selection were according to the document: "... noting the existing capability gaps, and the military importance, as judged by the Study Group."²⁶ What later are named *Key Capabilities* are the fifteen identified as such by the study group.

Understand

Understanding the battlefield is crucial for all phases and aspects of military operations. It is the first step of any operation, regardless of type, and it is what enables the phases that follow. To constantly try and achieve as higher level of understanding than your opponent (information superiority), will always be a priority. Hence, the understanding phase of an operation will not end until the very end of a transition is over. It is an increased capability in this area that in many ways enables the modernized, desired approach to UO. However, the "Understand" in USECT includes a wider meaning of understanding than is generally included in information superiority. As the Wall Street Journal reporter, Greg Jaffe points out: "in the future, units' readiness for war should be judged not only by traditional standards such as how well they fire their tanks, but by the number of foreign speakers in their ranks and their awareness of the local culture where they will fight."²⁷

Information superiority enables faster decision making and improves the likelihood of these decisions to be accurate. Emphasizing the "Understand" in USECT is the most significant difference in how to plan for and conduct future UO. Embracing the

complexity of modern warfare and UO, this will subsequently enable the use of the two guiding themes described in *RTO-TR-71*, summarized as the use of a maneuverist approach and minimizing the number of casualties. However, to gain information superiority and a good enough understanding of the urban battle space, the scope of the idiom “understand” has to be much wider than what traditionally has been the case.

It is no longer just a matter of evaluating the urban battle space and a single adversary, which indisputably is complicated as it is. Especially in military operations other than war (MOOTW) the situation requires so much more to gain an understanding. Since the peace of Westphalia 1648, the “monopoly” to wage war has been held by the State in Western European countries. Now we possibly face an enemy that does not fit in our models, who is unique on every occasion and most likely consists of multiple actors: military, paramilitary, more or less organized criminal gangs, media, government organizations (GO) and NGO’s that all have implications for decision makers in MOOTW. With the constantly shifting characteristics of the urban battle space, understanding is continuous and applies for all phases of an UO.²⁸

Requirements for Understand

The complexity of UO, and the expansion of current concepts to include a deeper regional and local knowledge of the AO, will cause the production of amass of information data from a large number of different sources. To achieve an understanding, the capability to process and fuse large quantities of data from different sources and to timely distribute necessary information to the right receiver has to be sufficient. The different information sources require personnel with linguist skills and personnel with skills to analyze data; it requires interoperability and integration to prevent delays and

misinterpretation. Another step to avoid misinterpretation and unnecessary mistakes is to raise the cultural awareness of the organization. This includes the understanding of the actors' involved, (factions, ethnical groups, NGO, etc.) local culture, costumes and traditions of the AO.

With the many actors involved in a PSO, the requirement to represent, gain and share information, and to coordinate will increase the number of liaisons, coordinators, and civil-military operation (CMO) personnel. The urban environment will further increase the need for experts and advisers to support the decision makers.

All of today's technical information gathering equipment is either hindered or limited by the urban environment. Even though the ambition to have multiple sources is as important in this type of environment as anywhere else, human intelligence (HUMINT) might be the only viable source. The possibility for an enemy to use the infrastructure and the noncombatants to blend in might also leave HUMINT and close combat as the only available option to distinguish non-combatants from foe using today's battlefield operating systems. HUMINT is the enabler in UO, other systems support. This call for an increase in the number of HUMINT collectors, like: reconnaissance troops, on-foot patrols, CMO personnel, and special operation forces.

Table 1 shows the ties between USECT capabilities and the requirement they put on the organization.

Table 1. Understand Capabilities Organizational Requirements	
Capabilities	Potential Organizational Requirements

U1: Process, format and distribute large scale data and information aimed at improving the acquiring and decision making process.	- Enhanced C4I capability. - Linguistic specialists. - Intelligence and media analysts. - Liaisons. - Interoperability and integration (multinational, joint and with special operational forces.)
U2: Know the location and status of own forces.	- “Blue Force Tracker” or the equivalent. - Enhanced C4I capability. - Interoperability and integration (multinational, joint and with special operational forces.)
Table 1— <i>Continued.</i>	
U3: Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings.	- “All Source” Coordination cell (civilian, military, NGO) - “Cultural Awareness” cell (country, demographics, local customs and traditions.) - CMO - Legal and political advisers. - Linguistic specialists. - Intelligence and media analysts - Liaisons. - Special operations forces and HUMINT collectors.
U4: Establish a clear understanding of own forces capabilities and limitations.	- See U2.
U5: Establish a psycho-sociological profile of the potential enemy, neutrals, key players and the population.	- See U3.
U6: Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population.	- See U3. - Recognizance, surveillance, target acquisition (RSTA) capacity, with a broad variety of sensors, with the emphasis on HUMINT.
U7: Acquire an accurate understanding of the infrastructure, the systems and the dynamics of the designated urban area and their impact on operations (identify the key nodes and vulnerabilities).	- See U3 and U6. - Experts with construction, city planning and civil engineering skills.

The key capacities are U1, U3, U6, and U7; these are viable on the tactical level as well. These key capacities all follow the same thread, with the governing idea of increasing the number and variety of sensors and information sources, which will lead to a larger amount of data that needs to be processed and delivered to users that requires an increase in the general C4I capabilities and the addition of new cells, functions, and experts. Furthermore, the dense terrain and dispersed way of conducting combat, makes the number of “subscribers” of intelligence to raise, soldiers on the end of the line and decision makers on all levels alike, has an increased demand for intelligence.

The desired information dominance cannot be achieved with the available technology in the complex urban battle space. The incomplete understanding needs to be augmented with increased HUMINT capability, which requires proximity and interaction with the population.

Shape

Shaping operations is the widest and hardest to define of the five USECT components. Mainly because it covers so many different effects on several parameters: friendly or allied forces, hostile forces, noncombatants, infrastructure, and environment. Shaping the battle space includes all actions taken to set favorable conditions for successful decisive engagements. It aims to seize the initiative by exerting appropriate influence on the other actors. Not limited to minimizing the capabilities of the hostile forces, it also includes capabilities to neutralize or leverage local population effects, influencing the information arena and enhancing own forces ability to win. Initial shaping operations might have a large impact on what forces capabilities are needed to deploy early. For example, non-combat forces such as civil affairs, public affairs, medical

support, and psychological operations units, might be of more urgent need than some combat units.²⁹ A specific shaping operation is very different from any other and with so many variables, an attempt to cover as many as possible will include many different capabilities that subsequently requires different types units. The EUBG will need a large variety of units or capabilities with the same readiness as the core, to provide a smorgasbord from which the commander can pick the best force package available for the specific mission the unit is facing.

Requirements for Shape

With a shift to a more maneuverist approach, the capability to act independently and dispersed must be greater than has been traditional. This is even more evident for a relatively small unit such as the EUBG in the “troop consuming” urban environment. The organizational requirement to be modular and put the EUBG together with what is needed does not stop at the task force or Battalion level. The concept must continue to the lowest level, in order to create the possibility of putting together force packages (company teams and platoon sized detachments) and for these to be more able to operate without the security of an adjacent unit, even without a constant secure land line of communication to higher echelon, in a 360° threat environment.

Table 2 shows the ties between USECT capabilities and the requirement they put on the organization.

According to *RTO-TR-71* the key shaping capabilities are S5, S10-11, S13-14, and S18. These six key capabilities follow the same theme: enable flexibility and maneuverability for your forces, and doing so, provide decision makers with an increased number of options, reduces the risks and enable decisive engagements.

These key capabilities focus primarily on friendly forces capabilities to shape the battle space to their advantage in regards to the enemy and the infrastructure. What is not deemed key is the third category of actors – the noncombatants. These, the population, are often one of the centers of gravity in the urban COE, especially true for PSO. Therefore, influencing the population and their surroundings must be key capabilities for a EUBG (S2 and S9). This is also closely tied to the important capability to collect HUMINT.

Table 2. Shape Capabilities Organizational Requirements	
Capabilities	Potential Organizational Requirements
S1: Monitor and control crowds within urban areas.	- Military police. - Combat troops. - PSYOP and IO capabilities. - CMO personnel.
S2: Selective control of infrastructure, utilities and non-military communications.	- Combat troops. - CMO personnel. - Aviation. - Littoral (harbor and or river) Navy assets (Amphibious Corps³⁰). - Special operations forces.
S3: Restrict the effect of chemical, biological and radiological hazards on own troops and noncombatants.	- CBRN troops.
S4: Restrict enemy movement/logistics/intentions.	- RSTA capabilities. - Combat troops. - PSYOP and IO capabilities. - CMO personnel. - Aviation. - Littoral (harbor and or river) Navy assets (Amphibious Corps). - Special operations forces.
S5: Provide the appropriate level of mobility (surface/above surface/sub-surface, including under water) to operate effectively in urban areas.	- RSTA capabilities. - Combat troops. - Engineers, combat engineers or movement enhancement units.

	- Military police. - CMO personnel. - Aviation. - Amphibious troops, including divers.
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Table 2— <i>Continued.</i>	
S6: Provide own forces with adequate protection against the entire threat.	- Escort and guard units. - Combat troops. - CBRN troops. - Air defense. - Explosive ordnance disposal and or mine clearing units. - Aviation. - Littoral (harbor and or river) Navy assets (Amphibious Corps). - Special operations forces.
S7: Manage and influence the media's impact on operations.	- CMO personnel. - PSYOP and IO capabilities. - Press and media cell.
S8: Isolate an urban battle space.	- RSTA capabilities. - Combat troops. - Engineers, combat engineers or movement enhancement units. - Military police. - Aviation. - Littoral (harbor and or river) Navy assets (Amphibious Corps). - Electronic Warfare (EW) capability. - CMO personnel. - PSYOP and IO capabilities. - Special operations forces.
S9: Influence the local population.	All parts of the organization will influence the local population with their presence. The parts of the organization that focus on this specifically are: - CMO personnel. - PSYOP and IO capabilities. - Press and media cell.
S10: Establish, secure and maintain own forces support systems (logistics, medical, etc).	- Logistical units. - Medical units. - Escort and guard units.
S11: Enable a force to use the battle space within the urban environment to best advantage.	Is primarily met by the Key Understand capabilities. Furthermore, it requires no specified organizational capability.

Table 2— <i>Continued.</i>	
S12: To utilize the combined arms effects on operations at the lowest level.	- An organization that allows the flexible creation of platoon sized detachments of mixed combat and combat support components.
S13: Detect, identify and assess rapidly chemical, biological and radiological threats (this includes toxic threats).	- CBRN troops.
S14: Deny the enemy from operating effective C4ISTAR systems.	- EW capabilities. - Combat troops. - Special operations forces.
S15: Deceive enemy as to own force intentions and actions.	- PSYOP and IO capabilities. - Special operations forces.
S16: Coordinate joint/interagency/coalition activities.	Is organizationally met by the Key Understand capabilities.
S17: Control (stimulate/prevent) non-combatant mass movement.	- Military police. - Combat troops. - PSYOP and IO capabilities. - CMO personnel. - Press and media cell.
S18: Assure C4 interoperability for own forces.	Is organizationally met by the Key Understand capabilities.

Even though shaping the battle space to your advantage and to your opponents' disadvantage requires a variety of capabilities, a pattern of some general requirements can be seen. To enable the combat troops to do their job, where they need to do it, the urban environment requires a capacity to shield them from draining their combat power on nonessential tasks and focus on the essential combat tasks. Non-combatants on the battlefield, support activities, lines of communication security, traffic direction, and casualty treatment, are all examples of these “distractions”, that regularly will occur on the urban battlefield. If combat troops have to devote too much combat power to these activities, they run a risk of culminating. In order to prevent this, a shaping operation in

the urban COE will always require: (1) a combat service support (CSS) packages, capable of pushing logistic and medical support to the combat troops, even with unsecured lines of communication, (2) a balanced set of combat support elements with a substantial civil affairs and PSYOP capability, and (3) air supremacy, to enable ground forces maneuverability. Yet, during a PSO in the COE the air threat is most likely going to be absent to begin with. A bigger concern is light surface-to-air missiles and small arms fire threatening our fixed and rotary wing support.

Engage

Under the heading Engage, the decisive actions to directly accomplish objectives from higher echelon can be found. In combat operations that means the defeat the enemy's center of gravity, critical functions, or vulnerabilities. In MOOTW the engagements can be very different. Depending on the specific mission they are likely to be more controlled and limited. Peace operations engagements tend to be more geographically spread out and lengthy in time.

Engage summarizes the capabilities needed to decisively destroy, defeat, neutralize, or take control of decisive points (nodes) in the urban environment. Many of the required capabilities are the same as in shaping operations and, it is likely that both components, Shape and Engage, will take place simultaneously. What is more evident in the engage phase is the larger use of military force and therefore also the amount of destruction and disturbance to the infrastructure and its population. The ambition to minimize casualties and collateral damage calls for the use of precision strikes, scaled effects (less-than-lethal munitions etc.), cyber operations, and the ability to distinguish between combatants (friendly and hostile) and noncombatants.

Requirements for Engage

The capability requirements in the documents reflect the ambition to minimize the number of casualties and collateral damage. Furthermore, they also reflect the modern approach to UO: conducting both combat missions and humanitarian assistance in areas simultaneously and having troops more widely dispersed, perhaps even isolated from each other.³¹ Most organizational requirements that the fragmented urban battle space demands are listed under either Understand or Shape. However, there is an increased need for firepower, including long-range precision fires; with dispersed and isolated forces the need for accurate fire support has increased. Table 3 shows the ties between USECT capabilities and the requirement they put on the organization.

Table 3. Engage Capabilities Organizational Requirements	
Capabilities	Potential Organizational Requirements
E1: Destroy or neutralize in a timely manner, fixed or mobile point targets in the urban environment with minimum casualties and collateral damage.	- Combat troops. - Aviation. - Littoral (harbor and or river) Navy assets (Amphibious Corps). - Special operations forces.
E2: Provide and sustain combat power and maintain tempo of own forces.	- Logistical units. - Medical units. - Escort and guard units. - Aviation. - Engineers, combat engineers and or movement enhancement units.
E3: Being in a position to conduct operations across the spectrum of conflict.	Cannot be defined by specific capabilities. It can include any type of capability, depending on the situation. However, it stresses the need for a large number of ready capabilities and a modular organization.

Table 3— <i>Continued.</i>	
E4: Operate with dispersed/isolated forces.	Modularity and flexibility to put together company sized combat teams, capable of conducting tasks independent for longer periods. (See the discussion in the previous chapter – Shape.)
E5: Provide for displaced populations and non-combatants.	- Military police. - Combat troops. - PSYOP and IO capabilities. - CMO personnel. - Logistical units. - Medical units. - Escort and guard units. - Aviation.
E6: Establish a reliable Friend-Foe-Civilian Identification.	- “Blue Force Tracker” or the equivalent. However, that will only cover the “Friendly” identification. A method to separate “Foe” from “Civilian” is not operational within the covered timeframe.
E7: Ensure basic provision for the non-combatants within any sieged area.	- Military police. - Combat troops. - PSYOP and IO capabilities. - CMO personnel. - Logistical units. - Medical units. - Escort and guard units. - Aviation.
E8: Dominate the electromagnetic spectrum.	- EW capabilities.
E9: Destroy wide-area targets in all dimensions.	- Combat troops.
E10: Conduct cyber operations.	- Offensive EW and cyber capability.

According to *RTO-TR-71* the key engage capabilities are E1-2, E6, E8 and E10; they cannot all be automatically transitioned to the tactical level without some adoption.

E1, 2, and 9 are the capabilities to decisively defeat or destroy the enemy. Those three capabilities are traditionally what urban combat has been all about. They still are

the most important capabilities. E6 and 10 emphasizes the distinction between targets and non-combatants and an increased understanding. Yet, despite an increased capability and emphasis on understanding as the new and very important ingredient that allows the concept, decisive combat engagement is what defeats or destroys the enemy; understanding allows a more accurate destruction of targets and less collateral damage, but it wins no battle.

Consolidate (C)

When consolidating, the emphasis lies in the establishment of a secure urban area. This is not only done by protecting what is gained, but by keeping the initiative and strengthening your position even further. The focus is the local population and their basic needs in a short and medium term perspective. Extensive civil military and interagency cooperation is needed. It requires significant logistic support as well as engineering assets, depending on the level of infrastructure damage.³²

Transition (T)

Transition is the transfer of control to other authorities (local military, civilian or international organizations) with the goal to free one's own forces to deploy elsewhere. It normally occurs when all major objectives have been met, but can also be done in parts of an urban area, while other parts are in other phases. In MOOTW the transition to, for instance, a new government can be the main objective and fundamental goal of the operation.³³

Adapting the USECT Tool to Suit the Analysis

The EU objective is to create the EUBG as a rapidly deployable force package with the primary function of either starting an operation in a new area, or as a temporary

reinforcement to an ongoing operation for preventing, or stop escalation. It is predicted that the deployment time for the EUBG is going to be short: between 30 and 120 days.³⁴ My assumption is that after that period of time the EUBG will either be replaced with a less capable force because the high threat capability is no longer needed, or the situation has deteriorated or and an increased need for military capacity has led to a take over by a HQ with increased capability to lead larger operations. When evaluating the EUBG with the capabilities listed in USECT, one will find that capabilities listed under Consolidate and Transition fall under a category of capabilities that are highly unlikely for a EUBG to need. There are two main reasons for this argument: (1) the consolidation and transition components are time consuming. With a timeframe of 30 – 120 days, it becomes the job for the follow-on-force rather than the EUBG. (2) It requires a completely different set of skills than what you normally find in the rapidly deployable units. For example, the Consolidation phase; it is likely to include very labor intense (and time consuming) humanitarian work to organize the protection of displaced persons, provide for the basic needs for non-combatants including security, and reestablish local government on a large scale. All the capabilities are certainly important, however, they are not necessarily specifically related to UO. Furthermore, in RTO-TR-71, none of the Key Capabilities are found under either Consolidate, or Transition.

Nevertheless, the USECT tool is not supposed to be viewed in a linear fashion, the capabilities described under the two last components cannot be ignored and considered being something to be dealt with later. It is impossible to see a scenario were a Western European unit can ignore the needs of the non-combatants or the security of the local population. A scenario were that is the case would look more like the

humanitarian catastrophes in Stalingrad, or the Russian campaigns in Grozny, both are examples of situations that the EU or any of its member states would not desire to end up in.

Must not the Consolidation and Transition phases be included in further analysis? The answer is both yes and no. Of course, the Consolidation and Transition capabilities have to be taken in consideration, and with the non-linear way the USECT tool is made it may affect any phase, not only those two phases, which they do, but on a smaller scale. Even though the size of the urban area or its population is included as a factor, you can make the distinction that in the USECT phases of the operation the involved troops take USECT consideration in the areas they are in control of, which with a nodal, non-linear approach can be relatively small parts of the urban area. While after decisive operations and the defeat of the main enemy, the EU units' responsibility includes the entire urban area. The need of the population affected is also on two different levels. While major combat operations are anticipated, planned for or ongoing, the needs for the non-combatants are on a very basic level – it is about staying alive! For the EUBG and allied forces, it is about keeping them out of harms way and providing for their most basic needs. After the termination of major combat operations, a more long-lasting rebuilding of the urban area can be the focus, and that will swallow an enormously larger amount of effort, than during the major combat operations.

Table 4 shows that in the further discussion regarding the EUBG; it is possible to address the immediate needs for those capabilities found under USECT, in USECT.

Table 4. Comparison between <u>USECT</u> and <u>USECT</u> Capabilities	
<u>USECT</u> Capability:	Is addressed in <u>USECT</u> Capability(ies):
C1: Establish a secure environment in an urban area.	U3: Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings. U5: Establish a psycho-sociological profile of the potential enemy, neutrals, key players and the population. U6: Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population. S2: Selective control of infrastructure, utilities and non-military communications. S16: Coordinate joint/interagency/coalition activities. S17: Control (stimulate/prevent) non-combatant mass movement. E1: Destroy or neutralize in a timely manner, fixed or mobile point targets in the urban environment with minimum casualties and collateral damage. E3: Being in a position to conduct operations across the spectrum of conflict. E5: Provide for displaced populations and non-combatants. E7: Ensure basic provision for the non-combatants within any sieged area.
C2: Take account of the effects of WMD and other environmental hazards where appropriate.	S13: Detect, identify and assess rapidly chemical, biological and radiological threats (this includes toxic threats).

Table 4— <i>Continued.</i>	
C3: Ensure swift and effective medical support, food, water, etc. for the population.	U3: Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings. U6: Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population. S2: Selective control of infrastructure, utilities and non-military communications. S16: Coordinate joint/interagency/coalition activities. S17: Control (stimulate/prevent) non-combatant mass movement. E1: Destroy or neutralize in a timely manner, fixed or mobile point targets in the urban environment with minimum casualties and collateral damage. E5: Provide for displaced populations and non-combatants. E7: Ensure basic provision for the non-combatants within any sieged area.
C4: Re-establish the civil administration.	-
C5: Control displaced persons and non-combatants.	S2: Selective control of infrastructure, utilities and non-military communications. E5: Provide for displaced populations and non-combatants.
T1: Conduct “exit” operations for the force.	-
T2: Return control of urban areas to civil authorities.	-

As noted in table 1, there are not any capabilities in USECT that address the C4 and T1 – T2 capabilities. A simple analogy may be that: it is neither recommendable nor important to rebuild a burning house before the fire is put out and people are saved from the immediate danger. Likewise, there is no need to focus on the rebuilding civilian infrastructure and reestablishing civil administration and authority before the end of hostilities.

With the planned timeframe for a EUBG operation and since the study only focuses on peace enforcement situations, there is no added value to include USECT in the further analysis.

USECT as a tool for a tactical unit

USECT is a tool to determine desired operational level capabilities for UO.³⁵ The EUBG is a tactical land component. Therefore the desired capabilities have to be viewed somewhat different. However, most of the capabilities translate directly to the tactical level and there are no finite boundaries between the two levels.³⁶ To focus the study further, some USECT capabilities, which only apply for the operational level, can be deleted; others have a different meaning on the tactical level. Table 5 to 7 shows the changes made for further work. Capabilities with no change are not included in those three tables.

Table 5. Changed Understand Capabilities	
Operational capabilities	Translates into tactical capabilities
U1: Process, format and distribute large scale data and information aimed at improving the acquiring and decision making process.	= Will be provided by higher HQ to some extent, less analysis on the tactical level.
U2: Know the location and status of own forces.	A capability that requires specific equipment and training, rather than organizational capabilities.
U3: Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings.	= Will be provided by higher HQ to some extent, less analysis on the tactical level. A large portion of the collection will be done on the tactical level.

Table 5— <i>Continued.</i>	
U4: Establish a clear understanding of own forces capabilities and limitations.	A capability that requires specific equipment and training, rather than organizational capabilities.
U5: Establish a psycho-sociological profile of the potential enemy, neutrals, key players and the population.	= Will be provided by higher HQ to some extent, less analysis on the tactical level.
U6: Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population.	= Will be provided by higher HQ to some extent, less analysis on the tactical level. A large portion of the collection will be done on the tactical level.
U7: Acquire an accurate understanding of the infrastructure, the systems and the dynamics of the designated urban area and their impact on operations (identify the key nodes and vulnerabilities).	= Will be provided by higher HQ to some extent, less analysis on the tactical level.

The Understand capabilities correspond well to the tactical level. Much of the collection of information will be done at this level. However, much of the process of turning the information into meaningful intelligence will be acquired and processed by the other components and the force HQ.

U2 and U4 will not be included in further studies.

Table 6. Changed Shape Capabilities	
Operational capabilities	Translates into tactical capabilities
S6: Provide own forces with adequate protection against the entire threat.	Not to include air and or naval threats, this will be the responsibility of the operational level.

Table 6—Continued.	
S7: Manage and influence the media's impact on operations.	Is mainly done on the operational level.
S8: Isolate an urban battle space.	Is mainly done on the operational level, however, that is depending of the size of the urban battle space isolated.
S11: Enable a force to use the battle space within the urban environment to best advantage.	Is a capability that requires specific equipment and training, rather than organizational capabilities.
S14: Deny the enemy from operating effective C4ISTAR systems.	Is mainly done on the operational level.
S16: Coordinate joint/interagency/coalition activities.	Is mainly done on the operational level.
S18: Assure C4 interoperability for own forces.	Is mainly done on the operational level.

The Shape capabilities will be used with above changes. S11, S14, S16, and S18 will not be included in the further studies. S2 and S9 will be considered key capabilities.

Table 7. Changed Engage Capabilities	
Operational capabilities	Translates into tactical capabilities
E6: Establish a reliable Friend-Foe-Civilian Identification.	Is a capability that requires specific equipment and training, rather than organizational capabilities. A method to separate "Foe" from "Civilian" is not operational within the covered timeframe.
E8: Dominate the electromagnetic spectrum.	Is mainly done on the operational level.
E9: Destroy wide-area targets in all dimensions.	Is mainly done on the operational level.
E10: Conduct cyber operations.	Is mainly done on the operational level.

The Engage capabilities can be used without change; E6 and E8 to E10 will not be included in the further studies.

The Nordic EU Battle Group and the USECT capabilities

In Appendix B is a list of the Swedish units and the force structure for the Nordic EUBG. That list of units is the foundation for the comparison between USECT capabilities and the organizational solutions that meets the specific capability needs.

Understand

Table 8. The Understand Capabilities Organizational Solutions	
Capabilities	Organizational Solutions
U1: Process, format and distribute large scale data and information aimed at improving the acquiring and decision making process.	To some extent this capability is more a matter of the technical level, and equipment wise there are no shortfalls. Organizationally the documents available do not go into detail down to the individual skills of each staff member. However, the organization charts and number of individuals in the HQs and RSTA units suggest that this is a prioritized capability.
U3: Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings.	The organizational aspect of this is met, (HQ, CMO, RSTA, SOF, and IO) however, a “Cultural Awareness Cell” and linguistic specialists, may be a shortfall depending on region.
U5: Establish a psycho-sociological profile of the potential enemy, neutrals, key players and the population.	See U3.
U6: Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population.	See U3. Multiple sensors, including fixed wing jet aircraft and HUMINT is available in the force package. A shortfall is sensors that can do pattern analysis and surveillance.

Table 8— <i>Continued.</i>	
U7: Acquire an accurate understanding of the infrastructure, the systems and the dynamics of the designated urban area and their impact on operations (identify the key nodes and vulnerabilities).	See U3 and U6. Individual contributions rather than organizational is needed in addition to above, experts in construction, city planning, and civil engineering in general, or preferably, with local knowledge. This capability is needed both imbedded and with reach-back capability to outside sources.

The general transition of the Swedish Armed Forces has lead to a C4I intense organization. This is mirrored in the EUBG structure, and the strength of the proposed organization is its capability in the “understand” field. What take time to build are the crucial individual “soft” skills mentioned in table 8: linguistic, regional knowledge and cultural awareness, etc. During the Cold War, Sweden’s focus in this area was the Soviet Union and the Russian language. However, recent and ongoing deployment has enhanced this capability somewhat (Example: SOF teams in Congo, CMO teams in Afghanistan), maybe more importantly: brought it in focus. Further capability increase of the regions outside the Russian-speaking need to be taken, and is currently a shortfall. Nevertheless, no matter how well prepared the EUBG personnel becomes, there will always be a need to access expertise, to reach back to national (and EU) sources outside the traditional military chain of command, for example subject area experts and centers of excellence like: anthropologists, linguists, building engineers, colleges and cultural centers. This capability requires a change in the standardized way of conducting intelligence preparations and what sources that might come to use, forcing the analysts to establish

new procedures and connections, to allow them to fuse data from systems of systems into meaningful intelligence. Furthermore, this requires the necessary communication equipment and bandwidth. This capability is not urban specific, but greatly emphasized in UO.

With state of the art equipment in other sensor areas, the most important shortfall is the lack of sensors able to determine urban patterns; a sensor with the capability to feed continuous (long time) information to detect changes in the established patterns. The force package includes JAS 39 swing-role jets, an airborne platform capable of carrying a variety of sensor pods. However, its high speed, its type of ground communication equipment, and its dwell-time over target make it less suitable for anything but taking snap-shots of the terrain and at relatively fixed targets. A slower going aerial platform, or an aerostat, capable of feeding near real-time data for longer time periods is a more important capability to have. Adding this capability would compliment the others and would be very useful to determine: location, movement, status and capabilities of potential enemy forces and population in the dense urban terrain (U6). To get this capability requires the addition of a suitable platform: aerostat, helicopters and or unmanned aerial vehicles (UAV), with appropriate sensor and communication equipment. Sweden has a limited number of tactical UAVs, but lacks satisfactory equipped helicopters or any other type of platform. This shortfall can partly be compensated with an increased number of ground-based sensors than otherwise required, but the dense urban terrain favors aerial sensors in most cases. In the absence of technical sensors command and control personnel can be airborne to get a visual overlook, and relay information and or decisions to the ground.

That said, the high level of understanding required for UO will not be achieved with any contemporary technological systems alone. What differentiates the urban environment from other complex terrain types is the population. The key to information superiority and environmental dominance is the ability to influence and control the population, in this case: collect and assess HUMINT, which in all forms is achieved in close proximity of the population. With the limitation of not being able to present a “third dimension threat” from above using rotary wing aviation and UAV, the key capabilities of Engage are adequately met.

With the limitation of aerial sensors, the key capabilities of Understand are adequately met.

Shape

Table 9. Shape Capabilities Organizational Solutions	
Capabilities	Organizational Solutions
S1: Monitor and control crowds within urban areas.	The primary organizational solution is the combat troops and military police. CMO, RSTA, SOF, PSYOP, and IO units also apply, but as force multipliers.
S2: Selective control of infrastructure, utilities and nonmilitary communications.	The force package includes the necessary organizational components (combat troops, CMO, SOF, IO, and military police). The shortfall is PSYOP.
S3: Restrict the effect of chemical, biological and radiological hazards on own troops and noncombatants.	Mainly an equipment and training issue. Organizationally a CBRN unit is included. However, it is dimensioned for the EUBG, not for mass casualty situation among non-combatants.
S4: Restrict enemy movement/logistics/intentions.	The force package includes the necessary organizational components (combat troops).

Table 9—*Continued.*

S5: Provide the appropriate level of mobility (surface/above surface/sub-surface, including under water) to operate effectively in urban areas.	The force package includes the necessary organizational components for surface and sub-surface mobility. - Engineers, combat engineers, and EOD units. (2 companies) - Military police. (Traffic control teams are generally included in Swedish logistic units as well.) - Amphibious Corps divers and Army (engineer) divers. However, above surface tactical mobility is a limitation.
S6: Provide own forces with adequate protection against the entire threat.	The force package includes the necessary organizational components, with the exception of PSYOP.
S7: Manage and influence the media's impact on operations.	The force package includes the necessary organizational components, with the exception of PSYOP.
S8: Isolate an urban battle space.	The force package includes the necessary organizational components for isolation in both the information and physical arenas, with the exception of PSYOP.
S9: Influence the local population.	All parts of the organization will influence the local population with their presence. The parts of the organization that focus on this specifically are included. (CMO, IO, press and media cell, and SOF), with the exception of PSYOP.
S10: Establish, secure and maintain own forces support systems (logistics, medical, etc).	The force package includes the necessary organizational logistical components. The available organization charts does not specify the details of any escort or and guard units. The needs to push logistic support and MEDEVAC to the maneuver units suggest a need for inherent force protection, in order to not drain combat power from elsewhere. The capability to sustain and MEDEVAC by air is not included in the force package.
S12: To utilize the combined arms effects on operations at the lowest level.	The force package includes the necessary organizational components. However, the lack of details of the support units makes it impossible to evaluate in detail.

Table 2— <i>Continued.</i>	
S13: Detect, identify and assess rapidly chemical, biological and radiological threats (this includes toxic threats).	The force package includes the necessary organizational components (CBRN-unit).
S15: Deceive enemy as to own force intentions and actions.	The force package includes the necessary organizational components, with the exception of PSYOP.
S17: Control (stimulate/prevent) non-combatant mass movement.	The force package includes the necessary organizational assets. However, the primary organizational solution is to use combat troops, and no PSYOP is included.

The many, and possibly diverging simultaneously on-going parts of a shaping operation will cause a need for several independent or semi-independent company sized combat teams. The Nordic EUBG has three combat arms maneuver company HQs, traditionally suitable to build such a task force around. However, the capability to build combat teams cannot be restricted to these three; all the augmenting company-sized units in the force pool must be trained, equipped, and organized with the command and control structure to form a combat team; combat, CS, and CSS alike. This will increase the flexibility for the battalion commander, making all subordinates possible maneuver elements and create a unit modular to the lowest level (S12).

To support the companies forming these company-sized combat teams, all the combat support and combat service support units in the EUBG should be organized with the capability to be divided into detachments, to be augmented to reinforce company-sized combat teams. This will give the EUBG the flexibility, pointed out in this quote regarding future UO from the U.S. Marine Corps:

A MAGTF [Marine Air Ground Task Force] conducting future MOUT will be like a chameleon, effortlessly altering its characteristics to best blend with the operational situation. The MAGTF commander and subordinate leaders at every level will anticipate the flow of operations, and will adjust the composition of units accordingly. Squad leaders and platoon commanders will command mini-task forces which might include tailored packages of dedicated support assets: tanks, artillery, combat service support, even aviation. As operations progress, these forces will change shape as special assets shift from one unit to another. In this way, leaders will smoothly adjust the focus of effort to maintain pressure against enemy critical vulnerabilities, while bypassing and isolating the enemy's positions of strength.³⁷

While it is easy to state that the EUBG organization is suited to handle almost all the shaping capabilities to a satisfying level, the organizational problem is more the limited size of the force and the likelihood of several simultaneous tasks. Combat troops are needed for most of the shaping operations, and it is there the primary area where there is a large risk of over-tasking is. The close combat environment of UO makes it highly likely that additional combat troops will be added to the core battalion for these types of missions. In the force pool there are more specialized combat units like a tank company, an Amphibious Corps Task force, and a ranger platoon; however, additional infantry is not included. Even though this essay is about capabilities, not capacities, large number of infantry units has traditionally been the primary asset for UO. One might argue that with a more modern approach less infantry is needed? However, the non-contiguous 360° battle space, the “three block war,” and the rapid change in the nature (threat level) of close combat missions in UO, suggests a change in how infantry is used, and subsequently trained, equipped, and others, but not a less demand.

A shortfall in the capability to cause non-kinetic effects on primarily the population (S2 and S9) is the absence of a PSYOP unit. This is an area, which the Swedish Army traditionally has been neglecting, and that might be crucial for UO. To

make the population—if not friendly, at least not hostile—is a key to success in UO. Being successful in alienating the adversary from the population would greatly increase the capability to achieve superior Understanding (enables HUMINT), and will have a positive effect on not only the control and influence of the population, but on most shaping operations (S4, S7, S8, and 15).

The lack of helicopters is another shortcoming. The ambition to apply a maneuverist's approach, nodal strikes and to have a non-linear battle space does not negate the need for logistic support, or the need for quick MEDEVAC. On the contrary, it enhances it. Troops deployed without a secure route to their logistical base, must rely on those units ability to get to them. Or they have to secure their lines of communication themselves, and thereby lose combat power possibly needed elsewhere. A quick secure MEDEVAC is the most important factor for limiting losses, another key factor in any PSO.

The tragic events with Task Force Ranger in Somalia, 3 - 4 October 1993,³⁸ demonstrate the vulnerability of helicopters in UO. However, it also serves as a reminder of the difficulties to support and MEDEVAC on the ground without secure lines of communications in the urban environment. All in all, Task Force Ranger would have been much worse of without helicopters. At times, they could not land and were thus not able to be used for MEDEVAC; however, they still played a crucial role in re-supplying, as fire support, for command and control and as sensor platforms throughout the entire battle, despite their vulnerability.

With the limitation of no PSYOP capability or rotary wing aviation, the key capabilities of Shape are adequately met.

Engage

Table 10. Engage Capabilities Organizational Requirements	
Capabilities	Potential Organizational Requirements
E1: Destroy or neutralize in a timely manner, fixed or mobile point targets in the urban environment with minimum casualties and collateral damage.	The force package includes the necessary organizational components, with a limitation in rotary wing aviation.
E2: Provide and sustain combat power and maintain tempo of own forces.	The force package includes the necessary organizational components, with a limitation in rotary wing aviation.
E3: Being in a position to conduct operations across the spectrum of conflict.	Cannot be defined by specific capabilities. It can include any type of capability, depending on the situation. However, it stresses the need for a large number of ready capabilities and a modular organization. The force package includes a wide variety of organizational assets; the limitation is in the authorized total number of personnel, which makes it hard to have an organization prepared for conducting operations across the whole spectrum simultaneously.
E4: Operate with dispersed/isolated forces.	Requires modularity and the flexibility to put together company sized combat teams and detachments, capable of conducting tasks independently, sustained for longer periods. The force package includes the necessary organizational components, with a limitation in rotary wing aviation.
E5: Provide for displaced populations and non-combatants.	The force package includes the necessary organizational components.
E7: Ensure basic provision for the non-combatants within any sieged area.	The force package includes the necessary organizational components.

The force package includes the types of capabilities needed for UO with few shortcomings. However, with the limit of 1,500 personnel, there will always be a need to

prioritize what capabilities that are needed in the very troop intense urban environment. Even if all the various capabilities exist, with such a low total number of troops, there is a risk of becoming short of certain key capabilities.

Helicopters are versatile and in addition to what has been said before, they enhance the capability to act dispersed and unexpected. Some of the advantages or effects that helicopters provide are hard to replace, like being a non terrain dependent way to quickly bring supplies to a unit, and MEDEVAC casualties from the battle zone. Another function hard to replace is that helicopters presents a great threat for an adversary that otherwise can use the three-dimensions of urban ground combat to his advantage by using the roofs and tops of infrastructures as observation and firing positions. We should always strive to present a threat as multifaceted and as hard to counter as possible for our adversary, in order to limit or hinder his ability to achieve surprise or advantages. Other capabilities or effects can be met by other means. For example, a desired effect to have a rapidly deployable fire support capability can with the proposed organization be met by armor and close air support (CAS) for direct support and by mortars and or howitzers for indirect fires. Another limiting factor in how dispersed and spread out you can deploy the units than becomes the practical fields of fire for the ground based indirect systems and the possibilities for rapid support by a ground based quick reaction unit.

Furthermore, armor has proven to be very effective in UO as part of a combined arms team. The deployment of armor in an urban area will require additional infantry, and possibly other units for protection and maneuver enhancement, turning it into a large unit. Using units equipped with Combat Vehicle 90 (CV90), they can substitute tanks in the role as infantry support platforms with sufficient firepower without adding more

vehicles, further increasing the number of dismounts for protection. The role that the CV90s cannot fulfill is to be a main battle tank destroyer in a duel. If the enemy is equipped with at least fairly modern main battle tanks, the only ground platform available for the Nordic EUBG capable of engaging in a head on duel without the benefits of a prepared fire position is the Leopard 2S tank (or the equivalent from another nation). There are other desired effects tanks will bring to the fight, which the CV90 will have problems performing, such as: mine and obstacle breaching if equipped with mine plows, a main gun capable of creating man-sized entrance holes in structures, enough protection to survive light anti-tank weapons, to mention a few. However, a CV90 infantry unit is a more versatile and flexible force to include.

As mentioned under Shape, the list of additional units available to add to the existing core battalion does not mention more infantry units. The proposed organization consists of two companies equipped with the CV90, which only fits five dismounts per vehicle.³⁹ That limits the total number of dismounts in one of those companies to approximately sixty soldiers and NCOs. The CV 90 is a formidable weapon system of its own, it can perform many of the tasks that otherwise require supporting armor, but in a close combat environment it needs dismounts for close protection. That leaves close to no soldiers for the commander to operate with, other than in close proximity to their vehicle, unless they are not needed to protect their vehicle. The complexity of the many UO tasks will require additional soldiers to operate dispersed from the vehicles and only the third infantry company in the organization will have a sufficient number of dismounts, due to the use of different vehicles (light armored personnel carriers (APC)) which has room for more . To be able to perform the many tasks of “the three block war”, a regimental sized

battle group most likely will have need for more than one company of infantry, capable of action separated from their vehicles with a reasonably number of soldiers. Maybe the lesson learned in Chechnya, and put in black and white by Mr. Anatol Lieven is viable:

It cannot be emphasized too strongly, therefore that the key to success in urban warfare is good infantry. And the key to good infantry, rather than good weaponry, is a traditional mixture of training, leadership qualities in NCO's and junior officers, and morale – implying a readiness to take casualties.⁴⁰

With the limitation of not being able to present a “third dimension threat” from above using rotary wing aviation and UAV, the key capabilities of Engage are adequately met.

Capabilities Compiled

The capability to task organize and customize the EUBG for a specific mission, like UO, is greater than in any previous unit Sweden has had. A challenge for the commander and other decision makers will be to select what capabilities are required, or optimal, for the specific situation. Given that this is a rapid reaction unit with a very short response time, the situation in the future area of operation is likely to be very unclear, and thus the decision is likely to be made based on limited information and on assumptions.

The emphasis on information superiority and modern equipment supposedly has lead to a demand for less combat arms troops. This can be seen in the force structure of this unit, as well as in the U.S. Army's modular force structure with brigade combat teams. The complex contemporary urban battle space negates many of the advantages a modern modular unit organization is built upon. Today's technology will not provide a perfect picture and complete situational awareness for the decision makers. This might be true in any type of terrain, but it becomes very obvious in complex urban areas, which in many cases are “terrain where the detection range is shorter than the weapon range”.⁴¹

Adversaries will use asymmetric methods to their advantage in order to maximize the effect of their efforts and negate, or level, our superiority. Therefore, urban operations still are, as they historically always have been, more intense close combat, and more troop consuming than combat in a more perspicuous and less complex terrain. Add to that, the ambition for a more restrictive use of firepower than what has been seen historically. This will require an increased number of soldiers to substitute for the less firepower and to direct precision fires. Furthermore, the need for HUMINT to compensate and complete technological sensor systems shortfalls, and an increased emphasis on immediate humanitarian assistance, all put together, spells a continued need for a large number of soldiers, mainly combat troops, working in close proximity with the local population on the ground. In a EUBG with the capability to be organized into integrated combat teams and detachments tailored to best suit the needs of the shifting Understand, Shape, and Engage effects desired.

However, it is not as easy as switching some of the CSS with combat troops. More combat troop draws a need for additional CS and CSS units as well. To find the right proportion is likely going to be a big challenge. It is not something that can be done generically; it requires the study of a specific scenario. To constantly create and plan for different contingencies will most likely be one of the main tasks for the EUBG staff during time of preparation; the challenge is summarized in this quote from the U.S.

Marine Corps:

A combat force without CSS is immobile and powerless. On the other hand, a combat force with an excessive CSS “train” is vulnerable and may be unable to execute effective tactical maneuver. Given the high consumption rates and high casualty rates of urban combat, commanders must determine the proper balance

between CSS and combat forces. And, our experience clearly showed that this changes constantly during operational execution.⁴²

The CSS function must have the capability to push supplies forward and MEDEVAC from the maneuver elements on unsecured supply routes, rather than them pulling the logistic support from a logistical base. While doing that, CSS must have the ability to provide their own escort for force protection, i.e. create a CSS combat team and detachments with the same capability. Today's organizational CSS units are not organized or equipped for a 360° threat environment, and needs to be changed accordingly. The C2 function should have the same capability to lead a mix of combat and other units, as combat arms equivalent.

The close combat of decisive UO and the modularity of the unit require troops that are well trained together and can perform as a unit down to the lowest level. To minimize the frictions built into such an organization, one of the principles of war: simplicity plays a major part. One of the fundamentals of simplicity is well functioning communications. The fast decisions that have to be made, and the fast action that follows, leaves no room for errors or misinterpretations. Therefore, to minimize the linguistic communication errors, the troops that form the integrated combat teams and detachments, should all speak the same language, and thus needs to be made up by Swedish or Swedish speaking Finnish units. Besides the linguistic, other reasons can be listed as possible sources of friction: (1) different rules of engagement and national caveats, (2) training and TTP are different, (3) supply packages, equipment, ammunition, and armaments differs, resulting in complex re-supplying and asset tracking.

If there is no other EU or coalition troops in the AO, the most likely use for a EUBG will be to secure a point of entry for follow-on forces. This can either be a port and or an airport, both most likely located in or in the vicinity of a substantial urban area. The Nordic EUBG, with the possibility to add seagoing amphibious elements is suitable unit to secure a harbor and the necessary surrounding infrastructure as a point of entry. It is in this framework one should view the EUBG capability for UO. Within the stipulated timeframe of 30 to 120 days, the EUBG then builds the understanding of the situation with its assets, as well as it shapes the battle space for the follow-on forces decisive engagements, rather than conducts decisive operational level UO engagements on its own. In a scenario were there are other EU or coalition forces in the AO, the EUBG can be used as reinforcement to more lightly armed and equipped peace support units to prevent a threatening escalation or put down forceful, well-armed enemy forces. In such a scenario the additional forces enables the EUBG to conduct decisive engagements and still have the ability for a “three block war”, seizing nodes in a large urban area and conduct decisive UO engagements.

Finally, I want to end by drawing a parallel to the development of the ‘pentomic’ division 1953 – 59. The pentomic division organization emphasized the use of “relatively autonomous and widely dispersed battle groups, each one capable of sustained combat on its own.”⁴³ Envisioning a new concept with a higher combat effectiveness “by exploiting to a maximum modern technology for the improvement of firepower, mobility, and control”, which would allow the battle groups to fight in a “cellular rather than linear battlefield.” However, the organization was based on new equipment: communications, radar and sensing devices, and aircraft. This equipment, that was not available initially,

was essential for maneuver and control. The concept might have been ideas ahead of its time, but without the essentials for a proper application of the new doctrine, the pentomic division became short-lived; summarized by the author, Major Robert A. Doughty, as a good illustration of: “the dangers of making too rapid changes in doctrine and organizations without possessing the requisite weapons and equipment. In short, the technology lagged behind the doctrine, and strategic concepts raced ahead of tactical realities.”⁴² The point to be made is that a modern approach and new capabilities for UO like suggested in *RTO-TR-71* is an absolute necessity. However, there is a danger of creating organizations with the assumption that we will have a superior understanding of the battle space, when today’s technology and the equipment available for the Nordic EUBG tell us something else.

¹NATO RTO-TR-71, *Urban Operations in the Year 2020*, chapter 2.3.2; *NIC 2020*, p 94; and JP 3-06, I-5, I-9, II-7.

²<http://unstats.un.org/unsd/demographic/products/dyb/DYB2001/Table01.pdf>

³*CJCS Essays 2004*, p. 62

⁴*Ibid*, p.68

⁵The three main characteristics shared by all urban areas – the urban triad – consist of: (1) the man-made physical terrain; (2) the population; (3) the infrastructure that supports the population and provides services, etc.

⁶The three block war reefer to the capability to perform a wide spectrum of operations simultaneously and within a limited urban area, referenced from *The Strategic Corporal: Leadership in the Three Block War* article by GEN Charles C. Krulak, U.S. Marine Corps.

⁷<http://europa.eu.int/abc/docoff/bull/en/9912/i1009.htm> (2005-01-26)

⁸<http://europa.eu.int/abc/docoff/bull/en/200405/p106005.htm> (2005-01-26)

⁹From notes taken by CDR Erik M Moss (CNO Executive Panel N00K3) U.S. Navy, during a POW seminar on 22 November 2004. Forwarded to me by email from Mr. Joseph Babb, DJMO, CGSC, Ft Leavenworth, on the 28 January 2005.

¹⁰<http://europa.eu.int/abc/docoff/bull/en/200405/p106005.htm> (2005-01-26)

¹¹<http://www.odci.gov/cia/publications/factbook/rankorder/2034rank.html> (2005-01-28)

¹²<http://europa.eu.int/abc/doc/off/bull/en/200405/p106005.htm> and <http://europa.eu.int/abc/doc/off/bull/en/200305/p106006.htm>. It is further highlighted in the document titled: *NATO/EU Consultation, Planning and Operations*. (All viewed 2005-01-28.)

¹³All EU countries with the exception of Denmark, which has a reservation regarding the common European Security and Defense Policy (ESDP).

¹⁴http://www.defmin.fi/chapter_images/395_Eng.pdf (2005-01-30)

¹⁵Swedish Joint HQ (HKV/Kri *PowerPoint Redovisning PD 7*)

¹⁶Swedish Joint HQ (HKV/Kri *PowerPoint Redovisning PD 7*)

¹⁷The Swedish Amphibious Corps is a Maritime littoral service under the Swedish Navy. It primarily forms seagoing infantry units and naval special warfare units, suited for littoral warfare, primarily in deltas and archipelagos. It has no aviation assets of its own, but is similar to the U.S. Marine Corps, on a much smaller scale.

¹⁸January and February 2005, this cooperation has evolved during the process of making this paper, hence the change in name from “Swedish EUBG” to “Nordic EUBG”. However, Sweden is the lead nation.

¹⁹http://www.defmin.fi/chapter_images/395_Eng.pdf (2004-01-30)

²⁰http://www.defmin.fi/chapter_images/395_Eng.pdf (2004-01-30)

²¹There has been discussions regarding cooperating with the United Kingdom in creating the force headquarters.

²²RTO-TR-71 *Urban Operations in the Year 2020*, chapter 4.5

²³*Ibid*

²⁴JP 3-06, p. II-12

²⁵JP 3-06, p. III-32

²⁶RTO-TR-71 *Urban Operations in the Year 2020*, chapter 5.4

- ²⁷*Wall Street Journal*, 2004-12-08
- ²⁸JP 3-06, p. II-8 – 9 and RTO-TR-71 *Urban Operations in the Year 2020*, chapter 5.3.1
- ²⁹JP 3-06, p. II-10 – 11 and RTO-TR-71 *Urban Operations in the Year 2020*, chapter 5.3.2
- ³⁰The Amphibious Corps is a littoral maritime service (with some similarities to the U.S. Marine Corps) under the Swedish Navy. It primarily form infantry units transported with either combat speedboats, lightly armored or soft skinned ground vehicles and include special purpose divers (combat, underwater explosive ordnance disposal, recognizance).
- ³¹JP 3-06, p. II-12 and RTO-TR-71 *Urban Operations in the Year 2020*, chapter 5.3.3
- ³²JP 3-06, p. II-12 – 13 and RTO-TR-71 *Urban Operations in the Year 2020*, chapter 5.3.4
- ³³JP 3-06, p. II-13 and RTO-TR-71 *Urban Operations in the Year 2020*, chapter 5.3.5
- ³⁴Swedish Joint HQ (HKV/Kri *PowerPoint Redovisning PD 7*)
- ³⁵RTO-TR-71 *Urban Operations in the Year 2020*, p. i
- ³⁶FM 3-90, p. 1-2
- ³⁷*A Concept for Future Military Operations on Urbanized Terrain*, page III-15
- ³⁸*Somalia Operations: Lessons Learned*, p. 58
- ³⁹It actually fits six soldiers in the troop compartment. However, the standard operating procedure for UO are to leave one of the two machine gunners as a rear gunner and observer in the troop compartment of the vehicle, which make the total number of dismounts five.
- ⁴⁰FM 3-06.11, Appendix H, H-1 a
- ⁴¹COL Don Freeman, Australian Army Directorate of Combat Development, quoted during a briefing at Joint Urban Warrior 05's Emerald Express Brief, 2005-05-22.
- ⁴²*Urban Sustainability, X-File 4-11.71*, p. 11
- ⁴³This, and the following quotes in this paragraph are from: *Leavenworth Papers: The Evolution of US Army Tactical Doctrine, 1946-76*, p. 16 – 19

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Peace enforcement operations in a large urban area are very demanding and difficult missions. The complexity and demands are dependent of several factors: the size and capabilities of the enemy, the size of the urban area, the level of local support and local authority, the number and situation for the noncombatants, and the level of destruction the infrastructure has sustained. Viewed one capability at the time, the Nordic EUBG has few shortfalls. However, the three-block war is not linear or sequential; there will be quick changes between the three blocks and several simultaneously occurring events. When combat operations are going on in the “first block” the vacuum in the “third block” must be filled, otherwise the adversary will be there again, or there will be chaos and plunder, turning the noncombatants against us, causing a foundation for unrest and possibly an insurgency. My conclusion is that even with the necessary capabilities, in most cases a EUBG is an inadequate unit for decisive operations in larger urban areas because of its size. No matter how modular and well-composed the force structure of the EUBG is, a 1,500 soldier strong battle group will not have the necessary manpower for all the capabilities required, even if it is augmented by a substantial air, and possibly littoral maritime support.

When it comes to decisive UO, the aim for a single acting EUBG should be to secure a point of entry, provide an understanding of the situation and shape the battle space for follow-on forces decisive engagements. In USECT terms, the EUBG focus is USECT as a stand-alone force. First after reinforcement (and thereby by definition turned

into something else) or in cooperation with other EUBG, it can proceed with decisive engagements. This is not to say that the EUBG cannot or will not be involved in heavy combat UO on the tactical level and in smaller urban areas, however, not on the operational level.

Nevertheless, the creation of the EUBG concept is a very important capability for the EU and its member states. It gives them the capability to act quickly and show determination – be proactive rather than reactive. It allows units with slightly less readiness (30 – 120 days) the respite to mobilize with the right capabilities and through a secure point of entry into the AO, or it can be used to rapidly reinforce an ongoing UO.

What Changes to Current Tactical Organization Are Required?

The concept of a modern joint force is built on information and decision superiority and requires integration; I would even go as far as calling it interdependence, of the different services. If an adversary and or the environment have the capability to leverage or negate the effect of such an organization, you will find a land component without all the necessary capabilities. In the case of the Nordic EUBG specifically, it has a suitable aviation capability for air superiority, but not for air ground support, neither with airborne sensors, tactical air transportation, airborne command and control, or fires. This is a serious shortfall that reduces the information and decision superiority, as well as the ability for a maneuverist approach. The failure to present the adversary with the threat of being observed and or fought from above, allows him to explore this possibility to his advantage. I would therefore recommend that rotary wing aviation is included in the force

package. Partly the same effects can be achieved by other aerial platforms, such as tactical UAV, which might be a substitute for some of the functions.

The solution to a successful understanding—which is an enabler for winning any shaping operation and engagement—in the urban terrain, is the population. The population, the large number of non-combatants and the infrastructure they rely on for their survival, is often the center of gravity. Without working in close proximity of them you cannot understand their intent, aim, and capabilities etc. Subsequently, you cannot influence or control them. Therefore, my recommendation is that a key capability to enhance is the capability to collect and assess HUMINT.

A shortfall in the ability to influence and control the population, and also the adversary to some degree, is the lack of local, tactical PSYOP, (loudspeaker messages, radio messages, leaflet distribution, etc.) capability. This capability might belong to the operational level; however, I would recommend that EUBG at least has the capability to request the effects of PSYOP.

Another important recommendation is the addition of more infantry. The addition of a company sized infantry element will increase the number of combat soldiers and add another HQ capable to C2 a company sized combat team, which gives the EUBG more versatility and additional combat power. Additional infantry should be equipped with APCs rather than CV90s, to add a maximum amount of dismounts and further enhance the possibility to work in close proximity with the population.

The logistical parts of the land component are not described in detail. However, they need to be organized with the capability to push the supplies to the maneuver elements over unsecured lines of communication. Some of that requirement is more an

equipment and training issue than an organizational, but it demands additional assets for force protection and escort, as well as C2 capability on the same level as the combat maneuver teams.

What Capabilities Are Essential to Have Nationally and What Can Be Provided by Other Nations?

UO tends to include very intense close combat. With short distances between friends and foes and physically separated units, rapid decisions have to be taken on a lower level than normal, and in much stressed situations. This decision making requires fast communication with as little built in frictions as possible between side units, as well as higher and lower HQs. Therefore, to include land component combat arms and combat support units with different native languages requires a lot of training together and a shared format of communication before it is not an obstacle or friction so large that the disadvantages exceeds the advantages. I believe that the units that are included in the maneuver elements (company sized combat teams) should consist of Swedish speaking units only, because the need to understand each other is down to the single soldier level, who most likely is not proficient enough to communicate in a foreign language in a life or death threatening situation. An alternative is to have a separate company sized combat team that speaks another language (Finnish). However, that would not allow the much sought after modularity to modify the team during the operation to fit a specific task, which makes it a much less attractive alternative. This will also minimize frictions caused by deviating standards regarding TTP, national caveats, and logistical requirements.

Regarding the supporting arms such as indirect fire support and aviation, communication is done by specially trained personnel using special formats for

communication. Therefore, the need for Swedish speaking personnel is not a requirement, and those units can be formed by any nation, or combination thereof.

In the case of ground support aviation and aerial surveillance platforms, the need for those clearly exceeds any disadvantages from not having it nationally, and a short term solution is to request that from any country willing to provide it.

Recommendations for Future Studies

This thesis has focused on capabilities and the next step would be to discuss capacities and numbers. I would recommend further studies in quantifying the size needed of a particular capability, tied to a specific scenario, to actually have a sufficient size to state that the Nordic EUBG has the capability.

APPENDIX A

USECT CAPABILITY REQUIREMENT TABLES

Table 11. Understand Capabilities (U)	
Number	Capability Requirement
U1	Process, format and distribute large scale data and information aimed at improving the acquiring and decision making process.
U2	Know the location and status of own forces.
U3	Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings.
U4	Establish a clear understanding of own forces capabilities and limitations.
U5	Establish a psycho-sociological profile of the potential enemy, neutrals, key players and the population.
U6	Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population.
U7	Acquire an accurate understanding of the infrastructure, the systems and the dynamics of the designated urban area and their impact on operations (identify the key nodes and vulnerabilities).

Source: NATO, RTO-TR-71, *Urban Operations in the Year 2020*, p.21.

Table 12. Shape Capabilities (S)	
Number	Capability Requirement
S1	Monitor and control crowds within urban areas.
S2	Selective control of infrastructure, utilities and non-military communications.
S3	Restrict the effect of chemical, biological and radiological hazards on own troops and non-combatants.
S4	Restrict enemy movement/logistics/intentions.
S5	Provide the appropriate level of mobility (surface/above surface/sub-surface, including under water) to operate effectively in urban areas.
S6	Provide own forces with adequate protection against the entire threat.
S7	Manage and influence the media's impact on operations.
S8	Isolate an urban battle space.
S9	Influence the local population.
S10	Establish, secure and maintain own forces support systems (logistics, medical, etc).

Table 12— <i>Continued.</i>	
S11	Enable a force to use the battle space within the urban environment to best advantage.
S12	To utilize the combined arms effects on operations at the lowest level.
S13	Detect, identify and assess rapidly chemical, biological and radiological threats (this includes toxic threats).
S14	Deny the enemy from operating effective C4ISTAR systems.
S15	Deceive enemy as to own force intentions and actions.
S16	Coordinate joint/interagency/coalition activities.
S17	Control (stimulate/prevent) non-combatant mass movement.
S18	Assure C4 interoperability for own forces.

Source: NATO, RTO-TR-71, *Urban Operations in the Year 2020*, p.21.

Table 13. Engage Capabilities (E)	
Number	Capability Requirement
E1	Destroy or neutralize in a timely manner, fixed or mobile point targets in the urban environment with minimum casualties and collateral damage.
E2	Provide and sustain combat power and maintain tempo of own forces.
E3	Being in a position to conduct operations across the spectrum of conflict.
E4	Operate with dispersed/isolated forces.
E5	Provide for displaced populations and non-combatants.
E6	Establish a reliable Friend-Foe-Civilian Identification.
E7	Ensure basic provision for the non-combatants within any sieged area.
E8	Dominate the electromagnetic spectrum.
E9	Destroy wide-area targets in all dimensions. ¹
E10	Conduct cyber operations.

Source: NATO, RTO-TR-71, *Urban Operations in the Year 2020*, p.22.

Table 14. Consolidate Capabilities (C)	
Number	Capability Requirement
C1	Establish a secure environment in an urban area.

Table 14— <i>Continued.</i>	
C2	Take account of the effects of WMD and other environmental hazards where appropriate.
C3	Ensure swift and effective medical support, food, water, etc. for the population.
C4	Re-establish the civil administration.
C5	Control displaced persons and non-combatants.

Source: NATO, RTO-TR-71, *Urban Operations in the Year*, p.22.

Table 15. Transition Capabilities (T)	
Number	Capability Requirement
T1	Conduct “exit” operations for the force.
T2	Return control of urban areas to civil authorities.

Source: NATO, RTO-TR-71, *Urban Operations in the Year 2020*, p.23.

Table 16. Key Capabilities	
Number	Capability Requirement
U1	Process, format and distribute large scale data and information aimed at improving the acquiring and decision making process.
U3	Have an overall understanding of the international, regional and local situation and in context with other factors such as population, ethnic, cultural, political factions, other agencies, NGOs and groupings.
U6	Determine intent, aim, location, movement, status, capabilities, and support structure of potential enemy forces, neutrals, key players and population.
U7	Acquire an accurate understanding of the infrastructure, the systems and the dynamics of the designated urban area and their impact on operations (identify the key nodes and vulnerabilities).
S5	Provide the appropriate level of mobility (surface/above surface/sub-surface, including under water) to operate effectively in urban areas.
S10	Establish, secure and maintain own forces support systems (logistics, medical, etc).
S11	Enable a force to use the battle space within the urban environment to best advantage.

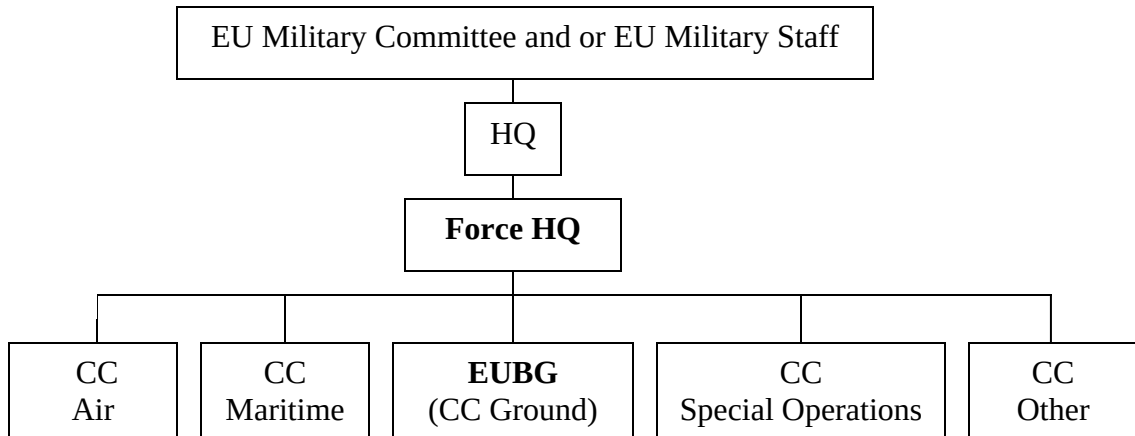
Table 2— <i>Continued.</i>	
S13	Detect, identify and assess rapidly chemical, biological and radiological threats (this includes toxic threats).
S14	Deny the enemy from operating effective C4ISTAR systems.
S18	Assure C4 interoperability for own forces.
E1	Destroy or neutralize in a timely manner, fixed or mobile point targets in the urban environment with minimum casualties and collateral damage.
E2	Provide and sustain combat power and maintain tempo of own forces.
E6	Establish a reliable Friend-Foe-Civilian Identification.
E8	Dominate the electromagnetic spectrum.
E10	Conduct cyber operations.

Source: NATO, RTO-TR-71, *Urban Operations in the Year 2020*, p. 24.

APPENDIX B

PROPOSED NORDIC EUBG ORGANIZATION TABLES

Force structure



Core battalion

HQ (45 officers and enlisted)

HQ and Mortar Company (100)
EUBG Command Post platoon
Company HQ and HQ Platoon
Signal Platoon
Mortar Platoon

Mechanized Infantry Company (155)
Company HQ and HQ Platoon
Mechanized Infantry Platoon (CV90)
Mechanized Infantry Platoon (CV90)
Mechanized Infantry Platoon (CV90)

Mechanized Infantry Company (155)
Company HQ and HQ Platoon
Mechanized Infantry Platoon (CV90)
Mechanized Infantry Platoon (CV90)
Mechanized Infantry Platoon (CV90)

Air Assault Infantry Company (180)
Company HQ and HQ Platoon (40)
Air Assault Infantry Platoon (36)

Air Assault Infantry Platoon (36)
Air Assault Infantry Platoon (36)
Heavy Weapons Platoon (32)

Support Company (120)
Supply Platoon (40)
Transportation Platoon
Maintenance Platoon (20)
Medical Platoon

Reinforcing units and capabilities

Combat and Combat Support

Fire support Company (132)
Company HQ and HQ Platoon (32)
Target Acquisition Platoon (30)
Artillery Hunting Radar
Fires Platoon (30)
120 mm Mortar Platoon (40)

Tank Company, Leopard 2S

Engineer Company (240)
Construction Engineers
Combat Engineers
EOD Unit with canine

Air Defense Missile Unit (85)

RSTSA Company (190)

CBRN Platoon (30)

Tactical Air Control Party

Amphibious Task Group²

Special Operation Forces
Ranger Platoon
Special Forces Teams

Combat Service Support

Logistic Support Unit (250)

Medical Support Unit

Geographical Support Section (16)

CMO Unit (25)

Military Police (20)

¹Destruction of targets that are in effect a general area rather than specified, smaller or pinpoint targets.

²Can be attached either to the land component commander (EUBG) or the maritime component commander.

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