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Whom it may concern

Copy to

Notification of choice of concept and competition for new Combat Boots for the Norwegian Armed Forces

1 Background

The Norwegian Armed Forces (NAF) and the Norwegian Defence Materiel Agency (NDMA) has for some time looked at different concepts regarding combat boots for the armed forces. The Norwegian climate is harsh with a temperature spread of up to 50 degrees Celsius on a single day within our borders. This makes it challenging to find a concept that fits all geographic areas of our armed forces. NDMA has since 2018 had talks with the industry and tested different combat boots solutions both in-field and in laboratory to see how they perform.

2 Discussion

With the challenging climate, especially during winter, it is crucial that the footwear system is solid and protects the soldier. NAF and NDMA has together put forward a concept called Norwegian Combat Boot (NCB). This concept builds on the concept that NAF have used and have experiences with since the 1970's. Since today's boot has been more or less the same since then, the time for an update has come.. This system have served the Norwegian soldiers well for nearly 50 years, so we see no reason to dramatically change it. The NCB system consists of the following:

- Leather boot with no lining
- A thick woolen sock, a thinner woolen sock and a technical sock
- Maintenance products such as polish, brush and shoe grease
- Innersoles; shock absorbing, isolating and a thick woolen insole
- An isolating waterproof overboot
- Felted wool liner

This system allows the soldier to easily do in-field changes and adjustments in case of weather change or changes to the environment. For seasonal configuration example see Appendix 2.

This procurement will focus solely on the boots.

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3 Conclusion

NDMA will start a procurement process of a new Framework-agreement of combat boots in the NCB system on behalf of the NAF. The procurement has of now a tentative initial call-off scope of MNOK 100 and the following tentative timeline:

RFI 2 with technical requirements	05.05.23
Bidders conference (in Oslo area)	16.06.23
Invitation to pre-qualification	07.08.23
Submission of pre-qualification deadline	08.09.23
Invitation to tender	10.11.23
Invitation to tender deadline	04.01.24
Delivery of samples for testing	20.07.24

We hope that with this notification on choice of concept, the industry will prepare for participation in the upcoming procurement process.

Appendix 1: Scenario description

Appendix 2: Seasonal configuration example

Sincerely



Tone Cecilie Kraft
Head of Section, Contract Department
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APPENDIX 1:

Scenario military footwear system

Climate zones / Degrees Celsius	Topography/terrain	Activity	Equipment	Other conditions
Intermediate: A3, C0, M1, M2. Cold: C1, C2[1] .	Woodland, Hills, Plains, Coastal, mountains and build up areas.	Low to high intensity. Mounted and dismounted.	With and without: helmet, body armor, rucksack, communications, weapons etc.	During night and daytime. Weather conditions from snow to rain with no wind to storm.

First encounter with the military life

It is August, and new recruits are joining in from all parts of the country for their first encounter with the military life. The recruits represents the lateral section of the Norwegian youths, both in gender, ethnicity and physical conditions. When men and women starts their military service, many are not familiar with walking and running in military footwear. Their feet's are not accustomed to the physical challenges the military service will put on them. When they get their equipment, and read the description, they will see that the footwear is easy to fit and adjust to their feet ergonomic shape. The description also tells them how to conduct first line maintenance of the footwear.

The footwear's suspension will protect their bodies during long military marches and training on tactics, techniques and procedures in all kind of operational terrains. The risk for strain related injuries are high, but the footwear's ergonomic design stabilizes and supports the foot and ankle during the activities, thereby preventing injuries. The shock-absorbing capability will protect the feet from injuries, when jumping down from objects like windows, obstacles and vehicles or small elevations in the terrain.

The soldiers receive their gear, which contains of overboots, this and this socks, ++

Fall

It is fall and the soldiers are on their first exercises. The weather is rainy, temperatures around 0°C and the ground is wet. Sometimes the soldiers have to walk in ankle-deep ponds. The footwear system (as example; footwear in combination with the issued over boots and wool socks) provides protection against the rain. Accumulated moisture is reduced and lead away from the feet. It is easy to use and adjust in regards of climate and weather in combination with overboot. Their feet are warm and preferably dry; soldiers are focusing on their mission instead of survival. The soldiers are happy that their footwear system is not heavy.

When arriving at the location for their bivouacs, they start putting up their tents. This will be their first experience with the concept of the term cold bivouacking. There will be no heating in the tents. Inside their tents, sitting on their sleeping mats, soldiers are cleaning and maintaining their equipment. They like that their footwear system is easy to maintain, and that they can repair minor damages.

After one hour, it is time for the first exchange of guards. The soldier walks out of the tent ready for guard duty, with newly maintained equipment and dry feet.

At the end of the week, the soldiers walks back to their barracks, and there has been no injuries related to non-functioning equipment. In the garrison, they will change footwear in order to relieve their feet in regards to the lighter form of duty at the barracks.

Winter

It is February, and there is up to one meter of snow in the terrain. The soldiers are out on a two weeks exercise, and have been attacking the enemy for three days. The temperatures is -30°C, and it is windy. All enemy positions have been captured and their new task is to secure the forward line of own troops. The soldiers starts to prepare defensive positions and establishes cold bivouacs in order to have a low infrared and thermal signature. The footwear system are keeping the feet dry and warm during the exhausting fighting and afterwards in their static positions.

At the last attack, some of the soldiers got their footwear wet, after jumping in the water from the landing craft at the beach. However, the footwear's functions are not degraded despite being wet, and the soldiers are managing to maintain combat efficiency.

After five days, the soldiers will have a rest and recreation phase with the possibility of resting with an external heat source. They will stay there for a minimum of 24 hours inside tents for fully recovery, maintaining and drying the equipment completely.

Spring

It is April and the weather is typical spring weather up to 10-15°C during day time and it drops down to around 3-5°C during night time. It is a mix of sunny days, and moments with showers of spring rain. The soldiers will stay in the field for a week. The aim of this training is to conduct a movement by vehicle, dismount and perform a hasty attack. The design of the footwear system prevents the soldiers of accidentally entangle in for example cables, ropes and nets. The footwear system keeps the soldiers feet dry and warm, despite operating in different weather conditions, and mounting and dismounting from warm vehicles.

At the end of the week, they will perform a march by foot through the terrain covering a distance of 25 km. During the march the soldier will be fully combat loaded. Engaging in different activities throughout the period, the footwear system gives the soldier the protection they needs from the outside environment when conducting marches and combat patrols. Carrying heavy equipment in rough terrain is possible because of the footwear systems good stability, support and shock-absorbing qualities.

Summer

The footwear system issued as recruits is still functional and operational after a year of severe use. It is summer and the weather is warm and mostly dry, with temperatures from 15-35°C during day time and down to 10°C at night.

During daytime helicopters are transporting a platoon to a drop-of-point, 15 km from a village. They will advance the rest of the distance on foot, crossing hills fully combat loaded. The footwear system is manufactured and designed to allow fast drying and does not create noise when worn. At nighttime, it starts to rain, and the wind is increasing. The soldiers adjust the footwear system to repel the water by adding overboots. The soldiers have reached a forming up point near the target in order to prepare for the attack. Just before the assault the soldiers easily adjusts their footwear system for exhausting actions that will make them warm and sweat. During the assault, heavy fighting is taking place. An improvised explosive device hits one of the attack squads. The blast and flames from the explosion do not melt their footwear system (excluding over boots).

When climbing through rubble and window frames, the soldier have basic protection from cuts from foreign objects to their feet, without hindering the soldier's movement. When the enemy is defeated, the soldiers begin patrolling the village.

Maintenance

In all activities, the soldiers will maintain their boots when possible and needed. Preferably the footwear system requires minor maintaining to be functioning. When needed they will conduct minor repairs to their footwear system, having a repair-kit in their unit, in order to be combat effective. This is especially important when the soldiers are prevented to change boots in the logistical chain, out in the field. The repairs does not demand special tools, but can be done with issued multi-tools.

APPENDIX 2:



DIFFERENT COMPOSITIONS

