



MINISTRY OF DEFENCE
Defence Staff Directorate General
Force Development Division

Special challenges for MilEng Combat Support and Combat Service Support in mountainous regions

Capability Manager MilEng & Log
LTC (OF-4) Mag (FH) LINDNER MA
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AGENDA

- ❖ **Curriculum Vitae**
- ❖ **MilOps / Mountain warfare in mountainous terrain**
 - **General**
 - **Principle**
- ❖ **CS & CSS requirements for cold weather operations**
- ❖ **Specialist training, organisation and equipment for supporting OPS**
- ❖ **Exercising mountain manoeuvre and unit mountain tactical drills**
- ❖ **Specific examples**
 - **Material Ropeway**
 - **Infantry Assault Bridge**



Curriculum Vitae

LINDNER Heinrich

- **LTC (OF-4)**
- **AUT Mod**
 - **Capability Manager MilEng & Log**
- **MA-degree „Military Leadership“**
 - **Fully trained BGDCDR MilEng & Log**
 - **Fully trained staff officer LCC NBC-defence**
- **Several missions**





Mountain warfare - general

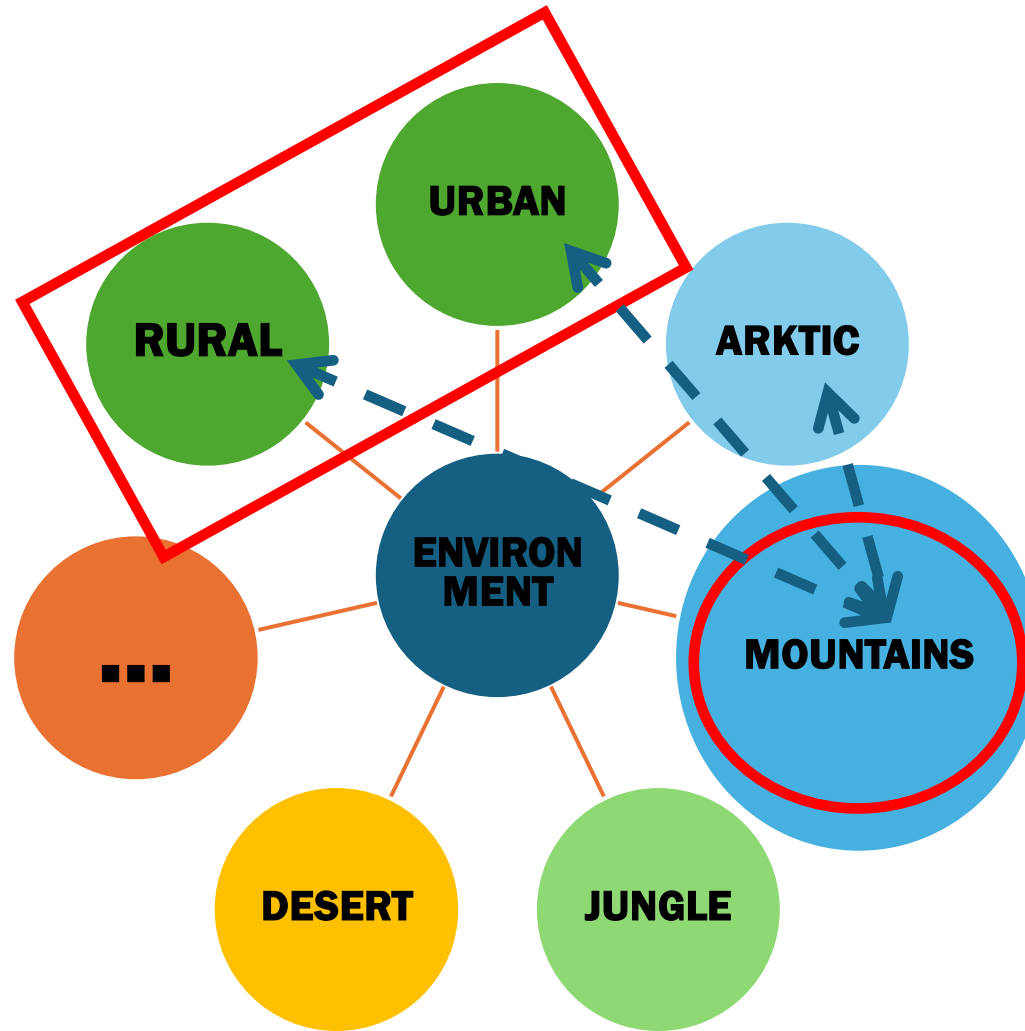
▼ **Influence of the special conditions in mountainous regions**

▼ **Peculiarities of mountain combat**



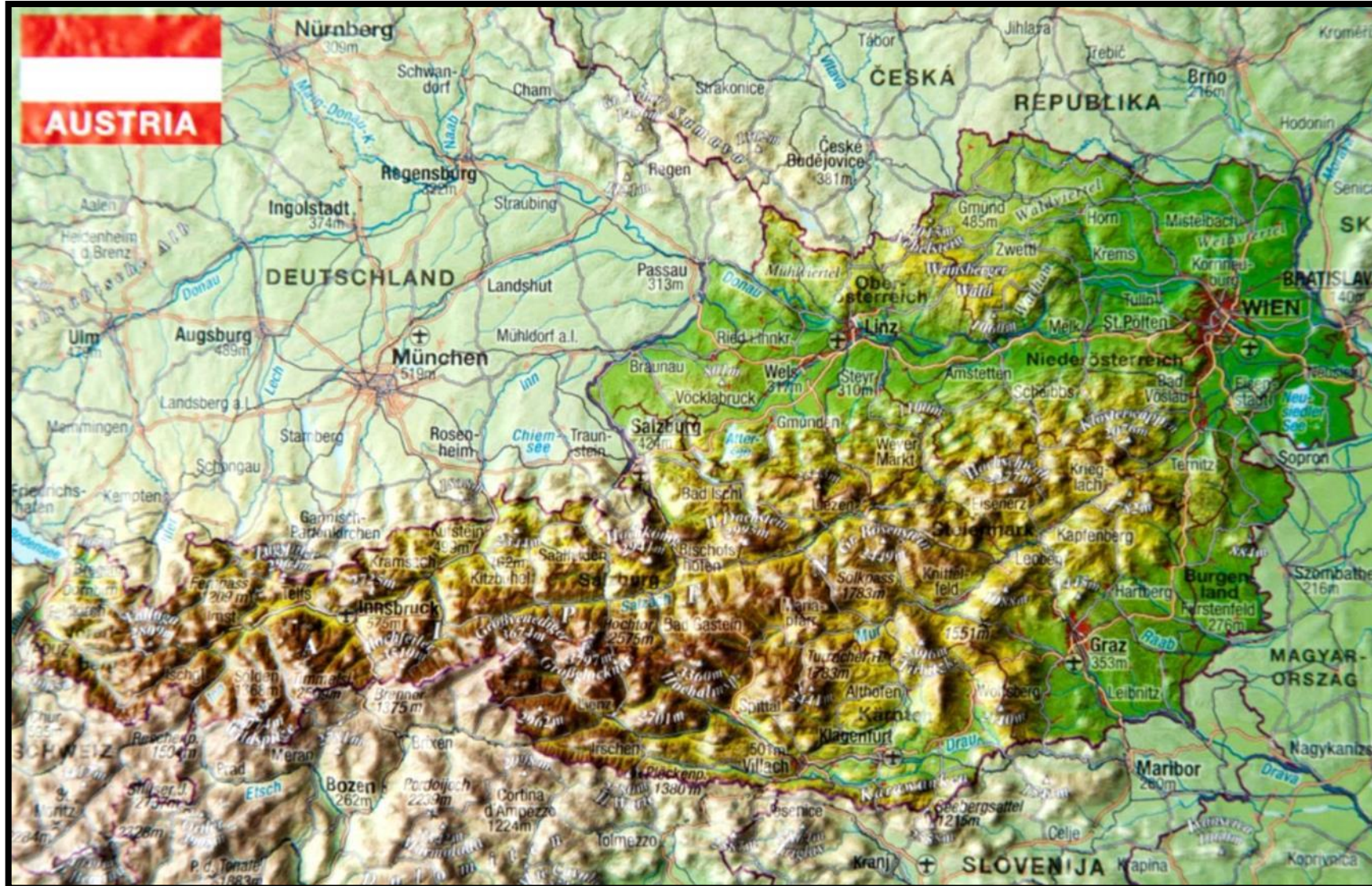


Mountain warfare - general





Mountain warfare - general





Mountain warfare - general

▽ Mountain warfare is the use of forces in a terrain with

- **large differences in altitude,**
- **special influences of the weather,**
- **little or no infrastructure at all.**
 - **“austere environment”**





Mountain warfare - general

- ◉ **Mountains are spatially closed, elevated parts of the earth's surface, which are separated from their flatter surroundings by an often clearly defined mountain base and are categorized into mountains, valleys and plateaus.**
- ◉ **There is a distinction between medium and high mountain ranges.**
 - **The limit is around 2.000 m altitude in mid-latitudes (e.g. ALPS) and elevated in tropical areas.**





Mountain warfare - principle

- ❖ **The criteria for a mountain range can also apply on a small scale to parts of the terrain that are not fundamentally a mountain but have many of the characteristics of a mountain (ravines, canyons, cliffs).**
- ❖ **The principles of mountain warfare must therefore be applied in that terrain.**





Mountain warfare - principle

- ❖ **Preparing for the operational conditions**
 - **Strengthening mind and body to survive in the environment.**

- ❖ **Omnipresence**
 - **Surprise the enemy with a 360° threat.**

- ❖ **Exploiting favorable opportunities**
 - **Exploit all opportunities in favorable terrain.**





Mountain combat - principle

- ◻ **Dominate the battlefield**
 - “Whoever holds the heights can use the valleys and whoever does not hold the valleys loses the heights.”

- ◻ **Bring all available weapons into effect**
 - Use complex weapon effects on the opponent.

- ◻ **Deprive the enemy of his freedom of action and cut off his supplies**
 - Interrupt the opponent's communication and supply lines.





CS & CSS requirements

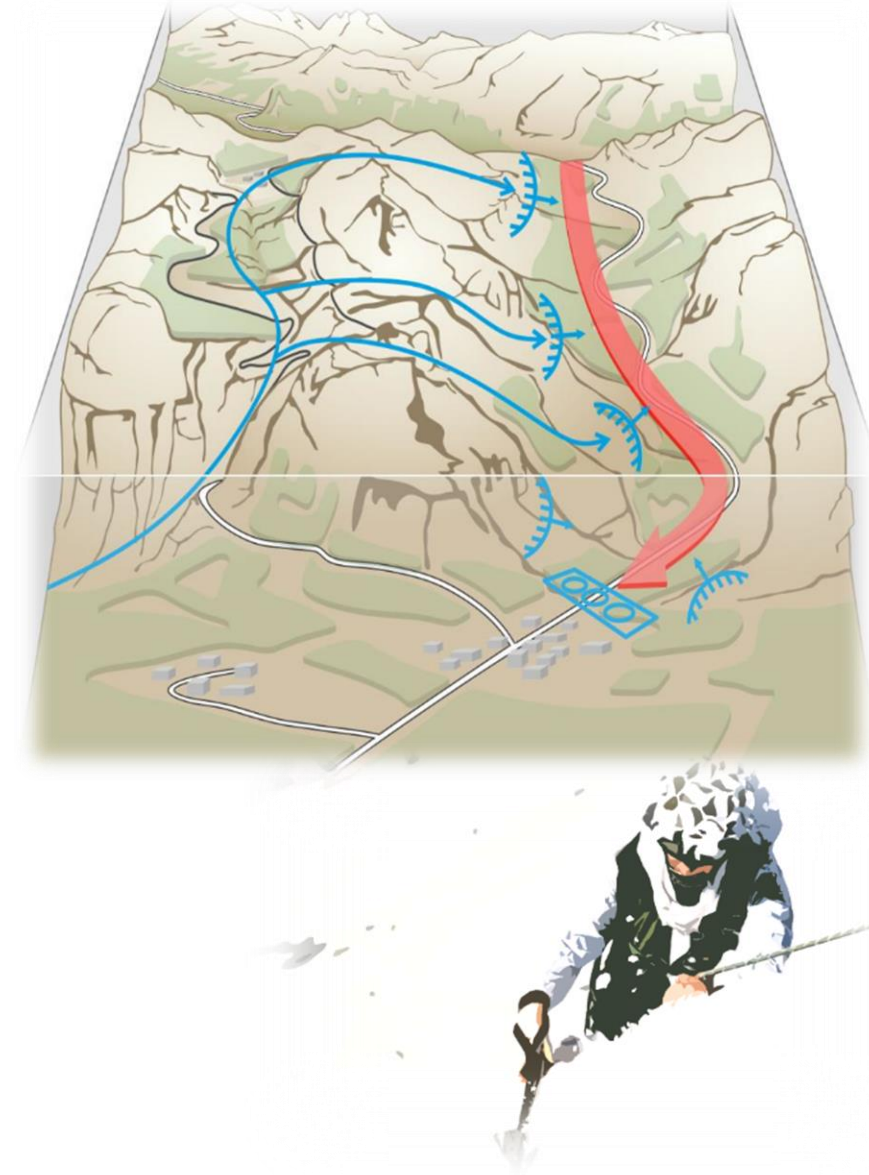
- ◉ **Mountain combat differs from that on the plains and therefore requires**
 - **consideration of the dominant influence of terrain, season and weather on the deployment of forces and the planning / execution of courses of action.**
 - **consideration of additional objective and subjective dangers of the mountains.**





CS & CSS requirements

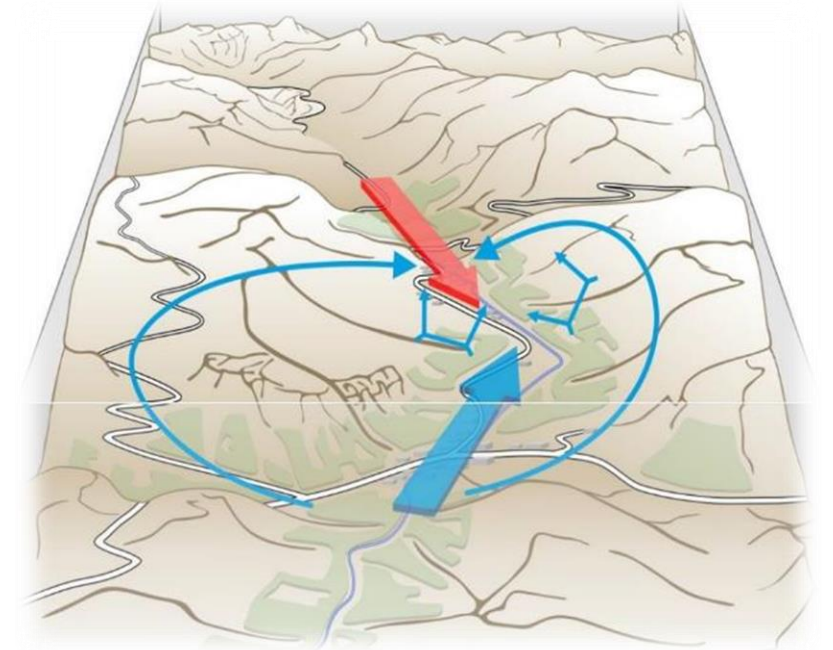
- ◻ **Mountain combat differs from that on the plains and therefore requires**
 - **deployment in (often) over-extended areas of operations / interest / responsibility.**
 - **the deployment of small combat units with a long-term mission at crucial terrain points.**





CS & CSS requirements

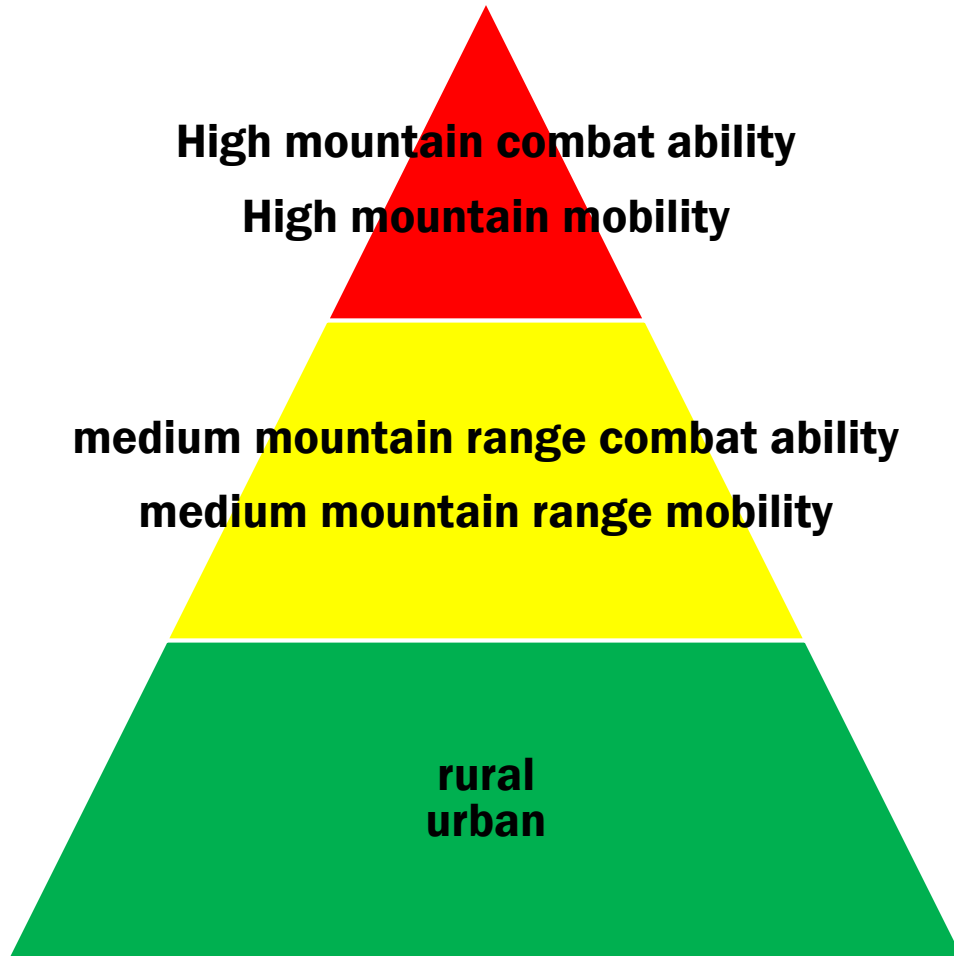
- ◉ **Mountain combat differs from that on the plains and therefore requires:**
 - **increased time for all movements and maneuvers.**
 - **increased time, changed capacity and appropriate means of transport in supply.**
 - **higher physical and psychological demands with less opportunity for regeneration.**





Specialist training

specialist training relates to terrain categories





Specialist training

- ▾ **Specialist training relates to terrain categories**
 - **responsibility at mountain combat training centre**
- ▾ **Capability cooperation – lead nation AUT**





Organisation

- ❖ **Essential for mountain combat is a staff cell for the special demands on the mountainous area on BN-level and BGE-level.**
- ❖ **COY-level requires specialists for reconnaissance and support.**





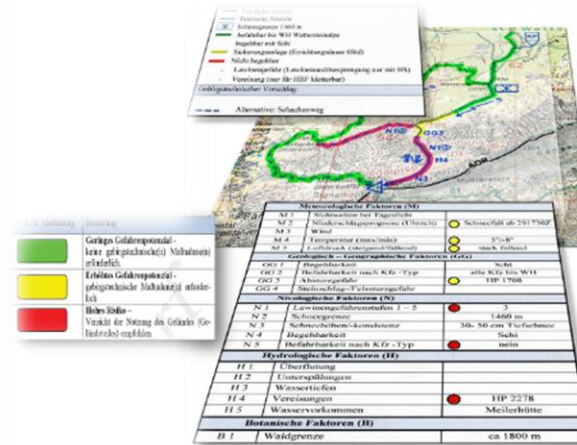
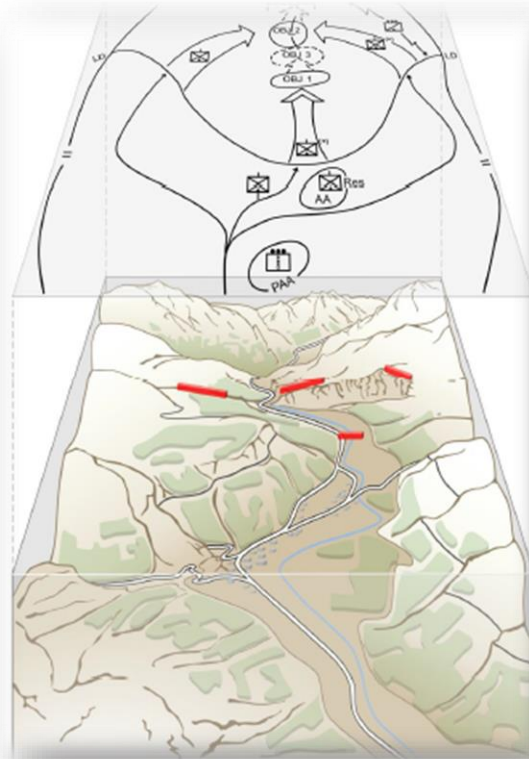
Equipment





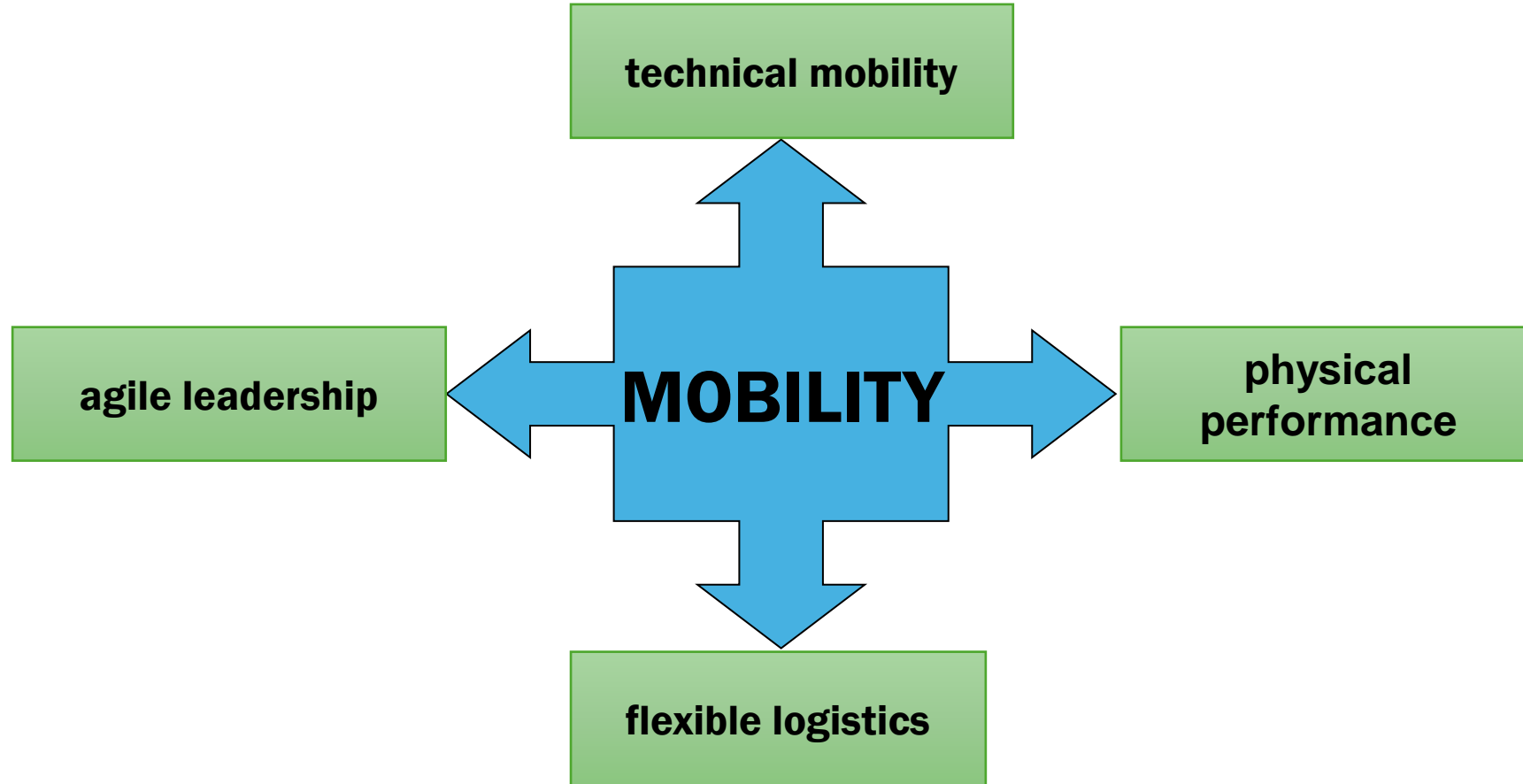
Exercising mountain manoeuvre

Training as MAPEX, SIMEX, FTX in multinational environment.





Unit mountain tactical drills





Specific example – material ropeway

AAAF do have one special asset that combines the functionality of MiEng CS and CSS.

Material ropeway

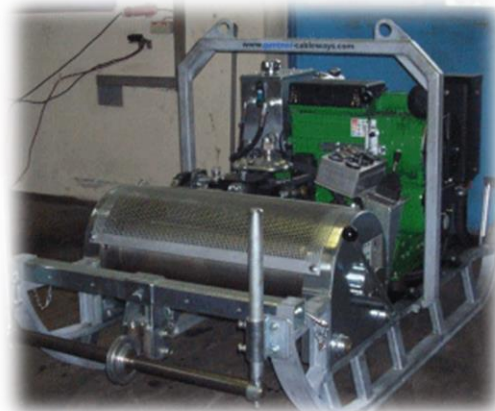




Specific example – material ropeway

▼ Material ropeway– data:

- **1 PLT with 2 autonomous operable systems**
 - **System 1 up to 2000 m free pending steel cable and a maximum load of 2500 kg.**
 - **System 2 up to 1500 m free pending steel cable and a maximum load of 1500 kg.**





Specific example – material ropeway

▼ **Material ropeway – data:**

- **Transportation of all goods and material**
- **For rescue issues – useable for transportation of personnel**
- **Independent of weather conditions – except storm and strong gusts**





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Specific example – Infantry Assault Bridge

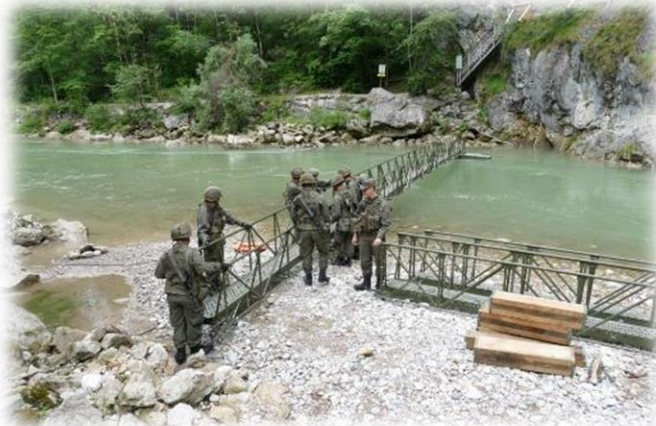




Specific example – Infantry Assault Bridge

Infantry Assault Bridge – data:

- **2 sets / ENGBN**
 - **Dry Gap crossing:**
up to 20 m /set
 - **Wet Gap crossing:**
up to 30 m /set
up to 44 m (2 sets)





Specific example – Infantry Assault Bridge

Infantry Assault Bridge – data:

- **(Light) Infantry**
- **Urban Ops**
- **Air Lift**
- **Rescue Ops**
 - **Disaster Relief Ops**





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Thank you for your attention!

