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(visit us in the Exhibition area)

Peace

When everything works,
just as we expect

Internet, coverage and bandwidth



Cellphones and apps



First Person Shooter Games



War

When we have to prepare ourselves for the fact that much of what works in peace time no longer works as we are used to



C⁴I²

Command, Control, Communications, Computers, Intelligence, and Interoperability

Command and Control



Secret?

Confidential?

Restricted?

Unclassified?



Encryption?

COMPUTERS (DATACENTERs, SERVERs / DESKTOPs / LAPTOPs / TABLETs / PDAs etc)



Encryption?

COMMUNICATIONS (FIXED TELE/DAIA / RADIO RELAY / SATCOM / HF / VHF / UHF / ICOM etc)



C2 (PLAN AND EXECUTE)



DATA



DATA



BMS (EXECUTE)



Dismounted



INFORMATION SYSTEMs

Encryption?

(TOP SECRET) / SECRET / CONFIDENTIAL / RESTRICTED / UNCLASSIFIED

Functional chains (examples)



Plans and orders

Reports

Sensors

Enemy reports

Intel

Communications

Joint fires

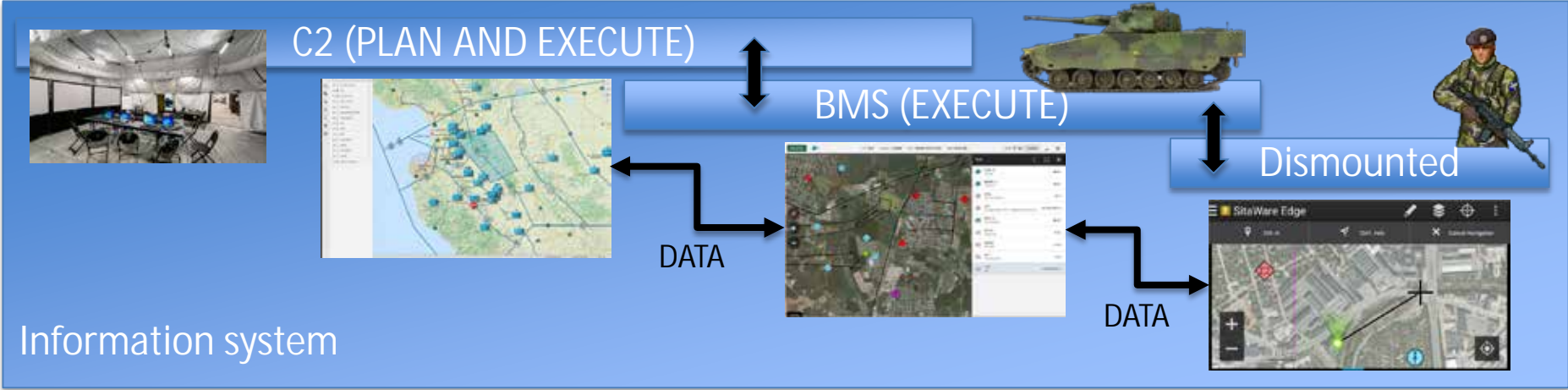
Geo / Maps

Interoperability

Medic

Logistics

Security



Information system

Who



Nice or Need?

Everybody talks about



Cyber

5G

Artificial intelligence

Wideband Waveforms

Software Defined Radios



Future Soldier systems

Security

BIG Data



3D

**DESIGNED FOR THE PERFECT WORLD
EVERYTHING WORKS**

Unmanned systems

NICE

HUD

Bandwidth

Internet of things

What we don't talk about that much



Cyber

5G

Artificial intelligence

Wideband Waveforms

The (human) soldier

Software Defined Radios

Electronic Warfare Threat

Future Soldier systems

Simplicity / robustness / availability

Security

BIG Data

True Command and control capability

3D

Unmanned systems

HUD

Internet of things

NICE

NEED

The (human) soldier

Serving only 10 days per year, no engineer degree,
with other stuff to do than operating the C2/BMS/Dismounted system

Electronic Warfare Threat

No infrastructure available, Radio silence capability needed, only low bandwidth available,
minimum amount of data possible to be emitted, lowest possible output power needed

Simplicity / robustness / availability

NEEDED functionality only, as few systems as possible, working anywhere / anytime,
easy to learn, short start-up time, scalable, small modular systems,
high mobility, supports rapid reorganization,
no access to operating support personnel in the field

True Command and control capability

The system shall not force the soldier to watch a screen all the time
The system must **SUPPORT** the soldier in command and control
Interoperable

Focus on Need IS need

Focus on Nice is **NOT** Need

Nice can be devastating

Its all, and only, about
Command and Control

Give the soldiers a C4I system that they master, can use professionally,
and be dangerous to the enemy, not to themselves

Its Not about “gadgets”



**Don't forget who
must be in focus**

Any questions?

Thank you for paying attention!

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