



Energy Efficiency in the Military:

NATO SMART ENERGY
From Conflict to Innovation

Susanne Michaelis
NATO

Alpbach Forum, 25 August 2017



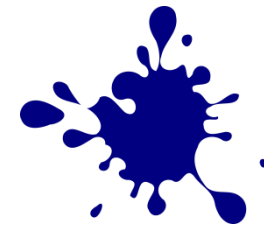
CARTOONS

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Energy Dependency Makes the Military Vulnerable

*Afghanistan and Iraq:
One casualty every 24th convoy
⇒ 3000 casualties 2003-2007*



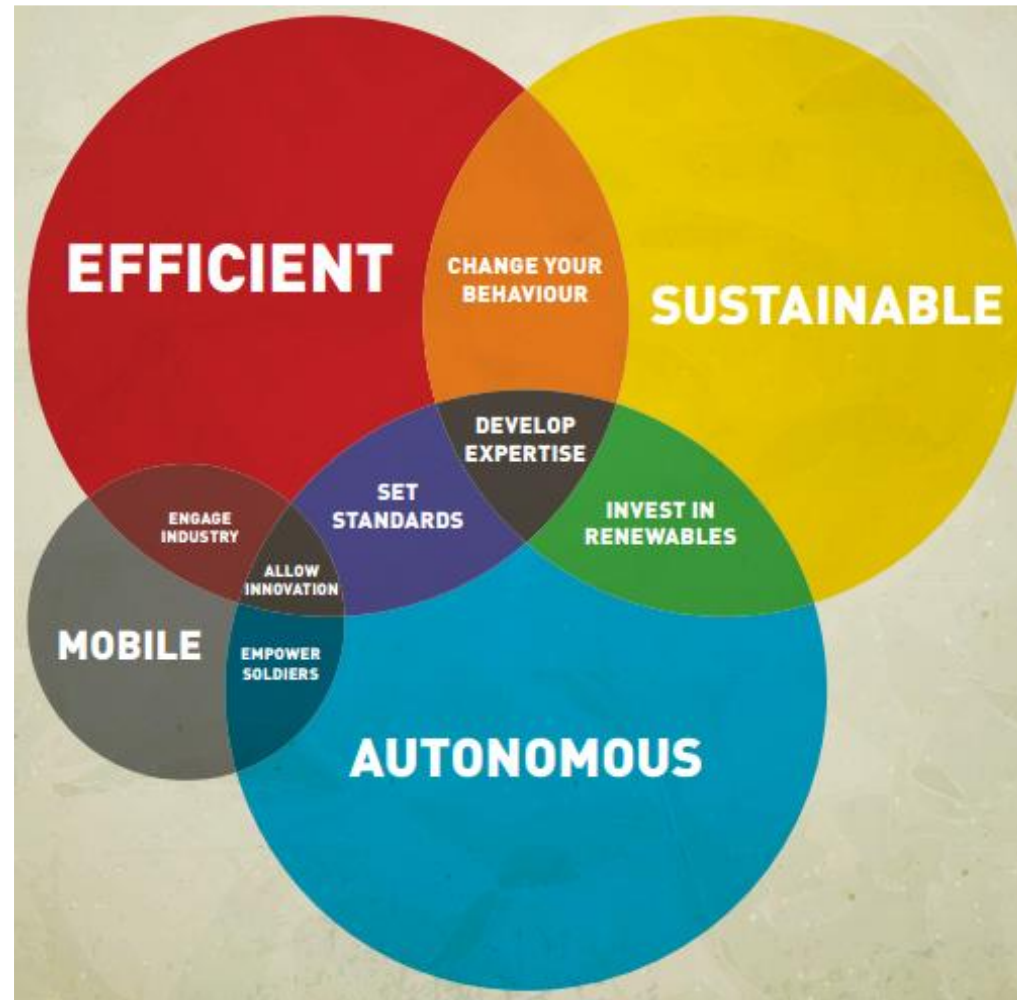
*Fully Burden Cost (FBC):
5-250 €
per litre fuel*



NATO Smart Energy

Efficiency:
Less consumption
-> less logistics

Mobility:
More flexibility
-> more effectiveness



Sustainability:
less logistics
-> less footprint

Autonomy:
More renewables
-> more resilience

Requirements for NATO Response Force



Smart Energy in NATO Declarations



Heads of state and government:

« We will work towards significantly improving the energy efficiency of our military forces »



Smart Energy Stakeholders

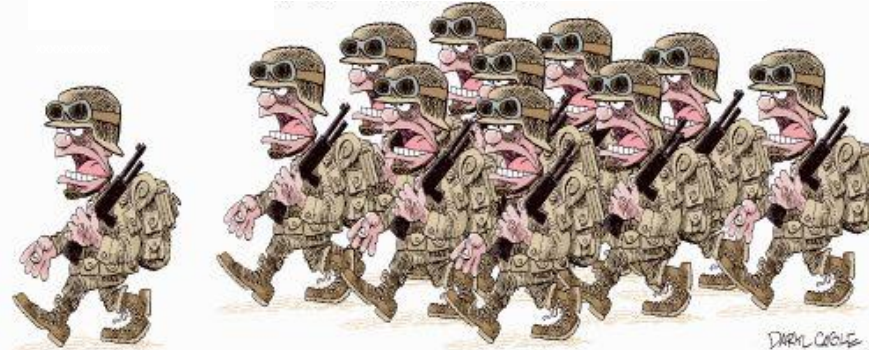
Commander



« NATO gave me this one
for fighting with windmills. »

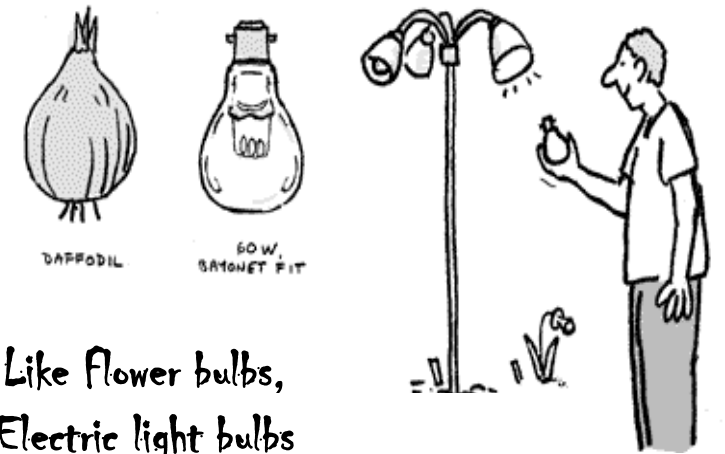
Soldier

« I dunno but I've been told ...
Shootin' things is gettin' old ...
Kiss a baby - hug a tree ...
Use alternative energy ... »



SENSITIVITY TRAINING.

innovator



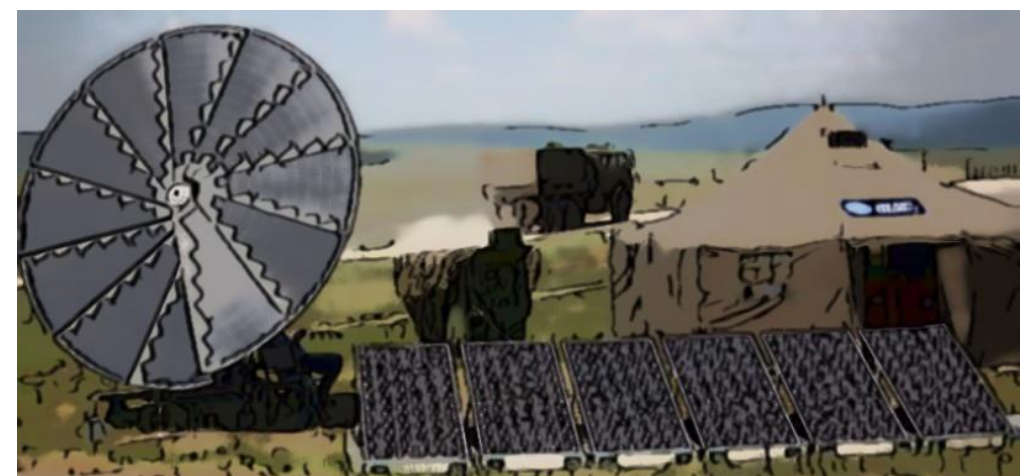
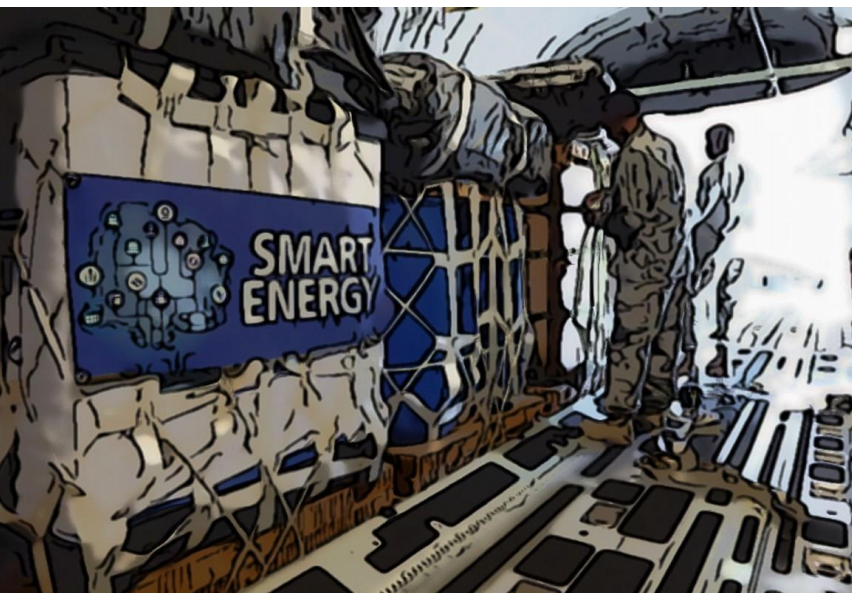
« Like flower bulbs,
Electric light bulbs
Will grow into energy efficient lights
From which fresh bulbs can be harvested. »

... diplomat, engineer, logistician, budget controller ...

Awareness rising, training, exercises,
policy development, standardisation agreements and innovation support



innovative Technologies Tried and Tested in Exercises

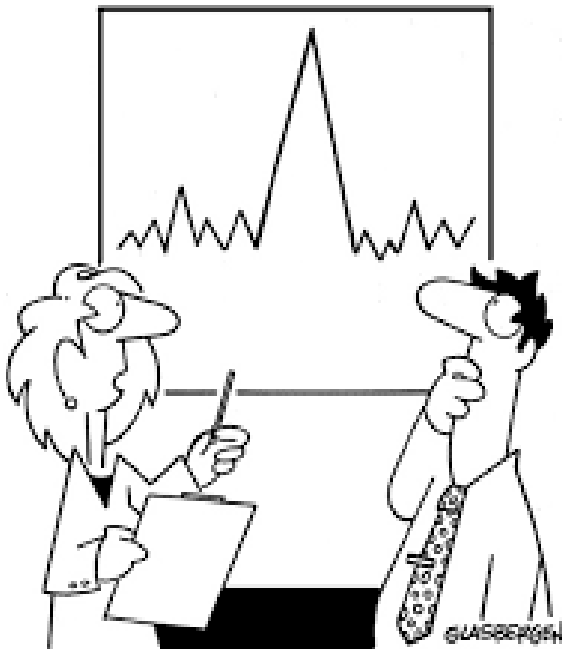


*Capable Logisticians
2015, Hungary*

What will NATO do next ?



« We have three sources for data:
The crystal ball, the coin flip and Siri.
All tell us: We are doomed! »



« I recommend your following our NATO standards. Unfortunately, they are classified. »



« I have no idea how to integrate this energy flash into our field camp power grid. »

- Encourage nations to disclose data on fuel consumption
- Declassify and publish NATO policies and standards
- Create a new standard for integrating innovative technologies

➡ NATO Smart Energy Training and Assessment Camp (SETAC)



Smart Energy – More Information

Dr. Susanne Michaelis

Energy Security Section

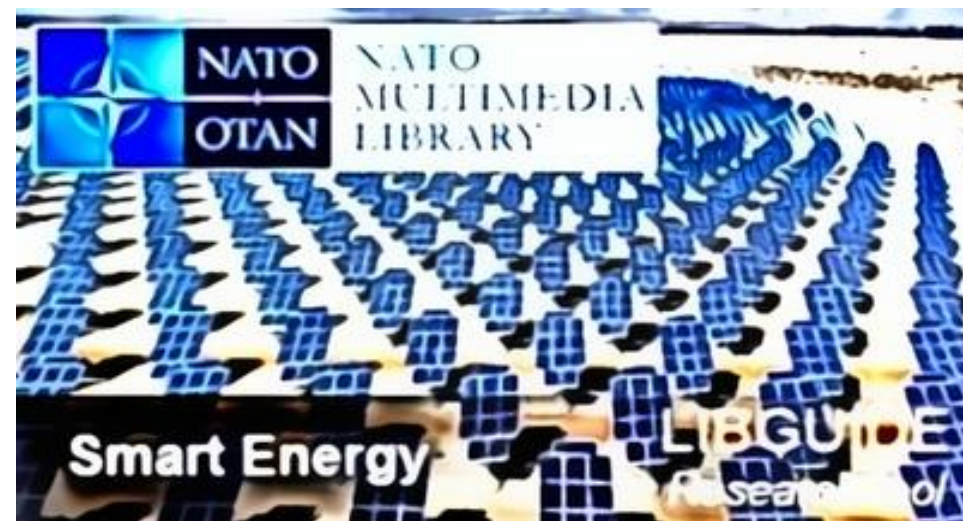
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www.natolibguides.info/smartenergy