

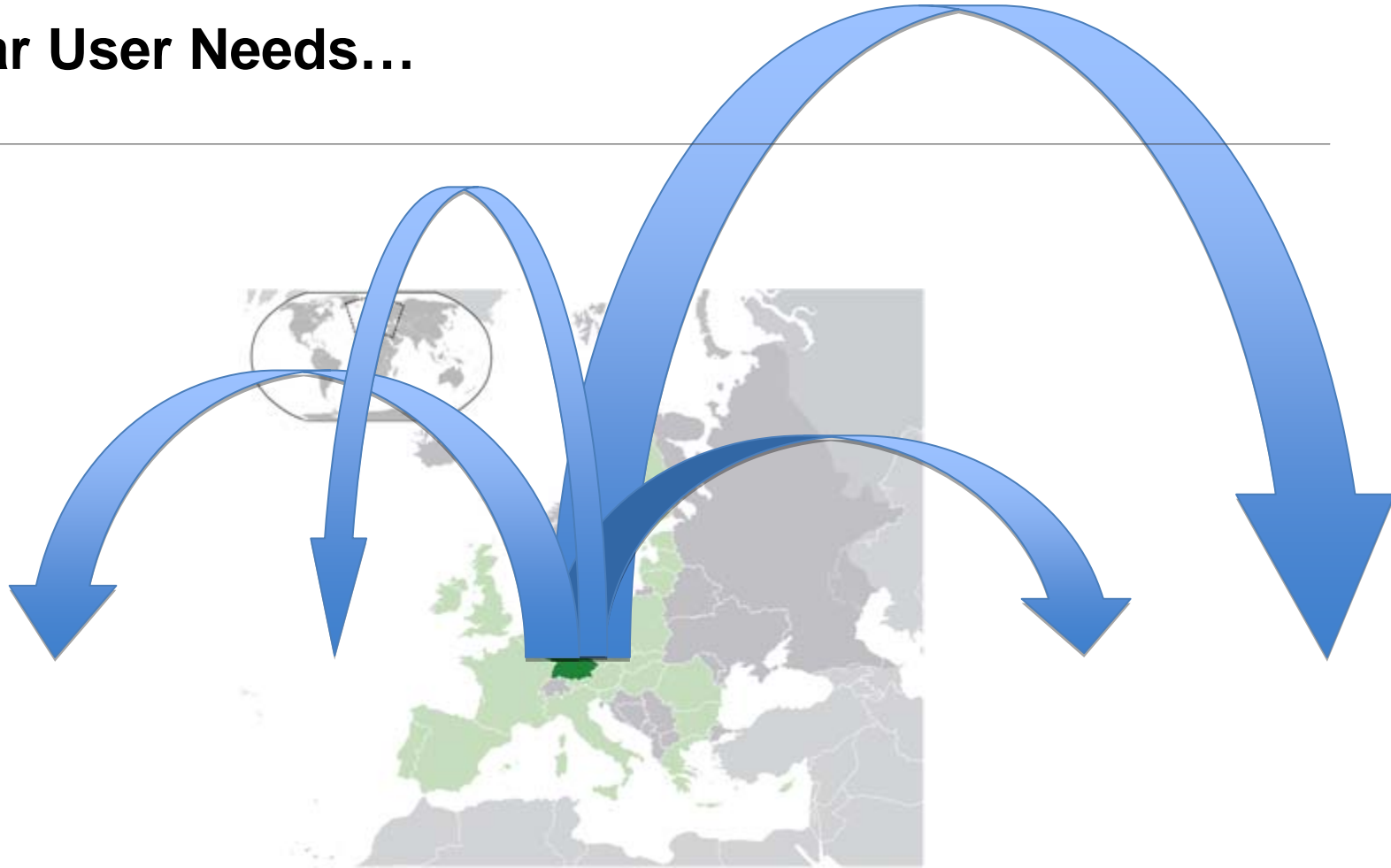
T4MOD: Telemedicine for the French, German, Italian and Spanish Ministries of Defence

ARTES Applications Workshop
5th-6th April 2011

Major René Mathieu, Dept. of Neurosurgery, Federal Armed Forces Hospital, Ulm



Clear User Needs...

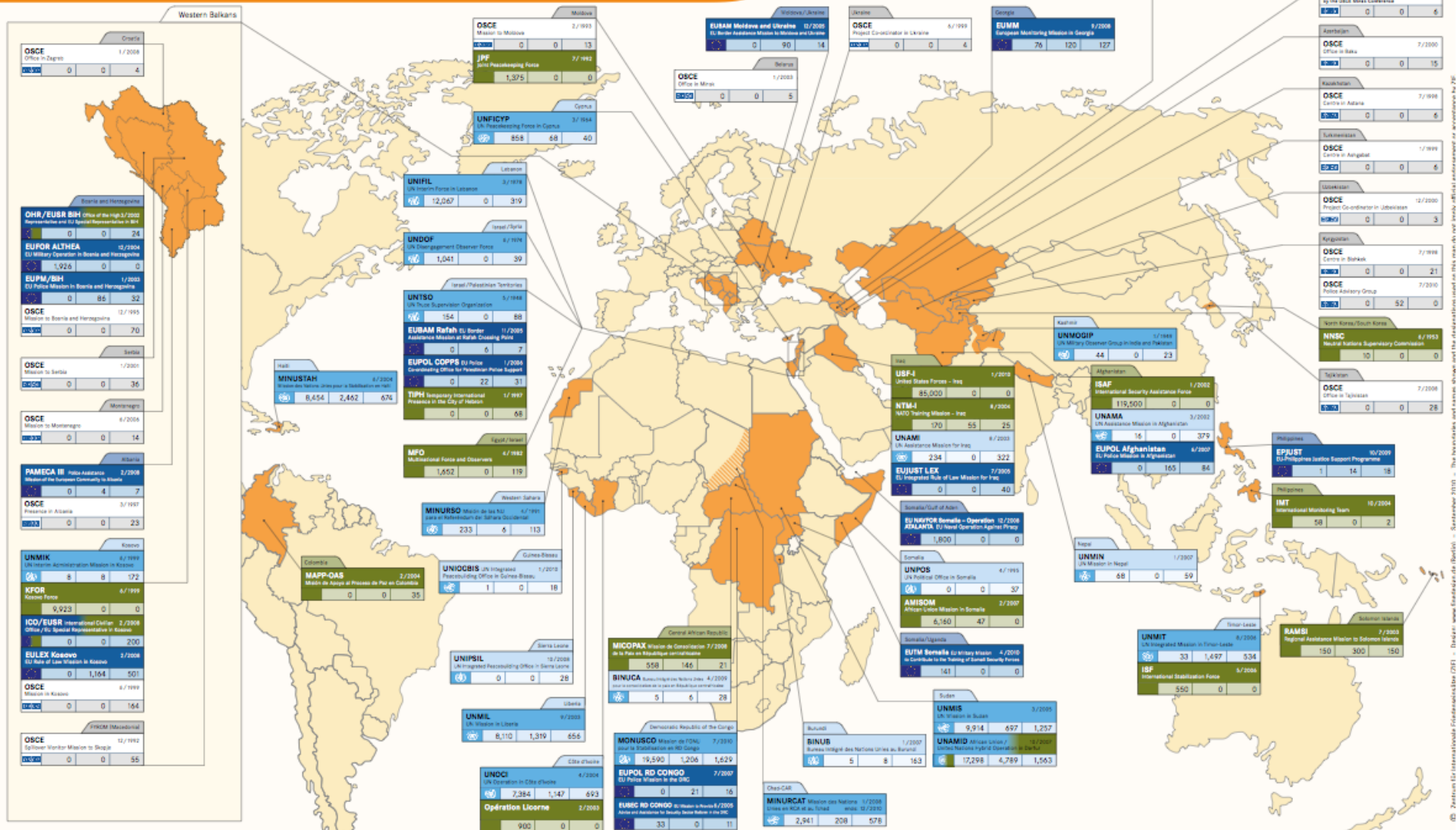


Why do we need to bring *expertise* to medical field operations?

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Crisis Prevention and Peace Operations 2010



Organizations and Personnel (total as of May 2010)

Organization	Police	Military	Civilians
OSCE	0	52	479
United Nations Peacekeeping	329	14	1,034
United Nations Peacekeeping	86,129	13,407	8,376
European Union	3,977	1,592	1,112
Others (with or without UN mandate)	228,006	548	420
Total personnel strength (all organizations)	316,441	15,713	11,423

Legend

Name of country/area	Acronym of mission	Full name of mission	Flag of institution	Beginning of operation
Liberia	UNMIL	UN Mission in Liberia		9/2003
Liberia		8,110	1,319	656
				International civilians International police International military

German MoD scenario: in case of a Neurotrauma - who will perform the operation onsite?



time is brain!

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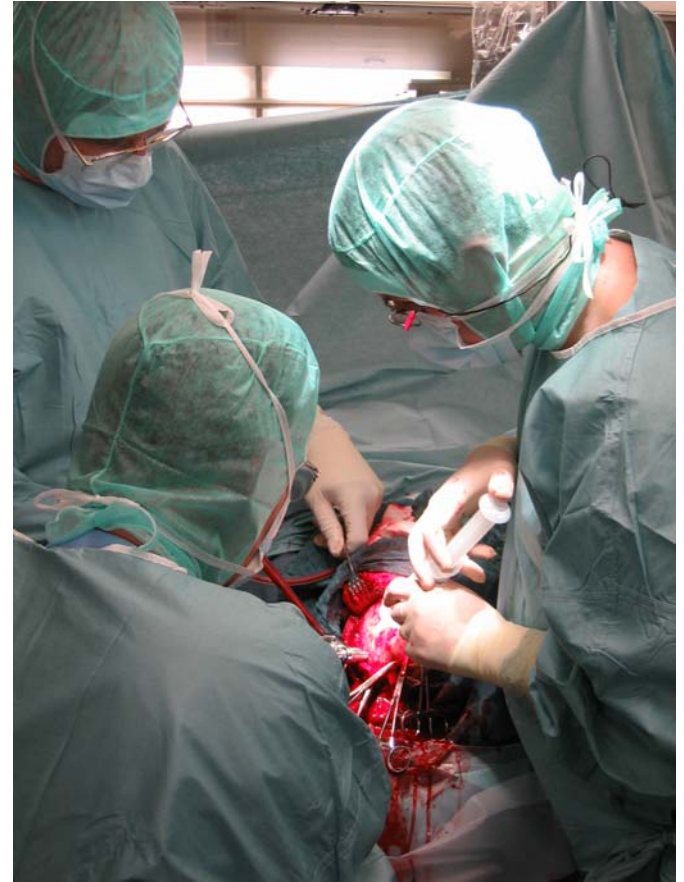
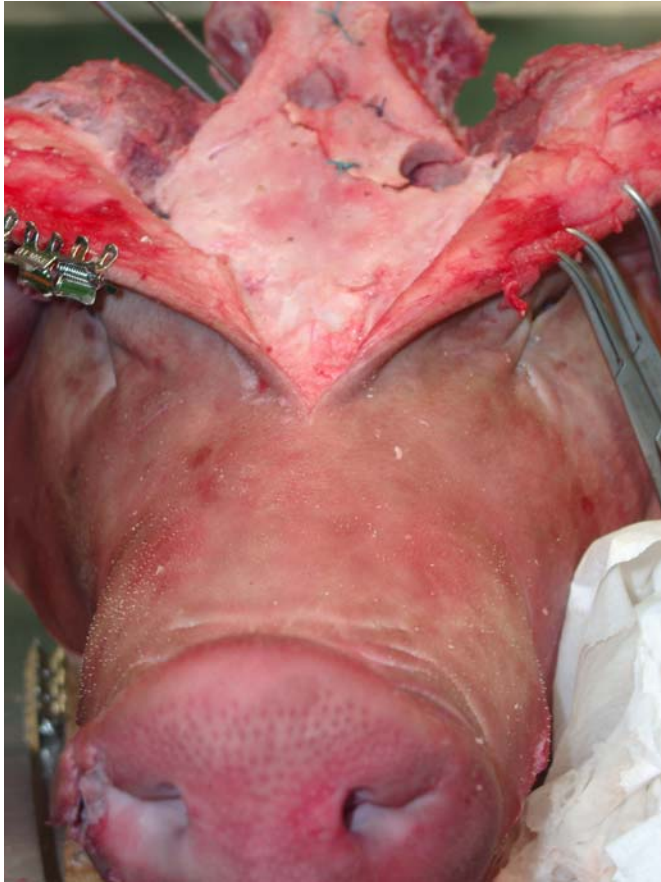
A partial solution: Neurotrauma Course – since 1999



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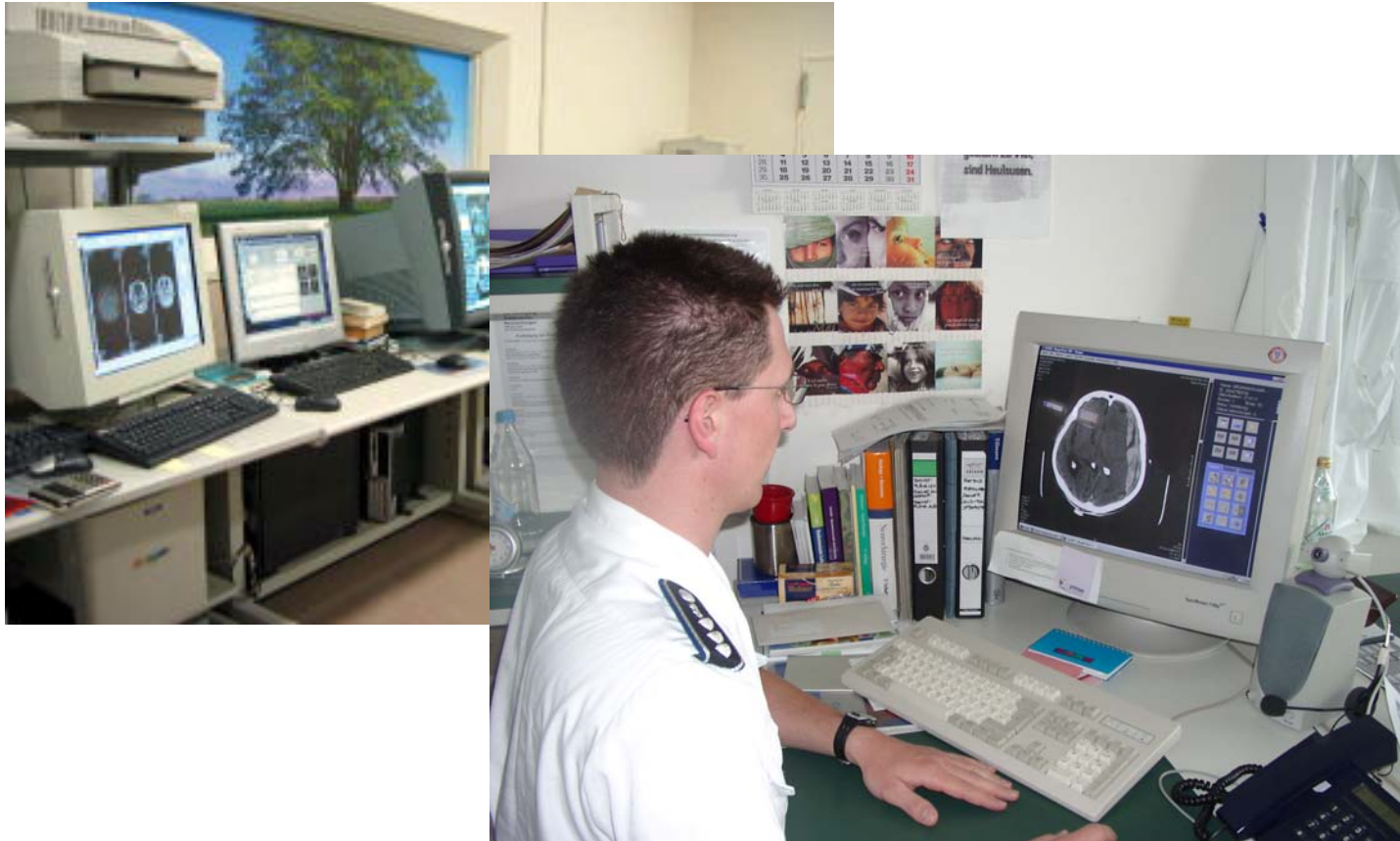
A partial solution: Neurotrauma Course – since 1999



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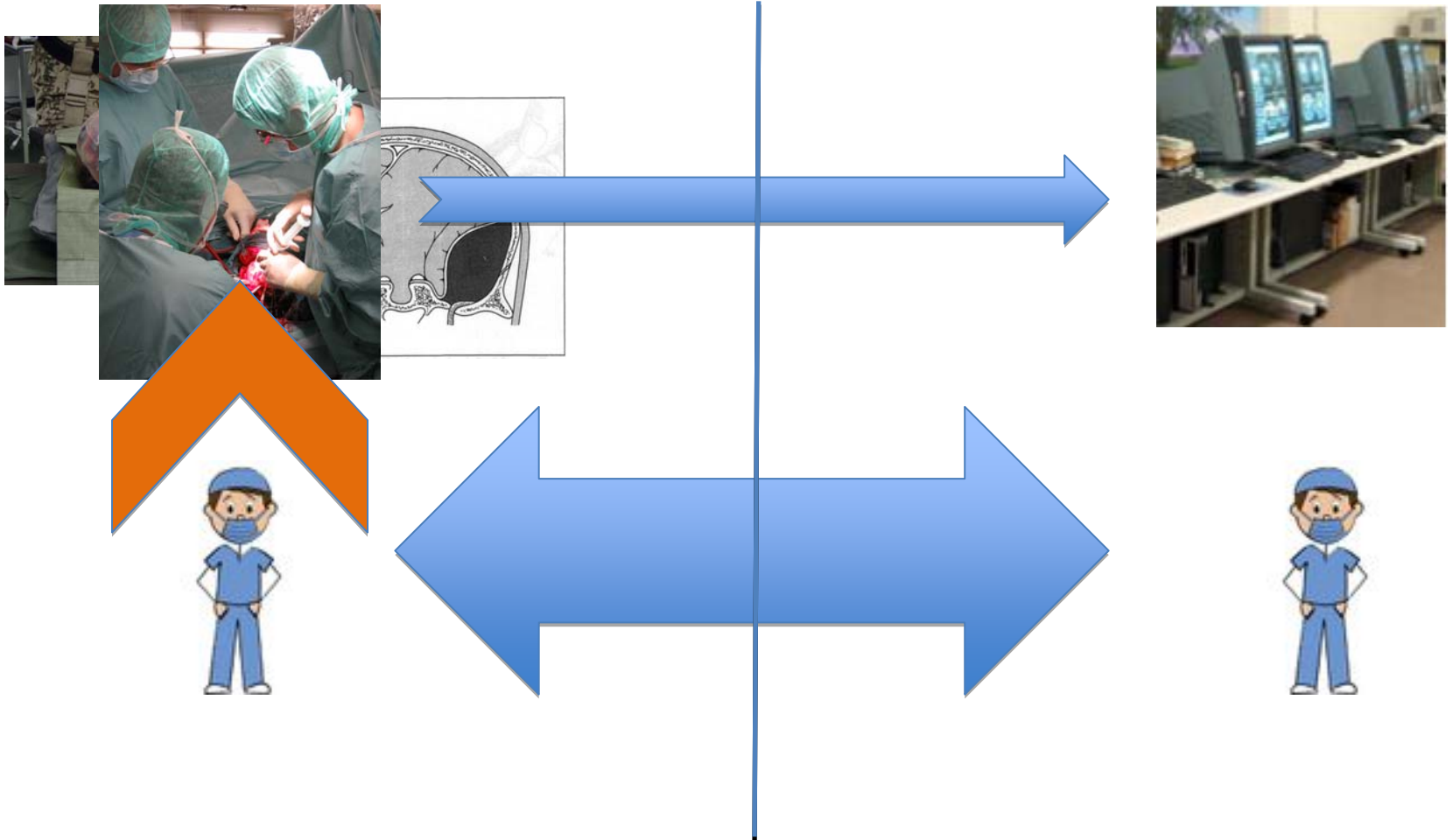
A complementary solution: Telemedicine



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Telemedicine



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The future of Telemedicine



Tele-Telemedicine



Providing a audio/video-conference directly into the OR



T4MOD Project Objectives

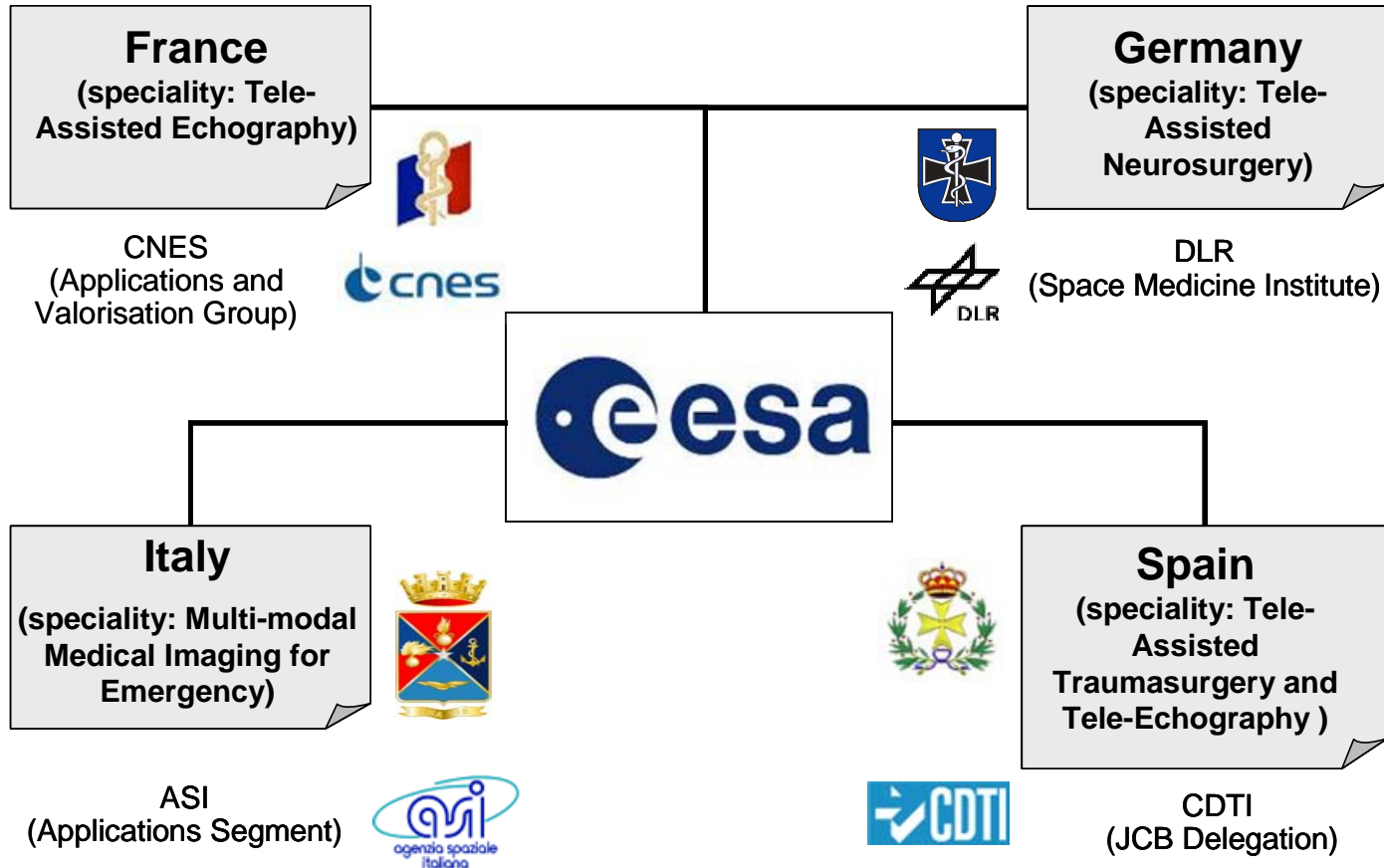


1. Provide a solution for the benefit of military personnel deployed abroad in emergency relief, humanitarian crises and peace keeping missions;
2. Leverage collaboration among public institutions within their national contexts and among the four representative member states;
3. Enable medical specialists to assist the remote site in case of a medical emergency or during a planned consult, when required;
4. Provide an easy-to-use solution able to be operated by medical and non-medical personnel;
5. Provide a reliable cost effective solution requiring minimal training, installation, maintenance and running costs;
6. Demonstrate the adequacy of the solution (system and services) with the MoD Health Services in their operational scenarios (characterised by geographical isolation, harsh environment and lack of local medical specialists).





Participants

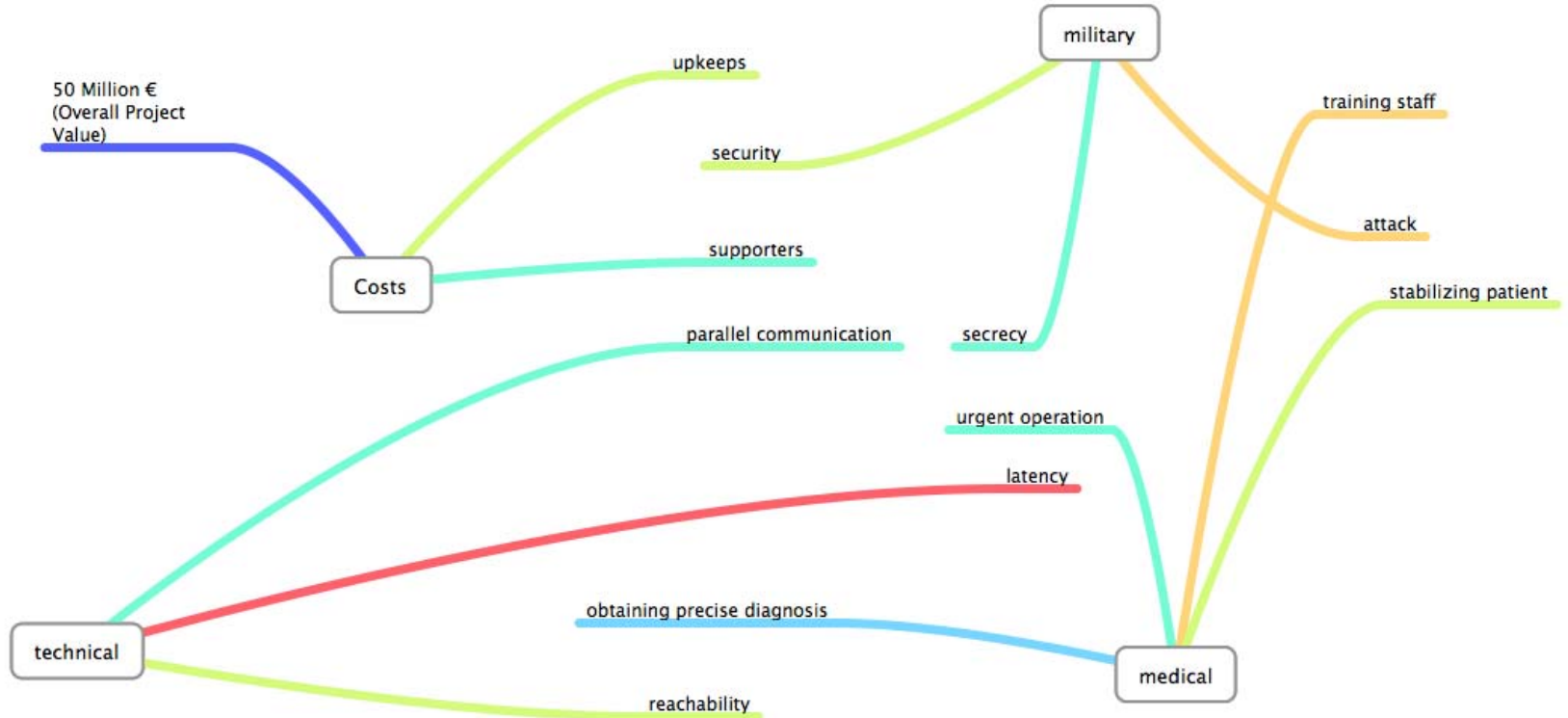


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Challenges





High Level Elements



MoDs

**ESA +
National
Space
Ag./Inst.**

User Scenarios and
Requirements

System Integration
and Qualification

Industry

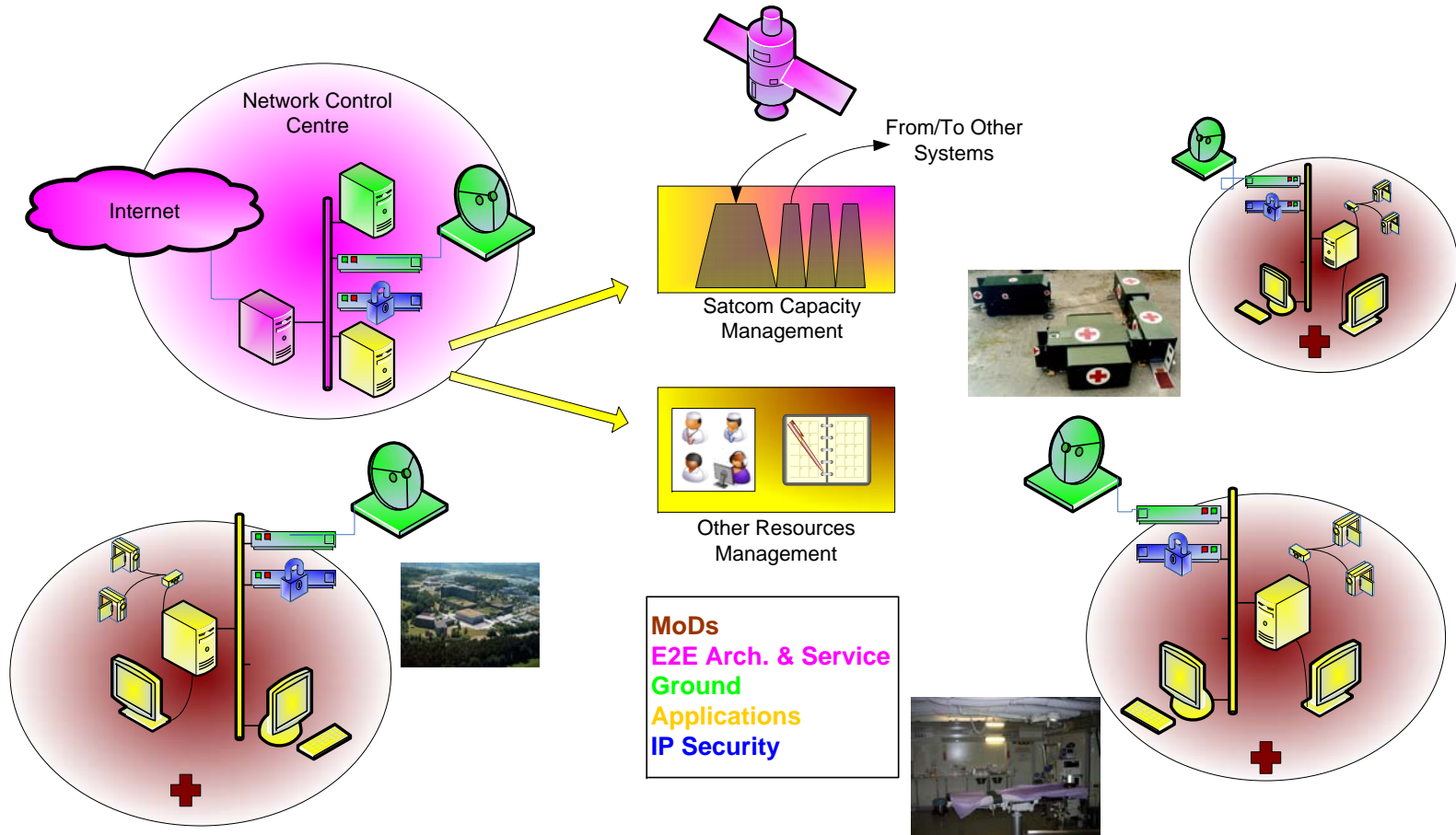
Consolidation of
Sustainability
and Evaluation

European and
Remote Pilot





Key Elements



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2 Space Assets: interoperable IP overlay satellite network + Manned Spaceflight technology (Robotized Tele-Echography)





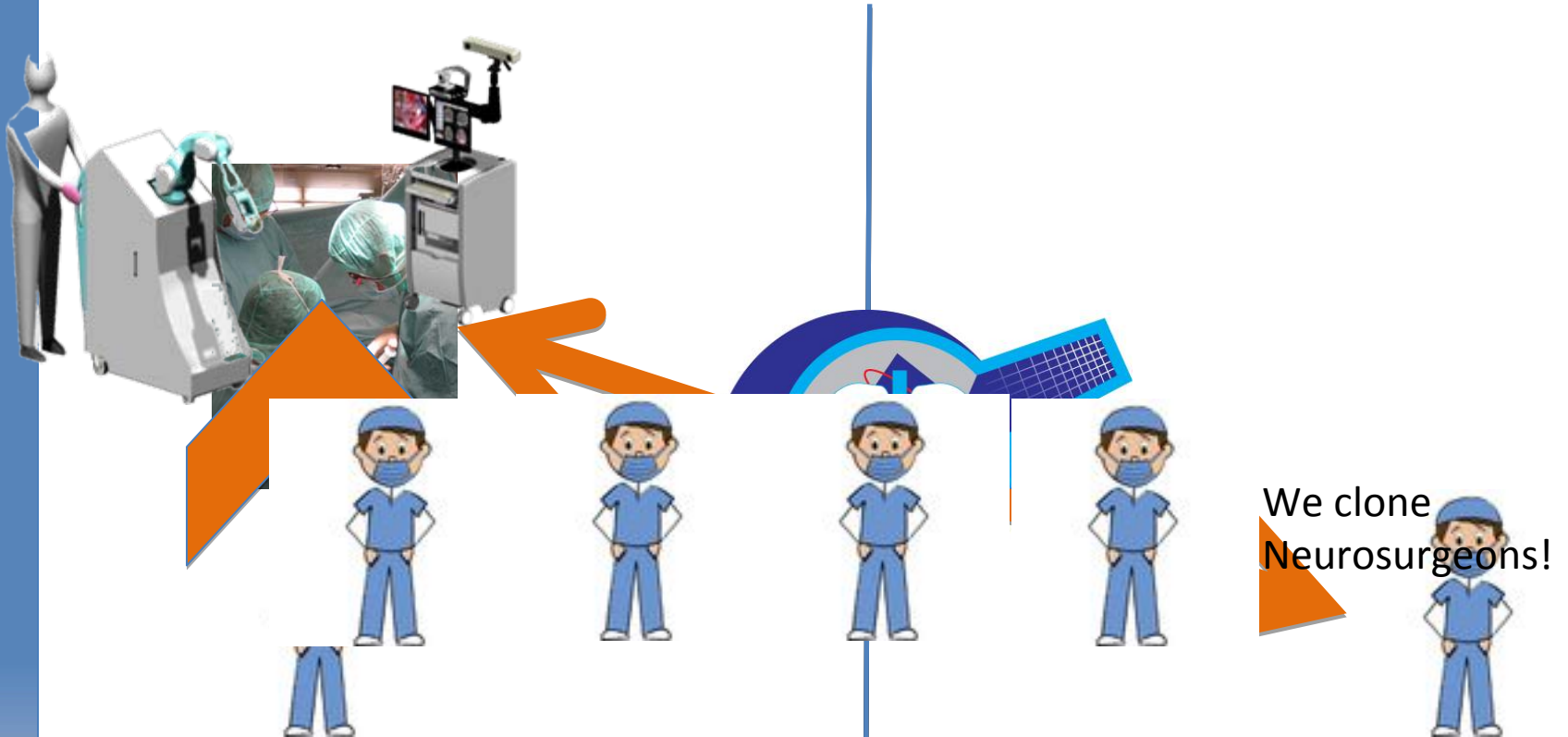
The Day after Tomorrow?



The next step could be telerobotic surgery...



The Day after “the day after tomorrow”?



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Thank you!



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