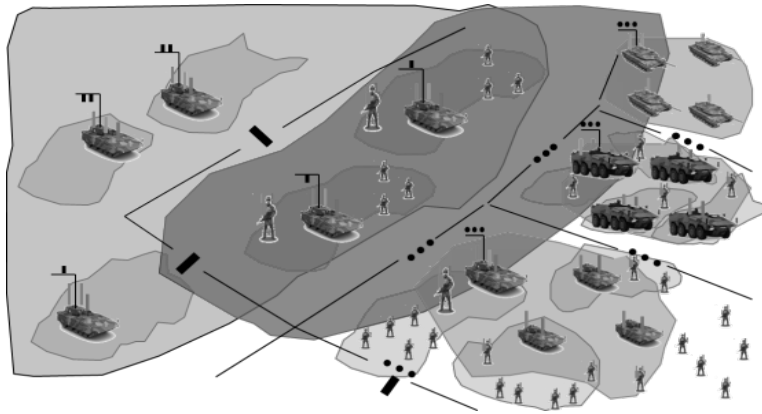




**Federal Office of Bundeswehr Equipment, Information Technology
and In-Service Support (BAAINBw)**



Digitization of land-based Operations (D-LBO)



Wireless Innovation Forum's

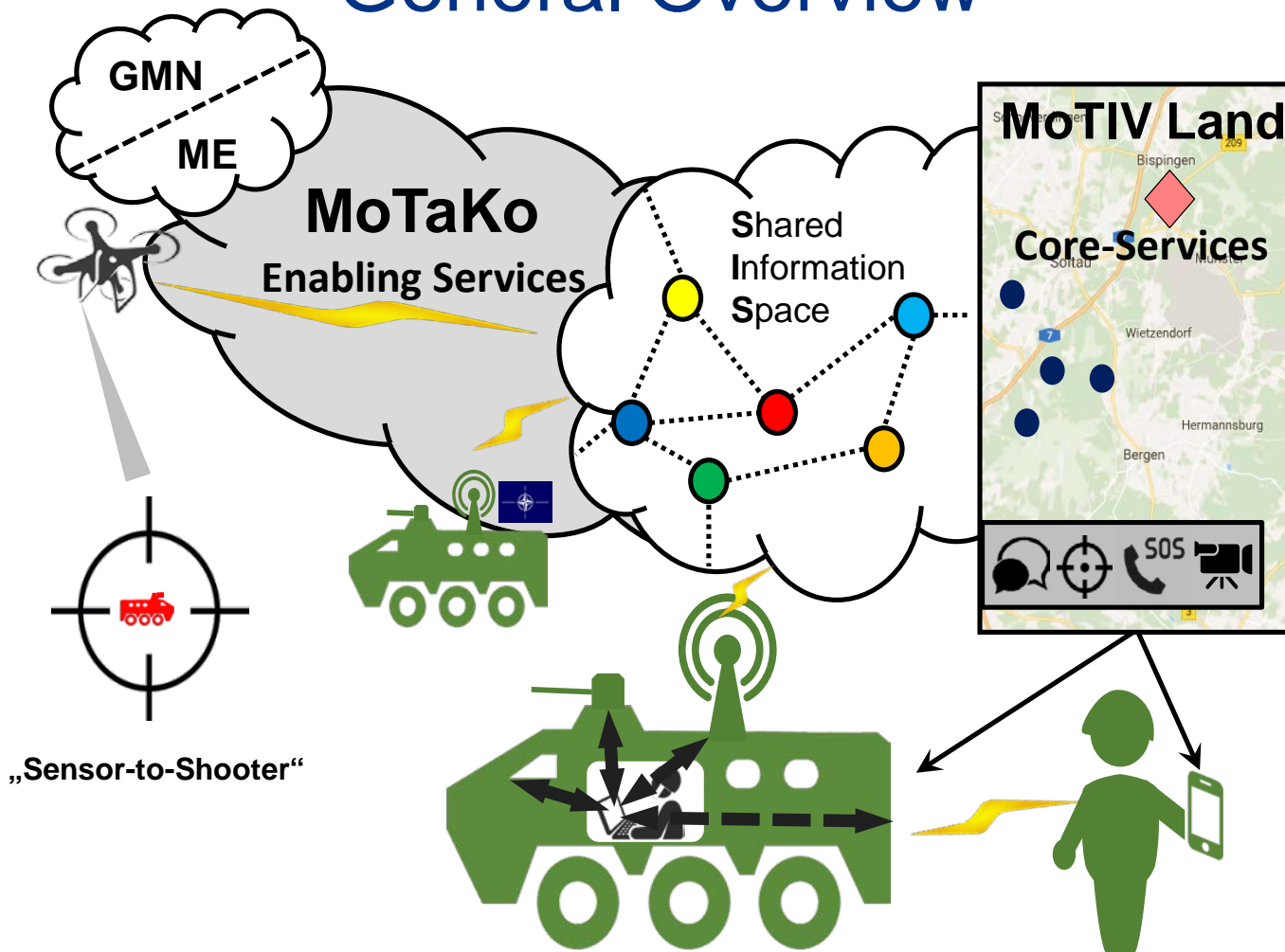
**SDR Tactical Communications
Workshop**

May 23rd, 2018



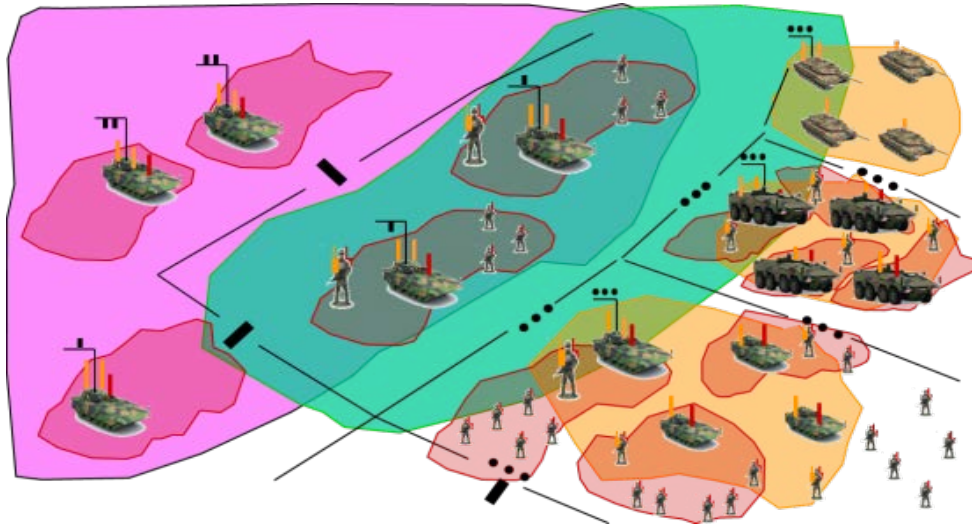
Bundeswehr
Wir. Dienen. Deutschland.

General Overview



D-LBO Programme = MoTaKo + MoTIV Land

Digitization of Land-based Operations (D-LBO)



- **Integrated mobile communications and information network** at tactical level (dismounted infantry, vehicles, mobile and deployable command posts)
- **Enabling access** to core and wide area networks
- **Transmission Components:** tactical radios (HF, V/UHF), trunked radio systems/cellular networks, SATCOM-on-the-move;
- **User Facing Components:** end-user devices, battlefield management systems (BMS)
- **Core Component:** tactical service provider (incl. „tactical routing“)
- **Overarching management systems** (IP addresses, network configuration, radio frequencies, crypto)



D-LBO Critical Points

- Enabling distributed and simultaneous operations of land forces throughout the areas of strategic interest
- Enabling joint and combined operations in complex asymmetric, symmetric, and hybrid environments
- Accelerating OODA (Observation – Orientation – Decision – Action) loops for more effective target engagement and combat effectiveness
- Incremental network enabled capability and system deployment by defined sets of task forces and capability enabling releases
- Inclusion of the warfighter in the system development process from the beginning
- Taking a overall system-of-systems approach, avoiding isolated solutions, and building on existing COTS/MOTS solutions and standards



D-LBO General Overview

SCOPE

Procurement volume and required integration

- 8 task forces (1 TF ~ 1 operational Brig)
- approx. 90.000 radios (vehicular, manpack , handheld)
- approx. 25.500 vehicles (350 types)

Development

- Tactical Router / Core Component / Management Systems

SCHEDULE

2018 – 2035: Solution Architecture Framework & System / Service Design,
Agile Requirements/Release/Change Management
CD&E
Incremental deployment

2020 et sqq. : Deployment SVFuA Radios for C² BOXER / PUMA

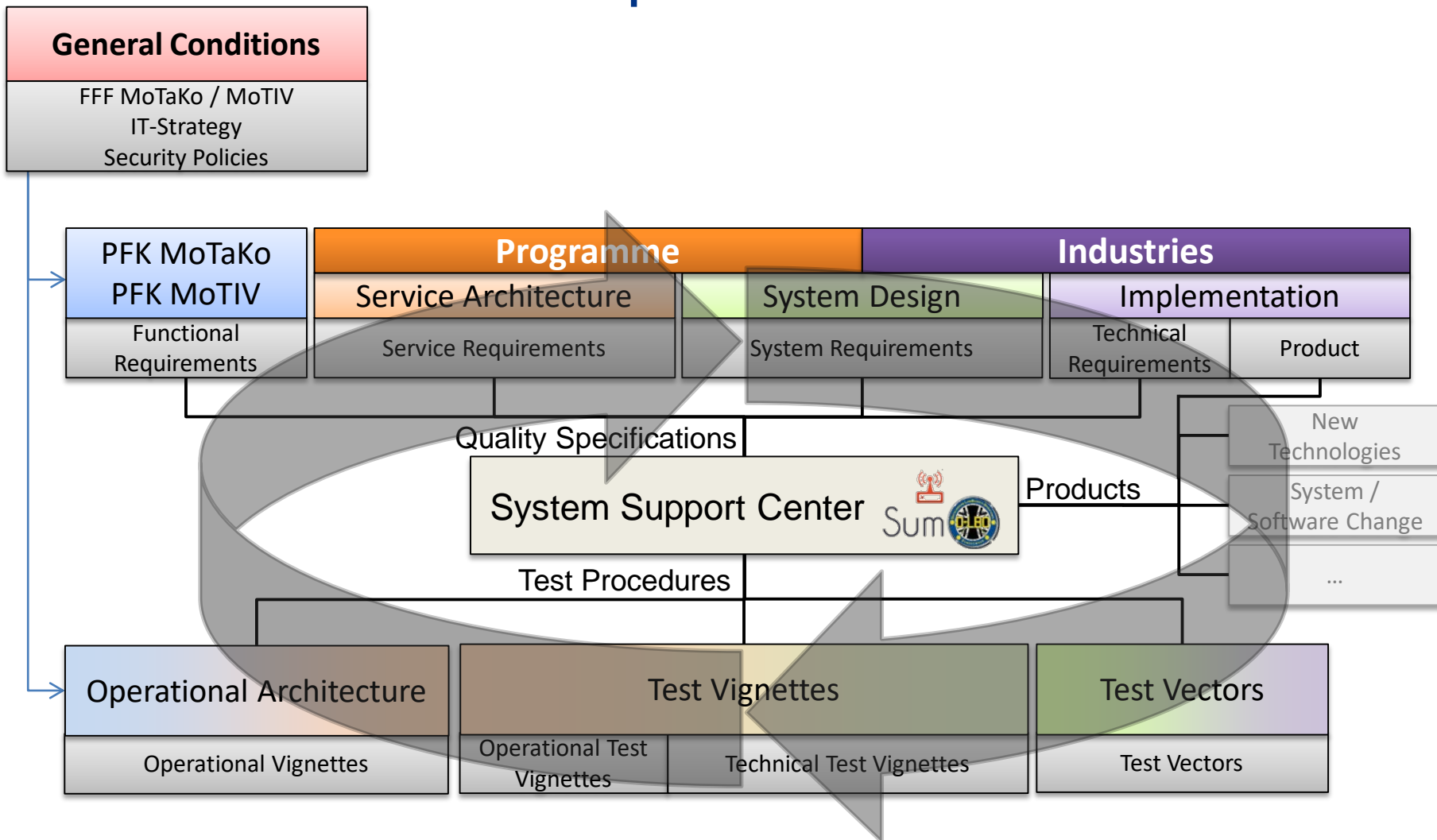
2023 et sqq. : Deployment for first TF concluded

Advanced measures due to Obsolescence

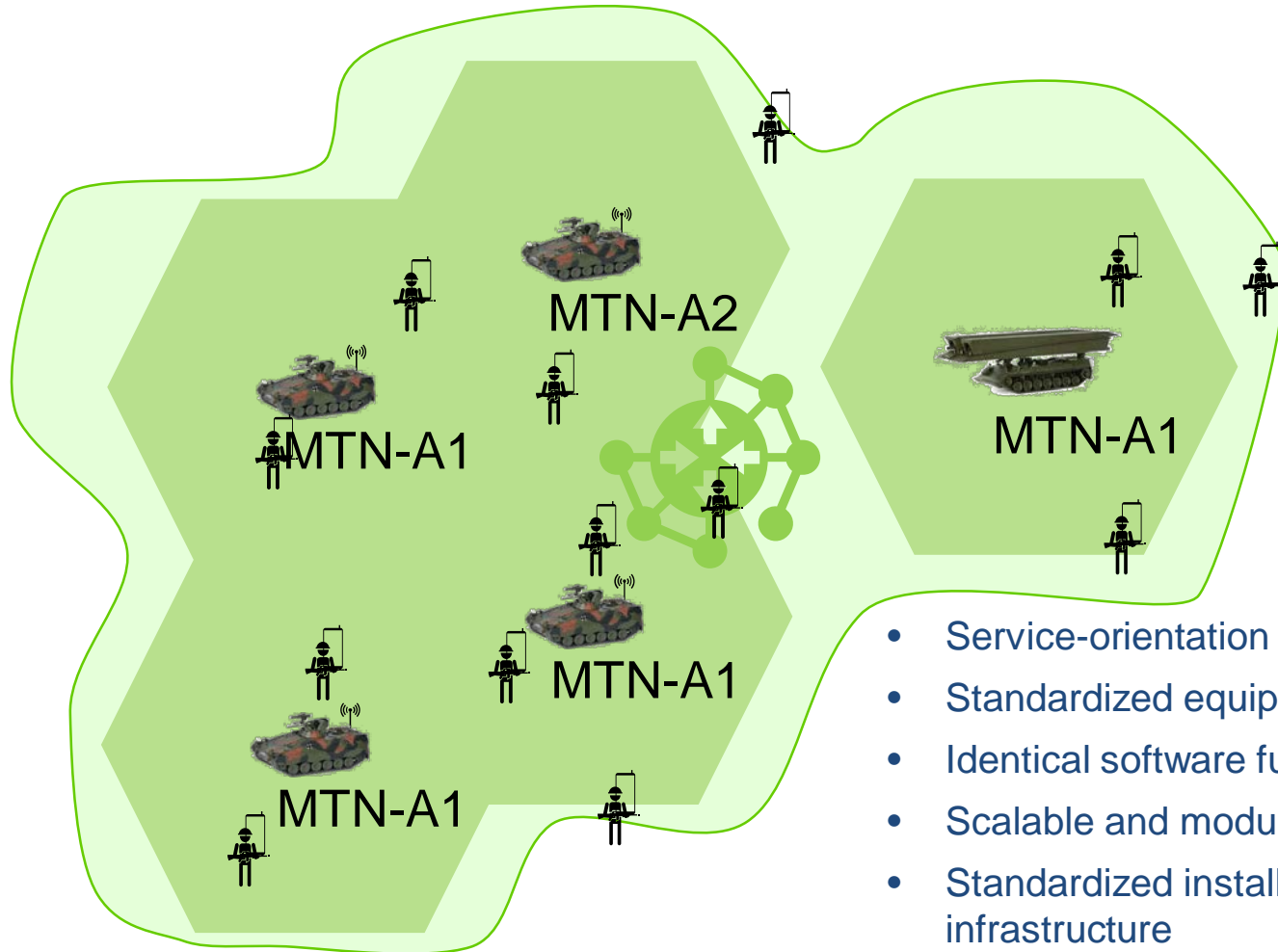
TF & Capability oriented deployment

		TF 1	TF 2	TF 3	TF 4	TF 5	TF 6	TF 7	TF 8
SECRET Communication	<p>50 C2 Vehicles (23 AIFV PUMA 27 MRAV BOXER)</p>	<p>Equipping of 325 C2 vehicles (Enok, Dingc, Fuchs, Fennek, Leopard, BV206, Wiesel)</p>							
VHF/UHF Tactical Radio	<p>AIFV PUMA MRAV BOXER</p>								
	<p>Future Soldier System</p>	<p>Equipping of further dismounted troops in a set of forces oriented approach</p>							
Cellular Networks (TETRA /LTE)	<p>TETRA</p>								
SOTM		<p>Equipping in a set of forces oriented approach</p>							
HF Radio									
Common Assets	<p>Common control and display</p> <p>IT-Services for mobile elements</p>	<p>Equipping in a set of forces oriented approach</p>							

D-LBO Development and Validation



D-LBO generic system requirements



- Service-orientation and centralization
- Standardized equipment sets & configurations
- Identical software functionalities
- Scalable and modular features
- Standardized installation, integration, and infrastructure
- Redundant, scalable, and robust networks



Questions?

