



# ARTILLERIESCHULE

ARTILLERY SCHOOL



# AMT FÜR HEERESENTWICKLUNG

ARMY CONCEPTS AND CAPABILITIES DEVELOPMENT CENTRE

## German Artillery Developments in Indirect Fire

COL Tuneke, DEU General of the Artillery

LTC (P) Windsch, DEU Chief of Artillery Branch, ACCDC



BUNDESWEHR

# GERMAN ARTILLERY DEVELOPMENTS IN INDIRECT FIRE



Current Political Environment



Main Requirements for Future Artillery



Multi-Domain Operations



Developments in DEU Army and Artillery



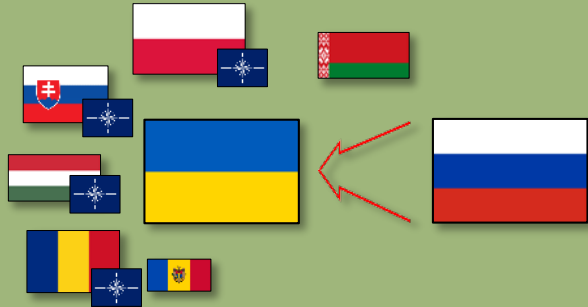
Artillery School



Observations and Lesson Identified from the UKR Conflict

# CURRENT POLITICAL ENVIRONMENT

24 February 2022  
Russian Invasion of Ukraine



German Chancellor **Olaf Scholz**

“We need to invest much more in the security of our country in order to protect our freedom and our democracy.”

“Special fund” of 100 billion euros

2% of GDP to be spent on defense

# CURRENT POLITICAL ENVIRONMENT



**Boris Pistorius**  
Federal Minister  
of Defense

Assumption of office on 19.01.2023

**Top Priority:  
acceleration of the procurement process**

**1. Deregulation**

**2. Off-the-Shelf Solutions**

**3. Strengthening of the Chiefs of Services**

# CURRENT POLITICAL ENVIRONMENT



**General Carsten Breuer**  
German Chief of Defense



Generalinspekteur der Bundeswehr

Berlin, 20. März 2023

Tagesbefehl  
des Generalinspektors der Bundeswehr

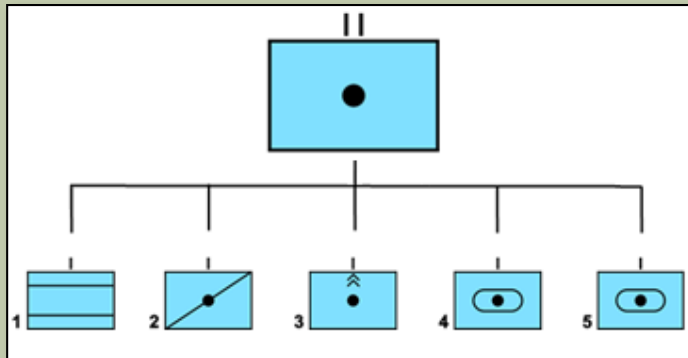
Order for the Assumption of Office

**Main Effort:**  
**Combat-Ready Bundeswehr**

**The direction is right**  
**The speed is not yet**

# ADVANCING THE ARTILLERY FORCE

## Current State



Optimized for  
International Crisis Management

## Future Artillery

Warfighting Capabilities

National and Collective  
Defence

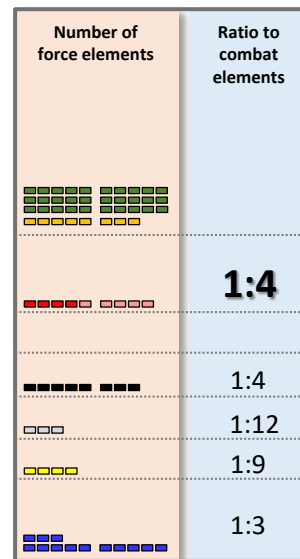
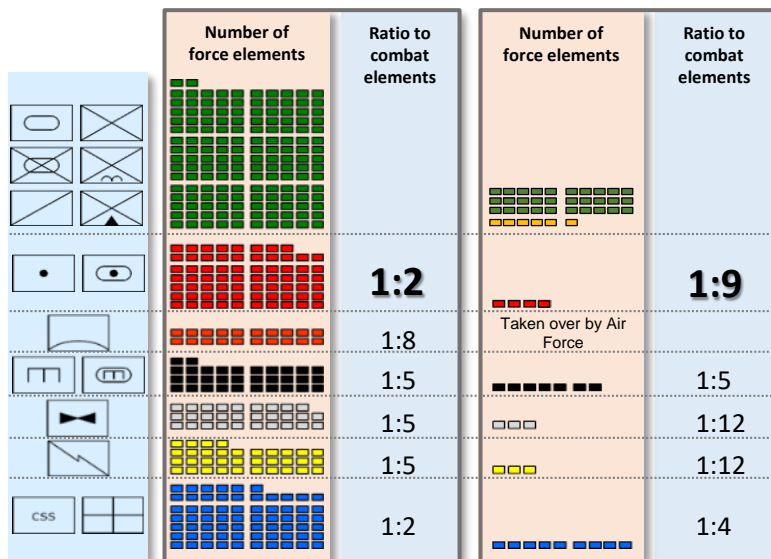


International Crisis Management  
remains one Option

# ADVANCING THE ARTILLERY FORCE

1990 to 2011

2032+



Reduction of Force Elements

Ratio of Manoeuvre Forces to Combat Support Forces

# MAIN REQUIREMENTS FOR FUTURE ARTILLERY



**Ratio of Manoeuvre Forces to Combat Support Forces**

**Quality of Support**

# GERMAN ARTILLERY DEVELOPMENTS IN INDIRECT FIRE



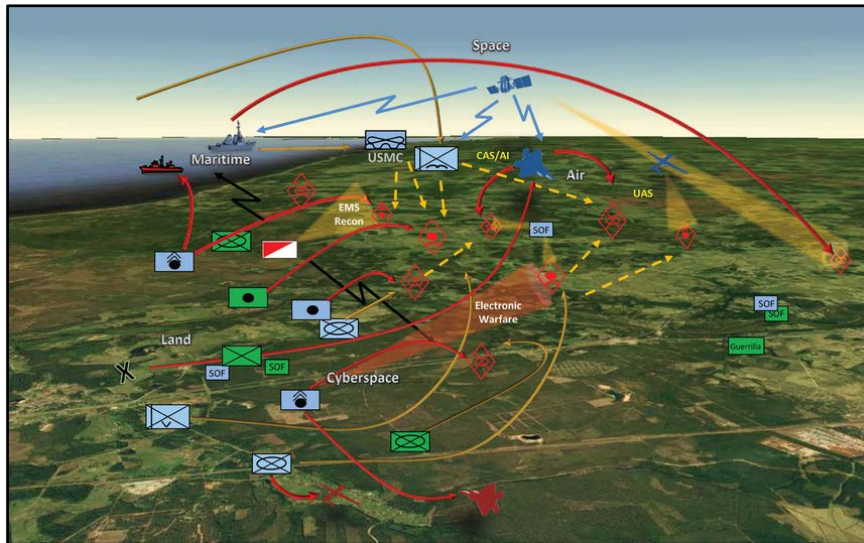
-  Current Political Environment ✓
-  Main Requirements for Future Artillery ✓
-  Multi-Domain Operations
-  Developments in DEU Army and Artillery
-  Artillery School
-  Observations and Lesson Identified from the UKR Conflict

# HOLISTIC APPROACH



**Warfighting capability in the multi-domain battlefield**

# MULTI-DOMAIN OPERATIONS



Air

Maritime

Land

Space

Cyberspace

Orchestration of **military activities**,  
**across all domains** and environments,  
synchronised with non-military activities,  
to enable the Alliance to  
**deliver converging effects**  
**at the speed of relevance**

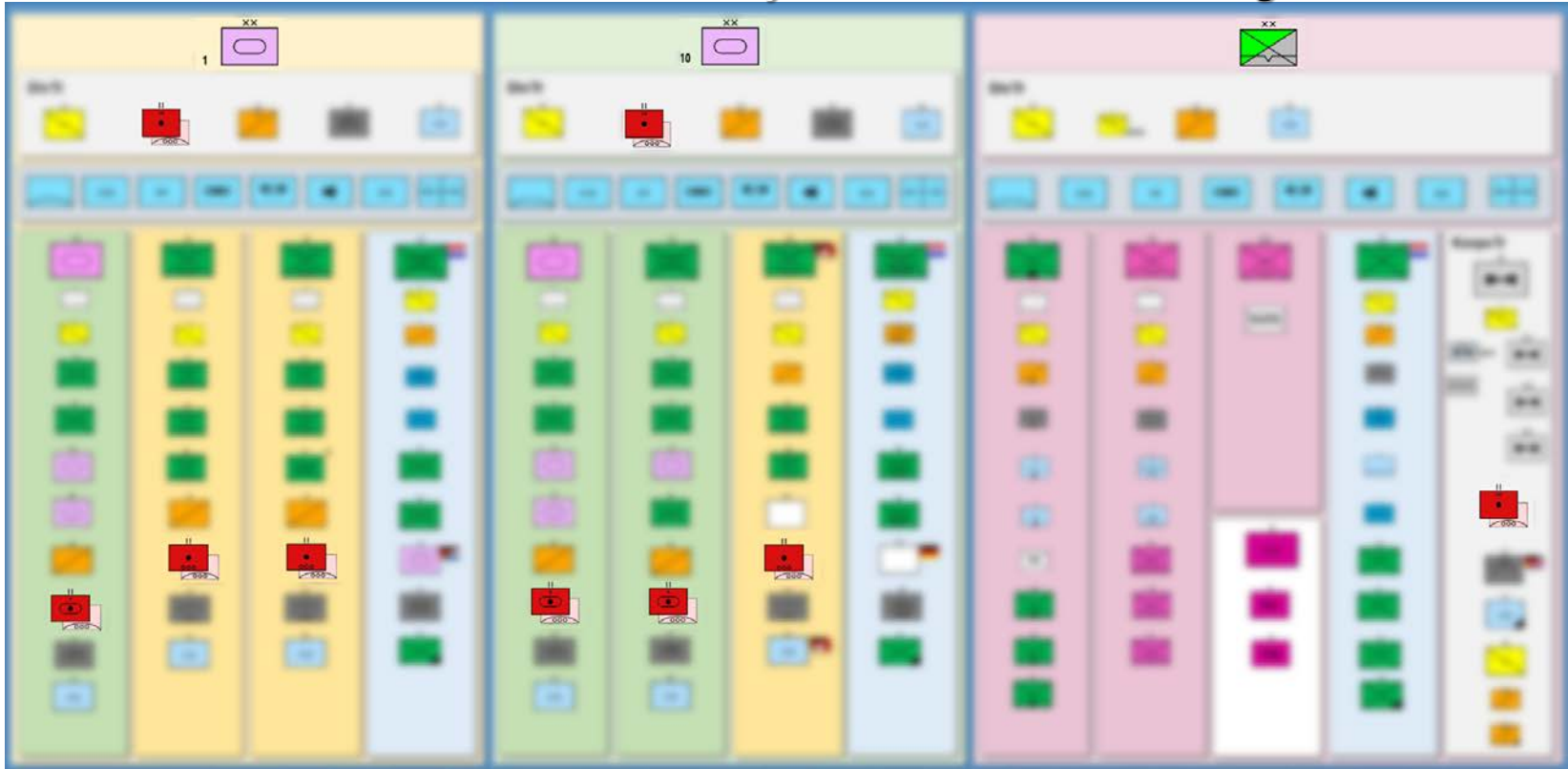
**Medium Forces as drivers of innovation**

# FUTURE ARMY STRUCTURE

*Medium*

*Heavy*

*Light*



# MEDIUM FORCES

## Core Requirement:

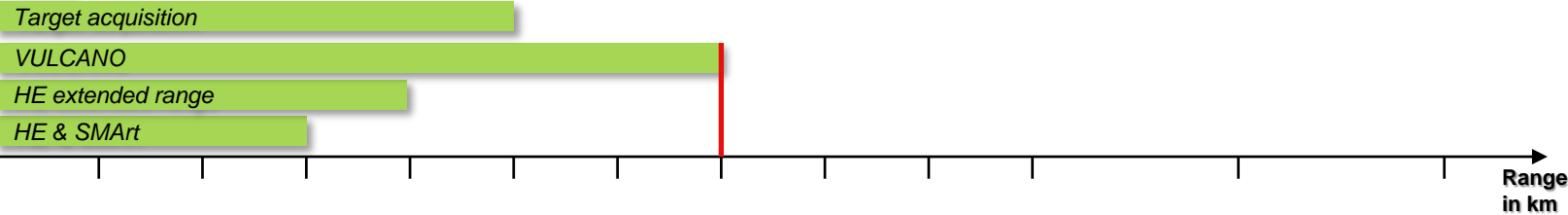
Ability to provide responsive strategic projection of a robust force

Closing the operational gap between light and heavy forces

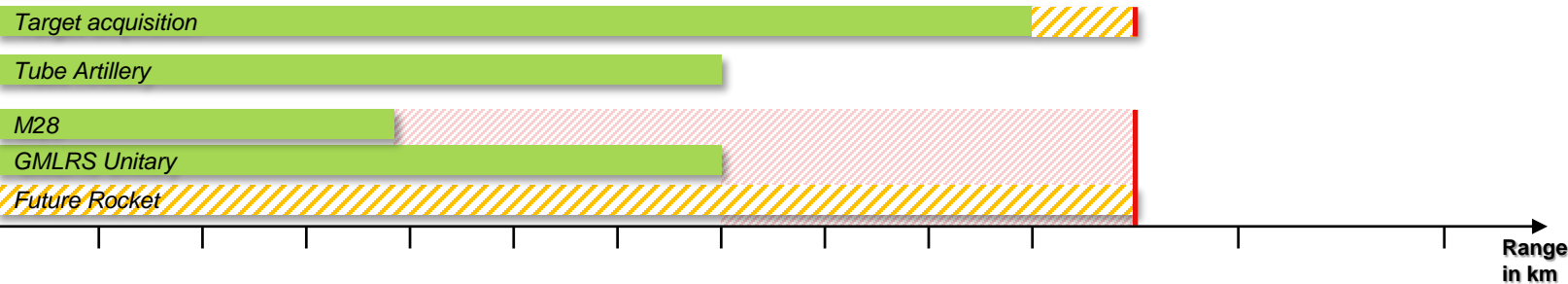
	<i>Light</i>	<i>Medium</i>	<i>Heavy</i>
Time to Effect	24 h Air Mobile	72 h Tactical Road March	> 7 days Rail/Seaway
Mobility	Air Transportable	wheeled	Tracked/wheeled
Area of Operation	ICM „Rear Area“	Advance Forces „Door Wedge“	High Intensity „Follow on“

# ARTILLERY REQUIREMENTS AND CAPABILITY DEVELOPMENT

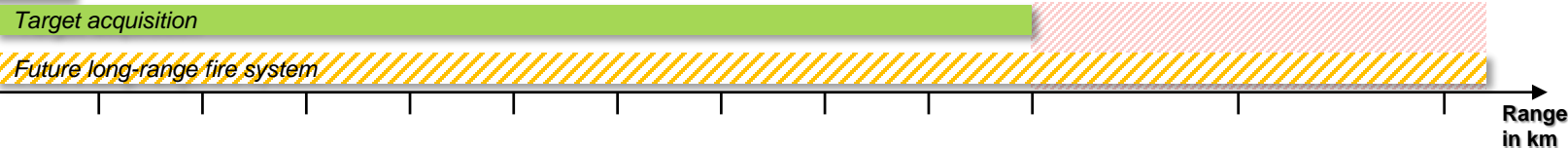
## Brigade Level



## Division Level



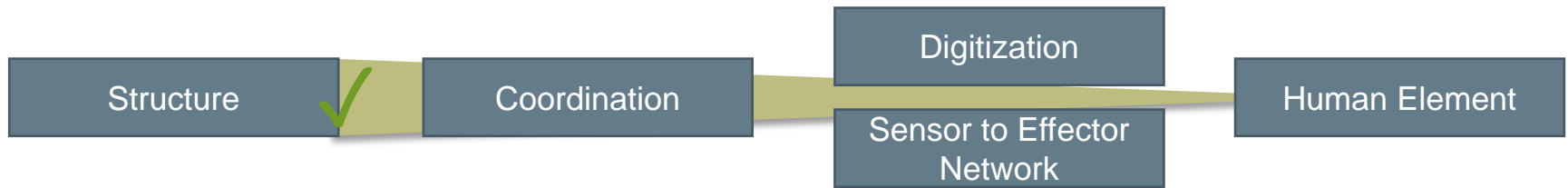
## Corps Level



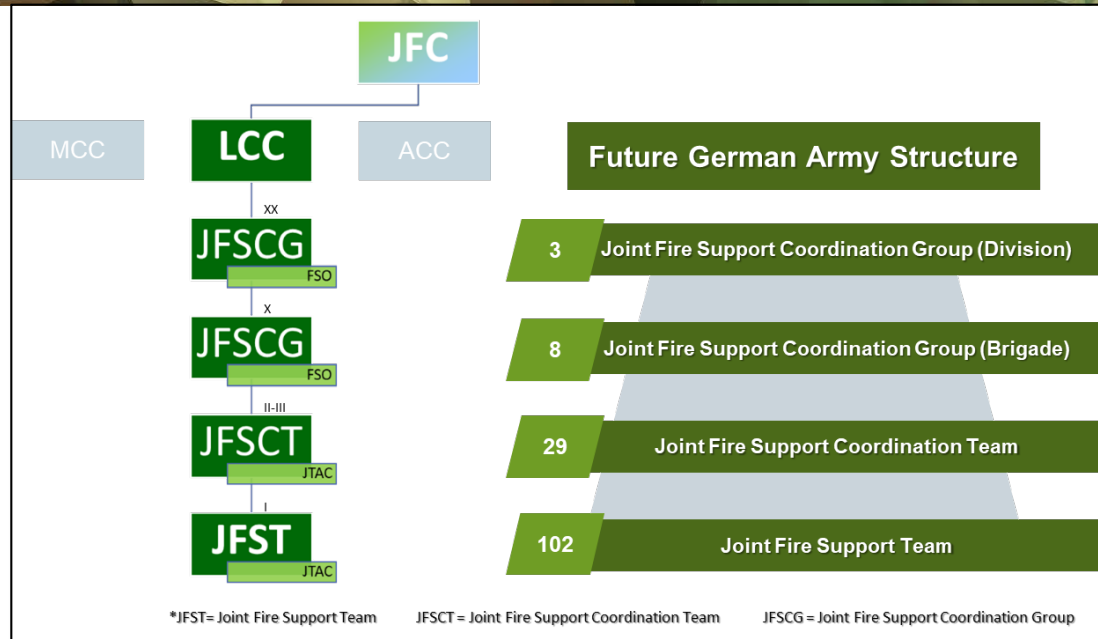
# MAIN REQUIREMENTS IN MULTI-DOMAIN OPERATIONS



- Cross-Domain Synergy
- Interoperability
- Information Superiority
- Rapid Decision Making
- Convergence

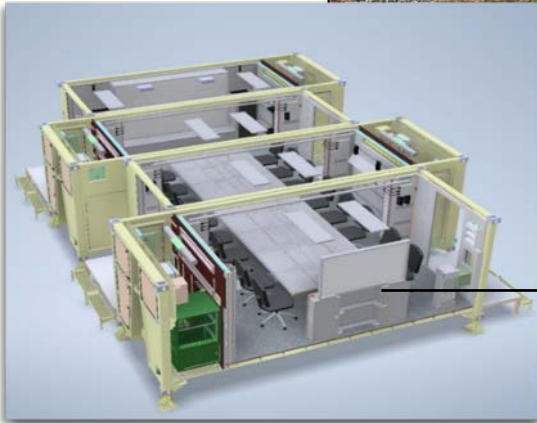


# COORDINATION OF MULTI DOMAIN FIRE SUPPORT



**The German Army will continue to rely on the use of coordination elements at all levels of command**

# JOINT FIRE SUPPORT COORDINATION GROUP (BDE/DIV)





## JFS Community of Interest Specific Service

JFS COISS app for *Mission Enabling Service Bundeswehr*

Support plans and current ops

Decision support regarding JFS

NATO air/land/sea fire support standard

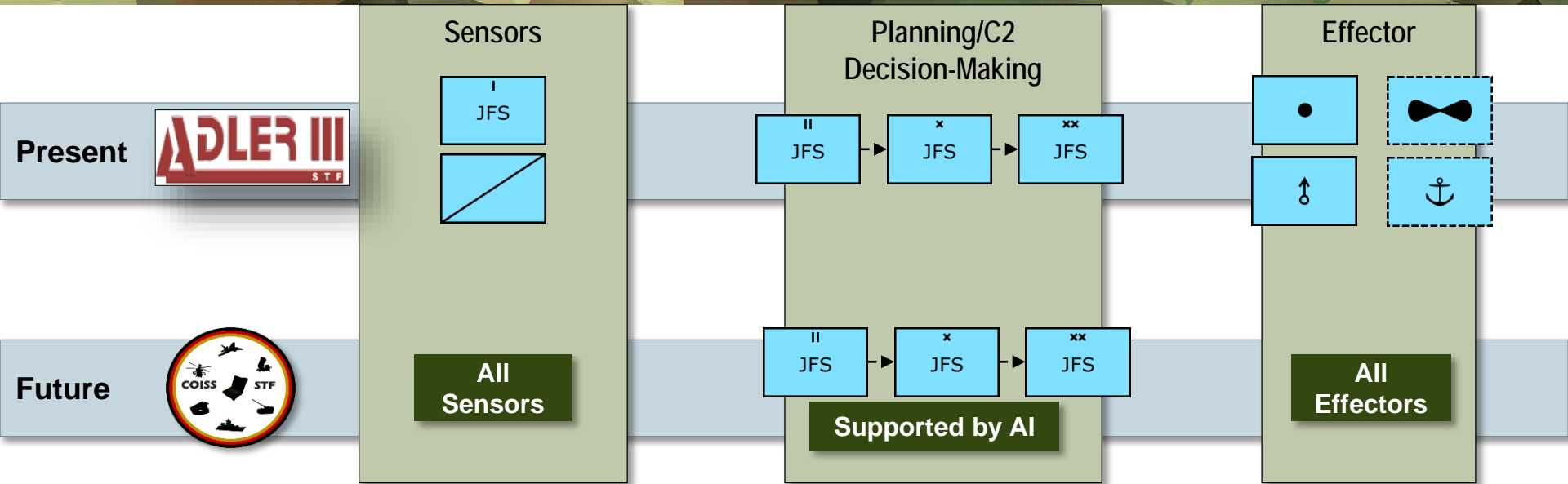
Collateral damage and threat analysis

Target evaluation and weaponeering assessment



“Multi-domain fire support capability”  
JFS COISS

# SENSOR TO EFFECTOR NETWORK



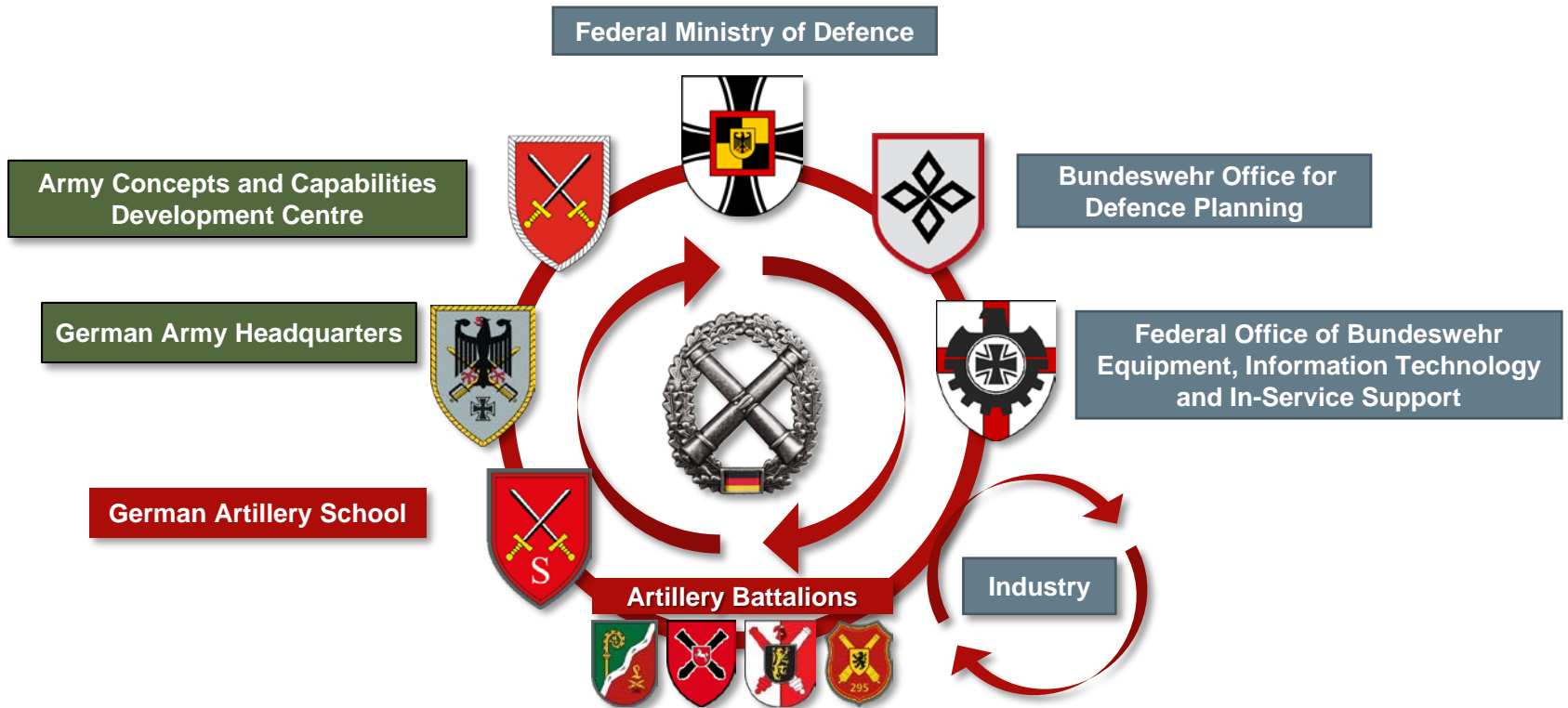
**All sensors should be able to be connected to all effectors.  
However, they must be controlled in the process.**

# HUMAN ELEMENT



**Humans remain at the center of all decisions**

# JOINT DEVELOPMENT



# DEU ARTILLERY SCHOOL



# OBSERVATIONS AND LESSONS IDENTIFIED FROM THE UKR CONFLICT

mobile conduct of battle

Command post concept

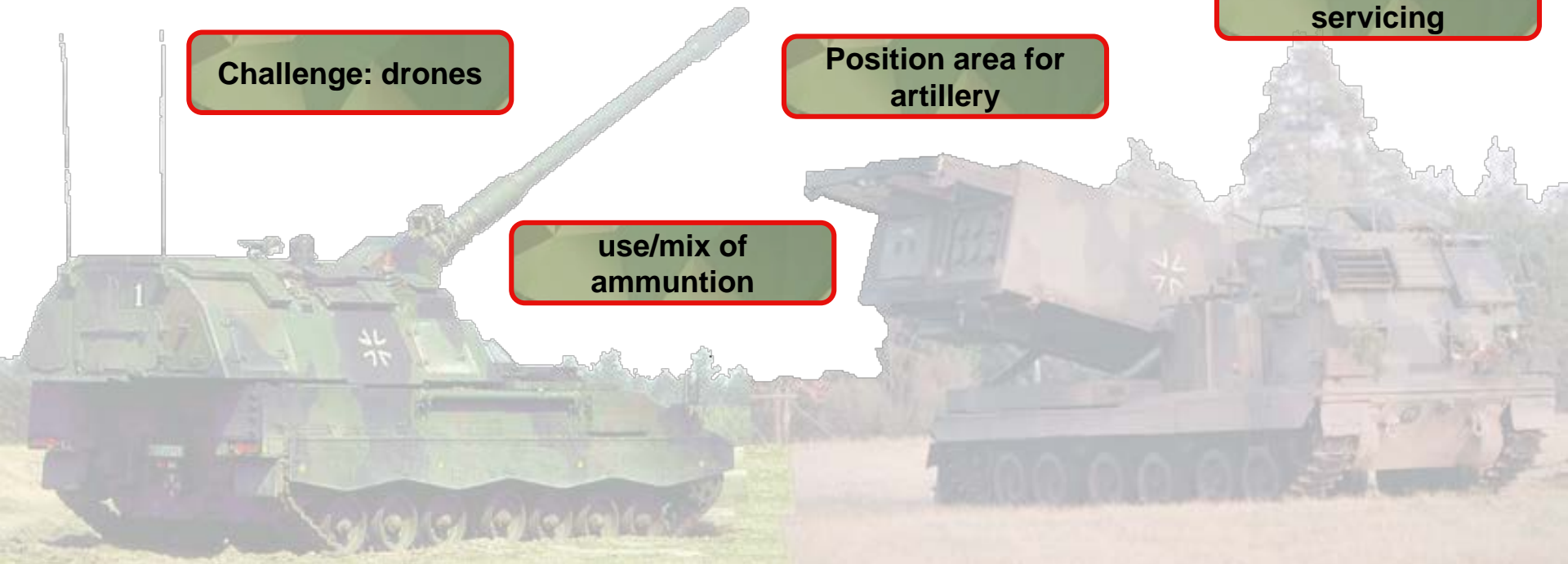
protective measures

Maintenance and servicing

Challenge: drones

Position area for artillery

use/mix of ammunition

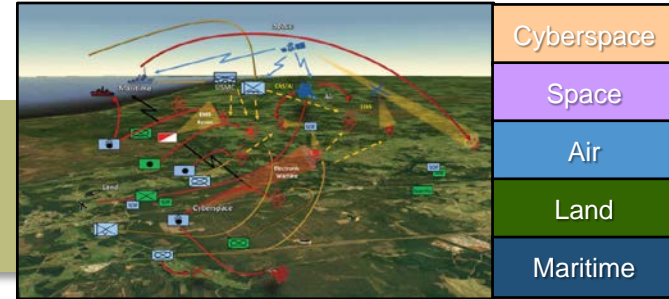


# SUMMARY



**Political will for fast Improvements**

**Development takes into account future and current influences**



**Weapon Systems**

**Coordination**

**Digitization**

**Training**

**Combat-Ready Artillery Forces**