



BGIS

The Bundeswehr Geoinformation Service



Dipl.-Met. Heinrich Liebing

Deputy Director,
Bundeswehr Geoinformation Office and
Bundeswehr Geoinformation Service



BGIS

Mission Statement

In accordance with the situation,

the Bundeswehr
Geoinformation Service

is to incorporate the impact of relevant
geospatial and environmental factors on
the planning and conduct of operations
into the decision-making process and to
guarantee the **supply of the German
Armed Forces with Geoinformation.**





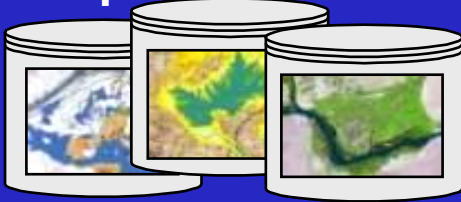
BGIS

Geoinformation Support

Indirect Geolnfo Support

**Geolnfo
bases/models**

**Geolnfo Database
setup/maintenance**



**Data/Map/Chart
Production**

**Reproduction of
Geolnfo Material**

Online supply

**ISAF Geospatial
Support Group
(Reachback)**



Geolnfo Advise

**METOC Data
Collection / Advise**



Surveying

Geospatial Recce



**Map/Data
Supply**

Direct Geolnfo Support

UNCLASSIFIED



BGIS

Interdisciplinary Approach

GEOINFORMATION FROM ONE HAND

Meteorology
Ethnology
Ecology
Geodesy
Remote Sensing
Geophysics
Cartography
Geopolitics
Hydrography
Hydrology
Climatology
Cartography
Photogrammetry
Oceanography
Biology
Geology
Atmospheric Sounding
Geoinformatics



BGIS

Interdisciplinary Approach

HEARTS

(Hazard Estimation for Accidental Release of Toxic Substances)

Atmospheric Sound.

Biology

Cartography

Climatology

Ecology

Ethnology

Geodesy

Geography

Geology

Geophysics

Geopolitics

Hydrography

Hydrology

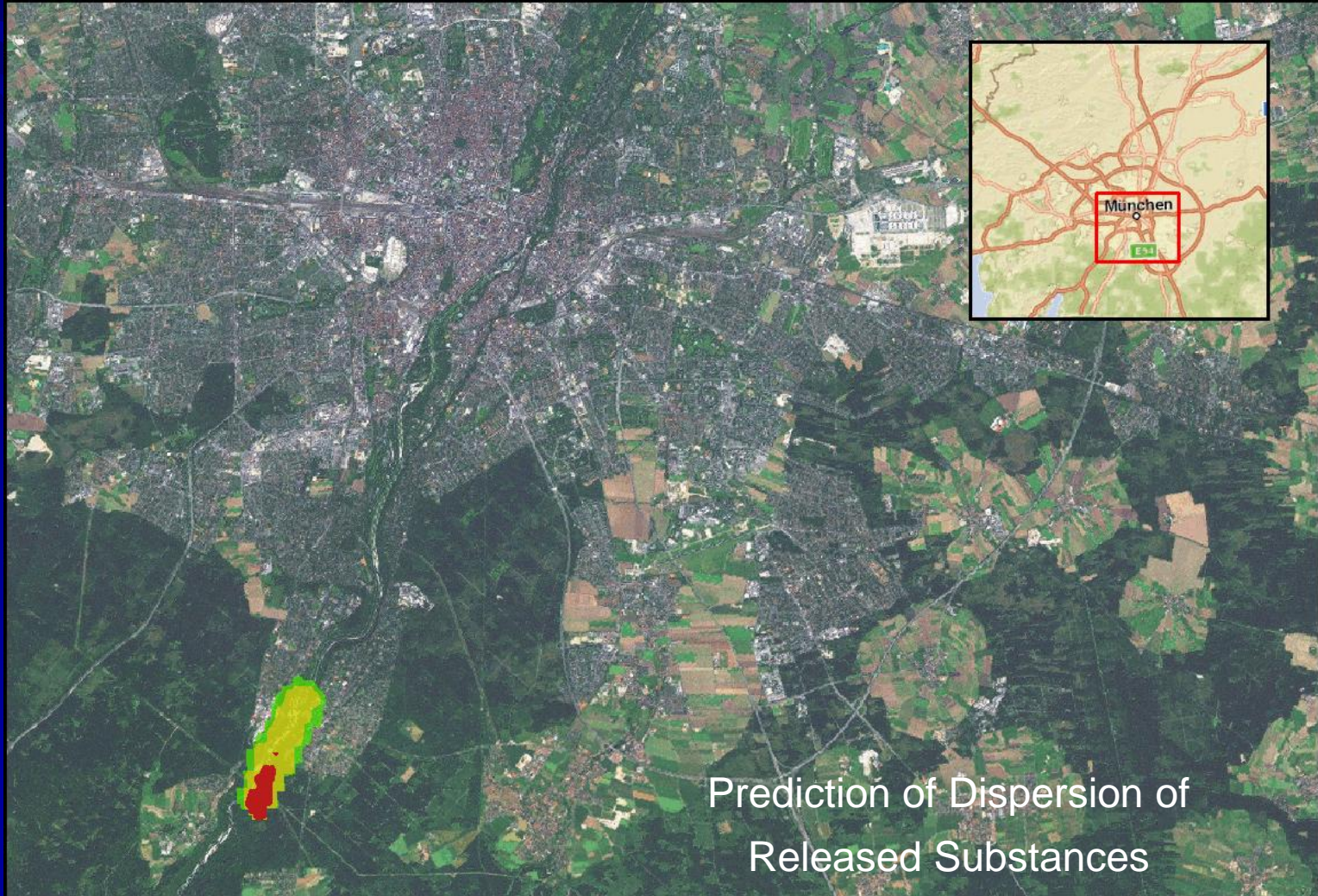
Meteorology

Geoinformatics

Oceanography

Photogrammetry

Remote Sensing



Prediction of Dispersion of
Released Substances

UNCLASSIFIED



BGIS

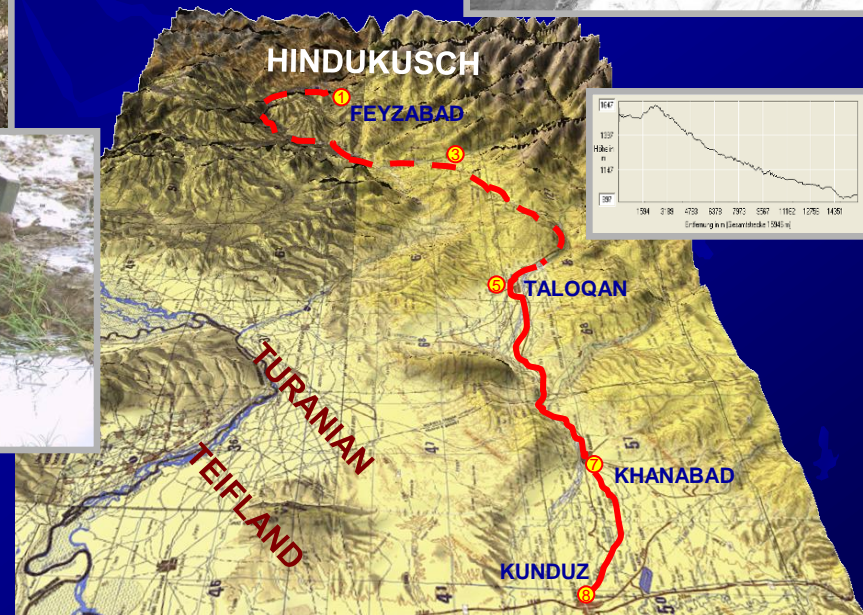
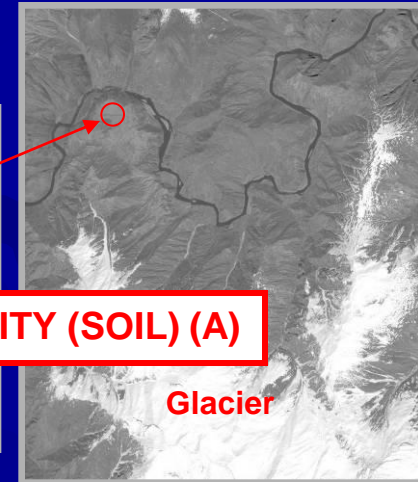
Interdisciplinary Approach

Cross-Country Movement Analysis

WEATHER (SOIL WATER CONTENT) (Y)



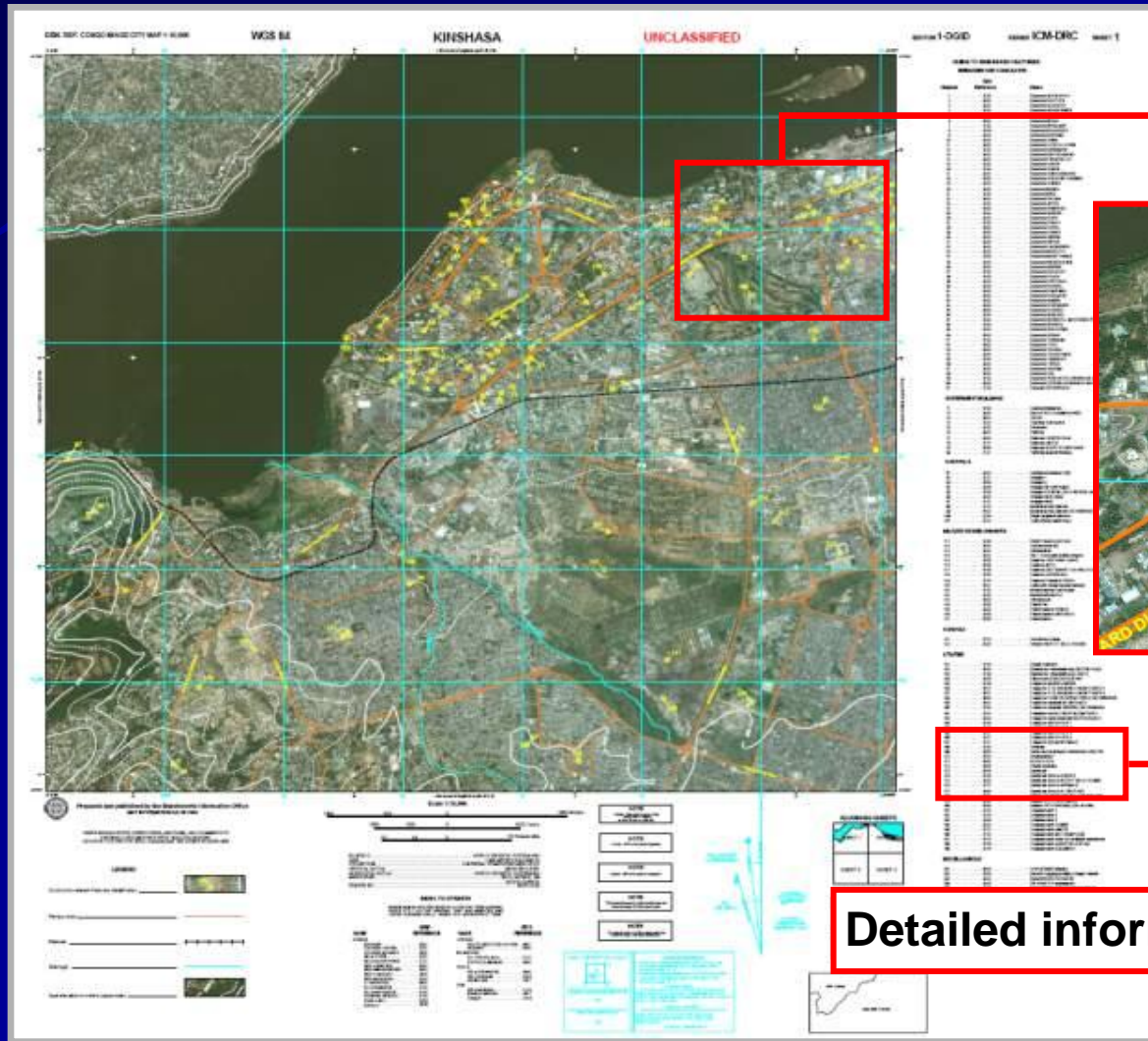
BEARING CAPACITY (SOIL) (A)



$$GO = A + X + Y$$

GEOLOGICAL STRUCTURE (X)

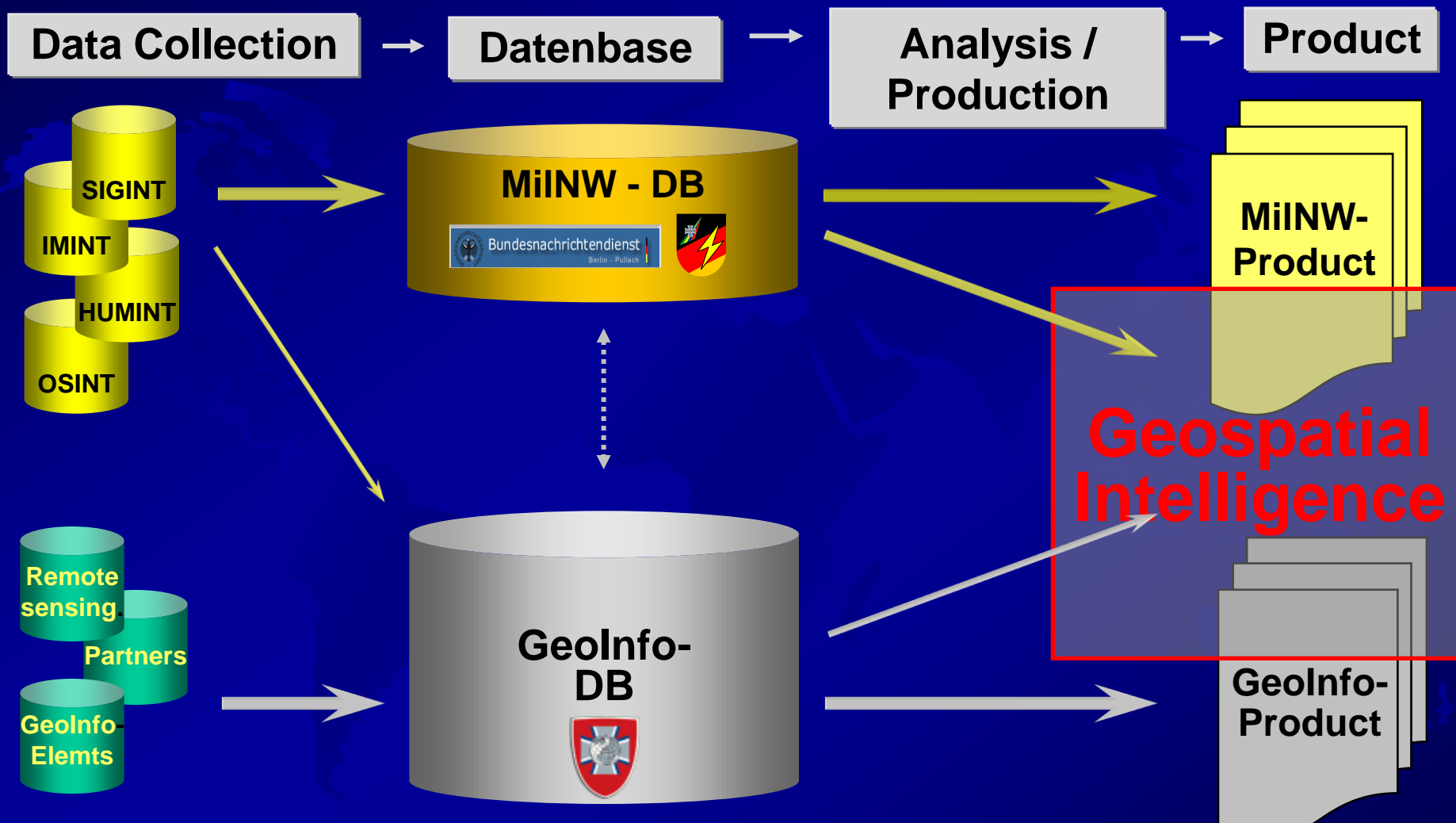
Interdisciplinary Approach





BGIS

Interdisciplinary Approach



GEOINT in DEU = Mission Specific Product-Approach

UNCLASSIFIED



BGIS

Image Acquisition and Distribution



UNCLASSIFIED



International Cooperation

General

- Multinational Co-Production
- Standardization of data capture, production ...
- Exchange of lessons learned
- ...and much more

Specific Projects

- ISAF Geospatial Support Group
- Integrated METOC (IMETOC) Support Concept

International Contributions



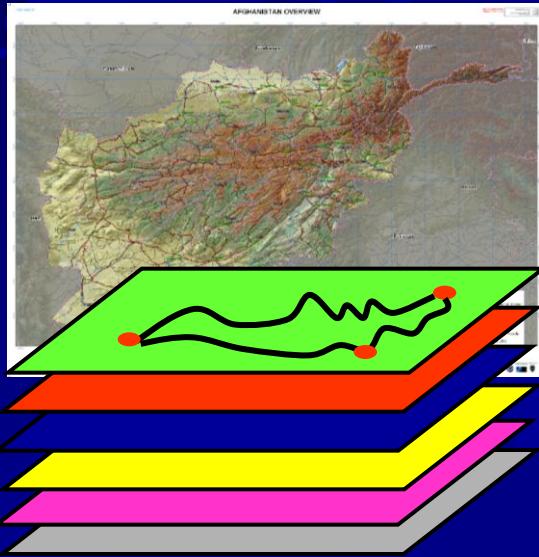
„fighting off the same map“

Required Capabilities of the GSG

- Set up and Maintain Catalogue of Geoinformation to be used in ISAF,
- Set up and Maintain the Database that is to be used in ISAF,
- Support Allied JFC Brunssum in choosing best Geoinformation to be used in ISAF,
- Produce new data as requested from theatre,
- Conduct surveying task to establish theatre geospatial control,
- Organize map distribution for ISAF.

ISAF Geospatial Support Group (GSG)

Terrain Analysis/ Data Management



Surveying



GeoInfo- Production



Establishing of the Theatre
Geospatial Database, Terrain
Analysis,
Production of GeoInfo-
Products

Surveying of airfields,
buildings,
Ground Control Information

Mass production
of products for the
theatre (reach back)



Integrated METOC (IMETOC) Support Concept

BGIS

Ref.: MC 0594 - Military Committee Policy on Meteorological and Oceanographic (METOC) Support to NATO Forces

- IMETOC Concept was implemented in 2005, MC 0594 in 2011
- MC 0594 promulgates the guidance and the responsibilities of METOC support to the full range of NATO operations, missions and all other NATO activities
- IMETOC is to ensure provision of METOC support to fulfill joint and combined users' requirements
- Most NATO Nations have dedicated Civil and/or military METOC organizations, but the IMETOC Concept brings them together to ensure:

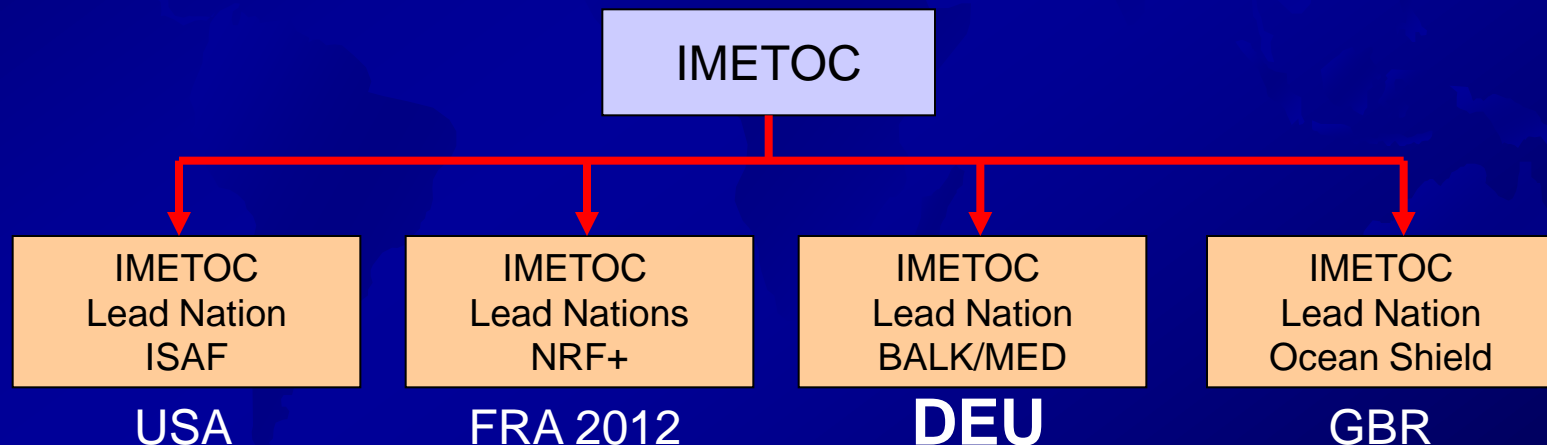
„ONE THEATRE, ONE FORECAST“



Integrated METOC (IMETOC) Support Concept

BGIS

- Predefined responsibilities
- Limited national capacities to support all NATO operations, missions or other activities → **Lead Nation Concept**
- IMETOC Lead Nation (LN) is coordinator and provider of IMETOC information
- Qualifying requirements of a prospective IMETOC LN sent out in IMETOC Implementation Plan
- Assisting Nations (AN) assist the IMETOC LN with contributions



e.g. by NATO OUP LYBIA DEU was according to the IMETOC Concept the LN.



BGIS

21st Century Requirements

2000+

2010++

20th Century

UNCLASSIFIED

[illegible]

Level of Detail



Key Take Aways

Interdisciplinary Approach “a story of success”

Support to all Communities is key

Principle of Multinational Coordination

Future Challenges

The Bundeswehr Geoinformation Service



Questions?