driver+
Driving Innovation in Crisis Management for European Resilience

ZKI

HANDS-ON TRAINING

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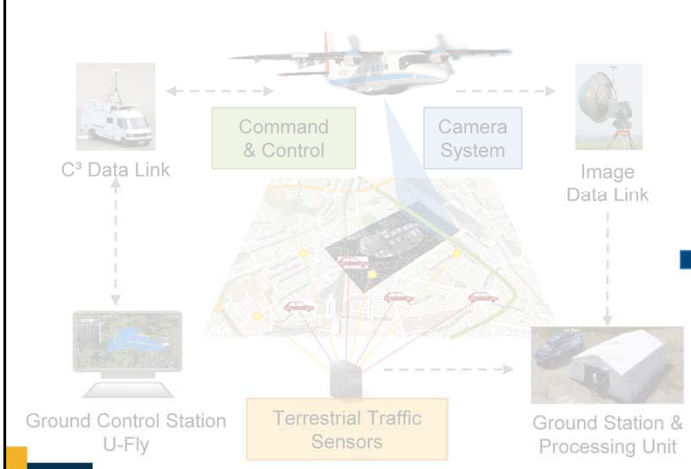
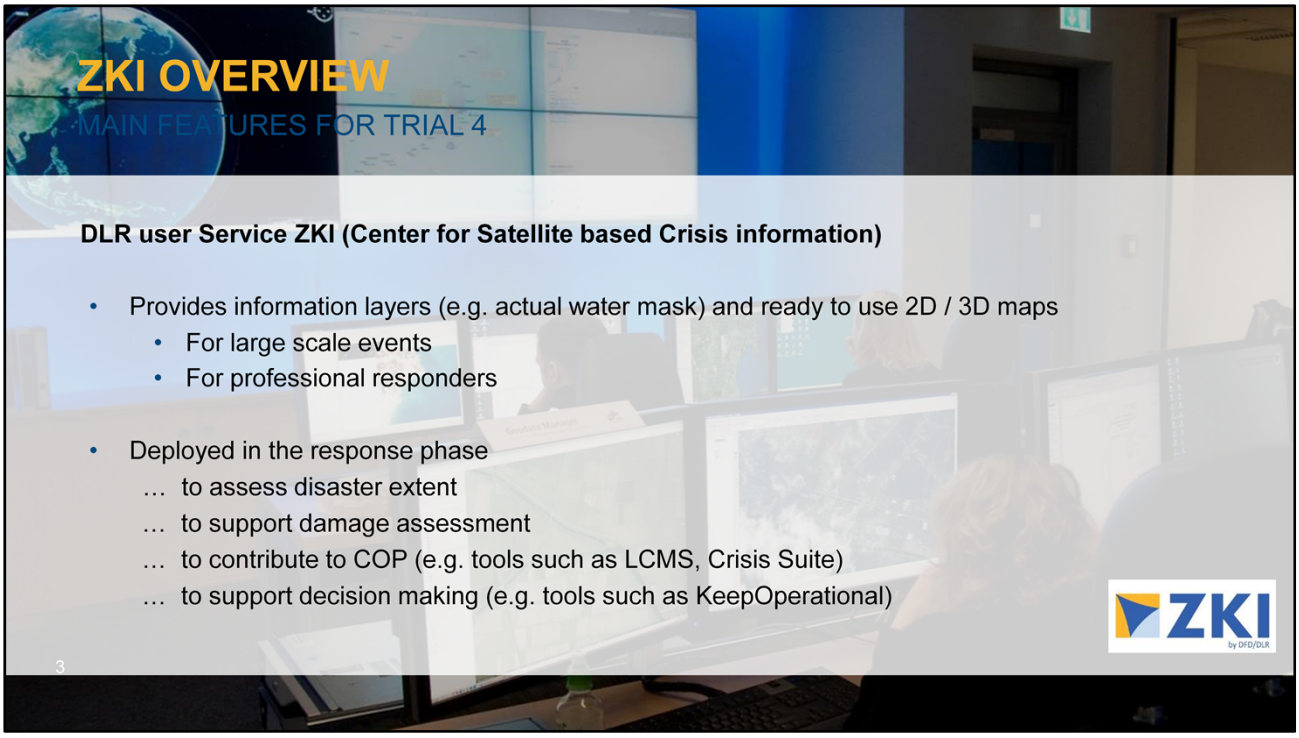
10.04.2019 – The Hague

AIRBORNE AND TERRESTRIAL SITUATIONAL AWARENESS

BACKGROUND DLR SOLUTION



Module: ZKI



ZKI OVERVIEW

MAIN FEATURES FOR TRIAL 4

DLR user Service ZKI (Center for Satellite based Crisis information)

- Provides information layers (e.g. actual water mask) and ready to use 2D / 3D maps
  - For large scale events
  - For professional responders

- Deployed in the response phase
  - … to assess disaster extent
  - … to support damage assessment
  - … to contribute to COP (e.g. tools such as LCMS, Crisis Suite)
  - … to support decision making (e.g. tools such as KeepOperational)

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ZKI OVERVIEW

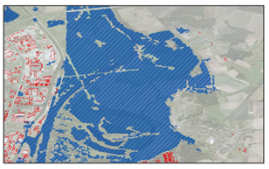
SERVICES & PRODUCTS FOR TRAIL 4

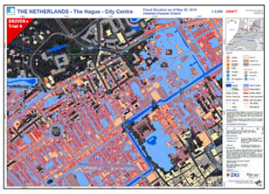
- Preparation of crisis related information
  - **water mask** derived from remote sensing data

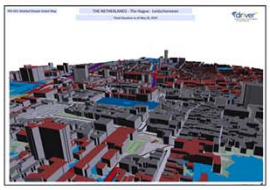
    In this Trial: *simulated water mask, as if derived from aerial imagery and processed based on DLR user service ZKI processing facilities*

- Web based Product Dissemination
  - OGC WMS / WFS **web services** for water mask
  - Download service for ready to use map products

- Generation of ready to use **maps**
  - 2D GeoPDF
  - 3D PDF







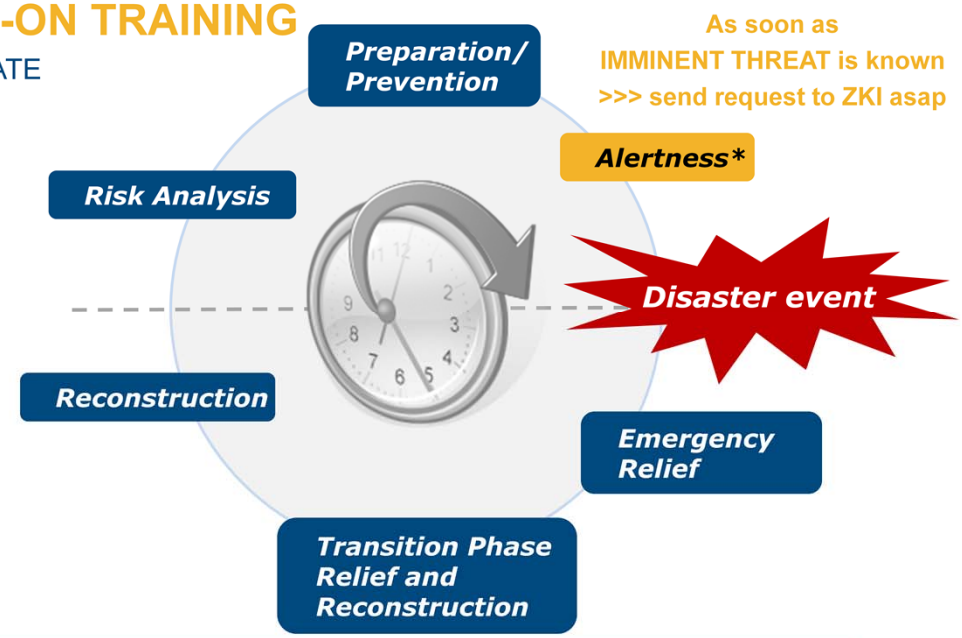
ZKI HANDS-ON TRAINING

CONTENT

- When and how to **activate ZKI** and receive mapping products
- Accessing **web services** for actual water masks
- Accessing and working with ZKI **2D GeoPDF map** documents
- Accessing and working with ZKI **3D PDF map** documents

ZKI HANDS-ON TRAINING

WHEN TO ACTIVATE



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HOW TO ACTIVATE

REQUEST EMAIL @

- **Who** activates (inquiring authority and contact person)
- Type of **event** (natural disaster / police investigation / …)
- Product **type** (satellite imagery or aerial imagery / disaster extent analysis / …)
- Product **format** (WMS / WFS layer for COP tools / map product)
- **Delivery** date (fast mode - as soon as possible - / date: …)
- Area of interest (name of location)
- Additional comments/requests

PLEASE SEND THE REQUEST EMAIL TO **TRIAL EMAIL ACCOUNT „ZKI“**. IF YOU HAVE ANY QUESTIONS IN ADVANCE OR NEED CONSULTATION ON YOUR INQUIRY PLEASE CALL **+49 8153 28 44 33 88**

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ACCESSING **WEB SERVICES** FOR ACTUAL WATER MASKS

OGC Web Map Service (WMS): Viewing service
https://www.opengeospatial.org/standards/wms

- Used for visual overlay other layers in map applications (e.g. LCMS, Crisis Suite)
- Provides rendered and geo-registered images of geodata
- Supports different projections and file formats
- Request-Parameters: Layer, area of interest, size, image format, spatial reference

OGC Web Feature Service (WFS): Data service for vector data
https://www.opengeospatial.org/standards/wfs

- Accessed for further geoprocessing (e.g. KeepOperational, GIS applications)
- Supports different projections and file formats
- Request-Parameters: Layer, area of interest, file format, spatial reference

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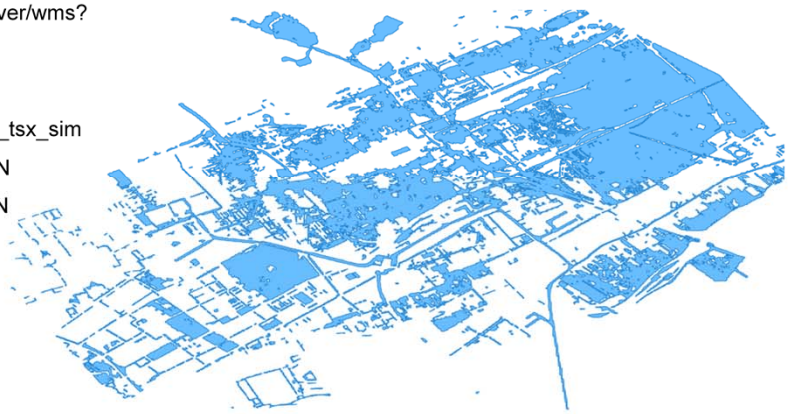
ACCESSING **WEB SERVICES** FOR ACTUAL WATER MASKS

https://geoservice.dlr.de/eoc/zki/service/driver/wms?

Service	WMS
Request	GetMap
Layers	driver:dryrun1_watermask_tsx_sim
AOI LL	4.2318027°E 51.962462°N
AOI UR	4.395028°E 52.113057°N
Image Width	951
Image Height	878
Spatial Reference	4326 Geogr./ WGS84
Format	PNG



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PLEASE OPEN SHORTLINK: HTTP://S.DLR.DE/250H

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ACCESSING **WEB SERVICES** FOR ACTUAL WATER MASKS

https://geoservice.dlr.de/eoc/zki/service/driver/wms?

Service	WMS
Request	GetMap
Layers	driver:dryrun1_watermask_tsx_sim
AOI LL	75572 442084
AOI UR	87017 458670
Frame Width	1024
Frame Height	768
Spatial Reference	28892 (Amersfoort / RD New)
Format	application/openlayers

10 **PLEASE OPEN SHORTLINK:** HTTP://S.DLR.DE/MH8C

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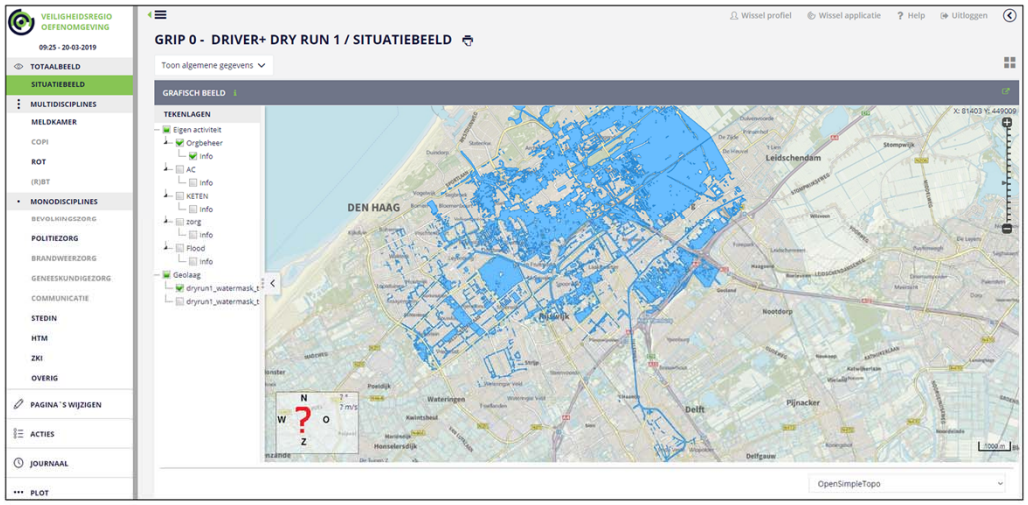
ACCESSING **WEB SERVICES** FOR ACTUAL WATER MASKS



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Demo watermask service layer displayed in LCMS

(image provided by TNO)

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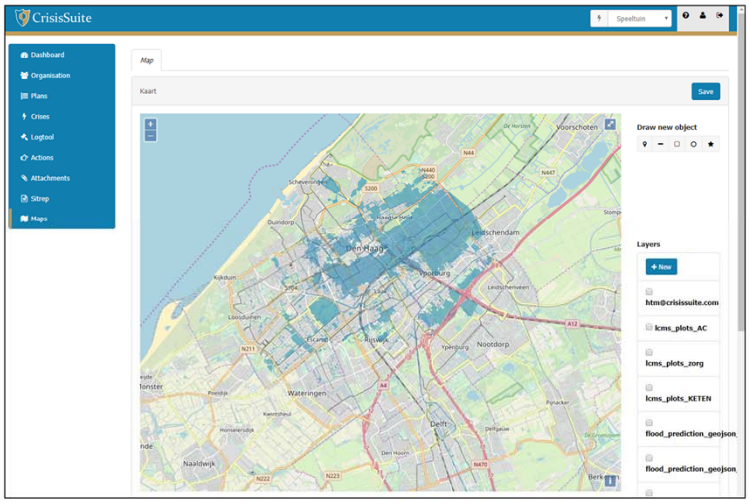
ACCESSING **WEB SERVICES** FOR ACTUAL WATER MASKS



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Demo watermask service layer displayed in CrisisSuite (image provided by MERLIN)

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ACCESSING AND WORKING WITH ZKI **2D GEOPDF MAP** DOCUMENTS

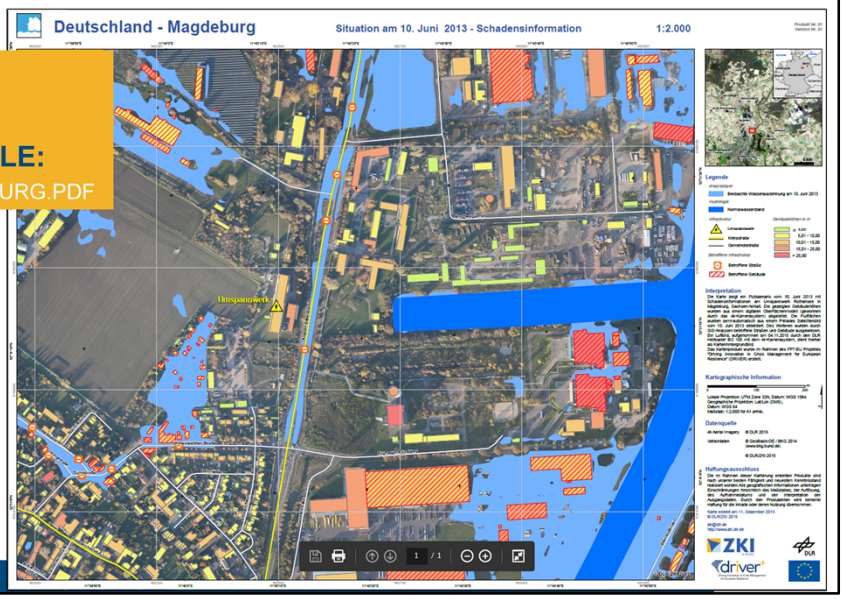
PLEASE USE SHORTLINK

HTTP://S.DLR.DE/2968

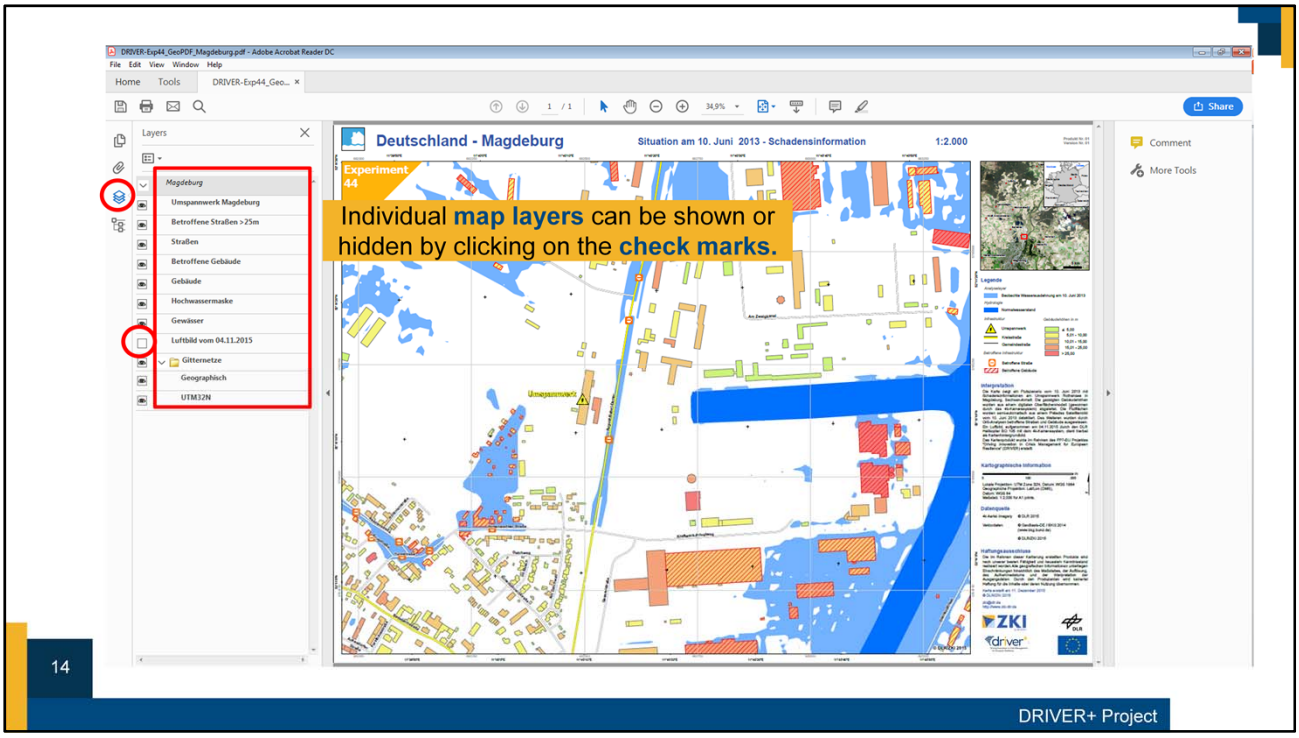
DOWNLOAD AND OPEN FILE:

DRIVER-EXP44_GEOPDF_MAGDEBURG.PDF

- Toggle map layers for custom map view
- Make messurements
- Make comments
- Access attribute information



13


Deutschland - Magdeburg
Situation am 10. Juni 2013 - Schadensinformation
1:2.000
Experiment 44
Individual map layers can be shown or hidden by clicking on the check marks.
Layers
Magdeburg
Umspannwerk Magdeburg
Betroffene Straßen >25m
Straßen
Betroffene Gebäude
Gebäude
Hochwassermaske
Gewässer
Luftbild vom 04.11.2015
Gitternetze
Geographisch
UTM32N
Share
Comment
More Tools
ZKI
driver
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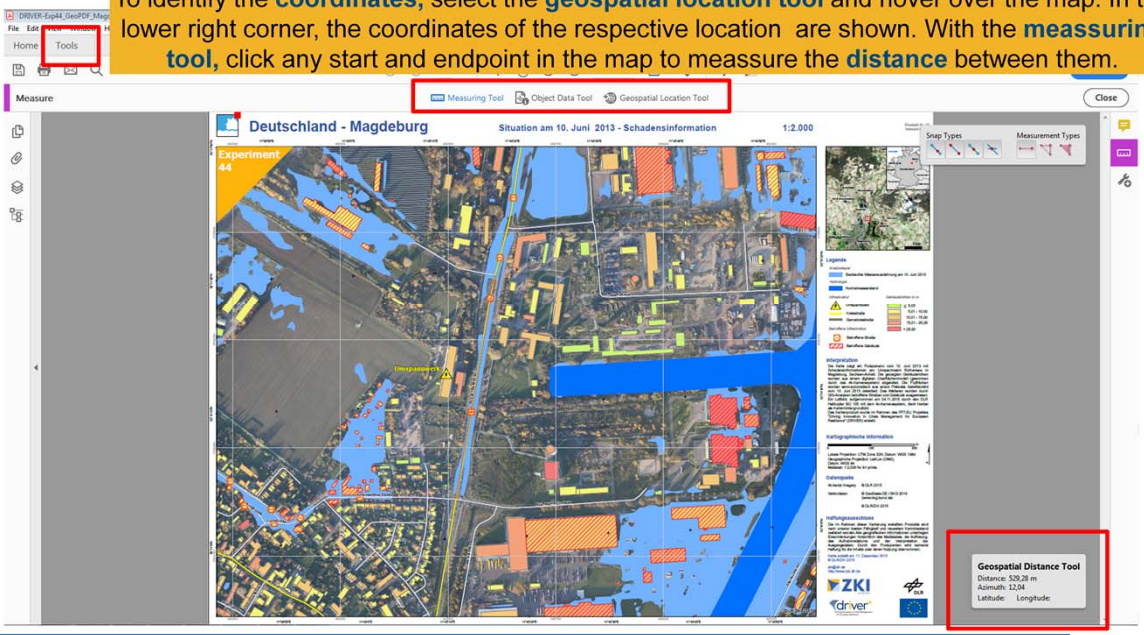
For measuring, go to the **tools** tab → select **measure** → new **toolbar** opens.
To identify the **coordinates,** select the **geospatial location tool** and hover over the map. In the lower right corner, the coordinates of the respective location are shown. With the **meassuring tool,** click any start and endpoint in the map to meassure the **distance** between them.



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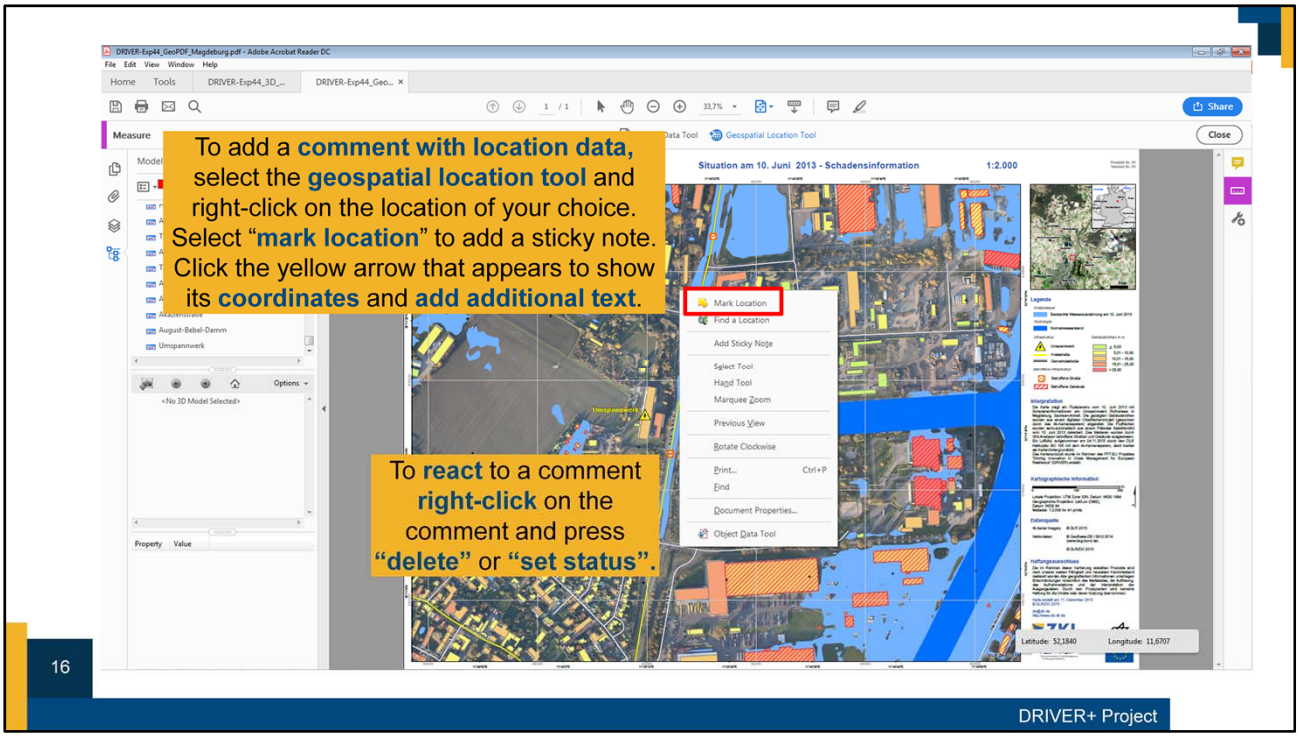

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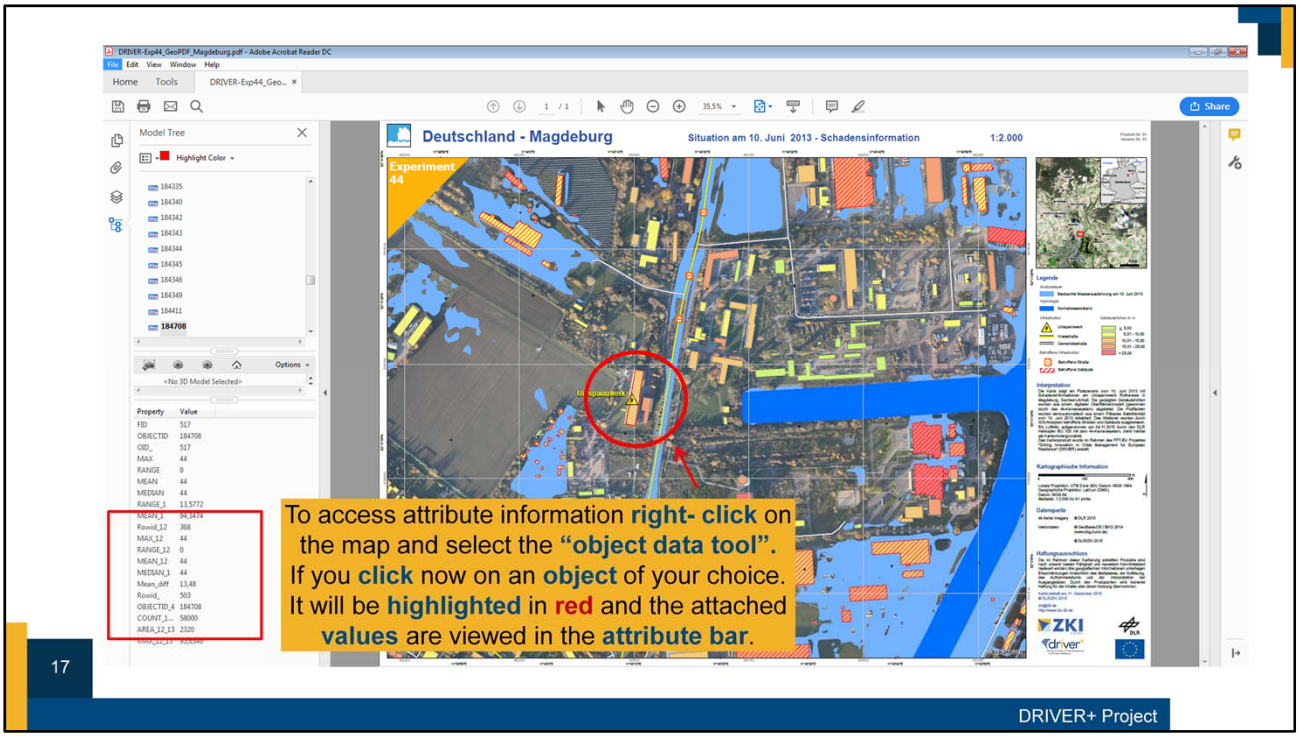
Deutschland - Magdeburg
Situation am 10. Juni 2013 - Schadensinformation
1:2.000
Experiment 44
To access attribute information right- click on the map and select the "object data tool".
If you click now on an object of your choice.
It will be highlighted in red and the attached values are viewed in the attribute bar.
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ACCESSING AND WORKING WITH ZKI **3D PDF MAP** DOCUMENTS

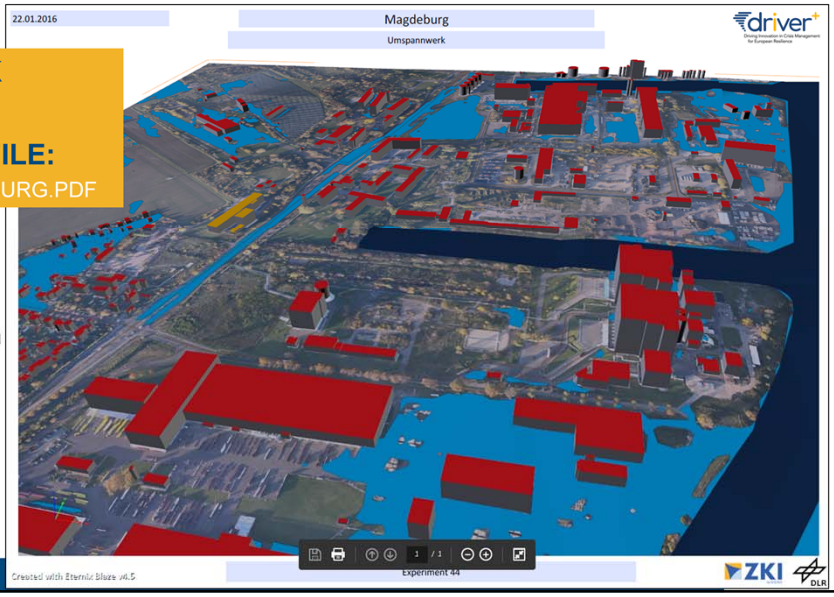
PLEASE USE SHORTLINK

HTTP://S.DLR.DE/M878

DOWNLOAD AND OPEN FILE:

DRIVER-EXP44_3D_PDF_MAGDEBURG.PDF

- Open 3D PDF
- Navigate through 3D environment
- Toggle map layers for custom map view
- Make messurements
- Make comments
- Access attribute information



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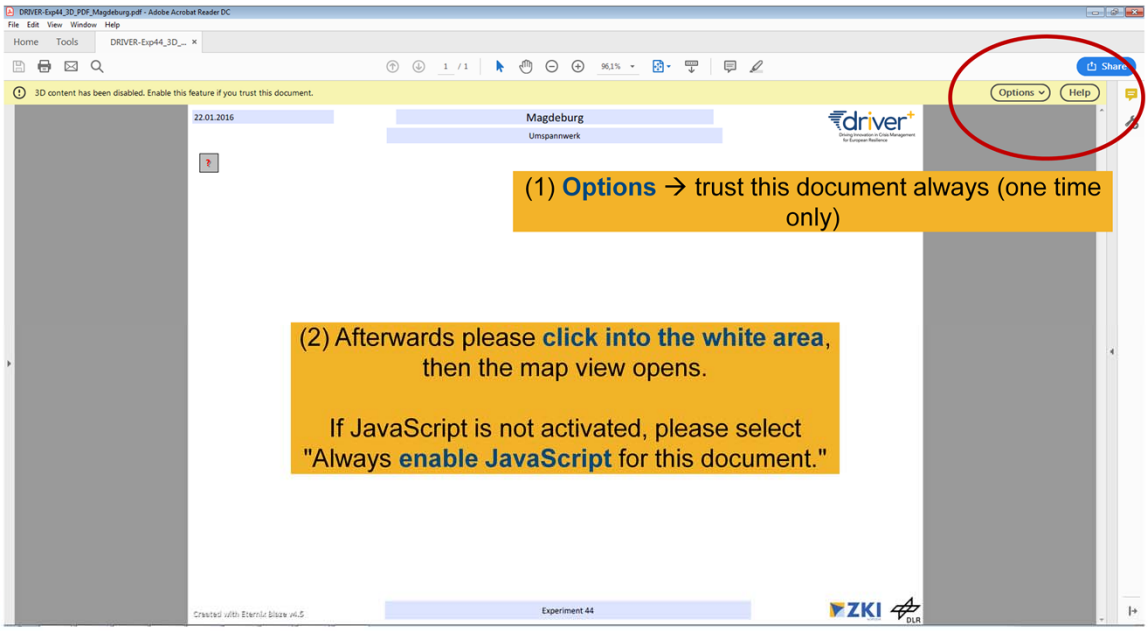


(1) **Options** → trust this document always (one time only)

(2) Afterwards please **click into the white area**, then the map view opens.

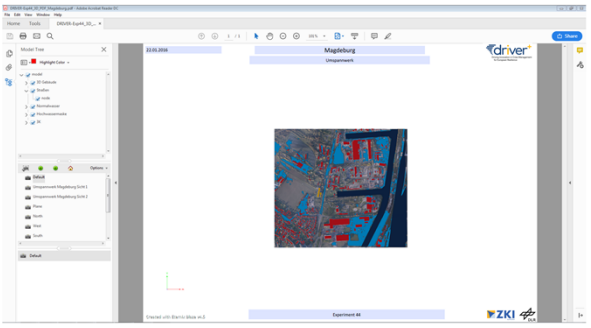
If JavaScript is not activated, please select "Always **enable JavaScript** for this document."

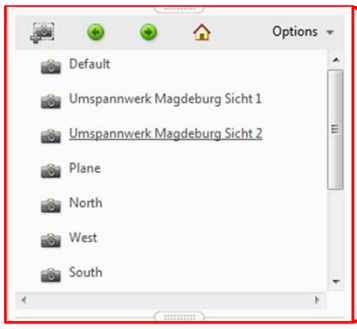
ZOOM: Shift + Mousemovement *or* Mousewheel

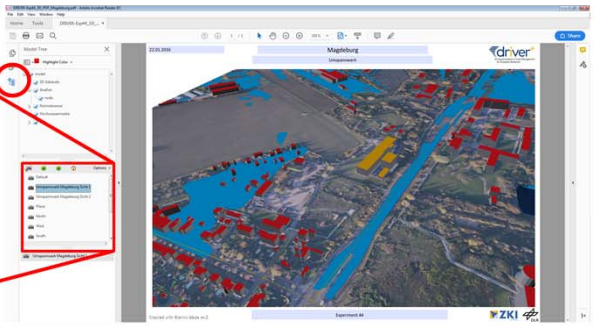
PAN: STRG + Mousemovement

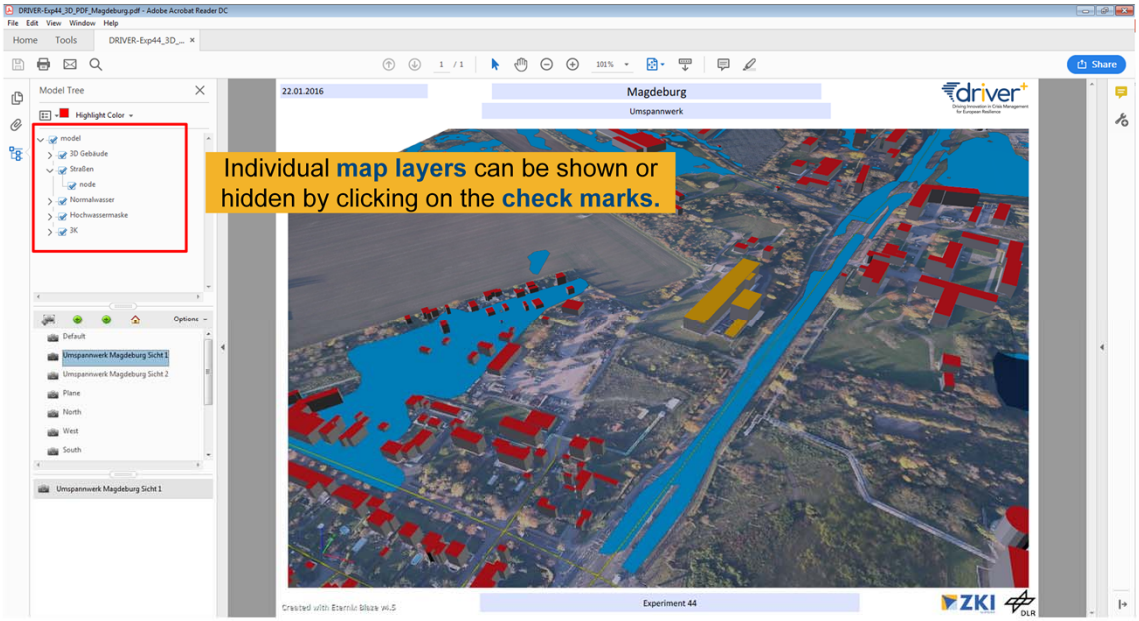
ROTATE: hold left mouse button down + move

Quick Views: open model tree + press default views









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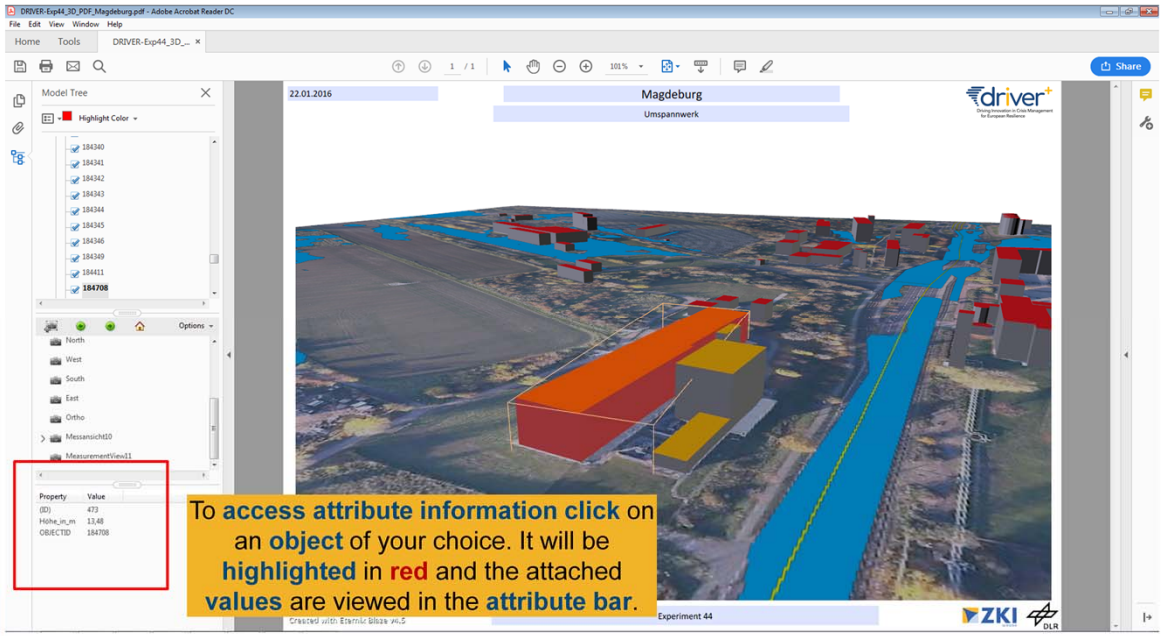
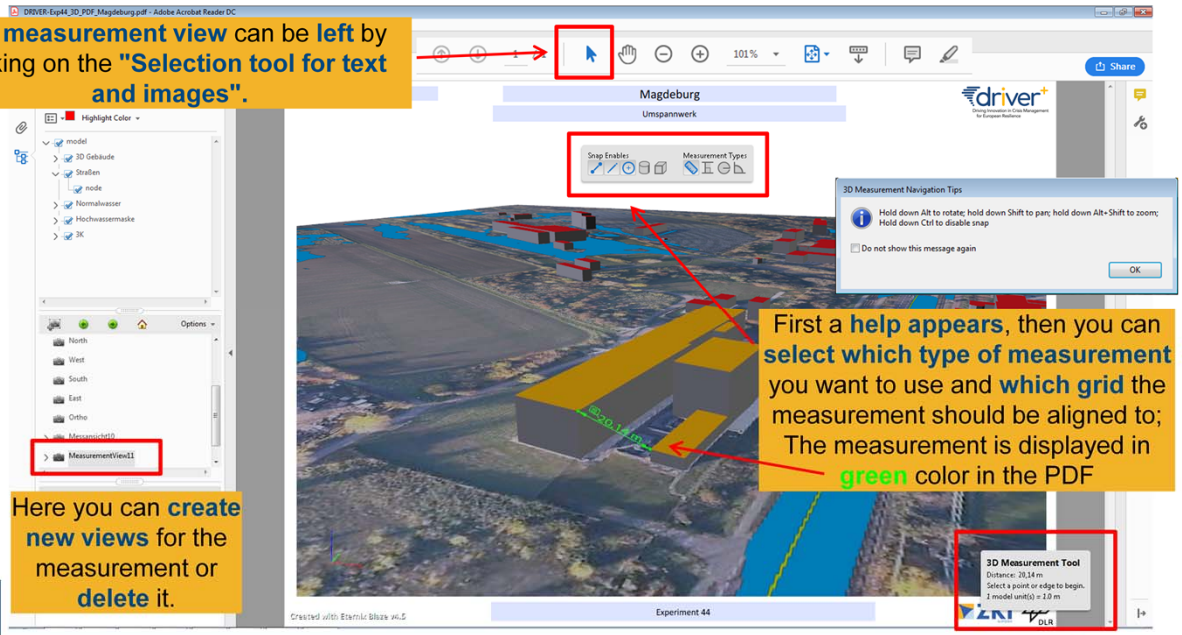
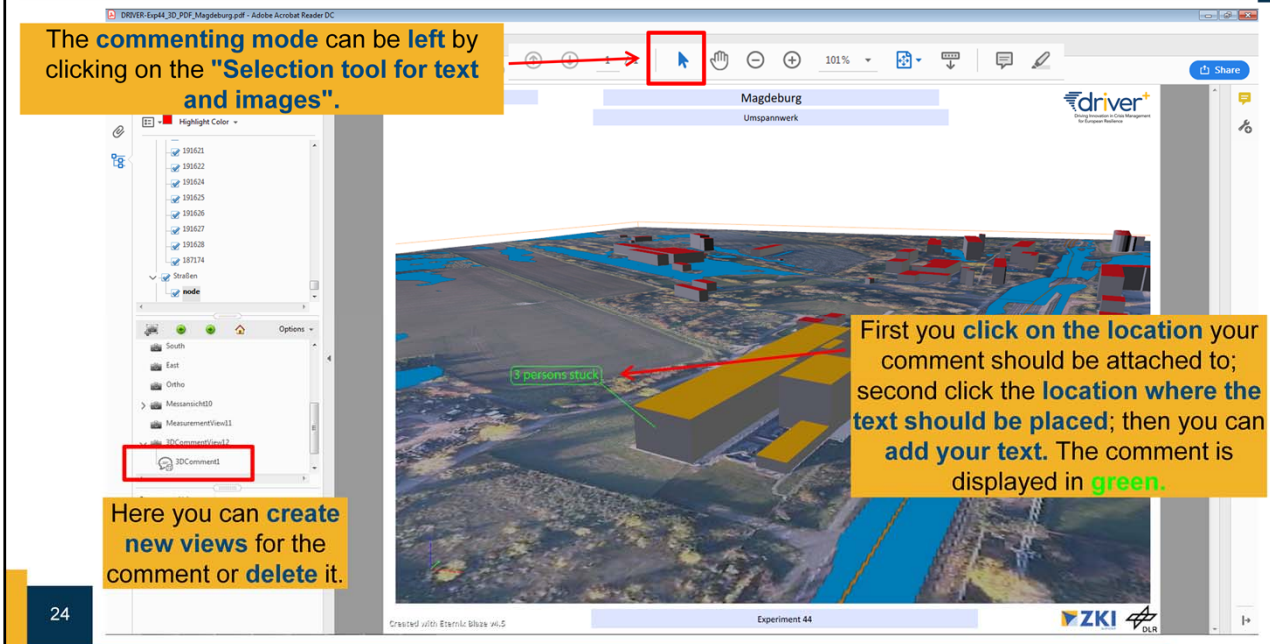

Model Tree
Highlight Color
Options
North
West
South
East
Ortho
Property
Value
22.01.2016
Magdeburg
Umspannwerk
Experiment 44
To access attribute information click on an object of your choice. It will be highlighted in red and the attached values are viewed in the attribute bar.

By **right clicking** into the 3D surface → **tools** → **3D measuring tools** different heights can be measured



By **right clicking** into the 3D surface → **tools** → **Add 3D comment** you can add further information.

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This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement n° 607798. The information and views set out in this presentation are those of the author(s) and do not necessarily reflect the official opinion of the European Union

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