EIGHTH
MINE ACTION
TECHNOLOGY
WORKSHOP
GENEVA, 2-4 NOV 2021

SITE

Field Data Collection and Information Management in Urban Survey & Clearance

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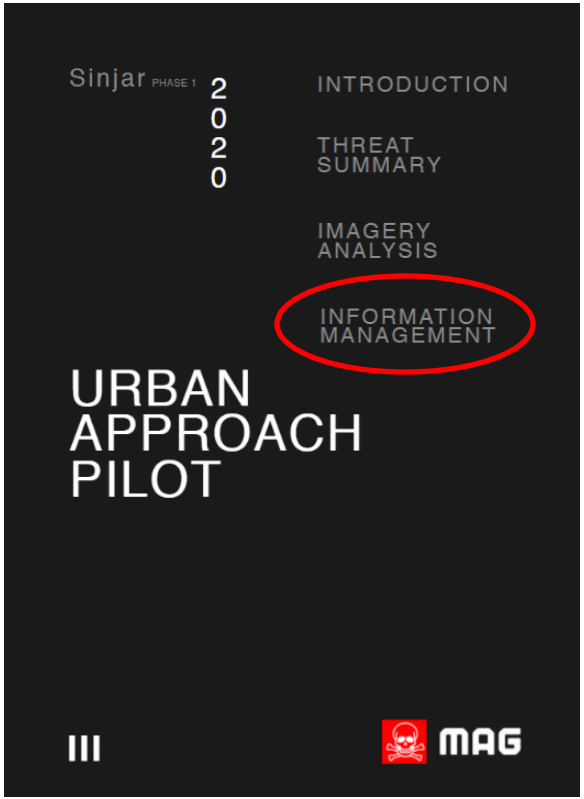
SITE Scandinavian Information Technology

Urban Approach Pilot – Sinjar 2020



CO-FINANCED BY

SITE Scandinavian Information Technology

- Swedish software development and consultant company (SME), located in Stockholm
- Founded in 1999
- Dedicated to the support of military EOD (EOD IS) and humanitarian mine action (T-IMS), using GIS centric information management systems and mobile technologies

EOD IS

- Explosive Ordnance Disposal Information System, EOD IS
- Funded by the Swedish Defence Material Administration (SAF)
- 4th generation, 1st version established in 1999
- Used by 15 countries' armed forces in an international cooperation
- Based on military standards, STANAG – AEODP 6 – …

T-IMS

- The SITE Information Management System, T-IMS
- Funded by the European Commission's FP7 (during 2012-2015), project TIRAMISU
- Operationally validated by HCR-CTRO (CROMAC-CTDT)
- Used in Croatia, Cambodia and Lebanon
- Based on humanitarian standards, IMAS – NMAS – …

Project background and requirements

- One easy to use tool allowing *Rapid contamination, damage and impact assessment,* and collection of **all** relevant data
- Information exchange/interoperability with Esri ArcGIS (IMSMA Core)
- IMAS Land Release compliance
- Focus **Urban Survey** and Clearance
- U.S. export controls and sanctions (affected countries Syria, Iran…)

T-IMS Key features

- User-friendly and intuitive field data collection tool built on touch technology, no need for a keyboard or a mouse
- **Complies with the international standard** for land release, IMAS 7.11 (NTS, TS, Clearance, QA…) => *"A one-system approach"*
- **Customisable forms** (supporting signatures and locking, images, map geometries)
- Uses **Esri's off-line map engine,** thus supporting all well established map formats
- **Any type of attachment** – such as georeferenced photos, images, documents and voice recordings – can be attached to any activity
- Information exchange **with IMSMA NG** and **IMSMA Core (Esri Enterprise)**
- **Off-line ordnance database** (supporting ordnances from CORD among other sources)
- Allows the use of peripheral equipment, such as a **laser rangefinder** for positioning of objects in the map directly in the field situation, or a RTK GPS/GNSS
- Runs with **100% functionality off-line** and does not require internet or WiFi connection

The process of Land Release

- Suspected Hazardous Area (SHA) — Classification of Land
  - "Refers to an area where there is reasonable suspicion of mine/ERW contamination on the basis of **indirect evidence** of the presence of mines/ERW. "
- Confirmed Hazardous Area (CHA) — Classification of Land
  - "Refers to an area where the presence of mine/ERW contamination has been confirmed on the basis of **direct evidence** of the presence of mines/ERW. "
- Cancelled Land — Land Release Product
  - "A defined area concluded not to contain evidence of mine/ERW contamination **following the non-technical survey** of a SHA/CHA. "
- Reduced Land — Land Release Product
  - "A defined area concluded not to contain evidence of mine/ERW contamination **following the technical survey** of a SHA/CHA. "
- Cleared Land — Land Release Product
  - "A defined area cleared through the removal and/or destruction of all specified mine and ERW hazards to a specified depth. "

IMAS 7.11 Land-Release *IMAS 8.10 Non-technical Survey* *IMAS 8.20 Technical Survey* *IMAS 9.10 Clearance*

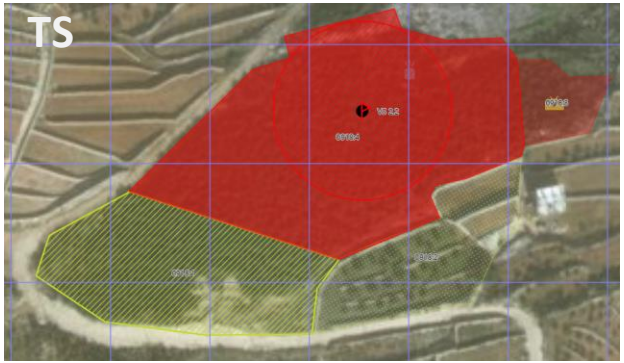
Land Release activities

Clone

Cut

Baseline Survey (NTS) with original polygon

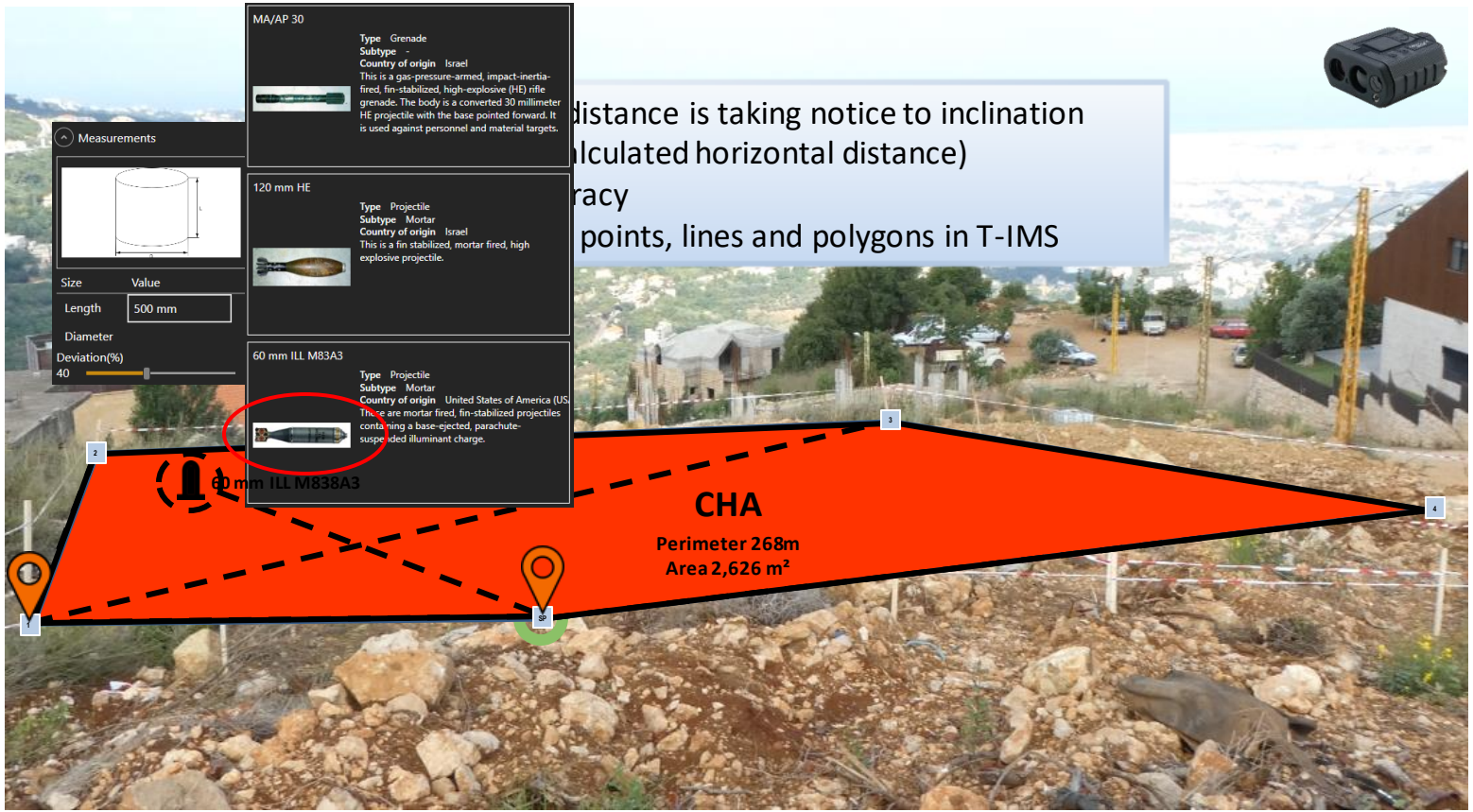
Classified land: SHA 18 830 sqm, CHA 1 224 m2
LR product: Cancelled land (released) 3 971 m2



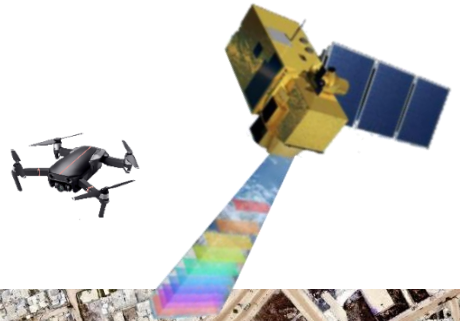
Classified land: CHA 13 050 m2 (incl. Fade Out)
LR product: Reduced land 6 363 m2

LR product: Cleared land 14 275 m2
=> Total area released 24 429 m2

The rangefinder and the ordnance database in the field situation



Imagery



Multiband hyperspectral imagery combined into operational basemaps at 30 cm resolution.

Compared imagery from 2013, 2014, 2016, 2019 – each building provided with a unique ID

Building footprints and hazardous properties classification

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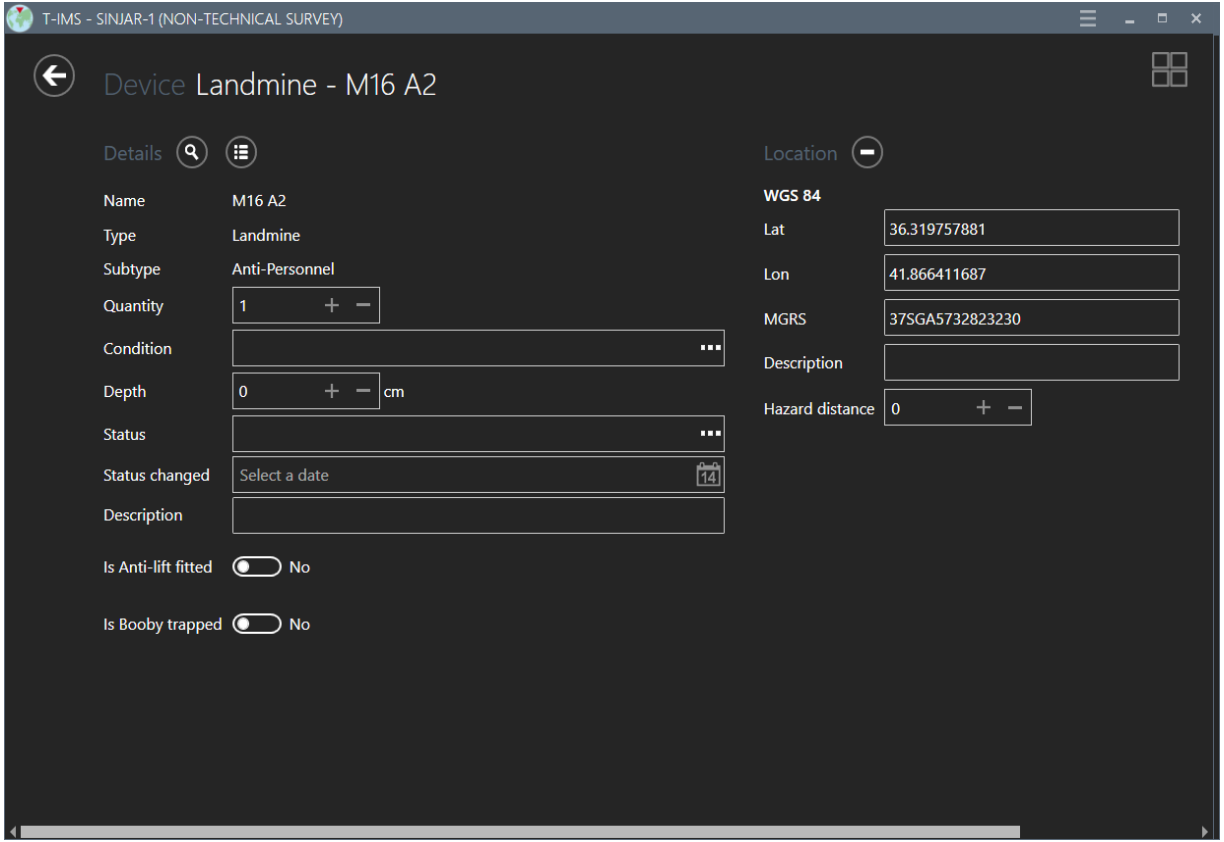
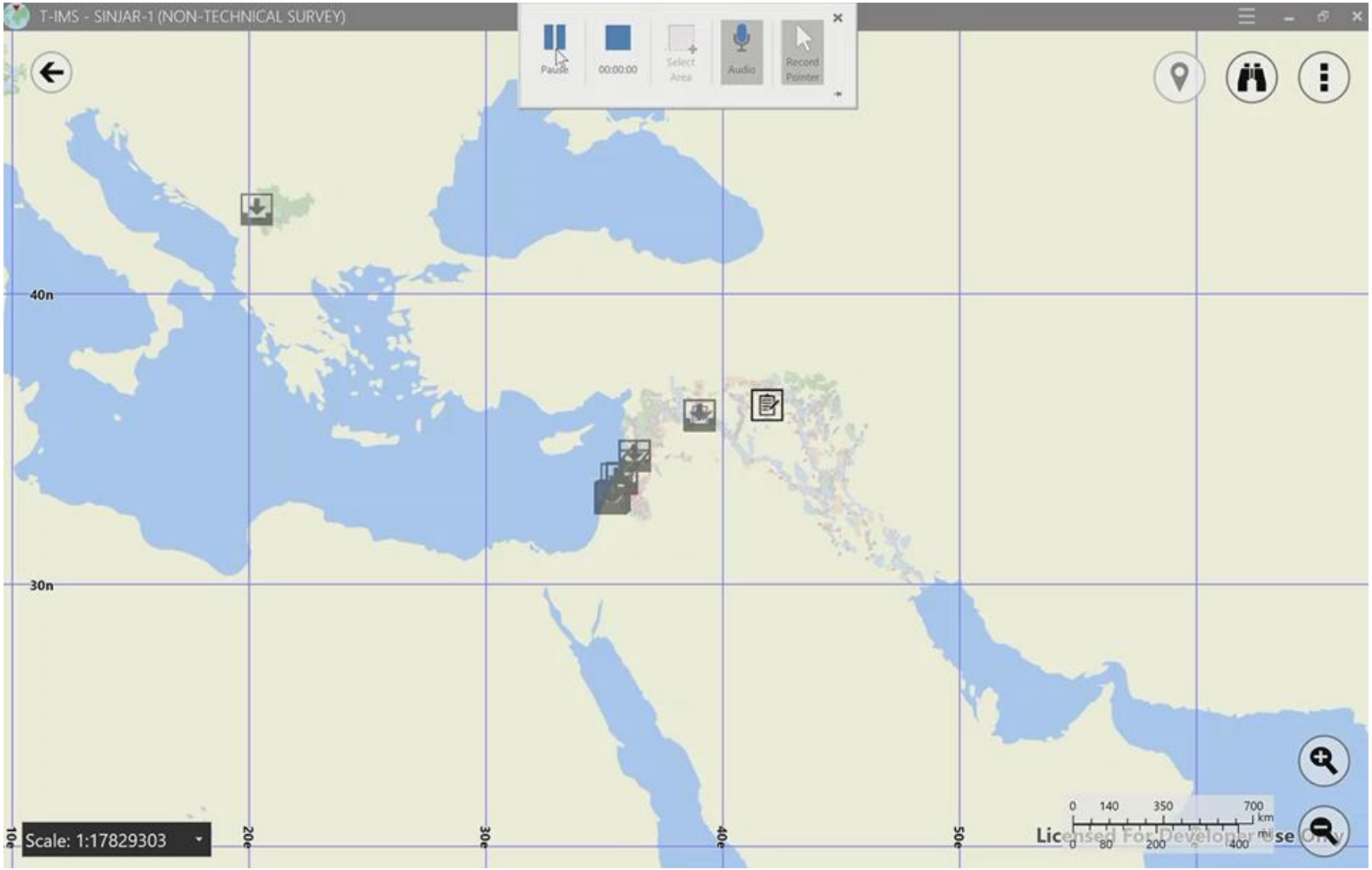
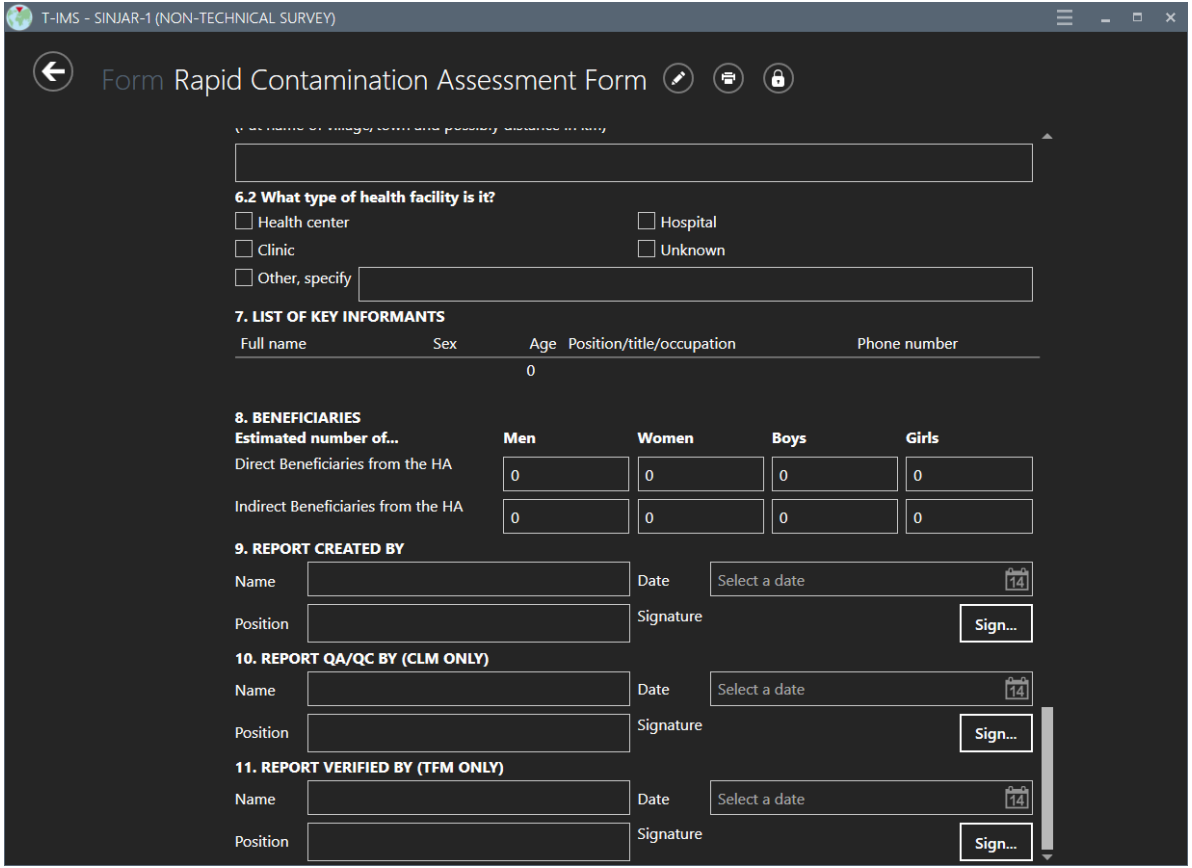
The map module, buildings and floors




T-IMS - SINJAR-1 (NON-TECHNICAL SURVEY)
Pause
00:00:00
Select Area
Audio
Record Pointer
40n
30n
10e
20e
30e
40e
50e
Scale: 1:17829303
0 140 350 700 km
0 80 200 400 mi
Licensed For Developer Use Only

Forms and reporting – Rapid Contamination Assessment Form



Forms and reporting – Rapid Contamination Assessment Form

FormPrintOutTemplate.docx [Read-Only] - Word — Torsten Vikström

File Home Insert Design Layout References Mailings Review View Help Easy Document Creator Tell me what you want to do Share

MAG saves lives builds futures

☐Local Signs	☐None
☐Other, specify	

3. GEOGRAPHICAL INFORMATION

All geographical coordinates in decimal degrees (dd.dddd)

3.1 Landmark (LM)

3.2 Benchmark (BM)

3.4 Estimated area (sqm)

1

4. SKETCHMAP

Attach explanatory sketch map showing: location of each evidence point, type and location of mines/UXO/sub-munitions, location of accidents, land mark, bench mark, start point etc.

The Arahan building block post first assessment

5. PHOTOGRAPHS: Informants, hazardous area, benchmark

6. CASEVAC Information

6.1 Where is the nearest functioning health point to provide lifesaving trauma care?
(Put name of village/town and possibly distance in km)

6.2 What type of health facility is it?

☐Health center	☐Hospital
☐Clinic	☐Unknown

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☐Other, specify

7. LIST OF KEY INFORMANTS

Full name	Sex	Age	Position/title/occupation	Phone number
		0		

8. BENEFICIARIES

Estimated number of...	Men	Women	Boys	Girls
Direct Beneficiaries from the HA	0	0	0	0
Indirect Beneficiaries from the HA	0	0	0	0

9. REPORT CREATED BY

Name	Date
Position	Signature

10. REPORT QA/QC BY (CLM ONLY)

Name	Date
Position	Signature

11. REPORT VERIFIED BY (TFM ONLY)

Name	Date
Position	Signature

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Project results and future steps

- T-IMS further developed to support ”Rapid contamination, damage and impact assessment”, field data collection and reporting (Urban Survey)
- Compliance with IMAS 9.13 Building Clearance
- Five (5) complete units with laser range finders delivered to MAG
- Plans for a phase 2, urban survey pilot late 2022

Thank you!

Questions and Answers

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