

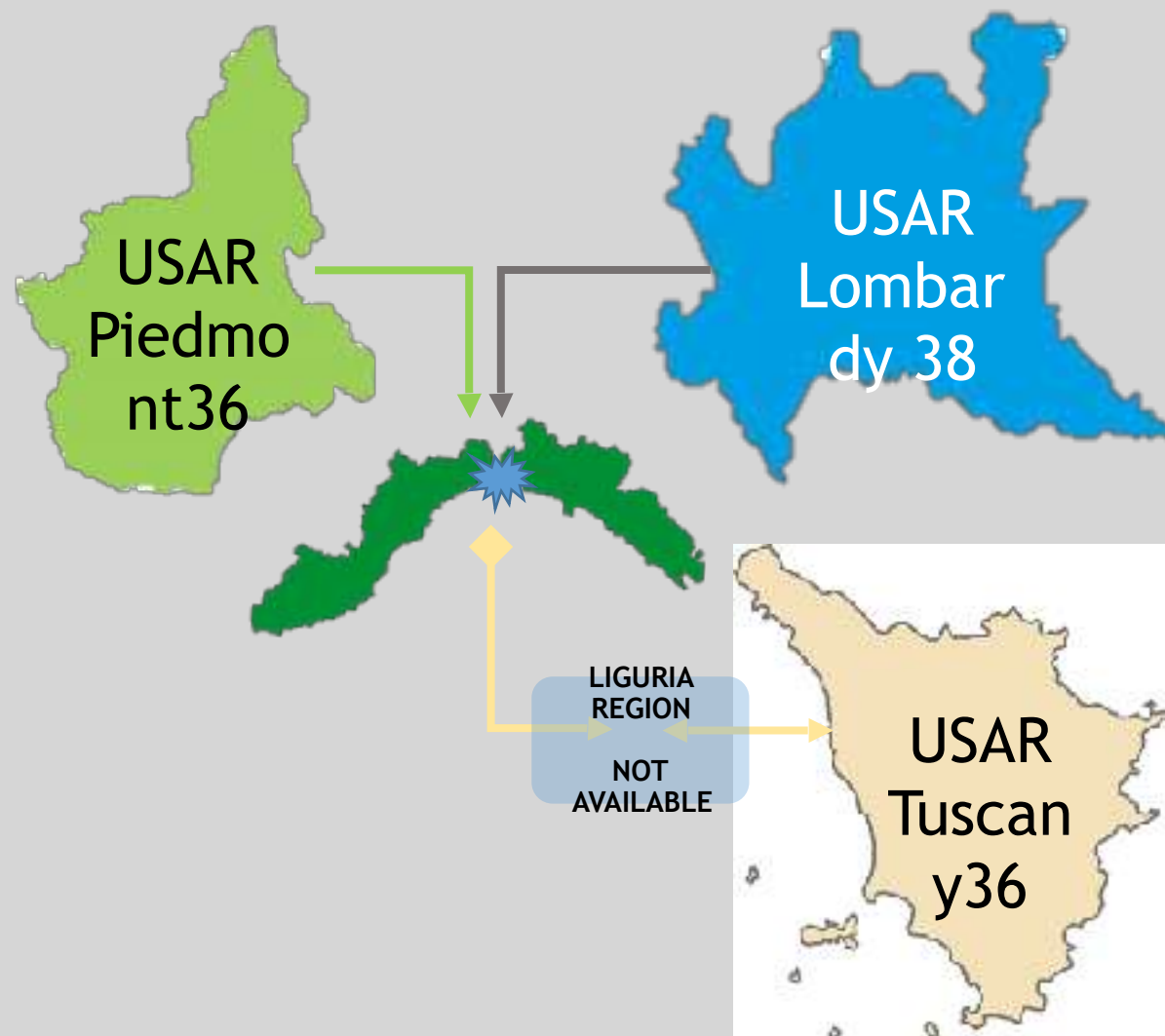
LARGE SCALE USAR OPERATION MORANDI BRIDGE AND OTHER CASE STUDIES

ONSITE MANAGEMENT AND THE DIFFICULTY TO IDENTIFY THE NUMBER OF CASUALTIES: INVESTIGATION AND ANALYSIS

Luciano Roncalli

Milan Fire Officer - USAR ITA-1 Planning Manager

USAR DEPLOYMENT



ALARM AND DEPLOYMENT	12:30
FIRST USAR TEAM ON-SITE	14:00
FULL USAR TEAM SIZE UP	15:00
ADVANCED COMMAND POST	16:45

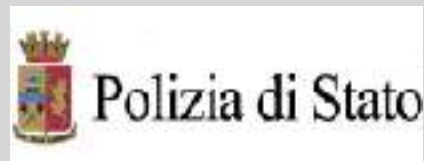






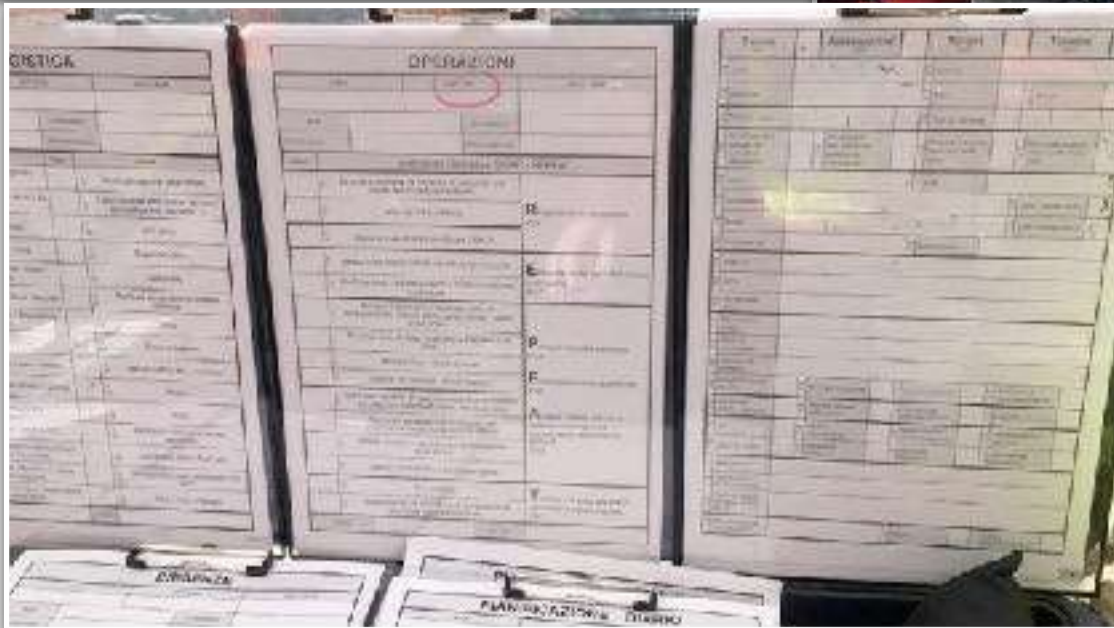


OTHER PARTICIPATING AGENCIES ON-SITE





USAR - ADVANCED COMMAND POST



OPERAZIONI			
MAGAZZINO		MATERIE PRIME	
QUANTITA' INVENTARI: 100000 - 100000			
MATERIE PRIME		MATERIE PRIME	
MATERIE PRIME		MATERIE PRIME	
Indicazioni Operative: UDAI - REPER			
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
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26	26	26	26
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28	28	28	28
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42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
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91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

USAR - ADVANCED COMMAND POST



USAR - ADVANCED COMMAND POST



USAR - ADVANCED COMMAND POST



USAR ORGANIGRAM

MEDICAL STAFF	LOMBARDY
Med. Officers	5
Doctors	9
Nurses	11
Total	25

COMMAND	UNITS
Bergamo	12
Brescia	10
Milano	11
Pavia	5
Totale	38

LIAISON OFFICER
1 DVD

PLANNING OFFICER
1 IA

RESCUE LEADER
1 CS

DEPUTY RESCUE LEADERS
1 CS 1 VF

LOGISTICS
1 CR

ACP
6 VF

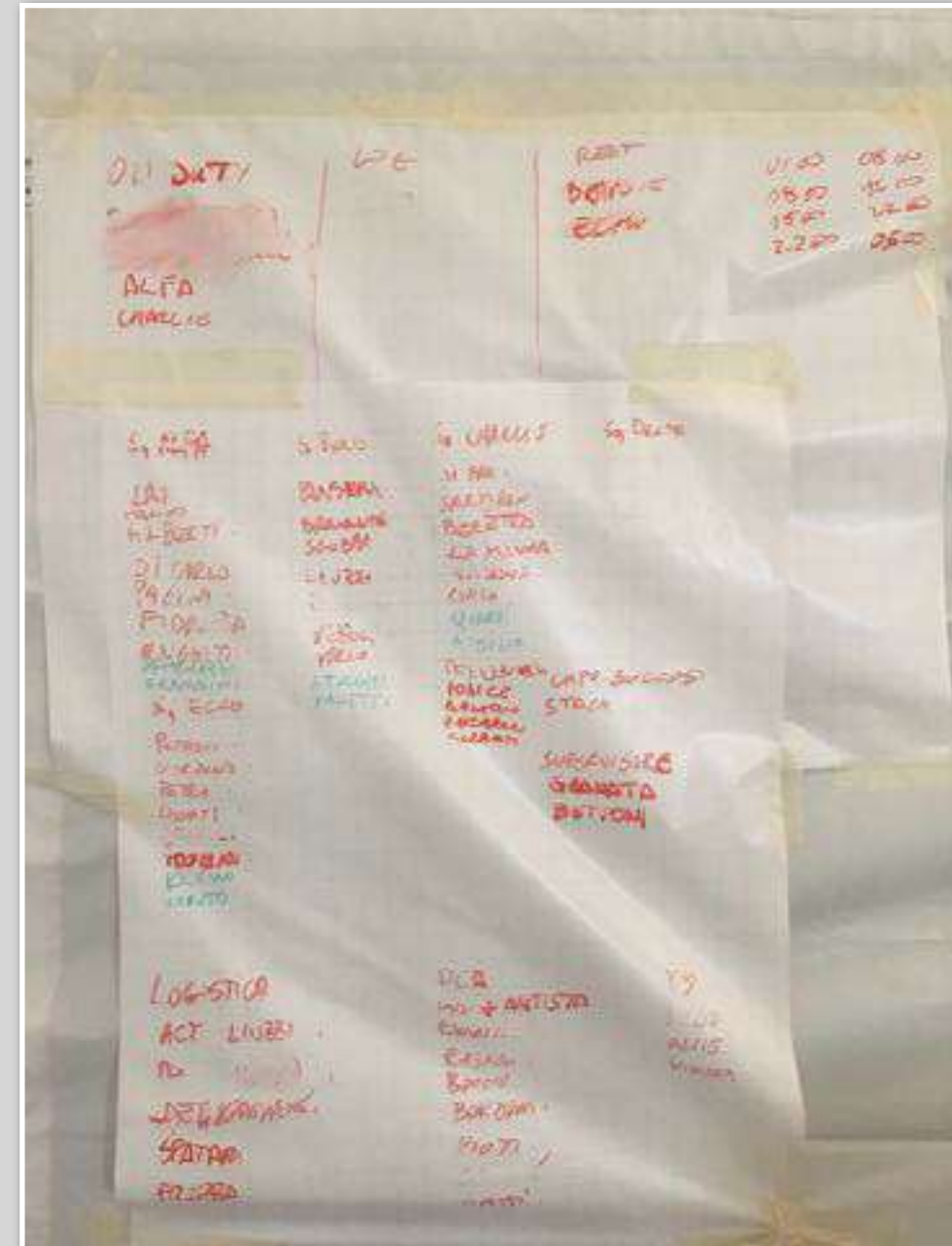
TEAM ALPHA
3 CS 10 VF

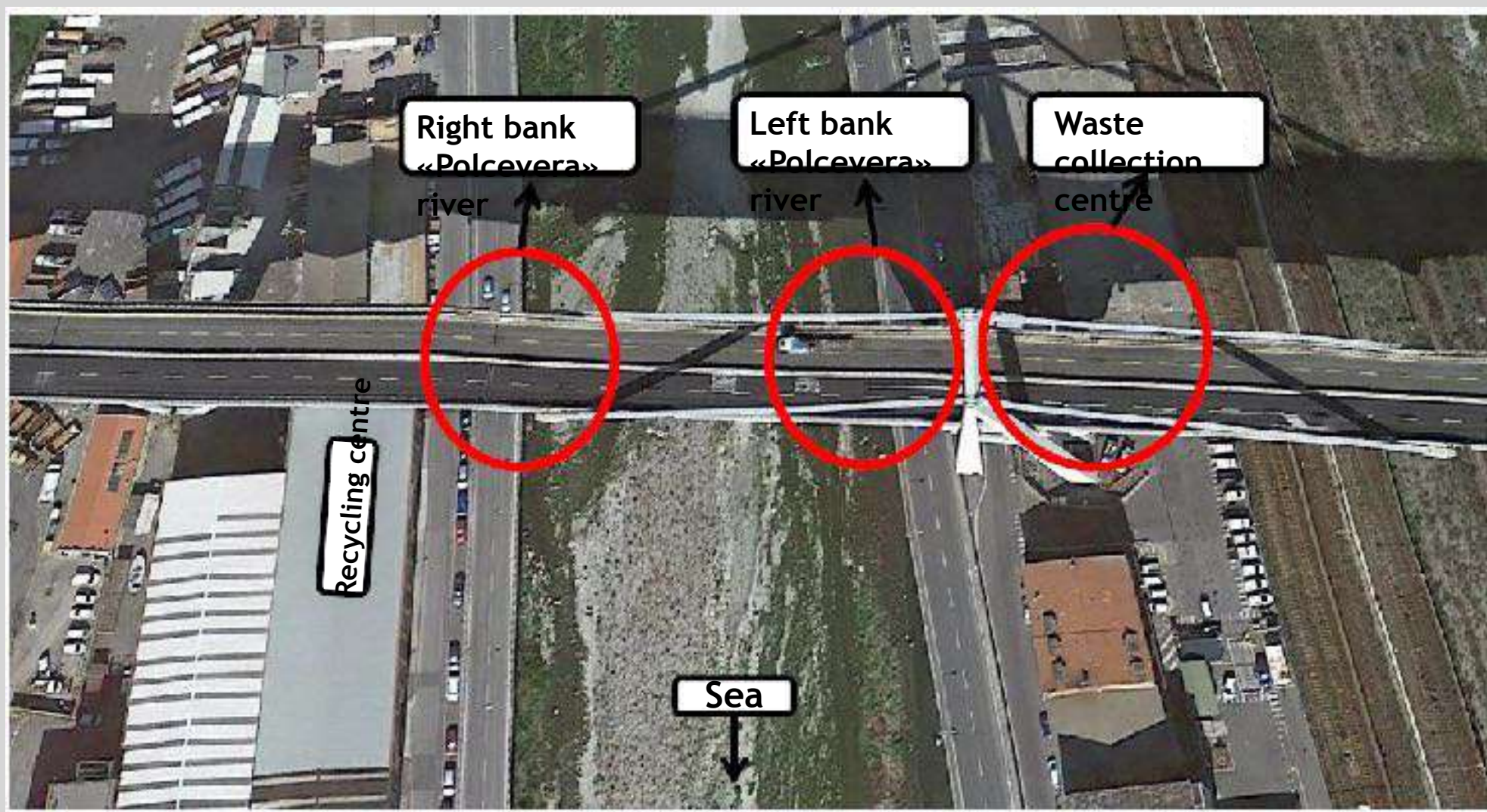
TEAM BRAVO
3 CS 10 VF

FF RANK	UNITS
DVD - Officer	1
IA - Sub-Officer	1
CRE - Station MGR	2
CSE - Crew Command	7
VC - Dep. Crew Com.	5
VE - Leading FF	4
VQ - FF	12
VF - FF	6
Total	38

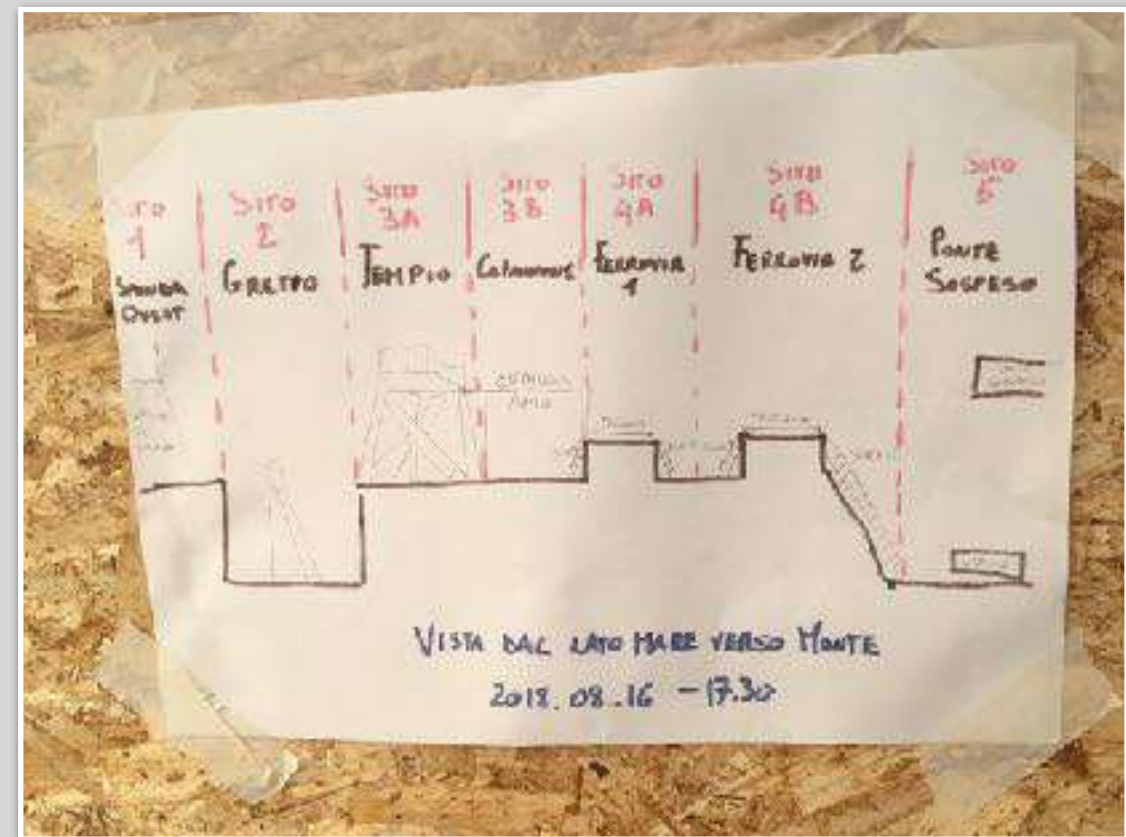
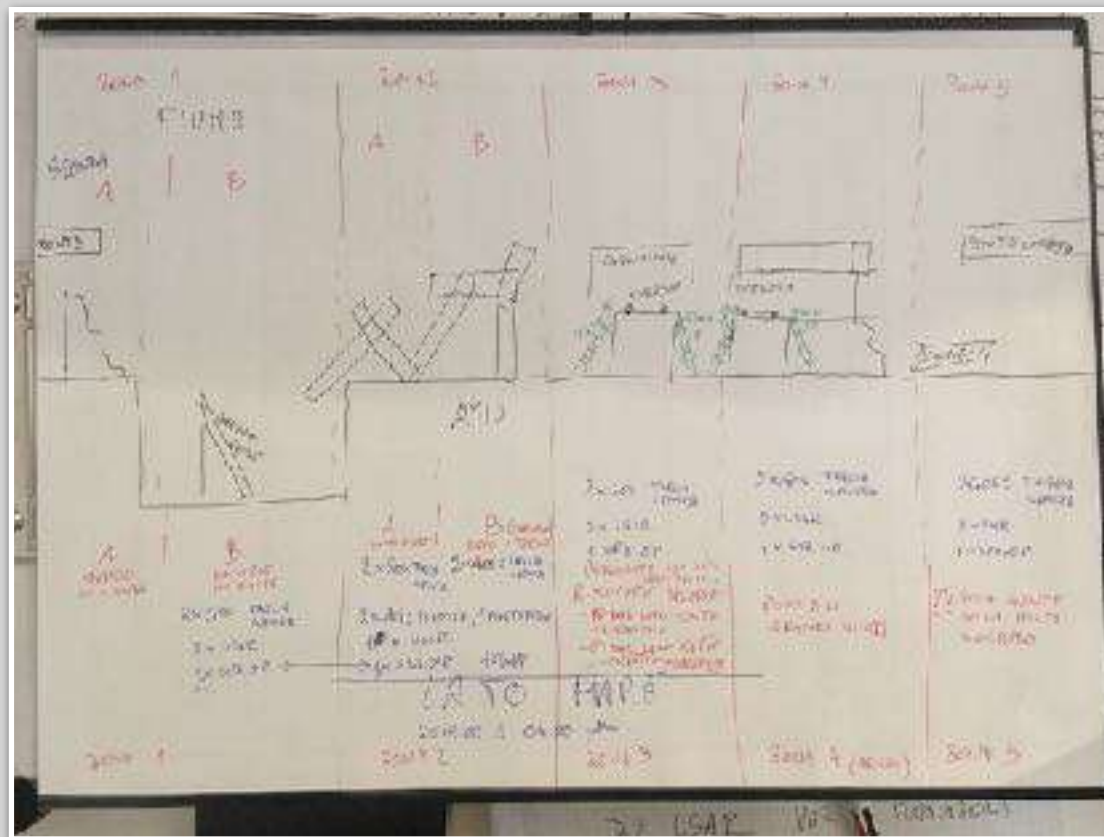
USAR - SHIFT PLAN

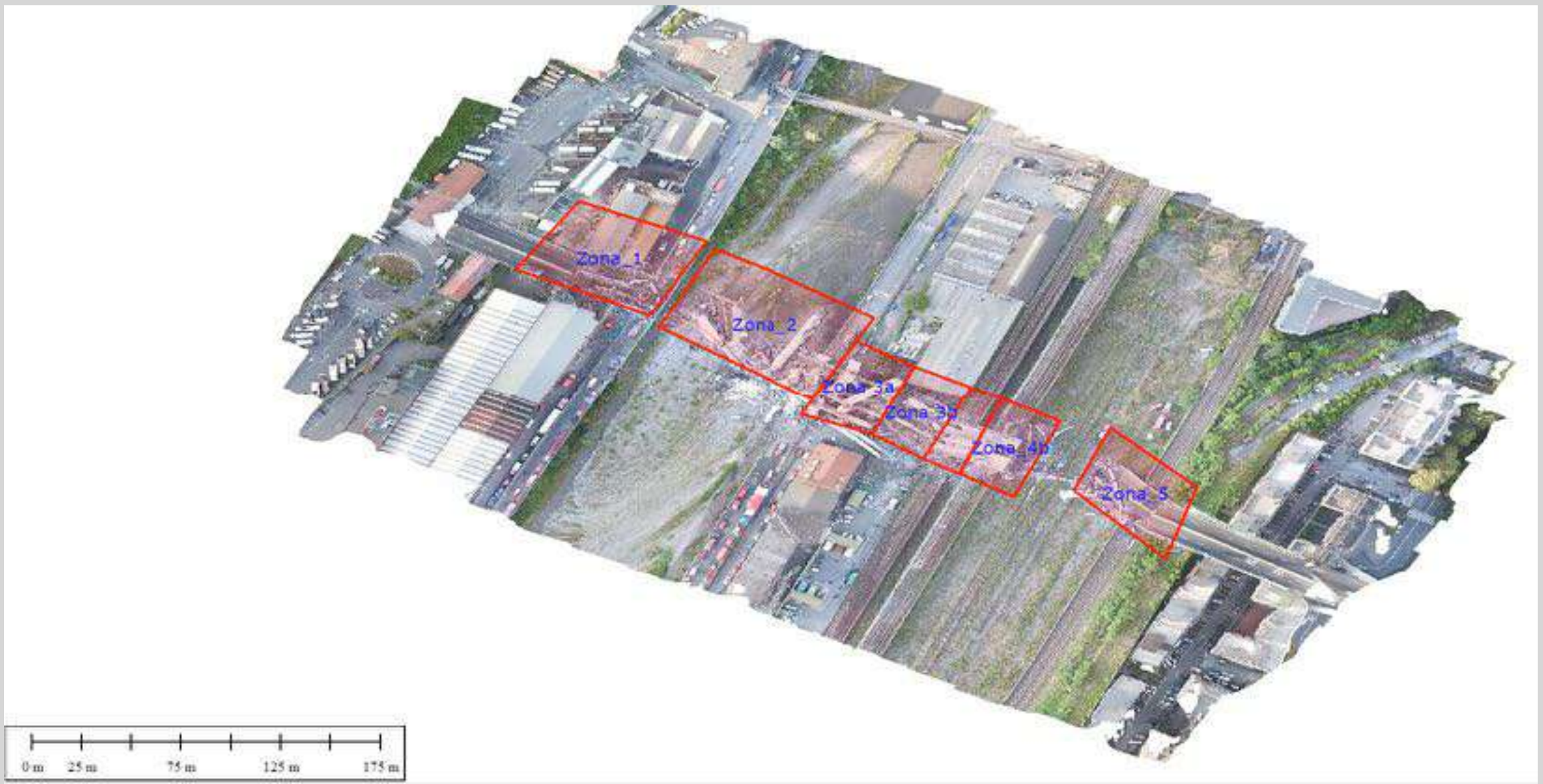
- Split into 3 teams:
 - Alpha;
 - Bravo;
 - ACP;
- 8 hour shift:
 - 8 hour operational;
 - 8 hour rest;
- Alpha e Bravo teams carried out:
 - Assessment;
 - Search and Rescue;
 - Logistics;
 - Safety and Security.

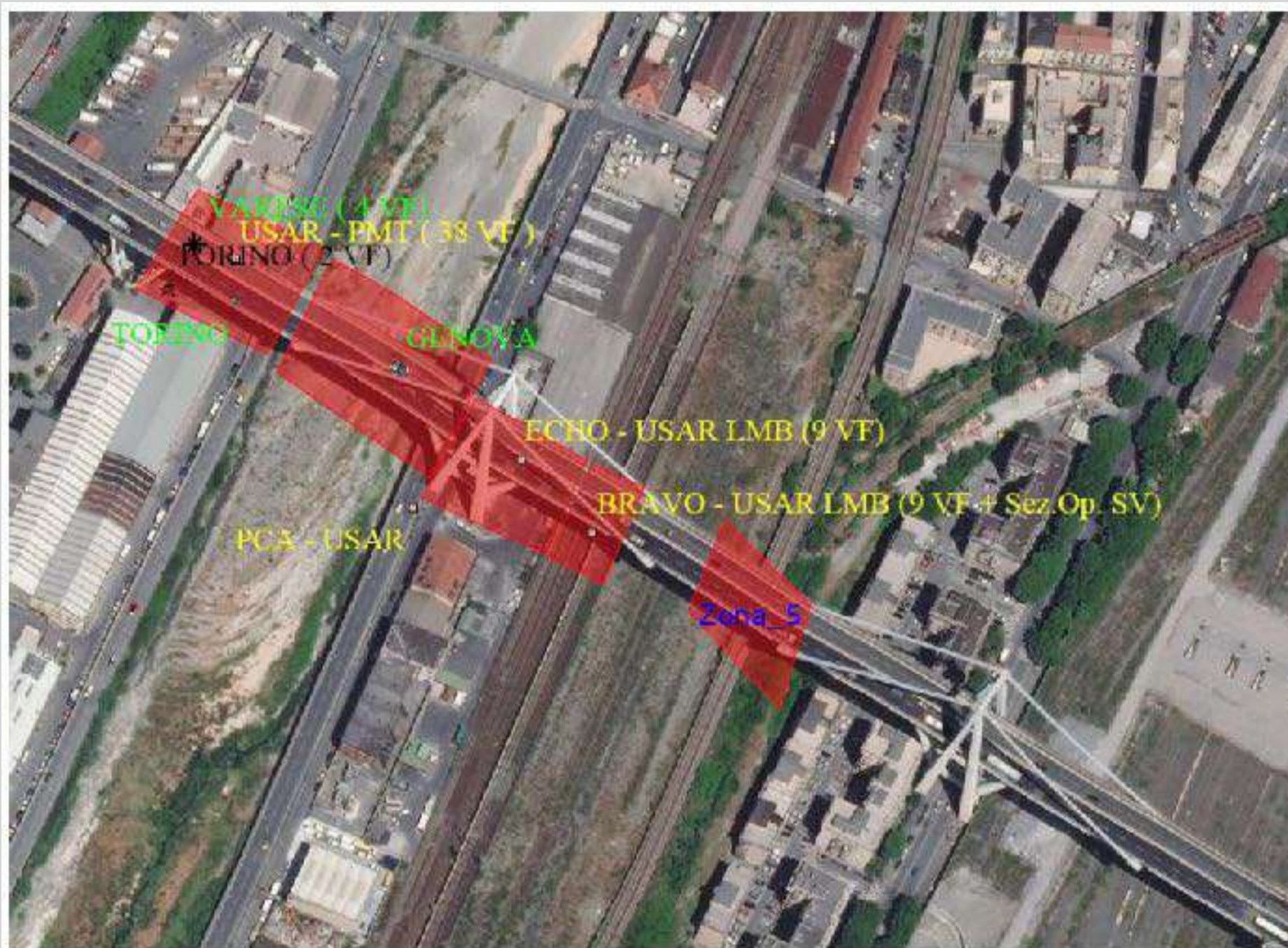


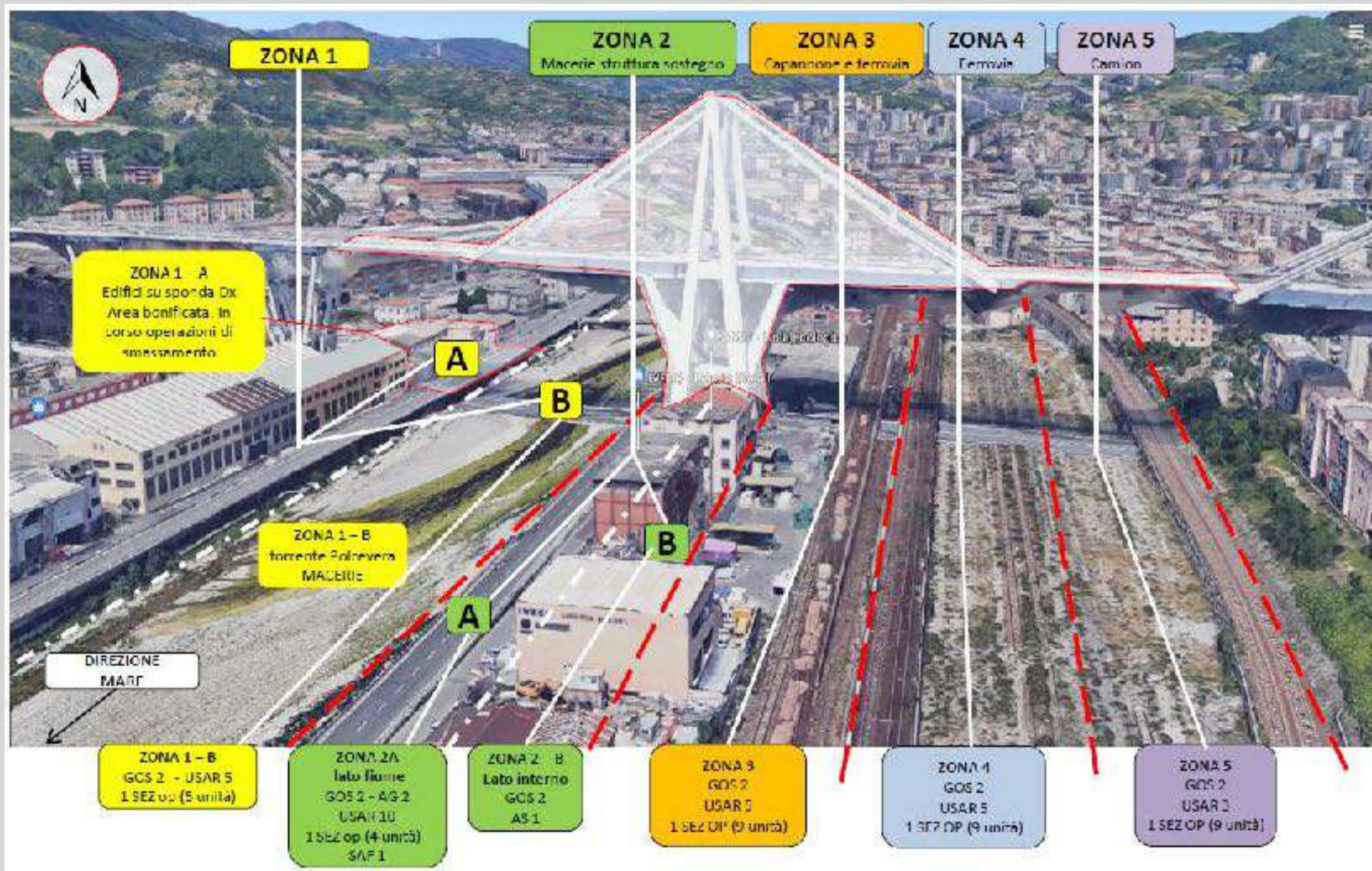


USAR OPERATIONAL AREA'S

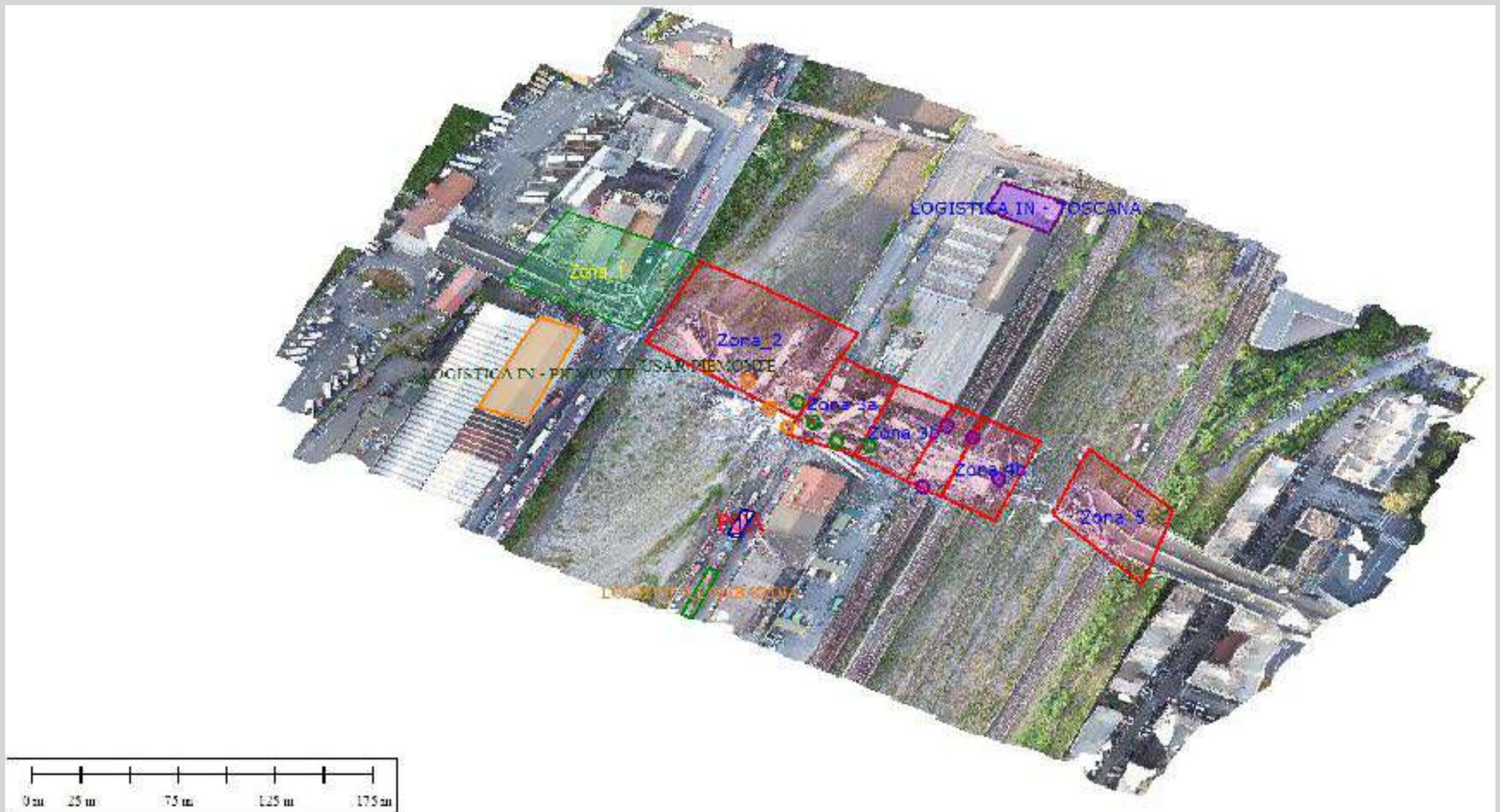


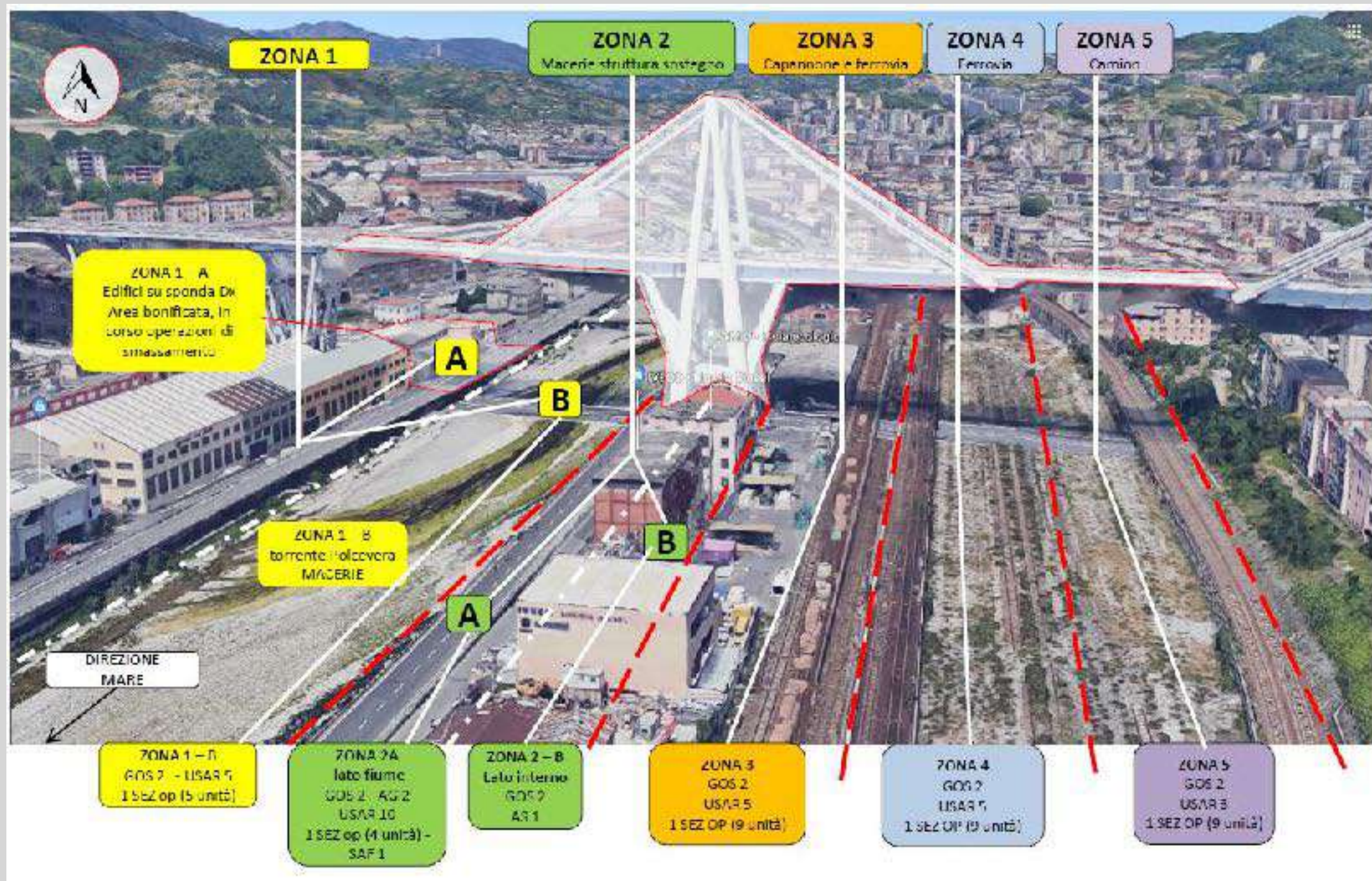




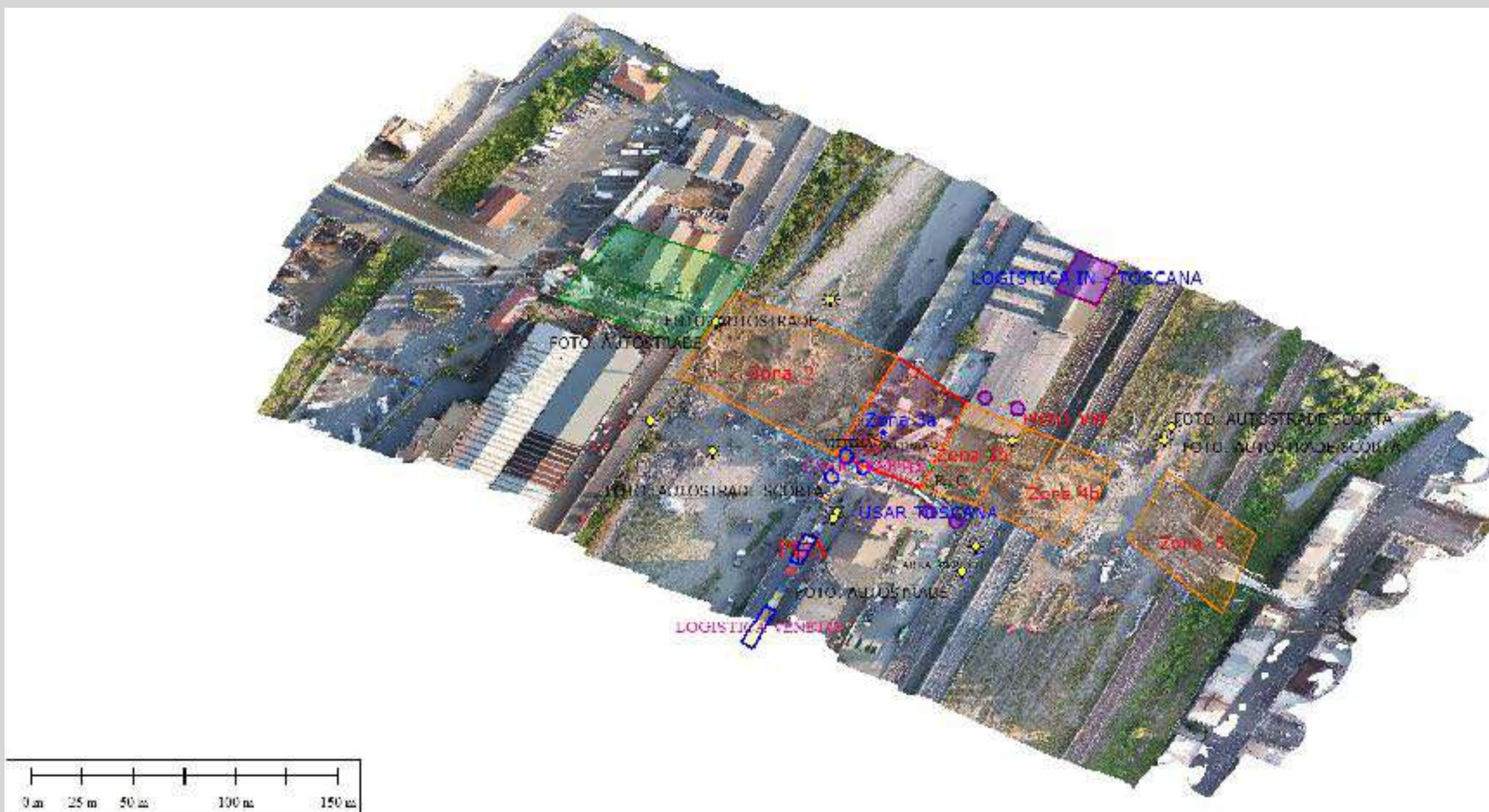


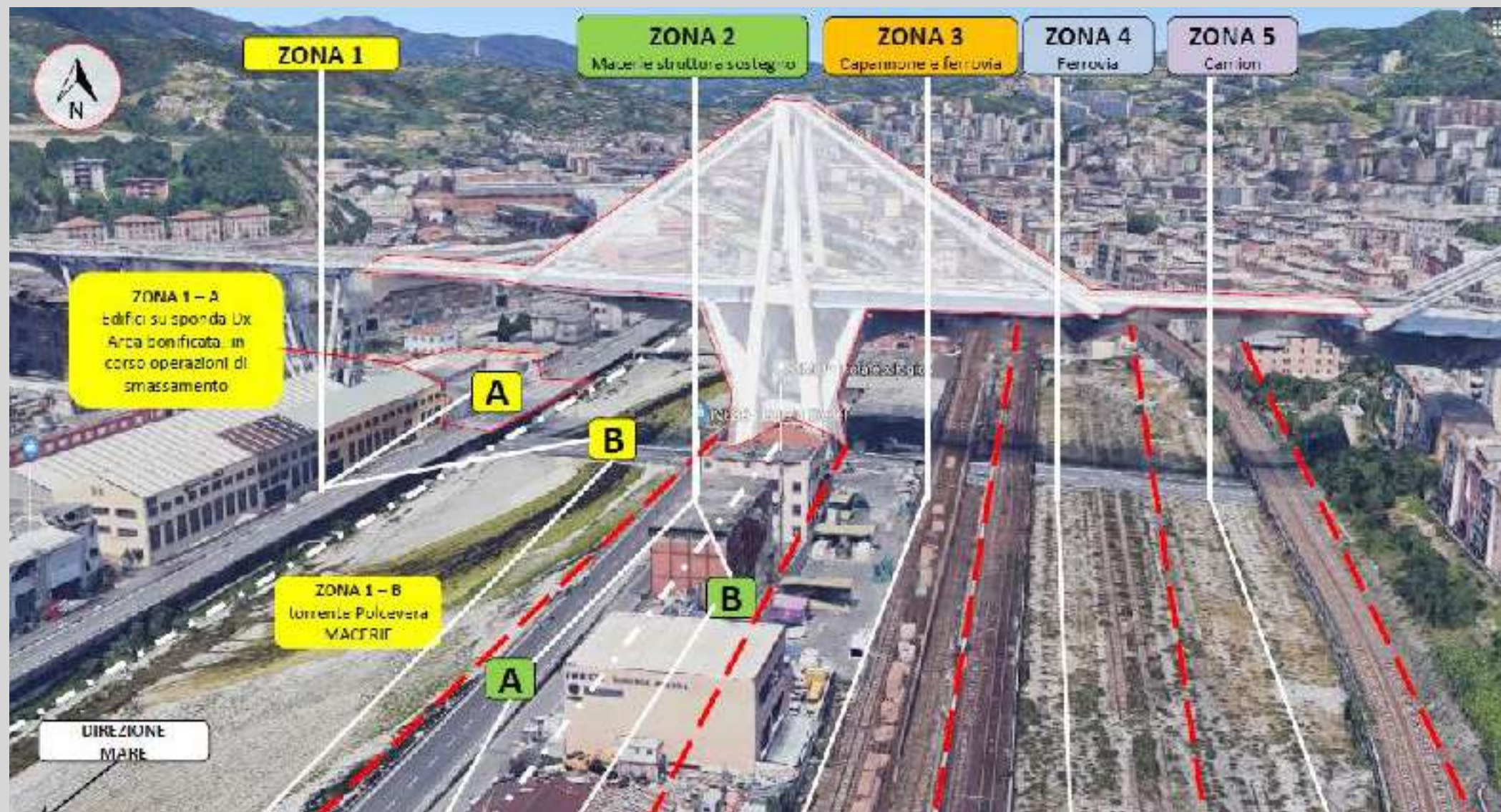
15th AUGUST @ 23:00





16th AUGUST @ 20:00





17th AUGUST @ 20:00

COLLABORATION OF OTHER ENTITIES

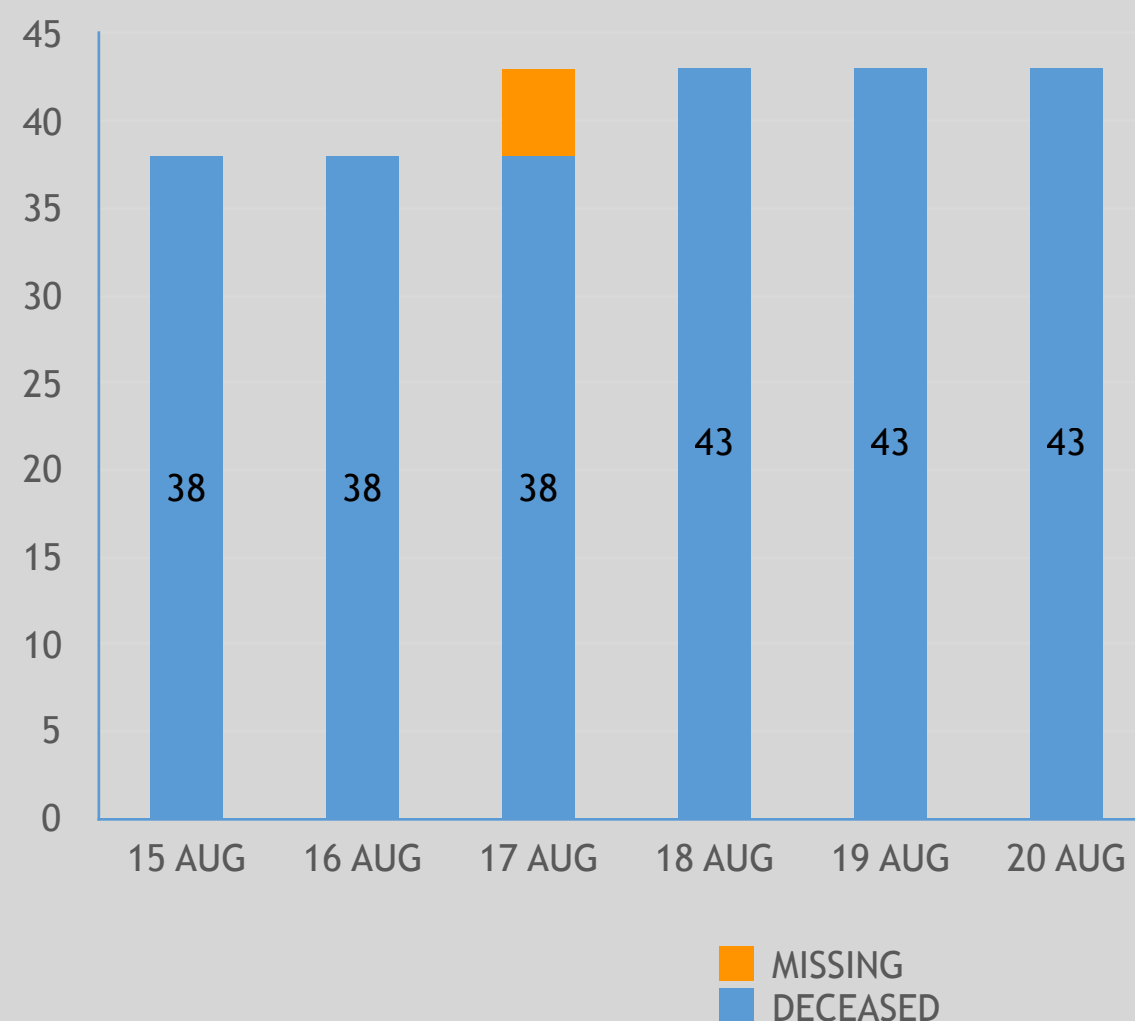


USAR - INTELLIGENCE



USAR - INTELLIGENCE

DATE	TIME	MISSING PERSONS (ESTIMATE)
14/08/2018	20:30	39
15/08/2018	01:30	53
15/08/2018	14:00	86
15/08/2018	20:00	86
16/08/2018	12:00	16
16/08/2018	18:00	13
16/08/2018	23:00	12
17/08/2018	14:00	5



THE TECHNICAL SEARCH



USAR - MARKING SYSTEM







COEM-Comunicazione In Emergenza



COEM-Comunicazione In Emergenza

