

LARGE SCALE USAR OPERATION MORANDI BRIDGE AND OTHER CASE STUDIES

THE FIRST RESPONDERS ROLE AND THE CONNECTION WITH THE INCOMING TEAMS

Fabrizio Piccinini

Genoa Fire Chief

LOCAL CONTEXT

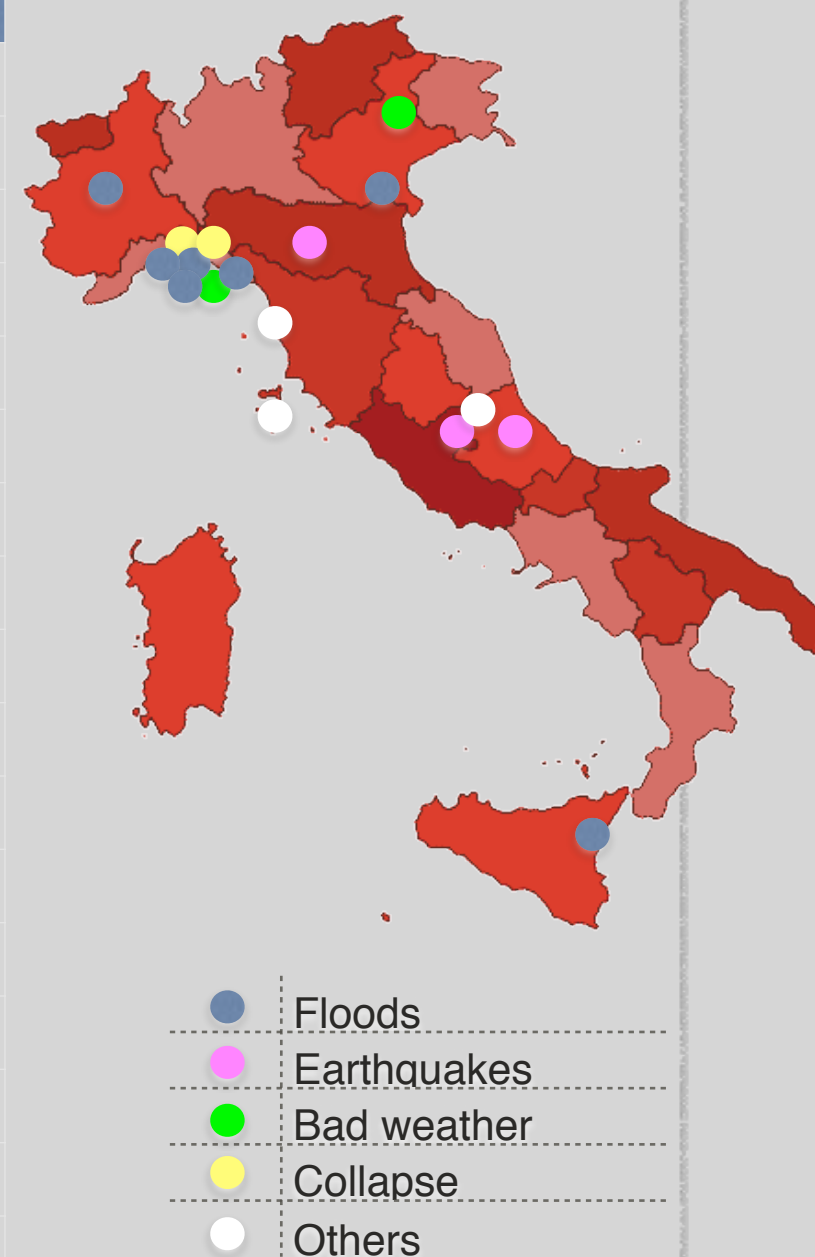


LOCAL CONTEXT



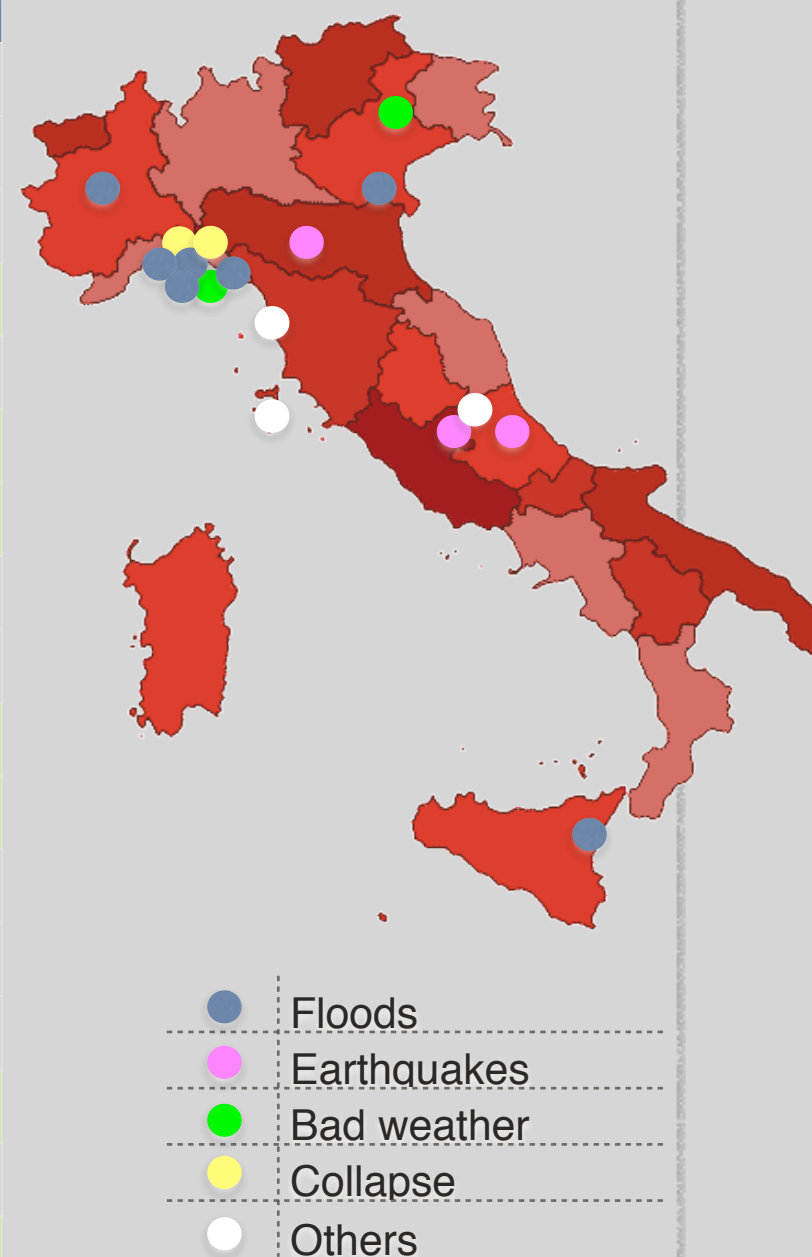
MAJOR DISASTERS IN ITALY

| Date | Relevant national events |
|-----------------------------|---------------------------------------|
| 6 april 2009 | L'Aquila earthquake |
| 26 july 2009 | Viareggio railway accident |
| 1 october 2009 | Messina flood |
| 4 october 2010 | Genoa flood |
| 31 october 2010 | Veneto flood |
| 26 october 2011 | Cinque terre and Lunigiana flood |
| 4 november 2011 | Genoa flood |
| 13 january 2012 | Shipwreck Costa Concordia |
| 29 may 2012 | Emilia earthquakes |
| 7 may 2013 | Pilot tower collapse - Port of Genoa |
| October-november 2014 | 3 floods: Genova, Tigullio and Genova |
| 24 agosto e 30 october 2016 | Central Italy earthquakes |
| 21-25 november 2016 | Piemonte flood |
| 18 january 2017 | Hotel Rigopiano avalanche |
| 14 august 2018 | Polcevera bridge collapse |
| 26-30 october 2018 | Bad weather in the Triveneto area |
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GENOA'S FIRE BRIGADE

Genoa Fire Brigade

Staff: 580 units

Rescue device composed of 76 units

Port Fire Service

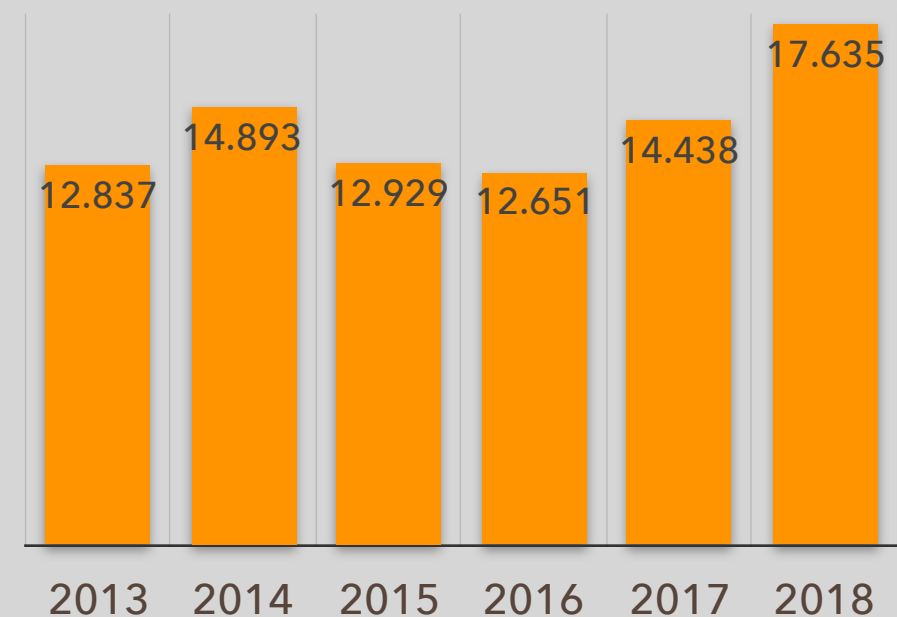
Regional helicopter emergency rescue service with rescuers and sanitary facilities on board

Regional CBRN unit

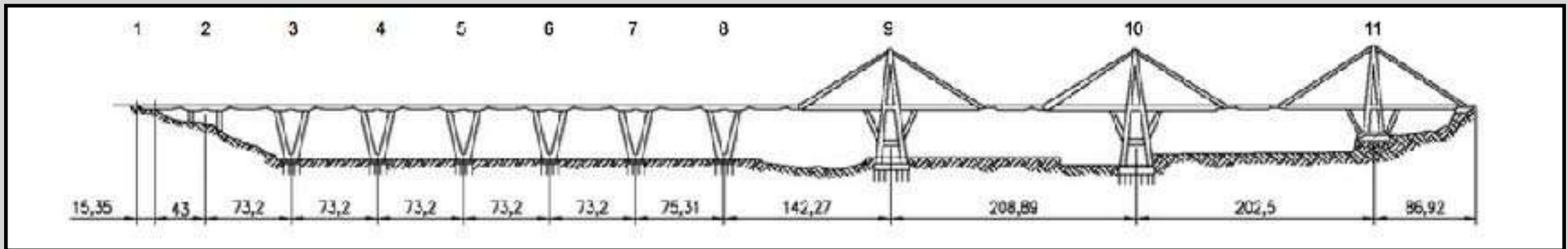
Regional canine team

Rope rescue teams

Rescue diver team



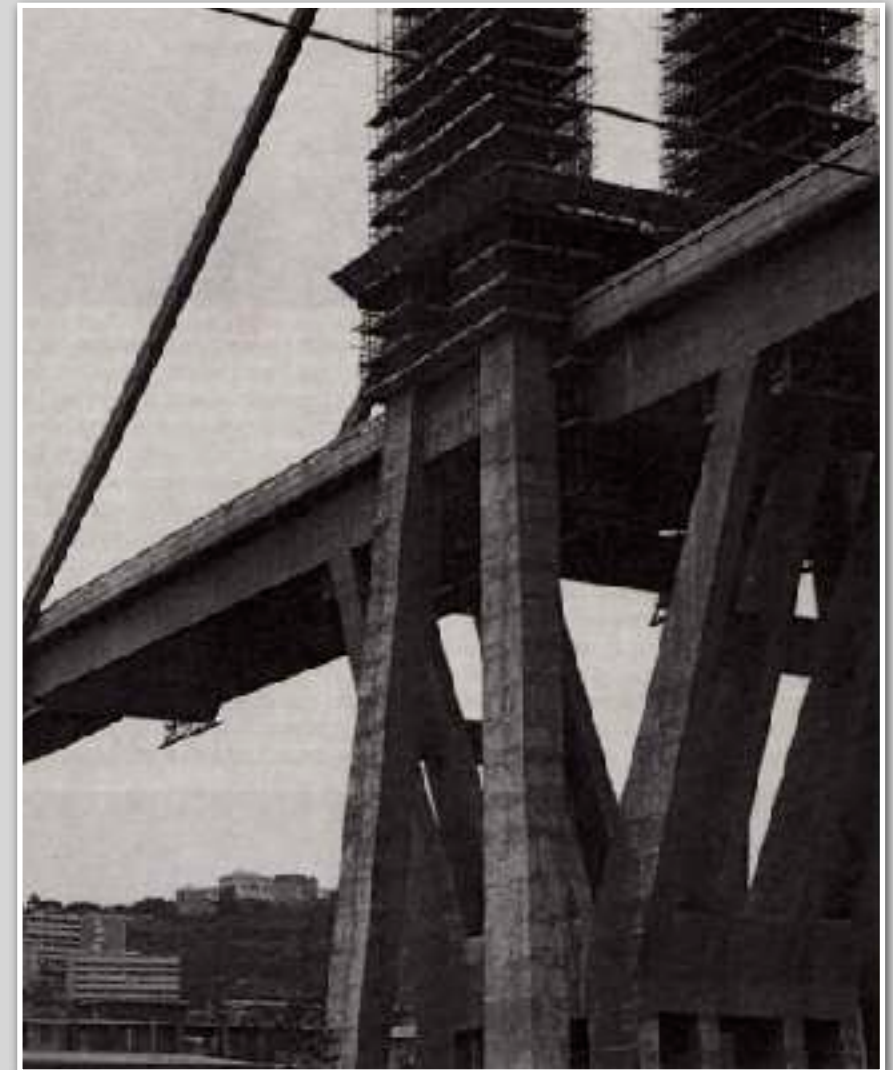
MORANDI'S BRIDGE



MORANDI'S BRIDGE



*Built in 1963-1967
Great distance 210 m
Length 1182 m
Concrete prestressed
90 m high
Iron cables inside concrete*



MORANDI'S BRIDGE

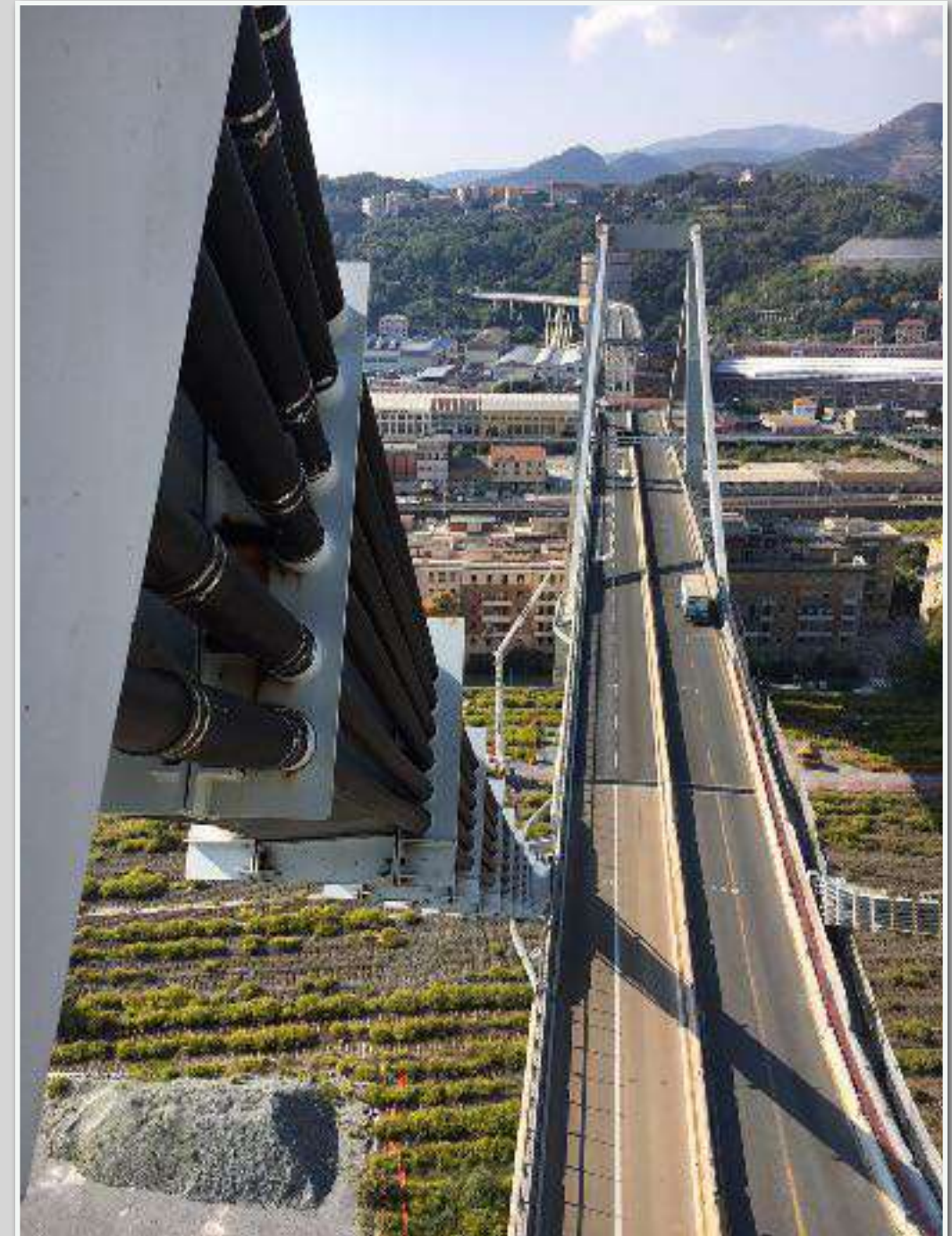
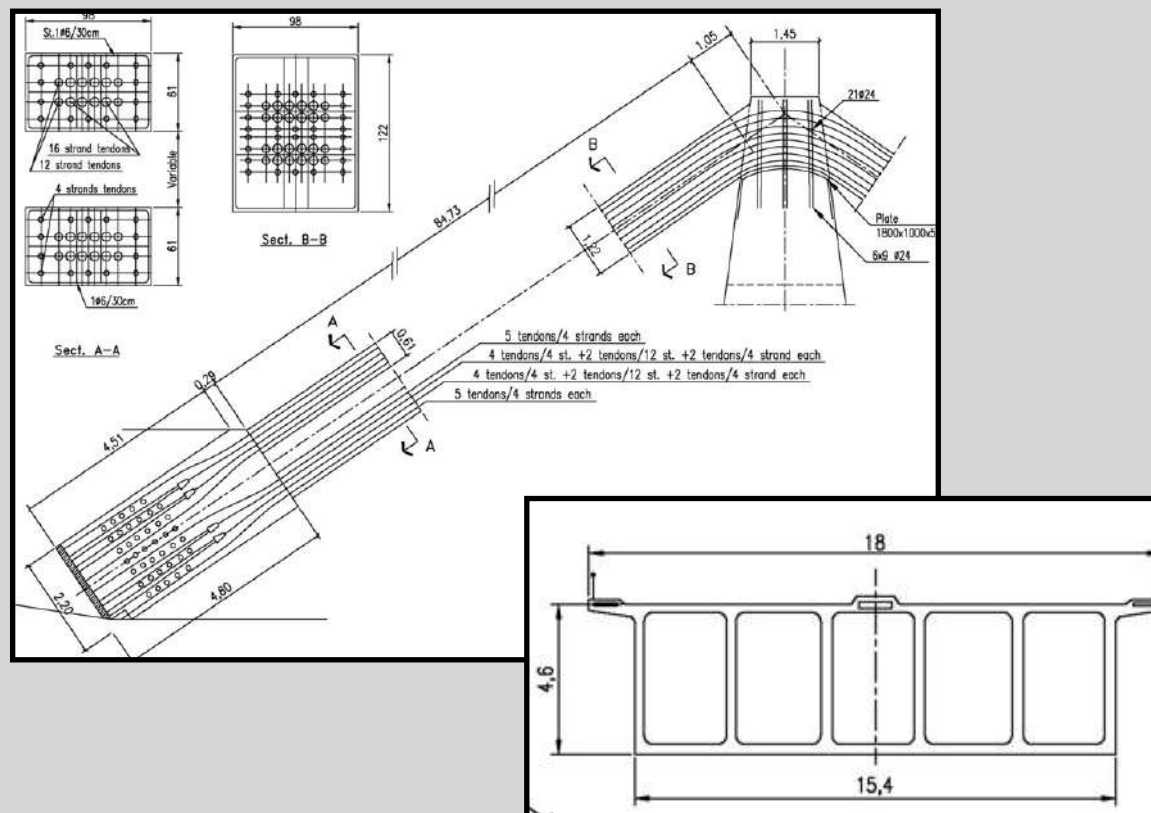
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Inspecting and repairing old bridges: experiences and lessons

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Milan 20133, Italy
Published online: 12 Mar 2013.



SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE



SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE

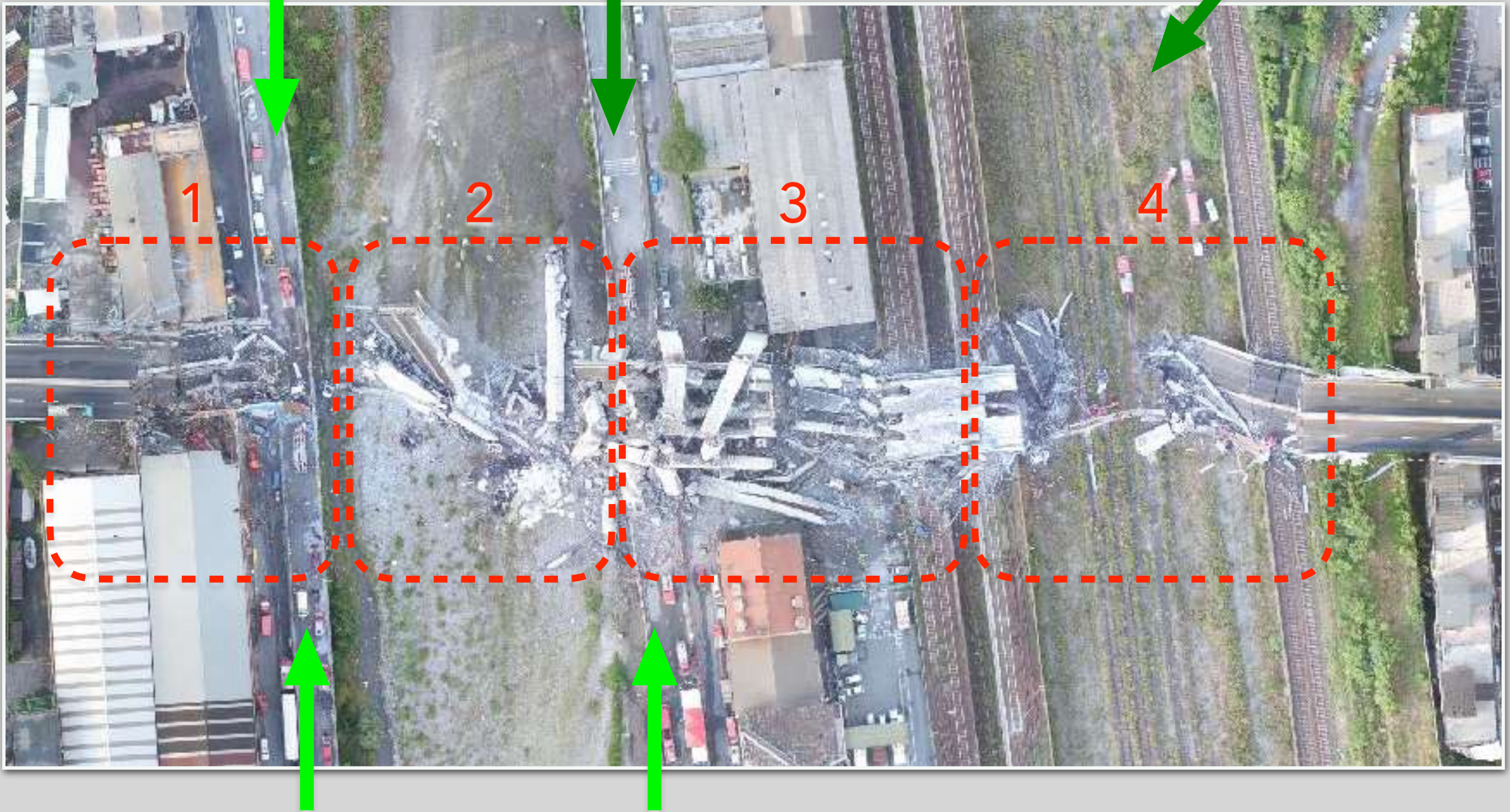


SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE

Accessi primari

Accessi secondari



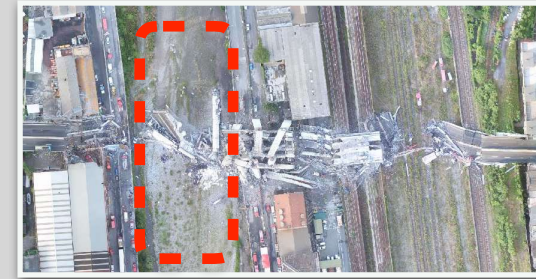
SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE SITE 1



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AUGUST 14 - FIRST RESPONSE SITE 2



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AUGUST 14 - FIRST RESPONSE SITE 3



SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE SITE 4



SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE



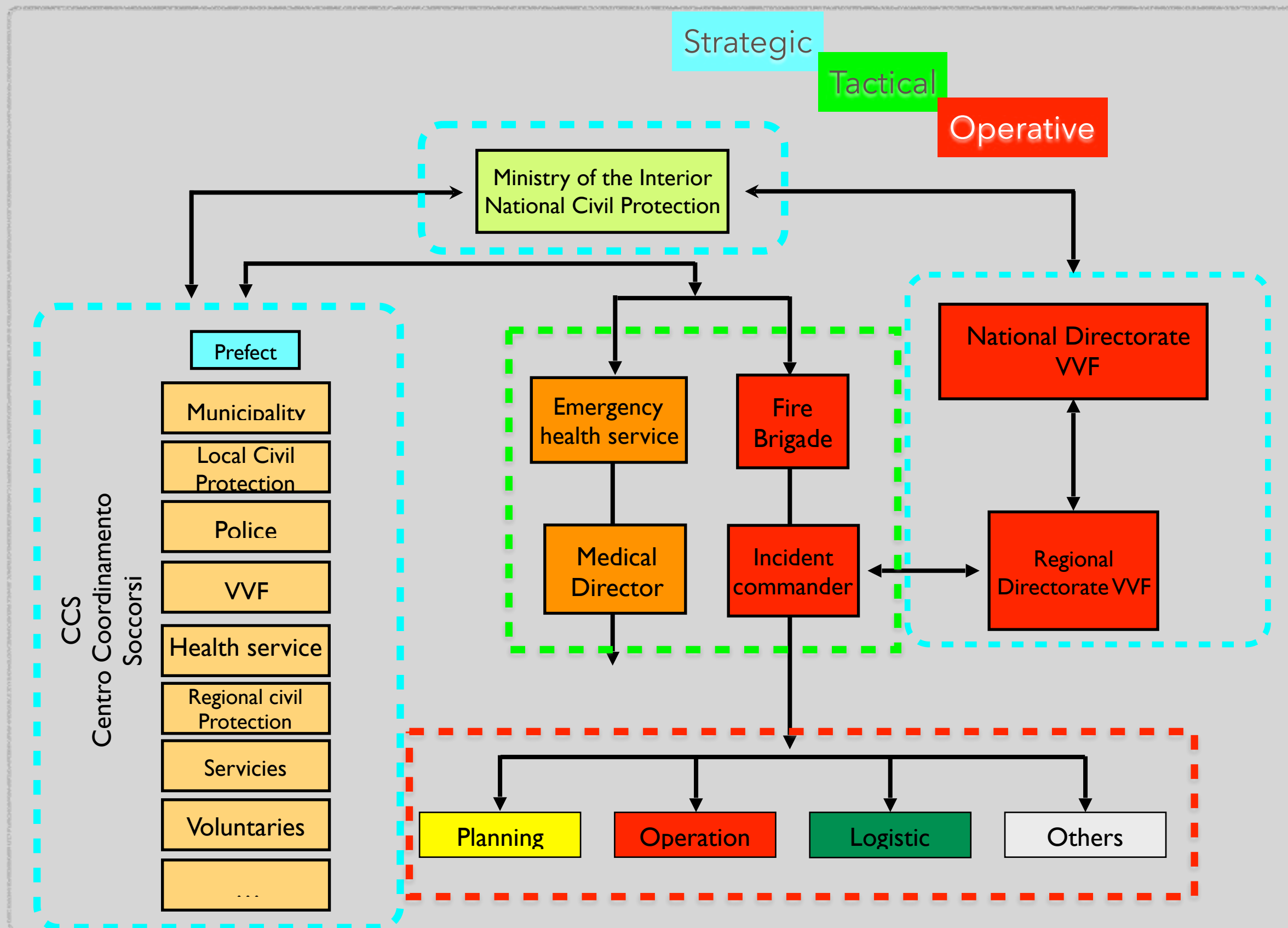
In addition to the fire fighters on the scene there were: more than 100 rescuers from the regional emergency health service, many Police units and citizens

SEARCH & RESCUE

AUGUST 14 - FIRST RESPONSE



Immediately evacuated about 700 people

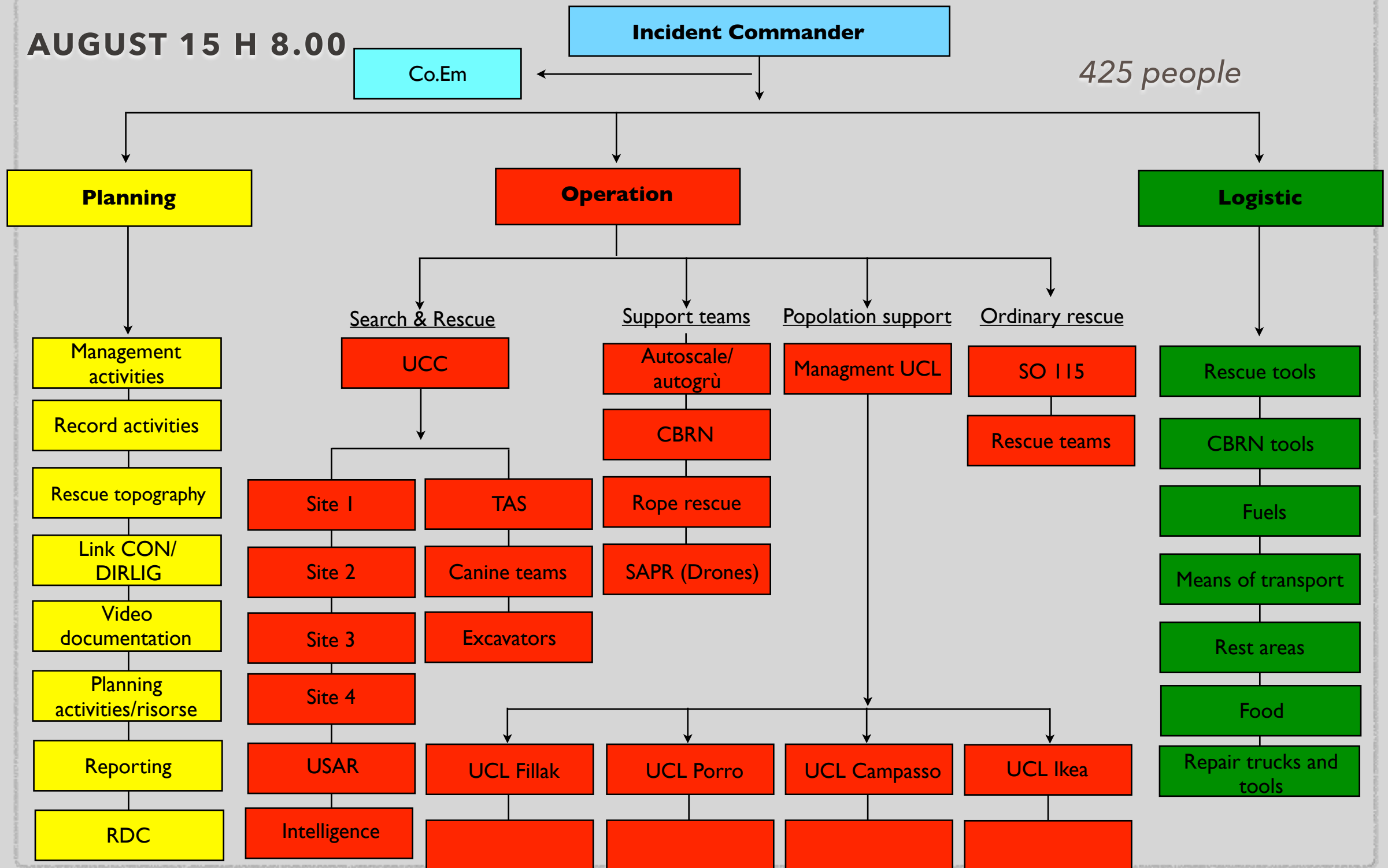


THE COORDINATION CENTER (CCS)



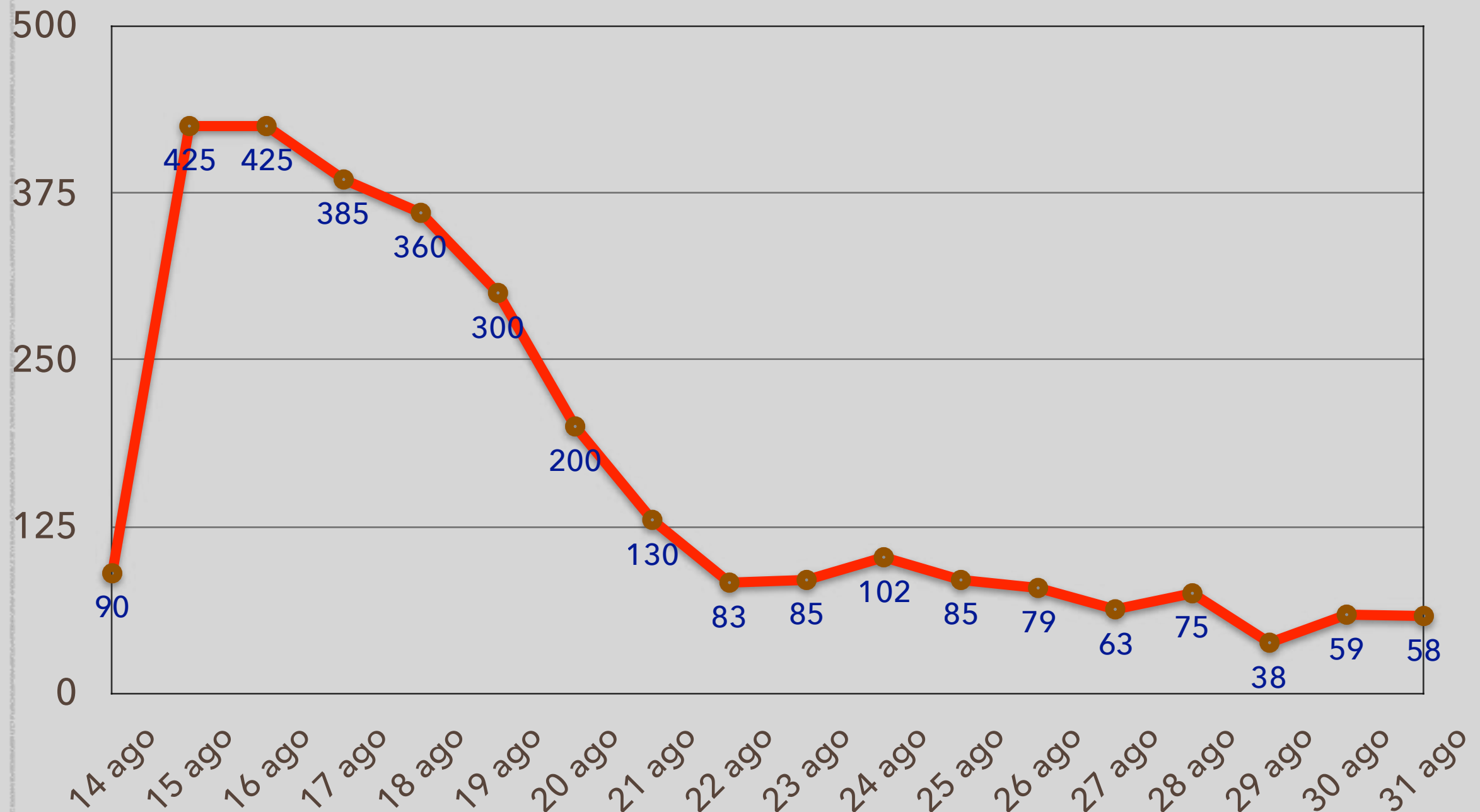
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AUGUST 15 H 8.00



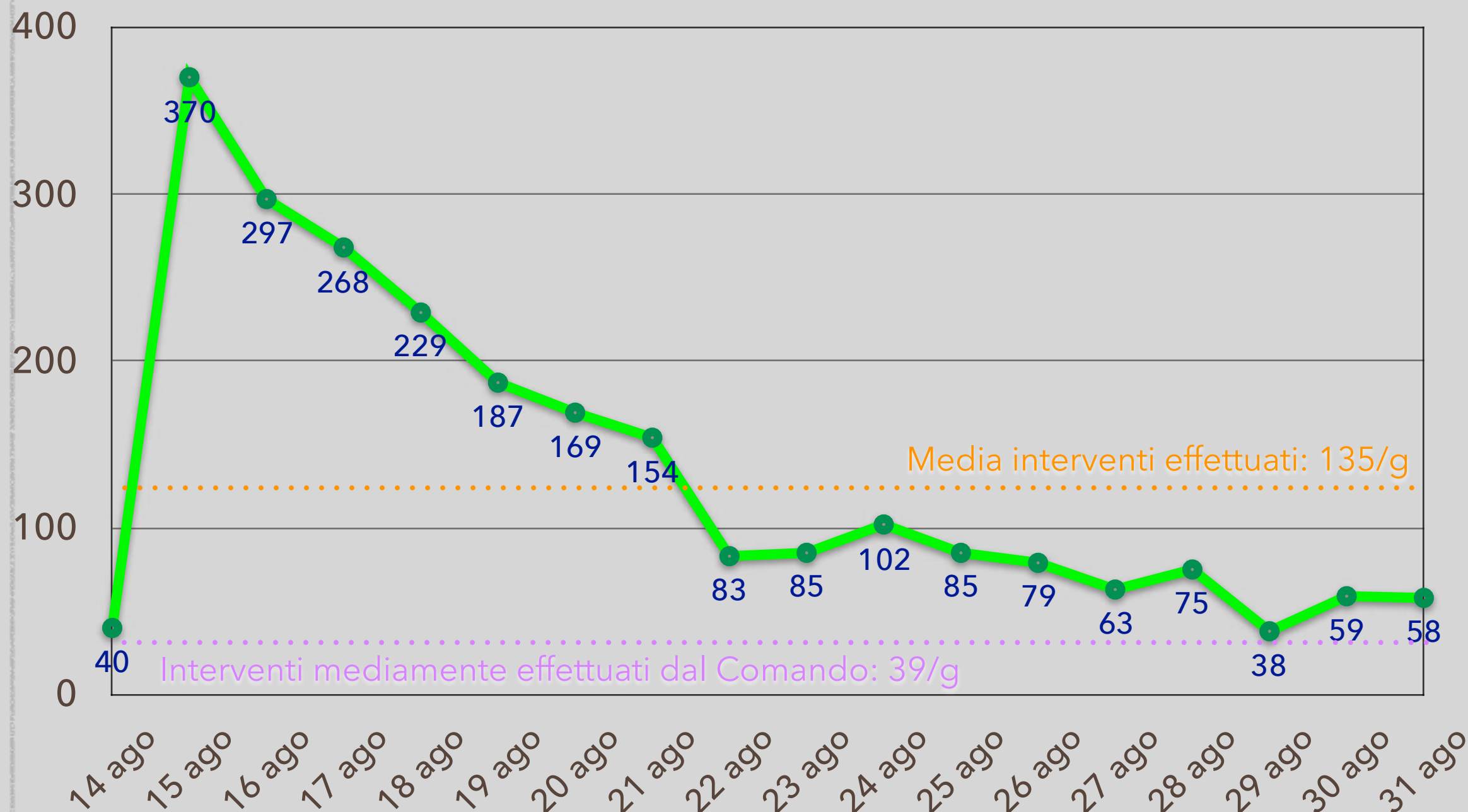
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HUMAN RESOURCES

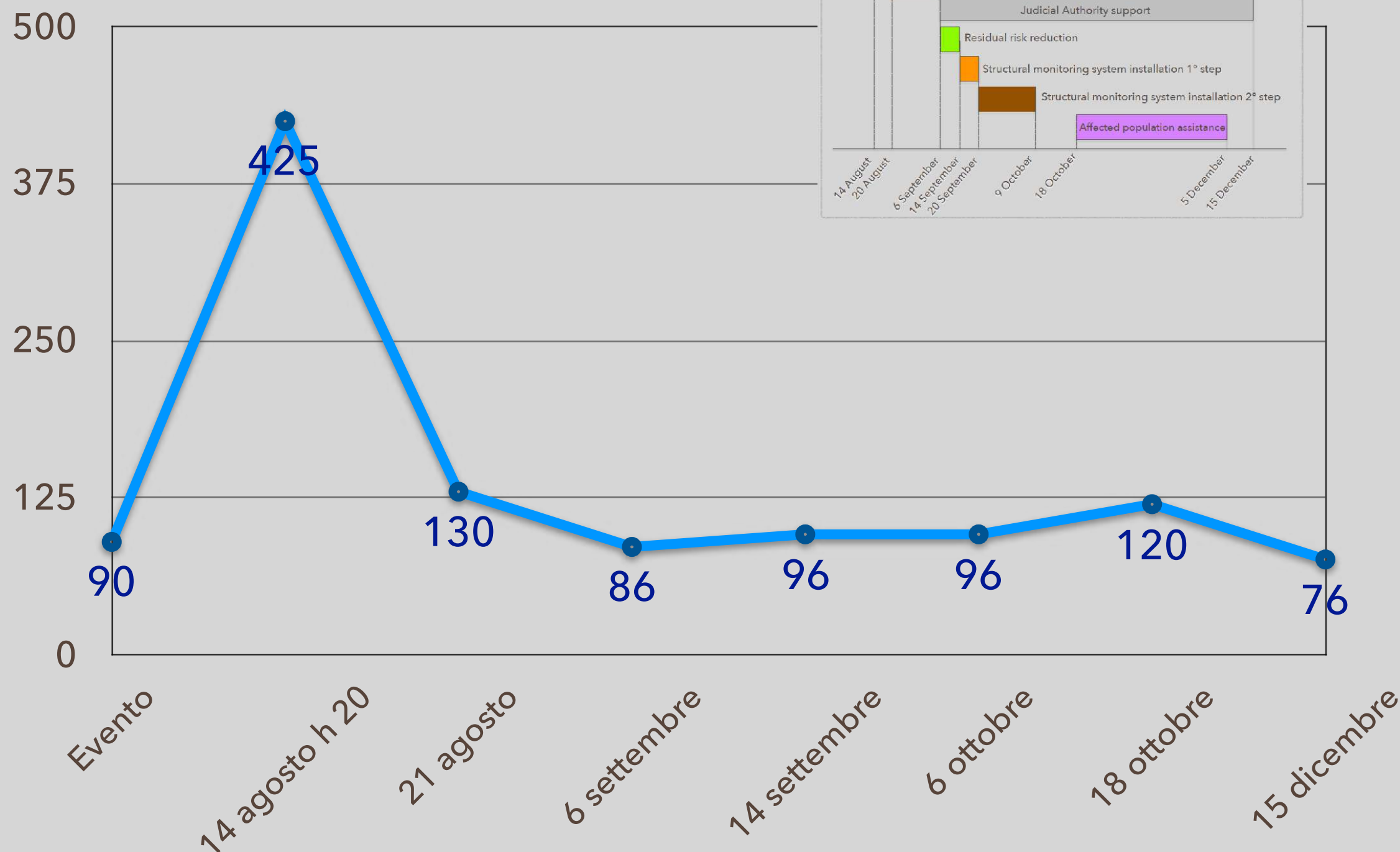


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RESCUE OPERATIONS CARRIED OUT



HUMAN RESOURCES



LESSON LEARNED



The provincial response system, perfected over the years following numerous hydrogeological events, has proved to be functional even for different events.

However being our best expertise, it would be desirable to develop shared projects on models of coordination and response to emergencies in multi risk urban contexts

| | |
|------------------------------|------------|
| SAVED PEOPLE | 16 |
| VICTIMS | 43 |
| EMPLOYED VVF STAFF | 425 people |
| RESCUE OPERATIONS | More 1500 |
| IMMEDIATELY EVACUATED PEOPLE | 700 |