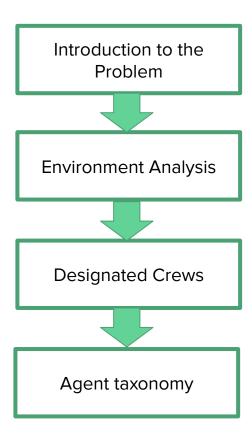
# Design of a MAS for emergency Response Simulation in Urban Environments: Task 1.

MAS 03/11/2024 Pedro Agundez Fernández Pau Baguer Fàbrega Carlos Jiménez Farfán Kacper Krzysztof Poniatowski Niklas Long Schiefelbein

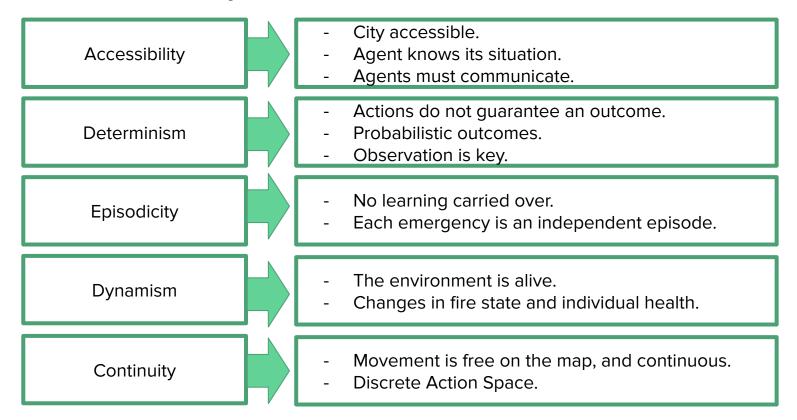
#### Contents

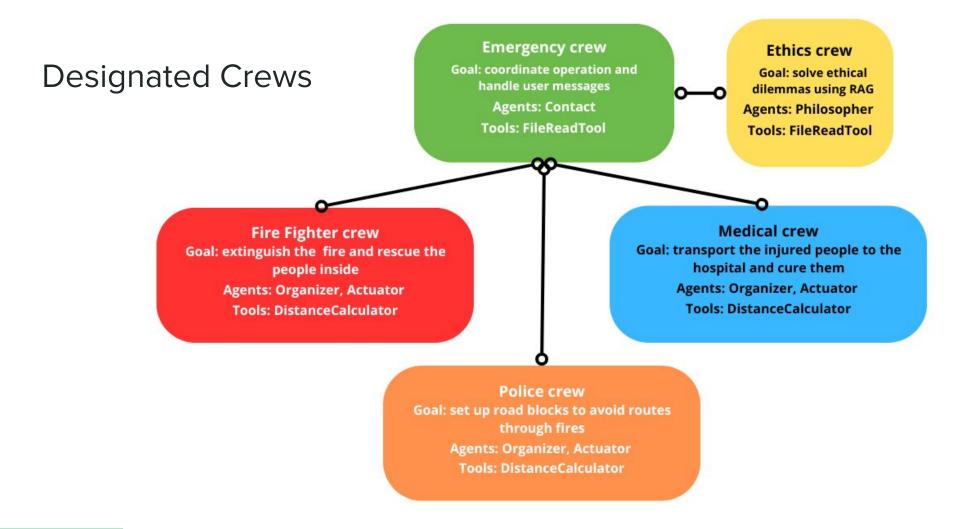


### Introduction to the Problem

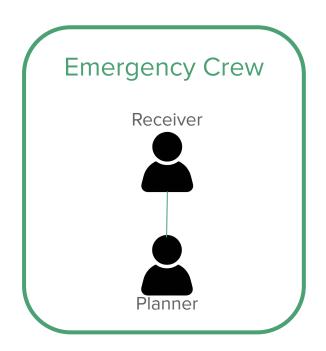


## **Environment Analysis**



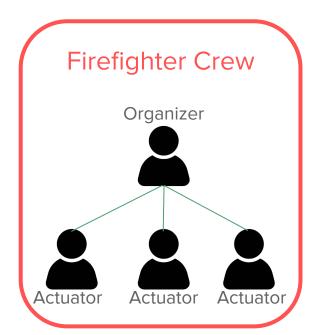


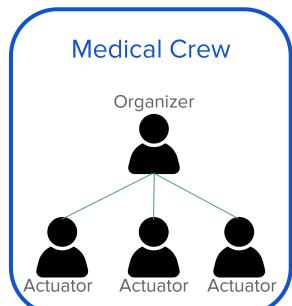
## Emergency & Ethics Agents

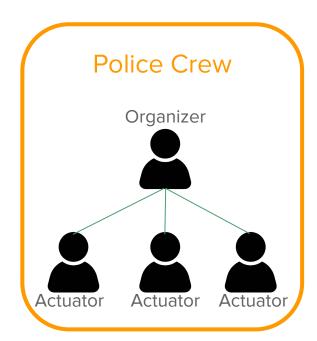


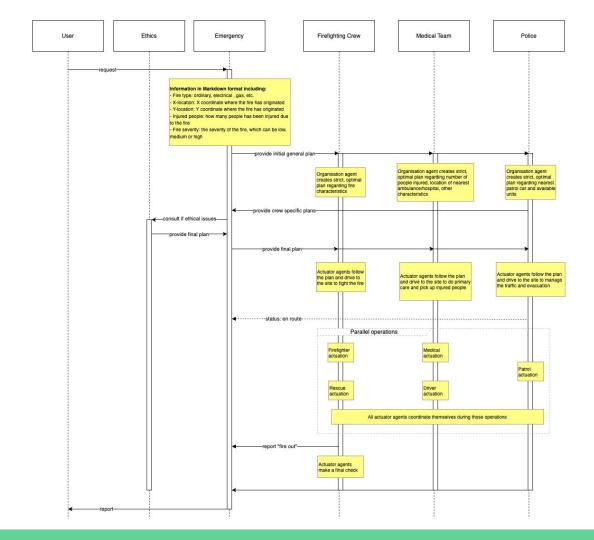


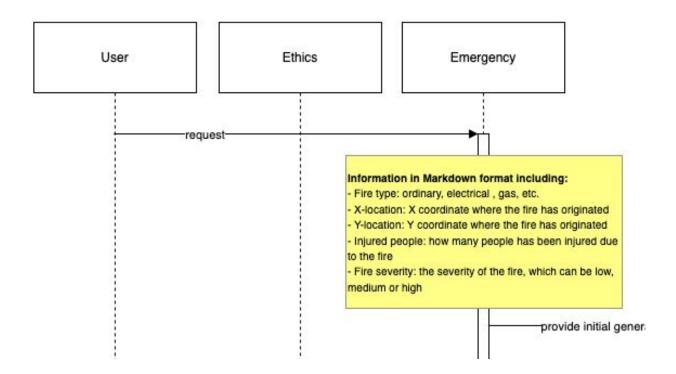
## Firefighter, Medical & Police Agents

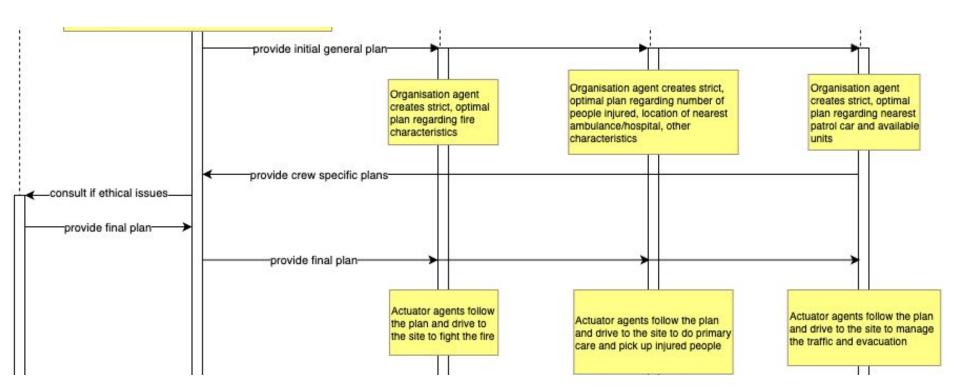


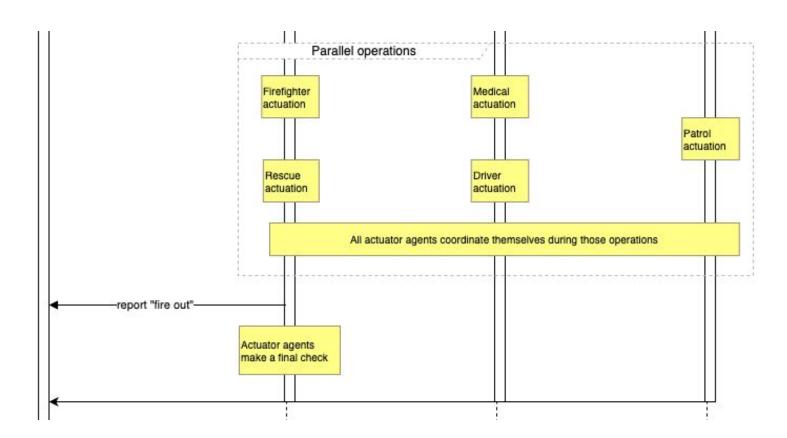












## Agent Taxonomy

|                     | Emergency        | mergency Firefighting Crew |                   | Medical Team          |                   | Police Crew           |                   | Ethics Crew          |
|---------------------|------------------|----------------------------|-------------------|-----------------------|-------------------|-----------------------|-------------------|----------------------|
|                     | Contact<br>Agent | Organization<br>Agent      | Actuator<br>Agent | Organization<br>Agent | Actuator<br>Agent | Organization<br>Agent | Actuator<br>Agent | Philosopher<br>Agent |
| Flexibility         | YES              | YES                        | YES               | YES                   | YES               | YES                   | YES               | YES                  |
| Reactivity          | YES              | YES                        | YES               | YES                   | YES               | YES                   | YES               | YES                  |
| Proactiveness       | NO               | YES                        | YES               | YES                   | YES               | YES                   | YES               | NO                   |
| Social Ability      | YES              | YES                        | YES               | YES                   | YES               | YES                   | YES               | YES                  |
| Rationality         | YES              | YES                        | YES               | YES                   | YES               | YES                   | YES               | YES                  |
| Reasoning           | YES              | YES                        | LESS              | YES                   | LESS              | YES                   | LESS              | YES                  |
| Learning            | NO               | NO                         | NO                | NO                    | NO                | NO                    | NO                | NO                   |
| Autonomy            | HIGH             | HIGH                       | LOW               | HIGH                  | LOW               | HIGH                  | LOW               | HIGH                 |
| Temporal continuity | YES              | YES                        | YES               | YES                   | YES               | YES                   | YES               | YES                  |
| Mobility            | NO               | NO                         | YES               | NO                    | YES               | NO                    | YES               | NO                   |

# Any questions?