









# Multi-Agent Pickup and Delivery<sup>[Li+ AAAI-20]</sup> (MAPD)

# Differences with respect to MAPF

## Input

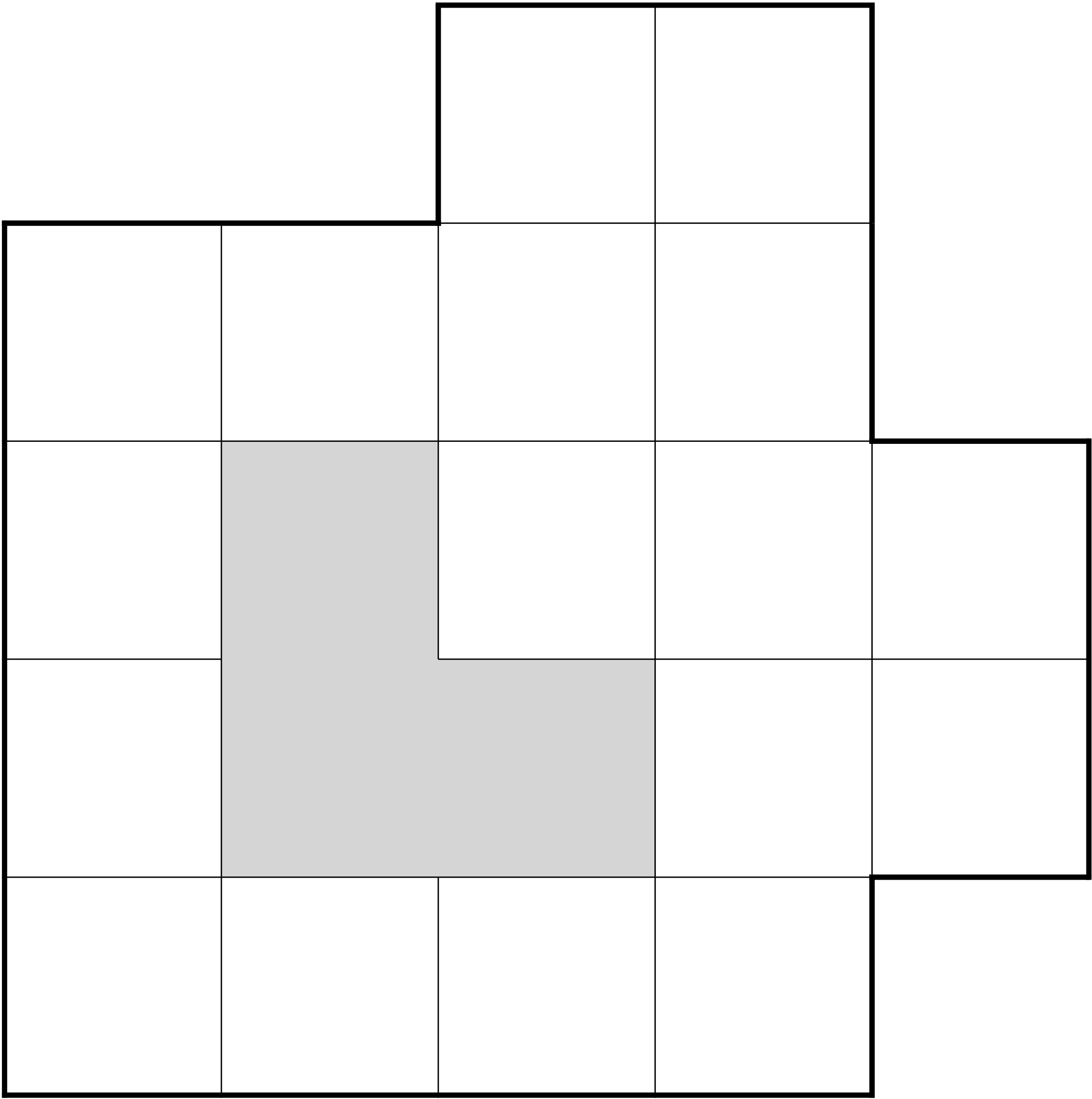
- sequence of goals for each agent

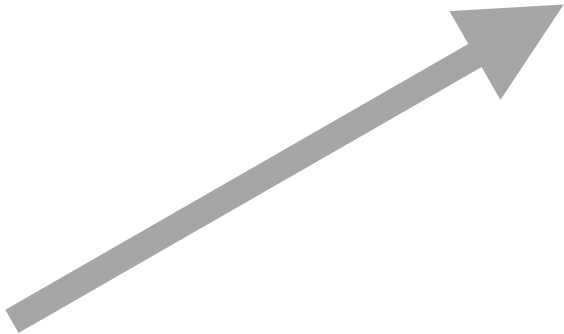
e.g. for agent  $i$  with  $m$  goals:

$$\{\blacksquare_{i1}, \blacksquare_{i2}, \dots, \blacksquare_{im}\}$$

## Constraint

- Online (not all tasks are initially known)







3

1



2

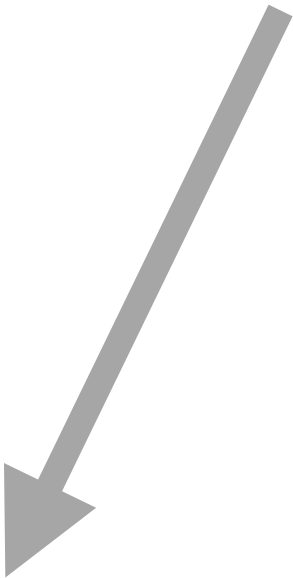


1

2

4









A large orange circle with a white number 1 in the center.

1

A large, solid orange circle is centered on a white background. Inside the circle, the number '2' is written in a bold, white, sans-serif font.

2

1



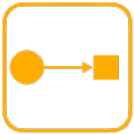
2

3



**4**





# Multi-Agent Pickup and Delivery<sup>[Li+ AAAI-20]</sup> (MAPD)

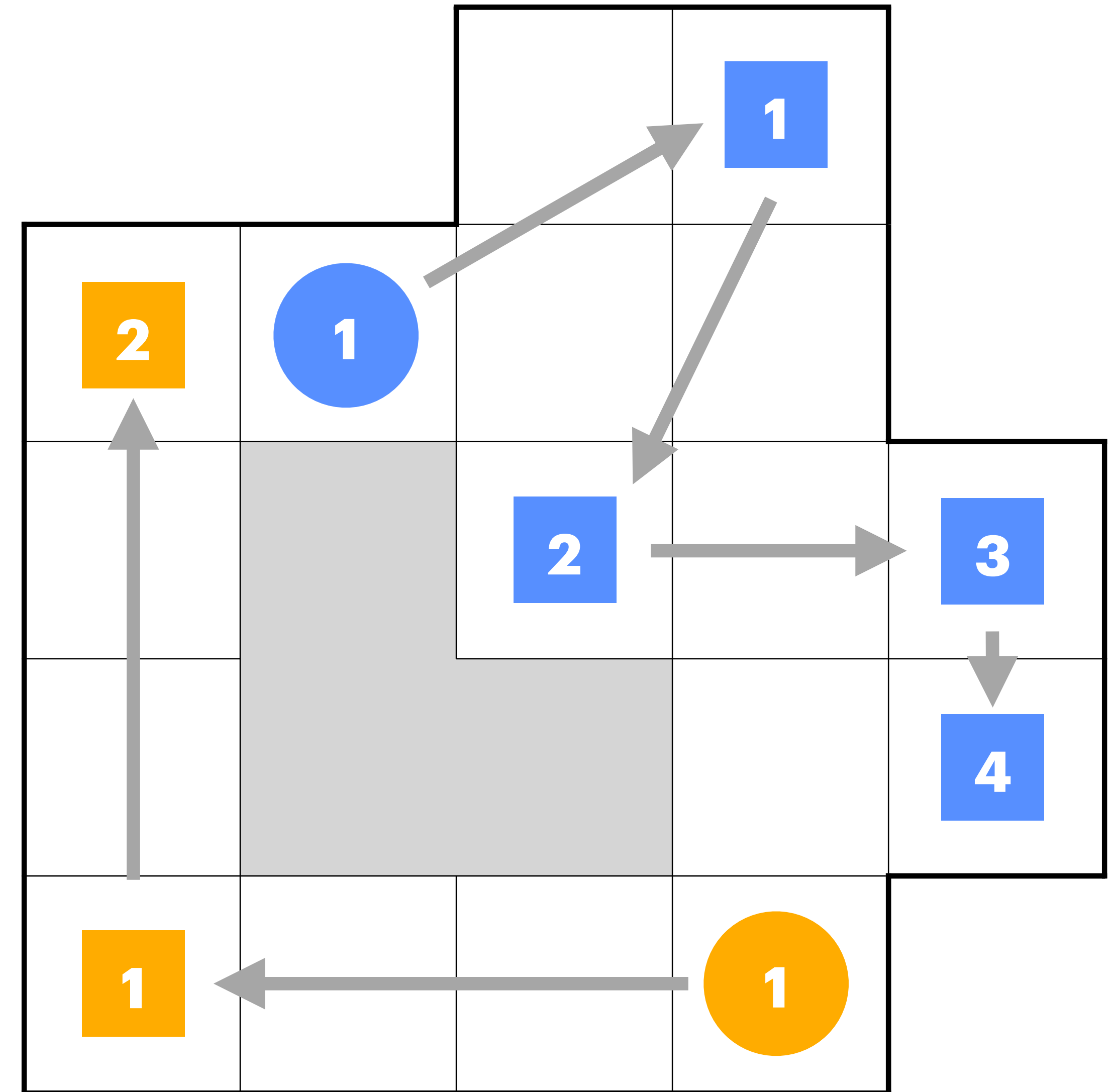
Differences with respect to MAPF 

## Input

- sequence of goals for each agent  
e.g. for agent  $i$  with  $m$  goals:  
 $\{\blacksquare_{i1}, \blacksquare_{i2}, \dots, \blacksquare_{im}\}$

## Constraint

- Online (not all tasks are initially known)



# MAPF / MAPD Conflicts [Stern+ SoCS-19]