

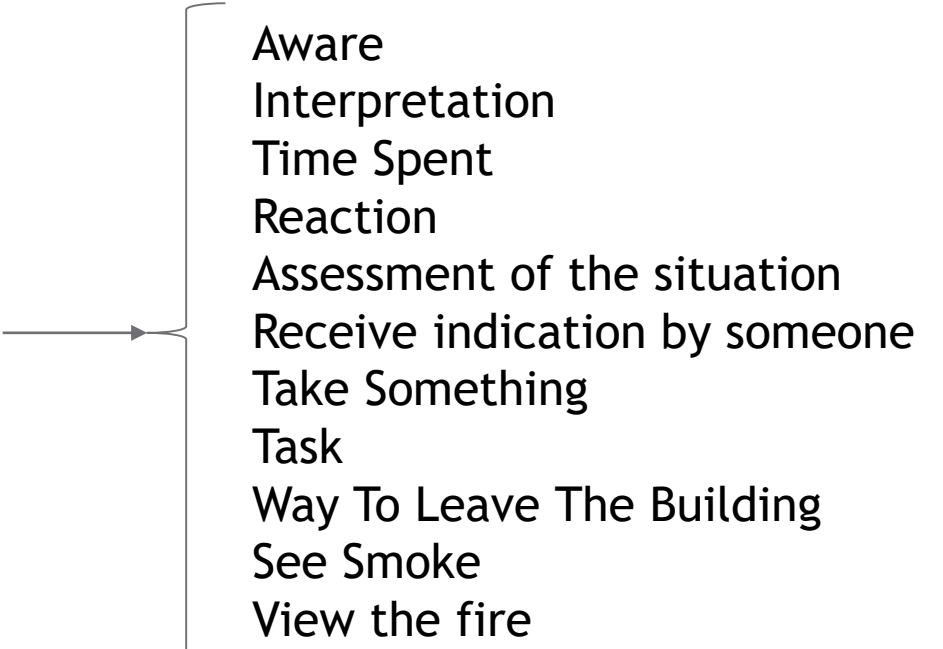
# Comparison between the human reactions in a simulacrum and in a real fire situation

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# Introduction



# INTRODUCTION

It is necessary to train occupants so in an emergency situation they can react appropriately. These trainings are only possible through exercises/fire drills. To understand if human behavior in fire drills reflects possible human behavior in a real fire situation it is necessary to compare the actions and behavior of the occupants in both situations.

The methodology used was based on 3 different surveys.

## SURVEYS

Surveys		Nº of Surveys received
Survey 1	Industry	22
	Residential 1	4
	Residential 2	3
Survey 2	General Opinion	648
Survey 3	Fire drill	141
Total		818

84% were aware of the fire drill.

TYPE 1

29

Distributed among people who were involved in a fire

TYPE 2

648

Distributed to the general population, no selection was made for this distribution

TYPE 3

141

People who took part in a fire drill at two shopping centers

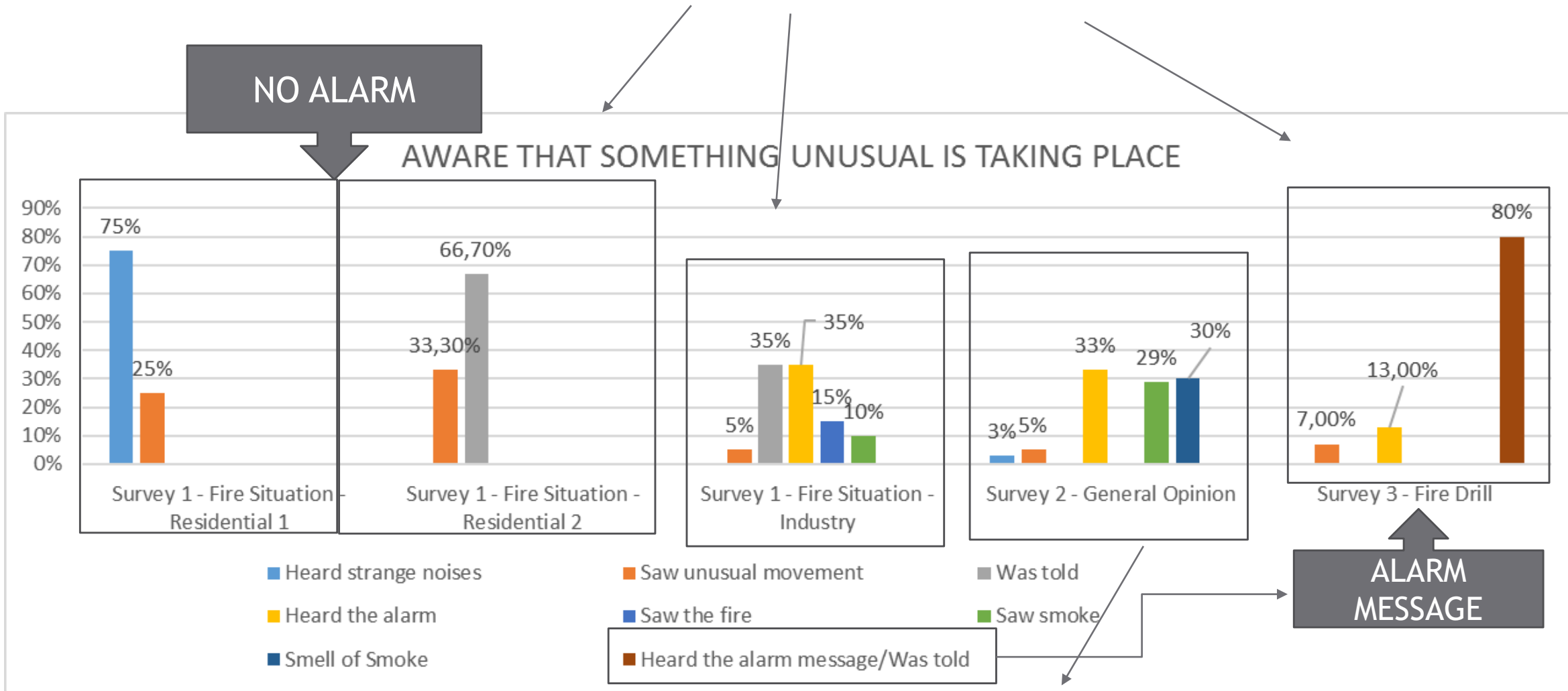
# Summary of the Results of the Study

Comparison of occupant behavior  
between Type 1, Type 2 and Type 3  
Surveys

Aware  
Interpretation  
Time Spent  
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Assessment of the  
situation  
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# AWARE THAT SOMETHING UNUSUAL IS TAKING PLACE

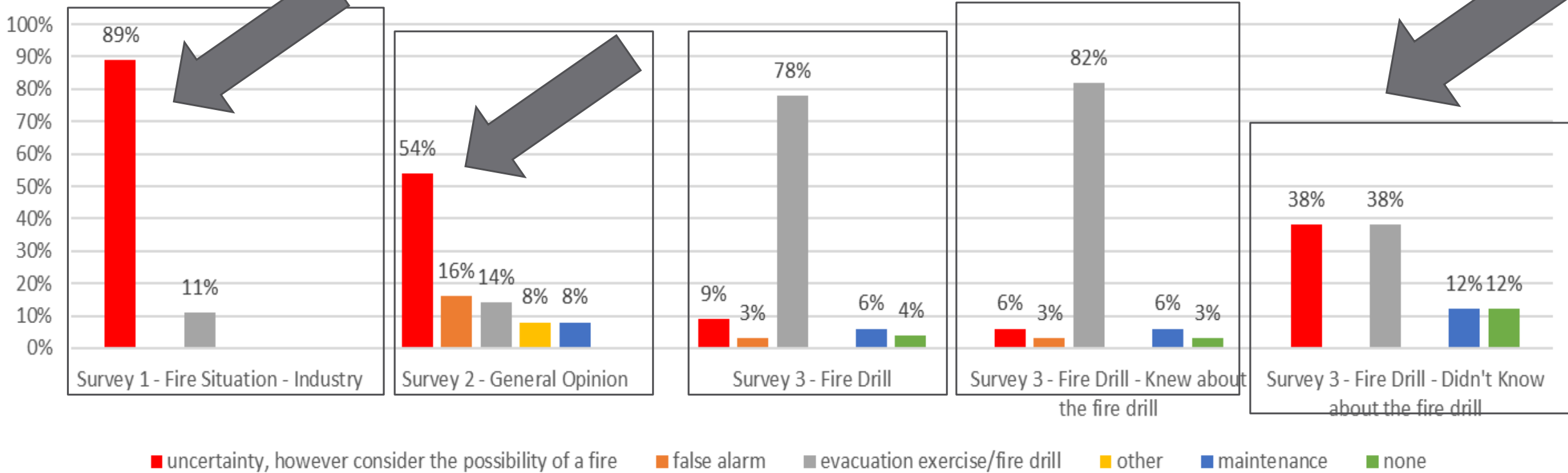
*"How did you know that something unusual was happening?"*



*What mainly caught your attention?*

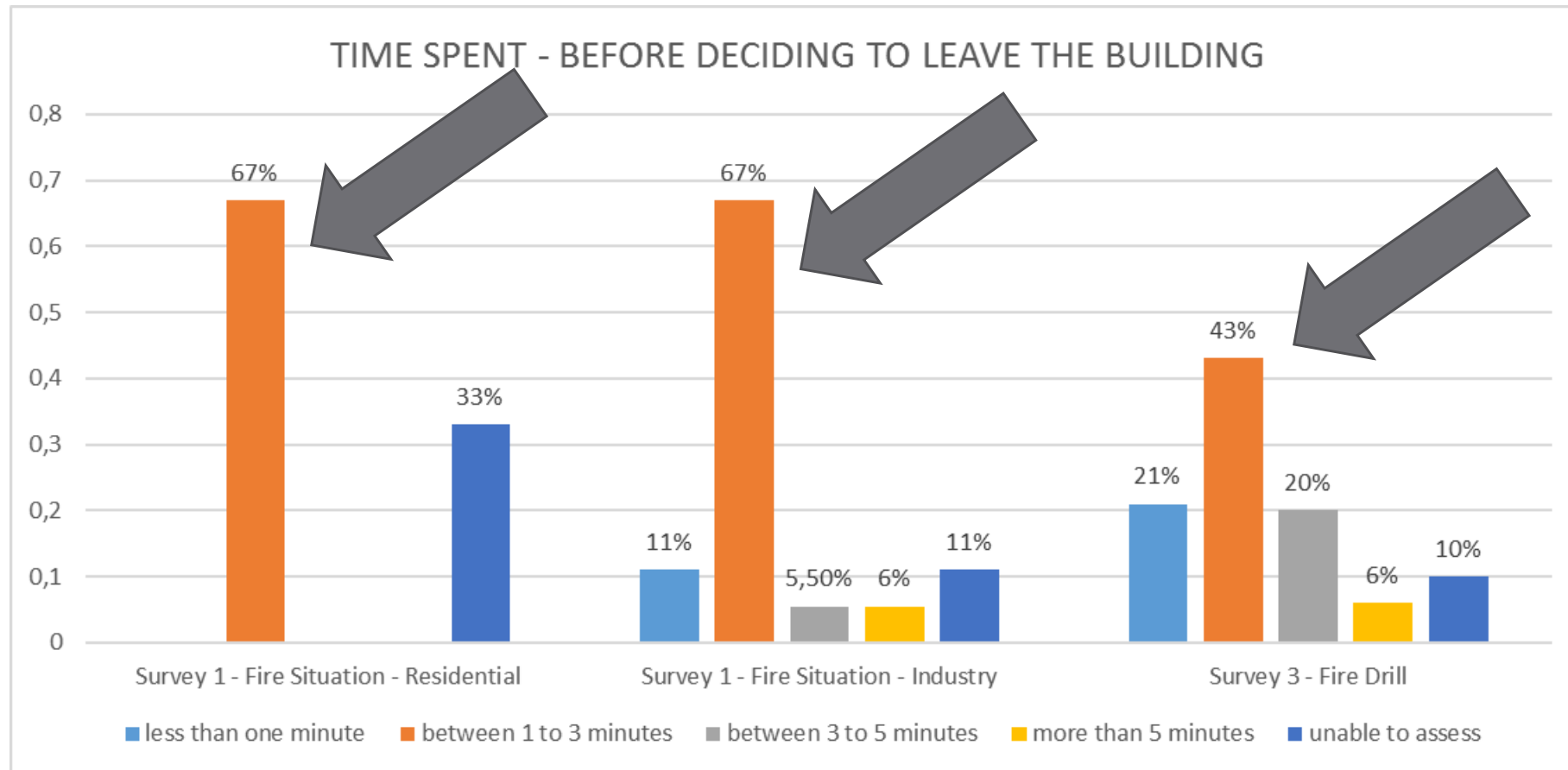
# THE ALARM SIGNAL INTERPRETATION

## THE ALARM SIGNAL INTERPRETATION



# TIME SPENT - BEFORE DECIDING TO LEAVE THE BUILDING

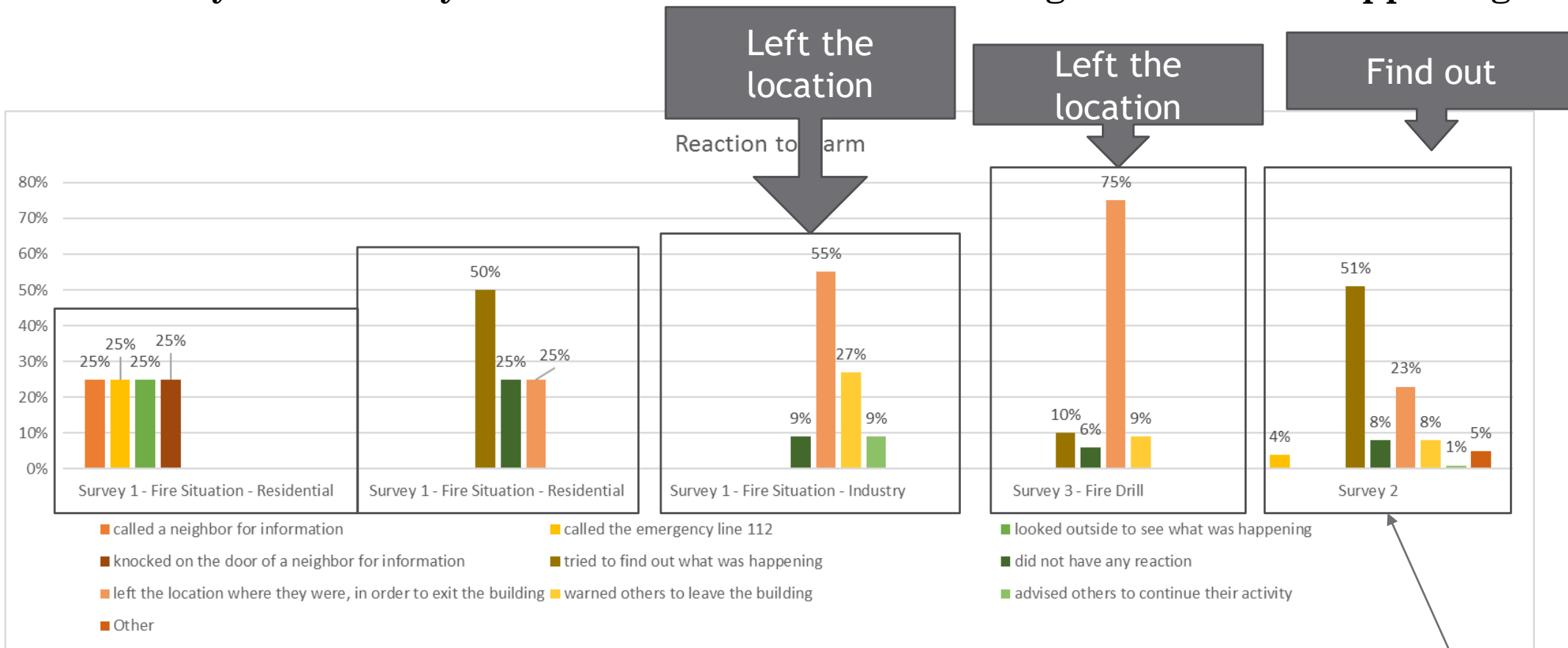
*“How much time passed between the moment you became aware that something unusual was happening and the moment you decided to leave the building?”*





# Reaction to alarm

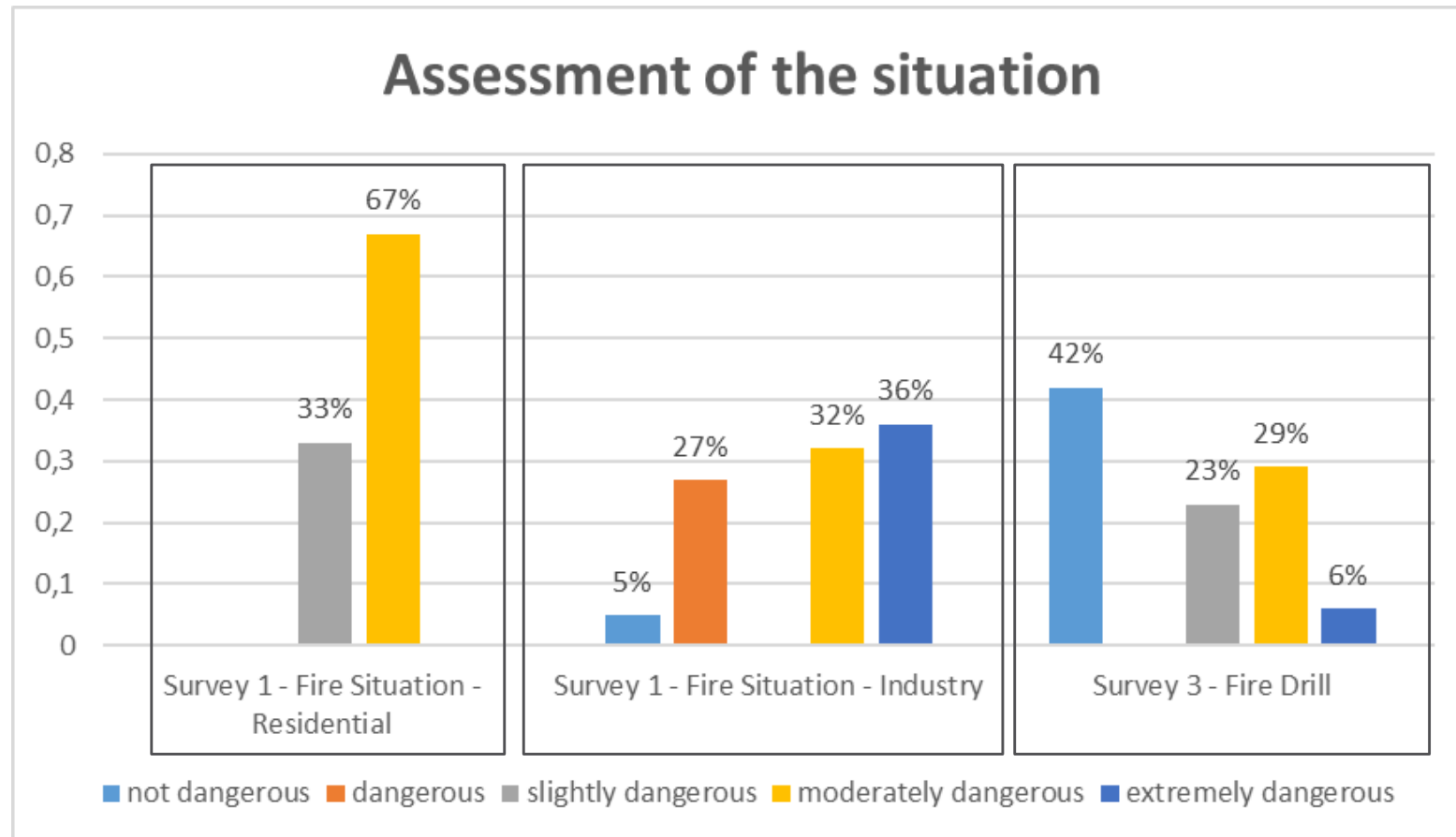
“What did you do once you became aware that something unusual was happening?”



“What is usually your reaction to the alarm?”

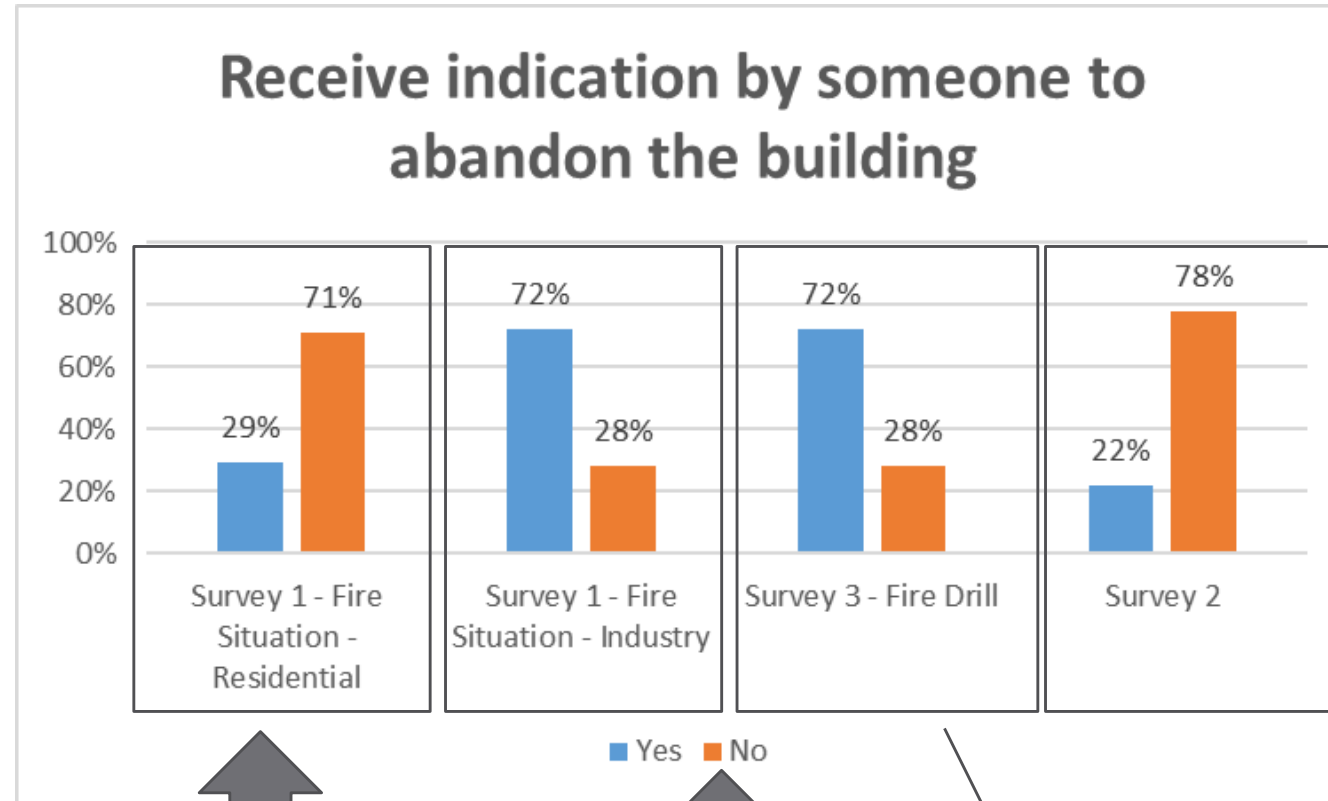
# Assessment of the situation

“How dangerous do you think the situation was?”



# Receive indication by someone to abandon the building

“Did you decide to abandon the building because someone told you to?”



*“Would you leave the building in case someone told you to?”*

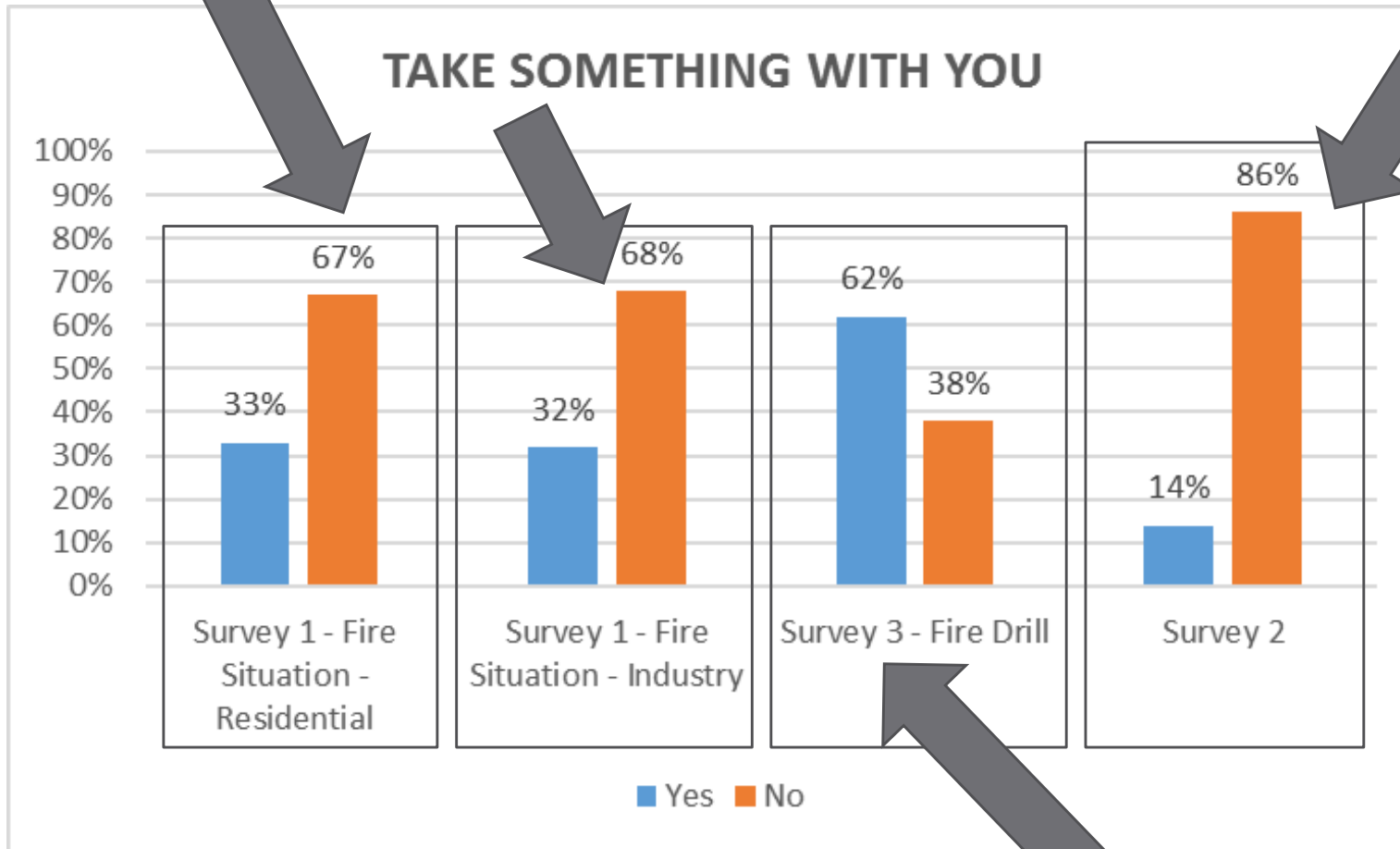
No Security staff

Both with Security staff

The message indicated to leave the building

# TAKE SOMETHING WITH YOU

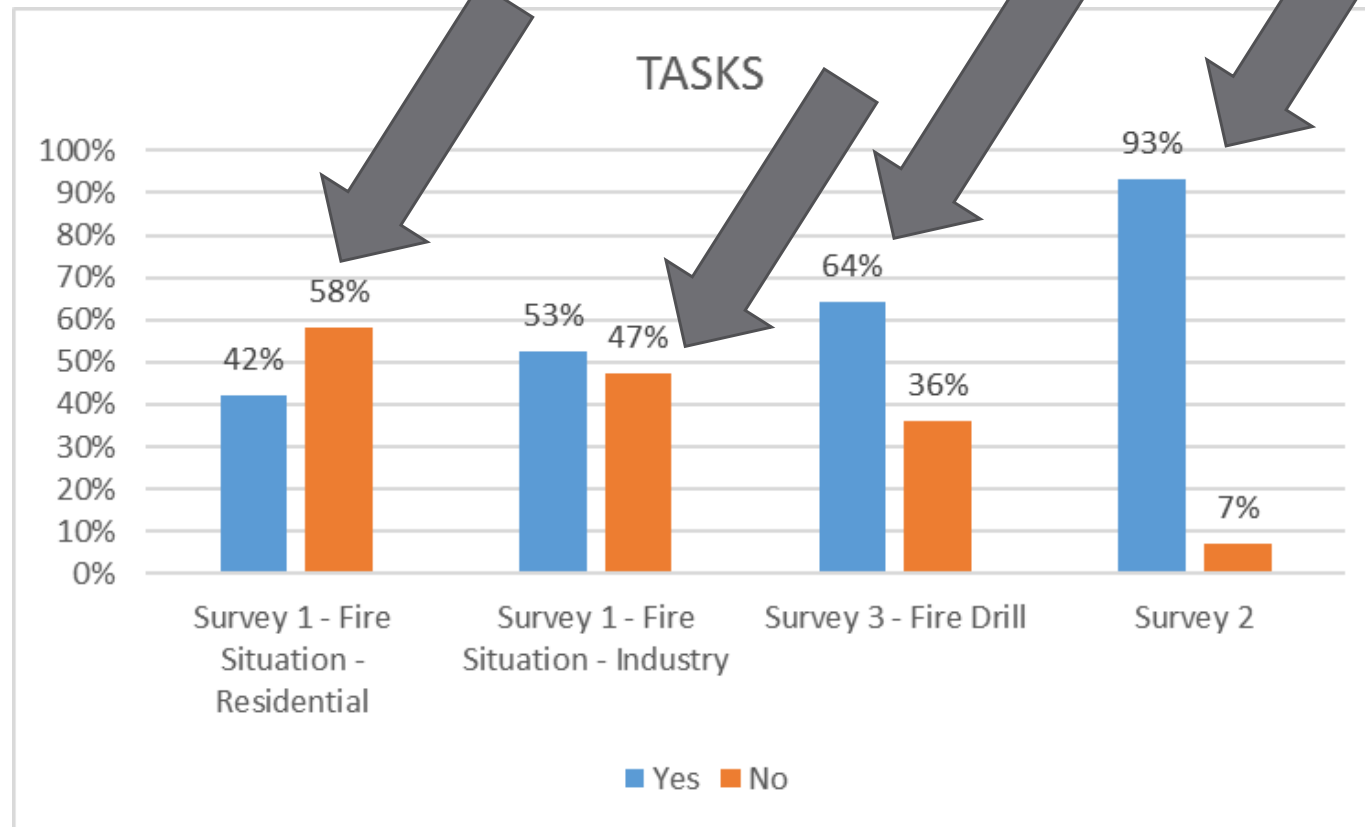
*"When you decided to leave the building, did you take anything with you?"*



*"Before leaving the building would you try to collect personal belongings?"*

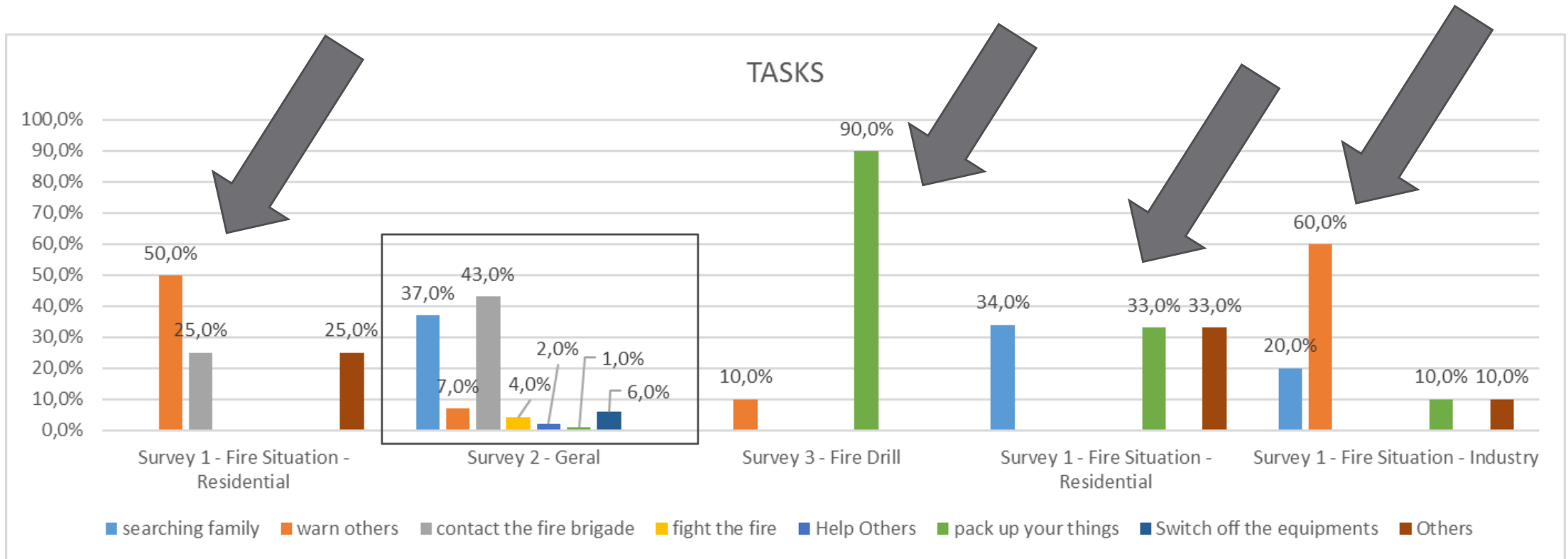
# TASK

*"Before deciding to abandon the building did you perform any of the following tasks (look for family members, warn others, contact the fire brigade, fight the fire, help others, pack your things)?"*



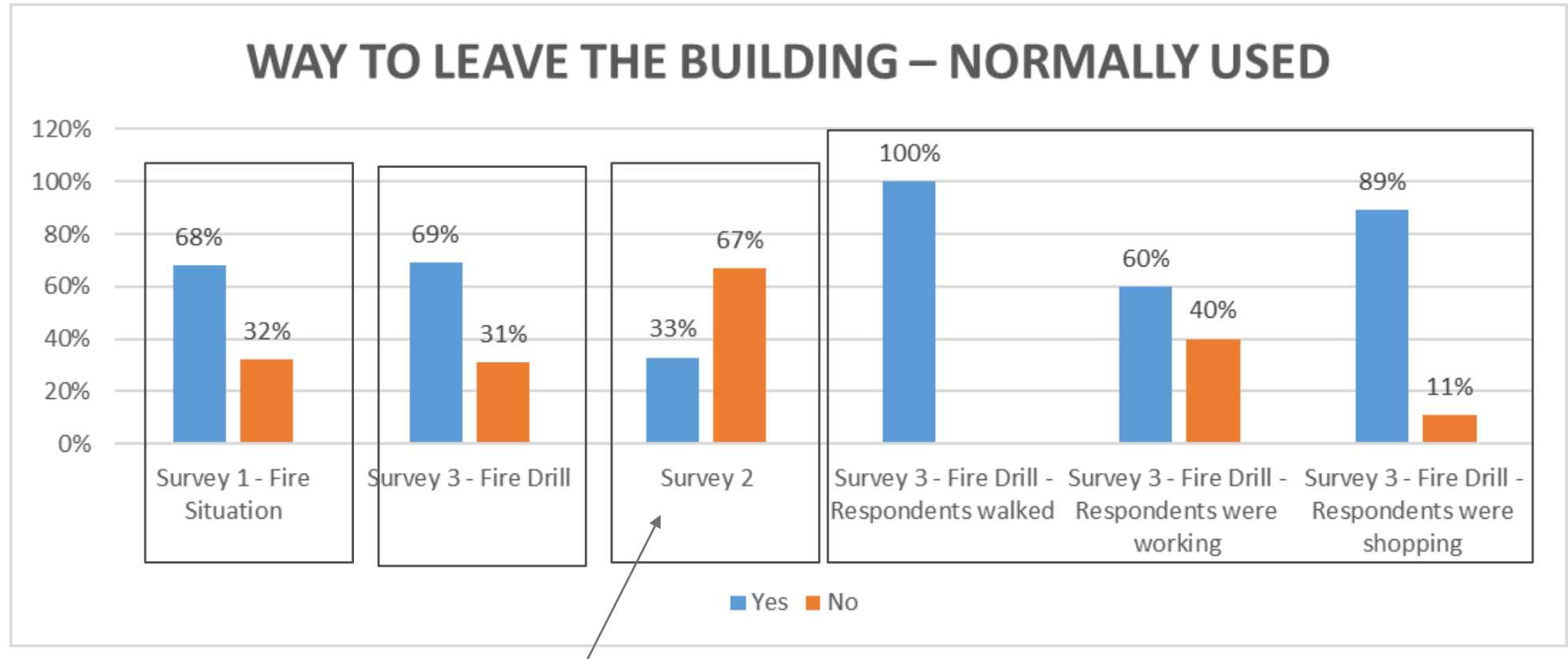
# TASK

**"Before deciding to abandon the building did you perform any of the following tasks (look for family members, warn others, contact the fire brigade, fight the fire, help others, pack your things)?"**



# WAY TO LEAVE THE BUILDING - NORMALLY USED

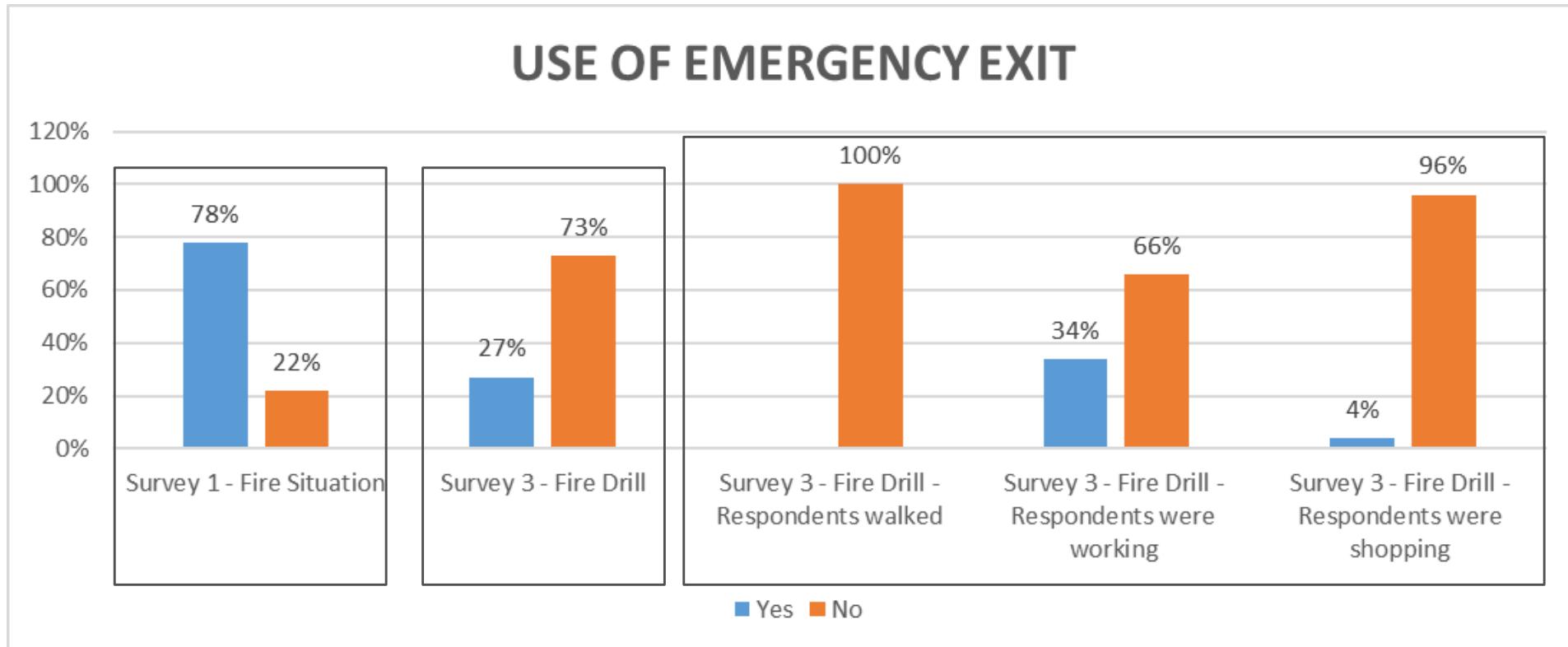
“To leave the building did you use the way you normally use?”



“If you were in a building, which path would you use to exit the building?”

# WAY TO LEAVE THE BUILDING - USE OF EMERGENCY EXIT

“To leave the building did you use an emergency exit?”

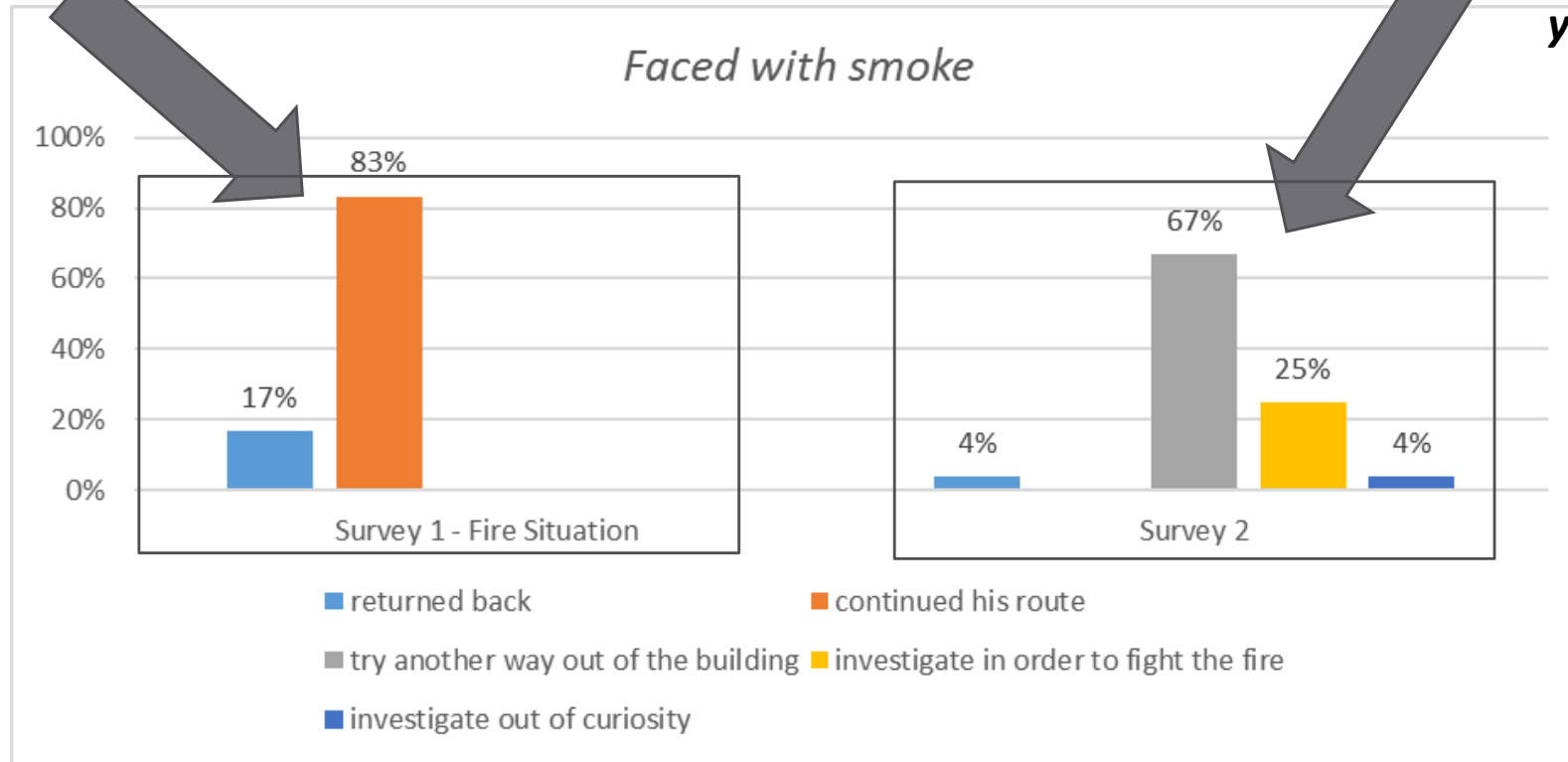




# FACED WITH SMOKE

*Reaction of the occupants when faced with the smoke*

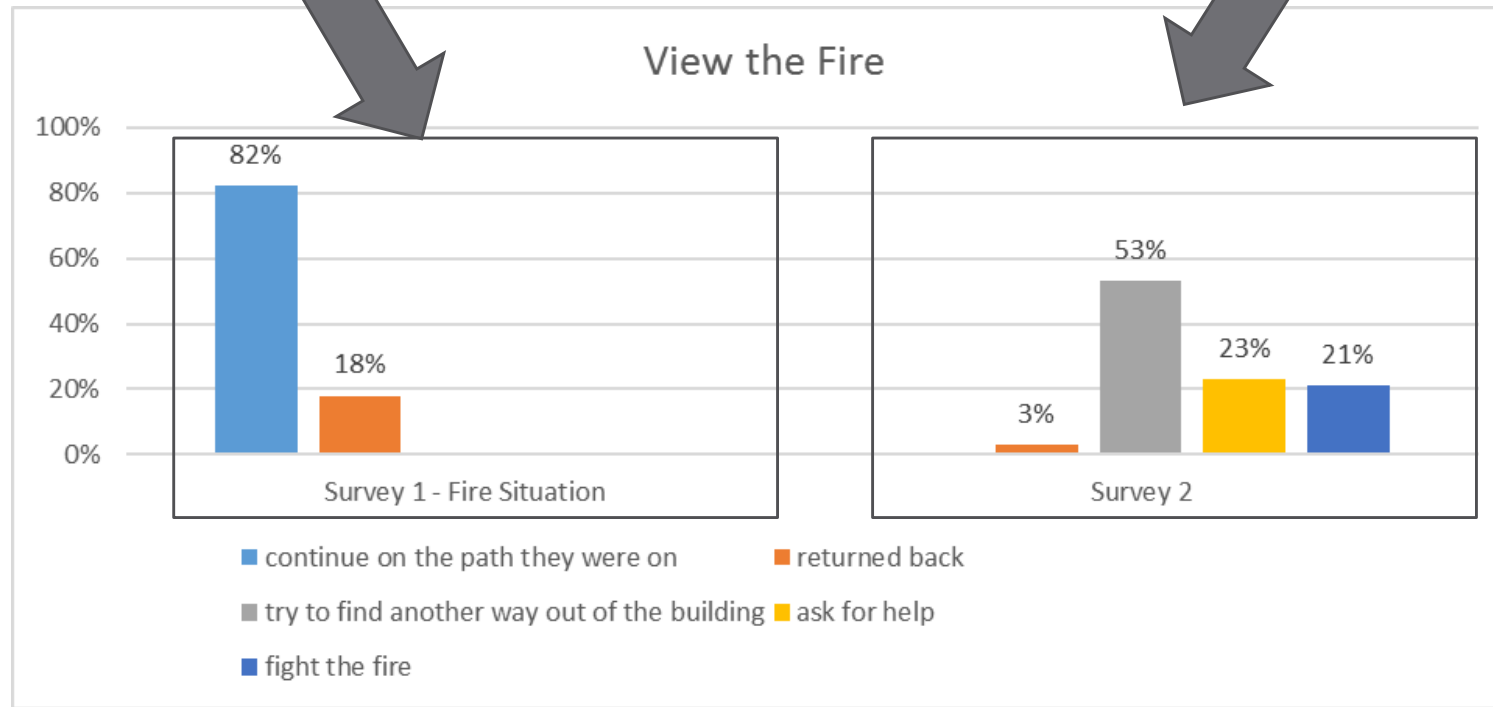
*“If you were faced with smoke when trying to leave the building, what would your reaction be?”*



# View the Fire

*Reaction of the occupants when faced with the fire*

*“If you were leaving the building and you were faced with the fire. What would your first reaction be?”*

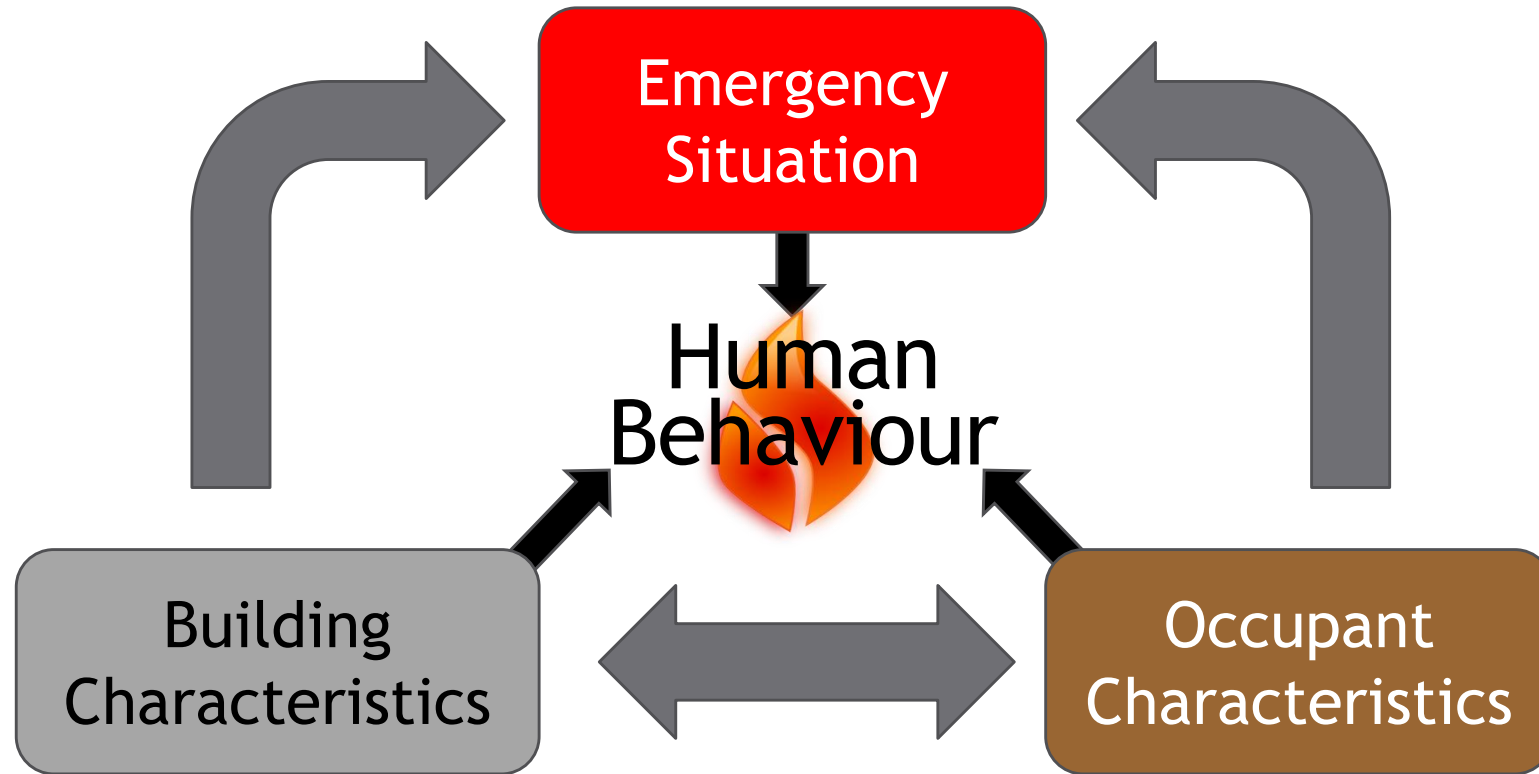


Conclusion

# Conclusion

- Having in mind the conditionality, some of the observed tendencies have been observed as follows:
  - The behavior of occupants can depend on their knowledge of the situation as well as their assessment of it;
  - When the alarm is heard sometimes it is not enough to decide to leave the building;
  - Before leaving the building the occupants perform several tasks, the main tasks are “look for family” or “warn others” as well as “take personal items”;
  - In order to leave the building, occupants tend not always to use the most appropriate way, giving preference to the normal path they used to enter the building;
  - In a fire drill, the behavior of the occupants may be different compared to a real fire situation.

# Conclusion



Thank You!

