H-GAC ITS Strategic Plan - First Responders Survey

First Responders Needs and Priorities Survey

Intelligent Transportation Systems (ITS) are advanced technologies that transportation agencies, organizations, and operators can use to improve the operations, management, and performance of the transportation network. Intelligent Transportation Systems can help emergency responders to quickly identify crashes/breakdowns and ensure agency coordination so that the closest available and most appropriate emergency unit can be dispatched to minimize clean-up and medical response time.
This survey is intended to identify the technologies or concepts that would be most useful and compatible with the needs and goals of the Houston Region emergency units.

You may contact the following individuals with any questions about the survey.

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Video Communications

Cell phone cameras or similar video technologies can be provided to first responders to send photographs or video of the incident site to the dispatch center. These photographs or video of the incident site can be used to understand the nature and scale of the emergency / incident. For example, if a hazardous material is leaking; nature of the material and rate of leakage would help determine the equipment and personnel required at the site. Medical responders can use this technology to relay the victim's condition and be advised on medicines to be given while at the site or in transit from site to medical facility.

1. In your opinion, are video communications important for relaying the correct incident information to dispatch centers?

- ◯ Not Important
- ◯ Somewhat Important
- ◯ Important
- ◯ Moderately Important
- ◯ Very Important

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Automatic Vehicle Location Systems

Automatic vehicle location systems relay the positions of emergency vehicles to a central location, allowing dispatchers to:

- Quickly find the closest available unit to respond to a call
- View all vehicles as they travel emergency routes and evaluate the route's efficiency
- Adjust directions to accommodate traffic conditions

2. Could the use of Automatic Vehicle Location systems help reduce response times for your agency?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

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Traffic Management Systems

Standard Intelligent Transportation Systems for freeway and traffic management, including loop detector systems, Closed Circuit Television systems, and lane and ramp control systems, can be adapted to utilize their capabilities to facilitate incident response through congested traffic behind the incident or in contra-flow downstream from the incident. Such response would also be safer for responders and travelers, reducing the likelihood of occurrence of secondary incidents caused by responding units threading their way through congested traffic or head-on crashes with units responding contra-flow from downstream.

3. In your opinion, will traffic management systems help reduce response times?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

4. Would you like the use of traffic management technology to clear the way for emergency vehicles to travel through congested traffic or in contra-flow?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

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Center-to-Center Communications

Center-to-center communications is the exchange of data between computers physically located in different transportation management center facilities (e.g., traffic management centers, transit management centers, emergency management centers, and parking management centers).
For example, responders can convey the clearance and cleanup time for an incident to the dispatchers, who in turn provide that information to the traffic management center and transit agencies. Traffic management centers can provide information about traffic conditions on possible routes to the to the incident site and thus help decide the best route to reach the incident site.

5. In your opinion, how important is it to receive and communicate information about traffic conditions between various centers?

- ◯ Not Important
- ◯ Somewhat Important
- ◯ Important
- ◯ ModeratelyImportant
- ◯ Very Important

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Route Guidance for Emergency Vehicles

Route guidance for emergency vehicles can help you avoid closed railroad crossing gates, construction closures etc. It is different from the in-vehicle navigation systems available in most passenger vehicles.

6. Would you like to have emergency route guidance capability to reach incident sites in the shortest possible amount of time?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

7. Would you like the emergency route guidance capability in-vehicle?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

8. Would you like the emergency route guidance capability at the dispatch center?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

9. If the route guidance capability is at the dispatch center, how should dispatchers provide you route directions?

- ◯ Verbal
- ◯ Map display in your vehicle
- ◯ Both

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Signal Preemption for Emergency Vehicles

This capability preempts traffic signals on an emergency vehicle's route so that emergency vehicle almost always gets a green signal.

10. Would you like to have the signal preemption capability?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

11. Would you like the signal preemption capability in your vehicle?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

12. Would you like the signal preemption from the dispatch center?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

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Advanced Automated Collision Notification Systems

Advanced automated collision notification systems use vehicle-mounted sensors and wireless communication to notify emergency personnel and provide them with valuable information on the crash, including location, crash characteristics, and possibly relevant medical information regarding the vehicle occupants.

13. In your opinion, how important are advanced automated collision notification systems?

- ◯ Not Important
- ◯ Somewhat Important
- ◯ Important
- ◯ Moderately Important
- ◯ Very Important

14. Would you like access to the information provided by advanced automated collision notification systems?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

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Early Warning Systems

Early warning systems help detect large-scale emergencies due to natural disasters such as hurricanes, earthquakes, floods etc. and due to man-made disasters such as HAZMAT incidents and acts of terrorism involving chemical, biological, or radiological weapons attacks. These systems monitor alerting and advisory systems, sensors and surveillance systems, field reports, and emergency call-taking systems to identify emergencies and notify all responding agencies of detected emergencies.

15. Should your vehicle be capable of detecting emergency information directly from the early warning systems?

- ◯ Definitely Not
- ◯ Maybe Not
- ◯ Possibly
- ◯ Probably
- ◯ Most Definitely

16. Prioritize the following Intelligent Transportation System concepts as applied to incident/emergency management. For more information on these concepts, you can refer to the text below the question.
Please rank from 1 to 8, without duplication, in terms of importance.

	Priority Rank
i. Video Communications	
ii. Automatic Vehicle Location Systems	
iii. Traffic Management Systems	
iv. Route Guidance for Emergency Vehicles	
v. Signal preemption for Emergency Vehicles	
vi. Advanced Automated Collision Notification Systems	
vii. Early Warning Systems	
viii. 911/Police/Fire Dispatch to Transportation Management Center Communications (Center to Center)	

Brief Description of Intelligent transportation systems (ITS) Concepts

Video Communications: Cell phone cameras or similar video technologies can be provided to first responders to send photographs or video of the incident site to the dispatch center. These photographs or video of the incident site can be used to understand the nature and scale of the emergency / incident. For example, if a hazardous material is leaking; nature of the material and rate of leakage would help determine the equipment and personnel required at the site. Medical responders can use this technology to relay the victim's condition and be advised on medicines to be given while at the site or in transit from site to medical facility.

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Traffic Management Systems: Standard Intelligent Transportation systems for freeway and traffic management, including loop detector systems, Closed Circuit Television systems, and lane and ramp control systems, can be adapted to utilize their capabilities to facilitate incident response through congested traffic behind the incident or in contra-flow downstream from the incident. Such response would also be safer for responders and travelers, reducing the likelihood of occurrence of secondary incidents caused by responding units threading their way through congested traffic or head-on crashes with units responding contra-flow from downstream.

Route Guidance for Emergency Vehicles: This technology can help you avoid closed railroad crossing gates, construction closures etc. It is different from the in-vehicle navigation systems available in most passenger vehicles.

Signal Preemption for Emergency Vehicles: This capability preempts traffic signals on an emergency vehicle's route so that emergency vehicle almost always gets a green signal.

Advanced Automated Collision Notification Systems: These systems use vehicle-mounted sensors and wireless communication to notify emergency personnel and provide them with valuable information on the crash, including location, crash characteristics, and possibly relevant medical information regarding the vehicle occupants

Early warning systems help detect large-scale emergencies due to natural disasters such as hurricanes, earthquakes, floods etc. and due to man-made disasters such as HAZMAT incidents and acts of terrorism involving chemical, biological, or radiological weapons attacks. These systems monitor alerting and advisory systems, sensors and surveillance systems, field reports, and emergency call-taking systems to identify emergencies and notify all responding agencies of detected

emergencies.

Center-to-Center Communications is the exchange of data between computers physically located in different transportation management center facilities (e.g., traffic management centers, transit management centers, emergency management centers, and parking management centers).

17. What additional capabilities would you like to have either in your vehicle or at the dispatch center that would reduce the response and clearance time for incidents?

18. Any other comments

* 19. Please provide the following information about yourself.

Name	
Agency/organization	
Address	
Adresss2	
City/Town	
State	
Zip	
Email Address	
Phone Number	