H-GAC ITS Strategic Plan – Transportation Operations Needs/Priorities Survey

This survey can be found on the web at http://ttihouston.tamu.edu/hgac_its_web_survey.

Preface: When thinking about creating the ITS Strategic Plan, we should be encouraged to "think regionally and act locally." "Regionally" can mean area-wide, statewide, multi-state areas or even nationwide. Local agencies will know best the types of strategies that will be most successful, in terms of both solving a problem and being accepted by the traveling public. However, local agencies should recognize that every individual ITS project should strive to be compatible with a larger ITS system if the overall goals of ITS are to be achieved.

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

- Tony Voigt (TTI) - a-voigt@tamu.edu - 713-686-2971
- Jeff Kaufman (H-GAC) - Jeff.Kaufman@h-gac.com - 832-681-2533
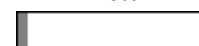- Stephan Gage (H-GAC) - Stephan.Gage@h-gac.com - 713-499-6692

General Information

First Name: Last Name:

Title: Organization:

Street Address: City:

State: Zip Code:

Phone: Fax:

Email:

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H-GAC ITS Survey - Continued

Section 1. ITS Needs & Priorities – These questions are not specific to your agency, but consider a regional view when responding.

What should the <u>region's</u> "big-picture" goals be with respect to providing ITS Solutions (rank 1-6)?

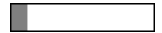| Goals	Regional Priority Rank
Increasing transportation system efficiency and capacity. <u>Read More...</u>	▼
Enhancing mobility. <u>Read More...</u>	▼
Improving safety. <u>Read More...</u>	▼
Reducing energy consumption and environmental costs. <u>Read More...</u>	▼
Increasing economic productivity. <u>Read More...</u>	▼
Creating an environment for an ITS market.	▼

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H-GAC ITS Survey - Continued

Top Issues: prioritize the transportation problems potentially solved by ITS (rank 1-11 and/or by importance – not at all to very important).

Transportation Problems	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Traffic congestion	[▼]	○	○	○	○	○
Lack of mobility and accessibility	[▼]	○	○	○	○	○
Disconnected transportation modes	[▼]	○	○	○	○	○
Severe budgetary constraints	[▼]	○	○	○	○	○
Transportation following emergencies	[▼]	○	○	○	○	○
Traffic accidents, injuries, and fatalities	[▼]	○	○	○	○	○
Air pollution	[▼]	○	○	○	○	○
Personal safety and security	[▼]	○	○	○	○	○
Commercial vehicle operations/Goods movement delays	[▼]	○	○	○	○	○
Unanticipated transportation needs /Enhanced Planning	[▼]	○	○	○	○	○
Lack of transportation information/traveler information	[▼]	○	○	○	○	○

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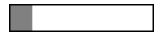
The following questions seek to define priorities for implementation and deployment, a s well as serve as a guide to agencies when considering what types of services would be most helpful in addressing user needs. Ple ase numerically rank in terms of regional significance, and qualitatively assess their importance to your agency.

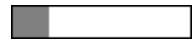When thinking about solving traffic congestion problems using ITS…

Rank the following potential ITS solutions to increase vehicle throughput

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Surface street control (smart signals)	▼	○	○	○	○	○
Freeway control (ramp metering, ramp bypass, variable speed control, etc.)	▼	○	○	○	○	○
Reversible lane management capability	▼	○	○	○	○	○
Corridor management – regional/multi-jurisdictional data sharing and system management	▼	○	○	○	○	○
Corridor management - historical evaluation, real-time assessment, and forecast of the roadway network performance	▼	○	○	○	○	○
Corridor management – railroad operations coordination	▼	○	○	○	○	○
Corridor management – the use of weather data to manage traffic	▼	○	○	○	○	○
Incident management – recurring and non-recurring events	▼	○	○	○	○	○
Incident management – emergency evacuation and response	▼	○	○	○	○	○
Maintenance and Work Zone management – fleet vehicle tracking	▼	○	○	○	○	○
Maintenance and Work Zone management – activity coordination	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

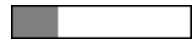When thinking about solving traffic congestion problems using ITS…

Rank the following potential ITS solutions to increase <u>passenger throughput</u>

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Flexible transit	▾	○	○	○	○	○
HOV lane management	▾	○	○	○	○	○
Integrating transit and other travel modes/feeder services	▾	○	○	○	○	○
Personalized public transit information	▾	○	○	○	○	○
Real-time ride matching	▾	○	○	○	○	○
Transit signal priority	▾	○	○	○	○	○

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H-GAC ITS Survey - Continued

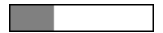When thinking about solving traffic congestion problems using ITS…

Rank the following potential ITS solutions to address reducing <u>travel demand</u>:

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Providing dynamic route guidance (en-route traveler information)	▼	○	○	○	○	○
Providing enhanced trip planning and route guidance (either pre-trip and en-route)	▼	○	○	○	○	○
Use of congestion pricing	▼	○	○	○	○	○
Encouraging telecommuting	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

When thinking about solving transportation <u>mobility and accessibility</u> problems using ITS, rank the following potential ITS solutions and qualitatively assess their importance to your agency.

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Use of automatic vehicle location/tracking to update transit schedules and schedule adherence	▼	○	○	○	○	○
Publishing multi-modal pre-trip traveler information only	▼	○	○	○	○	○
Publishing multi-modal pre-trip AND en-route traveler information	▼	○	○	○	○	○
Providing personalized public transportation service information, including the ability to request personalized public transit	▼	○	○	○	○	○
Providing enabling technologies to provide transit operators with the ability to provide demand responsive transit operations	▼	○	○	○	○	○
Providing turn-by-turn route guidance	▼	○	○	○	○	○
Providing real-time transit information at transit stops and on-board vehicles	▼	○	○	○	○	○
Provide real-time parking facility information (could be park and rides and/or private parking facilities in activity centers	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

When thinking about using ITS to <u>improve multi-agency or cross-jurisdictional transportation system operations</u>, rank the following potential ITS solutions and qualitatively assess their importance to your agency.

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Disseminating multi-modal travel information pre-trip	▼	○	○	○	○	○
Disseminating multi-modal travel information en-route	▼	○	○	○	○	○
Creation/maintenance of a multi-agency regional transportation information clearinghouse to allow data sharing	▼	○	○	○	○	○
Providing two way communications between multiple transit and traffic agencies to improve service coordination	▼	○	○	○	○	○
Providing capability for the sharing of traffic information and control among traffic management centers to support regional traffic management strategies	▼	○	○	○	○	○

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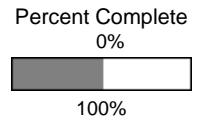
When considering how ITS can help us <u>prioritize funding and/or create new funding sources</u>, rank the following potential ITS-based solutions:

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
The use of ITS data for enhanced transportation planning, including more transit-based data	▼	○	○	○	○	○
Fee-for-use to provide data to 3rd parties to package personalized travel data	▼	○	○	○	○	○
Fee-for-use yellow pages and/or reservation type services (information about lodging, restaurants, service stations, etc.)	▼	○	○	○	○	○
Use of more electronic toll/payment capability for transportation services (tolls, parking, transit, permits, etc.)	▼	○	○	○	○	○
Efficiently manage lighting, minimizing electricity costs	▼	○	○	○	○	○
Advanced maintenance strategies – fleet management (location, etc.)	▼	○	○	○	○	○
Advanced maintenance strategies – fleet vehicle maintenance	▼	○	○	○	○	○
Advanced maintenance strategies – roadway maintenance and construction, scheduling based on minimizing cost to travelers and optimizing revenue capability	▼	○	○	○	○	○
Advanced maintenance strategies – infrastructure monitoring monitors the condition of pavement, bridges, tunnels, associated hardware, and other transportation-related infrastructure to minimize expense in inspection and traffic control	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

When thinking about how ITS can help us in <u>reducing accidents, injuries and fatalities</u>, rank the following potential ITS solutions:

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Advanced commercial vehicle fleet and freight administration (monitoring hazmat cargo/security and routing)	▼	○	○	○	○	○
Advanced railroad grade crossing systems	▼	○	○	○	○	○
Detection of adverse weather conditions and response management capability	▼	○	○	○	○	○
Mayday support (support for in-vehicle emergency assistance requests)	▼	○	○	○	○	○
Use of automated warning systems – support for in-vehicle signing. <u>Read More...</u>	▼	○	○	○	○	○
Use of automated warning systems – support for speed monitoring and either regulatory speed limit adjustment or warning speeds based on environmental conditions to suggest safe driving speeds	▼	○	○	○	○	○
Use of automated warning systems – support for work zone detection. <u>Read More...</u>	▼	○	○	○	○	○
Integrate incident management capabilities with commercial vehicle tracking to assure effective treatment of HAZMAT material and incidents	▼	○	○	○	○	○
Intersection collision avoidance systems. <u>Read More...</u>	▼	○	○	○	○	○
On-board commercial vehicle safety monitoring and reporting. <u>Read More...</u>	▼	○	○	○	○	○
Partially and fully automated vehicle control systems. <u>Read More...</u>	▼	○	○	○	○	○
Vehicle condition monitoring. <u>Read More...</u>	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

When thinking about how ITS can help us in <u>reducing air pollution</u>, rank the following potential ITS solutions:

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Advanced traffic management – surface street control	▼	○	○	○	○	○
Advanced traffic management – freeway control	▼	○	○	○	○	○
Advanced traffic management – regional traffic management	▼	○	○	○	○	○
Advanced traffic management – speed monitoring	▼	○	○	○	○	○
Advanced traffic management – work zone management	▼	○	○	○	○	○
Multi-modal pre-trip traveler information	▼	○	○	○	○	○
Enhanced trip planning, including dynamic routing	▼	○	○	○	○	○
Real-time ride matching	▼	○	○	○	○	○
Remote emissions sensing	▼	○	○	○	○	○
Congestion pricing	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

When thinking about how ITS can help us in addressing <u>safety and security concerns</u>, rank the following potential ITS solutions:

ITS Solutions	Regional Priority Rank	Your Agency Specific Importance				
		Not Important	Somewhat Important	Important	Moderately Important	Very Important
Transit surveillance and sensor monitoring - physical security of transit passengers and transit vehicle operators	▼	○	○	○	○	○
Asset tracking – commercial vehicles. [Read More...]	▼	○	○	○	○	○
Biometric identification. [Read More...]	▼	○	○	○	○	○
Electronic seals and GPS tracking of commercial vehicles	▼	○	○	○	○	○
Threat detection – detect and classify security sensitive HAZMAT	▼	○	○	○	○	○
Threat detection - detect when an unauthorized commercial vehicle driver attempts to drive their vehicle based on stored driver identity information	▼	○	○	○	○	○
Threat detection - monitoring of transportation infrastructure. [Read More...]	▼	○	○	○	○	○
Mayday services	▼	○	○	○	○	○
Route guidance and turn-by-turn direction support	▼	○	○	○	○	○

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H-GAC ITS Survey - Continued

Section 2. Agency Information

How would you classify your agency/organization?

○ Federal ○ State ○ County ○ Local ○ Transit ○ MPO ○ Consultant ○ Special Interest
Other: [   ]

Does your agency currently operate any ITS system(s)? If yes, briefly describe.

Do you feel that management in your agency <u>is knowledgeable</u> about how ITS can serve your customers?

○ Yes ○ No

Do you feel that management in your agency <u>is willing to invest</u> in further ITS deployment to better serve your customers?

○ Yes ○ No

Does your agency have internal processes to compare traditional and ITS projects against each other?

○ Yes ○ No

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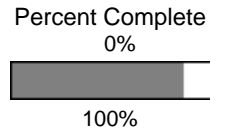
What are the barriers to further implementation of ITS within your agency? (rank severity?)

Barriers	Your Agency Rank
Inter organization coordination	⏷
Staff skill sets	⏷
Project financing	⏷
Freedom of Information	⏷
State laws	⏷
Federal Acts	⏷
Liability	⏷
Intellectual property	⏷
Lack of standards	⏷
Interagency coordination/cooperation	⏷
Other	⏷

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H-GAC ITS Survey - Continued

How would you characterize the current level of ITS training and awareness of your agency staff and leadership?

○ ITS is not currently a priority of the agency, so very few of our staff know much about ITS.

○ Our organization might be a little adverse to change, so new technology is a barrier to ITS deployment.

○ Our agency currently has a little ITS or plans to implement some level of ITS, but staff knowledge and/or training is a barrier.

○ We have some level of staff with experience, but could use training opportunities.

○ We have adequate levels of staff with experience and self-train within the organization.

○ Other (Indicate Below)

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H-GAC ITS Survey - Continued

What level of capability does your agency have in deploying ITS systems and/or solutions?

○ We don't have sufficient knowledge to either contract for design or maintain and operate ITS systems

○ We have the ability to specify and contract for design and construction, and the ability to contract for maintenance and operations of ITS systems (full outsourcing)

○ We have the ability to specify and contract for design and construction, but not the ability to maintain and operate ITS systems internally (we cannot or will not outsource)

○ We have the ability to spec and contract for design and construction, as well as the ability to maintain and operate in-house.

○ We have the ability to design and construct with internal forces, as well as the ability to maintain and operate in-house.

○ Other (Indicate Below)

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H-GAC ITS Survey - Continued

How does your agency feel about the need to apply <u>systems engineering</u> to ITS projects?

○ Very Important - No doubt, we need systems engineering.

○ Important - We would find value but are worried about cost.

○ Neutral - We will do it becuase we have to.

○ Not Important - Costs too much. Perceived return on investment is low.

Additional Comments

How does your agency feel about the need to evaluate before/after benefits of ITS projects?

○ Very Important - No doubt, we need to evaluate our ITS projects to be able to justify future investment.

○ Important - We would find value in evaluation but are worried about cost.

○ Neutral - We will do it because may be required to evaluate.

○ Not Important - Costs too much, we would rather deploy equipment just operate it.

Additional Comments

If you have any additional comments or questions, please add them here.

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

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