HNTB

The HNTB Companies
Infrastructure Solutions

EXPERTS | 2017

HNTB expert:
Jim Barbaresso

National Practice Leader, Intelligent Transportation Systems
Senior Vice President and HNTB Fellow
HNTB Corporation

"Society is just beginning to witness transformative changes in transportation as we enter an age of automation and connectivity between vehicles, infrastructure, organizations and people. This transformation will not only impact how transportation systems are designed and managed, but also how transportation services are funded and delivered."

Jim Barbaresso is HNTB national practice leader, intelligent transportation systems and senior vice president.

The firm's ITS capabilities include development of advanced and active traffic management systems; design and operation of transportation, toll and emergency management centers; and the latest advancements in connected and automated transportation technologies.

Barbaresso and HNTB have been involved in a growing number of projects related to the national Connected Vehicle initiative, including designing and building one of the first live test beds with the Michigan Department of Transportation. He was active in the 2016 Smart Cities initiative sponsored by the U.S. Department of Transportation.

Barbaresso, who is based in Detroit, has more than three decades of industry experience. Having worked with transportation clients across the country, he has successfully planned, implemented and managed everything from small ITS feasibility studies to some of the largest and most visible ITS programs in the nation.

Barbaresso is a regular contributor to many mainstream news media outlets throughout the U.S.

Barbaresso can address the future of surface transportation and ITS trends, including:

- **What to expect from the car of the future**
  Traffic tie-ups and fender benders may one day be a thing of the past. Many of today's vehicles already feature advanced sensor systems that involve video, radar and Lidar, a laser-based technology that continually and accurately scans and maps the environment around the vehicle. In fact, consumers can now buy vehicles that, within a few years' time, will receive software updates equipping them to be on the roads without drivers. It is widely believed there will be fully autonomous vehicles on America's roads in 2018. For transportation planners, critical changes lie ahead that will impact how our transportation systems are designed, operated and funded.

- **What the future holds for transportation infrastructure**
  Soon, new managed lanes concepts will emerge where automated vehicles will operate in platoons and electric vehicles will be charged wirelessly as they drive. Corridor management will take place through connectivity of vehicles and infrastructure, and active traffic management functions, like speed harmonization, will be automated. Smart phones will become toll tags, but also will be used to pay for parking and transit fares. Our roads, intersections, freeways and transit systems of tomorrow will look and operate quite differently than what we see today.

- **Moving toward zero traffic fatalities**
  It can be easy to overlook the evolution America has experienced as its transportation priorities have shifted to a more safety-oriented culture.

Technology holds the promise of further reducing, and perhaps someday eliminating, motor vehicle deaths. Connectivity and automation will play a huge role in reducing crashes, but engineering, enforcement and education will continue to be necessary components of the evolving safety culture.

- **Improving the environment**
  Technological advances in transportation will have a positive impact on the environment. Air quality will be improved with new connected vehicle applications and eco-driving capabilities. Carbon-based fuel consumption will decrease as our "smart cities" look toward new energy and mobility options.
- **Keeping the economy moving**
  Goods movement has been a focal point for economic growth. Intermodal connectivity, greater automation of vehicles and infrastructure and improved information systems allow goods to move more efficiently by land, air, pipeline and sea. Technology holds the key to the economic competitiveness of our nation through more efficient movement of goods.
- **Making mileage-based user fees part of the transportation revenue stream**
  The enabling technology for implementing MBUF will be in cars and trucks – including electric and alternative fuel vehicles – this decade. As the gas tax continues its long-term decline, charging drivers who use the roadway by the mile versus the gallon will gain traction. That means achieving a balanced approach with connected vehicle technology implementation – sooner rather than later – and establishing enabling legislation and regulatory oversight at municipal, state and federal levels. The general public also needs to know privacy concerns will be adequately addressed.

Education

Master of Science in transportation planning, 1978, University of Iowa

Bachelor of Science in sociology, 1975, University of Iowa

Professional affiliations

Member and Past President – Intelligent Transportation Society of Michigan board of directors (1996 – present)

Member – Traffic Improvement Association of Michigan board of directors (2004–present)

Member – Traffic Improvement Association of Michigan Executive Committee (2004–present)

Member – ITS America

Associate – Transportation Research Board

Member – Institute of Transportation Engineers

Select media and appearances

TM&E, Aug. 16, 2017 – "How do they do that?"

ITSdigest, June 20, 2017 – "Trending: Transportation as a Service"

TM&E, May 31, 2017 – "The key to being a Smart City"

ITSdigest, April 28, 2017 – "3 Steps for Transportation Agencies to Create an ITS Program"

ITSdigest, April 5, 2017 – "Automated Vehicles and the Future of US Airports"

TM&E, Winter 2017 – "How intelligent is your transportation system?"

CNN Tech, Feb. 7, 2017 – "Your car's data may soon be more valuable than the car itself"

Bloomberg Technology, Jan. 2, 2017 – "It's Aye, Robot, as Driverless Cars Finally Steer Near Showrooms"

The Washington Post, Dec. 13, 2016 – "Blind man sets out alone in Google's driverless car"

The Washington Post, Dec. 13, 2016 – "Obama administration proposes that all new cars must be able to talk to each other"

TM&E, Winter 2016 – "State DOTs ease congestion with ATDM tactics and make ready to harness emerging tech"

Chicago Tribune, July 4, 2016 – "Driverless cars could improve safety, but impact on jobs, transit questioned"

To schedule an interview with Jim Barbaresso and for more information, contact:

MEDIA CONTACT
Brian Cox
Senior Public Relations Manager
(816) 527-2056
brcox@hntb.com