

Industry Leaders Rally to Modernize Passenger and Freight Railroad Systems

ARMONK, N.Y., and BEIJING, June 11 /PRNewswire-FirstCall/ -- Today IBM (NYSE: [_IBM_](#) http://us.lrd.yahoo.com/_ylt=Ak8H5Ar.8OWllLNjtBj4Q5auMncA/SIG=110r7ao0k/**http%3A//www.ibm.com/investor) opened a new [_Global Rail Innovation Center_](#) http://us.lrd.yahoo.com/_ylt=AnznQF27SJTA41kifa8XEFOuMncA/SIG=12bq97icl/**http%3A//asmarterplanet.com/blog/2009/06/new-rail-innovation-center.html that will bring together the world's foremost industry leaders, researchers and universities to advance next-generation rail systems.

Founding members of the Center's Advisory Board include leading representatives and organizations in the railroad community: Judge Quentin L. Kopp, chairman of the California High Speed Rail Authority; Michigan Technological University; Motorola; Railinc; RMI; Sabre; Tsinghua University; and Professor Joseph M. Sussman of the Massachusetts Institute of Technology. The Advisory Board's role is to help define areas where business and technology solutions can solve passenger and freight rail problems.

(Video: [_http://www.youtube.com/watch?v=cfSDnMdVnUA_](http://www.youtube.com/watch?v=cfSDnMdVnUA_) http://us.lrd.yahoo.com/_ylt=Avr3Imncwda.hBnl0xxsJLOuMncA/SIG=11hhcdl2o/**http%3A//www.youtube.com/watch%3Fv=cfSDnMdVnUA)

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The Center will address the rail industry's most pressing challenges, including:

- * Passenger reservations and service;
- * Asset utilization and productivity;
- * Surveillance of tracks and infrastructure;
- * Scheduling;
- * Integrated fare management; and
- * Environmentally efficient operations.

Based in Beijing, the Rail Innovation Center will be staffed by a global network of IBM rail consultants, software specialists, mathematicians and business partners. China is at the epicenter of revolutionizing rail infrastructure and operations for the 21st century, introducing new high speed trains and a hugely expanded rail network at an unprecedented pace.

"Population growth and urbanization are driving an unprecedented demand for modernized rail systems, and governments and businesses worldwide recognize that railroads play a critical role in supporting economic growth," said Keith Dierkx, director of the IBM center. "By bringing together leading industry experts and advanced technologies, we can help rail providers increase rail capacity, efficiency, safety, and customer service – resulting in networks of smarter rail systems around the world."

In addition to collaboration with the Advisory Board, the Center will draw upon assets and expertise from across IBM and around the world including its Research labs, software development labs, systems centers and global service delivery capabilities. The center will also link with business consultants at IBM's recently announced Analytics Solutions Centers to create a global virtual rail community that can collectively address rail industry challenges.

Technology Takes to the Tracks

New railroad networks will contain millions of sensors that track everything from train speeds to when brakes need to be replaced. Building these intelligent rail networks requires a high-powered, integrated system that can collect, manage and analyze the enormous amount of data flowing in from the tracks, through the trains and stations, and across the maintenance process.

Netherlands Railways, one of Europe's busiest, uses advanced optimization software from IBM to weigh 56,000 variables, including the railroad's infrastructure and passenger demand, to assemble and schedule more than 5,000 trains per day, improving operating efficiency by 6 percent with an estimated annual savings of euro 20 million. This scheduling model can also be applied to future projects being led out of the new rail center.

Working on these projects demands a unique set of products, skills and services. The new rail Center will bring together IBM and its industry partners – both physically and virtually – to jointly develop these skills and put the products and services into action. For example, teams in China or California might be able to learn from the development of an Italian high speed rail system, and a U.S. inter-modal freight project could be applied in Russia.

Prof. Jun Li, Dean of Research Institute of Information Technology, Tsinghua University, said, "As China's railway industry rapidly enters its golden era, it is expected to take the lead in new rounds of economic development. Building advanced railroad systems is a priority that demands a unique set of products, skills and services. As China's most prestigious technological institution, Tsinghua University is a world-class center for science, research and innovation. Through its combination of research, software and services capabilities, IBM's newly established Global Rail Innovation Center in Beijing will deeply benefit and enable China's railway industry development. Tsinghua would like to collaborate with the center to jointly develop solutions to meet China's unique requirement."

Reliability and Safety

According to a recent IBM report _"The Smarter Railroad,"_ http://us.lrd.yahoo.com/_ylt=Aj5RaW0_Y4d6vhA7p628C4iuMncA/SIG=12lvsqr7u/**http%3A//www-03.ibm.com/industries/travel/us/detail/resource/W752897K23575C82.html>*

*railroad executives around the world are focused on capacity and congestion, operational efficiency and reliability, and safety and security.

One major area of focus will be safety and preventive maintenance. Smarter capabilities and insight can help to prevent accidents before they happen. Sensor-based early detection of potential equipment failures provides a more optimal predictive maintenance scheme, and various monitoring capabilities for rail infrastructure such as tracks and bridges can reduce disruptions to passenger and freight service.

Reliable on-time performance is another key factor when passengers select a mode of travel. The Taiwan High Speed Rail Corporation is using IBM software to manage maintenance and logistics for the revolutionary high-speed rail network that runs along the west coast of Taiwan. IBM is providing vital support to the management and maintenance systems that make sure hundreds of trains carrying passengers between the south and

the north are safe and on time.

"The development of high-speed rail in California is critical to the economic and environmental welfare of the state," said Quentin Kopp, Chair of the California High Speed Rail Authority. "It's encouraging to see companies like IBM drawing together international rail industry experts and leaders to share lessons learned in order to build smarter, safer, and more efficient high-speed rail systems – especially in countries and states where traffic congestion and gridlock are costing citizens valuable time, productivity and billions of dollars each year."

Boosting Customer Service

The rail center will also address customer service issues. Using intelligent aggregations of data, a smarter rail system can make the travel experience much more pleasant for passengers. New perks include the ability to buy a ticket and receive alerts on delayed trains using a mobile device, guaranteeing a seat, and achieving nearly perfect on-time arrival rates.

"Global demand for rail services continues to outpace available capacity while current worldwide investment and traditional business practices limit tangible responses to address the problem," said Allen West, CEO and President of Railinc. "Rail executives by necessity are building rail systems that are smarter. By embracing new and existing technologies to acquire, associate and analyze information across the rail network and using that information to become more efficient and effective, IBM and its partners can help them create more responsive and agile transportation."

IBM's Rail Expertise

IBM has worked with the world's leading railroads on mission critical projects for more than 50 years. IBM has an unparalleled portfolio of skills, technology assets, and business consulting and information technology services; supported by the world's largest industrial research organization IBM is uniquely positioned to facilitate a collaborative approach for innovation in the railroad industry because of technical knowledge of rail industry challenges, business partners and research.

For more information, please visit [_www.ibm.com/press/rail_](http://www.ibm.com/press/rail_)
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