

Review Article

The effect of world ITS congresses on ITS awareness and dissemination

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Abstract: In today's modern economies, congresses, conferences and fairs are the most suitable environments for the establishment of personal and long-term commercial relations. Since such meetings provide face-to-face interaction, they provide a high level of influence and information exchange. Types of meetings and congresses are classified according to the number of participants and delegates, as well as their purpose and the place where they are held. In this study, the importance of congresses and congress types has been tried to be explained, and detailed information is given with the origin and development of intelligent transportation systems. Today, smart transportation systems offer various solutions with new technologies in order to eliminate factors such as the increasing number of vehicles, traffic density, and the increasing noise and environmental pollution problems associated with them. In addition, thanks to the smart transportation world congresses held every year, a wide audience is aware of these solutions and innovations. In our study, which topics are covered in these congresses, it is explained which interactions these congresses lead to support the formation of technological innovations and smart transportation systems awareness at the global level. With all these factors, smart transportation systems have created a growing market in the world and in Europe.

Key words: Intelligent transportation systems, intelligent transportation systems world congresses, congress

AUS farkındalığı ve yaygınlaşmasında dünya AUS kongrelerinin etkisi

Özet: Günümüz modern ekonomilerinde, kişisel ve uzun vadeli ticari ilişkilerin kurulması için en uygun ortamları kongreler, konferanslar ve fuarlar oluşturmaktadır. Bu tür toplantılar yüz yüze etkileşim olanağı sağlaması sebebiyle de etki ve bilgi alışverişini yüksek ölçüde sağlarlar. Toplantı ve kongre türleri katılımcı ve delege sayısı, aynı zamanda da amaçlarına, düzenledikleri yere göre sınıflandırılmaktadır. Bu çalışmada, kongrelerin ve kongre türlerinin önemi anlatılmaya çalışılmış, akıllı ulaşım sistemlerinin çıkış noktası ve gelişimi ile detaylı bilgiye yer verilmiştir. Günümüzde artan araç sayısı, trafik yoğunluğu gibi faktörler ve bunlarla birlikte yükselen gürültü ve çevre kirliliği problemlerini ortadan kaldırmak için akıllı ulaşım sistemleri yeni teknolojileriyle çeşitli çözümler sunmaktadır. Ayrıca her yıl düzenlenen akıllı ulaşım dünya kongreleri sayesinde bu çözüm ve yeniliklerden geniş bir kitle haberdar olmaktadır. Çalışmamızda, bu kongrelerde hangi konuların işlendiğine yer verilmiş, bu kongrelerin hangi etkileşimlere yol açarak küresel düzeyde teknolojik yeniliklerin ve akıllı ulaşım sistemleri farkındalıklarının oluşmasını desteklediği anlatılmıştır. Tüm bu etkenlerle birlikte akıllı ulaşım sistemleri, dünyada ve Avrupa'da her geçen gün büyüyen bir pazar oluşturmıştır.

Anahtar Kelimeler: Akıllı ulaşım sistemleri, akıllı ulaşım sistemleri dünya kongreleri, kongre

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1. Introduction

In today's modern economies, congresses, conferences and fairs are the most suitable environments for the establishment of personal and long-term commercial relations. In these environments, face-to-face interaction ensures the sense organ to be defined as the most suitable places with full capacity utilization. The word congress comes from the Latin word "Congressus" and if we look at its dictionary meaning, it is defined as "a meeting with the participation of managers, ambassadors and delegates from various countries"(Url1, 2022). According to the records published by the International Association of Societies, the first international congress was held in Rome in 1681 in the field of medicine. After that, congresses began to be held in different fields of science.

In the literature, meeting and congress types are generally discussed under three headings as defined below. They are classified according to

the number of attendees, the purposes for which they are organized, and the place where they are held.

They are classified and named according to the number of attendees as seen in the table 1 below.

According to the purposes of regulation; Many congresses and meetings are held within and outside the genres determined by the International Association of Associations. It is generally classified as follows:

- Conferences and meetings organized by companies,
- Congresses and meetings organized by international associations, political parties and trade unions,
- International union congresses (Aymankuy, 2013)

They are divided into two according to the place where they are arranged. These;

Table 1. Types of congresses according to the number of participants

Meetings with Participants Up to 50 Delegates	Meetings with 50 to 300 Delegates	Meetings with More than 300 Delegates
Seminars	General Assemblies	Congresses
Colloquiums	Conferences	General Assemblies
Workshops	Symposiums	
Panels	Colloquiums	
Commission Meetings		
Audit Meetings		
Roundtable Meetings		

National Meetings: Most of the people attending the national meetings are citizens of the countries where the congresses are held. The most important issue here is seen as a good arrangement of time and space.

International Meetings: International meetings have a complex structure due to the presence of many participants from different nationalities. In international meetings, there are at least three national participants and the duration is between 4 and 7 days (Aymankuy, 2013).

2. Intelligent Transportation Systems (ITS) and ITS Congresses

In the 1970s, the search for a solution to the problem began with the inadequacy of road

capacities in the world. Especially in Europe, America and Japan, it has been tried to find solutions with regional projects where ITS is used. After the 1990s, ITS started to be used widely, especially in developed countries. Some of its main purposes are listed in Figure 1.

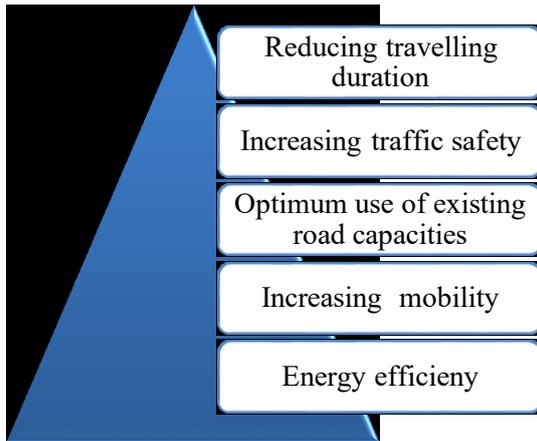


Figure 1. Main objectives of smart transportation systems

During the search for these solutions, ITS started to be on the agenda of international consultation meetings through international symposiums, congresses, conferences and workshops. As a reflection of this, ITS World Congress (ITS World Congress) has been held regularly in different countries every year since 1994, except for 2020 (Tektas & Tektas, 2020). The World ITS Congress is the largest event focused on smart mobility and the digitization of transport. ERTICO (ITS Europe) organizes an ITS regional congress or a world congress in Europe each year (“About the Congress - Itsworldcongress.Com,” n.d.). Congresses are like an annual celebration of smart mobility. Here, it organizes events that will attract attention by emphasizing the importance of ITS in the host country, city and region. Here politicians, experts and ITS related industry professionals demonstrate their important work to raise awareness of smart mobility solutions across the world. The congress includes live sessions where relevant industry and subject experts present the latest developments in ITS, a state-of-the-art showcase and an exhibition space. ERTICO, which organizes ITS World Congresses in different countries every year, focuses on: Connected and Automated Driving, Clean Mobility, Transportation and Logistics, Urban Mobility. By organizing these congresses, the organization aims to realize the roadmaps they have targeted until 2030 for each of these areas (“ITS Congress » ERTICO,” n.d.).

Congresses also provide stakeholders and patrons with the ultimate platform to meet with industrialists, discuss ideas and initiatives,

make new connections and promote their business by attending a series of events (“ITS Congress » ERTICO,” n.d.)

2.1. ITS World Congresses

2.1.1. First ITS World Congress- Paris (1994)

The first ITS World Congress was held on 30 November-3 December 1994 in Paris, France. As the first congress, the theme “Towards an Intelligent Transportation System” was chosen as the theme and focused on demonstrating the potential of ITS to reduce accidents, congestion and transportation costs while increasing the productivity and efficiency of existing infrastructure. In this congress, the products and services of the period are primarily single-functional solutions such as navigation, traveler information, traffic management, toll, network management, connecting services and creating multifunctional devices. Around 3000 people, including 260 journalists, from 33 countries participated in the event. Important topics are the implementation of ITS, market-oriented strategy to improve mobility, ITS applications, managers' perspective, policies that should be implemented for the new era and changes in mobility (1994 Paris (France), 1994).

2.1.2. Second ITS World Congress- Yokohama (1995)

It was held in Yokohama, Japan on 3-11 November 1995 and the theme of the congress was determined as "Steps Forward". 38 countries and 3400 participants took part in the event. VICS was demonstrated at the congress and 18 companies participated in it, and the test drive was successful with a total of 618 participations of approximately 1230 people. Participants were experienced in how to provide real-time congestion and traffic congestion in many areas, and the system, which is expected to be put into service in the spring of 1996, was highly evaluated. However, many ITS-related technical trips have been made in Tokyo (2nd ITS World Congress, 1995).

2.1.3. Third ITS World Congress- Orlando (1996)

It was held in Orlando, USA, between 14-18 October. More than 40 countries and several thousand participants attended the event. The congress theme was chosen as “Smart Transportation: Realizing the Future

Transportation System for a Livable Society”. “What do people need in ITS in the context of the information society?” and “How will the information technologies sector provide in the context of global information infrastructure?” questions were the main topics of the congress. The purpose of this congress is to focus on the future and set benchmarks for where the ITS community should be in 5, 10, 15 years, as well as set guidelines for how these benchmarks work. The purpose of the 1996 World Congress was to show attendees and the people of Orlando how the ITS community is bringing the future to the present (*3rd ITS World Congress-Orlando, 1996*).

2.1.4. Fourth ITS World Congress-Berlin (1997)

It was held in Berlin, Germany between 21-24 October 1997. The Fourth World Congress is devoted to the theme "Mobility for All", reflecting the role of transport telematics in enabling mobility for all citizens. Over 5000 people from 35 countries and 300 of them journalists attended the congress.

In this congress, executive sessions, technical documents, demonstrations and technical visits are aimed at optimizing network capacity while reducing gas emissions; increasing vehicle and road safety while reducing fuel consumption; providing passengers with real-time information about their journey and the impact of any disruption; It has shown that it is becoming possible to manage the road area so that public transport and service vehicles can have priority with minimal impact on general flows. Alongside the numerous practical demonstrations of the ITS, the exhibits also showcased a range of innovative products and cutting-edge technology (*4 Th ITS World Congress, 1997*). The Congress included 6 Plenary Sessions and Round Table Meetings, 16 Executive Sessions, 31 Special Sessions and 121 Technical/Scientific Sessions.

2.1.5. Fifth ITS World Congress- Seoul (1998)

Seoul, South Korea hosted the 5th ITS World Congress between 12-16 October 1998. “Together Towards the New Horizon” was determined as the congress theme and 85 companies exhibited. 50 countries and 4863 people participated in the event. 98 Key issues in Seoul; Together Towards the New Horizon,

Government and Industry Cooperation, Sustaining ITS Deployment for the Future. The 5th ITS World Congress, attended by 5,000 participants from 50 countries of the world, determined the future vision for the implementation of ITS with the theme of “Towards New Horizons Together for Better Life with ITS”. A colorful presentation of various current ITS products was exhibited at this congress, which had a significant success with 768 presentations in a total of 149 sessions (*5 Th ITS World Congress, 1998*).

2.1.6. Sixth ITS World Congress-Toronto (1999)

The 6th Congress, which stands out with the theme of “AUS: Smarter, Smoother, Safer, Earlier” was held in Toronto on 8-12 November 1999. The main topics of the congress attended by 4917 participants from 58 countries are:

- Public and private sector initiatives to make transportation smarter, smoother and safer to get passengers to their destination faster
- Customization and ITS adoption
- ITS has had societal, institutional and 21st century challenges (*6 Th ITS World Congress, 1999*).

2.1.7. Seventh ITS World Congress-Turin (2000)

It was held in Turin, Italy, between 6-9 November 2000. The theme is "From Vision to Reality". More than 7000 people from more than 40 countries and 200 of them journalists participated. Key topics have been the public-private partnership debate on ITS and people, vehicles and smart mobility for the benefit of the citizen.

Under the theme “From Vision to Reality”, Torino 2000 marked the convergence of three trends: the concept of the information society, the transition of ITS from experimental devices to off-the-shelf products, and the combination of services, for example parking information or traffic management systems linked to route guidance emissions monitoring. The e-Europe 2002 Program stands out strongly with its emphasis on adding intelligence to air, sea and rail transport as well as by road. Freight and environmental impact reduction practices of ITS were featured in Turin, along with a range of services to support public transport operations. An important demonstration and technical tour has been the use of ITS to manage

large areas of the entire city of Turin. There were 2 plenary sessions and roundtable meetings, 15 executive sessions, 10 European commission special sessions, 30 special sessions and 145 technical/scientific sessions at the congress (Japan, 2000).

2.1.8. Eighth ITS World Congress- Sydney (2001)

The eighth congress, adopting the theme of "ITS-Transforming the Future", was held in Sydney, Australia, between 30 September and 4 October 2001. Organized by Colin Jensen, vice-chairman of ITS Australia and congress organizing committee. 40 countries and 3818 participants from different parts of the world attended the congress.

Participants exchanged ideas and information on the use of computer-based technology in transportation operations and management of infrastructure. Delegates came from the Asia-Pacific region, North America and Europe, including the National and State Ministers of Transportation and Chief Transportation Officers and staff. The Congress made significant contributions to the promotion of the ITS industry and to the technical knowledge sharing and coordination. The ITS World Congress was held for the first time in the Southern Hemisphere and is the largest conference on transport in Australia. John Anderson, Deputy Prime Minister and Federal Secretary of Transportation and Regional Services, welcomed the successful staging of Congress. More than 170 exhibits in the three halls of the Darling Harbor Exhibition Center covered 15,000 square feet, including manufacturers, suppliers and developers of equipment, software and ITS services. To date, the government continues to invest significantly in ITS and support the industry to ensure Australia's successful participation in the global market (Japan, 2001).

2.1.9. Ninth ITS World Congress- Chicago (2002)

The 9th ITS Congress was held on October 14-17, 2002 in Chicago, Illinois, USA. 45 countries and more than 4000 people participated in the congress, and 209 exhibitions were organized. The theme is "ITS: Enriching Our Lives", the main topics are listed below:

- Transition economies

- Impact of future communication networks and technologies
- Road safety, telematics and load movement safety

Chicago's program stressed that the future of ITS is promising, but ITS itself is anything but futuristic. Already, real systems, products, and services have been seen at work in the US. In fact, the wide development and dissemination of these technologies represented a true revolution in the way the United States thought about transportation. The latest research on ITS continued to be done, but now, the fruits of this research, government and private investment, on the roads or even in the back offices, via cars or highways, come into play with the emerging vision of what communication can do to advance ITS for everyone. It started to show itself in a series of ITS applications that started (*9th ITS World Congress- Chicago, 2002*).

2.1.10. Tenth ITS World Congress- Madrid (2003)

Madrid hosted the 10th World Congress of ITS on 16-20 November 2003. 72 countries and more than 7000 people attended the congress. The organizing committee was chaired by Jaime Huerta (ITS Spain). Major issues have been global eSafety and the role of ITS in transport policies.

Madrid's theme was 'Solutions for Today... And Tomorrow', 2 Plenary Sessions and Round Tables, 10 Strategy and Perspective Sessions, 41 Special Sessions, 175 Technical/Scientific Sessions were held at the congress, and the event provided exactly that. In the longer term, a series of sessions were held with linked demonstrations on the theme of Global eSafety, in which the European eSafety Initiative plays a key role. E-Safety is a joint industry - public sector initiative launched in 2002 by ERTICO - ITS Europe and the European Commission to improve road safety using new Information and Communication Technologies (ICT) and reduce accidents and deaths by 50% in 2010. The overall aim has been to join forces and establish a European strategy to accelerate the research and development, deployment and use of Intelligent Integrated Road Safety Systems, including Advanced Driver Assistance Systems (ADAS) in Europe. For a closer look, the emphasis is on the role of ITS in changing the way we manage and receive transportation every day, by introducing new concepts and

services to make our transportation more efficient, safer, more comfortable and reliable with reduced environmental impact, as well as faster. Another important point has been the ministerial debate on the role of ITS in the formulation and implementation of transport policies (*Congress Theme Solutions for Today... And Tomorrow, 2003*).

Some of the exhibitions and technical trips made at the congress are listed below:

- Vehicle testing center at the industrial automation institute within the scientific research senior council
- DGT traffic control center in Madrid
- Vehicle center within the national aerospace technology institute (INTA)
- Madrid municipality traffic control center
- Arterial toll highways operations center in Madrid
- Control center for Madrid public transport bus identification and control system
- 112 emergency center
- AENA - Spain airports and air navigation
- Metro control center in El Arena

2.1.11. Eleventh ITS World Congress- Nagoya, Aichi (2004)

The theme of the 11th ITS World Congress, held in Nagoya, Japan, on 18-24 October 2004, was “ITS for a Livable Society”. 53 countries participated in this congress. Organizing committee chairman Dr. More than 60 thousand participants attended the event organized by Shoichiro Toyoda (Toyota Motor Cooperation). Plenary sessions have been about ITS for a liveable society, building on lessons learned, international collaboration and global eSafety. Under the theme “ITS for a Livable Society”, the purposes of ITS deployment are clearly categorized and all events are associated with these categories. These have been recognized as safety, environmental sustainability and comfort for occupants, which to this day have been inherited as safety, sustainability and mobility. ITS is a system that moves from research and development to distribution, and electronic toll collection, real-time traffic information systems infrastructure has been implemented. The key to successful deployment has been identified by the general public as acceptance of onboard equipment purchases. Therefore, various events were organized for the public and the media, such as the special exhibition for hands-on experiences

of ITS services, called 'ITS World', showcases the latest ITS technologies and open panel discussions featuring citizens and local government officials. An interactive session is introduced as a new experiment on the format of the ITS World Congress. Among the accepted techniques, articles, research, more suitable for face-to-face discussion in front of a panel, oral presentations rather than examples or small demonstrations were selected by the International Program Committee. Sessions were held by a group of commentators with expertise in the field, and the best paper was selected and awarded.

Congress is closed for the third day as a strong typhoon directly hit the Nagoya area. All sessions, exhibitions, screenings and related events scheduled for the day have been canceled and it has been an unforgettable experience for expats, especially visitors from countries without such natural disasters (*11th ITS World Congress- Nagoya, 2004*).

Educational video presentation for public awareness, mock-ups for technical presentation, real equipment and tools were shown in Nagoya.

1) Georama Theatre: Traffic flow and data exchange are shown on the 3D model that explains the working mechanism of ITS.

2) ITS City: The actual operation of ITS services is demonstrated by volunteers with real equipment, vehicles and sketches.

3) Dream Theatre: Short films about the future life of a family supported by advanced ITS services were shown (*11th ITS World Congress- Nagoya, 2004*).

2.1.12. Twelfth ITS World Congress- San Francisco (2005)

The 12th Congress of the ITS was held on November 6-10, 2005 at the Moscone Center in San Francisco, USA. 56 countries and more than 7000 individuals participated in the event. The theme of the congress, chaired by Harry Voccola (Navteq) of the organizing committee, is “Enabling Options in Transportation”.

Covering topics of ITS Real World Experiences in areas such as traveler information, hassle-free travel, transportation and logistics, vehicle infrastructure collaboration, and public transportation, the purpose of the congress was to facilitate the ability of the ITS community to collectively provide greater reliability,

convenience and security to users of the world's transportation system during the week of programming and service. This event focused on training and practical application as well as a constant focus on innovation. With this in mind, the organizers sought to highlight what was happening at the time and in the short term in four ways – through social participation, technologies, the political scene and the media. Socially, the World Congress held a major technology showcase in the parking lot of a local sports stadium to engage the community about new IUS innovations. Technologically, the opportunity to showcase crash-proof cars and first iterations of the DSRC is complemented by a series of technical tours highlighting electronic applications that facilitate highway tolls and traffic management. Finally, the media events held before and during the World Congress helped to reach a wider audience and consumer audience, to gain greater appreciation by the press and TV so that their messages could be delivered more effectively (*12 Th ITS World Congress, 2005*).

2.1.13. Thirteenth ITS World Congress-London (2006)

75 countries and over 8000 people attended the congress held in London on 8-12 October 2006. Its theme is “ITS Delivers Excellence in Transport”. Earlier congresses tended to emphasize automotive. Practices London's program and exhibition, which includes a variety of different stakeholders from both the public and private sectors, has demonstrated that ITS is now multimodal. Congress sessions were extremely well attended and allowed delegates access to the latest ideas and innovations at ITS, while the exhibition provided first-hand insight into the latest products, services and components. A popular feature among delegates was a ministerial roundtable discussion on the possible deployment of new and emerging technologies in transport. UK Minister of State for Transport, Dr. Stephen Ladyman MP moderated an informal ministerial debate at the first main session of the congress. This plenary was a thought-provoking and lively discussion inspired by a recently completed UK project that took a very long-term view of the opportunities technology offers to transport. The congress included a plenary and round table, 12 executive sessions, 77 special sessions, 142 technical/scientific sessions and 6

interactive sessions. In addition, lunch discussions and 3 auxiliary events were organized (*13th ITS World Congress -London, 2006*).

2.1.14. Fourteenth ITS World Congress-Beijing (2007)

The 14th Congress with 43 countries and 42 thousand participants was held in Beijing. Jianli Cao (Deputy Minister of Science and Technology) chaired the organizing committee of the congress held on October 9-13. The theme is “ITS for a better life. The largest ITS event of the year, the convention brought together government and relevant organizations around the world, technical people, consultants and industry leaders. The Congress was also supported by the Chinese government by the Ministries of Science and Technology, Communications, Construction, Public Security. With this support, it was aimed to learn more about the latest technology related to ITS and to encourage international exchange. The Cavendish Group, publisher of Road and Rail Technology, had established a tremendous reputation for western technology magazine in the country in recent years and was supported by the Ministry of Transport. Their publications were aimed at networking public authorities, traffic and transit agencies, highway authorities, consultants, ministries, and more. At the same time, the Cavendish Group was recognized throughout the industry, providing unparalleled insight into the latest technologies and developments from the west and how they will affect China. For these reasons, Cavendish Group publications were supported by many institutions, and their publications were distributed not only to World Congress participants, but also to all governing bodies and organizations involving ITS industry developments in major Chinese cities such as Beijing.

China quickly gained strength on the ITS issue. With the rapid economic developments and urbanization, the government has given more importance to the transportation system, hoping to improve the city traffic and transportation system by using advanced and intelligent information technologies (*14th ITS World Congress- Beijing, 2007*).

2.1.15. Fifteenth ITS World Congress-New York (2008)

The 15th World Congress was held on 16-20 November 2008 in New York, USA. “ITS Connections: Save Time. 71 countries and 8083 people attended the congress, which was held with the theme of "Saving Life". Michael Noblett, vice president of Connexis LLC, was chairman of the regulatory board. In the boards and meetings, the subjects of transport policy for a better world (General Assembly), looking at transport security in new ways (Security General Assembly), ITS and sustainable mobility (Closing Meeting) were discussed. This world congress emphasized the need for safer, more convenient and more reliable ITS solutions to be more economical, in the spirit of the theme “ITS Connections: Save Time”. Distribution was the focus of this convention and solutions were found on highways, walkways and waterways that improved the travel situation. Although the World Congress took place in the shadow of the expanding global economic crisis, it attracted 8,000 attendees and took center stage with the closure of 11th Street in front of the convention center where a series of demos were held in Manhattan. Inside, the range of programs is rounded off by a comprehensive exhibition featuring “The TMC of the Future” that emphasizes the organization, management and use of data to support traffic center operations and help the passenger reach their destination safely and securely (2008 New York City (Americas), 2008).

2.1.16. Sixteenth ITS World Congress-Stockholm (2008)

With the theme “ITS in Everyday Life”, Stockholm aimed to explore how ITS can improve our daily mobility with a strong emphasis on co-modality and ITS solutions for all modes of transport. The multimodal theme is reflected in the exhibition, where various trade participants, public administrations, ITS-related organizations showcase technologies and services that are changing the face of transport. Stockholm has been a clear transition from the era of demonstrations, pilots and local deployments to the time of large-scale deployment with enhanced service integration. The London experiment, which involved the Cabinet debate, was repeated on an even larger scale. The interest in the congress, which was held between 21-25 September, was again great and 64 countries, more than 8500 participants were found. The Congress was organized by the

Swedish Road Administration (2009 Stockholm (Sweden), 2009).

2.1.17. Seventeenth ITS World Congress-Busan (2010)

The 17th Busan ITS World Congress was held on 25-29 October 2010 with 84 countries and 39,000 participants and 215 companies' exhibitions. During the congress, sessions, exhibitions, showcases and technical visits took place under the theme of “Community Everywhere with ITS” and it was a great chance to experience the latest ITS technology and envision the future vision for ITS. In particular, the first-ever ministerial roundtable provided an opportunity for road and transport ministers from around the world to come together to present future ITS policies and initiatives, and to discuss ways to strengthen international exchange and cooperation. It also organized a job matching program for participants for the first time, to help participating companies and ITS research institutes create new job opportunities. Participants experienced the future vision of ITS in the showcase where new ITS technologies were showcased in line with three themes: mobile and network-based ITS services, user-friendly traffic information service, and testing environmentally friendly vehicles (17th ITS World Congress, 2010).

2.1.18. Eighteenth ITS World Congress-Orlando (2011)

The Orlando Congress was held on October 16-20, 2011 with the participation of 68 countries and 6700 people. Reflecting the theme of “Getting the Economy Moving”, the congress program highlighted a mix of ITS interests focused on issues and technologies that support economic recovery and development. The program demonstrates the continued emphasis on integrated innovation of ITS solutions and the global economy. 2011 World Congress; hosted a technology showcase on security, mobility, pricing and the environment. The congress organized technical tours with the latest technology in traffic and incident management. This world convention in Orlando provided a unique opportunity to showcase spatial transportation technology by visiting the Kennedy Space Center. The 2011 World Congress in Orlando was a great opportunity to watch more than 80 countries come together to witness the latest in transportation technology, attend the training program, talk to the vendor,

and enjoy the best family entertainment in the world. According to the president of the World Congress, “During the three years that I have planned this event, I have had the opportunity to work with a wonderful group of leaders who have a clear passion for ITS and know they are making a difference in our society. This enthusiasm was equally welcomed by our friends in other countries and allowed us to bring this conference together. “We’ve all witnessed real teamwork and I’m honored to be with so many great people who are totally committed to success.” (*18th ITS World Congress- Orlando, 2011*)

2.1.19. Nineteenth ITS World Congress-Vienna (2012)

It was held in Austria on 22-26 October 2012. The ITS World Congress, whose awareness has increased over the years, has hosted over 10000 guests from 91 countries.

Vienna 2012, with the theme “Smarter on the road”; highlighted the need to require more intelligence into transportation systems, as the ongoing challenges of increasing demand, security, and sustainability cannot be overcome with infrastructure and networking alone. This theme was carried over to all sessions and workshops held throughout the congress week, reflected in extensive demonstrations not only in the congress area but also throughout the city, demonstrating the advantages of cooperative systems in daily traffic. Based in London and Stockholm, Vienna was a roundtable meeting attended by more than 50 ministries and high-level representatives from public authorities and global organizations from 31 countries. The meeting titled “Sharing Best Practices and Meeting Challenges for Successfully Implementing ITS” was attended by European Commission Vice-President Siim Kallas and Austrian Doris Bures Minister for Transport, Innovation and Technology Efthymios Flourentzos, President of the EU Transport Council, as well as eight ministers, four political deputy minister and two political state secretaries. 12 distant countries were represented by senior officials. In addition, senior representatives of six international organizations strongly affiliated with ITS (ITF, IRU, UN/ECE, UITP; IBEC and IRF), as well as leaders of three regional ITS platforms ITS America, ERTICO - ITS Europe and ITS, Asia-Pacific, attended the Ministerial Roundtable

and issued a statement on the role of policy making in accelerating ITS deployment.

In the joint statement made by the host, the Austrian Ministry of Transport, Innovation and Technology and ERTICO - ITS Europe and supported by the European Commission, the following is committed:

- Increase political commitment to promote ITS diffusion
- Involving the World Congress in shaping international policy at ITS
- Promote the visibility and impact of the ITS World Congress (*2012 Vienna (Austria), 2012*).

In addition, the following technical trips and demonstrations were organized at the congress:

- Visit of the Austrian national traffic management center
- Visit of Siemens AG Austria–world headquarters for metro, buses and light rail
- ÖBB train tracking site
- ÖBB traffic management facility
- Vienna climatic wind tunnel visit
- Danube grand tour
- Austrian Truck Pass and ITS Tunnel Security Tour by Kapsch
- Bombardier Transport Vienna Site

At ITS Vienna 2012, shows were organized in 5 thematic areas:

1. Cooperative mobility
2. Network operations
3. Navigation and sensors
4. E-mobility
5. Public transport

The demonstrations aimed to demonstrate as much as possible technical innovations and user benefits in the everyday transport environment in the city of Vienna. Overall, 23 technical demonstrations were held, eight of which took place in real traffic in Vienna.

2.1.20. Twentieth ITS World Congress-Tokyo (2013)

The 20th World Congress was held in Tokyo on 12-18 October. It took place with 60 countries and 8000 participants under the theme of “Open to the next one for ITS”. In the long tradition of ITS World Congresses, this year's event brought all delegates together at the Tokyo International Forum to celebrate the Congress'

opening with many prominent figures from around the world. Among the highlights were the “Hall of Fame” and two other awards newly introduced from this congress. In addition, the ceremony included Japanese traditional Yosakoi dance and an energetic Japanese drum performance (Japan, 2013).

2.1.21. Twenty-First ITS World Congress- Detroit (2014)

With the theme “Reinventing Transportation in Our Connected World”, Detroit 2014 successfully included a wide range of people at

the ITS World Congresses in America, including the federal government, Michigan, the University of Michigan, and the automotive and infrastructure industries located in the region that registered the most attendees. The event featured 263 session programs, 31 technology showcases, 6 technical tours and more than 300 participants. The main focus points of “Automatic Driving”, “Big Data” and “General Public” and the topics discussed at the meetings were as follows (*2014 Detroit (United States)*, 2014).

Table 2. Topics covered in Detroit congress plenary sessions

Plenary Session 1	Reinventing policy to support the new ITS
Plenary Session 2	Plenary Session 2 Reinventing business models for the new ITS
Plenary Session 3	US DOT Plenary: laying the foundation for our connected society

In the congress; Technical visits were made to Monroe, Michigan PrePass Operations, Safety Pilot Model Deployment (SPMD), Southeast Michigan Transportation Operations Center (SEMTOC) Tour, Windsor City Traffic Operations Center, Macomb County Communications and Technology Center (COMTEC), OnStar Command Center.

2.1.20. Twenty-Second ITS World Congress- Bordeaux (2015)

With the theme "Better Use of Space Towards Intelligent Mobility" Bordeaux 2015 was made about distribution issues, but specifically focused on connected and highly automated vehicles. In almost every industry, there has been a shift from “supplier push” to “user pull” for system design in most cases. The congress included 3 plenary and roundtable meetings, 14 executive sessions, 68 special interest sessions, 7 stakeholder workshops, 98 technical/scientific sessions, 4 IBEC and 14 interactive sessions, and many other ancillary events. Main topics; “Space Services” are “Mobility as a Service”, “Connected and Automated Vehicles”.

Climate changes were discussed in the executive session. At the initiative of France, a ministerial roundtable was held before the official opening of the 22nd World ITS Congress. Segolene Royal, French Minister of Ecology, Sustainable Development and Energy, and Alain Vidalies, French Minister of State for Transport, Marine and Fisheries, broadly

invited their colleagues from 28 countries. Countries around the world have recommended focusing discussions on the prospects for ITS development to benefit the environment and climate. The meeting, which is closed to the public and the press, was held on 5 October 2015 between 14.00 and 16.00 in partnership with European Commissioner Violeta Bulc. As a result, the 2015 Bordeaux Manifesto “Guiding Against Climate Change” was adopted and they declared that they aim to encourage the dissemination of ITS to reduce greenhouse gas emissions and encourage the exchange of good practices so that we can achieve the COP 21 targets (*2015 Bordeaux (France)*, 2015).

2.1.23. Twenty-Third ITS World Congress- Melbourne (2016)

The 2016 ITS World Congress is a major event worldwide. The ITS community has successfully raised the profile of the Australian and international IUS industries, providing unprecedented job opportunities and connecting our industry with governments, organisations, academics and society. Hosting on behalf of ITS Asia Pacific, ITS Australia has produced a convention that has benefited the national economy \$25 million, making it the second largest international association convention ever held in Melbourne. 11,570 delegates from 73 countries attended the Congress, refuting the notion that the long distance to Australia might be too far for many delegates.

Government participation has been a feature of the 2016 World Congress, with strong local and international support throughout the week. Among those attending the Congress were Australian Prime Minister Malcolm Turnbull, Federal Minister for Infrastructure and Transport Darren Chester, Federal Minister for Urban Infrastructure Paul Fletcher, Victorian Minister for Public Transport and Projects Jacinta Allan, Victorian Minister for Roads, Road Safety and Harbors Luke Donnellan, Victorian Treasurer Tim Pallas, Victorian Minister of Finance Robin Scott, Queensland Minister of Main Roads, Road Safety and Ports Mark Bailey, South Australian Minister of Transport and Infrastructure Stephen Mullighan and New Zealand Minister of Transport Simon Bridges.

With the theme “ITS – Developing Livable Cities and Communities”, it reflects Melbourne's population growth, continued growth in mobility demand and users' appetite for services built on 24/7 connectivity, while reflecting the exceptional range of ITS products deployed by cities and urban settlements, as well as grid capacity, air quality. and aimed to bring improvements in safety. The congress is organized around eight main topics. “Challenges and Opportunities of Big and Open Data”, “Smart Cities and New Urban Mobility”, “Automated Vehicles and Cooperative ITS”, “Mobile Applications”, “Vehicle and Network Security”, “Future Freight”, “Environmental Sustainability”, “ Policy, Standards and Harmonization” (*ITS-ENHANCING LIVEABLE CITIES AND COMMUNITIES Melbourne Convention and Exhibition Centre POST CONGRESS REPORT CONTENTS*, 2016).

2.1.24. Twenty-Fourth ITS World Congress- Montreal (2017)

The 24th World Congress was held in Montreal, Canada from 29 October to 2 November 2017. A total of 65 countries and 8000 participants participated. Organized by ITS America/ITS Canada. Under the theme "Sustaining Smart Cities for Next-Generation Integrated Mobility", the Montreal 2017 Congress addressed connectivity and autonomy, the smart city, mobility, and specifically mobility as a service, through its program of more than 240 sessions. Main topics:

- Connectivity and autonomy

- Infrastructure challenges and opportunities
- Integrated approach: planning, operations and security
- Smart and smarter cities
- Data, security and privacy
- Innovation, what's next? New ideas
- Disruption and new business models (*2017 Montreal (Canada)*, 2017).

2.1.25. Twenty-Fifth ITS World Congress- Copenhagen (2018)

With the theme “ITS-Quality of Life”, the Copenhagen (17-21 September 2018) Congress hosted more than 250 sessions, including 3 Plenary Sessions, 12 Executive Sessions, over 500 technical papers and many other Ancillary Events. Main topics:

- Mobility services from transportation to mobility
- IUS and environment
- Connected and automated transport
- New generation goods delivery
- Satellite technology applied in mobility
- Evolution of transport networks
- Cross-border mobility solutions

The Congress was organized by ERTICO and the European Commission. 96 countries and over 10 thousand people attended the event (*2018 Copenhagen (Denmark)*, 2018).

2.1.26. Twenty-Sixth ITS World Congress- Singapore (2019)

In the congress held between 21-25 October 2019, there were 214 sessions, including 3 general sessions, 12 executive sessions, 484 technical/scientific/commercial papers and many other auxiliary activities, with the theme of "Smart Mobility, Strengthening Cities". 95 countries and more than 14 thousand 700 attended the congress. Program themes:

- Smart, connected and automated tools
- Crowdsourcing and big data analytics
- Sustainable smart cities
- Multimodal transport of people and goods
- Security for drivers and sensitive users
- Policies, standards and harmonization
- Innovative pricing and travel demand management
- Cyber security and data privacy (*2019 Singapore (Singapore)*, 2019).

The ITS World Congress to be held in 2020 could not be held due to the Covid-19 pandemic process.

2.1.25. Twenty-Seventh ITS World Congress- Hamburg (2021)

The congress was held in Hamburg between 11-15 October 2021. 66 countries, 15000 participants were found. Its theme is “Experience the Mobility of the Future Now”. With this theme, ITS has been chosen to demonstrate the radical role that digitalization and collaborative, connected and automated mobility can play in addressing key challenges in the mobility and transport sectors. The congress was held with the idea that the commissioning of ITS can take the countries of the world further on the road to an accessible, fair, affordable, zero-death, zero-emission, flexible under stress and seamless mobility between continents.

Main topics;

- Automated, collaborative and connected mobility tools
- Mobility on demand, mobility as a service
- Goods journey from ports to customers
- Smart infrastructure
- New services from new technologies
- Cities and citizen solutions (“ITS World Congress 2021 - Hamburg.Com,” 2021)

2.2. ITS in the World Market

Advances in the development of transportation networks have triggered the need for an efficient transportation system. At the same time, advances in the latest technologies, such as blind-spot detection and electronic toll collection, are continuously redefining the expectations and prospects for sustainable management of transportation networks and traffic. At this juncture, the growing need to present real-time traffic information to drivers and passengers is emerging as one of the key factors driving the demand for intelligent transportation system (ITS).

The traffic management accounted for the largest market share of over 30% in 2020. The increase in travel time and hence the fuel consumption and the subsequent monetary

losses stemming from traffic congestions are driving the necessity for implementing efficient traffic management systems. Traffic management systems also help in enhancing the operational performance and reliability of road networks (*Intelligent Transportation System Market Worth \$ 42 , 936 . 1 Million By 2028, 2022*).

Also, the growing number of vehicles on road, aging infrastructure, and a looming lack of traffic data management are some of the other factors that are anticipated to contribute to the growth of the market. The eminent need to efficiently manage the traffic flow across city corridors and highways has triggered the need for an alternative traffic management technology (Triandafyllidou & McAuliffe, 2019). An intelligent traffic management system ensures road safety, traffic flow, and mobility. It also provides real-time data for the analysis and response to emergencies on an immediate basis. Various countries are putting effort into modifying their traffic management infrastructure to reduce traffic congestion. The adoption of telematics services in vehicles can significantly improve security and safety. With the effect of these, the global intelligent traffic management system market size was at USD 9.70 billion in 2021(Figure 3) and is expected to expand at a compound annual growth rate (CAGR) of 13.1% from 2022 to 2030(Management, Signal, System, Region, & Forecasts, 2022).

The North America regional market is anticipated to reach USD 16.13 billion by 2028. The regional market is expected to continue dominating the global market over the forecast period leveraging the advances in telecommunications technology and the aggressive investments in research and development, deployment, and adoption of intelligent transportation systems across the U.S (Figure 2) (*Intelligent Transportation System Market Worth \$ 42 , 936 . 1 Million By 2028, 2022*).

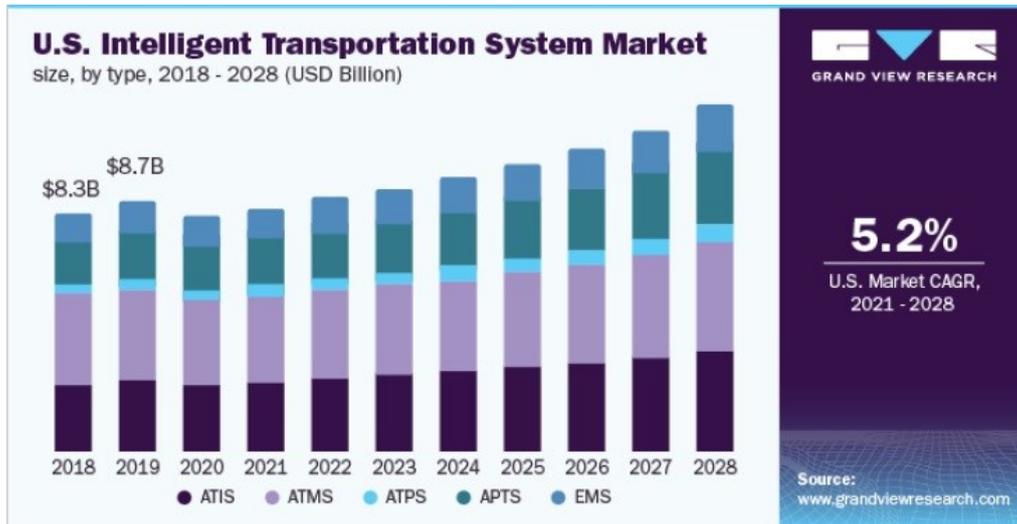


Figure 2. U.S. intelligent transportation system market

Due to the increase in information and data in smart transportation systems, as well as smart transportation devices and smart traffic management at the global level, the global

intelligent transportation system market size is expected to reach USD 42,936.1 million by 2028, registering a CAGR of 7.0% from 2021 to 2028.

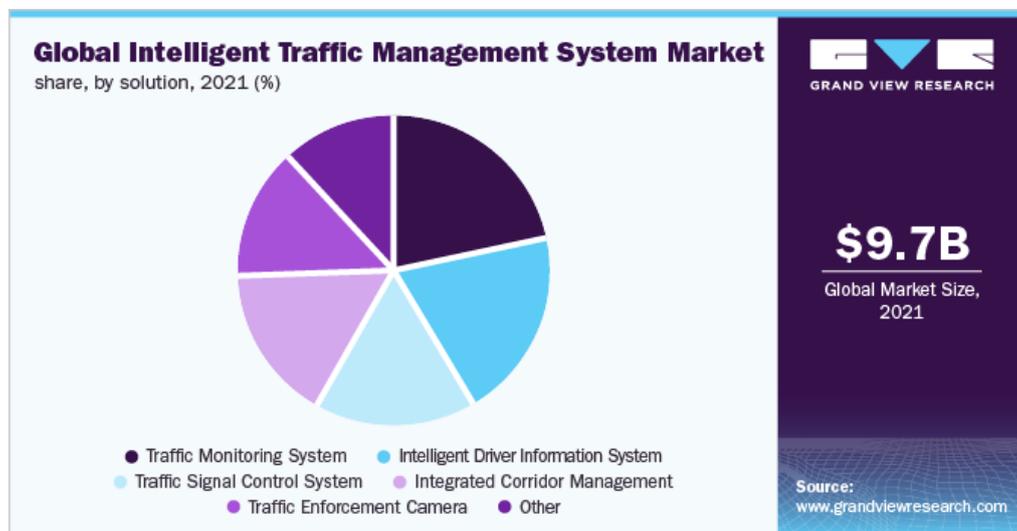


Figure 3. Global intelligent traffic management system market

3. Conclusion

ITS congresses contributed to the worldwide recognition and spread of smart transportation with the themes determined by considering the global needs and the meetings and exhibitions organized within this scope. And these congresses, which have been held since 1994, have an important place in marketing and promotion in the market, which has become very important today. For this reason, the activities of congresses increase their importance day by day and become an indispensable practice for many companies. It is aimed to expand the visions of the countries in

this regard by introducing the latest technologies in the exhibitions, screenings and technical trips. By including these innovations in their future plans, nations both put their smart transportation systems into practice and contribute to their own national economies. One of the most important examples of this in the world is Japan. He included it in his plans after the VICS screening he made at the Yokohama congress in 95 and put it into practice immediately in 1996. Since then, the application continues effectively. This and many other examples have been started to be implemented by the representatives by moving them to their countries.

Studies conducted in organizations come to the fore with their more result-oriented features compared to advertising studies. Company representatives participating in these events have the opportunity to communicate closely with their customers, develop existing relationships and gain new customers. In addition, it becomes possible to carry out sales development and public relations activities for large audiences. It is possible to learn how a new product is evaluated by the market, why the demand or reaction arises, how the products in the market are evaluated by the seller or the user, the complaints and solution suggestions. Since there is a one-sided flow of information in the promotions made by the companies with the advertising method, it is not possible to acquire the communication skills obtained in these activities through advertising activities. In addition, in these organizations where sales, sales development, advertising and public relations activities are presented together, it has taken its place in contemporary marketing communication as the most important activities of marketing. With the contributions of the press and administrations along with the congresses, ITS has become an even wider appeal to a wider audience. However, there is serious competition in this field. This competition has contributed to the growth of the market and industry day by day. The effect is increasing day by day as the stakeholders and the relevant industry giants come together and interact in the organizations and the congresses are open to the potential customers.

Although the ITS World Congresses could not be held in 2020 due to the pandemic, starting from 1994, they have been held regularly every year and the number of participants has increased every year. Presenting and sharing different ideas as mentioned above; It is aimed to raise awareness of the public and managers, to be aware of new technologies in this regard, and to protect the environment at the same time, and these goals are being achieved more and more rapidly. Politicians and administrators held meetings in these congresses and discussed the necessary new laws and regulations. Day by day, ITS finds more and more coverage in every corner of the world.

These congresses organized by ERTICO, both regionally and worldwide, have increased the participation and awareness of the countries. The knowledge of the countries on ITS has increased, and they have made technological studies and regulations in their own countries and cities.

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References

- Aymankuy, Y.** (2013). *Kongre Turizmi Ve Fuar Organizasyonları*. Detay Yayıncılık.
- Beijing.** (2007). *14 th ITS World Congress*. Retrieved from <http://2012.itsworldcongress.com/content>
- Berlin.** (1997). *4 th ITS World Congress*. Retrieved from https://www.its-jp.org/english/congress_e/
- Bordeaux France.** (2015). *2015 Bordeaux (France)*. Retrieved from https://www.its-jp.org/english/congress_e/
- Busan.** (2010). *17th ITS World Congress*. Retrieved from https://www.its-jp.org/english/congress_e/
- Chicago.** (2002). *9 th ITS World Congress*. Retrieved from <http://2012.itsworldcongress.com/content>
- Congress Theme Solutions for Today... And Tomorrow.** (n.d.).
- Copenhagen Denmark.** (2018). *2018 Copenhagen (Denmark)*. Retrieved from https://www.its-jp.org/english/congress_e/
- Detroit US.** (2014). *2014 Detroit (United States)*. Retrieved from https://www.its-jp.org/english/congress_e/
- Ertico.** (2021). About the Congress - itsworldcongress.com. Retrieved January 25, 2022, from <https://itsworldcongress.com/about-the-congress/>
- Francisco, S.** (2005). *12 th ITS World Congress*. Retrieved from https://www.its-jp.org/english/congress_e/

ITS World Congress. (2021). ITS World Congress 2021 - hamburg.com.

Japan, I. (2001). *8th ITS World Congress.*

London. (2006). *13th ITS World Congress - London.* Retrieved from <https://www.its-jp.org/english/files/2017/05/13th-ITS-World-CongressFinal.pdf>

Melbourne. (2016). 23rd World Congress on Intelligent Transport Systems - Congress. Retrieved January 28, 2022, from <https://www.itsworldcongress2016.com/>

Montreal Canada. (2017). *2017 Montreal (Canada).* Retrieved from https://www.its-jp.org/english/congress_e/

Nagoyı Aichi. (2004). *11 th ITS World Congress - NAGOYA, AICHI.* Retrieved from <https://www.its-jp.org/english/files/2017/05/11th-ITS-World-CongressFinal.pdf>

NewYork. (2008). *2008 New York City (Americas).* Retrieved from https://www.its-jp.org/english/congress_e/

Orlando. (1996). *3 rd ITS World Congress.* Retrieved from <http://2012.itsworldcongress.com/content>

Paris. (1994). *1994 Paris (France).* Retrieved from https://www.its-jp.org/english/congress_e/

Seul. (1998). *5 th ITS World Congress.* Retrieved from https://www.its-jp.org/english/congress_e/

Singapore. (2019). *2019 Singapore (Singapore).* Retrieved from https://www.its-jp.org/english/congress_e/

Stockholm Sweden. (2009). *2009 Stockholm (Sweden).* Retrieved from https://www.its-jp.org/english/congress_e/

Tektas, N., & Tektas, M. (2020). *PARADOKS Ekonomi .* (April).

Tokyo. (2013). *20th Its world Congress Tokyo 2013.* 178. Retrieved from https://www.its-jp.org/english/congress_e/

Torino. (2000). *7 th ITS World Congress.* Retrieved from <http://2012.itsworldcongress.com/content>

Toronto. (1999). *6 th ITS World Congress.* Retrieved from https://www.its-jp.org/english/congress_e/

Triandafyllidou, A., & McAuliffe, M. (2019). Report overview. *Migrant Smuggling Data and Research,* 1–18. <https://doi.org/10.18356/e0636308-en>

Url1. (2022). konferans ne demek TDK Sözlük Anlamı.

Url 2. (2022). *Intelligent Transportation System Market Worth \$42,936.1 Million by 2028: Grand View Research, Inc. Bloomberg.*

Vienna. (2012). *2012 Vienna (Austria).* Retrieved from https://www.its-jp.org/english/congress_e/

Yokohama. (1995). *2 nd ITS World Congress.* Retrieved from <http://2012.itsworldcongress.com/content>