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International Council
of Societies of Industrial Design
Design for a better world

WORLD DESIGN TALKS

TRAFFIC CONGESTION

ISTANBUL, TURKEY

24 JUNE 2016

“Addressing traffic congestion requires a human-centred approach, with a better understanding of local culture, challenges, stakeholders, and behaviours.”

RAPID URBANIZATION: TRAFFIC CONGESTION IN MEGACITIES

Megacity: City with 10 million+ residents

Fuelled by the desire for a better quality of life (whether due to poverty, rural unemployment, conflict), people are flooding into urban areas at an unprecedented rate. [Rapid urbanization](#) may help lift standards of living, but it also puts a tremendous strain on city services, such as housing, education, health care and transportation.

One of the fastest growing cities in the world with a population of 14 million, Istanbul was not created with modern transport in mind, and its infrastructure is unable to keep up with the demands of a growing population, estimated to reach an unsustainable 20-22 million by 2020. This megacity is the third most congested, after Mexico and Bangkok, with a 50% increase in travel times when compared to free flow traffic ([TomTom's 2016 Traffic Index](#)).

The causes of traffic congestion in Istanbul are numerous and include poorly planned roadways and transportation systems, poorly timed traffic signals, insufficient traffic system coordination, traffic accidents, special events (ex: concerts, festivals), and the unexploited use of Istanbul's seaways and sea transportation.

According to Prof. Dr. Murat Çelik of [Istanbul Technical University](#), traffic congestion costs Istanbul more than 3 billion Turkish Liras per year due to loss of labour and excess fuel consumption, just about equal to Turkey's GDP in 2005.

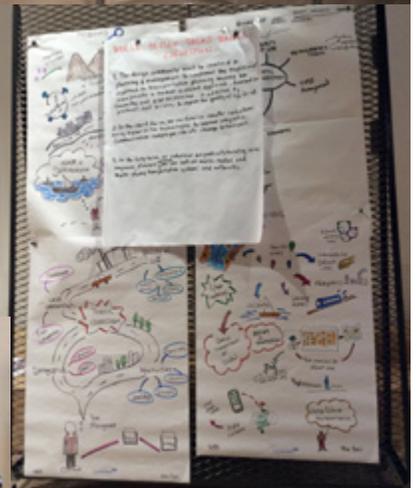
Reducing traffic congestion would address various targets set by the [UN Sustainable Development Goals](#) (SDGs), helping to reduce greenhouse gas emissions and to improve air quality, a major health problem in most megacities.



Transport related targets are included in eight out of the seventeen proposed Sustainable Development Goals.

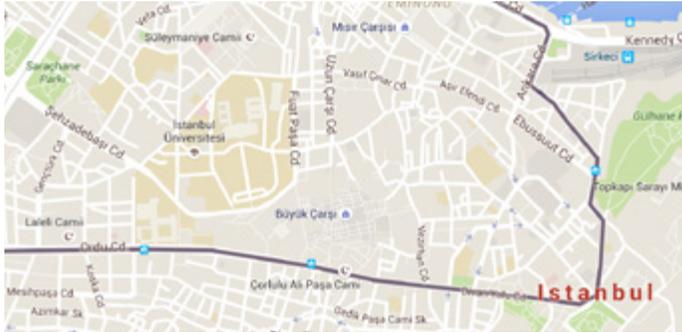
WORLD DESIGN TALKS TRAFFIC CONGESTION IN ISTANBUL

Forty participants including local academics, industrial designers, architects, and representatives from non-governmental organizations gathered in Istanbul on 24 June 2016 for [World Design Talks Traffic Congestion](#). Using a design perspective, they addressed the crux of the problem in the short, mid- and long-term. They explored sustainable and public transportation alternatives, including improvements to the dolmuş (pronounced “dole-moosh”), a responsive mini bus, which is locally generated, flexible, and demand-driven. They discussed behaviour changing campaigns, digital technologies and signage to better navigate traffic, as well as improved use of the seaways, pedestrian accommodations, and bicycle systems.



REDUCING TRAFFIC CONGESTION: SHORT, MID AND LONG TERM SOLUTIONS

Short-term solutions



- 1 Encourage sustainable transportation through public transportation, and incentivize people to use public transportation with economical fares that are socially equitable and accessible for all. Public transport improvements would also include automatic vehicle licensing and real time arrival information.



- 2 Implement congestion pricing: price according to the number of people in a car and the time of day (toll for people who travel to town during high peak times and high parking fares can discourage people from using their cars downtown).

REDUCING TRAFFIC CONGESTION: SHORT, MID AND LONG TERM SOLUTIONS

Mid-term solutions

3 Facilitate travel demand management by:

15 min. Staggering travel times

 Encouraging businesses to adopt telecommuting (working from home)

 Encouraging car-free zones, pedestrians, bicycle use and better pedestrian/bicycle connections

 Improving land use through smart growth policies (non-dense settlements and exclusive zoning)

 Designing transit strategies that encourage people to use high occupancy vehicles and public transportation.



4 Use technology (such as GPS, digital maps) to help educate citizens and help them make better transportation choices. Digital platforms (apps) can also help to better integrate the transportation system so that citizens can plan their trips in real time.

5 Transform culture, attitudes, and behaviours with regard to transportation.



REDUCING TRAFFIC CONGESTION: SHORT, MID AND LONG TERM SOLUTIONS

6

Pedestrianize the inner city to transform the human experience in downtown Istanbul and improve quality of life.



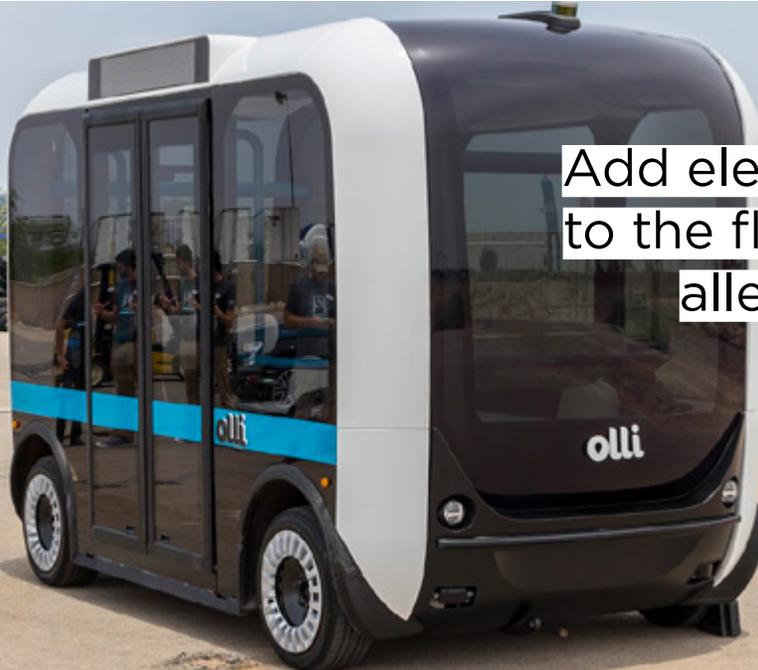
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Incorporate intelligent route finding to free up urban space for such activities as strolling around and communication.



8

Add electronic or hybrid cars to the fleet of dolmuş to help alleviate greenhouse gas emissions.



REDUCING TRAFFIC CONGESTION: SHORT, MID AND LONG TERM SOLUTIONS

Long-term solutions

9

Link rail, road and water transport on the one hand and public and private means of transport on the other.



10

Create a sea dolmuş system.

11

Improve roadway security design; barriers on shoulders, curbs, roundabouts, advanced signal systems, lane restrictions for high occupancy vehicles (ex: bus lanes) and changeable lane allocation can help calm and manage traffic.

12

Involve designers in the management and planning of an integrated transportation system. Designers have a unique mindset for solving problems that is distinct from traditional methods of urban planning. Industrial design places the needs and experiences of human beings first when designing out traffic congestion.

TOP 3 QUESTIONS

- 1** How do we change behaviours? For example, encouraging carpooling and use of public transport.
- 2** How has technology transformed traffic in your city?
- 3** Are there other design innovations in other megacities that Istanbul can learn from to better deal with traffic congestion?

WHAT'S NEXT? WHAT *YOU* CAN DO

We are looking to a wider design community and other likeminded organizations concerned with this issue to help us tackle this problem as World Design Talks Traffic Congestion goes online. We welcome your research, experience, insights and ideas.



Step 1

[Join](#) the World Design Organization group on LinkedIn



Step 2

Answer our Top 3 Questions



Step 3

Share this story



Step 4

Participate in a World Design Talks near you

WORTH BROWSING

[Turkey's Congestion Problem: Why New Roads Aren't the Answer](#)

[Study: Istanbul's heavy traffic congestion damaging to economy](#)

[Market Failure - Turkey Traffic Congestion](#)

Dolmus in Istanbul

[How and Where to Take a Dolmus or Shared Taxi in Istanbul](#)

[Dolmus & Minibüs Map](#)

[Dolmuş & Minibüs Map of Istanbul \(video\)](#)

ACKNOWLEDGEMENTS

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About World Design Talks

Icsid members hold World Design Talks, in their respective regions to address local challenges with global relevance—such as urbanization, climate change, migration—through a design lens. World Design Talks—including the accompanying online platform and larger biennial international gathering—aim to gather and share lessons learned, establish our common ground, and inform our world design agenda. Join the conversation on LinkedIn: [World Design Organization](#) or contact Gemma Peralta, Events Officer at gperalta@icsid.org.

About International Council of Societies of Industrial Design (Icsid)

Icsid is an international non-governmental organization (INGO) founded in 1957 that promotes the profession of industrial design. Icsid recently approved a name change, World Design Organization, to be implemented and celebrated in 2017, its 60th anniversary year. Icsid advocates industrial design-driven innovation that creates a better world, engaging our more than 140 member organizations in collaborative efforts and carrying out international programming—World Design Capital®, World Design Talks, World Design Impact Prize, World Industrial Design Day, and Interdesign. Icsid has United Nations Special Consultative Status. www.icsid.org

PARTICIPANTS

In alphabetical order:

Muzzafer Akay

Kerim Alper

Sonay Ardi Akkar

Engin Ayaz

Pinar Azizoglu

Luisa Bocchietto (Italy)

H. Murat Celik

Mehves Cetinkaya

Vivian Cheng (Hong Kong)

Dilki de Silva (Canada)

Alpay Er

Özlem Er

Alayca Erozcelik

Sertaç Ersayin

Hakan Etem

Mario Gagnon (Canada)

Gülay Gamze Güven

Begum Gungor

Esra Gunlükilig

Selva Gurdogan

Ceren Gutey

Ömer Hacıömeroglu

Gülay Hasdogan

Harun Kaygan

Sultan Kaygin Sel

Tuprul Keli Salei

Elif Kocabiyik

Ece Kuray

Mugendi M'Rithaa (South Africa)

Eunjoo Maing (South Korea)

Faith Mintas

Ali Ogulcan Ilhan

Deniz Ova

Ayşe Ozbil Turan

Can Ozcan

Arzu H. Toker Özkurt

Bulent Özkurt

Huseyin Penbeoglu

Gemma Peralta (Canada)

Gilles Rougon (France)

Berrak Salgamcioglu

Alexis Sanal

Beyza Sat Gungor

Srini Srinivasan (United States)

Burak Tasdizen

Billur Turan

Bahar Türkay

Mina Yanci

Yasemin Yildirim