

# 7<sup>th</sup> UIC nextstation conference

11-13 November 2019  
TEHRAN, IRAN

<https://nextstation.org/>



# UIC nextstation

“Railway Stations Boosting the City” TEHRAN 2019

# STUDENT COMPETITION

Supported by



INTERNATIONAL UNION  
OF RAILWAYS



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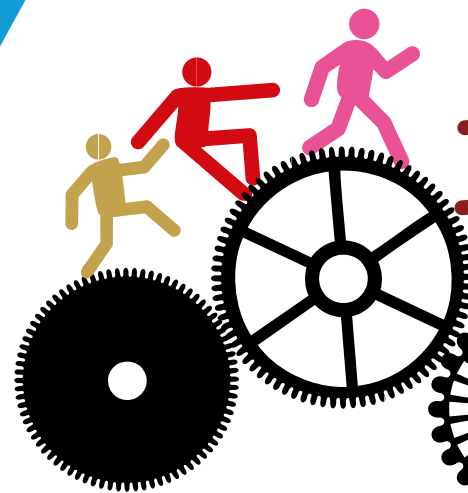


Iran University of Science and Technology



# 7<sup>th</sup> UIC nextstation conference

*Student Competition  
Call for Students*



Railway stations play an important role in people's lives and overall urban dynamics in cities worldwide. They come in different shapes and sizes and host thousands to millions of passengers daily. They are also catalysts for city development and revitalisation of urban areas. Therefore, their performance must be improved continuously by means of architecture, urban design, engineering and planning.

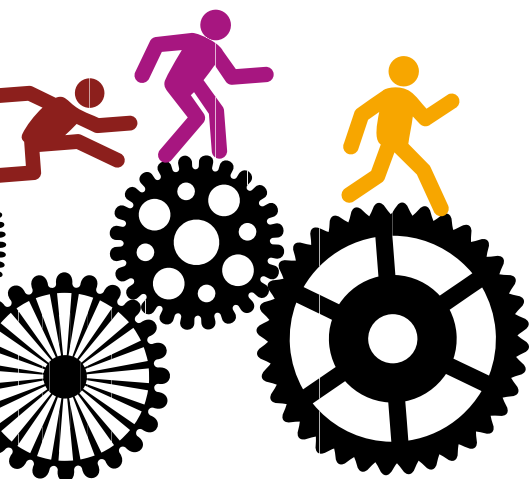
Supported by the **International Union of Railways (UIC)** and the **Railways of the Islamic Republic of Iran (RAI)**,

The **School of Railway Engineering at Iran University of Science and Technology** has teamed up with the **Faculty of Architecture and the Built Environment of Delft University of Technology** (the Netherlands) to launch the UIC nextstation Student Competition and to promote innovative and creative ideas from university students with the ability to “think outside the box” on current and future performance of railway stations.

The winners will be selected by the UIC nextstation Scientific Committee composed of a broad spectrum of international station manager specialists (UIC Station Managers Global Group members) including two University representatives, Dr. Manuela Triggianese from TU Delft and Dr. Melody Khadem Sameni from Iran's University of Science and Technology.

## Competition challenge

Students must choose an existing railway station, identify a theme of parallel sessions at the conference and analyse it on the selected location/case study. Students must use infographics to explain their ideas on how to apply the selected topic to the case study. The project idea should be in line with the following conference themes



**1 - Station Design 1**

**2 - Sustainability and Energy Efficiency**

**3 - Smart Solutions for Stations**

**4 - Services & Commercial Activities**

**5 - Station Design 2**

**6 - Mobility, Accessibility & Door-to-Door Solutions**

**7 - Security and Safety**

**8 - Station Management and Financing**

# 7th UIC nextstation conference: parallel sessions

## STATION DESIGN 1



One of the issues examined involves looking at how a station **fits into the design of a city**. Railway stations worldwide are assuming the role of urban centres. Important not just for transport purposes, stations are developing into attractive hubs that stimulate the city's socio-economic fabric. **Urban planning** must take account of the station's functions, including new ones. The right questions need to be asked when developing a **city's master plan for urban mobility**. One of the items to be raised is the subject of **finding location for the new-constructed passenger stations**. How can the conventional means of mobility be replaced with a **Transit-Oriented Development** concept while being more efficient and less costly for the city and its citizens? What is the **stakeholders' management approach** in potential as an **stimulant/driving factor for urban regeneration/recreation** surrounded contexts?

## SUSTAINABILITY



Railway stations must be able to provide more solutions than it already provides. Today's major challenge is to how to apply the challenges of **sustainable development goals** to the operation of stations. **Green solutions** in terms of **energy management**, infrastructure **life cycle**, **green procurement**, **social role** and **resilience** will determine the future of stations.

## SMART SOLUTIONS FOR STATIONS



Held in Madrid, the 2017 UIC nextstation conference addressed **best practices** for **smart stations** in **smart cities**. With the emergence of new challenges in railway station management, the **Internet of Things** (IoT) is delivering smart solutions to enhance the passenger experience. **Digitalisation** is driving digital transformation in stations. Data is being gathered ever more securely and efficiently in stations worldwide, and **smart data management** may be the key to reinforcing the railway station as a central facet of citizens' daily lives.

## SERVICES & COMMERCIAL ACTIVITIES



While rail is an excellent mode of transport for both short and long journeys, there is benefit to be had from exploring **new in-station functionalities**. The station plays a central role not only because of its central location in the mobility chain, but also in terms of customers' and citizens' **commercial and service requirements**. The efficiency of rail transport must be complemented by **efficiency of time spent** in the station. It is important to identify ways to make the station more useful not only for **passengers and commuters** but also for **tourists**. Let us not forget that **stations in rural areas and small stations** also have a very important role to place in relation to the social structure of cities. Stakeholders must work together to identify and develop future opportunities in this respect.

## STATION DESIGN 2



The emergence of **Building Information Modelling** (BIM) for construction of new railway stations brings with it the prospect of greater efficiency in project delivery and asset management. Another useful tool is the **Building Management System** (BMS). The Digitalisation will be used extensively to manage construction in the future, but it is important not to lose sight of the need to adapt this new way of technology to **local architectural identity** and **historical heritage**. **Stations must be designed**, to be **more resilient** and to adapt to changing circumstances, particularly with regard to **climate change**.

## MOBILITY, ACCESSIBILITY & DOOR-TO-DOOR SOLUTIONS



With the rise of sustainable mobility, **new means of mobility** and **e-mobility** are taking the lead in the development of environmentally-friendly vehicles. However, new modes of transport such as **shared mobility** and **micro/slow mobility** are becoming increasingly popular among urban citizens, representing a clear shift towards mobility as a service – the **MaaS** model. As patterns of intermodal passenger transport continue to evolve, the station is fast becoming a crucial center for integrated intermodality. Implementation of a **co-design framework between cities and railways for door-to-door projects is therefore important in order to secure accessibility, flexibility and universality**.

## SAFETY & SECURITY



Stations are not only a gateway to the rail system; they are also centers of mobility and are lively and popular meeting places. They are “calling cards” for cities and, increasingly, offer urban retail and service facilities across a balanced range of industries. Nevertheless, given the challenges posed by the increasing complexity of railway stations, the **need for a comprehensive station management approach** becomes all the more important in order to provide a great **experience for customers** in a **safe and secure environment**, even in **crowded situations**. **Which are the policies** that need to be developed to ensure that the stations of the future can meet these challenges?

## STATION MANAGEMENT & FINANCING



This parallel session is intended to **be free and open** to all to facilitate any discussions that may compliment the other sessions. In particular, financial analysis is very important for UIC members. Infrastructure development is increasingly wide-ranging and complex, resulting in higher construction costs. New **financing methods** must therefore emerge in order to meet these needs. With regard to the construction of new lines in the rail network (Commuter and High-Speed), How **railway station should be optimised** from **the operation part** in different countries?

## Competition eligibility and rules

1. University students who are enrolled at any University at bachelor, masters or PhD level are eligible to enter the competition.
2. A letter from the University with a declaration of student enrollment should be uploaded to the UIC nextstation conference website when submitting the proposal (<https://nextstation.org/>).
3. Students can enter the competition individually or as a group with a maximum of two people.
4. Only one idea can be submitted per group.
5. Entering the competition is free of charge.

## Criteria for selecting winners

- ▶ Importance of the theme that has been addressed
- ▶ Degree of innovation of the proposed idea
- ▶ Feasibility of implementation in the real world

## How to enter the competition

Students are asked to develop and upload an A2-sized infographic to the UIC nextstation conference website (<https://nextstation.org/>). The infographic should contain the following information:

- ▶ Name of the student(s), programme of study (bachelor, master or PhD), name of University and city, name of the station analysed and the project proposal, along with the title of the project.
- ▶ Explanation and demonstration of the theme from one of the eight parallel sessions as applied to the station (preferably with photos and graphics developed by the students).
- ▶ Explanation of the project idea and how it addresses the theme and is applied to the case study.





## Timeline of the competition and awards

	Students from universities in Iran	Students from universities in other countries
Deadline to submit ideas	1st July 2019	1st July 2019
Announcement of the winners	15 August 2019	15 August 2019
Prize	<ul style="list-style-type: none"><li>▶ UIC nextstation conference speaker</li><li>▶ Free accommodation, registration and meals at the UIC nextstation conference in Tehran</li><li>▶ Free travel to Isfahan for the conference technical visit</li><li>▶ Opportunity to develop the project idea into a research paper for publication in the 'International Journal of Railway Research'</li><li>▶ Partial travel grant for the winner to Netherlands to visit Dutch stations</li></ul>	

## Process for winners

Students must register as speakers on the UIC nextstation website. After confirming your participation as a speaker, you will receive a code to register free of charge in the "Registration" area of the website.

## Reaching the conference

To ensure that the conference runs smoothly, all speakers are expected to travel to and attend the UIC conference. The International Union of Railways can provide useful information regarding visas, travel and accommodation.



Should you need any further information concerning this event, please contact:  
Mr Clément GAUTIER, Coordinator of the UIC nextstation conference:  
[gautier@uic.org](mailto:gautier@uic.org)

<https://nextstation.org/>

[www.uic.org](http://www.uic.org)



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