

# ONLINE TRAINING PROGRAMME ON BUS PLANNING & SCHEDULING

22 June – 7 July 3 weeks

## Here's what you will learn

- Provide participants with knowledge on adapting to the new normal and run the Bus Business efficiently.
- Learn from the experts on planning and execution of Bus operation to enable resources optimization.
- Allow exchange of knowledge by tapping on UITP's international expertise.
- Present and discuss the best practices adapted in the region and internationally.
- Provide a conducive platform for networking opportunities and interaction amongst participants.

## Why choose an online course?

- Interact with public transport professionals from across the world
- Be time efficient, with 9 sessions over a 3-week timespan
- Flexibility to join the sessions from any location in the world, at work or at home

## A top-level methodology

- **Get inspired by our trainers**, understand the main aspects of bus planning and scheduling, and learn from successful best practice
- Participate to **interactive plenary sessions** with introduction by course leaders, presentation by trainers and open discussion with participants
- **Challenge your practical knowledge** on the effectiveness and quality of bus planning and scheduling
- Address topics and issues from an **international perspective**, enriched by different cultural approaches and points of views
- Participate in **practical exercises 'in the field'** allowing you to apply the principles and methods learnt during the training course
- Benefit from a **unique exchange of knowledge** and experience between professionals

## Who is it for?

- Staff from Bus transport operators or authorities responsible for the planning & scheduling.
- Staff from the industry worldwide involved in the market uptake in this area: ITS companies, software developers and vehicles manufacture
- Professionals from Bus planning operations, engineering, finance departments
- Professionals interested in obtaining a wider and international perspective on this topic and eager to learn more from best practice worldwide.

## Inspiring trainers & guest speakers

All UITP trainers are top level transport and mobility professionals with extensive experience in public transport and operations from different regions of the world. In addition, UITP invites guest speakers to illustrate specific solutions, practices and case studies.

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**Day 1, Tuesday, 22<sup>nd</sup> June 2021**

- 10.00 **Welcome, objective and introduction to the programme**
- 10.30 **Session 1A: Introduction to Planning & Scheduling**  
Guido BRUGGEMAN, Independent Senior Urban Transport Consultant
- Overview of the planning and scheduling process and the main parameters involved.
  - What objectives we want to achieve and what do we actually perceive as good planning?
- 11.15 **Session 1B: Bus Network Design and Route Planning: Implications for Operations Planning**  
Guido BRUGGEMAN, Independent Senior Urban Transport Consultant
- Impact of the network design and route planning on the efficiency and flexibility of the planning of operations.
  - Network design may have also an impact on the time-table design when routes needs to be coordinated or synchronized.
- 12.00 End of Day 1

**Day 2, Wednesday 23<sup>rd</sup> June 2021**

- 10.00 **Session 2A: Timetable design**  
Guido BRUGGEMAN, Independent Senior Urban Transport Consultant
- How to design a timetable,
  - Which parameters are leading, and which steps are involved in the design process?
  - How to make time-tables passenger-friendly.
- 11.00 **Case Study: Optimisation of school transport operations**  
Arminster Singh, Head – Logistics Sales Development, PTV Group
- Why is it important to utilise maximum capacity of each vehicle;
  - How to know what number of vehicles do you actually need in your operations;
  - How to achieve KPIs of customer satisfaction levels and reducing costs (Opex, Capex);
  - How to know what budget (CAPEX) you need to set for next year or how much to forecast for upcoming quarters;
  - How to make sure that each student in the bus do not spend more than allowed/set time by regulatory bodies or the school;
  - How to make sure you are not paying extra over time which is leading in more cost than revenue;
  - How to bid for new projects/schools based on what data and scenarios.
- 11.30 End of Day 2

**Day 3, Thursday, 24<sup>th</sup> June 2021**

- 10:00 **Session 3: Vehicle Planning**

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Guido BRUGGEMAN, Independent Senior Urban Transport Consultant

- Which parameters needs to be taken in account for the vehicle planning.
- What will be the impact of maintenance and fleet availability?

11:00

**Case Study: Demand-oriented bus network planning**

Rimbert SCHURMANN, Project Manager, PTV Group

- What is a good bus-network for the passengers?
- How can we gain passengers from the car to the public-transport?
- What is the different between network planning in cities and regional areas?

12:00

End of Day 3

**Day 4, Monday, 28<sup>th</sup> June 2021**

10:00

**Session 4: Personnel & Resource Planning**

Guido BRUGGEMAN, Independent Senior Urban Transport Consultant

- How to plan human resources and which parameters are involved in personnel planning.
- How to optimize the personnel and resource planning?
- What freedom and flexibility we will give to our drivers?

11:15

**Case Study: Efficient Resource Allocation**

Dave Joshua, General Manager for Europe, Optibus

- Optimising vehicle and driver schedules
- How what-if scenarios lead to better results
- Transitioning to EV

12:00

End of Day 4

**Day 5, Tuesday, 29<sup>th</sup> June 2021**

10:00

**Session 5: Personalized work schedules**

Robert MARUSIC, Director of Business Development, GIRO

- Personalized work schedules in the context of shortage of qualified personnel, talent retention, and absenteeism
- How public transport agencies can become employers of choice by giving their employees a greater say in organizing their work schedules
- How to ensure fairness, and that regulatory and operational requirements are respected
- Involving employees in decision-making can increase current employees' satisfaction and attract new employees

10:45

**Case Study: Personnel & resource planning from the perspective of the Karlsruhe transport Association**

Mary JOYCE, Head of Ticket-inspection and Security Department, Verkehrsbetriebe Karlsruhe GmbH

Co-host Dr Philipp HEISE, Verkehrsbetriebe Karlsruhe GmbH

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Their presentation is based on the optimal planning from the available personnel and resources while increasing the motivation and satisfaction from their employees at the same time.

11.30 End of Day 5

### Day 6, Wednesday, 30<sup>th</sup> June 2021

#### 10:00 **Session 6: Scheduling & Execution of Operations**

Guido BRUGGEMAN, Independent Senior Urban Transport Consultant

- How to we minimize the difference between planning and actual operations?
- Can we apply standard procedures for management of disruptions in daily operations?

#### 11:00 **Case Study: Optimisation of operations with Telematics and Data**

Georg-Maximilian MICHALSKI, Technical Consultant & Trainer at INIT Group

- Timetable and headway control through driver and dispatcher
- Real-time passenger information and incident management
- Optimisation through statistical data

11.45 End of Day 6

### Day 7, Tuesday, 6<sup>th</sup> July 2021

#### 10:00 **Session 7A: The Bus Business – Adapting to the New Normal**

Guido BRUGGEMAN, Independent Senior Urban Transport Consultant

- Addressing the changes in travel pattern or modal shifts
- Influencing the city policies in favor of bus operation
- Social distancing and impact on bus capacities
- Frequency enhancement or reduction
- Cost of operation and financial support
- Hygiene, cleanliness and sterilization

#### 11:00 **Session 7B: Execution of Operations: Driver Management**

Alok Jain, Managing Director, Trans-Consult, Hong Kong

- Shortages in bus driver availability
- Role of part-time drivers in cost reductions and service stabilisation
- Improving the gender participation
- Driver safety in era of pandemics
- Training the drivers as customer service champions
- Drivers at the frontline of post-covid recovery

11.30 End of Day 7

### Day 8, Wednesday, 7<sup>th</sup> July 2021

#### 10:00 **Session 8: Role Technology in Advancement of Bus planning and operation**

Alok Jain, Managing Director, Trans-Consult, Hong Kong

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- Technologies reshaping the world which could be relevant to bus industry
- Importance of efficiency and financial performance in the long-term sustainability
- Fleet management, dispatching and real-time operational management
- Using technology to bring agility in bus operation
- Artificial Intelligence and machine learning use cases
- Depot automation - use cases and opportunities
- Automated disinfection and sterilization of buses for operation

11.30

End of Online Course Programme

## PROFILES OF TRAINERS

### **Guido BRUGGEMAN**

Independent Senior Urban Transport Consultant



Guido Bruggeman is a world-class international urban transport expert with 30 years experience in the urban transport sector. He started his career in 1980 at the Municipal Transport Company (GVB) in Amsterdam (Netherlands) and afterwards became an urban transport consultant. From 2000, he worked for 7 years as an Urban Transport Specialist at the European Bank of Reconstruction and Development (EBRD). Currently he is working as an independent urban transport consultant. He is an experienced project manager and team player with strong communication and interpersonal skills. Guido has hands-on experience in analysing and developing institutional and organisational frameworks for urban transport; scoping and preparation of Urban

Transport Investment Programmes within budget constraints; defining and managing Reform and Corporate Development Programs for transport operators and sustainable transport strategies. Broad knowledge of and experience with different kind of public transport modes (minibus, bus, BRT, trolleybus, electric bus, tram, light-rail, metro and regional bus and rail). He has worked in over more than 25 countries on urban transport projects.

### **Alok JAIN**

CEO and Managing Director, Trans-Consult Ltd., Hong Kong



Alok is currently the Managing Director of Trans-consult. He is an international expert in public transport operations and management, with specialization in new technology, artificial intelligence, data analytics and clean fuel technologies. With 30 years of experience in the industry, Alok has worked with an array of international consultants and leading transport operators like MTR Corporation, Hong Kong and Kowloon Motor Bus, Hong Kong.

He is an international expert trainer for the International Association of Public Transport (UITP) and a Fellow of Civic Exchange, a Hong Kong based non-profit independent think tank. He regularly teaches at University of Hong Kong and serves as a Member in Transport Policy Committee of the Chartered Institute of Logistics and Transport in Hong

Kong. He has several publications to his credit, including contribution to a book on best practices in railways operations and management.

Alok is civil engineer and holds post-graduate degrees in transportation engineering and management.

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**Arminder SINGH**

Head – Logistics Sales Development, PTV Group



Arminder Singh is currently based in Dubai, UAE and is working as Head of Sales Development for IMEA region. Prior to this he was working as a Financial Analyst and also led the project of cost saving with the team of Planners in School Transport Services. He has more than 12 years of experience in operations, finance and sales in ME region. He has received his Master's in Business Administration specialised in Finance & Operations from S.P.Jain School of Global Management, Dubai, UAE.

**Mary JOYCE**

Head of Ticket-inspection and Security Department, Verkehrsbetriebe Karlsruhe GmbH



Mary Joyce has been working for the Verkehrsbetriebe Karlsruhe GmbH in Germany for the past 19 years. She comes originally from Ireland and found her way to Germany through her Hotel Management Training. She is also a CCI Bachelor Professional of Business and she will be finishing her studies as a CCI Professional in Business Management this year. Mary Joyce has worked in numerous departments within the public transport system. She has learned how to drive the trams and buses in Karlsruhe and went on to work in the Control Center. She also worked in the service office where she assigned duties to the Tram and Bus drivers. At the moment she is responsible for the Ticket-inspection and Security section.

**Georg-Maximilian MICHALSKI**

Technical Consultant and Trainer, INIT



Max has degrees in Engineering from University of the West of England, Project Engineering from Baden-Württemberg Cooperative State University and a Masters in Transportation Systems from Technical University Munich.

He has worked for the commuter railway branch division of Deutsche Bahn AG, where he was involved in various operational projects including maintenance planning, disposition as well as overall production planning. Later Max joined Mitsui Rail Capital Europe to set up a material requirement planning for their locomotive fleet.

Thereafter Max worked for the Singapore based research institute TUM CREATE to develop a Singapore public transport model using the automated fare collection smart card data provided by the Land Transport Authority. On this basis, he did various analysis of the public transport in Singapore.

In 2016 Max joined INIT, Karlsruhe-based leading supplier of integrated telematics and ticketing solutions for public transport. He worked in different roles in sales and support and assisted multiple customers internationally. Currently he is working as a Technical Consultant and Trainer. There he is consulting 15 customer in Germany in their use of INIT's solutions. Besides, he is carrying out training courses for INIT's solutions internationally.

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**Rimbert SCHURMANN**

Project Manager at PTV Group



Rimbert Schürmann has been employed at PTV AG since 2001. He is active in the field of public transport planning and consulting as project manager in which he accompanies and coordinates various projects. The range of his professional expertise ranges from creating public transportation master plans (e.g. the Bus Master Plan Dubai), optimising bus concepts up to creating concepts on local transport and tram networks. Here the main focus lies on the development of operational concepts, the investigation into demand changes and forecasts, economic viability analyses and evaluations.

He was able to build up and deepen his expertise in both of his earlier positions in renowned consulting companies (VCK Verkehrs-Consult Karlsruhe GmbH and TTK Transport Technologie – Consult Karlsruhe GmbH).

In 1992 Rimbert Schürmann gained his Master's Degree in Civil Engineering at the University of Dortmund, Germany, in the field of urban and regional planning.

**Robert MARUSIC**

Director of Business Development, GIRO



Robert Marusic is a Director of Business Development at GIRO, a leading maker of software solutions for public transport that supports more than 300 agencies around the world. He advises public transport authorities on the best use of technology to manage their planning, scheduling and operations activities, and he leads GIRO's business-development activities in German-speaking markets. Before joining GIRO, Mr. Marusic amassed extensive experience in product development and project planning, including nine years heading a business specialized in electrical propulsion systems. In his work with e-buses he has advised many clients on successfully meeting their challenges in the field of electromobility.

Mr. Marusic holds a degree from FSW Cologne in Business Administration, with a focus on Business Informatics.

**Dave JOSHUA**

General Manager for Europe, Optibus



Dave Joshua is Optibus' general manager for Europe, and is highly experienced in analytics, big data and optimization projects for leading FTSE and Fortune 100 companies. He's a former sales executive for technology services providers Romonet and Canara, and is the founder of a not-for-profit technology graduate platform that launched from Google's London HQ in 2012. Dave speaks five languages, possesses multiple accreditations in ML, BI and data strategy, and has a passionate interest in mobility solutions.

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