



---

## Session IV

### Electric Bus Technology - Moving into Future

\*\*\*\*\*

The initial capital requirement of electric bus project is high compared to conventional buses. Owing to lack of funds, the government is keen to invite private players to make investment in the project. Further, there are different technologies of electric buses available in the market. The companies are promoting different concept like overnight, fast charging and battery swapping technologies. The bus technology should suit the city profile and meet the operational requirement. The session will bring together cities which are implementing electric bus solution and manufacturers / operators who are offering these solutions.

.



## SESSION IV – Electric Bus Technology - Moving into Future

**Chairperson – Jerome Pourbaix**

Director Regional Offices & Services, UITP

| Time          | Title  |
|---------------|--|
| 15:45 – 16:00 | <b>Opening Remark by Chairperson</b>   |
| 16:00 – 16:15 | <b>Electric Bus Technology in India</b><br>Nishant Arya, Group Executive Director, JBM Group   |
| 16:15 – 16:30 | <b>Evolution of Electric Bus momentum in India</b><br>N Nagasatyam, Vice President - Business Development,<br>Goldstone Infratech Limited                            |
| 16:30 - 16:45 | <b>Ashok Leyland's Electric Buses: Solutions for India-specific problems</b><br>S A Sundaresan, Vice President, EV and eMobility Solutions, Ashok<br>Leyland Limited |
| 16:45 - 17:00 | <b>Smart &amp; Sustainable Public Transportation</b><br>Chinmay Pandit, Alternate Powertrain Solutions, KPIT Limited   |
| 17:00 - 17:15 | <b>Questions &amp; Answers</b>   |



---

**Jerome Pourbaix**

Director Regional Offices & Services  
UITP Brussels

---

**Vote of Thanks**

\*\*\*\*\*

**1. BIOGRAPHICAL NOTE:**



Jerome is currently working as Director of Regional Offices & Services at UITP. Earlier, he was leading UITP international advocacy activities, focusing notably on the economic case for public transport and the future role of public transport in cities. He champions the inclusion of mobility in the new urban agenda to be set out at the Habitat III conference. Jerome also supervises UITP's strategic projects and urban transport data collection activities. Previously he worked at the European Commission and the international city network Polis. He studied Sociology in Belgium and the United



---

## Nishant Arya

Group Executive Director  
JBM Group

---

### 1. **BIOGRAPHICAL NOTE:**



Mr. Nishant Arya took charge as Executive Director of JBM Group in 2010. In the short span of 8 years of his taking charge, the group has seen newer heights in terms of business and industry recognitions. His consistent focus on enhancing TECHNOLOGY, enabling INNOVATION and developing PEOPLE within the organisation has been a key driver of growth for the group.

Enriched with education from Bradford University, U.K and London School of Economics, and armed with decades of experience of his father and JBM Group Chairman Mr. S.K. Arya, Mr. Nishant Arya is determined to take JBM Group to newer heights.

With a strong drive to achieve more, Mr. Nishant Arya has expanded the businesses by actively looking at R&D, Engineering, diversification, international business and new projects. He has been instrumental in planning various technical collaborations and joint ventures with foreign companies including buyouts. He has played a pivotal role in identifying new business opportunities in areas like Electric vehicles, Engineering & Design Services, Renewable Energy, etc. Amongst the important JVs done under his directorship are the alliances with prestigious companies like Arcelor Mittal, Dassault Systemes, JFE Steel Corporation, Sumitomo Corporation, Magnetto (CLN Group), Ogihara, Solaris Bus & Coach and various others.

Mr. Arya is to be solely credited for the successful launch of the bus manufacturing division of JBM Group. JBM has introduced India's first true low floor Citybus – 'CITYLIFE' that is already redefining the dynamics



ADVANCING  
PUBLIC  
TRANSPORT

# 3<sup>rd</sup> UITP INDIA BUS SEMINAR

## E-MOBILITY AND TECHNOLOGY INNOVATION



of the public transformation domain in our country. The company has also recently unveiled 'ECOLIFE' – India's first 100% Electric bus. These buses have first of its kind innovative features that ensure enhanced comfort, safety and security for the commuters.

Mr. Arya is currently the member of CII Northern Regional Council and the Ex-Chairman of CII Haryana State Council. Mr. Arya is also the Co-chairman of ACMA's STDC (Sustainable Technology Development Committee), India. He is an Executive Council Member of CII, SIAM and ACMA – Young Business Leaders Forum. He is member of CII Northern Regional Council. He is also ON Board of various JBM Group companies and Chairman of Tesco Go SpA, Europe.

Mr. Nishant Arya is credited with multiple recognitions for his exemplary contribution to JBM Group and the automotive industry. Under his stewardship, the flagship company of JBM Group, JBM Auto Ltd. has been recognised amongst the "Elite set of the 10 greatest value creators in the Fortune India 500 companies". Mr. Arya was also recently felicitated by Business World as the 'Young Business Excellence Leader for the year 2016'.

JBM Group has a diversified portfolio to serve in the field of automotive, bus manufacturing, engineering & design services and renewable energy sectors with an infrastructure of 40 manufacturing plants, 4 engineering & design centres across 18 locations globally. The Group is well diversified and professionally managed with focus on quality, leadership and fast product development process, contract manufacturing and flexible manufacturing systems. With a major presence of around three decades, the Group has earned several recognition, awards and accolades globally.

## 2. **ABSTRACT**

India is on the verge of transformation to cope with rapid urbanization and rising pollution. As a consequence, the basic needs go beyond food, housing etc. mandating Smart Cities, Smart energy management and Smart disposal of waste. E mobility is the way forward for public and private transportation. E mobility, especially electric buses for



ADVANCING  
PUBLIC  
TRANSPORT

## 3<sup>rd</sup> UITP INDIA BUS SEMINAR

### E-MOBILITY AND TECHNOLOGY INNOVATION



public transport are a key focus area for the policy makers as it provides a sustainable solution to support the transformation. This requires a complete eco system approach for rapid adaption and sustenance. The key enabler for E mobility ecosystem would consist of government mandate and feasible solution for total cost of ownership (TCO). Some of these would be regulatory CO2 norms, optimal battery cost, availability of appropriate charging infrastructure like fast and opportunity charging supported by grid. Government should consider mandating electric buses for not only Tier I but also for Tier II & Tier III cities for PAN India penetration. This solution is catering to masses and society at large not only individuals in particular. Adoption of CAPEX model, localization of high voltage propulsion systems, fast charging as opposed to overnight charging are recommended for rapid introduction of E buses.



---

**N Nagasatyam**  
President – Strategy  
Goldstone Infratech Limited

---

## Evolution of Electric Bus momentum in India

\*\*\*\*\*

### 1. BIOGRAPHICAL NOTE:



Mr. N Nagasatyam is President (Strategy) of Goldstone Infratech Ltd. He is heading the business development and strategy of Goldstone Infratech. He has completed his MBA from University of Andhra.



---

## S A Sundaresan

Vice President, EV and eMobility Solutions  
Ashok Leyland Limited

---

### Ashok Leyland's Electric Buses: Solutions for India-specific problems

\*\*\*\*\*

#### 1. BIOGRAPHICAL NOTE:



S A Sundaresan is a mechanical engineer by education, and has been on a fascinating journey of 30 years, designing, nurturing and building new products, processes, technologies, systems and organizations.

His experience traverses all phases, paradigms and technologies of engineering and software product development – next generation vehicles, products for helping people produce safer and better embedded software, mechatronic simulation, systems engineering, manufacturing planning and factory scheduling, forming simulation, automotive accessories and components, compressor testing systems, and hermetic compressors.

Sundaresan Started two new green field ventures, one wilted, and another got acquired eventually into a giant MNC. Working with a globally distributed team offering solutions in Systems Engineering and Model Based Design, provided him many opportunities to learn by example the finer aspects of engineering per se, Systems Thinking, and the Digital Twin.

Excited by the paradigm shifts in the automotive industry being brought on by electrification and autonomous driving, Sundaresan decided to plunge into it, rather than watch it from sidelines. He is currently the





ADVANCING  
PUBLIC  
TRANSPORT

# 3<sup>rd</sup> UITP INDIA BUS SEMINAR

## E-MOBILITY AND TECHNOLOGY INNOVATION



Vice-President, EV and eMobility Solutions, at Ashok Leyland, with a mandate to make sense of and get a handle on the opportunities and challenges of e-mobility from the technology perspective.



---

## Chinmay Pandit

Alternate Powertrain Solutions  
KPIT Limited

---

### Smart & Sustainable Public Transportation

\*\*\*\*\*

#### 1. BIOGRAPHICAL NOTE:



Chinmay is Associate Vice President at KPIT Technologies Limited where he is responsible for the Alternate Fuel Vehicle Products Line.

A business graduate from J. L. Kellogg School of Business at the Northwestern University, USA, Chinmay is working on bringing the transformational Innovation of REVOLO – A smart Green Technology to markets in India and abroad.

Revolos are smart and intelligent, pure electric and hybrid electric technologies for buses, cars and light commercial vehicles. This innovation has the honors of several prestigious awards and KPIT's flagship offering to the auto industry. As a business leader of Revolo, he works on all major fronts bringing this technology to market, be it key partnerships, alliances, government or ecosystem development.

Chinmay is leading the effort of bringing India's first, indigenous smart electric buses to the market. Two of these buses were running in the Indian Parliament, flag-offed by Hon'ble Prime Minister Shri Narendra Modi.

He has rich experience of 14+ years. His earlier assignments, before KPIT, include KPMG and Infosys. Chinmay started his career as a Chartered



ADVANCING  
PUBLIC  
TRANSPORT

# 3<sup>rd</sup> UITP INDIA BUS SEMINAR

## E-MOBILITY AND TECHNOLOGY INNOVATION



Accountant in enterprise technologies. He has worked in India as well as the United States.

Chinmay's green passion is not restricted to work, he enjoys hiking, having done many treks in Western India, Himalayas, Africa as well as the US.

## 2. **ABSTRACT**

Public transport buses that are 'Clean, Connected, Comfortable & Safe' will help cities address the large challenges of pollution & congestion. Carefully assessing the public transport needs of a city one should decide on the type and kind of bus which will help optimize cost of bus procurement. Additionally, cities need to utilize new technology to understand traffic movement patterns and create platforms that provide citizens a seamless public transport experience. Combining the use green of vehicles with new technologies will help provide largest impact for sustainable transport systems