ISIC INTERNATIONAL CONFERENCE
ISIC
TRENDS ON CONSTRUCTION IN THE POST-DIGITAL ERA
GUIMARÃES, PORTUGAL - SEPTEMBER 6 TO 9, 2022

Workshop: Asphalt Process Control – Using Digital Technologies to improve construction performance

Date/Time: 6th September, 14:30 – 18:00
Location: Vila Flor Cultural Centre

Background

Recent advances in intelligent construction machinery have seen several new sensors and software added to asphalt construction equipment. Digital technologies such as GPS, infrared and other sensors, real-time process control, and advanced communication systems enable tracking, visualization, and data mining of key process parameters during asphalt construction, such as logistics, temperature homogeneity, and compaction consistency. Yet, despite the availability of these technologies, implementation is slow, and barriers to technology adoption remain an obstacle. Using the Netherlands as a case, this workshop will address SMART technology implementation for the asphalt construction industry, its benefits, challenges, complications, and strategies to make it successful and sustainable. A panel discussion will include international experiences from the US Minnesota transportation department and global experiences.

Focus

- Addressing variability in the asphalt construction process
- Digital technologies that will benefit the asphalt construction industry
- How to implement digital technologies efficiently and effectively
- How to overcome challenges of implementation, barriers to technology adoption, and digitalization
- Key organisations to involve in the implementation and sustainable adoption of digital technologies

Speakers

	Seirgei Miller (PhD) – ASPARi research unit, University of Twente, the Netherlands
	Mr. Curt Turgeon of US Minnesota department of transportation
	Dr. George K. Chang, President of ISIC, Transtec Group, USA

Agenda

Time	Topics	Speakers
14:30 – 14.35	Introduction	All speakers
14:35 – 14:40	Why Digitise?	Miller
14:40 – 15:40	The road to digitisation	
	Addressing challenges of variability and construction quality - the case of the Netherlands & Digital Technologies	Miller
	Lessons from the United States	Turgeon
	Digital Technologies – a global perspective	Chang
15:40 – 16:10	Mini-breakout Session: 1. Given what you have heard, how would you approach implementing digital technologies in your country? 2. What factors to consider when considering the broader adoption and implementation of digital technologies? 3. Which stakeholders should be driving implementation?	All speakers
16:10 – 16:20	Break	
16:20 – 16:50	Mini-breakout Session: Which STRENGTHS, WEAKNESSES, OPPORTUNITIES, and THREATS do digital technologies have for the road construction industry?	All
16:50 – 17:00	Break	
17:00 – 17:30	Mini-breakout Session: 1. What are the first “must” steps to be taken to encourage and foster technology implementation 2. What do you think are the essential elements to be included in a Digital Technology Roadmap 3. Task – Developing Roadmap 2030	All
17:30 – 18:00	Panel discussion	All speakers
18:00	Adjourn	

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icisic2022@civil.uminho.pt