International Seminar on Data Science for the Statistical and Transport Communities

Agenda Day 1

Date: 22.01.24

Venue: Museum of the Future

08:30 – 09:00	**Registration and Coffee**
09:00 – 09:02	Welcoming
09:02 – 09:05	Opening Video
09:05 – 09:10	Opening Remarks United Nations • **Mr. Mageed Yahia,** UN Resident Coordinator for the UAE
09:10 – 09:15	Keynote speech • **Mr. Ronald Jansen,** Assistant Director, Chief of Data Innovation and Capacity Branch, United Nations Statistics Division/ DESA
09:15 – 09:20	Opening Remarks UAE Regional Hub: • **H.E. Hanan Mansour Ahli,** Director of the Federal Competitiveness and Statistics Centre, UAE
09:20 – 09:23	Special Recognition
09:23 – 09:25	Group Picture
09:25 - 09:30	Break (5 mins)
09:30 - 10:30	**Panel 1 – How can AI and Data Science help in building sustainable transport systems?** This session will delve into the critical role of modern transportation information systems in designing, implementing, and monitoring the effectiveness of green transportation policies. New and novel data sources and advances in technologies are fundamentally changing how we understand transport, how we can improve policy making, and how individuals experience transport. **Moderator:** Meera Al Shaikh, Director of Smart Services, RTA, UAE **Panellists:** ○ **H.E. Mohamed Karmastaji,** Executive Director of Intelligent Transport Sector, Integrated Transport Centre, Abu Dhabi, UAE

	○ **Mr. Mohammed Al-Mudharreb,** Chief Executive Officer of Corporate Technology Support Services Sector, RTA, UAE ○ **Mr. Nicolas Petrovic**, Chief Executive Officer, Etihad Rail Mobility ○ **Ms. Samantha Rose**, Head of Profession for OR and Deputy Director for Advanced Analytics and Data Science at the Department for Transport, UK ○ **Mr. Marco Marini**, Chief of Data Governance and Services Division in the Statistics Department, IMF ○ **Mr. Guineng Chen**, Data and Policy Analytics International Team Leader, International Transport Forum, OECD
10:30 – 11:00	Coffee and Tea Break (30 mins)
11:00 – 12:00	**Panel 2 – What are the technology and cultural challenges of introducing Data Science and AI in the transformation of information systems for policy purposes?** This session will explore the technology and human-centric aspects involved in transforming information systems, for example to support public transportation services, transport infrastructure or sustainable transport development. It will focus on the challenges and opportunities in ensuring that these systems not only leverage technology but also effectively meet the needs of diverse stakeholders. **Moderator**: Alison Baily, Policy and Programme Manager, UK Statistics Authority **Panellists:** ○ **H.E. Younus Al Nasser**, Chief Executive, Dubai Data & Statistics Establishment, Digital Dubai, UAE ○ **Mr. Dominik Rozkrut,** President of Statistics Poland ○ **Mr. Osama Rahman**, Director of the Data Science Campus, Office of National Statistics, UK ○ **Mr. Bertrand Loison,** Vice Director-General and Head of Data Science & Statistical Methods Division, Swiss Federal Statistical Office ○ **Mr. Ivan Murenzi,** Deputy Director General, National Institute of Statistics of Rwanda ○ **Dr. Dirk Jungnickel,** Senior VP Enterprise Data & Analytics, Emirates Airlines
12:00 – 13:00	**Lunch**
13:00 – 13:05	**Demo-Tour** • **Session Overview**: The Demo Tour is a dynamic and engaging session designed to showcase cutting-edge applications of big data and data science from around the world. This session will feature presentations from renowned organizations, each highlighting their unique approaches and successes in leveraging data for transformative outcomes.

13:05 – 13:30 **(20 mins presentation)** (5 mins Q/A)	**Using Data Science to improve our understanding of UK Connectivity –** Ms. Samantha Rose, Head of Profession for OR and Deputy Director for Advanced Analytics and Data Science at the Department for Transport, UK
13:30 – 13:55 (20 mins presentation) (5 mins Q/A)	**Insights from the Federal Competitiveness and Statistics Centre** – H.E Mohammad Hassan Ahli, Executive Director for National Statistics & Data Sector at the Federal Competitiveness & Statistics Centre, UAE
13:55 – 14:20 (20 mins presentation) (5 mins Q/A)	**Highlights of Data practices, applications and frameworks**, Fatima al Abdooli, Director of Data Management and Statistics, Ministry of Energy and Infrastructure, UAE
14:20 - 14:45 (20 mins presentation) (5 mins Q/A)	**RTA's Approach to Big Data and Data Science –** Khalid Al Awadhi, Director of Transportation System Department, RTA, UAE
14:45 – 15:00	**Closing Remarks** • **Ronald Jansen,** Assistant Director, Chief of Data Innovation and Capacity Branch, United Nations Statistics Division/ DESA
15:00- 16:00	**Networking Session**

Agenda Day 2: Parallel Sessions

Date: 23.01.24

Venue: Jumeirah Emirates Towers

Room 1: Second DSLN Sprint – Developing a Playbook to effectively integrate data science into the strategic planning and day-to-day operations of national statistical offices

The 2nd DSLN Sprint will focus on developing a detailed outline of a playbook to integrate data science into National Statistical Offices (NSOs). The sprint will be divided into four half-day sessions, with each of the first three sessions dedicated to a section of the playbook and concluding with a session on cross-cutting issues and next steps.

9:00 -9:10: DSLN 2nd Sprint opening

- Introductory remarks by Mr. Osama Rahman, Chair of the Data Science Leaders' Network

Section 1 – Leveraging basic tools of data science for immediate efficiency gains in NSO operations.

- **Facilitator:** Mr. Marco MChief of Data Governance and Services Division in the Statistics Department, IMF

9:10 - 9:20	**Introduction / Setting the stage**
9:20 - 10:00	**Presentation of case studies with relevant and recent example highlighting the use of basic data science tools for efficiency in NSO operations.** • Case study 1: Reproducible Data Pipelines (Jeroen Minderman, Senior Data Scientist (TP), Data Science Campus, ONS UK) • Case study 2: Data linkage project of post enumeration survey and census data (Mr. Ivan Murenzi, Deputy Director General, National Institute of Statistics of Rwanda)

10:00 - 10:30	Group discussion • How could the basic data science tools used in this case study be adapted or expanded to address similar challenges in other NSO operations? • What are some potential obstacles when implementing these data science tools in NSO operations, and how might they be overcome? • Can you identify any opportunities for scaling or enhancing the efficiency gains witnessed in this case study to other areas of NSO work? • What lessons can be learned from this case study about integrating data science tools into traditional statistical processes?
10:30 -11:15	**Breakout groups** • Automation and process optimization • Adopting new tools and technologies • Cultural and process change management
11:15 -12:00	**Plenary: Reporting back from breakout groups**
12:00 -13:00	**Lunch**

Section 2 – Generating Insights in response to emerging needs.

- **Facilitator:** Mr. Alison Baily, Policy and Programme Manager, UK Statistics Authority

13:00 - 13:10	**Introduction / Setting the stage**
13:10 - 13:50	**Presentation of case studies with focus on rapid response and integration of diverse data sources for the fast delivery of new analytic outputs in a real-world scenario.** • Case Study 1: Improving the quality of transport statistics (Mr. Bertrand Loison, Vice-Director General Switzerland) • Case Study 2: Web scrapping and NLP for Business Statistics (Mr. Barteld Braaksma, Innovation Manager, CBS Netherlands)

13:50 - 14:20	Group discussion • How did the integration of diverse data sources in this case study enhance the ability to respond rapidly to new analytic requirements? • What challenges might arise when trying to replicate this approach in different contexts or with different types of data? • In what ways could the methodologies used in this case study be improved or innovated upon for even more effective outcomes? • How can the insights generated from this approach inform policy decisions, and what are the potential limitations?
14:20 - 15:15	**Breakout groups** • Rapid response and data integration • Skill development and capacity building • Data Science partnerships and collaboration • Quality frameworks • Resource mobilization and leadership support
15:15 -16:00	**Plenary: Reporting back from breakout groups**

Room 2: Hands-on training: Workshop on the use of Mobile Phone Data in transport statistics

Moderator: Fredrik Eriksson, ITU

Time	Session Title	Speaker
9:00-9:10	Welcome and Introduction – Launch of the Transport Guide	Mohammed Al Mudharreb, Chief Executive Officer, Corporate Technology Support Services Sector, RTA
9:10–9:20	Overview of the UN-CEBD	Ronald Jansen, UNSD
9:20-9:30	Awareness Raising on the Use of MPD – video presentation	
9:30-9:50	Using MPD: Benefits and Challenges	Thomas Smallwood, Flowminder
9:50-10:10	Interactive Polling Session	Thomas Smallwood, Flowminder
10:10-10:30	Towards MPD Use Cases: data access, data processing	ITU – Fredrik Eriksson, Eurostat
10:30-10:45	Coffee break	
10:45-11:45	MPD Use Cases in Transport	Positium - Siim Esko, University of Tokyo – Ayumi Arai, UK DfT – Samantha Rose, Samilia Koomson – Ghana Statistical Service
11:45-12:00	Discussions/Q&A	
12:00-13:00	Lunch break	
13:00-13:20	Launch of the Guide on the use of MPD for Transport Statistics	Latifa Alshehhi - Manager - Data Management, RTA
13:20-13:35	Modelling: Integration of MPD with other datasets	Siim Esko, Positium
13:35-13:50	Use Case: Use of Mobile Phone Data in Optimizing Bus Stations	Adel Shakri - Director - Planning & Business Development, RTA
13:50-14:15	Mini- Workshop	Latifa Alshehhi - Manager - Data Management, RTA
14:15-14:30	Coffee Break	
14:30-14:50	Presentation of the Synthetic Data Work	Badshah Mukherjee AI and Analytics Practice Lead SAS
14:50-15:30	Roundtable discussion and Q&A	

15:30-16:00	Way Forward and Wrap-Up	Ronald Jansen, UNSD

Agenda Day 3 Parallel sessions

Date: 24.01.24

Venue: Jumeirah Emirates Towers

Room 1: Second DSLN Sprint – Developing a Playbook to effectively integrate data science into the strategic planning and day-to-day operations of national statistical offices (continuation)

Section 3– Full Transformation through Data Science

- **Facilitator:** Eric Deeben, Chief Technical Advisor, UN-ESCAP

9:00 - 9:10	**Introduction / Setting the stage**
9:10 - 10:10	**Presentation of case studies showcasing a successful full-scale transformation of an NSO through advanced data science methods..** • Case study 1: Transformation of the Canadian Consumer Price Index (CPI) (Mr. Wesley Yung, Acting Director-General, Modern Statistical Methods and Data Science Branch, Statistics Canada) • Case study 2: Mr. Dominik Rozkrut, President, Statistics Poland • Case study 3: Transformation of the enterprise data architecture and modernization of the IT infrastructure (Mr. Elio Villasenor, Data Science Lab Director, INEGI, Mexico)
10:10 - 10:40	Group discussion • What were the key factors that contributed to the successful transformation of the NSO in this case study? • How did the use of advanced data science methods overcome specific challenges in the transformation process? • What could be the long-term implications of such a transformation on the quality and utility of official statistics? • What are the critical considerations for maintaining data security during a full-scale transformation?
10:40 -11:20	**Breakout groups** • Strategic leadership and support • Advanced data science tools and methods • Technology implementation and integration • Data quality management and security
11:20 -12:00	**Plenary: Reporting back from breakout groups**

12:00 - 1:00 **Lunch**

Section 4 – Cross-cutting issues

- **Facilitator:** Mr. Issoufou Seidou Sanda, United Nations Economic Commission for Africa (UNECA)

1:00 - 1:15 **Recap of cross-cutting issues identified in previous sessions (Mr. Luis Gonzalez, UNSD)**

1:15 - 2:05 **Presentation of case studies showcasing a successful full-scale transformation of an NSO through advanced data science methods.**

- Case study 1: Cultural change (Mr. Yves Jaques, Chief of Frontier Data and Technology Unit, UNICEF)
- Case study 2: Institutional arrangements (Mr. Gogita Todradze, Executive Director, National Statistics Office of Georgia)

2:05 - 3:00 **Plenary discussion focused on identification of additional chapters for the Playbook (including volunteers for drafting)**

Take aways and way forward

3:00 - 3:50 **Panel discussion with experts from various NSOs and data science fields.**

- Take-aways of the Sprint
- Overarching themes: ethical considerations, sustainability, and inclusivity

3:50 - 4:00 **Next steps and closing remarks.**

- Mr. Osama Rahman, Chair of the Data Science Leaders' Network

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BigDataUN Regional Hub In United Arab Emirates

هيئة الطرق والمواصلات ROADS & TRANSPORT AUTHORITY RTA

Room 2: Hands-on GIS training:

approaches to calculate SDG indicators 11.2.1, 11.7.1 and 9.1.1

Moderator: Daniel Hopp, UNCTAD

Time	Session Title	Training Link
9:00 -9:05	Welcome and introduction – Mr. Ronald Jansen, UN Statistics Division	
9:05 – 10:15	Mr. Dennis Mwaniki and Mr. Daniel Githira, UN-Habitat (remotely) • Indicator definition • Indicator components and concepts • Computation • Emerging challenges and opportunities	
10:15 – 11:15	Mr. Guineng Chen, Data and Policy Analytics International Team Leader, International Transport Forum, OECD • Access to Public Transportation Mr. Thiago Arantas, IBGE, Brazil • Transport and urban networks studies at IBGE, Brazil Ms. Safeyah Alshehhi - FCSC	
11:15 – 11:30	Coffee Break	
11:30 – 12:00	Preparatory work for use of ArcGIS on laptops of participants Facilitator: Ms. Safeyah Alshehhi, FCSC	
12:00 - 13:00	Lunch	
13:00 – 14:00	Overview of GIS data science concepts. Ms. Kate Hess, Solution Engineer, Official Statistics, Geospatial Center, Esri (remote) Facilitator: Mr. Matthew Pennells, Esri • Data Engineering – Example using ArcGIS Pro (cleaning health data for analysis) • Visualization & Exploration – Interactive charting in ArcGIS Pro • Spatial Analysis – Creating composite indices using health data; hot spot analysis on crime data • Machine Learning & AI – Spatial regression tools • Modeling & Scripting – Show example Notebooks • Sharing & collaboration	Link

14:00 – 15:30	Hands-on exercise. Ms. Kate Hess, Solution Engineer, Official Statistics, Geospatial Center, Esri (remote) • Demo and break for participants to follow the instructions in the learn lesson, with in-room/virtual support.	Link
15:30 – 16:00	Discussion	

Day 3: Closing plenary session

16:05 – 16:30	Closing remarks and acknowledgments