





# Chief Executives Board for Coordination

CEB/2019/HLCM/DTN/11 16 December 2019

## 33rd Session of the Digital & Technology Network (DTN)

1-2 October 2019; International Criminal Court (ICC-CPI), Den Haag, The Netherlands

# **Executive Summary**

The 33<sup>rd</sup> session of the DTN was hosted by the ICC-CPI in The Hague and was chaired by Mr. Erzen Ilijazi (UN Secretariat, standing-in for CITO) and Mr. Jeff Modell (IAEA). Mr. Modell finished his two-year term as Co-Chair and the DTN selected Ms. Ingrid Regien (UNESCO) as his replacement.

Attendance was high: 50 participants from 25 CEB member organizations and an additional 10 from both UN affiliated organizations and the private sector (Dataminr, Microsoft, Vodafone & the IEEE). The Chairs welcomed new members and participants from WIPO, ICAO, UPU, UNU, OPCW, UNOPS, the Special Tribunal for Lebanon and the Green Climate Fund. Engagement with other HLCM Networks included plenary discussions on areas of potential collaboration with the Human Resources Network, Finance & Budget Network and the Procurement Network.

The agenda focused on several aspects of AI including human-centred AI design, AI ethics and the demonstration of RPA solutions deployed within the UN system. For the first time, the DTN received updates from the Chairs of each of its five (now operational) sub-groups. The general theme of interagency coordination emerged during various discussions and helped establish the need to maintain close coordination with other business networks.

#### **DTN Working Methods**

At its 32nd session, the DTN committed to establish an informal group of experts and thought leaders from outside the UN system, including the private sector, academia and civil society, to provide the DTN with outside expertise and perspectives, to maximise the Network's collective impact for the UN System. The draft proposal<sup>1</sup> put forward was unanimously accepted by the DTN. The name assigned this entity will be determined in consultation with the DTN prior to the identification of its membership. The group is advisory in nature.

In recent years, the number of non-CEB organizations attending DTN sessions has been seen to be growing. Presently, members from the following organizations are regularly in attendance at DTN meetings: UNICC, UNJSPF, UNSSC, OPCW, ICC, ICJ, and CTBTO. Similarly, other organizations have recently requested to attend as Observers. The DTN's Terms of Reference state that extending the participation to include representatives from related or affiliate organizations (as Observers) may be proposed by the Co-Chairs in consultation with the DTN membership. In addition, speakers and/or Observers may be invited to attend by the Co-Chairs on behalf of the membership.

The proposal to charge non-CEB member organizations an annual fee (set at 5,000 per annum), Observers and Invitees, was accepted by the DTN. Minor changes were introduced to the wording of

-

<sup>&</sup>lt;sup>1</sup> CEB/2019/HLCM/DTN/04

this proposal<sup>2</sup>, which is to be circulated again (as an annex to a revised DTN Terms of Reference) within the network for final approval.

## **Artificial Intelligence**

Artificial Intelligence (AI) emerged as a central theme and encouraged much interest and discussion during the two-day session. A keynote address on Human-Centred AI (entitled 'Why the Future is Human'), was presented by Dr. Alex Jaimes, Chief Scientist & SVP of AI at Dataminr. Mr. Jaimes postulated a human centric approach to AI and highlighted recent developments in AI, as well as common pitfalls and opportunities in successfully deploying real-world AI systems that maximize impact. It was reasoned that human-centred methods are critical to success, particularly in the context of socio-economic development. This presentation was well received as it raised awareness on recent developments, trends, opportunities, and human-centred methods associated with the successfully application and deployment of AI in different cultural contexts.

Mr. John C. Havens (Executive Director of The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems) spoke to the evolution of ethical principles to normative standards. The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems (A/IS) has two primary outputs: the creation and iteration of a body of work known as Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems and the recommendation of ideas for Standards Projects focused on prioritizing ethical considerations in A/IS. Currently there are fifteen approved Standards Working Groups in the IEEE P7000™ series. Mr. Havens opened the discussion with a presentation on ethical standard and global implications.

Mr. Cédric Wachholz (Chief, ICT in Education, Culture and Science Section, UNESCO) and Ms. Dafna Feinholz (Head, Ethics of Science and Technology, UNESCO) provided an overview on the development of a standard setting instrument on the ethics of AI and the UNICEF-led initiative to develop policy guidance focusing on children rights. This intervention raised awareness and understanding of the ethical challenges and considerations presented by AI implementations and the role standards play in the planning, development and deployment of AI solutions. In the discussion that followed, members were asked where they are on the path to ethical AI, what areas they are exploring, what lessons were learned, and what practical ethical implications are being confronted. Members addressed issues that will be surfaced by AI and practical suggestions on how to address them. Discussion invited suggestions on how to turn ethical principles into practice and how could ethical standards be developed and implemented effectively.

Mr. Lambert Hogenhout (Chief, Innovation and Emerging Technologies, OICT) remotely updated the network on AI initiatives currently being undertaken at UN Secretariat. Mr. Hogenhout shared experiences in building a framework for Conversational AI (Chat Bot) at the UN Secretariat and presented best practices.

#### **HLCM Network Collaboration**

The DTN engaged in dialogue on emerging priorities and common interests with representatives of the Human Resources Network, the Finance and Budget Network, and the Procurement Network. The need for continuous and meaningful engagement was recognized by all HLCM networks and helped position the DTN as the technical enabler of business priorities.

Dialogue commenced with the Human Resource Network on the potential scope of inter-network collaboration, in the (remote) presence of Ms. Eva Mennel (UNICEF) and Mr. Michael Rosetz (CEB Secretariat). This initial dialogue between the two networks focused on areas of mutual concern, such

<sup>&</sup>lt;sup>2</sup> CEB/2019/HLCM/DTN/06

as how to avoid the degradation of skills in the fast-changing ICT sector; the attractiveness of the UN as an employer; how to establish closer and more robust partnerships; and the composition and structure ICT staff as organizations migrate to cloud-based solutions with the associated evolution of required technical profiles. Discussion also addressed the Future of Work at the upcoming HLCM and collaboration on the implementation of Secretary General's New Technology Strategy.

Recognizing that IT and digitalization should act as an enabler for all business and administrative departments including HR, Ms. Mennel and Mr. Rosetz voiced the need for closer collaboration between HLCM networks, and that it is good to model new ways of working to get out of the silos. Discussions addressed how the DTN can support the HRN and considered how to ensure good pilots and solutions are not only made transparent but also scaled up and disseminated faster with a more systematic functional roadmap on the priority areas in which we are looking for new solutions.

The Finance & Budget Network (FBN) was invited to present on approaches to transformation with specific focus on RPA. A keynote address from the private sector on the digital transformation of Vodafone was provided by Ms. Ellen Van Essen, who considered different approaches with a specific focus on Robotic Process Automation (RPA).

The network learnt that Vodaphone's shared service solution has evolved from decentralized in-house practices in 2006 to leading the digital transformation agenda in 2019. RPA is seen by Vodaphone to improve the customer experience, and enhance productivity and efficiency, while reducing operational risk. While the uptake of RPA across industries delivers positive cost reductions and improved ROIs, it was underlined that these results only apply when RPA is incorporated within a business strategy and capabilities. RPA is not seen as the goal, therefore, but a means to achieve strategic goals.

Demonstrations of RPA implementations within the UN system were then provided by UNHCR, IFAD and UNJSPF with a focus on lessons learnt. Mr. Dino Cataldo Dell'Accio and Karl-Ludwig Soll (UNJSPF) presented remotely on Digital Transformation and RPA at the UNJSPF, including an RPA pilot implementation for salary scale retrieval & upload (to IPSAS) and the introduction of the Digital Certificate of Entitlement, a pilot implementation within a business context. Following the pilot implementation with one organization and potential further enhancements, this proof of concept will be reported at the next UNJSPF board in 2020, for a final decision on its UN system-wide implementation.

Mr. Advit Nath (IFAD) demonstrated RPA at IFAD and provided an overview of how RPA bots have been applied by the Accounting and Controllers Division to automate payments, sanction screening, payroll, financial and donor reporting and cash disbursements. These demonstrations were then followed by a plenary discussion moderated by Mr. Hans Baritt (Controller, UNHCR).

Closing comments cast light on Business Innovation Group (BIG) initiatives being undertaken by UNHCR and WFP, including the Digital Solution Center. While the main objective was to raise awareness, this segment also stimulated discussions between the DTN and other networks on collaboration on future priorities and initiatives.

The DTN was also joined by representatives of the Procurement Network, Mr. Niels Ramm (UNGM Team Lead, UNOPS) and Mr. Giorgio Fraternale (Chief, Procurement Bureau, ILO). Mr. Fraternale provided the DTN an update on the collaborative procurement of hardware. Mr. Ramm showcased UN Global Marketplace (UNGM) reporting features of interest to CIOs, improving understanding of UNGM reporting features available for the ICT community and identifying of new areas of possible inter-agency collaborative procurement.

The DTN recommended stronger engagement with the HLCM/HLCP in the area of technology innovation and asks Co-Chairs to consider participation in the HLCM/HLCP meetings to ensure coordinated approach to the use of frontier technologies.

#### **Network Collaboration Platform**

CEB Secretariat reported that all DTN subgroups now have Teams spaces established and are operational. MS Teams was accepted as DTN's chosen platform for continued communication and coordination. There was consensus on the proposal for Microsoft Teams to be applied towards the coordination interests of other networks. In this regard it was decided that the DTN Secretary will engage with FBN and HRN Coordinators to find the most effective way forward.

#### **Subgroup Reporting**

All subgroups reported to the DTN on progress made since the 32<sup>nd</sup> session. Subgroups now reporting to the DTN include: Technology Innovation, Infrastructure Transformation, Business Transformation, Collaboration Platforms and the UNISSIG (Information Security Special Interest Group). The management and regular monitoring of the DTN workplan was a task assigned to DTN Secretary.

#### **Technology Innovation**

The mission of the Technology Innovation subgroup is to support the sharing of knowledge and experiences, as well as approaches to leverage advanced, emerging and frontier technologies in innovation.

This subgroup held its kick-off meeting in September to decide upon its initial focus, scope and composition. Items discussed included the group's Terms of Reference; its current composition; the structure and regularity of meetings; common grounds and cross-opportunities, including technology innovation in use and Blockchain. Topics to be explored and analysed include relevant SDG goals, targets and indicators. As an enabler, the use of technology innovations is a critical enabler for the implementation of the Sustainable Development Goals as well as the broader mandates of the member organisations of the DTN. Key technologies under review include innovation and frontier technologies (e.g. distributed ledger technologies (blockchain), machine learning and artificial intelligence, BOTs, sensor and internet of things, and image and facial recognition)

The proposition to invite a representative of UNIN to future meetings of the subgroup, in order to help identify opportunities for scaling innovations that maximize impact across the UN system, was approved by the network. No other action was required from the DTN.

#### **Business Transformation Subgroup**

The aim of the Business Transformation subgroup is to bring together strategic ICT leaders of the UN system as a formal group to assist the DTN in overseeing and monitoring execution of the Network's strategic direction in relation to using technology as an enabler and driver of Business Transformation.

The proposed scope of work under the Business Transformation was approved based on the draft Terms of Reference presented by the subgroup Chair, Mr. Luca Baldini (UNFPA), with minor modifications. The DTN agreed to broaden the scope beyond ERP to include all business applications and to identify business challenges shared by organizations, for which common application solutions need to be developed. At the same time, the intent is to avoid losing the sharing that can occur amongst those using common ERP solutions.

Priority issues for the attention of the BTG will demonstrate the highest potential for scaling positive business impact across the UN system, in turn measured by efficiencies or improved effectiveness. Towards this end, it was decided that an inventory of organizations' enterprise applications will be the first output from this subgroup in the autumn of 2020.

Priorities of this sub-group will be informed by a living inventory of projects seeking partnerships/collaboration and particularly within the area of frontier-tech. It was decided that an initial attempt to catalogue current and upcoming priority initiatives from all members will be conducted on the DTN Teams space.

#### **Collaboration Platforms Subgroup**

Report of the Collaboration Technologies Subgroup was presented by Ms. Anne Scanlon (Enterprise Software Systems Unit Head, IAEA) and Ms. Melanie Culver (Software Engineer, IAEA). The network heard that this sub-group finalized its Terms of Reference at its initial meeting, held in June.

Discussion centred on technologies in use and challenges, as well as the identification of areas and topics for future meetings. At its next meeting, scheduled for October, the chosen topic is MS Teams for external collaboration. Future meetings will be conducted as deep dive sessions on specific tools and technologies. This update required no decision from the DTN.

#### **Infrastructure Transformation**

An update from the Infrastructure Transformation Subgroup was provided by its Chair, Mr. Michael Maldony (Head, IT Infrastructure, IAEA). The mandate of subgroup is to promote interagency collaboration and cooperate on all things "infrastructure" with a focus on the cloud. Two meetings were held since the previous DTN session; the group now comprises 14 members.

Since April, the Infrastructure Transformation Subgroup approved its Terms of Reference and agreed to coordinate IP address range usage/issuance. Topics discussed included cloud adoption challenges, the use of MS Teams, and IP address range usage/issuance. It was noted that UN organizations are at different points in their "Cloud journey"; O365 is the starting point for many, with IaaS next, and many organizations using Azure, with limited AWS and Google.

Roadblocks identified by the subgroup include the need to build the required skillset for the cloud; data sovereignty and a limited appetite to let data reside off-premise; delivering cloud services to sanctioned countries; and usability/latency issues in countries that may have lower level infrastructure or non-stable connectivity. Migrating legacy ERP to cloud products appears to be a major pain point. Key activities planned for the next six months include a focused discussion of pain points, the finalization IP address range usage/issuance proposal/procedure, emphasis on skills transition and transformation, sourcing models, and identifying further areas for collaboration. No decision was sought from the network.

#### **Cybersecurity Subgroup (UNISSIG)**

The report from the UNISSIG Subgroup was provided by Mr. Thomas Braun (CISO, UN Secretariat). As part of the STIP to MISP transition, old STIP infrastructure (hosted by IAEA) is being decommission and replaced with the required protection protocols by implementing Common Secure (UNICC). Mr. Braun explained that there has since been no agreement on the scope and funding model for a proposal to establish a UN system (Cyber)-Security Operations Center. Under the leadership of UNICEF, an interagency working group on Privacy has formed and includes members from UNISSIG and the UNPPG, the latter of which is co-chaired by Global Pulse and OICT. Following up on the approved Privacy Principles endorsed by CEB Oct 2018, the task is to facilitate the development of privacy policies by

member organizations and alignment with GDPR (best practices). The goal of this initiative is to develop a common set of definitions (PII, protection levels, etc.) to allow interoperability/data exchanges.

#### **ERP Communities**

The network received a briefing from Mr. Luca Baldini (CIO, UNFPA), on the recent ERP community meeting (ERPSIG) and its constituent platform centric communities, CABIO and SAPSIG. The ERPSIG meeting was hosted by CTBTO/UNIDO in Vienna between 24-26 September. Attendance at this year's meeting was high (135 participants, of which 40 were commercial partners). It was decided that UNDP will remain Chair of CABIO through 2020; and OFID will remain Chair of SAPSIG through 2020. UNICC will explore, in coordination with the communities of practice leaders, the possibility to negotiate LTAs with Oracle and SAP.

As ERPSIG is the only formal forum in which to discuss the business/application solutions within the UN ERP communities, the decision was taken to maintain support for CABIO and SAPSIG as knowledge-sharing communities. Both communities of practices adopted to continue the support to mainstream technologies (currently Oracle and SAP ERP), albeit in a different format (meet more frequently (quarterly) and virtually). In the future, BTG sessions are to be planned annually and in-person. An initial version of the 'solution catalogue' foreseen for September 2020. The Terms of Reference for the new (Business Transformation) subgroup was approved (by ERPSIG & latterly, by the DTN), with minor changes proposed by the latter.

#### **Tech for Social Impact**

Mr. Alex Pinho (Global Lead for the United Nations, Tech for Social Impact, Microsoft) presented on the topic of Tech for Social Impact (TSI) – Microsoft Philanthropies' commitment to ensuring non-profits have access to technology that can enable digital transformation.

The mission of TSI is to empower non-profit, humanitarian and development organizations to advance their missions through the power of technology. The social impact strategy of Microsoft for the UN system was presented as a path towards UN digital transformation, which builds on the provision of support in the areas of training and capacity building, technical and engineering implementation support, digital architecture design and leadership for envisioning planning, digital advisory and thought leadership, and a social impact pricing framework agreement for all Cloud solutions. Numerous solutions and interventions, based on these foundational elements, were considered in turn including solutions for the UN digital workplace, security and information protection, modern hybrid-cloud infrastructure, social stakeholder engagement and intelligent UN operation.

#### **ICT Supporting Member States**

A plenary discussion on ICT Supporting Member States Plenary discussion was introduced by Mr. Jeff Modell (DTN Co-Chair). This discussion focused on the delivery by agencies of software to be implemented by Member States on their systems. In particular, the question considered was what controls an agency must apply to ensure IT and information security, manageability, and supportability for software whether developed and supported by the central IT division, or by shadow IT. The DTN recognized this as a common problem that should be further considered in a future meeting.

## **Virtual Meetings**

A core activity that many agencies do in order to deliver on programmatic objectives is meetings. Meetings can occur for many purposes, such as development of content, training and knowledge transfer. A plenary discussion on the topic considered virtual meetings as an alternative to some

physical meetings for programmatic activities. This discussion was moderated by Mr. Jeff Modell (DTN Co-Chair), who had provided a draft concept paper in advance.

The discussion postulated that the costs of physical, face-to-face meetings is likely a significant portion of the programmatic costs of many agencies' budgets. With the evolution of various technology platforms, such as Microsoft Teams, the possibilities for rich, collaborative interactions has been enhanced to the point that virtual meetings may, in some cases, be able to substitute for physical meetings.

Discussion on the topic sought to determine what experience agencies have had with converting some portion or types of meetings from physical meetings to virtual meetings; what change management approaches have agencies used to overcome resistance to change and counterincentives that are in place that work against moving to virtual meetings; and how effective these approaches were; and what metrics agencies applied to gauge progress and measure savings. This discussion led to an improved understanding of the potential applicability for virtual meetings, change management strategies, potential savings opportunities, and metrics.

#### **DTN Benchmarking Survey**

The DTN last performed a benchmarking survey in 2014 within its membership. At the 32<sup>nd</sup> session of the DTN, ICAO volunteered to lead its revision and presented a questionnaire with widened scope, updated to cover changes in the ICT landscape over the past five years.

Mr Francesco Calderini (ICAO) presented the proposed survey and questionnaire, encompassing a broader scope than the previous exercise and highlighted the new data requirements. The survey approach and questionnaire were approved and now addresses the digital transformation maturity of organizations, their digital maturity and future digital plans across the UN agencies. The survey is planned for execution towards the end of 2019 and discussion of the results is foreseen at the spring session of the DTN.

#### **Date and Venue of Next Meeting**

The next DTN session will be hosted by OICT in New York, between 21 and 22 April 2020.

The DTN provisionally proposed "New Work" and "The Future of Work", and possibly a follow-on discussion re ICT in Member States as topics to consider for the upcoming agenda.

# **Annex - Participants**

Organization	First Name	Last Name	Title
CEB	Remo	Lalli	HLCM Secretary
СЕВ	Richard	Maciver	Coordinator, Digital & Technology Network
СЕВ	Michael	Rosetz	Coordinator, Human Resources Network
СТВТО	Lucas	Ferreira	Head, Unix/Linux Support Unit
СТВТО	Tryggvi	Edwald	
Dataminr	Alexandre	Jaimes	Senior VP and Chief Data Scientist
FAO	Dejan	Jakovljevic	Deputy Director, IT Division
FAO	Samuel	Varas	
GCF	Nebi	Bekiri	Manager, Enterprise ICT Programme Management Office, Green Climate Fund
IAEA	Jeffrey	Modell	Director and Chief Information Officer, Division of Information Technology
IAEA	Michael	Maldony	Section Head, Infrastructure Services for Infrastructure Transformation
IAEA	Anne	Scanlon	Unit Head, Software Solutions for Collaboration
ICAO	Francesco	Calderini	Head, Enterprise Architecture & Project Management Unit
ICAO	SiNguyen	Vo	
UNICC	Marco	Liuzzi	Acting Chief Operations
UNICC	Sameer	Chauhan	Director
UNICC	Prado	Nieto	
ICC-CPI	Kelly	Mannix	Chief, Information Management Services Section
ICJ	Alvaro	Flores	Head of ICT Division
ICT-ILO	Gael	Lams	Web, Communication and Security Team Leader
IEEE	John	Haven	Executive Director of The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems
IFAD	Thomas	Bousios	Director and CIO
IFAD	Advit	Nath	Controller and Director
ILO	Petra	Marshall	Chief Technology Officer and Chief of Technology Management Services, INFOTEC
ILO	Mark	Mongillo	Chief Information Officer and Director, INFOTEC
ILO	Giorgio	Fraternale	Chief, Procurement Bureau
IMO	Vincent	Job	CIO
ЮМ	Marietta	Muwanga-Ssevume	Chief Information Officer and Director of ICT
ITU	Anders	Norsker	Chief, Information Services Department
Microsoft	Alex	Pinho	Global Lead for the United Nations, Tech for Social Impact (TSI)
OHCHR	Christopher	O'Connor	Chief, Information Management and Technology Section

Organization	First Name	Last Name	Title
OPCW	Dennis	Cleary	Head, Information Services Branch
OPCW	Jan	Stowisek	
STL	Lincoln	John West	Chief, Information Services Section
UN	Erzen	Ilijazi	Chief Technology Operations
UN	Dinh-Huy	Banh	Chief, Enterprise Solutions,
UN	Salem	Avan	Director, Strategy, Policy & Governance Division,
UN	Thomas	Braun	Chief, Cybersecurity Section
UN	Lambert	Hogenhout	Chief, Innovation and Emerging Technologies
UNAIDS	Christophe	Lanuit	Chief, Innovation and Development
UN Women	Soren	Thomassen	Chief, Information Systems and Telecommunications
UNCTAD	Elena	Tomuta	Chief of Information and Technology Services Section (ITSS)
UNDP	Paul	Raines	Chief Information Security Officer
UNDP	Robert	Орр	Chief Digital Officer
UNEP	Saiful	Ridwan	Chief, Enterprise Solutions Section
UNESCO	Ingrid	Regien	CIO
UNESCO	Cédric	Wachholz	Chief, ICT in Education, Culture and Science Section,
UNESCO	Dafna	Feinholz	Head, Ethics of Science and Technology
UNFPA	Luca	Baldini	Director, Information Technology and Solutions Office (ITSO)
UNHABITAT	Kamal	Naim	IT Officer, Head of ICT Unit, Office of Management
UNHCR	lan	Bennett	Head, ICT Service Centre
UNHCR	Hans	Baritt	Controller, UNHCR
UNICEF	Daniel	Couture	Chief Information Officer, ITSSD
UNICEF	Eva	Mennel	Head of HR, UN
UNIDO	Ana Paula	Nishio de Sousa	Chief, Information Technology Services
UNJSPF	Dino	Cataldo Dell'Accio	Chief Information Officer
UNOG	Sandro	Dessi	Chief a.i., ICT Service
UNOPS	Tushar	Dighe	CIO
UNOPS	Kristina	EGUND	Head, IT Delivery
UNOPS	Niels	Ramm	UNGM Team Lead
UNRWA	Kaan	CETINTURK	Director, Information Management
UNRWA	Suhail	Katkhuda	Chief, Technology Services Division
UNU	Yared	Dina	Head of Information and Communication Technology
WFP	Dominik	Heinrich	
WFP	Gina	Pattugalan	Chief, Governance and Partnerships for the Technology Division
WIPO	András	Makadi	Chief, ETS Section
WMO	Peiliang	Shi	Director, Information System Branch
WTO	Fabrice	Boudou	Director, IT Solutions Division
-	Ellen	Van Essen	ex-Vodafone, The Netherlands