The United Nations ICT and E-Communication Study: Options for Reducing Organizational Travel

Executive Summary

1) Introduction

In 2011, the Sustainable United Nations (SUN) team commissioned the preparation of the “United Nations ITC and e-Communication Study: Options for Reducing Organizational Travel”. Mr. Gert de Laet was recruited as IT and E-communication Expert for this purpose. The SUN team supported the expert by providing and collecting data from UN ITC member agencies.

2) Study background

In 2007, the UN System Chief Executives Board for Coordination (CEB), the Executive Heads of UN agencies, funds and programmes committed to move their respective organizations towards climate neutrality.

Travel is responsible for 50% of the UN’s greenhouse gas emissions. Reducing UN staff travel, whenever possible, would therefore contribute to achieve UN climate neutrality. The study seeks to determine the ability of UN offices to deploy and expand e-communication and e-collaboration tools as a partial substitute for travel. This could be especially useful in response to more restrictive travel policies, which could become part of future internal UN regulations.

The SUN team found out that throughout the organization, different UN agencies have different styles of communications, different preferences and use different tools. These styles, preferences and tools vary even within the same UN organization depending on the office and location. Harmonizing and spreading across the UN these technologies would therefore enhance the use of e-technology and contribute to the reduction of travel for meetings.

E-Collaboration tools can be regarded as business investment. Organizations can assess the Return on collaboration Investment (ROI) across three areas:

- **Operational ROI**: Achieved by reducing and/or avoiding costs;
- **Productivity ROI**: Realized through more efficient processes and reduced cycle time;
- **Strategic ROI**: Leading to business transformation and strategic advantage.

Organizations achieve operational ROI by reducing and/or avoiding costs. In addition to cost savings, there are also significant productivity gains. Effective collaboration can improve productivity and
reduce time spent on projects. As most travel is for meeting purposes, in some instances teleconferencing could replace travel. Each flight presents a hard cost for travel expenses, a soft-cost in terms of lost productivity, and an environmental cost in terms of carbon dioxide (CO2) emissions. Tele-Presence Return on Investment could be estimated balancing the cost of adopting tools to improve e-communication/collaboration against the potential hard and soft savings from travel mitigation and improved collaboration.

Effective collaboration begins and ends with the network. Only a network-centric approach can support the increasing mobility and the full range of communication devices that enable successful communication.

By connecting scattered team members across organizations and time zones, collaboration technology enables organizations to reduce and avoid costs, accelerate interventions, and become an innovative collaboration leader reducing their environmental footprint.

3) Study’s structure and objectives

The UN-wide study consists of two components:

- Phase 1 assesses the use of e-Communication/e-Collaboration capacity across the global UN System. This component of the study describes the existing e-Communication/e-Collaboration capacity of UN offices;
- Phase 2 identifies the technical requirements for the potential improvement of e-Communication/e-Collaboration capabilities within the UN. The study proposes a set of recommendations as to how e-Communication/e-Collaboration could be improved.

The study sets as overarching objective the following:

a) Ensure that UN staff members have the information and systems in place to accomplish their work objectives regardless of where they are (HQ, offices away from HQ, or while traveling);

b) Strengthen the UN identity and collaboration among/within the various agencies by improving and simplifying communication and information exchange;

c) Reduce UN environmental footprint by supporting green exchange and communications systems.

4) Main obstacles identified

The UN faces several challenges and weaknesses when attempting to implement Information and Communications Technology (ICT) governance, namely:

- Lack of an UN-wide ICT policy and strategy since its establishment. This has led to ad-hoc and disparate development of ICT across the different organizations, offices and duty stations,
dictated mostly by the specific environment and availability of resources. This has led to duplication of efforts;

- **Lack of corporate identity and branding**, which gives the general impression to average users that the organization is fragmented, lacks focus, and is not result-oriented;
- **UN's inability to articulate its ICT needs**;
- **Lack of mechanisms** to develop, monitor, and enforce standards and policies;
- **Lack of effective oversight of the level of ICT services provided to UN**;
- **Uneven distribution and investment** on core ICT infrastructure and services among all staff members;
- **Lack of access to high-speed internet connection** and other remote access services in most duty stations;
- **Inefficient information exchange** across the organization, and the absence of a unified corporate image to the rest of the world;
- **Need for senior management support** to ICT policies;
- **Many of the e-communication tools** have not yet been officially procured. Therefore, no training on their use was provided to staff.

Aiming at reducing GHG emission across the UN by limiting travel, the study takes note of specific circumstances that might hinder either the use of e-technologies as substitute to travel or the attainment of GHG emissions reduction:

- **High confidentiality of some tasks** that require in-person meetings and surveys;
- **Time zones differences**;
- **Security risks related to the use of most IT applications**. These should be considered and addressed prior to implementation;
- **Travel for staff rotation in risky and unstable operating environments due to security reasons**;
- **In some duty stations for some missions, emissions are mainly generated by other sources than flights and e-communication might not serve as a substitute**;
- **Limited commitment of dedicated resources - either financial or human - to support real emissions mitigation efforts**.

5) **Recommendations and next steps**

**a) Recommendations**

The survey highlights the issues to be addressed, and its main recommendations can be summarized as follows:

- **All UN staff members throughout the organization** should be provided with **standard ICT package** (hardware, software, and services), **adequate bandwidth levels** and other remote access services to deliver/implement UN's work program and its activities. The core package would have to be implemented by the ICT Team in accordance with the existing UN guidelines, taking into account open standards for interoperability and security for both access and information integrity. The core ICT package would need to be evaluated and revised as new technologies and services become available. **Communication** with other UN entities and personnel needs to be **smooth, easy and seamless**. Only when the basic ICT will be in place, for all staff members, the UN will be able to take the next step from a strong foundation to a
comprehensive knowledge management organization. This is especially important now that the web-based Umoja ERP system is being rolled out across the UN secretariat organizations.

b) Purchasing/developing a scalable **Content Management System (CMS)** for all UN websites for preservation of institutional knowledge and dissemination of information internally and externally.

c) Developing the **CMS at central level**, and providing it to all offices to ensure consistency of presentation and pertinence of content.

d) Creating a **new internet (e-media) policy** and establishing an **internet (e-media) board**. There needs to be a more cohesive internet presence, albeit that the UN is composed of some 70 (semi)autonomous entities, agencies, funds and trusts.

e) The global common goal should be to have an **UN-wide shared intranet**, with consistent layout, standard technology, and providing relevant and consistent messages to reach stakeholders everywhere.

f) Focusing on the adoption of a **global system for a shared extranet**. Some offices have already developed solutions to this requirement by implementing a variety of systems, such as SharePoint, WIKI, Quick Place, etc.

g) **Conducting a review of needs** to determine the extent of the extranet requirements within the organization, and evaluate existing team collaboration products, make recommendations for use, and arrange for training where necessary.

h) Creating a **single UN Document Management/Archive System** (at least in the Secretariat and associated agencies) instead of maintaining many distinct and independent databases developed at different times, on different platforms, and/or using different data management systems. The need to access and exchange data between UN staff members and partners, brings about the subject of interoperability, identified as an important need for international organizations operating in the 21st century.

i) Promoting **telecommuting**. There are many green benefits that come with teleworking and mobile workspaces. Some of the UN System Organizations allow/encourage employee telecommuting. However, telecommuting should be allowed on a much broader base and formal policies should be devised. Web email access should be systematically granted to laptop users and staff members provided with portable computers.

j) By implementing the **UN-wide ICT Governance structure**, the majority of the issues would be addressed. For this purpose, an ICT Advisory board should be established in order to devise a more thorough Knowledge Management Strategy.

k) The UN System should accelerate its efforts towards a commonly **negotiated licensing deal** towards the few major vendors (Microsoft, Cisco, etc.) as no overall policy is in existence. This can result in substantial costs savings.

l) In order for the UN to realize the full potential of its ICT investments, a robust training component must be an integral part of UN’s ICT Services. **Online trainings** in core e-communication applications and services need to be made available not only to ICT staff members, but to all UN staff members, worldwide, on an ongoing basis. Fast and on-demand access to engaging content that is tracked and recorded enables organizations to enhance training to improve employees’ skills and competencies in a cost-effective way.

m) An **Enterprise Resource Planning (ERP) System** should be established as UN programme managers lack timely, accurate and up-to-date (integrated) information on programmes and projects implementation status. An ERP System attempts to integrate all the administrative
data and processes of an organization into a single unified system. Aging and diverse Integrated Management Information System (IMIS) and ERP systems are sometimes incapable of performing required functions and linking with new modules and other remote systems. All ICT Chiefs and Focal points in different UN programmes need to work closely with UNHQ (OICT) in order to streamline their business processes in preparation for the future ERP.

n) Any e-communications system/ITC strategy depends as much on technology, as it does on buy-in from organizations and staff and the championing of these new policies by senior management. If successful, such a system would contribute to a change in the organizational culture.

b) Next steps proposed

In light of the various issues highlighted, the UN has a wide range of possibilities/opportunities ahead based on some of the recommendations made. The study created a UN-wide ICT “snap-shot” and the way ahead could be summarize as follows:

- Share the report with the ICT Network
- Define some quick wins with all ICT Focal points via the ICT Network
- Suggest e-communication options and deployment of minimum UN-wide technologies
- Suggest training/support and governance requirements
- Present analysis on cost benefits of e-communication implementation options
- Create an UN-wide ICT task force
- Devise an overall e-communication/e-collaboration strategy
- Define the implementation plan
- Define the resource plan and the UN Wide Advisory Function
- Create long term UN ICT strategy over the next 3-5 years

The SUN team was able to capture a wealth of information that should be further shared with the extended team. It expressed its availability for further support and to take the lead and help define the next generation ICT services. The SUN team is very confident that this will be a driving factor towards successful climate neutral UN-wide operations.

For any further information on this report please follow the link and download the full version of the United Nations E-Communication Study (http://www.unep.org/sustainability/docs/UN_SUN_e-Communication_FinalReport.pdf). SUN team contacts: Mr. Shoa Ehsani (shoa.ehsani@unep.org), Ms. Isabella Marras (isabella.marras@unep.org), Ms. Flavia Reale (flavia.reale@unep.org).
### Appendix: Main ITC tools currently in use across the UN

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<thead>
<tr>
<th>IT Area</th>
<th>Main elements</th>
<th>Definition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>e-Communication Tools</strong></td>
<td>E-mail</td>
<td>Messages or letters sent and received in electronic form via computers</td>
<td>Outlook, IBM Lotus Notes</td>
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<tr>
<td></td>
<td>Operating system (OS)</td>
<td>Program or set of programs that supports computers functions.</td>
<td>Windows XP Professional, Windows 7 (64 bit), MAC OS (special group of users)</td>
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<td></td>
<td>Productivity tools</td>
<td>Suite of applications for creating, editing, and sharing text, spreadsheets, presentations and other documents. Productivity tools can be software that helps employers to increase their business productivity.</td>
<td>Microsoft Office suite, Freeware Office Suite</td>
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<td>Instant Messaging</td>
<td>Instant messaging (IM) is a form of real-time direct text-based communication between two or more people using personal computers or other devices, along with shared clients. The user’s text is conveyed over a network, such as the Internet.</td>
<td>Cisco Unified Communication, Skype, Ericsson PBX, Alcatel phone systems</td>
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<td>Audio conferencing and Individual point-to-point systems</td>
<td>Development of electronic mail designed to support many-to-many simultaneous audio communication. Participants can be either active or passive interaction (listeners).</td>
<td>Desktop/Phone based (Skype, Arkadin, etc.), Audio conferencing facilities for larger conferences</td>
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<td>Video Conferencing</td>
<td>Set of interactive telecommunication technologies that allow two or more locations to interact via a two-way video and audio transmission system, simultaneously.</td>
<td>Desktop Video Conferences (Skype, WebEx, google talk video, etc.)</td>
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<td>Virtual Conferencing</td>
<td>Virtual conferencing or Tele-presence refers to a set of advanced Tele-robotics technologies, which give the virtual impression to have the other participants physically present, while they are located in different places.</td>
<td>Cisco’s Tele-presence Suite (Geneva, New York, Bonn and Nairobi)</td>
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| | ICT core package | It includes:  
- Hardware (desktop computer, laptop, printer)  
- Bandwidth  
- Access to UN-wide e-mail-Directory  
- E-mail services  
- Internet access  
- Remote access to internal resources  
- Desktop management  
- Backup / Recovery for e-mail  
- Centralized license procurement and management for all core software  
- ICT Training  
- Archiving, etc. | Internet browsers used: Microsoft Internet explorer, Mozilla firefox, Google chrome, Opera, Safari |
| | Bandwidth | Range of signal frequencies that indicates the amount of data that can pass along a channel at one time. Broadband networks, the basis of the information superhighway, allow video signals to pass at high speed. | Local ISP vary from 256kB to 10Mb (ADSL), and up to 45Mb (T3) |
| **Enterprise Resource Planning Systems** | Enterprise Resource Planning (ERP) software and Integrated Management Information Systems (IMIS) | Enterprise Resource Planning (ERP) integrates internal and external management information across an entire organization, embracing several areas. ERP systems automate this activity with an integrated software application. Their purpose is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections with outside stakeholders. | Infor Smart-stream, Atlas, PeopleSoft, SAP, Oracle, Oracle E-Business suite, IMIS, Agresso, Microsoft Navision, etc. |
**Content/Knowledge Management**

| Knowledge Management (KM) comprises a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge (individuals, organizational processes or practices). |

**e-Trainings**

| Remote trainings attendance/delivery to meet the needs of staff members in dispersed global organizations. e-Trainings enable organizations to improve employees’ skills and competencies in a cost-effective way. |

**ERPs**

ERPs are mainly accessed through Citrix.

- SharePoint
- EMC Documentum
- Hummingbird
- Oracle – Stellent
- IBM Content Manager
- jOOMLA
- Drupal for intranet
- Microsoft CMS for web
- Gauss of Open Text
- EXtron CMS

- CBT - Computer Based Training
- WBT - Web Based Training
- Virtual Class Rooms with streaming