



ICC

international
computing
centre

IT SOLUTIONS
FOR THE
UN FAMILY

ICT Services

April 2016



International Computing Centre

Cover - ICC supports sustainable human development with ICT service delivery to UN programmes, funds and entities. Photo credits from left: UNDP - Debebe, UN - Tobin, ICC - Diana

Who We Are

The International Computing Centre (ICC) has 45 years of experience providing Information and Communications Technology (ICT) services to United Nations programmes, funds and entities. Its mission is to provide ICT services to the United Nations family, maximise the sharing of infrastructure, systems and skills and generate economies of scale to benefit its over 40 Clients, including 38 Partner Organizations (those with membership or representation in ICC's Management Committee), as well as other United Nations or related not-for-profit entities.

The organization has a strategic view of ICT support for United Nations goals and results, with expertise and complex knowledge about their ICT environments. As a United Nations entity, ICC is uniquely positioned to understand and meet the needs of its Clients.



ICC is a United Nations entity providing UN ICT services with a professional workforce with global presence and coverage - New York, March 2016. Photo: ICC - Allen

What We Do

ICC provides core business services to United Nations entities, including Client advisory services, software-as-a-service, platform-as-a-service, infrastructure-as-a-service, and public cloud integration and management services.

ICC offers state-of-the-art Enterprise Resources Planning (ERP) hosting, messaging, Unified Communications, network, infrastructure, application hosting, IP telephony, Business Intelligence, data hosting, monitoring and more. This includes over 15 ERP systems, 9 Enterprise Communications Services (ECS), 13 Microsoft SharePoint platforms for United Nations programme, funds and entities.

ICC offers cost savings, business efficiencies, and volume discounts based on the scale of its engagements. ICC operates on a full cost recovery basis, with surplus funds being refunded at the end of projects or initiatives.

The ICC Advantage

ICC is the core shared service provider for the United Nations system, providing agile, cost-effective, UN-audit compliant high value ICT services. ICC is highly competitive with today's technology marketplace, often building synergies with industry partners as well as with its Partner Organizations.

Over forty UN programmes, funds and entities participate in the efficiencies of ICC services, from Enterprise Resource Planning, SharePoint and infrastructure hosting to Business Intelligence, Unified Communications, cloud computing, and advisory services.



Figure 1. The ICC advantage: 45 years of UN and ICT experience

As a United Nations entity, ICC operates under the same privileges and immunities as its

Clients and Partner Organizations. ICC's data centres and offices are extra-territorial, meaning that they are not under the jurisdiction of any national authority. The data and systems ICC hosts are protected from any national interest or intrusion, safeguarding United Nations jurisdiction. ICC is governed by the same rules as its Partner Organizations for procurement, financial audit and reporting.

Business First

ICC maintains a strategic view of ICT support for United Nations goals and deliverables around the globe. ICC's expertise and complex knowledge about United Nations ICT environments means that Clients and Partner Organizations get the top of today's technology marketplace services with the best value money can buy.



ICC is a core contributor to United Nations programme delivery. Photo: UNDP - Wright

Several principles frame the engagements ICC has with its Clients and Partner Organizations:

- Business acumen and responsiveness
- Courteous and professional attention
- Collaborative, honest communications
- Aligned services, architecture, portfolio
- Proactive understanding of Client needs
- Timely and useful information sharing.

ICC offers cost savings, business efficiencies and volume discounts based on the scale of its engagements. ICC operates on a full cost recovery basis, with surplus funds being refunded at the end of projects or initiatives.

Governance

ICC is governed by its Management Committee membership, comprised of representatives from its Partner Organizations. The ICC Mandate, the Memorandum of Understanding that all Partner Organizations sign and Service Delivery Agreements provide the policies and guidelines governing all service engagement.

The ICC Mandate covers jurisdiction, structure, governance, arrangements for service provision, funding and cost recovery processes, liabilities, and safeguards. ICC's Memorandum of Understanding includes rules for service management, ICC and Client management roles and responsibilities, confidentiality and security as well as payment protocols. Service Delivery Agreements govern the scope, service description, roles and responsibilities, cost estimates, and service metrics and Operational Levels (OLAs) for every service partnership.

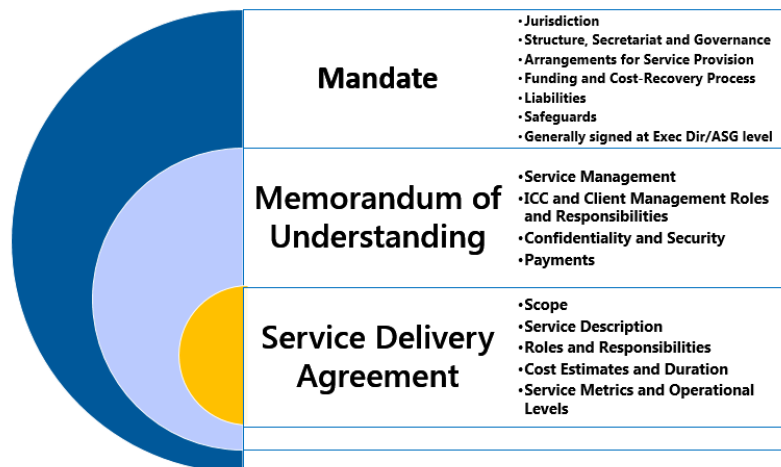


Figure 2. ICC's governance model and approach

Superior Operations

Operational excellence, service level management and continuous service improvement are fundamental to ICC's mission, vision and governance. They span the landscape of ICC's ICT projects and services, and account for ICC's trusted reputation with Partner Organizations and other Clients.

ICC's operations are tried and trusted, with:

- Strategic oversight
- enterprise architecture
- Product development
- Efficient project management
- Continuous service improvement.



ICC delivers ICT projects and services with continuous improvement. Photo: ICC - Diana

ICC is committed to continuing to improve its Client experience by building trust through standards-based service delivery, improving value for money, fostering cross-functional collaboration and communications, and advancing the capabilities of its Clients and Partner Organizations to strategically and tactically respond to and anticipate their needs in an ever-changing digital business landscape.

Global Presence and Impact

In order to meet its goals and provide quality services to its Clients and Partner Organizations, ICC has established offices in five strategic locations:

- Geneva, Switzerland
- New York, USA
- Brindisi and Rome, Italy
- Valencia, Spain.

ICC prides itself on the expertise and professionalism of its personnel, comprised of 250 regular staff and nearly 150 consultants.

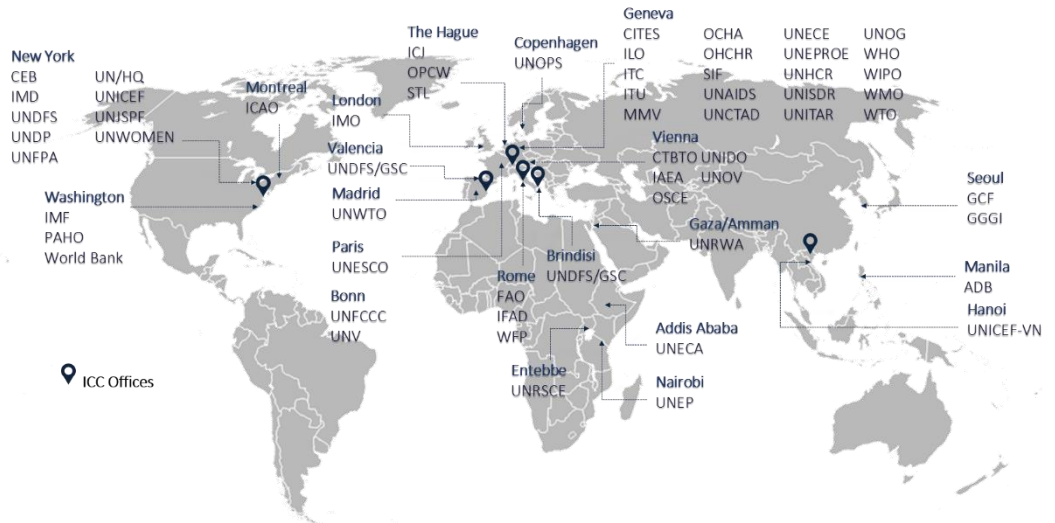


Figure 3. ICC's Clients and Partner Organizations today, leveraging the largest ICT service provider in the UN

The expert team at ICC brings decades of experience in the United Nations family together with state-of-the-art technology and business skill sets spanning the digital business environment.

Clients can focus on core business activities by leveraging ICC's services, built upon industry best practices, standards and documented business processes subject to a Continuous Process Improvement cycle.

Worldwide Data Centres - UN Jurisdiction

ICC's data centres are geographically distributed around the world and comply with the United Nations jurisdiction. The organization ensures that Client data meets all UN immunities and privileges. ICC provides service continuity and Disaster Recovery for all of its environments and service delivery options. They are located as follows:

- Primary Data Centre (Geneva, Switzerland) - 1,000 square meters (10,764 sq. ft)
- Secondary Data Centre (Geneva, Switzerland) - 170 square meters (1,830 sq. ft)
- North American Data Centre (Piscataway, NJ, USA) - 60 square meters (646 sq. ft)
- New Data Centre (Valencia, Spain) - 200 square meters (2,150 sq. ft)

Service Continuity and Disaster Recovery

Service continuity (or business continuity) ensures through comprehensive processes and procedures that mission-critical functions continue during and after a service disruption or disaster. Disaster Recovery involves the steps taken to resume operations, ensuring that a robust and fault-tolerant ICT infrastructure is in place to continue or restart operations in the event of a natural or man-made disaster or disruption.

This includes restoring business critical data with backups, re-establishing telephony exchanges or network infrastructure to meet immediate and longer-term business needs. ICC services incorporate a high level of disaster recovery, and enterprise backup services are also available to supplement or complete service continuity requirements.

Staff Expertise

The unique business environment of ICC requires a workforce that is versatile and skilled in deploying and supporting diverse technologies across the ICT spectrum. It demands knowledgeable staff who are familiar with United Nations goals, ethics, regulations, business and technology environments.

Staff and contractors command industry-standard certifications in many areas of strategic advisory services, professional services, training, Software-as-a-Service, Platform-as-a-Service, Infrastructure-as-a-Service, and public cloud integration and management services.

This includes training, qualification, and certification from key industry partners and suppliers, including Microsoft, Oracle, and Cisco, and professional certifications in governance (COBIT 5), information security (ISO 27001) and service management (ITIL and ISO 20000). Their advanced expertise allows ICC to function as the go-to ICT organization for the entire United Nations family.



Some of ICC's dedicated service desk staff in New York. Photo: ICC - Allen

Best Practices, Standards and Certifications

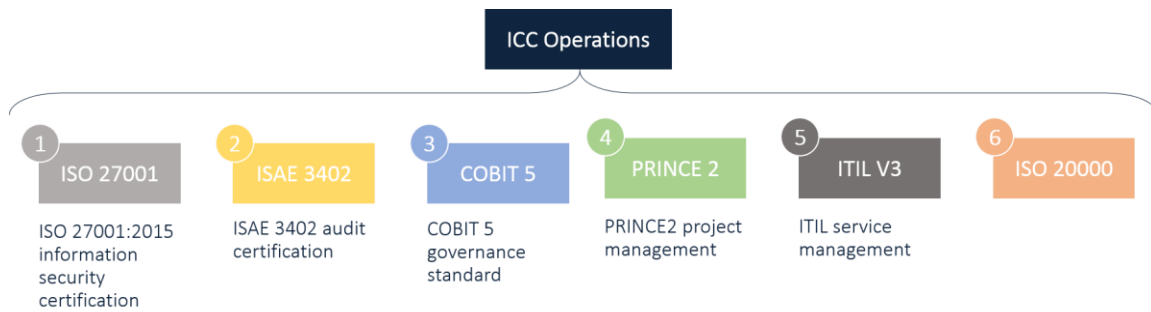


Figure 4 ICC services use industry standards and certifications

ICC's staff are trained in Information Technology Infrastructure Library (ITIL) service management standards, PRINCE2 project management methodologies and use the COBIT 5 standard as a governance internal control framework.

ICC achieved a major milestone in December 2014, with ISO 20000 service management certification for services provided to one Client worldwide. ICC has continued to establish and embed a culture of continual improvement in the quality of ICT services by implementing an ISO 20000 certification project for all ICC services.

Information Security

ICC is committed to maintaining appropriate levels of information security, pursuing a number of relevant certifications and independent audits based on international standards, including ISO 27001:2015 and ISAE 3402.

ICC's new information security services, including Common Secure, offer continuous, reliable and timely information security protections and controls, including gathering critical cyber information from Partner members, commercial security firms, service providers, federal, state and local government agencies, law enforcement and other trusted resources.

These services help to strengthen relationships with the cyber community at large on behalf of United Nations organizations and to foster a reputation for excellence. ICC is thus uniquely positioned to quickly disseminate cyber threat alerts and other critical information to organizations across the world.

ICC's Trusted Services

ICC has been the go-to service provider for United Nations programmes, funds, and entities since its inception. ICC, a United Nations entity itself, provides services to its Partner Organizations, other United Nations Agencies and related not-for-profit organizations.

All told, ICC's Clients number over 40, including 38 Partner Organizations (those with membership or representation in ICC's Management Committee), as well as other United Nations or related not-for-profit entities.

ICC offers a full range of digital business solutions for its Partner Organizations and other Clients, which can focus on core business activities by leveraging ICC's services. These services are built upon industry best practices,



ICC staff designing for the new digital business landscape. Photo: ICC - Allen

standards and documented business processes subject to a Continuous Process Improvement cycle.

ICC places a lot of importance on operational excellence with particular emphasis on the performance and availability of its services and the level of security associated with them.

Testimonials

ICC's Common Connect makes it easy for us to collaborate with other Partner Agencies. No hassle--easy to get in and get the job done.

Charles Havekost, Director, Office of Information Systems and Management, UNDP

The focus on end user satisfaction was the measure of success for this IP Telephony project with ICC.

Soren Thomassen, IT Director, UN Women



ICC works with United Nations programmes, funds, and entities. Photo: UNOG - Ferre

ICC Services At-a-Glance

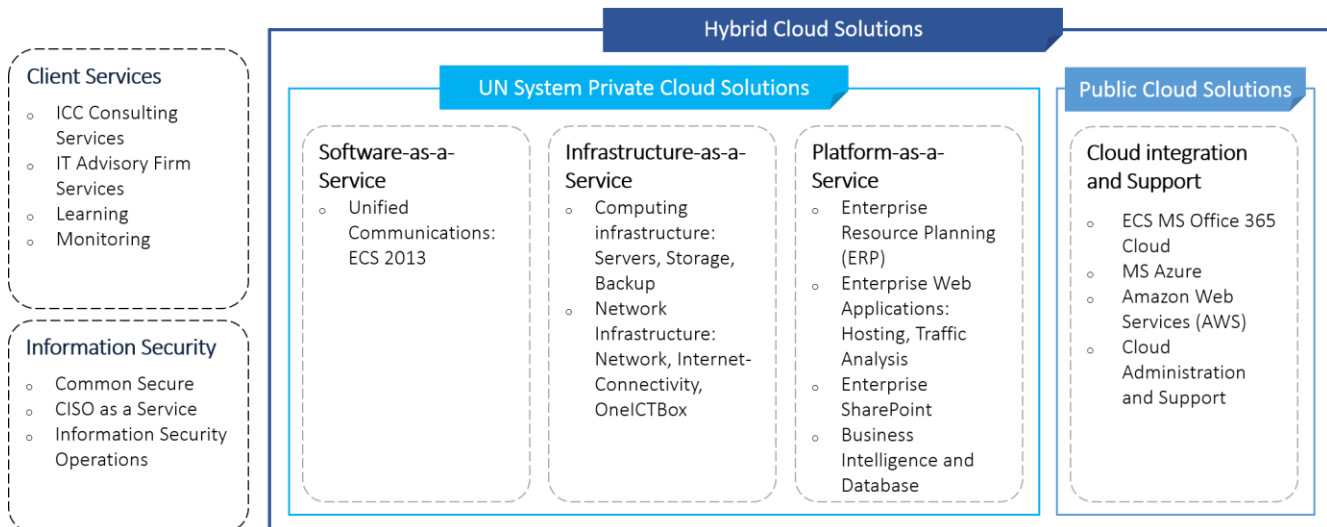


Figure 5. ICC's service delivery model. Professional services are available across the ICT spectrum.

Client Advisory Services

ICC has 45 years of experience providing ICT services to United Nations programmes, funds and entities. Its mission is to provide ICT services to the United Nations family, maximise the sharing of infrastructure, systems and skills and generate economies of scale to benefit its over 40 Clients. ICC offers its Clients strategic advisory services, subject matter expertise, access to IT Advisory Services, professional services and training.

- Strategic consulting - Business model mapping, ICT strategy, project portfolio, and industry research and writing
- Subject Matter Expert consulting - ICC subject matter advice from enterprise architecture to project management and more,
- Access to IT Advisory Services - Cost-efficient and volume-discounted packages for industry research groups, including 451 Research, Cutter Consortium, Forrester, Gartner and Infotech advisory services
- Training and capacity development - Includes all areas of best practices, standards, technologies and digital business solutions.



Photo: FAO - Castellanos

Professional Services

Professional services spans the Client Advisory Services area and goes much further, with a wide array of services across the ICT landscape. ICC professional services are flexible enough to deliver one-time projects and related on-going services for Clients. Professional services are negotiated to fit all requirements including scope, deliverables, roles, responsibilities as well as cost estimates.

Utilising proven best practices, procedures, guidelines, standards as well as tools, professional services are delivered in multi-disciplinary areas in a timely and efficient manner allowing Client ICT staff to focus on core business. Examples include:

- Information security operational services
- Common Secure and CISO-as-a-Service
- Project management and service desk support
- CRM implementation
- Infrastructure/platform/application support and integration
- Performance testing and technical security testing.



Photo: WIPO - Berrod

Software Services

ICC offers its Clients hosting and delivery of software applications designed to be delivered over the Internet for their end-users. This includes business apps, business data as well as the underlying platforms and infrastructure tailored to run the software. Benefits include resiliency, end-to-end setup and support, lower total cost of ownership, scalability and a seamless solution.

- Unified Communications
- Identity and Secure Access Management.

Platform Services

ICC offers its Clients a computing platform that allows administrators and developers to create, run and customize their application suite, including software-as-a-service components.

ICC manages computing platforms for Enterprise Resource Planning, Business Intelligence, web applications including SharePoint, Drupal, and Amazon (?), database, middleware, directory, resources and domains platforms.

- Enterprise Resource Planning (ERP) services, including Oracle (PeopleSoft and e-Business) and SAP solutions
- Web Applications
- Business Intelligence
- Database and Middleware
- Directory, Resources and Domains.

Infrastructure Services

ICC provides its Clients with computing infrastructure resources that allow administrators and engineers to easily manage networking, data centres and infrastructure elements for their business needs and application stack.

ICC offers networking, physical servers, virtual servers, Operating Systems, storage, physical hosting from its data centres or ICC brokered arrangements with third party cloud providers.

- Managed Computing
- Managed Infrastructure
- Monitoring.



Photo: UNDP

Public Cloud Services

ICC's traditional strengths have been in providing stable private cloud environment for its Client needs, from Enterprise Resources Planning and collaboration platforms to email and Unified Communications, Business Intelligence, web hosting, custom applications and monitoring and reporting.

Recent global innovations have opened the door for public cloud solutions, which are lean and cost-effective, but require advisory services, migration support, and ongoing professional services to make these off-the-shelf solutions fit the needs of United Nations Organizations, which rely on robust information security and protection of UN information assets in cost-effective and integrated ICT environments.

- Software Integration and Management
- Platform Integration and Management
- Infrastructure Integration and Management.

ICC Services At-a-Glance

Client Advisory Services




Strategic Consulting

ICC provides high-level strategic consulting to CIOs and other executive managers. This includes business model mapping, ICT strategy development, project portfolio prioritisation, and industry benchmark research and writing. High-level peer review of major projects at key points in a project lifecycle is provided to assess and make appropriate recommendations for the likelihood of successful delivery.

Subject Matter Expert Consulting

ICC offers specific subject matter advice across the ICT landscape. From enterprise architecture and risk management to cloud computing, ICC has a wide range of knowledge in various subjects that can be readily offered according to individual Client needs. ICC can rapidly assemble the right team of experts and define a proposition tailored to Partner requirements.



Success stories

	UN Women contracted ICC to assist in developing an ICT Strategy for 2016-2019		
	ICC is providing the International Court of Justice with project management services		

Access to IT Advisory Services

ICC provides cost-efficient and volume-discounted packages for industry research groups, including 451 Research, Cutter Consortium, Forrester, Gartner Info-Tech, and McLean & Company advisory services. These groups provide excellent research and development as well as industry trend analysis to drive ICT strategic governance and project planning, acting as arbiters between organizations and outside service providers.



Success stories

	UNFCCC, UNDP, UNICE, PAHO-WHO, UNRWA, UNJSPF and others have contracted for	
	ICC's Access to IT Advisory Services for industry research and trends analysis services	

Training

ICC also provides training in all areas of best practices and standards, from Microsoft, Cisco, and Oracle technical training to standards-based training in ISO 20007 for information security, ISAE 3402 for audit, ITIL V3 for service management, ISO 20000 for service management system certification and COBIT 5 for ICT governance.

Success stories

	Most of ICC's Partner Organizations, including UN's DFS, FAO, ILO, WFP, ITC, ITU, UNECE, and many others utilise ICC's training, from ITIL and SharePoint to network support, PeopleSoft, SAP, TOGAF, PRINCE2 and MS Exchange		International Trade Centre
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Information Security and Related Services

As part of a wide range of professional services, ICC's new information security services cover oversight and governance as well as operational components.

Services

Common Secure - This ICC information security service functions primarily to share timely, relevant and actionable physical and cyber security threat and incident information. This enhances the ability of the United Nations to prepare for, respond to, and mitigate risks associated with these threats.

ICC's cyber security service offers continuous, reliable and timely information gathering from Agency members, commercial security firms, service providers, federal, state and local government agencies, law enforcement and other trusted resources.

It works to build relationships with the cyber community at large on behalf of the UN system and developing a reputation for excellence. Common Secure is thus uniquely positioned to quickly disseminate cyber threat alerts and other critical information to organizations across the world.


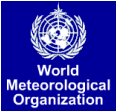

CISO as a Service - Information Security management and an identified accountable body in an organization mitigates the high risk of negative reputation, loss of valuable information, exposure to malicious acts as well as sophisticated and complex cyber-attacks. The ICC "CISO (Chief Information Security Officer) as a Service" operates within a Client's structure, in contact with Client's senior executives.

The CISO is responsible for establishing and maintaining the enterprise vision and strategy as well as programme to ensure that information security is managed properly and information assets/technologies are adequately protected. The CISO service serves Client's executives on strategic guidance and business alignments, CIOs on assurance, technical teams on expertise, end-users on awareness as well as 3rd parties possibly representing the Client.

Information Security Operations - With the proven track record of ICC's hands-on experience in conducting cyber security operations at all levels for all ICT components, this service includes one-time as well as ongoing activities within a given Information Security governance framework, ISO27001 as well as related standards and vendor recommendations.

Operational services include the implementation and monitoring of enterprise antivirus systems, periodic vulnerability scanning and coordination of follow-up actions, log reviews and analysis, periodic alignment of account/credentials, as well as perimeter/firewall rules management.

Success stories

	PAHO-WHO, WMO and UN Women have contracted for ICC's CISO-as-a-Service to ensure that organizational information security is managed and to protect assets		
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Unified Communications

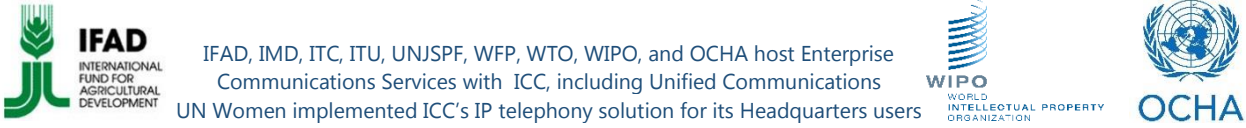
The ever-changing landscape of technology makes communication simultaneously simpler and more complex. Real-time and asynchronous communication methods need to be merged together to reduce latency and improve human communications. ICC's Unified Communications services provide an environment where different modes of communications, such as email and voicemail, chat and video can be accessed through unified user interfaces and user experiences across all media devices.

Services

Enterprise Communication Service (ECS) 2013 – A fully-managed messaging and Unified Communications resilient solution comprising centrally dedicated and redundant Microsoft Exchange and Skype for Business 2013 platforms. Packaged as a software solution along with ICC's value-added expertise and experience, the ECS 2013 service delivers quality and secure e-mail, chat, presence, conferencing and various collaboration features with an extended ease of integration across multiple system.

IP Telephony - The service, from provisioning of the infrastructure to on premise commissioning to remote/onside administration, allows IP network use for exchange voice, fax, and other forms of information in a dependable flow to users. Organizations will benefit from the service with cost savings, office efficiencies, new capabilities and streamlined services for office, remote and mobile working. With greater security, resilience, and scalability, it is a reliable service benchmarked with the industry's best practices.

Success stories



IFAD, IMD, ITC, ITU, UNJSPF, WFP, WTO, WIPO, and OCHA host Enterprise Communications Services with ICC, including Unified Communications
UN Women implemented ICC's IP telephony solution for its Headquarters users

Identity and Secure Access Management

ICC has many tools to validate user identities tied to directory accounts without compromising the user experience. Security threats are quickly recognized, monitored and resolved through 24/7 dedication to ensure the ultimate security to accounts and organizations as a whole. Two-step authentication provides secure access to accounts regardless of media device or location. Services such as Mobile Device Management protect data and control mobile devices, helping organizations manage the risks related to staff working remotely through mobility capabilities.

Services

Mobile Device Management - A fully managed software solution for Partner Organizations to manage mobile devices. By providing a conduit for virtual private network (VPN) connections, and with the aim of securely managing data, controlling configurations settings, encouraging mobility, the service helps the ICC Clients to manage risks related to the usage of mobile devices. MDM further complements Partner Organization "Bring Your Own Device (BYOD)" policies and procedures.

Two Factor Authentication - This service reduces identity and authentication related security breaches by allowing the medium for two means of identification from separate categories of credentials. This service allows Client users to use an additional layer of dynamic credentials, delivered through various means of soft and hard token devices. Two Factor Authentication integrates with trusted Active Directory and other web related instances for ease of synchronization.

ICC Services At-a-Glance

Identity and Secure Access Management (con't)

Services

Email Security Service - This service is positioned at the Client's SMTP inbound and outbound gateway, providing an additional layer of email message hygiene for protection against spam, viruses, phishing, denial of service and attacks. The subscription includes daily and period definition updates as well as delegation so Client users have the ability to manage their own spam in an efficient manner.

Common Connect - This service enables participating Partner Organizations to receive access to each other's systems without having to create and manage separate user accounts for those outside their own organizations. This service facilitates inter-operability and enables the use of existing corporate solutions instead of duplication of ad hoc local ICT services for the sole purpose of meeting common ICT requirements.

Success stories

	IAEA, WMO, UN Women, WTO, WIPO, and UNJSPF all utilise ICC's secure identity and access management services		
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Enterprise Resource Planning (ERP)

ICC offers its Clients a variety ERP platform hosting solutions and support, to give Partner Organizations integrated views of core business processes, often in real-time. Current solutions include Oracle E-Business, PeopleSoft and SAP. Pre-production and production environments are fully managed and hosted in ICC's primary data centre in Geneva with a choice of High Availability and Disaster Recovery sites, all of which are covered by United Nations jurisdiction. ERP services can be extended to include license procurement and management as well as integration with third party applications.




Services

SAP Managed Services – This service provides fully-managed solutions for many of the major products of SAP, such as SAP ERP. Some features include infrastructure sizing and design for production, pre-production quality, development and disaster recovery environments depending on the Client's wish, as well as provision, installation and configuration of infrastructure hardware.

Oracle E-Business Managed Services - From the provision of infrastructure and designing detailed environment documents, ICC provides fully-managed Oracle E-business Suite services solutions for its Clients. ICC can determine a method and plan on how to migrate an application, including all the requirements and constraints for each environment. Clients will benefit from ICC's experienced end-to-end management and updates.

Oracle PeopleSoft Managed Services - Clients can enjoy fully-managed ERP business modules and systems that are based on PeopleSoft applications. The managed hosting service includes hosting the hardware on which the applications reside, including network and application environment management.

Success stories

		CTBTO, UNJSPF and WFP run on SAP with ICC. UNDP, IFAD, UNHCR and WIPO run Oracle PeopleSoft, while IAEA, WHO and WMO use Oracle e-Business	
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Database and Middleware

ICC provides its Clients with database and middleware services that use relational database management systems (RDBMS) for the management and storage of information. A common choice for keeping financial records, personnel data and other applications, RDBMS gives organizations the platform to create easier-to-understand database management systems.

Services



Oracle Database Service – This is a backend database service that can be extended to support of Oracle ERP solutions. The service includes installation of Oracle SQL server technology components, such as database, application and other components, including performance monitoring, patching, and database administration and object migration.

Oracle Fusion Middleware Service – This service offers a comprehensive family of products under the Oracle Fusion Middleware platform, functioning as the application infrastructure foundation. Clients can benefit from the unified SOA infrastructure that streamlines labor-intensive events and service management. ICC provides end-to-end management to ensure a smooth transition and experience.

Database and Middleware (con't)

MS SQL and Open Source RDBMS - Hosted in ICC's infrastructure for all available platforms, the service offers high performance, secure and managed SQL database service. Clients will be provided standard and advanced SQL platforms including the end-to-end operations, such as database administration, system monitoring, temporary files/logs clean up, software upgrades and patching and surface area configuration changes.

Success stories

	UNHCR, IMD, DFS, UNJSPF, WFP, WTO, PAHO-WHO and Special Tribunal for Lebanon have contracted ICC for database hosting and management	
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Web Application Platform




ICC's web application platform services range from basic to complex installations tailored to meet Client needs, including platforms for end-to-end business processes, results-based management, performance tools, enterprise dashboards, content and collaboration, portals, search and content management. ICC provides specific and customised environments, such as Microsoft SharePoint, that are needed for Clients to create and design according to their business objectives and technical requirements.

Services

Enterprise SharePoint 2013 - An all-in-one Microsoft SharePoint based web platform offering to mid and large size Clients, which traditionally are separate applications for intranet, extranet, content management, document management, personal cloud, enterprise social networking, enterprise search, business intelligence, workflow management, web content management, and an enterprise application store. The service includes all necessary hardware, software, hosting and support.

Enterprise Web Service - A secure, high performance web hosting environment with maximum availability. Clients may select their preferred hosting environment from Microsoft Windows Server, Internet Information Server, Linux Red Hat or Apache. Clients can benefit from this service that features website traffic analysis, real-time reports and the included necessary hardware, software, hosting and support in ICC's data centre.

Success stories

		WFP, WMO, UNDP, WIPO, UPU, GFUND, ILO, IMO, UN Women, and many others host web applications on ICC's platform infrastructure	
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Business Intelligence



ICC offers its Clients various data analytics tools to direct and drive business insight. Business Intelligence helps predict, track, analyse, and present information as it relates to business performance, providing Partner Organizations with tools to translate data into actionable information. ICC's solutions include data analytics and visualisation, business performance management, data warehousing, dashboards and key performance indicators (KPIs).

Services

Data Warehousing – This service provides a system for reporting and data analysis, and is a central repository of integrated data from disparate sources. ICC provides SQL Server environments for production, development and disaster recovery in ICC data centres, and will provide data warehouse setup and configuration. The configuration consists of production, disaster recovery, staging and development. Additional training and workshops are also available.

Enterprise Dashboard - A real-time user interface showing a visual representation of trends/KPIs to enable quick decision-making. This service provides overviews from daily to annual scales, customised to suit Client needs. The enterprise dashboard can be created using QlikView, Lintao and Microsoft BI technologies.

Success stories

	OCHA and UNDP (including UNV) have adopted Business Intelligence solutions with ICC, including enterprise dashboard and data warehouse solutions and services		
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Directory, Resources and Domain Platform

ICC's directory, resources, and domain platform services include Active Directory and desktop management. These platforms offer environments to manage all users and computers in a Windows domain type network. Through this service, Clients are also ensured that the proper people are given the appropriate level of security.

Services

Active Directory and Resources – This service includes end-to-end hosting, support and management of Active Directory and related services, Directory (users, groups, resources), authentication and rights management, federation, certification, with extended services such as File, Print, DNS and DHCP. The service is flexible to be hosted at ICC's data center residing in ICC's or the Client's platforms/infrastructure.

Desktop Management - This service allows Partner Organization to manage all its computers, including overseeing laptops and devices. ICC will build, implement and manage an Active Directory based infrastructure for policy and software management, as well as design and implement initial core images for a standard, managed desktop model. ICC will also plan and assist in the migration to a new desktop environment.

Managed Domain Name and Registration – This is a 2nd level public Domain Name Services (DNS) registration and hosting service. Hosting is provided through multiple duplicated servers across ICC's data centres as well as through third party ISPs for cascading backups.

ICC Services At-a-Glance

Platform Services

Directory, Resources and Domain Platform (con't)

Success stories



OM, OHCHR, IMD, OCHA, UNJSPF, UN Women, WFP, WIPO, and many others utilise ICC's directory, resources and domain services

IOM • OIM

UNJSPF
INVESTMENT MANAGEMENT DIVISION

Managed Computing Infrastructure

ICC's managed computing infrastructure services manage Client hardware and storage problems. ICC hosts hardware, software, servers, storage and other infrastructure services. The service also provides computing power, storage, memory, and other services, including application management and tasks such as system maintenance and backup.

Services

Servers and Enterprise Server Support - This service includes a wide range of computing service packages. While vServers provide virtual CPU and RAM instances, allowing Clients to commission their own operating systems, Enterprise Server Support service include licensing and Operating Systems support with relevant security, health, hygiene, and monitoring systems. The service provides physical server provisioning and hosting services for Clients opting for a bare metal solution hosted in ICC's Tier-3 data centre. VMware Support Services offers Clients full management of dedicated VMware environments including setup, configuration and ongoing administration following VMware best practices.

Storage on Demand - These online storage services are based on ICC's data centre grade technologies in High-end and Mid-range arrays over SAN and TCP/IP Networks. With multi-vendor setup (HP, DELL, Violin, ORACLE, NetApp, EMC, IBM and HDS), optional combination environments of SSD for high response time, SAS for high performance, and/or NL for high volume are offered to Clients with around-the-clock monitoring and support in ICC's Tier-3 data centre.

Enterprise Backup - This service offers full and scalable backup, restore and archiving solutions with retention options. With automations and scheduling under highly secure environment, the service seamlessly integrates a wide range of Operating Systems (Windows, Linux, Solaris, Netware, HP-UX,) VMware Infrastructure, agents for application including Oracle, SAP, SQL Lotus Domino, MS Exchange, as well as direct block based backup from any storage solution.

Managed Networking Infrastructure

ICC's managed networking infrastructure services provide Clients with everything from point-to-point connectivity to full network design, including connectivity, networking services, routing and switching, load balancing, firewalls, and security services. Solutions such as the OneICTbox focus on providing a comprehensive infrastructure and platform solution for Client's field, branch, remote, and satellite offices. From initial implementation to on-going operational support, ICC plays an end-to-end role in the installation of network infrastructure.

Services

Managed Network Services - These are the full management services for Local Area Network, Wide Area Network, and Metropolitan Area Network infrastructures, including routers and complex routing protocols, Layer 2/ Layer 3 Switches and technologies, vLAN management, Wireless LAN, traffic & latency performance monitoring and optimization that are essential to operate and manage an IP-based communications network.

Connectivity Services - An offering to the commissioning, subscription, integration, as well as contract management of wide range global public and/or private Wide Area Network or Metropolitan Area Network connectivity solutions ranging from Leased Lines, MPLS, client and Site-to-Site VPN as well as Internet Service provisioning.

Load Balancing - This service provides a networking method for managing the distribution of workloads across multiple resources to optimize resource. Load balancing service can be applied at different layers of infrastructure, platforms and applications, providing availability and allowing use as components for High Availability as well as business continuity.

ICC Services At-a-Glance

Managed Networking Infrastructure (con't)

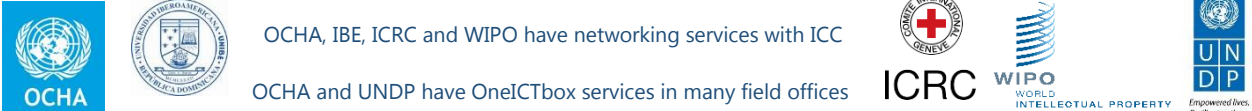
Services

IP Address Management (IPAM) - This service offering significantly increases efficiency for Clients by automating and streamlining the planning, tracking, auditing and managing of IP address space used in a network. Changes and mappings between multiple levels of DNS and DHCP data can be easily integrated and presented in a single dashboard.

Firewall and Infrastructure Security - This service offers firewall and other security services that protect the ICT infrastructure. ICC provides hardware provisioning, infrastructure and the setup of firewalls. ICC also can evaluate current infrastructure and firewall policy and configuration of an organization before implementing security measures.

OneICTbox - This service is a blend of services and technology delivering a reliable and centrally monitored network service to field, branch, remote and satellite offices. It is a rapidly deployable modular infrastructure designed for the field and for lean ICT setup. OneICTbox is a comprehensive infrastructure and platform solution in one. Clients can benefit from ICC's end-to-end role, from initial implementation to on-going operational support. This service can be extended to include the provisioning of hardware and software, shipping and subsequent break-fix support.

Success stories



OCHA, IBE, ICRC and WIPO have networking services with ICC
OCHA and UNDP have OneICTbox services in many field offices

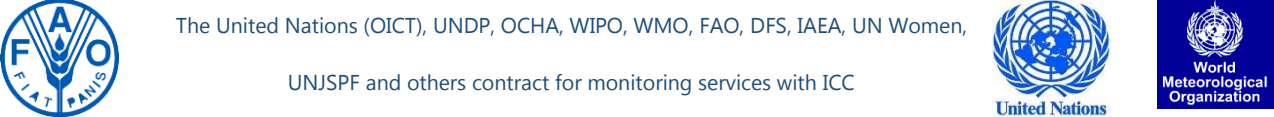
Monitoring

ICC provides monitoring services for Client infrastructure environments using a tested pool of knowledge, resources, tools and systems. Performance and availability of enterprise systems depend upon a secure and stable infrastructure, and real-time monitoring proactively reviews all data and configuration items to isolate problems, minimize downtime and allow for streamlined business continuity.

Services

Monitoring as a Service - This service monitors end-to-end infrastructures using a common pool of resources, tools, knowledge and systems. Built for OICT and United Nations standards and frameworks, this service is an extensive and customizable solution. Additional benefits include specialized infrastructure and professional resources, all-around 24/7 support, business continuity and disaster recovery, and more.

Success stories



The United Nations (OICT), UNDP, OCHA, WIPO, WMO, FAO, DFS, IAEA, UN Women,
UNJSPF and others contract for monitoring services with ICC

ICC Services At-a-Glance

Public Cloud Services

Public Cloud Software Management and Integration

ICC's traditional strengths have been in providing stable private cloud environments for its Partner Organization needs, including software such as Unified Communications. ICC has years of experience in cloud computing technology, with lean and cost-effective software solutions available to Clients. ICC is ready to support whatever hybrid or customized configurations are required.

Recent global innovations have opened the door for public cloud solutions, which are lean and cost-effective, but require advisory services, migration support, risk mitigation, and ongoing professional services to make these off-the-shelf solutions fit the needs of United Nations organizations, which rely on robust information security and protection of UN information assets in cost-effective and integrated ICT environments.

ICC's Partner Organizations and Clients have relied upon the experience and expertise of ICC's staff and resources to ensure that their ICT environments are professionally managed.

ICC can assess an organization's migration to the public cloud, to ensure that it is cost-efficient and compatible for a transfer, or advise a hybrid use of public cloud technology together with ICC's stable, secure, trusted, and UN-related cloud. This includes advisory and professional, technical services to oversee any potential problems and ensure a smooth transition to a public cloud solution with potentials for ongoing public cloud support.

Services

- Public cloud software management and integration support
- Public cloud platform management and integration support
- Public cloud infrastructure management and integration support

Success stories



ICC has supported UNDP's transition to Microsoft Office 365 with migration assessment, migration support and ongoing operational services (directory, applications, etc.)



About ICC - The International Computing Centre (ICC) is the leading provider of Information Technology and Communications (ICT) services within the United Nations System. Over the last four decades, ICC has been continually expanding the services it is providing to its Partners in various parts of the world, and in various areas of ICT. For more information, visit us at: www.unicc.org.

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ICC has office and data centre locations with UN jurisdiction worldwide. Photos: ICC - Allen

