CGIAR ICT Shared Services

A discussion paper prepared by Consortium Shared Services for discussion with Centers

October 2014

Executive Summary

For years Centers have explored and implemented a number of shared services. The area of ICT strong of a collegial community of practice, has seen a number of successes, from the Integrated Voice and Data Network, to the global contract with CGNET, to the common email system, to a global Active Directory, and to common procurement of software spanning from the 90's to today.

The ICT community has long supported exploring options for additional shared services, however the pressure to run operations detracts from the energy and momentum required to create a suitable Consortium-wide mechanism to exploit the full potential economic and operational benefits of large scale ICT shared services.

Innovations in the area of ICT and a more mature organization offer a renewed opportunity to establish a global ICT support function to provide a set of common services and systems that capitalize on the Consortium global presence.

In the last couple of months, a paper authored by Paul O'Nolan (ILRI-ICRAF) and his Centers' renewed the interest in fast-tracking a new model for ICT shared services, presented a new opportunity to further discuss this issue and design an actionable plan.

Shared Services ICT support services are not new. In Kenya alone, the shared ILRI-ICRAF ICT services unit has been providing support to 13 Centers.

This draft paper explores both a revolutionary and an incremental model to build on the experiences to date to accelerate the implementation of a system-wide ICT shared services support function.

This draft paper is intended as an opportunity for interested Centers to discuss future approaches to ICT Shared Services, with the objective of accelerating implementation and proving the benefits, building on the experiences to date.

Centers are invited to provide feedback and express their interest in principle (or not) to be further engaged in the design and implementation of an ICT Shared service model for the Centers interested.

Background

In 2009 Accenture Development Partners study on Shared Services opportunities for CGIAR made as one of its primary recommendations the further consolidation of ICT functions and delivery of those functions through a shared service model. Building on this early report, there has been a significant level of discussion and debate about options to progress such a shared service model.

In 2014 the CGIAR Consortium and its members are operating in a different institutional and business environment: the funding has doubled, the number of offices and staff has increased, many new ICT innovations have appeared, and a number of initiatives have advanced the level of shared ICT functions being delivered across the Centers. These include:

- There is more common purchasing for software licenses and IT services, scientific systems, and adoption of common policies.
- Certain campuses in close proximity, such as ILRI and ICRAF in Nairobi have continued to implement common IT function to support both Centers.
- The ICT-KM program activities aimed at fostering greater collaboration amongst Centers in the area of ICT (among others) came to fruition.
- One Corporate System (OCS) has been developed and is being rolled out across 9 Centers and the Consortium (Office), and is being supported by a central support team.
- A consolidated Active Directory (AD) is in place and leveraged by all Centers.
- The Consortium in consultation with Centers has developed a centralized cloud strategy, adopting a standpoint of 'how rather than 'if'.
- The most recent ICT Leaders Community of Practice workshop demonstrated cohesion amongst IT managers in identifying the highest priority pain points across Centers that they wished to address, indicating a common desire and readiness for change. These include:
  - Establishing SLAs with global vendors.
  - Developing an overall Identity Management strategy and implementation.
  - Establishing Internet connectivity standards and upgrading centers to meet those standards.
  - Implementing a centralized IT support system.
  - Conducting an organization wide security assessment and initiatives to address most critical gaps.
  - Establishing "Green" IT standards and aligning center practices.
  - Developing a CGIAR wide business continuity plan.

As a whole, the CGIAR Consortium and its members have taken a number of steps in the direction of greater shared services and with foundations like AD and OCS in place, the business and institutional environment make the Consortium and its members now primed for a bolder leap to providing more cohesive shared ICT services. As ILRI and ICRAF, who are already providing ICT in a shared service manner between the two Centers, as well as to many other Centers that they host in both Nairobi and Addis Ababa, look to hire a new head of their shared ICT unit, now is the time to evaluate whether a strategic investment given this existing vacancy can pave the way to scale it up into a nascent CGIAR Consortium-wide ICT shared service.

Benefits

The benefits of a stronger CGIAR Consortium-wide ICT shared service are much the same today as they have always been, though the CGIAR Consortium and its members are in a stronger position to deliver against them.

- **Alignment of CGIAR Strategy and ICT** - The overall intention of ICT is to support the CGIAR Consortium and its members in their ability to meet the Strategy and Results Framework (SRF) and help shape the way research is planned, conducted, and delivered. Developing and implementing ICT strategies *and* governance at the CGIAR level provides the best way to ensure that the overall ICT landscape (platforms, infrastructure, business alignment, standards, policies, information/data management, ICT staff and skills, and ICT Community of Practice) are best positioned to support the overall mission of CGIAR.

- **New Services/Services Improvement** – By leveraging existing best practices and focusing improvement efforts in certain areas, new and improved services will be offered, increasing productivity of administrative and research staff across the Consortium and Centers.

- **Increased Efficiency** – Standardizing processes and delivering a global or regional service increases efficiency and utilization of resources, enabling the ability for IT to meet growth projections. Other benefits include reduced downtime for applications and hardware, improved end-user issue resolution, and improved user productivity.

- **Improved Collaboration** – A user-oriented IT architecture yields improved collaboration across Centers and geographies, allowing for increased sharing of information and reduced research time on publication searches for materials.

- **Reduced Cost** - Administering global services has the potential to reduce costs in areas of application development and maintenance, hosting, servers, storage, telecommunications, support and connectivity. Hardware consolidation will result in higher utilization of assets and provide a higher return on investment.

Services

The services to be offered in a shared approach, at varying degrees to ensure maximum efficiency and value to end users, can be summarized as follows. These are ordered by recommended priority for implementation considering dependencies and factors such as ease of implementation and degree of user impact.

- **Governance** – The prioritization of IT spend as well as benefits measurements of Consortium- wide IT initiatives.
- **IT Strategy** – Establishing the overall strategy for how ICT will support the SRF.
- **Procurement** – Creation and implementation of standards with the purpose of vendor consolidation and economic leverage.

- **Security** – The implementation and enforcement of IT security standards, procedures, hardware, and software. This does not include the definition of the standards, as these should be delivered by a separate entity within the overall Consortium.
- **Help Desk** – Basic IT support services for day to day issues.
- **Field Support** – Complex IT support for major issues.
- **Network/Connectivity** – Providing LAN/WAN services and all activities associated with planning and management of the network.
- **Application Hosting** – Running an application on external servers and the cloud.
- **Servers** – Activities associated with server maintenance, capacity analysis, planning, installation, performance monitoring, enhancements, and retirement/disposal.
- **Storage** – The ability to store data and information on external hardware.
- **Application/Database Development & Maintenance** – The design and creation of new applications or databases, and the on-going support and enhancements required to maintain application or database functionality. It includes gathering requirements, functional design, testing and rollout services.
- **Disaster Recovery** – The service of providing business continuity, data and network recovery in the event of a major disaster.
- **Telecommunications** – Administering telecommunications services, including installation, maintenance, and asset management.

Delivery Models

The delivery of an ICT shared service model is typically thought of in terms of from what level the service will be delivered. Services can be delivered by a central unit of the Consortium and its members, Center headquarters, a yet-to-be-created regional support Center, and/or local support. There are many variations for how different services could be delivered across each of these levels. The initial models explored here account for two primary considerations:

1. The overall benefit to the end-user – ultimately any model that is implemented should have a net positive impact to the end user and their ability to complete their primary responsibilities, whether they are research or administration. The user should experience an improvement in service level, response time, downtime, speed to delivery, and overall experience. Without a benefit to the end user, a service should not move to a shared model unless the cost benefit of doing so is substantial.

2. The overall cost benefit to Centers – the costs to a Center should not increase with the introduction of shared services. At worst they should remain the same but coupled with an improvement to service levels. Ideally, a Center should realize cost savings not only through the reduction of manpower associated with providing IT services and costs of infrastructure, but through the other benefits mentioned in the Benefits section above.

The pictures below depict the current state, the proposed transitions, and the proposed end state of where different services would be delivered from and to what degree, with larger boxes representing a larger investment and/or responsibility in the delivery of the service. Resource figures are intended to be proportional in nature and **not** representative of actual FTEs.

The proposed two options for end state that emphasize country level delivery and support of services are based on the premise that support to the end user can be delivered quicker, better, and cheaper by a country supporting all its offices rather than too centralized or too localized.

The different layers depicted in the diagrams below are:

Central: At the overall Consortium level, covering all Centers and geographies
Center HQ: Governed and/or delivered by the headquarters of a particular Center
Country: Delivered by one unit across all Centers/CRPs within that country
Local: Delivered by a single Center location within a country

As-Is (Approximate)
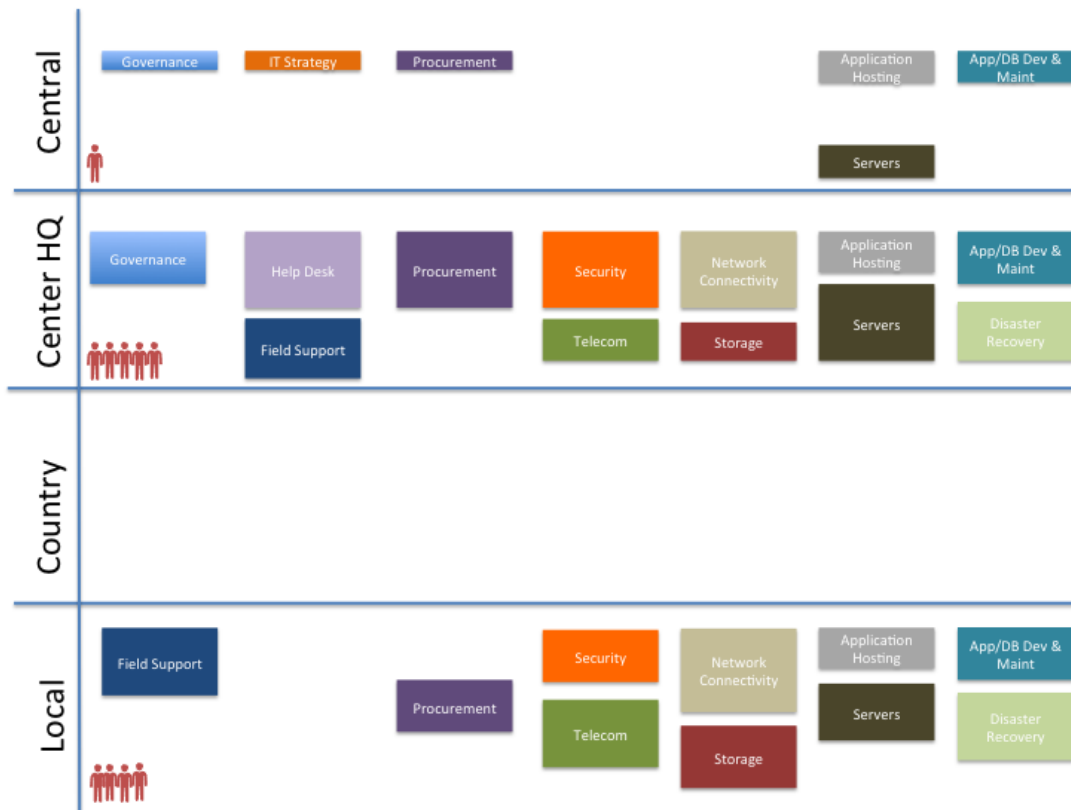
Currently, the majority of IT services are delivered through Centers in all of their locations, either through HQ or a local office. There is very little governance or IT strategy delivered centrally and only certain functions are supported at that level, such as email, active directory, and eventually OCS. There is no official country support mechanism although there are some examples of geographically delivering IT services such as the ILRI center in Addis Ababa.

Proposed Transition
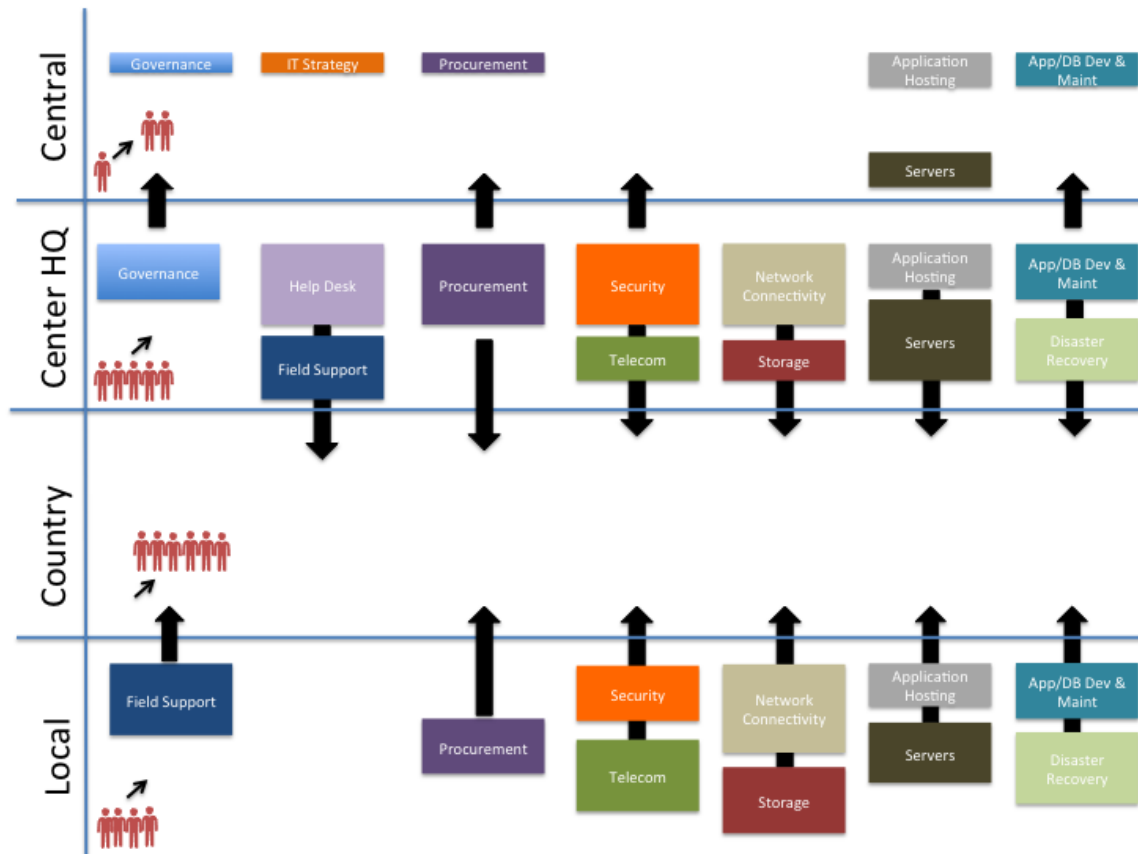
By shifting resources towards a country, regional and central delivery model, the overall CGIAR Consortium and its members can begin to deliver and support ICT in a way that best positions them to achieve the benefits documented above. While moving in this direction will never completely eliminate the need for both Center HQ and localized support, all services for applications and infrastructure that are shared amongst multiple centers should move to delivery and support at the country level, perhaps leveraging a single well positioned office to support others. Some of the activities currently being executed by Center HQ would shift to a central team, especially around governance, procurement, security, and cross-Consortium application development and maintenance.

Two options for an end state (for discussion)

An evolutionary model

We can envisage two different models for an end state, one more incremental where functions are shifted to a regional center – along similar lines of the current Internal Audit model, see below:
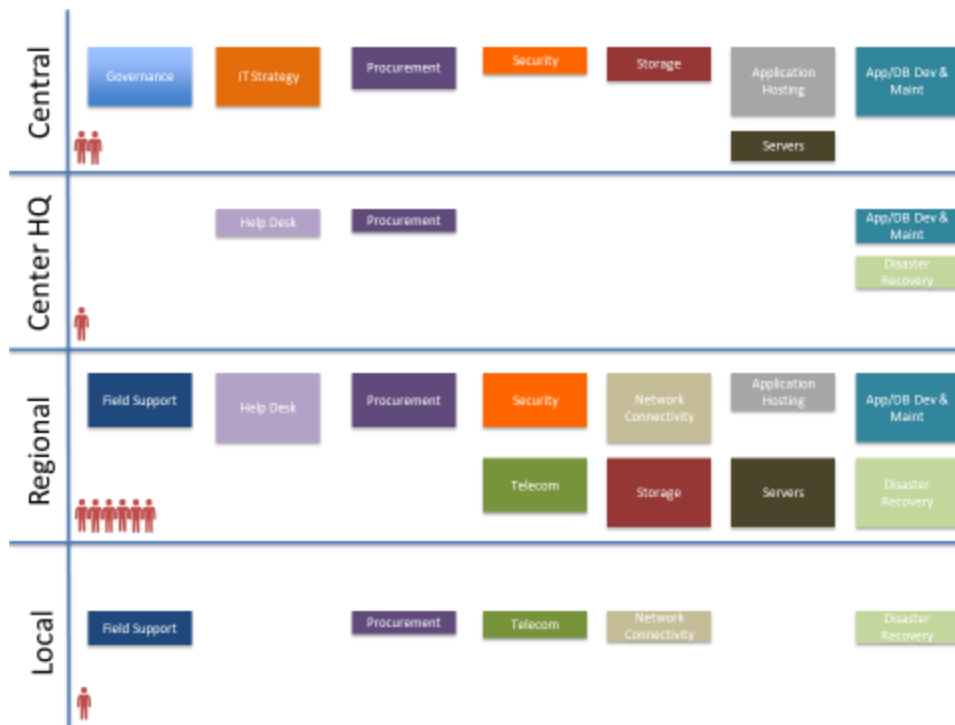
In this model, a regional Center for Africa would be established and as an immediate next step, the open ILRI/ICRAF ICT Director position opening would be used to expand the current ILRI/ICRAF shared service platform to an Africa wide regional shared service model and use as the model for the first regional implementation, to be followed, if proven feasible, the following year by similar models for the Americas, Europe, and Asia

In the proposed end state, the majority of delivery and support responsibility has shifted to a country entity that is best positioned to understand the needs of their offices as well as delivery quickly against their needs.

Centers, either through HQ or the country office will still have responsibility for the delivery and support of all applications and infrastructure that is not shared across centers and for which they are best positioned to support.
At the same time, shifts of functions from Centers to Central in the areas of governance, procurement and security will be explored.

As to local support, while ILRI and ICRAF have already moved in this direction in both Kenya as well as Ethiopia, Bangladesh could be considered a good candidate as well, with multiple Centers located in close proximity but still managing their own IT individually. The delivery of IT through shared services for all Centers in Dhaka could quickly deliver value and benefits as documented above.

A revolutionary model

A second, more revolutionary model is one where the functions are shifted from Centers to Country and Central, with a very limited Regional function – see below
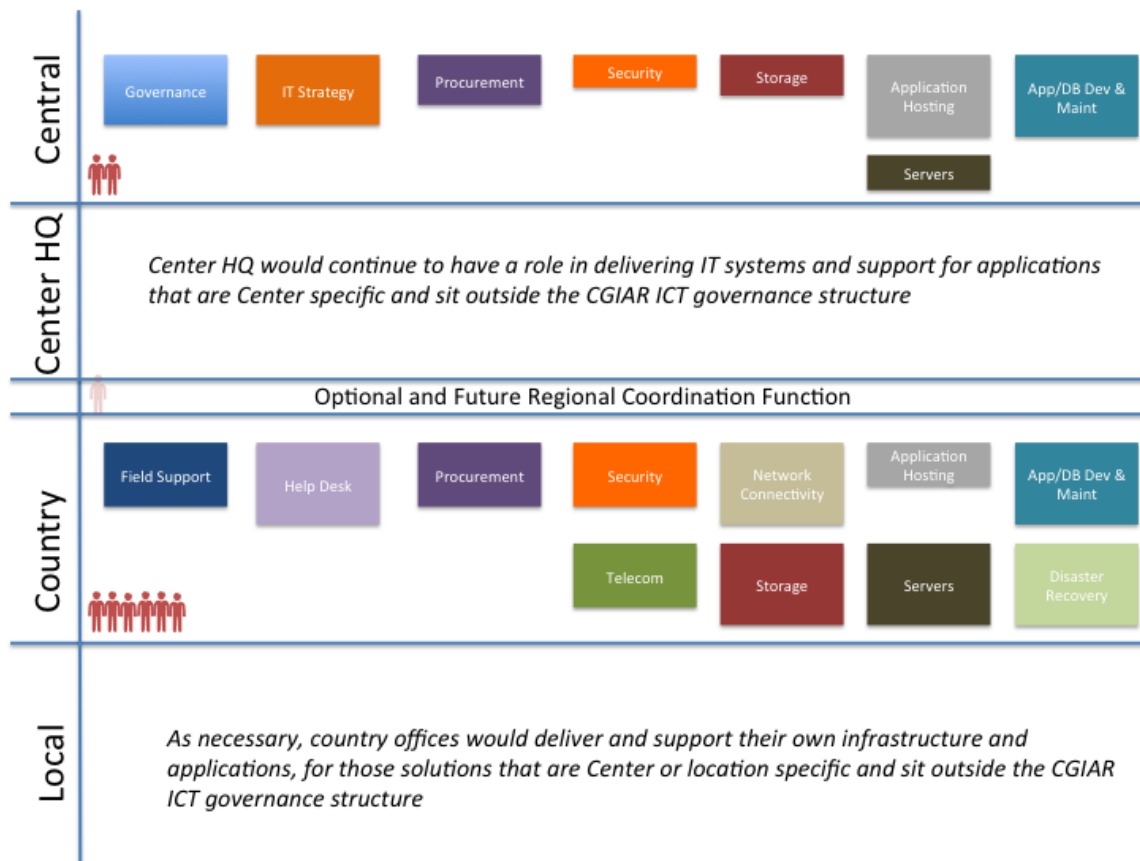
In this model, Local and country-level services would be same as previous, but regional functions would be reduced and Central would take on a more prominent role in setting strategy and direction, as well as delivering against functions that would best be offered Consortium wide, such as cloud services and the development and procurement of global applications.

Governance

Perhaps the most important step before embarking on more robust ICT shared services is the creation of an IT governance structure to align, guide, and measure IT. Proper IT governance enables an organization to ensure that IT expenditures and initiatives are driven by the business, aligned to overall organization priorities, and are continuously measured against the value they were intended to deliver.

There are many different IT governance models employed in large and distributed organizations. The different models and processes are not within the scope of this paper, but the following guiding principles should be considered:

1. Governance should be inclusive of all participating Centers and should be primarily driven by business leaders, with small representation from IT.
2. Prioritization and IT budget definition should be done on a regular, preferably annual basis.
3. While there should be options for Centers to opt out of an initiative, ground rules should be laid for the types of initiatives that are also not optional (ie security)
4. Centralized governance need not rule out local and different implementations of IT across Centers. It simply allows for a structured process to achieving consensus on those decisions.
5. Each investment in IT over a certain threshold should be subject to the IT governance process and should be supported by a business case created and driven by the business.
6. All IT initiatives should be measured against the value they were intended to deliver as defined in the business case.

Next Steps

1. Next 1 month: socialize this draft paper with Centers for comments/buy-in; determine interest of Centers; develop detailed budget and plan with Centers interested[1].
2. Next 3 months –If evolutionary model is selected, use open ILRI/ICRAF ICT Director position opening to expand the current ILRI/ICRAF shared service platform to an Africa wide regional shared service model and use as the model for the first regional implementation, to be followed the following year by similar models for the Americas, Europe, and Asia or to be revised if the revolutionary model proposed above (local-central) is deemed to be a better way to move forward.
3. Next 6 months – Conduct a detailed analysis of ICT capabilities, services and costs to determine highest priority services to be provided through shared services and business case for doing so.
4. Next 12 months – review lessons learned; develop an updated overall CGIAR ICT strategy and approximate annual budgets for implementation over the next 5 years, building on the ICT Strategy developed by the Consortium and the ICT Leaders Community of Practice.

---

[1] Currently an investment of 1 Internationally recruited position plus 30k USD for detailed plan is estimated to be shared among the Centers interested.

References

- [Accenture Consultancy on Administrative, Financial, and Research Support Services in the new Consortium of the CGIAR Centers – 2009](#)
- [CGIAR ICT Strategy presentation – 2014](#)
- [CGIAR ICT Strategy Draft - 2014](#)
- [An ICT Shared Services Team for the CGIAR by Paul Nolan – 2014](#)
- [Workshop Report from the CGIAR Consortium ICT Community of Practice Annual Meeting – 2014](#)
- [Regional Shared Service Units for CGIAR Centers Concept Paper by Ian Moore – 2014](#)