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From Information to Impacts: Using global learning systems to expand access to knowledge in ADB

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Abstract:

Development is about transformation. The Asian Development Bank (ADB), a multilateral development finance institution based in the Philippines is working with the countries of Asia and the Pacific to promote growth and to improve well-being of millions of people. ADB's long-term strategic framework—"Strategy2020"—places knowledge on a par with financing operations. This is a major challenge considering that ADB generates a very large volume of information and data in its day-to-day work. ADB is in the process of setting up institutional mechanisms and staff incentives to consolidate and build on its internal knowledge base, most of which remains fragmented across individual staff and experts working as short-term consultants. This paper aims to showcase ADB's successes in selected areas, and to learn from the wider community to enhance knowledge-sharing areas where difficult issues remain.

The ADB library, as part of the Information Resources and Services Unit (IRS), uses technology, global learning systems (GLS), and other means to change the existing organizational culture and create a vibrant environment for knowledge sharing and advocacy. Some of these initiatives have successfully expanded the physical space for knowledge exchange. The initiatives can be classified in four broad areas:

- *Targeted Information Dissemination Facility. ADB generates about a million pages of research and study reports using individual staff and consultancy firms or experts. There is also an ongoing information explosion externally. To cope with this information flow, IRS has taken on the role of knowledge broker, collecting, organizing, storing, indexing, tagging, and retrieving information based on user demands. A small team of dedicated research staff supports the sector priorities identified in Strategy 2020. They provide targeted information collation on any topic of staff interest and arrange a virtual library of resources pertaining to the request.*

- *Creating a physical knowledge space. ADB is largely a formal organization. Most of operational work is and a large number of project teams works simultaneously. IRS converted a visible and much frequented portion of the library into an information-sharing hub called kHub—a natural place to meet and share knowledge by way of seminars, information events, book releases, or simply for coffee. Identifying and creating a vibrant space for networking has been a great hit and fosters the knowledge access environment across diverse groups.*

- *Supporting the formal knowledge networks of ADB's Communities of practice. IRS has undertaken programs using cutting-edge technologies to bring useful information to the users' fingertips. For instance, it has developed and deployed mobile applications, Google Maps-based access to abstracted information summaries, and a facility to store and retrieve active documents which is distinct from the electronic databases available on the market.*

- *Creating a brand of information products. Knowledge is contributing to the core business process of ADB through a number of information products using the "i" series. These i-branded tools have high visibility and support the sectoral information needs of our operations. These iLink products are available in electronic and print forms. Another initiative of iLab fosters experimentation and learning using new development tools.*

Continuous innovation and improvement are required to lead ADB to the 21st century as a cutting edge learning organization. A lot has been achieved at our headquarters, but much still needs to be done, especially in extending the knowledge network and global learning systems to our 27 field offices. ADB looks forward to partnerships with organizations like the International Federation of Library Associations to create a mutually beneficial global learning environment across Asia and the Pacific.

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I. Background

A. Introduction

The Asian Development Bank (ADB) has embarked on a long-term strategic framework, known as Strategy 2020, which envisions it as a knowledge institution. ADB has undertaken many information and communication technology (ICT) programs to collect, analyze, and disseminate knowledge for more efficient use by its staff and clients. The Information Resources and Services Unit (IRS) plays a key information-brokering role by acting as a bridge between external and internal information resources. It employs ICT-based tools and techniques to harvest the available information and package it into a useable knowledge product. The unit underwent a major change in 2007 to position itself as an information broker, harvesting external information and packaging it to the internal clients as knowledge products, thereby laying the foundations for open access to knowledge.

B. Global Learning System in the Context of ADB

An enabling environment is required for the creation of superior knowledge. The Global Learning System (GLS) is a mechanism to facilitate the production and dissemination of knowledge. It provides the required means to create and maintain knowledge products or services, and offers a conduit for channeling the information outputs and soliciting inputs, ideas, and innovation.

The role of the GLS can be categorized as

(i) a building block of creating and sustaining knowledge as a natural process of product and service development, and

(ii) a mass media based communication platform for reaching out and sustaining the services.

In both contexts open access should result in efficiency improvements, optimization of resources, and ease of use and reach. Also the employment of such a tool should expedite actionable information by filtering and tagging the knowledge outputs. This requires the development of strategic programs regarding employing the tools and techniques seamlessly as part of an integrated production process.

C. Objectives

This paper details the evolution of open access to information in the context of a growing organization. It maps the actionable and tangible products and services IRS delivers to its user community through open access to knowledge.

II. Drivers

The overall drivers for IRS to maintain open access to knowledge framework can be summarized as follows.

(i) Through Strategy 2020, ADB has pledged to transform itself into a knowledge bank. IRS has an important role in supporting ADB in meeting this goal. ADB staff need to have access to the required information base to perform tasks needed to fulfill this new role. Advances in technology and the rapid reduction in networking costs mean that ADB staff are dealing with external clients who are much more knowledgeable and who demand specific and superior knowledge. IRS' role in the medium term is to create an enabling environment in which ADB staff are able to develop niche knowledge based on the effective management of ADB's information assets.

(ii) IRS is faced with the challenges of reduced overall budgetary resources, pressures on the use of existing physical space, and growing expectations from end-users in a world where search engines have created the impression that all content is instantly and freely available at the click of a mouse. While dealing with day-to-day demands, IRS also has to continuously deal with the question of managing its print collection. Digitization and enhanced resources for electronic information resources have meant greater staff access to specialized databases, especially for journals. However this should not come at the cost of its existing assets: IRS needs to maintain a delicate balance between demands for use of available physical space for high-value services, and the preservation of and easy access to its 60,000 plus print collection. There needs to be greater ADB-wide consultation and ownership regarding this balance that not only meets today's constraints, but also nurtures ADB's information assets for the future.

(iii) IRS has to continuously evaluate the level of services it provides to its clients, the core priorities for ADB's business support now and in the future, and what can be withdrawn without a major disruption. It must also remain abreast of innovations taking place in an information-dominated world by collaborating with other similar organizations to help establish 21st century learning and collaborative spaces within the organization. Innovations such as open spaces and Google Books are on the cards and IRS needs to remain vigilant so that ABD benefits from such opportunities.

Knowledge management requires collaborative and inclusive nurturing of knowledge elements. This will have to be built using the collaborative processes supported technology framework. Sections III and IV describe ADB's collaborative environment and the role of IRS in supporting it to enable open access to knowledge.

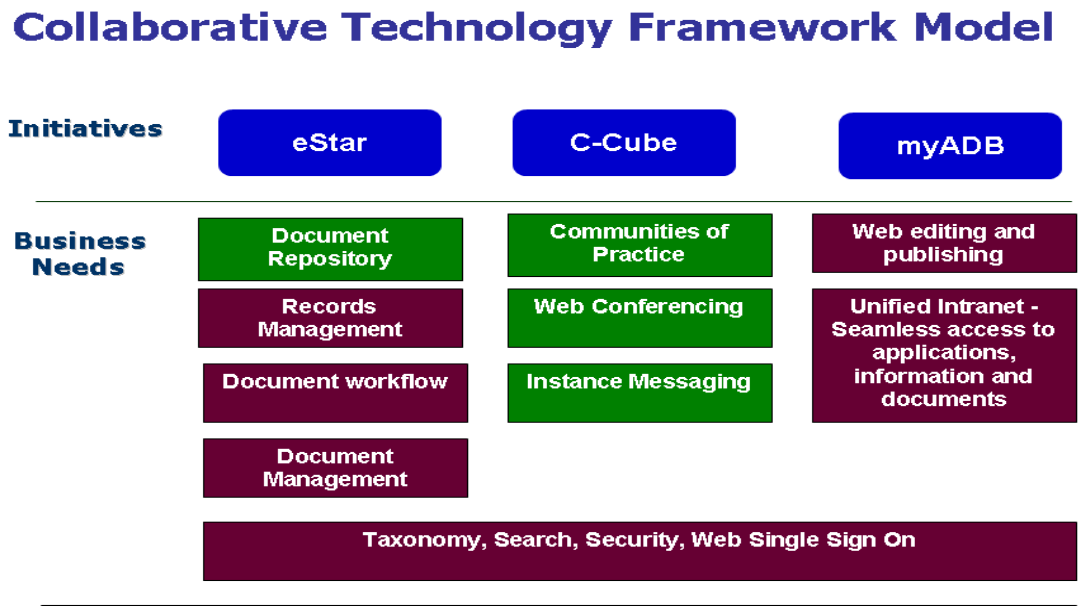
A. Communities of Practice

ADB's key knowledge management process is the establishment of a formal body of experts in a particular field ADB's operations. These are referred as communities of practice (CoPs). The CoPs gather periodically to discuss and share knowledge on the trends in their particular sectors, the lessons learned, and best practices that can be put to use in their departments. IRS' support for these formal knowledge networks is most apparent during these gatherings.

B. Collaborative Technology Suites

The work of the CoPs is supported by a technology framework comprising of a set of application suites: C-Cube, myADB, and eSTAR (electronic storage and retrieval system). C-Cube is about communicating, collaborating, and coordinating. MyADB is about providing web based portal platforms including web content management system. eSTAR is about records and documents; creating, storing and managing. Figure 1 illustrates this thematic ICT-enabled collaborative technology framework.

Figure 1: Collaborative Technology Framework Model



IV. Application of Collaborative Tools

The IRS unit participated in ADB's collaborative framework-based activities by sponsoring the eSTAR initiative. It also contributed to the collaborative process initiative of the CoPs by creating environments conducive to holding seminars and knowledge sharing sessions in the form of physical knowledge spaces such as the Knowledge Hub (kHub), the Learning Resource Centers, and the Information Laboratory (iLAB).

A. eSTAR

For IRS, eSTAR represents a new era in active records management. Before 2006, ADB staff kept their documents in several disparate repositories and IRS managed paper-based documents. Besides the huge costs associated with storing paper-based records, searching through such repositories and retrieving volumes was costly and cumbersome. They were also vulnerable to accidental destruction by fire, insect infestation, or flooding. The need to change over to electronic document storage was deemed timely. It offers a more efficient mode of managing ADB's records, enabling access anytime and anywhere, and thereby serves a key tool for storing institutional memory. It also enables knowledge sharing and serves as an effective learning resource for staff.

Through eSTAR, IRS contributes to the knowledge agenda of ADB by providing an enabling information resource and furthering efforts to strengthen information sharing within the organization. eSTAR offers the following benefits:

(i) **Faster client service**. Due to instant information access, seven ADB resident missions have pilot-tested and implemented submission of disbursement claims to the Controller's Department, successfully shortening lead time of disbursement by 5 to 10 days.

(ii) **A central repository.** eSTAR provides one common, easily accessible repository for final documents that staff can access. Almost 1 million pages of final documents (approximately 500 cubic feet of documents) were uploaded to eSTAR generating savings of about US$1,930,000 which were used to finance activities such as filing, indexing, storing, retrieving, and refilling which are done manually by staff.

(iii) **Easy access to information.** eSTAR provides the facility to store, search, and retrieve documents even remotely. Searching, retrieval, and reuse of knowledge stored in the documents have been made possible.

(iv) **Broader information sharing.** eSTAR provides a medium for information exchange. To date, 22 out of 31 offices (71%) have opened their filing cabinets to all ADB staff to promote the free flow of knowledge products. In an effort further to ensure that appropriate information is shared, a facility to secure confidential documents is also provided.

B. The Learning Resource Center

IRS' initiatives to provide a collaborative space for learning materialized when about 1,000 square meters of space at the front of the headquarters' west atrium were turned over to create the Learning and Development (L&D) Unit during the third quarter of 2007. The combined effort of construction and remodeling, in coordination with L&D, to determine how best IRS

can support its training programs has created a physical presence in one of the most highly trafficked areas of ADB. This new space reflects favorably on ADB as a learning organization that values the cognitive development of its staff. Taking on its fundamental role of disseminating information, IRS supported the Learning Resource Centers (LRC) seminars and training programs with regular book exhibits on topics relevant to the seminars being held. Close to 100 book exhibits were held by IRS at the LRC between 2008 and 2010.

C. The kHub

The objective of the kHub is to provide a venue for exchanging information and facilitating the creation of knowledge products. The kHub serves as a collaborative space to share knowledge. Interactive learning was at the core of efforts to redesign the space, including beautification, arranging print collections in a circular concentric fashion around the recreated space, and providing a more open and inviting space. The aim was to prioritize the spaces occupied by static information resource materials for collaboration and social problem solving, while smaller spaces and corners are zoned as quiet reading alcoves. The table provides a glimpse of the activities held at the kHub.

Breakdown of Activities Held at the kHub

Activities at the kHub	2008	2009	Total
Communities of practice events	23	27	**50**
Departmental activities	1	22	**23**
Book launches	11	7	**18**
Total	**35**	**56**	**91**

D. The iLab

Despite its flexibility, the kHub was used mostly for seminars, CoP events, and other similar activities. It has certain limitations in terms of the size of the audience and the medium for information exchange. As a complementary venue, IRS has allocated a dedicated space to better cater to small groups or audiences who may want to experiment with new information products, familiarize themselves with an electronic database, or simulate and try freeware or trial software of interest to the CoPs. This space has been branded the information laboratory or iLAB. In the last quarter of 2009, the highway simulation software HDM-4 was installed in the iLAB and a tutorial session was provided on its use. Since then, other electronic resources including eBooks have been installed. iLAB is hosted on a separate IT network from that of ADB.

V. Other Collaborative Tools

Throughout ADB, collaborative technological support provides targeted information dissemination in addition to that provided by IRS. The resources are as follows.

A. myADB

This is one-stop shop for all ADB-related information on resources and services for staff. The new portal has a section called “ADB Avenue”, which features motivational success stories and serves as an effective communication medium to disseminate information on important topics. It fosters collaboration through a blog-like medium for providing online feedback, comments, and opinion.

B. C-Cube

This tool is used by the CoPs for communication, collaboration, and coordination, such as the sharing of ideas and documents. It is an online medium administered by the CoPs. The information shared and generated by this medium is used to prepare position papers on topics for discussion. The medium allows civil society to participate in discussions and share its views and knowledge on the topic.

C. The External Website

ADB’s website www.adb.org is the primary tool for sharing knowledge with the outside world. It provides copious information about ADB and its operations, hosts details about our scholarly publications, and is equipped with modern tooling capabilities for web telecasting.

D. Digital media

ADB employs the digital media to effectively communicate and extend the reach of its developmental activities. The electronic media used include television, print, and YouTube. See http://www.youtube.com/results?search_query=asian+development+bank for details.

E. Depository Library Program

ADB is adopting a depository library program since 1994 as another technique to share knowledge. Through this program, about 155 libraries spread across 43 member countries of ADB receive copies of ADB publications for knowledge sharing purposes. For details see

http://www.adb.org/Publications/Depositories/default.asp

F. Business Intelligence Tools

ADB has instituted a data warehouse based tooling infrastructure which pulls information from various transactional systems spread across multiple IT platforms, such as mainframes and Oracle Systems Lotus Notes. This information is then organized according to various parameters into a data warehouse. The warehoused data is used to produce analytical reports with modern drill down and drill through capabilities which enable directors’ timely access to appropriate data for decision making and information dissemination purposes. The warehouse also retains institutional memory regarding transactional and analytical data.

VI. Innovative Tools and Techniques

An innovative application of ICT is being put to use in IRS to capture tacit learning and broaden open access to knowledge. eSTAR hosts ADB's records. Much of the information resides in voluminous documents that have been generated over the years. To harness this wealth of information, IRS and the IT Department undertook a pilot initiative with the Energy CoP to mine these documents and produce actionable information. This initiative has been branded "Enercall".

A. Abstraction and Categorization of Research Reports on the Web

To capture past information that can be reused or referenced by staff in their current activities, the CoP needed energy-related information to be organized on a portal. IRS, together with the users, identified from eSTAR all the technical assistance reports of relevance to the CoP and developed short, quality abstracts for each report. Care was taken to limit the length of each abstract to a page. This was a collective effort involving a team of analysts and1,500 pages of reports. Other data relating to the author, consultants, objectives, inputs, outputs, and outcome were also collected and added to the abstracts for each report. The reports are classified by ADB member country, and further broken down by energy subsector into energy efficiency and conservation, electricity transmission and distribution, energy sector development, pipelines, energy utility services, large hydropower, and renewable energy. All the data collected was then arranged on a Lotus Notes-based system under the following tabs: knowledge outputs, TA (technical assistance) details, TA documents, country basics, TA framework, and regional data. A set of key words was developed for each TA report abstracted and the entire repository was web enabled. This abstraction service was well received by the users because it allowed them to gain an overview of reports in a neatly categorize format and to delve into detail if needed.

B. Mobile application—mEnercall

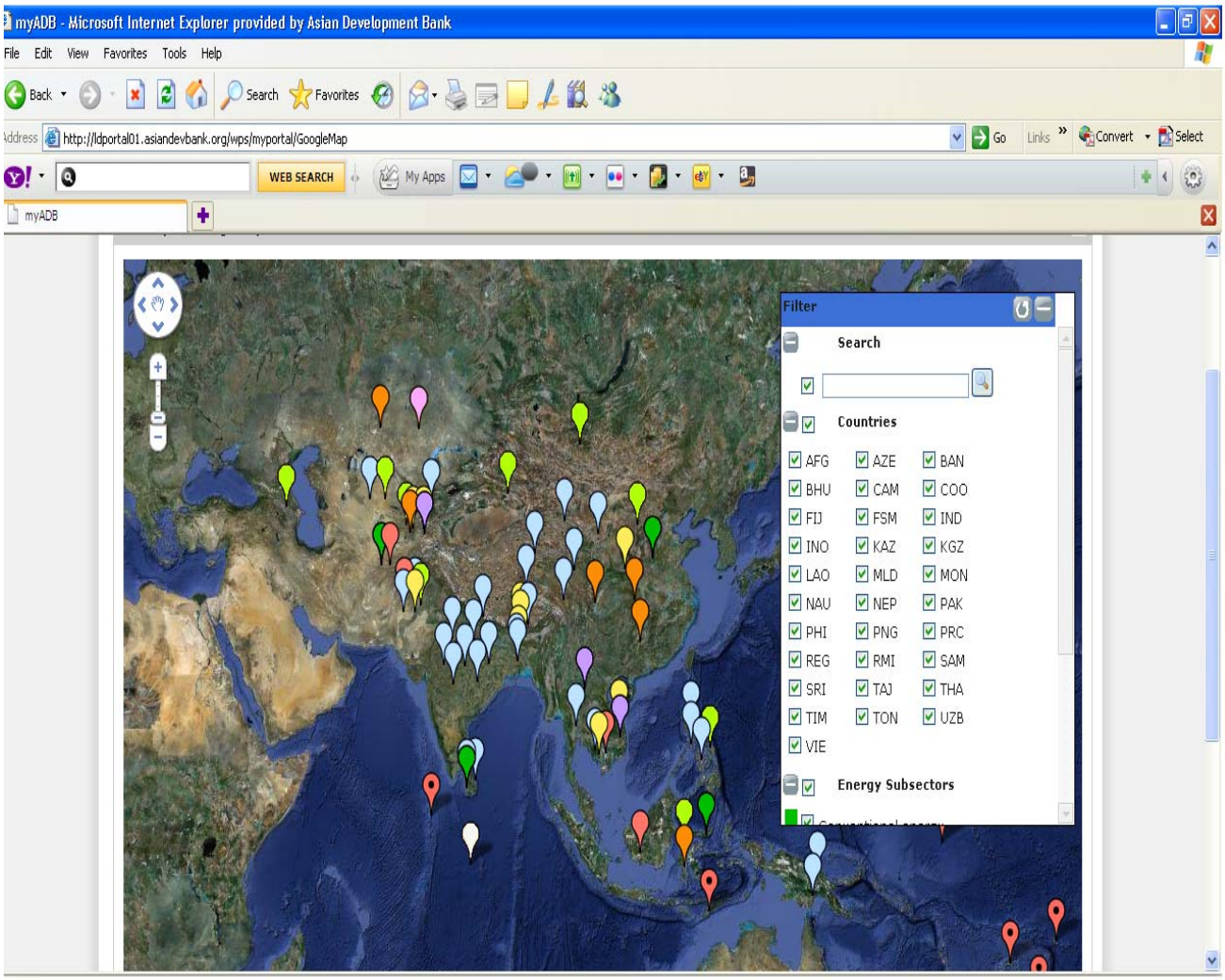
Since ready access to actionable information is a key consideration of this initiative, and staff are often in transit, it was decided to equip our operations staff to access this information via mobile media. ADB's past knowledge would then be searchable by operations staff when in discussions with clients, and could be reused with tweaking if required. mEnercall has been well received by the user community as it enables them to access knowledge anywhere, anytime. Figure 2 illustrates the process of accessing this resource.

Figure 2: Mobile Application Snapshot

C. Google Application of the Abstracts

The Enercall abstracts underwent a further enhancement to develop a user-friendly interface: The application was embedded into a Google Maps application framework and the additional functionality of key word and full text search was introduced. The application access capability was enhanced by adopting layering and filtering features. Figure 3 shows snapshot of this tool.

Figure 3: Google Maps-Based Enercall Reports



D. Sector-Specific Information Coordinators

Increasing IRS' operational focus as mandated by the LSSC was given shape by conceptualizing and implementing dedicated research and stewardship by way of deploying five permanent staff to respond to the information needs in the five core areas of ADB—environment, financial services, infrastructure, regional cooperation, and education. To further enhance the competencies and targeting of its research services, IRS uses these information coordinators to handle requests for research assistance in these core areas. The ICs, as they subsequently became known, were formally launched as a team in April 2009. Participation in various seminars (brown and blue bag seminars and external related forums)

and efforts to collaborate with the various CoPs have enabled the ICs to provide effective information intermediary services in their sector and strengthen targeted information dissemination.

E. The iProducts

The ICs have released various products that have drawn huge interest and are well regarded by the ADB staff and management. Released under the brand name iLink, the ICs' monthly summaries have attracted a growing number of subscribers. These have also led to the release of other by-products including the ICs' participation in CoP retreats and meetings, inputs for the transport eLibrary, special monthly summaries on regional groupings, and bimonthly issues on health and influenza AH1N1.

The IC service was broadened further to the senior staff and CoP chairpersons by releasing a monthly digest of papers selected from the iLink summaries. Packaging information in a more substantive and readable form, the iLink Digest has become one of IRS' flagship products. Predominantly intended for ADB Management, the iLink Digest, packaged in book form, aims to provide a more detailed glimpse of recent publications on the core areas of Strategy 2020. The use of excerpts for this book adds instant executive information to the conceptual briefs provided in the monthly iLink summaries which are released using web-based communication medium. The iLink Digest provides Management with a means to keep up-to-date with information on the core areas of Strategy 2020. Substance is assured since the relevance of the studies to ADB operations, literature on best practices in the field, and applicability to ADB projects are foremost among the selection criteria for articles to be included in the iLink Digest.

F. Electronic Databases

IRS subscribes to sector-specific electronic databases. This expense of these subscriptions makes it challenging to provide access to a wider audience. In response, IRS devised a means of disseminating of the information using the electronic alert features of these databases on a defined frequency. Short-term access to the database is provided to staff who express interest in links that they receive as electronic alert mails or eAlerts. This has helped manage the limited access to the subscriptions more effectively. Often these vendor-provided software solutions have not been used effectively because of their complex designs. To remedy this and further improve information dissemination, IRS has begun to develop training brochures and programs for such databases. This has already resulted in increased use of the databases. Such small, incremental changes can have a significant effect on ensuring open access to knowledge using global learning systems, and can thereby help ADB achieve its vision of becoming a knowledge bank.

VII. Conclusion

Given resource constraints and the ever-changing external environment, IRS must enhance the skills of its staff to ensure they remain relevant and visible, evaluate potential trade-offs in offering different types of services, and harness appropriate technology to provide the level of service needed to make ADB a knowledge institution. Drawing from ADB's wealth of experience, tremendous benefits can be realized with open and easy access to information in a knowledge-era environment. The challenge has been to filter through this sea of information and extract the parts that are most relevant to the clients and can best help to build superior knowledge and contribute to the goals of ADB as envisioned in Strategy 2020.