

THE STATE OF WORLD BANK KNOWLEDGE SERVICES
KNOWLEDGE FOR DEVELOPMENT
2011



THE WORLD BANK

RESULTS **CONNECTIVITY** **OPENNESS**

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Foreword

The history of human development is a portrayal of our treatment of knowledge: search, sometimes rejection, and then rediscovery, expansion, and diffusion. The ways knowledge leads to change and to improvements in human welfare are neither linear nor predictable. Knowledge accumulates and is applied in unanticipated ways.

When Daniel Bernoulli published *Hydrodynamica* in 1738, he did not know that his principle would lead to the development of the perfume atomizer—nor that Gottlieb Daimler would adapt the atomizer as a carburetor to power the internal combustion engine. When Joseph Marie Jacquard invented a mechanical loom in 1801 to simplify the manufacturing of textiles with complex patterns, he did not know that a version of his punched cards would be used a century and a half later as an integral part of 20th century data processing machines. Such is the case with knowledge generally: the more widely we share knowledge, the more connections we make, and the more change happens in unforeseen ways.

The value the World Bank Group brings to our clients, and to the world, is grounded in developing and sharing knowledge. Our financial resources are significant—but they are finite. By contrast, knowledge is potentially unlimited: the more it is shared, the more new ideas develop, and the more improvement is possible. When strands of knowledge are connected, the possibilities for increased prosperity and improvements in human welfare multiply. The more people know, the more they can expect, and the more they can do.

As we consider the ways the Bank Group will support development in the 21st century, we understand that change and reform are dynamic processes involving the active participation of all segments of societies. My vision is for a World Bank Group that plays a catalytic role in linking up data, information, and ideas with those in search of development solutions—in ensuring that knowledge for development is readily available to citizens, civil society, opinion makers, researchers, and government policy makers at all levels. My aim is to sponsor a Bank Group that reaches out to better encompass the experiences of successful developing countries—not with ordered templates, blueprints, or prescriptions—but with inquiry, innovation, cooperation, and openness.

This Knowledge Report is timely, because we are witnessing a fundamental transformation in the way the world produces and accesses knowledge. We are seeing an explosion of information from multiple sources, and information increasingly accessible to people across the world. In this context, the World Bank Group has been transforming the way we do our knowledge work, opening our data and knowledge to students, researchers, policy makers, and civil society throughout the world. We are grateful to a wide array of external advisors and reviewers who have contributed to this Report. We hope to continue that process, maintain our partnerships on our knowledge activities, and remain closely connected to those producing and applying development knowledge.

This Report is the first in a series of World Bank Knowledge Reports. It provides the first comprehensive overview of the Bank's knowledge

work. It also lays the foundation for an ongoing discussion about how we can work better—internally and externally—to ensure that the work we do is relevant, is of the highest quality,

and contributes to tangible improvements in economic opportunities and human well-being. We look forward to the lively global conversations that this information will make possible.

Robert B. Zoellick
President
The World Bank



Preface

In May 2010 the World Bank formed the Knowledge and Learning Council, comprising members of the Bank's Senior Management, to catalyze new approaches to the way we manage and disseminate our knowledge work. This first Knowledge Report, produced under the auspices of the Council, takes stock of the various types of World Bank's knowledge activities and their evolution in response to the fast changing world of development and multiple sources of knowledge flows. The Report points to three directions for improving the way we manage our knowledge services: putting in place stronger results frameworks, capturing complementarities across the wide range of the Bank's knowledge work, and moving toward a more open and collaborative approach to knowledge services. The Knowledge and Learning Council will guide this agenda forward.

The Bank and this Report have benefited from extensive consultations with development

partners and external reviewers. The range of perspectives is helping the Council use this Report as a tool to manage our knowledge work for better development results and greater openness. We look forward to continuing these rich discussions and further broadening our collaboration with others.

As our work progresses, we will aim to achieve greater connectivity within the World Bank Group and with external partners. We will work to enhance our capacity to produce, customize, and share knowledge that informs policy debates and development solutions. As a Bank, we are committed to ensure that our knowledge services yield the best development impact.

Partners and clients will increasingly see a more open Knowledge Bank emerging, one that generates knowledge in collaboration with others and makes this knowledge easily accessible across the globe, for inclusive growth and sustainable development.

Mahmoud Mohieldin
Managing Director
The World Bank

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Abbreviations

AAA	Analytic and Advisory Activities
ADePT	Automated DEC Poverty Tables
DEC	Development Economics Vice Presidency (the Research Group)
DIME	Development Impact Evaluation Initiative
ESW	Economic and sector work
FPD	Finance and Private Sector Development
GL	Global monitoring
ICT	Information and communication technology
IDA	International Development Association
IE	Impact evaluation
IEG	Independent Evaluation Group
KP	Knowledge products
NP	New product development
QAG	Quality Assurance Group
RePEc	Research Papers in Economics
RF	Research
TA	Technical assistance
TE	External training
WBI	World Bank Institute
WDR	<i>World Development Report</i>

An evolving focus on knowledge: 15 years of the Knowledge Bank

- 1996** President James Wolfensohn articulates the concept of the Knowledge Bank and knowledge networks. The Bank's "networks" initiative begins with the Human Development Network, and soon grows to include Environmentally and Socially Sustainable Development, Finance, Private Sector, and Infrastructure, and Poverty Reduction and Economic Management. The networks were tasked with addressing emerging development issues and ensuring the flow of knowledge throughout the Bank to support the work of staff.
- 1998–99** *World Development Report: Knowledge for Development* is published. The report analyzes the risks and opportunities that the global information revolution is creating for developing countries, and concludes that access to financial, technical, and medical knowledge is crucial to improving the health and living standards of the poor.
- 2000** The World Bank's Development Committee report, *Poverty Reduction and Global Public Goods: Issues for the World Bank in Supporting Global Collective Action*, cites sharing development knowledge as one of five focus areas as the Bank increases its emphasis on producing global public goods and recommends that its knowledge role extend beyond country clients.
- 2003** The Bank's management information systems begin incorporating knowledge "products," with deliverables and predefined milestones and with monitoring of most knowledge products similar to that for lending products. The Independent Evaluation Group (formerly Operations Evaluation Department) publishes its report, *Sharing Knowledge: Innovations and Remaining Challenges*, Report No. 25883.
- 2004** The Organizational Effectiveness Task Force notes that the Bank is not capturing the full potential of being a global knowledge-based organization and recommends building networks to leverage global knowledge and improve the quality of client services.
-



An evolving focus on knowledge: 15 years of the Knowledge Bank *(continued)*

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| <p>2003–07 The Quality Assurance Group reviews economic and sector work and technical assistance in 53 countries, assessing them in the context of country assistance strategies, in consultation with local officials and stakeholders.</p> | <p>2010 President Robert Zoellick launches the Open Data, Open Knowledge, Open Solutions, and related policies on Access to Information, resulting in many databases becoming publicly available free of charge, including the World Development Indicators. The data are available under an open license for use and reuse. Under Access to Information, the public has free access to many documents previously restricted to official users. The 2010 Knowledge Strategy, <i>Transforming the Bank's Knowledge Agenda: A Framework for Action</i>, is adopted. The Knowledge and Learning Council is established to manage knowledge initiatives, including this first Knowledge Report.</p> |
| <p>2008 The Independent Evaluation Group publishes a report on "Using Knowledge to Improve Development Effectiveness: An Evaluation of World Bank Economic and Sector Work and Technical Assistance, 2000–2006." It finds that clients prefer the Bank's reports and technical assistance to those from other institutions, and that country clients generally prefer technical assistance and short reports rather than longer pieces of economic and sector work. It also finds that the results tracking system for knowledge work in the Bank has some serious weaknesses and that more follow-up with clients after delivering products would strengthen impact.</p> | <p>2011 This Report marks the first time that the Bank has systematically reviewed its knowledge services, advancing concrete proposals for measuring results and modernizing the management of the Bank's knowledge work. Six Knowledge Platforms are funded for three years, to support co-generation of knowledge from diverse sources and institutions, by engaging with researchers, policy makers, and practitioners to fill knowledge gaps on developmental issues.</p> |
| <p>2009 The Knowledge Strategy Group, formed to oversee the preparation of a knowledge strategy, identifies nine product lines as the core of the Bank's knowledge business, for three audiences: knowledge for clients, knowledge as a public good, and knowledge for internal use.</p> | |
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Executive Summary

“Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty—unnecessarily. Knowledge about how to treat such a simple ailment as diarrhea has existed for centuries—but millions of children continue to die from it because their parents do not know how to save them.”

With those words began the 1999 *World Development Report* on knowledge for development, which analyzed the risks and opportunities that the global information revolution is creating for developing countries. Asserting that knowledge, not capital, is the key to sustained economic growth and improvements in human well-being, it concluded that access to financial, technical, and medical knowledge would improve the health and living standards of the poor. Three years before, the World Bank had begun to position itself as a knowledge bank, not just a lending bank, creating, sharing, and applying knowledge for development.

The Knowledge Strategy

Reforms over the ensuing years (see box on pages x–xi) culminated in the 2010 Knowledge Strategy—*Transforming the Bank’s Knowledge Agenda: A Framework for Action*. Soon afterward, the Bank launched the Open Knowledge initiative with the aim of making its knowledge work more accessible to a broad base of stakeholders in client countries, covering both government and civil society.

The Knowledge Strategy provided an overview of the Bank’s knowledge work and proposed a Knowledge Report series to develop

an approach for systematically managing the emerging challenges in the changing knowledge landscape. In fiscal 2010 the Bank’s spending on what it considers “core knowledge”—for country clients, for global products, and for internal Bank use—totaled \$606 million. Accounting for Bank, client, and partnership resources committed to knowledge services (including lending operations), the Bank estimates total annual spending on knowledge services of about \$4 billion. The Bank is using this first Knowledge Report to rethink how it can continue to bring the highest value to clients, given the increasing number of development knowledge providers, the evolving needs of our clients, and rapid developments in technology for sharing knowledge.

The Bank’s contribution to global development knowledge

The Bank has two unique capabilities on which to build—cross-sectoral and cross-country learning from engagements in policy and project implementation in more than 120 countries, and in-house capacity to combine data, research, practice, and policy analysis to create customized solutions to specific development challenges. This Report shows how the Bank is drawing on its roles as a producer, customizer, and connector of knowledge to respond to client needs. The Bank produces and disseminates quality global and country knowledge that clients appreciate. It also works with clients to customize policies, programs, and products to meet specific challenges, based on the best knowledge available. And it connects official, civil, and private actors with others who have

The Bank's scale, range, and diversity, including the interaction of knowledge with its lending operations, lie at the core of its specialized role as a key contributor to global development knowledge

faced—and met—similar challenges. Able to play any or all of these roles, the Bank's scale, range, and diversity, including the interaction of knowledge with its lending operations, lie at the core of its specialized role as a key contributor to global development knowledge.

The Bank's ability to provide customized advice to clients rests on a broad ecosystem of complementary and interrelated knowledge activities (discussed in chapter 1). What clients usually experience is the tip of a complex interaction of many knowledge products and services, which include research, country and sector reports, project knowledge, and inputs from outside the Bank. Client services inform—and are informed by—the Bank's global knowledge products, including the annual *World Development Report*, and the knowledge the Bank produces for internal use, much of which makes its way to clients and the broader development community. The Bank operates most effectively, and delivers the greatest value, when its knowledge ecosystem combines relevant and up-to-date diagnostic and analytical resources, grounded in its operational experience, global perspective, and continuing interactions with a broad array of development partners.

Key trends and the knowledge paradox

This Report demonstrates the growing importance of knowledge services among the services provided by the Bank to its clients (described in chapter 2). Over the last nine years the Bank management has steadily allocated a larger share of its administrative budget for core knowledge work. In 2011 this came to 31 percent of the Bank's budget, compared with 24 percent in 2002. The Report also illustrates how the knowledge products and services are creatively responding to a swiftly changing development knowledge landscape. The Report

identifies three key trends, which show how the Bank is becoming more responsive to its clients.

- It is providing more technical assistance, a service highly valued by clients. At the same time, it is producing fewer of the longer analytical pieces and more shorter just-in-time policy notes for clients.
- Trust funds and fee-based services are becoming more important. Trust funds now support 40 percent of core knowledge, and fee-based services are becoming the predominant practice for some countries.
- The Bank's knowledge services are becoming more open. The Open Data Initiative and the Knowledge Platforms are just two examples.

Surveys show that clients cite knowledge services as the Bank's most valuable contribution, more than twice as often as financial resources.¹ Yet the Bank's knowledge work is not seen internally, or by independent evaluators, as having the impact it could. Managers and staff see limited internal support for their knowledge work and some of them feel that such work is undervalued. This gives rise to a knowledge paradox. Most staff feel, despite the growing importance of knowledge work, that the Bank's main internal incentives are still related to lending. One reason for this apparent contradiction may be the lack of robust and systematic evidence that knowledge work brings demonstrable and measurable returns. By contrast, lending has built-in metrics. Lending volumes and disbursement rates are easily understood and communicated (even though money spent may not be a valid measure of impact).

Three initiatives

To address this paradox, the Bank is pursuing three initiatives (discussed in chapter 3). First, it is establishing consistent standards for governance and the measurement of results.



This will apply to each of the nine product lines that make up core knowledge, and aims to strengthen technical quality, relevance, and results, and to put a stronger emphasis on client engagement. Much has already been done to improve results orientation, with innovations adopted across the Bank. And still more remains to be done within each of the knowledge product lines. But a focus on the product lines alone will not ensure that knowledge services systematically address the needs of client countries or consistently yield lessons from country engagements.

Second, the Bank is working to strengthen connectivity across the core knowledge product lines and to develop a framework for a comprehensive approach to managing knowledge as a portfolio—setting strategic priorities and ensuring complementarities. The Bank needs now to identify the objectives of each knowledge activity. Explicit mechanisms will be created for discussing work programs and priorities among Networks and Regions. One possibility is to use more extensively current review bodies, such as the Knowledge Learning Council and the Chief Economists Council, to ensure that such conversations take place among the Networks, Regions, the World Bank Institute (WBI), and the Development Economics Vice Presidency (DEC). Already, the four Networks, DEC and WBI are organizing their work according to product lines comparable across the six units. This will allow reinforcement of linkages in the management of knowledge services across the Bank and facilitate the identification of gaps as well as opportunities for coordination. The diagnostic report prepared as a background document for this Report outlines the details of how this approach will be implemented, building on existing results chains for economic and sector work, technical assistance, and external training.

Third, Open Knowledge will become part and parcel of the way the Bank does business. All aspects of creating, acquiring, sharing, adapting, and applying knowledge will be made more open. The Bank has long experience with sharing its knowledge so that others can apply it. Now the Bank is working to create better two-way connections within and outside the Bank, so that the best expertise and the most relevant experiences, wherever they may be, can be brought to bear on specific challenges of development (discussed in chapter 3). Efforts that have been taken to implement open knowledge are the following:

- *Open data and open access to Bank documents.* In April 2010 the Bank took a critical step toward openness by making its development data available for download free of charge.
- *Open research tools.* To support policy and academic research around the world, the Bank is beginning to produce research tools for others to use, and it is providing open access to those tools.
- *Open publishing.* The Bank is making the transition from a traditional book publishing model to a new publishing model with immediate free access to the Bank's peer-reviewed literature and data, with no restrictions on the use and reuse of the Bank's knowledge.
- *Open and collaborative knowledge generation.* The Bank is experimenting with two promising tools. It is investing in six knowledge platforms on pressing global problems and in technology that will enable people inside and outside the Bank to connect in e-space.

Open policy debates. Over the past 10 years the Bank has become more inclusive, expanding to involve civil society, nongovernmental

The Bank is working to create better two-way connections within and outside the Bank, so that the best expertise and the most relevant experiences, wherever they may be, can be brought to bear on specific challenges of development

organizations, and the private sector in evidence-based debate on policy and investment choices. This broader involvement—the democratization of development, the empowerment of local change agents—can be difficult and contentious, but it has the potential to bring about broad-based and sustainable progress.

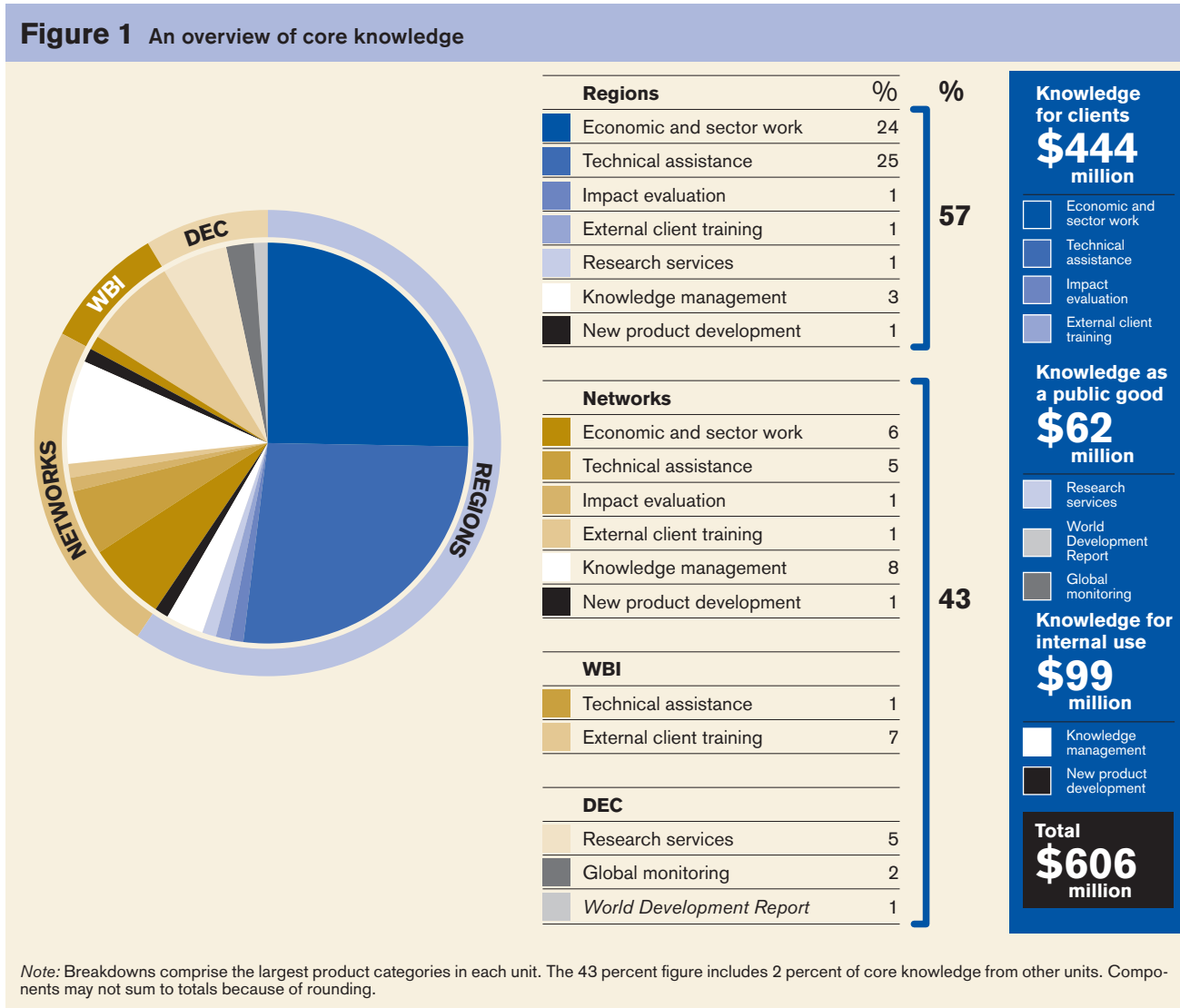
This Knowledge Report is the first in a series. The research and consultations on which it is based have helped to illuminate the Bank’s

knowledge landscape, and to map a part of that territory. Within the territory covered by this Report, specific actions are recommended to bring more coherence, oversight, and accountability to the Bank’s knowledge work. Other issues, as they continue to evolve through further research and consultations, will be covered in future reports.

Note

1. World Bank 2010a.

Figure 1 An overview of core knowledge



Feature 1 Apps for development: open knowledge through innovation

'We're only at the start of the open data era'

The World Bank made a commitment to open data to contribute to a greater global dialogue but also to increase the reach of its knowledge resources and spur innovation. Creating its own research and analysis tools—and encouraging the use of those tools by others—is one of the most important ways the Bank has gone about promoting open knowledge through technology, but it's not the only way. Embracing open data also means fostering a culture of creative analysis and problem solving outside, as well as inside, the Bank organization.

"One of the reasons we threw open the doors to our data was that we recognized we don't have a monopoly on innovation," said President Zoellick, at an April 2011 ceremony announcing the winners of the "Apps for Development" competition, a worldwide call for software developers to tackle some of the world's most pressing development problems by creating digital applications using data collected by the Development Economics Data Group.

The competition was launched in October 2010 with an imposing challenge: to "help change the world" by tackling long-standing problems. Aleem Walji, the manager of Innovation Practice at the World Bank Institute, which organized the event, said that the "essence of the challenge" was to use the Bank's open data to tap into crowdsourcing innovation. The hope, he said, was to "see examples of developers everywhere using our data and combining it with their own data to build really useful applications addressing local problems."

The response was even better than organizers had hoped, with more than 100 qualifying entries from 36 countries across 6 continents. Even more impressive than the breadth of participation was the origin of the entries—almost a third of the final submissions came from Africa. Judges received more entries from Ghana, Kenya, Nigeria, and Uganda than from all of Europe.

"This was the world's largest apps competition," Walji said. "It brought software developers into the development



Feature 1 Apps for development: open knowledge through innovation *(continued)*

conversation. Just by paying attention and tapping into new ideas, we can accomplish much more with our data than we could on our own.”

Submissions were accepted for any kind of software application, whether designed for the web, a mobile handheld device, SMS, or any platform broadly available to the public. The only requirement for each app was that it relate to one or more of the Millennium Development Goals and use one or more datasets from the World Bank data catalog available at data.worldbank.org.

The winning apps all feature unique approaches for using the Bank’s open data to study and analyze development challenges. StatPlanet World Bank, the competition’s overall winner, is a powerful app with an easy interface that uses 3,000+ indicators to visualize and compare country and regional performance over time. Submitted from Australia, StatPlanet built on its success by releasing an enhanced version of the app months after the competition.

Other winners included Development Timelines, which allows users to put development data into different historical contexts, and Yourtopia: Development Beyond GDP, a highly interactive app that calculates different dimensions of human development based on individual priority comparisons. A

popular choice award, determined by online voting by the general public, went to WORLD, an app that selects data at random to generate concise statements about progress toward the millennium goals.

A panel of expert judges, including technology and innovation leaders from the private sector as well as veteran development specialists from the Bank, awarded a total of \$55,000 in cash prizes to the competition winners based on three general criteria: quality of the idea, implementation of the idea, and potential impact on raising awareness and making progress toward achieving the millennium goals. The competition demonstrates how other communities outside the traditional development world, such as software developers, can harness technology and leverage open data to create powerful new uses of knowledge.

“We see enormous potential in crowdsourcing solutions to persistent development problems, and we are especially excited when our data can be used as raw material to spark creativity and innovation,” said Shaida Badiie, Director of the Development Economics Data Group and a key partner in implementing the Open Data, Open Development initiative. “We’re only at the start of the open data era. Just watch what happens.”

A Changing World of Development Knowledge

This first Knowledge Report, stemming from the 2010 Knowledge Strategy, is a tool to strengthen the management and development impact of the Bank's knowledge services. It identifies actions to improve the Bank's ability to respond to the changing needs of our clients and ensure a greater outcome orientation for our knowledge services. It recognizes the globally proliferating sources of knowledge, the changing demands of the Bank's clients, and the role of technology. The rest of this chapter details the opportunities and challenges the Bank faces.

Background and context

A key milestone in the Bank's efforts to adapt to the changing knowledge context is the 2010 Knowledge Strategy, *Transforming the Bank's Knowledge Agenda: A Framework for Action*. The strategy aims to deliver the best expertise to our clients, to enhance the development impact of our knowledge, and to strengthen our role as a global connector. Overseen by the Knowledge and Learning Council, implementation of this strategy is already yielding demonstrable results.¹ For example, building on the Bank's role as a global connector, six new Knowledge Platforms have been funded to help the Bank and the broader development community focus resources on medium-term issues affecting developing countries. These Knowledge Platforms are seen as multiyear engagements with external partners, aimed at filling knowledge gaps through co-generation of knowledge from diverse sources (box 1).

Increasing number of globally connected knowledge providers

Knowledge is created and held by individuals, small groups, and large institutions, ranging from universities and governments to multi-lateral development agencies. In today's world, email, the Internet, and social media offer affordable paths for disseminating knowledge, and new ways of acquiring it—democratizing knowledge and energizing a movement for open knowledge. More and more institutions and individual experts focus on producing and disseminating knowledge—as a core business activity.

The private sector now creates knowledge to guide public policy. For example, the McKinsey Global Institute defines its mission as helping leaders in the commercial, public, and social sectors develop a deeper understanding of the evolution of the global economy that contributes to decision making on critical management and policy issues. The Economist Intelligence Unit bills itself as the world's leading resource for economic and business research, forecasting, and analysis.

Nongovernmental organizations and institutions also create and disseminate knowledge. The website of Foreign Policy magazine lists 10 top global think tanks, culled from 228 nominees with specializations in politics, economics, health, and other areas.² And the Bertelsmann Foundation helps “policy makers, government and society find solutions for the future”—its “Megatrend Meta-analysis” information management is one example. The International Growth Centre, based at the London School of

Box 1 Knowledge Platforms—Strengthening the Bank’s role as a global connector

The Bank’s Knowledge and Learning Council is funding six Knowledge Platforms as part of an Open Development Initiative, which also includes efforts to open the Bank’s data stores to the public (Open Data) and increase access to World Bank information.

Knowledge Platforms are multiyear, cross-sectoral engagements that support collaboration among World Bank staff, research centers, think tanks, practitioners, and private firms on vexing global challenges. The first three were selected in January 2011 and are the Urbanization Knowledge Platform, the Green Growth Knowledge Platform, and Information and

Communication Technologies (ICT) for Open Development. These Knowledge Platforms are working with external partners such as the United Nations, NASA, Cisco, Google, McKinsey, the Penn Institute for Urban Research, and the Indian Institute for Human Settlements.

In July 2011, following a second competition, the Knowledge and Learning Council selected three new Knowledge Platforms to further open the way the Bank creates, connects, and shares knowledge. They are the Jobs Knowledge Platform, the Knowledge Platform on Food Security and Nutrition, and The Hive: Fragility, Conflict, and Violence.

Economics and Oxford University and funded by the UK Department for International Development, has about 100 research projects under way on growth-related issues. Its research supports in-country engagements with decision makers and informs policy making.

Civil society organizations, many with limited budgets, have found economical ways to share their knowledge by forming information networks—“loose arrangements with or without a formal structure, which are primarily focused on helping members to communicate and share reliable research and up-to-date information.”³ There also are easy channels for individual experts and development practitioners to communicate views and information that have a policy impact—and to create virtual communities of practice. Such communities cluster collective knowledge in hubs that are now connecting with each other.

Evolving client demands

Client country counterparts, knowledgeable and specific in their requests for Bank expertise,

demand top-quality knowledge services. They ask Bank teams for information on how other countries have handled particular development issues—and for specific examples and advice in implementing reforms. For example, one middle-income country that wanted to establish a national planning commission asked the Bank to quickly summarize other countries’ experience with similar commissions and to identify the lessons from these examples. Such demand for knowledge runs across the country income spectrum, with government officials and advisors asking for specific and practical implementation experiences, not just general policy advice.

Clients expect customized solutions. This requires Bank staff to draw on data and operational expertise ranging from sugar subsidies to pension reform, on experiences from other countries facing similar problems (South-South connections are frequently of interest), and on local expertise. That often involves identifying and working in partnership with a broad set of stakeholders.



In creating and disseminating knowledge, the Bank is one institution among a growing number of development agencies, global and local consulting firms, and think tanks that can provide expertise quickly, on demand. Many governments have the financial ability to hire firms and to reach out to the think tanks. Frontline managers report that clients ask about the education, qualifications, and experience of World Bank staff. The World Bank imprimatur no longer confers automatic authority, and the Bank is seldom the only source of information.

World Bank lending surged in the recent financial crisis, but in the longer term Bank lending is expected to be a smaller share of the total transfers to developing countries. The Bank's opportunities for knowledge transfers through lending will also shrink as some countries "graduate" from reliance on Bank finance during the coming decade. So, the Bank's ability to contribute to policy and to the general course of development through finance may become more limited.

In this context, knowledge can have a big impact—by delivering essential data, critical analysis, and new perspectives to leverage investments from other sources, with fairly modest expenditures. The Bank can also leverage its share of official development assistance by customizing knowledge and by convening and collaborating with others in the process.

Spreading and democratizing technology

The impact of the Internet and the Web on knowledge work cannot be overstated. Anyone, anywhere in the world, can find geo-referenced data, careful analyses, reports, and expertise through general purpose search engines. A new class of answer engines—such as Wolfram Alpha, which makes it possible to access expert-level knowledge on a wide range of issues—may

transform things even more. Scholarly papers, blogs, and ideas in all forms are being fed into social networks and online services—and into purpose-built development websites and portals. Online collaboration tools allow experts and practitioners around the world to work together on knowledge activities ranging from coauthoring articles to designing best-practice solutions to development challenges and to formulating real-time responses to natural disasters in remote locations. Online interactions can also give policy makers real-time knowledge about the governance and service delivery concerns of constituents, making it possible for them to respond quickly.

The Bank began to use information technology to produce, disseminate, and manage knowledge in the mid-1990s, and by 2003 had three major knowledge technology platforms—the Development Gateway, the Global Development Learning Network, and the Global Development Network.⁴ With advances in information technology and connectivity and more systematic collection of information, the Bank's knowledge continues to become easier to access, fostering greater interaction among staff, with clients, and across countries. These profound changes have been paradigm shifting. But internal evaluations have also noted that the tracking of results, document retention, and links to operations could be strengthened.⁵

In considering its opportunities for investing in the next generation of knowledge management, the Bank can look to experiences from the private sector, other international organizations, and think tanks. Substantial investments in technology and human resources will be required to meet the standard that some of these firms have set. Still, it is relatively easy to keep pace with new technologies as they are developed. What is more difficult—and more critical for the Bank's evolving role as a

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With so many players, and so many sources of knowledge, the Bank must consider how best to contribute most to development debates

knowledge institution—is to manage information and knowledge strategically in the context of new technological possibilities. This will require careful consideration of options not only for knowledge systems, but also for governance mechanisms and internal incentives to treat these issues with the same level of depth for knowledge work as is done for lending operations.

Changes in the nature of development knowledge

In the 1950s and 1960s governments in developing countries saw their role as providing public goods (building bridges, roads, ports), addressing externalities (protecting infant industries), and sometimes redistributing income to the poor (keeping food prices low). And Bank economists studied the “investment gap,” thought to be an obstacle to faster growth in developing countries. Much of the development knowledge in this context was advice from engineers and financial analysts on building and designing the right infrastructure, though sectoral expertise began to grow as the Bank ventured beyond infrastructure and into other development sectors.

By the 1970s and 1980s the Bank was hiring public policy experts, sector specialists, and social scientists to address the increasingly complex development challenges. Costly infrastructure was not being maintained; protected industries were often inefficient; low food prices led to shortages and increased poverty. Development knowledge began to focus on policy solutions such as “structural adjustment” to improve efficiency, reduce fiscal imbalances, and remove market obstructions (privatizing public enterprises, reducing trade barriers), based on the belief that well-functioning markets could deliver efficient outcomes. Much of the economic and sector work estimated the costs

of market failures and the expected benefits of policies recommended to address them. The policy advice emerging from this theoretical work—promoted not only by the Bank but also by other international financial institutions and many other development agencies—was sometimes applied without carefully considering local circumstances on a broader range of alternatives. Resistance by client governments was often attributed to vested interests; and even when structural adjustment policies were implemented, they did not always deliver the intended outcomes.

Today, in the deepest financial crisis since the Great Depression, it is clear that consensus is not wisdom. Instead, evidence-based debate, on particular challenges, offers the best hope for continuing improvements in policies and institutions. Open debate and discussion in very different societies can bring about major change.

As these changes take hold, the Bank strives to produce knowledge that is cutting-edge and operationally relevant, as a partner and as an intermediary that offers access to the best development knowledge produced by others. In providing this knowledge—to client governments and to civil society and other actors—the Bank will support dialogue about the priorities and policies in societies striving to become more open. With so many players, and so many sources of knowledge, the Bank must consider how best to contribute most to development debates. It is also important to learn from past experiences in the evolution of development knowledge.

As the World Bank continues to adapt, it will have to be selective. The Bank cannot be everywhere and do everything, so it must think strategically about how to be most effective as one player in a large universe of knowledge-based institutions and partners—about how



to leverage its comparative advantage through openness and collaboration and about how to best link its contributions with those of other institutions.

The Bank's comparative advantage arises in large part from its presence in 120 countries across the globe, which provides a unique ability to combine different kinds of knowledge to meet client needs, and to develop many kinds of knowledge partnerships and collaborations in response to specific opportunities and situations. Its knowledge products are among the most frequently cited on development topics, according to monitoring services such as Research Papers in Economics (RePEc). The World Bank Group recently ranked first for publications on China and on development, and second for publications on Africa, Asia, international trade, microfinance, and transition economics.⁶ For six years in a row (2000–05), the Bank won a Most Admired Knowledge Enterprise award, though it has not appeared on this list in recent years.⁷

Becoming more collaborative and open

The World Bank's best-known knowledge activities, economic and sector work and technical assistance, are evolving in close collaboration with clients. In Vietnam, for example, an influential series of Public Expenditure Reviews was launched in 1996. For the first review, the government's role was to provide data, while Bank staff did much of the analysis and writing. In 2002 the government wrote some sections of the review. In 2005 the Bank and the government prepared the review jointly. A later study by the World Bank's Independent Evaluation Group found that the 2002 and 2005 Public Expenditure Reviews informed laws increasing transparency in the state budget process and led to a medium-term expenditure framework and

a unified system of public accounts.⁸ In Brazil in 2007 the Bank team working on early childhood development and teacher quality collaborated with local academics and local governments. In Lao People's Democratic Republic in 2010 a development report prepared with the government and bilateral donors fed into the government's medium-term strategy. In both cases, repeated deep consultations with a variety of stakeholders ensured the report's relevance and legitimacy.

Experiments in collaborative knowledge, such as the Global Development Network and Global Development Learning Network, have fostered greater openness and knowledge flows on critical global issues. By sharing policy and research experience across countries and among development institutions, the entire development community is better positioned to address the scale and complexity of critical development challenges, such as AIDS, urbanization, climate change, water scarcity, and food shortages. The Global Development Learning Network is a partnership of more than 120 recognized global institutions in 80 countries that collaborate in the design of customized learning solutions for individuals and organizations working in development. The Bank coordinates requests and contributions from affiliates as diverse as the Asian Institute of Management, the Ethiopian Civil Service College, the Islamic Development Bank, and Pontificia Universidad Católica de Peru. The network provides its members with direct access to local, regional, and international development experts, as well as tailored learning, knowledge, and technical assistance programs. In major and secondary cities it provides state-of-the-art facilities for multipoint videoconferencing and Internet-based learning.

The Bank also connects clients with other institutions. The World Bank Institute now offers a range of tools and support services,

The World Bank's best-known knowledge activities, economic and sector work and technical assistance, are evolving in close collaboration with clients

Work on global public goods benefits from greater collaboration helping to leverage Bank resources and expertise to broaden the scope and coverage of knowledge work

including a searchable South-South knowledge portal that includes results stories and good practice examples. Consider, for example, how Ghana's and Zambia's experiences have helped to shape the design of the road maintenance fund in Lao PDR. In February 1999 a delegation from the Lao government visited Ghana and Zambia to learn first-hand from their successes in using sustainable financing mechanisms for road maintenance. Through the study tour, the delegation learned that road users are willing to pay for better road services and that they need to be represented on the road fund's board. This South-South knowledge exchange contributed to the Lao government's decision to create such a fund, which today covers the maintenance of the entire national road network and a part of the local road network.

Work on global public goods also benefits from greater collaboration helping to leverage Bank resources and expertise to broaden the scope and coverage of knowledge work. The Business Environment and Enterprise Performance Survey—a partnership of the World Bank and the European Bank for Reconstruction and Development—generates comparative measures in such areas as corruption, state capture, lobbying, and the quality of the business environment. These measures are then related to firm characteristics and performance. A 2011 World Bank study, *Trends in Corruption and Regulatory Burden in Eastern Europe and Central Asia*, used the European Bank of Reconstruction and Development (EBRD)–World Bank Business Environment and Enterprise Performance Survey (BEEPS) data from more than 11,000 firms in 29 Europe and Central Asian countries to track progress in reducing administrative corruption and the regulatory burden on firms. The EBRD and the Bank share expertise, funding, and local knowledge to provide a public good in a geographic area

of common developmental interest. In this new report, tax administration demonstrated the greatest decline in administrative corruption, followed by customs regulations, though overall perceptions of court performance remain unfavorable for the majority of firms, particularly those firms that have actually used the courts. In 2005 about 20 percent of firms in 27 transition countries reported that bribes were frequently needed “to get things done with regard to customs, taxes, licenses, regulations, services, etc.” For the same countries in 2008 less than 14 percent reported that bribes were frequently needed. The BEEPS survey has been supported by various donors over time, including the Taiwan Business–EBRD TC Fund, EBRD–Canadian Technical Cooperation Fund 2006–2009 (BEEPS IV), and the Japan Europe Cooperation Fund and the Multi-donor Fund for the Early Transition Countries (BEEPS III).

To deepen collaboration further, under its Open Data initiative, launched in April 2010, the Bank is releasing its development data free of charge to the public. As it moves forward, the Bank continues to increase the amount of data available and to develop new applications to enable easy access to data across platforms and devices. The Bank also continues to strengthen the capacity for data collection in developing countries, to ensure the quality and availability of data to address country issues. The Bank's new Access to Information policy makes most Bank documents publicly available for the first time.

The Bank's three knowledge roles: producer, customizer, connector

The Bank's role as a knowledge institution has evolved to include three distinct functions—producing and disseminating high-quality global and country knowledge, working with clients to customize policies and programs to



meet specific challenges, based on the best available knowledge, and connecting governments, civil society, and private actors with others that have faced similar challenges. As it finds development solutions, the Bank sometimes acts more in one role, sometimes more in another:

- *Knowledge producer.* Knowledge is produced across the Bank. An example is the Bank's Development Economics arm, which provides intellectual leadership and analytical services to the Bank and the development community. Development Economics has three main business lines: development research (research and knowledge creation), development prospects (global economic monitoring and projections), and development data (international statistics, statistical capacity building, and results monitoring).
- *Knowledge customizer.* The Bank's task teams and country offices interact directly with clients, organizing and applying knowledge from a wide range of sources to help countries address their development challenges. Working closely with clients, these teams draw on data, research, expertise, and experience to develop policy options, inform lending, and deliver technical assistance. Customizing requires combining a global perspective with deep local knowledge to support countries as they strive to improve the lives of their people. The Regional units and Network vice presidencies engage most in this line of work, with Regions engaging the clients and Networks customizing the results of research in a way that is easily applied to operational work and engagement.
- *Knowledge connector.* The Bank's engagement with global partnerships and in South-South exchanges highlights its role as connector. Connecting or convening can also involve drawing from the data, research, and

expertise of client countries and other development partners. While this is the main function of the World Bank Institute, other units of the Bank also perform this role, as an integral part of their client services.

The Bank, because of its scale and diversity, can play any or all of these three roles, as needed to address a particular development challenge. The Bank's flexibility and scope lie at the core of its comparative advantage. Because of the potential synergies among staff, ranging from experienced and project-based practitioners on the front line, to researchers working with academia around the world, the World Bank has a somewhat unique niche relative to other knowledge-producing organizations. It is not one type of service that makes the Bank unique (say, research or technical assistance or economic and sector work) but the synergistic portfolio of many types of knowledge services. The spillovers and gains from its diverse talent give the Bank the possibility of becoming more than the sum of its parts (box 2).

The Bank recognizes that other institutions can also play these roles, and in some contexts contribute more than the Bank. It is thus important to look carefully at when the Bank should play a particular role and when another institution could make a more relevant contribution. We might make a bigger contribution by doing fewer things well, or by supporting others in their efforts and linking them to a larger network of practitioners.

Capturing and capitalizing on the economies of scale and scope in knowledge accumulation implies that the Bank will need to ensure that it is appropriately organized with the right human resource profile to adapt to changing knowledge needs. (These critical issues will be covered in future Knowledge Reports.) The current Report touches on issues related to incentives for producing and

The Bank's role as a knowledge institution has evolved to include producing and disseminating high-quality knowledge, working with clients to customize policies and programs, and connecting governments, civil society, and private actors with others that have faced similar challenges

Box 2 Measuring and analyzing poverty—the Bank’s role as a knowledge producer, customizer, and connector

Given the Bank’s mission to reduce global poverty, poverty measurement and analysis are critical. They allow the Bank, our clients, and other interested parties to monitor progress in reducing poverty (at the country and global levels) and also support the design of policies and programs tailored to country conditions. The Bank’s poverty economists are often the main interlocutors with country clients on these issues, but they rely on many interactions both within the Bank and across the development community. The Bank produces new knowledge, data, and tools, customizes them to country needs, and convenes experts and practitioners to facilitate the cross-fertilization of ideas and practices across countries and disciplines.

Many parts of the Bank produce new knowledge, data, and tools related to poverty measurement and analysis. Development Economics (DEC) researchers push the knowledge frontier by publishing research papers, developing and analyzing new methods of measurement, and creating tools like the Automated DEC Poverty Tables to make those methods accessible to clients. They also produce global poverty statistics that allow the development community to monitor progress toward the first Millennium Development Goal of halving poverty by 2015. Economists in Poverty Reduction and Economic Management poverty units in the regions and anchor often work with country clients in producing new survey data and analysis

including poverty assessments. Development Economics Data Group statisticians, pushing the Open Data initiative, together with poverty economists and Development Economics researchers, prepare national poverty data and make it available to the public.

Since the conditions and needs in client countries vary widely, the knowledge on poverty measurement has to be customized to individual countries. This is done through technical assistance and capacity building—using analytical techniques and tools—to create the kind of knowledge that can provide policy advice relevant for the country. The quality of knowledge services provided to client countries depends on the understanding of the country context, the latest methods, tools and research, and the lessons from other country experiences. To best suit client needs, Bank teams typically comprise experts from different Bank units.

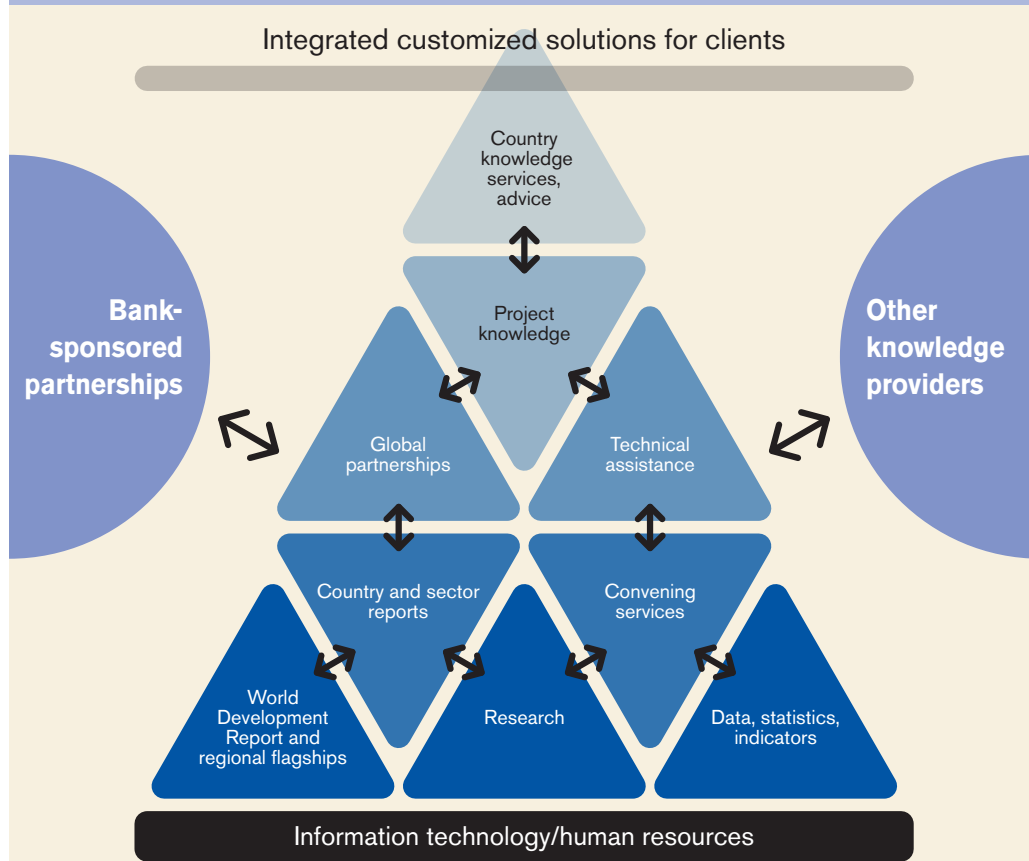
To facilitate the exchange of ideas and latest innovations in poverty measurement and analysis, the Bank regularly convenes experts from academia and development practitioners from different regions. For instance, the Bank recently organized workshops to discuss multi-dimensional poverty indicators, convening practitioners and academics prominent in poverty analysis. Interactions with other multilateral agencies, bilateral donors, and academia further improve the quality of our knowledge products and services.

disseminating knowledge. But it focuses on outlining the landscape and taking stock of the core knowledge products that form a big part of the full set of knowledge services the Bank provides.

The Bank’s knowledge ecosystem

The Bank’s ability to provide customized advice to clients rests on a broad ecosystem of complementary and interrelated knowledge activities (box 3). Its integrated and

Box 3 The Bank's ecosystem of interlinked knowledge activities



Source: Adapted from Chioda, De la Torre, and Maloney (2011).

The Bank's knowledge products and services interact within a complex and dynamic system, and can be thought of as a type of "ecosystem." The knowledge product lines described in this Report each have specific purposes and audiences—and are usually managed and delivered as individual activities. Information flows throughout this system and across the institution's boundaries. Findings from research inform the shape and direction of subsequent studies and reports, enriched by lessons from operations, and updated thanks to new datasets and analytical tools. Dissemination occurs through multiple audiences, and informs the

design and delivery of technical assistance, *World Development Reports*, flagship reports, workshops, and South-South exchanges, some facilitated by the World Bank Institute and other units in the Bank, or by the growing body of external partnerships.

Clients value solutions that are tailored to their circumstances and needs and delivered as rapidly as possible. A small technical assistance task of less than \$50,000 may be perceived as more valuable to the client than a major analytical task costing many times this sum. The Bank operates most effectively, and delivers the greatest value, when the "ecosystem"

(continued)

Box 3 The Bank's ecosystem of interlinked knowledge activities *(continued)*

combines relevant and up-to-date diagnostic and analytical resources, grounded in operational experience, a global perspective, and continuing dialogues with a broad array of development partners.

As in a natural ecosystem, the flows and exchanges are as important as the parts in understanding the Bank's system of knowledge services, and disruptions in one area are likely to cause problems elsewhere. Underlying the ecosystem is the stock and profile of

human capital and the information technology infrastructure.

While this analogy has limits, thinking of knowledge services in this way underscores interdependence and connectivity, without which the ability to deliver useful products to clients may be significantly compromised.

This Report focuses on the products that make up this knowledge ecosystem; the next Report may examine issues of knowledge flow. Box 4 presents an example of the ecosystem at work.

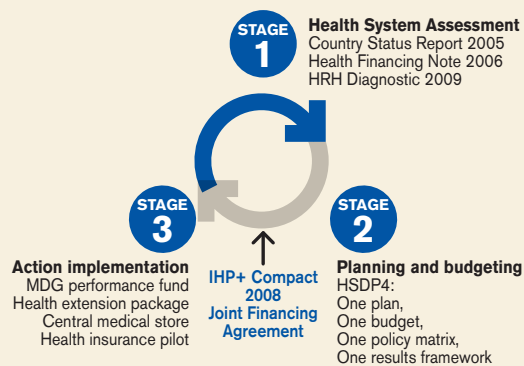
Box 4 The Bank's knowledge ecosystem at work—Health Systems Strengthening hubs in Nairobi and Dakar

The Africa Region has small teams of senior technical experts in Nairobi and Dakar for its regional Health Systems Strengthening program, to accelerate progress toward the health-related Millennium Development Goals. The program, launched in fiscal 2010, focuses on evidence-based measures to address key gaps in health, health financing, supply chain and pharmaceuticals, governance and service delivery, infrastructure, and information and communication technology. The Nairobi and Dakar hubs provide rapid-response technical and analytical support, even in countries where the Bank may not be actively lending in health. Demand for this support is increasing rapidly, ranging from rapid assessments to in-depth analytical work, technical assistance, and policy advice. This support is integrated within the multidonor Harmonization for Health in Africa initiative, which includes joint analytical work, training, and capacity building (see www.hha-online.org).

This country-driven process illustrates how task teams are adapting to meet client needs,

combining diagnostic assessments in Stage 1, with technical assistance in Stage 2, followed by implementation support and pilot projects in Stage 3 (lending/supervision), which may be financed by trust funds or other donors as well as by Bank loans (see figure). Close collaboration with a range of partners is a key feature of this model of knowledge service delivery, which tailors the details of each engagement to the needs of a client country, based on careful analysis of local gaps and opportunities.

Adapting to meet country needs





customized solutions are based on extensive supporting activities, including data collection, that deepen understanding of a particular development challenge, its global context, and the capacities of local counterparts. The Bank's ability to meet a client's need for "just-in-time" advice—which could be a PowerPoint presentation or a meeting of senior Bank staff with a minister—depends on staff having already done different types of in-depth knowledge work on a country and issue, often over several years.

What clients usually experience is the tip of a complex interaction of many knowledge products and services. The Bank may rely on its various roles as producer, customizer, and connector in the process. Staff may draw on original analytical work, plus learning from operations and knowledge derived from external sources and partnerships. Underlying this ecosystem is the interaction of experts in the related areas across the Bank—in the Networks, and across the Regions. Teams also draw on outside suppliers and partners (box 4). All of this interacts to produce the "just-in-time" advice with the whole system grounded in the Bank's information technology systems and the stock of available human resources and expertise.

While the Bank plays various roles in creating and disseminating knowledge and is becoming more open and collaborative, management has been developing ways of determining which knowledge activities have the most impact and how much priority to give them. Client surveys consistently show that the Bank's knowledge, seen as a comparative advantage, is highly valued and appreciated. In the 2010 Country Survey, for example, clients cited knowledge as the Bank's second most valuable contribution, after its financial resources. And, when technical, policy, and economic advice is included, knowledge work is cited as the Bank's most valuable

contribution more than twice as often as financial resources.⁹

But the Independent Evaluation Group and the Quality Assurance Group have concluded that the Bank's knowledge work is not having the impact it could, and that the Bank's knowledge work is often more focused on production of a quality report than on impact.¹⁰ Internal surveys indicate that staff feel there is relatively less internal support for knowledge work and that this work is undervalued relative to lending. Despite the growing importance of knowledge work, the main institutional incentives in the Bank are still related to lending.

So, why has knowledge work not developed into an institutional priority since James Wolfensohn articulated the concept of the Knowledge Bank and knowledge networks in 1996? Why are we faced with the paradox of knowledge that the clients value, but which the Bank systems undervalue? One reason is that in the competition for scarce financial and management resources, lending has built-in metrics—lending volumes and disbursement rates are easily understood and communicated (even if these are not necessarily valid measurements of impact). At the same time, knowledge work lacks robust and systematic evidence that resources spent bring demonstrable results. Systematically measuring how knowledge services contribute to results is an inherently difficult exercise, but it is an exercise to which the Bank's management is committed.

With this Knowledge Report, the Bank is addressing the challenges of this knowledge paradox and suggests ways to move forward. Chapter 2 takes stock of the Bank's rich variety of knowledge activities, where and when they are carried out, how they are financed, and the recent trends in the knowledge portfolio. Chapter 3 discusses two key elements in the Bank's approach to managing the knowledge

Systematically measuring how knowledge services contribute to results is an inherently difficult exercise, but it is an exercise to which the Bank's management is committed

services: results and openness. It describes what has been achieved in these areas and closes by summarizing the next steps planned by Bank management.

Notes

1. Annex 2 summarizes the key achievements so far from implementation of the 2010 Knowledge Strategy.
 2. Hounshell 2008.
 3. Fries and Walkenhorst 2011.
 4. OED 2003.
 5. IEG 2008. See also IEG (2010) for a discussion and a list of completed IEG work on knowledge management.
 6. RePEc is a collaborative effort of hundreds of volunteers in 74 countries to enhance the dissemination of research in economics. The heart of the project is a decentralized database of working papers, journal articles, and software components. RePEc collaborates with the American Economic Association's EconLit database. The companion diagnostic report summarizes RePEc's rankings of the Bank in selected disciplines. RePEc can be accessed at <http://ideas.repec.org/top/>.
 7. The Most Admired Knowledge Enterprise Award or MAKE was established by Teleos in 1998 to identify and recognize those organizations that are creating shareholder/stakeholder wealth by transforming new as well as existing enterprise knowledge into superior products/services/solutions. Regional MAKE studies have been established since the initial Global study of 1998. MAKE uses an expert panel's perceptual knowledge to identify and examine critical issues—in the case of the Global MAKE study to identify those organizations that are leaders in the 21st century knowledge economy. The Global MAKE Winners are selected by a panel of Global Fortune 500 senior executives and leading knowledge management/intellectual capital/innovation/organizational learning experts.
 8. IEG 2008.
 9. World Bank 2010a.
 10. IEG 2008.
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Feature 2 Technical assistance: open knowledge through expert advice

In Romania and Africa 'working collaboratively is a great advantage'

In recent years the World Bank's commitment to becoming a "global knowledge bank" has led to advances in the way the Bank interacts with clients, engages with partners, and uses technology, generating new approaches for tackling development challenges. Yet, even as this new era of open knowledge is celebrated, it's important to remember that the Bank has made knowledge an integral part of its mission for a half-century through its analytical and advisory services.

Two of those services, technical assistance and economic and sector work, have long been among the most important ways the Bank supports development. Through technical assistance, the Bank draws on its organizational experience and expertise to offer advice and support as countries work to strengthen institutions in order to reach their economic, social, and poverty goals. In many cases this advisory assistance cuts across all facets of institutional reform, as it has in Romania, which endured an extended period of postrevolution economic troubles before beginning a successful reform process.

In 1995–2002, when Romania undertook a widespread effort to transition to the market economy, technical assistance provided by the Bank formed the basis for the country's efforts related to this transition, restructuring and privatization of the financial and enterprise sectors. Romania relied on Bank technical assistance to create its Capital Market Development Program, which was instrumental in establishing pension, insurance, and mortgage regulations. The Bank also provided Romania guidance on agriculture policy ahead of the country's accession discussions with the European Union. Over the course of a few years, the Bank's knowledge work in Romania, through technical assistance, helped set the country's government on a course of reform and modernization.

But as country needs evolve and knowledge transfers become much more common, the approaches the Bank can take with technical assistance are also evolving. Bank experts generally offer advice and counsel, helping officials

prepare key documents, draft legislation, and form action plans, and they aid governments in shaping or implementing new policies. Because the work requires close local involvement, collaboration is an integral part of the technical assistance process. Increasingly, as the demand for knowledge has grown, the scale of that collaborative assistance also has grown, creating new networks of knowledge providers.

A good example is an African program launched in 2009, entitled Health System Strengthening (HSS). The program rose from the realization that the Millennium Development Goals in Health in Africa are unlikely to be achieved if the underlying health systems that deliver services to the poor remain weak and underdeveloped. Central to the operation



Feature 2 Technical assistance: open knowledge through expert advice *(continued)*

of HSS are two technical hubs with small technical teams in Dakar and in Nairobi, both providing technical, analytical, and operational expertise to governments and country task teams leaders. The teams have also provided technical expertise in countries where the Bank may not have active lending in health.

The program mainly supports countries that have joined the International Health Partnership, to scale up health, nutrition, and population services to reach the Millennium Development Goals, using a health system strengthening approach. It includes capacity development and knowledge management to support innovations in health system development. It also supports more than eight communities of practice on health systems in Africa, facilitating knowledge exchanges among policy makers and practitioners in countries and across regions.

According to Eva Jarawan, Sector Manager of the Africa Health, Nutrition and Population unit, “In designing the HSS program, great emphasis was put on partnerships both within countries and regionally.” These partnerships have harmonized efforts in providing support to countries through timely technical assistance, policy advice, and capacity building—and engaged in major analytical activities, such as Human Resources for Health in Africa and Investing in Health for Africa. South-South partnerships have also been established, such as the China-Africa Initiative, with technical discussions between China and Africa and China providing technical assistance in specific areas.

“Our capacity to respond to demand quickly and effectively and to enable knowledge sharing in countries but also regionally makes this a unique approach to health system strengthening,” said Chris Lovelace (HSS program leader).

The State of the World Bank's Knowledge Services

As mentioned in chapter 1, the Bank's definition of development knowledge has broadened from knowledge coincident with lending to include data on global development issues and broad engagement with societies to provide reliable knowledge in support of development debates.

This chapter describes the different types of Bank knowledge services. The boundaries of what is called "knowledge" are inevitably blurred. For this stocktaking, the definition includes research and practical knowledge related to development issues.

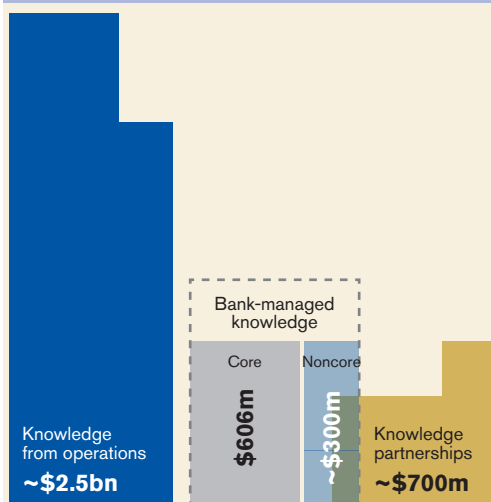
The Bank's knowledge services

As the Bank adapts its knowledge services to current demands, all three of the Bank's knowledge roles are changing. As a knowledge producer, the Bank is doing less economic and sector work and more technical assistance. Its research activities are becoming more open and collaborative, and independent researchers worldwide are being empowered by access to the Bank's open data and robust tools. As a knowledge customizer, the Bank is fostering more collaboration between and among Bank teams, government teams, civil society, and academia to apply global knowledge to pressing development challenges. As a knowledge connector, the Bank is linking practitioners and development professionals across the globe. Increasingly, the focus is on empowering non-state actors to press for greater accountability through their engagement in public debate and policy formulation (in the past the focus was primarily on state actors).

Knowledge activities exist not only as stand-alone services; they are also integrated with the

Bank's operations and underpin its lending activities. Following the 2010 Knowledge Strategy and the Bankwide effort in preparing this first Knowledge Report, the extent of the Bank's knowledge activities is becoming clearer. But the Bank has only one lens through which to view its knowledge work—the management information system and the defined knowledge "products" it captures. That system has its roots in enterprise software developed to manage discrete or industrialized processes, built on the notion that individual products have defined starting and finishing points. This Report deals mostly with the defined knowledge products and how they are produced. But that presents an incomplete picture of the Bank's knowledge activities. And even as we speak about "knowledge products" and "product lines," it is important to situate the discussion in a broader universe of World Bank–sponsored knowledge activities.¹ These are as follows: core knowledge activities funded by the Bank's budget or by trust funds and subjected to one or another type of Bank process for quality assurance; noncore knowledge activities prepared for other Bank management purposes (for example, country and sector strategies); noncore knowledge activities for which the Bank works within the organizational goals of a partnership, but for which the partnership itself retains responsibility for quality; knowledge activities embedded in lending operations as part of project preparation and implementation (while the Bank oversees quality as part of supervision and implementation support of the project-financed knowledge activities, quality review usually falls directly under the purview of the client; see figure 2).

Figure 2 The estimated universe of knowledge services



Note: Dollar amounts are estimates based on definitions in the text of noncore knowledge activities and core-like partnership knowledge activities.

Source: Estimates based on figures for network and technical assistance partnerships in IEG (2011a) and on Business Warehouse data.

Core knowledge activities funded by the Bank's budget or by trust funds, and subjected to one or another type of Bank process for quality, accounted for about \$606 million in fiscal 2010 (see annex 1). Core knowledge consists of explicit knowledge products that are codified and tracked in the Bank's management information system, and whose aim is producing or disseminating knowledge. The World Bank has identified nine core knowledge products. They include the best-known Bank knowledge products and services, such as economic and sector work, technical assistance, and the *World Development Report*—as well as external client training and capacity development, research, impact evaluations, global monitoring, and new product development. These core products are discussed in some detail below.²

Aside from core knowledge activities, other knowledge activities inform the Bank's business

or arise from work in partnership with others. These can be grouped as follows:³

- *Noncore knowledge activities* represented an estimated \$300 million for fiscal 2010. This grouping is an amalgamation of two broad types of activities. One type informs the Bank's strategy for its operations in general (including knowledge and lending services); it includes country partnership strategies, sector strategies, and evaluations by the Independent Evaluation Group. It makes up about one-third of spending on noncore knowledge. The other type makes up about two-thirds of spending on noncore activities and comprises activities under global partnerships housed within the World Bank, for which the partnerships retain discretion as to quality and management. Options are under consideration for classifying some of these activities as part of core knowledge products.
- *Core-like partnership knowledge activities* are generally similar to the Bank's "core" knowledge products but are not governed by the Bank's quality processes or captured in the Bank's reporting system because they are not considered "Bank products." Activities the Bank undertakes as part of partnerships with other development institutions, managed outside the World Bank under arrangements of various kinds, and that contribute to knowledge, are recently estimated at \$700 million a year, of which about \$200 million is noncore knowledge (included above), and \$500 million is core-like partnership knowledge.

In addition to the above knowledge products, there is a large body of knowledge embedded in Bank operations financed through lending proceeds. The Middle East and North Africa region systematically reviewed the knowledge embedded in operational documents and estimated that in 2010 borrowers spent about 10 percent of loan proceeds on



knowledge products, some of them very much like the Bank's core knowledge products. If similar percentages hold for other regions, knowledge spending embedded in Bank lending can be estimated at about \$2.5 billion for 2010, though this estimate must be considered very preliminary at this point.

Taken together, a broad estimate of the total spending on explicit knowledge services in 2010—funded by the Bank, by partnerships in which the Bank is involved, and from client loan proceeds—comes to about \$4 billion. While this figure is indeed a broad estimate, and captures spending on knowledge services much beyond the Bank's budget, it reflects one attempt to capture the breadth of Bank engagement in knowledge for its clients.

The Bank has yet to put a value on the tacit knowledge that staff, partners, and clients have developed and use in the course of their work. These knowledge producers have a rich diversity of backgrounds and development experience, or on that of the Bank's partners and clients. Neither codified nor explicit, this tacit knowledge is often transferred through direct individual interaction. There are ongoing discussions in the Bank about ways to capture and codify this tacit knowledge, and about challenges in designing mechanisms to ensure that it stays alive and current, transmitted and developed from year to year and from staff member to staff member—through mentoring, debriefing, and peer learning. Tacit and embedded knowledge are complex topics, and by their nature are difficult to quantify; these challenges will be taken up in future Knowledge Reports. This first Report focuses on the explicit knowledge products described previously—the Bank's core knowledge products.

The core knowledge products

The 2010 Knowledge Strategy⁴ classified nine types of Bank knowledge activities as core

knowledge products, grouping them into three broad categories (see box 5 for a full overview of core knowledge services):

- Knowledge for external clients.
- Knowledge as a public good.
- Knowledge for internal use.

Note that both “knowledge for external clients” and “knowledge as a public good” are inherently public goods. The main difference between the two types of products is that knowledge for external clients is usually geared toward a specific client country, and there is usually a more specific development objective to be advanced. By contrast, knowledge as a public good is meant for a global (noncountry specific) audience as is the case with the *World Development Report*.

When a core knowledge activity is planned, the task leader chooses from one of these nine product types. While some types reflect real differences, there is also considerable overlap—for example, an outside observer might have a hard time distinguishing between some technical assistance activities and some client training. Similarly, research and impact evaluations may use similar methods and address similar audiences.

This core knowledge is produced by almost every part of the Bank—in Regional Vice Presidencies (Regions) and Network Vice Presidencies (Networks), as well as by the Development Economics Vice Presidency (DEC) and the World Bank Institute (WBI).

The Regions, which collectively account for more than half of core knowledge spending, work mainly on knowledge for external clients. The Networks, which together spend just under a quarter of the Bank's core knowledge budget, divide their spending about 55 percent for external clients, 42 percent for internal use, and the remainder for global public goods. WBI, which accounts for about 9 percent of

The Bank has yet to put a value on the tacit knowledge that staff, partners, and clients have developed and use in the course of their work

For many years, economic and sector work accounted for the biggest share of the Bank's core knowledge services, but economic and sector work deliveries dropped from nearly 700 in fiscal 2005 to fewer than 500 in fiscal 2010, when the Bank for the first time spent more on technical assistance

core knowledge spending, does mostly capacity building for external clients. And DEC, spending about 10 percent of the total, works mostly on research, global monitoring, and global public goods. Other central units—such as Legal, Concessional Finance, and Operational Policies and Country Services (which includes the financial management and procurement groups)—account for the rest. The Treasury and Institutional Integrity vice presidential units also produce some knowledge that is not currently recorded as products or reflected in the \$606 million for core knowledge.

Knowledge for external clients

Knowledge services for external clients accounted for some \$444 million in fiscal 2010, almost three-quarters of the Bank's core knowledge spending. Knowledge for external clients includes work done for specific countries and also work done at a regional or even global level (see annex 1). This category is by its nature, a public good, especially since most of these products are available to the public. The four product lines under this category are economic and sector work, technical assistance, external training, and impact evaluation. The mix varies only slightly across Bank regions, though there are notable differences from region to region in the share of spending from trust funds.

The diagnostic report accompanying this Report discusses in detail the products and spending by category. This synthesis report focuses on what makes knowledge services for external clients especially effective: the length of engagement, the involvement and ownership of country counterparts, the soundness of technical work, and in some cases the additional lending.

Economic and sector work

Economic and sector work is analytical work meant to inform policy choices. It can include

studies on agriculture, energy, institutions, poverty, or climate change—to name but a few. During fiscal 2010 there were 1,626 active economic and sector work tasks, most done by country or sector teams in the Bank's Regions. For many years, economic and sector work accounted for the biggest share of the Bank's core knowledge services, but the number of economic and sector work deliveries dropped from nearly 700 in fiscal 2005 to fewer than 500 in fiscal 2010, when the Bank for the first time spent more on technical assistance. This trend is largely explained by client preferences or a move to undertake more knowledge activities as partnerships (which may not be fully captured in the Bank's management information system). However, the Bank will continue to monitor and study movements in these trends to ensure that it does not eventually impair our clients' ability to rely on solid evidence to inform their policy choices. In many cases the Bank's ability to offer high-quality technical assistance depends on a sound analytical foundation.

A recent example of influential economic and sector work is the Africa Infrastructure Country Diagnostic, an unprecedented effort to document public expenditure and sector performance in each of the main infrastructure sectors, culminating with the 2010 publication of the flagship *Africa's Infrastructure: A Time for Transformation*, along with companion pieces for various audiences. This work has become the reference point for Africa's infrastructure challenges, providing an empirical basis for deciding on investment and priorities and designing policy reforms.

Long-term, broad-based knowledge engagements can be especially fruitful in supporting policy change. Consider the Bank's work with Indonesia on poverty analysis, a three-year effort (2003–06), supported by nearly \$1 billion in Bank funds and more than twice that



in trust funds from the UK Department for International Development. The objective was to consider ways to help the government address poverty as the central development challenge. This required analysis, dialogue on the issues, and the development of a comprehensive poverty strategy that focused on making growth work for the poor, making public expenditure work for the poor, and making services work for the poor. The program's success was due in part to its cross-sectoral mandate, which involved counterparts from seven ministries, as well as from local government and other agencies. The entire activity was characterized as a single piece of economic and sector work.

In 2008 the Independent Evaluation Group (IEG), which reports to the Bank's Board, recommended greater selectivity in economic and sector work, and more serious attention to tracking results.⁵ In 2009 the Quality Assurance Group (QAG) found that most economic and sector work tasks were appropriately focused on issues of key importance to clients.⁶ But there was less attention to client participation, dialogue, and dissemination, which determine impact. Managerial attention to quality concentrated on the front end, at the concept or design stage, dropping off during implementation. And incentives for Bank staff emphasized producing and delivering economic and sector work, not focusing on its longer term impact. Both IEG and QAG found widespread shortcomings in consistency of internal recording and monitoring of analytical tasks, and retaining documents. There is ongoing work to strengthen the capture, retention, and retrieval of documents, and this is also an issue that future Knowledge Reports will examine in depth.

Technical assistance

Technical assistance supports client efforts to implement reforms and strengthen institutions.

During fiscal year 2010 there were 1,424 technical assistance activities, up from 782 in fiscal 2005. This trend mainly reflects the Bank's response to the request from client countries for more technical assistance support.

A good example is the work on "Aid for Trade" in Mauritius in 2006. The government asked for help in defining its trade reform program and mobilizing funds as part of a multi-donor initiative. Within two months of the request, a Bank team provided analysis of possible reforms, including estimates of the costs of lowering trade barriers, reforms of the tax structure, and strategies to lower the cost of key services. At the end of a two-week Bank mission, the team presented the government with a summary of the main reform options. Among the important factors underlying the effectiveness of the technical assistance were the timely nature of the support and the ability to build on existing economic and sector work. After extensive internal debate, the government adopted many of the team's recommendations in its reform program, which was eventually supported by a Bank loan.

The 2008 IEG study found that clients preferred technical assistance to economic and sector work in both International Bank for Reconstruction and Development and International Development Association countries.⁷ The 2009 QAG report also rated technical assistance tasks somewhat higher than economic and sector work, because of clearer objectives, greater client involvement and coordination with bilateral donors, and better dissemination arrangements.

The Bank's clients place a high value on technical assistance, and because the work requires their engagement, collaboration is a natural part of it, making the knowledge imparted more accessible. A good example of such collaborative work is the Europe and Central Asia Region's

The 2008 IEG study found that clients preferred technical assistance to economic and sector work in both IBRD and IDA countries

Total expenditure on external client training across the Bank declined from almost \$72 million in fiscal 2005 to about \$55 million in fiscal 2010

Public Expenditure Management Peer Assisted Learning, designed to enhance domestic capacity in public expenditure and financial management, to play a catalytic role in scaling up aid, and to strengthen institutions and policies by establishing a forum for peer-to-peer exchange. One key to its success was the involvement of many local researchers and opinion leaders.

External client training

External client training encompasses a broad range of activities, from events that focus on awareness raising or skill enhancement to the design of curricula and learning materials—and is used mainly by WBI. In fiscal 2008 WBI introduced a programmatic approach where several deliverables could be consolidated under a single Activity Initiation Summary (AIS). From fiscal 2009 programmatic AISs could also become multi-year. In the spring of 2009 the WBI's Renewal Strategy further consolidated WBI's programs through strategic selectivity. All these measures were designed to generate better results on the ground through the delivery of more integrated and strategic external training services to clients and substantially contributed to the number of tasks dropping from 1,677 in fiscal 2005 to just 292 in fiscal 2010. Total expenditure on external client training across the Bank declined at a slower rate, from almost \$72 million to about \$55 million over the same period, mainly reflecting budget cuts.

WBI has developed a Capacity Development and Results Framework as part of its new strategy, launched in 2009. The framework links capacity development initiatives to the sustainable institutional changes required for development results. Promoting flexibility and innovation in the change process allows for measuring achievements at the level of intermediate capacity outcomes (awareness, skills, coalitions, networks, know-how). WBI is making

significant investments to apply this strategic results-focused approach in its programs, and to support learning about what works, and why, in capacity development.

One recent example of this kind of South-South exchange was seen after the earthquake hit Haiti in 2010, wiping out much of the housing infrastructure. Before the government could begin major reconstruction, it needed to shelter those who had lost their homes. Using a South-South Facility grant, the Bank connected Haitian officials and technical experts to counterparts in Indonesia to learn how to implement community-driven development reconstruction programs. Indonesia had come a long way since the tsunami shattered its shores and subsequent earthquakes shook its buildings, and critical to its quick recovery was the use of community-driven development programs that empowered local communities to take charge and rebuild. The exchange inspired Haiti to amend its housing policies, formulate new policies to facilitate reconstruction, and develop a blueprint for the first set of housing units.

Impact evaluation

Impact evaluation, empirical work to measure the effect of a development intervention on outcomes, is the newest category of knowledge product, established in 2006 by the Chief Economist's Office, as part of the Development Impact Evaluation (DIME) initiative. By definition, it measures outcomes relative to a well-specified counterfactual. Aimed at informing an external client, it leads to a freestanding report when it is linked to the supervision of a Bank-financed project or program—or to the preparation of a new one.

One example of this kind of work comes from Madagascar, where the government is working to improve school management. With support from a Bank team, a group of educators



developed a new set of management tools that was validated and owned by practitioners. The government wanted to test the efficacy of the new tools before scaling them up country-wide, and so decided to undertake a rigorous impact evaluation. The Bank team facilitated the Malagasy team's participation in training workshops and engagement with external experts to conceptualize the design of the impact evaluation, which the country team then implemented. When the evaluation found that the new tools were effective, government officials made the decision to disseminate them more widely. More generally, the impact evaluation gave Malagasy policy makers an appreciation of the benefits of impact evaluation, and the same team subsequently launched another impact evaluation focused on school feeding.

Although impact evaluation is an important and fast-growing element in the Bank's knowledge work, it is also the newest element, and accounts for less than 2 percent of the Bank's core knowledge. In 2010 the Bank spent about \$11 million as part of the DIME initiative (see annex 1), though impact evaluation work from other sources came to an additional \$3 million. There have been 162 impact evaluation tasks between 2006 and 2010, with unit costs varying from less than \$50,000 to almost \$500,000. More than other knowledge activities, impact evaluation depends on trust funds.⁸ There has not yet been an evaluation of the Bank's impact evaluation work, but IEG is planning one.

Knowledge as a public good

The Bank supports debate, discussion, and policy making on issues of global significance. While all of the Bank's work contributes to the public good, the name of this category denotes work that has no prespecified external or internal client, but that ultimately benefits the cause of development worldwide. Three knowledge

services are categorized as knowledge as a public good:

- Research, which is original analysis using rigorous methods to advance knowledge or stimulate debate.
- The annual *World Development Report*, which consolidates development knowledge on a topic, to stimulate debate on new directions for policy.
- Global monitoring, which provides data and tools to enable policy makers and advocacy groups to make better informed decisions.

Together, these services accounted for about \$62 million (or 10 percent) of core knowledge spending in fiscal 2010.

Research

The Development Economics (DEC) arm of the Bank does more than 80 percent of the Bank's research, and research is the greatest share of what DEC does, annually publishing 10–20 books and edited volumes, 100–150 journal articles, and 150–200 working papers. Figure 3 illustrates the range and focus of topics covered by DEC research. DEC focuses on:

- Conducting applied policy-oriented research on pressing development issues (measuring poverty and inequality).
- Influencing policy debates on development, both globally and in countries (documenting absenteeism by teachers and health workers).
- Producing data geared to addressing the most important development issues, and connecting data producers with data users (World Development Indicators).
- Creating robust operational tools to facilitate analysis by practitioners in developing countries (ADePT, a free software platform for automated economic analysis).

Research managed by DEC or financed through research funds undergoes a rigorous

Although impact evaluation is an important and fast-growing element in the Bank's knowledge work, it is also the newest element, and accounts for less than 2 percent of the Bank's core knowledge

Figure 3 Word cloud for titles of World Bank–authored journal articles

Source: Adapted from Ravallion and Wagstaff 2010.

peer review. For example, DEC task team leaders are not involved in the selection of reviewers or in the flow of documentation. Some research tasks are selected competitively, and citation in external peer-reviewed journals is encouraged as evidence of development impact. Unlike work for clients, research products do not necessarily represent Bank views, and a disclaimer to this effect is included in research publications.

World Development Report

Since 1978 the annual *World Development Report* has provided in-depth analysis of a specific aspect of development, representing state-of-the-art knowledge in that area. It brings together research, case studies, and the results of extensive consultations with leaders and development practitioners throughout the world. The 2010 Report was on climate change, and the 2011 Report, on conflict and security. It is one of the few pieces of knowledge work discussed by the Bank’s Board.

Global monitoring

Global monitoring products are often open-ended, unlike other knowledge products that have defined starting and closing points. The Living Standards Measurement survey has been in use since the 1980s. The World Development Indicators, the Purchasing Power Index database, the International Household Survey Network, and the Bank’s poverty mapping databases are also part of this category. Some knowledge work that the Bank treats as economic and sector work is conceptually similar to global monitoring products, such as the Bank’s *Doing Business 2011* report. This is the most downloaded report from World Bank websites, with 2.4 million visits, 6.6 million page views, and 309,000 total files downloaded this year.

As a part of its global monitoring, the Bank combines expertise in regional issues, market trends, and forecasting to construct a consistent view of global economic prospects and the implications for macroeconomic trends in developing



countries. These opinions were just issued in the annual print and online editions of *Global Economic Prospects*. The Bank's *2011 Global Development Horizons* addresses multipolarity in the global economy and the associated structural changes in growth, corporate investment, and international monetary and trade arrangements. The annual *Global Monitoring Report* is a joint effort by the World Bank and International Monetary Fund to monitor progress toward the Millennium Development Goals, proposing priorities for policy responses by developing countries and the international community.

The Bank's new Open Data policy has greatly expanded the number of users downloading development data from the Bank's databases. At the time of the Open Data announcement in April 2010, there were about 140,000 paid subscribers. Providing free and easier access to the databases has had an immediate impact on use, with well more than 20 million page views and the number of visitors using the site more than tripling. Over the past year, the number of entries in the data catalog has increased dramatically. And of the 7,000 indicators available, more than 1,200 can also be accessed in Arabic, Chinese, French, and Spanish. Recently the Bank added a Central Microdata Catalog, a portal for Bank and non-Bank household survey data that meet international standards for quality. By July 2011 the catalog contained more than 600 surveys with some 360,000 searchable variables.

Knowledge for internal use

Knowledge for internal use accounted for some \$99 million (16 percent) of knowledge spending in 2010, with two types of services: internal knowledge products and new products.

Internal knowledge products

Internal knowledge products relate to the Bank's internal activities to produce and deliver

sectoral reports, policy papers, tools, and databases developed primarily for Bank staff. The terms "knowledge management" and "internal knowledge products" are both used for this category of activity—a mix in terminology that reveals and conceals some ambiguity in whether these activities are concrete *products*, analogous to economic and sector work intended for Bank staff, or *processes* to ensure connectivity. The stated objective of this category is "to ensure that staff have the knowledge and skills required to achieve results for/with clients."⁹

The internal knowledge product line accounted for \$81 million (13 percent of core knowledge) in fiscal 2010—third largest among the nine core knowledge product lines, after technical assistance (\$195 million) and economic and sector work (\$184 million), and ahead of external training for clients (\$55 million).

Internal knowledge products are aimed at ensuring that sector staff are well connected across the globe, and have access to the ideas, experiences, research, and global knowledge to be as effective as possible in their work with clients. Investments in this category, like that for most of the Bank, are highly decentralized (sector by sector). Because concerns have been identified about the consistency and quality of governance of these activities, regional and Bankwide management are working to ensure that accountability, results measurement, and evaluation mechanisms are strengthened.

"Scaling Up HIV/TB Interventions in Africa," financed by Dutch trust funds, is an example of an internal knowledge product. It studied new approaches for responding to the two epidemics. In partnership with WHO, UNAIDS, and the Royal Netherlands TB Foundation, Bank specialists reviewed new scientific knowledge and country experience to provide hands-on support to task teams (and governments) on

The Bank's new Open Data policy has greatly expanded the number of users downloading development data from the Bank's databases

In 2002 spending on economic and sector work was nearly twice that on technical assistance. By 2010 spending on technical assistance services had almost quadrupled, accounting for more than economic and sector work

concrete ways to deal with tuberculosis/HIV coinfections. The techniques are being replicated by other donor agencies such as PEPFAR and the Global Fund to Fight AIDS, Tuberculosis and Malaria, as well as by nongovernmental organizations.

New products

Many Bank units develop new Bank business products, such as pilots and prototypes. Examples include:

- The Prototype Carbon Fund.
- Subnational finance products.
- International Development Association (IDA) partial credit guarantees.
- Weather risk management tools.
- Expanded IDA/International Bank for Reconstruction and Development credit buy-downs.

There is debate in the Bank about whether some or all of this work should be included in the Bank's core knowledge products.

Key trends and issues

A survey of a broad range of users of economic and sector work and technical assistance activities completed between fiscal 2008 and fiscal 2010 was sent to 1,220 end-users, able to provide their responses in various languages. The survey results, at the time of publication of this Report, are not representative.¹⁰ Even so, the results indicate client perceptions which are largely consistent with IEG's 2008 findings.

In general, respondents considered the Bank's economic and sector work and technical assistance products as supporting policy decisions and implementation. There was an almost inverse relationship between cost and policy impact—smaller reports (less than \$50,000) were considered to have had the most impact, and larger reports (costing more than \$500,000) the least. There was also a preference for technical

assistance over economic and sector work in providing support for policy decisions, timeliness, and relevance—and as a source of relevant information on global good practices. And technical assistance as well as economic and sector work informs client policies, blurring the line between them.

Greater responsiveness to clients and partners

In 2002 spending on economic and sector work was nearly twice that on technical assistance. By 2010 spending on technical assistance services had almost quadrupled, accounting for more than economic and sector work (see annex 1). Within the technical assistance category, “how to” guidance increased even faster, and now accounts for more than half of all technical assistance tasks.

While spending on economic and sector work has been relatively flat for several years in 2002–10, spending within the category has been shifting. The number of core diagnostic reports dropped by 40 percent over the last five years,¹¹ while the number of regional and global economic and sector works increased. As noted earlier, these trends in economic and sector work reflect the Bank's response to clients for more technical assistance, “just-in-time” advice and policy notes that requires less time to absorb for busy country counterparts. In addition, much of the Bank's core diagnostic work has an extended useful life, therefore the Bank is intentionally relying more on data and diagnostics produced by, or in collaboration with, government, think tanks, and bilateral and multilateral development partners. However, while responding to client needs, the Bank will ensure that this shift in trends for economic and sector work is not compromising the foundations of the Bank's knowledge—the ecosystem depends on a healthy mix of interrelated

knowledge activities (see box 3) and is integrally related to lending operations.

Between fiscal 2002 and fiscal 2010 the number of active knowledge products rose from 3,672 to 5,192 (up 41 percent). The increase in the number of tasks may indicate greater responsiveness, but is also a challenge to managing for results. Both the IEG 2008 evaluation and the pilot survey for this Report show that clients are asking for shorter analytical pieces and “just-in-time” advice. However, the proliferation of tasks may also be a symptom of working in silos, multiplying tasks and duplicating effort implying lower connectivity. It is difficult for the Bank to manage so many tasks and measure their impact—particularly when a focus on fewer, more strategically selected tasks is likely to have greater impact.

Some units within the Bank have adopted a programmatic approach to addressing fragmentation, with a focus on results and economies of scale. Consider the WBI, whose programmatic approach to external training bundled individual tasks into a smaller number of initiatives. As noted earlier, this reduced the number of external training activities from 1,677 to 292 between fiscal 2005 and fiscal 2010, a more than 80-percent reduction.

More knowledge work is done in partnerships, not always captured in the Bank’s systems. Although the Bank does not track the outputs of partnerships, as mentioned earlier in this chapter, it is clear that knowledge work done in collaboration with others is increasing. For example, the Water and Sanitation Program—a partnership of 14 bilateral donors, the Bill & Melinda Gates Foundation, and the Bank—generates extensive data and analytical work. Much of the Bank’s work on inclusive finance is now done through the Consultative Group to Assist the Poor, involving more than a dozen bilateral and multilateral agencies. Other

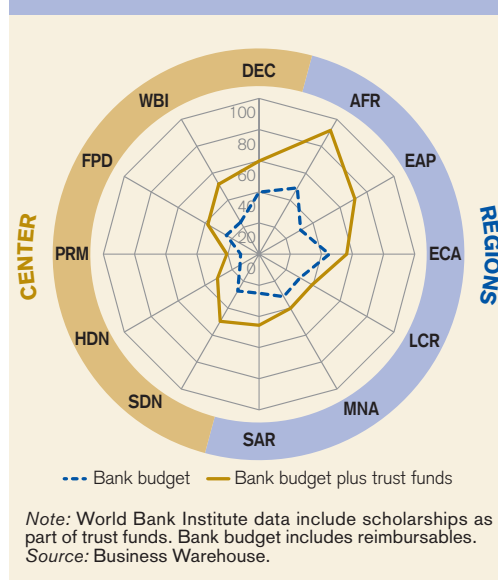
partnerships accounting for significant knowledge production and dissemination include the Public Private Infrastructure Advisory Facility, the Energy Sector Management Assistance Program, the Cities Alliance, the Program on Forests, and the Global Program on Sustainable Fisheries. Overall, the World Bank is involved in more than 200 such collaborations, most described as knowledge brokering.

Trust funds and fee-based services are becoming more important

In fiscal 2010 trust funds accounted for about \$245 million, or 40 percent of core knowledge spending, up from about 30 percent in fiscal 2005. Their use for knowledge work varies tremendously, especially across regions (figure 4) and across product type (box 5).

Trust funds, by adding resources beyond the Bank’s operational budget, make it possible to deliver more knowledge services, particularly economic and sector work and technical

Figure 4 The contribution of trust funds varies by unit (\$ millions, 2010)



In the spirit of open knowledge, the Bank will also consider dropping the distinction between knowledge for external clients and knowledge for internal use

assistance, and respond to a wider range of client needs. For example, they have been instrumental in raising awareness of community-driven development and climate change. And for the Gender and Development programs and the Governance Partnership Facility, they have been combined with just-in-time competitive awards to raise awareness of gender and governance issues in the Bank and in the development community. The Gender Action Plan implementation period culminated in the 2012 *World Development Report* on gender and development and the selection of gender as one of the four special themes under IDA-16, with trust funds having financed more than 260 products and services, including those for research and knowledge. The Governance Partnership Facility, launched in 2008, has awarded 86 grants, totaling roughly \$60 million, to fund innovative projects around the world. It supports the Knowledge and Learning Portal, uniting all regions and networks.

Trust funds have enabled more work in areas that could otherwise not be financed through the Bank budget alone. The Independent Evaluation Group, while recognizing the important role of trust funds in leveraging resources, raising awareness and facilitating quicker response, nevertheless concludes that their outcome orientation could be strengthened.¹² The Bank is addressing these issues in the context of the Trust Fund Management Framework approved by the Board in 2007.¹³

In recent years the Bank has entered fee-based agreements with middle-income countries for economic and sector work and technical assistance, mostly in Europe and Central Asia, Latin America and the Caribbean, and Middle East and North Africa. They appear small as a share of the Bank budget, but have risen from \$13 million in 2008 to \$19 million in 2010. For some middle-income countries

(especially in Europe and Central Asia and Middle East and North Africa), fee-based services have become the predominant practice.

Going forward, the Bank will consider a more standardized approach to fee-based services. Management will work to clarify the budget treatment of fee-based service fees, the proprietary nature of the services and how this relates to the policy on access to information. At present, management sees fee-based services as a useful menu option for some clients and for certain types of engagements.

Knowledge is becoming more open

The Bank spends more on development knowledge than many other institutions, and its contributions are an important part of a broad stream of development knowledge. More openness will help increase the importance of the Bank's knowledge work. President Robert Zoellick, in a speech at Georgetown University in September 2010, articulated a need to democratize development economics: "We need to throw open the doors, recognizing that others can find and create their own solutions. And this open research revolution is under way. We need to recognize that development knowledge is no longer the sole province of the researcher, the scholar or the ivory tower." Our aim, President Zoellick said, is to "open the treasure chest of the World Bank's data and knowledge to every village health care worker, every researcher, everyone."¹⁴

In the spirit of open knowledge, the Bank will also consider dropping the distinction between knowledge for external clients and knowledge for internal use. In practice, both types of knowledge are often shared: external products with internal audiences, and internal products with external audiences. At a minimum, there is an opportunity to bring more external collaborators into this mix, to ensure



that Bank staff have access to world-class best practices. Already, as part of implementation of the 2010 Knowledge Strategy, the Bank has engaged three international experts on topics related to mobile banking, urbanization, and climate change to bring global expertise and world-class ideas to its clients (see annex 2).

Quality, relevance, and results

In addition to the above trends, arrangements for assessing quality, relevance, and results has been a key issue in ensuring greater connectivity in the knowledge products. Evaluations of Bank knowledge services show there is more emphasis on technical quality, less on strategic relevance and impact. They also show that high-impact knowledge services are characterized by considerable interactions with client governments, to build consensus and strengthen ownership—from initiating the task to formulating recommendations, including sustained follow-up beyond one-off dissemination.¹⁵

The Bank's systems and incentives have tended to focus on ensuring the quality and relevance of the knowledge product itself, even though Bank staff repeatedly find that the quality of engagement makes the real difference. For much knowledge work, the Bank does not yet have systems to track, let alone measure, the extent and quality of engagement with clients. Little systematic attention is paid to what happens after a product is delivered. However, beginning in fiscal 2012, with the new tools and changes proposed under the Bank's review of its analytical and advisory work, there will be greater focus on planning for and engaging clients in the production, dissemination, and assessments of knowledge work.

For client-facing work, the rule set and management attention appear to be strongest for economic and sector work and technical assistance. For regional studies, Chief Economists

consistently play a strong and direct role in strategic selection, quality control, financing, and dissemination. For economic and sector work and technical assistance dealing with individual countries, there is general and consistent understanding across all Regions that accountability for technical quality and strategic relevance lies with the Sector Manager and the Country Director. Across the Regions, there is some variance in arrangements for quality monitoring, support, and control depending on the number of active client countries in a region and the level of engagement in the quality control process of the Chief Economist's office. Regional models range from proactive and hands-on support and advice from the Chief Economist, as in Africa (with a special focus on weaker country programs), to a much more selective and arms-length support, as in Latin America and the Caribbean. A more consistent approach would clarify accountability for technical quality, client engagement, relevance, and results. An internal Bankwide quality assurance function would promote such consistency. The Bank is currently completing a review of existing quality arrangements that will be used to strengthen the quality assurance framework.

For external client training, WBI task teams are now using a core set of intermediate and final outcome indicators to inform program design and results measurement. The intermediate indicators for external training are focused on the outcomes of engagement, with the aim of strengthening the capacity of local (nonstate and state) actors to participate in change processes. The integration of monitoring and evaluation at all stages promotes systematic learning to determine what works and does not work, and enables timely corrective action.

For research work, more than most other knowledge areas, the Bank has well-developed

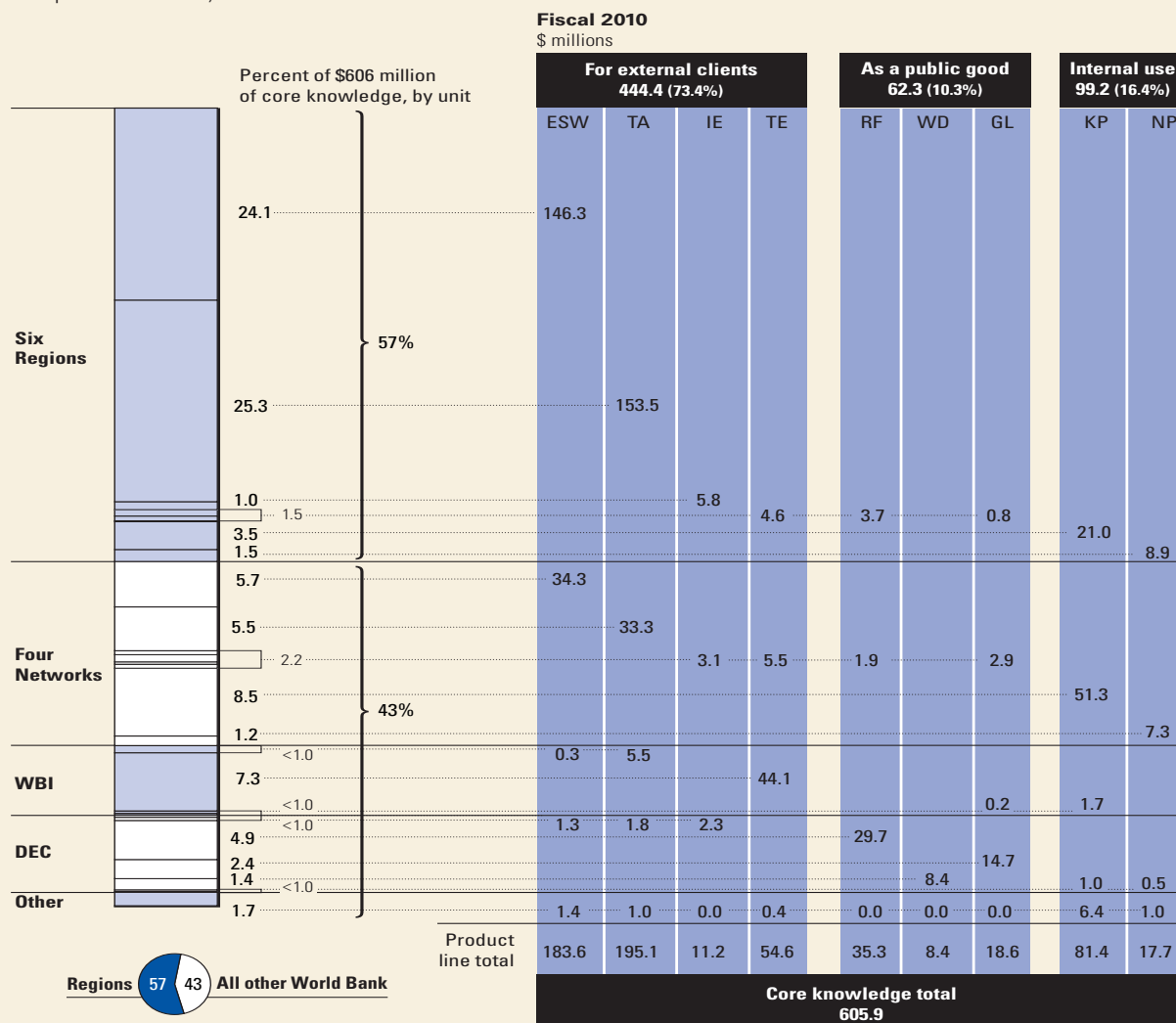
The Bank's systems and incentives have tended to focus on ensuring the quality and relevance of the knowledge product itself, even though Bank staff repeatedly find that the quality of engagement makes the real difference

Box 5 An overview of core knowledge

The Bank's nine core knowledge activities or product lines are organized into three categories, by audience.

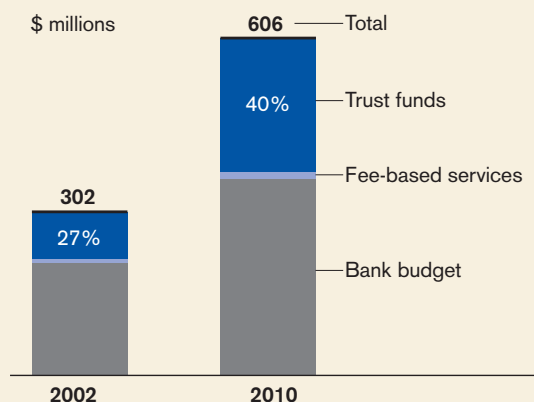
Category	Product line	Purpose
Knowledge for external clients	ESW Economic and sector work	Inform policy
	TA Technical assistance	Assist reform implementation and strengthening institutions
	IE Impact evaluation	Analysis of development interventions
	TE External training	Training
Knowledge as a public good	RF Research	Use of rigorous tools to advance knowledge and debate
	WD <i>World Development Report</i>	New directions for development policy
	GL Global monitoring	Data and tools for policy makers, academics, and CSOs
Knowledge for internal use	KP Knowledge products	Activities supporting the knowledge flow across the Bank
	NP New product development	Development of new products for the Bank

Core knowledge activities are undertaken across the Bank, with some degree of specialization by the Regions (whose economic and sector work and technical assistance represent about 80 percent of all economic and sector work and technical assistance or about half of core knowledge), Networks (which produce about 63 percent of internal knowledge products), World Bank Institute (which produces about 80 percent of external training), and DEC (which produces about 85 percent of research).

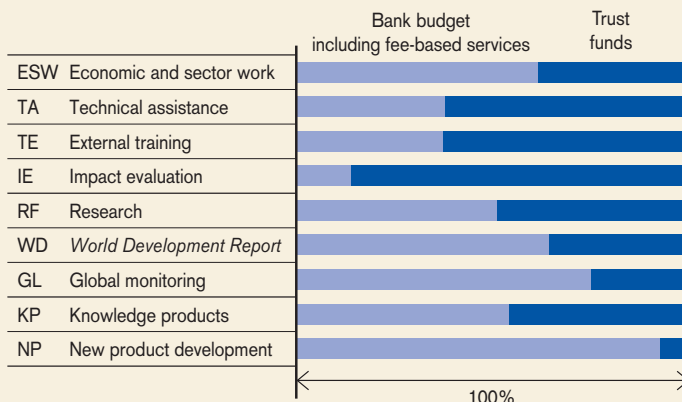


Box 5 An overview of core knowledge (continued)

The share of trust funds and fee-based services in total spending has increased since 2002



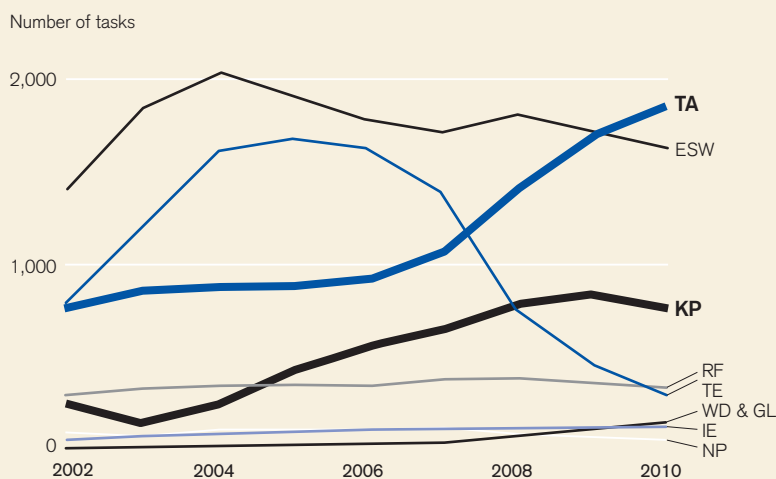
The share of trust funds out of total spending varies significantly across products



Fee-based services are rising for Europe and Central Asia, Latin America and the Caribbean, and Middle East and North Africa

	Total	AFR	EAP	ECA	LCR	MNA	SDN	PRM	FPD	WBI	DEC
<i>\$ thousands</i>											
2002	3,709	0	0	0	0	372	657	30	41	2,455	155
2010	18,780	1,071	113	5,199	3,253	7,486	0	0	345	1,308	5
<i>As a share of the unit's Bank budget for knowledge (percent; including reimbursables and excluding trust funds)</i>											
2010	5.2	2.2	0.4	11.5	10.8	23.8	0	0	1.4	5.5	0

Output for technical assistance and for knowledge products for internal use is increasing



Note: The significant decline in the trend for external training is a result of changes that took place in WBI reflecting a more programmatic approach, which reduced the number of tasks by organizing them into larger groupings.

To strengthen the link between researchers and operational parts of the Bank, the Research Group (DEC) aims to dedicate a third of its staff time to cross-support, and the other two-thirds to more open-ended research

quality control mechanisms and quality standards for its outputs. Bank research is most effective when it involves a close collaboration between researchers and operational parts of the Bank. To strengthen this link, the Research Group (DEC) aims to dedicate a third of its staff time to cross-support, and the other two-thirds to more open-ended research.

For the *World Development Report*, extensive internal and external reviews ensure quality and relevance. An independent evaluation pointed to the “lasting importance and influence” of several *World Development Reports*.¹⁶

For internal knowledge products, a 2009 QAG report¹⁷ found that some appear to be of lower quality than knowledge products for clients. The report concluded that internal knowledge products were often supply-driven and undermanaged, pointing to poor quality of data on product costs and delivery dates, and weak document retention within responsible units.

About 80 percent of these internal knowledge products are produced by the Bank’s Networks, with the Sustainable Development Network (SDN) consistently the largest producer. In part as a result of the QAG study, SDN has worked to improve the quality of its internal knowledge products, and started to subject them to the same governance processes as economic and sector work. For example, peer reviews are now required for internal knowledge products costing more than \$30,000.

Essential for quality assurance of all product lines is the peer review at concept and delivery—to assess quality, relevance, and results and to ensure cross-regional or cross-country transfers of knowledge. For economic and sector work in most units, task team leaders propose their own peer reviewers to the sector manager. However, there are no guidelines or criteria to assist reviewers or ensure consistency across the Bank in assessing quality, relevance,

and results. But in the DEC research unit, management chooses peer reviewers, including external reviewers. The peer-review process will be strengthened and made more consistent across the Bank by including external reviewers, where appropriate, and by assessing the articulation of a development objective, the identification of indicators to measure achievement of the objective, and the quality of the engagement.

There are ongoing initiatives to strengthen the results orientation of the Bank’s knowledge activities including approaches that move beyond self-assessments to include client feedback. Currently, with the exception of WBI’s external training, there is no routine mechanism for gathering feedback from external clients, or from stakeholders or observers, on whether the knowledge activity is achieving its intended objective, outcomes, or change objectives. The companion diagnostic report provides the details of plans for more rigorous assessments of knowledge results. These changes have come about mainly through two efforts:

- The Capacity Development Results Framework¹⁸ adopted by the WBI in 2009 for external training, which has good potential for broader applicability.
- The fiscal 2011 review of the Bank’s analytical and advisory activities (the AAA Review), focused on economic and sector work and technical assistance, and led by the Bank’s Operational Policies and Country Services vice presidency.

Both efforts call for greater attention to why a knowledge activity is being undertaken, what development contribution is intended, and whether the work is achieving its intended objectives. In the case of external training, task teams are already required to specify the outcome or change objectives of the work and provide evidence of achievement of results.



Starting in fiscal 2012, task leaders of technical assistance and economic and sector work are required to clearly articulate, at the concept stage, the change objective and related indicators, including how they will be measured to demonstrate their contribution to results.

Defining intermediate outcomes will shift the focus from outputs to outcomes—and capture the Bank’s convener or connector role in many knowledge activities. At completion, task leaders will be asked to assess the degree to which these outcomes and change objectives were achieved. As a result of the AAA Review, management has developed new tools to improve management and measurement for results for economic and sector work and technical assistance.¹⁹ These tools will help strengthen accountability and lead to greater outcome orientation of the Bank’s knowledge work.

Because knowledge activities can take some time to generate results, it is important to look back on the work after it is completed. In 2008 the Independent Evaluation Group did the only retrospective analysis of economic and sector work and technical assistance.²⁰ This study’s five recommendations were as follows:

“First, reinvigorate the mandate . . . to maintain a strong knowledge base on countries and sectors where the Bank is providing or planning to provide funds. Second, ensure that ESW in IDA countries is adequately resourced (even if it means fewer ESW tasks), since cost matters for quality, and quality matters for effectiveness. Third, enhance institutional arrangements for ESW and TA by ensuring substantive task team presence in country offices—particularly in countries with low institutional capacity—to facilitate closer client collaboration. Fourth, recognize, receive, and build on

client feedback to counter-balance current Bank incentives for lending over nonlending and ESW over TA. Fifth, take the results tracking framework for ESW and TA more seriously, including systematizing client feedback.”

Since the 2008 IEG report, progress has been most noticeable on the third, fourth, and fifth recommendations. Decentralization of Bank staff has ensured a substantive presence in client countries. The Bank is moving toward increasing client feedback on nonlending activities, both through sample surveys in regions (and for this Report) and by reconfiguring the main client survey instrument. And, as described in this Report, results measurement is being significantly improved going forward.

In the case of research, DEC makes its data and analytical work available online and routinely tracks statistics on webpage views, unique visitors, file downloads, and dataset access. The measures use objective criteria to gauge the Bank’s interaction with the world. They are also related to staff incentives—salary increases are tied to the number of times a researcher’s work is cited in the academic literature. While downloading a research report does not in itself result in policy change, it can be a first step toward that change. In addition, the Bank is exploring approaches to survey the users of that information to see whether they found it useful. One option being considered is to solicit permission from users to contact them with a follow-up survey (as part of the download process), with follow-up a week or two later. The merits of this and other approaches or options will be examined in the course of developing an implementation plan for the Bank’s knowledge work.

For internal knowledge products and new product development, network and sector

Defining intermediate outcomes will shift the focus from outputs to outcomes—and capture the Bank’s convener or connector role in many knowledge activities

management will require task teams to clearly articulate the results they expect and to measure progress toward those results. This will give management the tools to make strategic choices, including the weight to give each of the Bank's three knowledge roles in each sector (producer, customizer, and connector).

This chapter described the Bank's core knowledge services, identified important trends, and described the Bank's current approaches to quality and results. It showed that there is significant variability in how these activities are managed, and how results are measured. This variability in quality limits the ability of the institution to promote an integrated delivery of solutions to clients (or the operation of the knowledge ecosystem) and strategic prioritization. The next chapter describes management's approach to developing the tools it needs to ensure quality, relevance, and results across product lines and to support setting better strategic priorities.

Notes

1. Core knowledge is the subject of this Report. It is distributed across nine activities or product lines, with different audiences and functions under three core categories: knowledge for country clients, knowledge as a public good, and knowledge for internal use. Over the course of future Knowledge Reports, the Bank will discuss possible changes to, and simplification of, its knowledge product coding.
2. See the diagnostic report that accompanies this Report for a deeper discussion of the Bank's knowledge products and services.
3. Estimates based on figures for network and technical assistance partnerships in IEG (2011a) and on Business Warehouse data.
4. World Bank 2010b.
5. IEG 2008.
6. QAG 2009a.
7. IEG 2008.
8. Legovini 2010.
9. Human Resources Leadership and Organizational Effectiveness website: <http://go.worldbank.org/YNUY52WVF0>.
10. The survey was planned and conducted a year or two after the economic and sector work and technical assistance were completed, to give time to observe some results from the knowledge activity. There were too few responses from clients leading to a lack of representativeness of the survey. In addition, task teams often had difficulty locating the contact information for their clients. Going forward, management plans to make it mandatory for task leaders to identify and agree with management on the list of clients at the beginning of any activity.
11. This subcategory includes Country Economic Memoranda, Development Policy Reviews, Poverty Assessments, Public Expenditure Reviews, Country Financial Accountability Assessments, Country Procurement Assessment Reviews, and Integrated Fiduciary Assessments.
12. IEG 2011b.
13. World Bank 2007.
14. Zoellick 2010.
15. IEG 2008.
16. Banerjee and others 2006; Ravallion and Wagstaff 2010.
17. QAG 2009a.
18. World Bank Institute 2009.
19. These tools include a programmatic approach to tasks, a flexible "just in time" product, an enhanced Country Portfolio Reporting Tool, simplification of control points, a revised self-assessment tool, and an enhanced storage and retrieval system.
20. IEG 2008.

Feature 3 Economic and sector work: open knowledge through informed analysis

Real results from a decade-long partnership with Vietnam

Whereas technical assistance is mostly advisory, economic and sector work involves research and analysis meant to inform policy choices. Like the *World Development Report*, these studies illustrate the Bank's long-standing role as a producer of knowledge.

For many years economic and sector work accounted for the biggest share of the Bank's core knowledge activities. Interest in advisory services and partnerships is increasing, but economic and sector work activities remain central to the Bank's knowledge commitment and, as with technical assistance, collaboration is an increasingly critical part of what might be considered "traditional" Bank work. A collaborative long-term approach to promoting open knowledge in Vietnam, for instance, was rooted in standard economic and sector work practice, but the joint partnership of the Bank and the Vietnamese government from the beginning exemplified changing approaches.

During 2010 more than 1,600 economic and sector work projects were under way. The Bank produces more than 50 different types of reports, ranging from narrowly focused, such as a study analyzing a single area—a transport sector strategy, for instance—to more broad-based, such as a country economic memorandum or a public expenditure review—one of the Bank's most important knowledge products.

Public expenditure reviews are important to the Bank's internal use—they help inform policy loans—and they have also been repeatedly shown to impart the kind of knowledge necessary to generate real results and effect long-term change. In Serbia a review led to new labor laws on wages for civil servants. In Jordan it resulted in the overhaul of budgeting processes. In Guyana it informed the country's Financial Management Accountability Act. And in Vietnam an ongoing series of reviews helped transform the role of government from doing (through public investment projects)



(continued)

Feature 3 Economic and sector work: open knowledge through informed analysis *(continued)*

to steering (through resource allocation for policies and programs).

Vietnam is one of the world's fastest-growing economies, rapidly shifting from a focus on tight controls to a market-based player on the global stage. The poverty rate fell from 58 percent in 1993 to 14.5 percent in 2008. Real income has grown 7.3 percent a year over the last 10 years. During that same period Vietnam has made a concerted effort to reform its public financial management system.

"Vietnam was a country going from a secretive approach in policymaking—a legacy of decades of war—to trying to build transparency," said Martin Rama, who spent eight years as the Bank's lead economist in Vietnam. The reform process is generally credited with being a key driver of transparency and accountability in the allocation and use of public monies. A series of public expenditure reviews, produced collaboratively between the Bank and the Vietnamese government in 1996, 2000, and 2005, guided the reforms.

"A decade ago, the published budget was one page. Now, almost all expenditures are on budget and fully disclosed, with the supreme audit institution carefully checking how they were used," Rama said.

As country officials improved their financial management knowledge, the government gradually took on a greater role with each successive review, from simply providing data in 1996, to contributing to the report in 2002 and to crafting the review on an equal footing with the Bank in 2005. The

next review is expected to be led completely by Vietnam's finance ministry.

According to Rama, this powerful growth in government capacity and individual capability should be lauded, but it should not come as a surprise. "Our objective was to have local officials to eventually take the lead on every core diagnostic, with the Bank gradually shifting its role from demonstration to support."

The most recent public expenditure review, in 2005, was "truly a joint product," Rama said. The report led to 107 recommendations, and, according to Rama, Bank and government officials discussed each one in detail to reach consensus. In the end, both sides agreed to all but three.

Officially, the individual reviews are considered single products, but the ongoing collaborations as a result of the review process produced much greater results in a country where adequate and transparent budget processes had not existed. With the help of auditors, budgeting and expenditure power shifted from a single ministry to a national assembly, and, according to Rama, the budget process now generates "an incredible amount" of interest and publicity.

According to Rama, the public expenditure reviews themselves not only aided Vietnam's economic transformation, but the increasing collaboration of their production over time created a vital sense of ownership. "The reviews and the knowledge provided by them," he said, "have been central elements to transforming culture."

Managing for Results and Openness

The first two chapters discussed how the Bank's knowledge activities have been shifting. Some shifts have been in response to changing demands—such as the growing preference for technical assistance over economic and sector work. Other shifts have been purposeful initiatives—such as an increasing move toward more transparency and collaboration, as with the Bank's Open Data Initiative. The Bank is now at the threshold of a still bigger effort, to bring knowledge services closer to its clients by strengthening results frameworks for knowledge services—and by providing open data, open solutions, and open knowledge to all stakeholders, not just client governments.

Strengthening the results of knowledge products and services

Because core knowledge services represent a significant commitment of resources (\$606 million in fiscal 2010), the Bank is recommitted to strengthening the results of its work. It must move beyond counting the number of reports delivered, and begin the difficult process of measuring what can be measured, recognizing the complex and sometimes unmeasurable factors that contribute to development success. The Bank also needs to build on its relative strengths and maximize its contribution to development by focusing on its comparative advantages. By better understanding how each of its knowledge roles—producer, customizer, and connector—contributes to development globally and in countries, it can focus its resources where they make the greatest contribution.

In order to prioritize scarce resources to strengthen the Bank's approach to results,

management plans to take a two-pronged approach. First, each of the nine knowledge product lines must have a results framework to assess the technical quality, relevance, and results of knowledge activities. Much has already been done in this area, with innovations adopted across the Bank. But more remains in each of the knowledge product lines. However, a focus on the product lines alone will not automatically ensure that knowledge services centrally developed systematically address the needs of client countries or systematically derive lessons from country engagements. That is why the Bank needs to move beyond separate results frameworks to greater interaction and integration in its knowledge activities.

Accordingly, the second part of the two-pronged approach is to strengthen the links between product lines and to manage them as a portfolio—setting strategic priorities and ensuring the complementarities across knowledge product lines. This will take time. The diagnostic report accompanying this Report outlines the details of how the approach could work. It builds on the results chains for economic and sector work, technical assistance, and external training to define intermediate indicators of outcomes of Bank knowledge services.

In line with this increased emphasis on measurable results, the Bank is strengthening the governance arrangements for all core knowledge products (table 1 summarizes the current arrangements). Most of the Bank's knowledge spending is subject to generally clear governance arrangements, but there are governance gaps in many product lines. Some gaps are in reviewing the output of the knowledge service and in

Table 1 Governance arrangements for core knowledge products

Product line	Who sets the rules?	Number of control points	Draft output review	Completion report	Mandatory archiving	Who monitors compliance?	Ex-post review
Economic and sector work	OPCS	3	Yes	Yes	Yes	OPCS	No
Technical assistance	OPCS	3	Yes	Yes	Yes	OPCS	No
External training	WBI	4	No	Yes	Yes	WBI/VPU	No
Impact evaluation	DEC/OPCS	2	Yes	No	No	VPU	No
Research	DEC	2	Yes	No	No	DEC/VPU	No
Global monitoring/ <i>World Development Indicators</i>	DEC	3	No	No	No	VPU	No
<i>World Development Report</i>	DEC	2	Yes	No	Yes	DEC	No
Knowledge products	None	2	Yes (> \$30,000)	No	No	—	No
New product development	None	2	No	No	No	—	No

Note: OPCS-Operational Policies and Country Services Vice Presidency; WBI-World Bank Institute; VPU-Vice Presidential Unit; DEC-Development Economics Vice Presidency.

monitoring compliance. Some are in assigning responsibility for setting rules or guidelines for some knowledge product lines, such as internal knowledge products, which give individual managers tremendous latitude to initiate tasks with little or no systematic review. The lack of ex-post evaluation means that the Bank is not systematically capturing lessons to strengthen its knowledge activities. And the lack of systematic archiving means work is sometimes difficult to retrieve when the responsible task leader moves. As noted in chapter 2, there are ongoing efforts to strengthen document capture and retrieval (i.e. WBDocs). In addition to these efforts, the Bank is putting in place mechanisms to ensure that there is consistency in governance of the core knowledge products.

Establishing consistency in governance

For economic and sector work and technical assistance, a Bankwide unit sets processing guidelines and conducts overall monitoring of key steps.¹ To further ensure quality, regional and network guidelines may augment this corporate guidance. But for the other product lines,

monitoring is up to the implementing unit, and this can leave significant gaps, even if clear rules are in place. For example, although DEC monitors all research products financed through its budget, it does not monitor compliance for research products financed from other units' budgets. Similarly, the World Bank Institute (WBI) monitors compliance for its external training products but not for those executed elsewhere in the Bank. Management will establish consistency in governance frameworks with attention to how clients are engaged from the start of an activity to delivery and completion.

Strengthening the results and governance arrangements for each of the nine products has already begun with the recently completed Review of Analytical and Advisory Activities (AAA Review). As noted in chapter 2, teams will be required to define, together with clients, the development objectives to which a knowledge activity or series of knowledge activities will contribute (box 6). Going forward, knowledge activities may be designed using multiyear programmatic approaches, to enable greater flexibility than when tied to the annual project



Box 6 Strengthening the results orientation of economic and sector work and technical assistance under the AAA Review

The Operations Policy and Country Services Delivery and Results Management department reviewed AAA, specifically economic and sector work and nonlending technical assistance. It is now putting in place mechanisms and processes to strengthen the outcome orientation of these products, including self-assessments and other approaches to improve governance and accountability. The goal is to increase impact, better capture results, reduce fragmentation and the counting of deliverables, and align systems and processes with business needs.

A standardized Concept Note and Completion Summary templates will be introduced online. The Concept Note will require a clear definition of the change objective for the task. This will inform the identification of objectives and expected (intermediate) outcomes, including the approaches for measurement. Based on the

change objective, intermediate outcomes would be chosen from a standardized menu that captures the change objective and enables aggregation at the corporate level, so that the Bank can assess its development effectiveness.

The achievement of objectives would be based on self-assessment by the task team leader on two dimensions—Bank performance and likely achievement of objectives on a four-point scale. The task team leader's self-assessment would be endorsed by the Sector Manager and Country Director. Capturing the clients' views is also important. Various options for seeking inputs—either on an individual basis or in a more aggregated way at the country level—are being piloted. There will also be an opportunity to capture lessons from preparing and delivering the knowledge services in a searchable system.

cycle. Lessons from the 2008 IEG Evaluation, the AAA Review, and WBI's Capacity Development Results Framework will inform the way forward in developing a results framework for all knowledge services. The next step could be to explore a practical amalgamation of outcomes and indicators (or a common results framework) applied across knowledge product lines. The feasibility of this approach and needed steps will be outlined in a note that will be used to design the implementation of recommendations from this Report.

This year a new annual Results Report and a Corporate Scorecard will be introduced, as part of a comprehensive program of internal reforms to make the Bank more oriented to clients and results with the aim of strengthening accountability arrangements. And in 2012 the Board

will consider a new lending instrument that will disburse against client results.

Measuring results is inherently difficult but doable

The Bank needs to be able to assess results if it is to allocate the available resources effectively and support staff appropriately. There are challenges associated with attribution, with the lag time that can be associated with the impact of knowledge work, and with the selection of appropriate and measurable indicators. And as measurement systems are put into place, there will be different options to consider based on what is feasible in terms of relative costs in relation to timeliness of implementation. There will also be technical issues to resolve. (At what level should impacts be assessed? How standardized

and aggregated should impact measures be?) This will be an evolving effort, and the best should not be the enemy of the good.

A systematic attempt to measure results begins with clarity of intended outcomes on the ground. With the intended outcomes clearly stated, it becomes possible to think about what intermediate results can be tracked to assess progress toward those outcomes, and how intermediate results can be measured. Box 7 summarizes different approaches to measuring results.

The term “results” covers a range of indicators from outputs, through outcomes, to impacts, the final effects on beneficiaries. The ways that results are measured will vary from one type of knowledge activity to another. The results of a piece of economic and sector work might be measured by how it contributed to the domestic debate in a client country, which could lead to improved policies. Indicators of knowledge impacts could comprise surveys of opinion makers, references to World Bank studies in the media and other public discussions, and independent assessments of the likely impact of the study. The diagnostic report that accompanies this Report describes

in some detail a set of technical approaches for measuring knowledge results for the Bank. These options are currently undergoing internal consultation prior to implementation. Forthcoming reports by the Independent Evaluation Group and the Internal Audit Department will also be helpful in informing implementation.

The Bank will use multiple approaches to measuring results in order to enable teams and management to make a rounded assessment of progress. One approach will involve maintaining and strengthening the current self-assessments as per the AAA Review. Another will be to systematically use client surveys as a source of information. Such surveys were piloted in preparing this Report. Other approaches to eliciting the client’s assessment of the impact of knowledge activities within the context of the overall country portfolio will be piloted to inform the way forward. Case studies will also be used (as in the Middle East and North Africa knowledge notes), as can web-based metrics such as the number of views and downloads and references to knowledge products in policy documents, the popular press, and academic journals.

Box 7 Examples of results measurement arrangements for knowledge services

Impact evaluation in Latin America and the Caribbean. Throughout the rapid expansion of conditional cash transfers (CCTs) from nascent, geographically limited programs in Brazil and Mexico to major flagship programs in most Latin America and Caribbean Region countries, knowledge has been the primary, underpinning component driving growth. The Bank has contributed by using a complementary suite of services. Impact evaluations, for instance, are a cornerstone of CCT knowledge; there are

hundreds overall, with about 100 studies each for Brazil and Mexico. There are no CCT programs in the Region without at least one sound evaluation already finished or currently planned. The Bank has provided financing, advice on topics and designs, principal investigators, and venues for dissemination. In 2008 DEC published the only Policy Research Report ever done on a single policy instrument, drawing heavily on the CCT evidence base built in Latin America.

**Box 7** Examples of results measurement arrangements for knowledge services *(continued)*

Results framework and program evaluation: Welfare and Social Policy in Turkey. This Analytical and Advisory Service comprised on-demand technical advice through policy notes and an international expert panel, joint analytical work with the social policy department of the Turkish State Planning Organization, and continuous outreach and dialogue activities with academia and civil society. The Bank was predominantly a facilitator rather than a disseminator of analytical findings. This programmatic knowledge service, spanning 28 months (March 2008 to June 2010), was one of the core vehicles for the Bank's analytical and advisory work to support the review and design of social policies in Turkey. After the work was completed, the Bank team administered its own survey instruments to have clients in Turkey assess the technical assistance. Ratings from 1 (low) to 5 (highly satisfactory) were assigned to: overall assessment of the analytical output (technical papers and the equity report); whether these analytical studies made an impact on Turkish social policy; whether the analytical outputs were used in the organization's work program; whether the process of conducting the work was collaborative; and how well the Human Development Dialogue functioned. The assessment found the government was most positive (with highly satisfactory marks almost throughout), followed by academia and then civil society organizations, which were particularly skeptical about the impact of the work on social policy design.

Measuring knowledge outcomes—WBI's approach. The entire portfolio of the World Bank Institute (WBI) is knowledge products and services. This specialization, as well as

its results-focused renewal strategy, led WBI to design an innovative approach to foster the achievement of results, systematically account for outcomes, and advance the current knowledge of what works and does not work in capacity development. Underlying this approach is the Capacity Development and Results Framework, which links capacity development initiatives to achievement of sustainable institutional changes required for development results. The framework is used to design knowledge initiatives and manage them for results. It is embedded in the systems and processes of the external training product line, from the articulation of results logic in the Activity Initiation Summary and Concept Note to the reporting of results in the Activity Update Summary (AUS) and Activity Completion Summary (ACS). In addition to self-rating their external training activities (akin to the Bankwide assessment for economic and sector work and technical assistance), task team leaders in WBI are to describe their results in their AUS and ACS and provide evidence of the reported changes in the capacity of clients at intermediate and institutional levels. The supporting evidence can consist of a broad array of documentation from external sources, such as stakeholder surveys, knowledge tests, document reviews, interviews, and media reports. A dedicated team in WBI is responsible for reviewing and transparently analyzing the results reported by task team leaders—and for reporting the aggregate results data as part of WBI's Key Performance Indicators. These data as well as special studies will also be used to learn more about the “how” of reform through capacity development. Implementation is still at an early stage, but the overall approach shows considerable promise.

The Bank will also turn its attention to managing knowledge as a portfolio, and strengthening connections across product lines will be an area of focus

Enhancing the complementarities of knowledge activities for greater results

The Bank will also turn its attention to managing knowledge as a portfolio, and strengthening connections across product lines will be an area of focus. Within each of the Bank's six regions, there are already established quasi-markets for services between country teams and sector teams. Together, these teams decide which knowledge tasks are funded. The Country Director controls the budget and "buys" services, typically based in the region and is in close touch with government officials about what they need from the Bank. The Sector Director brings to bear global experience in the sector or technical field. This quasi-market interaction offers some assurance of the knowledge task's relevance and quality.

The Bank will work to put in place a greater and more systematic process of consultation on priorities between the Networks and Regions. They and the sector boards set priorities with varying inputs from regional staff across the Bank. Where sector staff in regions have a strong and effective voice in setting priorities for the anchors, this ensures the relevance of sector work. The quasi-market for WBI and DEC will also need to be strengthened, to maximize operational relevance.

To optimize the results and impact of its knowledge activities, the Bank will take a portfolio approach to managing them. Management will consult across vice presidential units to examine feasible options for structures and processes in support of managing knowledge as a portfolio. This begins with identifying the objectives of each knowledge activity. Explicit mechanisms will be created for discussing work programs and priorities among Networks and Regions. One possibility would be to use more extensively current review bodies, such as the

Knowledge Learning Council and the Chief Economists Council, in ensuring that such conversations take place among the Networks, Regions, WBI, and DEC. These conversations will strengthen quality, relevance, and results. They will also help identify avoidable overlaps and duplication. And they may achieve genuine synergies. We will also improve quality and results by inviting external discussion and review of our knowledge services, how we choose our knowledge activities, and how we can bring the best minds in the world to bear on the most pressing development challenges.

Network initiatives

The Networks are set up with the purpose of strengthening knowledge flow across the Bank and that requires that they play a stronger role in ensuring connections across the Bank. The decentralized approach to knowledge services may constrain the flow of knowledge across the institution. The current level of cross support (gross cross-support averaged 7 percent of staff time for regions and 15 percent for network anchors) is one indicator of constrained flow of knowledge. The Finance and Private Sector Development (FPD) Network notes in a recent assessment that the scale, budget, and strategic alignment of knowledge activities are limited by the fact that the Networks and Regions operate separately.² This impairs the Bank's ability to move lessons across its 120 country offices and around the world. To address this, the FPD Network is putting in place new processes, structures, and information infrastructure to facilitate knowledge flow, reward knowledge sharing, and promote collaboration across regional units. Strong interaction across units, particularly between the Regions and Networks, will bring to bear global experience in a sector or technical field and assure the knowledge activity's relevance and quality. External



connections are equally important and the section below on Open Knowledge outlines some of the initiatives the Bank has launched to strengthen it.

The other three Networks are adopting a 10-point strategy to strengthen their sector boards and to develop performance indicators for knowledge flows and talent management. The strategy is expected to strengthen sector boards, human resource management, and knowledge flows across the institution, including an intensified effort to capture all knowledge outputs in the Bank's document systems, in a form that is retrievable and searchable to meet continually changing client demand and ensure timely responses.

Regional and country approaches

The Regions take different approaches to ensure knowledge flows and to ensure that their knowledge services build on complementarities. Chief Economists and sector units take responsibility for the flow of knowledge in each region. In Latin American and the Caribbean the Chief Economist's office plays the role of DEC, working with academia and think tanks and sponsoring regional research. The Colombia country team has taken the portfolio approach one step further by explicitly bundling knowledge services and financial services toward a common outcome in the country strategy. In the Africa Region the Chief Economist monitors quality for knowledge and lending services and ensures that country teams make the right decisions in addressing a development challenge with their knowledge or lending services, underpinning lending services with analytical work. The Middle East and North Africa Region draws lessons from knowledge services embedded in lending operations (funded by borrowers and providing lessons applicable across the Bank). In the South Asia Region the vice presidential unit is

taking a more centralized approach to the multitude of regional (that is, not country-specific) knowledge tasks, structuring them into portfolios with clear objectives.

Greater attention to results should resolve the knowledge paradox

As noted, many staff find that large and high-profile lending operations hold more potential than knowledge work for career advancement. And those doing knowledge work find—with management systems oriented to team leadership in discrete knowledge products rather than teamwork and development solutions—that incentives are stronger for knowledge production than for knowledge flows. So it is easier to find funding and management support for producing knowledge than for sharing the work with colleagues and counterparts around the world. This presents a challenge, in that clients value knowledge services, while the institution's incentives are geared relatively more toward lending.

Changing behavior will require both different management signals for knowledge services (which will be supported by better results measurement) and recognition of contributions of knowledge services and teams to development outcomes. When resources are tied to strengthening connections of experts and practitioners inside and outside the Bank, behavior can change. The Knowledge Platforms, a competitive initiative of the Knowledge and Learning Council, are judged in part for their multi-sectoralism. As a result, the teams submitting proposals reach beyond sectoral and regional boundaries, make new connections, and find new synergies. Performance evaluations for knowledge activities could take into account more knowledge-related behaviors, including client engagement, multisector and multiregion collaboration, and follow-on dialogue and

So it is easier to find funding and management support for producing knowledge than for sharing the work with colleagues and counterparts around the world. This presents a challenge

All aspects of creating, acquiring, sharing, adapting, and applying knowledge can be made more open and collaborative

dissemination. Going forward, management recognizes the pressing need to align incentives with the value our clients perceive in our knowledge services.

Open knowledge

Knowledge generates the greatest results when it is shared and applied. All aspects of creating, acquiring, sharing, adapting, and applying knowledge can be made more open and collaborative. The Bank has significant experience with sharing its knowledge, so that others can apply it. Now the Bank is working to create better two-way connections in and outside the Bank, so that the best expertise and the most relevant experiences, wherever they reside, can be brought to bear on specific development challenges. The Bank is experimenting with co-generating knowledge, and looking at ways to involve clients and collaborators in measuring the results of the World Bank's knowledge work.

Open data and open access to Bank documents

In April 2010 the Bank made its development data available for download free of charge. The Open Data initiative is moving forward rapidly. It is continually expanding the amount of data available for download. It is developing new applications to enable easy access to data across platforms and devices. And it is strengthening capacity in developing countries to collect and disseminate high-quality and relevant data on the ground. Under the new Access to Information policy, any Bank document not on a small exclusionary list is now available to the public.

Open research tools

The Bank's traditional research model is product-oriented. Researchers investigate a specific issue

over a period of time and produce a paper on their findings, which is then disseminated to the public, other researchers, and policy makers. The Bank is a world leader in producing such products on a wide range of development issues.³ The Bank also remains a leader in development economics research, though the vast majority of development economics researchers are affiliated with other institutions. New development thinking and experience in the wider academic and development community are increasingly found in developing countries themselves. To support this work, the Bank's Development Economics (DEC) department is producing research tools for others to use and providing open access to those tools. The Open Tools initiative has three objectives: to empower researchers in developing countries to do better research to inform development policy and practice; to expand, over the longer term, opportunities to work more closely with colleagues in developing countries as full peers, to the benefit of both; and to ensure open and transparent policy analysis.

One of DEC's new tools is the Automated DEC Poverty Tables (ADePT), innovative software that simplifies and speeds the production of standardized tables and graphs in many areas of economic analysis, with a focus on country and regional analytic work. ADePT extracts indicators from micro surveys and presents them in a print-ready form, making it possible to automatically generate analytical reports in minutes, not months. A free standalone program, available for downloading by anyone in the world, it includes modules on poverty, labor, health, education, inequality, social protection, and gender. The interface is being translated into several languages, and ADePT training courses are being developed.

With several thousand users in the Bank and around the world, the user base is growing



fast. In March 2010 the first localized version of ADePT was launched by the Bank, and Bappenas, the Indonesian Ministry of Planning, translated it into Bahasa Indonesia and included new tables for analysis at the decentralized Kabupaten level.⁴

Another example of technology to create a more open research environment is DEC's global poverty monitoring work, which aims at producing the most accurate data possible on poverty reduction.⁵ One challenge in poverty monitoring has been that the Bank's dollar-a-day poverty calculations could not be easily replicated by external researchers, and the model would not allow for the use of different assumptions, such as purchasing power parity rates or poverty lines. To address this, DEC created PovcalNet, an online analytical tool for global poverty and inequality analysis. Users can replicate the Bank's global poverty measures with primary data from 700 household surveys—and choose their own poverty line, purchasing power parity exchange rates, and aggregations. PovcalNet is now widely used for research and as an educational tool for students in development economics.

Open publishing

The Bank's Office of the Publisher is making the transition from a traditional book publishing model to a new model for the dissemination of the Bank's formal research outputs, whether published by the Bank or authored by Bank staff and published externally. The new model offers immediate free access to the Bank's peer-reviewed literature and data, with no restrictions on use and reuse. Adopting a creative commons-like attribution license, an Open Knowledge Repository is being created for all Bank books, journal articles, working papers, relevant economic and sector work, and associated datasets.

Open and collaborative knowledge generation

The Bank is experimenting with two promising tools to support external research, economic and sector work, and technical assistance:

- *Knowledge Platforms.* The Bank is investing about \$3 million a year in six Knowledge Platforms as an experiment in greater openness. The platforms promote connectivity inside the Bank and across the international development community to address strategic, cross-cutting, and transformational development issues. The first three platforms, competitively selected in January 2011, are already working with partners to collaboratively generate and practically apply open knowledge in the areas of urbanization, green development, and information and communication technologies for accountability and development. The second group of knowledge platforms, selected in July 2011, will pursue open knowledge on jobs, food security and nutrition, and fragility, conflict, and violence.
- *E-collaboration information technology platform.* The Bank is investing in technology that will enable people in and outside the Bank to connect in e-space, allowing worldwide communities of practice to share, store, and retrieve knowledge products. By involving worldwide communities of governments, practitioners, development agencies, and civil society organizations, the Bank is moving toward greater integration with the larger development community.

Open policy debate

Over the past 10 years the Bank has become more inclusive, involving civil society, non-governmental organizations, and the private sector in evidence-based debates on policy and investment choices. This broader

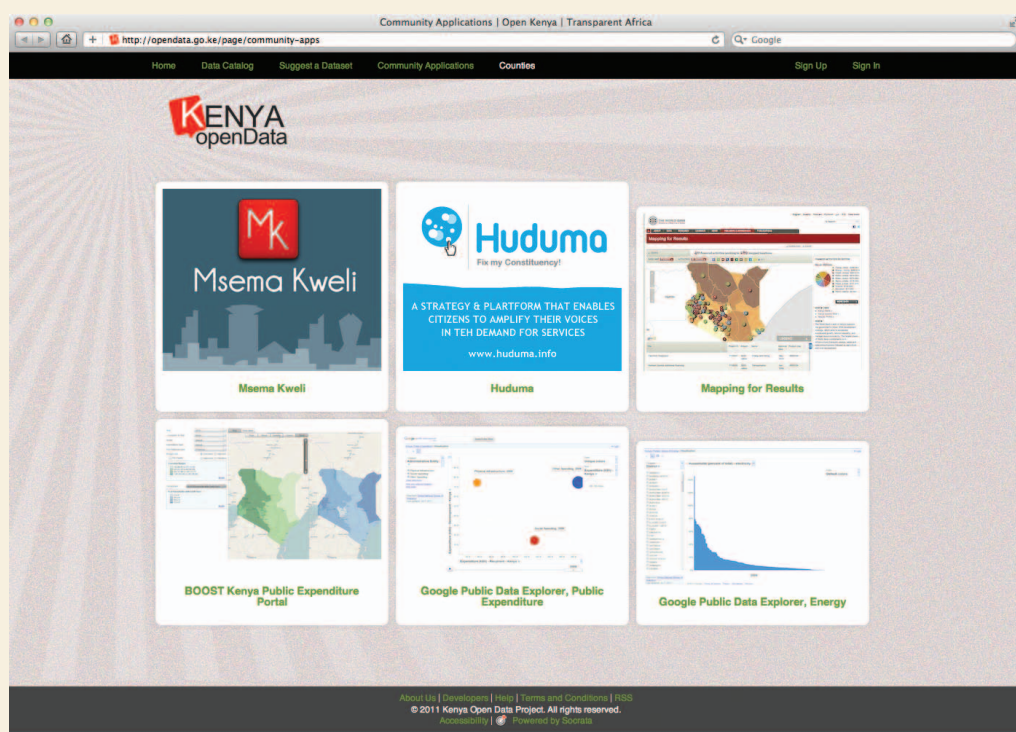
The Bank is experimenting with two promising tools to support external research, economic and sector work, and technical assistance: knowledge platforms and the e-collaboration information technology platform

involvement—the democratization of development, the empowerment of local change agents—can be difficult and contentious. But it can also bring about broad-based and sustainable progress. An example of empowering local change agents comes from the WBI, which has been convening, facilitating, and supporting a multistakeholder coalition of public, private, and civil society actors pursuing better governance of Ghana’s oil sector. Ghana is part of a regional initiative sponsored by the WBI, the Africa Region, and a network of global and local partners to promote greater accountability and transparency in the extractive sectors. By supporting multistakeholder engagement, the program strengthens both the technical capacities and collaborative skills of those involved.

With more of the Bank’s knowledge work conducted jointly with clients, and financed with trust funds in partnerships, an inevitable implication is that the knowledge work reflects not only a Bank perspective on what should be done and how, but also the perspectives of partners and stakeholders. This affects both how the Bank does knowledge work (trust funds have been more available for technical assistance than for economic and sector work) and what it works on (trust funds for climate change, governance, and debt relief have added to the Bank’s ability to fund knowledge work in these areas).

One example of the elements of the Bank’s knowledge ecosystem coming together in partnership with a client is the Kenya Open Data Initiative (box 8). Strong partnership with government was supported by economic

Box 8 Kenya Open Data Initiative



Source: <http://opendata.go.ke/page/community-apps>, with permission of the Kenya ICT Board.



and sector work on public expenditures and on social accountability, a technical assistance project with the National Statistics Agency, regional work with DEC and WBI, and an on-the-ground presence by the Bank. As a result of the initiative, the government of Kenya is placing important information at the disposal of its citizens.

* * *

This first Knowledge Report is an exercise in opening the Bank's knowledge processes to global scrutiny and inviting inputs on how the Bank does its knowledge work. Having inventoried its knowledge work, the Bank for the first time describes how it manages the work, what it is doing to better measure results, and what topics require further attention. For the preparation of this Report, Bank management invited extensive inputs from, and discussions

with, external reviewers and partners. By soliciting feedback on this Report, the Bank is inviting interested parties to provide their inputs, to inform the content of future Reports and what they will cover. This supports the Bank's open knowledge agenda, providing interested parties the opportunity to give their views on how the Bank can ensure that its knowledge work is of the highest quality, is relevant to today's development challenges, and contributes to results on the ground.

Notes

1. Operational Policies and Country Services Vice Presidency.
2. FPD 2010.
3. See Ravallion and Wagstaff (2010) and the reference to RePEc in chapter 1.
4. ENP Newswire, March 15, 2010.
5. For the latest update, see Chen and Ravallion (2010).

Feature 4 Data tools: open knowledge through technology

'This is so different from anything we've done before'

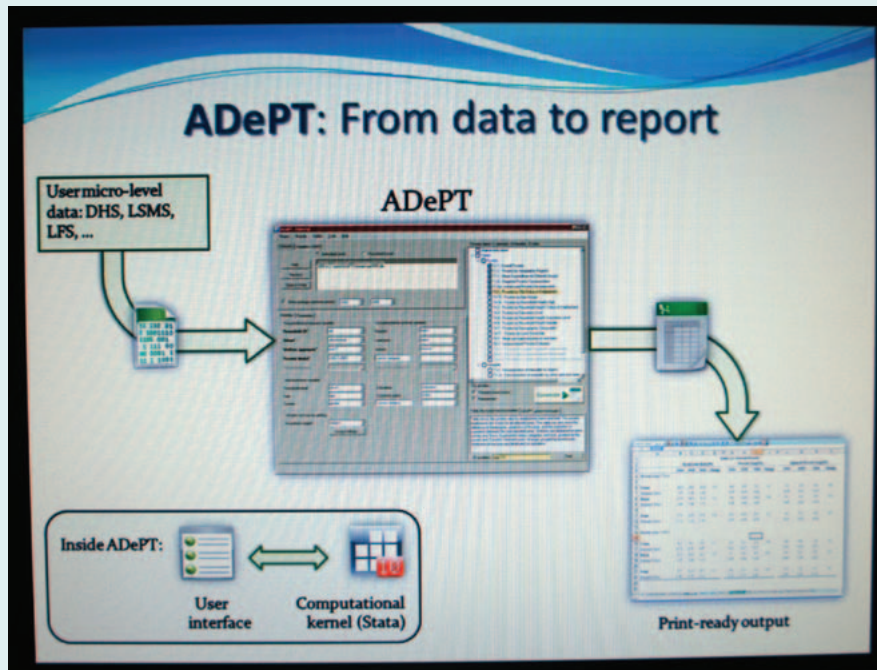
Between 2003 and 2006 the World Bank worked closely with the Indonesian government on a program to reduce poverty. This three-year effort, supported by nearly \$1 million in Bank funds, required collaborative research and analysis and resulted in a comprehensive poverty strategy. Overall, the program was a success. It also was a traditional form of the Bank's knowledge work. But just a few years later, the Bank and Indonesia engaged in a different, nontraditional, form of knowledge work—using new technologies to give local officials all around the country a new way to access and analyze data to produce their own strategies.

In March 2010 the first standalone version of the Automated DEC Poverty Tables (ADePT), a powerful analytical tool developed by the World Bank's research team, was launched in Indonesia. ADePT is software designed to simplify and speed up economic analysis. It also reduces human error and produces standardized results. And its Windows-based interface, which is much easier and less complex than traditional statistical analysis software, opens the door to

data analysis to a much more diverse audience of number crunchers.

"Indonesia's government collects lots of data about living standards, households, wages, and so forth, but that data is centrally located in Jakarta and used by very few agencies," said Michael Lokshin, a Bank economist who was also the lead developer of ADePT. "Indonesia has hundreds of districts. The idea behind the project was to translate our software into Bahasa Indonesia and install ADePT across the different districts, allowing people in local government to use large datasets for their own local needs."

ADePT was started in 2007, and today the Bank already is working on a fifth version. It is emblematic of the Bank's growing commitment not only to open data, but to open knowledge—the tool, freely available to download from the Bank's website, has been translated into 15 different languages, including Arabic, French, Portuguese, Romanian, and Spanish; Bahasa Indonesia was the first translation. By producing a standard set of tables and graphs, ADePT also





Feature 4 Data tools: open knowledge through technology *(continued)*

allows for easier intracountry comparisons among different areas of economic analysis. Current “modules” or specific applications cover analysis relating to poverty, inequality, labor, gender, education, health, and social protection, and more are being developed.

Through its Open Tools initiative, the Bank is redefining the meaning of research by creating its own data analysis products, sharing them with the world, and then training others on how to use them. In addition to ADePT, the Bank’s research team created PovcalNet, an online analytical tool for global poverty and inequality analysis. These tools are not just for policy analysis, either. AidFlows is a data visualization tool that offers country-by-country details on aid transfer as it moves from donors to beneficiaries—a strong tool for transparency.

The end result is that once these tools have been created and shared, all citizens, from a national minister to a local official to an engaged academic, can do better, faster research on their own terms, and for their own needs.

For Indonesia’s localized version of ADePT, Lokshin and others spent weeks working with government officials and others to ensure that they knew how to use their localized version to form better policy. According to Lokshin, the initial training workshops were such a success that Indonesian officials have actively kept up their learning relationship with the Bank, traveling to Bank headquarters or elsewhere, including

a labor market analysis event in Thailand in April 2011, for additional training.

“This new model for how we do research combines open access to data with open access to the analytic tools used to inform policy discussions using those data,” said Martin Ravallion, the World Bank’s director of development research. “Our vision is that data, the knowledge, and the solutions to development problems will ultimately be generated collaboratively by those who have most to gain from the success of those solutions.”

For the Bank, opening its data was just one step toward its even broader vision of open knowledge. Tools like ADePT help expand the universe of informed researchers, while training and education on using the tools strengthens the long-term benefit. To further assist researchers, for example, the Bank is producing a series of instructional ADePT guidebooks and user manuals. Higher education training courses are also being developed. Lokshin said the Bank has done ADePT training in more than 30 countries so far.

“What we can do in three minutes with ADePT would normally take three months,” Lokshin said. “This is so different from anything we’ve done before. We’re not just writing research papers anymore. We’re still doing that, but we’re also developing commercial-grade software. And we’re giving others their own software, something tangible to use for their own interpretation.”

Annex 1

Spending on Core Knowledge Products

Table A1.1 Core knowledge products (\$ thousands)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Knowledge for clients	214,146	255,352	264,121	297,941	301,349	306,979	343,472	384,486	444,448
Economic and sector work	110,832	142,771	142,771	163,464	163,068	157,724	162,753	169,622	183,596
Technical assistance	56,286	56,817	50,256	62,773	81,200	93,262	125,627	156,409	195,081
Impact evaluation	0	0	0	0	1,191	2,817	4,626	8,890	11,195
External client training	47,027	55,764	71,095	71,705	55,889	53,177	50,465	49,565	54,575
<i>For country clients</i>	164,819	190,531	204,845	239,279	240,816	240,350	258,833	273,405	307,076
Economic and sector work	81,365	98,961	100,777	125,437	126,887	117,412	114,196	113,003	112,933
Technical assistance	36,427	35,806	32,973	42,137	56,849	66,944	89,546	101,947	128,372
Impact evaluation	0	0	0	0	1,191	2,817	4,626	8,890	11,195
External client training	47,027	55,764	71,095	71,705	55,889	53,177	50,465	49,565	54,575
<i>For global and regional clients</i>	49,326	64,821	59,277	58,663	60,533	66,630	84,638	111,082	137,372
Economic and sector work	29,467	43,810	41,994	38,027	36,182	40,312	48,557	56,620	70,663
Technical assistance	19,859	21,011	17,283	20,636	24,351	26,318	36,081	54,462	66,709
Knowledge as a public good	34,348	39,161	40,488	42,065	42,712	46,955	50,506	55,031	62,258
Research services	22,523	25,113	24,643	25,920	26,522	27,919	28,293	32,958	35,273
Global monitoring	8,212	9,375	11,523	12,934	13,187	15,101	17,043	16,780	18,558
<i>World Development Report</i>	3,613	4,674	4,322	3,211	3,003	3,935	5,170	5,293	8,427
Knowledge for internal use	53,824	49,772	60,530	75,093	87,295	88,247	91,282	90,772	99,154
Knowledge management	39,204	35,281	45,099	58,368	64,875	67,200	75,794	76,098	81,443
New product development	14,620	14,491	15,431	16,725	22,420	21,047	15,488	14,673	17,711
Core knowledge total	302,317	344,285	365,139	415,100	431,355	442,181	485,259	530,289	605,860
Client services budget	1,249,160	1,457,771	2,558,531	2,041,880	1,894,724	1,848,673	1,972,143	1,809,889	1,955,579
Core knowledge as a percentage of client services budget	24.2	23.6	14.3	20.3	22.8	23.9	24.6	29.3	31.0

Note: World Bank Institute data include scholarships as part of trust funds.
Source: Business Warehouse.


Table A1.2 Core knowledge products, Bank budget and trust funds, fiscal years 2002, 2006, and 2010 (\$ thousands)

	2002			2006			2010	
	Bank budget (including reimbursables)	Bank- executed trust funds	Total	Bank budget (including reimbursables)	Bank- executed trust funds	Total	Bank budget (including reimbursables)	Total
Knowledge for clients	152,149	61,997	214,146	204,080	97,269	301,349	249,294	444,448
Economic and sector work	93,905	16,927	110,832	131,256	31,812	163,068	129,431	183,596
Technical assistance	29,850	26,436	56,286	40,813	40,387	81,200	92,043	195,081
Impact evaluation	0	0	0	260	931	1,191	2,183	11,195
External client training	28,394	18,634	47,027	31,751	24,138	55,889	25,637	54,575
Knowledge as a public good	27,283	7,065	34,348	31,604	11,108	42,712	42,839	62,258
Research services	16,923	5,601	22,523	17,626	8,896	26,522	21,487	35,273
Global monitoring	7,936	276	8,212	11,723	1,464	13,187	15,156	18,558
<i>World Development Report</i>	2,424	1,188	3,613	2,254	749	3,003	6,195	8,427
Knowledge for internal use	39,756	14,068	53,824	66,652	20,643	87,295	68,771	99,154
Knowledge management	27,868	11,336	39,204	48,982	15,892	64,875	51,934	81,443
New product development	11,888	2,732	14,620	17,670	4,750	22,420	16,838	17,711
Core knowledge total	219,187	83,129	302,317	302,336	129,019	431,355	360,905	605,860

Note: World Bank Institute data include scholarships as part of trust funds.
Source: Business Warehouse.

Annex 2

Progress in Implementing the Knowledge Strategy

The Bank's knowledge strategy aims to deliver the best expertise to our clients, to enhance the development impact of our knowledge, and to strengthen the Bank's global connector role. Implementation is progressing as planned.

Open development

- *Open Data, Open Knowledge, Open Solutions.* The Bank's focus on openness and ease of access was led by the Open Data initiative. Since its launch in April 2010, the website now includes more than 7,000 indicators for free access, with more than 1,200 indicators available in Arabic, Chinese, French, and Spanish. Building on this momentum, the Apps for Development competition—a global competition to build “apps” with open data—attracted 107 entries from 36 countries across the world. The Bank has also launched its “Mapping for Results” platform (<http://maps.worldbank.org/>) to help users visualize the location of Bank projects together with information on funding and results. Complementing the Bank's research are software systems and tools—such as ADePT (www.worldbank.org/adept), iSimulate (<http://isimulate.worldbank.org>), and PovCalNet—that allow users to experiment and interact more closely with the Bank's information.
- *Access to Information.* The Bank's commitment to transparency was strengthened by the Access to Information policy (July 1, 2010), providing wide access to information about projects under preparation, projects under implementation, analytical and advisory activities, and Board proceedings.

Over the past year, the Bank had disclosed more than 13,000 new documents, adding to a collection of more than 117,000 reports, accessed by nearly 3,000 worldwide users every day.

- *Knowledge Platforms.* To increase the Bank's external connections and foster the co-generation of knowledge, the Knowledge Platforms program was launched in January 2011, bringing together groups of researchers and practitioners to work on a pressing global development. Three Knowledge Platforms were initiated in early 2011—the Urbanization Knowledge Platform, the Green Growth Knowledge Platform, and Information and Communication Technologies (ICT) for Open Development. Three more have recently been commissioned—the Jobs Knowledge Platform, the Knowledge Platform on Food Security and Nutrition, and The Hive: Fragility, Conflict, and Violence. Early results from these programs include numerous multicountry dialogue events to gain consensus, establish key global partnerships, and create communities of practice around core topics.

Strengthening delivery to clients

- *Finance and Private Sector Development global practice pilot.* To improve the Bank's responsiveness to its clients and ensure that knowledge flows throughout the institution, the Bank has begun a global practice pilot for the Finance and Private Sector Development vice presidential unit. The aim is to implement a new organizational structure that facilitates mobility in the Bank



and knowledge sharing in and outside it. Lessons from the pilot are expected to inform efforts for broader changes to overall organizational structure.

- *World Bank Fellows.* The World Bank Fellows program helps the Bank attract top-class external experts and brings global expertise and world-class ideas to its clients. Three World Bank Fellows are currently engaged with the Bank. Michael Joseph, former CEO of Safaricom, is advising Bank clients in ministries, regulatory bodies, and the private sector on the policy, regulatory, and implementation aspects of mobile banking. Edward Glaeser, renowned urbanization expert, is strengthening the Bank's engagements with urban practitioner communities and governments across the world. Rosina Bierbaum, renowned climate change expert, is working with the Bank's climate change team to develop screening tools for operations in low-income countries.
- *Chief Technical Specialists.* The Chief Technical Specialist program aims to strengthen the Bank's capacity and increase knowledge capabilities by attracting world-class experts to work at the Bank. Currently, the Bank has two Chief Technical Specialists: Daniel Kammen, expert in renewable energy issues, and Inci Okter Robe, expert in finance and private sector development.
- *Global Expert Teams.* The Bank has sponsored seven teams of the World Bank's top experts to engage with the Bank's country teams and clients on strategically relevant topics: Climate Change Adaptation, Disaster Risk Management, Fragile and Conflict Situations, Health Systems, Public Sector Performance, Public-Private Partnerships, and Social Safety Nets. Recent examples of engagements include flood relief support by the Disaster Risk Management team, advice on the legal framework and prospective water public-private partnerships in Ghana by the Public-Private Partnerships team, and a practitioner-to-practitioner training program for provider payment and health insurance by the Health Systems team.
- *South-South Knowledge Exchange.* To leverage the Bank's position as a global connector on development issues, the Bank is facilitating dialogues among developing country practitioners and piloting approaches to mainstream such exchanges in Bank operations. Through the South-South Experience Exchange Facility (www.worldbank.org/seetf), 69 grants were funded as of spring 2011, with an average size of \$100,000, sharing knowledge with 52 countries. The exchanges covered agriculture (fishing and forestry), education, finance, industry, trade, public administration, and law and justice. Key exchanges were between Vietnam and Thailand, Singapore, and Hong Kong SAR, China, on establishing medical profession licensing systems, between Haiti and Brazil and the Republic of Korea on garment production, and among Burkina Faso, Mali, Niger, and Nigeria on small-scale private irrigation.
- *Innovation Fund for Bank country teams.* As an incentive for Bank country teams to engage in innovative methods of service delivery to clients, the Bank initiated the Innovation Fund last year. The idea is to provide a small amount of seed funding to test the potential of the innovative concept. The selected projects had a focus on new products for clients, co-creation with clients and other development partners, and solutions that improve transparency and information flow. Thirteen projects were funded on a

pilot basis. In one project the Bank helped the Liberian government develop a baseline map of the water point infrastructure. Using a mobile application called FLOW, users could respond to a survey on a touch screen, take a picture of the water point, obtain its GPS location, and then send all the data to a central server—a step forward in better infrastructure planning.

- *Knowledge and Learning Council.* To strengthen corporate management and prioritization of the Bank's knowledge activities, the Knowledge and Learning Council was established in August 2010. The Council, led by a Managing Director (Mahmoud Mohieldin), comprises members of the Bank's senior management. Over the past year, the Council has met quarterly to

decide on funding allocations for corporate priority initiatives, such as the Knowledge Platforms and Global Expert Teams. It is expected to play a large role in the follow-up to the Knowledge Report, including the results framework and governance for knowledge activities.

- *Knowledge Report.* The Bank's first Knowledge Report is an effort to build consensus on how the Bank "does knowledge differently" and provide a benchmark on the Bank's current knowledge services. The aim is to modernize knowledge services by strengthening their quality, relevance, results, and accountability. Extensive client surveys were piloted for the Report and supplemented by extensive internal discussions on various aspects of the Report.
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References

- Banerjee, Abhijit, Angus Deaton, Nora Lustig, and Ken Rogoff. 2006. "An Evaluation of World Bank Research, 1998–2005." World Bank, Washington, DC.
- Chen, Shaohua, and Martin Ravallion. 2010. "The Developing World is Poorer than We Thought, But No Less Successful in the Fight against Poverty." *Quarterly Journal of Economics* 125 (4): 1577–1625.
- Chioda, Laura, Augusto De la Torre, and William F. Maloney. 2011. "Towards a Conceptual Framework for the Knowledge Bank." Background paper for 2011 Knowledge Report.
- Fries, Tom, and Peter Walkenhorst. 2011. "Sharing Global Governance: The Role of Civil Society Organizations." Bertelsmann Stiftung, Gütersloh, Germany.
- FPD (Finance and Private Sector Development). 2010. "Global Practices—Prototyping Global Practices in the FPD Network." World Bank, FPD, Washington, DC.
- Hounshell, Blake. 2008. "The World's Top Think Tanks." *Foreign Policy*, January 9. http://blog.foreignpolicy.com/posts/2008/01/09/the_worlds_top_think_tanks.
- IEG (Independent Evaluation Group). 2008. *Using Knowledge to Improve Development Effectiveness: An Evaluation of World Bank Economic and Sector Work and Technical Assistance, 2000–2006*. Washington, DC: World Bank, IEG.
- IEG (Independent Evaluation Group). 2010. "The Matrix System at the World Bank: An IEG Evaluation." World Bank, IEG, Washington, DC.
- IEG (Independent Evaluation Group). 2011a. *The World Bank's Involvement in Global and Regional Partnership Programs: An Independent Assessment*. Washington, DC: World Bank, IEG.
- IEG (Independent Evaluation Group). 2011b. "Trust Fund Support for Development: An Evaluation of the World Bank's Trust Fund Portfolio." Discussed at the March 10, 2011, informal Board meeting of the World Bank. World Bank, IEG, Washington, DC.
- Legovini, Arianna. 2010. "Development Impact Evaluation Initiative: A World Bank-wide Strategic Approach to Enhance Developmental Effectiveness." Discussed at informal Committee on Development Effectiveness meeting, July 14. World Bank, Development Impact Evaluation Initiative, Washington, DC.
- OED (Operations Evaluation Department). 2003. *Sharing Knowledge: Innovations and Remaining Challenges. An OED Evaluation 2003*. Washington, DC: World Bank, OED.
- QAG (Quality Assurance Group). 2009a. "Internal Knowledge Management Products: a QAG Learning Review." World Bank, QAG, Washington, DC.
- QAG (Quality Assurance Group). 2009b. "Synthesis of Past Assessments of Analytical and Advisory Activities (AAA): A QAG Review." World Bank, QAG, Washington, DC.
- Ravallion, Martin, and Adam Wagstaff. 2010. "The World Bank's Publication Record." Policy Research Working Paper 5374. World Bank, Washington DC.
- World Bank. 2007. "A Management Framework for World-Bank Administered Trust Funds." (R2007-0198). World Bank, Washington, DC.

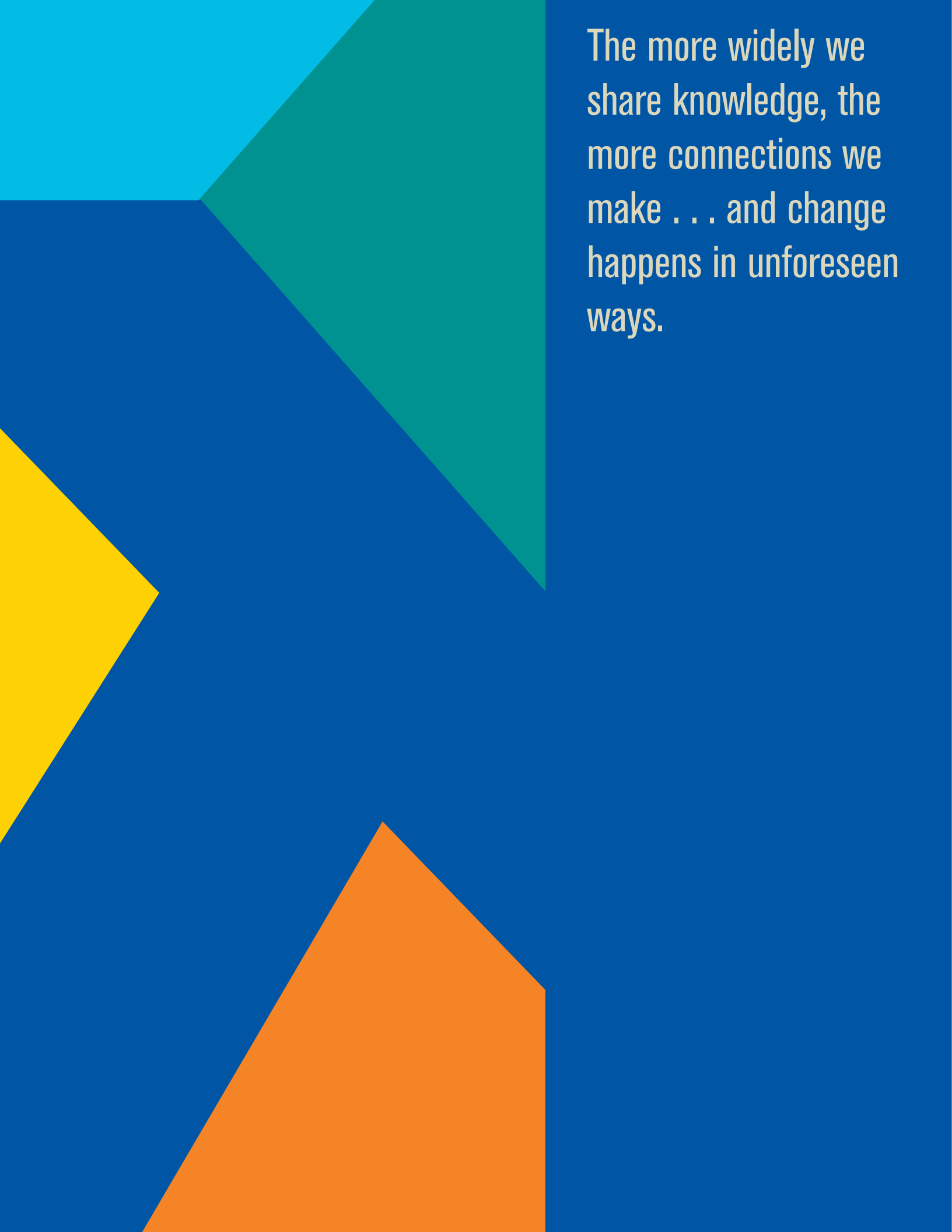
World Bank. 2010a. "Country Survey, 2010 Review." World Bank, Washington, DC.

World Bank. 2010b. "Transforming the Bank's Knowledge Agenda: A Framework for Action." World Bank, Knowledge Strategy Group, Washington, DC.

World Bank Institute. 2009. "The Capacity Development Results Framework—A Strategic

and Results-Oriented Approach to Learning for Capacity Development." World Bank, World Bank Institute, Washington, DC.

Zoellick, Robert B. 2010. "Democratizing Development Economics: As Prepared for Delivery." Speech at Georgetown University, Washington, DC, September 29. <http://go.worldbank.org/5VEUBEBHY0>.

The background features a dark blue field with several large, overlapping geometric shapes. A teal triangle points downwards from the top center. A yellow triangle points downwards from the left side. An orange triangle points upwards from the bottom center. The text is positioned in the upper right quadrant.

The more widely we
share knowledge, the
more connections we
make . . . and change
happens in unforeseen
ways.