DEVELOPMENT ECONOMICS KNOWLEDGE MANAGEMENT

Managing Knowledge, Learning, and Data for Operations

WORLD BANK GROUP
Knowledge Management

DECKM

The DEC Knowledge Management unit (DECKM) plays a critical role in managing the wealth of knowledge that the Bank generates through its operations.

Like many development organizations, the World Bank generates knowledge in everything it does, across diverse activities and throughout the project cycle. Strong structures and approaches to manage this knowledge are indispensable to ensure that this knowledge is used to its full potential, to prevent knowledge loss, to understand what works and avoid repeating mistakes.

Knowledge—one of the World Bank's most valuable assets, after its people—and its effective management are vital to ensure high-quality development projects, and, ultimately, to deliver development impact. The programs within DECKM align to support the key goal of managing knowledge, learning, and data effectively to facilitate World Bank operations and maximize development impact. These programs are grouped into three main units: 1) Knowledge Management (including Text and Data Analytics and the South-South Experience Exchange Facility); 2) Data (including the Global Delivery Initiative and Geospatial Operational Support); and 3) Learning (including the Open Learning Campus).

Knowledge Management

- Knowledge Management (KM) works to build a cohesive knowledge management program at the bank to bring value to operational staff and positively impact the broader knowledge agenda. This program draws upon and promotes best practices for partners and clients, and helps to gather together and promote the sharing of knowledge as a global public good.
- Text and Data Analytics helps practitioners navigate and utilize the vast amounts of data and documentation inside and outside the Bank to support their work. The team is creating practical knowledge packages through research, literature reviews, and data analysis to support operational staff. Its services ensure that useful knowledge and insights from data and text analytics add value to the work of World Bank staff work.
- The South-South Experience Exchange Facility (South-South Facility) enables sharing of development experiences and knowledge among World Bank client countries by supporting knowledge exchange activities. Helping developing countries to share tacit knowledge among themselves around the similar development challenges they face enables them to find solutions that work within their social and economic context.

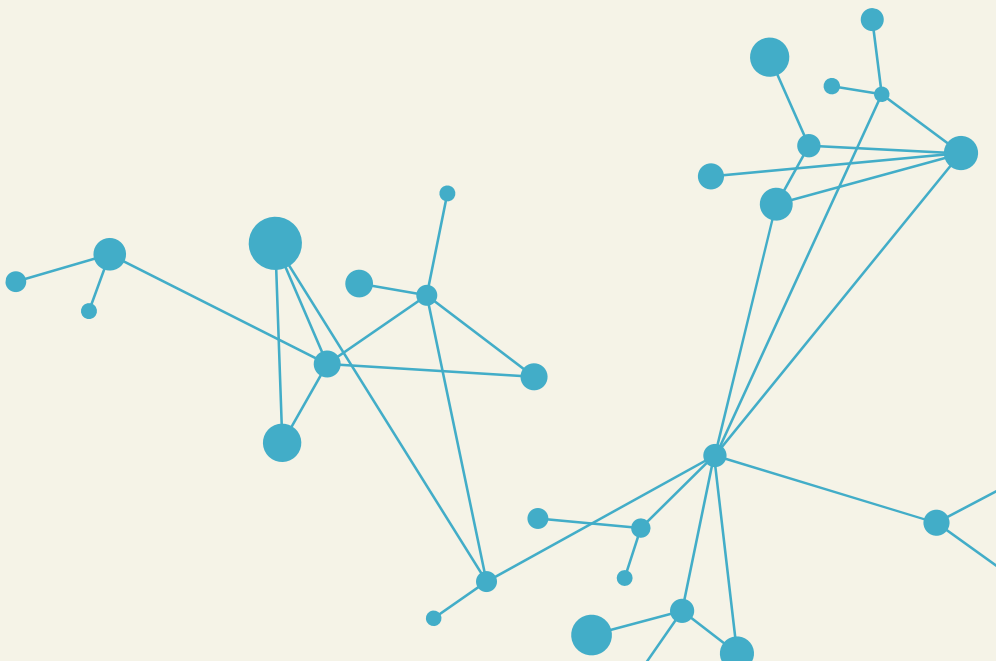
Data

- The Global Delivery Initiative (GDI) works with a variety of partners to document and disseminate delivery know-how in operations to improve project outcomes. GDI is a partnership of over 40 organizations that collaborate to bring together and share operational knowledge to improve development outcomes.
- Geospatial Operational Support Team (GOST) helps task teams unlock the potential of geospatial technology (e.g., satellite imagery, GPS data) to plan, implement and monitor their projects more effectively. GOST delivers "data public goods" for the Bank (e.g., improving procurement, building strategic partnerships, and curating geospatial data).

Learning

- The Open Learning Campus (OLC) works to equip staff with operational knowledge and capabilities to tackle the toughest development challenges. The OLC helps transform knowledge from the World Bank and partners into actionable learning for clients and staff.

The following pages explore in more depth the DECKM programs that work to bridge knowledge gaps within the World Bank Group and across the development sphere. By connecting development professionals to the right knowledge, presented in useful, practical products and formats, when they need it, these diverse teams enable and elevate the work of World Bank staff, clients, and partners.



Knowledge Management

Who We Are

The goal of Knowledge Management at the World Bank is to incorporate better management of what the Bank knows within the operational workflow, providing faster and more effective access to relevant knowledge, which can help staff work more efficiently, effectively, and with agility.

What We Do

The World Bank, like many development organizations, creates knowledge through operations and throughout the project cycle. Indeed, the World Bank has long been recognized as a leader not just in development finance, but also in development knowledge. The Knowledge Management program focuses for this reason on how to better manage this rich know-how. We want to enable staff to share the knowledge that they learn every day, to access knowledge in ways that are user-friendly, and to use it to enable their work and maximize impact for our clients.

How We Work

To move toward an optimal state of Knowledge Management across the Bank, we have developed a Knowledge Management Action Plan, guided by a comprehensive strategic framework.

The Knowledge Management framework has a number of critical components, including:

Ensuring that processes and new ways of working add value without adding administrative burden; leadership for accountability around knowledge-sharing; ensuring that roles and responsibilities are clear; working to get the right mix of tools and technology; awareness-building about Knowledge Management work across the Bank; getting the right mix of incentives to encourage knowledge-sharing; building a culture of knowledge-sharing; and increasing connectivity among staff, clients, and partners.

Our goal is to create a knowledge-sharing environment at the Bank through a combination of technology, incentives, processes and support, so that staff can easily access what they need in order to do their work efficiently. Making knowledge and information more accessible also fosters productive interactions—across the organization, with clients and partners, and across countries—and ultimately increases development impact.

Drawing on key inputs from external partners and internal stakeholders across the World Bank, we have developed a vision for "what good looks like" for each part of the framework, and identified key action items for "how to get there." We are working with different operational units to experiment and test ways to embed Knowledge Management in the project cycle, working on both tactical and strategic levels. The tactical track focuses on immediate opportunities to use Knowledge Management methods and approaches to help staff now. While we move forward on tactical goals, the strategic track takes on longer-term issues that require more in-depth work. Overall, the Knowledge Management Action Plan supports an ultimate goal of giving practitioners useful knowledge, when they need it, in order to support their work tackling the most difficult development challenges, and to enable them to maximize impact.

Text and Data Analytics

Who We Are

The Text and Data Analytics unit within DECKM helps practitioners and decision-makers navigate and utilize the wealth of unstructured and structured data, both inside and outside the World Bank. This team helps ensure that the Bank's collective knowledge effectively informs analysis—whether by tracing information in the extensive documentation produced by projects, or by drawing out insights from the terabytes of data generated by World Bank operations.

What We Do

Given the wealth of qualitative and quantitative information inside and outside the World Bank, practitioners and decision-makers often need help to extract insights from the sea of information around them. The Text and Data Analytics unit provides centralized expertise in extracting these insights and helps map them to development challenges.

How We Work

Working closely with teams from across the World Bank, the Text and Data Analytics unit provides support by automatically extracting knowledge and insights from the wealth of documents and data inside and outside the World Bank.

The **data analytics** offerings use basic to advanced data analytics, ranging from exploratory data analysis to econometric modeling. These techniques and services help translate structured data into analysis for effective decision-making at all levels in the organization.

The **text analytics** methods in use include text clustering, sentiment analysis, topic identification, document classification, text extraction, entity extraction, and concept mining.

These varied techniques help ensure that operational teams can leverage the best available knowledge as they work to achieve the World Bank's goals of eradicating poverty and boosting shared prosperity.

Examples of Supporting Operations

Using Text Data and Geo-Location to Map Sensitive Projects

Challenge: The Environment Global Practice (ENR GP) needed to ensure that the Bank's operations were doing enough to mitigate any adverse impact of their projects on the world's forest cover.

Solution: The team used text analytics and project geo-locations to provide a list of projects for further scrutiny to ensure that necessary steps were taken to eliminate or mitigate any adverse impacts on forests during the design and execution of these projects. Geo-coded project locations and global forest cover data were used to develop a map of project locations against forest cover data. Text analytics was used to identify sensitive projects, bringing together and identifying information that had already been collected.

Creating a User-Friendly Database for Energy and Extractives Global Practice (EEX GP)

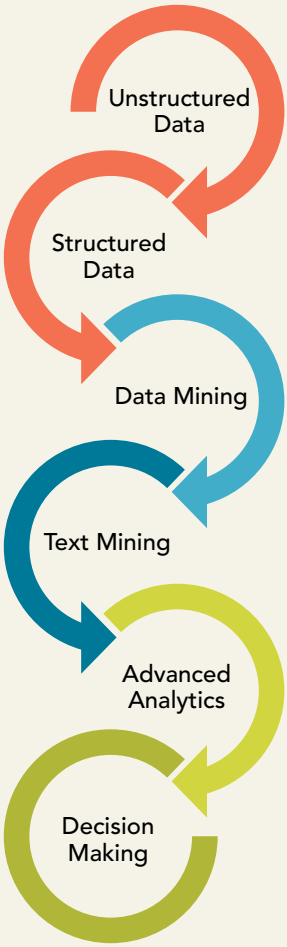
Challenge: Making relevant energy and extractives data easily accessible.

Solution: The Text and Data Analytics team worked with the EEX GP to identify data sources used by project teams to understand the energy sector across client countries. The data was then processed so that practitioners had user-friendly Excel-based tools for SCD analysis, power utilities benchmarking, and general energy sector data. These tools brought together all relevant energy and extractives data series in one place.

Improving Search Results in the World Bank System

Challenge: Improving the quality of information in, and retrieval from, the World Bank's internal document repositories can enable staff to access relevant information more quickly and easily.

Solution: The team leverages technology in a number of ways to deliver knowledge more efficiently. The building blocks for this approach are metadata tagging, document filing tools, and application of the WBG taxonomy. From there, the team works to optimize metadata and sharpen search algorithms, ultimately ensuring that staff can easily access all the relevant information that they need.



The South-South Experience Exchange Facility

Who We Are

Launched in 2008 as a multi-donor trust fund, the South-South Experience Exchange Facility (South-South Facility) enables sharing of development experiences and knowledge among World Bank client countries by funding knowledge exchange activities. Helping developing countries to share tacit knowledge among themselves around the similar development challenges they face enables them to find solutions that work within their social and economic context.

What We Do

Since 2016, the South-South Facility's work and strategy has shifted from a funding mechanism supporting individual South-South knowledge exchanges to one that supports programmatic delivery of South-South knowledge exchanges. This strategy is grounded in the experience gained over the first eight years of the South-South Facility, and feedback from participants and organizers of the exchanges. The South-South Facility results are captured in a series of implementation progress reports, result stories, videos, and client survey reports that are published on the interactive **South-South Knowledge Exchange library**.

How We Work

The South-South Facility follows an integrated knowledge-sharing approach that includes:

Introducing programmatic knowledge sharing to enable multiple countries to participate in multiple exchanges over 2-3 years.

Using knowledge-sharing experts who will ensure appropriate design, implementation and monitoring of knowledge exchanges.

Providing tools and services to ensure that country institutions are well prepared to share their knowledge with other countries.

It provides support through two main windows – stand alone and programmatic – as well as the Organizational Knowledge Sharing Program.

Stand alone: Targets one-off South-South knowledge exchanges that are implemented within a year. The primary objective of this service is to expose participants to a specific experience that will help address their development challenge.

Programmatic: Targets multi-year collaboration with the aim of implementing solutions identified by the countries for a specific development challenge. It includes activities that will help the provider of knowledge capture and share knowledge pertinent to the development challenge.

Organizational Knowledge Sharing: Helps public sector institutions learn from their own experience. Institutions supported under the OKS program build the organizational infrastructure and skills to: a) execute a proven discipline of documenting and sharing operational knowledge; and b) solve critical challenges and scale up solutions.

SOUTH-SOUTH FACILITY AT A GLANCE (PERIOD COVERED: 2008-2017)

230 KNOWLEDGE EXCHANGES have been completed

163 RESULTS STORIES and **4** IMPACT STORIES have been prepared and will be posted on the new SSF website

94 countries as knowledge ***PROVIDERS***

112 countries as knowledge ***RECIPIENTS***

75 countries ***PROVIDED*** and ***RECEIVED*** knowledge

Examples of Supporting Operations

Haiti Empowers Local Communities to Rebuild with Lessons from Indonesia

Challenge: After the earthquake that hit Haiti in January 2010, Haitian authorities wanted to learn more about disaster responses, and the "how to" of designing and implementing community-based housing reconstruction initiatives.

Solution: A delegation of officials from Haiti's Ministry of Planning and Ministry of Interior, as well as nongovernmental representatives, visited three provinces in Indonesia to see firsthand completed and ongoing post-disaster reconstruction projects. During these site visits, Indonesian reconstruction experts, government officials, and community members shared their expertise with the Haitian delegation.

The Haitian delegation drew several key lessons on post-disaster housing reconstruction, including the importance of strong national and local leadership from the government in setting clear goals to hasten the rebuilding process, and how empowering community members could create a greater sense of ownership. Moreover, the delegation gained skills for coordinating and monitoring global aid and stemming corruption in planning and implementing reconstruction projects.

Promoting Forests and Reducing Carbon in the Kyrgyz Republic and Tajikistan

Challenge: National forest authorities and specialists in the Kyrgyz Republic and Tajikistan wanted to learn about forest management and reforestation policies, and how to register for the Clean Development Mechanism (CDM) of the Kyoto Protocol.

Solution: Government officials and forestry specialists from the Kyrgyz Republic and Tajikistan visited Moldova to see carbon sequestration and afforestation initiatives implemented in the field. Moldovan experts then traveled to the Kyrgyz Republic to conduct workshops on carbon sequestration techniques and Clean Development Mechanism (CDM) documentation.

Officials from the Kyrgyz Republic and Tajikistan learned how to register for the Kyoto Protocol's Clean Development Mechanism (CDM) for carbon trading and sequestration, which can generate revenue for further expansion of carbon-reduction programs. The Kyrgyz Republic also began implementing a trial program to reintroduce forests. Furthermore, the exchange rebuilt a network of forestry institutions and individuals that had dissolved after the collapse of the Soviet Union.

GLOBAL DELIVERY INITIATIVE
KNOW-HOW THAT WORKS

Who We Are

The Global Delivery Initiative (GDI) is a collaborative effort of over 40 partners across the development field—multilateral and bilateral organizations, non-governmental organizations, country governments, academic institutions—who aim to create a collective, cumulative evidence base of delivery know-how to inform development practice and improve implementation. GDI has created a governance structure, with the secretariat currently housed in the World Bank's Science of Delivery team, and with the World Bank and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) co-chairing the steering committee.

What We Do

GDI works to connect practitioners to share knowledge and operational know-how on implementation processes, what worked and what didn't. It leverages data to help practitioners anticipate delivery challenges, and supports the documentation of implementation process to help practitioners understand how interventions worked in context. GDI uses a variety of approaches, including a comprehensive online platform, to catalyze knowledge flow across sectors, institutions, and regions.

How We Work

The GDI Learning Program provides workshops and trainings that enable practitioners to deepen their knowledge about practical tools and methodologies to operationalize delivery know-how, capture evidence on how to address delivery challenges, and connect with others who are working on these themes.

Delivery Challenges in Operations for Development Effectiveness (DeCODE) is an evidence-based system that helps practitioners identify and address likely delivery challenges by leveraging historical project data. DeCODE predicts the likelihood of challenges that may occur during project implementation.

The Global Delivery Library is a space that connects practitioners to share practical experiences and know-how around delivery challenges and adaptive implementation throughout the project cycle. It deploys a variety of forms, including delivery case studies, videos, multimedia materials, and other publications contributed by practitioners, to capture a range of experiences and inform practitioner decision-making for better development solutions.

Examples of Supporting Operations

Using Evidence to Preempt Delivery Challenges

Challenge: Delivery challenges often arise unexpectedly in the course of even the best-prepared projects.

Solution: DeCODE draws on historical data from a number of GPs and external partners to create an evidence-based system that helps project managers anticipate and preempt delivery challenges based on sector, region, and a wide range of other contextual variables.

Online Platform to Connect Practitioners

Challenge: We know that knowledge is often diffuse, even fragmented across institutional, sectoral, and geographical boundaries. Practitioners need an easier way to share delivery know-how and access knowledge on delivery processes, what works and what doesn't.

Solution: The GDI platform was launched in a high-profile event in Chongqing, China, in November 2016. Partners such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Korea Development Institute (KDI), and China, among others, are contributing resources to this online platform, which serves as a meeting point for practitioners and partner organizations to connect and share knowledge, and which is being used by practitioners to share knowledge across GDI.

Documenting Implementation Processes and Solutions to Share Delivery Know-How

Challenge: Information on processes of implementation and how these were effected by delivery challenges remain under-documented. This is a significant problem, because knowledge on how practitioners confronted challenges during implementation can offer rich insights, and help practitioners to emulate the successes, and avoid the mistakes, experienced in other projects.

Solution: The Global Delivery Library offers a variety of resources—including case studies, delivery notes, video testimonials, and toolkits for adaptive management—that have been contributed by partner organizations. These products provide access to a wide range of knowledge on "the how," and document implementation processes in their context. They draw on tailored blends of original research, interviews with implementers, and conversion of program documents like Implementation Completion and Results Reports, evaluations, and scholarly papers to produce user-friendly products focused on delivery challenges and operational know-how. These resources offer a user-friendly way to help practitioners understand how delivery processes occurred—and how delivery succeeded and failed—in projects relevant to their own work. Products in the Global Delivery Library have been used in diverse contexts: from improving water and sanitation, agriculture, and governance in Nigeria, to supporting a team preparing a health project in Indonesia, to helping the Mexican government assess the efficacy of a social inclusion project.

geospatial OST
development happens somewhere

Who We Are

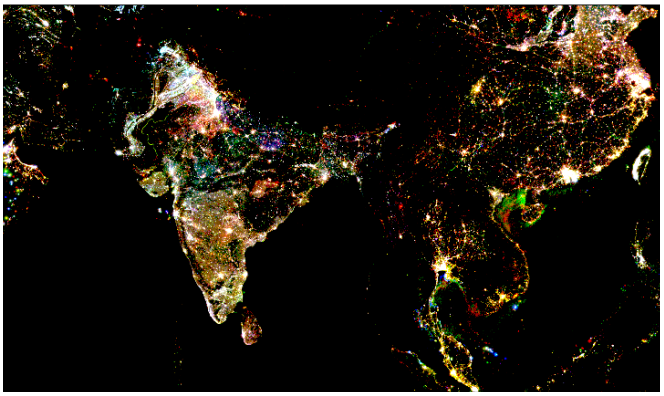
The Geospatial Operational Support Team (GOST) works with geospatial data – that is, data matched to measures of location, from countries and municipalities to specific coordinates – throughout the World Bank. The essence of this work lies in the combination of useful data with a location element. The world of geospatial goes beyond positioning existing types of data, and advances in technology (satellites, drones, cell phones) are causing new data types to emerge. Questions which couldn't be answered ten years ago can be answered today using this technology.

What We Do

The team provides a variety of services, including advice on how geospatial data can help solve specific problems, purchasing support for data and imagery, and direct assistance for task teams, to help make the World Bank Group a sophisticated consumer of geospatial analytics, and ultimately carry out its development operations in the most cost-efficient and effective manner.

How We Work

In addition to direct support and assistance to task teams that need help, from short-term assistance to long-term engagements that create geospatial global public goods, GOST is creating a set of services and resources to help make geospatial data useful and accessible to teams across the World Bank.



Efficient Spatial Data Management: GOST is creating a consolidated catalogue of geospatial layers that will be available to everyone at the World Bank. This catalogue will grow with demand for commonly-requested geospatial products.

Procurement Support: GOST is creating a "Development Data License" with key vendors. This will help increase access to data through the elimination of duplicated data purchases, deep purchasing discounts, and advantageous data sharing permissions.

Knowledge Capture and Dissemination: GOST is working to integrate spatial data and analysis into Systematic Country Diagnostics (SCDs), by developing a catalogue of geospatial data, maps, and analysis that team leaders can draw on as they prepare SCDs. GOST is also working to help projects use geospatial data for M&E indicators, and is helping to scale pilot activities.

Examples of Supporting Operations

Improving Road Asset Management through Geospatial Technology

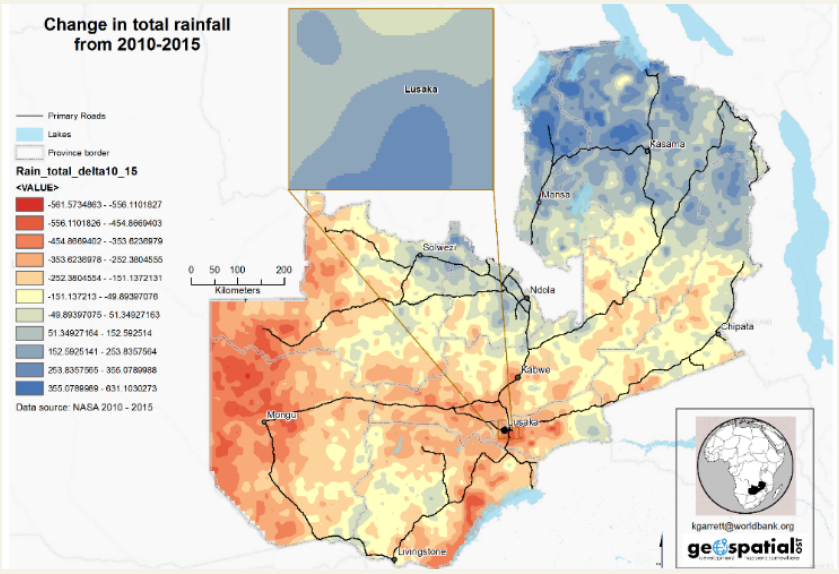
Challenge: Collecting the geometry and quality of rural roads is vital to maintaining a proper road asset management system; however, this collection process can be prohibitively expensive. As a result, investment decisions and prioritization models are often based on outdated, invalidated, and non-spatial road inventories.

Solution: : In cooperation with the Transport & ICT and Governance Global Practices, GOST sponsored two missions to Vietnam to work with the team leader of the local roads project and local government counterparts to design and implement a series of data collection processes and open source technologies to inventory, map, track, and analyze unmapped rural roads. By integrating spatial information into what is normally a spatially blind table, GOST established a means for gathering and curating data that supports context driven medium term expenditure planning, risk assessment, and relative investment prioritization. The solution included smart phone apps and a web platform for road quality monitoring and investment prioritization. This modular, low-cost approach is designed to be replicable in other countries at low cost in less time with each iteration.

Geo-Enabling Portfolios in Fragile and Conflict States

Challenge: : Capturing geospatial project data that is accurate, reliable, detailed, and spatially referenced at a granular level is important in project prioritization, project design, and monitoring and evaluation. While this has always been a desire in the World Bank Group, it has proven difficult at the portfolio scale.

Solution: GOST provides on-the-ground training courses in-country, utilizing open-source technologies. While in the field, surveyors use smart phones to fill out digital forms, take photos, record GPS coordinates, and conduct audio interviews, all without the requirements of mobile or wireless network connection. Once network or wireless connection is available, these completed forms and multimedia files are automatically uploaded to a cloud-based server where team leaders can view results, plot project sites and associated survey forms on descriptive maps, and verify the accuracy of submissions in near real-time. This tool will revolutionize how projects are monitored for both team leaders and country management units, and while the current implementations have been in fragile states, there is an appetite for these services across the World Bank Group.



Open Learning Campus

ACCELERATING SOLUTIONS THROUGH LEARNING

Who We Are

Development practitioners and decision-makers in developing countries want to learn from each other's achievements and failures. Where can they can turn for real-world, current and practical information to tackle development challenges? To a virtual Open Learning Campus (OLC)—a vast, unique ecosystem of customizable and just-in-time curricula, lessons, tools, conversations, and communities to help World Bank clients, partners and staff update their knowledge and co-create solutions.

What We Do

Technology is constantly changing the learning landscape. The OLC represents the World Bank's commitment to harness this global revolution in learning to advance its efforts to lift people out of poverty and boost shared prosperity. The OLC provides dynamic learning opportunities where diverse audiences can access development lessons just-in-time, and in versatile formats—from bite-sized lessons to full-length courses to peer-to-peer conversations. Since we learn constantly, the expansive scope and real-world focus of the OLC ecosystem can contribute to learning and project and performance effectiveness.

How We Work

The OLC is inspired by successful models of digital learning, such as the Khan Academy and Massive Open Online Courses (MOOCs), as well as the latest developments in adult pedagogy. These innovations include gamification, learning labs, simulations, and learner-centric activities, such as role-plays, peer reviews, and scenario analysis. To make learning accessible to busy professionals, the OLC offers its curricula through three "schools":

WBx–Talks Nuggets of knowledge through talks, podcasts, videos, briefs, and games that provide a just-in-time overview of materials targeted to learner-specific interests.

WBa–Academy Deep learning related to development challenges and solutions through virtually facilitated or self-directed e-courses, MOOCs, and material from face-to-face courses.

WBc–Connect Platforms for participants to share knowledge, engage with peers and experts and, find crowd-sourced solutions to development challenges.

The OLC provides just-in-time learning as a central part of the WBG and client operational engagement. It responds to an urgent need to capture and curate tacit knowledge in real-time in forms that are accessible, and interactive.

There is a significant body of tacit knowledge available with World Bank operations staff, gathered over years of development experience. The OLC's pedagogical services, delivered at critical points in the project cycle, helps capture and share this tacit knowledge, for people to learn in real time, engaged with a broader community of development experts.

In addition, bite-sized learning products, which are developed with the assistance of experts working in the development field, provide summary insights that staff and clients can learn and apply with a short turnaround within the project cycle. Practitioners can access the OLC library of cutting-edge content and innovative learning tools at any time and from any place.

The OLC is:

- Customizable
- Multi-format
- Interactive

Users can:

- Rate courses
- Ask an expert
- Share ideas through social media
- Receive personalized recommendations
- Track learning progress

Examples of Supporting Operations

Accessing and Visualizing Multi-Sectoral Data in a Spatial Context

Challenge: Solutions to many development problems are hampered by the poor availability of spatial data. How can you easily find out which areas in Madagascar are susceptible to cyclones? Or which areas in India have high child malnutrition? Or what the major exports of Vietnam are?

Solution: The OLC offers curricula that enable learners to apply spatial data from interactive maps, satellite observations, and economic trends in order to not only identify where problems occur but how solutions can be developed. Through tutorials, for example, participants can explore how spatial information enables better planning for a city or river basin to promote sustainable development.

Results Based Financing (RBF) in Health

Challenge: RBF approaches can help to strengthen core health systems. However, countries and development agencies are faced with insufficient implementation capacity.

Solution: RBF involves learning about how to measure and manage health outcomes better. Through immersive learning opportunities provided by an eight-module, facilitated e-course and game the learner is able to understand the concepts that stimulate creative thinking. Throughout the course and game, players are required to make decisions on simulated real life operational problems, such as dealing with health providers, voucher agencies, and government ministers.

Financing for Development: Unlocking Investment Opportunities

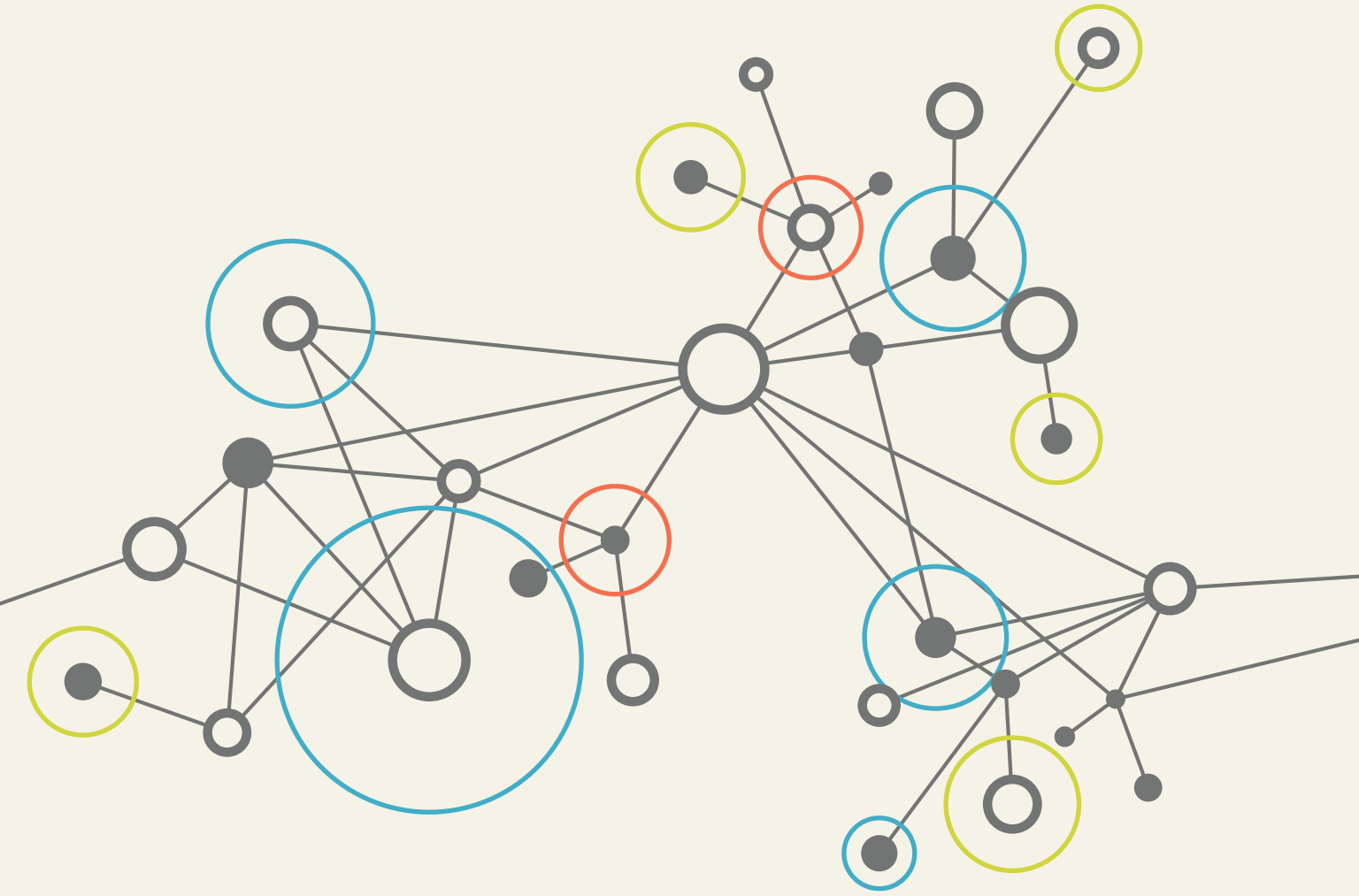
Challenge: Implementing the ambitious global development agenda requires trillions of dollars of financing. How can we unlock investment opportunities to finance this critical work and help the poor and most vulnerable?

Solution: In this Massive Open Online Course (MOOC) a large and diverse audience is engaged to learn about Financing for Development; raise their awareness on broad issues and opportunities in development finance, familiarize them with key concepts and approaches, and encourage participants to consider what actions might be taken within each of their contexts to support this agenda. A mix of government, private sector, and international organization leaders from around the world delivered course lectures.

Planning and Design of Sanitation Systems and Technologies

Challenge: Learning about effective sanitation planning and behavior change is critical for improving the living conditions of the poor in developing countries.

Solution: The OLC offers interactive, experiential learning on how to implement affordable sanitation solutions. This also includes learning about tools that could accelerate behavior change, shifting the approximately half a billion persons world-wide still practicing open defecation to utilizing sanitary toilets. The course is offered in English and French, with subtitles in Spanish and Hindi to reach this diverse audiences.



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