



**A NEW ROUTE TO DEVELOPMENT:
SENEGAL'S TOLL HIGHWAY PUBLIC-PRIVATE PARTNERSHIP, 2003 – 2013**

SYNOPSIS

By the early 2000s, traffic in Senegal's capital city of Dakar had become unbearable. A skyrocketing number of vehicles strained the city's infrastructure, and traffic jams choked not only the major road into and out of town but also the region's economic growth. A new highway that would ease road congestion had been planned decades earlier but had been shelved because of the cost, complexity, and difficulty of financing. Abdoulaye Wade, elected president in 2000, sought a new solution: a public-private partnership. The plan called for a private company to contribute a portion of the cost of the highway's construction and then to maintain the highway—in exchange for toll revenues—with the rest of the up-front costs borne by the government. Executing the first such partnership of its kind in the region would not be easy. In addition to identifying and resolving complex technical and financial aspects of the partnership, government planners had to find ways to mitigate extensive social and environmental impacts of the project—including the displacement of 30,000 people from their homes and businesses. Senegal's newly created Agency for Investment Promotion and Major Works led the process of selecting the partner company, overseeing construction, and coordinating implementation with institutions ranging from Senegalese ministries to international development banks and community associations. Once it opened in August 2013, the Dakar-Diamniadio toll highway saw greater use than expected and alleviated congestion in the capital. But delays in the resettlement of people displaced by the project meant that some problems persisted into 2016.

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INTRODUCTION

On August 1, 2013, green lights flickered on at the tollbooths, and Senegal's 32-kilometer Dakar-Diamniadio highway opened for business. The occasion was cause for celebration by the diverse group of government agencies, companies, and international development groups that had labored for more than a decade on sub-Saharan

Africa's first toll highway public-private partnership outside South Africa. Aminata Niane, who played a pivotal role in the partnership as head of the government agency that spearheaded the project, recalled that the process had been "a battle every day."

Located on a peninsula at the westernmost point of Africa, Dakar was well positioned to serve

as a business and trade hub for the region. But in the early 2000s, the rapidly growing capital city was struggling with increasing demands on its road system. The Dakar region's population grew by more than 40% to 2.43 million during the decade that ended in 2005,¹ and the number of vehicles more than doubled to 98,000 in 2007 from 40,000 in 1997.² Bumper-to-bumper traffic became the norm, and driving the 32 kilometers from Dakar's downtown business district to the town of Diamniadio took an average of 90 minutes.³

The difficulty of moving people and goods from Dakar to the rest of Senegal and West Africa not only infuriated drivers but also hurt businesses in the area, discouraged investment, and weighed on the national economy. In 2008, the World Bank estimated that Dakar's traffic troubles were costing Senegal at least 42 billion West African CFA francs (about US\$86 million at the time) per year, or 0.64% of 2008's gross domestic product.⁴ Senegal's Agency for Investment Promotion and Major Works (APIX) estimated the losses were more than twice as large, at 100 billion CFA francs (US\$205 million) per year.⁵

Surrounded on three sides by the Atlantic Ocean, the city had little room to expand, leading to a shortage of about 200,000 housing units per year⁶ and substantial premiums for land. In addition to fueling price pressures for land and housing, the traffic jams contributed to worsening air pollution. In 2005, the concentration of particulate matter, known as PM₁₀, in Dakar was more than double the World Health Organization's maximum acceptable level.⁷ The challenge of traveling between Dakar and the rest of the country also exacerbated Senegal's regional inequalities. In 2009, 25% of Senegal's population and 80% of its formal economy were located in the capital—although the city made up only 0.3% of Senegal's land area.⁸

As early as 1978, the Senegalese government conducted studies for a new highway to ease congestion on the existing Route Nationale, the only major road into and out of the city. However, the government focused its limited resources on

pressing social needs such as education and health, and the highway remained out of reach.

With the election of President Abdoulaye Wade in 2000, infrastructure improvements gained importance on the government's agenda. A new highway and airport topped the list of Wade's campaign promises. Wade also emphasized the need to attract private investment, and the new president was aware that investors were unlikely to bet on Senegal if the country lacked the infrastructure to support their businesses. In July 2000, three months after taking office, Wade established the Agency for Investment Promotion and Major Works, which reported directly to the president, and appointed Niane as its director. Niane had years of experience advising the government and donors on private sector development.

Among Niane's first tasks was to build the long-sought highway that would link Dakar with a proposed special economic zone located in Diamniadio, about 32 kilometers away. Wade "explained to me that he wanted a toll highway as soon as possible, funded by the private sector," Niane recalled. The new president had long been interested in public-private partnerships and wanted to finance the project through a build-operate-transfer agreement, in which a private company contributes funds to construct a highway and maintains it for a specific number of years in exchange for a revenue stream based on tolls.

Neither Senegal nor any other country in West Africa had ever attempted to make use of such a partnership to build a road. It was up to Niane and her team at APIX to break new ground.

THE CHALLENGE

Niane and her team not only had to design, implement, and manage an effective partnership with a private company but also had to deal with the social and environmental spillover effects from the construction and coordinate a host of stakeholders with sometimes dissimilar priorities.

Designing and managing the project posed a major challenge for APIX. The partnership was

the first of its kind in the region, and the new agency had no experience in managing comparable projects. “At that time, Senegal did not have any institutional framework, any legal framework,” said Abdou Diaw, the agency’s public–private partnership manager. “The president kept saying, ‘BOT’ [build-operate-transfer], but many of us didn’t know anything about PPPs [public–private partnerships] or about BOT.” To effectively coordinate the numerous actors involved and to supervise the partner company’s work, APIX had to develop its internal capacity and hire a strong project management team.

The partnership’s structure had to be attractive to private investors who measured goals in terms of revenue and profit, and it had to also meet the government’s objectives of reasonable costs, affordable tolls, and quality construction. Risk was a key consideration: how the public and private sectors would share the risk and how the project’s structure could mitigate it.

Companies were unlikely to participate unless they could be confident that revenues would be sufficient to recoup their initial investment in construction, to cover operating and maintenance costs, and to result in a reasonable profit. At the same time, Niane said, the Senegalese government was unwilling to allow tolls to be set at levels that would place the highway out of reach for use by average citizens. The government also wanted to minimize its share of the costs while ensuring that its partner company delivered quality work on schedule.

APIX also had to develop strategies for dealing with the possibility of corruption, a common problem in public-works projects worldwide. Transparency International’s Bribe Payers Index consistently rated public works as the most corrupt global sector.⁹ A rigged bidding process could result in an unqualified contractor or inflated costs, and during construction, companies could cut corners and pocket the cost differences.

Using a build-operate-transfer partnership reduced the risk of that type of corruption because the company that built the highway would also be

responsible for maintaining it during the concession period. “There’s no advantage for the concessionaire to cheat with the quality,” Niane said. “If they [use] less concrete, if the highway deteriorates, they have to reinvest.” However, she added, “there was a fear of corruption in these major projects,” and it was essential to run a fair and transparent bidding process and develop effective mechanisms for supervision during construction.

As the representative of the Senegalese government, APIX was responsible for coordinating among the groups and institutions that played roles in such a broadly shared undertaking. In addition to the company and such government agencies as the ministries of finance and infrastructure, the project required participation by development banks, local governments, and community associations. APIX had the job of facilitating communication among the participants and resolving unforeseen problems.

The project posed significant social and environmental challenges as well. Regardless of the chosen route, the new road had to cross a densely populated urban area and would displace thousands of homes and businesses. (The final route affected approximately 30,000 people.) “The most difficult part of this project was the relocation, because it became a social project rather than a financial or technical project,” Niane said. Effectively compensating and resettling people displaced by infrastructure projects were problems around the world, and the Senegalese government and international donors wanted to ensure that people affected by construction of the highway were treated fairly.

In addition, one possible route passed through the Mbao forest, one of Dakar’s few undeveloped natural areas. The 630-hectare forest, consisting mainly of former cashew plantations, was sometimes referred to as the city’s “green lung” and provided livelihoods for nearby communities, which used the area for pasture and horticulture.¹⁰ The forest had been under threat

for years as the Dakar region urbanized, and if the highway passed through part of it, APIX and other agencies would have to find ways to mitigate the environmental impact.

Finally, APIX had to secure support within the government. The idea of partnering with the private sector to build the highway was new to officials at all levels, Diaw said, and securing buy-in was difficult. APIX had to get them “to see the relevance, see the opportunity of this mechanism . . . they don’t know about it, and they aren’t used to it,” he said.

“Many people were afraid that if we build this highway, we will have demonstrations and opposition,” Niane said. The project’s champions had to persuade other government officials to back the project and, critically, to maintain their support during years of preparatory studies, contract negotiations, and construction.

FRAMING A RESPONSE

Before moving ahead with preparations for the partnership, Niane said, she had to determine “whether it’s bankable for the private sector to come in, and under which conditions private investors would be interested.” With funding from the World Bank, APIX commissioned studies of the variables that would determine the financial structure of the concession.

In 2003, APIX hired Setec International, a French engineering company, to project the number of vehicles that would use the new highway given different toll rates. Accurate projections were critical to predicting the revenue stream and deciding practical issues such as the number of lanes. Setec’s traffic study estimated that under the base toll scenario, approximately 33,000 vehicles each day would use the portion of highway east of the suburb of Pikine, where the private company would begin construction.¹¹

Toll prices represented the other critical component of the government’s financial calculations. The government wanted to ensure that the toll road, Senegal’s first, would be a viable option for average people. If the tolls were too

high, people would not use the highway, so “the government was seeking to fix tariffs that would be socially acceptable,” said Dominique Ndong, APIX general coordinator of major projects. Furthermore, Ndong said, it was important to be sensitive to affordability because “the users think it’s the state that should do everything—including paying the tolls.” People in Senegal were not accustomed to paying fees for government services, he said.

Setec conducted surveys to determine how much users were willing to pay for a toll road, and based on the surveys and on calculations of living expenses, APIX set caps for the tolls—for instance, at 1,275 CFA francs (about US\$2.55 in 2009) for a passenger car to drive the entire length of the tolled highway.¹²

Creating a legal framework

In preparation for the highway project, Senegal had to establish regulations governing public–private partnerships. In March 2004, Senegal’s parliament passed a law enabling the use of build–operate–transfer partnerships. The law also stipulated the bidding process and requirements for such concessions, “inspired by best practices all around the world,” Diaw said. APIX staff “traveled all around the world to benchmark some other countries where PPPs have been successful”—mainly in Europe and South America, because South Africa was the only African country that had experience with similar partnerships.

Another law, passed on the same day, established the Infrastructure Council, an oversight body that would supervise the bidding process. The council was “one of the major innovations,” Niane said, because it served as a check against corruption. The council’s diverse membership—representatives from the judiciary, parliament, business associations, and civil society organizations—authorized each stage of the bidding and monitored the process for irregularities. “They were checking all the documents before bidding, the bidding documents,

and the contract; and they authorize the signature before we sign the contract. . . . They control each step of the bidding process and each step before the signing of the contract, so there was little room for corruption,” she said.

Diaw added that the requirement to represent all major political parties among the council’s parliamentary members was important to ensure sustainability. Inclusion of the opposition helped secure political support for the long-term project, he said, and the rationale was that “if the regime changes, the opposition couldn’t say they were not aware of this project.”

Studying the possibilities

Using projections of traffic and construction costs as well as preliminary assessments of environmental and social impacts, the government evaluated four possible routes. APIX technical director Abdoulaye Thiam said each route posed different trade-offs with regard to cost, number of people displaced, and environmental impacts.

Responsibility for making the final decision lay with the national infrastructure steering committee, which oversaw all of Senegal’s major infrastructure projects and comprised representatives of key ministries such as finance, infrastructure, and environment. The discussion was contentious, Niane recalled, particularly because “many people were scared of the scale of the displacement [of people]. So they were proposing other routes, but those routes had disadvantages as well,” such as greater costs or undesirable environmental impact. When the committee members were unable to reach agreement, the prime minister stepped in, Niane said, and with his involvement, the committee selected the final route between Dakar and Diamniadio.

The chosen route minimized displacement, Thiam said, although at the cost of greater environmental impact. By passing through Mbaou forest, the route avoided more-densely-populated areas but would destroy part of Dakar’s most significant natural area. Although widening the

existing Route Nationale was also a possibility, Niane said, APIX wanted to ensure that drivers had a free option in addition to the toll highway. Allowing drivers to choose would ease acceptance of the tolls and provide an alternative for those who considered the cost too high.

With the planned route decided, APIX hired another company, Buursink International Consultants, to evaluate the project’s externalities in more detail. In March 2006, Buursink produced an overall environmental and social assessment, which presented an array of impacts—from air pollution to residents’ livelihoods. Relocation was especially noteworthy: the expected displacement of about 30,000 people was more on the scale of a dam project than a road, said Moctar Thiam, the World Bank’s task team leader at the time.

As studies for the public–private component of the highway were in progress, construction began in July 2005 on the first 12 kilometers, from Malik Sy in downtown Dakar to the suburb of Pikine, using a traditional government procurement process. Because of the preparation and negotiations, “we knew from the very beginning that the PPP was going to take a very long time,” Diaw said. The first section was considered too urgent to wait, and the government saw that section as a way to demonstrate its commitment. However, APIX planned to start tolling the section at the seventh kilometer, where drivers could choose between the toll road and the free Route Nationale. The final concession would include the tolls on that section of the road.

Developing a program

Although the design of the highway could be adjusted during the contracting process, APIX had to develop initial plans that would guide companies’ bidding. In addition to technical specifications for the construction, APIX worked closely with the World Bank to find ways to address the highway’s social and environmental impacts.

To design the highway itself, APIX worked with a French engineering company, Egis

International, beginning in 2006. Based on the costs and traffic projections, “We developed technical and financial optimization strategies with APIX to give Senegal infrastructure of an international standard,” said Jean-Pierre Raybaud, the director of Egis in Senegal. Egis also helped APIX develop specifications for materials and standards for construction and maintenance.

As the highway plan took shape, managing displacement was a central concern. Approximately 3,000 families would lose their homes to make way for the construction. Based on a survey of residents’ preferences and the donors’ policies, the project team decided to build a resettlement site about 15 kilometers from Pikine as an option for those displaced. Although families could use the compensation they received to buy or rent new homes anywhere, the goal was to provide a place that would offer better infrastructure and social services than were available in the poor, informal areas of Pikine, where most of the displaced population lived, said Babacar Diouf, APIX director of environment and right-of-way clearance. At the resettlement site, he said, “people can have formal titles and all the amenities: roads, lights, water supply, sanitation, and community facilities like schools, a market, a health center, places of worship—all things they didn’t have or that were insufficient [in their former communities].” The planners hoped that enough people would relocate to the site to create a vibrant community and anchor the area’s development.

Finding land for a resettlement site was difficult, however. The only land available that offered sufficient space for up to 30,000 displaced people was located just two kilometers away from the Mbeubeuss dump site, an informal landfill that took in trash from the entire Dakar metropolitan area. “All of a sudden, the dump problem is our problem [too],” said Moctar Thiam. Concerned about possible health risks, the World Bank made the closing of Mbeubeuss a precondition for opening the resettlement site.

Closing the dump required the creation of a high-quality landfill elsewhere, and although the Senegalese government had selected a site in the municipality of Sindia, south of Dakar, the work to close Mbeubeuss had not started. For public health reasons, “closing the dump site would have been such a big social benefit,” Moctar Thiam said. He recalled thinking, “If I can do it through the toll road because I have the leverage, let’s do it.”

Besides requiring the demolition of houses and businesses directly in the route, the planned highway also would split in half the densely populated, informal neighborhood of Pikine Irrégulier Sud. To mitigate negative effects on residents who remained in the area and to ease their acceptance of the project, APIX and the World Bank planned to improve drainage in the flood-prone neighborhood and build schools and health clinics to ensure that people on both sides of the highway could easily access social services.

The project quickly grew to a scale far beyond what APIX had originally envisioned, Diaw said. “It was as if we were saying, ‘Maybe we should add this component to limit the social impact on this district along the road . . . OK, what about the people we will be moving to another area? Let’s add a component to build houses for those people. What about the landfill that is two kilometers away from this resettlement area? Maybe we should add another component. We’re going through a forest, so we should do something about it—just add it.’” Each addition had a purpose, Diaw said, but they produced a very different project. “We had started doing a highway project, and we ended with an urban planning project.”

GETTING DOWN TO WORK

As the highway project took shape, APIX established a dedicated unit, the Direction du Projet Autoroute (Highway Project Management), to manage the public–private partnership and all of its related components. “We wanted only the best—to have a ‘dream team,’” Niane said, and funding from the World Bank enabled her to offer

salaries that attracted experienced engineers, sociologists, and environmental specialists. As the project grew, the team grew with it, and to complement its in-house team, APIX also hired consultants to serve as technical, financial, and legal advisers.

With the studies and design completed, members of the APIX team knew what they wanted to build, but in designing the tender documents, they had to decide how the government and the private sector would work together to get the job done. With authorization from a presidential decree in February 2007, APIX began work on the bidding documents and draft concession agreement that would delineate the private sector's and the government's precise roles.

Structuring the concession

The key decisions were which costs and risks each partner would bear. Structuring a partnership “is all about risks,” said Didier Payerne, director of African development at Eiffage and operational director of SENAC, S.A. SENAC is a special-purpose vehicle that Eiffage, the eventual winning bidder, created to finance, build, and operate the highway.

Given the projected construction costs and the anticipated traffic, the caps that APIX set on tolls meant that no private partner would be able to make enough money to recoup all of the construction costs. The government would have to cofinance the project for it to be profitable for the private partner—contrary to initial expectations, Niane recalled. “I had a very tough time when I presented this financial model to the president, because in his understanding, the highway should be funded 100% by the private sector,” she said. Niane persuaded the president that the government would have to contribute, but when she laid out the plans for Wade and several key ministers, “they were surprised that the state was paying more than the private sector.” Once they understood the model, however, they agreed.

The government could choose how to contribute its share of the costs. One option, Diaw

said, was for the Senegalese government to “guarantee a certain amount of revenue, and if we're below that number, the government will pay compensation.” However, he said, “The government didn't want to go for that option because the issue was for the government to plan how much it has to pay every year.” An alternative was for the government to pay a portion of the up-front construction costs.

The key distinction between the two options was which party would take on the “traffic risk”: who would lose money if revenues were lower than expected. Guaranteeing the concessionaire a certain amount of revenue meant the government would bear the risk and pay more or less each year depending on the number of vehicles using the highway. In contrast, contributing a larger share of the construction costs meant that bidders might be willing to take on the traffic risk in exchange for lower up-front costs. When Niane presented the options to the president and ministers, she said, the budget ministry strongly preferred the predictability of “a core investment with the private sector, right at the beginning.”

In accordance with the build-operate-transfer model, APIX decided that the concessionaire would be responsible for maintenance for the duration of the concession. The contract provided that the cost of all repairs would be borne by the concessionaire, creating a powerful incentive to do high-quality work. A BOT contract presented an important advantage in contrast to traditional procurement contracts that only provided work guarantees for 1 to 10 years, Raybaud said. “It's the concessionaire's responsibility to put in whatever resources are necessary to ensure quality and safety throughout the concession,” he said. Because the concessionaire also bore the traffic risk, Raybaud added, “the Senegalese government benefited from ‘all-risk insurance’ for the 30-year concession period.”

The duration of the contract was another key decision. The concession period had to be long enough to provide the government with a guarantee of long-term quality and to give the

company enough time to collect the revenues necessary to profit from its investment. But too long a concession period might make the project unattractive because maintenance costs would increase over time—and the government would have to wait longer to collect revenues itself. Balancing those considerations, APIX settled on a 30-year concession period.

Although some aspects of the partnership were fixed, the planners built flexibility into many areas in order to gain from companies' expertise. The route was final, and bidding documents set the specifications for design, for materials, and for construction standards. But bidders could suggest modifications that would improve the quality of the highway or make the project more cost-effective. "This is a common practice with PPP projects, and we wanted to benefit from their suggestions, so we limited the points they could not change," Diaw said.

With the documents developed, APIX began the bidding process in April 2007.

Selecting a concessionaire

As an investment promotion agency, APIX was well positioned to market the project internationally. "We didn't want to give it to just the private sector; we wanted to give it to the best," Diaw said. About 10 companies requested the application, and 3—from France, Portugal, and Morocco—participated in the prequalification phase. All three of those companies met the requirements, which included experience in working on similar projects, having the staff and equipment necessary to complete the contract, and holding sufficient liquidity.

After the prequalification phase, APIX received technical bids from the French and Portuguese companies in March 2008 (the Moroccan group had dropped out). At this stage, companies made suggestions about the design—particularly about ways to make it more cost-effective—and filled in the details of their plans to meet the contract specifications.

The initial technical bids served as a starting point, Diaw said, "and then we have this direct dialogue where the private [companies] say, 'If you want us to come, you have to change this,' or 'This technical solution is better, so consider this option.'" In March and April, the APIX team met with each of the bidders to discuss each one's proposal and decide what to incorporate into the final bidding documents.

Much of the discussion centered on technical modifications. APIX rejected some suggestions, such as changing the composition of construction materials, and others were taken into account for the final bidding process. For instance, the agency adopted the French company's proposals on spacing the pedestrian overpasses based on population density and adjusting the design so their construction would not affect traffic, APIX technical director Abdoulaye Thiam said.

In addition, the two companies suggested contractual revisions. Senegal's 2004 law on build-operate-transfer partnerships included provisions for arbitration in a regional court managed by the Organization for the Harmonization of Business Law in Africa (Organisation pour l'Harmonisation en Afrique du Droit des Affaires, or OHADA), "but the bidders said, 'We're not happy with OHADA court; we want it to be international. If you want us to come for this bid, you need to change the law and make international arbitration possible,'" Diaw recalled. Parliament did in fact change the law to allow the parties to mutually agree on the type of arbitration, which was more in line with the international practice for PPP projects, he said.

As APIX drafted and revised the documents during the negotiations, the Infrastructure Council monitored the process for signs of bias or manipulation and approved each step. After APIX decided on which changes to incorporate into the bidding documents and after approval from the council, the agency issued the final documents in May 2008. Each company had until October to prepare its full technical and financial bid.

In the second round, APIX, the tender committee, and the Infrastructure Council placed more emphasis on financial aspects because each company had already demonstrated how it would meet the project's technical requirements. For the government, the key criterion was how much each company was willing to invest in the construction phase, given its financial model and the set toll rates. As a result, financial aspects received a heavier weighting (60%) in the consideration than did the modified technical aspects (40%), Abdoulaye Thiam said.

Eiffage, the French company that emerged as the preferred bidder, offered to finance 92.5 million euros (about US\$125 million in 2009) through debt and equity, or about 40% of the construction costs. Upon its selection in December 2008, Eiffage formed SENAC as a special-purpose vehicle to serve as the concessionaire.

Although cost was a critical factor, other aspects of Eiffage's proposal helped secure the deal. "One of the things that put Eiffage ahead was that every 10 years, the company would do a renewal of the base [pavement] layer" with the participation of a supervisory company to guarantee quality, Abdoulaye Thiam said. Also, the company had done work in Senegal since 1926. The structure of the deal may have been new, but "Eiffage really knew Senegal and took more risk than a concessionaire from Singapore would take, for example," said Moctar Thiam of the World Bank.

"We accepted to take these risks because it was in Senegal," Payerne said.

After the tender committee chose Eiffage as the preferred bidder, the company and the government still had to go through eight months of negotiations to hammer out a final concession agreement. The parties agreed on some technical adjustments during that period. For instance, Diaw said, "The project was still quite expensive, and we wanted Eiffage to make suggestions to limit the cost." The company suggested that two interchanges could be completed on a staggered

schedule, with every other exit going in a different direction until traffic was sufficient to justify building the rest.

The two partners also had to finalize the contract's performance indicators, which ranged from maximum wait times at toll booths to the thickness of the concrete pavement. If Eiffage failed to meet one of the targets, the Senegalese government could assess penalties of millions of West African CFA francs depending on the indicator. However, Ndong said, "What we're looking for is a balanced contract . . . when the state imposes, the state should also be ready for certain conditions to be imposed on it." If the government failed to pay the company on time or hand over the land as scheduled, it too would be subject to penalties.

The negotiations also addressed one final source of risk: inflation. "The private operator had proposed a lump sum based on its projections," Ndong said, but the government opted to take on the risk and use an index to adjust for inflation as it made each payment. However, inflation was higher than expected, Ndong added, so the government ended up paying substantially more, and in retrospect, he believed it would have been better to have chosen a well-negotiated lump sum.

With the agreement signed in July 2009, both the government and the company had to finalize their financial backing. The Senegalese government contributed €55 million of the construction costs (about US\$74 million) from its own budget but financed the rest of its €130-million share with loans from development agencies.

The World Bank, which had been involved from the beginning, provided significant resources. "They were our number one support, and they funded most of the studies required for the project," Niane said, in addition to providing loans for implementation. While the bidding was in progress, APIX also approached the French Development Agency (Agence Française de Développement, or AFD) and the African Development Bank. "It was easier, once you have one major funder, to get the others," Niane said,

although each had its own time-consuming approval process. The donors worked together to decide which components each would fund, with AFD and the African Development Bank offering loans for construction of the highway itself and with the World Bank funding most of the remaining social and environmental components, supplemented by funding from AFD.

To finance its €92.5-million investment, Eiffage approached the private arms of two of the same lenders: the International Finance Corporation (IFC), the private sector lender within the World Bank Group, and the private arm of the African Development Bank. “The project was already known by the board of those institutions, so it was easier and quicker for the concessionaire to get its funding,” Niane said. Because the public arms of each bank had already reviewed the project—particularly its adherence to social and environmental “safeguard” policies—“some items have been cleared before we stepped into the project, so we can really focus on the commercial aspect,” said Rokhaya Diop-Diallo, principal private sector officer at the African Development Bank’s Dakar office.

SENAC, Eiffage’s special purpose vehicle, also obtained loans from two other banks: the West African Development Bank and CBAO, a Senegalese commercial bank. Although the company had hoped for more financing from local commercial banks, only one bank was willing to take the risk on a loan for a new type of project. Finalizing all of the loans, especially on the private side, took about eight months, until November 2010. While negotiations with lenders were in progress, Diaw said, the government agreed to start paying its share “so we could get the project started.”

Clearing the route

Before SENAC could start construction, APIX had to coordinate clearance of the right of way, or the highway’s route, and relocate approximately 30,000 people, most of them in

densely populated and poor neighborhoods of Pikine.

Relocation was a common problem in infrastructure projects around the world,¹³ and to ensure that the affected population would be treated fairly, APIX contracted three nongovernmental organizations (NGOs) to help residents through the compensation and resettlement process. “In our projects, we were trying to show people that they have rights, they can ask questions, they can discuss with the authority,” said Diouf, who was in charge of clearing the right of way. The NGOs were intended to serve as neutral mediators to make the process clear and simple for residents.

One of the key steps was to check the list of affected residents from a census that APIX had coordinated in 2006. Representatives of the NGOs visited every house to make sure that anyone whose property was going to be affected was on the list for compensation and to verify that the list included only people who faced relocation. In previous infrastructure projects in Senegal, only titled property holders could be compensated for the loss of land, Diouf said, “but in this project, we were also using the policy of the international donors . . . and for that, we take into account the loss of the land even if people don’t have formal titles.” In line with donors’ policies, the list of people to be compensated included informal landholders, renters, and people with businesses in the area.

The NGOs also played a major role in explaining the project and the compensation process to residents, who understandably “were not going to accept the project immediately,” said Madjiguene Dieng, an officer at ENDA ECOPOP, an international NGO whose Senegalese branch aided in the relocation process. “The primary concern was that they would be displaced, but they didn’t know to where. Also, they thought they would not be sufficiently compensated . . . [and that] if they moved, they would have new neighbors.”

To receive compensation, property holders had to submit such documents as a copy of their National Identity Card and a copy of the property deed. If the current holder had inherited the property, he or she had to produce such documents as an inheritance certificate, a certification of nonopposition, and a notarized power of attorney in addition to the property deed and copies of both their own National Identity Card and that of the deceased owner. The NGOs helped families assemble all of the necessary materials so that they could receive their compensation. After submission of the paperwork, household members met with the Conciliation Commission, a body of officials from the local government, the interior ministry and APIX, accompanied by NGO representatives.

The commission's staff evaluated each property and proposed compensation based on the amount of land, the type of building, and the building's components, Dieng said, such as the number of rooms, the use of wooden or iron doors, and the presence of septic tanks. Each resident received 40,000 CFA francs (about US\$80) per square meter of titled land and 17,000 CFA francs (about US\$34) per square meter of rented or informally held land. Using their compensation payments, residents had the option to obtain land at the resettlement site either for a subsidized price if the value of the family's compensation was between 5 and 10 million CFA francs (US\$10,060 to US\$20,160) or for 17,000 CFA francs per square meter if the compensation was more than 10 million CFA francs. The poorest families received land for free.

"When a person affected by the project doesn't agree with the compensation proposed by the state authorities . . . the person makes a claim on the point of disagreement before the Conciliation Commission," said Mamadou Mansour Diagne, national delegate and operational head of ENDA ECOPOP. In such situations, the NGO workers accompanied the evaluators on another visit to the property to reassess its value. Generally, if residents continued to disagree, the

NGO's team attempted to make them understand that "the project will be beneficial for the affected populations because their living conditions will improve," Diagne said. Dialogue was slow but usually worked in the end. . . Even if the negotiations with some of the people affected took time, Diouf said, both parties always reached an agreement based on the facts of the situation.

Some communities attempted to negotiate a broader solution rather than only increases in their individual claims. For instance, in the neighborhood of Sicap Mbao, the community selected representatives early in the project to advocate for higher compensation rates. "We were not really content" with the amount, said Daoud Mamadou Gueye, a community representative who later became president of the residents' association at the resettlement site. When the government refused to change its proposed rate, "I told the press we were not happy," Gueye said.

The government responded by stressing not just the cash value of the compensation but also the amenities that would be available at the resettlement site, Gueye said. "The government invited the population by commune, by group, and showed them the maps, the site, the placement of the site, and what it wanted to put there," he said. Some residents saw little value in the site, but others signed on, Gueye recalled, "and the movement started to weaken." Eventually, Gueye chose to accept the compensation rather than lose his claim entirely. Dieng said: "[The resident] has to leave even if he doesn't agree, and his compensation would be held for him. When the moment comes, he has to leave the premises. . . . So what would be preferable is that he agrees with the amount of compensation, which has been deemed fair and equitable."

Monitoring construction

With the route largely cleared, SENAC broke ground on the highway project in January 2010. Although the construction was the responsibility of the company—and it would pay if flaws emerged during the concession period—APIX

monitored the work to ensure quality and timeliness.

To assist in project management and provide technical advice, APIX hired Egis to serve as the supervisory company. The two had worked together throughout the project: Egis had been involved in the design of the highway and had worked with APIX to supervise the construction of the government-funded section between Patte d'Oie and Pikine. Once construction on the PPP component was underway, Egis served as an “expert advisor,” Raybaud said, helping APIX to ensure that the work adhered to the set deadlines, budget, and quality specifications.

A central aspect of the monitoring was tracking physical progress, primarily through site visits and reports from SENAC. Throughout the project, Raybaud said, Egis worked closely with APIX, the company, donors, and the ministries involved to collect and synthesize information about the project’s technical and financial progress. Based on the information SENAC provided, site visits, and meetings, Egis provided monthly reports to keep all of the participants up to date and create a detailed record of the project. The emphasis on engagement helped ensure the supervisory company was in a position to advise APIX on progress, quality issues, and how to handle new situations.

SENAC hired French engineering company Setec to supervise and monitor the works, said Celine Grall, who also worked on the project at Egis. “Every day, Setec is on the site, checking the work directly, checking the test results,” she said. Setec’s reports also provided all the necessary information APIX and Egis to analyze, for example the results of tests on the quality of the concrete.

If the company did not meet performance indicators for quality and progress as set forth in the contract, APIX could assess penalties. “Because the private party did not come to lose money, it does everything it can to respect the initial schedule,” and the company successfully managed to meet its indicators, Ndong said.

However, he added, there were times when the government was delayed in making payments and risked incurring penalties itself.

Steering the project

In addition to the project’s day-to-day supervision by APIX and Egis, the national infrastructure steering committee provided policy-level supervision of APIX’s work. The committee, based in the office of the prime minister and comprising all the ministries involved in infrastructure projects, met monthly to review progress and respond to any major issues.

Niane, who chaired the committee, described its mission as “first of all, to share information with them . . . where we are, what the main issues are, and how we’re going to resolve them. But then the other objective is that if a specific issue needs a consensus, we have to discuss it.” In the same manner as during the preparatory phase, the prime minister decided issues that the committee had failed to resolve.

The steering committee helped maintain high-level support for the project because it provided a forum for ministers, mayors, and others to voice their concerns. Technical issues were generally left to APIX and the concessionaire, Niane said, and the steering committee monitored environmental and social issues more closely, “especially the displacement, because that was their main concern.” Niane, who had received the status of minister in 2008, said that after that point, she could also raise important issues during cabinet meetings, where the president could take action.

Donors also conducted monitoring on both the public and private sides. The three public sector donors—the World Bank, AFD, and the African Development Bank—had representatives who met regularly with APIX, and the donors, too, made joint site visits to supervise progress. The World Bank coordinated among the three donors. “The donors agreed together that the World Bank could assume the lead,” said Marieme Lo of AFD, and the World Bank’s project team typically handled issues related to procurement procedures

and the compensation policies for social and environmental impacts, in collaboration with the other donors.

The private lenders—IFC, the African Development Bank, the West African Development Bank, and CBAO—also regularly monitored the project, with IFC in the lead. The group of private lenders had its own technical engineer assess progress every three months during construction, African Development Bank’s Diop-Diallo said, and after the highway’s completion, “[we] monitor the cash flows, see what can really be an impediment to future cash flow, discuss it with the sponsor, revise [the financial model] from time to time, and also update traffic forecasts.”

Coordination and communication

With such a large and complex project, APIX had to work with all of the numerous institutions involved, from donors and government ministries to community associations. Day-to-day challenges emerged throughout the project, and handling them required effective coordination.

Because the project had so many components, Diaw said: “We could not have an instance where you have all the stakeholders—it’s so massive, and the issues are really different. Stakeholders around the component of closing down the landfill [may not] have much to do with Mbao forest.” Instead, he said, APIX met monthly with the donors to review the project’s progress overall and then organized smaller groups to handle various issues such as resettlement or forest management, which typically included APIX, the donors funding that component, other relevant ministries, and any local governments or community associations involved. These committees coordinated activities and solved everyday problems that did not require high-level policy decisions.

For instance, mitigating the highway’s impact on the Mbao forest required participation by APIX; the World Bank, which had funded that component of the project; the Directorate of

Forest and Water in the Ministry of the Environment; and the communities situated near the forest that used it for agriculture and pastureland. Because a swath of the forest had to be cut down to make way for the highway, all of the participants were determined to preserve the remaining area.

Working with a forest management plan that APIX and the forest directorate had developed in 2008, the committee and local leaders established a participatory code of conduct that would govern community members’ use of forest resources. The forest directorate coordinated training sessions on beekeeping, aquaculture, and sustainable farming to support more-environmentally-friendly livelihoods, said Ale Badara Sy, head of APIX’s environmental unit. APIX also worked with community leaders to create monitoring committees that would educate other forest residents about sustainability and would serve as the “first line of defense” against violations of the code of conduct such as the dumping of litter in the forest or unauthorized cutting of trees for firewood, Sy said.

In addition to playing a role in regular project components like forest management, international donors on both the public and private sides also played important roles in resolving problems. “They are able to talk to the government another way than we as a private company talk to the government,” said Payerne of Eiffage. One example of the donors’ mediating role involved finding a way to handle the West African Central Bank’s restrictions on offshore accounts. To prevent the loss of foreign exchange, the central bank prohibited companies based in countries belonging to the West African monetary union—including SENAC, Eiffage’s Senegal-based concessionaire—from opening offshore accounts that used other currencies, such as the euro. However, SENAC’s private lenders required that the company maintain an offshore account in euros with sufficient funds to cover six months of loan payments. Both as a group and individually, the lenders met with and wrote to the central

bank's leaders, eventually securing an exemption for SENAC.

Other issues had simpler solutions. For example, although the company had no official role in clearing the route, SENAC collaborated with APIX to optimize the relocation of 30,000 people from the construction zone. Relocation was the government's responsibility, Payerne said, but sometimes "certain people remain for one, two, or three months in the house, so the machines will go [elsewhere] and come back. . . . It requires a kind of coordination to have a peaceful process."

APIX and SENAC also had concerns about people's willingness to pay highway tolls, and each conducted its own publicity campaigns to promote the highway. During the planning stages, APIX ran TV and radio ads to build support. "We explained to people that it was a state project that would be useful," Niane said, and the dismal traffic conditions helped create a receptive audience. During construction, SENAC organized its own communications campaigns to encourage use of the highway. "We equipped a truck that could be transformed into a theater to drive into the impacted zones," Payerne said, "So, for instance, you would have this husband who used to arrive home very late from work, and the wife was in bed, and the *thiébou dieune* [a traditional fish and rice dish] was cold, and now because of the highway, he's quicker in arriving, the wife is very happy, and he can help her cook the *thiébou dieune*—you know, perfect family life."

Because drivers in Senegal were unfamiliar with tolls, the company also had to explain the underlying concept of the system as well as the mechanics of paying. The goal, Payerne said, was "to get them to understand little by little [that] they're not paying to drive; they're buying a service. They're paying to drive safely: no potholes, no truck accidents, no people selling things on the street in traffic jams."

In many situations, coordination occurred as needed. "The coordination is very informal," Payerne said, and although some issues were outside the scope of the contract, "we are a little

bit more proactive in integrating things and trying to find solutions." Moctar Thiam said the World Bank met regularly with APIX, but problem solving required a more adaptable approach. "If something happened, we would put a team together with the government . . . we had to put that together very quickly and move."

OVERCOMING OBSTACLES

Although many of those involved in the highway project said the initial process of clearing the route had gone relatively smoothly, resettling the displaced population posed significant challenges.

The plans for the resettlement site, Tivaouane Peulh, called for high-quality infrastructure—from roads to electricity—and for easier access to social services such as medical care and education. However, both the procurement process to hire contractors to build the site's amenities and the construction itself took longer than expected. Plots in the site were scheduled to be available in July 2011, but the site's opening was postponed to June 2012, then April 2013, when its infrastructure was fully completed, said Diouf.

As the site neared completion, the linkage between opening the resettlement site and closing the Mbeubeuss dump site threatened to add to the delays. Initially, concerns about the health effects of the dump site and a hope of using the highway project as leverage to resolve the long-standing problem had led the World Bank and APIX to agree on the closing of Mbeubeuss as a precondition for any movement into Tivaouane Peulh. However, difficulties in securing a site for a new landfill stalled the process. Based on an international consultant's study, the government had selected a site for a new landfill in the municipality of Sindia before the highway project started, but tensions between parties and levels of government blocked the plan. Sindia's local government had not been sufficiently involved in the planning, Sy said, and although the mayor supported the proposed project, other politicians and residents refused to buy in. Even after study

visits to cutting-edge landfills in Italy and efforts to sweeten the deal with promises of employment and contributions to the local budget, an agreement remained out of reach.

In July 2012, APIX and the World Bank agreed to conduct further analysis of the health effects of the landfill. The results of the new study, completed in November 2012, found that Mbeubeuss posed less risk than originally thought. The initial environmental and health study, completed in 2008, had determined that the soil was safe for all uses, including agriculture, but that like much of the Dakar region, the site's groundwater was polluted, which would be addressed by providing piped water. That study had not addressed the potential problems with air quality, but the 2012 study found that air pollution in Tivaouane Peulh was below the Senegalese average, and 2012 surveys of health centers in the area indicated that the use of groundwater was the only significant health risk.¹⁴

Given the findings of the study, in June 2013 the World Bank and the Senegalese government agreed to drop the condition, allowing the site to open. Replacing Mbeubeuss remained a separate component, but by early 2016, Tojoarofenitra Ramanankirahina, a transport specialist at the World Bank, said that the bank and the government were planning to remove it altogether from the highway project because no progress had been made. "We don't have any time left to continue the discussion on Mbeubeuss within this project," he said. Instead, they decided to use the remaining year to conduct a more detailed study on Mbeubeuss, but implementation was planned to take place under an upcoming project dealing with urban sanitation.

Even when the site was ready, moving people there remained a challenge. The time spent in preparing the site had forced displaced communities to look for alternatives, and the result was a multitude of problems for people who had lost their homes.

During the years of waiting, people who had been displaced by the project had to find other

places to live, which several said was difficult and expensive—particularly with thousands of people suddenly in the market. For some of those who intended to move to land they had purchased or received in Tivaouane Peulh, rental costs took a significant portion of the compensation payments they had planned to use to build new houses. The World Bank reallocated funding for APIX to cover additional rental expenses for displaced people. However, Fama Sylla, a resident of Sicap Mbaou who eventually moved to the resettlement site, found that the payments took time to arrive and were not sufficient to cover years of rent in Dakar's tight market. "I spent three years renting. Imagine, I paid the rent the whole time, and I had to eat, to pay for water and electricity . . . Sure, APIX paid the rent in the end and reimbursed me. But when it reimbursed me, the reimbursement could not pay to build a house," she said.

Others decided not to wait, instead finding permanent housing outside the resettlement site. Yacine Lo, who bought a house in Pikine, said she would have preferred to build a new house on the land offered to her in Tivaouane Peulh, but "the resettlement was taking time, and I absolutely had to find shelter for my family. . . . it was an emergency for us, and we had to do it quickly." Like Lo, many chose to use their compensation to secure housing elsewhere, and the population that had been planned to move to the resettlement site dwindled. As of early 2016, Diouf said, "We can observe that the new site is not very occupied. We don't have many families there, and it's related to the delay in making the housing plots available."

Because fewer people had moved to the resettlement site than anticipated, some of those who did said they had difficulty supporting themselves. Sylla, who had a small informal business selling fish, had planned to continue doing so in Tivaouane Peulh but found she had no customers. Without a significant number of people living at the site, residents had limited opportunities for making a living selling goods and services. Mamadou Malaly, who had run a shop in Pikine before moving to the resettlement site, had

hoped to relocate his business to Tivaouane Peulh, “but on the professional front, for business, nothing is functional yet,” he said. Without enough customers there, he instead commuted back to his old marketplace—a time-consuming trip and an added expense. A marketplace was under construction at the resettlement site, Dieng said, but “for the moment, it’s a zone where there aren’t many inhabitants . . . [so for now] the people have to go, to come here to Guinaw Rails [a suburb of Dakar] or go to the city to work.”

The relocation also affected the livelihoods of some of those who chose not to move to the resettlement site. “I’m no longer able to make what I was making before,” said Lo, also an informal vendor, and neither could her family members. The compensation payment had bought a better house than the one she had lived in before, she said, but “when the highway was finished, some of my clients were affected by the highway and left.”

As displaced people found options other than the resettlement site, their social networks frayed. The World Bank’s planning documents noted that “the main concern expressed by 49 percent of the [people affected by the project] is the disruption of their social networks as a result of involuntary resettlement,” and the resettlement plan had been intended to “minimize disruption of social ties.”¹⁵ But the delays in opening Tivaouane Peulh made it difficult for communities to stay together. “We said we’d stick together, but right now we are pretty much spread out,” Lo said. “There are some who built their houses on the land they were given, there are some who took their money and went elsewhere, and as for us, we are here. We no longer have the same customers; we no longer have the same neighbors.”

It appeared that some of the people with land at the resettlement site opted to sell it informally. “It’s a difficult issue, and the main objective is to provide them with a good-quality area where they can live,” Ramanankirahina said. “On one hand, they have signed not to sell for five years, and on the other hand, they’re the owners.” Although land

at the resettlement site could not legally be sold for five years, “there’s some speculation in that area, because it’s very well constructed, so the value of that land is increasing,” Ramanankirahina said. Speculators were willing to pay up front and officially receive the property five years later, although APIX began a communications campaign to discourage such informal sales. APIX and the World Bank hoped that movement to the resettlement site would increase, but as of early 2016, the pace of resettlement remained below expectations.

ASSESSING RESULTS

The Dakar-Diamniadio toll highway opened in August 2013. After more than a decade of work, the project’s core goal had been achieved, but some issues, particularly resettlement, remained.

The new road sharply reduced the average travel time between downtown Dakar and Diamniadio to 30 minutes using the toll highway in 2015 from 90 minutes using the Route Nationale in 2009. The highway also sped up travel times on the Route Nationale, which remained available as a free alternative, by splitting the traffic.

As of October 2015, 45,000 vehicles were using the toll highway every day—a significantly higher number than the World Bank’s target of 37,500 by the end of the project.¹⁶ Payerne said revenues were in line with the company’s expectations.

Although APIX and SENAC had worried about drivers’ willingness to pay tolls, high levels of use indicated that for many, it was worth it. However, the Senegalese media criticized the toll rates as being too high, calling the highway the “*autoroute à pillage*,” or “plunder highway,”¹⁷ and a giveaway to the former colonial power.¹⁸ The rates—for example, 1,400 CFA francs (about US\$2.35 in 2016) for a passenger car to drive the entire tolled section¹⁹—might seem expensive, Diaw acknowledged, but APIX had to balance the need for a “social price” with the amounts contributed by each partner.

The highway was completed on time and on budget—an achievement in the challenging public works sector. Raybaud said that the construction, operation, and maintenance of the highway had been fully in accordance with international standards, and had earned recognition both in Senegal and in neighboring countries. “We’re all proud today of the result,” Raybaud said, which depended on the efforts of all the project’s participants.

In February 2014, Senegal’s government signaled its satisfaction with Eiffage’s work by awarding the company the concession to extend the highway 16.5 kilometers to the site of a planned new international airport. The extension attracted controversy, however, because the concession was awarded as an amendment to the existing agreement rather than through a new bidding process. The extension was on schedule to be completed in August 2016—but traffic was uncertain because of delays in constructing the airport.

The Dakar–Diamniadio highway project was the first highway public–private partnership in Senegal and in West Africa, and it served as an example for future projects across the continent. Several other African countries—including Cameroon, Gabon, Cote d’Ivoire, and Uganda—approached APIX to learn about the partnership, Ndong said. AFD used the project as an example in training workshops it held on public–private partnerships in Ghana, South Africa, and Vietnam. The World Bank,²⁰ the African Development Bank,²¹ and AFD all highlighted the project as an example of the potential of such partnerships for infrastructure development in sub-Saharan Africa.

Payerne said the project generated interest across the continent. “When I go to other countries, they know of the project, and we have a very good image. Frankly, it has been the start of redeveloping Eiffage internationally, especially in Africa,” he said.

Despite being held up as an example of private sector participation, private financing was more limited than expected. “Our initial scenario

was 40% government and 60% private [financing],” Diaw said, and “now we’re looking back, and people keep saying, ‘Why did you pay that much?’” But it was critical to keep the tolls down, he said, because at the time, it was seen as crucial to avoid the traffic risk. In addition to approximately 60% of the highway’s construction costs, the government of Senegal paid about US\$420 million from its own budget and in loans from the World Bank, AFD, and the African Development Bank for resettlement, infrastructure construction in Pikine, and project management. SENAC’s share of the construction costs also relied less on commercial banks and more on development banks than the company and APIX had hoped.

Although the highway partnership was widely considered very successful, some other components of the project were not progressing as well as expected. “The most effective is the highway itself—it is working now perfectly well,” said Ramanankirahina of the World Bank. “What is not moving perfectly well is the resettlement and the social aspects. It’s a work in progress.”

Resettlement was still a thorny issue two and a half years after the highway opened. The process of compensating residents for their properties had run relatively smoothly, and staff at APIX and the World Bank said that payments were significantly larger than in past projects in Senegal and that in addition to formally titled property owners, renters and informal holders were eligible. As of October 2015, the World Bank reported only two unresolved complaints over compensation.²²

Relocating the displaced people, however, remained a problem. APIX and the World Bank had originally planned for approximately 3,000 families to relocate to the resettlement site established at Tivaouane Peulh,²³ but as of early 2016, only about 100 families had moved there. At a cost of US\$158 million, including the budgets for compensation and closing the landfill, the goal was for the resettlement program to provide residents with better living conditions as a “secondary benefit” of the project. But delays in opening the

site forced many to look elsewhere for new housing.

Other components of the project also were behind schedule. Despite years of effort, the Mbeubeuss dump site remained open. Infrastructure construction in Pikine Irrégulier Sud, an informal neighborhood crossed by the highway, was also behind schedule. As of early 2016, work on the US\$55-million component, which included construction of drainage and infrastructure on both sides of the highway, was in progress but significantly delayed.

Although the highway offered significant benefits to the population of Dakar, some of those affected most directly by its construction continued to struggle.

REFLECTIONS

As the first project of its kind in Senegal, the Dakar–Diamniadio toll highway was a valuable learning experience—particularly for the Agency for Investment Promotion and Major Works (APIX), which coordinated the project. As APIX gained experience, the partnership solidified, said Didier Payerne, operations director at SENAC, the private company involved in the partnership. “I used to say our project is a model, but it’s not a financial model, and it’s not a technical model; it’s a partnership model. Because what has really worked here is the partnership with public and private, with APIX and Eiffage. We don’t agree every day . . . but at the end of the day, we have a very integrated collaboration.”

Although APIX developed its management capacity over time, Abdou Diaw, who managed the partnership aspects for the agency, said there was room to improve. “We’re still lacking expertise in Senegal,” he said, and the country needed to continue its practice of learning from best practices from around the world.

As the partnership moved into the operation period, Diaw said, monitoring was a continuing challenge. “We have the right to claim almost any kind of information at any time . . . [and] the contract is clear enough for us to monitor,” he

said, but APIX still needed to develop better tools to analyze and verify the information. “The issue is, how do we prove, for example, that on Thursday night, the streetlights were not on from 11 p.m. to 12 a.m.” as required in the contract, he said, so that the agency could apply penalties if necessary.

Learning and adaptation were especially important on the issue of resettlement, said Babacar Diouf, director of environment and right-of-way clearance at APIX. “The issues of involuntary displacement are very difficult issues that we can’t learn about at school or at university. We have to learn by doing.”

Leadership was critical as APIX worked through the project’s challenges. Executing Senegal’s first highway public–private partnership was a lengthy process, and “the big issue is to manage the political pressure in terms of timeline,” Diaw said. Aminata Niane, director general of APIX from its creation until 2012, “was able to manage that pressure,” Diaw said. She could effectively communicate that “‘If you want me to do this project, I need to do it properly, I need to take the time to set the framework, take the time to do the right studies, take the time to benchmark the best practices, take the time to hire the right people.’ That’s why it took a long time, but we did it properly.”

Niane said, “Our great strength was that we reported directly to the president, and he supported us.” Strong presidential backing—for both the project and APIX’s leadership role—enabled Niane to secure the cooperation she needed from other government agencies.

Despite APIX’s determination to “do it properly,” the resettlement process highlighted areas for improvement. As community leader Daoud Mamadou Gueye pointed out, “It’s not that [residents] were against the project.” Community members recognized that the highway was necessary, he said, because “Dakar was suffocating; the traffic was not functioning as it should.” But delays in setting up the resettlement site had significant consequences.

“If the site had been ready, it would have been better for us,” said Pikine resident Yacine Lo. “If there was already land available, we would have built our own houses there, but because there was no land, we had to move and buy something else.” The low take-up also disrupted the livelihoods and social networks of those who did relocate to the site, such as Fama Sylla. “In reality,” Sylla said, “the promises were not completely kept.”

Despite the challenges, APIX’s partners agreed on the value of having a dedicated government agency coordinate the process. “Senegal had this innovative idea about 10 years

ago—a very good idea—and it’s advice I’m trying to spread in other countries. The country dedicated a special agency to run the concession contract. . . . You need so many competencies—technical, financial, legal—and they had this good idea to gather [them] into the same dedicated agency,” Payerne said.

“Having APIX helped a lot,” said Marieme Lo, the officer in charge of urban development and transport projects at the French Development Agency. “You can see the difference: they’re really delivering.”

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