



# INNOVATIONS FOR SUCCESSFUL SOCIETIES

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## INCREASING TRANSPARENCY AND IMPROVING PROJECT MANAGEMENT: SOUTH AFRICA'S NATIONAL ROADS AGENCY, 1998 – 2011

### SYNOPSIS

Following the transition to democracy in 1994, South Africa experimented with ways to improve ministry effectiveness by separating policy-making functions from operations. The Department of Transport introduced principles of New Public Management and public-private partnerships to improve service delivery. The South African National Roads Agency Ltd. (SANRAL), led by Nazir Alli, reconfigured the procurement process and financing models for planning, design, construction, maintenance and operation of the country's national road network. Increasing transparency in the tendering of contracts led to greater accountability on the part of project managers and contractors. This case study chronicles the steps that Alli and his staff took to build the agency and to deliver results on a large scale, culminating with the upgrade of the freeway connecting the cities of Johannesburg and Pretoria during the final months before the 2010 FIFA World Cup.

*Richard Bennet drafted this case study based on interviews conducted in Pretoria and Cape Town, South Africa, in March 2011.*

### INTRODUCTION

In the months leading up to the 2010 FIFA World Cup, South Africa braced itself for an influx of visitors from around the world. Construction workers scrambled to finish major infrastructure upgrades, including the first part of the Gauteng Freeway Improvement Project, an upgrade of the roads connecting the cities of Johannesburg and Pretoria. Officials predicted that traffic would be especially heavy during the World Cup as visitors drove between the cities and to and from the international airport.

Nazir Alli, who was chief executive of the South African National Roads Agency Ltd.

(SANRAL) at the time, recalled, "For all of us in South Africa, it was at the moment again like April 1994 [when Nelson Mandela was elected president]. ... There was this huge enthusiasm to say we know we can do it, and we've got to deliver. ... Everybody pulled their weight to make sure that we met those milestones." The first phase of the project highlighted SANRAL's ability to renovate and upgrade 185 kilometers of national roads. The undertaking was the largest toll-financed road project in the world at the time. It was also a test for a new agency that sought to create a more efficient and effective road transportation system for South Africa. In 1998, the Roads

Department, previously an arm of the Department of Transport, became SANRAL, an independent agency. Guided by the principles of New Public Management that sought to introduce the logic of private sector business management into government operations, SANRAL was responsible for the development and maintenance of what was then a 7,000-kilometer national road network. Although the Gauteng Freeway project was significant for its size, the principles of management were consistent with all of the agency's projects.

This case study charts the initial steps that Alli and his team took to set up SANRAL, transform the tendering process, and reform the methods through which South Africa developed its national road network.

## THE CHALLENGE

With the transition to majority rule in 1994, the newly elected government of South Africa inherited myriad transportation problems. Under the apartheid system of racial segregation, housing policies had located black townships far from economic centers. Public-transit systems ran only during limited hours to limited locations, making it difficult for those in geographically remote townships to hold jobs in the cities or to even look for employment. Improvements to the national road network would increase economic development opportunities for large segments of the country's population.

The minister of transport, Mac Maharaj, believed that transportation was a fundamental pillar of development. Maharaj, a leader in the anti-apartheid struggle, recognized that improvements in transportation were vital if historically disenfranchised segments of South Africa's population were to participate in the country's economic growth. Alli shared the conviction. "Prior to 1994, transport was always there on the side," Alli said. "That changed when

people recognized the crucial role that transport plays in the growth of the economy and in social development."

Earlier governments had underfunded road construction and maintenance, especially in rural areas. Road traffic had grown at a rate of 3% per year during the previous 20 years, but the government had failed to make any concerted efforts to expand the network and accommodate that growth. In the mid-1990s, 80%-90% of the country's passenger and freight transport traveled on roads, and driving from rural communities to economic centers was difficult and time-consuming.

Maharaj wanted to repair and expand the road network, but several obstacles stood in the way. Under earlier governments, corporations had paid bribes to win political favors and tenders, and to bypass regulations. Although a South African Roads Board had existed since the 1930s, the board did not always address the needs of the population or consider good governance a priority. In theory, the board, whose members came from business as well as government, was independent. However, the chairman of the board was the director general of transport, the Department of Transport's chief civil servant. The director general was also responsible for carrying out the minister's agenda. The structure created a continuing conflict of interest, according to Alli. "So whom did the chief director listen to? To the Roads Board? If the DG [director general] has a difference of opinion from his Roads Board, [and he] gets his minister to agree with him, then we ignore the Roads Board. So there was no accountability," Alli recalled.

Poor coordination between the provinces and the central government exacerbated maintenance problems. Alli said, "The provinces used to be responsible for the maintenance of our roads. There was no accountability at all, none whatsoever. When we asked the provinces one time to show us

where they spent our money, on which portions of our roads, they couldn't even show us that."

### FRAMING A RESPONSE

Alli, trained as an engineer, had experience in engineering consulting and had participated in the working group that developed the Reconstruction and Development Programme, South Africa's broad framework for socio-economic reform after the end of apartheid. He had joined the Department of Transport as chief director of roads in 1995. Maharaj led the initiative to review and alter the department's configuration and responsibilities, which included spinning off several areas, including national roads, into agencies and shrinking the department's workforce to 250 employees from 1,400 during the next few years. For national roads, Alli would be the individual to carry out the needed reforms.

In early 1995, Maharaj commissioned a study of South Africa's transportation policy. The department historically had operated and administered national roads, financing construction and maintenance through general obligation government bonds. By 1994, a government-wide budget deficit of 5.1% demonstrated the need to find new models for managing the financing of roads. The government sought to expand infrastructure and services to the majority of the population that had not received equal access under apartheid but did not want to burden itself or risk insolvency by issuing more debt. Additional toll roads were an attractive option, as the funds collected from drivers—the users of the roads—could cover the interest payments on revenue bonds. Because they produced income, toll roads would attract private investors, increasing opportunities for partnerships with the private sector and relieving the government of the responsibility for backing the financing.

The commission's review process brought together people from the transportation industry, the government and the academic community to examine the role that the department played in service provision. Representatives from municipal, provincial and national levels of government met with taxi associations, workers' unions, consulting firms, government lawyers and university scholars to evaluate the ways that the Department of Transport could adapt to meet the challenges of a democratic South Africa. More than 300 organizations participated in the review process. Maharaj, reflecting on the resulting White Paper on National Transport Policy, noted, "We critically looked at what was assumed to be the role of the state and found that many areas of activities could be more effectively done if there was a direct relationship between the providers and the users."<sup>1</sup>

As part of the review, a group from the Roads Department visited other countries to learn from others' experiences. The director general of transport, Ketso Gordhan, accompanied Alli to New Zealand, which had undergone major transport reforms in the late 1980s, employing New Public Management (NPM) principles to separate the government's policy making and regulatory functions from its implementation and delivery functions. The New Zealand model, known as Transit New Zealand, sought to introduce the logic of private sector management into public sector operations. Founded in 1989, Transit New Zealand was governed by a board of directors. It featured the outsourcing of key functions to private and semiprivate companies to improve efficiency and reduce costs, while emphasizing outcomes in service delivery, the introduction of competition through the tendering of contracts, and the removal of hierarchical structures in favor of empowered middle managers.

Gordhan and Alli wrote a proposal based on their findings in New Zealand. Gordhan noted, “We copied New Zealand, with one major difference. In New Zealand there were no toll roads. They were not mobilizing private capital for public infrastructure. Theirs was about an efficient allocation system. Ours was about an efficient allocation system and raising capital.”

Based on industry consultations and what they had learned from New Zealand’s model, Gordhan and Alli proposed that taxpayers should not directly fund the construction and maintenance of roads. “We looked at how roads were being managed,” Gordhan said. “The principle we looked at in transport said that where there is a user, the user should pay.” They proposed a fuel levy to fund operating costs, but the Ministry of Finance rejected the idea because of worries about political fallout from an increase in gasoline prices. Under a final agreement, all South African taxpayers would share in the cost of building and maintaining non-toll roads. But new toll roads would be financed entirely by the sale of bonds that would be backed by payments from the drivers who used the roads. Though the new financing model would avoid burdening all taxpayers, the organizers knew the toll system might draw complaints from some drivers. The Department of Transport concluded that drivers would be willing to pay for better roads and faster commutes, but that local consultation would be needed to ensure public support.

In addition to financing, the review process sought to clarify the role of the Roads Board. Alli noted that the team looked at roads departments in New Zealand, Australia, Canada, the Philippines, Malaysia and the United Kingdom to help answer questions about the size and representation of the board. Maharaj, Gordhan and Alli concluded that structural realignment could improve the department’s efficiency and effectiveness.

They would separate several functions from the department, establishing agencies that operated with greater autonomy but under the oversight of a board of directors. Some of Alli’s team argued that other organizations in the roads industry should have representation on the board. Alli and Maharaj settled on a smaller board without formal representation from organizations like taxi associations and trade unions. “The final decision was to say, no, what we need on the board are people who have skills, experience and knowledge about the business,” Alli said. “Because when you have vested interests sitting on the board, you never reach a decision.”

Following the publication of the White Paper on National Transport Policy in 1996, Maharaj began the realignment by focusing on four sections of the Department of Transport: those in charge of national roads, cross-border travel, and the aviation and maritime sectors. Each of the four would become a distinct agency. During Maharaj’s five years as minister of transport, he shifted many of the department’s delivery-related responsibilities to agencies in accordance with the New Public Management approach to governance. The department would cease to be the operator and administrator, and would become a leaner, policy-focused, strategic planning and regulating body. Gordhan explained, “We were focused on creating an optimal model where policy, regulation and operations should be three very distinct activities.” For the national roads network, the Department of Transport would retain responsibility over policy and some regulation, but a new agency, SANRAL, would take over responsibility for financing, management, development and maintenance.

## GETTING DOWN TO WORK

Several initial steps were necessary to realize the vision that Maharaj, Gordhan and Alli had for SANRAL. They would need to

lobby for the legislation that would enable the transfer to occur, staff the new agency and build support within the roads industry for these changes. They would then need to implement models for financing, tendering and project management so that they could begin to expand the capacity of South Africa's road network.

#### *Enabling legislation and new responsibilities*

Following the review process, Maharaj lobbied Parliament to pass legislation that would formalize changes to the department's role. In April 1998, Act No. 7 established SANRAL as a public corporation. The legislation stipulated that the agency would function as a statutory company operating along commercial principles under the leadership of a chief executive who reported to a board of directors. But the department would retain control and oversight over the agency as the sole shareholder. "We were splitting the policy maker from the implementer," Alli said. Maharaj's approach granted the new agency greater autonomy in its organization and operations under the supervision and guidance of an oversight board.

The minister of transport could appoint seven of the eight SANRAL board members, but a civil servant would no longer chair the proceedings, as had been the case in the past with the director general of transport. The eighth board member represented the Ministry of Finance. The decision to separate the board's policy-making functions from the agency's implementation functions reduced potential conflicts of interest and reinforced the importance of the board as a mechanism for oversight and guidance. "There would be no [direct] representation from the minister of transport," Alli said. "We didn't need a policeman from [the minister's office] to be sitting on the board. But I think one of the smartest things we did was we reserved one seat for ... somebody from the national

treasury. ... There is always conflict between the different departments and national treasury in terms of what your allocation should be. Because we had somebody from [the Ministry of Finance] sitting on our board, there was a better understanding of what our business was all about without us having to keep on justifying over and over again to people who didn't have intimate knowledge of the agency. That was the big advantage."

#### *Staffing the agency*

In the months that followed the April 1998 legislation, Alli worked to persuade key members of his Roads Department staff to leave their government jobs and follow him to the new agency. "We identified those who had a passion for this change," Alli said. "We had those internal champions, and we convinced 91 people to join." The staff would shrink to 92, including Alli, from 330. The agency would hire outside contractors and consultants to carry out many of the former department's core functions, such as conducting land surveys, design consulting, and road monitoring and maintenance.

Alli decided that the department would give all staff members the choice to stay in the department in another capacity, join the agency, or, in cases where the agency planned to contract out a particular function, the agency would help specialists start or join existing small, privately-run businesses under certain non-negotiable conditions. The agency would guarantee these small businesses work for two years, along with salary and benefits for the former employees at the levels they had enjoyed when working for the department. The former employees would also receive training and financial consultation at the expense of the agency, as many were engineers with no experience in private business. After two years, the employees and their firms could enter into the tendering process independently. The process created a new

market for functions that had been the government's.

For many of the civil servants in the department, joining the new agency was an uncertain step. "Ninety-two of us resigned from the Department of Transport. It was a huge leap of faith," Alli said. "Not by me; I had just joined [the department] in 1995. But the 91 people who joined me, for them I thought it was a huge leap of faith because there was a certain set of safeguards that they had in benefits as being civil servants which suddenly were not there, because now we were going to run this agency on commercial lines." Alli guaranteed that the agency would not fire any employees during the first two years, and that although performance-based salary adjustments would replace the fixed adjustments that civil servants enjoyed, for the first two years the minimum salary adjustments would be the same as the employees would have received at the department.

Gordhan said he understood the staff's initial reluctance. "Nobody likes change, nobody likes uncertainty," he said. "We talked and we persuaded and cajoled up to a point, and then we just did it." Though many were skeptical of the changes, within a year, those who outperformed the standard salary adjustment realized the benefits of performance-based evaluation. Alli recalled, "Those who would have got the 5% salary adjustment suddenly started to get 5.5% and said, 'Wow, my performance has been recognized.'"

Alli and his team also needed to reach out to other organizations in the roads industry to build support for the changes. The support of workers' unions, taxi associations, and construction companies were important to a smooth transition. "It was a very wide and broad consultation that had taken place; it was very intense," Alli said. "There was a lot of enthusiasm for transformation to take place

within government. ... We consulted very broadly [among industry organizations] and took their views into consideration about what this agency should be for South Africa."

With his staff in place and the minister of transport having selected the board of directors, Alli and his team moved to overhaul the financial model for the new agency while also reforming ethical standards for procurement and project management.

#### *Assets and financing*

When SANRAL's founding act transferred the Roads Department's assets to the new agency in 1998, the balance sheet did not reflect the maintenance needs of the road network. Inge Mulder, SANRAL's chief financial officer, described the initial balance sheet as insolvent, as liabilities far exceeded assets. The cost of addressing the backlog of needed road maintenance was more than three times the annual allocation from the national treasury. One of the first challenges for the young agency came when the independent auditor general's office issued a disclaimer stating that SANRAL needed to create an accurate list of its property holdings. Historically, the government simply would declare its intent to build a road on a stretch of land, buying from private landowners if necessary. But many of these deals had been made over the course of several generations, and government records for the transactions often did not exist. SANRAL's founding legislation stipulated that the agency needed to prove that it owned the land on which its roads were built. Accounting for its assets and building a realistic balance sheet would be critical as the agency moved to issue bonds for new toll road construction.

The agency hired teams of property evaluators and land surveyors to prove that the government had paid for its properties and to establish the value of the landholdings. Many of the surveyors and evaluators were people

who had performed similar functions with the Department of Transport but had entered the private sector under the program that guaranteed their new small businesses work over the first several years. The process took several additional years to complete and expanded as the national road network grew.

SANRAL oversaw both the toll and non-toll roads in South Africa's national network. In all financial matters, the two sides of the agency's responsibilities carried separate balance sheets.

South Africa had a history of toll roads that dated back to the 18th century, but it was not until the early 1980s that the country established its first modern toll road. As government funding in the late 1990s fell short of what was needed to build and maintain the new roads necessary for growth, it became clear that more tolling offered a solution. In accordance with the 1998 legislation, SANRAL funded the building of toll roads through the issuance of bonds, with the principal and interest paid by toll revenues. The government guaranteed up to six billion rand (US\$871 million) of borrowing for the toll roads, and all such borrowing required approval of the ministers of transport and finance. In addition to the publicly operated toll roads, SANRAL also managed the contracts for private, concession-run toll roads. Many operated on the so-called "build, operate, and transfer" model, where a private company received a concession from the agency to finance and build a toll road, and operate it for 30 years. At the end of that period, ownership reverted to the government.

Non-toll roads received funding from treasury allocations. Simultaneous to the establishment of SANRAL, the government also created the medium-term expenditure framework (MTEF) that increased the duration of grants for those allocations that required longer lead times and consistent funding. Instead of justifying the budget

request for the coming fiscal year alone, the agency worked three years in advance, allowing for greater strategic planning. SANRAL's independent status also allowed it to have a separate allocation from the rest of the Department of Transport. In the past, after the national treasury allocated money to the department, departmental sectors had fought for pieces of the grant. Planning for large road projects became difficult if the department decided to transfer money to rail or maritime projects midway through the procurement phase. The independence of the agency allowed Alli and his team to plan strategically and reduced the uncertainty associated with government funding.

#### *A new model for project management*

Alli wanted to increase accountability at every stage of the procurement process in order to improve efficiency. Central to his strategy was increased autonomy for individuals within the agency and transparency across SANRAL's business. When he arrived as chief director of roads in 1995, Alli had taken a tough line on issues of ethics and propriety. It had been common, for instance, for hired consultants to take the chief director and senior staff on vacations. Upon discovering that a colleague was taking such a holiday, Alli told him that such favors were no longer acceptable. "I stopped all of that nonsense," Alli said. "Word got around very, very quickly in the street: Don't offer these guys holidays or anything of that sort again. We don't take trips from consulting engineers. We don't take trips from contractors." When he became chief executive of SANRAL, Alli carried over these stringent rules and built them into the agency's corporate culture. He set up anti-fraud hotlines for internal and external reporting on any suspicions of collusion or corruption. Substantive reports were investigated.

Given SANRAL's reliance on the sale of bonds in financial markets, it was important to

build trust in the new agency's corporate governance. Alli emphasized the disclosure of performance information, review and analysis of financial and performance management, and appropriate actions for noncompliance and underperformance.

Alli knew that SANRAL had to bolster its ability to manage the tendering process for roadwork in order to increase effectiveness and build credibility and legitimacy. Jeremy Cronin, the deputy minister of transport noted, "An absolutely critical skill—and one that is so lacking in government—is the ability to enter contracts and to project-manage." Alli surveyed best practices for tendering processes from around the world and drafted a new set of tender rules. "We had nothing to hide," Alli said. "We went to the industry, to the construction contractors and the design engineers. We went to the industry at large and asked them for their comment on our tender rules." All tenders would be opened in public, reducing possibilities for collusion. "Everything we do is guided by good governance practice," said Alice Mathew, SANRAL's company secretary and risk officer. "We are an implementing arm of the government and we handle large amounts of money, which are taxpayer funds or tolls collected from the road user, and we have a responsibility to the nation that we handle that money correctly."

The tendering process was revised to improve transparency, bolstering accountability and reducing opportunities for collusion. An independent evaluation committee comprising the project manager and representatives from the private sector evaluated bids based on functionality and price. From the evaluation report produced, the proposal went through several different offices for recommendations and improvements before submission to the board of directors' contracts committee, which was responsible for making the formal award. In accordance

with government's policies designed to address historical inequalities in the wake of apartheid, the agency emphasized what Alli described as "social and entrepreneurial development" throughout the procurement process. SANRAL set aside 80% of the maintenance work for micro, small, and medium-size enterprises, with at least 90% of that work reserved for businesses run by non-whites. "Our emphasis was on the skills development with a bias toward the historically disadvantaged or disenfranchised," Alli said. "We wanted to develop the pool of civil engineering construction contractors in South Africa. ... These are small companies and they are generally owned with no politically-connected people." SANRAL made a practice of pairing small contractors with larger contractors. Given that some of the small companies could not afford many of the costs involved with large construction projects, such as insurance, partnerships with larger firms allowed the smaller businesses to develop.

Alli also reorganized the flow of project management. Rather than arranging departments hierarchically, he worked with his staff to create clusters of employees with expertise or experience in particular fields. The new organizational structure was flatter, decentralizing authority to project managers in a manner that reduced bureaucratic lag times and increased efficiency. The clusters helped to develop policy and managed problems associated with their areas of competency. For example, the design and construction cluster would meet separately from the toll cluster and the maintenance cluster, though they most likely shared several staff members. SANRAL operated in accordance with the government's hiring policies of black economic empowerment; by avoiding hierarchy, the cluster system provided a collaborative way to reduce potential challenges as new project managers paired with more experienced engineers. Mentoring facilitated the transfer

of skills between staff members and provided an avenue to monitor performance in the flattened structure.

Under the new process, small groups of engineers from among the staff received assignments to manage particular projects. The managers then stayed with their projects through each phase of the procurement process, rather than handing the project from section to section. By seeing the project through from start to finish, managers were able to solve problems faster and reduce bureaucratic lag times.

### OVERCOMING OBSTACLES

The Gauteng Freeway Improvement Project provided a major test of SANRAL's procurement process under trying conditions. Alex van Niekerk, a young engineer who worked on tolling and traffic modeling for the agency, had written memos to Alli since 2001 about the need to upgrade freeways in Gauteng Province, particularly the routes connecting Johannesburg and Pretoria. Though many of the roads were in relatively good condition, they required significant expansion to handle additional traffic. Given the size of the project, estimated costs exceeded the budget allocation from the central government for non-toll roads. Van Niekerk designed a preliminary model that used tolling to fund the upgrades. "We realized that we are at the point where we require an intervention. We need to climb in, upgrade the Gauteng freeway network, and have a vision for the future," van Niekerk said.

During the summer of 2004, when South Africa won its bid to host the 2010 World Cup, Alli and van Niekerk had to make a decision on whether to move ahead with the Gauteng freeway upgrade. The project was not a World Cup project, as the planners projected that successive stages of the upgrades would continue well past the 2010 event. But they did not want to be in the

midst of major construction during the event. The decision centered on whether SANRAL could substantially complete such a large project in such a short period of time. Van Niekerk outlined the various stages of the project for Alli and initially told him that time was too short. Ultimately, they decided to move ahead with the project, setting milestones for each contract to reach by the summer of 2010. Van Niekerk explained, "We all saw the World Cup as an opportunity to gain further momentum for this much needed project. Although the GFIP [Gauteng Freeway Improvement Project] was not a World Cup project, and since this project was required to be implemented in any case, the World Cup was a big incentive to accelerate this project in order to have the benefits of the project for the 2010 World Cup."

Van Niekerk won approval for the project through the Department of Transport, a process that included appeals to politicians whose constituencies might be affected by both construction and the collection of tolls. The minister of transport at the time, Jeff Radebe, lent his political support to the project. "I have said on numerous occasions that roads are the veins and arteries of our country's economy," Radebe said in 2008. "The congestion on the freeways around Gauteng are inhibiting economic growth and development, and this heart bypass for Gauteng will enable the economic hub of the subcontinent to grow without the hindrance of poor traffic management."<sup>2</sup> Because the network connected to major provincial roads, the Gauteng provincial government approached the agency and asked to incorporate the R21 highway into the freeway project. The R21 connected the cities to the international airport and was in bad need of repair. Because the road often had lane restrictions and closures, drivers frequently missed their flights due to traffic delays. The province did not have extensive experience

with the operation of toll roads.

Acknowledging that the agency was better equipped to carry out the project, the provincial premier formally handed over control of the R21 to SANRAL through a memorandum of understanding.

The process of tendering for the Gauteng work was consistent with SANRAL's other projects. "Whether it's a small contract or a big contract, the principles are the same," van Niekerk said. In August 2006 the agency began an open tender process to appoint traffic and toll consultants to do traffic modeling. From the modeling they could decide how best to toll the roads, targeting those areas with high congestion where toll facilities could adequately fund the needed improvements to the infrastructure. They would then proceed with the tendering process for design consultants. "Traffic modeling was the main input parameter for the design of the roads, the toll strategy and the financial model," van Niekerk said. They settled on an open-road tolling model, with tolls charged using electronic transponders and camera verification of registration plates. Open-road tolling allowed for multiple lanes to travel without the need to slow down at tollbooths. The upgraded Gauteng freeway was to be one of the largest open-road tolling projects in the world.

Alli and van Niekerk were mindful that the scope of the project—185 kilometers for Phase 1 alone—might overwhelm South Africa's construction industry. After the standard prequalification process, SANRAL requested that large contractors form joint ventures with smaller ones. "A lot of skills were transferred in this process," van Niekerk said. They divided the work into two bundles of three projects each, with each project covering a stretch of freeway. In order to qualify, contractors had to tender for all three packages in one of the two bundles. This ensured that contractors would bid

competitively for all parts of the project rather than picking only the ones that had the greatest profit potential. "We had to ensure competitiveness in the industry," van Niekerk said. Tendering was the most important part of the process, given SANRAL's model and the need to hire quality contractors who could deliver effectively and efficiently. Van Niekerk noted, "SANRAL is a management agency, with a light structure, which means we are very dependent on appointing quality contractors in order to ensure that we get the required end result."

Construction began in June 2008, just two years before the start of the World Cup, and continued without major difficulties for 18 months. "In December 2009 everything was on track, everything was on time," van Niekerk said. "Then the rains started." The rain arrived in January 2010 and poured down until May. With twice the normal amount of rainfall, contractors struggled to meet their milestones, especially given the dry conditions necessary for the final sealing stages of roadwork. Construction continued during nights and weekends, with some contractors working 12 straight weeks without giving workers any off days. This increased the costs to the contractors and increased the importance of the joint-venture partnerships with smaller contractors. In the end the contractors met almost every milestone. Alli was quick to give credit to the contracting partners. "They did as much as was humanly possible for us to make sure that what we had said to the people [came true]," he said.

## ASSESSING RESULTS

The creation of SANRAL from South Africa's Roads Department provided an opportunity to increase efficiency within the road industry by separating government policy making from implementation and opening the tendering process to a wider range of contracting partners. SANRAL was able to

remake the culture of procurement and reconfigure the financial model for roads infrastructure. During the first decade of the agency's existence, its network more than doubled to 16,000 kilometers from 7,000 kilometers.

Large projects like the Gauteng Freeway Improvement Project demonstrated the ability of the New Public Management model to facilitate major infrastructure projects in tight time frames. Many individuals inside and outside of the agency questioned whether the total cost of the project, at 20 billion rand (about US\$3.9 billion), could have been reduced if the agency had allotted more time or delayed construction until after the World Cup. But the World Cup also acted as a catalyst that helped move the project forward.

The project gave smaller contractors and engineering companies a chance to pair with larger firms and improve their skills and ratings as judged by the Construction Industry Development Board, a statutory regulating and monitoring body. The project created 20,000 jobs during construction and an additional 900 permanent jobs related to maintenance and tolling. As the first 185 kilometers neared completion, another 375 kilometers remained before SANRAL finished the entire upgrade, offering the potential for continued employment opportunities throughout the construction industry. From an infrastructure standpoint, the new and expanded roadways promised to improve traffic safety and reduce congestion.

Though SANRAL did not officially complete the first phase of GFIP until the following year, the agency was able to halt construction and open the roads in time for the games. Commuters experienced what project manager van Niekerk called a "traffic holiday," as travel time between Johannesburg and Pretoria shrank dramatically. "People were raving on the radio about how many hours they were saving," he recalled.

The World Cup was a success for South Africa, and in its wake the construction continued, with the final work on the first phase nearing completion and plans in place for the second phase. But in February 2011, when SANRAL announced that tolling would begin and that motorists could expect to pay as much as 66 cents (approximately 10 U.S. cents) per kilometer, a public outcry arose. Although few motorists would actually pay the maximum toll because of discounts and the graded system of charges, headlines emphasized the maximum price.

SANRAL had engaged in an "intent to toll" process throughout the planning stages of the project, in which the agency sought to communicate the details of the project, the proposed toll locations and expected prices. Public forums had offered local communities the opportunity to comment. But it was not until the final completion phases of the project that taxi associations and workers' unions complained that tolling indiscriminately burdened an already disadvantaged segment of the population. Radebe, the transport minister who had signed off on the project in its early stages, had moved on to become the minister of justice midway through the project. His replacement, Sbu Ndbele, met with Gauteng Premier Nomvula Mokonyane and agreed to suspend the tolling pending further review.

The political impasse over tolling frustrated SANRAL leaders. Alli noted that in the past he had measured the success of his projects by their completion. With the tolling model, however, he now had to wait to see whether the planned tariffs would be implemented. "This is where you needed to show firm political leadership," he said. "There is no political leadership. It is a problem for us. There is an issue of poor leadership."

That the agency went through all of the communications channels with the "intent to

toll” process and yet still met public outcry suggested that the government needed to spend even more effort on the public relations aspects of the Gauteng project. The difficulties also spoke to the challenges of operating in a political environment with frequent changes in top management. From 1994 to 2011 the Department of Transport had six directors general and four ministers. Even though the SANRAL model provided the sustainability needed for extensive strategic planning, the turnover within the department undermined the consistent political support that large projects require from start to completion.

## REFLECTIONS

By 2011, the Department of Transport had created a total of 11 agencies responsible for the management of various sectors of South African transportation. Many within the department, including Jeremy Cronin, the deputy minister of transport, noted SANRAL’s success. Cronin noted the importance of leadership within the agency. “Someone like Nazir Alli is obviously a very effective leader...[He] is very technically competent as well, and is not just a political appointee managing an agency with a CEO title. ... He has actually brought professional skills to bear on the challenge of constructing and maintaining our national road network.” Cronin said.

Ketso Gordhan, the former director

general of transport, agreed. “The agencies have been more or less successful. SANRAL is clearly a standout success compared to the others and the reason is very simple; it’s a guy called Nazir Alli. If you don’t get the right management, these things don’t work,” he said.

Separating the agency from the department allowed Alli and his team to manage projects with more efficiency and effectiveness. SANRAL was effective in its primary goal of improving roads for the people of South Africa. Paying for the new roads through toll collection, however, remained an obstacle because of the added costs to drivers. Though the expansion and upgrading of roads had the potential to increase economic opportunities for the historically disenfranchised, South Africa struggled to implement tolling in an effective and fair manner so as to benefit the entire population.

“I think South Africa, whether one is talking transport or pretty much anything else, is still sharply marked by duality,” Cronin said. “The strange combination of a relatively advanced first world side-by-side a very significant third world, to use metaphoric language. ... The danger is that we perpetuate this first world/third world duality. ... We’ve got a very efficient, first class operation in SANRAL which has ensured that we retained and even extended this wonderful first world freeway network system we’ve got. ... When you toll in South Africa, you’ve got to think about what you’re doing.”

<sup>1</sup> Briefing by the Minister for Transport, Mac Maharaj. (February 16, 1999).

<<http://www.polity.org.za/polity/govdocs/speeches/1999/sp0215d.htm>>

<sup>2</sup> “R11,5bn Gauteng roads project to help keep SA’s economic hub on growth path,” by Chanel de Bruyn, Engineering News Online <<http://www.engineeringnews.co.za/print-version/r115bn-gauteng-roads-project-to-help-keep-sas-economic-hub-on-growth-path-2008-06-24>>

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