



# E-PARCC

COLLABORATIVE GOVERNANCE INITIATIVE

**Syracuse University**

Maxwell School of Citizenship and Public Affairs

Program for the Advancement of Research on Conflict and Collaboration

## **VFAN – A Sustainable and Collaborative Initiative to Improve the Livelihoods of Underprivileged Communities in Conflict Countries: The Rwandan Experience**

### **CASE**

#### **Vision for Rwanda**

In March 2018, the UK-based Vision-for-a-Nation (VFAN) - a non-governmental organization promoting eye care services - had bagged the 2018 Bond Innovation Award, given by British Overseas NGOs for Development.<sup>1</sup> The award was given to organizations or initiatives “that are taking inventive approaches as they chart a course through a complex and changing external environment.” The award recognized VFAN’s contribution in making eye care accessible to all the 11.8 million Rwandans.

This case was written by K.B.S. Kumar and Indu Perepu of IBS Center for Management Research (ICMR). It was the winning case in E-PARCC’s 2018-19 **Glendal E. and Alice D. Wright Prize Fund for Conflict and Collaboration Case Studies in International Development**. The case is intended for classroom discussion and not to suggest either effective or ineffective responses to the situation depicted. It may be copied as many times as needed, provided that the authors and E-PARCC are given full credit. E-PARCC is a project of the Collaborative Governance Initiative, [Program for the Advancement of Research on Conflict and Collaboration](#)- a research, teaching and practice center within Syracuse University’s Maxwell School of Citizenship and Public Affairs.

---

<sup>1</sup> British Overseas NGOs for Development or BOND supports 450 civil society organizations and allies to help eradicate global poverty, inequality and injustice.

Over the period of five years since its intervention (in association with the Rwandan health ministry) in 2012, VFAN trained 3,000 eye care nurses, affected 2 million eye screenings (18% of the population), 1.1 million medication prescriptions, and 214,000 referrals for specialist treatment in addition to the distribution of 160,000 pairs of glasses to the needy Rwandans.<sup>2</sup> This self-funding program had a positive impact on the citizens and the economy of Rwanda, as many people returned to work and children went back to school, after overcoming their vision-related challenges. While giving VFAN the UK Charity Awards<sup>3</sup> in 2016, one of the judges said, “This is a really well planned and executed project, and the results are excellent.”<sup>4</sup>

Already crippled after decades of conflict and a ruthless genocide in 1994, the Rwandan economy had slid down to appalling levels. With 57% of Rwandans living below the poverty line and 37% in extreme poverty, the country desperately needed economic and social reformations. In 2001, the government initiated its development agenda by charting out its Six Pillar Program through the three cross-cutting areas to bring long-term transformation in the Rwandan society – called Vision 2020.

At the core of this development agenda was improving the human resources through health and education. This called for providing quality, affordable healthcare, and increasing its access through effective collaboration, clear vision, and strong ethics. One of the issues that needed immediate attention was visual impairment that was preventable and treatable, as an estimated 34%<sup>5</sup> of the population had some sort of visual impairment, causing productivity losses amounting to \$60 million per year. To address this, the government came up with a national vision plan as a part of Vision 2020, to end avoidable blindness. The ministry of Health was keen on partnering with Non-Governmental Organizations to treat the preventable blindness at the primary care level.

In 2011, VFAN<sup>6</sup> entered into an association with the Rwandan government and started operating as a non-governmental organization in the country. In 2012, it collaborated with the Ministry of Health along with a few other like-minded voluntary organizations and developed a nationwide primary eye care program.

The epicenter of VFAN’s intervention was the Rwandan coffee sector, in which 400,000 poor small-scale farmers were engaged. Rwanda, being one of the world’s leading coffee

---

<sup>2</sup> “VFAN Provides 1 Million Rwandans Eye Care” [www.visionforanation.net](http://www.visionforanation.net); 2015

<sup>3</sup> The Charity Awards is Civil Society Media’s annual awards program held to identify, recognize and reward those organisations doing exceptional work in all areas of charitable activity.

<sup>4</sup>“[Vision for Nation Foundation, Delivering Primary Eye Care to the whole of Rwanda.](#)”

<sup>5</sup>OlanrewajuEweniyi, “Rwanda Is Now Providing Eye Care For All Its Citizens,” [www.konbini.com](http://www.konbini.com), January 2018.

<sup>6</sup> VFAN was led by James Chen, who described himself as venture philanthropist. Chen was driven by a strong motive of eradicating the avoidable visual challenges that crippled the underprivileged population around the world, especially in the developing countries.

producers, had witnessed a noticeable decline in the productivity of the coffee-bean sorters as their age advanced, the main reason being the failing vision due to presbyopia.<sup>7</sup>

VFAN began its intervention with the coffee bean sorters and played an instrumental role in establishing sustainable local primary eye care services. With the success of the program, it was extended to people living in poverty and extreme poverty all over the country and was subsequently integrated into Rwanda's mainstream healthcare system.

In a span of five years, VFAN in association with the Health Ministry made eye care system available to 90% of the people, living in 15,000 villages. In this short span of time, VFAN developed, implemented, and integrated nation-wide primary eye care program, which emerged as a huge success, and helped improve eye care delivery, building capacity and services leading to the creation of a comprehensive social model.

VFAN planned to exit from Rwanda in 2018, after which the government would assume the full responsibility of the program. Thereafter, it was up to the ministry to continue the program with the same spirit while maintaining the ethical stance with which VFAN carried out the program.

## **A COUNTY UNDER CONFLICT**

Rwanda was marred by a horrifying humanitarian disaster led by politically motivated hostile groups inside the country (*Refer to Exhibit I for A Brief History of Rwanda*). In 1994, Rwanda witnessed a brutal genocide that took away about 1 million lives in 100 days. The massacres had reduced the Rwandan population by about 10%. Those killed included teachers, doctors, and many other professionals, creating a huge void in the Rwandan society. The event pushed the Rwandan economy and society into shambles. The fundamental family networks, health care, judicial machinery, and the education system had become dysfunctional.

The genocide of 1994 had deteriorated the economic situation in the country. The Rwandan economy was predominantly based on agriculture. While agriculture claimed to have employed 80% of the labor force, it contributed to only one-third of the country's GDP. The GDP per capita nosedived from \$ 376 in 1990 to about \$ 230 in 1999 (*Refer to Exhibit II for Rwanda's Macroeconomic Indicators – At a Glance*).

The sabotaged infrastructure and severe reduction in population crippled the Rwandan economy, putting a huge challenge before the new Government. Thirty seven percent of Rwandans were in extreme poverty<sup>8</sup> i.e., could not meet basic food needs. Mere 19.8% of the population had access to electricity. Rwandan population was also marred by various

---

<sup>7</sup>Presbyopia refers to long-sightedness caused by loss of elasticity of the lens of the eye, occurring typically in middle and old age.

<sup>8</sup> "10 Things about Rwanda," [www.borgenproject.org](http://www.borgenproject.org), June 2013

endemic diseases, disorders and health issues that included Malaria, malnutrition, HIV/AIDS, eyesight issues to name a few.

Rwanda had suffered from a geographical disadvantage too. The country was landlocked and long distances from ocean ports contributed to greater transportation costs for both exports and imports thus disturbing the economies of trade.

## **REVIVING RWANDA**

After a phase of post-genocide recovery and reconstruction phase which lasted till 2000, Rwanda started looking towards development, with a focus on poverty reduction, economic growth, and democratic governance. The Rwandan Patriotic Front, which played a major role in ending the genocide, formed the government in the country.<sup>9</sup>

Between 1998 and 1999, the government under the leadership of Paul Kagame started looking at stabilizing the future of the country through economic upliftment, rural development, productivity, youth employment, and responsible governance. The government outlined the vision and goals for the country, to be reached by the year 2020.

This resulted in the Government of Rwanda signing 'Vision 2020' Initiative towards rebuilding its economy. The vision aimed at attaining per capita income equal to that of a middle-income country;<sup>10</sup> making Rwanda a modern and strong nation that does not discriminate its citizens; reducing the population below the poverty line to less than 30%, and that of extreme poverty to less than 9%.<sup>11</sup>

Vision 2020 had focused on some critical aspects of national interest such as good governance, skilled human capital, education for all, health care, modern infrastructure, information technology infrastructure, vibrant private sector, and modern farming technology. Millennium Development Goals (MDG),<sup>12</sup> which emphasized framing of economic development and poverty reduction strategies, addressing the critical issues like empowerment of women, universal primary education, child and maternal mortality, HIV prevalence, and environmental sustainability<sup>13</sup> were a part of Rwanda's Vision 2020 program.

---

<sup>9</sup> In 2003, a new constitution was adopted. This guaranteed political freedom and human rights for all the citizens. In the same year the first post-war legislative elections were held.

<sup>10</sup> The per capital income of a middle income country was between \$ 1026 and \$ 4035 according to the World Bank.

<sup>11</sup> "The World Bank In Rwanda," [www.worldbank.org](http://www.worldbank.org).

<sup>12</sup> The United Nations Millennium Development Goals are eight goals that all 191 UN member states have agreed to try to achieve by the year 2015.

<sup>13</sup> "[Fact sheet on current MDG progress of Rwanda \(Africa\)](#)," December 05, 2015

The Rwandan Government identified six priority pillars and three crosscutting areas to bring about necessary long-term transformations in Rwandan economy and society. (Refer to Table I for Pillars and Cross-Cutting areas of Vision 2020)

**Table I Rwanda – Vision 2020**

| Pillars                                                 | Cross-Cutting Areas                                                   |
|---------------------------------------------------------|-----------------------------------------------------------------------|
| Good governance and a capable state                     | Gender Equality                                                       |
| Human resource development and knowledge- based economy |                                                                       |
| A private sector-led economy                            | Protection of environment and sustainable natural resource management |
| Infrastructure development                              | Science and technology, including ICT                                 |
| Productive and Market Oriented Agriculture              |                                                                       |
| Regional and International Economic integration.        |                                                                       |

Source: Ministry of Finance and Economic Planning, Republic of Rwanda

To coordinate funding for Vision 2020, the aspirations of the vision were translated into a medium-term strategy called Economic Development and Poverty Reduction Strategy (EDPRS). EDPRS was operationalized through Sector Strategies and District Development Plans. EDPRS aimed at achieving strong human capital development through flagship programs like sustainable growth for jobs and exports; a decentralized integrated rural development program to reduce extreme poverty, and governance to make Rwanda a country with low incidence of corruption. Sector Strategies defined the government’s strategies for five years at the sector level. District Development Plans looked at the plans for districts for five years.

All the three plans were implemented through Medium-Term Expenditure Framework (MTEF). The government described MTEF as “a three-year fully integrated budgets that mainstream the Public Investment Programs (PIP) of the agencies and translate into concrete action plans, costed through annual budgets.” The poverty reduction achieved through the MTEF was to be monitored and fed back into the elaboration of sector and

district plans. Thus MTEF helped in integrating planning and budgeting and helped in enhancing the quality of macroeconomic planning.

Once these plans were implemented, the government estimated that the real GDP would grow on average by 11.5 percent per year, and agriculture by at least 8.5 percent. Industry was projected to grow by 14 percent on average and the services by 13.5 percent.

The success of Vision 2020 largely depended on human resource development, and the government was looking at improving education and healthcare services to build a highly productive workforce to transform Rwanda into a knowledge-based economy.

Rwandan Human Resources had taken a severe beating as a result of the 1994 genocide. It called for a root level intervention to rebuild active human resources. The government had taken several initiatives to address basic issues like health, education, and human rights.

The restoration measures included reviving the Rwandan coffee sector, which accounted for more than 70 % of its foreign exchange. The government had focused on increasing the volume and quality of coffee exports to revive the economy. By 2006, coffee had accounted for 30 % of exports. Coffee farming had a significant impact on the livelihood of Rwandan farmers. In the value chain of coffee making, coffee bean sorting was the most rigorous procedure and had to be done manually. As Rwanda was known for the quality of its beans, the rigor involved in coffee bean sorting was of higher degree, which took a toll of the bean sorters' eyesight especially those aged above 45.

## **VISUAL IMPAIRMENT AND ECONOMIC IMPACT**

Coffee-bean-sorting had been one of the major sources of employment for Rwandans in general and Rwandan women in particular. Thirty six percent of Rwandans were dependent on the coffee sector for their livelihood. Their employment security was determined by their ability to sort beans as per the quality parameters. Coffee bean sorting was a rigorous activity that demanded keen observation and sharp sight for handpicking the beans to meet the quality parameters. The hallmark of quality was, 'Greener the bean; better was the pick'. Speaking about the coffee bean sorting activity, Hassan Nyiringabu, a Supervisor at Rwanda Trading Company said, "To sort coffee, you need a clear vision. When someone has clear vision, we are sure about the productivity to expect from him/her."

VFAN's survey revealed that 70% of the coffee bean sorters in Rwanda suffered from some form of eye disorder. The disorders ranged from minor symptoms to those that required major surgeries. While about 70 % of the bean sorters reported discomfort and pain in the eyes, 50% experienced difficulty in working. Forty eight percent had to depend on their co-workers to finish their job, and 34% were observed accomplishing less because of the visual challenges they faced. This not only affected the health but also posed a severely adverse

economic impact on the Rwandan coffee bean sorters. According to Dr. Graeme Mackenzie (Mackenzie), optical advisor to VFAN:

“It is usually females employed in this industry, and their livelihood depends on their ability to sort beans. Around the age of 45 they lose their ability to see well. Their quality of work suffers and therefore their income suffers. Now, the breadwinner is no longer earning enough. The young girls in the family are pulled out of school so they can work in agriculture to help. They do not finish their education and the whole cycle of poverty is just reinforced.”<sup>14</sup>

Visual impairment was widely prevalent in Rwanda, beyond the coffee bean employees too. About 34% of Rwanda’s 12 million population suffered from some type or other of vision impairment that had affected their economic well-being. While the most common defects were short-sightedness<sup>15</sup> and cataract,<sup>16</sup> other ailments that had crippled the Rwandans included an uncorrected refractive error<sup>17</sup> (URE), corneal scarring.<sup>18</sup> The costs of those visual impairments were humongous on individuals as well as on the Rwandan economy.

In 2006, Fred Hollows, a voluntary organization, conducted a Rapid Assessment of Avoidable Blindness (RAAB) survey to gain an insight into the prevalence of blindness in Rwanda. The survey suggested that cataract was the most prevalent eye disorder in Rwanda, accounting for 66.7% of all causes of bilateral blindness. It was followed by posterior segment disease (18.0%) and corneal scarring (15.3%). Visual impairment had not only affected the individuals but also impacted the economic status of the people. Visual impairments had an adverse impact on the quality of life and people’s productivity. People with healthy eyesight were found to be economically engaged and active, thus making a better living. Ninety eight percent of people with healthy sight were economically active, while only 62% of those with low vision were found to be economically active. A mere 21% of blind people were found to be engaged economically.

Poor vision was observed to have an adverse impact on work quality, health, and overall development. Families were compelled to pull their kids out of the schools and engage them at the coffee farms to earn wages for the home. As the children did not get to finish their education, they were stuck in the vicious circle of perpetual poverty and adverse health.

---

<sup>14</sup> [“Rwanda’s Visionary Move,”](#) February 07, 2018.

<sup>15</sup> *Short-sightedness*, or myopia - eye condition that causes distant objects to appear blurred, while close objects can be seen clearly.

<sup>16</sup> A *cataract* is a clouding of the eye's natural lens, which lies behind the iris and the pupil. *Cataracts* are the most common cause of vision loss in people over age 40 and is the principal cause of blindness in the world.

<sup>17</sup> Refractive errors occur when the eye is unable to properly focus images on the retina, resulting in blurred vision. Short sightedness is also a type of refractive error. Other refractive errors include astigmatism (blurred vision) and presbyopia

<sup>18</sup> Corneal scarring refers to the scarring of the cornea, from trauma, or infection or disease, which results in impaired vision, or even blindness, in the affected eye.

Thus visual impairment was the main cause of several direct and indirect losses like the loss in productivity and hence income, the opportunity cost of dedicated assistance to people with vision impairment, abstained education opportunities, cost of accidents and injuries due to visual impairment, the decline in quality of life, deadweight loss.

Visual impairment had thrown a severe challenge before the government, affecting the individuals, the society, and the Rwandan economy. Visual challenges had posed a productivity loss of about US\$60 million per year to the Rwandan economy. However, over 80% of those eye ailments were found to be preventable and curable (based on a report by the World Health Organization.)<sup>19</sup>

## **PUBLIC-PRIVATE PARTNERSHIP**

Considering the economic and social damage posed by the poor eye health, providing systematic primary eye care had become a priority for the Rwandan government. Investment in nationwide primary eye care services promised a benefit-to-cost ratio of more than two-to-one.<sup>20</sup> However, as a majority of the population still lived in poverty, it was not economically viable for many Rwandans to get their eyes tested and treated. Only 23% of the patients had access to the vision assessment.<sup>21</sup> Moreover, by 2006, Rwanda had only 14 eye care specialists to take care of its population of around 9 million. Thus, the need of the hour was a nationwide social initiative to reach out to the needy Rwandans and address their eyesight challenges.

Such an initiative was replete with a plethora of challenges including lack of infrastructure, shortage of specialist skills, geographically dispersed population, larger rural population, poverty, and lack of education, to name a few.<sup>22</sup>

This made the government of Rwanda seek partners for the effort. In 2011, the Ministry of Health partnered with VFAN with a mission to address the eye health issues of the visually impaired Rwandans by making the primary eye care accessible to all. This program was funded by The United Kingdom's Department for International Development,<sup>23</sup> UBS Optimus Foundation,<sup>24</sup> and the Chen Yet-Sen Family Foundation.<sup>25</sup> James Chen (Chen), a

---

<sup>19</sup> "Improving eye care in Rwanda," Bulletin of the World Health Organization, [www.who.int](http://www.who.int), June, 2014

<sup>20</sup> Ibid

<sup>21</sup> "VFAN; Eye Care for Coffee Bean Sorters," [www.youtube.com](http://www.youtube.com), April, 2016

<sup>22</sup> Primary Eye Care Service in Rwanda, [cloudfront.net](http://cloudfront.net), May, 2015

<sup>23</sup> The Department for International Development is a United Kingdom government department responsible for administering overseas aid. The goal of the department is "to promote sustainable development and eliminate world poverty"

<sup>24</sup>The *UBS Optimus Foundation* is a grant-making foundation dedicated to improve the lives of children worldwide.

<sup>25</sup>The *Chen Yet-Sen Family Foundation* is a Hong Kong based grant-making institution with a strategic focus on early childhood literacy, library development and education enhancement



University of Chicago alumni, was heading VFAN, which was driven by his core mantra, “No one should go blind for the want of eye care.” In the developed world, eye care was a service that was taken for granted. However, with very few resources available, higher service costs and poorer economies, the developing countries were far from accessing the eye care service. Chen’s mission was to bridge that gap. Through VFAN, he resolved to take the eye care to the poorest nations in the world and to the poorest individuals in those nations. The primary eye care procedure included checking the external eye for lid defects and assessment of visual acuity. VFAN’s intervention strategy was based on a three-tier procedure that included prevention, early intervention, and referral for cataract and other surgeries.

The cost of VFAN’s intervention comprised many components, which included establishing and running an organization in Rwanda, designing and delivering training, collaborating with the Ministry of Health, monitoring and evaluating the work, publicity, and advertising costs. VFAN’s intervention also included distribution of standard pre-made adjustable spectacles invented and manufactured by its associate firm Adlens (*Refer to Exhibit III for more about Adlens*). The cost amounted to about \$0.46 per pair (reading glasses) and \$4.00 per unit (adjustable glasses). While 80% of the users in Rwanda were found to be capable of paying for the glasses, the proceedings were to be used for the remaining 20% patients, who could not pay for the glasses.

The costs also included the nurses who examined the patients and dispensed the glasses. The time spent by each nurse was 30 minutes per patient. A series of awareness-raising initiatives, an intrinsic part of the program, also added to the costs.

## **THE INTERVENTION**

VFAN’s beginning in Rwanda was not smooth sailing. The mission had to face several adversities when it started, described by Chen as dollars, distribution, diagnostics, and demand.

As Chen shared, there was a lot of cynicism over their ambitious goal of bringing about the systemic transformation in Rwanda’s primary eye care. Vision and related problems had been low on priority in the health institutions of developing countries due to inadequate infrastructure, meager knowhow, overstretched resources, and underfunded investments. Eye care was synonymous with high costs due to trained doctors involved in the diagnosis and high- priced glasses customized according to the patient’s needs. These were to be made available in different strengths at different locations. He also needed professionals who could diagnose the problem and prescribe either eye drops, glasses or other treatment. Above all many people never realized that their eyesight needed a correction. This called for building awareness and taking eye care facilities to the rural hinterlands.

Lack of trained professionals and healthcare centers in Rwanda was a huge bottleneck. Sharing his experience Chen said, “The assumption was it (VFAN intervention) couldn’t be done. Let’s see if we can figure it out ourselves. Let’s take one country, solve this issue. And if we can’t, we’ll learn why we can’t.”<sup>26</sup>

VFAN had a clearly defined mission to ‘make eye care globally accessible; unlock economic growth and human potential of the world’s poorest communities through providing eye care.’ At the core of the VFAN’s strategy was innovative thinking and strategic collaboration with the Government of Rwanda, along with other multiple-stakeholders. Other stakeholders included Harvard University (Boston), Adlens (Boston), Fred Hollows Foundation, (Australia), Christoffel-Blinden Mission (Germany), and Rwanda International Institute of Ophthalmology.<sup>27</sup> This partnership was powered by an innovative approach to build a sustainable local primary eye care services model and integrate it into Rwanda’s mainstream healthcare system.

Strategically the VFAN intervention was based on four pillars:

1. Measurement of the spread of the disease and evaluation of services
2. Infrastructure development
3. Human resources development
4. Disease control and service delivery

The four strategic pillars were guided by three principles:

1. Prioritizing geographic equity of service delivery
2. Reducing the cost of access to services
3. Coordinating all partners under a single national plan

In 2012, VFAN had launched its first national eye care program in Rwanda.<sup>28</sup> VFAN’s mission was to make the service accessible to all the 10 million people in Rwanda. It needed a wide network of health centers to deliver primary health care to the people. Direct intervention of VFAN in the delivery of service was beyond imagination. Hence, the critical component of the VFAN’s strategic intervention was to build a trained eye care force.

There was a severe dearth of the trained human resources to deliver the primary eye care service. According to Abdallah Uwihoreye (Abdallah), Country Director, VFAN, *“There was need for us to invest in strengthening the whole continuum of care, and focus on the*

---

<sup>26</sup> Peter Guest, “James Chen’s Moonshot,” [www.raconteur.net](http://www.raconteur.net), October 13, 2016

<sup>27</sup> “Improving eye care in Rwanda,” Bulletin of the World Health Organization, [www.who.int](http://www.who.int), June, 2014

<sup>28</sup> Tom Rosewall, “Primary Eye Care: The Rwanda Model,” April 29, 2016

*awareness and use of health services.*"<sup>29</sup> To address the situation VFAN came up with an innovative three-day training course on delivering primary eye care.<sup>30</sup>

The nursing curriculum was tested and the training was rolled out in association with the Ministry of Health in October 2012. The training was initially provided to existing health center nurses. It demonstrated the potential to reach a larger audience. The program also began a series of awareness- raising initiatives to promote knowledge about the eye care service among the people. The three-day training course offered general nurses the competencies required to conduct basic eye screenings and treatments at the primary level.

After the nurses from all across the country were trained, VFAN established health centers in all the districts. These centers had all the equipment necessary to treat patients. At the same time, the glasses were also made available in the pharmacies attached to the centers. But after one year, it was found that only 30% of the patients were treated. The main reason being the attrition of trained nurses. Then VFAN decided to extend the training to schools of nursing in the country.

In the next few months, the data showed that patients were not very forthcoming. According to Abdallah, "It's because the eyes are not painful and this makes them reluctant to seek medication. So we decided to do an outreach program where we go to the people other than waiting for the people to come to the health centers." <sup>31</sup>

The next decision was to send nurses to each of the 15,000 villages in the country over two years. This was a massive exercise in which a cross-section of the civil society like local leaders, hospitals, nurses, and people participated. Thus VFAN was able to reach several eye patients who would otherwise not seek any treatment. After this program, an additional 1 million people were screened.

By 2015 VFAN had trained nearly 1,900 nurses in Rwanda<sup>32</sup> who went on to provide frontline eye care to the needy patients. The testimony to the curriculum's success lay in the fact that it was adopted by the World Health Organization (WHO) for further implementation across the developing world.

VFAN also extended the scope of its intervention by distributing a pair of its innovative adjustable glasses, with the help of its associate firm Adlens. Ninety percent of the glasses provided by VFAN were simple reading glasses, whose cost was below US\$ 1. Instead of

---

<sup>29</sup> Joseph Mudingu, "Vision For a Nation: Training Nurses for Sustainable Eye Care Services," [www.newtimes.co.rw](http://www.newtimes.co.rw), April 19, 2017

<sup>30</sup> Prior to this, in 2010, VFAN and the Ministry of Health, Rwanda launched a comprehensive curricular program around primary eye care. The program included creating and delivering a permanent primary eye care curriculum at all eight nursing schools in Rwanda.

<sup>31</sup> Ibid

<sup>32</sup> Tom Rosewall, "Primary Eye Care: The Rwanda Model," April 29, 2016

customized glasses, it provided adjustable-lenses that cost US\$ 3. VFAN stocked five types of glasses, which limited its inventory. These included reading glasses with different strengths and adjustable glasses.

In three years, over 18,000 pairs of adjustable glasses were distributed among Rwandans. The needy patients could purchase a pair upon a nominal payment of around \$1.50. This money was in turn sent to the Ministry of Health for further eye care programs. This innovative revenue generation model by VFAN allowed the Rwandan Ministry of Health to meet other expenses towards offering eye care to the Rwandans.

VFAN also went on to build a marketing and sales team that worked with stakeholders in all the districts and also built a supply chain to source and deliver products to ensure that the glasses were available in all the 502 health centers across the country. The glasses were ordered to VisionSpring<sup>33</sup> and were delivered at the Kigali (Capital of Rwanda) airport. VFAN paid for the glasses (\$0.46 per pair) for training the nurses and for the outreach program.

VFAN's initiative also drew the United States Agency for International Development's (USAID) attention. In 2015, The USAID had awarded VFAN a \$395,000 grant to fund eye care for 5,000 communities across Rwanda. This award was a part of USAID's Development Innovation Ventures (DIV) program. DIV was a competition that supported the innovative solutions that carried the potential to affect millions of underprivileged lives at an affordable cost. DIV had recognized VFAN for demonstrating innovation, economics, scalability, and replicability of its initiatives towards reducing the preventable eye care issues around the third world countries (*Refer to Exhibit IV for VFAN's Innovations*). Tom Rosewall, VFAN's Chief Executive Officer, commented,

“USAID represents one of the most rigorous development funding regimes in the world. That they have decided to fund our innovative nationwide outreach programme is a great endorsement of our work in Rwanda.”<sup>34</sup>

Well-orchestrated coordination among VFAN, the Rwandan Ministry of Health, and other stakeholders towards Rwanda's national vision plan had culminated in a successful and sustainable model of public-private partnership, which reached all the 30 districts, 502 health centers in 15,000 villages across the country by 2017.

## **THE IMPACT**

The primary eye care initiative by VFAN resulted in increased awareness and had drawn more attention to vision care at the primary levels. The initiative increased demand for much better vision care at the secondary and tertiary care levels. By 2015, VFAN conducted

---

<sup>33</sup> The mission of VisionSpring was to ensure equitable and affordable eyeglass is available to every individual to live a productive life.

<sup>34</sup>“[VFAN Receives Funding from USAID to Implement Unprecedented Eye Care Initiative in Rwanda,](#)”

500,000 screenings – with 260,000 eye drops, 80,000 referrals and provided 65,000 pairs of glasses. The program had administered about 200,000 vision assessments all over Rwanda. VFAN’s contribution towards creating curricula, initiating support scholarship programs, delivering specialty care and developing critical health care infrastructure had been appreciated by the Rwandan Government.<sup>35</sup>

This ‘task-shifting’ approach from the eye specialists to the nurses, by training them, equipped the nurses with the competencies to deliver the primary eye care, thereby shifting the burden off the specialists. Post the training, nurses had acquired the skills to perform a host of activities that included screening patient’s eyes, detecting allergies, conducting basic vision tests, administering eye medications, dispensing affordable lens glasses, referring patients with more complex issues for specialist treatment.<sup>36</sup> VFAN in collaboration with Rwandan government and other NGO stakeholders had established a sustainable supply chain system for eyeglasses across Rwanda.

The groundbreaking nationwide primary eye care program proved extremely successful. Theophile, a textile worker, commented, “Now that I have these glasses, I am not worried for my job anymore. The glasses help me in my job, and that way I am able to continue to provide for my family.”<sup>37</sup>

According to Chen, the VFAN initiative was naive – but it worked. The program’s success was primarily attributed to the diagnostic process, innovative curriculum, collaborative approach, and economies of scale. The VFAN initiative had helped over one million people to access eye care services across Rwanda. The initiative went on to provide affordable eye care to 100% of Rwanda’s population. The coffee sector employees showed tremendous improvement in their productivity. The new glasses provided by VFAN improved the productivity of the employees by 11%.<sup>38</sup>

VFAN’s program played a critical role in successfully building a sustainable, affordable and replicable nationwide eye care service, which was effectively integrated into the mainstream public health system.

VFAN’s intervention made Rwanda the first emerging country in the world to provide its entire population affordable eye care. Tom Rosewall, CEO of VFAN, concluded,

“In only four years the service that we (VFAN) have helped build throughout the nation has served more than one million people – 10% of the population. With complete integration within Rwanda’s public health system, it will continue to help

---

<sup>35</sup> “Improving eye care in Rwanda,” Bulletin of the World Health Organization, [www.who.int](http://www.who.int), June, 2014

<sup>36</sup> Vision for a Nation, Annual Report and Accounts, 2016

<sup>37</sup> “Vision for a Nation Screens 2 Million in Rwanda,” [www.iapb.org](http://www.iapb.org), August 07, 2017

<sup>38</sup> “VFAN; Eye Care for Coffee Bean Sorters,” [www.youtube.com](http://www.youtube.com), April, 2016

people long into the future. We are now working to take our ground-breaking approach to other countries around the world.”<sup>39</sup>

Between 2012 and 2015, the program reached a third of the population. A study by Crook Associates in 2015 estimated that US\$ 60 million or 0.7% of the economic productivity was lost annually due to moderate and severe distance vision loss in Rwanda. The expenses at the end of the first year of intervention i.e. 2012 were \$ 0.46 million, \$ 0.75 million in 2013 and \$ 0.974 million in 2014. The projected expenditure for 2015, 2016 and 2017 were \$ 1.13 million, \$ 1.09 million and \$ 0.74 million respectively. (*Refer to Exhibit V for VFAN Program Actual and Projected Expenditure*). According to VFAN’s assessment, the program costs looked favorable as compared to the estimate of the gains of the program relating to productivity and the estimate of loss incurred due to the prevalence of the eye care challenges.

In 2016, VFAN was recognized with the Top Prize in the “International Aid and Development” category by the United Kingdom’s Charity Awards Program. The award was a much acclaimed, most prestigious and longest-running award in the UK charity sector. On the occasion John Rhodes, Chairman of VFAN added:

“With VFAN’s support, Rwanda has become the first emerging nation in the world to provide all of its people with local access to affordable eye care; It is testament to the vision and generosity of our Founder (Chen) and the commitment of Dr. Agnes Binagwaho, the Minister of Health in Rwanda, and of our staff and other partners.”<sup>40</sup>

Chen, who lamented over the low prioritization of vision issues in the developing world, hoped to expand the project to other developing countries in the future. Commenting about VFAN’s future plans Mackenzie, commented:

“It’s wonderful that the Adlens and VFAN story has a chance to be heard by people everywhere. Vision is such an important part of life, affecting education, livelihoods, and families across the globe, and so organizations like VFAN need to be recognized for the important work they are doing.”<sup>41</sup>

VFAN planned to exit Rwanda in 2018, after playing a catalytic role in establishing eye care services in the country. This was consistent with the government’s vision of achieving operational independence from NGOs and others by 2018. But before it could exit VFAN wanted to ensure the continuation of the program and had increased the number of nurses in each health center to four from the existing two. It also provided refresher courses to the nurses who were trained at the beginning of the program. It also had in place, ophthalmic

---

<sup>39</sup>SaloniNagpaul, “UK Sight Charity Helps over 1 Million People in Rwanda,” [www.iapb.org](http://www.iapb.org), March 01, 2017

<sup>40</sup>“Vision for Nation Wins Top Prize at the UK Charity Awards 2016,” <http://visionforanation.net>.

<sup>41</sup>TurquillLambo, “[Adlens Focuses on Eyewear Innovations](#),” [Invisionmag.com](http://Invisionmag.com). February, 2015

officers in 41 district hospitals who lent their support to nurses in the health centers. A core group from VFAN was decided to be working in Rwanda even after its exit to monitor the services and provide the necessary support.

The ministry planned to carry on the program and assume full financial responsibility by 2018 based on a National Strategic plan for Eye Health (2018-2024). In the policy document, the government admitted that it faced certain challenges in implementing the plan. These included a shortage of skilled eye care staff, limited accessibility, shortage of consumables for cataract surgeries, limited access, and the absence of medicines for complex eye conditions. The government said that the eye care services were not fully integrated into the country's healthcare systems.

Though there was a strong case for continuing the program, it remained to be seen if the government would continue it with the same zeal as VFAN had, and also maintain the ethical stance that the program had been implemented with.

In the meantime, after having implemented the program successfully in Rwanda, VFAN moved to Ghana to scale its program taking ahead its plans of implementing the program in Africa and Asia. Its venture in Ghana started with a feasibility program that was conducted in association with Brien Holden Vision Institute.

## Exhibit I

### Brief History of Rwanda

- The 1884 Berlin Conference placed the Kingdom of Rwanda under German rule as part of Deutsch Ostafrika (German East Africa).
- During the subsequent partition of Africa in 1910, a big part of Rwanda was annexed to neighboring countries. This caused the loss of 1/3 of the Rwandan internal market and a large part of its natural resources.
- Following the First World War and the defeat of Germany, Rwanda was given to Belgium as a trustee territory under the authority of the League of Nations.
- After the Second World War, the League of Nations became the United Nations and Rwanda became a UN Mandate trust territory, under Belgian administration, until 1962.
- During the colonial period, the Belgian administration applied contemporary Darwinian theories, thereby deeply dividing the people of Rwanda. This unfortunate development can be seen as laying the foundations for periodic mass killings even after independence was gained in 1962, culminating in the 1994 genocide.
- The Rwandan Patriotic Front or RPF put an end to the 1994 genocide and thereafter formed the Government of National Unity (GNU) and the Transitional National Assembly (TNA) in coalition with other political parties to define a new future for Rwanda through democratic institutions.
- In 2000, initial Vision 2020 was elaborated some of which remain while others have been overcome.

*Source: Rwanda Vision 2020*



## Exhibit II

### Rwanda's Economic Indicators - At Glance

|                                     | 1980  | 1990  | 2000  | 2005  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GDP (US \$ billion)                 | 1.246 | 2.46  | 1.735 | 2.581 | 5.773 | 6.563 | 7.335 | 7.622 | 8.017 | 8.278 | 8.476 | 8.995 |
| Real GDP Growth (%)                 |       | 0.4   | 6.5   | 9.4   | 7.3   | 7.8   | 8.8   | 4.7   | 7.0   | 6.9   | 5.9   | 6.2   |
| Budget Surplus / Deficit (% of GDP) | -3.4  | -7.5  | .8    | .3    | -.1   | -3.3  | -1.2  | -5.0  | -3.9  | -5.2  | -3.8  | -4.1  |
| Population (million)                | 5.14  | 7.23  | 8.02  | 8.99  | 10.24 | 10.51 | 10.78 | 11.06 | 11.34 | 11.62 | 11.91 | 12.20 |
| Life Expectancy (at birth) Years    | 48.08 | 34.21 | 48.41 | 55.43 | 63.14 | 64.10 | 64.91 | 65.59 | 66.18 | 66.69 | 67.13 |       |
| GNI Per capita                      | 270   | 350   | 240   | 270   | 560   | 600   | 660   | 680   | 710   | 710   | 710   | 720   |
| Total Debt (% of GDP)               | 14.6  | 26.4  | 82.6  | 58.5  | 17.6  | 20.2  | 20.2  | 25.2  | 26.7  | 30.1  | 37.6  | 40.1  |

Adapted from [Data Portal Open Data for Africa.org](http://Data Portal Open Data for Africa.org)

## Exhibit III

### Adlens- At a Glance

- James Chen, a University of Chicago alumni spent a large part of his childhood in Nigeria. There he noticed that the use of eyeglasses and spectacles was limited.
- In 2004, he met a professor from Oxford, who made a prototype for an adjustable lens, which could serve a wide range of needs. He thought that it could replace the made-to-order glasses, which were expensive and could be of use in underdeveloped countries, where the poor could not afford glasses.
- University of Chicago alumnus and winner of Nobel Prize Luis Alvarez built adjustable lens, which featured two independently moving plates, whose relative position to each other helped in adjusting the focal length of the lens.
- In 2005, James Chen had co-founded Adlens which introduced the breakthrough technology and design to develop eyewear that adapts to the needs of the human eye, without having to use various pairs of glasses for various purposes of sight. Chen used the wealth from his family business to build the venture.
- Adlens' spectacles came with two lenses per eye along with oval optical plates fitted in each one. The lenses could be adjusted to slide horizontally relative to one another, thus incrementally changing the visibility from near to far (or vice-versa). The spectacle's arms had a small dial, twisting which will alter the spectacles from one lens to the other.
- Priced at mere \$ 1.4 a pair, Adlens' adjustable glasses became an extremely successful product, which sold about 600,000 pairs around the world, in the initial four years of its invention. The sales included its consumers during its intervention in Rwanda, through its associate firm VFAN42. The glasses also gained popularity in the US, Mexico and Norway markets43.
- Chen attributed Adlens' success to his motive behind the invention i.e. to bring glasses to people who otherwise would not have been served.
- In 2014, he founded Vision for a Nation (VFAN) to provide affordable eye care in developing countries. Its first foray was into Rwanda.

Source: [Adlens.com](http://Adlens.com)

---

<sup>42</sup> Shane Hickey, "Spec savers? The Glasses that can Change Prescription," [www.theguardian.com](http://www.theguardian.com), March, 2015

<sup>43</sup> Ibid

## Exhibit IV

### VFAN's Innovations at a Glance

- A new eye care training course that allows general nurses to be trained in just three days (versus 3+ years for an optometrist).
- The use of adjustable glasses that focus at the turn of a dial to provide instant vision correction.
- A revenue-generating model which allows the Ministry of Health (MoH) to use surplus revenue from the sale of glasses to sustain the services.
- The integration of the services into Rwanda's national health system and health insurance scheme.
- Delivery of an unprecedented outreach campaign to all 15,000 villages in Rwanda.
- Results-based financing from USAID Development Innovation Ventures.

Source: [Vision for a Nation.net](http://VisionforaNation.net)

### VFAN Program Actual and Projected Expenditure

|        | Year         | (\$ US million) |
|--------|--------------|-----------------|
| ACTUAL | 2012         | 0.46            |
|        | 2013         | 0.74            |
|        | 2014         | .97             |
| BUDGET | 2015         | 1.1             |
|        | 2016         | 1.08            |
|        | 2017         | 0.73            |
|        | <b>Total</b> | <b>5.08</b>     |

Source: *Primary Eye Care Service in Rwanda, Benefits and Costs, May 2015*