Innovation for better education – partnering for progress

The United Nations (UN) has declared 2005-2014 as the Decade of Education for Sustainable Development. Education empowers people and strengthens nations and acts as a powerful equalizer to help people lift themselves out of poverty. At this stage, governments have been working hard to achieve progress in education, but much remains to be done and the private sector can play a part.

Shell has long standing commitment to Sustainable Development and a key aspect of this is to maximise the opportunities for local communities to benefit from our presence. We support this objective through enterprise development, access to energy, road safety or the development of local capability and education is a key enabler in our approach.

We partner with local organizations to ensure our education programmes are locally relevant and financially sustainable beyond the initial investment. We support a variety of educational initiatives ranging from scholarships and internships, curriculum development and web based science learning programmes to enhancing the quality of education for hard-to reach rural communities. A key driver in some of these programmes is to help students gain a better understanding of their future career prospects in industry and technology.

Please find below some examples of Shell's innovative solutions and best practices in the area of education.

1. Shell Questacon Science Circus

Description (methodology, techniques and strategies used)
The *Shell Questacon Science Circus* ("the *Science Circus*") is a highly successful partnership program that takes interactive science and technology education to regional and remote Australia, including remote Indigenous communities. Given the size of Australia, regional and remote areas can be in geographically hard to reach places. These regions can therefore be disadvantaged through lack of access to quality educational opportunities, opportunities that metropolitan based children take for granted. The *Science Circus* is an outreach program designed to fill this gap and encourage people all over Australia to value and engage with science.

The program's primary audience is young people, whose engagement with science has been identified as a critical issue for the Australian science, education and innovation sectors. The program includes a wide range of proven strategies for engaging young people in science and related fields, and targets those at every educational stage from early childhood right through to senior secondary level. Given the size of Australia, it is important that the *Science Circus* embraces new technology and digital capabilities to supplement and reinforce the face to face learning experience Australians receive when visited by the *Science Circus*. The

experience incorporates a program for schools and communities that delivers hands-on workshops with the *Science Circus* via video conferencing technology. From the studio at Questacon in Canberra, the *Science Circus* maintains contact with schools across Australia.

The *Science Circus* has five key components:

- In-school delivery
- Teacher professional development workshops
- Public exhibitions in communities throughout rural and remote Australia (interactive science exhibitions)
- Video conferencing delivery
- Science communication education and training. Staffed by up to 16 students undertaking graduate studies in Science Communication at the Australian National University and their Associate Lecturers *(see section below: What is innovative about this approach/tool/project?)*

Each year the *Science Circus*:

- Visits over 150 towns and communities throughout regional and remote Australia providing access to quality science experiences
- Visits over 400 schools and engages nearly 70 000 young Australians and their families
- Holds over 25 community exhibitions
- Runs professional development workshops for more than 300 teachers
- Visits approximately 20 remote Indigenous communities

Members of the team visit schools in each of the regions on the tour itinerary to present science demonstrations on a wide range of topics. In each major town, the *Science Circus* exhibition is set up in a local venue so that members of the public, as well as school students, can experiment for themselves with the hands-on exhibits and watch a series of short, entertaining science shows. Whenever possible, the team runs workshops with or performs for local community groups. Teacher workshops are a feature of the program, which along with other tools, assists them to teach their students about science in an engaging and knowledgeable manner. Specialised programs are developed for delivery in remote Indigenous communities as well.

Implementation methods

The delivery of the *Science Circus*, and its longevity and success, is a result of the unique partnership between Questacon—The National Science & Technology Centre, the Australian National University ("the ANU") and Shell. It is an outstanding, award-winning example of business, government and universities working together to develop and implement a program that benefits the community.

The *Science Circus* involves working partnerships with regional as well as community-based organisations. These may include tertiary education institutions, industry employers, not-for-profit agencies, government bodies and science outreach providers operating at state and local levels. Each tour program is designed specifically to meet

the needs and respond to opportunities within a particular region. Questacon has a long history of working in remote Indigenous communities who have limited access to science learning resources. Its approach involves community consultation and participation, and includes cultural awareness training with *Science Circus* staff to ensure appropriate delivery.

What is innovative about this approach/tool/project?
The program is a partnership with a number of unique features.

- Geographical reach – the *Science Circus* has, to date, visited thousands of Australian communities, directly reaching millions of people including schoolchildren, teachers, families and the broader community. The tyranny of distance, so prevalent in Australia, is no barrier to the *Science Circus*. Today, it engages directly with approximately 70,000 people every year, particularly with those communities that are geographically isolated and educationally disadvantaged.
- Remote Indigenous community tours – the *Science Circus* understands the importance of engaging with local Indigenous communities, even where they are situated in remote or even very remote locations. Each year the team is trained in cross cultural communication and delivers an appropriately designed program to remote Indigenous communities.
- A cohort of more than 350 science communication graduates - from modest beginnings with eight volunteer presenters, the *Science Circus* has grown to become Australia's most recognised and extensive science outreach program. Each year a new team of science graduates are given the opportunity to complete a Graduate Diploma in Science Communication at The Australian National Centre for the Public Awareness of Science at the ANU in Canberra, resulting in a variety of influential career pathways. The competitive program recruits up to 16 talented young science graduates annually who staff the *Science Circus* and visit schools in regional and remote areas while working towards graduate qualifications in science communication that equip them for future careers in science, education and industry. The most enduring, and unique *Science Circus* legacy continues to be this cohort of graduates from the program. Their achievements and growing influence are diverse, far-reaching and far exceed what was anticipated. By any measure, the *Science Circus* with its ANU graduate science communication program, is unique in the increasingly important and influential field of national science communication.

Evidence of results and impact
Evaluation studies show the program meets a recognised need for high quality science education in regional and remote areas, supports science teachers in the classroom, builds science communication capacity nationally and encourages greater student engagement with science.

Through independent evaluations of Questacon's outreach programs, an understanding of the impacts of the *Science Circus* has been gained. This research has revealed that the program has improved science teaching in the classroom by providing teachers with skills and

ideas which support their teaching practice. Students were found to benefit from its dynamic approach to community science, reporting a greater interest in learning science and displaying greater engagement with the subject material.

There is also anecdotal evidence that the program has had an effect on participants that extends well beyond the classroom. Parents report that their children have been inspired and engaged by the content of the public exhibition, and that they themselves have enjoyed the opportunity for the family interaction that it provides. Some students exposed to the program during the 1980s have also reported long-lasting influences on their career decisions, leading them to train as scientists and science educators. (Copies of evaluation studies are available upon request). In addition to the education aspects of the *Science Circus*, it also serves as a research and evaluation tool for academics studying aspects of informal learning. Such evaluation and research is essential to ensure that the *Science Circus* and Graduate Diploma programs remain current and at the forefront of science communication.

Costs associated with the development and implementation of the activity

For the period 2011-2013, the delivery of the *Science Circus* will cost approximately $AUD 1.9 million per annum. The three partners all contribute significantly, with Shell funding around 47% of the Science Circus annual operational costs. The value of establishment costs, national and international reputation, brand exposure, capital value, years of program develop and logistic expertise has not been quantified but is significant.

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2. Cradle to Career (C2C) Scholarship Scheme

Description

The UN has declared 2005-2014 as the Decade of Education for Sustainable Development. Education empowers people and strengthens nations... a powerful "equalizer" that opens doors to all, an opportunity to lift themselves out of poverty.

Nigeria has a large and growing population with a significant proportion of people of school age. As with many countries, this is putting strain on the educational system. In the Niger Delta where Shell operates, access to affordable and quality education is very limited. And only few people have the chance to attend schools. For many years, Shell has run a scholarschip programme in Nigeria. In 2010, we awarded 2,730 secondary and 750 university scholarships.

According to the National Bureau of Statistics (2009), in 2006, there was a drop in Junior Secondary School (JSS) enrolment in Rivers, Bayesla and Delta states in addition to fluctuating levels of male and female enrolment. On the other hand, the SSE witnessed a slight increase in one of the states (Rivers) and reduction in enrolment for Delta and Bayelsa. This resulted in continued poor performance of scholars in West African School Certificate (WASC), National Examination Council (NECO)[1], Joint Admission and Matriculation Board (JAMB)[2] exams exacerbated by the dearth of quality schools, teachers and absence of other educational services in public schools in the region. There were also huge disparities in the performance of children in private schools when compared with those in public schools especially those in rural communities.

Based on the foregoing, SPDC designed and introduced the Cradle to Career Scholarship scheme to create access and enhance quality of education for indigent pupils from hard-to reach rural communities. The pilot program commenced with 60 students selected from primary schools in Bayelsa, Rivers, and Delta states. Shell had earlier in 2007 encouraged the Bayelsa state government to start a similar scheme, but the scheme was not sustained after the first set of student admissions.

The pilot **Cradle to Career Scholarship** is a partnership with 2 top private schools in Rivers state: Jephthah Comprehensive Secondary School and The Brookstone International School. It provides access to quality education by providing complete funding of 60 indigent students (20 each from Delta, Rivers and Bayelsa states) - for six years. Where they continue to perform well, it is being planned that there will be a seamless transition to SPDC's University scholarship and eventually into the Oil and Gas school, the Shell Intensive Training Program (SITP) which prepares young graduates for employment in the sector. Hence the name from Cradle to Career (C2C).

C2C is based on gender equity and equal opportunity principles in keeping with the Millennium Development Goals 2 and 3, hence it is geared towards making education touch every class of the operating environment, irrespective of gender, disability, social environment or creed, as SPDC is seen as an equal-opportunity and non-discriminatory corporate citizen.

Implementation Methodologies

The implementation process is as follows:

1. Engagement of stakeholders (e.g. Ministry of Education, heads and administrators of public schools) to secure 'buy-in' of the proposed C2C scheme.
2. Identify the best indigent pupils from rural community primary schools through an on-the-spot test conducted by an Educational NGO.

[1] NECO - Conducts examination and awards secondary school certificate to qualified students leaving secondary school

[2] JAMB - Conducts selection examination for those seeking admission to the universities

3. Secure placements and partner with top private schools for six years.
4. Set up a mentoring and performance tracking system of beneficiaries until they complete Senior Secondary Education.
5. C2C Secondary school graduates who secure University admissions migrate to SPDC University scholarships.
6. Set up a mentoring and performance tracking system for University scholarship holders until they graduate.
7. University graduates in relevant disciplines compete for the Shell Intensive Training Program (SITP), (a Shell oil and based career development programe).

What is innovative about the Project?

1. The project is targeted at indigent, hard-to reach pupils from rural communities, who would never have been able to access high quality education.
2. Furthermore, it caters for the beneficiaries from Junior secondary to senior secondary school and provides opportunity for them to acquire higher education through the SPDC university scholarship scheme and subsequently employment through the SITP.
3. It ensures the selection of the best schools for the education of the scholars.
4. It is based on gender equity and equal opportunity principles in keeping with the Millennium Development Goals 2 and 3, hence it is geared towards making education touch every class of the operating environment, irrespective of gender, disability, social environment or creed, as SPDC is seen as an equal-opportunity and non-discriminatory corporate citizen.
5. It bridges educational inequalities, promotes access to quality education and enhances high literacy in the Niger Delta region. The scheme also helps in the development of a sound human resource base for future employment.
6. It provides pastoral care, mentoring and monitoring by NGOs to make up for parents inability to visit and care for the children who are outside their places of residence.

Evidence of Results and Impact

- After a three week orientation program in August 2010, the students showed confidence and positive dispositions in their attitudes towards education and life generally. The launch of the program was applauded by parents, governments of the Niger Delta states and other education stakeholders.
- Positive feedback recorded from parents after the first term break when the parents had opportunity of being with the students.

Costs associated with the development and implementation of the Project

The complete funding per student is about $7,000 per annum and this covers tuition, personal and health care, accommodation and feeding, monitoring and mentoring and pastoral care. This implies Shell will be spending about $420,000 per annum on the 60 foundation students.

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3. World Challenge – a partnership project between BBC World News, Newsweek and Shell

Description (methodology, techniques and strategies used)
World Challenge is a partnership between, BBC World News, Newsweek and Shell which has been running since 2004. It is a global competition which recognises businesses showing enterprise and innovation at grassroots level. Since its inception, World Challenge has featured 70 projects run by groups or individuals around the world that tackle environmental or social issues within local communities. In addition to sponsoring the partnership, Shell has supported the scale-up of a number of these projects by providing financial assistance. This includes one of the 2010 runner-ups, A Class Apart in Guatemala which builds schools out of recycled waste materials. Shell also offers mentoring and business advice (along with well known sustainable business adviser Leo Johnson), to a select number of past projects that are finding it tough going, to help them grow and become financially sustainable.

Implementation methodologies
World Challenge is a competition in which projects or small businesses that show enterprise and innovation within their local communities are nominated to win a financial prize. A panel of renowned judges including Satinder Bindra, Director of the Division of Communications and Public Information (DCPI), UNEP, and Sergio Jellinek, External Affairs Manager, World Bank, pick 10 finalists. The finalists are then profiled on the BBC World News channel and in Newsweek magazine with a public vote to pick a winner and two runners-up. Since its inception both the nominations and votes have increased year on year.

What is innovative about this project?
Partnering with BBC World News and Newsweek ensures that World Challenge has a significant global audience. Leveraging the broadcast and print functionality of both media partners gives the World Challenge finalists worldwide exposure and coverage while at the same time educating those that watch and read about the competition about social development and enterprise issues. Similarly by allowing members of the public to vote for their favourite projects, World Challenge also builds and drives the

public's interest in development issues and the innovative ways in which the projects benefit their local communities.

Evidence of results and impact
World Challenge has made a real and tangible difference to the projects it's supported. The financial investment provided and the profile gained through BBC World News (each finalist is featured as part of a documentary series) has enabled the projects to scale-up and seek additional investment. Examples include: 2010 winner AIDFI who since winning World Challenge has received numerous donations and publicity opportunities and Oro Verde who through World Challenge were brought to the attention of the Colombian Government who showed an interest in learning how the project could be applied to sustainable mining.

With the introduction of Down to Business in 2010, previous finalists that are struggling have also been given access to Leo Johnson (Sustainability Business Adviser). Leo, along with Shell, has provided practical business advice and guidance on identifying additional sources of investment. Since meeting with the two projects - SkyLink Biogas in Kenya and Oro Verde in Colombia – significant progress has been made with each project developing sustainable expansion plans. In the case of Oro Verde, this has led to them being selected by a Dutch NGO to run an awareness campaign called "Good Gold" aimed at educating consumers in the Netherlands about responsible gold.

Costs associated with the development and implementation of the activity
The winner of the World Challenge receives a grant of US$20,000 while two runners-up each receive US$10,000. Over the life-time of the project $240,000 has been awarded to projects or small business to help develop and enhance their initiatives.

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