Overview of the Innovation
This project supported the set-up of the Rubengera Technical Secondary School (RTSS), an accredited, private technical secondary school for carpentry and wood technology based in Rubengera/Karongi District. The school started operating early in 2013.

RTSS has established the concept of 'Dual Integrated Technical Training' (DITT). DITT is a professional technical approach to training, where training on the job in the workshop together with professionals is integrated into the programme of the school with a focus on interaction between trainers and students and combined with actual production of goods for the market. It combines theoretical instruction with practical skills acquisition involving professionally qualified technicians inside the school, which enables students to produce high quality products. The DITT concept is a new approach in Rwanda with its origin in the German dual training system adapted to the Rwandan TVET situation and needs.

The project’s objectives were to achieve higher technical and personal skills development for students by applying the DITT concept and using cost-effective appropriate technologies in combination with innovative training (and training materials) and continuous professional development for trainers. This would provide young people with knowledge and skills which are relevant for employment, self-employment or further studies. The project aimed to include more girls in Technical Vocational Education and Training (TVET).

In addition to supporting the carpentry and wood technology units, the IFE grant was also used to establish and run a community pavilion to support local community members to develop their ICT and English language knowledge and skills through participating in non-formal training opportunities.

32 students were involved in the training at RTSS.

The total project budget was GBP 68,880.

Grant Recipient
The project was implemented by “Abaja ba Kristo” (the Community of Protestant Sisters).

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What makes it innovative?
The introduction and piloting of “dual integrated technical training” (DITT) is new to the Rwandan context, based on the dual training system previously successfully used in Europe and other developing countries. The applied learning methodology and close link between learning in technical schools and production for the market have not been practiced before in Rwanda.

Promoting the participation of girls in technical education can be considered as another innovative element of the project. The project has developed a specific approach to mobilizing women to support TVET for their children.

Relevance to education priorities
Main theme: Skills Development
Sub theme: Gender
Developing more interactive teaching and learning methodologies and quality and relevant TVET education at the Post-Basic level are key priorities for the ESSP 2010-15.
Project Learning (activity/output to outcomes level)

- The introduction of the DITT approach has real potential to influence the wider TVET curriculum and system.
- The direct links between skills development, production and marketing serve to highlight the value of good TVET.
- The deliberately small class sizes allow abundant direct support from teachers.
- The project emphasised Training of Teachers (ToT), in particular enhancing pedagogical skills alongside technical skills for the carpentry and wood technology sections.
- An innovation of the project was for students to reflect in groups on their learning and maintain a logbook or journals of their progress. Teachers also engaged in peer observation and review of each other’s teaching.
- Finding good and skilled teacher-practitioners for the production unit is seen as a major challenge.
- Sustainability of the project is an issue as the current set up and management is for a large part dependent on the managerial and technical skills of the school’s international Technical Director.

Project outcomes and reflection on monitoring and evaluation

Despite the modest scale and exploratory nature of this project, the evaluation has a range of approaches – though not all have baseline and end-line measures. With only one school/community involved, the sample was necessarily very small. The project was evaluated through qualitative and quantitative methods including: student outcomes in course assessments and final public examinations; student enrolment; ‘classroom’ observation of trainer-student interactions; parental participation (course numbers).

The results indicated good learning outcomes and success, notably in improving the role of women in TVET (both through targeted enrolment and work with other women’s events). There was a slight improvement in marks from S4-5. There was an increase in girls’ enrolment on the carpentry course (from 3% to 28% of total enrolment) with girls importantly performing as well as boys. The improved interaction created a community of learners and good use of reflection and sharing of experiences of students and teachers. The school has achieved an excellent
reputation in the region and is known for being well equipped, having good technical teachers and high quality carpentry and wood processing production units.

The modest nature of the project was reflected in the simplicity of the evaluation methodology and input. There is good evidence of the success of the project but it will need a more systematic and larger-scale evaluation to give sound evidence for anything more than a gradual increase in this approach to TVET.

**Conditions for success**

There was very little written about the processes of innovation encountered by this project making it difficult to assess the conditions for success. Undoubtedly the project focus on a single technical school and the human and physical resources available contributed to the success of the training component and development of DITT.

For continuation of the current school maintaining the same level of quality it is critical to have a strong manager and committed Technical Director with the required technical skills. Training a critical mass of skilled teachers will be another condition for prolonged success.

Community engagement in running the schools needs to be sustained. Mobilisation and commitment of local leaders was important, especially for the successful operation of the community pavilion and the integration of the school with the community, but proved difficult.

If RTSS were to increase its current mandate and have a stronger role to play in training of teachers and transferring good practices into government programming, it will need to continue the existing dialogue and advocacy role with WDA. The TVET minister visited the site and commended the excellent performance. He would like to see the RTSS serving as the model school for the Province. In particular he indicated that the Integrated Polytechnic Regional Colleges (IPRCs) could transfer the teacher training of the wood technology component to the RTSS.
Scale up and sustainability considerations
It is envisaged that the high quality intervention in Rubengera TSS will be sustained and the school will continue to run using the DITT approach. The lifelong learning activities for the community will continue within the school, while community courses other than English and ICT are being considered. As such, the school may serve as a model school and example in the region. External funding from other parties may be required for this.

The project management does not have a focus on scale up and mentioned that “as the school has limited human resources and capacity it won’t be feasible thing to think about scaling-up the approach”. Although this is well understood, more thought could have been given by the project team on how it could influence wider adoption and institutionalisation, including transferring good practices to WDA. The DITT approach, including the interaction between teachers and students and the linkages between learning and production, as well as the community component, could all inform future government decision-making and programming. Current developments of RTSS playing a role for training of trainers for wood technology in Western Province as part of the general TVET system are very promising, but were not addressed in the scale-up document. Any scale-up utilising public funding should capitalise on this potential for wider adoption of the innovation.

More emphasis could also have been put on ensuring sustainability through maximising the potential of producing for the market. The products coming out of RTSS are of such high quality with identified market demand for these products, that there seems to be real potential for generating a sustainable revenue stream, making donor funding less necessary and/or using the investment to further strengthen or widen the scope of the intervention.

Cost considerations for upscaling and institutionalisation
The project did not conduct an economic analysis as the project management did not consider the intervention to be suitable for scale up for the following reasons:

• The project requires highly skilled/qualified human resources to set up and monitor the project. At least a technical expert would be needed to initiate the Dual Integrated Technical Training (DITT) approach and workshop management in another school where this approach could be implemented.
• It requires major resources (infrastructure design and construction, equipment) to ensure safe and effective management of the system.
• The ownership needs to be identified. The project would not be scaled up if there is not a permanent owner (private, public) who has the capacity (skills, start up and maintenance cost and commitment) to initiate and run the program.

The issue of market revenue streams should have been given more attention in the economic analysis.

Immediate next steps
• Secure the continuation of the DITT approach and implementation at RTSS in a similar way as during the pilot stage. External funding may be required for this.
• Continue the lifelong learning activity for the community within the school and design other interventions based on community’s needs.
• Further strengthen the dialogue with the Government, in particular WDA in order to assess RTSS potential for further expansion in the area of teacher training, as well as advising WDA and IPRCs to adopt the good practices and integrate them into their own systems.
• If replication of the approach in other schools proves feasible, this can only happen in a relatively limited number of schools given the capital intensive nature of the intervention. Investment will need to be made in an intensive ToT programme (provided by trained teachers from the project) to ensure that there are qualified trainers to run the approach.
• The quality of the output (people and products) and the tested linkages between skills development and sales suggest that WDA should explore the possibility of PPP with an entrepreneurial investor.