

Template for Impact Case Studies Submission

Title of the Impact Case Study: Commercialization of a sorghum probiotic drink (Niselo)

Submitting University: Tshwane University of Technology

Summary of the impact:

(Including who or what has benefited, been influenced, or acted upon.)

Nutrigi is a TUT start-up which manufactures Niselo, a nutrition on the go product developed by the Department of Pharmaceutical Science using a SANBio grant. When COVID-19 struck we donated the product to homeless shelters and also to marginalized communities in Tshwane. Since 2021, the product is sold to taxi-drivers, students, cancer patients (who have problems swallowing) and consumers looking for healthy “on the go” nutrition for themselves and their children. In terms of capacity building, we have trained over 20 students and interns in the manufacturing and distribution of the product in South Africa and Botswana. These skills have given them experience in the world of work. The innovation has been recognized by being awarded funding by the Scottish Inward Investment Fund in 2022 enabling it to be manufactured and distributed in the UK and in June 2024, it was one of 2 products selected by Unilever / Innovate UK for entry into East Africa. With this generous grant, this product is now entering the Kenyan market as NutriGO multigrain drink.

Underpinning academic work:

(Either research or teaching. Conducted by which Department or Unit?)

In 2018, the Department of Pharmaceutical Science (South Africa) and NAFTEC (Botswana) received the SANBio BIOFISA II grant in an innovation challenge. TUT had the background IP which was then used to formulate and commercialize Synmba Sorghum Drink in Botswana. Further R&D followed which resulted in Niselo which was licensed out by TUT to a start-up called Nutrigo-SA. The innovation in the product is the growing of probiotic cultures on sorghum grain which was then pharmaceutically formulated for long shelf-life. The product is a non-dairy drinking yoghurt which is gluten-free, lactose-free, vegan and high in protein and energy. It assists with vitality, management of sugar (low glycemic index) and is a nutritious wholemeal on the go.

Narrative description of the impact:

(A detailed narrative explaining the nature of the impact in terms of difference made, the sector of society which stood to benefit from the impact, the reach and significance of the impact, over what period the impact occurred, and how the impact arose as a result of academic work at the submitting university.)

Poor nutrition and hunger are identified by the UN as a global challenge, affecting 828 million people globally with a further 2,3 billion at risk. COVID-19 has exacerbated the problem. Therefore, there is a need to develop culturally acceptable nutraceutical products which serve both as food and also have health benefits for people of all ages. Sorghum is an underutilized African grain with good nutrition potential which fermentation (with probiotics) further enhances. Niselo is popular among taxi drivers and commuters because it is a meal on the go which is tasty, healthy and filling. The inclusion of probiotics also helps with gut and dental health, among other health attributes.

Apart from selling the product, we have also made donations to homeless shelters, children’s homes (through a grant from Rotary Club of Pretoria Capital) and also to jobseekers.

We have trained over 10 interns and 10 students in manufacture and commercialization of the products which has impacted positively on their employability. Some of the interns were funded by Department of Trade Industry and Competition and Human Science Research Council (HSRC).

Overall, this project has raised the visibility of research and innovation at TUT. We were selected for the University Innovations Global (<http://www.ui-global.com>) Virtual Accelerator programme in 2021 which created opportunities for us to collaborate with Abertay University and apply for the Scottish Inward Investment programme. This led to us setting up an affiliate in the UK called BiaGO. In April 2024, we were awarded a grant by the South African Medical Research Council (MRC) of over R1 million to study the effects of this product on the health of miners. In June 2024, we were selected by to do tech transfer to Unilever in East Africa through open innovation challenge coordinated via InnovateUK called MilletX. Working with our partners in the UK, we are in the process of pilot-manufacture NutriGO, a multi-grain probiotic – fermented drink for the East African market. We have plans to expand into Zimbabwe and Zambia through various affiliates and therefore continue to provide good, affordable, evidence-based, culturally acceptable nutrition-on-the-go.

Evidence and sources to corroborate the impact:

(For examples of evidence see Section 5 of the Guidance Note. For quantitative evidence please use publicly available figures as far as possible, with references. For testimonials by sources external to the submitting university (which may be appended to the impact case study) please provide details on how the sources can be contacted for audit purposes.)

Website – <http://www.niselo.com>

For testimonials on NutriGO, please contact UI-Global – Mr Bob Creighton - bob@ui-global.com

For testimonials on the use of Niselo in patients, please contact Dr M Shavhani – Mshavhani1@gmail.com

For donations to communities, please contact Rotary Club of Pretoria Capital – Dr Makina, president - makina@unisa.ac.za

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Nate Blum

Executive Director at The Nebraska Grain Sorghum Board

[View full profile](#)



Executive Director at The Nebraska Grain Sorghum Board
1mo • 🌐

Tremendously pleased to have met with Mr. Robert Goodfellow to discuss the [#sorghum](#)-based [#health](#) drink, Niselo.

A [#kambucha](#)-style drink, Niselo captures the remarkable [#nutritional](#) benefits of our [#climatesmart](#) [#ancientgrain](#) in an easy and consumer-familiar product.

Look for this product to be a big player in the [#healthyfood](#) sector in the future!

The [#SorghumArmy](#) strives to bring [#value](#)-added processing opportunities, such as Niselo, to our state to help [#grownebraska](#).



Award letter from Scottish Inward Investment

Hi alan.phillips@interface-online.co.uk *@interface-online.co.uk*

Subject: **Inward Investment** Catalyst Fund approval - Nutri-Go SA Pty Ltd

Dear Jonathan, Alberto, Simon and David

I hope that you are well.

Regarding your **Inward Investment** Catalyst Fund application -Development of a sustainable, highly nutritious gluten free and dairy free sorghum based protein drink.

We have received your application for consideration under the **Inward Investment** Catalyst Fund administered by Interface with funding from **Scottish** Government, concerning Nutri-Go SA Pty Ltd collaborating with Abertay University on the above project.

I am pleased to advise you that the Panel have agreed to fund your application. Please note that they will make a maximum contribution of £5,000.02 in line with the grant requested.

The collaborative programme of work can now commence. I would ask that you fully familiarise yourself with the rules and requirements of this scheme which are attached and ensure that all of the activities being undertaken in this project fall within its scope.

Please confirm your acceptance of the Funder's Terms and condition of the grant offer that an interim report (template attached) must be submitted by no later than the 4th March, 2022 on activity carried out to date.

The Interface marketing team will be in contact over the next week to update you on potential PR regarding the award announcement. Therefore, the award decision is embargoed and we would ask you to ensure that there is no publicity ahead of the official press release from **Scottish** Government - the decision should remain confidential to the team and the company.

The panel were keen to ensure that your **Scottish** resources were maximised to support the projects **Inward Investment** and **Scottish** Development International (SDI) can offer other potential support (e.g. securing premises etc). Please do let me know if you would like support from the SDI team, if you are not already engaged.

Upon receipt of an acceptable end of project report (template attached) detailing all project costs, the Interface funding team will arrange for payment to be made. Please note that we require the **Final Report** to be submitted to grants@interface-online.co.uk. You must ensure that this document is completed fully, signed and returned electronically otherwise this could result in a delay in making payment.

Should additional time be required to complete the project, this must be requested, in writing to grants@interface-online.co.uk at least 28 days before the project end date and there is no guarantee that the panel will automatically agree to the new project end date.

Please ensure that no project activity is undertaken that would in any way contravene the advice of the Chief Medical Officer for **Scotland**'s advice in regard to social distancing.

On behalf of the panel, we would like to congratulate you on the award and wish you every success with the project.

Yours sincerely,

Alan Pratt
 Systems and Finance Manager
 INTERFACE - The Knowledge Connection for Business
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Award letter from Unilever

Millet iX challenge: Introduction BiaGo - Unilever team



Inbox x

Dana Heldt

Fri, Jun 7, 7:14 PM (5 days ago) ☆ 😊 ↶ ⋮

to Dexter, Lwandile, Robert, me, Babar ▾

Dear Robert, David, Dexter and Lwandile

I am delighted to officially introduce you to each other following the pitch event and the BiaGo team being selected as a collaboration partner for the Millet challenge.

Babar will be in touch about documents which need to be completed.

But please reach out to each other to start scoping the project and how to approach it.

I wish you a successful collaboration and looking forward to following your journey.

Bw, Dana

Dana Heldt

Knowledge Transfer Manager - Synthetic Biology

07711 782619

dana.heldt@iuk.ktn-uk.org

Any other information considered relevant:

Signed off on behalf of the University by:

Date:

[Length of the Impact Case Study: Please do not exceed 1,500 words in total, excluding appended testimonials.]