

# DIGITAL TRANSFORMATION CENTER **KIGALI**



## Lessons Learned Report



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Photo: DSSD / Mali Lazell

# INTRODUCTION



***GIZ and its implementing partner Ministry of ICT and Innovation (MINICT), are jointly implementing the Project Digital Solutions for Sustainable Development (DSSD) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).***

***This project was commissioned in 2017 for a timeframe of three years (January 2017 – December 2020), and was subsequently extended for another period of three years (January 2021 – December 2023).***

***During this period the Digital Transformation Center Kigali was established as an innovation hub, event and coworking space for partners and the local IT ecosystem.***



Photo: DSSD / Mali Lazell

With the extension of the project, the need arose to reflect on the past years and to clarify which activities went well and which did not go well. Therefore, the DSSD team organized several lessons learned sessions on various key topics in order to shed more light on them. In total, five sessions were held on general topics such as **HR** or **gender** as well as specific topics such as **events**, **strategies**, **capacity-building** and **solution development**. Subsequently, various actions were taken from the discussions and strategies were developed to prevent errors in the future and to have a better planning foundation for the second project phase.

The key results are presented and explained on the following pages. The aim of this lessons learned report is to inform partners about various activities and strategies. At the same time, DSSD would like to provide recommendations for other Digital Transformation Centers that will be established on the African continent in the near future.



# LESSONS LEARNED

## 1 Solution Development

### 1A General Approach

*The solution development in the Digital Transformation Center is based on two pillars. On the one hand, ideas are proposed by line ministries and/or various government agen-*

*On the other hand, digital solutions are developed through a participative and community approach, involving startups and the private sector. A distinction must therefore be made between these*



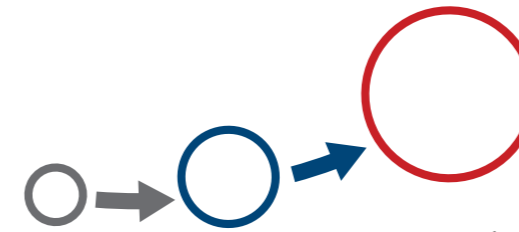
Experience shows that good coordination with partners, donors and the digital ecosystem is important to avoid double efforts. In the past, Rwanda faced the issue that various stakeholders were unaware of each other's activities.

**A sector working group of all key representatives was therefore set up to counteract this.**

**In addition, it was noted that the ministries developed products that were partly similar to those of the private sector. If possible, this should be a more coordinated approach in the future.**

**Moreover, experience shows that an approach involving the target group and beneficiaries in the development process from the very beginning is important. Clear KPIs should be defined which indicate whether the product is a success and accepted by the target group.**

**Besides, the impact should always be measured and clearly documented. The scaling of digital products is particularly important for Rwanda because of its relatively small market.**



Since many of the solutions were only developed in the 2nd or 3rd project year, it was difficult to scale them in time during the project phase. GIZ's internal networks should be used to introduce the developer teams to helpful contacts outside of Rwanda to increase their reach. The **partnership with the Smart Africa Secretariat** has proven to be a best practice example, as the Secretariat is very familiar with local conditions and ecosystems in their member states. It also provides expertise in the field that is necessary to select qualitative products for further development.

When it comes to organizational procedures around contracting developer teams, experience shows that **a contract of six months or less is usually too short**. Therefore, it is necessary to plan with the developer teams accordingly, do a risk assessment and align the contract with the duration of the GIZ project. Easing the process of invoicing cannot be altered by the project since they are regulated centrally by GIZ. Nevertheless, GIZ terms and conditions can be complicated and hard to understand and should therefore be explained in detail at the beginning of the contract to ensure that developer teams have understood them and do not face any issues later on. Many of the government solutions were tendered externally for development.



Experience has shown that it is particularly important to define standards for this and to work closely with the partners to stay on schedule. Otherwise, delays can quickly occur, which can also lead to other disadvantages. On a positive note, many of the digital solutions are based on emerging technologies and are therefore in line with the latest trends. In particular, some IoT-based, but also machine learning or big data solutions have been developed. In order to expand the variety even further as well as to gain more expertise and experience, it is planned to collaborate more closely with the GIZ Blockchain Office and other GIZ Emerging Technology labs in the future. On the other hand, it is necessary to ensure that the advising team also has knowledge about emerging technologies and business development in order to consult the developer teams accordingly. If this cannot be provided, an external expert can be contracted.

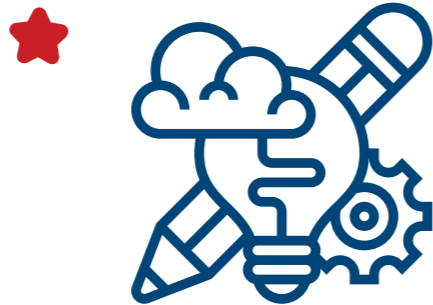
# LESSONS LEARNED

## 1 Solution Development

### 1B Design Challenges

For the development of digital solutions together with the innovation community, several design challenges were carried out. In most cases, these have enabled even more than one development team to be recruited for the Digital Transformation Center. However, the quality varied greatly from competition to competition.

*In order to increase the quality of the ideas and solutions, respected measures must be taken already in the initiation and application stage of the competition.*



During this stage, **more time and discussions with the partner** would be useful to increase the understanding of the partners' needs and priorities. This could be accomplished during a partner meeting or a stakeholder workshop including institutions/organizations from government, development partners, academia, private sector, international and local NGOs where expectations and a common understanding of potential outcomes are being established.

Which approach is suitable needs to be decided on a case by case basis. The first approach makes sense when the beneficiary of the solution will be solely the government and partner institutions, whereas the second approach is suitable for solutions addressing mainly beneficiaries from the community. Experience has shown that it is particularly important in this stage to already identify clear outcomes and awards. Important questions to be raised include:

**What is the budget that can be awarded?**

**Is the budget enough to award more than one team and at the same time is the budget ensuring that all teams can still develop a high-quality prototype?**

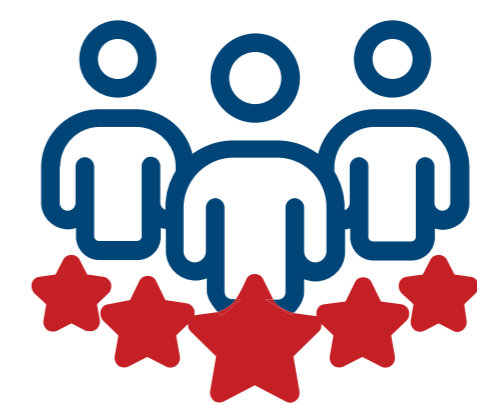
**What are the conditions of engagement (time, number of installments, deliverables)?**

**Does the partner or the developer team hold ownership rights?**

**What needs to happen in terms of procurement procedures so the teams can start developing the solution and receive stipends on time?**

In the application stage, it is recommended to launch a more comprehensive and detailed call for application.

With the numbers of applications received may be lower but of higher quality. The call for application can be supported through informational sessions, where the purpose and awards of the challenge can be presented to potential candidates. On the other hand, it is also a chance for the organizers to receive feedback and answer questions that might occur. It is recommended to limit the call for application to teams and exclude individuals. Teams already comprise a set of skills that do not need to be recruited during the development stage. However, for the effective development and implementation of solutions, **it is better when teams know each other before the start of the competition.** The applicants could be even more challenged throughout the process with an even more specific application form and interviews, ensuring that those that apply are really interested and qualified. For example, this could be done through video submissions or any other multimedia application.



# LESSONS LEARNED

When selecting the teams, it should be considered that the process is very time-consuming. An assessment sheet with certain selection criteria should be defined in advance to assess the teams on objective criteria. Experience has shown that it is not absolutely necessary to involve the partner at this stage, but rather to keep the partner informed about taken decisions. The first selection should be based on **the application form alone**. The second selection should involve a **personal meeting or interview with the first shortlisted teams** to further assess their motivation and capability.



Furthermore, it was observed over several design challenges that the implementation stage is very crucial for the outcome of the challenge. Teams should not only be given the chance to present their ideas but also **be provided with mentorship and time to develop their prototype**.

If mentorship is not provided, the outcome might be heavily affected with teams not knowing what to do or giving up in the process. Depending on the budget at hand, stipends could be given to the teams to support the development process, since otherwise, the idea might not be transformed into a more concrete prototype during this phase. The stipends for transport and internet are needed especially for teams not having a reliable connection or computers. For participants living outside of the capital, covering accommodation should be considered to include people from rural areas. Ideally, mentors are assigned to support during the whole challenge, so the teams know whom to ask and whom to turn to for guidance.



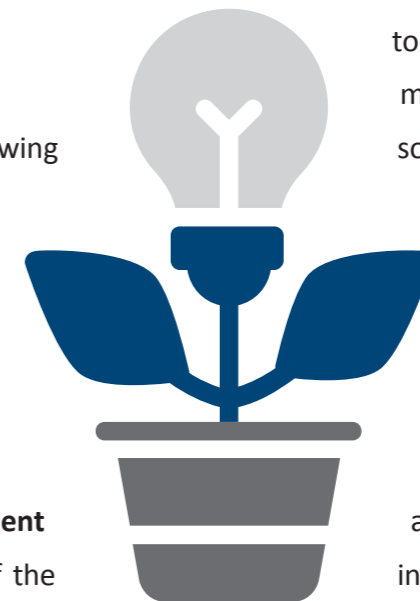
A more structured approach with regular meetings with the mentors is recommended to track the progress of the teams and support them accordingly. In order to increase the quality of the prototype, more time to the implementation stage should be allocated. Less than a week is very short for the teams to come up with a high-quality product. **The recommended period is 4-8 weeks**, depending on the complexity of the solutions.

For the selection stage, the following lessons learned could be identified: it is recommended to assess, if the team is not only technically talented but also whether it has a realistic plan for the **business model, development and scaling**. The assessment of the winner could be done through a final pitch at the venue.

However, having an assessment of the solutions based on the technical submission as well as the pitch seems like a more meaningful way to evaluate the work of the teams, as opposed to assessing it only based on the pitch. Though the award belongs to the winners, it is best to

provide it in three installments. This way, less experienced innovators have the chance to become financially literate and responsible. The first installment should therefore cover the main costs that occurred during the challenge and give the team another starter budget for further development.

As mentioned earlier, it is very crucial to have the contracts and procurement processes ready at this stage, so teams can start right away.



Bureaucracy and complicated paperwork might confuse and discourage the teams to further work with the program. The contract should include milestones to be achieved and the respective payment of installments.

Finally, it is recommended to not only provide technical expertise but also **business-related guidance**. Involving the winning teams in incubator programs will support the teams to create real market-ready products and increase their chances to sustain their business independently after the partnership with GIZ.

# LESSONS LEARNED



## Events

Since the opening of the Digital Transformation Center, it has become known especially through events. Various Meetups and Communities of Practice on the topics of IoT, AI, Blockchain and VR & AR have created a strong network of members, whose experts provide deeper insights into

the digital ecosystem and are also available as mentors for design challenges or coaching. Experience has shown that it is important to engage these communities in the long term while maintaining a mentor database.



Photo: DSSD / Mali Lazell

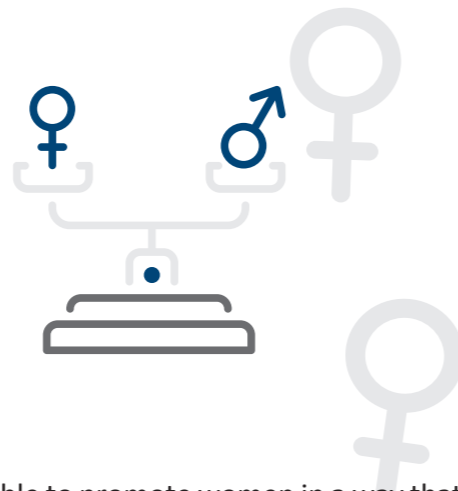
Solid planning of events is recommended in order to maintain networks and interaction with the local ecosystem on a regular basis and to avoid lastminute stress. An event registration tool that supports data protection regulations should be used to facilitate the events. In addition, **framework contracts for catering and other services** can make the task much easier. New ideas should also be explored to keep the audience engaged. For example, the Digital Transformation Center hosted the ***Digital Art Exhibition in February, where artists presented their art pieces in a digital medium. Another important aspect is the involvement of partners in the events.*** If this is well planned, many synergies can be created, such as communication via **social media** or visibility via shared contact databases. Partnerships should also be established with academic institutions because these particularly reach young people and are thus one of the project's target groups.

# LESSONS LEARNED

## 3 Gender

One of the project's indicators included the involvement of young people and women. Generally, women are fewer in numbers in the Rwandan ICT sector. To change this, project activities should be designed to promote women in the sector, for example through capacity-building measures.

*In the current project phase, for example, care has been taken to ensure that both development teams and trainees make up 50% women, if possible.*



Often, this poses a challenge, as Rwandan women usually have a different daily routine than their male counterparts and are expected to stay at home most of the day. An approach to solve this issue was to extend the period of the coaching that was usually two to three days long and at the same time to reduce the number of hours per day. Even though this approach took a lot more days in total, women could attend this coaching because they could afford to be away from home for a few hours instead of a whole day. However, in

order to be able to promote women in a way that meets their needs, employees must be sensitized and trained on the topic of gender equality and traditional role models in Rwanda. In an internal team assessment, it became apparent that not all team members feel up to the task. **Gender sensitization workshops** are now being planned and carried out to get the team informed about this topic.



Photo: DSSD / Mali Lazell



# LESSONS LEARNED

## 4 Policies & Strategies

In the course of the project, it became clear that developing a solution alone would not lead to the full intended result. Rather, it is necessary to support solution development through an implementation guide. These implementation studies provide partners and developers with recommendations about how much budget must be invested or other conditions fulfilled in order to successfully implement the product.

*Experience shows that strategy documents often do not receive the necessary attention after they have been created. In this case, a strong exchange with the partners is necessary in order to keep these documents in mind over a longer period.*

It is recommended to check through Monitoring and Evaluation (M&E) activities how helpful the creation of the strategy documents is for the partners in order to take other measures if necessary and to support the partners even better.

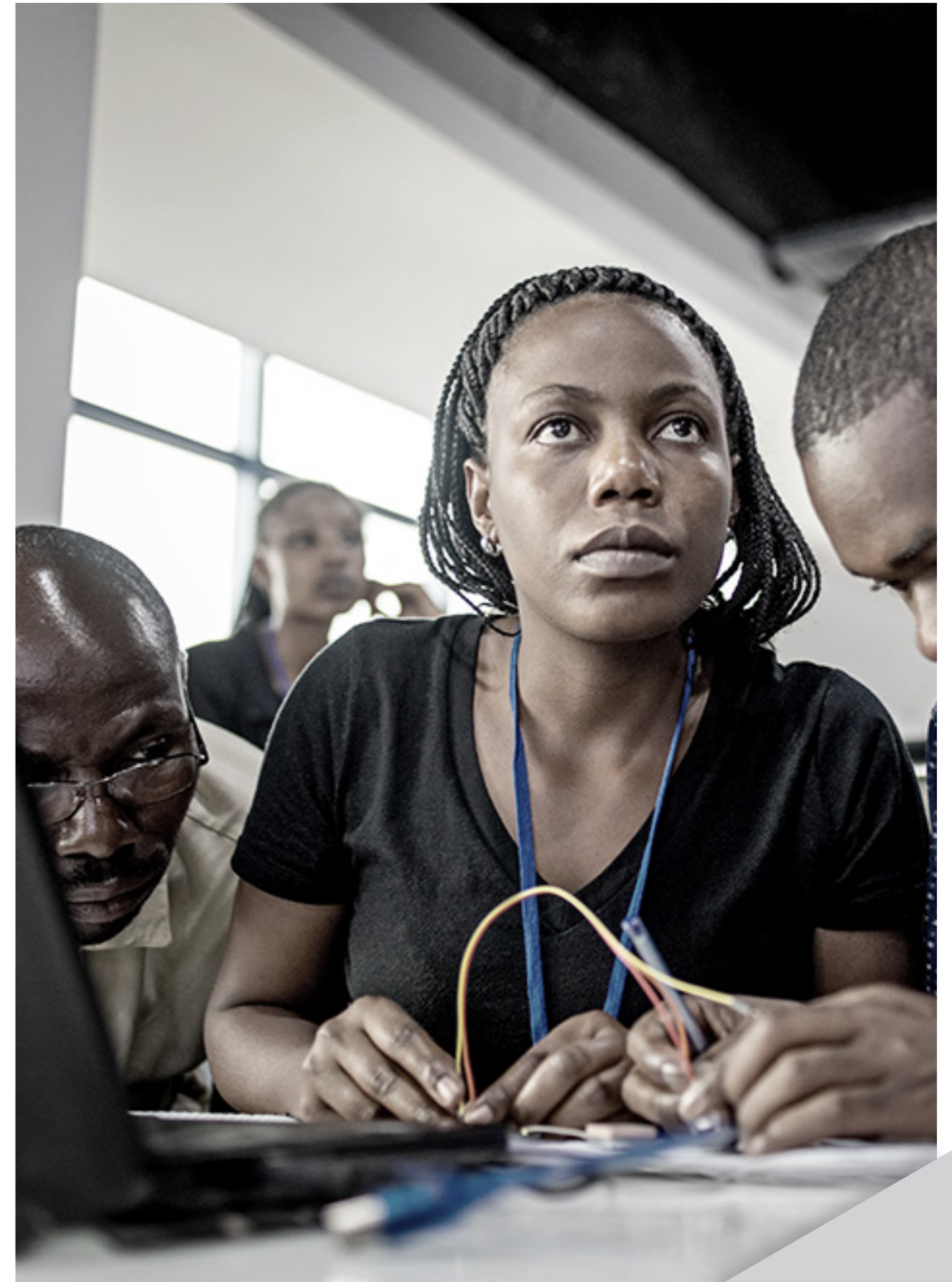
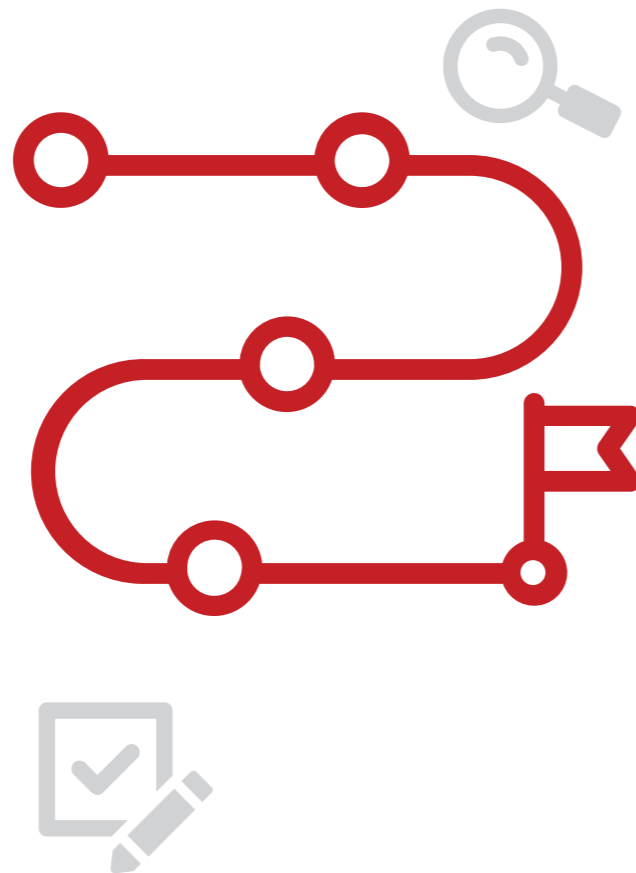


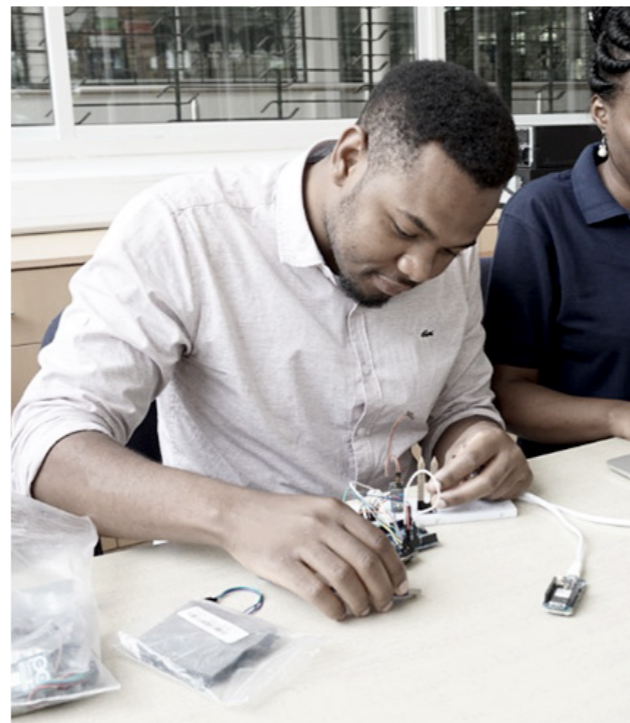
Photo: DSSD / Mali Lazell

# LESSONS LEARNED

## 5 Capacity-building

### 5A Community-based Training

Even in the area of capacity building, it was found that thorough M&E is an important part of adapting training to the needs of the participants. In this respect, it has already been found that 4-day training courses in the field of IoT or machine learning are too short for participants to really dive deeply into the topics. In addition, the knowledge level of the participants should be assessed in advance so that **homogeneous learning groups can be created**, and the content can be adapted to the participants' level of advancement. More hands-on examples that relate to the local context or real-life should be given rather than focusing on theory.



***If possible, a pre-assessment with the instructors of the training content should be carried out in advance to ensure that the instructors do not teach either too much or too little content and use suitable methods.***

Experience has shown that it is advisable for instructors to prepare and bring their own materials instead of requesting it from the project. Otherwise, there might be a risk of procuring too much material that will remain unused.

In addition, even free training can still be a financial burden due to transport costs for participants from rural areas traveling to Kigali. Whenever suitable, **transport allowances** were given to participants in order to support them.

Furthermore, the collaboration with other GIZ projects such as SI Jobs and Fair Forward can be rated as a success in regard to not only sharing costs but also reaching a larger audience through combined networks.

## Capacity-building 5

### 5B Partner Coaching

***A prior needs assessment is important for the successful implementation of partner coaching.***

The goal should be to achieve the best possible impact. Again, training should have a practical focus and provide examples from the local context. On the job training provides a suitable format for that. On the other hand, it often helps to **take participants out of their regular environment** and organize training outside of Kigali in a different venue to avoid distractions by routine activities.

At the end of the coaching sessions, a **follow up** is recommended to measure the success to measure the success of the training and draw conclusions for future training. In addition, qualification certificates should be handed out to the participants at the end of the training. Topics covered in the current project phase focused mainly on **design, programming and business development**. Topics that could be addressed in the next phase are **emerging technology topics, but also data protection and security**. Moreover, on the job training could be used more extensively in the future.



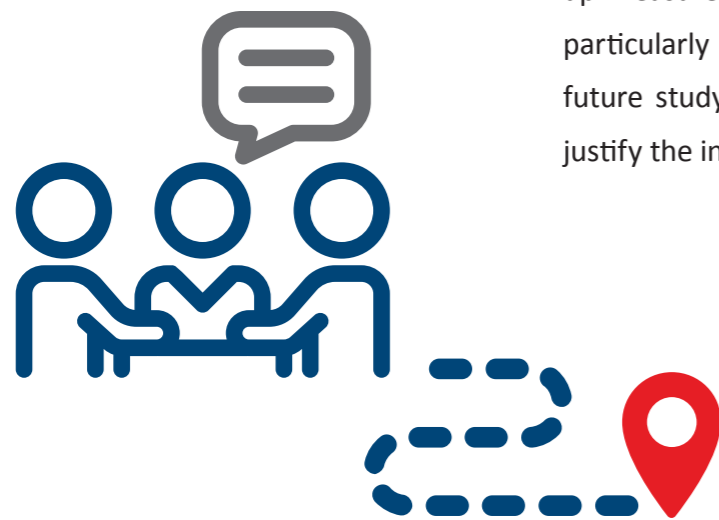
# LESSONS LEARNED

## 5 Capacity-building

### 5C Study Tours

Clearly, targeted **study trips to innovative countries with a strong ICT focus can have a high impact on the participants**. Therefore, it is particularly important to select the right participants who are highly motivated and can benefit from the learned content in their daily work.

The idea of enabling not only **political partners to take part in these trips, but also start-ups and members from the private sector**, has also been given consideration. Since study trips involve a high financial investment for a small number of people and thus limiting the numerical impact, a thorough evaluation should be made and follow up measures put in place after the trip. This is particularly important in order to determine future study trips according to demand and to justify the investment.



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