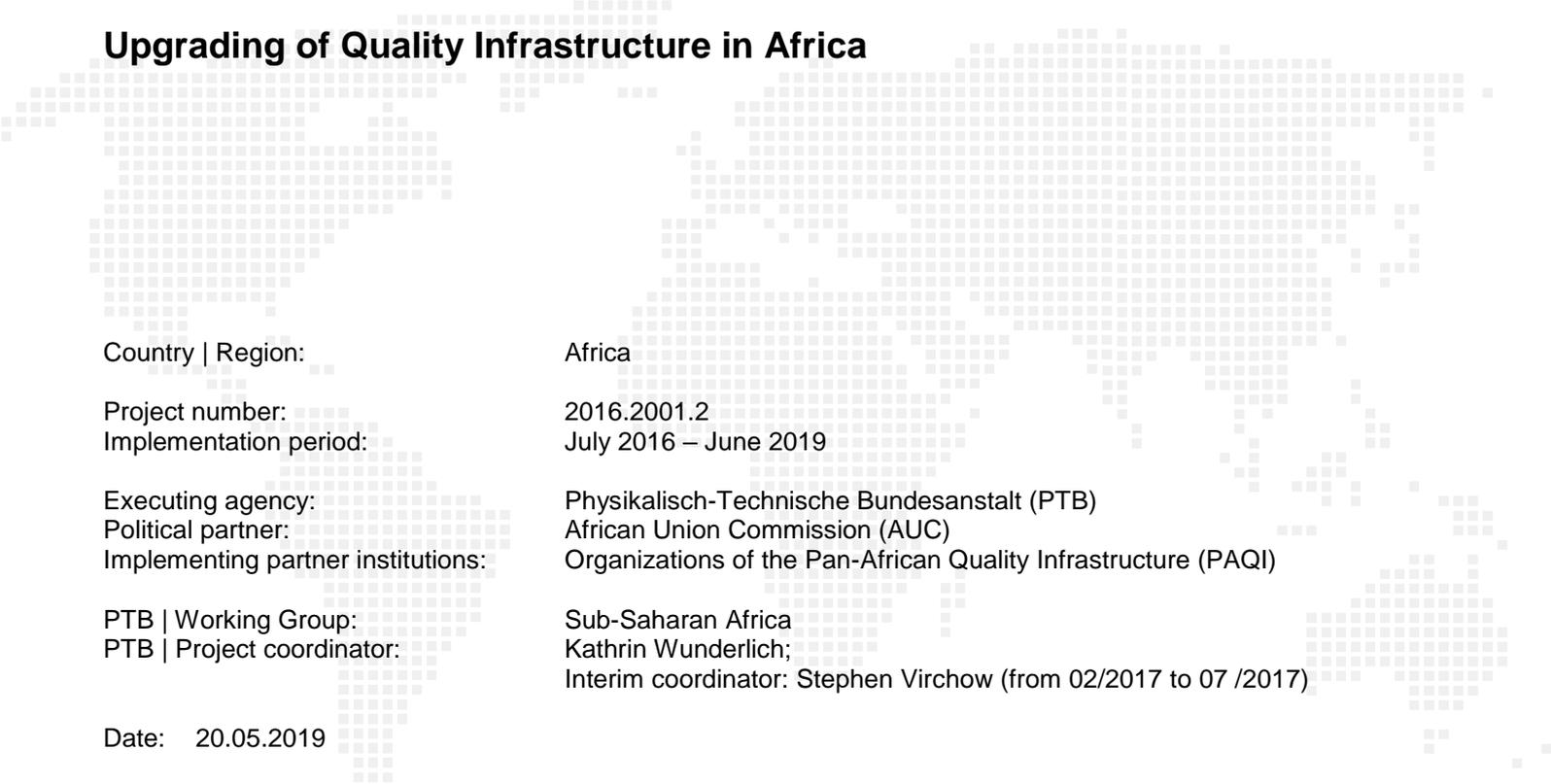


EXTERNAL EVALUATION

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Upgrading of Quality Infrastructure in Africa



Country | Region: Africa

Project number: 2016.2001.2
Implementation period: July 2016 – June 2019

Executing agency: Physikalisch-Technische Bundesanstalt (PTB)
Political partner: African Union Commission (AUC)
Implementing partner institutions: Organizations of the Pan-African Quality Infrastructure (PAQI)

PTB | Working Group: Sub-Saharan Africa
PTB | Project coordinator: Kathrin Wunderlich;
Interim coordinator: Stephen Virchow (from 02/2017 to 07 /2017)

Date: 20.05.2019

This evaluation is an independent assessment. Its contents reflect the assessor's opinion which is not necessarily equivalent to PTB's view.

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List of abbreviations

AfCFTA	African Continental Free Trade Agreement
AFRAC	African Accreditation Cooperation
AFRIMETS	Intra-Africa Metrology System
AFSEC	African Electrotechnical Standardization Commission
AIDA	Action Plan for Accelerated Industrial Development of Africa
AMOT	African Union Ministers of Trade
ARSO	African Organization for Standardization
AU	African Union
AUC	African Union Commission
AUC DREA	African Union Commission, Department of Rural Economy and Agriculture
AUC DTI	African Union Commission, Department of Trade and Industry
BIAT	Boosting Intra African Trade
BMZ	German Federal Ministry for Economic Cooperation and Development
CAMOT	Conference of African Ministers of Trade
CD	Capacity Development
CEMAC	Communauté Economique et Monétaire de l'Afrique Centrale
CEN-SAD	Community of Sahel-Saharan States
CFTA-NF	CFTA Negotiation Forum
COMESA	Common Market for Eastern and Southern Africa
DREA	AUC Department of Rural Economy and Agriculture
DTI	AUC Department of Trade and Industry
EAC	East African Community
ECOWAS	Economic Community of West African States
EU	European Union
FTA	Free Trade Agreement
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ILAC	International Laboratory Accreditation Cooperation
iSTE	Intermittent Short-Term Expert
LTE	Long-term Expert
MRA	Mutual Recognition Arrangement
NMI	National Metrology Institute
NSB	National Standards Bureau
OIML	Organisation Internationale de Métrologie Légale
PAQI	Pan-African Quality Infrastructure
PAQI JC	PAQI Joint Committee
PK	Projektkoordinator/-in (Project Coordinator)
PRC	Permanent Representative Committee
PTB	<i>Physikalisch-Technische Bundesanstalt</i> , National Metrology Institute Germany
QI	Quality Infrastructure
REC	Regional Economic Community
SADC	Southern African Development Community
SPS	Sanitary and Phytosanitary Measures
TC	Technical Committee
TBT	Technical Barriers to Trade
UNECA	United Nations Economic Commission for Africa
UNIDO	United Nations Industrial Development Organisation
WTO	World Trade Organization
WTO TFA	WTO Trade Facilitation Agreement

1. Brief Summary

The following table presents the quantitative assessment in accordance with OECD-DAC. For more details about the qualitative aspects justifying the rating of the respective OECD-DAC criteria see the respective chapters of this report.

Criteria	Justification
Relevance Mark: 1,3 (very good)	<p>The project is very relevant for the African Union Commission (AUC), the African Continental Free Trade Agreement (AfCFTA) process and the Pan-African Quality infrastructure (PAQI) organisational development (e. g. professionalization of their services). It is of high relevance for strengthening a common sense of importance for quality infrastructure (QI) issues. It supports developing capacities at continental level. The project is in line with current expectations, state-of-the-art and framework conditions within the African Union (AU) context and current trends in development policy dialogue. Its crucial foundation is a long-standing relationship of PTB with its stakeholders and continuous support over many years. Through several projects carried out by PTB in Africa since 1998, a long-standing cooperation between PTB and quality infrastructure institutions has been a solid basis for intensifying cooperation with the AUC and PAQI institutions. All involved partners acknowledged the support of international state-of-the art QI expertise and making best use of lessons learnt from other regional economic communities (RECs).</p>
Effective-ness Mark: 1,5 (very good)	<p>The three outcome indicators are achieved; the OECD-DAC criterion "Effectiveness" is rated with "very good". The project has made remarkable progress in achieving its objective to contribute to developing the Annexes for technical barriers to trade (TBT) and sanitary and phytosanitary measures (SPS) of the AfCFTA. It supported effectively strengthening AUC departments and PAQI institutions in accordance with international good practices. The project achievements are beyond expectations given the highly complex political context of African integration and supporting the AfCFTA (signing of the AfCFTA in 2018). The work of the long-term expert at AUC contributed greatly to the effectiveness of the project.</p>
Impact Mark:1,5 (very good)	<p>Envisaged higher-order impacts are plausible to be achieved: TBT/SPS Annexes are key foundations (prerequisites) for creating better framework conditions for: a) better quality products on the market and b) trade (intra-regional; globally) and c) creating a single African market. But at this point in time it is difficult to assess these overarching development effects as there are no close linkages with the industry side to assess any changes made. Moreover, one has to take into account that these are long-term impacts. With the subsequent operationalisation of the AfCFTA the Annexes will lead of course to create necessary underpinning structures of national and regional QI structures. Hence, it is reasonable to assume that the Annexes will be instrumental in overcoming technical barriers to trade and increase in a middle to long-term perspective African intra-regional and global trade. Overall, the project is attaining higher-ranking objectives with respect to development policy and supports necessary institutional changes in the field of QI.</p>
Efficiency Mark: 1,7 (very good)	<p>Project management has been able to match challenges that regional projects generally imply, that is avoiding dilution of efforts and fostering the linkages between its interventions and its counterparts. The project has used its resources adequately for subject-related project activities and for the two main Outputs – the support for the AfCFTA process and institutional strengthening of PAQI organisations. A key success factor for efficient implementation has been to have a long-term expert on the ground close to the main partner AUC. This has been crucial for working with an intergovernmental body as the AUC. Good communication and coordination mechanisms with other German development projects as well as with other PTB projects have been established which contributed to efficient resource allocation. That said and based on discussions with project staff and partners, the evaluation concludes that resources are adequately distributed among the intervention areas (Outputs).</p>
Sustain-ability Mark: 2 (good)	<p>The project has contributed to enabling structures and strengthened cooperation links between relevant continental policy makers, PAQI network and its four pillar organisations. It can plausibly be assumed that having achieved this level of solution-oriented approach, a drop back to mere consultation and dialogue without concrete problem solving is not very likely to happen as stakeholders appreciate the scope of action, they have developed for collaborative action to improve QI in Africa.</p>

Concerning the Capacity WORKS (CW) success factors the evaluation jointly prioritized with the project team on three of the five CW factors as the most relevant ones for the purpose of this evaluation. The table provides the assessment in accordance with Capacity WORKS Success Factors.

<p>Strategy Level of achievement: 83 %</p>	<p><i>Justification</i> The suitability of the strategy to match core needs of the stakeholders and partners is high. The design of the project is assessed as mostly adapted to the chosen objective. The strategy is coherent and comprehensible and has a long-term vision for designing QI in Africa. Future strategic considerations should also include even more the interdependence of the four pillars and private sector interest.</p>
<p>Cooperation Level of achievement: 86 %</p>	<p><i>Justification</i> The project is working with the right stakeholders at the Pan-African and regional level. The project has two powerful key stakeholders at the continental level - on the one hand the (political partner) AUC and its two departments Department of Trade and Industry (DTI) and Department of Rural Economy and Agriculture (DREA), on the other hand the implementing partner - the network PAQI with its four pillar organisations. AUC and PAQI have an interlinked relationship, e. g. the PAQI chairperson is frequently invited to report at AUC ministerial meetings concerning trade and industry and vice versa. Roles and responsibilities have been identified and clarified during the start of the project (e.g. like locating the office of the long-term expert inside DTI) and adapted to changes emerging during the implementation. At the regional level, the third group of relevant public stakeholders are the eight RECs, but with individually differing importance and influence on the project. During the project term, close relationships were established with COMESA, EAC, ECCAS, ECOWAS and SADC based on their participation in the PAQI Forum and their advanced QI capacities.</p>
<p>Learning and innovation Level of achievement: 53 %</p>	<p><i>Justification</i> The project has actively supported the adaptation of activities based on priorities of the partner institutions and showed high responsiveness to changes of their specific framework conditions. Concrete learning objectives have not been defined by the project. Results of the implemented or finalised activities were documented in reports and shared with the project team. A systematic feedback mechanism of the quality and the effects of capacity development measures is not in place yet (e. g. systematic follow-up of knowledge sharing after international participations of PAQI representatives, utilization of knowledge within PAQI pillar organisation, effectiveness of expert/technical committees, etc.). The development of the partner's project monitoring and evaluation capabilities have been supported by establishing the PAQI Joint Committee (JC) as the steering committee of the project. The PAQI JC is chaired by AUC DTI. The implementing partners (representatives of the four PAQI pillars) are members and the project coordinator and intermittent short-term experts (iSTEs) were observers. Based on this high ownership, learning processes in the area of steering, decision making, monitoring and evaluation were fostered and increased. Within the institutionalisation process of the PAQI JC, the participants realised that stakeholders representing the RECs were missing due to their relevance in QI at the regional level. Therefore, the PAQI Forum was established. This has been a successful learning process for all project stakeholders. And lastly, the PAQI "Stocktaking" was a self-assessment of the AU Member States (MS) realised by the individual four PAQI pillars strengthening their monitoring capacities in the process of collecting data, coordination, planning and time scheduling. Additionally, all PAQI pillars added their specific knowledge into the AfCFTA Annexes on TBT and SPS.</p>

2. Introduction

The purpose of this evaluation is to make a thorough assessment of the project **“Upgrading of Quality Infrastructure in Africa” (PN 2016.2001.2)** achievements. The evaluation team reviewed the project's performance covering the full range of activities over the implementation period 07/2016 up to the time of evaluation in January 2019 respectively the likeliness of whether the project will achieve its intended objectives until 06/2019 with a budget of 3.0 Mio. EUR. According to the TOR specific questions have been addressed regarding changes in framework conditions (analyses of QI specific problems and opportunities) and whether there is a need in adjusting the methodological approach.

PTB implements the project on behalf of the German Federal Ministry for Economic Cooperation and Development (*Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, in short: BMZ*). Political project partner is the African Union Commission (AUC) based in Addis Ababa (Ethiopia). Main implementation partners are on the one hand the four pillar organisations of the Pan-African Quality Infrastructure (PAQI) network. And on the other hand, the Department of Trade and Industry (DTI) of the AUC functions as a strategic coordinator for the preparation and negotiations of the African Continental Free Trade Area (AfCFTA).

The evaluation was conducted by an external consultant, Ms Renate Müller (international development consultant; economist) on behalf of PTB. A supplementary evaluator Ms Saida Bunk (PTB Project Coordinator, International Cooperation Middle East and North Africa) participated in the evaluation for corporate learning purposes. The evaluation method encompassed a thorough desk study of relevant project documents and a field mission to consult with main stakeholders and partners of the project. During the field mission to Addis Ababa from 21st until 26th of January 2019 the *PAQI Joint Committee Meeting (PAQI JC)* took place.

Moreover, at the same time as the evaluation mission took place the Project Coordinator Ms Kathrin Wunderlich (Projektkoordinator, in short: PK) and the international PTB short-term expert Mr Martin Kaiser (involved in project implementation on an intermittent assignment since 2002, in short: iSTE) appraised a follow-on project.

3. Framework conditions and strategic approach of the project

3.1 Framework conditions

The establishment of a continent-wide free trade area is one of the 12 flagship projects of the “Agenda 2063”, the continent's own development vision piloted by the African Union (AU). Another key element for success in this regard is adopting adequate accompanying measures, including the thorough implementation of the AU's broader *Action Plan for Boosting Intra-African Trade (BIAT)*. This plan is made up of seven priority clusters – trade policy, trade facilitation, productive capacity, trade-related infrastructure, trade finance, trade information, and factor market integration. The BIAT Action Plan provides the framework that AU MS can use to prioritise the policy reforms required to derive the full benefits of the AfCFTA. Another important accompanying programme is the *Accelerated Industrial Development for Africa (AIDA)* with its seven intervention areas: industrial policy, upgrading production and trade capacities; promotion of infrastructure and energy, human resources industrial innovation systems, financing and resource Mobilization; and sustainable development.

The 18th Ordinary Session of the Assembly of Heads of State and Government of the African Union, held in January 2012, adopted a decision to establish a continental Free Trade Area by an indicative date of 2017. The negotiation process began in mid-2015, a year before the project start in July 2016. An AfCFTA Unit was established at the AUC functioning as strategic coordinator for the preparation and negotiations of the AfCFTA. Due to the inclusion of all MS in the negotiation and the anticipation of far reaching economic and socio-economic consequences of the AfCFTA for Africa, the negotiation process has been highly political. The unexpected dynamics of the negotiation resulted in the subscription of the framework agreement of the AfCFTA by 44 AU MS already in March 2018 and reached 49 MS in July 2018. After the ratification at national level by 22 MS, the AfCFTA will enter into force and become operational in these MS. Up to the time of the evaluation in January 2019, 18 MS

have ratified the AfCFTA. The four more needed ratifications are prospected to be reached until the next AU Summit in summer 2019. Furthermore, the PAQI network and its four main QI institutions:

- i) *African Accreditation Cooperation (AFRAC)*,
- ii) *Intra-Africa Metrology System (AFRIMETS)*,
- iii) *African Electrotechnical Standardization Commission (AFSEC)*, and
- iv) *African Organisation for Standardisation (ARSO)*

have been able to play an active and constructive role in the negotiation process of the AfCFTA. Both the virtual PAQI network as well as the four pillar organisations have made efforts to improve their performance and to professionalize their services. Clear progress has been made to further formalize the relationship between PAQI and the AUC. Moreover, an important signal has been given by the *AU Ministers of Trade (AMOT)* by proclaiming the “2017 Year of Quality Infrastructure” - a milestone in awareness raising for quality infrastructure as well as successfully advocating for the AfCFTA negotiation process. In July 2017, the PAQI “*Stocktaking 2014*” peer review assessment of the status of accreditation, metrology and standardization in the individual African states, was updated. The project benefited by using the momentum to provide the requested technical expertise on TBT and SPS for the AfCFTA annexes together with PAQI and mobilizing resources for the AUC. The secretariat of AFSEC will be transferred to Kairo, which is in line with the perceived raising involvement and power of Egypt, as one of the five major contributors (besides Algeria, Nigeria, South Africa and Morocco) to the AUC budget. Egypt shows clear interest in relocating secretariats of African institutions to Kairo.

There are great expectations that the agreement will significantly boost intra-African trade and will help to put the continent’s economies on a path towards structural transformation and robust economic development. QI components are the backbone of manufacturing of quality and safe goods and thus, trade both regionally and globally. If successfully implemented (also including progress made in the area of QI), the AfCFTA will constitute the world’s largest free trade area in terms of membership, comprising the 55 MS of the AU. It will span a market with a total population exceeding one billion people and a combined gross domestic product of more than US\$3.4 trillion, according to the AU.

The AfCFTA and related protocols will enter into force 30 days after 22 countries have deposited their instruments of ratification. With the legal framework of the AfCFTA now agreed, AU MS will need to tackle the next steps for making the free trade area a reality on the ground. Plans for operationalization of the AfCFTA foresee the establishment of an independent AfCFTA Secretariat in one of the MS. The location is not yet decided, but several MS have indicated interest (amongst Egypt, Eswatini, Ghana). For the supervision of SPS, an independent *Food Safety Authority* is planned by the *AUC Department of Rural Economy and Agriculture (DREA)*.

According to the *Transition and Implementation Work Programme*, which sets out a roadmap for the work ahead, the 11th Meeting of the *AfCFTA-Negotiation Forum (NF)* is intended to take place in early May 2019 – in parallel with technical working groups – and focus on the “*implementation and practical application*” of agreed modalities for the negotiations on both trade in goods and trade in services. AfCFTA members will then participate in a signalling conference on trade in services, as well as a “*Workshop on the Schedule of Tariff Concessions and Schedule of Specific Commitments on Trade in Services*” during the 12th Meeting of the AfCFTA-NF in late May 2019.

Since the subscription of the AfCFTA by 49 MS and ongoing ratification, the EU has increased its interest in cooperating with the AUC, amongst other in the area of SPS. During the AfCFTA negotiation process, they financed seven of the ten advisors within the AfCFTA secretariat, BMZ financed the other three. The World Bank will start cooperating with the AUC in the area of trade beginning of 2019, in general DFID will be responsible for donor coordination concerning trade with the beginning of March 2019.

In December 2018, BMZ agreed on a financial budget increase for the PTB project as well as on the expansion of the project term up to August 2019, including a change of the module target and output indicators.

3.2 Strategic approach of the project

The political partner of the project is the AUC. Main implementation partners are the PAQI and its four pillar organisations. AUC DTI functions as a strategic coordinator for the preparation and negotiations of the AfCFTA. In this process, AfCFTA is not seen as an isolated goal, but as an instrument to bring about the integration of the entire continent. To this end DTI needed to develop sufficient know-how and capacities within a relatively short period of time to be able to steer the negotiation processes for the areas TBT/SPS measures. But also, to assess TBT/SPS measures from a subject-related point of view and to advise the AfCFTA-NF with the respective expertise. Hence, the project has addressed these capacity development needs of partners. The project objective has been defined as follows:

Economic integration in Africa through reduction of technical barriers to trade and unjustified sanitary and phytosanitary measures is supported.

Assessing whether the project has achieved its objective has been measured against the defined objective indicators. There are three project objective indicators set to measure the objective (outcome level):

- (1) The draft technical barriers to trade (TBT) Annex is submitted to the *African Union Minister of Trade (AMOT)*.
- (2) The draft sanitary - and phytosanitary measures (SPS) Annex is coordinated with AfCFTA-*Negotiation Forum (AfCFTA-NF)*.
- (3) PAQI Institutions demonstrate their performance through active participation in relevant meetings of the AUC and international professional associations.

To achieve these objectives the project has designed three output areas:

- Output A: Quality infrastructure embedded as a cross-cutting theme within AUC and AfCFTA negotiation process is supported.
- Output B: African experience with free-trade agreement negotiations utilized in shaping the AfCFTA and
- Output C: Institutional and technical capabilities to implement WTO requirements (TBT/SPS) enhanced.

The project provides strategic and policy advice to the AUC to upgrade quality infrastructure (QI) in Africa. It works closely with the AUC DTI. Furthermore, it provides technical expertise (subject-related; facilitation and coordination tasks) for AfCFTA negotiations in the area of TBT and SPS. The support provided to the AfCFTA will also contribute to the overall objective of the AU strategies BIAT and AIDA. Moreover, it promotes creating awareness of quality infrastructure as a cross-cutting theme within the AUC and AU MS. The project has drawn on valuable experience gained in free trade negotiations at regional economic community level to shape an efficient negotiation process for the AfCFTA.

At the level of the PAQI network, focus is on improving processes, increasing efficiency and expertise in network management. The project also facilitates PAQI's four operational pillars AFRAC, AFRIMETS, AFSEC and ARSO to improve their services and to participate actively in relevant meetings of international professional associations (e. g. *International Laboratory Accreditation Cooperation, ILAC*). The understanding of the organisational set-up and implications of QI has been increasing among African states, regional economic communities (RECs) and the sub-regional networks of quality infrastructure associations. Special technical consultancy has been provided on harmonization, benchmarking (comparisons and proficiency testing) and technology transfer.

The implementation approach is based on different concepts of capacity development and policy advice. The approach is focused both at the AUC level as well as the continental pillars of standardization, industrial/legal metrology and accreditation. An international long-term expert (LTE) renders advice to the AUC. Furthermore, systemic interaction of the QI system within Africa is supported.

Critical assessment of the project impact logic and indicators

The concept of the project is closely related to the AfCFTA process and capacity development needs of QI institutions operating at the continental and sub-regional level and in the MS. Planning of the project has been done based on solid results of an appraisal mission conducted in 2015 (situational analysis of QI; in-depth institutional analyses of the relevant stakeholder and partners at the AUC and relevant internal departments, e.g. AfCFTA Unit, DTI, etc.). Lessons learned from previous projects in the field of quality infrastructure have been incorporated into the project design.

The project is operating in a highly political environment working with the AUC being the key organ playing a central role in the day-to-day management of the AU. Among others, it represents the Union and defends its interests; elaborates draft common positions of the Union; prepares strategic plans and studies for the consideration of the Executive Council; elaborates, promotes, coordinates and harmonizes the programmes and policies of the Union with those of the RECs; ensures the mainstreaming of gender in all programmes and activities of the Union¹. The project is working with the AUC DTI being responsible to support development programmes in the area of industry, trade and mining. Hence, DTI is the relevant department for quality infrastructure on continental level.

The underlying hypothesis of the project are plausible:

- i. TBT and SPS Annexes are prerequisites for improving quality infrastructure at continental level (Output 1 and 2).
- ii. Credibility of the two AfCFTA Annexes increases if the development of these Annexes is done in a concerted effort with relevant QI institutions (PAQI and its 4 pillars). This also includes a systematic and structured interplay between relevant AUC Departments (DTI, DREA, AfCFTA Unit), QI responsible contact persons at REC level, and PAQI institutions.
- iii. The inclusion of QI as a cross cutting feature within AUC structures and throughout the AU MS increases understanding of the organisational set-up and implications of QI among MS, RECs and sub-regional networks of QI associations (Output A).
- iv. Institutional strengthening of the PAQI network and its four underpinning QI organisations (ARSO, AFRIMETS, AFRAC, AFSEC) is essential for developing better QI services (Output C).

The defined project objective (outcome), reading as: *“Economic integration in Africa through reduction of technical barriers to trade and unjustified sanitary and phytosanitary measures is supported”* describes more the overarching impact of the project than the positive changes to be achieved within the current project term. There are also some weaknesses regarding the formulation as it contains a means to an end relation: *“through reduction of technical barriers”* (means) positive changes are expected *“Economic integration”* (end). Moreover, the means does describe how the project intends to achieve its objective (methodological approach) and thus, not a positive change. A formulation reading as: *“Institutional and regulative framework conditions for Pan-African QI have been improved”* would be more mirroring outcome and structural changes the project has intended to bring about. Regarding Output level the following assessments on the quality and appropriateness of the project’s Outputs and indicators are made:

Output A *“Quality infrastructure embedded as a cross-cutting theme within AUC and AfCFTA negotiation process is supported”*² describes a better integration of QI issues within the AUC structures and the negotiation process. Output A demonstrates a positive trend and its indicators are expected to achieve planned values by the end of the project. The combination of providing international technical expertise and making best use of existing lessons learned from African RECs has been an asset for implementation and it has been strongly aligned to partner needs. Output B reading *“African Free Trade*

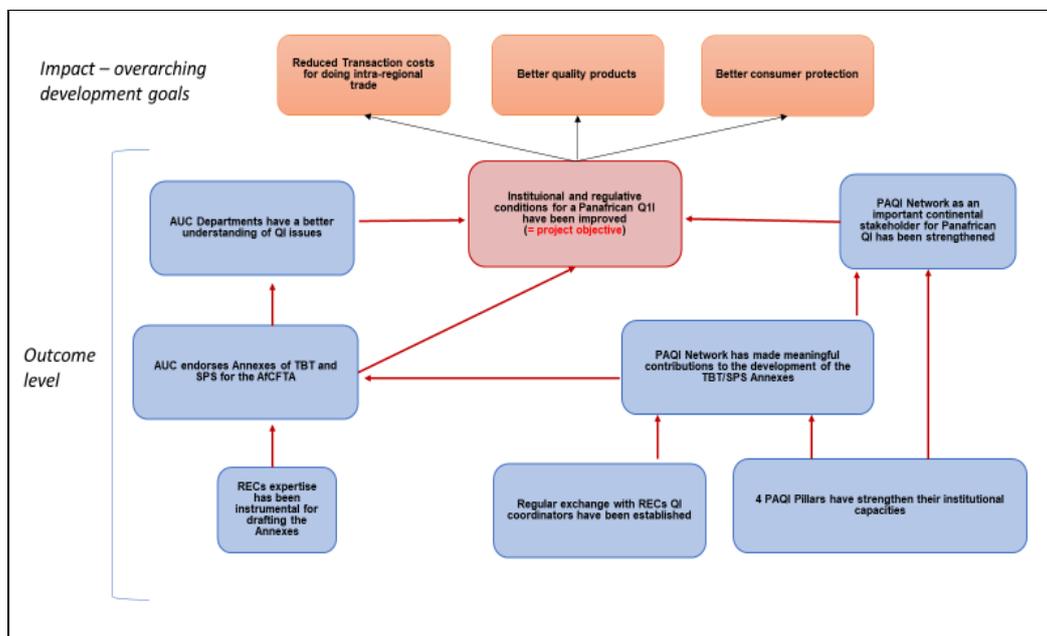
¹ <http://www.au.int/en/about/nutshell>

² The English translation of Output A differs from the German original: *QI ist als Querschnittsthema bei der AUC verankert und in den CFTA Verhandlungsprozess eingebunden*. English translation: *QI embedded as a cross cutting theme within AUC and AfCFTA negotiation process in TBT/SPS supported*. The report uses the version without the add on *“in TBT/SPS”*.

Agreement (FTA) experience utilized in shaping AfCFTA” indicates how to draw from best practice experience from sub-regional level. The two Output B indicators, however, do not fully measure whether the experience and knowledge are used for the AfCFTA negotiation process. Both indicators are measuring the level of availability of background and best practice documents (activities). The underlying assumptions to involve the experience and responsibilities of the RECs, however, has been an important element for the successful drafting of both Annexes. The level of ambition of Output C *“Institutional and technical capabilities... enhanced”* is high given the limited budget and time, as the project intends to achieve institutional strengthening of four regional QI organisations and the umbrella network PAQI. The intervention approach complies with the project objective in so far as important preconditions are supported (reducing TBT/SPS) to boost regional economic integration in Africa. Concerning the AfCFTA negotiation process the project has had a clear target focusing on two important annexes.

The leverage of private sector stakeholder’s interest and priorities in improving QI in Africa has not had a prominent role in the overall methodological approach. Taking into account also end users from industry to increase understanding of QI benefits and services provided by the PAQI would support understanding of how relevant QI issues are for regional economic integration.

Output A and C are plausibly linked to the two action fields of the project being i) policy and technical advice to supporting drafting of the AfCFTA Annexes and ii) enhancing institutional structure and QI capacities of PAQI and its four pillars. A proposal for rephrasing and rearranging the Output B as important interface among stakeholders of AUC, RECs and PAQI to build alliances and strengthen joint action for shaping the continental QI has been discussed with the project team for further processing. The different intervention areas (Output A, C) to achieve the objective are appropriate and viable. An analysis of the quality of the indicator according to SMART criteria³ is presented in chapter 5.1.2. The following chart illustrates the slightly modified conceptual approach of the project for evaluation purposes:



³ SMART: Specific, measurable, achievable, reasonable, timebound.

4. Evaluation methodology

4.1 Evaluation design

Subject of this evaluation is the PTB International Cooperation project “*Upgrading of Quality Infrastructure in Africa*”. Conceptual basis is its original project proposal submitted to the BMZ in 2016. The evaluation mission in Ethiopia took place from 21st until 26th of January 2019 as an interim evaluation (about 6 months before the original current term comes to an end in June 2019). At the end of 2018 the BMZ approved the amendment of the project to focus on the subsequent next steps of operationalization of the TBT/SPS annexes. The change of the project proposal encompasses an increase of budget of 0.5 Mio. EUR, an extension of the project duration until 08/2019 (two more months) and adjusted objective indicators (1) and (2).

For evaluation purposes relevant documents covering project planning and implementation were examined (e. g. among others operational planning/work plans, progress reports, monitoring data). Based on these findings the evaluation team collected data during face-to-face consultations with key stakeholders from the AUC and the PAQI network as well as representatives from other development partners (see also Annex 1 for details about the list of interviewed stakeholders and partners). The evaluation should serve as a joint strategic reflection on the course and intermediate results of the project. It intends to enrich further planning and implementation (based on the assessment of achieved outputs and outcomes) and a substantiated forecast of planned outputs.

Project interventions have been assessed on standardised evaluation criteria of PTB to ensure comparability of evaluations conducted. They are based on the five OECD Development Assistance Committee (OECD DAC) criteria⁴:

- a. Relevance: Is the project doing the right thing?
- b. Effectiveness: Is the project achieving its objectives?
- c. Impact: In which way is the project contributing to overarching development goals?
- d. Efficiency: Are the objectives achieved cost-effective?
- e. Sustainability: Are the positive results durable?

Moreover, the criteria of coherence, complementarity and coordination and in addition to these evaluation criteria, the contributions to Agenda 2030 and its principles (universality, integrative approach, *Leave No One Behind*, multi-stakeholder partnerships) have been applied. PTB evaluations are in line with the standards set by the *German Society for Evaluation (DEGEVAL Deutsche Gesellschaft für Evaluierung)* focusing on four basic attributes⁵: utility, feasibility, propriety and accuracy.

According to the TOR specific questions have been addressed regarding changes in framework conditions (analyses of QI specific problems and opportunities) and whether there is a need in adjusting the methodological approach. Regarding the management model of Capacity WORKS (CW) of the German technical cooperation it has been agreed that most relevant factors for analysis to determine causes and factors for observed results and change processes are selected for in-depth analysis. With project staff and the PTB department 9.3 that oversees evaluations, the following CW factors have been selected during the start session for the evaluation in November 2018: a) strategy, b) cooperation and c) learning and innovation.

Organisation for Economic Cooperation and Development. See also BMZ document “*Criteria for Evaluating the German Bilateral Development Assistance*”: <https://www.bmz.de/en/ministry/evaluation/Evaluation/Principles/index.html>

⁵ For detailed information see www.degeval.de/degeval-standards.

4.2 Data sources; data quality

For the evaluation two types of sources of data were examined:

- Firstly, data from the monitoring system and a wide variety of relevant documents covering project design (project proposal), operational planning and work plans, reports (annual progress reports, mission reports of the LTE seconded to the AUC and the short-term experts), results of the feedback questionnaire of the trainings – among others.
- Secondly, telephone/skype interviews with the project team (PK, iSTE) and face-to-face consultations with a wide range of stakeholders and partners from the AUC and PAQI, using “semi-structured interviews” with a key set of questions in a conversational format. The questions asked aimed to provide evidence regarding the evaluation criteria. Triangulation of results, i. e. comparing information from different sources, such as documentation and interviews, or interviews on the same subject with different stakeholders, were used to corroborate or check the reliability of evidence. In total 20 interviews were conducted (for more information about guiding questions see Annex 2). The skype and/or telephone interviews with the PK and the iSTE were conducted already in December 2018. Moreover, a focus group discussion took place at the end of the PAQI JC meeting on the 24th of January 2019.

Quality of the monitoring system and provision of financial data

The monitoring system is organised in a systematic and regular manner. Most of the data regarding progress made measured against objective and output indicator has been up to date. The annual “Calendar” gives a good overview of annual activities linked to related documents. In addition, a table has been provided to align activities and resources to outputs. Monitoring of the various activities and measures implemented is based on the reports provided by participants. The reports are structured in a comprehensive and informative way to learn about achievements and effects of the activities and necessary follow-up measures.

Reflections at project steering and coordination level about support provided is done as part of the PAQI JC meeting (continental network) as well as for each of the four organisations on a bilateral basis. PK and both iSTE are involved in this regular review mechanism about project implementation.

To sum up, the quality of the monitoring data regarding results is good regarding information on outcome and output level. There is a comprehensive monitoring of activities/outputs that provides even more details about partners, progress made, status and development of the project. Progress reports by PK and the seconded LTE presented meaningful information. Most of the interviews went according to schedule. In total 20 interviews were conducted. Both interviews and the focus group discussion provided valuable insights about project implementation, progress made and about the status of the AfCFTA process. The interview partners expressed their opinions and interest in a very open and constructive manner. Most of the interview partners had in principle a common understanding about the objective of the project for shaping QI for Africa.

5. Evaluation results

5.1 Status of the transformation process (OECD/DAC)

5.1.1 Relevance

The project is closely aligned to the overall AUC goal of fostering continental economic integration in Africa. It fits well into the broad relevant strategic reference framework of the AfCFTA. The policy and technical expertise for the Annexes TBT and SPS of the AfCFTA has come at the right time with the right priorities. Due to the *World Trade Organization* (WTO) membership of many African countries (42

out of 55 AU MS) there are special obligations under TBT and SPS. The concept of the project is closely aligned to the AfCFTA which forms an integral part of continental initiatives. The AfCFTA, along with the free movement of persons and the single air transport market, is a flagship component of the broader “Agenda 2063” program – the African Union’s framework for structural transformation and development. The African Union’s initiatives to boost intra-African trade (BIAT), the Programmes for Infrastructure Development for Africa (PIDA) and the industrialisation strategy (AIDA) are essential to realise the benefits of the AfCFTA. Thus, in the long run the project input will contribute to the core problem of overcoming technical barriers to regional and international trade.

With its approach to provide tailor-made support (demand driven by each PAQI institutions) based on the strategic direction of ARSO, AFRIMETS, AFRAC and AFSEC it aligns also close to priorities of these institutions. A better integrated PAQI contributes to the *Abuja Treaty* 1991 (Chapter XI, Article 67). Regarding international QI the project helps Pan-African organisations to actively participate in global QI fora and discussions. The project is in line with the cross-sectoral BMZ strategy, *Aid for Trade* (2017) and the BMZ priorities for regional economic integration expressed in the strategy document “*A new partnership for development, peace and a better future. A Marshall Plan with Africa*” (2017). It addresses the priorities of the BMZ with the AUC on sustainable and inclusive growth, the achievement of the *Sustainable Development Goals* (SDG⁶) and the AUC “Agenda 2063”. Furthermore, the project is embedded in PTBs long-term strategy “*Quality for Africa*” (2018).

Overall, the project is very relevant for the AUC, the AfCFTA process and the PAQI organisational development (e. g. professionalization of their services). It is of high relevance for strengthening a common sense of importance for QI issues. It supports developing capacities at continental level. The project is in line with current expectations, state-of-the-art and framework conditions within the AU context and current trends in development policy dialogue. Its crucial foundation is a long-standing relationship of PTB with its stakeholders and continuous support over many years. Through several projects carried out by PTB in Africa since 1998, a long-standing cooperation between PTB and quality infrastructure institutions has been a solid basis for intensifying cooperation with the AUC and PAQI institutions. All involved stakeholders and partners acknowledged the support of international state-of-the art QI expertise and making best use of lessons learnt from other RECs (rating: very good).

Criterion	Assessment aspect	Assessment ⁷
Relevance	Solving the target group's core problem	2
	Agreement of the objective with strategies of the partner country	1
	Agreement of the objective with BMZ strategies	1
	Topicality of the fundamental orientation and concept with respect to development policy	1
Global assessment of the relevance		1,3 (very good)

⁶ SDG 1: Overcoming Poverty; SDG 8: Decent work and economic growth; SDG 9: Industrial innovation and infrastructure; SDG 12: Responsible production system.

⁷ Assessment is done for each DAC criterion according to the GIZ “*Handreichung für die Projektfortschrittskontrolle*” (2012, see page 70 assessment grid). The following six-point scale has been applied for the individual evaluation criteria (and their assessment aspects), whereby 1 = very good rating; 2 = good rating, no significant defects; 3 = satisfactory rating; positive results predominate;

⁶ 6 = the project/programme is useless, or the situation has deteriorated on balance. Overall rating is calculated based on the average score of each OECD DAC criteria and an equal weighing of the five DAC criteria. An overall rating of 1-3 shows that a project was successful, a rating of 4-6 shows it was unsuccessful. However, a project can only be rated as “successful” if the criterion “Effectiveness”, “Impact” and “Sustainability” are rated at least “satisfactory”.

5.1.2 Effectiveness

The criteria effectiveness assesses to which extent the project has achieved its objective measured against the objective indicators.

Project indicators (outcome and output level) are defined in such a way that they guide implementation. Indicators are specific and measurable; baseline and target values of the indicators have been defined. result matrix comprises of three outcome and ten outputs indicators. The indicators defined have by and large measurable and realistic levels of achievements. Activities related to output indicator C1 “*African Quality Policy Guide*” and C5 “*Technical regulation guide*” have not been continued because another development partner, the United Nations Industrial Development Organisation (UNIDO) presented respective guidelines in 2017.

The outcome indicators are suitable for reporting to the commissioning party and out of the three outcome (objective) indicators two are appraised with “adequate indicator” (grade “A”). One indicator is assessed with “*slight objections*” (grade “B” for objective indicator 3). The formulation of Outcome indicator 3 “*PAQI institutions demonstrate their performance through active participation (e. g. presentations, inputs to discussions, etc.) in relevant meetings of the AUC and international professional associations*” it is not sufficiently specific. It is not clear what is meant by “active participation”. There are some examples mentioned in brackets but overall it is not fully clear what the project monitors and measures to prove that the indicator has been fulfilled. The target value should have not been defined as “*the number of events at AUC and/or /international associations*”. A better understanding and appropriateness of the target value could have been reached by defining what “active participation demonstrated” means. For example, “active participation” could have been operationalised as following: a) number of presentations given, b) number of working groups lead, etc. Such specification of the indicator could have been made either in the formulation of the indicator or in the “sources of verification”. Accordingly, the evaluation has tried to gather information in this understanding about “active participation”. Moreover, the related output C 4 indicator “*Number of AFRAC members*” could have functioned in a general formulation (e.g. institutional capacities of AFRAC are strengthened) as an additional outcome indicator to better mirror the substantial work the project is supporting in institutional strengthening of the four PAQI pillar organisations. The following table assesses the three objective (outcome) indicators:

Outcome indicator 1: The draft TBT Annex is submitted to the AMOT.	Degree of fulfilment (in %)	Appraisal (A-C) ⁸
	100 %	A
<p>Justification: The project supported the work of one of the seven <i>Technical Working Groups</i> (TWG) of the AfCFTA negotiations. The TWG „<i>Non-Tariff Barriers & Technical Barriers to Trade</i>” was responsible for drafting the TBT/SPS Annex (including NTB Annex). The repeated expert discussions among the TWG members have been conducted in a structured and result-oriented manner based on a first draft version. Moderation, facilitation and technical expertise provided has been closely aligned to the needs and requirements of the AUC AfCFTA Unit being in charge. The input consisted also of relevant background studies and analysis by PAQI and African <i>think tanks</i> (related output indicator B 2). For example, compiled reports by the <i>Trade Law Centre</i> (TRALAC) were utilised as major part of the situational analyses presentations which was shared in 2017 in Kigali TWG meeting and at the Nairobi meeting. For further use the reports have been consolidated into a PAQI branded report.</p> <p>Moreover, input included also presentations by all four PAQI representative at the Kigali meeting as well as the presentation on <i>Non-Tariff-Measures</i> (NTMs) by UNCTAD done at the request of the project. Moreover, the project drew on important lessons learned from RECs with free trade</p>		

⁸ Definition: Appraisal: A = adequate indicator; B = slight objections; C = poor indicator, to be revised if possible.

agreements and provided platforms to exchange on experiences made with experts from RECs (related output indicator B 1). The consultation and negotiation process were well structured and participatory. Stakeholder acknowledged the expertise provided. The draft TBT Annex has been submitted to AMOT. **Thus, the defined target of outcome indicator 1 has been fully achieved.** With the signing of the consolidated text of the AfCFTA Agreement by 44 out of the 55 AU MS at the Kigali Summit already in March 2018 the process reached a point that exceeded expectations of many stakeholders and observers of the AfCFTA negotiation process.

Outcome indicator 2: The draft SPS Annex is coordinated with AfCFTA-NF.	<i>Degree of fulfilment (in %)</i>	<i>Appraisal (A-C)</i>
	100 %	A

Justification:
 More or less the same process and procedure as described under outcome indicator 1 has been applied also for drafting the SPS Annex. However, the stakeholder landscape at continental as well as REC level is rather diverse with the different areas for standard setting (food safety, animal health and plant protection). Thus, more efforts had to be made for the consultation process by the AfCFTA Unit and the LTE at the AUC compared to the TBT Annex. The draft SPS has been successfully coordinated with AfCFTA-NF. Once again, with the signing of the AfCFTA Agreement (including its Annexes) the project contributed very successfully to this important step for trade liberalisation and consumer protection. **Thus, the defined target of outcome indicator 1 has been fully achieved.**

Concerning the related output A, “*QI embedded as a cross-cutting theme*” and output indicator A 1 “*Elements of QI reflected in documents of at least 4 AUC departments*” the project made substantial promotion and advocacy activities. Concerning embedding QI as cross-cutting issues at the AUC good progress has been made concerning awareness raising and sensitisation. Apart from DREA (closely involved for the SPS Annex) also interactions with a) the Department of “Social Affairs”, b) the Department of “Economic Affairs”, c) the Department on “HR, Science and Technology” and the Department “Energy & Infrastructure” were made. The following documents and outputs illustrate this collaboration: e. g. reference laboratory project proposal with DREA; establishment of AU Food Safety Authority proposal; standards for pharmaceutical products and medicinal products under ARSO, ARSO training for the AU departments on the standard for anti-bribery.

Outcome indicator 3: PAQI institutions demonstrate their performance through active participation (e. g. presentations, inputs to discussions, etc.) in relevant meetings of the AUC and international professional associations.	<i>Degree of fulfilment (in %)</i>	<i>Appraisal (A-C)</i>
	100 %	B

Justification:
 The annual target values of this indicator are as follows: a) AUC level: 3 (2019) and b) International associations: 6 (2019). In 2017 and 2018 both targets have been met (e. g. ILAC IAF Meeting Frankfurt, meeting in Kigali PAQI with AUC; participation of AFRIMETS at BIPM and OIML; participation of ARSO at ISO and AFSEC at IEC). The monitoring systems documents the number of continental and international events where PAQI institutions participated. Unfortunately, less qualitative information is collected about the mentioned active participation, such as e. g. presentations, inputs to discussions. However, there are good indications that representatives of PAQI got more actively involved in leading positions (e. g. AFRACs Chairman maintained the Vice-Chair of ILAC; the Secretary of AFRIMETS became permanent member of the International Committee for Weights and Measures of the BIPM and AFRIMETS Vice Chair became Head of OIML Technical Committee 6). **The project achieved its Outcome-Indicator 3.**

The targets set for related output C, indicators C2: “*Increased number of standards*” for ARSO and AFSEC are achieved in the case of ARSO 1.000 targeted and 1.194 at the time of the evaluation. Also, targets for C 3 “*Increased number of African benchmarking processes*”:25/27) are met. The status of C 2 for AFSEC is 182 standards are adopted by 01/2019 (target: 220). It is most likely that

the target will be achieved till the end of the project phase as there will be special general assembly in 2019 where the standards will be adopted. Concerning the output indicator C 4: “Number of AFRAC full members” progress is on track (target: value: 10 members, achieved: 9; Sudan has an associate member status). It also has to be appreciated that a mutual recognition arrangement (MRA) of AFRAC with ILAC was signed within the project period. This MRA is beyond expectations and is a great success not only regarding the project, but of course for AFRAC.

Overall, the three outcome indicators are achieved; the OECD-DAC criterion “Effectiveness” is rated with “very good”. The project has made remarkable progress in achieving its objective to contribute to developing the TBT/SPS Annexes of the AfCFTA. It supported effectively strengthening AUC departments and PAQI institutions in accordance with international good practices. The project achievements are beyond expectations given the highly complex political context of African integration and supporting the AfCFTA (signing of the AfCFTA in 2018). The work of the long-term expert at AUC – a conducive combination of technical expertise, professional experience in working within a multi-cultural working environment as well as cultural-sensitiveness for working within a political context – contributed greatly to the effectiveness of the project.

Criterion	Assessment aspect	Assessment
Effectiveness	Quality and requirements of the results matrix	2
	Objective achievement of the module	1
Global assessment of the effectiveness		1,5 (very good)

5.1.3 Impact

The criterion “Impact” assesses to which extent higher-order impacts have been attained in terms of development policy, whether it contributed to creating structures and/or whether the project will have a broad impact in the long-run.

The project has contributed to raising awareness about QI issues (see chapter 5.1.5 “Sustainability”). With the benchmarking tool (peer-review and self-assessment instrument “Stocktaking”) an important level of reflection has been introduced for QI organisations. The tool has been highly appreciated by the interview partners as it is instrumental to identify key areas where improvement is needed. It has the potential to motivate stakeholders to improve systems on a continuous basis. Benchmarking results function as a good reference system and they promote continuous improvements.

Envisaged higher-order impacts are plausible to be achieved: TBT/SPS Annexes are key foundations (prerequisites) for creating better framework conditions for: a) better quality products on the market and b) trade (intra-regional; globally) and c) creating a single African market. But at this point in time it is difficult to assess these overarching development effects as there are no close linkages with the industry side to assess any changes made. Moreover, one has to take into account that these are long-term impacts. With the subsequent operationalisation of the AfCFTA the Annexes will lead of course to create necessary underpinning structures of national and regional QI structures. Hence, it is reasonable to assume that the Annexes will be instrumental in overcoming technical barriers to trade and increase in a middle to long-term perspective African intra-regional and global trade. Overall, the project is attaining higher-ranking objectives with respect to development policy and supports necessary institutional changes in the field of QI (rating: good).

Criterion	Assessment aspect	Assessment
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Impact	Attaining higher-ranking objectives with respect to development policy	2
	Exemplarity, creation of structures and/or broad impact of the module	1
Global assessment of the impact		1,5 (very good)

5.1.4 Efficiency

The criterion “Efficiency” assesses whether the use of resources by the project deemed reasonable with regard to the performance and impacts reached (output and outcome). The criterion also assesses whether the project used synergies with other project funded by international development partners and whether the outcomes been reached within a reasonable period of time.

The project team consists of the project coordinator and the project assistant, the seconded LTE to the AUC and two short-term international experts (iSTEs) on an intermittent assignment. Interviews conducted gave a strong impression that having a long-term expert at the AUC significantly contributed to attain project objectives in an efficient and effective manner. Both iSTE have been supporting the project continuously over a longer period of time (since 2002 respectively since 2007). Interview results show that roles and responsibilities among the project team (e. g. management, decision-making structures, clear assignments for both iSTE) are fully understood by stakeholders and partners. One iSTE is responsible for overall strategic direction and technical support to the network PAQI, metrology and accreditation/conformity assessment. Whereas the other iSTE mainly provides technical expertise for capacity development in the field of standards and electrotechnical standardization. The evaluation team perceived a good balance of joint flexible steering among the team which has also been confirmed by interview results.

Up to the time of the evaluation 88 % of the overall project budget of 3.0 Mio. EUR were spent. Of the spent project budget 41 % has been on consultancy and technical support, 4 % on trainings and 24 % on travel costs mainly for participants for meetings and trainings (e. g. PAQI JC, general assembly meetings, etc.). In total 3 % were spent on equipment (e. g. laboratory equipment on a minimum scale, work devices (e. g. computer etc.)). For attaining its objectives, the core mode of delivery provided by the project is international long- and short-term expertise (mainly technical support but also process management and facilitation of stakeholder dialogues) provided by the key iSTE.

The resource allocation by Output has been as follows: 39 % on Output A “*AU and QI as crosscutting theme*”, 4 % on Output B “*African FTA experience*” and 38 % on Output 3 “*PAQI and its pillars*”. From a conceptual point of view, the linkages and the almost equal distribution of costs between the two main interventions areas (policy and framework level and institutional foundations) are convincing. Furthermore, project management related costs amount to 19 % of the project budget.

Within Output 3 the biggest amount has been provided to ARSO (45 %). For AFRAC and AFRIMETS the project allocated 20 % of its budget to support their institutional learning and development. And for AFSEC 15 % of the budget has been spent. This distribution of resources among the four pillar organisations is understandable due to the different level of management and steering capacities of the four pillar organisations. ARSO was established already in 1977 and is thus, advanced in its management and service capacities compared to the other three organisations. The mechanism for supporting the four pillar organisations by so called “*special partner request*” has been assessed as a very good mode of delivery by the interview partners. By and large, the mechanism is well administered and embedded with long-term organisational development goals of each organisation. The project strives continuously to align existing decision-making processes of partners (AFRIMETS, ARSO, AFSEC, AFRAC, PAQI) so that there is transparency about the funding decisions and at the same time to align closely to its agreed course of action.

Regarding synergies with other funding sources, much effort is made to attain leverages. The project has successfully coordinated with the technical cooperation project implemented by the GIZ

“Panafrikanische Freihandelszone” (Continental Free Trade Area, CFTA, Afrikanische Union, PN: 2016.2000.4”); synergies are realized and resourced are pooled. Regular exchanges are taken place between GIZ team leader and the PK respectively the iSTE experts. A good cooperative working relationship has also been established between the seconded LTE at the AUC and the respective GIZ staff at the AUC.

Furthermore, there are a substantial number of other bilateral and regional PTB projects with the African RECs which relate to the project. The project is well connected to other PTB projects in Africa (bilateral as well as projects in cooperation with the various RECs, e. g. EAC, SADC, ECOWAS) and tries to identify synergies. With more emphasis on leveraging these synergies and defining joint action areas even more win-win situations could be found and supported (e. g. defining interconnecting indicators).

The amount of partner contributions (AUC, PAQI) is meaningful. Partner contributions are complementing resource allocation and are relevant for the attainment of outcome and the project's allocation efficiency (e. g. partial participation in travel expenses; planning of budget resources; provision of office space and equipment free of charge; implementing partners provide on-the-spot logistical support).

To conclude, project management has been able to match challenges that regional projects generally imply, that is avoiding dilution of efforts and fostering the linkages between its interventions and its counterparts. The project has used its resources adequately for subject-related project activities and for the two main Outputs – the support for the AfCFTA process and institutional strengthening of PAQI organisations. Outcomes for the TBT/SPS Annex have been reached within a shorter period of time as there has been political momentum for the AFCFTA negotiation process. A key success factor for efficient implementation has been to have a long-term expert at the ground and close to the main partner AUC. This has been crucial for working with an intergovernmental body as the AUC. Good communication and coordination mechanisms with other German development projects as well as with other PTB projects have been established which contributed to efficient resource allocation. The period of time was adequate for such a complex negotiation and advisory process with its partly high aspiration level. That said and based on discussions with project staff and partners, the evaluation concludes that resources are adequately distributed among the intervention areas (Outputs) and reflect the relative weight regarding their contribution to the attainment of the module objective.

Criterion	Assessment aspect	Assessment
Efficiency	Adequacy of the resources used	1
	Coordination with other donors/projects	2
	Adequacy of the period of time	2
Global assessment of the efficiency		1,7 (good)

5.1.5 Sustainability

The criterion “Sustainability” assesses to what extent the positive changes (outcomes) of the module deemed long term and whether the project had taking account of risks that might have a negative influence on sustainability.

According to the interview partners, a positive effect has taken place, causing a general shift in the mindsets towards more cooperative and strategic thinking among involved stakeholders (AUC, PAQI and its members). For stakeholders also interlinkages between standards, metrology, accreditation and conformity assessment have become more apparent. Also, more awareness about matters of sequence regarding the development of a functioning continental QI has been raised. The support of the project also contributed to more receptiveness and ownership of QI issues at the level of the AUC. A crucial signal has been given by AUC commemorating the year 2017 as *African Year of Quality Infrastructure “Better Quality, Better Life”*. The decision was made by the AU Conference of Ministers of Trade. Furthermore, the year cultivated a culture of collective responsibility in building a sound quality

infrastructure amongst African countries. And lastly, it provided an opportunity for the continent to discuss and showcase how it plans to sensitize and advocate for national and regional policies supporting quality infrastructure. Also, the “*Intra-African Trade Fair*” (IATF) in Cairo in 2018 hosted an important session on harmonisation of standards which drew considerable attention by public and private stakeholders. Capacity development measures have contributed to more professional attitude and performance of the respective staff of ARSO, AFRIMETS, AFRAC and AFSEC within their institutions. With its incremental approach to strengthen capacities (technical, institutional) geared to the level of development of each pillar organisation the project has contributed to sustaining its outcomes. For example, the MRA of AFRAC with ILAC was signed within the project period (see outcome indicator 3). Staff has also been participating in international fora and taking over leadership positions (e. g. AFRAC office bearers participate actively in relevant ILAC committees, AFRIMETS at BIPM and OIML level, ARSO members in ISO committees and AFSEC executives in correspondent IEC fora). Sensed from participating in the PAQI JC meeting, it has been conducted in an effective and result-oriented manner.

The degree to which advisory contents, approaches, methods and concepts of the project are already anchored and/or institutionalized in the partner system is challenged by the prevailing lack of partner resources (e. g. staff; budget of PAQI institutions, etc.). However, there are also some good indications for ownership. The premises of the ARSO Secretariat and its technical infrastructure are provided by the Republic of Kenya. The financing of the employees is made from membership fees. The Republic of South Africa provides the secretariat for AFRIMETS, AFRAC and AFSEC (AFSEC secretariat was transferred to MS Egypt in January 2019). Travel costs for board members, secretariats and members of the executive committee are partly taken over by the respective countries. Several more advanced countries regularly send executives to African and international meetings of professional associations and technical committees (TCs).

Although there are good steps made concerning financial sustainability issues still substantial risks of long-term sustainability remain due to high dependence of PAQI structures and pillar organisations on PTB support. However, there is great awareness among interviewed stakeholders to find ways to work on these preconditions for sustained structural changes necessary at AUC level and the interplay with PAQI. Since 2013, the PAQI organisations are recognized as the subject matter related continental organisations for QI by the AU. All involved interview partners apparently are committed to continue the results achieved with own momentum. To discuss these issues more regularly will help to gradually develop a long-term phasing out strategy with PAQI and its pillar organisation. This will be conducive to outline the way for the PAQI pillars to become more financially independent.

Overall, the project has contributed to enabling structures and strengthened cooperation links between relevant continental policy makers, PAQI network and its four pillar organisations. It can plausibly be assumed that having achieved this level of solution-oriented approach, a drop back to mere consultation and dialogue without concrete problem solving is not very likely to happen as stakeholders appreciate the scope of action, they have developed for collaborative action to improve QI in Africa.

Criterion	Assessment aspect	Assessment
Sustainability	Durability of the positive impacts	2
	Taking account of risks that have a negative influence on sustainability	2
Global assessment of the sustainability		2 (good)

5.2 Success factors for observed impacts and transformation processes

As agreed with the project team, an in-depth Capacity WORKS analysis focused on three selected success factors: a) strategy, cooperation, learning and innovation. A self-evaluation based on PTB CW Checklist for all five CW success factors has been done by the project team. The results are shown in chapter 6. Also, the quantitative assessment of all CW factors by the evaluation team are presented in this summary. There are only slight differences with the CW assessment done by the evaluation team.

5.2.1 Strategy

The project is operating in a volatile political environment. It has designed its strategy on relevant existing AU policy documents, potentials and challenges for improving QI structure in Africa. Although the TBT/SPS Annex content is clearly defined by the WTO providing technical and procedural expertise the project has been important for facilitating the formal negotiation process of the AfCFTA. In this regard, the project played an important role as convenor and honest broker for the negotiation process.

With the PTBs long-term engagement with most of the QI organisations the project has successfully done a thorough analysis involving key institutions (e. g. jointly analysed the situation through bilateral and group consultations, developed intervention options based on peer-review exercise of the “Stocktaking Analysis”). Most of the partners contributed and know about the strategy.

It has to be acknowledged that regional projects have to master the trade-off between interventions meant to foster changes on political level (Output A) and more tangible (smaller) interventions related to enhancing the performance of relevant QI organisations on the ground (Output C). The project managed to support political consultation and coordination processes and at the same time to develop effective measures for more immediate support. Thus, with its long-term vision (functioning PAQI structures) and its good balance between interventions at political (system) level and institutional support the project follows a convincing strategic direction.

The project utilises punctual interventions based on continuous learning on stakeholders needs and embedded in a network of cooperation partners. The project team links its interventions wisely to other projects (other PTB projects and GIZ technical cooperation projects). The project is able to deal with unpredictability as main component of complexity while continuously fine-tuning and adapting its interventions if required.

The suitability of the strategy to match core needs of the stakeholders and partners is high. The design of the project is assessed as mostly adapted to the chosen objective. The strategy is coherent and comprehensible, and it has a long-term vision for designing QI in Africa. In future strategic considerations should also include more the interdependence of the four pillars and private sector interest.

Success factor	Central question	Assessment (%)
Strategy	Joint strategy development	90
	Taking the relevant stakeholders and circumstances into account	95
	Awareness level and implementation of the strategy	80
Global assessment of the strategy		88%

5.2.2 Cooperation

The project is cooperating with the right stakeholders at the Pan-African and regional level. The project has two powerful key stakeholders at the continental level - on the one hand the (political partner) AUC and its two departments DTI and DREA, on the other hand the implementing partner the network PAQI

with its four pillars AFRAC, AFSEC, AFRIMETS and ARSO. AUC and PAQI have an interlinked relationship, e. g. the PAQI chairperson and representatives of the 4 pillars are frequently invited to report at ministerial meetings of the AUC concerning trade and industry and vice versa. These two key stakeholders have veto power in regard of their potential to block and influence the implementation of project activities.

Roles and responsibilities have been identified and clarified during the start of the project and adapted to changes emerging during the implementation like for example locating the office of the LTE inside DTI. The project team has established a relation of great confidence and mutual understanding based on its professionalism and expertise in the field of QI as well as TBT and SPS which are core topics relevant for DTI, DREA and PAQI. Additionally, the project team (PK, iSTE) is participating at almost all annual General Assemblies of all four PAQI pillars and on relevant DTI and DREA meetings. Within the PAQI pillars the relation is strong between AFRAC, AFRIMETS and ARSO, signified by cooperation, frequent information exchange, overlapping interests and mutual trust. It is perceived as close between AFSEC and the other three QI institutions. ARSO and AFSEC have signed a Memorandum of Understanding for cooperation. At international conferences the corporate representation of PAQI and its interests could be enhanced by each of the individual pillars based on the high synergies and interlinkages of the QI elements (accreditation, standards and metrology).

At the regional level, the third group of relevant public stakeholders are the eight RECs, but with individually differing importance and influence on the project. During the project term, close relationships were established with COMESA, EAC, ECCAS, ECOWAS and SADC based on their participation in the PAQI Forum and their advanced QI capacities (see chapter 5.2.5 and PAQI Stocktaking 2017). The RECs are increasingly demanding PAQI's expertise on QI. Less strong ties exist between the project and the RECs CEN-SAD, IGAD and UMA, mainly probably due to other thematic priorities of these REC's (e. g. security, climate) and overlapping memberships of countries in different RECs. At the national level, the MS of the AU are categorised as primary stakeholders of the project because they are directly affected and influenced by project activities and/or results in the middle to long-term perspective, but they are no project partners. Some MS play a stronger role as they are highly advanced on QI and in hosting the secretariats of the four PAQI pillars (e. g. Egypt, Ethiopia, Kenya, South Africa, Tunisia).

The private sector has had a limited involvement in the project, but mainly in the area of standards. TCs of AFSEC and ARSO have realised that a stronger representation of the private sector is essential, and better integration is highly supportive for more demand oriented TC's work. This is a lesson learned from the RECs experiences who partly missed the inclusion of private sector stakeholders. Additionally, public-private dialogue formats like the *COMESA Business Forum*, the *Cairo Trade and Industrial Week* and the *Inter-African Trade Fair* have been approached by PAQI representatives (e.g. Chairperson), but there is not yet a strategy of systematic involvement of private sector stakeholders and/or structures.

Secondary stakeholders are the EU Delegation, the GIZ project "CFTA" and other international development partners (e. g. UNECA, UNCTAD). The cooperation is characterised by close coordination, complementarity, information exchange and using of synergies. The project has no interaction with civil society stakeholders due to its very technical and high level political strategic orientation. By and large the project is taking possible lines of conflict among partners, stakeholders and other international development engagements into account (e. g. different interest of PAQI and its pillars, activities of other donor projects, diverging positions of RECs and AUC, etc.). A stakeholder map has been developed by the evaluation team. The stakeholder map (see Annex 3) has been discussed with the project team at the end of the evaluation (debriefing session).

Success factor	Central question	Assessment (%)
Cooperation	The right stakeholders	90
	Defining the project partners	95
	Clear responsibilities	90

	Taking lines of conflict into account	70
	Global assessment of Cooperation	86

5.2.5 Learning and innovation

The project has actively supported the adaptation of activities based on priorities of the partner institutions and showed high responsiveness to changes of their specific framework conditions. By using a mechanism of “*special requests*” the project showed high flexibility and adaptation capacity to changes as well as demand-driven decisions and implementation. The basis for decision-making of the PK is the submission of a proposal sheet with clear criteria filled by the project partners explaining the needs, envisaged activity and intervention area. Another positive consequence of the specific requests were increased ownership of the respective partner and additional learning processes by implementing the approved activities in a self-sufficient manner. This tool enabled partner institutions being somehow innovative in developing individual requests, planning, implementing activities and reporting which increases their learning experience and lessons learnt.

According to the sub-criteria of this CW success factor concrete learning objectives should be defined. The project has not defined learning objectives. Moreover, from a methodological point of view it is not clear what is meant by this sub-criterion. Thus, this criterion has not been assessed. Results of the implemented or finalised activities were documented in reports and shared with the project team. After each conducted training relevant training material and a brief report are shared with the secretariats of the PAQI pillars. A systematic feedback mechanism (assessment) of the quality and the effects of trainings is not in place yet (e. g. achievement of learning objectives, quality of training method, utilization of knowledge, etc.).

The development of the partner’s project monitoring and evaluation capabilities have been supported by establishing the PAQI JC as the steering committee of the project. The PAQI JC is chaired by AU DTI (often delegated to the LTE representing AUC and supported by the respective representative of PAQI). The implementing partners (representatives of the four PAQI pillars) are members and the project coordinator and iSTEs were observers. Based on this high ownership, learning processes in the area of steering, decision making, monitoring and evaluation were fostered and increased.

Within the institutionalisation process of the PAQI JC, the participants realised that stakeholders representing the RECs were missing due to their relevance in QI at the regional level. Therefore, the PAQI Forum was established, including the PAQI pillars plus representatives of the RECs like to date COMESA, EAC, ECCAS, ECOWAS and SADC. One result of the information exchange inside the forum is the regular request of experts from PAQI by the RECs.

The PAQI Stocktaking was a self-assessment of the AU MS realised by the individual four PAQI pillars strengthening their monitoring capacities in the process of collecting data, coordination, planning and time scheduling. Additionally, all PAQI pillars added their specific knowledge into the AfCFTA Annexes on TBT and SPS.

The intensive exchange, sharing of information within the project team (coordinator, iSTEs and international LTE) and the clear decision-making processes are sources of learning for the project team and have been adjusted based on experiences during the project term.

One overall learning process based on this project being implemented in a highly political and therefore sensitive context is the extraordinary support of an international LTE as technical expert. The LTE being officially based at the AUC DTI and providing the highly requested expert knowledge in the technical field of TBT and SPS was one of the core advantages for project’s successes.

Success factor	Central question	Assessment (%)
Learning and innovation	Defining learning objectives	Not assessed
	Supporting the partners' PME capabilities	80
	Learning from project activities	80
Global assessment of Learning and Innovation		80

6. Summarized assessment of the development measure

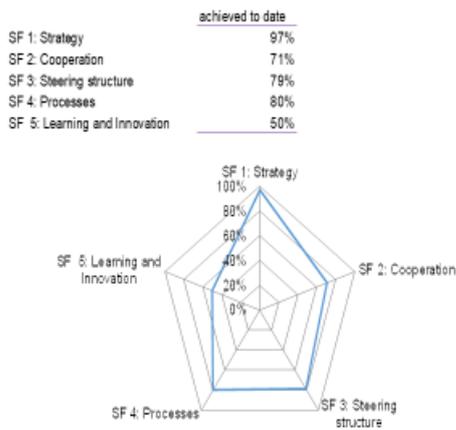
6.1 DAC evaluation criteria

Criterion	Criterion assessment
1. Relevance	1,3
2. Effectiveness	1,5
3. Impact	1,5
4. Efficiency	1,7
5. Sustainability	2
Global assessment	1,6 (good)

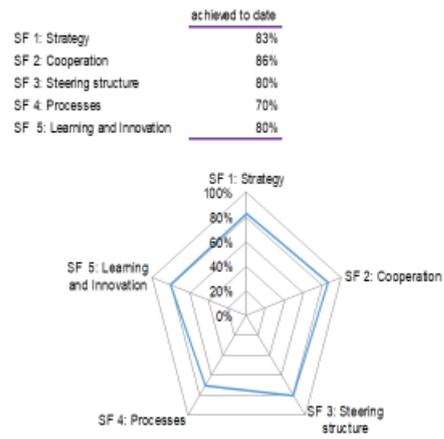
6.2 Success factors of Capacity WORKS

As agreed with the project team, an in-depth Capacity WORKS analysis focused on the selected success factors: a) strategy, cooperation, learning and innovation. The following figures show the results of the self-evaluation based on PTB CW Checklist by the project team for all five CW factors. Also, the quantitative assessment of all CW factors by the evaluation team are presented here. There are only slight differences with the CW assessment done by the evaluation team.

Capacity Works-Self-assessment by PTB Team



Capacity Works Assessment by Evaluation Team



7. Learning processes and experience

The chapter summarizes the most important learning experiences - technical and managerial innovations of the development measure, which are particularly important for the continuation of the development project and/or for PTB projects with a similar approach. Both learning processes as well as experiences may take place at the meta-level of project planning and project implementation and at the meta-level of the cooperation relationships with the partners and other stakeholders or at the content/thematic level. "*Learning processes*" refers to systematic processes that were planned and initiated through the project:

- The exceptional support of an international LTE who is intensively involved in implementing project activities, in giving advice, awareness raising, and networking has been a key success factor. The LTE being officially based at the AU DTI and providing the highly requested expert knowledge in the technical field of TBT and SPS was one of the core advantages for project's success. Cooperating with intergovernmental organisations such as the AUC it is of utmost importance to have a professional LTE working with the partners to build trustful and reliable working relationships.
- Good balance of technical, managerial and process management (overall steering and process management: project coordinator; technical and strategic inputs (iSTE); LTE: context related technical expertise and process management).
- Regular contact and exchange with high-level partners of the AUC by project staff (project coordinator, iSTE, LTE) showed interest and commitment of PTB.
- Strategic direction of the multi-country project on continental issues of shaping QI (topics, institutional set-up, collaboration between AUC + RECs + PAQI). This contributed to focus and steer the project.
- Effective communication and coordination with other relevant German development cooperation projects increased management capacities and flexibilities of steering the process with partners and stakeholders.
- Incremental approach to strengthen capacities (technical, institutional) geared to the level of development of PAQI network and its pillar organisation. Usage of a "special request" application process by the PAQI institutions. Basis for decision-making of the presented proposal sheets are clear criteria filled by the project partners explaining the needs, envisaged activity and intervention area. Another positive consequence of the specific requests were increased ownership of the respective partner and additional learning processes by implementing the approved activities in a self-sufficient manner. This tool enabled partner institutions being somehow innovative in developing individual requests, planning, implementing activities and reporting which increases their learning experience and lessons learnt.
- Benchmarking tool (self-assessment instrument; peer learning) is highly instrumental to identify key areas where improvement is needed; stocktaking over time motivates stakeholders to improve systems: good reference systems – spurs continuous improvements.

"*Experiences*" refers to findings that took place within the scope of the project but were not planned:

- One overall experience based on project implementation is that in a highly political and therefore sensitive context close working relationship are crucial. Moreover, due to the high volatility of the partner context conservative project planning and target setting has proven its value.
- Within the institutionalisation process of the PAQI JC, the participants realised that stakeholders representing the RECs were missing due to their relevance in quality infrastructure at the regional level. Therefore, the PAQI Forum was established, including the PAQI pillars plus representatives of the RECs like to date COMESA, EAC, ECCAS, ECOWAS and SADC. One result of the information exchange inside the forum is the regular request of experts from PAQI by the RECs.
- Interlinkages with bilateral and other regional PTB projects in Africa need more attention (on both sides) to make best use of potential synergies between PTB projects regarding efficiency, peer-learning and outcome.

8. Recommendations

The recommendations to the partners and the project team refer to the entire project cycle. Particular attention is given to the following aspects: orientation to actual needs, strategy development, development of the target system, cooperation structures and project steering. There are also recommendations with regard to future activities. Unless explicitly stated the priority of the recommendations are equally important and the deadline for action rests within the end of the current project term respectively the planning steps for the extension of the cooperation between PTB and AUC/PAQI.

Recommendations are addressed to the project team and partners:

- It is recommended to discuss the evaluation results with the main implementation partners, in particular the PAQI network and four pillar representatives in a joint meeting.
- The strategic direction to focus on issues to shape QI at continental level should be continued (topics, institutional set-up, collaboration between AUC, the RECs and PAQI - see chapter 5.2.1).
- Carry on supporting the subsequent operational steps of the AfCFTA as there seems to be still political willingness and a window of opportunity to make progress. Given the limited resources it is recommended to either concentrate on TBT or SPS (see chapter 3.2).
- Successful implementation in such a political sensitive context as the AUC and Pan-African economic integration is not possible without a LTE functioning as technical expert and advising on defining strategies for addressing trade challenges related to standards, metrology, accreditation and conformity assessment issues (see chapter 5.1.2 and 5.1.4).
- Continue with institutional strengthening of the PAQI as a member-driven network promoting policy formulation in the field of continental QI and being a collective voice of the interests of its members (ARSO, AFRIMETS, AFRAC, AFSEC - see chapter 5.1.2).
- By participating in international conferences, the individual PAQI pillars (AFRIMETS, AFRAC, AFSEC and ARSO) could enhance the representation of PAQI and the networks interests based on the high synergies and interlinkages of the quality infrastructure elements (accreditation, metrology, standardisation)
- Also, the stepwise approach of capacity development (CD) of the four QI organisations should be continued. Geared to strategic development goals and level of capacities clear targets should be jointly agreed with each organisation on. Moreover, it would be good to have annual CD milestones for the next project term. (see chapter 5.1.2).
- Some cooperation partners have shown pronounced interest in being further equipped with concrete inputs to engage closer with private sector and its interest and needs for adopting/complying with standards. Thus, it is recommended to further explore entry points to advocate for QI issues and to find allies in improving processes and services of QI in Africa (e. g. gap analysis along the cassava value chain, sensitization and advocacy work within the public-private dialogue formats of the AUC such as the annual "*Industrialisation Week*"; sharing case studies of success stories and good practices at enterprise level to motivate and facilitate SMEs to get involved with quality issue, etc. - see chapter 3.2, 5.2.2).
- Anchoring results of a regional project with punctual interventions in partner structures is always a challenge. Thus, it is recommended that the project team continues and expands its efforts to map additional opportunities linked with PTB cooperation projects at bilateral and REC level. This supports transfer of knowledge and deepening application knowledge into MS structures and procedures (see chapter 5.2.2).
- The landscape of other international development partners providing funding in the field of QI is expected to change in future. There are a number of projects in the pipeline funded, among others

by the EU and bilateral partners. Looking for opportunities to join forces and to clarify complementarities respectively to avoid duplication of efforts will be a crucial task for the extension of the project and the project team (see chapter 5.2.2).

- Managing interlinkages between bilateral and regional PTB projects in Africa (e.g. setting clear targets for coordination, interconnected indicators) should be further explored (see chapter 5.2.2).
- To further raise the project's visibility, it is recommended that the project team (PK, iSTE) becomes even more present at strategic events (e. g. events such as the *Intra-African Trade Fair*, Cairo).

Recommendations to the Evaluation Team of the PTB Department 9.3

Evaluation Design:

- For a regional project cooperating with a political body having a clear mandate such as the AUC it has been important to closely involve the political partner and main stakeholder in the evaluation in a face-to-face consultation and assessment process (see chapter 5.2.2). Thus, it is recommended to organise these evaluations in such a way that personal interviews are conducted.
- It is recommended to be more flexible in analysing Capacity WORKS Success Factors. Agreeing on most relevant CW factors has been a constructive way of dealing with this issue. Prioritization of CW factors relevant for evaluation supports using CW as an analytical tool. By identifying the most relevant factors (instead of only ticking the box of all CW factors) will increase acceptance of CW as it proves added value for project management.
- Combining the evaluation mission with the appraisal mission has had numerous opportunities to directly link lessons learned to designing the way forward. The joint debriefing session including the formulation of the impact matrix of the appraised project has contributed to effectively using synergies between the two missions. Such a combination is feasible for planning a follow-up project and where there is no fundamental change in strategy expected.
- The Capacity WORKS check list should be filled in by the project coordinator and the key iSTE before the kick-off meeting for the evaluation. Thus, results of the self-assessment could be discussed during the meeting.

Reporting requirements:

- The length of the inception report should be shortened to key facts about the upcoming evaluation to increase the likeliness of the interview partners to study it (see shortened version of the inception report). Depending on the project context the report should be send to the foreseen interview partners shortly before the field mission (e. g. one week ahead).
- Reporting requirements should be better geared to the needs of the respective target group. The short version of the evaluation report functions as key document to be shared with the partners and the public. Thus, it is recommended to use a restricted number of pages for concentrating on the findings of the OECD DAC criteria as main reference framework for evaluations and to leave out the findings regarding the CW factors.

Evaluation assessment criteria:

- Moreover, the checklist is using different criteria than the sub-criteria of the CW factors (see chapter 4). Thus, for consistency reasons the CW checklist should be adjusted (e. g. the sub-criterion for the CW Learning and Innovation "Defining learning objectives" is not reflected in the CW checklist).
- Moreover, the sub-criterion for the CW Learning and Innovation "Defining learning objectives" has its methodological weaknesses (e. g. who should learn what at which level of project

implementation?). More guidance is needed for the evaluator and the project team about what kind of learning objectives should be defined, by whom and when (see chapter 5.2.2).

- Regarding the OECD DAC Criteria, the content of the GIZ 2012 guideline regarding the sub-criteria of the five OECD DAC criteria does not match any more with the sub-criteria given in the PTB annotated evaluation report format. Thus, it is recommended to clarify to which extent the guidance given by the “GIZ PFK Handreichung (2012)” is still valid for PTB evaluations.

Capacity WORKS management tool:

- CW should be more explicitly applied in project planning and implementation but in a flexible way adapted to the specific context (see chapter 5.2).

9. Annexes to the evaluation report

- Interview Guidelines
- List of interview partners
- Capacity WORKS: Stakeholder Analysis

Annex 1: Interview Guidelines

Questions will be asked, during the stakeholder interviews along the following guiding questions, adjusted appropriately for the particular context of the interview partner:

Relevance

The extent to which the objectives of the project are consistent with the target groups' requirements, country needs, institutional priorities and partner and donor policies.

- Has the project been working on the right issues and priorities within the field of QI (focus on Appendices for TBT and SPS)?
- In which way has the project contributed to the ongoing process of the harmonization of standards, and technical regulations (e.g. adoption of standards by ARSO/AFSEC)?
- In which way and to which degree has the project contributed to overcome TBT/SPS and to foster regional integration?
- Has the project been working with the right stakeholders to achieve its objective (within AUC; priorities of working with the PAQI institutions)?

Effectiveness

The extent to which the intended direct results (objectives) of the project are being achieved (comparison of actual situation with targets).

- What changes are perceived by stakeholders and implementation partners due to the cooperation with the project regarding the main intervention areas:
 - Technical support for drafting the TBT and SPS Annex for the AfCFTA-NF
 - Institutional and technical capabilities at partner level
 - Incorporating QI as a cross-cutting issue within AUC and for the AfCFTA negotiations
 - Drawing lessons learned from free trade negotiations from regional economic communities (international good practices)
- Which results (inputs) of the PTB project are assessed as the most positive for the respective partner (regional/national level)?
- How did the project activities correspond to the work priorities of the involved stakeholders?
- In which way has the project contributed to an increase of AFRAC membership base?
- What has been the most relevant support of the project pertaining to the benchmarking processes (e. g. intercomparisons, proficiency testing, etc.)?
- Who and how has the selection of training participants taken place? Have the conducted trainings matched the actual training needs of the selected participants?
- How does the project secure that individuals benefiting from trainings, conference participation, etc. are sharing their new knowledge with their colleagues/peers within the respective QI institution?
- In which way are those who got training using their new skills and knowledge in their respective work/responsibilities?
- What has been supportive or hindering project implementation?
- Are any adjustments regarding project design and approach needed for extending/continuing the project?

Impact

Contribution of the project to overarching results.

- What kind of contributions can the project realistically make to overarching development results?
 - Effective reduction/overcoming TBT/SPS
 - Strengthening intraregional trade
 - Better integration in global value chains?
- In which way has the project dealt with social and ecological safeguards?

Efficiency

To which degree resources invested

- Are communication and steering processes appropriate for project implementation?

by the project are appropriate compared to the outputs and results achieved.

- What kind of mechanism are in place to agree and implement measures based on mutual interest?
- What resources has the project been using for implementing activities and steering the project?
- Is the budget distribution by output in line with partner priorities?
- To which extent has the project coordinated with or been complementary to other donor projects for task-sharing (e.g. other PTB projects, other bilateral and regional projects of the German Development Cooperation, other international development partners, among others EU, UNIDO)?
- Have the outputs been produced cost-efficiently (cost-benefit ratio)?
- What approaches, instruments, methods or concepts are likely to be lastingly used, institutionalized or further developed by the involved implementation partners: AUC (various departments) and PAQI institutions?
- To what extent are - organizational, personnel, financial, economic - resources and capacities available at AUC, PAQI for maintaining the results achieved?
- Has the project worked to overcome structural impediments for applying newly acquired technical knowledge?

Sustainability

The likeliness that the positive results of the project will continue beyond the end of the project support.

Annex 2: List of Interview Partners

Partners	Name of interview partner	Name of institution / function
AUC	Albert Muchanga Treasure Maphanga Hussein Hassan Hussein Prudence Sebahizi Ron Osma Omar Rongai Chizema Dr. Simplicie Nouala Fonkou	Commisioner DTI Director DTI Head of Industry Division, DTI Head of AfCFTA Secretariat Senior Policy Officer Industry Division of DTI Chief Technical Advisor & Head of ICU – UNIDO, DTI Head of Division Agriculture and Food Safety, Department of Rural Economy and Agriculture (DREA)
AFRIMETS	Denis Moturi Wynand Louw	Chairman Secretariat
AFRAC	Ron Josias Araya Fesseha	Chairman Former Chairman
ARSO	Hermogene Nsengimana Reuben Gisore Eve Gadzikwa	Secretary General Technical Director President (until 2018)
AFSEC	Claude Koutoua Omneya Sabry	President Executive secretary (since 2019)
PAQI	Nadine Umotoni Hermogene Nsengimana	PAQI secretariat PAQI Chairman
PTB Project staff and key technical experts	Kathrin Wunderlich	Project Coordinator at PTB Headquarter
	Dr. Oswald Chinyamakobvu	Long term Advisor of the project based at the AUC
	Alex Inklaar	PTB key technical expert (ARSO, AFSEC) until 12/2018
	Martin Kaiser	PTB key technical expert (AFRIMETS, AFRAC, PAQI)
German Embassy	Barbara Schäfer	Counsellor
Other German Development Cooperation projects	Jasmin Gohl	GIZ, Head of Programme Support to the AfCFTA
Total number of interviews	20	

Annex 3: Capacity WORKs Assessment

Stakeholder map

AUC

- DTI
- DREA

RECs

- CEN-SAD
- COMESA
- EAC
- ECCAS
- ECOWAS
- IGAD
- SADC
- UMA

Other International Development Partner (IDP)

- UNIDO
- UNECA
- UNCTAD
- Etc.

Private Sector

