

# Better Health

Human, technical and political factors for better coordination and support of e-health in Africa

## D2.4: Strategic Partnerships (Task 2.4)

WP2

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## Abbreviations

BeH	BETTEReHEALTH
LLMICs	Low and Lower Middle-Income Countries
WP	Work Package
PAT	Partnership Assessment Tool
MoH	Ministry of Health

# 1 Introduction

## 1.1 Structure of the document

This document is structured as follows:

- Section 1 - presents the main purpose of the document, e-health strategic partnerships, and the relationship of this task to other project deliverables.
- Section 2 - describes the adopted methodology, in particular the partnership assessment tool.
- Section 3 – presents the findings of data collection and criteria evaluation for the four African partner countries in the BETTEReHEALTH project: Ethiopia, Ghana, Malawi and Tunisia.
- Section 4 - provides results analysis for strategic partnerships.
- Section 5 – presents conclusions drawn from the analysis.
- Section 6 – presents some sources and references used in the task preparation.
- Section 7 – presents some documents and forms used for data collection and analysis.

## 1.2 Purpose of the document

This report represents the deliverable for Task 2.4 strategic partnerships under BeH project. The main goals of this task are to coordinate and support the development of existing strategic partnerships on e-health and to build the basis for cooperation and deployment of e-health in LLMICs in Africa, particularly in the 4 partner countries, notably Ethiopia, Ghana, Malawi and Tunisia. To achieve the task's goals, identification, contact and analysis of existing partnerships must be fulfilled.

In the present document, we will provide relevant information about existing partnerships involving public institutions, private sector, civil society and funding organizations at the national, regional and international levels. After data collection activities, partnerships analysis will be performed to finally identify the strategic ones. Eventually, strategic partners in e-health, who represent key actors, will be involved in the design and co-creation of the policy roadmap for e-health development which will take part in future project activities.

## 1.3 General project Objectives

BETTEReHEALTH stands for "Better e-health for better health" and studies the human, technical and political factors for better coordination and support of e-health in low and lower middle-income countries and regions in Africa. The project activities include the coordination and implementation of registries for e-health solutions and e-health policies while in parallel

supporting and organizing activities and workshops that will address the human, technical and public policy factors that are related to the successful implementation of e-health in LLMICs in Africa.

The overall objective of BeH project is to contribute to better, more accessible, and more efficient health and care services by coordinating and supporting the deployment of e-health.

The specific objectives are:

- To collect evidence and map existing resources to inform the successful deployment of e-health in LLMICs in Africa
- To address the human factors that are related to successful e-health technologies in African LLMICs
- To address the technical factors that are related to successful e-health technologies in African LLMICs
- To address the public policy factors that are related to successful e-health technologies
- To facilitate national initiatives by authorities for the successful deployment of e-health in LLMICs in Africa
- To disseminate the actions and the results of the project so all relevant stakeholders get informed

## 2 E-health strategic partnerships

### 2.1. The importance of partnerships

Partnership refers to a group of organizations with a mutual interest who agree to work together to achieve specific common objectives. Partnerships are crucial to the success of the organization's goals and initiatives. To support certain initiatives in developing countries, partnerships with international funding bodies or cooperation organizations would provide financial resources, technical expertise, and networking.

Acknowledging the importance of partnerships is not difficult, yet, understanding how to build and sustain those partnerships is critical. In fact, not all partnerships can create an added value for one or both parties. Partnerships should be formed strategically based on strategic working program and objectives. A successful and strategic partnership is also characterized by other criteria that will be studied in this report.

## 2.2. Strategic partnerships

The term partnership and related terms such as collaboration, coalition, network, task group, work group, cooperation and others, are used to describe a wide variety of relationships and structures. For purposes of our project, partnership refers to a group of organizations with a common interest who agree to work together toward a common goal.

A successful partnership should be able to bring together different actors who share a common vision and pursue compatible targets to effect change in collaborative actions<sup>1</sup>. The combination of the terms “partnership” and “strategic” introduces a question of priorities in the implementation of joint actions. This also places emphasis on long-term relationships and their stability. Comprehensive strategic partnerships are not simply the next stage cooperation but it has evolved from such cooperation only in strategic areas<sup>2</sup>.

In order to be classified as strategic, a partnership must be aligned with all or the majority of successful partnership characteristics in the first place (**Figure 1**). Characteristics of a successful partnership can be categorized according to organizational structure characteristics and work program characteristics. A strategic partnership must verify further strategy related characteristics.

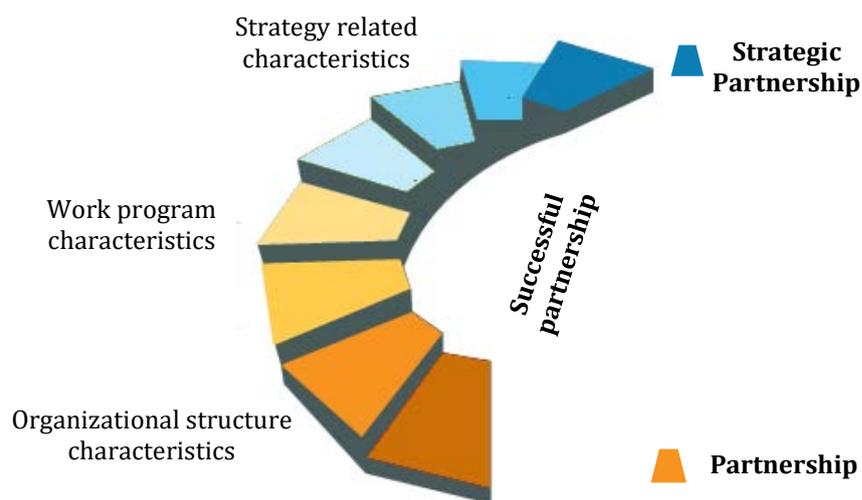


Figure 1 From successful to strategic partnerships

## 2.3. Objectives of Task 2.4 strategic partnerships

Task 2.4 Strategic Partnerships aims to achieve three main goals:

- Building the basis for cooperation and deployment of e-health in LLMICs in Africa, in particular partner countries of the project
- Coordinating and supporting the effective use and further development of existing strategic partnerships on e-health deployment at national and international levels
- And developing and enhancing existing strategic partnerships on e-health

#### 2.4. Relationship with other deliverables

Strategic partnerships task is included in WP2 Research, existing resources and evidence, This WP consists in collecting evidence and mapping existing resources to inform the successful deployment of e-health by:

- Creating open, free and easy to access registries of relevant existing e-health solutions and policies.
- Mapping and development of existing strategic partnerships and
- Extracting best practices and lessons-learned

Strategic partnerships task requires input from Task 3.1 stakeholders' analysis, since strategic partners represent generally key stakeholders. Output results from this task will be needed for Task 5.2 Health policy roadmap as strategic partnerships will be involved in designing the policy roadmap (**Figure 2**).

## 3 Methodology

### 3.1 Overall methodology

Several activities are assigned to each specific objective in order to achieve the main purpose of the task (**Table 1**). The first activity consists in identifying and mapping of the existing partnerships in e-health in each African country at the national, regional and international levels. The following activity is contacting existing/strategic partnerships according to two levels. The next activity consists in analysing of the potential of strategic partnerships. And the final activity is preparing a report on the existing strategic partnerships on e-health deployment in LLMICs and regions in Africa and their potential.

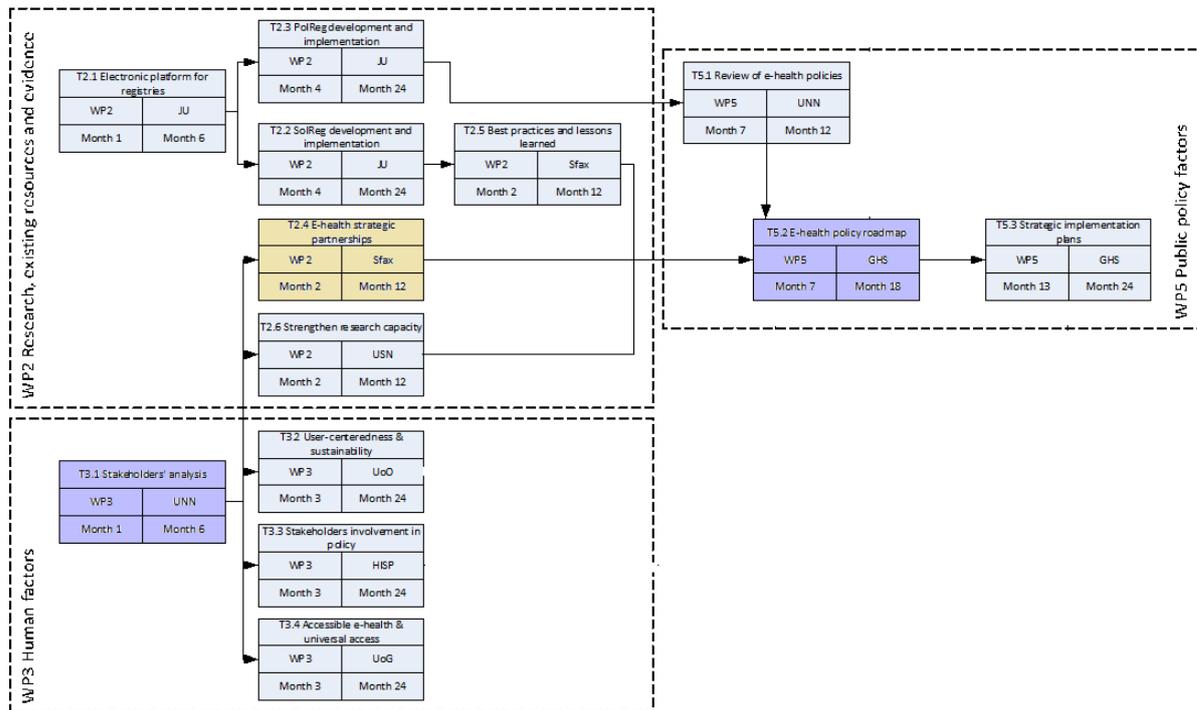


Figure 2 Relationship of task 2.4 with other project deliverables

Table 1 Objectives and activities of task 2.4

Objectives	Activities
Building the basis for cooperation and deployment of e-health in LLMICs in Africa	Identification and mapping of existing partnerships
Promoting the effective use and further development of existing strategic partnerships on e-health deployment across countries, regions, and continents	Contact with existing/strategic partnerships Analysis of the potential of strategic partnerships

For the assignment of this task, a working group from team HealthTECH cluster Tunisia has been formed to design and develop a working methodology. A biweekly meeting has been scheduled to present the procedure of each activity, to follow up the progress of data collection and to discuss any related issues with the project partners.

### 3.2 Identification and mapping of existing partnerships

Identifying strategic partnerships in LLMICs in Africa is a fundamental and primary step to build the basis for cooperation and deployment of e-health. Each partner country was in charge of data search and identification of existing partnerships in e-health in their respective countries.

The identification and mapping actions are performed at the national, African/African African/International levels for Ghana, Ethiopia, Malawi and Tunisia. Existing partnerships are supposed to be established between the following organization categories:

- Ministries and their departments (IT centers, technical centers...)
- Universities/Research institutions
- Funding organizations
- Private sector, in particular start-ups
- Patients' associations
- Civil society, including professional and scientific associations

In the first place, baseline characteristics, which represent general and primary information regarding existing partnerships are required. The baseline characteristics were defined according to **Table 2** and include the project scope and objectives, countries/regions involved, partners, solution/service produced, target group, and type of transactions. The data collection procedure for this activity consists in performing a desk/web search including reports, press articles, and grey literature.

Table 2 Partnership baseline characteristics

<b>Parties involved</b>	Funding organizations, public institutions, university...
<b>Countries/regions involved</b>	Local, African/African, African/European, African/international
<b>Date of establishment and planned Duration</b>	Partnerships may be time-bound or open-ended. (Some partnerships may begin as time-bound and limited in ambition but evolve over time)
<b>Output</b>	The product/service produced
<b>Target group</b>	Patients, health professionals, health institutions...
<b>Type of transaction</b>	What is being transacted in each direction between partners? For example: money, information, access, equipment, training

### 3.3 Contact with existing partnerships

Following the primary data collection and mapping of existing partnerships, further information regarding well established partnerships is required. The task's working group contacted key actors according to two levels:

- Primary level contact to collect relevant information related to well established partnerships. Interviews and online forms were used as qualitative data collection tools, where data collectors were based on questions and guiding notes from the developed partnership assessment tool explained in section 3.5.
- Secondary level contact for dissemination and networking activities to coordinate and support the utilization and further development of existing strategic partnerships and to involve them in future project actions, namely in designing the policy roadmap.

A partnership assessment tool was developed to evaluate different aspects of the partnership, i.e., partners ownership, management procedure, equity issues, responsibilities of each partner and aimed goals.

### 3.4 Partnerships evaluation

The final step of the task consists in evaluating the aggregated total scores attributed to each partnership. Assessment criteria were set to study different aspects of partnerships and were basically categorized under 'successful partnerships criteria' and 'strategic partnerships criteria'. Partnerships are then classified under three categories according to their scores:

- *Strategic*: The partnership is working well in most of the areas
- *Successful*: The partnership is lacking in some areas, however it shows promising aspects
- *Developing*: The partnership is experiencing failures in major areas

### 3.5 Data collection: Partnership Assessment Tool

#### 3.5.1 Description

The Partnership Assessment Tool (PAT) is a form that partners can complete to examine the strengths and weakness of their partnership. Answers to the assessment questions can help diagnose and fix certain gaps at the organizational or work program levels. If corrective measures are taken, the partnership will be increasingly successful. The PAT is adopted by many organizations that seek continuous progress of their partnership<sup>3-5</sup>.

In relation to the BeH framework, the tool is tailored to enable project members to measure key performance indicators. Certain evaluation criteria are defined to measure the extent of which a partnership is successful and/or strategic.

### 3.5.2 Elements of the PAT

The PAT comprises three main elements:

**Criteria and guiding notes:** In order to evaluate partnerships, a set of evaluation criteria along with guiding notes are defined. For the scope of the present study, criteria are classified to assess ‘successful’ and ‘strategic’ aspects. Guiding notes that provide explanations of each criterion are also provided in the PAT.

**Questions and assessment:** Each criterion is associated with key assessment questions that enable project members to evaluate the extent to which the partnership meets the considered criterion. Key assessment questions for successful and strategic partnerships criteria are given in **Appendice 1** and **Appendice 2**.

**Assessment:** the grading will be assigned as follows:

- ✓ Very low = 1 point
- ✓ Low = 2 points
- ✓ Average = 3 points
- ✓ High = 4 points
- ✓ Very high = 5 points

### 3.5.3 Successful partnerships criteria

The adopted criteria to assess whether a partnership is successful or not are: Ownership, Inclusive approach, Clearly agreed responsibilities and a strong commitment, Sufficient and shared resources and exchanged information, Equity, Good practice in management and Transparency of decision making, Clearly defined working program, Good relationship and efficient communication, Planned and leveraged external relations and Monitoring and evaluation. The guiding notes to each criterion are presented in the **Table 3**.

Table 3 Successful partnerships criteria

Criteria	Guiding notes
<b>Ownership</b>	Stands for the partners’ approach towards their partnership, its goals and its work. Partners are equally engaged and have a strong feeling of ownership
<b>Inclusive approach</b>	Relevant actors from all parties are involved in planning and implementation activities

<b>Clearly agreed responsibilities and a strong commitment</b>	Strong commitment to agreed responsibilities, the nature of co-operation and responsibilities are clarified. Roles, rights and obligations are clearly agreed and stated.
<b>Sufficient and shared resources and exchanged information</b>	Material and non-material resources, knowledge, know-how and information are shared within the partnership Data and information: statistical data, information about resources and politics...
<b>Equity</b>	Fair opportunities within the partnership are secured All actors have obligations as much as they have rights
<b>Good practice in management and Transparency of decision making</b>	There is a firm foundation of good practice in financial controls, administrative procedures, human resource management... Administrative: organizing activities, meetings and projects Financial: applying for and managing grants and funds HR: Assigning the best profile for the available positions Each partner is open about how it makes decisions concerning the partnership. Notes of internal meetings may be shared and partners may have a right to attend key meetings of the other party when partnership related issues are discussed.
<b>Clearly defined working program</b>	A working program based on concerted strategy, clearly defined objectives comprehensive analysis, assessment of local needs and a consultation process
<b>Good relationship and efficient communication</b>	Mutual respect, trust, shared values, interests and benefits and a good two-way communication between partners
<b>Planned and leveraged external relations</b>	Public relations activities and a clear external reporting system are planned Relationships with the community, funders, and other professional networks are fully leveraged to advance the partnership's goals.
<b>Monitoring and evaluation</b>	Resources and energy are devoted to monitoring and evaluation, performance indicators are clearly defined The process of monitoring and reviewing should focus not only on the achievement of agreed goals but also on the adopted work methodology (Experience shows that a combination of both internal and external monitoring approaches leads to the best results and greatest partner satisfaction.)

### 3.5.4 Strategic partnerships criteria

Similar to successful partnerships criteria, strategic partnerships criteria are defined and explained in **Table 4**. The adopted criteria are: Clearly formulated strategic objectives, Sustainability, Resilience, Ability for growth, Support of innovation and Support of exchanging best practices.

Table 4 Strategic partnerships criteria

Criteria	Guiding notes
<b>Clearly formulated strategic objectives</b>	Strategic objectives are planned by partners including objectives for the future relations development Program targets are compatible with relevant strategic issues/challenges (nationally/internationally/related to the organization's own strategic goals) Partners clearly formulate goals, strategic interests, and direct their resources and financial instruments to realization
<b>Sustainability</b>	Sustainability over time is ensured by planning a long-term impact after the project actions are terminated
<b>Resilience</b>	Certain measures are taken / planned against arising challenges (change of regulations, lack of resources, conflicts...) and changing the partnership conditions and framework is / may be considered when necessary, in order to ensure resilience
<b>Ability for growth</b>	The partnership is characterized by its ability for growth and setting up possible future projects Extension of the field of activities is possible when necessary
<b>Support of innovation</b>	Partnership projects are expected to develop innovative outputs, and/or engage into intensive dissemination and exploitation activities of new products or innovative ideas
<b>Support of exchanging best practices</b>	A learning culture is fostered, i.e. one where all partners are able to learn from one another by allowing new ideas to come forward in an open exchange of experiences Allowing organizations to develop and reinforce networks, exchange ideas, methods and best practices

## 4 Findings

In this section, partnerships baseline characteristics are given following the data collection activities in the partner countries Ethiopia, Ghana, Malawi and Tunisia (Table 5-8). Based on the

developed PAT, individual criteria scores are presented via a spider diagram for each studied partnership (Figure 3-14).

#### 4.1 Partnerships analysis in Ethiopia

Table 5 Partnerships in Ethiopia: Baseline characteristics (Appendix 2)

ID	Name Of partnership	Partners	Countries /regions	Year of establishment / duration	Output	Target group	Type of transaction
E1	Digital Health access initiatives	-State Ministers: policy and planning directorate Information communication and Technology directorate  -Digital Health Access /John Snow, Inc (USA)	Ethiopia /USA	2018-2024	Formulate Policy, strategy and directives for the application of eHealth solutions in the health system  Support for the design and implementation of priority e-health projects like EMR, DHIS2, eCHIS, Telemedicine, and Teleradiology	Health professionals, technical and administrative staffs in public and private facilities	Information  Know-how  Financial and materiel support
E2	Capacity Building and Mentorship Program	University of Gondar, Jimma University, Addis Ababa University, Mekele Universities, Hawasa University, Harramaya University John Snow, Inc	Ethiopia /USA	2017-2021	Create connected facilities and districts  Support the implementation DHIS2 and eCHIS	The ministry of health - Public and private facilities -Health extension workers -Communities	Experience, knowledge share support
E3	Striving for excellence in eHealth through DHIS2 academy	University of Gondar University of Oslo University of South Eastern Norway	Ethiopia /Norway	2019	Provide technical support Train health workforce on eHealth solutions	Ministry of health Regional Health Bureau Collaborator/consortium universities Health workers in public facilities	Experience, knowledge share

#### 4.1.1 Successful criteria evaluation

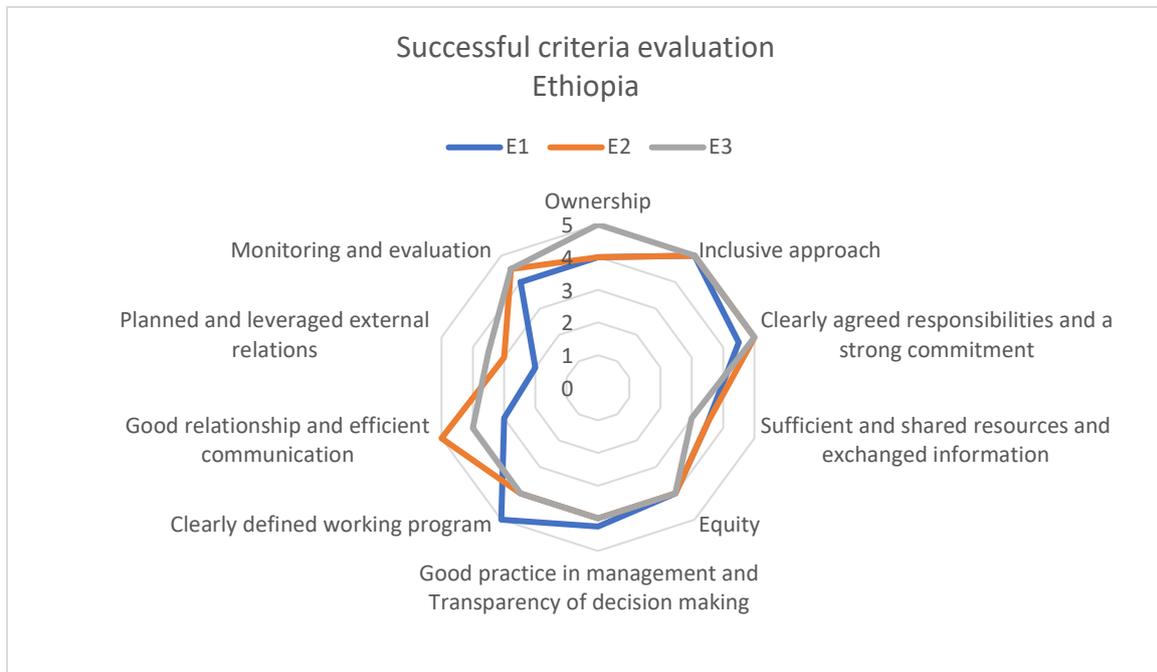


Figure 3 Successful criteria evaluation: Ethiopia

#### 4.1.2 Strategic criteria evaluation



Figure 4 Strategic criteria evaluation: Ethiopia

## 4.2 Partnerships analysis in Ghana

Table 6 Partnerships in Ghana: Baseline characteristics (Appendix 3)

ID	Name Of partnership	Partners	Countries /regions	Year of establishment / duration	Output	Target group	Type of transaction
G1	Health Systems Strengthening (HSS) accelerator Project	GHS/MoH R4D USAID	Ghana USA	2003-now	Primary Care Provider Network Improving data utilization Health Facility Mapping Support system integration and inter-operability	Health managers at the policy level	Financial and technical assistance on eHealth Knowledge Research
G2	eclaims	GHS/MoH NHIA KOFIH	Ghana Korea	2010-now	Improve claims management, including centralizing the system and the creation of an electronic claims system.	Health managers, Health care workers NHIA	Technical and financial assistance
G3	Network Infrastructure and Services	GHS/MoH NITA	Ghana	2008-now	The ICT policy implementing arm of the Ministry of Communications  Create the enabling digital environment for the use of technology in clinical care. Enforce legal and regulatory frameworks in the use of technology to ensure patient safety and confidentiality, integrity, and privacy of health data  Promote the adoption of Best Practices, IT Standards and Frameworks in Digital Health implementations.	Government agencies Local governments Telecom	Innovative technologies Standards Guidelines

					Provide technical assistance and advise in the adoption of technology among health institutions		
G4	LWEHS	GHS/MoH	Ghana	2016-now	Provide an electronic medical record for all citizens in the country, and develop a real-time bio-surveillance system, as well as develop a patient management system which would streamline the admission, discharge and transfer system.	Health workers (Doctors, Nurses, Programs managers, Directors of Departments) working in both public and private health facilities	Technical Assistance Financial Logistics
G5	DHIMS2	GHS/MoH WHO Ghana	Ghana International	2018-now	Health Information Systems nationwide deployment Review of country e-health implementation Technical Assistance and funding support for key eHealth initiatives (deployment of DHIS2 to all 260 districts in Ghana),	Health workers (Doctors, Nurses, Programmes managers, Directors of Departments) working in both public and private health facilities	Technical assistance Financial Equipment and logistics
	DHIMS2	+ USAID + University of Oslo	Ghana USA Norway				
	DHIMS2/e-tracker Mother Child health tracker HIV and AIDS TB	+USAID	Ghana USA	2012-now	Availability of standard tools and indicators across partners for country-specific adaptation	Health workers (Doctors, Nurses, Programmes managers, Directors of Departments) working in both public and private health facilities	Technical assistance Financial Equipment and logistics

#### 4.2.1 Successful criteria evaluation

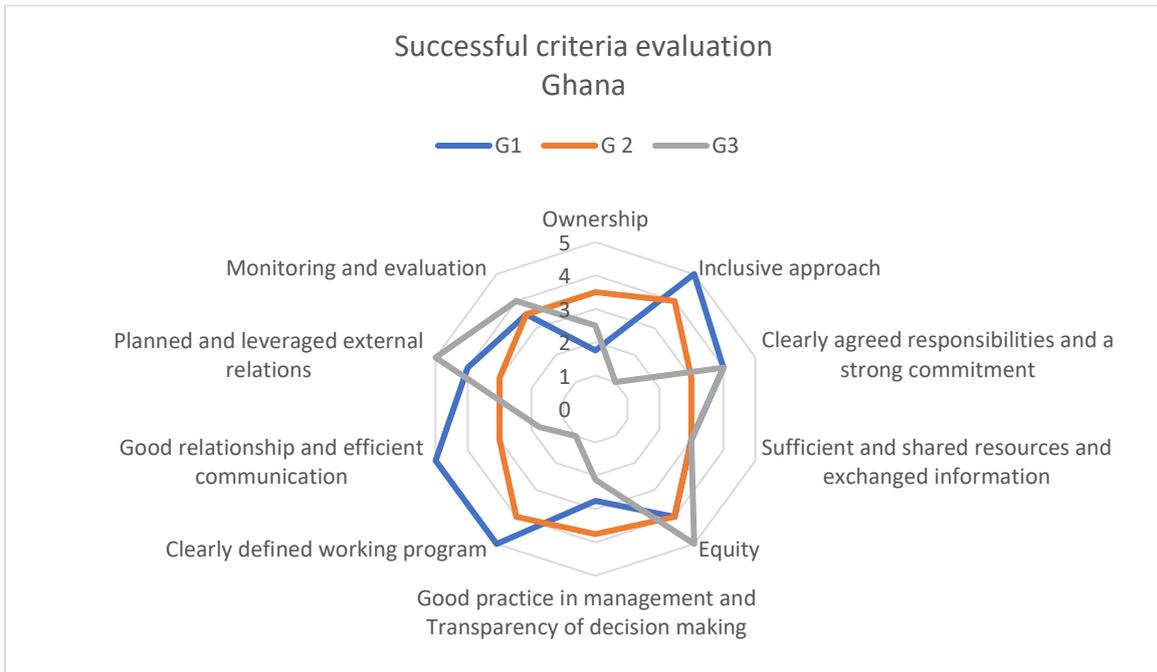


Figure 5 Successful criteria evaluation: Ghana

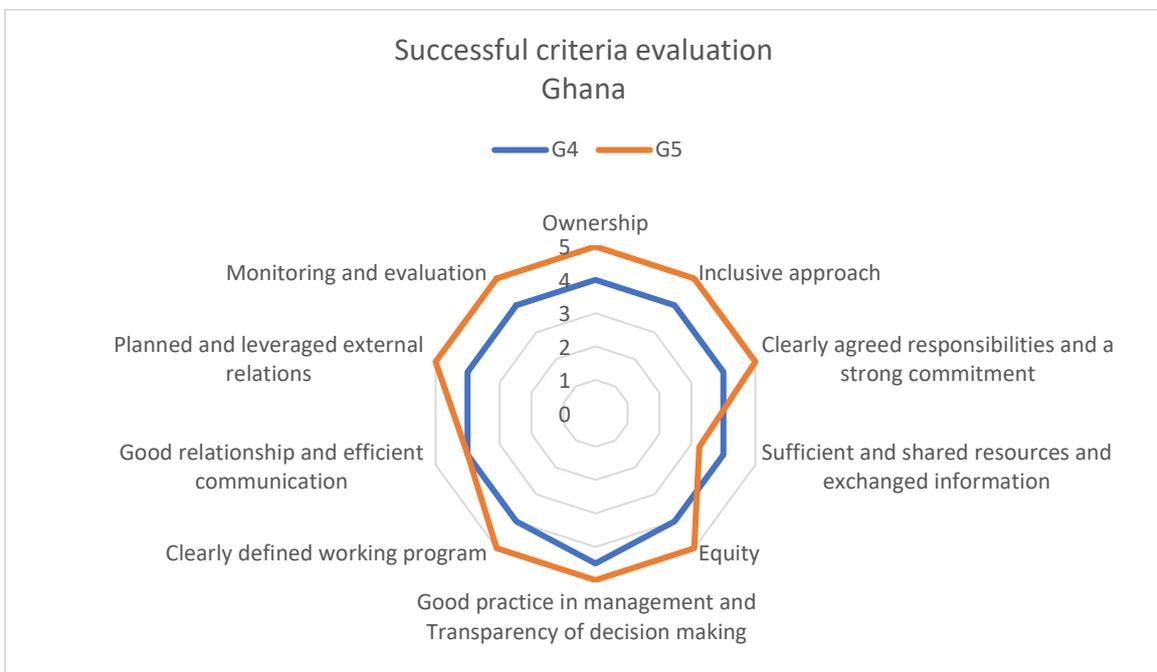


Figure 6 Successful criteria evaluation: Ghana

#### 4.2.2 Strategic criteria evaluation

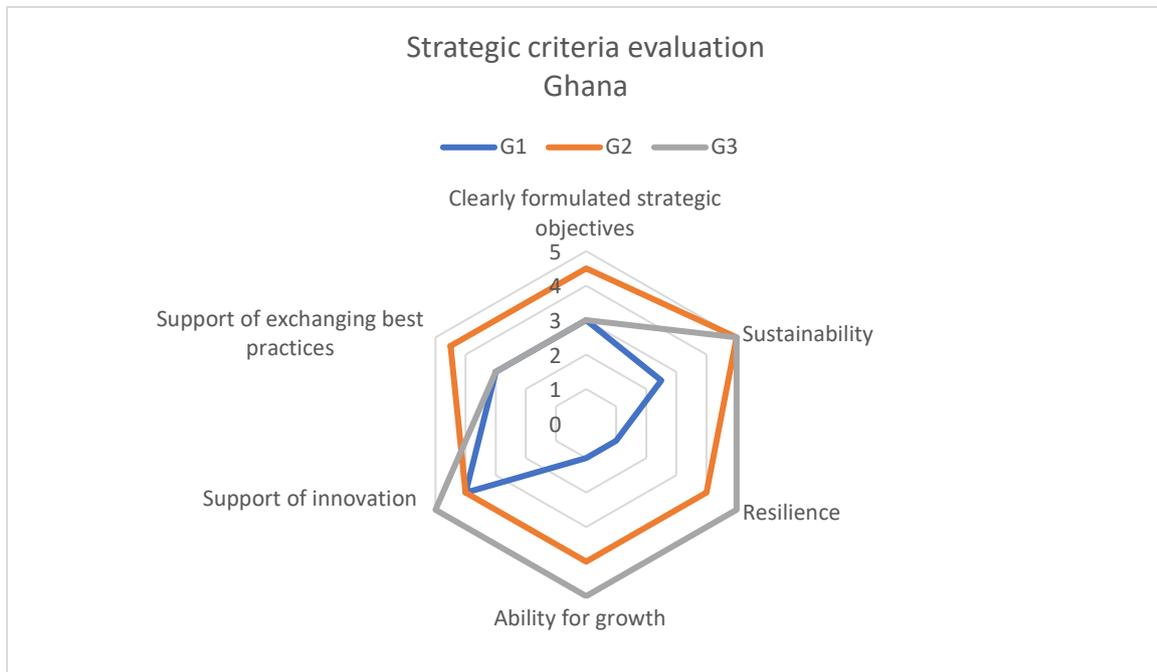


Figure 7 Strategic criteria evaluation: Ghana



Figure 8 Strategic criteria evaluation: Ghana

#### 4.1 Partnerships analysis in Malawi

Table 7 Partnerships in Malawi: Baseline characteristics (Appendix 4)

ID	Name Of partnership	Partners	Countries /regions	Year of establishment / duration	Output	Target group	Type of transaction
M1	Cooperation in e-health	GIZ MoH	Malawi Germany	2016-2023	Support for the design and implementation of priority e-health. Electronic Medical Records, LMIS, eRegister	Health professionals and Technical Staff. Health Centers Hospitals	Information Technical know-how Financial
M2	Education, Research and Innovation in eHealth	MoH Luke International	Malawi Norway	2012-now	Education, Research and Innovation activities	Frontline Health Workers, ICT and Healthcare professionals	Education, Research
M3	Community Case Management	Catholic relief services Dimagi Dtree	Malawi USA	-	To improve the quality of child health care at the primary level through integrated mobile decision-support tools	Community Health Workers	Information Technical Know-how Financial
M4	District Health Information Systems (DHIS 2) Tracker	MoH UoO	Malawi Norway	-	Aimed to collect, manage, and analyze transactional and case-based data records. Send reminder messaging to patients for upcoming clinic appointments	Health Workers	Information Technical Know-how

#### 4.1.1 Successful criteria evaluation

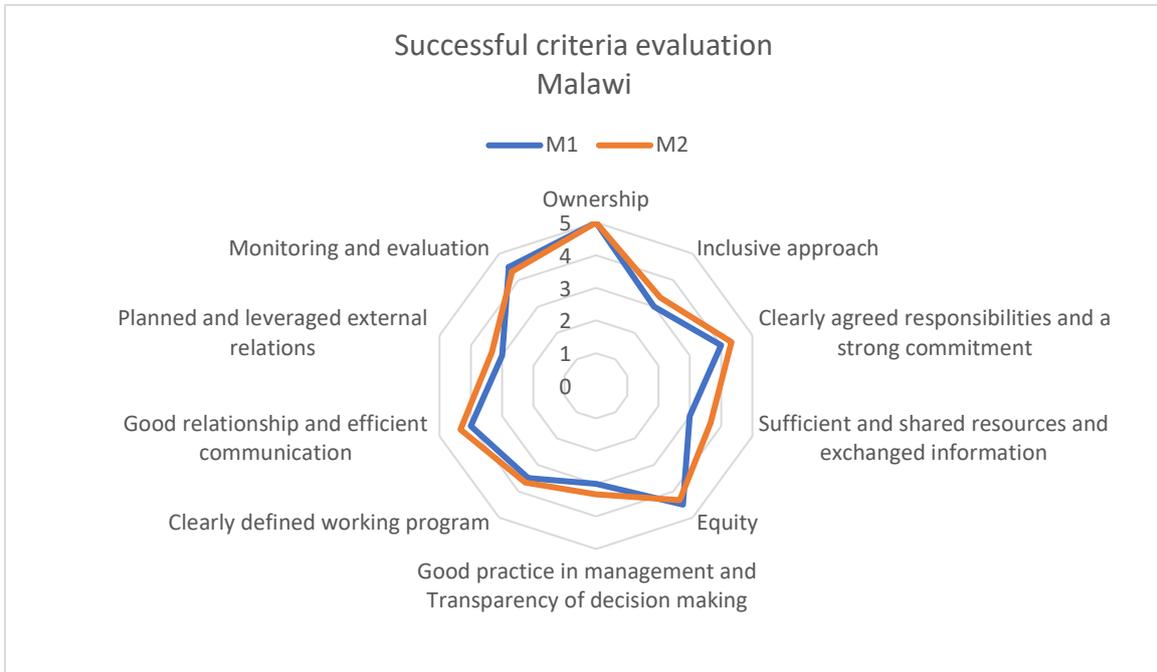


Figure 9 Successful criteria evaluation: Malawi

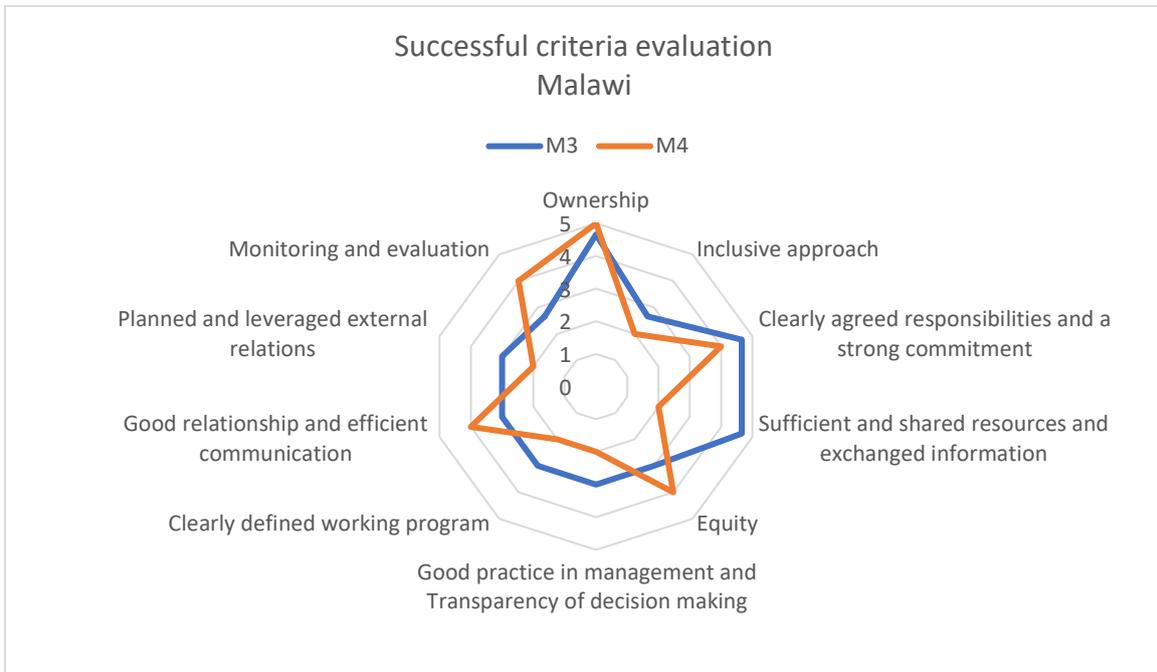


Figure 10 Successful criteria evaluation: Malawi

#### 4.1.2 Strategic criteria evaluation



Figure 11 Strategic criteria evaluation: Malawi



Figure 12 Strategic criteria evaluation: Malawi

## 4.2 Partnerships analysis in Tunisia

Table 8 Partnerships in Tunisia: Baseline characteristics (Appendix 5)

ID	Name Of partnership	Partners	Countries /regions	Year of establishment / duration	Output	Target group	Type of transaction
T1	Essaha Aziza	MoH EC	Tunisia EU	2019-now	Improved access, quality, management and governance of frontline services including some ehealth initiatives.  Enhancing the involvement of civil society in improving services and governance.	Health professionals and Frontline health establishments Civil society	Funding, training, studies, access, to equipment, participatory collaboration at the local level
T2	Ehealth development program	MoH FDA	Tunisia France	2020-2023	Modernization of the HIS in 15 public hospitals, implementation of 5 telemedicine projects, creation and animation of a network around the theme of e-health	Health professionals Health establishments	Financial support
T3	Telemedicine development	MoH FMM	Tunisia	2017	Development of telemedicine, in particular, teleradiology in the regional hospitals of Gafsa, Tozeur and Kebelli	Patients and health workers	Knowledge sharing Equipment

#### 4.2.1 Successful criteria evaluation

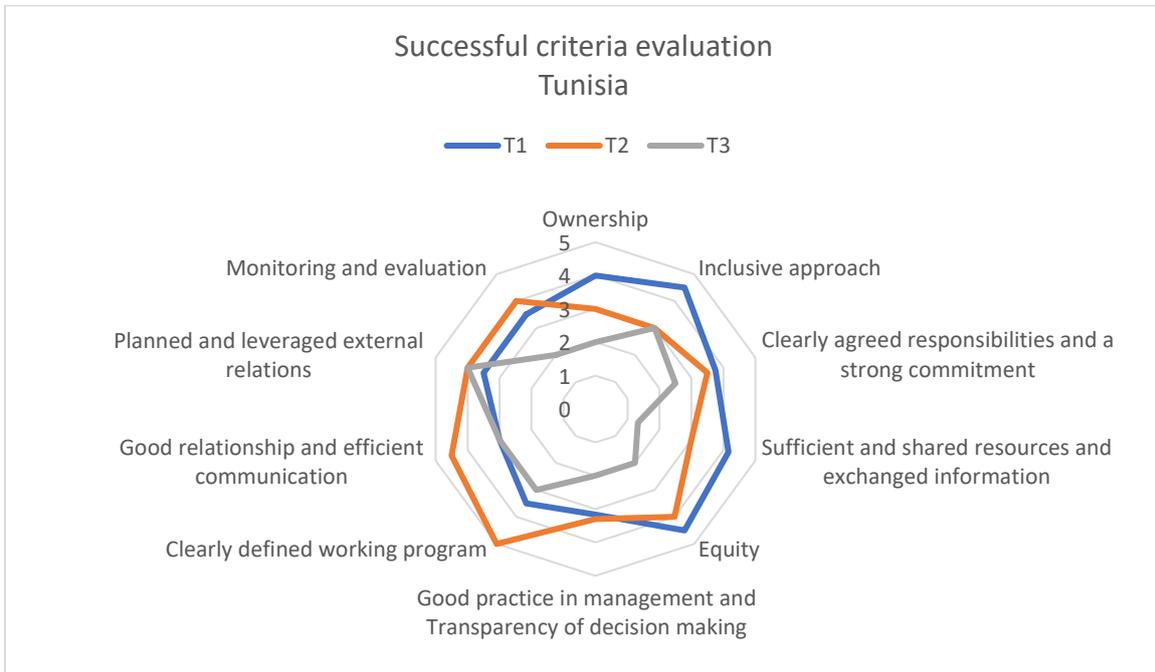


Figure 13 Successful criteria evaluation: Tunisia

#### 4.2.2 Strategic criteria evaluation

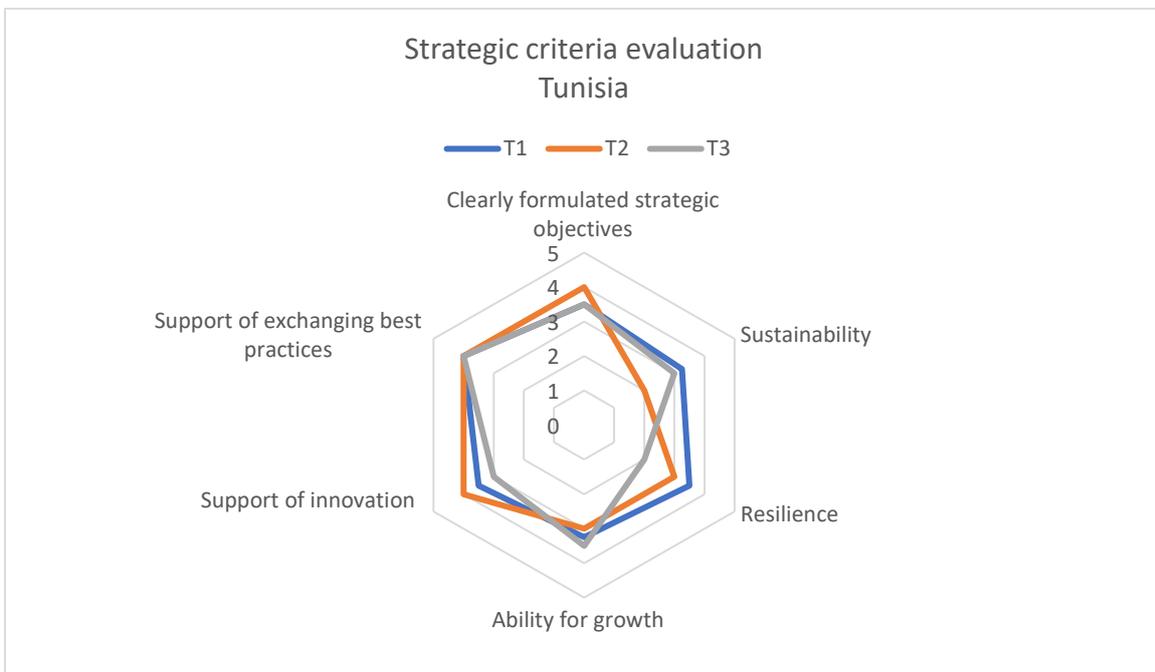


Figure 14 Strategic criteria evaluation: Tunisia

## 5 Analysis of partnerships' potential

The objective of the analysis is to classify partnerships under developing, successful and strategic according to their assessment (Figure 13). In order to have a better insight on the findings, the following scores are calculated: 'successful criteria' average score, 'strategic criteria' average score and total average score.



Figure 15 Highest level of partnerships: strategic level

The classification is done according to the following threshold of the total score:

The partnership is *developing* if its total score is inferior to 2.5

The partnership is *successful* if its total score is included in the interval [2.5 3.5[

The partnership is *strategic* if its total score is superior to or equal to 3.5

### 5.1 Results analysis in Ethiopia

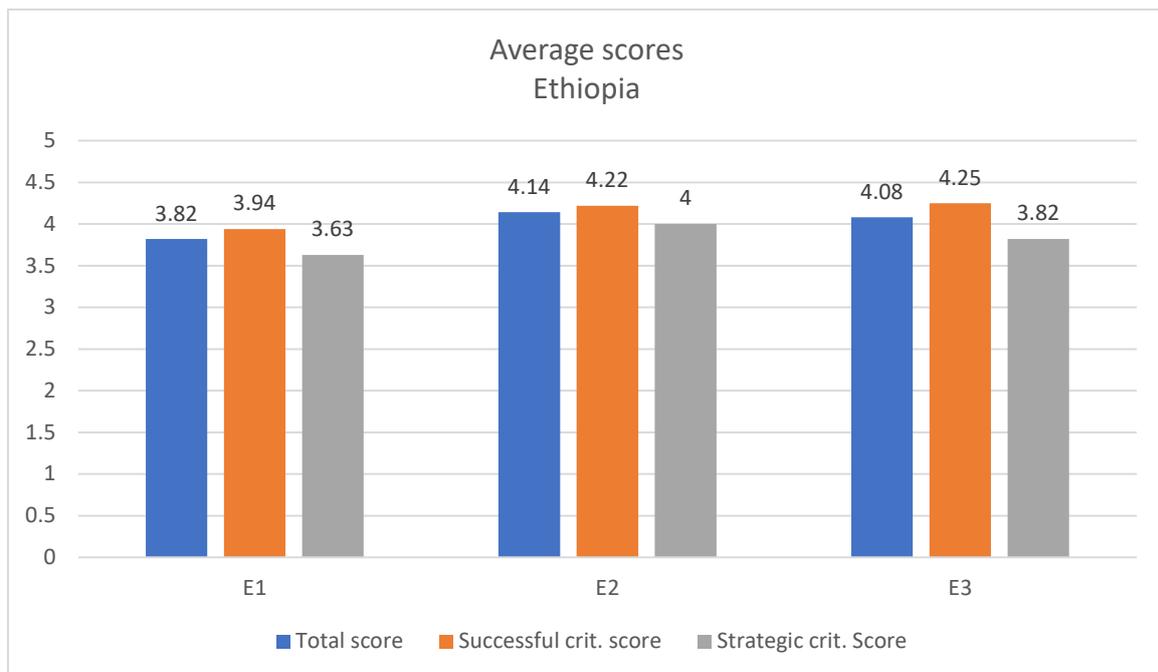


Figure 16 Partnerships average scores: Ethiopia

The total scores for partnerships E1, E2 and E3 in Ethiopia are superior to the threshold 3.5, hence they represent strategic partnerships (**Figure 14**).

Partnership E1 that supports digital health access initiatives involves state ministers from Ethiopia and John Snow, Inc. which is a global public health consulting organization from USA. Among the evaluated strategic criteria, support of innovation has been assigned the least score that is equal to 3 (Figure 4).

Capacity Building and Mentorship is the aim of the second strategic partnership, partnership E2, between several Ethiopian universities and John Snow, Inc. Strategic criteria scores range between 3.5 and 5, where resilience and ability for growth achieved the lowest score (Figure 4).

Finally, strategic partnership E3 that involves universities from Ethiopia and Norway and supports excellence in eHealth has an average strategic criteria score equal to 3.81, where ability for growth has achieved the least score which is equal to 3 (Figure 4).

As for successful partnership criteria, planned and leveraged external relations has been assessed as low with a grade equal to 2 for partnership E1, whereas the other partnerships have achieved better performance (Figure 3).

## 5.2 Results analysis in Ghana

According to the calculated scores, partnerships G1 and G3 represent successful partnerships, whereas, partnerships G2, G4 and G5 are strategic as their total scores are superior to 3.5 (Figure 17).

Partnership G2 is a partnership between Ghana Health Services (GHS), the National health Insurance Authority (NHIA) with a financial support from The Korea Foundation for International Healthcare (KOFIH), where all the strategic criteria have achieved a score equal or superior to 4 (Figure 7).

Partnership G4 is a partnership between GHS and the MoH that offers technical and financial assistance as well as logistics. All the evaluated strategic criteria achieved a score equal or superior to 4 except for sustainability that was assigned a grade equal to 3.25 (Figure 8).

Finally, partnership G5 represents a partnership among the MoH and WHO Ghana and revolves about reviewing the country's e-health implementation and offering technical assistance and funding for key eHealth initiatives. Under the framework of this partnership, additional partners

are also involved, namely, the USAID and the University of Oslo. As seen in the figure, the assigned assessment score is equal or superior to 4 for all the considered strategic criteria (Figure 8).

The three strategic partnerships have shown good performance regarding their successful criteria with their grades ranging from average to very high (Figure 5) and (Figure 8).

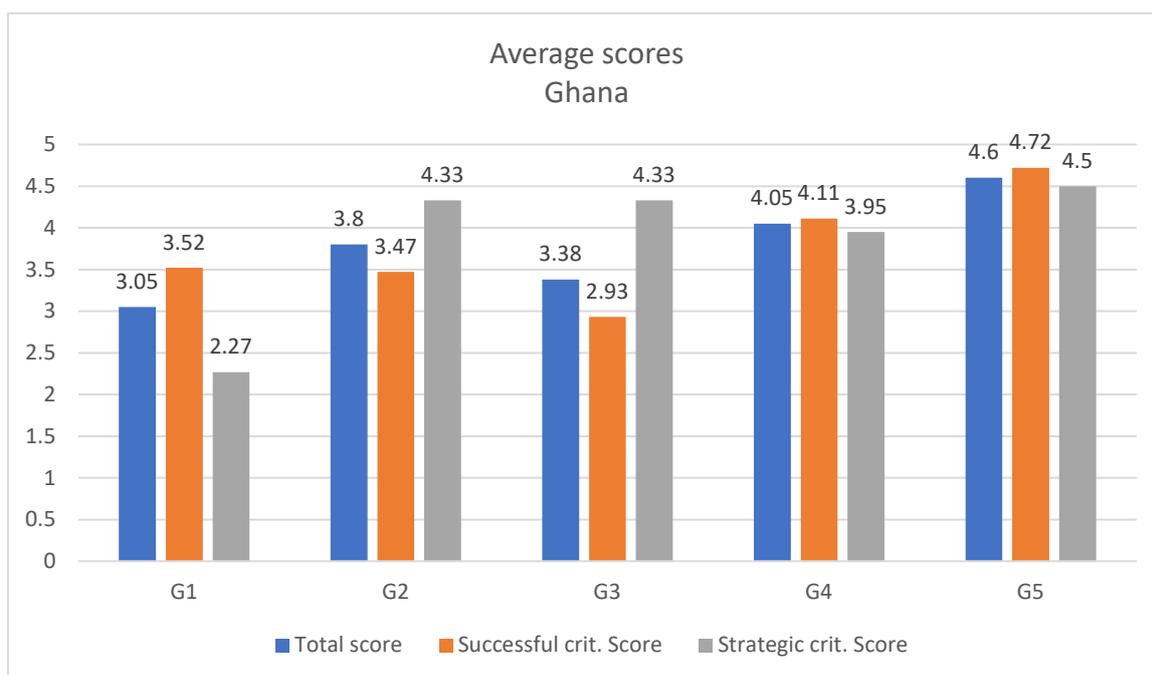


Figure 17 Partnerships average scores: Ghana

### 5.3 Results analysis in Malawi

In Malawi, partnerships M1, M2, M3 represent strategic partnerships, while partnership M4 is successful as shown by their calculated scores (Figure 18).

Partnership M1 involves the MoH and the German cooperation agency GIZ and present support for the design and implementation of priority e-health. Support of innovation has been rated low, as its assessment is equal to 2, followed by sustainability with a grade equal to 2.5 (Figure 11).

Partnership M2 is a partnership between Luke international and the MoH revolving about Education, Research and Innovation. Sustainability had the lowest assessment with a grade equal to 3 (Figure 11).

Partnership M3 is a partnership between Catholic relief services, Dimagi and Dtree companies and aims to improve the quality of child health care at the primary level through integrated

mobile decision-support tools. All the strategic criteria achieved a high grade except for sustainability that was assigned a low score (equal to 2.5) (Figure 12).

These partnerships displayed a good performance regarding successful criteria with no criterion evaluated as very low or low (Figure 9) and (Figure 10).

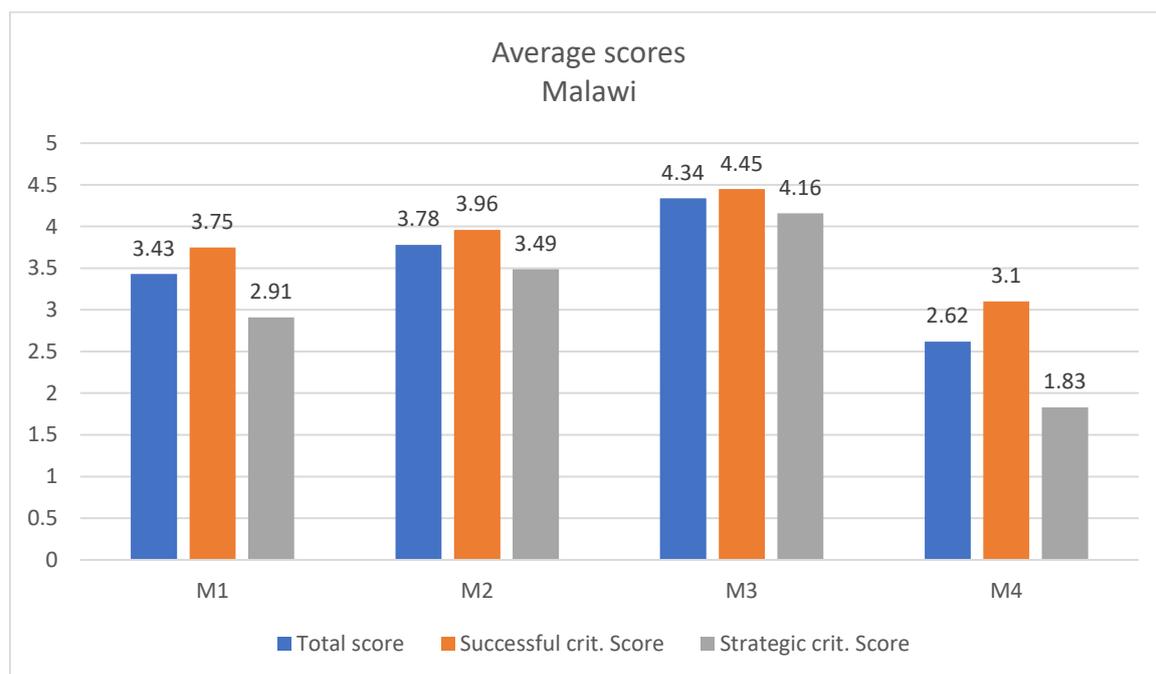


Figure 18 Partnerships average scores: Malawi

#### 5.4 Results analysis in Tunisia

In Tunisia, partnership T1 involving the MoH and the EC represents a strategic partnership (Figure 19). The latter was under the program 'Essaha Aziza', which supports health activities with social impact and has certain actions related to e-health. Among the different criteria, sustainability and ability for growth had achieved the lowest grade (equal to 3.25) (Figure 14). All the successful criteria have been evaluated as better than average (Figure 13).

Partnership T2 between the MoH and the FDA has achieved a score equal to 3.44 which is close to the predefined threshold and thus can be considered as a strategic partnership if certain aspects will be enhanced, in particular, sustainability that was assigned 2 out of 5 (Figure 14).

Partnership T3 between the MoH and the FMM is a successful partnership. As seen in figure 19, the average strategic criteria score is higher than the average successful criteria score. Aspects

that were rated the lowest, i.e. Management, monitoring and evaluation, ownerships and equity (figure 13) has to be enhanced.

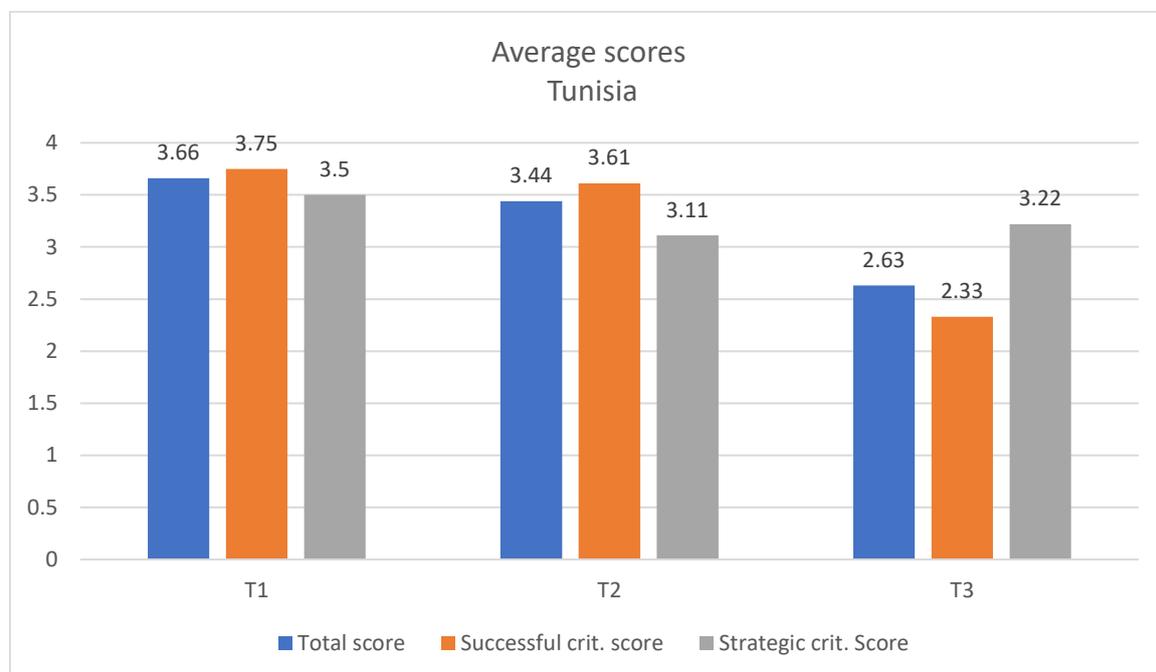


Figure 19 Partnerships average scores: Tunisia

## 6 Conclusion

Trough the present task, we collected information about existing partnerships in e-health in the four partner countries, Ethiopia, Ghana, Malawi and Tunisia. The search process involved the national, African/African and African/International levels. The analysis of the identified partnerships was followed by their classification to finally focus on strategic ones. The main objective is to enhance cooperation and strategic partnerships in e-health deployment in LLMICs. Under the framework of BETTEReHEALTH project, information related to strategic partnerships will be used in e-health policy roadmap to promote their effective use and development.

Existing partnerships analysis in the four African countries performed in this report has shown that all the strategic partnerships involve international funding organizations. It can be the WHO, a development/cooperation body (EU, FDA, GIZ, KOFIH) or an academic institution (University of Oslo, University of South Eastern Norway). Contrariwise, it is obvious that national or African/African cooperation in e-health deployment is not common. Obtained results also demonstrates the lack of governmental support in financing e-health projects and creating

dynamic cooperation. Based on these results, the next project activities will provide evidence-based advice to decision makers, i.e. ministries of health and other governmental bodies to prepare a strategic policy roadmap for e-health development.

## 7 References

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<sup>4</sup> Partnership Self-Assessment Tool, Center for the Advancement of Collaborative Strategies in Health

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<sup>5</sup> Sterne R, Heaney D and Britton B., The Partnership Toolbox, WWF-UK

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## 8 Appendices

### 8.1 Appendix 1: Key assessment questions

#### Successful partnerships criteria

Criteria	Assessment questions	Evaluation very low-low- average-high- very high
<b>Ownership</b>	<p>Do the involved members feel ownership of the structure, process and purposes of the partnership?</p> <p>Do partners agree that they are equally engaged in different partnership aspects?</p>	
<b>Inclusive approach</b>	<p>Are all relevant actors from all parties involved in planning and implementation activities?</p>	
<b>Clearly agreed responsibilities and a strong commitment</b>	<p>Is there a shared understanding of and a strong commitment to agreed responsibilities among the partners?</p> <p>Do the partners have a clear sense of their roles and responsibilities?</p>	
<b>Sufficient and shared resources and exchanged information</b>	<p>Is there enough resources? (material, funds, time, info)</p> <p>Are these resources equally shared between partners?</p> <p>To what extent the partnership supports information exchange among partners?</p>	
<b>Equity</b>	<p>Is equity a guiding principle in the partnership, regarding opportunities, resources, rights and obligations?</p>	
<b>Good practice in management and Transparency of decision making</b>	<p>Is a strong management structure established regarding administrative, financial and HR aspects?</p> <p>Are notes of internal meetings shared? DO partners have the right to attend key meetings of the other party when partnership related issues are discussed?</p> <p>Are partners open about how decisions are made concerning different aspects of the partnership?</p> <p>How is transparency of internal decision-making ensured? / Is there any adopted practices to ensure transparency of internal decision-making?</p>	

<b>Clearly defined working program</b>	Is the working program of the partnership clearly defined and coordinated based on concerted strategy, clearly defined objectives comprehensive analysis, assessment of local needs and a consultation process?	
<b>Good relationship and efficient communication</b>	How do the partners assess their relationship regarding mutual respect, trust, shared values, interests and benefits? How do the partners assess their relationship regarding communication?	
<b>Planned and leveraged external relations</b>	Do partners study some opportunities for external relationships? / Are there existing opportunities to deepen the partnership current external relationships?	
<b>Monitoring and evaluation</b>	Do monitoring procedures exist to control the progress? Are performance indicators that reflect the quantitative and qualitative objectives developed?	

### Strategic partnerships criteria

<b>Criteria</b>	<b>Assessment questions</b>	<b>Evaluation</b> very low-low- average-high- very high
<b>Clearly formulated strategic objectives</b>	Does the partnership have SMART objectives shared by all its partners? (SMART = Specific, Measurable, Achievable, Results Focused, & Time Limited)  Are program targets compatible with relevant strategic issues and challenges related to (national/international/ the organization's own) strategic goals?	
<b>Sustainability</b>	Did partners take /plan certain measures to sustain the partnership/ partnership impact after the program completion?  Do partners consider changing the partnership conditions and framework when necessary?	
<b>Resilience</b>	Did partners take / plan specific measures against arising challenges (change of regulations, lack of resources, conflicts)?  Do / did partners consider the possibility of changing the partnership conditions and framework when necessary?	
<b>Ability for growth</b>	Do partners consider the possibility of partnership growth/extension or setting up possible future projects?	

	Do partners consider the possibility of extending the field of activities when necessary?	
<b>Support of innovation</b>	Does the partnership focuses on creating/supporting innovation activities (engage into intensive dissemination and exploitation activities of new products or innovative ideas)?	
<b>Support of exchanging best practices</b>	Do partners develop activities to foster a learning culture (where all partners are able to learn from one another by allowing new ideas to come forward in an open exchange of experiences)?  Do partners implement activities to develop and reinforce organizations networks, exchange ideas, methods and best practices?	

## 8.2 Appendix 2: Partnerships in Ethiopia: Complementary information

### Baseline characteristics: Abbreviations

Abbreviation	Full name
EMR	Electronic Medical Record
DHIS2	District Health Information Software Version 2
eCHIS	Electronic Community Health Information System

### Baseline characteristics: Organizations

Organization	Country	Description
John Snow, Inc	USA	John Snow, Inc. is a public health research and consulting firm in the United States and around the world. Named after the English physician John Snow, JSI, with its <b>nonprofit partner</b> JSI Research & Training Institute, Inc., provides technical and managerial assistance to public health programs worldwide.

### 8.3 Appendix 3: Partnerships in Ghana: Complementary information

#### Baseline characteristics: Abbreviations

Abbreviation	Full name
R4D	Results for Development
NITA	National Information Technology Agency
DHIS2	District Health Informational System 2
NHIA	National Health Information Authority
TB	Tuberculosis
HIV	Human Immunodeficiency Virus
AIDS	Acquired immunodeficiency syndrome
GhILMIS	Ghana Integrated Logistics Management Information System
LWEHS	Lightwave eHealthcare services
GCNET	Ghana Community Network Services Limited
KOFIH	Korea Foundation for International Health Care
EPI	Epidemiology
EMR	Electronic Medical Records
AMR	Antimicrobial Resistance
FHR	Financial Health Records
HR	Human Resources

#### Baseline characteristics: Organizations

Organization	Country	Description
GHS	Ghana	Public organization: The Health service primarily administrates the health services provided by the government and in implementing government policies on healthcare.
R4D	USA	NGO: Support in the development of the health sector; to serve as technical co-lead for the Frontier Health Markets Global Technical Assistance Program
USAID	USA	International Funding Organization: Support in the development of the health sector
KOFIH	Korea	International Funding Organization: Support in the development of the health sector

NITA	Ghana	Public organization: the agency responsible for implementing Ghana's IT policies. Its mandate includes identifying, promoting and developing innovative technologies, standards, guidelines and practices among government agencies and local governments, as well as ensuring the sustainable growth of ICT via research & development planning and technology acquisition strategies to facilitate Ghana's prospect of becoming a technology-driven, knowledge-and values-based economy as espoused in the e-Ghana project which ideally seeks to assist the Government generate growth and employment, by leveraging ICT and public-private partnerships.
WHO	Switzerland	International Organization: Support in the development of the health sector

## 8.4 Appendix 4: Partnerships in Malawi: Complementary information

### Baseline characteristics: Abbreviations

Abbreviation	Full name
GIZ	Deutsche Gesellschaft für International Zusammenarbeit (GIZ)
LMIS	Logistics Management Information System
DHIS2	District Health Informational System 2

### Baseline characteristics: Organizations

Organization	Country	Description
Luke International	Malawi	<p>Luke International (LIN) is an International non-Profit Christian organization head-quartered in Norway with an Office in Malawi. Its vision is to restore human’s health and dignity.</p> <p>LIN is recognized as an INGO (International nongovernmental organization) in Malawi. Luke works in the areas of Health Information Systems Strengthening, Research and Capacity Building, and Community Development</p>
Catholic relief services	Malawi	<p>Catholic Relief Services began working in Malawi in 1997 at the invitation of the Episcopal Conference of Malawi. Initial work focused on improving food security, with CRS carrying out Malawi's first programs with U.S. Agency for International Development (USAID) food aid. Today, CRS Malawi implements food security, emergency response, nutrition, WASH and capacity building activities funded by both public and private donors throughout the eight Dioceses of Malawi.</p>
Dimagi	Malawi	<p>Dimagi is an International Consulting Organization in Information &amp; Communication Technology sector. Dimagi is helping Malawi’s Ministry of Health (MoH) realize their vision of a locally-owned, locally-managed, and locally-sustainable digital integrated Technologies.</p>
Dtree	Malawi	<p>D-tree International (D-tree) is a non-profit organization that has developed numerous digital platforms to strengthen community health systems in low and middle income countries. In Malawi, DTree designs, develops and implements digital health systems to improve the clinical outcomes of maternal and child health in Malawi. D-tree has been working with the Ministry of Health to develop what has grown into the “Digital Village Clinic”. This is a comprehensive system supporting Health Surveillance Assistants (HSA), their Supervisors and the Ministry of Health in every aspect of the HSAs work.</p>

## 8.5 Appendix 5: Partnerships in Tunisia: Complementary information

### Baseline characteristics: Abbreviations

Abbreviation	Full name
FDA	French Development Agency
FMM	Faculty of Medicine of Mounastir
EC	European Commission

### Baseline characteristics: Organizations

Organization	Country	Description
FDA	France	The French Development Agency supports and accelerates the transition to a fairer and more sustainable world. Focusing on climate, biodiversity, peace, education, urban development, health and governance, our teams carry out more than 4,000 projects in France's overseas departments and territories and another 115 countries. In this way, we contribute to the commitment of France and French people to support the Sustainable Development Goals (SDGs).
EC	Europe	The European Commission (EC) is the executive branch of the European Union, responsible for proposing legislation, enforcing EU laws and directing the union's administrative operations.