LASER PULSE

Long-term Assistance and Services for Research (LASER)
Partners for University-Led Solutions Engine (PULSE)

APPLICATION OF COMPREHENSIVE ISSUE ANALYSIS TO INFORM DEVELOPMENT RESEARCH IN EAST AFRICA, PART 1: BASIC EDUCATION (BE), MATERNAL/CHILD HEALTHCARE (MCH)

SUPPLEMENT TO AGREEMENT NO. AID-7200AA18CA00009

APRIL 2019

Application of Comprehensive Issue Analysis to Inform Development Research in East Africa, Part 1: Basic Education (BE), Maternal/Child Healthcare (MCH)

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Description of this Document

Development researchers generally want to identify, examine, and improve the most important elements of the system in which they work (e.g. maternal/child healthcare) that are not yet adequately addressed. Within any given system, however, it is quite common to observe multiple unmet conditions that limit problem resolution such that working on one (or even a few) in order to "make progress" is rarely sufficient to overcome a systemic issue. Additionally, by the time development practitioners are able to address other conditions, the state of those already dealt with may have changed. The key is to pursue solutions that address the main unmet conditions simultaneously, as a system, by thinking ahead about the connection between potential solution paths and outcomes that are most likely to lead to on-the-ground impact.

With this in mind, researchers at Purdue University have developed a method (initially referred to as *Comprehensive Issue Analysis*), rooted in innovation science, to assist in the identification of the most important and interrelated suite of factors that define a specific grand challenge problem. LASER PULSE employs this approach to frame and analyze the scope of issues that are related to various region-specific development priorities. For each priority area, a view of the "conditions for success" that are typically required to address the specific category that poses a challenge is developed. Gathered from an extensive literature review and a deep mining of internet resources, these conditions build upon patterns understood in innovation science. With input from advisors knowledgeable on the current state of conditions in the region of focus, as well as perspectives gained from stakeholders engaged in LASER PULSE's R4D workshop sessions, these generalized conditions for success are shortlisted to specifically call attention to those that are required in the specific context and not adequately addressed. The results of this input gathering process then help frame development research themes and focal areas that form the basis of a Request for Applications (RFA) for funding of LASER research grants that the USAID-funded LASER PULSE consortium will subsequently award. RFAs will be generated for selected development sectors in various countries of interest to USAID; the first RFA will be for East Africa.

Note that this document represents the first iteration of this innovation science method; refinements to the process are ongoing and have already resulted in certain revisions. For example, the overall name of the approach is now referred to as "Comprehensive Success Factor Analysis" to more clearly convey its intent. The tangible artifacts of the process itself have also undergone significant revision, such that the tools for application included in this document have been superseded by newer versions (e.g., success

factor trees → success factor checklists; system template → system synthesis template). As such, this document represents – *and thus should be viewed as* – an early stage in the evolution of an overall process, and its contents should therefore be properly considered as archived. Future documents in the present technical report series entitled *LASER PULSE R4D Innovation Science Frameworks and Tools* will be more accessible and contain usable tools for those interested in applying them.

Content Type Definitions

Guide for Facilitators

A document that provides an overview of the theory that supports specific Innovation Science methods used for a particular analysis, as well as step by step instructions to facilitate a related working session, inclusive of activity descriptions, activity timing, a listing of required supplies and materials to run the session, input capture templates, and responses to frequently asked questions (FAQs).

Success Factor Tree

An extensive outline of the key factors that are likely needed to achieve commonly desirable outcomes when addressing a specific grand challenge problem.

Stakeholder Map

A visual representation of the stakeholder categories/roles that are likely to play a vital role in addressing a specific grand challenge problem.

Template

A custom-designed printable framework intended to encourage users to consider specific questions and record related information when performing work in support of specific Innovation Science analyses.

Correct Citation

Sinfield, J.V., R.R. Kotian, and M.M. Busse. 2019. "Application of Comprehensive Issue Analysis to Inform Development Research in East Africa, Part 1: Basic Education (BE), Maternal/Child Healthcare (MCH)". *LASER PULSE R4D Innovation Science Framework and Tools* Technical Report Series. Innovation and Leadership Studies Program, Purdue University, West Lafayette.

Disclaimer

Basic Education
Success Factor Tree

A. Security/Safety

1 **Measures to ensure safety within the basic education system exist**

Equal safety, security and opportunity is provided to all residents (i.e. no discirimination based on gender, race, religion, disbility, income
2 level, age, etc.)

3 Corruption, if present, can be circumvented

4 The basic education delivered meets certain **quality standards**

5 *Quality standards and thresholds for basic education are established

6 *Quality standards are established for curriculum

7 *Programs are designed and implemented based on quality standards established

8 *Study materials to complement programs uphold quality standards required

9 Methods of assessing student competence are formalized

10 Quality requirements are established for workforce

11 The school is accessible to those who need to use it

12 The path to school is safe and easy to traverse

13 The path to school is reliable and not regularly impacted by weather

14 Any transport system uses safety measures to protect student/teacher/staff well-being

15 The means of transport is consistent and reliable

16 The school environment is safe for all participants

17 *Schools provide safe work environment

18 School staff has proper ethics training

19 Safe and secure mechanisms exist to report violations

20 *Schools are a safe learning environment for students

21 *Acceptable disciplinary measures are in place for taking action against misconduct

22 *Acceptable disciplinary measures are in place to prevent bullying
23 *Acceptable disciplinary measures are in place to prevent misconduct on the part of teachers
24 *Acceptable disciplinary measures are in place to prevent misconduct on the part of other stakeholders involved
25 The ability of a school to provide a basic education is not impacted by competition from surrounding entities
26 Surrounding schools do not impact ability of school to provide resources to students
27 Surrounding entities do not harm natural resources used by school
28 Basic education is recognized by higher institutes of education so students can advance

B. Policy

1 **The governing bodies of the country have established the importance of equitable access to basic education through structured policies**
2 Policies are inclusive of all irrespective of gender, race, religion, disbility, income level, age, etc.
3 Policy makers represent the people for whom they are making policy
4 Policies framed are economically operational
5 Policies framed are functionally operational
6 Policies are protected from misuse
7 Policies are regularly updated
8 Structured policies have been developed and implemented to create availability/access to basic education
9 Policies clearly define "basic education"
10 Policies establish national goals for provision of basic education
11 Policies on various aspects related to basic education exist
12 Policies on provision of basic education exists
13 Policies on raising awareness and sensitizing population about basic education exist

Basic Education
Success Factor Tree

14 Policies on provision of education infrastructure exist
15 Policies on teacher training and development exist
16 Policies on curriculum for basic education exist
17 Policies on education delivery system exist
18 *Policies on improvement of techniques and technology used in education exist
19 *Policies on assessment methods utilized exist
20 Policies on making education affordable exist
21 Policies on quality of education delivered exist
22 *Policies on education being universally available to all students exist (e.g. different socio-economic backgrounds, religions, students that have different abilities and needs, age)
23 Policies provide means to measure quality of education provided by different institutions
24 Policies allow schools to meet operational needs if they are otherwise not being met
25 Policies protect the rights of those involved in the education system
26 Policies protect student rights in schools
27 Policies protect staff rights in schools
28 Policies promote partnerships
29 Policies promote private sector engagement to create access to primary education
30 Policies promote delivery of education
31 Policies promote partnerships with other organizations withing the country (e.g. Non-profit organizations)
32 Policies allow international partnerships (e.g. Funding agencies, schools)
33 Policies promote partnerships between schools
34 *Policies are scalable and flexible
35 *Policies are flexible to allow and incorporate development in the education sector
36 *Policies are flexible to allow regional variations in teaching mediums and techniques

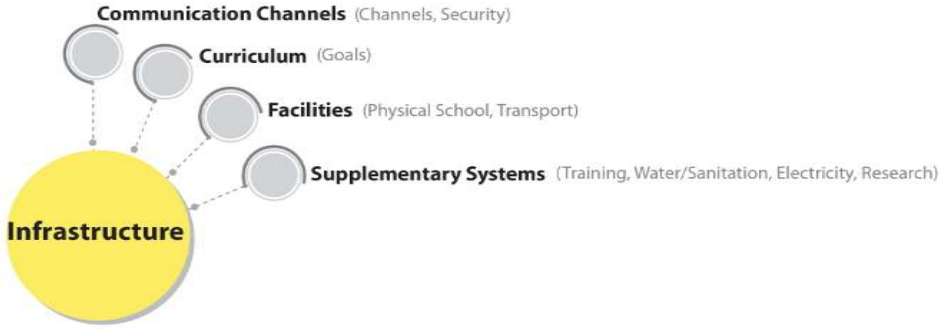
C. Government

1 **Country has received Government commitment to support the provision of basic education to all children**
2 *Government is committed to creating equitable access to quality education
3 Government understands and supports the need for access to basic education
4 *Government supports development of education technology and teaching methods
5 *Government and policy makers have an ambitious, hopeful, committed attitude
6 Government is open to ultilizing opportunities for private sector engagement to achieve goals related to basic education
7 Government has means to assess quality of basic education provided
8 *Body responsible for evaluation of outcomes of increasing engagement of population in basic education exists
9 *Body responsible for defining/designing curriculum for basic education exists
10 *Education researchers are engaged in curriculum development
11 *Entities resposible for developing study material (e.g. Textbooks, videos, activities) exist
12 Body responsible for distribution of study materials exist
13 Body responsible for regulation of national examinations exists
14 *Body responsible to measure outcomes of the basic education system exists
15 *Body responsible for training and assessing teachers exists
16 Policies and laws on basic education are adhered to across all **political levels** (National, Regional, Local)
17 *All political sectors are made aware of policies related to basic education
18 Relevant representation from all political levels are allowed to participate in the regulation and policy framing
Representation includes members from the education sector (e.g. education administrators,
19 education researchers)
20 Government is supportive and influential in driving awareness and implementation of policies

Basic Education
Success Factor Tree

Different government bodies at national, regional and local levels are in agreement with policies and work towards its
21 implementation
22 Checks are in place to make sure policies and regulations are not misused
23 *Public (government) as well as private (non-government) schools are required to uphold quality
24 *Local and regional education system operators are comfortable working with each other
25 Local leaders have ability to influence and promote education
26 Local leaders believe they can benefit population by facilitating awareness of education
27 Local leaders believe they can benefit population by facilitating access to education
28 Leaders care for the greater good of the communities, regions and the nation
Leadership believes that improving access to quality education can have a long-term impact on the community,
29 state, and the nation
30 Local leaders are commited to supporting basic education needs of the region
31 Local leaders are cooperative with government
32 Local leaders are cooperative with body governing the school
33 Leaders are motivated to supporting education system requirements for development
34 Leadership structure exists within the school
35 Leaders are commited to providing basic education based on policies and cirriculum to students
36 Leaders are cooperative with school funding agencies
37 Support structure for school needs is in place
38 Organization representing student's needs is functioning
39 Organization representing staff needs is functioning
40 Government does not interfere with schools aiblity to meet needs
41 Leaders are cooperative with support groups within the school, community, state and nation

D. Infrastructure



1 **Infrastructure to support effective delivery of education is in place or can be developed in an equitable manner**

Effective channels of communication exist or can be developed to spread awareness among populations (e.g. mass media channels like
2 radio, television, interpersonal channels like nutritionist, local sellers, markets, institutional channels like schools, government)

3 *Acceptable and robust communication channels are identified or developed

Existing institutions and/or private sector channels are leveraged to spread awareness among the masses (e.g.
4 trusted private-sector entities that are popular among communities)

5 *Channels to spread awareness that have high impact and are reliable are identified

6 Drivers of awareness acknowledge the need for awareness among the population about basic

Channel drivers formalize intent to raise awareness about nutrition and food security by setting
7 outcome based objectives and developing strategies

8 Channels to spread awareness are secure and stable

9 Channels to spread awareness are supported by sufficient resources

10 Channels to spread awareness are equipped with material resources

11 *Channels to spread awareness are equipped with technological resources

12 Channels to spread awareness are equipped with human resources

13 Channels to spread awareness are financially secure

14 Channels to spread awareness operate legally in compliance with existing laws and

15 Channel drivers are trusted by the government and other stakeholders

16 *Channel drivers and the communication channels utilized are trusted by the population

17 Communication systems utilized are persistent and secure for long-term purposes

18 Involved stakeholders trust communication channels used

19 *Different and multiple channels of communication are used to raise awareness among different target

Basic Education
Success Factor Tree

A variety of effective channels of communication exist
Barriers preventing community level reach are overcome
*Viable private sector channels are considered and employed to overcome barriers
Communication channels and systems are resilient to environmental and political change
Awareness can be spread in a socially acceptable way
Awareness can be raised among vulnerable/high risk target populations
*Infrastructure exists to facilitate communication between different stakeholders
A curriculum for basic education is established
Basic education curriculum forms the foundation and aligns with curriculum of higher grade levels
Curriculum is updateable
Curriculum is appropriate in terms of difficulty level for target student age range
Curriculum enables individual to achieve academic, professional, and technical needs and national, social, and economic
*Curriculum ensures the acquisition of appropriate levels of literacy
*Curriculum ensures the acquisition of appropriate levels of numeracy and numerical manipulations
*Curriculum ensures the acquisition of appropriate levels of communication
*Curriculum ensures the acquisition of appropriate levels of life skills, as well as the ethical, moral and civic values needed for laying a solid foundation for lifelong learning
*Curriculum enables creativity, practicality, and productivity
*Curriculum supports a culture of democracy, tolerance, social, and environmental awareness
*Curriculum is is based on pedagogies that stimulate intellectual and practical qualities of all learners
Infrastructure facilities for education in a region exist or can be developed
Private schools or intitutions have required licenses to operate as per regulations
Infrastructure (such as schools and institutions) for delivery of basic education is secure and reliable
The infrastructural system is environmentally friendly
The infrastructure is accommodating and promotes equality/equal access to all students (e.g. students that come from different backgrounds, students that may need special accommodations)
Regional community leaders are supportive of infrastructure development
Infrastructure provides a conducive learning environment (e.g. classrooms, labs, libraries, computer centres, potable water, electricity, toilets, furniture)
The education delivery system is technically scalable
Infrastructural needs properly accommodate students (no overcrowding or classroom shortage)
Infrastructure facilities include functional sanitation facilities
Infrastruture exists to deliver education to non-traditional groups (e.g., youth/young adults)

50 Infrastructure developers have access to resources to enable development
51 *An effective education delivery system can be designed within the constraints of available resources
52 Appropriately skilled labor can be sourced for construction, operation and maintenance of schools
53 Acceptable working conditions can be created in the system
54 Locally sourced labor can be employed
55 Facilities to maintain operation of schools exists or can be developed
56 A maintenance approach can be designed employing local talent and resources
57 Maintenance procedures can be performed via local talent
58 Effective maintenance practices can be achieved
59 Infrastructure to collect and distribute study materials (e.g. textbooks, stationery) can be identified or setup
60 Local businesses can be identified to source study supplies
61 Distribution of school supplies can be done through local traders
62 Boarding school infrastructure meets all needs of students
63 Dormatories exist and have appropiate accomodations (i.e. beds, workspace, light, sanitation facitlites)
64 Clinic infrastructure is equipped with supplies to manage needs at school
65 Kitchen infrastructure is operational and meets feeding capacity
66 Religious facilities are available where appropriate
67 Water infrastrucuture provides safe, clean water that does not cause disease
68 Recreational infrastructure is available and maintained
69 Housing facilites with appropriate accomodations are available to staff
70 Infrastructure exists to facilitate travel to school
71 Roads connect communities to schools
72 The path to school is safe and easy to traverse
73 *Obstructions to the safe passage of commuters to school can be overcome
74 Transportation modes exist to transport students to school everyday
75 The mode of transport is safe
76 The mode of transport is trusted by families/communities
77 The mode of transport is efficient
78 The mode of transport is reliable
79 Alternative means to deliver education are sought where transportation is not feasible (e.g. online education, home school, mobile solar computer classroom)
80 Home infrastructure accomodates for school tasks that need to be completed at home
81 Infrastructure required by **other supplementary systems to the education system** exist or can be developed

Infrastructure to educate/train workforce (e.g. extension programs) for various positions within the education system exist or can be
Infrastructure for water and sanitation systems exist or can be developed
Infrastructure required for power generation and distribution to edcuation system exists or can be developed
Infrastructure to enable research and improvement of technology and techniques exists or can be developed

E. Equipment/ Supplies

Country has or can create access to enabling resources wherever required
Content used to spread awareness about basic education is effective
*Content is based on formative research and has been proven to be effective
*Content is culturally appropriate and aligns with values of target community
*Content motivates population to engage in available education system to avail basic education
Content is specific to context and target audience
*Variations in literacy are surmountable
*Content takes is sensitive to variations in literacy
*Majority of the target audience finds content easy to understand (e.g. Use of more pictoral representations, avoid difficult words or phrases)
*Content can sensitize population about basic education in order that communities fully participate in their implementation
Physical materials for learning are available (i.e. textbooks, paper, pencils, other supplies)
Physical materials can be protected from the environment
Physical materials can be maintained
Materials are equitably distributed or shared among students
Education infrastructure includes teaching equipment (e.g. Blackboards, chalk, projectors)
Teaching equipment can be protected from the environment

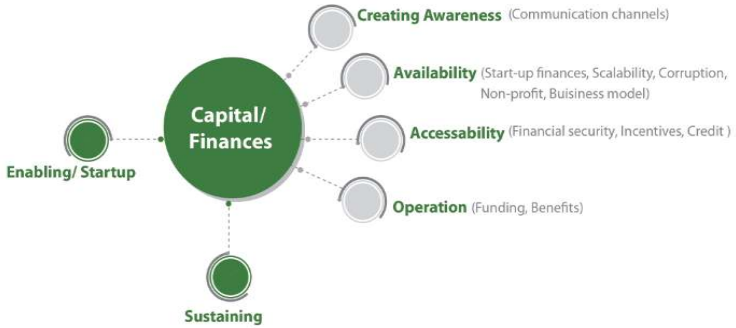
17 Teaching equipment can be maintained
18 Equipment is equitably distributed or shared among teachers
19 School has required equipment to meet nutritional needs of students while they are at school
20 Consumable resources are available for producing/cooking/consuming food
21 Non-consumable resources are available for producing/cookingconsuming food
22 Resources are available to properly clean non-consumable resources
23 Resources are available to properly maintain non-consumable resources

F. Workforce/ talent

1 **Workforce/ talent to support effective delivery of education is in place**
2 Positions in the workforce are equitably available to all who meet position requirements
3 Appropriately skilled workforce can be identified to take on different roles in the education delivery system
4 Skilled individuals are motivated to participate in education delivery system
5 *Tangible and intangible incentives offered to participants in the education delivery system is attractive (e.g. Attractive salaries, respectable job)
6 *Jobs in education sector offer good working conditions and attractive salaries/incentives to retain workforce (e.g. Teachers, administrative staff, support staff)
7 *Schools provide fulfilling work opportunity
8 *Teachers are required to have certain level of education
9 *Teachers are trained to manage students partaking in the education system in a respectful and non-discriminative manner
10 *Teachers are trained to manage young children
11 *Teachers are trained to manage young adults (youth)

*Teachers are trained to manage a class with students from a mixed age group
*Teachers are trained to manage students with varying learning capacities
*Teachers are trained to manage students with varying abilities
*Teachers are trained to handle difficult or unique situations that may arise in school
Teachers are trained in appropriate communcation
Teachers are aware of proper channels to handle/report difficult situations
Teachers/administration and staff are provided with clear guidelines for their positions
*Teachers are required to be regular to work
School administration and leadership are required to possess a certain qualification
School/ institutional support staff are required to be qualified for their respective positions
Mechanisms exist to enforce terms of work agreements
*Stakeholders involved are informed about feedback mechanisms to improve the existing system

G. Capital



Economic barriers in providing quality basic education and in receiving basic education can be overcome
Economic barriers with regard to creating **awareness** of basic education can be overcome
Suffieicent resources are available for start up of communication channels
Existing communication channels are supported by sufficient resources
Channels are financially secure
A structured benefit system is in place where required
*A system to obtain return on investment is developed
Economic barriers with regard to creating **availability** of basic education can be overcome
Sources are available to sponsor system start-up

Basic Education
Success Factor Tree

10 Government allocates funds for education sector
11 Viable opportunities for industry engagement are utilized
12 Opportunities to obtain external monetary aid are utilized (e.g. USAID, JICA, GIZ)
13 Options are available to gain/augment government financial support
14 *The education delivery system is economically scalable
15 Possibility of corruption can be circumvented
16 All entities in the basic education system that utilize funds are held accountable for it
17 All entitities that distribute funds ensure they arrive where they are allocated
18 Mechanisms exist to enforce proper money distribution
19 Opportunities to engage non-profit resources are effectively utilized
Non-profit entities that are willing to bridge any gaps to enable long term delivery of basic education are utilized
20 (e.g. providing volunteers to teach, providing online learning materials and resources, contract teachers)
21 *A business model can be developed that accounts for variations in community purchasing power
22 The cost to employ skilled workforce for delivery of basic education can be supported by the system business
23 The cost of utilizing technology for education can be supported by the system businesss model
24 The cost to develop/ implement educational content and tools can be supported by the system business model
The cost to produce scholastic material for students (e.g. Notebooks, stationery, textbooks) can be supported by
25 the business model
26 The cost to construct and maintain education infrastructure can be supported by the business model
27 Economic barriers with regard to creating **accessibility** to basic education can be overcome
28 *The education delivery system is economically sustainable
29 Technology is used effectively to reduce costs to deliver education
30 *System construction costs are self-sustained and/or reliably supported
31 *System operating costs are self-sustained and/or reliably supported
32 *System maintenance costs are self-sustained and/or reliably supported
33 *Incentives to maintain student involvement are provided (e.g. Food)
34 Incentives to maintain teacher involvement are provided (e.g. Food, healthcare benefits, contract)
35 *Education delivery system is free from any kind of monopolizing entity
36 *Opportunities of sourcing private sector capital are utilized where/when needed
37 Viable credit market can be developed and/or accessed
38 Economic barriers with regard to **operation** of basic education system can be overcome
39 Reliable funding mechanism exists to pay employees
40 A structured benefit system is in place where required

41 Funding mechanism in place to sustain food production/purchasing

H. Practices/ Mechanisms

1 **Practices/ mechanisms to support effective delivery of education is in place**

Hiring practices are supported by factors that lead to student success (i.e. undertanding of content and teaching practices, gender
2 equality among teachers, etc)

3 School schedule accomodates children's ability to attend school

4 Schedule is consistent

5 Channels of communication are available to communicate changes

6 Schedule is conducive with parent/guardian schedule

7 *Appropriate teaching techniques are employed for effective knowledge transfer

8 *Knowledge is imparted using different techniques to overcome disparities in learning abilities of children

9 *Teaching methods are interactive

10 *Teaching is aimed at improving students' competence in reading, writing and basic mathematics

11 *Teaching methods include vocational and practical methods

12 *Teachers have the necessary human resources and support to effectively perform their duties

13 *Teaching methods accommodate access challenges of youth/young adults

14 *Systems to train and certify teachers exist or can be developed

15 Teachers are trained in inclusive education and critical disability studies

16 Teachers use prescribed cirriculum to impart goals of basic education to all students equally

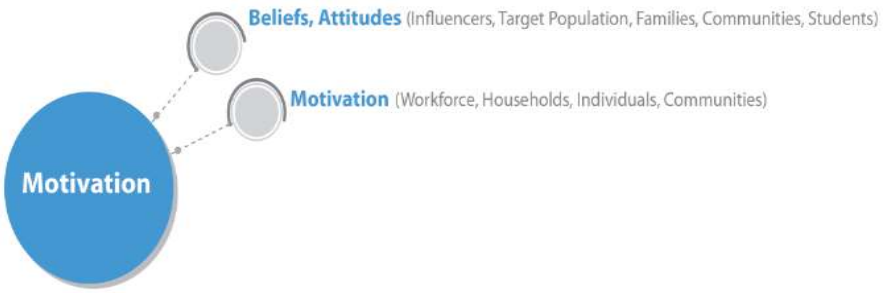
17 Training exists to keep teachers updated on cirriculum

18 Mechanisms exist to ensure teachers are covering required material

I. Awareness

1 **Country is aware of the availability of and means to access basic education**
2 *Awareness can be raised about opportunities and benefits of engaging in available system for basic education
3 Awareness can be spread in a socially acceptable way
4 *System for basic education is perceived by community as equitably accessible
5 *Benefits of enrolling children/youth in school are appealing to parents and community
6 Benefits of enrolling children/youth in school are appealing to youth populations that make their own decisions (e.g. street youth, street children, orphans)
7 *Awareness can be raised among high risk target populations (e.g. rural areas, foster homes, street youth)
8 Populations that fall in the category of "people who know about basic education but do not know how to engage in it" are
9 Information about how to engage in basic education system can be conveyed to inform different categories of unaware
10 *Information on application processes to admit children to schools can be relayed
11 Information about scholastic requirements (e.g. Uniforms, books, stationery) and where to obtain them can be
12 *Information on application processes for jobs in education sector can be relayed to potential applicants
13 Potential applicants can be identified
14 *Awareness can be raised among education system workforce about necessary components that constitute basic education (e.g. Policies, curriculum, workforce qualifications, teaching tools)

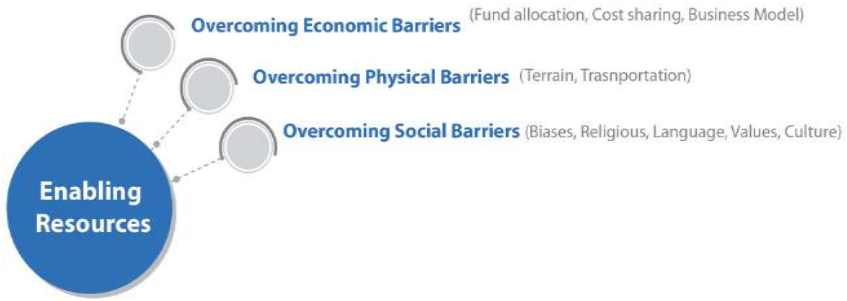
J. Motivation



1 **Country is motivated to engage with education system and obtain basic level of education**
2 Motivation strategies are tailored based on existing attitudes towards obtaining basic education
3 Individuals/ communities in the **pre-contemplation stage** can be motivated to consider basic education
4 Influencers of change are motivated to consider the need to educate population
5 Target populations are motivated to consider benefits of basic education
*Families and households are encouraged to consider education as a priority for their children over household responsibilites
6
7 Families and households are exposed to convinving messages to prioritize education
Youth making their own decisions are motivated by benefits of obtaining basic education (e.g. street youth, street children, orphans)
8
Individuals/ communities in the **contemplation stage** can be motivated to prepare themselves or their families to engage in basic education
9
10 *Students are motivated to engage in education system
11 Individuals/ communities in the **preparation stage** can be motivated to act in favor of basic education
12 Individuals and communities obtain information on basic education enrollment procedures
13 *Skilled individuals are encouraged to apply for positions to be a part of the education workforce
14 Students are motivated to attend school
15 Households in communities are motivated to obtain basic education for all members of the household
16 It provides a sense of fulfillment
17 *It creates a sense of self-efficacy among the people
18 *It creates opportunities that were otherwise not available
19 *Retention rates are increased and students are motivated to complete basic education

*Students find it beneficial to attend school (e.g. Lessons are interesting, participation in extra-curricular activities, provision of free meals, having a peer group)
Parents find it beneficial to admit their children to school (e.g. Children are more competent)
*Education system workforce is m Individuals and families care about their health
*Communities are presented with opportunities to volunteer and engage in education system

K. Enabling Resources



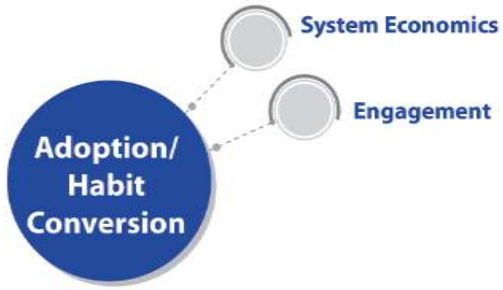
Enabling Resources can be utilized to overcome barriers, if they exist, to delivery of basic education
Functional barriers do not exist or can be overcome
Barriers preventing target populations from enrolling in basic education are minimized or overcome
*Barriers preventing enrollment of children can be addressed
*Barriers preventing enrollment of youth/young adults can be addressed
*Barriers preventing regular attendance of students and teachers can be addressed
*Barriers preventing student progress in education system leading to multiple repeating years or drop-outs can be addressed
*Skills related barriers are identifed (e.g. Teachers do not know if the have the required qualification)
Wealth related barriers are identified (e.g. Financial capacity to enroll children in school is inadequate)
*Access related barriers are identified (e.g. School in located far from the community)
*Time related barriers are identified (e.g. Children/youth/young adults are required to help at home during the day, preventing them from going to school)
*Behavior/ Habit related barriers are identified
*Strategies to address specific high priority and high impact barriers are executed
*The barriers are addressed in a socially acceptable way (e.g. Financial barriers to education have been overcome)

*Barriers preventing consideration of enrolling children in school are addressed (e.g. Children/youth are required to help with household chores or income generation instead of attending school)
` Strategies facilitate equitable access to basic education
Physical barriers do not exist or can be overcome
Physical obstacles to access imposed by local terrain can be overcome
Infrastructure exists to facilitate travel
Roads connect communities to schools
The path to school is safe and easy to traverse
*Obstructions to the safe passage of commuters to school can be overcome
Transportation modes exist to transport students to school everyday
The mode of transport is safe
The mode of transport is trusted by families/communities
The mode of transport is efficient
The mode of transport is reliable
*Students are able to engage effectively in lessons
*Students have nourishment to engage in learning (are well fed and able to concentrate in class)
*Students have food security at home
*Schools provide meal plans to students to overcome barriers in learning (e.g. hunger, nutritional deficiences)
*Schools act to overcome issues students face, such as malnutrition or lack of food security (e.g. through programs like the garden program initiative in Tanzania)
*Students are able to off-load other responsibilities to engage in learning
*Students find learning material stimulating
*Students find attending school exciting and motivating
*Study materials cater to multiple learning capacities/levels
*Students with different abilities actively engage in education
*Study materials cater to students of different ages
Social barriers do not exist or can be overcome
*Culture/religion/ tradition related barriers are identified
*Social group biases do not exist or can be overcome
*Religious barriers do not exist or can be overcome (e.g. religious group segregations/ ethnic group segregations preventing engagement in basic education)
*Language variations/barriers are surmountable

*Local community members will be comfortable with education delivery system
*The education delivery system can be operated in a manner consistent with local values
*Conflicts, if they exist, can be resolved
*Territorial disputes can be overcome
*Competing demands for education can be negotiated
*Ownership conflicts influencing access to education can be resolved
*Cultural barriers, if exist, can be overcome
*Gender stigma, if exists, can be overcome
*Cultural practices that prevent children from regularly attending school can be addressed
*Cultural issues (child labor, early marriages), if exist, can be overcome
*Local community members will be comfortable with the education workforce
*Communities are willing to commit to obtaining basic education
*Community trusts involved stakeholders
*Community is willing to take responsibility for its well being
*Community will reliquish present hindering behaviors in favor of desired behaviors
*Community is optimistic about its future
*Community values community wellfare

Economic barriers do not exist or can be overcome
A viable pricing/payment mechanism exists for the local population
Payment mechanism considers economic capacity and customer perceived value of the education received
Pricing accounts for all necessary materials and expenses in addition to school fees
Financial obligations are clear and enforced
*Costs to send children to school are clear, not hidden (e.g. uniforms, textbooks, note books, pencils,
Mechniams exists to support students that cannot afford fees
The economics of the system are appropriately tailored to local income levels

L. Adoption/ Habit conversion



1 **Individuals/ communities that have chosen to pursue basic education can be encouraged to maintain their engagement**
2 Individuals/ communities that have taken **action** in favor of basic education can be encouraged to maintain progress
3 Individuals/ communities are convinced about benefits of basic education
4 *Individuals and communities feel empowered and believe they can create meaningful impact in their lives
5 *Education delivery system creates a sense of fulfillment for those who engage in it

M. Measurements and Evaluation

1 ***Indicators to measure effectiveness of education system exist**
2 The attitudes of populations towards basic education in different regions are understood
3 Effective channels and reliable means exist to perform a formative assessment of populations' attitudes
4 *Channels and means are appropriate for specific context
5 *Rigorous assessments are made to obtain comprehensive data on the knowledge and attitudes of people

Basic Education
Success Factor Tree

6 *Data collected from assessments are effectively analyzed
7 *The analysis results are utilized to drive change in populations' motivation and behavior
8 *The priorities of families are assessed
9 *The outcomes of providing basic education to the people can be measured
The economic growth in relation to growth in number of students enrolled and number of
10 workforce employed in the education sector is measureable
11 *It fosters community/social equity
12 *It promotes wealth equity among communities
13 *Effective strategies to address specific barriers are developed
14 *The barriers that have higher impact on population are identified
15 The impact on population due to a skill based barrier is assessed
16 The impact on population due to a wealth based barrier is assessed
17 The impact on population due to access based barrier is assessed
18 The impact on population due to a time based barrier is assessed
19 The impact on population due to a behavior based barrier is assessed
20 The impact on population due to a cultural barrier is assessed
21 *Mechanisms exist to measure quality of delivered education to overcome disparities
22 *Evaluative bodies exist to carry out quality checks
23 Bodies responsible for inspecting education quality exist
24 Students are assessed to measure competencies gained through basic education
25 Students are assessed to verify their understanding of basic mathematical reasoning
26 Students are evaluated on their understanding of basic mathematical ideas and concepts
*Students are evaluated on their ability to think critically/reason rather than their ability to
27 memorize, recall and recite
28 Students are assessed to evaluate their basic reading competencies
29 *Students are assessed to evaluate their basic writing skills
30 *Education systems/ institutions that do not meet required standards can be strengthened
31 *Education systems/ instutions that do not meet required quality standards can be identified
32 *Existing barriers that prevent system/ institution from attaining quality standards can be addressed

N. Sustainability

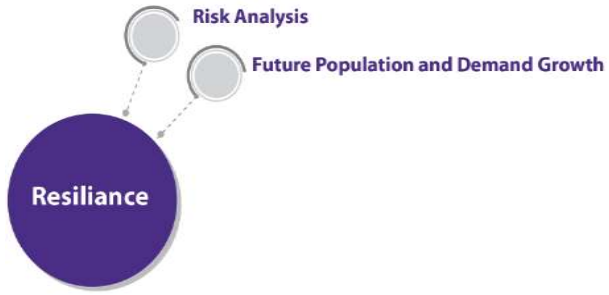
1 **The basic education system in the country is sustainable**
2 Country has or can develop sustainable approaches to managing education delivery system
3 *Organizations and institutions that run the basic education system are sustainable
4 *Administrative bodies responsible for components of basic education can sustain themselves
5 *Bodies responsible for policy development on basic education are sustainable
6 *Bodies responsible for basic education curriculum development are sustainable
7 *Bodies responsible for financing the basic education in the system are sustainable
8 *Bodies responsible for recruiting teachers and other education workforce that contribute to the basic education system are sustainable
9 *Bodies responsible for the assessment/examination system within the basic education system are
10 *Bodies responsible for evaluation of quality of education delivered by the basic education system are sustainable
11 *Bodies responsible for infrastructure growth and expansion with regard to basic education are
12 *Communication channels used to spread awareness among populations are sustainable
13 *Policies that govern the basic eduation system are sustainable and enable long term growth and development in the education sector
14 *Entities that support and facilitate delivery of basic education are sustainable
15 Transportation systems connecting communities to schools are self-sustainable
16 *Teacher training programs are self-sustainable
17 Systems in place to produce study material (e.g. textbooks, stationery) are self-sustainable
18 Systems in place to distribute study materials and tools are sustainable

Basic Education
Success Factor Tree

Infrastructure capacities can be expanded through sustainable means
*Enrollment and teacher projections, infrastructural needs and equipment are used for evidence based planning and budgeting for basic education
*Technology and methods of teaching and curriculum are updateable
*Quality of education delivered by the basic education system is sustainable or can be improved
*Quality of teachers teaching subject material can be improved/ maintained over time
*Quality of teaching material used can be improved/ maintained over time
*Quality of teaching methods employed can be improved/ maintained over time
*Quality of students produced by the education system can be improved/ maintained over time
*Feedback mechanisms are in place to facilitate improvement in quality aspects
*School leadership is evaulated and monitored for effective functioning
*Teachers are evaluated based on their performance
The utilization of resources within schools is monitored
*Community engagement in available basic education system can be sustainably improved/ maintained over time
*The basic education system is able to build the trust of communities and other stakeholders
*The basic education system has sustainable external stakeholder support (i.e. parents, community members, teachers, church, donor agencies and all levels of government)
*Community observes benefits of engaging in the basic education system over time
*Individuals with a background in basic education can contribute more to the household and community than individuals with no education
*Suitable job opportunities exist for individuals who can read, write and perform basic mathematical computations
*Mechanisms to connect students to job opportunities exist or can be developed (e.g. job counselor, employment office)
*The enrollment rate of children in the basic education system can be improved over time
*Education delivery system is economically sustainable
*Action plans must be created, submitted on time, and followed to receive access to funding
*Mechanisms to fund sustainable operation and maintenace of education delivery system can be identified and
*Long-term opportunities to leverage private sector capital to fund education system can be utilized
*Funds may be allocated by country government
*Teachers are paid well enough to be a viable occupation
*The economic plans for the basic education system can support future trends
*The economic system can support employment of increasing education workforce

47 *The economic system can support infrastructure expansion
48 *The economic system can support implementation of new technologies in the future
49 Funds are allocated for creating long-term access to educational systems
50 Opportunies for growth are available
51 *Teachers have opportunities for growth
52 Teachers have opportunities to be a part of/lead teacher associations at school
53 Teachers have opportunities to head team projects
54 Teachers have opportunities to organize events in school
*Teachers have opportunities to engage with external volunteers from non-profit organizations or
55 engage in volunteering activities
56 *Students have opportunities for growth and learning beyond the curriculum
57 *Students have opportunities to take part in extra curricular activities (e.g. art, music, sports)
58 *Students have opportunities to take part in inter-school/intra-school competitions
*Students imbibe skills like teamwork, management (e.g. through team projects or through
59 leadership roles in class)
*Students imbibe values (e.g. respect for each other, a sense of patriotism, respect for all cultures,
60 concern for the environment and consciousness to protect it)
61 *Students have opportunities to be a part of different student unions/groups
*Students extend the applications of what they learn beyond the learning environment (e.g. at home
62 or where they work)

O. Resilience



1 **Events that can disrupt the education system can be overcome**
2 Mechanisms to combat various crisis scenarios exist
3 Government policies and response to stressors are in place
4 Infrastructure is resiliant to natural disasters
5 *Communication channels and systems are resilient to environmental change
6 *Communication channels and systems are resilient to political change
7 Country is prepared for population growth and demand on education resources

Basic Education

= National
= Regional
= Community
= Household
= Individual

EXTERNAL PERSONNEL
- RESEARCHERS
- CONSTRUCTION PERSONNEL
- MAINTENANCE PERSONNEL
- VOLUNTEERS

SUPPORT ORGS
- NON-GOVERNMENTAL ORGANIZATIONS
- FAITH BASED ORGANIZATIONS
- RELIEF ORGANIZATIONS
- CIVIL SOCIETY ORGANIZATIONS

JOB OPPORTUNITY
- LARGE ENTERPRISE EMPLOYERS
- ENTREPRENEURS
- SMALL/MEDIUM ENTERPRISE EMPLOYERS
- RECRUITERS
- CERTIFICATION ORGANIZATION

FAMILY ENVIRONMENT
- HOUSEHOLD
- FOSTER HOME

STUDENTS
- CHILDREN
- YOUTH
- ADULTS

EDUCATORS
- NUTRITIONIST/DIETICIAN
- SCHOOL COUNSELOR
- SCHOOL COUNSELOR
- TEACHERS

EDUCATION ADMINISTRATORS
- PUBLIC EDUCATION INSTITUTION
- SPECIALIZED EDUCATION INTISTUTION
- SUPPLEMENTAL EDUCATION PROGRAMS
- PRIVATE EDUCATION INSTIUTION
- HIGHER EDUCATION INSTITUTION
- ONLINE EDUCATION PROGRAMS

- LOGISTICS PROVIDER
- LOCAL BUSINESSES
- LABOR ORGANIZATION

AFTERSCHOOL
- ACADEMIC PROGRAMS
- CLUB LEADERS
- STUDENT ASSOCATION/ SOCIETY
- SPORT COACH

INFRASTRUCTURE
- TRANSPORTATION PROVIDER
- FACILITY MANAGER
- TECHNOLOGY PROVIDER
- EDUCATION MATERIAL SUPPLIER
- MATERIAL DISPOSER
- FACILITY PROVIDER
- EDUCATION CONTENT PUBLISHER
- TEACHER MATERIAL SUPPLIER
- FACILITY MAINTENANCE PROVIDER
- TELECOMMUNICATIONS PROVIDER
- EDUCATION CONTENT DEVELOPER
- STUDENT MATERIAL SUPPLIER
- FOOD AND WATER SUPPLIER
- POWER SUPPLIER

LOCAL INFLUENCE
- RELIGIOUS ORGANIZATION
- LOCAL LEADERS
- CULTURAL ORGANIZATIONS
- LOCAL RESIDENTS

LOCAL ADMINISTRATORS
- BOARD OF EDUCATION
- CURRICULUM ADVISOR

FINANCES
- PRIVATE INVESTORS
- PUBLIC DONORS
- GOVERNMENT FUNDING
- AID ORGANIZATIONS

GOVERNMENT
- ECONOMIC AGENCY
- INSPECTION AND EVALUATION AGENCY
- RISK/CONFLICT AGENCY
- QUALITY MANAGEMENT
- POLICY MAKER
- EDUCATION AGENCY
- UN
- LOBBYIST

EMERGENCY PERSONNEL
- POLICE
- FIREMEN
- EMERGENCY MEDICAL TECHNICIANS

Maternal and Child Healthcare
Success Factor Tree

A. Security/Safety

1 **The MC healthcare services delivered meets certain quality standards**
2 Quality standards and thresholds for MC healthcare are established
3 Quality standards are established for dispensaries/clinics/health centers/hospitals providing different levels of care
4 Health establishments have required licenses to operate as per regulations
5 Regulatory bodies exist to evaluate and enforce license requirements
6 * Hygienic health practices (e.g., sterilization, disinfection) are enforced at all levels of health establishments (community units, dispensaries, clinics, health centers, hospitals)
7 Quality standards for various MC healthcare dimensions exist
8 Quality standards for health promotive services exists
9 Quality standards for preventive services exist
10 Effective and appropriate examination/screening techniques are implemented for maternal health
11 Effective and appropriate examination/screening techniques are implemented for child health
12 Diagnostic measures for maternal health issues are accurate
13 Diagnostic measures for child health issues are accurate
14 Quality standards for curative services exist
15 Effective treatment that is tailored to different maternal health issues are deployed
16 Effective treatment that is tailored to different child health issues are deployed
17 Quality standards for rehabilitative services exist
18 * Follow-up support and care after treatment of maternal health issue is provided (e.g., peer support program)
19 * Follow-up support and care after treatment of child health issue is provided
20 Quality requirements are established for workforce

Maternal and Child Healthcare
Success Factor Tree

- Healthcare workforce are required to have certain levels of education based on assigned roles within the health system
  - Various roles have required qualifications attached to them
  - Roles are filled through structured recruitment process
  - Mechanisms exist to verify qualifications for specific roles
  - Mechanisms exist to ensure adherance to qualification requirements
- Members of the healthcare workforce are trained to manage patients (from all socio-economic backgrounds, ages, religions, capacities) partaking in the healthcare system in a respectful and non-discriminative manner
  - Healthcare providers have a positive attitude towards customers/patients
  - Healthcare providers have good interpersonal skills
  - Healthcare providers adopt a patient-centric health delivery system
- Healthcare worforce is trained for emergency preparedness
- Health centers/clinics have consistent and adequate availability of healthcare providers
  - Waiting time for a customer/patient to see a healthcare provider is perceived as acceptable
  - Absenteeism among healthcare staff is minimized
  - Health center/clinic operation hours are consistent and acceptable

Checks are in place to make sure policies and regulations are not misused

Corruption, if present, can be circumvented

- Mechanisms are in place to take disciplinary action against corruption

Conflicts, if they exist, can be resolved

- Territorial disputes can be overcome
- Competing demands for healthcare can be negotiated
- Ownership conflicts influencing access to healthcare can be resolved

Security during healthcare services will be consistent among both genders

- Emergency Services are available to be deployed at any moment
  - Police are among emergency personnel
  - Firefighters are among emergency personnel
  - Emergency Medical Technicians (EMT) are among emergency personnel
  - Logistics Technicians (e.g., Dispatchers, Department heads) are among emergency personnel
- Emergency protocols have been developed
  - Emergency Protocols have defined objectives
  - Emergency Protocols have defined roles for personnel
  - Emergency Protocols have defined communication methods
- All personnel have effective training in emergency protocols

53 Personnel have requisite certifications
54 Personnel practice emergency training regularly

B. Policy

1 **The governing bodies of the country have established the importance of equitable access to MC healthcare facilities and services for all residents**
2 Structured policies have been developed and implemented to create availability/access to MC health services
3 Policies clearly define what constitutes maternal and child healthcare
4 Policies establish national goals for provision of MC healthcare facilities and services
5 Policies on various aspects related to MC healthcare exist
6 Policies on provision of equitable MC healthcare to all residents of the nation exists (e.g., different socio-economic backgrounds, religions, Customers that have different abilities and needs)
7 Policies on privacy and patient information confidentiality exist
8 Policies on raising awareness and sensitizing population about family planning, MC health exist
9 Policies on provision of healthcare infrastructure exist
10 Policies on making MC healthcare facilities and servies affordable exist
11 Policies on improvement of techniques and technology used in MC health system exist
12 Policies on assessment methods utilized exist
13 Policies on quality of MCH service delivered exist
14 Policies to guide government bodies and local leaders to help create access to healthcare exist
15 Policies on quality of medications sold/provided exist
16 Policies on healthcare workforce training and development exist

17 Policies on specific curriculums for different roles within the healthcare workforce exist
18 Policies on degrees/certifications required to prove qualification for specific positions within the healthcare workforce exist
19 Policies to support maternal healthcare exist
20 Policies on maternal healthcare exist
21 Policies on maternal healthcare delivery exists
22 Policies on training expectant mothers and families of expectant mothers exist
23 Employment conditions and leave policies for pregnant women exist
24 Policies to support child healthcare exist
25 Policies of child healthcare delivery exist
26 Policies on vaccinations for children exist
27 Policies on nutrition for children exist
28 Policies on child mental health exist
29 Child labor policies exist
30 Policies provide means to measure quality of healthcare services provided by different institutions (e.g., dispensaries, clinics, health centers, public, private healthcare institutions)
31 Policies framed are economically operational
32 Policies framed are functionally operational
33 Policies are protected from misuse
34 Acceptable disciplinary meaures are in place for policy misuse
35 Policies are regularly updated
36 Policies promote partnerships
37 Policies promote private sector engagement to create access to MC health services
38 Policies promote delivery of MC healthcare services
39 Policies promote partnerships with other organizations within the country (e.g., Civil Society Organizations(CSOs), Faith Based Organizations (FBOs), Other Non-profit organizations, medical schools)
40 Policies allow international partnerships (e.g., Funding agencies, non-profit organizations)
41 Policies promote partnerships between healthcare entities (e.g., healthcare centers, pharmacies, volunteer organizations, referral system)
42 Policies are scalable and flexible
43 Policies are flexible to allow and incorporate development in the healthcare sector
44 Policies are flexible to allow incorporation of traditional healthcare practices followed within the country
45 Policies promoted gender equality at all stage of MC Healthcare and policy making

C. Leadership/Government

1 **Government is committed to creating equitable access to quality MC healthcare services**
2 Government understands and supports the need for access to MC healthcare services
3 Funds are allocated for creating long-term access to MC healthcare facilities and positive health impact in the country
4 Adequate funds are allocated to support delivery of maternal healthcare across the country
5 Adequate funds are allocated to support delivery of child healthcare across the country
6 Funds account for various costs involved (e.g., commodities, health interventions, programs and their management costs, employment costs)
7 Cost sharing opportunities are utilized
8 Opportunities of sourcing private sector capital are utilized where/when needed
9 Opportunities of sourcing non-profit capital are utilized where/when needed
10 Opportunities of sourcing non-traditional capital are utilized
11 Government supports development of healthcare technology
12 Government and policy makers have an ambitious, hopeful, committed attitude
13 Government is open to ultilizing opportunities for private sector engagement to achieve goals related to health delivery
14 Government has means to assess quality of MC healthcare provided
15 Operational bodies responsible to enforce various healthcare policies exit
16 Operational body responsible for evaluation of outcomes of increasing engagement of population in MC healthcare services exists
17 Operational body responsible for development of MC healthcare strategies for delivery/implementation exist
18 Operational body responsible for development of healthcare investment plans exist
19 Entities responsible for developing medicines and technology to support MC healthcare exist and operate in region
20 Operational body responsible to spread MC healthcare information exists

21 Operational body responsible for distribution of MC healthcare products exists
22 Operational body responsible for distribution of MC healthcare services exists
23 Operational body responsible for regulation of national MC healthcare systems exists
24 Operational body responsible to measure outcomes of the MC healthcare system exists
25 Operational body responsible for training and assessing healthcare workforce exists
26 Operational body responsible to monitor and take action against drug abuse exists (studies indicate a prevalance of drug abuse among teenagers)
27 Policies and laws on MC healthcare services are adhered to across all political levels (National, Regional, Local)
28 All political sectors are made aware of policies related to MC healthcare services
29 Relevant representation from all political levels are allowed to participate in the regulation and policy framing process
30 Representation includes members from the healthcare sector (e.g., experts in the field of child and maternal health in the country)
31 Government is supportive and influential in driving awareness and implementation of policies
32
Different government bodies at national, regional and local levels are in agreement with policies and work towards its implementation

D. Infrastructure

1 **Infrastructure to support the MC healthcare system is in place**
2 Medical institutions continue to produce high quality health professionals for the country
3 Medical institutions continue to provide quality education that is accessible

Maternal and Child Healthcare
Success Factor Tree

4 Medical intitutions continue to attract motivated students
5 Medical institutions continue to graduate qualified healthcare professionals
6 Infrastructure facilities to support access to MC healthcare services in a region exist or can be developed
7 Infrastructure facilities accommodate various requirements to effectively deliver MC healthcare services
8 Infrastructure includes provision of distributed network for health across the country to enable equitable access to MC health services
9 Infrastructure facilitates capacity building in the country
10 Infrastructure provision of laboratory space to conduct medical research on MC healthcare exists or can be developed
11 Infrastructure to distribute medications, medical supplies and equipment exists or can be developed
12 Infrastructure (such as health centers/clinics/dispensaries) for delivery/distribution of MC healthcare is secure and reliable
13 Health dispensaries/clinics/health centers/hospitals are equipped with electricity supply
14 Health dispensaries/clinics/health centers/hospitals are equipped with clean water supply
15 * Infrastructure to source and and distribute medical support devices/equipment for MC health centers (e.g., life sustaining devices, ultrasound devices) can be identified or setup
16 Infrastructure to develop and and distribute medical products and medications to support MC health for communities (e.g., medication) can be identified or setup
17 A robust supply-chain system is developed for distribution of MC healthcare support devices
18 Reliable entities to take on different roles within the supply-chain are identified
19 The supply-chain system is implemented
20 Measures exist to prevent corruption within supply chain
21 Appropriately skilled labor is sourced for construction, operation and maintenance of healthcare centers/clinics
22 Acceptable working conditions can be created in the system
23 Locally sourced labor can be employed
24 Mechanisms to maintain operation of health establishments exists or can be developed
25 A maintenance approach can be designed employing local talent and resources
26 Maintenance procedures can be performed via local talent
27 * Effective maintenance practices can be achieved (e.g., good medical practices like decontamination, disinfection)
28 The infrastructural system is environmentally friendly
29 The infrastructure is accommodating and promotes equality/equal access to all (e.g., individuals that come from different backgrounds, individuals that may need special accommodations)
30 Regional community leaders are supportive of infrastructure development
31 The MC healthcare delivery system is technically scaleable

32 Infrastructure accommodates regional population demands
33 Infrastructure facilities include functional sanitation facilities
34 Infrastructure allows creation of a hierarchial network of healthcare providers to cater to various population needs in the MC healthcare domain
35 Specific healthcare providers/centers provide primary healthcare facilities for MC healthcare
36 Specific healthcare centers provide specialist MC healthcare for more unique requirements
37 Reference systems exist to foster a network between primary community units, dispensaries or clinics and specialist health centers/hospitals
38 Healthcare infrastructure based on level (primary, surgical, specialist) of healthcare provided is equipped with technical equipment required to deliver MC healthcare services
39 Health centers have facilities and equipment for medical examination and diagnosis
40 Health centers have facilities and equipment for emergency preparedness
41 * Health centers have facilities and equipment for labor, delivery and recovery
42 * Health centers have facilities and include equipment for surgery and anaesthesia (e.g., cesarean section)
43 Health centers have facilities and include equipment for mother and newborn care (e.g., Baby specific hospitals)
44 * Health centers have facilities and include equipment for pregnancy trainings and counselling services
45 Health centers have facilities and include provision and equipment for intensive care
46 Health centers have facilities and equipment to support child mental health analysis and treatment (e.g., diagnosis equipment, couselling facilities)
47 Infrastructure developers have access to resources to enable development
48 An effective MC healthcare delivery system can be designed within the constraints of available resources (e.g., setup of health camps in remote villages, mobile clinics, telephonic/online health service delivery)
49 Infrastructure systems that support good health are developed in conjunction with healthcare delivery infrastructure systems
50 Infrastructure systems to create access to water and sanitation facilities for all are developed
51 Infrastructure systems to create food security for all are developed
52 Infrastructure for education is developed (statistics show higher involvement of educated populations in healthcare systems when compared to less educated populations)
53 Transportation infrastructure systems are developed
54 Communication infrastructure systems are developed

E. Equipment/Supplies

1 **Equipment and technology used at health centers/clinics support quality standards of MC healthcare delivery**
2 Equipment and technology used at health centers/clinics support quality standards of MC healthcare delivery
3 Health centers/clinics are equipped to address maternal health concerns
4 Treatments for diseases that children in the region are most vulnerable to are provided (e.g., Oral Rehydration Salts for Diarrheoa, treatment for pneumonia, treated mosquito nets to avoid malaria)
5 Maternal health concerns related to portpartum care are addressed (e.g., support after childbirth)
6 Maternal health concerns related to safe delivery are addressed (e.g., Presence of skilled healthcare workforce during delivery)
7 * Maternal health concerns realted to STDs are addressed (e.g., screening for HIV, Syphilis and treatment for the same)
8 Emergency maternal health concerns are addressed through effective obstetric care
9 Health centers/clinics are equipped to address child health concerns
10 * Effective neonatal care is provided (e.g., immediate attention to breathing and warmth, hygienic cord and skin care, and early initiation of exclusive breastfeeding)
11 Infant healthcare concerns are addressed
12 Child health concerns related to preventive measures are addressed (e.g., vaccinations)
13 Child health concerns related to injuries and emergencies are addressed
14 Child health concerns related to physical development of child are addressed (e.g., couselling on growth and feeding)
15 Child mental healthcare concerns are addressed (e.g., provision of diagnostic and treatment measures)
16 Child nutritional intake requirements for healthy growth and development are addressed
17 Treatments for diseases that children in the region are most vulnerable to are provided (e.g., Oral Rehydration Salts for Diarrheoa, treatment for pneumonia, treated mosquito nets to avoid malaria)
18 Child health concerns related to unhygienic living practices

19 Supplies and commodities used at health centers/clinics support quality standards of MC healthcare delivery
20 Health centers/clinics are equipped to address child health concerns
21 Access to commodities for basic child health is available (e.g., bandages, medication)
22 Vaccinations are available onsite for children and/or newborns
23 Health centers/clinics are equipped to address surgeries for all levels of care
24 Workforce has proper supplies for safe delivery (e.g., clippers, forceps, wipes etc.)
25 Workforce has proper supplies for life saving surgery (e.g., scalpel, syringe, stiches, suture etc.)

F. Workforce/Talent

1 **Workforce/talent to support MC healthcare system are in place**
2 Healthcare system workforce is motivated to continue facilitating delivery of quality healthcare services for MC health
3 Partners continue to engage in healthcare system delivery
4 Private sector partners continue to aid in MC healthcare service delivery
5 Non-profit organizations continue to aid in MC healthcare service delivery
6 Communities are presented with opportunities to volunteer and engage in the healthcare system
7 Country has adequate healthcare workforce to support MC healthcare system needs of the country
8 Country has adequate workforce to deliver child and maternal healthcare
9 Country has adequate, distributed health workforce for MC health promotive services
10 Country has adequate health communication workforce
11 Country has adequate health information officers
12 Country has adequate public health officers

Maternal and Child Healthcare
Success Factor Tree

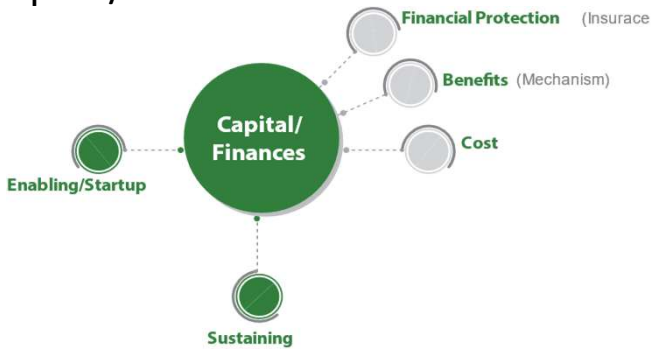
13 Country has adequate, distributed health workforce for preventive MC healthcare services
14 Country has adequate workforce to administer vaccinations
15 Country has adequate primary healthcare providers/physicians for check-ups and screening patients for various issues (e.g., for developmental screening in children)
16 Country has adequate counselors (e.g., for child healthcare, diet counseling)
17 Country has adequate, distributed health workforce for curative MC healthcare services
18 Country has adequate specialist doctors (e.g., pediatricians)
19 Country has adequate specialists to treat acute conditions (e.g., emergency doctors, surgeons)
20 Country has adequate specialists to treat chronic conditions (e.g., cancer, Tuberculosis)
21 Country has adequate, distributed health workforce for rehabilitative services
22 Country has adequate therapists (e.g., couselors for depressions, physical therapists)
23 Country has adequate, distributed support staff
24 Country has adequate nurses
25 Country has adequate clinical officers
26 Country has adequate health administrative officers
27 Country has adequate medical technologists
28 Country has adequate pharmaceutical technologists
29 Country has adequate nutritionists
30 Country has adequate, development of MC health development workforce
31 Country has adequate researchers
32 Country has adequate field experts
33 Country has adequate workforce trainers (e.g., teachers, examiners)
34 Incentives to maintain patient and healthcare workforce involvement are provided
35 Healthcare delivery system creates a sense of fulfillment for those who engage in it
36 MC healthcare customers are cognizant about healh, good healthcare practices and services available through health education
37 Individuals feel responsible for their own health
38 Individuals identify MC health as an important concept and are willing to seek knowledge on healthcare
39 Referral systems within the MC healthcare system enable easy appointments with specialists when need arises
40 There exists cooperation between facilities involved
41 There exist means for patient/customer to access facility referred to
42 Individuals tend to practice good MC healthcare practices, utilize available services and work towards overall community health development
43 Individuals and households have access to clean drinking water

Maternal and Child Healthcare
Success Factor Tree

Individuals and households have food security
Individuals have access to education
Mechanisms exist to provide health education on MC health concerns to the community
Individuals can access knowledge on available measures to treat issues associated with MC health
Mechanisms consider varying health literacy of the population
Mechanisms consider varying literacy levels of the population
Mechanisms are culturally appropriate
Individuals feel a sense of self-efficacy by engaging in the healthcare system
MC health providers have a sense of job fufillment
Healthcare jobs are considered respectable
Jobs in the healthcare domain offer attractive salaries and benefits
Doctors are paid well enough to be a viable occupation
Healthcare jobs offer appealing working conditions
Individuals are trained to practice healthy habits, hence benfitting them and their families
Healthcare jobs for medical practitioners allow for promotion
Healthcare jobs allow participation in associations/unions (e.g., Peer support group, labor union)
Healthcare professionals are trained in proper communication skills for patients
Healthcare jobs require qualifications of communication expertise obtained at a credible source
Healthcare professionals actively engage in communication with patients
Healthcare professionals actively look for understanding from the patient
Possible communication barriers can be overcome
Healthcare professionals can communicate in multiple ways (i.e. languages, dialects)
AND/OR Healthcare system provides different channels of communication

Healthcare communication training is open to people regardless of gender or otherwise (i.e. ethnicity, age, religious belief etc.)

G. Capital/Finances



1 **Capital/finances to support MC healthcare system can be accessed**
2 Economic barriers with regard to creating accessibility to MC healthcare can be overcome
3 A viable regional support system/healthcare insurance coverage mechanism exists for the local population
4 Regional support/insurance is equitably available to all populations
5 Payment mechanism considers economic disparities in income of rural and urban populations
6 Payment mechanism considers economic disparities within a region (e.g., within a rural region, within an urban region)
7 Payment mechanism considers economic capacity and customer perceived value of the healthcare service received
8 Relevant and target populations are made aware of available health support/insurance coverage (e.g., rural populations, populations with low literacy)
9 Regional support/insurance scheme is appealing to attract participation
10 Benefits of insurance/regional support scheme in comparison to existing system are conveyed to target populations
11 Insurance/regional support benefits are based on household expectations
12 Insurance/regional support benefits are based on household/individual's ability to pay
13 Insurance/regional support benefits are based on household/individual's willingness to pay
14 Costs of MC healthcare facilities are controlled to local economic capacity
15 The economics of the system are appropriately tailored to local income levels
16 Cost sharing mechanisms are adopted by the government and other funding sources

H. Practices/Mechanisms

1 **Practices/mechanisms to support MC healthcare system are in place**
2 Equipment and technology used at health centers/clinics support quality standards of MC healthcare delivery
3 Health centers/clinics are equipped to address maternal health concerns
4 Maternal health concerns related to prenatal care are addressed
5 Regular health check-ups are administered to women during their pregnancy
6 * Appropriate diagnostic tests and treatments are administered in the first trimester (e.g., screening for HIV/Syphilis, blood count tests, pap smear, antibody screening)
7 * Appropriate diagnostic tests and treatments are administered in the second trimester (e.g., ultrasound tests, blood tests)
8 Appropriate diagnostic tests and treatments are administered in the third trimester (e.g., fetal development assessments, Streptococcus screen, glucose loading test, hematocrit test)
9 * Counselling on nutrition intake during pregnancy is provided
10 Pregnancy trainings are provided with information on dos, don'ts and symptoms that require pregnant women to see a healthcare professional
11 * Life-threatening issues such as development of eclampsia are recognized early and treated
12 * Risks associated with contracting diseases (like malaria or AIDS) while pregnant are reduced through appropriate treatment
13 Maternal health concerns related to postpartum care are addressed (e.g., support after childbirth, peer support groups for new mothers)
14 * Treatment to prevent excessive bleeding (i.e hemorrhage) of mother after birth are administered (e.g., injecting oxytocin)
15 * Early infections after birth are recognized and treated
16 Health check-ups and care for mother post birth are provided (e.g., check for vital signs, dehydration, bowel movements)
17 Safe healing envirnoments for mothers post birth are provided (e.g., specific maternal health area)
18 Maternal health concerns related to safe delivery are addressed (e.g., Presence of skilled healthcare workforce during delivery)

Maternal and Child Healthcare
Success Factor Tree

- Skilled birth attendant is present during delivery
- Progress of labour and fetus during delivery are monitored
- Caesarean section, if required, is performed
- * Birth complications (e.g., ectopic pregnancy, pre-eclampsia, placental abruption, fetal distress) are handled effectively

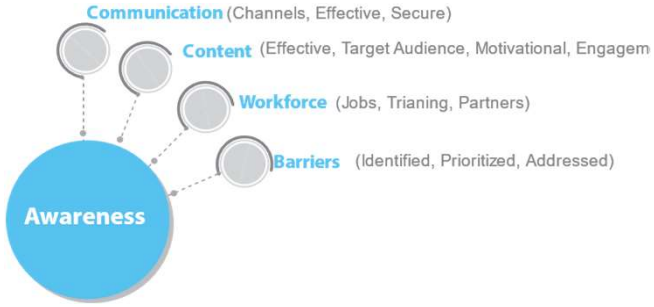
Health centers/clinics are equipped to address child health concerns

- * Effective neonatal/infant health care is provided (e.g., first 1000 days of care, Baby Friendly Hospital)
- * Care is taken to ensure breathing of the baby (e.g., intrapartum asphyxia)
- Resuscitation mechanisms for newborns are implemented when required
- * Hygienic provisions are made in clinics/health centers for new born babies
- Medical care is provided to sick new borns
- * Medical care is provided to low birth-weight newborns (e.g., heating and drying, incubator)
- Medical care is provided to premature babies
- Early initiation of exclusive breastfeeding is encouraged
- Milestone care system for infants is used (e.g., first 10, 100, 1000 days of care)
- Child health concerns related to preventive measures are addressed (e.g., Herd Immunity)
- Basic vaccinations are required for all children and administered
- Information on hygiene and health risks are provided
- Dental and oral hygiene and treatment are provided
- Screening programmes for disease prevention are provided (e.g., screening for congenital malformations)
- Nutritional and food supplement information is provided
- Child health concerns related to injuries and emergencies are addressed
- Child health concerns related to physical development of child are addressed
- Diagnostic measures are in place to recognize and assess developmental health concerns
- Physical therapy is provided
- Nutrition supplements and diet counselling is provided
- Child mental healthcare concerns are addressed (e.g., provision of diagnostic and treatment measures)
- Diagnostic measures are in place to recognize and assess mental health conditions
- Treatment mechanisms are in place for specific conditions
- Treatments for diseases that children in the region are most vulnerable to are provided
- Children with diarrhea can be treated (e.g., with Oral Rehydration Salts (ORS))
- Children with pneumonia can be treated
- * Preventive measures and treatment for malaria is available (e.g., availability of treated mosquito nets)

Health centers/clinics are equipped to provide consistent case management (i.e. same provider throughout healthcare process)

52 Effective scheduling and communication between healthcare workforce is utilized
53 Health centers utilize proper communication technologies available
54 Health center workers are trained in proper communication techniques

I. Awareness



1 **Country is aware of importance and means to access MC healthcare system**
2 Country is aware of the benefits and means to access available healthcare system
3 * Effective channels exist to spread awareness of benefits and means to access healthcare among populations (e.g., mass media channels like national news, local radio shows; interpersonal channels like schools, clinics, healthcare providers)
4 Acceptable and robust communication channels are identified or developed
5 Existing institutions and/or private sector channels are leveraged to spread awareness among the masses (e.g., trusted companies/brands that are popular among communities)
6 Channels to spread awareness that have high impact and are reliable can be identified
7 Drivers of awareness acknowledge the need for awareness among the population about healthcare systems
8 Channel drivers formalize intent to raise awareness about healthcare systems by setting goals, objectives and developing strategies
9 Channels to spread awareness are secure and stable
10 Channels to spread awareness are supported by sufficient resources
11 Channels to spread awareness are equipped with material resources
12 Channels to spread awareness are equipped with technological resources
13 Channels to spread awareness are equipped with human resources
14 Channels to spread awareness are financially secure
15 Channels to spread awareness operate legally in compliance with existing laws and regulations

16 Channel drivers are trusted by the government and other healthcare stakeholders
17 Channel drivers and the communication channels utilized are trusted by the population
18 Communication systems utilized are persistent and secure for long-term purposes
19 Involved stakeholders trust communication channels used
20 Different and multiple channels of communication are utilized to raise awareness among different target populations
21 A variety of effective channels of communication exist
22 Communication channels and systems are resilient to environmental and political change
23 Awareness can be spread in a socially acceptable way (e.g., messages are aligned with the traditional belief that health is a balance between physical, spiritual, moral and social aspects of life)
24 Awareness can be raised among vulnerable/high risk target populations (e.g., rural areas, foster homes, adolescents)
25 Content used to spread awareness about the healthcare system is effective
26 Content is based on formative research and has been proven to be effective (e.g., If formative research proves mothers do not believe in the effectiveness of vaccines, content is designed to effectively overcome that notion)
27 Content is culturally appropriate and aligns with values of target community
28 Content motivates population to engage in available healthcare system
29 Content is specific to context and target audience (e.g., interpersonal interactions with a healthcare professional is a channel used to assist with family planning)
30 Variations in literacy are surmountable
31 Content is sensitive to variations in literacy
32 Majority of the target audience finds content easy to understand (e.g., Use of more pictoral representations, avoidance of difficult words or phrases)
33 Content can sensitize population about MC healthcare in order that communities fully participate in it
34 Awareness can be raised where people have little knowledge about MC healthcare system
35 Awareness can be raised among local leaders
36 Awareness can be raised among local leaders about the need for better healthcare system in the region
37 Awareness can be raised about specific requirements to strengthen MC health delivery in the region
38 Awareness can be raised on the particular healthcare service delivery (maternal or child) that is immediately required in the region to allow prioritization (e.g., increasing number of deaths caused by child diseases or lack of vaccines prioritizes child health over maternal)
39 Target populations/communities are made aware about MC health

40 Populations are made aware of existing MC health rights
41 Target populations (e.g., expectant mothers, new mothers, families of expectant mothers) are made aware of maternal healthcare
42 Target populations are informed about the stages of pregnancy
43 Target populations are informed about the what to expect at different stages of pregnancy and during childbirth
44 * Target populations are informed about the best practices and what to avoid during pregnancy (e.g., nutrition intake, exercise, avoid heavy lifting)
45 Target populations are informed about nutritional requirements for an expectant mother
46 Target populations are informed about pre and post natal care
47 Target populations/communities (e.g., families with children below the age of 18, foster homes, schools) are made aware of child healthcare
48 Target populations are informed about care to be taken with new born children
49 Target populations are informed about vaccinations available for children and the benefits of administering them
50 Target populations are informed about nutritional requirements to enable healthy development of children
51 Target populations are made aware of child mental health and services available in association with it
52 All populations are made aware of existence of unqualified healthcare professionals and how to identify them
53 Individuals can access knowledge on preventive measures that reduce risk of ill health with respect to MC health
54 Awareness can be raised among potential healthcare workforce about job opportunities in the healthcare sector and required qualifications (e.g., doctors, nurses, pharmacists, pharmacologists, healthcare specialists, health communicators)
55 Awareness can be raised about available training/degrees for different positions available within the healthcare workforce
56 Job opportunities in the MC healthcare domain are appealing
57 Possible partners can be approached to contribute to the healthcare system
58 Awareness can be raised among non-profit groups about healthcare system opportunities for engagement

59 Possible private sector partners can be made aware of healthcare system opportunities for engagement
60 Awareness can be raised among healthcare system workforce about necessary components that constitute MC healthcare to strengthen services provided
61 Awareness can be raised among healthcare system workforce about necessary components that constitute maternal healthcare
62 Awareness can be raised among healthcare system workforce about necessary components that constitute child healthcare
63 Awareness can be raised where people know about requirements to maintain MC health but do not know how to avail it
64 Information about how to engage in the healthcare system can be conveyed to inform different categories of populations
65 Local leaders can be made aware of means to strengthen existing local healthcare systems
66 Local leaders and influencers of change can be informed about new healthcare technology/medicines to support MC health
67 Local leaders and influencers of change can be informed about means to avail MC healthcare facilities for their region
68 Populations are informed about available healthcare services to support MC health
69 * Target populations are informed about services available to support a safe pregnancy and safe delivery (e.g., pregnancy training, benefits of having a healthcare professional oversee
70 Target populations are informed about child physical, mental and developmental health facilities available
71 Populations are informed about when (e.g., at what stage they need to see a doctor) and where to avail healthcare services to support MC health
72 Populations are informed about available certified healthcare centers
73 Populations are made aware of when the healthcare centers operate
74 Populations are informed about medications and the process to obtain them
75 Information on application processes for jobs in healthcare sector can be relayed to potential applicants
76 Potential applicants are identified from institutions offering degrees/training for various healthcare positions within MC domain
77 Healthcare workforce can be made aware of means to improve existing systems
78 Feedback mechanisms and means to improve existing MC health service systems in a region exist
79 Awareness can be raised among possible partners on how they can contribute to the healthcare system

80 Awareness can be raised among non-profit groups about means to engage in healthcare system
81 Possible private sector partners can be made aware of means to engage in the healthcare system
82 Awareness can be raised where people are aware of MC healthcare and how to access it but do not know how to overcome specific barriers
83 Existing barriers are identified
84 Skills related barriers are identifed (e.g., Insufficient qualified healthcare workforce)
85 Wealth related barriers are identified (e.g., Financial capacity to engage in healthcare system is inadequate)
86 Access related barriers are identified (e.g., Healthcare center is located far from the community)
87 Time related barriers are identified (e.g., Healthcare center is operational only for limited hours)
88 Behavior/Habit related barriers are identified (e.g., pursuit of traditional medicine beyond its effectiveness)
89 Culture/religion/tradition related barriers are identified (e.g., Stigma against going to see a professional doctor)
90 Knowledge barriers are identified (e.g., myths about MC health)
91 Effective strategies to address specific barriers are developed
92 The barriers to be addressed are identified and prioritized
93 The impact on population due to a skill based barrier is assessed
94 The impact on population due to a wealth based barrier is assessed
95 The impact on population due to access based barrier is assessed
96 The impact on population due to a time based barrier is assessed
97 The impact on population due to a behavior based barrier is assessed
98 The impact on population due to a cultural barrier is assessed
99 Strategies to address specific high priority and high impact barriers are implemented based on prioritization

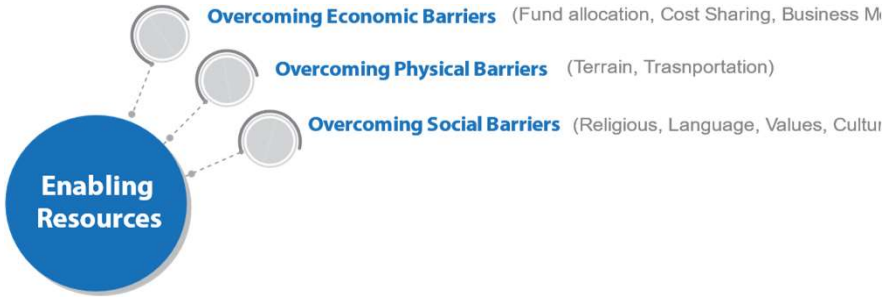
J. Motivation/Acknowledgement of Needs

1 **Country is motivated to engage in available healthcare system**
2 Country is motivated to engage in available healthcare system
3 The beliefs, attitudes and perceptions of populations towards MC healthcare in different regions are understood
4 Effective channels and reliable means exist to perform a formative assessment of populations' beliefs, attitudes and perceptions
5 Mechanisms used to perform formative assessment are appropriate for specific context
6 Rigorous assessments are made to obtain comprehensive data on the knowledge and attitudes of people towards MC healthcare
7 Data collected from assessments are effectively analyzed
8 The analysis results are utilized to drive change in populations' motivation and behavior
9 Evidence-based intervention strategies are employed to motivate populations at different stages of change
10 Individuals/communities in the pre-contemplation stage (when they are not considering engaging in available healthcare services) can be motivated to consider availing MC healthcare services
11 Influencers of change are motivated to consider the need to provide access to MC healthcare
12 Target populations are motivated to consider benefits of healthcare
13 Barriers preventing consideration of engaging in healthcare system are addressed (e.g., lack of finances to cover costs)
14 Strategies to facilitate equitable access to MC healthcare services are implemented
15 Viable private sector channels are considered and employed to overcome barriers
16 Communities are conscious about existing living conditions and possible healthier lives after obtaining healthcare services (e.g., healthy mothers can foster healthy families)
17 * Individuals, families and communities feel empowered and believe they can create meaningful impact in their lives
18 Individuals and families care about their health

Maternal and Child Healthcare
Success Factor Tree

19 Communities are aware of channels they can use to influence change in their lives
20 Individuals/communities in the contemplation stage can be motivated to engage in the healthcare system
21 Local leaders and influencers of change believe they can benefit population by facilitating awareness and access to healthcare
22 Leaders care for the greater good of the communities, regions and the nation
23 Leadership is convinced that improving access to quality MC healthcare facilities can have a long-term impact on the health of communities, states, and the nation
24 Individuals, families and communities are convinced about benefits of MC healthcare
25 Barriers preventing target populations from engaging in MC healthcare are minimized or overcome
26 Available healthcare facilities are made a comparitively more appealing alternative to existing practices in terms of skills, wealth, access and time
27 Families and households are encouraged to adopt the practice of consulting healthcare professionals
28 The priorities of families are assessed
29 Families and households are exposed to convincing messages to prioritize healthcare (e.g., risks associated with unattended birth)
30 Individuals are motivated to consider building a career in the MC healthcare domain
31 Individuals are motivated to enroll in and complete degrees/trainings offered by medical institutions
32 Medical institutions exist to impart education/training for medical degrees/certifications
33 Medical institutions provide quality education
34 Medical institutions are accessible
35 Degrees/trainings/certifications provided by medical institutions are affordable
36 Degrees/trainings/certifications qualify individuals for specific jobs within the MC health domain
37 Skilled individuals are motivated to participate in their national healthcare delivery system
38 Tangible and intangible incentives offered to participants in the healthcare delivery system are attractive (e.g., Attractive salaries, respectable job, good standards of living)
39 Working conditions promote interest in job opportunities
40 Healthcare centers provide safe work environment
41 Healthcare centers provide fulfilling work opportunity
42 Jobs in healthcare system are perceived as respectable
43 Equal opportunities are offered to all qualified applicants
44 Opportunities to volunteer are provided
45 Households in communities are motivated to avail healthcare facilities for all members of the household
46 Engaging in available healthcare facilities creates a sense of self-efficacy among the people
47 Households and communities can observe improvements in health of families who avail healthcare

K. Enabling Resources



1 **Country has or can create access to enabling resources wherever required**
2 Possible entities (organizations, institutions, companies) or resources (material, human capacity/know-how) can be identified to overcome existing challenges to enable equitable access/availability of MC healthcare
3 **Economic barriers in providing quality MC healthcare services and in receiving MC healthcare services can be overcome**
4 Economic barriers with regard to creating availability of MC healthcare can be overcome
5 Sources are available to sponsor system start-up or to gain/augment government financial support
6 Government allocates funds for healthcare sector with emphasis on providing equitable coverage to all
7 Viable opportunities for industry engagement are utilized
8 Opportunities to obtain external monetary aid are utilized (e.g., USAID, JICA, GIZ)
9 Monetary transaction costs at country level are kept in check (to avoid paying high exchange rates)
10 Fragmentation of monetary resources are minimized
11 Other possible partnership opportunities between healthcare system and entities within the country are tapped
12 The MC healthcare service delivery system is economically scaleable
13 Possibility of corruption can be circumvented
14 All entities in the MC healthcare system that utilize funds are held accountable for it
15 Financial distribution within the healthcare system is done based on past results from performances of various sub-sectors

16 Opportunities to engage non-profit resources are effectively utilized
17 A business model can be developed that accounts for variations in community purchasing power
18 The cost to employ skilled workforce for delivery of MC healthcare services can be supported by the system business model
19 Employment salaries match salaries offered by competing healthcare recruitment channels (e.g., preventing skilled professionals from going abroad due to attractive salaries)
20 The cost of utilizing technology for healthcare can be supported by the system businesss model
21 The cost to develop/implement healthcare products and services can be supported by the system business model
22 The cost to produce/implement development and distribution of healthcare products (e.g., vaccines, contraceptives) for MC health can be supported by the business model
23 The cost to construct and maintain healthcare infrastructure can be supported by the business model
24 Business model accommodates integration of healthcare services to avoid duplication and wastage
25
26 **Physical barriers** do not exist or can be overcome
27 Physical obstacles to access to healthcare providers imposed by local terrain can be overcome
28 Infrastructure exists to facilitate travel
29 Operational transportation modes exist and connect communities to health facilities
30 The mode of transport is safe
31 The mode of transport is trusted by families/communities
32 The mode of transport is efficient
33 The mode of transport is reliable
34 Transportation cost is affordable
35 The route from community establishment to healthcare facility is safe and easy to traverse
36 Obstructions to the safe passage of commuters to healthcare facility can be overcome
37 Alternative means to deliver MC health sevices are sought where transportation is not feasible (e.g., telephonic services, mobile health dispensaries)
38 **Social barriers** do not exist or can be overcome
39 Social group biases do not exist or can be overcome
40 Religious barriers do not exist or can be overcome (e.g., religious group segregations/ethnic group segregations)
41 Religious Organizations can help facilitate progress if barriers do exist
42 Language variations/barriers are surmountable
43 Local community members will be comfortable with healthcare delivery system

The healthcare delivery system can be operated in a manner consistent with local values
Infrastructure exists to facilitate communication between different stakeholders
Cultural barriers, if exist, can be overcome
Stigma associated with diseases or conditions can be alleviated
* Stigma/misconceptions associated with engaging with a healthcare provider/obtaining health check-up can be overcome (e.g., parental consent deters youth in Kenya from getting checked for HIV)
Apprehension associated with health information being leaked can be resolved
MC healthcare sevices provided are aligned with cultural preferences
MC healthcare provided instigates positive cultural norms towards healthcare services

L. Adoption/Habit Conversion

Individualscommunities maintain engagement with the healthcare system
Return rates are increased and individuals, families and communities are encouraged to consult trusted medical practitioners for MC health related matters
Patients find it beneficial to consult trusted medical practitioners (e.g., Level of comfort offered, services provided result in better health)
Families of patient trust qualified medical practitioners for health related advice
Local community members is comfortable with the healthcare workforce
Local community trusts healthcare workforce
Local and regional healthcare system operators are comfortable working with each other
Healthcare delivery system is free from any kind of monopolizing entity
Acceptable disciplinary measures are in place for taking action against misconduct within the healthcare system
Acceptable disciplinary measures are in place to prevent misconduct on the part of healthcare staff (physicians, nurses, volunteers)
Acceptable disciplinary measures are in place to prevent misconduct on the part of healthcare administrative staff

Acceptable disciplinary measures are in place to prevent misconduct on the part of other stakeholders involved in the healthcare system

Communities are willing to avail healthcare facilities delivered

Community trusts healthcare workforce

Community trusts involved stakeholders

Community is willing to take responsibility for its well being

Community will relinquish present impeding behaviors in favor of desired behaviors

Community is optimistic about its future

Community values community wellfare

M. Measurements and Evaluations

Indicators to measure effectiveness of healthcare system exist

Mechanisms exist to measure quality of care delivered by healthcare facilities

Evaluative bodies exist to carry out quality checks

Dispensaries, clinics, health centers and hospitals (public and private) are required to uphold quality standards

Key quality indicators for MC healthcare delivery system are measured

Maternal health indicators show positive impact of health services delivered

Maternal mortality rate is decreased

Percentage of women who received antenatal care is increased

Number of births that took place with a skilled healthcare worker in attendance is increased

Percentage of women who received postnatal Care (PNC) is increased

Low birth weight prevalence is decreased

Child health indicators show positive impact of health services delivered

13 Infant mortality rate/ratio is decreased
14 Under five mortality rate/ratio is decreased
15 Number of births that took place in a healthcare facility is increased
16 Nutritional status of children under five shows positive rsults (e.g., measured through BMI, degree of stunting)
17 * Percentage of children who have received all basic vaccines is increased (e.g., for measels, pneumococcal vaccines)
18 Prevalance of breast-feeding among children under 6 months is increased
19 Neonatal mortality rate/ratio is reduced
20 Individuals/communities that have chosen to engage in available healthcare services can be encouraged to maintain their engagement
21 Government and local leaders are motivated to continue supporting healthcare system requirements for MC health
22 The outcomes of providing healthcare facilities to the people can be measured (more outcomes listed in lines 397-414)
23 Existing solutions are driving a year over year improvement in maternal health (e.g., more safe deliveries, more deliveries in presence of healthcare professional, decrease in maternal mortality rates)
24 Existing solutions are driving a year over year improvement in child health (e.g., decrease in infant mortality rate, decrease in mortality rates of children under the age of five)
25 Access to MC healthcare services fosters community/social equity
26 Provision of access to healthcare facilities promotes health equity among communities

N. Sustainability

1 **The healthcare system in the country is sustainable**
2 Country has or can develop sustainable approaches to managing healthcare delivery system
3 Organizations and institutions that run the MC healthcare system are sustainable
4 Administrative bodies responsible for components of MC healthcare system can sustain themselves

Maternal and Child Healthcare
Success Factor Tree

- Bodies responsible for policy development on MC healthcare are sustainable
- Bodies responsible for healthcare workforce training curriculum development are sustainable
- Bodies responsible for financing the MC healthcare delivery in the system are sustainable
- Bodies responsible for recruiting healthcare workforce that contribute to the MC healthcare system are sustainable
- Bodies responsible for evaluation of quality of MC healthcare service delivered are sustainable
- Bodies responsible for infrastructure growth and expansion with regard to MC healthcare are sustainable
- Communication channels used to spread awareness among populations are sustainable
- Policies that govern the MC healthcare system are sustainable and enable long term growth and development in the health sector

Entities that support and facilitate delivery of MC healthcare services are sustainable

- Transportation systems connecting communities to health centers/healthcare providers are self-sustainable
- Healthcare workforce training programs are self-sustainable
- Systems in place to source and distribute medical devices are sustainable
- Systems in place to source and distribute medical equipment are sustainable
- Systems in place to source and distribute medications are sustainable
- Systems in place to deliver healthcare services are sustainable
- Infrastructure capacities can be expanded through sustainable means
  - Infrastructural needs and equipment are used for evidence based planning and budgeting for MC healthcare systems
- Technology used in the MC healthcare domain is relevant and updateable

Quality of MC healthcare services delivered by the healthcare system is sustainable or can be improved

- Quality and standards of health centers can be improved over time
- Quality and capabilities of health workforce can be improved over time
- Quality and standards of medication and other medical products offered can be improved over time
- Quality of service delivery and patient/customer interaction can be improved over time
- Feedback mechanisms are in place to facilitate improvement in quality aspects
  - Healthcare administration is evaulated and monitored for effective functioning
  - Physicians, nurses and other health workforce are evaluated based on their performance
  - The utilization of resources within healthcare centers is monitored for efficiency

Community engagement in available MC healthcare system can be sustainably improved/maintained over time

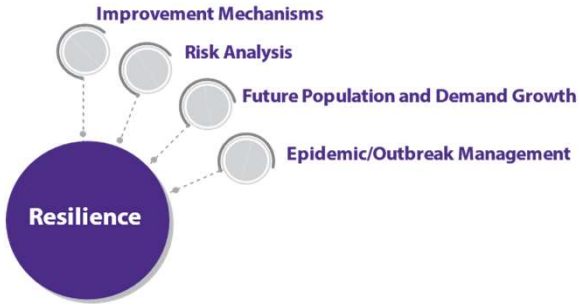
- The MC healthcare system is able to build the trust of communities and other stakeholders

34 The MC healthcare system has sustainable external stakeholder support (e.g., households, community members, teachers, churches, donor agencies and all levels of government)
35 Community observes benefits of engaging in the MC healthcare system over time
36 Communities are better informed about MC healthcare, MC healthcare resources and healthy practices
37 The results of key quality measurement factors for the MC healthcare system show improvement with increased engagement in the healthcare
38 Children and youth grow stong and healthy
39 Couples/single mothers are better able to plan families and provide for them
40 Expectant mothers are able to maintain good health through pregnancy
41 Increasing number of safe childbirths with healthy mothers and newborn in the presence of healthcare professional are observed

42 MC healthcare delivery system is economically sustainable
43 Mechanisms to fund sustainable operation and maintenace of MC healthcare delivery system can be identified and engaged
44 Funds may be allocated by country government
45 External/Internal aid to augment/support government funding can be identified and leveraged when required
46 Long-term opportunities to leverage private sector capital to fund healthcare system can be utilized when required
47 Opportunities to engage non-profit organizations can be leveraged
48 Action plans are created, submitted on time, and followed to receive access to funding
49 The economic plans for the MC healthcare system can support future trends
50 The economic system can support employment of increasing healthcare workforce
51 The economic system can support infrastructure expansion
52 The economic system can support development and implementation of new technologies in the future

53 The healthcare delivery system is economically sustainable
54 Technology is used effectively to reduce costs to deliver MC health services
55 System construction costs are self-sustained and/or reliably supported
56 System operating costs are self-sustained and/or reliably supported
57 System maintenance costs are self-sustained and/or reliably supported

O. Resilience



1 **The MC healthcare system is resilient**
2 MC Health centers/clinics that do not meet required standards can be strengthened
3 Health systems that do not meet required quality standards can be identified
4 Existing barriers that prevent system/center from attaining quality standards can be addressed
5 Financial barriers are addressed
6 Lack of availability of skilled/qualified workforce is addressed
7 Lack of access to medical supplies and stocks is addressed
8 Issues associated with quality standards are identified and addressed
9 MC Health centers/clinics can account for sudden increases in patients or health risks
10 Health systems can perform risk analyses for their patient demographic
11 Health centers collect anonymous data from patients
12 Health centers collaborate with nearby centers
13 Health centers have capability to interpret data collected
14 Health systems utilize pre-identification techniques to determine future trends
15 Health systems utilize national census data where available
16 Health systems develop and utilize trend models
17 Health systems are accurate when determining future trends
18 Health systems are trained to accommodate certain events (i.e. epidemic, outbreak)
19 Health centers/clinics have surplus supplies
20 Health centers/clinics have communication with other regions for coordination of personnel
21 Health providers are trained in protocol to deal with large risk events (i.e. epidemic)
22 Health centers/clinics can accommodate a sudden influx of patients for the short term

Healthcare

- = National
- = Regional
- = Community
- = Household
- = Individual

FINANCES
- INSURANCE PROVIDER
- CREDIT LENDER
- INSURANCE AGENT
- CREDIT AGENT
- PHARMACY BENEFIT MANAGER

RECIPIENTS
- CHILDREN
- YOUTH
- ELDERLY
- MOTHERS
- ADULTS

HEALTHCARE DELIVERY
- EMERGENCY MEDICAL TECHNICIANS
- FIELD DOCTORS

RESEARCHERS

PREPATORY EDUCATION

HEALTHCARE PROVIDERS NETWORK

SPECIALIZED CARE
- HOSPITALS
- SPECIALIZED CARE DOCTORS
- EMERGENCY / MOBILE EVALUATION TEAM
- HEALTH COMPANIES

PRIMARY CARE
- PRIMARY CARE DOCTORS
- CLINICS
- NURSES
- CLINICAL SUPPORT STAFF

TRADITIONAL CARE
- MIDWIVES
- TRADITIONAL MEDICINAL PRACTITIONER
- FAITH BASED HEALER

LABOR ORGANIZATIONS

COMMUNICATION
- HEALTH COMMUNICATOR
- NUTRITIONIST/DIETICIAN
- SCHOOLS
- LOCAL HEALTHCARE WORKERS

SUPPORT ORGS
- RELIEF ORGANIZATIONS
- CIVIL SOCIETY ORGANIZATIONS
- NON-GOVERNMENTAL ORGANIZATIONS
- FAITH BASED ORGANIZATIONS
- INTERNATIONAL ORGANIZATIONS

INFRASTRUCTURE AND SUPPLIES
- EQUIPMENT MAINTENANCE PROVIDER
- MEDICAL SUPPLIES DISPOSER
- PHARMACEUTICAL DISTRIBUTOR
- FACILITIES MANAGER
- PHARMACEUTICAL PRODUCER
- HEALTH TECHNOLOGY PROVIDER
- FACILITIES PROVIDER
- PHARMACEUTICAL DEVELOPER
- FACILITY MAINTENANCE PROVIDER
- CONSTRUCTION PROVIDER
- MEDICAL EQUIPMENT SUPPLIER
- TRANSPORTATION PROVIDER
- UTILITIES PROVIDER
- TELECOMMUNICATIONS PROVIDER
- LOGISTICS PROVIDER

LOCAL INFLUENCE
- LOCAL LEADERS
- CULTURAL ORGANIZATIONS
- RELIGIOUS ORGANIZATIONS
- COMMUNITY/PEER SUPPORT GROUPS
- COMMUNITY PROGRAMS

GOVERNMENT
- ENVIRONMENTAL PROTECTION AGENCY
- INSPECTION AND EVALUATION AGENCY
- WATER AGENCY
- WORKER PROTECTION AND SAFETY AGENCY
- QUALITY MANAGEMENT
- ECONOMIC MANAGER
- POLICY MAKER
- RISK/CONFLICT AGENCY
- UN
- LOBBYIST

FUNDING ORGS
- PRIVATE EQUITY IN EMERGING MARKETS
- PUBLIC DONORS
- MICROFINANCE ORGS
- GOVERNMENT FUNDING

EMERGENCY PERSONNEL
- POLICE
- FIREMEN
- EMERGENCY MEDICAL TECHNICIANS

SYSTEM TEMPLATE

SYSTEM ELEMENTS	SYSTEM LINKAGES	RATIONALE	STAKEHOLDERS TO INVOLVE	GAP
SECURITY/SAFETY				
POLICY				
LEADERSHIP/ GOVERNMENT				
INFRASTRUCTURE				
EQUIPMENT/ SUPPLIES				
WORKFORCE/ TALENT				
CAPITAL/ FINANCES				
PRACTICES				
AWARENESS				
MOTIVATION/ ACKNOWLEDGEMENT OF NEED				
ENABLING RESOURCES				
ADOPTION/HABIT CONVERSION				
MEASUREMENTS AND EVALUATIONS				
SUSTAINABILITY				
RESILIENCE				

SYNTHESIS OF PRIORITY

SCOPE

- ☐ Individual
- ☐ Household
- ☐ Community
- ☐ Regional
- ☐ National

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FACILITATOR'S GUIDE*

RFA DESIGN INPUT SESSION

INTRODUCTION

After completing the Comprehensive Issue Analysis working session, teams focusing on each sector will have identified and ranked up to three priority success factors that they believe could advance progress on the session sector if supported through research. Pursuing research on the priorities, however, will require development of a Request for Applications (RFA) to formally solicit proposals from researchers to address those aspects of the success factor that are viewed as non-existent or operating at a less than adequate level. To this end, the RFA Design Input session is intended to gather key inputs that will facilitate the design of an RFA to specifically address each priority.

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REQUEST FOR APPLICATIONS DESIGN INPUT SESSION

Overview

Development of an effective RFA requires clear definition of the scope of the priority to be addressed, the desired objectives of the effort and related outcomes, the timing of the impact required, and a range of details that form the technical foundation of the request, while ensuring that it is not redundant with prior/existing efforts and is instead focused on closing gaps in our understanding of the topic under investigation. Additional insight into the contacts, collaborators, and partners that may help address the priority are also valuable, as well as thoughts on potential research pursuits that could inform means to address the priority. Ultimately, these are all inputs that participants in the R4D are likely to be able to inform from their knowledge and experience, and gathering this input is the focus of the RFA Design Input Session.

PREPARING FOR THE RFA DESIGN INPUT WORKSHOP – FACILITATOR

Request for Applications Workshop Activity

The success factors that were deemed priorities in the CIA working session should meet the following three criteria:

1. The success factor is **significant** to overall efforts to realize sector-specific outcomes
2. The success factor is **not currently realized** in the existing system in the region of interest today
3. There is great likelihood that **research** on that success factor **can help realize a desired state**

Each of the prioritized success factors was cast in the context of a system during the CIA session, and each priority's System Template now serves as a focus for the RFA Design Input activity.

With this as context, facilitation guidance for the RFA Design Input session is as follows:

Logistics

Location

Participants should return to the breakout rooms they utilized for the Comprehensive Issue Analysis activity to engage in the RFA Design Input session. The breakout rooms include the Royal Palm Room (which will be split into two sections), as well as the Acacia and Ebony Rooms.

Timing

May 8th, 09:40 – 13:00 (Session timing shaded on overall agenda below)

08:30 – 09:30	Plenary: Comprehensive Issue Analysis
09:40 – 13:00	Issue Analysis Breakout Sessions (4 concurrent 3-hour sessions, by sector)
	[Tea Break at 11:00 am for 15 minutes]
13:00– 14:00	Lunch
14:00 – 16:00	**RFA Design Input Session**

Objective

The objective of this session is for participants in each team to:

1. Contribute their experience and knowledge to record important information that will help shape RFAs to specifically address each priority success factor that they believe could advance progress on the session sector if supported through research.

Facilitator's Pre-workshop Preparation

Your role as the facilitator is to guide participants through the following activity and support productive discussion among participants. We hope to encourage participants to provide added context on the nature of the gap to be addressed at the core of the priority success factors identified in the CIA working session. To prepare for your role, please –

1. Read this guide completely
2. Review the System Template [Figure 1] and RFA Design Input Template [Figure 2] and be familiar with its content and organization
3. Participate in training provided for facilitators
4. Ensure that all the items required at your session, as provided in the checklist in this document, are available before you start your session

Team Formation

For Part 1 of this session, participants should remain in the same teams formed during the CIA session.

Session Materials

Each breakout room should have the following materials and supplies:

- ☐ Completed System Templates for each priority success factor (up to 3 per table) [see Figure 1 for illustration]
- ☐ RFA Design Input Template (at least 3 per table) [see Figure 2 for illustration]
- ☐ Flip charts (1 per table)
- ☐ Flip chart markers
- ☐ Pens/pencils
- ☐ Highlighters
- ☐ Sticky notes
- ☐ Pins or tape (depending upon room wall materials)

Room Preparation

The room should be set up with individual tables arranged to accommodate 5 to 6 people. Each table should be near a wall on which the previously developed System Templates are posted. A flip chart should also be arranged near each table. Each table should then be provided with 3 RFA Design Input Templates, as noted above, as well as markers, pens/pencils, sticky notes, and pins or tape.

Facilitating the RFA Design Input Session

As participants in this session should already be acquainted from prior activities, the working session should start off quickly with a brief introduction period and then progress in two phases. Attempt to adhere to recommended activity timing as much as possible.

Activity Introduction *(10 minutes)*

1. **Introduction** – You should initiate the session by gaining the attention of attendees.
2. **Instructions -** You will be giving participants at your session instructions on what will take place during the session and introducing the concepts and logic presented in this document. This presentation will be provided to you prior to the session for convenience and consistency.

Once general instructions are provided, the workshop activity can commence. The workshop is divided into two main parts and a description of each is provided in detail below. **Importantly, teams should complete activity Part 1 for <u>each</u> of their top priorities (up to three) in the 60-minutes allotted for the exercise to ensure that there is time for the final activity.**

Activity Details: Part 1: Team Completion of RFA Design Input Template *(60 min)*

In the first part of the activity, participants should develop one RFA Design Input template **for each of their priority success factors** (up to three), using insights from their system level work to shape the inputs recorded on the RFA Design Input template.

The **RFA Design Input Template** requests 8 categories of information that will help inform RFA design. See Figure 2.

1 – Problem Definition
2 – Scope
3 – Technical Foundations
4 – Work-to-date Information
5 – Cross-cutting Issues
6 – Potential Contacts, Collaborators and Partners
7 – Impact Potential
8 - Potential Research Initiatives

The following information should be recorded in each of these sections:

1 *Problem Definition*: Here participants should record a concise statement of the specific challenge related to their priority that they believe can be addressed through research, the motivation for this focus, and the objectives and/or outcomes sought from a related research effort.
2 *Scope*: The scope definition should include details on the intended beneficiaries of the effort, their geographic location, and any quantification of the scale of the problem to be addressed
3 *Technical Foundations*: The section should specify any technical fields or domains that participants believe should lead the research to address the outlined problem statement or could otherwise contribute a valuable perspective on the problem.
4 *Work-to-date Information*: In this section participants should record knowledge of any past or on-going efforts that are related to or directly address the stated problem, any known gaps in this work, and any funding sources that may be support related work
5 *Cross-cutting Issues*: Here participants can capture any dependencies of the stated problem on issues of gender, conflict, or government.
6 *Potential Contacts, Collaborators, and Partners*: Here participants can outline any specific individuals, groups, or organizations that they believe could play a valuable role in accelerating or enhancing the impact of research intended to address the stated problem
7 *Impact Potential:* Here, participants should outline expectations on the nature of the effort likely required to address the priority and the time likely required to achieve outcomes. Categorization of the anticipated effort as fundamental research, development using established knowledge, or ready implementation of existing knowledge/solutions would be helpful.
8 *Potential Research Initiatives:* In this section, participants are encouraged to record specific project ideas or initiatives that they believe would help illustrate the kind of work that could advance efforts to address the stated priority.

Teams should be encouraged to record any knowledge or experience they have that would improve and/or focus the development of an RFA to address the priority success factor under discussion.

Once an RFA Design Input Template is completed for one success factor, teams should move on to their next priority success factor.

In the last 5 minutes of the activity, the team should post their RFA Design Input templates on the walls around the room at a legible height and spacing. This will create a showcase of the RFA Design Input Templates that will be reviewed and enhanced by session participants in the second part of the session.

Activity Details: Part 2: Group Improvement of RFA Design Input Templates *(50 minutes)*

In the second part of the session, all breakout session participants should be encouraged to walk the room, examining each RFA Design Input Template. For any success factor on which they have experience, they should be encouraged to annotate the template either directly or through the attachment of a sticky note that could enhance the information already provided.

This should be a very dynamic activity and participants should be encouraged to move around the room, scanning all RFA Design Input templates.

At the end of the session, the facilitator should gather the participants, thank the group for their hard work and energy, and call out some measure of the success of the session (e.g., "We have identified xx priorities today from more than yy hundred at the start of the day – an achievement enabled only by your dedication to this process. Thank you for your engagement!")

End Products

By the end of the session, each team should have completed up to three RFA Design Input Templates – one for each of the topics prioritized by the teams – and gathered input from the collective set of participants in the session. All templates should be collected by the facilitator and delivered to the Purdue team for further analysis and review.

SYSTEM TEMPLATE

SYSTEM ELEMENTS	SYSTEM LINKAGES	RATIONALE	STAKEHOLDERS TO INVOLVE	GAP
SECURITY/SAFETY				
POLICY				
LEADERSHIP/ GOVERNMENT				
INFRASTRUCTURE				
EQUIPMENT/ SUPPLIES				
WORKFORCE/ TALENT				
CAPITAL/ FINANCES				
PRACTICES				
AWARENESS				
MOTIVATION/ ACKNOWLEDGEMENT OF NEED				
ENABLING RESOURCES				
ADOPTION/HABIT CONVERSION				
MEASUREMENTS AND EVALUATIONS				
SUSTAINABILITY				
RESILIENCE				

SYNTHESIS OF PRIORITY	SCOPE
	☐ Individual ☐ Regional ☐ Household ☐ National ☐ Community

Figure 1. System Template

RFA DESIGN INPUT TEMPLATE

1 - PROBLEM DEFINITION	3 - TECHNICAL FOUNDATIONS	5 - CROSS-CUTTING ISSUES	7 - IMPACT POTENTIAL
PRIORITY TO BE SOLVED WITH RESEARCH MOTIVATION OBJECTIVES/OUTCOME	TECHNICAL FIELDS/DOMAINS TO LEAD RESEARCH	e.g. GENDER EQUALITY, CONFLICT RESOLUTION	TIME TO IMPACT | NATURE OF REQUIRED EFFORT
2 - SCOPE	**4 - WORK-TO-DATE**	**6 - POTENTIAL CONTACTS/ COLLABORATORS/PARTNERS**	**8 - POTENTIAL RESEARCH INITIATIVES**
TARGET POPULATION GEOGRAPHIC LOCATION SCALE	PAST/ONGOING EFFORTS/RESEARCH GAPS IN WORK-TO-DATE FUNDING SOURCES	SPECIFIC ENTITIES THAT CAN ENHANCE IMPACT	e.g. DEVELOPMENT OR APPLICATION INITIATIVES, DATA COLLECTION & ANALYSIS, LITERATURE REVIEW, CASE STUDIES

Figure 2. RFA Design Input Template

Tips for Facilitators:

- Encourage participants to take ownership of the work products and activity deliverables. The facilitator should refrain from being a scribe.
- Encourage participants to use the templates to guide their work
- Encourage participants to convey their knowledge and experience – this is a key input for our collective success
- Encourage capture of both positive and negative case inputs that may help focus an RFA

Contacts for more information:

During the session three members of the Purdue Innovation Studies Program will be on-site to help in guiding the teams and/or answer questions: Prof. Joe Sinfield, Romika Roshan Kotian, and Maggie Busse.

In the interim, if you have any questions related to the CIA process or facilitation of the session feel free to contact the Innovation Science team at **innovation@purdue.edu**

GLOSSARY

RFA Design Input Template: A large-format printed document used to record the participant inputs on 8 key areas of information that can inform the design of a robust and focused Request for Applications to address the priority success factors identified in the CIA working session

System Template: A large-format printed document used to record the success factor priorities and related dependencies that a team believes warrant research based effort

Success Factor: Any of literally hundreds of resources, relationships, roles, or actions that likely must be in place to enable a functioning system capable of achieving desirable outcomes related to a sector

FREQUENTLY ASKED QUESTIONS

General Facilitation Questions

1. **What must I do as a Facilitator?**

   Ans. Facilitation is the process of enabling teams of people to collaborate in a cooperative manner to help them achieve their goal. You should move around the room and interact with participants to make sure all the teams are collaboratively progressing on the assigned task according to the provided timeline. Additionally, you will help any teams that are uncertain about how to execute certain steps of the activities.

   Below are some tips to help you with this process.
   Dos:
   - Do come prepared for the session by completing all required pre-work.
   - Do encourage participants to take turns voicing their opinions and comments along with listening to other participants' thoughts and views.
   - Do encourage participants to use the provided templates to guide their work.

   Don'ts:
   - Don't participate in or contribute to a team's brainstorming process for the activity.
   - Don't get side-tracked into long conversations with individuals or teams.

2. **How should I (facilitator) prepare myself for the RFA Design Input session?**

   Ans. Read this guide in its entirety and complete all tasks listed in the 'Facilitator's Pre-workshop Preparation' section of the Facilitator's Guide. Contact innovation@purdue.edu with questions you have about the facilitation before the session.

3. **What should I (facilitator) do if there are participants who are not actively involved in discussion?**

   Ans. These participants may be identified as the ones sitting quietly, on their phones or working alone. Ease these individuals into the process. Give them an opportunity to share their thoughts and ideas with their team by asking them what they think.

4. **How do I (facilitator) help a table that is finding it difficult to follow the process?**

   Ans. Start by asking the participants at the table to describe the step that they find difficult. Next ask them to describe what they think a solution might be. If what they describe aligns with the process they are required to follow, encourage them to implement their ideas. If not, guide them to their pre-read documents and explain what they need to do.

5. **What should I (facilitator) do if a table finishes early?**

   Ans. Request that the table summarize their work to you so you can assess if they have performed the required tasks as per instructions.

- If not, request that they iterate on the parts that they can improve.
- If they are indeed done with required deliverables encourage them to help other teams.

6. **How should I (facilitator) manage conflict of opinion? / How should I (facilitator) help a team that is finding difficulty in reaching consensus?**
   Ans. Discussions and debates on differences of opinion are an integral part of this session. Participants are required to reason with each other to complete the activity. If the debates go beyond appropriate limits, contact one of the managing facilitators (from the Purdue team) so that they can address the situation.

RFA Template Questions

1. **What should be written in the RFA Design Input Template?**
   Ans. The section on Activity Details, Part 2 of your Facilitator's Guide provides detailed information on completing the system template.

2. **Can participants brainstorm/ use a different method to fill the RFA Design Input Template than recommended?**
   Ans. Participants should be encouraged to utilize the proposed approach to ensure that all needed RFA Design Input details are captured. The procedure and template for the activity is designed to allow participants to understand the full scope of success factors that shape an RFA.

3. **Can a participant draw from their experience to inform inputs to inform the RFA Design Input Template?**
   Ans. Yes, and this should be encouraged, although input that is anecdotal should be noted as such.

4. **Can people send in more thoughts to shape RFAs after the working session?**
   Ans. Additions to the RFA Design Input process are always welcome. However, participants should recognize that only inputs gathered at the session will have timely influence on the request for applications (RFAs) that will result from the workshop, so providing inputs during this session is ideal.

General Session Related Queries

1. **What expectations should facilitators and participants have for the session?**
   Ans. The RFA Design Input session will be an active working session which involves collaboration between people from various backgrounds and disciplines.

2. **How will session outputs be used?**
   Ans. Completed RFA Design Input Templates will be used as guides to inform the Requests For Applications that will be developed and launched following the R4D event.

3. **What if a team is running out of time?**
   Ans. Monitor the teams to make sure they follow the provided timeline to prevent this from taking place. If at the end of any part of the session, you find teams that have not made sufficient progress, request the teams break up work to ensure capture of as many inputs to the RFA Design Input Template as possible in the time available.

4. **Will participants remain in the same teams as in the CIA session?**
   Ans. Yes, for the first two parts of the RFA Design Input session.

5. **On what basis are the teams formed?**
   Ans. Teams are pre-assigned to participants to ensure that perspectives from different disciplines are present at each table.

6. **What if participants would like to consult local stakeholders to obtain input from them?**
   Ans. Encourage them to do so if someone with relevant background is present at the session. Note also that each participant in a given breakout session will have a chance to comment on all RFA Design Input Templates during the third part of the activity.

7. **What materials will be provided to participants?**
   Ans. All materials listed in the attached checklist will be provided.

8. **How will funds be allocated toward priorities after the session?**
   Ans. Funds will be allocated through rigorous review of applications to the Request for Application (RFA) process that is being deployed by the LASER PULSE consortium.

9. **Can participants leave the room and work elsewhere?**
   Ans. No. The working session is designed to be a collaborative and interactive session that requires in-person engagement.

RFA DESIGN INPUT TEMPLATE

1 - PROBLEM DEFINITION

PRIORITY TO BE SOLVED WITH RESEARCH

MOTIVATION

OBJECTIVES/OUTCOME

2 - SCOPE

TARGET POPULATION

GEOGRAPHIC LOCATION

SCALE

3 - TECHNICAL FOUNDATIONS

TECHNICAL FIELDS/DOMAINS TO LEAD RESEARCH

4 - WORK-TO-DATE

PAST/ONGOING EFFORTS/RESEARCH

GAPS IN WORK-TO-DATE

FUNDING SOURCES

5 - CROSS-CUTTING ISSUES

E.G., GENDER EQUALITY, CONFLICT RESOLUTION

6 - POTENTIAL CONTACTS/ COLLABORATORS/PARTNERS

SPECIFIC ENTITIES THAT CAN ENHANCE IMPACT

7 - IMPACT POTENTIAL

TIME TO IMPACT

NATURE OF REQUIRED EFFORT

8 - POTENTIAL RESEARCH INITIATIVES

E.G., DEVELOPMENT OR APPLICATION INITIATIVES, DATA COLLECTION & ANALYSIS, LITERATURE REVIEW, CASE STUDIES