

DIGITAL BIRTH REGISTRATION IN BANGLADESH

Technical Analysis Study: strengthening CRVS in Bangladesh
through the appropriate use of digital technologies

Plan Bangladesh and EATL

On behalf of CRVS Secretariat, Cabinet Division

Table of Contents

Table of Figures	Error! Bookmark not defined.
List of Tables.....	4
List of Abbreviations and Acronyms	6
Acknowledgements.....	7
Introduction.....	8
What is CRVS and why is it important?	8
Plan International and CRVS	9
Methodology.....	10
How was the study conducted in Bangladesh?	11
Research Techniques.....	11
Participant Selection.....	12
As-Is Assessment	15
CRVS Long Term Vision: Government’s Vision for CRVS	16
Current Status of CRVS in Bangladesh	17
Main CRVS actors in Bangladesh.....	20
CRVS Legal & Policy Framework	23
CRVS Processes.....	27
CRVS System Landscape: IT systems that are used to support CRVS processes	40
Process Bottlenecks: the weaknesses in the registration processes	45
Registration Barriers: issues that prevent people from registering births and deaths.....	47
Cultural Considerations: socio-cultural factors affect registration rates	50
Current CRVS Initiatives: existing programmes aim to strengthen CRVS systems	51
Conclusions	52
Technical Feasibility	54
Physical / IT Infrastructure	54
Human Capacity	58
System Integration Opportunities	63
Legal Assessment of Digitisation.....	66
Process & Technology Options	69
Future State Technology Architecture.....	71
Future State Process Flow.....	75
DBR Programme Blueprint.....	78
Programme Overview	78

Programme Scope 80
Programme Strategies 82
Change Management 87
Programme Implementation 106

Table of Figures

Figure 1. UN definition of Civil Registration & Vital Statistics	8
Figure 2. Technical Analysis Methodology.....	11
Figure 3. Key findings from the Bangladesh comprehensive assessment Report	19
Figure 4. Interpretation of score in the Bangladesh comprehensive assessment report.....	19
Figure 5. Responsible ministries for the vital event registration in Bangladesh	23
Figure 6. Status IT based process of CRVS in Bangladesh	28
Figure 7. Birth and death registration process diagram	29
Figure 8. Marriage registration process diagram.....	34
Figure 9. Divorce registration process diagram	37
Figure 10. Schematic diagram of BRIS	41
Figure 11. Sources of information about birth registration.....	47
Figure 12. Rate of birth registrations across age groups	48
Figure 13. Schematic diagram of IDEA System (NID Project).....	64
Figure 14. A conceptual view of the MRP IT infrastructure.....	64
Figure 15. A conceptual view of the BRTA IT infrastructure.....	65
Figure 16. A conceptual view of the Health IT infrastructure.....	66
Figure 17. Process and technology options	70
Figure 18. Future state system architecture.....	71
Figure 19. Future state process flow	75
Figure 20. Birth registration to be process	76
Figure 21. Integrated DBR Programme Model	80
Figure 22. DBR Process	83
Figure 23. Comparison of birth registration rates by time of registration	85
Figure 24. DBR Results Framework.....	100
Figure 25. DBR Programme Governance Structure	107
Figure 26. DBR Programme Workplan	111
Figure 27. DBR Programme Implementation Phases.....	111
Figure 28. Indicative DBR Programme Costs.....	113

List of Tables

Table 1. Research techniques of the as-is analysis	12
Table 2. List of participants in the analysis.....	13
Table 3. List of household survey locations	15
Table 4. Current performance of Bangladesh against regional action framework	18
Table 5. List of key household survey findings.....	20
Table 6. List of CRVS actors in Bangladesh.....	23
Table 7. Summary of law related to CRVS	25
Table 8. Existing gap in the current CRVS legislation	27
Table 9. Steps of birth registration process	31
Table 10. Steps of death registration process.....	31
Table 11. Fee structure for the birth and death registration.....	32
Table 12. Registrars of birth and death events.....	32
Table 13. Key actors of birth and death process.....	33
Table 14. Variations of birth and death registration processes	33
Table 15. Steps for marriage registration	35
Table 16. Steps for divorce registration.....	38
Table 17. Key actors in marriage and divorce process	40
Table 18. Number scheme for birth and death registration number	42
Table 19. Number of records in BRIS of different categories	42
Table 20. SWOT analysis of BRIS system.....	44
Table 21. ICT coverage of CRVS functions in Bangladesh.....	44
Table 22. List of registration process bottlenecks	47
Table 23. List of socio-economic factors that affects registrations	51
Table 24. List of current CRVS initiatives.....	52

List of Abbreviations and Acronyms

A2I	Access to Information Program, Prime Minister's Office
ADB	Asian Development Bank
APAI-CRVS	Africa Programme on Accelerated Improvement of CRVS
BBS	Bangladesh Bureau of Statistics
BCC	Bangladesh Computer Council
BDRP	Birth & Death Registration Project
BEC	Bangladesh Election Commission
BRIS	Birth Registration Information System
BRN	Birth Registration Number
BRTA	Bangladesh Road Transport Authority
BTCL	Bangladesh Telecommunications Company Limited
BTRC	Bangladesh Telecommunication Regulatory Commission
CCDS	Citizen Core Data Structure
CRC	Convention on the Rights of the Child
CRVS	Civil Registration and Vital Statistics
DBR	Digital Birth Registration
DGHS	Director General Health Services
DIP	Department of Immigration and Passport
DML&C	Directorate of Military Lands and Cantonments
DNCC	Dhaka North City Corporation
EA	Enumeration Area
EATL	Ethics Advanced Technology Limited
ED	Executive Director
EPI	Expanded Programme on Immunization
FGD	Focus Group Discussion
FWA	Family Welfare Assistant
HH	Household
HQ	Head Quarter
IGR	Inspector General of Registration
IT	Information Technology
INGO	International Non-governmental Organization
JSC	Junior School Certificate
MoHFW	Ministry of Health and Family Welfare
NGO	Non-Governmental Organization
NID	National Identity
PC	Personal Computer
PSC	Primary School Certificate
Plan Int'l	Plan International
SVRS	Sample Vital Registration System
SWOT	Strengths, Weaknesses, Opportunities and Threats
TIN	Tax Identification Number
UN	United Nations
UNESCAP	United Nations Economic and Social Commission for Asia and Pacific
UNICEF	United Nations International Children's Emergency Fund
UP	Union Parishad
UDC	Union Digital Centre
PSU	Primary Sampling Unit

Acknowledgements

This research project was financed by Plan International Bangladesh Country Office and conducted by EATL on Evidence based technical analysis for digital birth registration toward supporting the CRVS in Bangladesh. We thank our colleagues from EATL and Plan who provided insight and expertise that greatly assisted the research. From the Digital Birth Registration Team at Plan International Headquarters, the study benefitted from the expertise of Edward Duffus, DBR Project Manager and Annina Wersun, DBR Technical Lead.

We would also like to show our gratitude to Senait Gebregziabher, Country Director, Plan International Bangladesh for orchestrating this much needed research and vision for supporting the Government for strengthening the CRVS. We are also immensely grateful to Mr. S M Ariful Islam, DBR Lead and Ms. Jannatul Ferdous Ruma, Child Protection Advisor for sharing their pearls of wisdom with us during the course of this research and worked as team members for achieving the vision.

Furthermore, we would also like to acknowledge with much appreciation the important role of the CRVS Secretariat, Cabinet Division and specialized knowledge of a distinguished reference group further enhanced the study including Mr. Nazrul Islam, Secretary (Coordination & Reforms), Mr. Bijoy Bhattacharjee, Additional Secretary (Coordination), Cabinet Division, Seikh Mujibur Rahman, PD, BDRP, who has provided partnership opportunity and kindly agreed to sign the MOU for this research with Plan International Bangladesh. Also would like to mention that Prof. Dr. Abul Kalam Azad, Additional Director General & Director of MIS, Directorate General of Health Services (DGHS), Ministry of Health & Family Welfare (MoHFW), Mr. Anir Chowdhury, Policy Advisor, A2i project, UNDP, Mr. Settasak Akanimart, Child Protection Specialist, UNICEF, Dr. Md. Badiuzzaman, National Professional Officer (Planning and Management), WHO, Mr. Joseph Sebhatu, First Secretary (Development), CIDA for their guidance and collaboration in the process.

A special gratitude to our Managing Director, Mr. M A Mubin Khan and Ex-Project Director, BDRP, AKM Saiful Islam Chowdhury, whose contribution in stimulating suggestions and encouragement, helped us to coordinate the project and writing this report. The author wishes to express sincere thanks and gratitude to respondents of household survey and their surroundings community for their cooperation in this research.

Dr. Nizam Uddin Ahmed, CEO
Team leader and CEO of EATL

Introduction

This study, Digital Birth Registration (DBR) Technical Analysis, was commissioned by Plan International Bangladesh on behalf of the newly formed CRVS Secretariat under Cabinet Division to support the strengthening of Civil Registration and Vital Statistics (CRVS) systems in Bangladesh.

The study has undertaken in three logically sequenced stages including As-Is Assessment, Technical Feasibility Assessment and Programme Definition. The As-Is assessment, being the first of the three logically sequenced stages of the study, was conducted to document the current state of CRVS in Bangladesh and provide holistic picture of the CRVS landscape. The as-is assessment covered an analysis of current civil registration business processes, barriers to registration, the existing legal and policy frameworks that support CRVS, existing CRVS initiatives and an assessment of the CRVS system landscape.

The DBR technical analysis study is being undertaken at a time when CRVS Secretariat along with DGHS, LGD, EC, ICT Division, BBS, A2i are making concerted efforts to strengthen its CRVS system. A high level CRVS Steering Committee has already been formed to ensure better coordination and to mobilise the whole process using top-down approach; again several working groups under most of the stakeholders are there implementing a wider public service innovation agenda using bottom-up approach with the view to reach public service at the door steps of people including strengthening of CRVS systems.

Based on the DBR technical analysis findings, the output of this study will be a blueprint for an integrated programme specifically aimed at improving birth registration services across the country. The purpose of this programme is to prove the effectiveness and viability of the technology solution and programming approach, and to build the case for scale up to other vital events at a national level.

What is CRVS and why is it important?

A well-functioning CRVS system is essential for both designing and delivering citizen services. CRVS represents key institutions of a country as well as providing a basis for assessing a country's status and development in general. Weak information systems of citizens' statistics have adverse influences on multiple connected systems of identification, health services, issuing of passports, and various others. Accurate and timely vital statistics are keys to monitoring progress in achieving national and global development goals. There cannot be any 'data revolution' without a complete vital statistics system linked to effective civil registration.

Civil Registration is “the continuous, permanent, compulsory and universal recording of the occurrence and characteristics of vital events pertaining to the population, as provided through decree or regulation in accordance with the legal requirements in each country.”

Vital statistics “constitute the collection of statistics on vital events in a lifetime of a person as well as relevant characteristics of the events themselves and of the person and persons concerned. Vital statistics provide crucial and critical information on the population in a country”

Figure 1. UN definition of Civil Registration & Vital Statistics¹

¹ United Nations Department of Economic and Social Affairs Statistics Division. (2014) *Principles and Recommendations for a Vital Statistics System*. [Online]. <http://unstats.un.org/unsd/Demographic/standmeth/principles/M19Rev3en.pdf>

According to the World Health Organization (WHO)², the aims of a well-functioning CRVS system are described as:

- i. Secure individuals with recognition of their legal identity and ensure rights of access to public services, social protection and human rights.
- ii. Generate statistics on population dynamics and health indicators on a continuous basis for the country and at a local level for its administrative subdivisions.
- iii. Generate essential statistical information that decision-makers depend on for policy formulation, planning, implementation, and monitoring.
- iv. Permit the understanding of the prevalence, distribution and causes of mortality, as well as identify health inequalities and priorities.

Plan International and CRVS

Plan International works across the world to promote child rights and lift millions of people out of poverty. As a child rights organization, Plan International Bangladesh has been supporting birth registration since 1998 through both technical and financial support, achieving 100% birth registration in 6 programme districts (Dinajpur, Barguna, Gazipur, Lalmonirhat, Nilphamari and metropolitan Dhaka).

In line with the spirit of the article 7 (Registration, name, nationality, care) of Convention on the Rights of the Child (CRC), Plan International is one of the leading international agency working for improving CRVS systems in the developing countries. The organization has a long experience of working with birth registration programmes for last 14 years and implementing such programmes in 52 countries. As a part of its global initiative, since 2005, Plan had helped register 40 million children and influenced laws in 10 countries so that 153 million more can enjoy the rights to a birth certificate³. Plan International remains an active player in global CRVS efforts:

- Co-organizer of the Ministerial Conference on CRVS in Asia and the Pacific in November 2014.
- Key contributor in Asia-Pacific CRVS Ministerial Conference, 24-28 Nov 2014, to conceive a global business case for smart information and communications technology (ICT) investments in CRVS.
- Co-organizer of the 'Third Conference of African Ministers responsible for Civil Registration' in February 2015.
- Core Group Member of the Africa Programme for the 'Accelerated Improvement of CRVS (APAI- CRVS)'.
- Member of the Regional Steering Group for 'CRVS in Asia and the Pacific (provisional)'.
- Leading the taskforce for the creation of a 'Guidebook on CRVS Digitization' on behalf of APAI-CRVS.
- Presently sponsoring to conduct evidenced based studies on CRVS in other countries, such as, Indonesia, Cambodia, Pakistan, Kenya, Liberia, Malawi, Sierra Leone, along with Bangladesh.
- EATL is the research and technology partner of Plan Bangladesh for conducting this research and delivery of outcomes.

²Source: <http://www.emro.who.int/civil-registration-statistics/about/what-are-civil-registration-and-vital-statisticscrvs-systems.htm>

³Website of Plan International: <https://plan-international.org/birth-registration>

Methodology

The methodology for this study has been developed by Plan International⁴ and is split into three distinct stages.

Stage 1: As-Is Analysis

In this stage, a household survey, FGD, stakeholder consultations, observation and an in-depth desk review are conducted to understand the existing CRVS landscape. Areas of weakness and potential opportunities for system strengthening are then identified using the UN definitions of Civil Registration and Vital Statistics as a guide (Figure 1). Perspectives are taken from all stakeholders including policy makers, system users and end beneficiaries. The scope for analysis has been limited to the birth, marriage and death registration processes in direct response to the low demand of these vital events in Bangladesh.

Stage 2: Technical Feasibility Analysis

In this stage an assessment will be made of all READINESS and potential opportunities that may impact the feasibility and cost-effectiveness of digital solutions to strengthen CRVS. The aim will be to identify a technology solution that is appropriate to the country context and that fulfils the following characteristics as per the Principles for Digital Development⁵:

- Scalable
- Sustainable
- Flexible
- Interoperable
- Secure

Stage 3: Programme Definition

In this final stage of the DBR technical analysis, findings from the As-Is and Technical Feasibility Analyses will be used to propose a programme to bring about improved birth registration services and a strengthened CRVS system.

The programme will consist of a technology solution and additional complimentary components that together form a comprehensive response to current system weaknesses and maximise the effectiveness of deployed technology. This integrated approach aims to improve the demand for and supply of birth registration services, and the required supporting legal and policy environment.

Error! Reference source not found. below shows the areas of analysis included within each stage of the study. The three stages are designed to be conducted sequentially with checkpoints after each stage to confirm the findings with relevant stakeholders before commencing the next stage.

Further details of each assessment area are included in Appendix A: Technical Analysis Methodology.

⁴ Description of areas of assessment in Plan Methodology can be found in Annex A

⁵ *Icdt4dprinciples. Principles for Digital Development. (2015). [Online]. <http://ict4dprinciples.org/>*

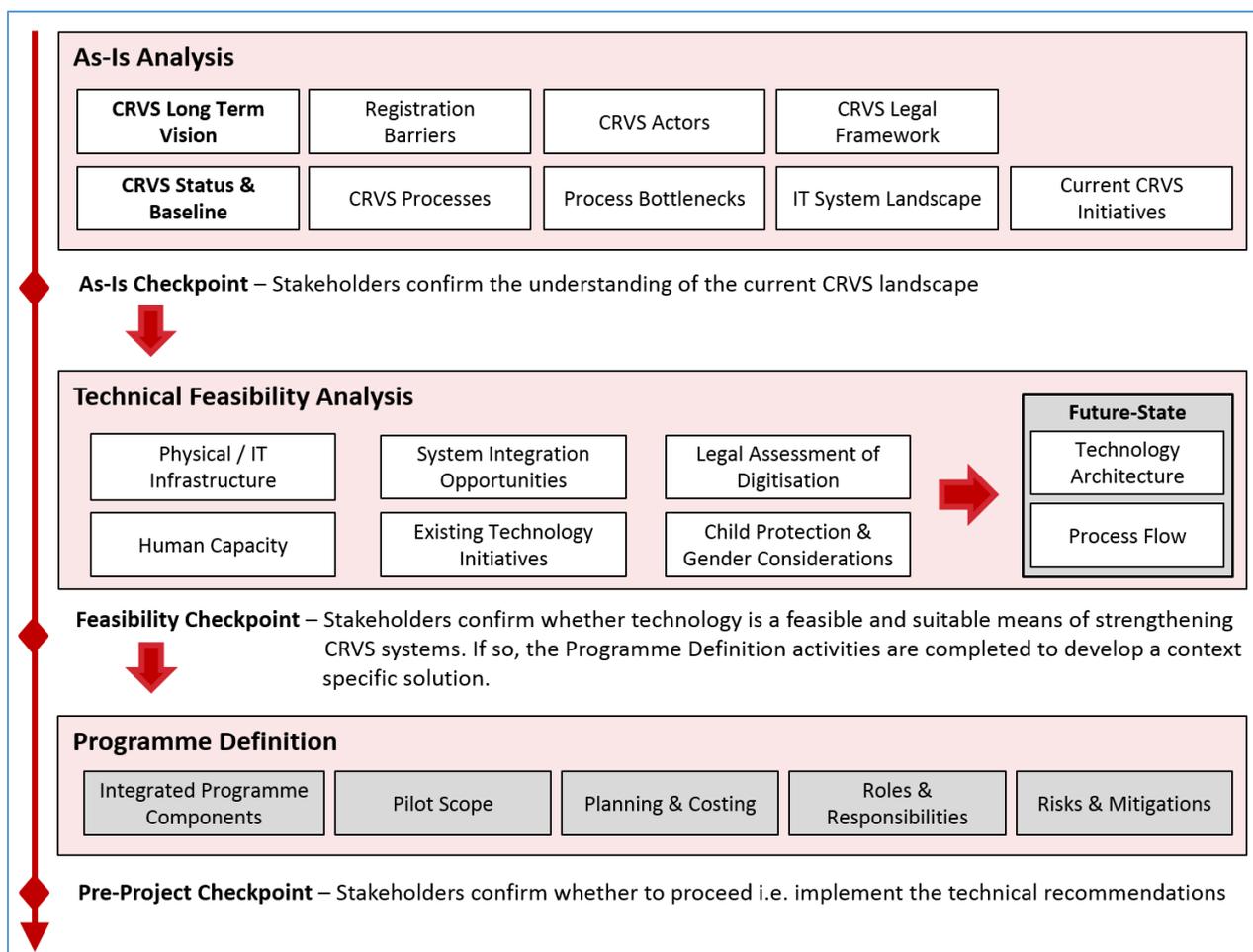


Figure 2. Technical Analysis Methodology

How was the study conducted in Bangladesh?

The study was an exploratory investigation of CRVS systems and processes. It was conducted using a combination of qualitative and quantitative research methods. A household survey was conducted to take the representative samples to assess the status of baseline instead of generating an official baseline (at either national or district levels).

Research Techniques

A combination of consultation techniques were used to gather information about the CRVS landscape, systems, processes and barriers including a desk review, semi-structured interviews, a household survey, and focus group discussions.

Technique	Description	Sources	Supporting tools
Desk Review	In-depth review of existing literature on CRVS, which is further used to compare and complement the primary research findings.	<ul style="list-style-type: none"> Publications: Government, United Nations and other INGO, Newspaper and journal articles, Relevant web pages, Statistical reports, Government circular, Legal texts, International declarations. 	

Technique	Description	Sources	Supporting tools
Semi-Structured Interview	Stakeholders were identified to provide qualitative data ⁶	<ul style="list-style-type: none"> ▪ CRVS Secretariat, Cabinet Division ▪ LGD ▪ DGHS ▪ BBS ▪ ICT Division ▪ MoLJPA ▪ MoPME ▪ A2i ▪ UNICEF 	Semi-structured Questionnaire ⁷ followed by discussion.
Focus Group Discussion	Fourteen FGD conducted, out of which seven at the community level and rest at Upazila/Zila level to understand and document the process, perceptions, opinions, beliefs, and attitudes towards civil registration and public service delivery	<ul style="list-style-type: none"> ▪ Field level duty bearers ▪ Elected members ▪ UDC Entrepreneur ▪ Health & Family Planning workers ▪ SVRS data collectors ▪ Community representatives ▪ Citizens ▪ NGO field staffs 	FGD guidelines ⁸ followed by discussion.
Household Survey	Households were sampled to provide quantitative data on knowledge, practice, gaps, barriers, readiness etc.	<ul style="list-style-type: none"> ▪ Citizens 	Survey Questionnaire ⁹
Observations	The field researchers examine people in natural settings and recording their observations.	<ul style="list-style-type: none"> ▪ Citizen ▪ Duty bearer ▪ Community 	Lesson learning workshop

Table 1. Research techniques of the as-is analysis

Participant Selection

Participants were selected purposively to ensure that all research questions could be answered by members of society with the relevant knowledge. All the participants of the various groups are associated with CRVS processes directly or indirectly.

Participants' Group		Participants' Category	Areas of Knowledge/information
Citizen	House hold heads	A total of 3,578 household respondents who have or have not registered a birth and other vital events.	Direct experience of registration process, facing barriers in registering, use of certificates.
	Community representatives	<ul style="list-style-type: none"> ▪ Health & family planning workers ▪ Teachers 	Community perception about requirements of different registration systems, easiness/difficulties of getting registration, Insight into social and cultural practices that affect registration, use of certificates, local opportunities to improve digital birth registration.

⁶ Annex B: List of consulted stakeholders

⁷ Annex C: Sample Questionnaires used in semi-structured interview

⁸ Annex E: FGD Guide

⁹ Annex D: Household Survey Questionnaire

		<ul style="list-style-type: none"> ▪ Religious leaders¹⁰. 	
Local level stakeholders and local government officials	<ul style="list-style-type: none"> ▪ District commissioner ▪ UNO ▪ Elected members ▪ SVRS data collectors ▪ UDC Entrepreneur ▪ Lawyers ▪ NGO field staffs ▪ Media professionals. 	Capacity of registration services (staff and infrastructure) to meet the demand for registration, registration barriers, coordination among different government agencies at local level, understanding on processes, bottlenecks, barriers, key players, requirements within each of their operating units at local level.	
Central Government Agencies	<ul style="list-style-type: none"> ▪ CRVS Secretariat ▪ BDR project ▪ DGHS ▪ BBS ▪ ICT Division ▪ MoPME 	Governmental vision and existing policy options, existing legal framework, decision making authority within their respective organization, existing and potential programmes and potentiality of integration, existing and potential system and scope of coordination and integration.	
Other existing and potential partners	<ul style="list-style-type: none"> ▪ Plan International ▪ Bloomberg D4H Initiatives ▪ Norway Embassy ▪ UNICEF ▪ A2i ▪ DFATD, WB 	Understanding of existing CRVS initiatives and potential to coordinate activities with partners	

Table 2. List of participants in the analysis

Research Locations

Purposive sampling framework was used for collecting household data from all over of Bangladesh. The planned sample size of 3,500 respondents was split across the 14 districts of 7 divisions of Bangladesh. While drawing sample areas, every effort was taken to ensure that the sample reflects the diverse nature of the country including: Divisional HQs, coastal areas, hilly areas, indigenous areas, capital city area, river erosion areas, industrial areas, border areas and areas with marginalized population and ethnic minority were covered while defining the sample frame. The following map shows the location of the surveyed areas.

Sl.	District	City / Upazila	Ward / Union	Population	Total Household	Justification to select the survey area
1	Barisal	Barisal City Corp	Ward # 1	1379	360	Divisional HQ, Urban area
2	Barisal	Barisal Sadar Upazila	Chandpura Union	1178	262	Divisional HQ, Rural area
3	Bhola	Charfession Paurashava	Ward # 2	1590	311	Coastal urban area

¹⁰ Full list of community representatives is available at Annex IV

Sl.	District	City / Upazila	Ward / Union	Populati on	Total Household	Justification to select the survey area
4	Bhola	Charfssion Upazila	Jinnahgar	815	190	Coastal rural area
5	Chittagong	Chittagong City Corp	Ward # 3	1637	316	Divisional HQ, coastal and Urban area
6	Chittagong	Chandanaish Upazila	Joara Union	3024	548	Divisional HQ, Rural area
7	Bandarban	Bandarban Paurashava	Ward # 4	769	237	Hilly urban area
8	Bandarban	Bandarban Upazila	Bandarban Union	1265	329	Hilly rural area
9	Dhaka	Dhaka North City Corp	Ward # 5	6810	1776	Capital City, Urban area
10	Dhaka	Tejgaon Circle	Dakshinkha n Union	5514	1243	Capital City, Rural area
11	Narsingdi	Narsingdi Paurashava	Ward # 6	15516	3357	River erosion area
12	Narsingdi	Narsingdi Sadar Upazila	Karimpur Union	2589	499	River erosion area
13	Khulna	Khulna City Corp	Ward # 7	10645	2594	Divisional HQ, Industrial and Urban area
14	Khulna	Dighalia Upazila	Senhati Union	18956	4810	Divisional HQ, Industrial and Rural area
15	Kushtia	Kushtia Paurashava	Ward # 8	6715	1478	Culturally developed urban area
16	Kushtia	Kushtia Sadar Upazila	Paitkabari Union	1943	492	Culturally developed rural area
17	Rajshahi	Rajshahi City Corp	Ward # 9	2082	414	Divisional HQ, Urban area
18	Rajshahi	Paba Upazila	Haragram Union	693	159	Divisional HQ, Rural area
19	Chapai Nababganj	Nachole Paurashava	Ward # 2	1057	218	Plane land ethnic group living urban area
20	Chapai Nababganj	Nachole Upazila	Nachole Union	1755	372	Plane land ethnic group living rural area
21	Rangpur	Rangpur City Corp	Ward # 10	6421	1433	Divisional HQ, Urban area
22	Rangpur	Rangpur Sadar Upazila	Chandanpat Union	954	233	Divisional HQ, Rural area
23	Lalmanirhat	Patgram Paurasava	Ward # 9	2872	586	Bordering urban area

Sl.	District	City / Upazila	Ward / Union	Population	Total Household	Justification to select the survey area
24	Lalmanirhat	Patgram Upazila	Dahagram Union	2589	564	Bordering rural area and enclave
25	Sylhet	Sylhet City Corp	Ward # 12	3497	645	Divisional HQ, Urban area
26	Sylhet	Sylhet sadar Upazila	Khadimnagar Union	2468	370	Divisional HQ, Rural area
27	Maulvibazar	Maulvibazar Paurasava	Ward # 9	845	164	Tea garden, urban area
28	Maulvibazar	Maulvibazar Sadar Upazila	Giasnagar Union	1571	355	Tea garden, rural area

Table 3. List of household survey locations

Characteristics of the Respondents

There were 3584 respondents in the 14 household survey areas in 7 divisions, and the total number of children (up to 18 years) in the surveyed households were 5615. The following are the basic demographic information of the respondents of the household survey.

Gender, Age and Religious view: The percentages of male and female respondents in the survey are 51.45% and 48.55%, respectively. The national ratio of male and female is 50.06: 49.94 as per Bangladesh census report of 2011, which closely matches with the household survey ratio. Around 40.60%, 38.25% and 21.15% of the respondents were among 18 to 35, 35 to 50, and 50+ years age group, respectively. In terms of religious view, about 86.10% of the respondents are Muslims and 7.6% are Hindus. 219 respondents from Buddhist community were found in the survey area of Chittagong, which is 6.17% of the total respondents.

Marital Status: Among 3584 respondents 92.21% were married and 7.52% of the respondents were widowed.

Education Level: Out of 3584 respondents, 27.23% completed Secondary School Certificate Examination (SSC), only 7.25% completed higher secondary level, 5.52% are graduates and 22.9% of the respondents did not receive any formal education.

Income level: The monthly income of the 29% of the respondents was less than 10,000 BDT, and about 21% of the respondents earn less than 15000 BDT. Around 10.44% of the respondents earn less than 20,000 BDT per month and only 3.9% of them earn more than 40,000 BDT per month.

Gender distribution of the children: Among the survey areas, the highest number of children were found in Sylhet area which is 1030 and 604 (the lowest count) children were found in the Chittagong area. There were 2904 male children and 2711 female children in total and the percentages are 51.72% and 48.28%, respectively.

As-Is Assessment

This section describes the current CRVS landscape, with a focus on birth and death, and identifies system weakness as well as gaps in the existing process and legislation.

CRVS Long Term Vision: Government's Vision for CRVS

The Ministerial Conference on Civil Registration and Vital Statistics (CRVS) in Asia and the Pacific adopted a Ministerial Declaration to 'Get Every One in the Picture' and proclaimed the 'Asian and Pacific CRVS Decade' for 2015-2024. The Ministerial declaration outlines the commitment of governments to achieve a shared vision that by 2024 all people in Asia and the Pacific will benefit from universal and responsive CRVS systems for all key life events, providing people with legal proof of identity, facilitating the realization of their rights and support good governance, health and development.¹¹ The ESCAP adopted resolution 71/14 on the Asia and Pacific Civil Registration and Vital Statistics Decade, 2015-2024 in May 2015¹². The Regional Action Framework contains 3 goals, 15 nationally set targets, 7 action areas as well as 8 implementation steps for countries to follow to improve their CRVS systems¹³. The Government of Bangladesh shows a commitment to strengthening their CRVS systems through both regional and national level commitments to achieve the following three goals:

Goal 1: Universal civil registration of births, deaths and other vital events;

Goal 2: All individuals are provided with legal documentation of civil registration of births, death and other vital events, as necessary, in order to claim identity, civil status and ensuing rights;

Goal 3: Accurate, complete and timely vital statistics (including on causes of death), based on registration records, are produced and disseminated.

'Digital Bangladesh' is now the buzzword ever after the independence of Bangladesh in 1971 through government's vision is to brand it globally where ICT needs to be an enabler to the nation's struggle to achieve the economic, cultural, and social emancipation. The four major key elements are the Human Resource Development, Connecting Citizen, Digital Government and ICT in Business¹⁴. A well-functioning CRVS system is embedded in the present government's vision by 2021, which is now implementing by newly formed CRVS Secretariat under the Cabinet Division who is responsible to make the coordination among large number of national and field level agencies especially the once responsible for public service delivery.

As part of its whole-of-government approach to improving governance, the quality of services and reducing inefficiencies in their delivery processes, Access to Information (a2i) Programme of the Prime Minister's Office – with technical support from UNDP and USAID – is providing strategic support to the government's CRVS Secretariat to embark on a 3-pronged strategy for developing CRVS:

1. Policy alignment
2. Coordination and partnership
3. Innovation.

Through the work of coordinating national CRVS efforts and aligning multiple identity platforms, Bangladesh has gleaned some important insights:

1. Supportive policies and laws are critical;
2. Ease of registration is a must by making sure registration facilities are located nearby to reduce the time, cost and number of visits required by citizens – the Digital Centres are a key part of this strategy;

¹¹ <http://getinthepicture.org/ministerial-declaration>

¹² <http://getinthepicture.org/asia-pacific-crvs-decade-2015-2024>

¹³ <http://getinthepicture.org/regional-action-framework>

¹⁴ <http://www.a2i.pmo.gov.bd/digital-bangladesh>

3. Linking registration to service delivery is much more effective than any awareness campaign to stimulate behaviour change – for example, the Bangladesh government made the submission of birth certificates mandatory for children’s admission into primary schools; and,
4. Ensuring interoperability across multiple identity platforms is most practically done by designing CRVS creatively with different modules ‘owned’ by different agencies and having a strong but flexible technical coordination that links to all these systems¹⁵.

Guided by the target set in the Regional Action Framework for Asia and The Pacific, government of Bangladesh has signed an MoU with Plan International Bangladesh to conduct ‘Digital Birth Registration Technical Study Towards Strengthening CRVS’ to come up with baseline of RAF target with a view to provide sustainable, scalable and adaptable CRVS process, architecture and landscape to support development of an effective civil registration system in the country, is also the symbol of such strong cooperative intention.

Current Status of CRVS in Bangladesh

The population of Bangladesh is 158,513,000, which is the eighth largest populated country on earth with density of 1100.8 per sq km¹⁶. The present crude birth rate and crude death rate is 20/1000 and 5/1000 whereas rate of infant mortality is 31/1000. The population (2010-2015 average annual) growth rate is 1.2%. The urban-rural distribution of the population is 33.5:66.5¹⁷.

There are nearly 19 million¹⁸ children under the age of 5, with approximately 3 million¹⁹ more born each year. Only 33.91% of the children under the age of 5 have their birth registration whereas 3.33% have the registration within 45 days²⁰. The percentage of birth registration within the 45 days is almost at the same level for last 10 years after enactment of the Birth and death registration Act, 2004. The rate varies between 2.66% to 4.44%²¹. The registration rates increase at times in a child’s life when they require their birth certificate for school enrolment. Table 4 supports this fact by showing available data for the 3 goals of the Regional Action Framework:

Regional Action Framework Goal	Bangladesh Current Performance
Universal civil registration of births, deaths and other vital events	<ul style="list-style-type: none"> • Official Birth Registration rate (taken from Birth Registration Information System, BRIS): 83.7%²². <i>Calculated by dividing the total number of records in BRIS by the total population of Bangladesh.</i> • About 80.58% of the respondents mentioned that they have registered their birth and out of 5615 children in the surveyed areas, 67.25% children are registered and only 3.3% of total children were registered within 45 days of birth. There are 1841

¹⁵ <http://getinthepicture.org/blog/not-just-about-stats-crvs-ensures-legal-identity-services-and-rights-each-human-being>

¹⁶ UN Data, <http://data.un.org/CountryProfile.aspx?crName=Bangladesh>

¹⁷ Source: <http://data.worldbank.org/indicator/SP.DYN.CBRT.IN>

¹⁸ UNICEF country report can be cited at [http://www.unicef.org/bangladesh/cbg_\(18.10.08\).pdf](http://www.unicef.org/bangladesh/cbg_(18.10.08).pdf)

¹⁹ United Nations Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2012 Revision

²⁰ Household survey finding

²¹ Household survey finding

²² Data from BRIS system.

	<p>children who were within 0-5 years of age and among them 3.69% were registered within 45 days of birth.</p> <ul style="list-style-type: none"> • Difference between these rates (7.58%) exists for 2 reasons: (i) records counted include records of those who have passed away, it is a total number of records in the system rather than the total number of records created in a year divided by the total number of expected births (ii) existence of multiple records (for the same birth) in BRIS. • Death registration rate: 1.96^{23%} • Marriage registration rate: 79.14^{24%} • Divorce registration rate: 36.51^{25%}
All individuals are provided with legal documentation of civil registration of births, death and other vital events, as necessary, in order to claim identity, civil status and ensuing rights	<p>Certification rate (<i>Based on Household Survey</i>):</p> <ul style="list-style-type: none"> • 28.63% of those who had birth certificates had the new digital version; • 76.96% had original paper versions of Birth certificates. • 23.04% of respondents were unable to present their birth certificate at the time of data collection
Accurate, complete and timely vital statistics (including on causes of death), based on registration records, are produced and disseminated	<ul style="list-style-type: none"> • Civil registration data is currently not used as a source of vital statistics. • Information on all vital events is gathered from 210 primary sampling units (PSU) every year all over the country. Two-stage stratified (urban and rural) systematic sampling is used, and 150 units are chosen from rural and 60 units are chosen from urban areas. National census is conducted every 10 years. • Cause of death data are not available.

Table 4. Current performance of Bangladesh against regional action framework

Previous assessments on the state of CRVS in Bangladesh

The assessment of the CRVS system in Bangladesh was conducted from September 2012 to March 2013 with technical assistance from the United Nations Economic and Social Commission for Asia (UNESCAP) and World Health Organization (WHO-SEAR). The report on 'Comprehensive Assessment & Strategic Action Plan on Civil Registration & Vital Statistics (CRVS) System in Bangladesh' was published by DGHS, UNESCAP & WHO in December 2013. The assessment used two WHO Tools,

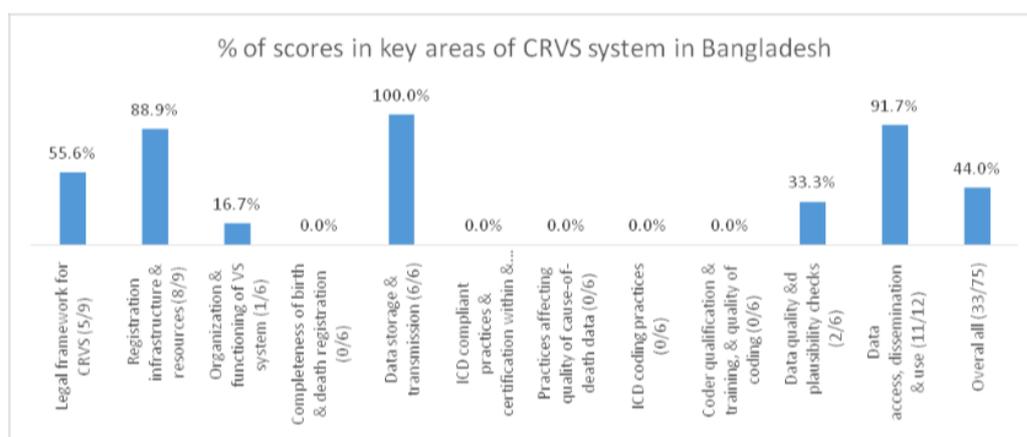
- (a) Rapid assessment of national civil registration and vital statistics systems; and,
- (b) Improving the quality and use of birth, death and cause-of-death information: guidance for a standards-based review of country practices.

The findings of the comprehensive assessment are presented below in Figure 4. Interpretation of score in the Bangladesh comprehensive assessment.

²³ Death registration rate for the last instance in the households, but it is not evidence-base information because, in most of the cases, respondent could not show the death certificate to the enumerator.

²⁴ Survey Findings, considering the marriage took place after 3rd July, 2006,

²⁵ The reported level of divorce registration by the respondents of the HH survey.



Interpretation of the score: <34% = Dysfunctional; 34 – 64% = Weak; 65 – 84% = Functional but inadequate; and 85 – 100% = Satisfactory

Figure 3. Key findings from the Bangladesh comprehensive assessment Report

Score (%)	Rating	Action Required
<34	Dysfunctional	System requires substantial improvement in all areas
35–64	Weak	Many aspects of the system do not function well, and multiple issues require attention
65–84	Functional but inadequate	System works but some elements function poorly and require attention; specific weaknesses of the system should be identified by completing the comprehensive review
85–100	Satisfactory	Minor adjustments may be required in an otherwise well-functioning system

Figure 4. Interpretation of score in the Bangladesh comprehensive assessment report

Based on the comprehensive assessment, observed from the graph above, the overall score rating established was a weak (44%) CRVS system for Bangladesh requiring substantial improvement in all of the areas assessed. The specific recommendations arising from the rapid assessment to ensure improvement of the Bangladesh CRVS system have been included in Annex-IX of this report.

Key Survey Findings

Issue/ Subject	Findings	Interpretation
Awareness of Birth Registration	1. More than 97% of the household head have at least some knowledge about birth registration.	More sensitization is required to raise demand side.
Variation of registration rate across the different administrative regions	2. The birth registration rates for under 18 children are different in different administrative divisions ²⁶ ; 3. Highest 76.35% in Rajshahi division and lowest 52.32% in Dhaka division.	Dhaka division is destination of most of the migrated population from various part of the country. Many of the migrated families live in slum or low cost rental houses and stay out of the many citizenry services, including Birth registration.
Variation of registration rate across the different administrative level (urban-rural)	4. In city corporations (urban areas: big cities) 76.84%; 5. Union Parishad (rural areas) 67.61%; 6. Municipality (urban areas: small cities) 62.73%.	Marginal population faces more difficulty to reach at the citizenry services in municipalities than the rural areas.

²⁶ Division is the highest/largest administrative tier of Bangladesh refers to 7 geographical regions (see annex II)

Reasons for not interested for registration (for adults themselves)	7. Not aware of registering 32.76%; 8. Do not face any necessity for registration 48.99%.	Birth registration is not yet linked with many of the governmental services, for age 18+, NID is used as a substitute to access public service.
Reasons for not doing the registration, even after being interested to do so (for adults themselves)	9. Distance of the registration point (68.82%); 10. Registration office was non-known (19.11%); 11. Multiple visit of the registration office (11.21%); 12. Asking for extra money (11.93%).	People's mind-set is to keep themselves away from public service delivery institution.
Reasons for not interested in registration (for children by guardian and parents)	13. Unaware of the necessity of birth registration 87.01%; 14. Felt the registration office is far away 5.66%.	Lack of communication found for the necessity of birth registration to access the public services. Prior to school enrolment, parents don't feel any necessity of having birth registration
Duplicate or multiple registrations	15. Duplicate or multiple registrations took place in some extent	Cause of duplicate or multiple registrations ²⁷ <ul style="list-style-type: none"> • Increase or decrease babies age prior to school enrolment, JSC Exam, PSC exam and SSC exam. • Increase the age for marriage of brides; • Increase or decrease of age for joining in the jobs. • Lost of certificate • To avoid complexity of updating information, people register themselves again. • Technical problem arise during data entry
Birth certificate shown for marriage	16. 75.53% asked to produce birth certificate prior to marriage registration.	Proof of age is not yet strictly practiced.

Table 5. List of key household survey findings

Main CRVS actors in Bangladesh

Historically, local government agencies responsibility for registering birth and death at the local level, whereas registration of Marriage, Divorce and Adoption is maintained by Law and Justice Division. Table below shows the different actors related to civil registration and vital statistics activities in Bangladesh.

S/L	Actors	Unit	Role description
Oversight	CRVS Secretariat	1	<ul style="list-style-type: none"> • It is established in February 2015 at the Cabinet Division. It is actually the country focal point of CRVS. After the establishment of CRVS secretariat 2 pilot projects were completed, 1 pilot project is going on and 2 more pilot projects to go.
	National Steering and	1	<ul style="list-style-type: none"> • The committee formed in 2014, which is led by Cabinet Secretary as the convener and other 15 members from finance

²⁷ FGD findings

	Coordination Committee on CRVS		<p>division, local government division, economic relations division, ministry of education, statistics and information division, ICT division, planning division, ministry of health and family welfare, election commission secretariat, cabinet division, implementation, monitoring and evaluation division, Bangladesh bureau of statistics, directorate general of health, birth and death registration project and 2 guests on special invitation representing DGHS and A2i;</p> <ul style="list-style-type: none"> • Worked under cabinet division for policy reform and coordination with different ministries and divisions for the overall development of Civil Registration and Vital Statistics System (CRVS) in Bangladesh; • Provide necessary suggestions and direction towards the proper implementation of CRVS related activity; • Discuss and provide the strategic actions and plans for the development of CRVS.
	Local Government Division	1	<ul style="list-style-type: none"> • Birth & Death Registration Project (BDRP) is being operated under the Local Government Division. Local Government Division has official mandate for birth and death registration under the "Birth and Death Registration Act, 2004". • There is Registrar General Office formed under LGD, which is expected to be functional within the next couple of months.
	Divisions	8	<ul style="list-style-type: none"> • Largest local government administrative unit and clustered over districts, consolidate CRVS related information from district level and provide guidance for implementation of CRVS related projects to the district level.
	Districts	64	<ul style="list-style-type: none"> • Third level local government administrative unit above Upazila, consolidate CRVS related information from Union Parishad level through Upazila administration as well as provide guidance for implementation of CRVS related projects to the union level through Upazila administration.
	Law and Justice Division	1	<ul style="list-style-type: none"> • This body is responsible for and looks after registering marriage, divorce and adoption. All the registrations are done still by paper based systems, because they have less readiness of using ICT as an important tool for public service delivery.
Administrative Actors	City Corporation (CC)	11	<ul style="list-style-type: none"> • Responsible for the registration of vital events (births, deaths, marriages and Divorces) and arbitration of the divorce in the large cities
	Cantonment Board	15	<ul style="list-style-type: none"> • Cantonments Boards are responsible for registration of vital events in cantonment establishments. • Cantonment Boards administrations are permanent military stations, and are under the control of the Department of Military Lands and Cantonment (DML&C) under the Ministry of Defence.
	Paurashava (Municipality)	323	<ul style="list-style-type: none"> • Responsible for the registration of vital events (births, deaths, marriages and Divorces) in the small towns. • Coordination with wards and districts administration.
	Upazila Parishad	489	<ul style="list-style-type: none"> • The Upazilas are the second lowest tier of local government administration in Bangladesh. • An elected public representative called Upazila Chairman heads the Upazila Parishad (Council). • An Upazila Nirbahi Officer (UNO) is a government officer of Senior Assistant Secretary rank works as administrative head in the Upazila level. • The Upazila Parishads monitor/coordinate the activities and development works of Union Parishad under their jurisdiction.

	Union Parishad (UP)	4553	<ul style="list-style-type: none"> The smallest administrative unit of Local Government; Responsible for the registration of vital events (births, deaths, marriages and divorces). Headed by the UP Chairman, is responsible for compliance with the registration process and creation of relevant data records and documentation. The a2i project under the Prime Minister's office funded by the UNDP has setup digital centres in 4547²⁸ Union Parishads. These centres known as Union Digital Centre (UDC), which are being operated as Public-Private Partnership (PPP) model participating government and a local entrepreneur as service delivery agent. More than 400 government services are available in these centres through the use of ICT.
	Embassy	55	<ul style="list-style-type: none"> The Embassies are governed by the Ministry of Foreign Affairs and represent Bangladesh to the foreign governments and international organizations across the globe. These embassy are responsible for the registration of vital events (births, deaths, marriages and Divorces) of the citizens of Bangladesh.
	PSU of BBS	210	<ul style="list-style-type: none"> There are 210 PSUs (Primary Sample Unit) all over Bangladesh and 150 units are chosen from rural & 60units are chosen from urban areas to collect samples for generating vital statistics.
	Union Level Nikah Registrar/ kazi Office	1	<ul style="list-style-type: none"> Registration of marriage and divorce take place at kazi officers. There are around six thousands and five hundred KAZI offices in Bangladesh for registering marriage under the Ministry of law and justice division.
Supportive Actors	Election Commission	1	<ul style="list-style-type: none"> This voter database is also known as National Identification Number (NID), which has been developed in 2007 and till now maintaining under the supervision of Bangladesh Army. This is the trusted database for identifying citizen and mostly practiced all around the country. In recent days, they are on the way to register upcoming voters of age 15+;
	Bangladesh Bureau of Statistics (BBS)	1	<ul style="list-style-type: none"> Provide the government statistical information to guide decision-making and the development process; It is the authority responsible for the sample collection, compilation, analysis and publishing of accurate data relating to various sectors of the economy and social sector; publication of reports, data and national level information for policies and programs.
	Ministry of Health and Family Welfare	1	<ul style="list-style-type: none"> Policy regarding Health and Family Planning for supporting CRVS, especially registration of birth, death and cause of death; Coordination with local health workers and registration offices for birth death and cause of death registration.
	Ministry of Primary and Mass Education	1	<ul style="list-style-type: none"> This actor is already practiced with the integration of birth registration database. They are the potential actor for raising the demand for birth registration in the community.
	Access to Information Program (A2i), UNDP	1	<ul style="list-style-type: none"> This body is providing policy, advocacy, solution and implementation support to government towards using ICT as a means for public service delivery. CRVS initiative is also taken by this organization.
Notifying Actors	Selected people for notifying vital event		<p>A list of people can inform the occurrence of vital event by law. They are-</p> <ul style="list-style-type: none"> Secretary or member of the Union Parishad.

²⁸ <http://a2i.pmo.gov.bd/content/union-digital-center>

			<ul style="list-style-type: none"> • Village police • Councillor of the Municipality or Mayor of the City Corporation • Health and Family Planning worker • Private health and family planning NGO worker • Authorized person or doctor of any kind of birth facility • Any person appointed by the registrar office • Jail super or jail authorized person in case of Jail birth/death • Police Inspector of certain area for abundant child birth/ unidentified dead body. • Authorized person of any cemetery for death.
--	--	--	--

Table 6. List of CRVS actors in Bangladesh

Generation of CRVS primary information and the dealer ministries:

The responsibility for the collection, processing and storage of vital events data is shared across ministries, depending on the vital event. The following Figure 5 shows the ministries responsible for registering and storing vital statistics.

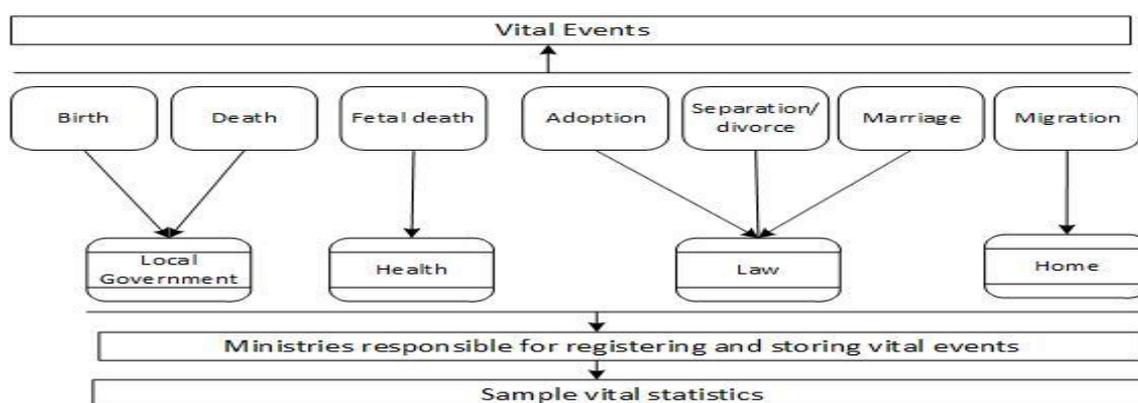


Figure 5. Responsible ministries for the vital event registration in Bangladesh

CRVS Legal & Policy Framework

Current legislation exists in Bangladesh that supports CRVS

There is no unified single legal or policy framework about the registration of all these six vital events. The following laws constitute the present legal framework of CRVS in Bangladesh.

SL #	Law	Description
1.	Birth and death registration Act, 2004 and Birth and Death Registration Rule, 2006 <i>Related to:</i> Both birth and death; <i>Applicable for:</i> all citizens of the country	<ul style="list-style-type: none"> • The Births and Deaths Registration Act, 2004 made birth registration compulsory for anyone born in Bangladesh, irrespective of age, race, religion or nationality. • New-born babies must be registered within 45 days after birth. • There are monetary penalties for parents who don't register their children within two years. In 2013, the government revised the law, increasing penalties for late registration. • Birth and Death Registration Rule, 2006, compliments the law with somewhat discretion for four different level of administrative set up, such as, Paurashava, Union Parishad, Cantonment and City Corporation.

2.	<p>The Guardians and Wards Act, 1890 (amended in 1982)</p> <p><i>Related to:</i> Adoption; <i>Applicable for:</i> all citizens with religious discretion</p>	<ul style="list-style-type: none"> • Before 1972 the procedure allowed foreigner parents to adopt Bangladeshi babies. • The 1981 amendment states that the foster parents can now only get the guardianship of a child. However, only Bangladeshi citizens are eligible to apply for guardianship of Bangladeshi children. Granting guardianship of Bangladeshi children to non-Bangladeshi parents is prohibited by the 1982 Guardianship and Wards Amendments Ordinances. • Documents, including Birth Certificate of the minor, are required for obtaining legal guardianship of a child. • Many experts opined the legal adoption is only applicable to the Hindus and in Muslim Law, adoption as such is not recognized.
3.	<p>Muslim marriage and divorce Registration Act, 1974</p> <p><i>Related to:</i> Registering marriage and divorce; <i>Applicable for:</i> all citizens who profess Islam as religion</p>	<ul style="list-style-type: none"> • For the purpose of registration of marriages, the Government grants licenses to designated person called 'Nikah Registrars', popularly known as 'KAZI'. • Only one Nikah Registrar is licensed for any one area for example UNION Parishad. • A Nikah registrar may register divorce affected under Muslim law within his jurisdiction on application being made to him for such registration. (section 6) • Every Nikah Registrar shall maintain separate registers of marriages and divorces in such forms as may be prescribed and all entries in each such register shall be numbered in a consecutive series, a fresh series being commenced at the beginning of each year.
4.	<p>Hindu Family Law</p> <p><i>Related to:</i> Registering marriage and divorce; <i>Applicable for:</i> all citizens who profess Hinduism as religion</p>	<ul style="list-style-type: none"> • The Hindu laws on marriage as applied in Bangladesh are principally based on the Daya-bagha school. • In Hindu family law, marriage is not considered as a contract like Muslim law. Marriage in Hindu law is a sacrament. • Since it is not a contract, ordinary legal principles regarding contracts are not relevant, such as the minimum age for marriage. • Hindu family laws do not permit divorce under any circumstance although the decision to divorce is mutual. • Hindu Marriage Registration Act 2012 is drafted with provision of compulsory registration of marriage yet to be enacted.
5.	<p>The Christian Marriage Act, 1872</p> <p><i>Related to:</i> Registering marriage and divorce; <i>Applicable for:</i> all citizens who profess Christianity as religion.</p>	<ul style="list-style-type: none"> • The Government may appoint one or more Christians, either by name or as holding any office for the time being, to be the Marriage Registrar or Marriage Registrars for any district subject to its administration. • Nothing is indicated for divorce registration.
6.	<p>Child Marriage Restraint Act, 1929 (as amended by the 1989 Ordinance),</p> <p><i>Related to:</i> Registering marriage and divorce; <i>Applicable for:</i> all citizens</p>	<p>A marriage involving a groom of less than 21 years of age or a bride of less than 18 cannot be solemnized and the people involved in the contracting of an underage marriage can be subjected to penal sanctions. However, notwithstanding such sanctions, the validity of the marriage is not affected.</p>
7.	<p>The National Identity Registration Act, 2010</p> <p><i>Related to:</i> individuals vital information; <i>Applicable for:</i> all citizens</p>	<p>The National Identity Registration Act of 2010 provides the basic legal and institutional elements of the framework for registering all citizens with age of 18 and above as a voter, the latter through the creation of the National ID Wing (NIDW) under the Bangladesh Election Commission.</p>
8.	<p>The Children Act 2013</p> <p><i>Related to:</i> Birth registration; <i>Applicable for:</i> children under 18</p>	<p>Mentions the birth certificate as a proof of age but does not make birth registration compulsory or set it as a right.</p>

9.	BBS Law	BBS has the only legal authority to declare vital statistics.
----	---------	---

Table 7. Summary of law related to CRVS

Existing gaps in current CRVS legislation

The table below demonstrates the extent to which Bangladesh’s current legislative provisions of reflect UN recommendations for CRVS and Plan International’s Key Principles and Standards on Birth Registration²⁹:

Recommendation	Assessment
Compulsory registration	
Legislation needs to be in place to obligate the registration of all vital events.	<ul style="list-style-type: none"> • Birth and death registration Act, 2004 and Birth and Death Registration Rule, 2006 obligate registration of all births and deaths of Bangladeshi citizen, • Obligation of registration of marriage and divorce is subject to religious discretion. There is no option for divorce in Hindu beliefs as well as Hindu family law, • The Guardians and Wards Act, 1890 (amended in 1982) does not obligate the registration of adoption. • Without a well-defined reporting, tracking and validation system, along with better service delivery systems, citizen awareness and participation in vital event registration activities cannot be ensured.
No penalties should be imposed for non-compliance with compulsory registration.	<ul style="list-style-type: none"> • In the Births and Deaths Registration Rules, 2006, there is provision of late fee (5-10 Taka for each year after 2 years). • FGD findings suggest that late registration penalties do not act as a deterrent therefore late registration is common practice.
Establish positive incentives to stimulate and encourage compliance with the compulsory registration law without restricting access to other rights.	<ul style="list-style-type: none"> • The law in Bangladesh supports any positive incentives. • The birth certificate is a required document for enrolment in the government primary school according to the “Birth and Death Registration Act: 2004” as a proof of age. • A significant portion of population in the rural areas and floating population in the urban areas generally live outside of legal and administrative linkage, thus, reluctant to compliance of registration obligation. A well-designed incentive package, such as priority in getting post-maternal care, advantage in enrolling in famous schools, priority in getting stipend, etc. may attract them to be included in the national information network. The incentive package may be other than a direct monetary transfer payment.
Universal registration	
All vital events should be registered on the basis of non-discrimination.	<ul style="list-style-type: none"> • Constitution of Bangladesh, Article 28(1), states a particular application of the principle of equality, which prohibits any differential treatment only on the ground of race, caste, religion, sex or place of birth. • Rule- 3(2) of the Birth and Death Registration Rule, 2006 is a very specific anti-discrimination law exist regarding CRVS, more specifically, birth registration. It illustrates inclusion of every child such as, illegitimate children, children with only one parent, disable either physically or mentally, prostitute, homeless floating people (<i>bade</i>).

²⁹ Department of Economic and Social Affairs Statistics Division. (2014) Principles and Recommendations for a Vital Statistics System. [Online]. <http://unstats.un.org/unsd/Demographic/standmeth/principles/M19Rev3en.pdf>

WHO. (2013) Strengthening civil registration and vital statistics for births, deaths and causes of death - Resource Kit.

[Online]. http://apps.who.int/iris/bitstream/10665/78917/1/9789241504591_eng.pdf

UNICEF. (2013) A PASSPORT TO PROTECTION - A GUIDE TO BIRTH REGISTRATION PROGRAMMING.

[Online]. http://www.unicef.org/protection/files/UNICEF_Birth_Registration_Handbook.pdf

UNITED NATIONS. (1998) Handbook on Civil Registration and Vital Statistics Systems. [Online].

http://unstats.un.org/unsd/publication/SeriesF/SeriesF_70E.pdf

Plan International. (2014). Key Principles and Standards for Universal Birth Registration.

	<ul style="list-style-type: none"> • The Birth and Death Registration Act 2004, prescribes that the following persons must be formally registered (birth and death): “A person who was born, died or resides permanently in the territory (Union Parishad, Municipality, Cantonment board or City Corporations) of Bangladesh, or a Bangladeshi citizen who was born, died or living abroad for a specific time period or prescribed time period by government gazette notification”. • But the law does not provide any provision for customary differences among the religions and ethnic groups. • According to the rule- 3(3) of the Birth and Death Registration Rule,2006, in case of death of a child immediate after taking birth, firstly the birth has to be registered and then the death to ensure universal coverage.
Special procedures may be established when there are significant variations in the level of social and economic development in different parts of the country.	<ul style="list-style-type: none"> • No specific procedures currently exist to account for variations in the level of socio-economic development in different parts of the country other than legally distinct coverage of five mentioned registering entities.
Vital events occurring to a country’s residents abroad should also be registered.	<ul style="list-style-type: none"> • Under provision of births and deaths registration act, 2004, and births and deaths registration rules, 2006, Bangladesh ambassadors are designated registrars to register birth and death but for other vital events there is no such declaration. • No law in Bangladesh makes this requirement mandatory. Registration of vital events under a foreign law is a well-accepted legal norm in Bangladesh as there is no known legal challenges were made against such registrations.
Continuity and Permanence	
A permanent, administratively stable agency is required to support the registration system and its processes. The permanence of this authority is contingent upon the authority given to it through the enactment of a civil registration law.	<ul style="list-style-type: none"> • Birth and death registration Act, 2004 provides responsibility of registering births and deaths of the respective residence to Local Government offices, such as city corporation, municipality, union Parishad and also to cantonment board³⁰. The administrative duties of the registrars are also described³¹. • There are kazi (marriage registration) offices under Law and Justice Division for registration of marriage and divorce. • A permanent CRVS Secretariat is established in September 2014 and presently run by the Coordination Wing of the Cabinet Division and being supported by the ‘Access to Information Programme’ of the Prime Minister’s Office.
A permanent system is required to support and facilitate continuity of registration and vital statistics data.	<ul style="list-style-type: none"> • There is no legislation that specifically provides for a continuous source of vital statistics data
A strong legal framework should ensure the efficient use of information collected; clearly defining the administrative structure, role of different agencies and timelines for use of data.	<ul style="list-style-type: none"> • The existing legal framework, as well as organization capability, is not strong enough to ensure the enforcement of legal provisions. • There is no such law to support coordination, integration or even sharing of civil registration or vital statistics data between different agencies.
Registration forms should include a range of fields to support national policy and programme development,	<ul style="list-style-type: none"> • The Birth Certificate does not complies all the characteristics under the UN Guidelines on CRVS, 2014. Name of the hospital, Father’s and mother’s place of birth, Father’s and mother’s date of birth, duration of pregnancy, number

³⁰ Section-4, Birth and death registration Act, 2004.

³¹ Section-6, Birth and death registration Act, 2004.

and to promote the regional and global comparability of data.	<p>of children ever born to this mother, weight of child, kind of birth etc. are not included in the current registration form. Full analysis included in annexe.</p> <ul style="list-style-type: none"> • The Death Certificate does not complies 23 characteristics under the UN Guidelines on CRVS, 2014. Place of birth, occupation, birth place of father and mother etc. are not included in the current death registration form. Full analysis included in annexe.
Confidentiality & Safeguarding of Documentation	
Confidentiality of collected information must be protected in such a way that those who provide it can be assured that it will be used only for the purposes described by law and/or in aggregated form where their identity is not shared.	<ul style="list-style-type: none"> • Birth and death registration Act, 2004, 32 provide instructions to secure and preserve the registered information in the following way- <ul style="list-style-type: none"> ✓ The registrars shall preserve and maintain the register books in prescribed format and system and such register shall be deemed to be permanent record; ✓ The registrar shall be responsible for the destruction and loss of the register; ✓ Despite the register book, the information relating to births and deaths may be preserved, in a prescribed system. • There is no such specific law for protection of personal data. The process setting up opportunity for digital signature is already initiated but the characteristics of identity theft is not noticed in legal framework.
Provisions for confidentiality of information and individual privacy should be made part of civil registration law.	<ul style="list-style-type: none"> • Confidentiality of information and individual privacy issues related to CRVS are not noticed in the legal and policy framework of Bangladesh.
Cost and time of registration	
Registration should be free of charge.	<ul style="list-style-type: none"> • Registration is free under Births and Deaths Registration Act and Rules up to 2 years of occurrence of birth or death; however, there are fees for late registration.
Legal framework should provide for time allowances for registering each type of vital event.	<ul style="list-style-type: none"> • The time allowance for registration of births and deaths is defined as 45 days in B&D Registration act, 2004³³. • The time allowance of other vital events is not defined.
Procedures for late registration should be made in the legal framework that supports CRVS.	<ul style="list-style-type: none"> • Under the Birth and Death Registration Act, 2004, for regular and delayed registration all the role, activities, timing are similar except the provision of a penalty for application for registration of birth or death after two years. For union Parishad and union the late registration fee is tk. 5.00 (five) for each year delayed after two year of occurrence of the vital event where as it is double in case of city corporation and cantonment board. • For the registration of other vital events the procedures for late registration are not defined. • Procedures are not sufficient to check the validity of the application and to stop multiple (duplicate) registrations.

Table 8. Existing gap in the current CRVS legislation

CRVS Processes

As mentioned in the previous sections, there are formal processes for civil registrations such as birth and death registrations, marriage and divorce registrations in Bangladesh; however, there is no formal

³²Section-14, Birth and death registration Act, 2004

³³ Section-8, Birth and death registration Act, 2004

process for adoption and migration registrations. In fact, the existing law³⁴ of Bangladesh does not allow adoption; only Bangladeshi citizens are eligible to apply for guardianship of a Bangladeshi child. For vital statistics, the Bureau of Statistics under the Ministry of Planning is responsible for collecting data samples throughout the country and publishes reports regarding it. As shown in Figure 6, only the birth and death registration process in Bangladesh is IT based.



Figure 6. Status IT based process of CRVS in Bangladesh

It is worth to mention that at present there is no direct link between the civil registration and vital statistics processes. For vital statistics, the bureau of statistics introduced Sample Vital Registration System (SVRS) in 1980, and initial coverage was 103 primary sampling units (PSU) which is over 2012 now. Under the SVRS system there is a local registrar for each PSU who collects data from 120 households of each PSU about the vital events and record the data in the specified schedule. Then the registrar sends the filled-in schedules to the headquarters according to the timetable set for each schedule. Vital statistics are gathered through the SVRS system, which includes: (i) house listing, (ii) household card, (iii) birth, (iv) death, (v) marriage, (vi) divorce/separation, (vii) out-migration, (viii) in-migration, (ix) contraceptive use and (x) disability. BBS operates SVRS to understand the change of the population parameter, based on described samples, during the inter-censal periods and generate report from it. However, the presented data in the reports does not fit with the requirement of the SVRS, because CRVS refer to complete data of the population.

What are the current processes for birth and death registration in Bangladesh?

The Figure 7 given below represents the current birth and death registration process in Bangladesh, which is commonly followed.

³⁴Guardianship and Wards Amendments Ordinance 1982

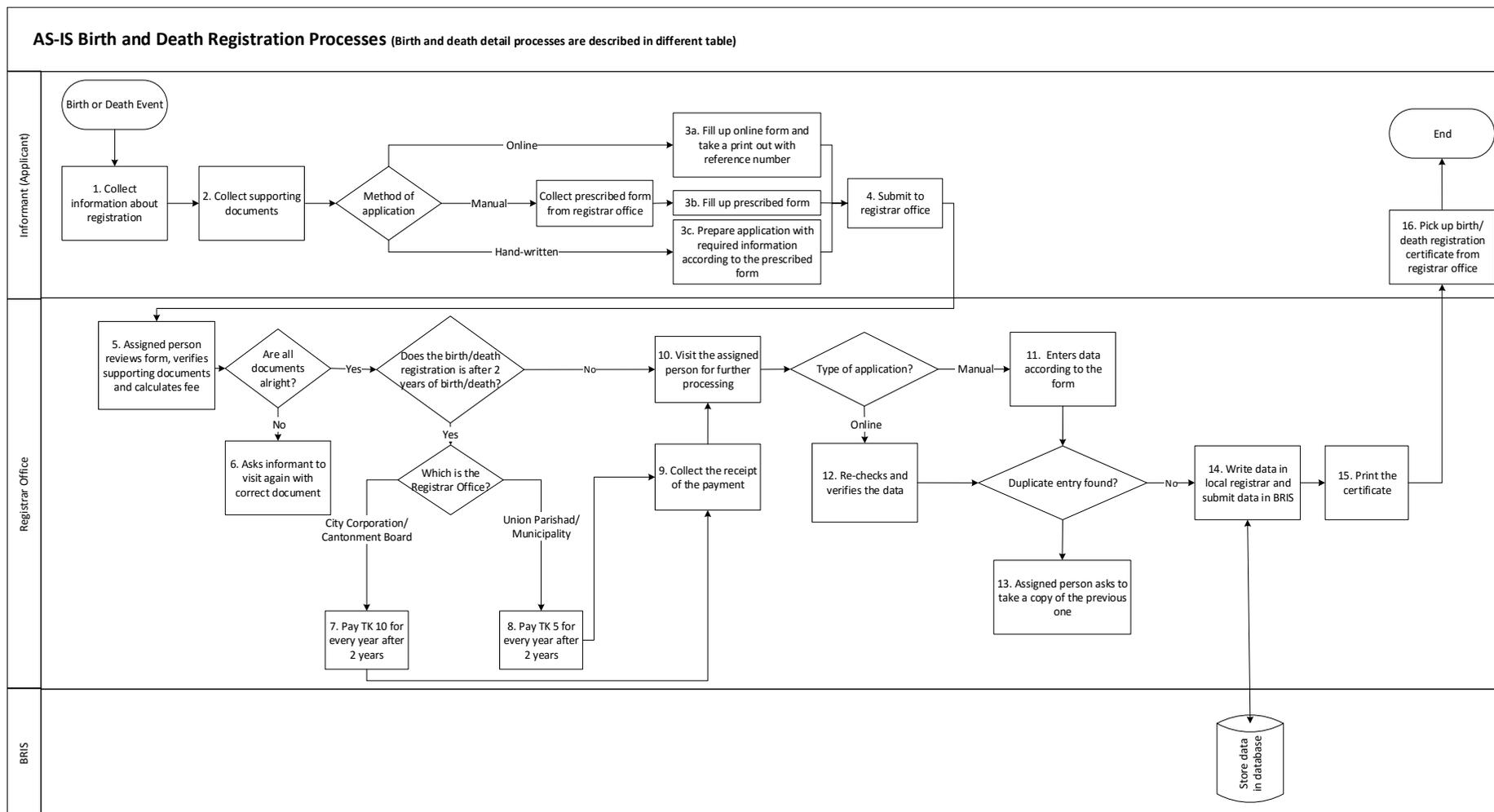


Figure 7. Birth and death registration process diagram

The steps of birth registration process have been described in the Table 9 below.

Step	Process
1	Typical citizen queries focus on required supporting documents, associated fees and time taken for certificate to be issued.
2	An applicant has to collect the supporting document to apply for birth registration certificate. The supporting documents are different for children under 5 years and above 5 years. Below 5 Years: <ul style="list-style-type: none"> • Attestation of the informant, or • Attested copy of the vaccination (EPI) card, or • Attested copy of hospital document or birth record, or • Certification regarding NGO worker authorized by registrar in favour of date of birth, or • Attested copy(s) of other document as prescribed by the Registrar. 5 Years and above: <ul style="list-style-type: none"> • As a proof of age, certificate from a medical (MBBS) doctor and as a proof of birth-place or permanent address, certificate from ward councillor is required, or • As a proof of age and birth-place a certificate from the principal/head-teacher or any other teacher or officials nominated by the head of the academic institute is required as informant, or • As a proof of age and birth-place attested copy of vaccination (EPI) card, passport, secondary school certificate, or hospital birth record or certificate is required, or • Certification regarding NGO worker authorized by registrar in favour of date of birth, or • Attested copy(s) of other document as prescribed by the Registrar.
3	An informant or applicant can apply for registration in three different ways as such: <ul style="list-style-type: none"> • <i>Manual:</i> Forms are available in registrar office. Parents visit the registrar office, collect manual form and properly filled up form along with supporting documents, then submit it. • <i>Online:</i> The applicant can fill up online form from anywhere if computer and internet facility are available and then take a print out. Also, Union Digital Centres helps to fill up the form and print submitted copy. • <i>Hand written:</i> Citizen can even apply with a hand written application where all necessary information has been written correctly.
4	An applicant has to take the hard copy of the manual form or the printed copy of the online form, or the handwritten application with him/her and then attach the supporting documents with the form. Then the applicant submits the form to the office of the Registrar by local government, for example: Union Parishad, City Corporation, Municipality and Cantonment Board. The office must be within the same jurisdiction of the Applicant's permanent address, present address or place of birth.
5	After receiving the submitted form the assigned person in the Registrar office reviews the application form, verifies the supporting document(s) and then calculate fees if needed.
6	If the supporting forms are not correct or the form found incomplete, then registrar officer asked the applicant to visit the registrar office again with correct document.
7,8 & 9	If all the documents are alright, the assigned person checks whether the date of birth is less than 2 years. If less than 2 years, the application is sent to the IT officer for further processing without charging any fee. If the date of birth is more than 2 years, the registrar office charges according to the fee schedule. After paying the fees, the applicant receives the receipt of payment.
10	The application is sent to the IT officer for further processing. The assigned person and IT officer can be the same person.
11	IT officer first checks the type of the application. For manual form or handwritten application, IT officer gives the entry to the online BRIS according to the form or application. Then asks the applicant to check if all the entries are alright.
12	For online application, IT officer takes the printed copy and re-check the data entry and verify the data.
13	After entering or verifying all the data, IT officer checks for duplicates with and if no duplicate is found, IT officer approves the new registration.
14	After that, IT officer completes the data entry in local registrar and BRIS system. The inserted data are then stored into the BRIS central database.

15	The IT officer prints the certificate for issuance and give the 'applicant piece' of the application to the applicant for collecting the certificate. The certificate should have to be approved by the signatory.
16	Then the authorized signatory approves the certificate with his/her signature. Applicant can pick the birth registration certificate when it is ready with signature. Any parent or guardian of the applicant can collect the certificate. "Guardian" means guardian as defined in 'The Guardians and Wards Act, 1890 (Act VIII of 1890)'. Applicants of 18+ years of age can collect the certificate by themselves. According to rules, it is the responsibility of the registrar to deliver the certificate or the causes of rejection to the application through his staff in case the recipient does not come to collect the certificate. The Applicant can only collect the certificate from the registration office where they applied.

Table 9. Steps of birth registration process

Informal Birth and Death Registration Process

Legally, there is no option for informal birth or death registration process. Sometimes the local government representatives issue informal birth certificates to certify the applicants' place of birth. It is practiced in the community to delivery some public services like education, health etc. In tea estates of Sylhet and Chittagong divisions, the estate owners recorded the date of births of their permanent labour's new born babies in their own register. These types of informal registration are also kept in Christian churches and in the custody of headmen of ethnic groups.

Duplicate Copy Registration/ Birth certificate correction Process

- When a birth/death certificate is lost, one can apply for a copy of the certificate.
- When an applicant needs to correct some information, he or she needs to apply to the registration office using specified form.

Death Registration Process

Death registration process is similar as birth registration process but some clarification is needed for death registration process for some steps.

Step	Process
1	An authorised person can apply for a death registration certificate for a deceased person to the Local Government Office in the location where the person was died or at the permanent address. Registrar offices are same as birth registration. Applicants need to collect the information needed for applying a death certificate.
2	The following are the supporting documents needed for death registration certificate. <ul style="list-style-type: none"> • Attestation from a Government or private health worker, or • Certificate from hospital or medical doctor about the death, or • Attested copy of the post-mortem report of the deceased person, or • Attested receipt from the caretaker of graveyard or crematorium, or • Attested copy of death certificate from member of the Union/Municipality or or Councillor of the City Corporation, or • Attested copy(s) of other document as prescribed by the Registrar.
18	After verifying all the supporting document and complete application form, registrar office staff fixed a date and ask the applicant to collect the certificate on that day.

Table 10. Steps of death registration process

The following table shows the fees for birth and death registration.

Subject	Fee rate		
	Union Council & Municipality	City Corporation and Cantonment Board	Embassy
Within 2 years of occurrences	Nil	Nil	Nil
For every year, after 2 years of occurrences	Tk. 5.00	Tk. 10.00	\$5.00
For original Birth or Death Certificates (either in English or Bangla)	Nil	Nil	Nil
For duplicate copies of Birth or Death Certificates (either in English or Bangla)	Tk. 25.00	Tk. 25.00	\$10
For the correction of any clerical mistake	Tk. 10.00	Tk. 10.00	\$20

Table 11. Fee structure for the birth and death registration

The following persons shall act as Registrars for birth and death events.

Area	Authorized person
City Corporation	The zonal officers of the Dhaka North, Dhaka South, Gazipur City Corporation, Narayanganj City Corporation and Comilla City Corporation. Ward councilors of the Chittagong, Khulna, Rajshahi City Corporation, the Chief Health officers at the main offices Barishal, Sylhet, and Rangpur City Corporations.
Municipal Council (Paurashava)	Mayor or authorized commissioner or officer on his behalf
Union Council (Union Parishad)	Chairman, or, any member or officer authorized by the Government
Cantonment Board	Cantonment Executive Officer or any officer nominated by him
Bangladesh Embassy / High Commission	Any officer nominated by the Ambassador or High Commissioner

Table 12. Registrars of birth and death events

Key Actors in Birth/Death Registration Process

Actors	Responsibilities	Challenges/Opportunities
Informant/Applicant (Informant can be parents or guardian or any person who can provide supporting document)	<ul style="list-style-type: none"> Collecting the supporting documents Reporting the vital events in registrar office Filling up the prescribed online/manual form and submit it by paying required fee (if needed) 	<ul style="list-style-type: none"> Informant can be unaware about registration process Can face problem to collect supporting documents and fill up the form Basic literacy is needed to fill up the form
Registrar office staff	<ul style="list-style-type: none"> Receiving and validating the application Entering the data in online BRIS Checking duplicates 	<ul style="list-style-type: none"> Well versed in registration process, requirements and certification activities Skilled, trained and experienced person is needed to complete

	<ul style="list-style-type: none"> Submitting the registration in online BRIS Entry the details of vital event in register book Issuing of certificate 	<p>the registration process and issue the certificate</p> <ul style="list-style-type: none"> Low level of computer literacy can be a challenge. Can be resistant to change
--	---	--

Table 13. Key actors of birth and death process

What variations occur in birth and death registration practices in Bangladesh?

There exists some informal practices in birth and death registration process. The following are the variations of birth and death processes collected from the interviews with stakeholders, household survey and FGDs.

Practice	Root Cause
<ul style="list-style-type: none"> From FGD discussion, it is found that in absence of IT officer in registrar office, the applicant needs to visit the registrar office again 	<ul style="list-style-type: none"> In some cases, an IT officer serves in multiple registrar offices. Thus if he/she is not available, registration is not completed on the same day.
<ul style="list-style-type: none"> From discussion with the stakeholder, people apply for new certificates instead of requesting a change in an existing certificate. They do it by slightly changing their name or other details so that it appears like a new record in the database. 	<ul style="list-style-type: none"> There are different age limit to get different services, so people wants to change their date of birth when they need to take certain service. People easily lose or fail to preserve their certificates. So, they try to get a new certificate, when they need it.
<ul style="list-style-type: none"> From survey results, it is found that people cannot collect the certificate in one day due to the absence of the signatory. 	<ul style="list-style-type: none"> The registrars are elected by the people or by their representatives, and they are only the authorized person to approve the birth registration certificate in their jurisdiction. So, they are not always available in registrar office.
<ul style="list-style-type: none"> Another findings come from the FGD that though the law is establish to send the certificate to applicant's home if s/he does not come to collect that after certain time period but it does not happen. 	<ul style="list-style-type: none"> From interviews, registration staff explained that they could not find the applicant due to a change of address and certificates can be lost in transit. FGD findings revealed that the registration office staff does not complete this service.
<ul style="list-style-type: none"> It is also found in FGD that in some rural areas women register their birth after marriage, due to change of their permanent address. 	<ul style="list-style-type: none"> Women have different permanent address after their marriage, so they think, they would register their birth after marriage.
<ul style="list-style-type: none"> From FGD it is found that the fee for late registration is very low and sometimes it is remised by the local government officer for the poor. 	<ul style="list-style-type: none"> Personal relationship between registration staff and applicants creates scope for late registration.
<ul style="list-style-type: none"> FGDs revealed that registration offices do not always have the required working equipment, therefore the application can only be submitted if staff input it at another site e.g. UDC, where facilities are available. 	<ul style="list-style-type: none"> In some cases, there are only one computer in the registrar office and if that computer is not working, it takes time to repair it and IT officer need to go somewhere else for entering data into BRIS.
<ul style="list-style-type: none"> From FGD discussion it is found that people can get their registration certificate without their 'application stub' which is provided by the registrar office. 	<ul style="list-style-type: none"> In rural areas, people are much known to each other and they register their birth when they really need the certificate. So, sometimes registrar office provides the certificate without receiving the application stub.

Table 14. Variations of birth and death registration processes

In Bangladesh marriages are solemnized according to religious identity. Figure 8 represents the overview of marriage registration process for Muslims.

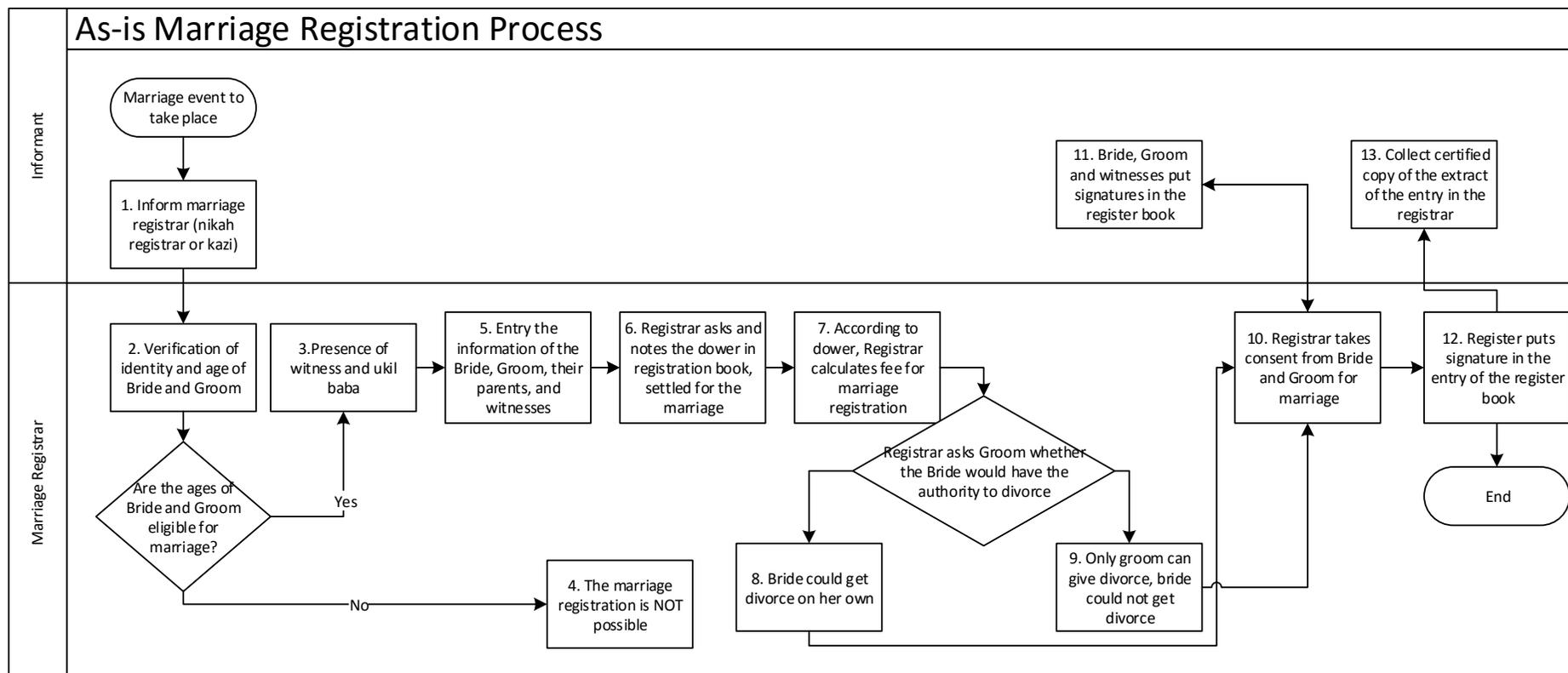


Figure 8. Marriage registration process diagram

The steps of marriage registration process are described in the Table 15 below.

Step	Process
1	The government appointed marriage registrars (known as <i>nikah</i> registrar or KAZI) for the Muslims under the supervision of the district marriage registrar. A Muslim marriage registrar is called to register a marriage with the presence of a witness. The bride and groom can also go directly to the registrar office for marriage registration.
2&4	The register solemnizes marriage after verifying the age, taking consents from both parties in the presence of witness. The legal age for getting marriage is 18 years for women and 21 years for man.
3	Minimum two witnesses must be present. In case of female witness it will be counted like 1 male = 2 females. One person needs to be present as guardian or <i>ukil</i> of the parties. If the bride is <i>pardanashin</i> (<i>hijabi</i>), <i>ukil</i> can takes the consent of the bride and also can sign on behalf of the bride, if needed. <i>Ukil</i> can be the person with whom marriage is not possible according to <i>Muslim Sunnah</i> , for example, bride's mother's/father's brother.
5	Every <i>nikah</i> registrar shall maintain separate record for each marriage in prescribed form and all entries are to be numbered in a consecutive series; a fresh series being commenced at the beginning of each year. A marriage registrar enters the information of bride, groom, and their parent's and witness in the register.
6	Marriage Registrar asks and notes the Dower money or <i>Denmohar</i> , which must be decided by the guardian of the parties or by the parties of the marriage.
7	Based on the dower, the <i>nikah</i> Registrar calculates the fees for marriage registration. A <i>nikah</i> Registrar charges fees for marriage registration at a rate of Tk.10 for each Tk.1000 where minimum ceiling is Tk.100 and maximum is Tk.4000.
8 & 9	During the entry in the register book, <i>nikah</i> Registrar asks the groom whether the bride will have the authority to get a divorce. If the groom permits, then <i>nikah</i> registrar records this in the marriage register book. So that, in future, wife can be able to get a divorce from her husband. Otherwise, the wife can never be able to get divorce from her husband, but the husband possesses the authority to give divorce to his wife.
10	After filling up all the necessary entries in the marriage register book, Marriage Registrar takes consent from the bride and groom in front of the witness. If the bride is <i>pardanashin</i> (<i>hijabi</i>), the <i>ukil</i> can take the consent from the bride.
11	After taking the consent from the bride and groom, the <i>nikah</i> Registrar take the signature of bride, groom and witness in the register. If the bride is <i>pardanashin</i> , <i>ukil/ukilbaba</i> can sign on behalf of the bride.
12	Finally, the marriage registrar put his signature in the entry of the register.
13	After completing the registration of any marriage, <i>nikah</i> Registrar shall deliver an attested copy of the entry in the register to the parties, and for such copy no charge shall be made.

Table 15. Steps for marriage registration

Other religion marriage registration

There is no such provision for the people of other religious communities such as Hindu and Buddhists. The Hindus, Buddhists, Christians solemnize their marriages in presence of respective religious priest, relatives, social leaders from both parties. Records of the Christians marriage are kept in churches. For legal documents, parties engaged in a marriage declare their marriage through affidavit as a proof the marriage. However, the government of Bangladesh enacted a law that authorize LG authorities to appoint a marriage registrar to be known as Hindu (including Buddhists) Marriage Registrar at every ward of the City Corporation or Municipality and Upazila. The bride must be at least 18 years old and

for groom, it is 21 years. The law aims to ensure the rights of married daughters who are deprived from most of their rights, including their equal rights or inheritance to the parental property as well as husband's property. This registration under this act is not mandatory, so, most of the people do not concern about registering their marriage.

For Muslims there is a formal procedure for a divorce and it is registered and documents from divorce are given to both parties. However, for other religious community there is no option for divorce. The parties involved in a marriage of other communities can stay separately, but their rights obtained by the marriage do not become null and void. Figure 9 represents the divorce registration process for Muslims.

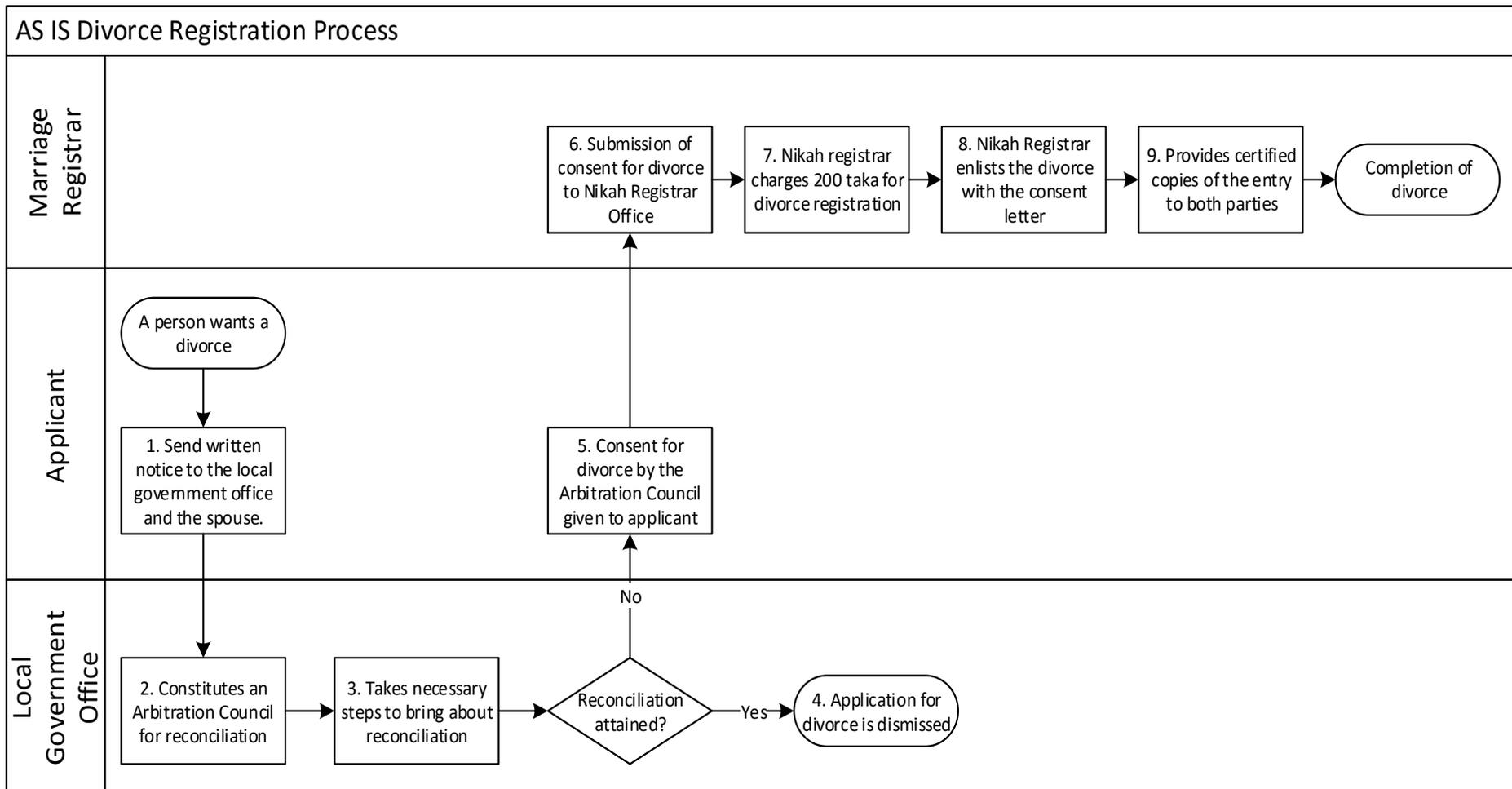


Figure 9. Divorce registration process diagram

Divorce Registration Process Description

Step	Process
1	Any person who wishes to divorce his/her spouse will give notice in writing to the chairman or the official of local government of his/her willingness, of giving divorce to his/her spouse. The person should have to send the same written notice to his/her spouse as well. A <i>talaq</i> unless revoked earlier, shall not be effective until the expiration of ninety days, from the day on which notice is delivered to the Chairman or the local government official. Within thirty days of the receipt of notice to the Chairman or the local government official, he will responsible for taking measures.
2	The chairman or authorized official shall constitute an Arbitration Council for the purpose of bringing about reconciliation between the parties.
3	Then, the Arbitration Council shall take all necessary steps to bring about such reconciliation
4	If the arbitration council success to reconcile the spouses, then the application of divorce will be dismissed.
5	If the arbitration council do not success to reconcile the chairman or local government official will give a written consent paper through which a person can apply for divorce to the <i>nikah</i> registrar.
6	A person, if he is male, with the written consent paper will visit to the <i>nikah</i> registrar and apply for divorce orally. On the other hand, for female applicant, if she is <i>pardanashin (hijabi)</i> , such application can be made by her duly authorized advocate. In that case, the marriage registrar will verify a document which is registered under the Registration ACT 1908, which proves that the husband delegated the power of divorce to his wife. In other way, marriage registrar can verify the attested copy of the entry in the registrar of marriage showing that such delegation has been made.
7	After verifying the necessary document marriage register charges 200 taka for divorce registration.
8	After that, marriage registrar can register the divorce in a prescribed form.
9	Finally marriage registrar provides an attested copy of the entry of the registrar to both parties.

Table 16. Steps for divorce registration

Key Actors in Marriage and Divorce Process

Actors	Responsibilities	Challenges/Opportunities
Informant/Applicant	<p>For marriage registration:</p> <ul style="list-style-type: none"> Bride and groom need to apply for marriage registration by paying required marriage registration fee, in the <i>nikah</i> registrar office, or the <i>nikah</i> registrar can come to the wedding premises. Bride and groom also responsible for informing two witnesses. Detail description of witness category is discussed in marriage registration process. To show supporting document for date of birth. <p>For Divorce Registration</p> <ul style="list-style-type: none"> Husband/wife needs to send a notice through <i>Ukil</i> (advocate) to his/her spouse and also to the authorized person in Local Government. 	<p>For marriage registration:</p> <ul style="list-style-type: none"> Marriage registration is not essential for every religion except Muslim. So, people from different religion can be unaware of marriage registration. To supply a supporting document as proof of date of birth can be a challenge. <p>For Divorce Registration</p> <ul style="list-style-type: none"> If wife is not authorized to get a divorce in time of marriage registration, she cannot sent a notice for divorce registration. Detail process is discussed in divorce registration Table.

	<ul style="list-style-type: none"> • Need to attend the meetings of the arbitration council. • Need to go to the marriage registrar office with the written consent letter of the arbitration council (if reconciliation is not done) and need to pay required fee. 	
Local Government Division	<p>For divorce Registration:</p> <ul style="list-style-type: none"> • After receiving the notice from applicant, the authorized person of the Local Government is responsible for organizing an arbitration council for bringing about reconciliation. • If reconciliation is not possible, Local Government issues a written consent paper for divorce. 	<p>For divorce Registration:</p> <ul style="list-style-type: none"> • One of the parties or both party can be absent in the arbitration council, so arbitration council is dismissed, and if needed arbitration council can be announced later.
Marriage Registrar Office	<p>For marriage registration:</p> <ul style="list-style-type: none"> • Checking the birth registration of both parties for validate the date of birth. • Registering the marriage in presence of witness in the prescribed marriage registration book. • Taking the signatures of the bride, groom and witnesses • Receiving the fees for marriage registration. • Provide a copy of the register book to the parties concerned. <p>For divorce registration:</p> <ul style="list-style-type: none"> • Accepting the written consent paper given by the Local Government arbitration council. • Registering the divorce in prescribed register book. • Taking the signature of both parties • Taking the required fee for divorce registration. • Providing the attested copy of the entry of the divorce 	<p>For marriage registration:</p> <ul style="list-style-type: none"> • Marriage registrar cannot be sure about the originality of the supporting document, as there is no online verification system. • All information are only written in local register book, no online database is available for marriage registration. • Damage/lost of the register book is possible. <p>For divorce registration:</p> <ul style="list-style-type: none"> • All data are only written in local register book for divorce registration too, no online database is available for divorce registration.

	registration book to both parties.	
--	------------------------------------	--

Table 17. Key actors in marriage and divorce process

CRVS System Landscape: IT systems that are used to support CRVS processes

At present there is an IT infrastructure in Bangladesh for birth and death registration which is Birth Registration Information System (BRIS). There is no IT infrastructure for marriage, divorce, adoption or migration processes. There are some initiatives taken by CRVS Secretariat, Health and ICT Division, for example, ICT division already takes initiatives to introduce the enterprise bus service and health has conducted some pilot project, like shared health record using Open MRS+. However, there are couple of others IT infrastructure for registration and citizen identification purposes. The National Identity Card (NID) service, Machine Readable Passport (MRP) system and Bangladesh Road Transport Authority (BRTA) Information System are three examples of such kind. In the health system there is also IT infrastructures for hospital management and health information system.

Existing IT infrastructure for birth / death registration

After the enactment of the Birth and Death Registration Act 2004, a manual registration process with a nationwide unique registration number was introduced in July 2006. In that system, the local government offices used to keep birth/death data in register books with a national number scheme (shown in Table 11) based on the location such as District, municipality or City Corporation, Cantonment boards, and a local serial number. In October 2010, central online digital system was introduced; initially, 30 districts were included on a pilot basis. Later on in 2013, this system was extended to all 64 districts in the Local Government registration centres. The records of the manual data from 2006 to 2010 were also included in the online database later on.

The birth registration data were recorded manually (handwritten in the local register book) in the local registrar offices, before the installation of the BRIS system. The registrar offices got notice to upload the manual data from 2006 to 2010 in the online BRIS system. Afterwards the registrar offices submitted the entries in their local register book to the online BRIS system. The phase is already completed. Recently the BRIS system has been migrated to a high-end server located in datacentre of Bangladesh Computer Council with the help of UNICEF. A schematic diagram of the BRIS system is shown in Figure 11.

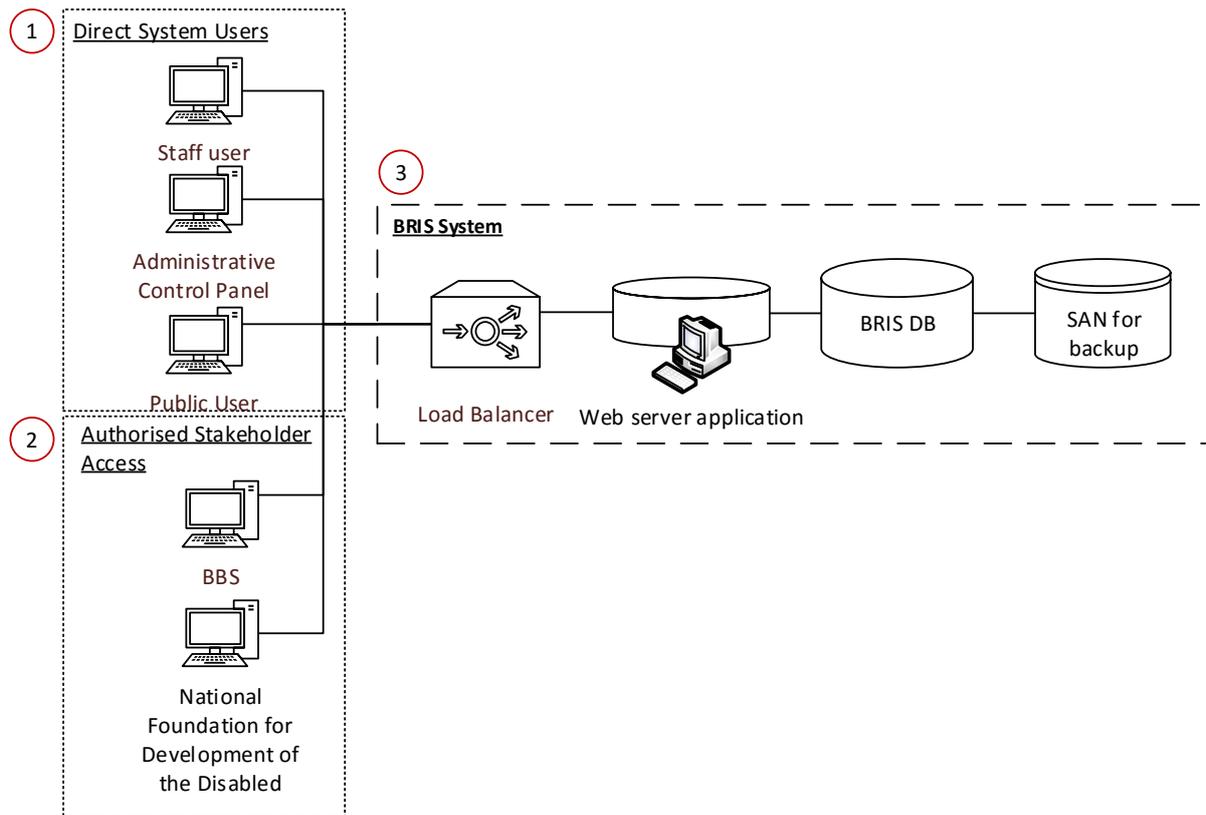


Figure 10. Schematic diagram of BRIS

1. Direct System Users

Staff user: The online BRIS system is accessible to the staff users at the registration offices. They have the ability to create new record and view online applications. Beside this, registrar office can control different administration work such as correction and de-duplication is done by the officers of different jurisdiction. A local registrar office can check the duplicate entries by searching the name, date of birth and parent's name and verify the given information of the applicants within its' own jurisdiction area. Whereas, Deputy Commissioner can monitor within the whole district, Divisional Commissioner can monitor within the whole division and BRIS project director can monitor the whole country. There are 9132 users in the registration centres who access the online database and complete the registration process.

Administrative control Panel: There is an administrative control panel for system administration. Basic responsibility of this administrative panel are- assigning new users, changing password, resetting password etc. they also have access to the BRIS. In BRIS, both birth and death registration data are kept in the same server. Otherwise, there is no interaction between birth and death registration systems.

Public users: Anybody can visit the online BRIS system and can enter information for online application on the web interface. Moreover, to verify an existing birth registration record, anybody can check the birth details by giving the BRN and date of birth of a person.

2. Authorized stakeholder access

BBS: The online BRIS system has technical connectivity with BBS. In fact, BBS access the birth records and use them for different purposes. A dedicated line integrated directly with BRIS allowing BBS to

access and query for the birth records. For example, for household survey, BBS needs birth registration verification and data collection, which is more or less similar to BRIS information.

National Disable Development Foundation: National Disable Development Foundation has similar access like BBS. They access the birth records from BRIS and use them for different purposes.

On the other hand, NID, MRP (Machine Readable Passport) do not have any technical integration with BRIS data. They only can check and verify the data of BRIS by giving input of the BRN and date of birth which is available for everyone on the BRIS website.

3. BRIS System

Load balancer: Direct system user and authorized stakeholder access to the BRIS system through the load balancer. Load balancer distributes network or application traffic across 5 servers.

Web server application: BRIS web server application is the web interface of BRIS. Anybody can access in to this interface and apply online. A birth record can also be verified using birth registration number (BRN) and date of birth by anybody.

BRIS Database: BRIS is using MSSQL server database, which stores all the information of registration.

SAN: In current system BRIS is using a storage area network (SAN) for data backup. It is a high-speed network of storage devices that connects the storage devices with servers.

At present, BRIS uses geocode based numbering scheme which represents a 17 digits unique number as BRN. It is allocated for every person as shown below:

BIRTH YEAR				GEO CODE						Sequence Number							
#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
				District Code	RMO	B		C									

Table 18. Number scheme for birth and death registration number

- **RMO:** 1 for Union Parishad, 2 for Municipality, 3 for Union Parishad where situated Upazila Parishad offices but no municipality, 5 for Cantonment, 7 for enclave, 8 for forest or barren land, 9 for City Corporation and 0 for Embassy.
- **B:** Upazila Code for Union Parishad, Municipality Code, City Corporation Code, Cantonment Code and Embassy Code.
- **C:** Union Parishad Code for Union Parishad and Ward Code for Municipality/ City Corporation/ Cantonment and Consulate code for Embassy.

Table 19 shows the number of birth and death records in the BRIS system from its inception to December 2015. Out of the 139 million birth records, 75 million records were recorded manually in the local offices before 2010, and uploaded in BRIS later on.

Record Type	Number (As of December 2015)
Birth Records	139 million
Child Death Records	3,974
Adult Death Records	245, 172

Table 19. Number of records in BRIS of different categories

The SWOT analysis in the present system architecture of BRIS is shown in the Table 20.

Issues	Strength	Weakness	Opportunity	Threat
Database design & database engine	<ul style="list-style-type: none"> Database currently holds 140 million birth records. Regular backups are taken of all data. 	<ul style="list-style-type: none"> Over 6000 official users and around 10,000 visitors access the website on a regular basis. System only able to handle 2900 records simultaneously. Data stored in one single data file. 	<ul style="list-style-type: none"> Database design to be assessed and revised. Alternative robust database engine to be used. 	<ul style="list-style-type: none"> System performance will continue to degrade due to growing population.
Web application interface	<ul style="list-style-type: none"> Available in both Bengali and English. Easy to use Good instructions provided to end-users on-site. 	<ul style="list-style-type: none"> Not compatible with mobile device. 	<ul style="list-style-type: none"> As mobile devices are more available than computers in Bangladesh, a mobile version of the application should be developed and/or responsive website. 	<ul style="list-style-type: none"> People's interest for registration decreases due to the unavailability of having an easy mobile solution.
Server speed	<ul style="list-style-type: none"> This server supports on-going registration process; around 20,000 applications processes per day. 	<ul style="list-style-type: none"> System slows/fails when too many requests are processed e.g. during machine-readable passport re-issuance, there was difficulty in accessing the server from outside of the country. Staff often have to access the system at night to perform regular functions due to slow speed of server. 	<ul style="list-style-type: none"> Change in logic in application level along with upgraded database design. 	<ul style="list-style-type: none"> Server performance will continue to degrade due to growing population.
System Security	<ul style="list-style-type: none"> Supports secure connection e.g. SSL. 	<ul style="list-style-type: none"> Unable to differentiate between genuine and malicious users e.g. no CAPTCHA function 	<ul style="list-style-type: none"> Implement challenge-response test function. 	<ul style="list-style-type: none"> Malicious users not identified
Address entry	<ul style="list-style-type: none"> Supports reality of unstructured addresses in Bangladesh. 	<ul style="list-style-type: none"> No down options for address entry. No client-side validation completed to ease data entry for user. 	<ul style="list-style-type: none"> Drop down address list can be included to help maintain the consistency of addresses and prevent applications for new certificates. 	<ul style="list-style-type: none"> People often apply for a new certificate by making a minor change to the spelling of their address.
Fee calculation		<ul style="list-style-type: none"> No option for calculating the fees for a registration No option for online payment 	<ul style="list-style-type: none"> Online payment option provided. Receipt of payment generated by system. 	<ul style="list-style-type: none"> Increased chance of bribery/corruption as fees are not explained.
Search capability	<ul style="list-style-type: none"> System supports search 	<ul style="list-style-type: none"> Search capability weak – only exact 	<ul style="list-style-type: none"> Improve search capability to include 	<ul style="list-style-type: none"> Increased number of duplicates as people

	of records by name of child and parent.	matches are shown, not close matches.	additional search fields e.g. DoB, address	are not able to find required record so will create new ones.
Access right mechanism		<ul style="list-style-type: none"> Limited number of roles defined in the system 	<ul style="list-style-type: none"> Different level of authorities can be assigned to perform specific tasks such as late registration, information correction and birth date change request. Risk of unauthorized personal obtaining the data, people can misuse. 	<ul style="list-style-type: none"> Users can misuse access to birth and death records.

Table 20. SWOT analysis of BRIS system

ICT coverage of CRVS functions is shown in a Table 21.

CRVS Function	State of Automation	Description
Civil registration		
Declaration of vital events	Manual or Online	An applicant can declare the occurrence of vital event through the online BRIS system or can visit the Registrar office for declaring that vital event.
Notification of vital events	Not automated	Any authorized person, selected by the government can be an informant to notify the occurrence of the vital event. The list of informant is given earlier. An informant goes to the registrar office and verbally notify the vital event.
Registration form fill up	Manual or Online	An applicant visits the Union Parishad for collecting form, and then fills it up. Otherwise, an applicant fills up the online form home or any digital center and takes a printed copy of the form.
Validation of supporting documents	Not automated	The supporting documents are validating manually. No tools for verifying supporting document.
Store (data submission)	Automated	The registrar office can entry the data into BRIS from the manual form, or can recheck the entry of BRIS with the printed copy of the online form. Data automatically uploaded to the central server after submission of the online entry.
Certification	Automated	The submitted form then directly print from the BRIS system.
Vital Statistics		
Compile	N/A	Vital statistics are not generating from the civil registration process.
Processes	N/A	See above
Operations		
Monitoring and reporting	N/A	Not available
Data sharing	Semi-automated	Currently BRIS system shares data with only BBS and National Disable Development Function for survey related studies.
Verification	Automated	Any person can verify the birth registration certificate by giving input of BRN and date of birth.

Table 21. ICT coverage of CRVS functions in Bangladesh

Process Bottlenecks: the weaknesses in the registration processes

Process bottlenecks, inefficiencies, delays and informal processes that impede civil registration during each stage of the formal birth/death registration processes are listed below.

Steps	Process Weakness	Description	Outcome
2	Copies of supporting documentation often not preserved	Attestation of vital event provided by authorised individuals e.g. Teacher, Doctor, can be forged. Copies of supporting documentation are often lost or not maintained and there is no mechanism to maintain a copy in digital format.	Unable to prove that valid supporting documentation was provided at a later point.
3.a	Online application	Once online application is complete, the user must print a copy of the application, sign it and then take the form to the registration office.	Citizen deterred from online application process as it requires additional effort of printing form before visiting registration office
3.a	Selection facility for address entries	There is no drop-down option in the address field of the online form; people can write any address as they wish. No consistency in address field.	For the same address, there is a huge variation of spellings, and chances of duplications increase.
5	Lack of verification tool for supporting document	Verification of supporting documentation is manual; no server side validation is conducted e.g. with National ID number..	People can give false supporting document, as per their need, to get a certificate with false information. Authenticity of the documents relies on the applicant and judgment of the staff in the registration office; approved applications may not be legitimate.
12	Lack of client side validation	The application provides free text fields for the user to complete; this takes more time to complete for the user and mistakes are often made and not detected.	System unable to identify incorrect/duplicate data – overall data quality and integrity low.
11	System response time	The online BRIS works very slowly in day time due to server limitation. The server has less capacity than users, which hampers the registration work very much.	People have to come several time in the registrar office because of slow server. They lost the interest of taking the certificate. The operator needs to wait a long time due to the low server speed.

12	Limited ability to identify duplicates in BRIS	Duplicate names can be checked only in the jurisdiction of a particular registration office, and if a name is changed slightly, the application can't detect the duplicates.	This is one of main causes of duplicate entries in the online database. If duplicate checking is done properly, people can take copies of previous records rather than creating new records in the database.
7, 8	Fees for collecting copy of an existing registration	A person can correct the certificate @ Tk 10, and can get new certificate by paying @ Tk 5 for Union/Municipality and @ Tk 10 for city corporation and cantonment board, for each year, after 2 years of birth. For taking a copy of the certificate costs Tk 25.	As the fee for taking copy of existing registration is more than correction fee and new certificate fee, people often request a new certificate rather than collecting the previous one. For this reason, duplications occur.
16	Absence of signatory	The authorized person for approving a certificate with signature does not always present in the registration office. People have to visit multiple times to the registrar office to get the signed certificate.	Multiple visits to the registrar office prevent people to register their birth.
16	Language of certificate	The certificate is printed either in Bangla or English, not both. Different organization demand different versions for authorisation purposes.	People need to apply for each version when necessary.
16	Certificate collection point	Applicant need to collect the certificate from the same registrar office where s/he applied.	People who have changed their present address often create a new record rather than collecting their certificate from the original registration location.
General	Inefficiencies in the correction process	To make a change to an existing record after 6 months one must engage in a process with the central office. Within 6 months of registration, the local registration office can make the changes.	Applicants re-register their child as the process is much easier; this creates duplicates in the system and has a negative impact on data integrity
General	Cause of death in the death certificate	It is not given as per ICD-10 format	It will create discrepancies in VS generation process

General	Resources at the demand side	Use of computer, broadband internet, and printing facility is limited in the remote areas.	In some cases, the registration office owns only one computer/ printer. If that computer/printer has some technical problem, then staff needs to go to distant places for entering the data or printing the form. Moreover, broadband internet connection is not available in remote areas, most of the registrar offices use the telecom operator's internet modem, which provides very slow speed in the remote areas. Also, the maintenance and servicing of the computer is troublesome in the remote areas.
---------	------------------------------	--	--

Table 22. List of registration process bottlenecks

Registration Barriers: issues that prevent people from registering births and deaths

The barriers that prevent universal and comprehensive birth and death registration are given below.

1. Lack of understanding of the importance of birth registration

People in general do not understand the necessity of registration. The household results show that 97% of respondents have some knowledge of birth registration that means who have only "heard" about birth registration. Source of their knowledge is shown in the Figure 12 below.

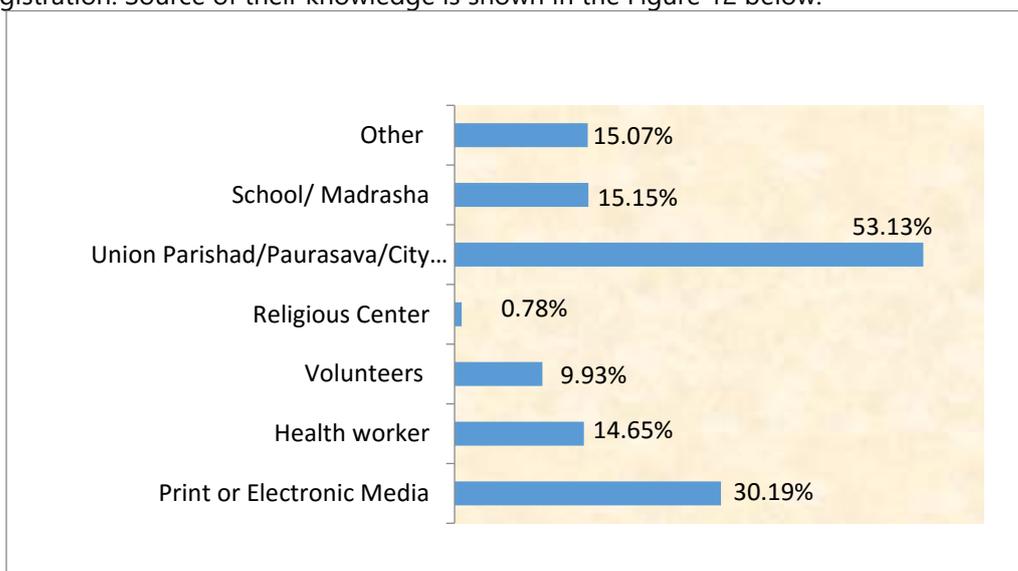


Figure 11. Sources of information about birth registration

The 97% of the respondents who heard about birth registration, the majority (72.76%) of them said that it was required for school admission; around 31% said that registration was required for marriage registration; 36.89% identified it as a requirement to get a job; 15.93% described it to apply for and get a passport. In addition, 21% of the respondents said that birth registration is needed to open a bank account; 15% to get an NID card and 3.29% for the issuance of a life insurance policy. However, only 2% of the respondents could hardly mention the purpose of death registration and 18.59% of people do not understand why birth registration is important.

The understanding on incentive of having registration and disadvantage of not having a registration is not vitally experienced, not even known to some extent. They register or obtain certificate when they really need to submit a certificate to avail certain services.

2. Lack of need for birth registration certificate within the first 6 years of birth

While legal measures are in place that demand the presentation of a birth certificate for certain services, 17³⁵ in total 38, in reality the certificate is only needed when a child first enrolls in school at the age of 6. Also, there are no legal provisions to take action against them who are not registered birth within a stipulated time. There is also no incentives for registering in due time. No punitive action taken, people is not enforced, so, people do not worry about having registration. In addition, fees for late registration aren't high. The delayed registration fees are very nominal and also the procedure for late registration is too easy. In some cases the fee for taking previous copy is more than delay registration fee. This causes the people not to register in time. People only register when they really need it. Above all, in rural areas of Bangladesh, preservation of the paper based registration certificate is also a cumbersome task. There is a good chance of damage by water, termites, etc.; even the villagers do not have safe storage to preserve the certificates. People want to register their birth when they really need it to use somewhere.

3. Unawareness of birth and death registration processes

From the household survey, it is found that 93.53% of respondents were unaware that birth registration should happen within 45 days of birth. People register their birth when they need it. The below graph (Figure 13) shows the comparison of birth registration status among children within 45 days of birth and any time of 10 years.

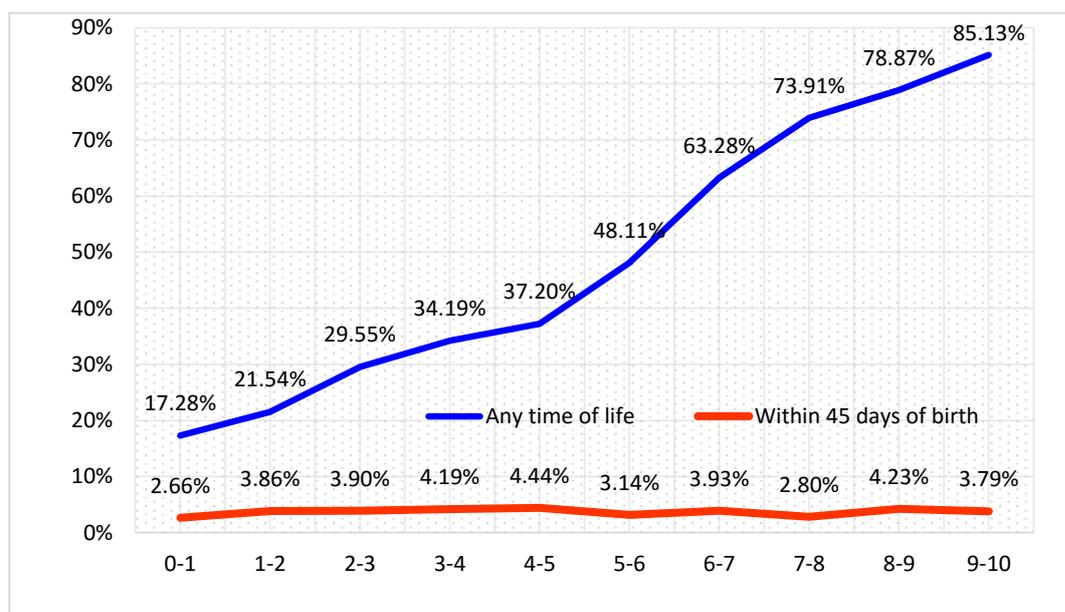


Figure 12. Rate of birth registrations across age groups

From the household survey findings, 91.8% of respondents were unaware that death registration should happen within 45 days of death. Of the 97% of respondents who had heard about birth registration, only around 57% of them knew where they could register a birth: 56.11% knew that they can register at the Union Parishad, 28.96% at the Paurashava; 21.09% at the City Corporation; 0.36% at the Cantonment Board. Some respondents, 1.34%, thought that birth registration can be done at a hospital; likely mistaking a medical birth certificate as formal birth registration. Other respondents, 1.65%, identified

³⁵ Handbook on Civil Registration and Vital Statistics Systems Computerization, Studies in Methods Series F, No. 73, Page:11-12

the Union Digital Centre as a place for registration. While UDCs are often utilized by registration staff to complete the online registration process, this is either done because the Registrar has provided the Entrepreneur with login details to the system (not supported in regulations) or because staff need access to a working computer and internet access. Among the respondents 19.11% unaware of where to register a birth. Lack of permanent address is an important barrier of registration for the street child, rootless citizens, Bede community (gypsy), stranded Pakistani, Children of Rohingya refugees, etc. This people thinks they cannot register without a permanent address. Moreover, lowest registration rates exist in Dhaka due to high population of migrated people. To know the process for registration people have to visit the registrar office or the online BRIS website. Travelling to registrar office is a must and also all information are not available in online BRIS. People loss interest for registration, so they don't register. According to existing act and rules different process follows in different religion. Such as, only Muslims need marriage registration, whereas Hindus and Buddhists do not need marriage registration, so they do not need birth registration for marriage. Some people of these religious communities do not bother to register birth.

4. Importance of National ID card widely understood and preferred

According to the Birth and Death Registration Act, 2004 birth certificate is mandatory to get NID. However in reality citizens are not required to provide a birth certificate to receive a NID. There are more than 102 million NID cards which covers most of the adults in Bangladesh. Moreover, the NID card serves all purposes in Bangladesh including opening bank account, applying for Govt. service, marriage registration, buying phones, etc.

5. Government service delivery requires improvement

People do not want to engage in government service delivery because of bureaucracy³⁶. From FGD it is found that, general people think that birth registration in Govt. offices creates hassle, so, they don't want to get a certificate unless it is really needed. People think that registrar office charges extra money which creates mistrust and negative perception of government service delivery. Moreover, the speed of existing server of BRIS has been slow, concerned people become fed-up with the system and stopped registering further. Limitation of man power and inadequate computer literacy of Union Parishad secretary is also a barrier of prompt birth registration. As identified in process bottlenecks, the existing process requires multiple visits and people do not want to visit multiple times because of the barriers.

6. Low literacy rates

The overall literacy rate in Bangladesh is approximately 61% and as a result people are unable to complete the forms themselves. Citizens often need to request support to fill in these forms. From FGD it is found that, people feel hesitated to fill up a form for birth registration, so they avoid registration. People apply for registration when it is absolutely required.

7. Direct and indirect costs of registration

In some cases, people need to visit the registrar office several times. It takes extra time and cost. The household survey revealed that around 32% of the households were within 1Km distance from the registration office. 24.80%, 21.95% and 8.71% of the households were between 2km, 3km and 4km, respectively. About 56.11% of the respondents said that traveling cost was less than 100 BDT to 200 BDT,

³⁶ Reference: Inception workshop

7.37% respondents said that cost for travelling was 200 BDT – 300 BDT, and 1.78% said that cost was less than 300 BDT – 400 BDT.

However, around 61% of the respondents visited for single time. But 17.47%, 3.26% and 1.53% of the respondents visited for two, three and more than three times, respectively. In household survey, 2.23% of the respondents said that registrar office staff asked for extra money for registering, which is also a barrier for registration.

Cultural Considerations: socio-cultural factors affect registration rates

Issue	Cultural/ Social norm, attitude, practices & characteristics	Impact
Change of name	There are some other socio cultural barriers, such as when naming children traditionally takes place sometime after birth or where names are traditionally changed frequently during childhood.	Parents want to register their children’s birth after fixing the name of their baby.
Frequent changes to date of birth	<p>People often change their (or their children’s) date of birth, for a number of different reasons:</p> <ul style="list-style-type: none"> • Enrolment in school: According to National Education Policy of Bangladesh Government, the age for enrolment in class one is 6+ years but a student can appear the Secondary School Certificate Examination after completion of 10 years study at the age of 15+, which is contradictory. About 88% of the respondents in the household survey who changed their date of birth in the registration said that they did it for academic enrolment purpose. • Marriage: Many of the people are still now wants to give marry of their daughter below 18 years. In some area 16-18 years old daughter who are still unmarried is a matter of disgrace for their parents. According to law, marriage of a girl less than 18 years is prohibited. • Job: There is an age range to join in government job, but the retirement age is fixed. People who join government job at early age have an opportunity to serve for a longer duration. 	<ul style="list-style-type: none"> • Enrolment in school: Students can change their date of birth either at the time of enrolment or while appearing in terminal examinations. So parents have no inspiration to register birth before schooling. • Marriage: Parents don’t want to register the birth of their daughter or to change their, so that, they can give marriage of their daughter below 18 years of age and register the certificate just before marriage. • Job: Many people want to change their date of birth because of government service.
Inability to provide required information	All people including orphan, prostitute, un-identified children, Bohemian must be allowed to register their birth according to “Birth and Death Registration Rule”, but in the registration form, name, date of birth, place of birth, parent’s name and nationality need to be included. However, all these information are not available for this group of people. Moreover, these children sometimes do not get responsible guardian who can take the initiative of registering their birth.	This group of people doesn’t want to go through the registration process.
Special group	The above-mentioned people also try to hide their identity. Some of them do not want to expose their identity in some cases. We do not have many facilities for the above-mentioned people and these people are socially humiliated, so this is one of our socio cultural barriers that they do not get social facilities.	This group of people avoid registering their identity. This people get minimum social facility, so, they do not need the registration certificate to use somewhere.
Disable children	Parents tried to hide the identity of their physical or mental disable children in society.	Parents do not want to register their birth, as they think people will get to know the disability of their children.

Fear of engaging in registration process	Publicity of family planning encourage not to take more than 2 babies, so, parents who had more than 2 babies think that registering the birth of their children is an indicator of calculating the number of their children, which can deprives them from getting social facilities.	Parents do not understand that all the babies should register.
Lack of consistency in marriage registration process	According to existing act and rules different process follows in different religion. Such as, only Muslims need marriage registration, whereas Hindus and Buddhists do not need marriage registration, so they do not need birth registration for marriage.	Some people of these religious communities do not bother to register birth.
Afraid of the process	Some people think that procedures may be complicated, and may be discriminatory, for example: against single mothers, people from ethnic minorities or refugee children.	This group of people avoids registering their children's birth.
Social stigma	People may also hesitate to report birth of children born out of wedlock due to social stigma ³⁷ . Socio-cultural issues: language barrier, tradition, social exclusion can be socio cultural barriers ³⁸ .	These issues can be a barrier for registering birth.
Influence of status on service provision	Citizens are often treated differently by government service providers depending on their status within the community; those with money and influence will be treated with preferential treatment as opposed to the under-privileged.	Awareness of this reduces engagement in government services.

Table 23. List of socio-economic factors that affects registrations

Current CRVS Initiatives: existing programmes aim to strengthen CRVS systems

This section presents current CRVS initiatives aimed at improving the current situation on CRVS in Bangladesh. The Table 24 below highlights the on-going initiatives along with the opportunities presented by each of the initiatives:

Initiatives	Descriptions
<p>DGHS: MOVE-IT System³⁹ - the system has been designed by WHO and initiated by DGHS along with A2i for the purpose of improving maternal and child health service through unified electronic information system.</p>	<p>The core technological aspect of this is the use of mobile devices for such registration at the community level by household health workers. Incentives, such as, free talk time for families that report pregnancies, births, deaths and emergencies. Major objectives were to:</p> <ul style="list-style-type: none"> • Tracks vital events (births, deaths, cause of death); non-fatal health events (complications); • Coverage of priority services (antenatal, natal, postnatal care); • Continuous updating and reporting of priority indicators; reminders and alerts; <p>The project aims include the following:</p> <ul style="list-style-type: none"> • Development of unique identification standards;

³⁷UNESCAP & WHO. "Report of the Comprehensive Assessment & Strategic Action Plan on CRVS System in Bangladesh."

³⁸UNICEF & IDB. "Toward Universal Birth Registration: A systemic approach to the application of ICT." (2015).

³⁹ Move it: Report on Monitoring of Vital Events using Information Technology, WHO, can be cited at http://www.who.int/healthinfo/civil_registration/crvs_report_it_2013.pdf

	<ul style="list-style-type: none"> • Development of minimum data set standards; • Creating an operational framework for digital design; • Software and device development; • Pilot planning and deployment; • Crosscutting activities.
<p>DGHS: Shared Health Record (SHR) is an effort to create a Health Information Exchange (HIE). It intends to make exchange of health information across systems possible. Shared health record will be the repository of health record in Bangladesh.</p>	<p>A pilot project is underway towards establishing HIE in Bangladesh, supported by DGHS. The setup will consist of multiple components, interacting and inter-operating with each other over standard and agreed protocols and contracts. The A2i will help DGHS in implementation of SHR in Bangladesh along with providing necessary support in formulation of policies, making legal framework and doing promotional activities.</p>
<p>BBS: National Population Register (NPS)</p>	<p>The bureau of statistics (BBS) has been mandated to build a National Population Register (NPS). In the interview with the BBS, the chairman mentioned about it and they are in the planning phase and looking for potential donor agency for funding.</p>
<p>BDRP: Strengthening Existing BRIS</p>	<p>The BDRP authority is quite aware of the existing technical bottlenecks of the BRIS system and they have already prepared a list of features to be incorporated in the BRIS system and they have plan to upgrade the BRIS with new features.</p>
<p>ICT Division: Bangladesh National Enterprise Architecture (BNEA)</p>	<ul style="list-style-type: none"> • Bangladesh National Enterprise Architecture (BNEA) is a strategic planning tool that translates business vision and strategy to facilitate an effective, sustainable and comprehensive service delivery platform • Each Ministry and Sector can develop their own IT roadmap through enterprise architecture enablement • A centralized architecture governance board will consolidate the projects and establish the common requirements for Government of Bangladesh

Table 24. List of current CRVS initiatives

Conclusions

This research has created an opportunity to analyse the key findings and respond effectively for providing potential strategies through Bangladesh As-Is Analysis Report on “**EVIDENCE BASED TECHNICAL ANALYSIS PHASE FOR DBR TOWARDS STRENGTHENING THE CRVS**”. Bangladesh has already gained a substantial experience in working with Civil Registry and Vital Statistics and clearly ahead in CRVS initiatives than many other countries of similar economic status. But use of ICT in development programming is a relatively new concept in Bangladesh. So, the specific findings from the next phase of this study i.e., technical analysis will be highly necessary for complementing the understanding gathered from this as-is analysis. It is expected that combined the findings from first two phases of the study will lead to a very useful programming analysis in the third phase which shall come up with models for the universal CRVS in Bangladesh. The advanced indications derived before the

technical analysis is that three types of model can be exercised during the programming analysis. They are –

1. Integration and improvement of exiting administrative model
2. Development of right-based model,
3. Development of Public-Private partnership model.

The major phases (work streams) of the program shall include, but not limited to –

1. Development of the policy framework for necessary legal and administrative reform to ensure integration and assignment of specific roles and responsibilities among the stakeholders,
2. Deal with legacy data with necessary revalidation and set up the new robust system,
3. Massive awareness program for inclusion of every citizen with special consideration to disadvantaged, vulnerable and less interested groups,
4. Improvement of service delivery
5. Implementation of strong motivational and enforcement measures for ensuring birth registration within 45 days and timely registration of other vital event.

Based on findings from the as-is analysis and technical analysis, the programming analysis shall address the issues to overcome the weakness, eliminate the barriers and utilize the prevailing strength and opportunities for implementing a full-fledge CRVS system in Bangladesh. As a final output of the study an appropriate model will be proposed for a sustainable CRVS system with universal coverage in the country. That will lead to a paradigm shift in ensuring better citizen services by tracking one-to-one rights and needs of every individual. A universal CRVS will facilitate and foster the development planning based on real information rather than present practice of doing the same based on inference drawn from census data.

Technical Feasibility

In this chapter an assessment of current capacity and relevant opportunities that may impact the feasibility and cost-effectiveness of digital solutions is detailed. This assessment forms the basis of a recommended technical solution which will be the foundation of the DBR Programme in Bangladesh.

Physical / IT Infrastructure

Current physical and technical infrastructure in Bangladesh

The Table below presents the current infrastructure capacity in place across Bangladesh, along with the opportunities this capacity creates for strengthening CRVS systems:

Infrastructure	Capacity	Opportunity
Registration Offices	<p>There are 124 regional offices in 11 City Corporations, 320 Paurashava, 4571 Union Parishad and 15 Cantonment boards. In addition, there are 55 registration offices in the overseas embassies⁴⁰. Thus at present there are 5085 registration offices through which online birth and death registrations are taking place by direct and regular interdepartmental coordination.</p> <p>From field visit and FGD, it was found that most of the offices are well equipped to support registration functions. However, the registration offices are in local government's workplace, and are often shared with other government activities. Therefore, the space is limited to complete their registration functions.</p> <p>Location: It has revealed that 33.07% of respondents were within 1km, 26.1% were within 2km, and 22.62% were within 3km from the registration office⁴¹.</p> <p>Power: In urban areas, most of the registrar offices are under the connection of PDB (Power Development Board), whereas REB (Rural electric board) supplies electricity in the rural area's registrar office. However, most sites experience regular power outages which affects their ability to provide online services.</p> <p>Connectivity: Most registration sites utilize a dongle accessing mobile internet to support their functions. Few of the registrar offices are using broadband internet in urban areas or a modem.</p> <p>IT equipment: the common equipment in the registration offices are a desktop personal computer, a printer and a GSM modem.</p>	<ul style="list-style-type: none"> ▪ Provision of alternative power sources e.g. solar, UPS. ▪ Provision of additional building/office space as required.

⁴⁰<http://br.lgd.gov.bd>

⁴¹ Household survey report

Union Digital Centre (UDC)	<p>UDCs are newly established one-stop service outlets operating at all 4,547 Union Parishad (UP, lowest tier of local government) of Bangladesh. The UDCs are able to bring various types of information related to government, livelihood and private services to the doorstep of citizens in rural areas. <i>It helps people to apply for birth/death registration.</i> It ensures saving time and cost among the services providers and users and also made operations hassle free. This is operated through Public-Private-Peoples' Partnership (PPPP) modality and these centers are run by local entrepreneurs, housed by UPs with technical support from a2i project, Prime Minister's Office (PMO).</p> <p>Location: It has been found that 60% of people can easily access UDCs; 30% of people are within 3km of a UDCs⁴².</p>	<ul style="list-style-type: none"> ▪ Place formal government staff in UDCs to perform birth and death registration function. ▪ Provide technical facilities officially for registration. ▪ Provide on-demand certification services.
Health Facilities	<p>Total number of hospitals are 3,549 in 2012, among them 459 public hospitals are in Upazila and Union levels and 124 public hospitals are in secondary and tertiary levels and 2,966 non-Govt. hospitals registered by DGHS⁴³. Currently, there are 421 Upazila Health Complex in Bangladesh where 15,958 beds are functioning⁴⁴. The followings are the existing health facilities provided in the Upazila.</p> <ol style="list-style-type: none"> 1. Upazila Health complex 2. Union Sub-Centers 3. Union Health and Family Welfare Centers 4. Rural/Urban/Thana dispensaries 5. Community Clinics 6. Trauma Centers 7. MCWCs 8. Chest Disease Clinics (TB clinics) 9. Private clinics/facilities 10. NGO clinics/Facilities 11. Outreach Center <p>In every health facilities primary care is given, like pregnancy checkup, pregnant women delivery, vaccination, diarrhea treatment etc. Hospitals are more equipped and surgeries can be done in most of the facilities.</p>	<ul style="list-style-type: none"> ▪ Offer notification/registration services in hospitals or any other facilities at the time of birth.
e-Govt. services	<p>Government has already taken initiatives for e-govt. services. One of the current popular e-Govt. service is the District e-Service Centre (DESC), which is an ICT facilitated one-stop service center that provides an efficient electronic version of the century-old manual and heavily bureaucratic service delivery system at every Deputy Commissioner's (DC) office. It is located in the DC office. DESCs are currently operating at all 64 DC Offices⁴⁵. About 3,89,423 land records has been</p>	<ul style="list-style-type: none"> ▪ Improve online civil registration application e.g. include supporting document verification tool, pay online, select delivery option, on demand certificate printing etc.

⁴²Reference a2i presentation

⁴³Health Bulletin 2012

⁴⁴http://app.dghs.gov.bd/inst_info/other/uhc.php

⁴⁵<http://www.a2i.pmo.gov.bd/content/ness-national-e-service-system>

	<p>delivered to the citizens against 758,153 application received⁴⁶. The average time for disposal of an application has been reduced from 3-4 hours to maximum 1 hour. The average time to take decision (full cycle) has been reduced from 2 -7 days to 1 - 2 days.</p> <p>Objectives:</p> <ul style="list-style-type: none"> • Ensure service delivery at the door steps of the people at the least possible time. • Uphold citizens’ rights to Information through extensive information flow. • Save time and labour in the processing period. • Increase the number of clients served everyday through the use of ICT. • Reduce corruption and increase accountability by ensuring enhanced flow of information and more transparent processes <p>NID system, current BRIS, machine readable passport are some examples of e-Govt. services.</p>	
<p>Cellular/Mobile phone networks</p>	<p>There are six mobile network operators (MNO) in Bangladesh and these networks is covering 92% of the geographical areas and 97%⁴⁷ of the total population. In the household survey, it was found that 87% of the households possess at least one mobile phone.</p> <p>In February, 2016, there were around 131 million mobile phone subscribers (~82% of the total population including multiple connections per individual) in Bangladesh. There were 58.3 million Internet subscribers (~36.4% of the total population) out of which 55.5 million people (~95% of the Internet users) access Internet from their mobile device⁴⁸.</p> <p>The third generation (3G) networks were introduced in 2013 and most of the district headquarters are now under 3G network coverage. From 2014 onward, the number of 3G connections subscriber has been rapidly increasing along with Internet subscribers. The consumers’ appetite for internet use in urban and rural areas is driving this trend, and 3G connections are expected to surpass 2G by 2020⁴⁹.</p> <p>In 2013 BBS conducted an ICT use access survey comprising 36,268 households with 1,30,714 individuals with 5+ years of age. The survey reported that only 5.6% households have computers and only 4.8% households have access to internet. There are 92.7% and 67.2% mobile internet user in the urban</p>	<ul style="list-style-type: none"> ▪ There is an opportunity for the government to find out a way to link up birth registration process with mobile connectivity for facilitating the process. ▪ Mobile phone application, or any hotline number can be helpful for citizen to serve the CRVS issues.

⁴⁶<http://www.a2i.pmo.gov.bd/content/ness-national-e-service-system>

⁴⁷http://www.btrc.gov.bd/old/index.php?option=com_content&view=article&id=91&Itemid=317

⁴⁸ BTRC website

⁴⁹GSMA: Analysis: Country Overview Bangladesh- August 2014

	<p>and rural area respectively. Around 5.9% people use internet through WiFi in the urban areas⁵⁰.</p> <p>In the year 2015, 44 lac smartphones were sold in Bangladesh. Dhaka has the largest number of mobile phone user, about 91.3%. In Chittagong 90.8%, in Khulna 87.1%, in Sylhet 86.9%, in Rangpur 82.2%, and in Rajshahi 81.9% people use mobile phone⁵¹.</p>	
BTCL	<p>Bangladesh Telecommunications Company Ltd. (BTCL) was the only telecommunication service provider in Bangladesh before 1993 when cellular network operators started their operations. It provides fixed line and Internet connectivity services in all districts, 481 Upazila and 87 growth centres through 718 Exchanges (243 MSU+475 RSU/ONU) in 595 locations in Bangladesh. BTCL has optical fiber network of 5000+ kilometers in 64 districts, 126 Upazila and 108 Union Parishad. Currently there are 19,066 sanctioned workforce in total and among them 7325 workers are working regularly⁵². Other than the regular manpower stated above, a large number of work-charged and casual laborers have been working with BTCL. BTCL has introduced digital exchange in 481 Upazila, and has a satellite earth station in Betubnia and two in Mohakhali.</p>	<ul style="list-style-type: none"> ▪ Being a communication company owned by the Government with country-wide network, BTCL can play a pivotal role in connecting the registration centres with high speed connectivity.
Data centers	<p>A data center put at the premises of Bangladesh Computer Council (BCC), where the National Web Portal of Bangladesh is hosted. The portal consists of more than 25,000 websites of the government's ministries, departments and directorates. The BRIS and NID systems are also hosted in the BCC data center.</p> <p>There is another data center being developed and deployed in Jessore. It will be mainly used as Disaster Recovery Site (DRS) center. It has not been fully functional, only a container DR is being used by couple of banks.</p> <p>Another Tire-4 data center is being built in Kaliakoir, Gazipur in the High-tech Park at a cost of \$194 million. It is expected to be completed by 2020 and envisioned to be the fifth largest datacenter in the world.</p>	<ul style="list-style-type: none"> ▪ This infrastructure will be enough to host the CRVS hardware and software systems.
a2i user support forum	<p>A2i provides technical supports for users of any government system. A2i already created a forum for public where public can ask their queries and can communicate in different issues through blog posts. In this way A2i provides support to the users.</p>	<ul style="list-style-type: none"> ▪ A2i could provide improved training materials for BRIS online. ▪ Create BRIS forum for BRIS focused questions.

Table 25. Current physical and technical IT capacity in Bangladesh

⁵⁰Report on ICT use and access by individuals and households Bangladesh 2013

⁵¹Report on ICT use and access by individuals and households Bangladesh 2013

⁵² Presentation on Bangladesh Telecommunications Company Ltd (BTCL), 07 July,2014

The goal of digital Bangladesh is to introduce digital system in every aspect, like- E-governance, E-health, E-Education, E-Agriculture, E-citizen service etc. The process has already been started by the Government. Offering online registration system for passport and machine readable passport is already introduced. Initiatives for online banking, mobile banking, online shopping, and online health care is already started. Govt. also have future plans of improving other e-services as well.

There is a permanent secure server in Bangladesh Computer Council which is nationally use for different purpose and currently it is working as a data center to support digitized CRVS solution.

Human Capacity

Bangladesh has made substantial progress in ICT based capacity building over recent years. The ICT Division and A2i project in the Prime Minister’s office have been working on a range of ICT projects for training and capacity building with various ministries.

What capabilities do existing CRVS actors have?

Actor	Capacity	Opportunity
Birth and death registration staff (Local Government Division)	IT staff at the registration offices are competent enough in the use of computers and BRIS. Interviews with local registration staff showed that most of them have the resources and the staffs are proficient in use of smartphones.	<ul style="list-style-type: none"> ▪ Train all staff for the use of the newly developed system. ▪ Ensure that all registration sites are adequately resourced.
UDC - Union Digital Centre (a2i)	Union Digital Centres (UDC) are running according to PPPP model, and operated by the local entrepreneurs. One male and one female member staff work in each UDC. Education level of this entrepreneurs is S.S.C and above, but FGD and Interviews reveals that they are competent in the use of ICT tools.	<ul style="list-style-type: none"> ▪ Use UDC staff for local government technical training. ▪ Use UDC staff for birth and death registration; make their roles official. ▪ Registration certificates may be collected from the UDC.
ICT Division, Ministry of Posts, Telecommunications and Information Technology (MoPT&IT)	<p>ICT Division is responsible for achieving overall infrastructure and human development of Bangladesh by establishing universal access to ICT. Since its inception, it has been working to develop countrywide ICT infrastructure and train citizens in ICT.</p> <p>Recently ICT Division undertook couple of training and capacity building projects such as learning and earning, free-lancer to entrepreneur, national mobile app trainer and app development program, etc. More than 37,500 participants were trained under First Track Future Leader, Top up IT, IT Foundation Course and through national training programmes. Bangladesh Computer Council has also training 9600+ trainees over the last couple of years. ICT Division</p>	<ul style="list-style-type: none"> ▪ Support the deployment of an enhanced BRIS application ▪ Use BCC staff to train registration staff in the use of computers and systems.

	provided 24,000+ tablet PC to the government officials under the 'Info Sarker' project ⁵³ .	
Birth and Death Registration Project	Birth and death registration project has properly trained staff who are responsible to control and manage birth and death registration rules and guidelines. Beside this, trained technical team specifically manages operation on BRIS system.	<ul style="list-style-type: none"> ▪ Provide inputs for the design and implementation of the upgraded BRIS ▪ Operate and maintain the enhanced BRIS application.
A2i	<p>The capabilities of A2i are:</p> <ul style="list-style-type: none"> • Strengthening existing e-service and promoting innovation in the delivery of e-services • Provide training and sensitizing government officials • Expanding digital literacy among general public <p>A2i formed and trained innovation teams in 61 ministry/divisions, 345 directorates, 64 districts and 488 Upazila. They conducted 380 innovation pilots in the field level. A2i has trained 2902 participants in 96 workshops so far. They also conducted orientation/sensitization programs in the field and central level involving 6668 participants in 23 innovation circles, 9 innovation forums, 3 meet-ups, 46 innovation team orientations at field level and 21 in central level.</p>	<ul style="list-style-type: none"> ▪ Provide inputs and support in the design and implementation of the upgraded BRIS application
Directorate General of Health Services (DGHS), Ministry of Health and Family Welfare	<p>The health administration has the largest network of staff all over Bangladesh. The MIS department of DGHS has strong infrastructure and software systems for recording and generating reports from the health data. The DGHS provides ICT training to its staff and provides hardware devices such as laptops and tablet PC for data entry and monitoring.</p> <p>Around 60 telemedicine centres piloted to provide remote medical diagnostics via video services to rural populations. Each Upazila health complex is now provided with mobile phone so that people can reach the service of emergency medical advice.</p>	<ul style="list-style-type: none"> ▪ Generate birth and death notifications for the Local Government as most of the events occur at their facility or they stay very close to the community ▪ Provide training for generating notification
Skilled workforce for the troubleshooting of the ICT equipment in the registration offices	Most of the registration offices (except few in the remote/coastal areas) are now able to fix the ICT equipment in the Upazila level. Government has recently created a post and employed an 'Upazila technician' under the 'Info Sarker' project. An assistant programmer is working in Upazila and District level under 'BanglaGovNet' Project ^{54,55} . They basically look after the smooth operation of the ICT equipment, connectivity and digital service delivery.	<ul style="list-style-type: none"> ▪ They stay close to registration office and can help troubleshooting the ICT software application and equipment. They can also help to train the community health workers.

Table 26. Capabilities of existing CRVS actors

⁵³ Meet the Press: Speech of Honorable State Minister, 12 Jan 2016 (www.ictd.gov.bd)

⁵⁴ Interview with BDRP Officials

⁵⁵ Website of ICT Division: www.ictd.gov.bd

Current readiness of Bangladesh to install and operate a Robust CRVS system

Governmental service network: Bangladesh has a strong administrative and service network up to the grass-roots level. There are more than 75,000 health & family planning workers and over 13,500 community clinics equipped with ICT. The organizational maturity is in an uprising trend after reintroduction of Upazila Parishad and delegation of more planning and implementation activities to the local government institutes.

Collaboration among multi-level stakeholders: Collaboration among the government agencies, development partners, NGOs and private sector is experienced and visible that can add collaborative strength to add more value in to the system. Participation of non-government sectors can put additional value in strengthening CRVS in the future also.

Strength of private sector: private sector is regarded as the engine of growth of Bangladesh economy, especially for its contribution in the manufacturing, expatriates' remittance, service industries and even agriculture. Some of the industries including RMG, pharmaceuticals, banking, ICT are predominantly managed under private sector and gathers enough organizational and financial strength to partnering in the governmental initiatives.

Current technical capacity and attitude of citizens towards digital technologies

Government of Bangladesh has already given priority in E-Governance, E-Learning, E-Commerce and E-Citizen service, the National e-Service System (NESS) is a web service platform featuring initially 400+ e-Services and capability to integrate new e-Services from any service delivery organization of the government. The e-Forms are an engine that enables conversion of paper-based forms to online forms. Since many government services are initiated through a citizen's application using a form, e-Forms allow integration of many services into the NESS platform. The National ID Card Project under Election Commission has more than 100 million records comprising photo and finger-prints. Citizens also appreciate the use of digital technologies. Mobile banking, online shopping, electricity & gas bill payment by using technology. Thus, in terms of capacity, Bangladesh is much prepared to host a digital technology for strengthening CRVS.

What capabilities do other potential CRVS actors have?

Actor	Opportunity
Family Welfare Assistant (FWA)	
<p>FWAs are community based outreach workers responsible for disseminating information on family planning to expectant mothers and the wider community; collecting demographic data during household visits e.g. name, age, address, marital status, religion, weight; providing ante-natal care to expectant mothers. In 2011, the number of FWA was 23500, the number of Family Planning officers</p>	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate tools, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas. ▪ Inform parents of official registration process and the importance of registration.

was 508 and the number of Family Welfare Visitors is 5710 ⁵⁶ .	
Community Health Care Provider (CHCP)	
CHCPs are based at the community clinic and responsible for providing primary health care services to the community. They are also responsible for delivery of immunization services. The EPI programme is the most successful health programme in Bangladesh. The Ministry of Health has provided each CHCP with a tablet/laptop to record health records.	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate tools, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas. ▪ Inform parents of official registration process and the importance of registration.
Health Assistants/EPI Workers	
<p>Health Assistants (HA) are field workers located at community tasked with disseminating key health messaging to the population e.g. information on diseases, hygiene, epidemics, vaccinations etc. In 2011 number of health assistant was 19279⁵⁷.</p> <p>HAs are responsible for delivery of the Expanded Programme on Immunisation (EPI) at community which provides all required vaccines to the children through 120,000 outreach centres. Vaccination in Urban areas mainly operated through non-government partnership. In rural areas these resources are supported by the Ministry of Health. In urban areas these are supported by Local Government.</p>	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas. ▪ Inform parents of official registration process and the importance of registration.
Birth Attendants	
Birth attendants are responsible for delivering babies at home within the community. In 2011, WHO reported that 71% of all births occurred at home ⁵⁸ and also from household survey findings, 71.26% of total children were born at home, which is almost similar to WHO report. According to BNC, the number of trained birth attendance was 6500 ⁵⁹ in 2011.	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate tools, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas. ▪ Inform parents of official registration process and the importance of registration.
Health Facility Staff	
Health facility staffs are actually responsible for giving health care in health institutes like hospitals, clinic and Upazila health complex. According to BMDC, the number of registered physicians was 58,977 and estimated number of doctors available in the country was 43,537 ⁶⁰ , the number of registered nurse was 30,418 and the number of existing nurse in public sector was 15709 ⁶¹ in 2011. According to DGHS, the population per physician (Current	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate tools, these individuals could become a primary source of birth notification and/or registration data for births that occur in a health facility ▪ Inform parents of official registration process when offering antenatal care, encourage prompt registration of newborns, and educate them on the importance of registration.

⁵⁶Health Bulletin 2012

⁵⁷Health Bulletin 2012

⁵⁸WHO DHS 2011

⁵⁹Health Bulletin 2012

⁶⁰Health Bulletin 2012

⁶¹Health Bulletin 2012

population per available registered physician) was 2586 ⁶² in 2011.	
Primary School Head Teacher/Staff	
Primary school head-teachers or senior teachers are well-known in the local community, respected and they have generally very strong influence over the community people.	<ul style="list-style-type: none"> ▪ Primary school teachers can create awareness about importance of birth registration, can inform parents about official registration process and can encourage prompt registration of newborns.
Religious Leaders	
Religious leaders have strong relationships with community people, and religious places are the regular meeting place for community people. People usually trust religious leaders and believe what they say. <i>Imam</i> in Masjid and <i>Purohit</i> in Mandir can take initiative to spread the necessity of birth/death registration in the locality.	<ul style="list-style-type: none"> ▪ Inform parents about the official registration process, encourage prompt registration of newborns, and educate them on the importance of registration. It came out from FGD that many people come to the mosque on Friday for "Jummah" prayer, so it would be effective if Imam speaks about the importance of birth/death registration to create awareness.
Village Police	
Village police is located at each community, known in the areas and can be a potential actor who is trusted to everyone in villages. He is a part of the community and could perform a great role for creating awareness among people and also can be an effective notifying agent.	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate tools, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas. ▪ Inform parents of official registration process and the importance of registration.
BBS Staff	
<p>Bangladesh Bureau of statistics has 4-tiered administrative structure which includes Head office, Division, District and Upazila level offices. In district level offices, the sanctioned staff size is 13 and in the Upazila level there are 5 posts including a first class officer.</p> <p>More than 82,000 personnel were involved in the latest economic census conducted by BBS. Among them 86 officers worked in the District level, 2150 officers worked in Zonal level, 12046 were supervisors and around 68000 personnel collected the data in the field.</p>	<ul style="list-style-type: none"> ▪ BBS staff may be engaged in the field level to cross-check vital event data for validation and to check against possible anomalies in the field level vital event data.
Mobile Banking Agent	
At present there are more than a half million mobile banking agents all over Bangladesh who make mobile financial transactions. People frequently visit them and they are trusted to the community people and, competent in using smart phones as well as using basic phone applications.	<ul style="list-style-type: none"> ▪ If trained effectively and equipped with the appropriate tools, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas.
Community NGO actors	
There are many NGOs working at community level like – BRAC, ASA, IPSA, Light House etc. in Bangladesh who are present all over Bangladesh and carrying out several activities in socio economic development related activities, e.g. health, education, micro-credit, agriculture, entrepreneurship development, etc.	<ul style="list-style-type: none"> ▪ Local NGOs are potential actor for birth & death registration ▪ If trained effectively and equipped with the right tools, these individuals could become a primary source of birth notification and/or registration data, especially in rural areas.
Telecom Partners	

⁶²Health Bulletin 2012

At present there are six mobile network operators who have country-wide network and can reach 97% of the population.	<ul style="list-style-type: none"> ▪ Deliver vital event notification to BRIS ▪ Convey notifications to the applicants ▪ Provide SMS/USSD based functionality and services which will help the birth registration process ▪ Improve the internet speed in rural areas.
Software Company	
Bangladesh has made good progress in software industry. There are wide variation among different software development company or IT farms. It has the capacity to design and implement technology solutions& its maintenance as well.	<ul style="list-style-type: none"> ▪ Be engaged in the development of customized systems/applications that support/integrate with online birth registration system.
Supporting hardware and electronic shop	
Almost all types of IT based hardware shops are available in Bangladesh and the import duty on computers is 0%.	<ul style="list-style-type: none"> ▪ Efficient and good quality IT product is needed for integrating new solution. It can be purchased locally.

Table 27. Capabilities of potential CRVS actors

System Integration Opportunities

By integrating systems, authorities can benefit from enhanced capabilities by sharing data and communicating with one another. In the case of CRVS this means:

- Improved data collection from a variety of sources.
- Increased access to vital statistics data for policy and planning activities.
- Shared access to civil registration records for authorised authorities.

The following is a list of systems that each gather and store data but which are currently operating in isolation, providing an opportunity to integrate them with CRVS systems.

NID System (or Identification System for Enhancing Access to Services (IDEA))

The project was undertaken by the Bangladesh Election Commission in collaboration with the Bangladesh Army in 2008. It was mainly to register the voters of Bangladesh and provide the citizens with voter identity cards to check against fake votes in the election. Photographs and finger-prints were collected for the first time in Bangladesh and it has evolved as one of the most trusted identification systems in Bangladesh. Though it was introduced as voter ID card, it has been widely used for national identification purpose and it is used for opening bank accounts, purchasing telecom SIM cards, land purchase and sell, obtaining driving license and other numerous purposes as well. The project has been extended and initiatives have been taken to use the national ID card to access services provided by the government. The new name of the project is Identification System for Enhancing Access to Services (IDEA).

The NID project has its system installed in Bangladesh Computer Council (BCC) and the data recovery server is installed in the project head office. The system is connected with 10 regional offices and more than 500 local election offices in Upazila/Thana level. The NID system contains around 100 million records and about 22 organizations are integrated with this system for ID verification purpose. The birth registration system should be integrated with the NID system because it would create opportunity to link first legal records of a child’s existence (birth certificate) with later identification documents. Beside this, including parent’s NID will provide a continuous and permanent record of a person’s existence.

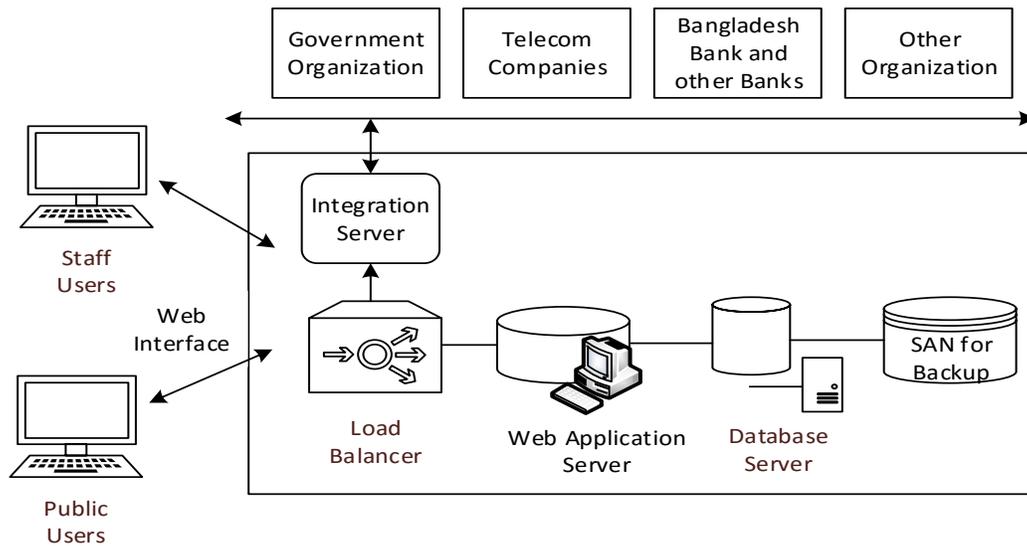


Figure 13. Schematic diagram of IDEA System (NID Project)

Machine Readable Passport (MRP) System

The conceptual view of the MRP system is given below to show the relation among BRIS and NID system. These systems need to verify the identity of the applicants. The passport application accepts both the NID number and Birth Registration number.

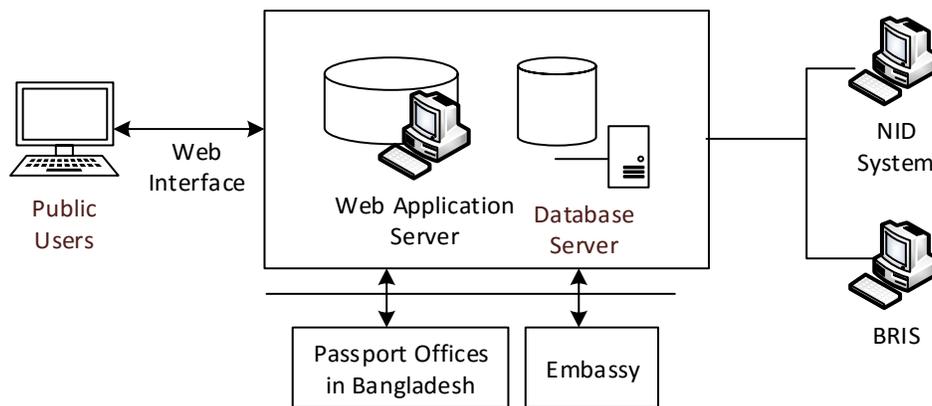


Figure 14. A conceptual view of the MRP IT infrastructure

BRTA (Bangladesh Road Transport Authority) Information System

BRTA is a regulatory body to control, manage and ensure discipline in the road transport sector and road safety related areas in Bangladesh. As per revised organogram total number of circles is 62 (57 District Circle+5 Metro Circle). At present 57 circles are working where 61 AD (Engg.) is posted as head of the office. Rest of the sanctioned circles are administered from near by circles (57 circles). The conceptual view of the BRTA information system are given below to show the relation among NID and BRTA

system. BRTA only accepts copy of NID card as a proof of identity. Later on, they verify the information from the NID.

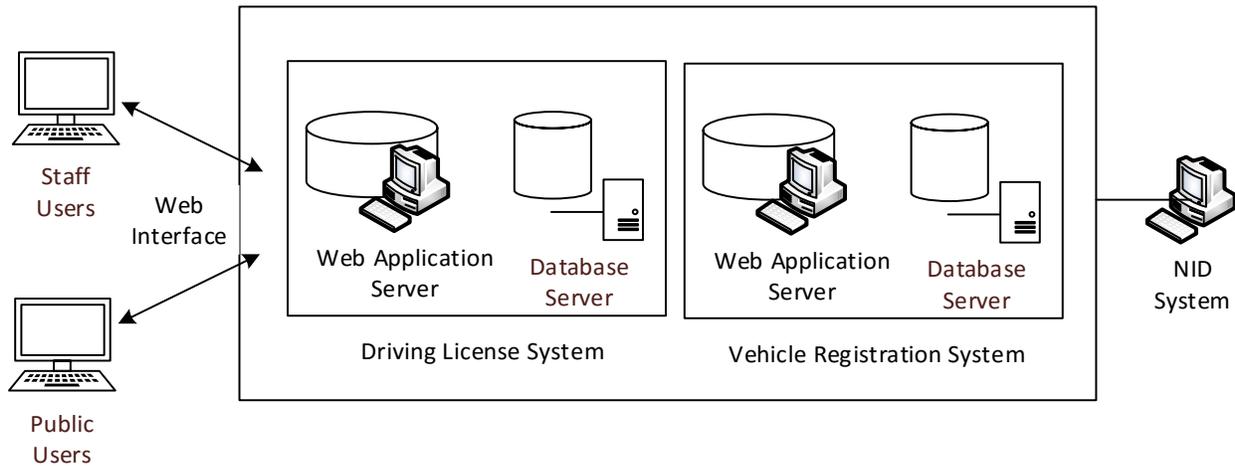


Figure 15. A conceptual view of the BRTA IT infrastructure

Health Service IT Infrastructure: There is also a standalone IT infrastructure in the health sector established by the MIS wing of Directorate General of Health Services (DGHS). A DHIS-2 server has been installed in the DGHS data center and government health facilities all over Bangladesh can access the server through PC, laptop, and Tabs via cellular networks' Internet connectivity. The District Health Information System (DHIS, version 2) is a web based system to collect routine health data from the government health facilities of Bangladesh. The DHIS-2 is a software tool for collection, validation, analysis and presentation of aggregate statistical data, tailored (but not limited) to integrated health information management activities. On the other hand, at present five hospitals are now equipped with OpenMRS which is a hospital management software system integrated with DHIS-2. Health system can be a great source of birth notification. The proposed solution allows them to provide notification data directly to BRIS as a source.

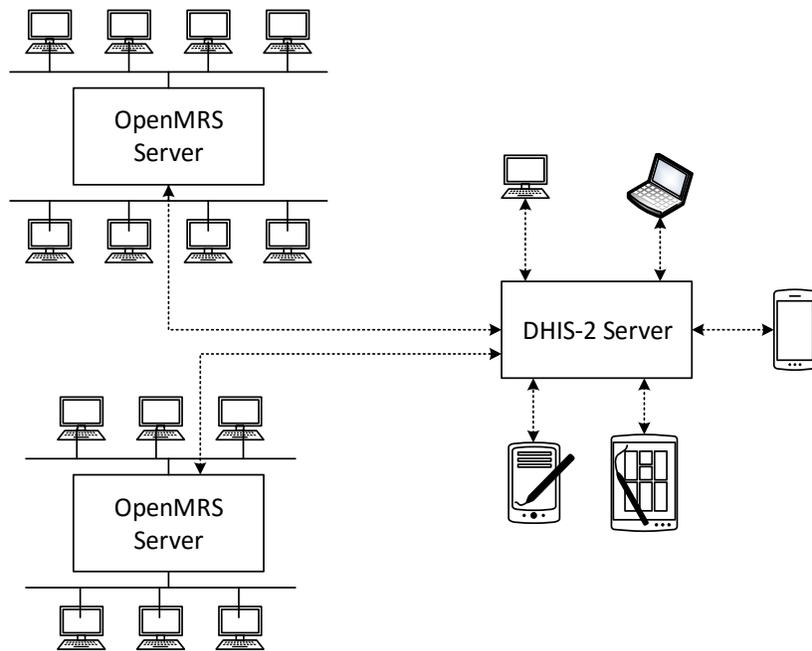


Figure 16. A conceptual view of the Health IT infrastructure

Legal Assessment of Digitisation

What is the legislative and policy landscape regarding digital solutions for CRVS (e.g. web-based and mobile phone applications)?

- The existing online birth and death registration system, BRIS was implemented under the Birth and Death Registration Act – 2004.
- The Bangladesh Government had policy to cover 100% online birth registration by December 2013.
- More than 95% of the registration centers for birth and death registration are connected to the central BRIS over Internet⁶³.
- Before October 2010, birth and death registration system was manual but currently all newborn babies are being registered through online.
- The procedures for marriage and divorce registration are still manual.
- All immigration and migration procedures under the Department of immigration and passport are done electronically following the Passport Act – 1920.
- The data of NID cards were collected under the National Identity Registration Act 2010, which includes collection of photo, finger-prints, iris, facial recognition, DNA and signature. NID wing is now on the way to collect civil registration data of 15 and above age's citizen even for all the people, through from Supreme Court and central government bodies, few grievance found in the favor of not providing such authority.

What are the current gaps in legislation and policies?

⁶³ Interview with BRIS official

There are some gaps in legislation and policies, which prevent registering the birth and other vital events of the citizen in due time frame, which are –

- By the Birth and Death Act – 2004, a newborn baby should be registered within 45 days of birth, however, in Birth and Death Registration Rule – 2006, no additional fee or fine is imposed till two years of age. Thus parents do not feel the necessity to register their children within 45 days of birth.
- It is mandatory to register birth and death within 45 days after the event but there are no rules or provision what will happen if a citizen fail to register birth and death within 45 days.
- By Birth and Death registration act 2004, one citizen can register birth against place of birth or permanent address. But there is no provision to identify if the same citizen registers in multiple locations.
- In the existing law, nothing is mentioned about sharing of information among the stakeholders of CRVS. Even no restrictions are imposed against sharing information within government and other service delivery agents.
- Only BBS has the legal authority to declare vital statistic in Bangladesh, which is also practiced for most of the statistical references data. Total 2012 no's comprising 120 households from representative Primary Sample Units are identified to collect real time civil registration data⁶⁴.
- There is no legal basis for Adoption in Bangladesh, however few practices found in the society through mutual understanding, sometimes maintaining black & white agreement.

What data protection, privacy and confidentiality legislation exist?

The ICT Act 2006 ensures the protection, privacy and confidentiality of information. The following clauses are some important parts of the law. No legal reform is required to safeguard private data and ensure confidentiality of collected data.

- [Clause 63] If a person, who has secured access to any electronic record or information, discloses such information to any other person without the consent of the person concerned, shall be regarded as an offence. That person shall be punishable with imprisonment for a term, which may extend to two years, or with fine, which may extend to Taka two lakhs, or with both.
- [Clause 22] This law has enough provisions for providing legal recognition and security of information, and it describe the power of Government to make rules in respect of digital signatures.
- [Clause 18 and 19] It describes the roles of certifying authorities Controller and other officers and their functions. Under this act, the Government established Controller of the Certifying Authority (CCA) in ICT Division.
- [Chapter VIII, Part I] There are provisions for penalty for IT related offences such as damage to computer system, hacking with computer system, for publishing fake, obscene or defaming information in electronic form, and for disclosure of confidentiality and privacy.

Apart from ICT Act 2006, there are few more initiatives found by the different ministries and bodies with an object to ensure data protection, privacy and confidentiality, those are:

⁶⁴ Interview with BBS

- NATIONAL TELECOMMUNICATIONS POLICY 1998 [3.14 Defense and Security], Defense and security interests of the country are to be protected.
- ICT Division has now recently prioritizing more on the security and protection of digital data, they had recently introduced the Information Security Policy Guideline (Bengali and English version) and Cyber Security Strategy to meet challenges of digital information security. In very recent days, 80 million USD have been stolen from Bangladesh Bank reserve fund brought these issues as a vulnerable one which needs high-level of priority.
- Secretariat Instructions 2014 [Chapter Three, Section 9], recommended to use Digital Signature for maintaining security and confidentiality of data transmitting from the field level to the national level in order to protect against cyber-crime activities like electronic fraud, damages or illegal uses of ICT etc.

Process & Technology Options

A number of process and technology options have been identified based on the opportunities identified above.

	PROs	CONs
Capture of Vital Event Information Options		
<p><i>Basic notification for follow-up:</i> Using a basic phone, Parent enters basic notification details and sends via SMS/USSD to Registrar Office.</p>	<ul style="list-style-type: none"> Ability to monitor event notification vs. registration applications and respond appropriately. Increases accountability of Registrar Office. Provides information with which to follow up with individuals directly if they do not register the vital event. 	<ul style="list-style-type: none"> Requires communications efforts to encourage action. Literacy dependent. Device dependent. Additional effort required – additional step in process. Health actors already capture this information. Requires motivation of parents to engage in process
<p><i>Manual process for follow-up:</i> Local Government Actor fills in form for Parent/Caregiver, gets signature of parent, and takes to Registrar Office for processing.</p>	<ul style="list-style-type: none"> Reduces direct and indirect costs of travelling to Registrar Office. Leverage existing community relationships and knowledge of expectant mothers. 	<ul style="list-style-type: none"> Increased chances of fraud / false applications. Additional effort required by actors – need to maintain and incentivise. Creation of new process for few births. Manual-paper based process
<p><i>Full declaration for validation:</i> Local Government Actor captures vital event information in a standalone registration application and sends information to BRIS for validation by Registrar Office.</p>	<ul style="list-style-type: none"> Actors mandated in law to notify vital events. Local Government officially responsible for birth and death registration. Strong relationships with families within communities. 	<ul style="list-style-type: none"> New application required to be developed. Health processes already gather birth information.
<p><i>Full declaration for validation:</i> Community Health Worker captures vital event information through existing health and shares with BRIS system via interoperability and data exchange layer for validation by Registrar Office.</p>	<ul style="list-style-type: none"> Extensive coverage e.g. 86% vaccination rates Reduce duplication of effort Leverage existing relationships with mothers Opportunity to combine health and registration messaging Creation of demand through health channels Creates monitoring mechanism Health actors already mandated to gather birth and death data Link registration with other services e.g. vaccinations. Increased registration of vital event information within 45 days 	<ul style="list-style-type: none"> Additional workload Need to motivate health workers CHWs not always local resource so do not always have existing relationships with Mothers
<p><i>Digital notification for follow-up:</i> Informant completes registration form in web-based application and submits to Registrar Office for completion</p>	<ul style="list-style-type: none"> All paper work complete in advance of processing. Instructions of how to complete application provided Online payment option provided 	<ul style="list-style-type: none"> Still requires travel to the Registrar Office with associated direct and indirect costs.

of process on provision of supporting documents	<ul style="list-style-type: none"> Reduces duplication of effort required at the UP. 	
Validation & Storage Options		
<p><i>Notification follow-up:</i> Informant travels to Registrar Office with supporting documents and Registrar completes form in BRIS and prints certificate.</p>	<ul style="list-style-type: none"> Authentication of Informant in person. Can collect certificate on first visit (if service is provided) 	<ul style="list-style-type: none"> Still requires travel to the Registrar Office with associated direct and indirect costs. Potential for corruption and bribery. Need to bring relevant supporting documents. Multiple visits possible.
<p><i>Digital validation and SMS confirmation:</i> Registrar views applications in queue in BRIS & validates information. If information is queried, Registrar calls given contact number to query information. Once validated, SMS is generated by central system to inform Parent/Caregiver of birth registration status, ID and certificate collection instructions.</p>	<ul style="list-style-type: none"> No need to travel for registration No supporting documents required Collection instructions sent by SMS Increased registration of vital event within 45 days 	<ul style="list-style-type: none"> Proof of application (with signature) not available at local government, stored with health department
Certification Options		
<p><i>Certification on Demand:</i> Informant collects certificate from Registrar Office or UDC.</p>	<ul style="list-style-type: none"> Reduces unnecessary printing and wasted costs People can collect a certificate when they need to Certificates often damaged in natural disasters; reduce need for re-issuance efforts for those who do not yet need the certificate 	<ul style="list-style-type: none"> Often not collected
<p><i>Certification Delivery:</i> Registrar Office prints and signs certificate and dispatches to Informant/defined pick-up location for collection.</p>	<ul style="list-style-type: none"> Reduces direct and indirect costs of travelling to Registrar Office. Reduces burden on offices by reducing certificate requests 	<ul style="list-style-type: none"> Resource intensive (money, people, time) Certificates often get damaged when not used or before use (incl. natural disasters) Potential for wrongful delivery
<p><i>Certification copy available online on request:</i> Informant can access their certificate via online web-based application using appropriate authentication and digital signature.</p>	<ul style="list-style-type: none"> Easier for Informant Reduces effort in collecting certificate Reduces burden on offices by reducing certificate requests 	<ul style="list-style-type: none"> Security concerns, potential for fraud Reduces revenue for local government

Figure 17. Process and technology options

Future State Technology Architecture

The Future State Technology Architecture is a view of what the CRVS technology architecture could look like in the future. Delivery of each of the components of the architecture will take different periods of time to implement. The architecture's key features are detailed below, aligning with the numbers identifying each component in the diagram above. Each of these key features responds directly to findings from the as-is and technical feasibility analyses. This architecture provides a future state view that recognises birth registration within the context of an architecture for CRVS as a whole in Bangladesh.

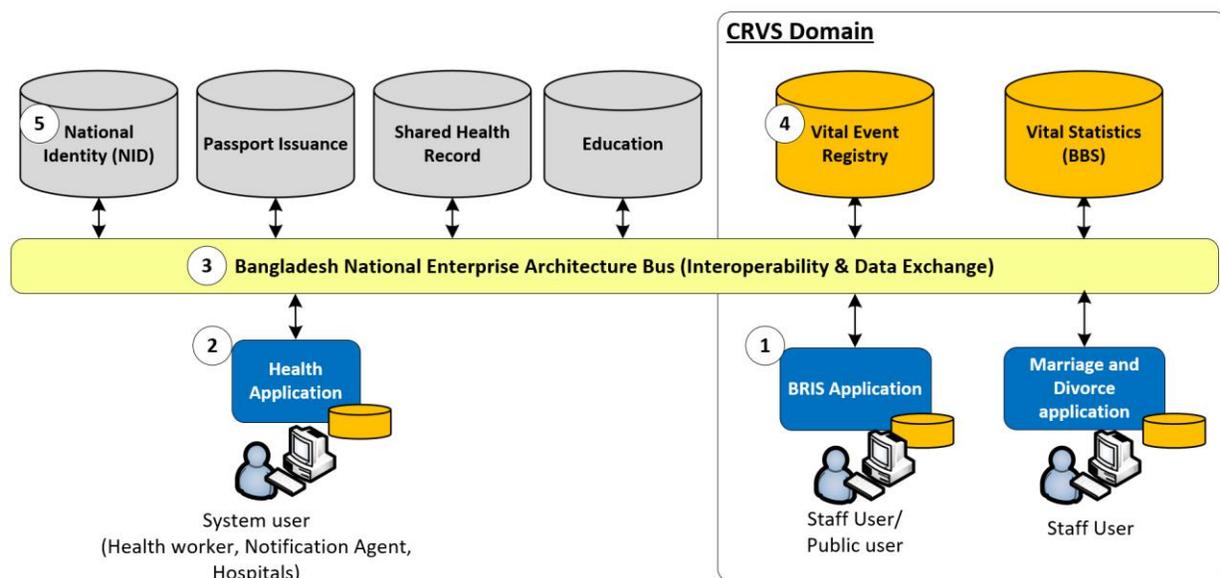


Figure 18. Future state system architecture

1. BRIS Application

The BRIS application is comprised of 4 main components:

1. Public user web-based application
2. Staff user web-based application
3. Applicant feedback messaging
4. CRVS web-based reporting dashboard

Public User Web-Based Application

This web-based application is available to public users on all devices e.g. desktop pc, laptop, smartphone, tablet and works in both online and offline modes. When accessed on a mobile device, the application is responsive to the smaller screen.

The Applicant fills in all necessary fields for birth/death registration as per the registration form and client-side validation prevents the submission of erroneous data. Drop down lists are used for defined fields to reduce the need for manual input of information e.g. Date of Birth field. Additional fields

included in the form will be (i) local registration office (drop-down lists having the hierarchy of administrative geography distribution as a part of validation) and (ii) phone number of the applicant. When the applicant submits the form, the application is sent to the central system through available Internet connection. When the application is received, an SMS is generated by the central BRIS system and sent back to the applicant (i) confirming receipt of application, (ii) details of how to complete the registration i.e. visit registration office with supporting documents, (iii) address of registration office and (iv) a time period in which to visit (time period will be provided as default e.g. 9-11am, each registration office will be able to change available service times via the system).

When the Applicant visits the registration office, the Registrar will search for the record using a range of fields including notification number. The Registrar will confirm details along with supporting documents and validate the record, saving it to the central system for storage. The Registrar will print the certificate onsite directly from the application.

Staff User Web-Based Application

Registration staffs access the BRIS application using given credentials. The system has different user profiles for different types of users ensuring that civil records can only be created, changed and printed by defined user profiles. System administrators are not allowed to access existing records directly.

Once a vital event notification is received from different sources e.g. health application within their jurisdiction, the applications appear in a queue for validation and submission. Upon completion of validation of the application, the status of the record will be updated in the BRIS database as “complete”.

If any Applicant comes to the registration office physically to submit their application, the Registrar is able to create a new record and print the certificate onsite.

All Registration offices will be equipped with fixed line Internet, if unavailable, the office will be provided with mobile Internet access via a dongle. Appropriate computers, printing facilities and back-up power sources will also be provided to all registration offices to ensure continuity of service delivery.

Applicant feedback messaging:

A contact number (e.g. a mobile phone number) of the informant is captured during the vital event notification generation. That contact number (if it is available and the informant wants to provide) will be used to communicate with the informant later on. As the vital event notification is processed and validated, the informant is sent an SMS message containing the details of the processing status. This message contains the registration ID number along with a brief status summary (e.g. application received, application validated, vital event registered, ID: 12345678). In case of incomplete information in the notification or pending issues found in the verification process, the registration office will send SMS to the informant to visit registration office with further information/supporting documents.

CRVS web-based reporting dashboard (2 main functions):

It provides monitoring and reporting functionality for Local Government offices so that Division, District and Upazila level officials are able to check the number of vital events registered across their

jurisdiction. This allows government officials to monitor the performance of Union Parishad and Paurashava and to identify those areas that may require additional support to achieve the registration targets. This provides an opportunity to ensure accountability by cross-checking the number of actual births and number of registrations completed in a registration area.

It provides the facility to create reports on relevant vital statistics disaggregated by defined fields. The data which are needed for vital statistics, are extracted from the vital events and will be stored separately in a statistical repository. This secure dashboard can be made accessible, through login credentials, to relevant stakeholders e.g. Local Government, Health, Planning and Development and Statistics Departments.

2. Health Application

This existing health application e.g. DHIS-2, already used to gather birth and death registration information, will be updated to include all required birth/death registration form fields in the appropriate data collection forms. If the application already captures all mandatory fields required for birth/death registration, no additional effort is required from the Agent who already captures this data for health purposes.

The application is accessible on desktop and mobile devices so is be used by both health facility staff to register facility births, and Community Notification Agents in the field to notify home births on a mobile device (smartphone/tablet). The notification agent logs into the application using their authentication details. When the notification agent completes the form, client-side validation prevents the submission of erroneous data. Drop down lists are available for defined fields to reduce the need for manual input of information. Additional fields included in the form are, (i) local registration office and (ii) phone number of the applicant. The application is available in both online and offline modes, transferring encrypted data via secure protocols to the central health database. When the notification is submitted, the record will include a geocode based unit number, which acts as a unique identifier for the record.

Notification information will be shared between the central health system and BRIS via the Enterprise Architecture Bus using a standard vital event form that complies with Bus standards. On receipt of the notification, the BRIS system will make the notification available at the local registration office for validation and final submission. When the application is received by the central system 1. The application will receive a notification that the application has been received and 2. An SMS is generated by the central BRIS system and sent to the applicant (i) confirming status of application, (ii) details of how to complete the process, (iii) *if validated* Birth Registration Number.

The notification agent will be able to query the system to find out the status of open applications.

3. Bangladesh National Enterprise Architecture Bus

A single middleware application facilitating communication between different Point of Service (PoS) applications e.g. BRIS, health application, and centralized registries and shared record services e.g. shared health records, vital event registry, using standards-based messaging to send and receive data. This interoperability and exchange layer will facilitate the sharing and querying of health information with the vital event registry, as well as other transactions such as validation of birth applications with the national id system and validation of passport applications with vital event records.

4. Vital Event Registry

One central registry that holds all vital event records: birth, death, marriage and divorce. Via the BNEA Bus this registry can be accessed by different systems for different purposes.

5. Validation with National ID System

When the BRIS System receives a vital event notification, it further validates this information. Server side validation (a verification of submitted data against information that is only held centrally), checks the validity of the NID number of the informant within the NID system via the BNEA Bus. Further validation logic checks existing records to ensure that the notification being received is not a duplicate. This helps maintain the integrity and quality of registration records.

Improvements to existing BRIS system

The following improvements need to be incorporated in the existing BRIS system. These recommendations are based on an analysis of the existing system and interviews with CRVS stakeholders.

- Database design to be assessed and revised.
- Alternative robust database engine to be used.
- As mobile devices are more available than computers in Bangladesh, a mobile version of the application should be developed and/or the existing website to be a responsive website.
- Change in logic in application level along with upgraded database design.
- Implement challenge-response test function to avoid unwanted users.
- Define individual user profiles
- Improve system ability to identify duplicates by increasing match criteria.
- Improve consistency of data fields by creating drop-down lists and improving client side validation.
- Drop-down address list can be included to help maintain the consistency of addresses and prevent applications for new certificates.
- System should be able to calculate fee based on inputs.
- Online payment option for fee payment can be included and receipt of payment can be generated by system.
- Improve search capability to include additional search fields e.g. DoB, address, parent's NID.
- Create dynamic drop-down lists to support improved search.
- Improve reporting capability to include additional reports for both operational and vital statistics monitoring.

Future State Process Flow

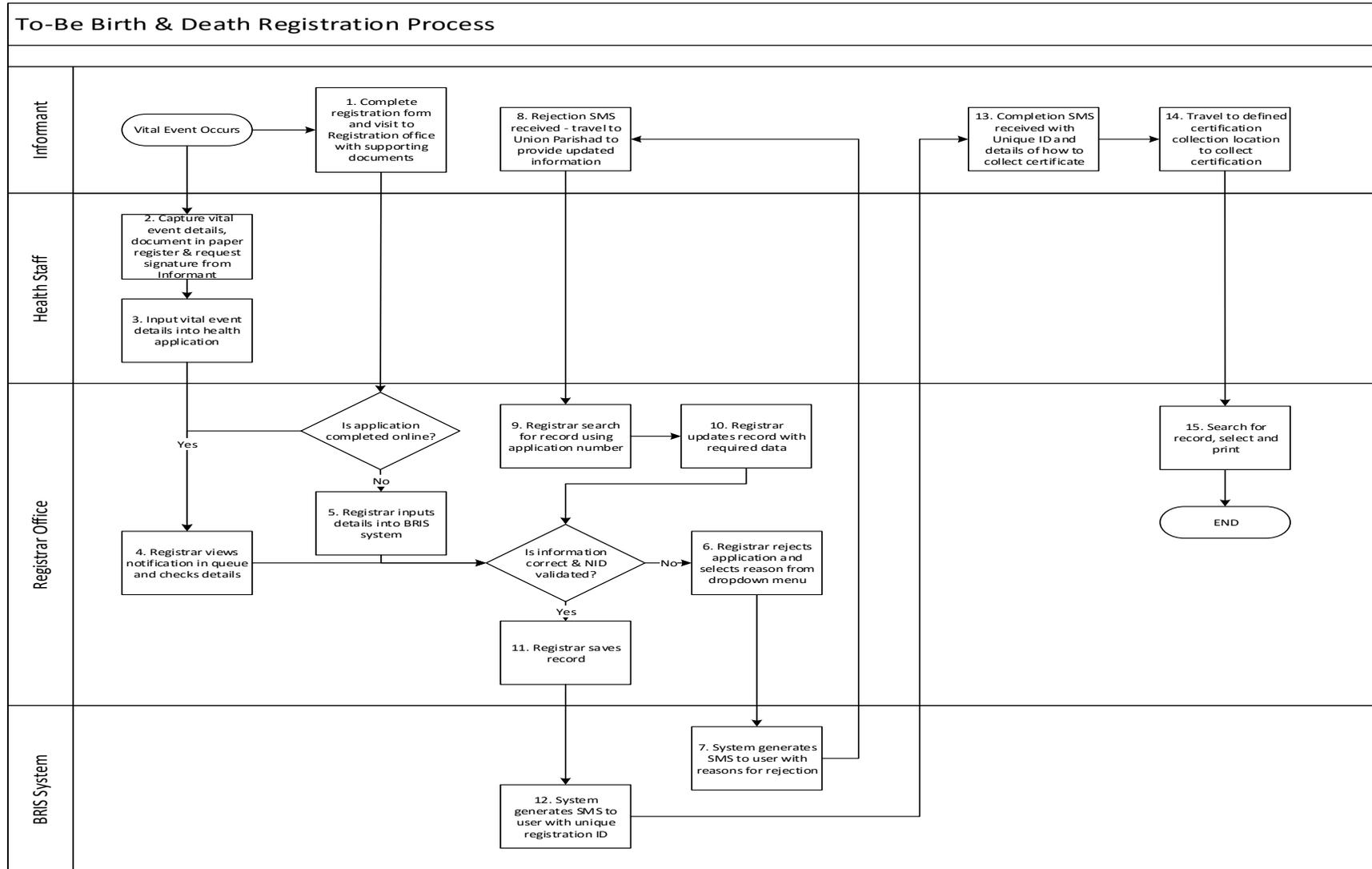


Figure 19. Future state process flow

Birth Registration Process

Step	Process
1	There are two options for completing registration form: (i) an informant can fill in a form through BRIS website, and the online system provides a reference number after completion of the form through SMS; (ii) an informant can fill out a printed prescribed form after collecting it from the registration office. The registration office verifies the supporting documents after receiving a completed form.
2	A community health worker notes the vital event information including some additional information such as NIDs of the parents and name of the registration office. Then he/she collects signature of the guardian in the paper based register.
3	The health worker then enters the information into the shared health record system via a health application provided by the DGHS. A notification is sent to BRIS from the shared health record system containing the vital event information required for registration.
4	A notification pops up on the dashboard of that particular registration office mentioned in the health application form and the registration office checks the information given in the form.
5	When an informant submit manual form, registration office enters the information of the printed form into the system.
6	Registration office select dropdown menu from the online system to reject the application due to incorrect information like, "Invalid NID number" and rejects that application. Rejected application do not deletes from the system, it actually stayed with a pending status.
7	Applicant receives system generating messages, like- "Your birth registration application has been rejected due to invalid NID number. Please, visit the registration office within 1 week by 9am-5pm." The SMS pattern can be set by the registration office staff, they can be able to change the reason for rejection, date and time as their own.
8	Applicant travels to registrar office with application number and proper supporting document for correction of information.
9	Registration office staff searches the pending application record using the application number.
10	Registration office staff updates the information into the system.
11	Registration office staff saves the record in the system.
12	System generates automated message with unique registration ID and sent to the applicant.
13	Applicant receives message about successful registration with unique registration ID.
14	Applicant needs to visit any government e-service provider's office to print the certificate, e.g. any Union Parishad, City Corporation, Municipality, UDC or any certificate collection point authorized by Local Government Division.
15	The staff searches the records with the registration ID which was sent to the applicants through SMS, and prints the certificate and gives it to the applicant.

Figure 20. Birth registration to be process

Death Registration Process

The death registration process follows the same flow as described above. Supporting documentation for the registration of birth is listed below:

- Attestation from a Government or private health worker, or
- Certificate from hospital or medical doctor about the death, or
- Attested copy of the post-mortem report of the deceased person, or
- Attested receipt from the caretaker of graveyard or crematorium, or
- Attested copy of death certificate from member of the Union/Municipal Councilor or Councilor of the City Corporation, or
- Attested copy(s) of other document as prescribed by the Registrar.

The proposed solution which help to overcome the following process bottlenecks

Bottleneck	Solution
Copies of supporting documentation often not preserved	The proposed solution directly takes notification from health system by health worker, family planning officer, EPI agent, hospital etc., so notification comes directly from the health sector does not need to show any supporting document.
Online application	The proposed solution will be facilitated with responsive screen. So that, besides computer, it will also work in mobile device or in tablet pc. Also, the propose solution includes mobile application system, which will help people to report and entry birth data even from home.
Selection facility for address entries	The proposed solution's application and web interface contains drop down address menu bar, which helps to find the proper spelling of every specific places which reduce the chance of duplicate entry or certificate correction.
Lack of verification tool for supporting document	The birth/death reporting should be done by the health worker or the hospitals which reduced the need for supporting document. Beside this, as discussed earlier there is an individual validation system in the proposed solution for data verification. So, individual applicant can submit their supporting document in registrar office and registrar office can be able to validate the document with new tool.
Lack of client side validation	The proposed online registration form will contain client side validation tools that will prevent the applicant from entering invalid data, such as date, address, identification number, NID etc.
System response time	The redesign database and application software along with upgraded hardware equipment will make the BRIS server more responsive.
Limited ability to identify duplicates in BRIS	In the proposed solution there is individual validation system for data verification and duplicate checking. So, by checking the NID of the parent's it is possible to prevent the duplicate entry.
Fees for collecting copy of an existing registration	Fees for collecting a copy of the previous certificate will be reduce than creating a new certificate. Certificate will be available in nearest UDC or registrar office. So that, people can have their registration in time because they do not have to preserve it, they can take it anytime they need it.
Absence of signatory	The proposed solution allows to print the certificate any time from any authorized certificate collection center and no signature is needed for registration. So, absence of signatory does not delayed the registration process.
Language of certificate	The certificate contains both English and Bangla version. People can take any of the copy anytime when they need it, by paying required fee. No need to apply further.
Opportunity for duplicate entries	As the future process takes parent's NID in time of registration opportunity for duplicate entries are decreases. Every entry will be checked the parent's NID and the position of the baby within their siblings. So, it reduce the chances of duplicate entry.
Certificate collection point	The proposed solution offers authorized certificate collection point anywhere in Bangladesh. People do not need to go any specific registrar office, rather than they can go any authorized certificate collection point any time of their need.
Inefficiencies in the correction process	The correction process for date of birth will be difficult than past, it will take more supporting document form authorized person and take longer time. So that, people will be conscious of their date of birth at the time of registration.
Cause of death in the death certificate	The proposed solution will have the cause of death option in death registration certificate.

Table 28. How proposed solution help to overcome barriers and bottlenecks

DBR Programme Blueprint

Programme Overview

The key findings from the technical analysis clearly highlight the need for further efforts to increase and improve both the demand for and supply of birth registration services in Bangladesh. The programme outlined in this blueprint responds to these key findings in order to prove a model of birth registration that is scalable and sustainable across the whole country.

The survey conducted as part of this study identified that only 3.7% of birth registrations are done within 45 days (required registration period). As a result, the government do not benefit from accurate data for planning and development purposes, specifically for services required in early childhood, and children do not benefit from the protection or access to services that a birth certificate can provide. Reasons for this low level of birth registration within 45 days include (i) unawareness of the importance of birth registration before a certificate can be used for access to services (registration rates grow significantly between the ages of 5 and 10, by almost 50%); (ii) unawareness of the birth registration process, only 57% of survey respondents could identify a registration location, (iii) distance, associated costs and bureaucracy of registration, almost 40% of respondents had to travel more than once to the registration office to complete the process.

As 80% of births occur at home and not in health facilities in Bangladesh, the birth registration process must be accessible to parents within the community. The DBR programme aims to prove an accessible and innovative model for birth registration that is scalable and sustainable so that all boys and girls in Bangladesh are registered through a rights-based national CRVS system. This integrated programme will:

1. Increase the accessibility and reduce the complexity of the birth registration process, subsequently increasing the number of children registered within 45 days of birth, by using Community Health Workers to register births during existing maternal and newborn child health interactions (MNCH) e.g. vaccinations.
2. Leverage existing information gathered for health purposes to register a birth by integrating health and birth registration systems.
3. Improve the quality of data in the birth registration system so that it can be better used for planning and development purposes.
4. Address the backlog of children who remain unregistered (aged 0-18) by supporting the Local Government Division to design innovative and replicable late registration approaches and conduct drives in all programme areas.
5. Develop SOPs for birth registration in emergency situations (natural disaster), ensuring that these are effectively documented and tested in defined locations.
6. Manage the process and technology changes through the affected institutions to ensure that all individuals recognise the value of the change and the importance of CRVS, and are adequately skilled to provide the services.
7. Increase the demand for registration through an integrated marketing and communications campaign that focuses on behavioural impact.
8. Advocate for legal and policy changes that support the safe use of a digital rights-based registration system.

9. Monitor and evaluate each component of the programme on an ongoing basis to continuously improve the model, building a case for nationwide use at the end of the programme.

Programme Scope

Integrated Programme: Key Strategies

The DBR programme is comprised of five key strategic interventions, which collectively will contribute to an increase in the demand for and improvement in the supply of birth registration services, subsequently increasing birth registration rates across Bangladesh. Plan's extensive experience in birth registration programming demonstrates the importance and interdependency of each of these strategic interventions in order to effectively increase birth registration rates in a scalable and sustainable way. These strategic interventions also define the workstreams under which activities will be delivered in the project (also defined as outputs in the current results framework).



Figure 21. Integrated DBR Programme Model

Process and Technology:

1. **Community Registration through an existing health application:** in order to support community based birth registration through existing maternal health interactions, the

programme will design, build, test and deploy an integration layer between health and civil registration systems.

2. **Enhancement of existing birth registration system (BRIS):** Work with Local Government Division (LGD), Bangladesh Computer Council and partners to enhance BRIS to support integration with health and increase the quality of data within the system.
3. **Late registration:** Work with LGD and partners to develop innovative late registration models that can be used across the country. Support them to use these approaches in programme areas to register all children aged 0-18 who have not been registered within 45 days of birth.
4. **Birth Registration in Emergencies:** Support a2i, the LGD and partners to define appropriate Standard Operating Procedures (SOPs), along with required regulatory changes, for birth registration in emergency situations (natural disaster). These approaches will be tested to prove their effectiveness.

Change Management: Implement a change management programme that responds to the needs of all affected actors, ensuring that they have the skills required to use the new solution effectively and fully understand and accept the change to their day to day roles that the solution results in.

Advocacy: Advocate for legal and policy changes that support rights-based birth registration and the safe and correct use of digital technologies for birth registration.

Behavioural Impact: Create demand for birth registration by affecting a change in the behaviour of parents to make them engage in MNCH services within 45 days of birth so that the child can be registered through these health interactions.

Monitoring and Evaluation: Robust monitoring mechanisms put in place to increase accountability & performance, continuously improve the solution and process, and ultimately document an evidence-based business case that demonstrates the potential for scalability & sustainability.

Programme Strategies

Process & Technology

Community Registration through an existing health application

The majority of births in Bangladesh are delivered at home (71%), with Mothers in the lowest wealth quintile increasing this figure to over 90%⁶⁵. Despite this, the vaccination programme in Bangladesh is one of the Health Department's biggest successes with rates at 95%⁶⁶, indicating that mothers have regular interactions with health professionals after the baby is born. An active cadre of community health workers exist to provide maternal and child services within communities including ante-natal care and vaccinations, providing a clear opportunity to leverage existing MNCH interactions to capture information required for birth registration. Furthermore, the Ministry of Health has provided a tablet/laptop to each Community Health Care Provider across the country to record health records, providing another opportunity to integrate health and civil registration services, facilitating a digital birth registration process that operates in communities within 45 days of birth.

The proposed process and solution provide the opportunity to:

1. Increase registration rates within 45 days of birth by leveraging existing MNCH interactions that occur within this period.
2. Increase accessibility of birth registration services by offering the service in communities and with agents who parents/guardians are familiar with and trust.
3. Remove duplication of effort by utilising data already gathered for health purposes through an existing health application on devices that community health workers already use.
4. Simplify the registration process and remove costs for parents/guardians by removing the need for multiple trips to the Union Parishad to complete the registration process by facilitating an end-to-end digital process.
5. Make collecting the certificate easier by providing a unique registration ID by SMS that can be used to collect the certificate as and when required at a number of locations.
6. Reduce the prevalence of duplicate entries in the system by validating the parents' National ID number on submission of the application.
7. Provide the LGD with operational and monitoring data that can support operational improvement measures.
8. Produce vital statistics that are sourced through existing MNCH interactions.

The diagram and description below explain how the integrated DBR and health process will work.

NB. This will be further elaborated during detailed design.

⁶⁵ WHO Maternal & Perinatal Health Profile

http://www.who.int/maternal_child_adolescent/epidemiology/profiles/maternal/bgd.pdf?ua=1

⁶⁶ http://www.searo.who.int/entity/immunization/data/bangladesh_epi_factsheet_2011.pdf

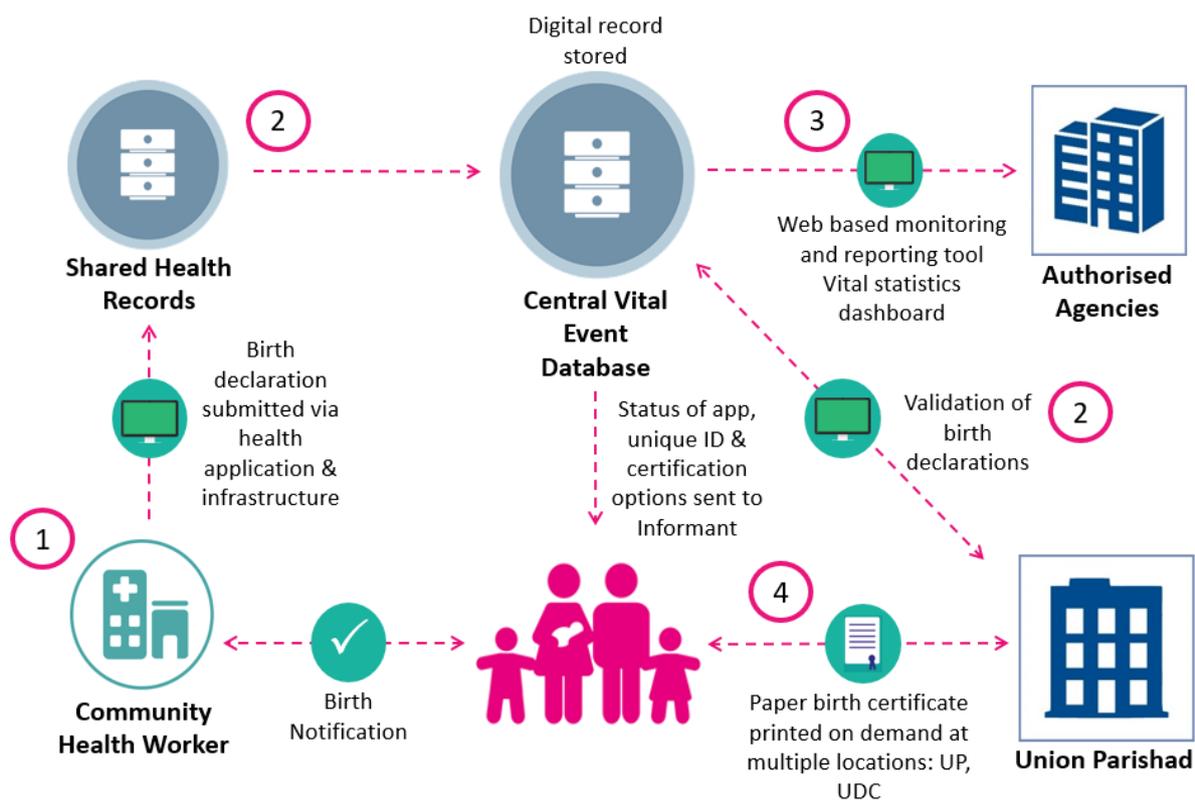


Figure 22. DBR Process

1. Parent/Guardian visits Community Health Worker for an MNCH appointment e.g. vaccination, post-natal care. Community Health Worker uses health application as per normal process and informs Parent of integrated birth registration process.

The Parent/Guardian is able to declare the birth shortly after birth during an appointment for maternal and newborn child health purposes. The Community Health Worker uses the health application to gather standard information related to the service being provided; this will include standard fields requested during the birth registration process including Name of Parents, Name of Child, DoB etc. If the Informant has previously had interactions with the health worker, this information may already be in the system. During the exchange with the health worker, the Informant will be asked to confirm whether they want to register the birth of their child; if they do, a check box will be selected. In order to declare the birth, parents are asked to provide their NID number as proof of identity as NID coverage is high in Bangladesh; this will be validated with the NID system in order to support in identifying duplicate declarations.

For ongoing communication purposes, parents can provide a mobile phone number if they wish to be kept directly informed of the registration status and receive their unique birth registration number via SMS.

Once all required information is inputted into the application, the Informant will be asked to confirm that the information is correct by either reviewing the form on the screen or through confirmation of verbal review. Once complete the Informant will be asked to sign the paper health register as authorisation of the submission and the health care worker will submit the application.

The health application used is an existing health application e.g. WHO OpenSRP that feeds data into the shared health records database. The application will operate on a tablet that uses mobile data connectivity when available. When internet access is not available, data can be input in offline mode and will be synced with the central database as and when connectivity is re-established.

- 2. All data is sent to the shared health records database and required birth registration information is subsequently shared with BRIS. The notification is processed and validated by the Union Parishad, with updates on the status of the application sent to parents/guardians.**

The Union Parishad receives a notification in the BRIS application informing them that a community birth has been declared. The Officer opens the notification, reviews details and either commits the it as “registered” to the central system, or rejects it for further action. If the Informant has provided a mobile phone number for tracking purposes, at this point the registered mobile phone will receive an SMS confirming the status of the application, the Birth ID number (if successful, generated by the National ID system) and instructions on how to collect a certificate or how to resolve the issue. If a phone number was not provided, the community health worker will provide an update on next steps to the parent/guardian during their next interaction, based on a notification that they will receive on the application. The health worker can access the status of all birth registration applications via the MNCH application.

- 3. District authorities have a full view of birth data and registration rates for their jurisdiction and the Local Government Division have a view of operational and performance data for the whole country**

District authorities have online and offline access to aggregate birth registration rates, allowing them to track performance across their jurisdiction, disseminate status reports and address specific issues (e.g. through additional training or communications).

LGD have online and offline access to country-wide data allowing them to track performance across districts, responding appropriately.

- 4. The birth certificate can be collected on-demand at any location where government e-services are provided**

Parents/Guardians collect their certificate as and when they need it, from anywhere that provides e-government services e.g. any Union Parishad, City Corporation, Municipality, Union Digital Centre or any certificate collection point authorized by the LGD. Staff at these locations can search for the record using a number of different fields including Last Name, DoB, Location of Birth, and Birth ID number. Certificate collection locations have computers and printers and access to internet to allow them to search for the record and print the certificate.

Enhancement of existing birth registration system (BRIS):

Digitisation of the birth registration process in Bangladesh through the introduction of the Birth Registration Information System (BRIS) in 2009 has increased birth registration rates considerably. Despite this, based on the analysis conducted in the as-is assessment and the proposed to-be process, there are a number of areas in which the system can be strengthened to support improved service provision.

The DBR programme will work with the LGD, BDRP and Bangladesh Computer Council to support in the design, build and test of BRIS enhancements that will:

- Allow official registration staff to validate birth registration applications received through the health system.
- Provide an SMS feedback function to facilitate communication with parents throughout the registration process.
- Improve system usability and quality of data by improving client-side validation and the use of standardised reference data.
- Improve search capability for existing records.
- Reduce the number of current duplicates through data cleansing and improving the system's ability to identify and reject duplicate applications.
- Provide local and national level government with access to civil registration data in an accessible format to support operational improvements and for planning and development purposes.
- Support performance improvements that will allow the interoperable birth registration solution to maximise usability and reduce system downtime.

After rigorous field testing, the enhanced BRIS application will be rolled out to all registration offices within the programme areas.

Late registration:

Based on the survey conducted as part of the as-is assessment, birth registration rates in early childhood remain very low in Bangladesh, with only 3.79% of births registered within the legally defined timeframe of 45 days. While registration rates do increase as a child's age increases as parents identify more uses for the certificate e.g. enrolment in school, see Figure 1 (right), (i) governments cannot benefit from accurate birth registration data that supports them in effectively planning and providing public services e.g. vaccination programmes and schooling and (ii) children cannot benefit from the rights that are enshrined in a birth certificate until they are registered, or experience the public services they require because the government does not have the required data to plan and provide for them.

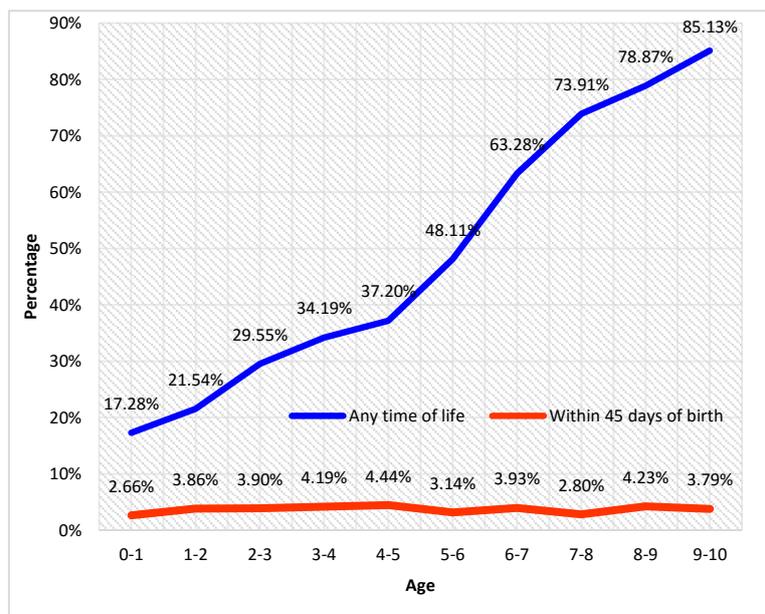


Figure 23. Comparison of birth registration rates by time of registration

The programme will support a2i and the LGD to design innovative late registration approaches that can be used across the country. These approaches will be tested in the field to identify effective and replicable ways in which the government, along with support from other partners, can conduct registration drives at scale. These approaches will include targeting market days where large numbers of people travel from villages across the district, and targeting school opening days, registering all children who attend the school in one sweep. Based on the learnings from these test

cases, the DBR programme will conduct late registration drives in all target communities, registering all children without a birth certificate between the ages of 0-18.

Birth Registration in Emergencies (BRiE):

As one of the most environmentally vulnerable countries in the world, Bangladesh has a long history of experiencing natural disasters, predominantly floods, cyclones and earthquakes. It ranks in the top 15 countries that experience natural disasters each year and between 1980 and 2008 experienced 219⁶⁷. On average, 5% of the population (7.5 million people) are affected by these events on an annual basis, with nearly three million people displaced by natural disasters related to weather and geophysical hazards between 2008 and 2012⁶⁸.

Birth registration is a standalone right and a protection tool that promotes access to other basic rights. In emergencies, unregistered children are amongst the most vulnerable. They are unaccounted for and therefore commonly unassisted. This forces unregistered children and their families to resort to negative coping mechanisms, like child labour, child marriage, and trafficking, in order to meet basic needs.

In an emergency context, parents are less likely to have the supporting documentation required to register births; existing authorising agents are often overwhelmed responding to the emergency; and the birth registration system will subsequently experience significant delays, disabling parents to register within the legal timeframe required.

The disaster recovery plan in Bangladesh places a strong emphasis on prioritising the restoration of health service in affected areas, with the immunisation programme being one of the first services that restarts post emergency. The DBR solution's integration with the health system aligns with this strategy and can support in monitoring vital event data in real-time during these critical periods.

Using Plan International's BRiE activity guidelines, an appropriate birth registration process and SOPs will be defined for both small and large scale disasters in collaboration with key stakeholders including the Ministry of Disaster Management and Relief, the Department for Disaster Management and UNHCR. The approach defined will be tested in one emergency affected community. Related regulatory changes will also be identified and advocated for to reflect any changes to the standard registration process.

⁶⁷ http://www.undp.org/content/undp/en/home/ourwork/crisispreventionandrecovery/projects_initiatives/Bangladesh-drr-casestudy-transformational-change.html

⁶⁸ <https://www.gsmaintelligence.com/research/?file=140820-bangladesh.pdf&download>

Change Management

In order to facilitate acceptance of the DBR system across all affected institutions and to ensure that service providers are adequately skilled to effectively facilitate the digital birth registration process, a change management programme will be implemented. Change management is the management of transformative activities within an organisation in such a way as to ensure that the changes that occur are fully accepted and integrated into daily routine. An effective change management approach is crucial to facilitate the acceptance and use of the digital CRVS system and processes across the LGD, Ministry of Health and other affected institutions. Clear and targeted communications through a variety of channels will be used to explain what changes are happening, when, and how they will affect each stakeholder and a comprehensive training curriculum will be provided to all service providers.

Key components of the Change Management work-package will include:

- **Structured communications plan:**

We will build credibility in the project and change by being clear in communications to all affected actors (direct and indirect) from the outset, informing them of changes early on in the process to avoid “fire-fighting” when the change is implemented. This will include:

 - Understanding individual needs: all communications will be targeted for specific groups of people, ensuring that the communication is tailored to their needs in order to facilitate an acceptance of the change.
 - Mobilise a network of Change Champions: Change Champions will be identified at all levels across the LGD, the Ministry of Health and the community who will be charged with spreading “good-news” about the upcoming change, responding to queries, and gathering feedback. These individuals will be part of the groups that will be affected by the change and thus are able to relate to those affected and respond more effectively than those initiating the change. See table below for examples of where change champions will be used.
 - Mobilise a Project Sponsor: this will be a senior individual from the Government of Bangladesh who will champion the change at the highest level and encourage adoption of the digital birth registration process across all layers of the different affected institutions.

- **Capacity Building:**

Training IT staff and users in the use of the digital CRVS system and processes will ensure that the system is used effectively and will mitigate the risk of business rejection and safeguard against improper use. A comprehensive training plan will be developed to ensure that each actor is provided with relevant training at regular intervals. Using a train the trainer approach, the capacity of the LGD, MoH and all other affected actors to provide effective and efficient birth registration services will be strengthened.

Structured Communications Plan

The table below provides an initial view of what type of communications will be disseminated throughout the programme lifecycle.

Actor	What do they need to know?*	What communication method(s) will be used?
Community Health Worker ⁶⁹	<ul style="list-style-type: none"> ▪ What is the new process, when will it be implemented and how will it affect their day to day activities? ▪ What follow up activities are there for parents e.g. on-demand certificate collection? ▪ What is their responsibility in the new process? ▪ Benefits of the new process e.g. reduction of effort due to integrated process 	<ul style="list-style-type: none"> ▪ Visual representations of the new process posted in health facilities and local clinics. ▪ Team meetings held in local health clinics (where community agents operate from) to explain the change, as defined in column left. ▪ Official notification of change via letter from senior change champion. ▪ Authorized person will be responsible for sharing key change messages with every health worker. ▪ Experience/ knowledge sharing sessions will be held at the Upazila level with all health workers in the affected jurisdiction
Health facility staff	<ul style="list-style-type: none"> ▪ What is the new process, when will it be implemented and how will it affect their day to day activities? ▪ What follow up activities are there for parents e.g. on-demand certificate collection? ▪ What is their responsibility in the new process? ▪ Benefits of the new process e.g. reduction of effort due to integrated process 	<ul style="list-style-type: none"> ▪ Visual representations of the new process posted in health facilities. ▪ Official notification of change via letter from senior change champion. ▪ Team meetings held in health facilities to explain the change. ▪ Experience/ knowledge sharing sessions will be held at the Upazila level with all health workers in the affected jurisdiction
<ul style="list-style-type: none"> ▪ Upazila Health Officer ▪ District Health Officer (Civil Surgeon) ▪ DGHS Staff 	<ul style="list-style-type: none"> ▪ What is the new process, when will it be implemented, how will it affect their day to day activities and benefits? ▪ How does the new process affect their respective departments/staff members? ▪ What affect the change has on the governance structure. ▪ The benefits of working with LGD & BDRP and how they will work together. ▪ New roles and responsibilities, including monitoring overall performance of vital event notification in their respective jurisdiction. 	<ul style="list-style-type: none"> ▪ Official notification of change verbally by senior authority in management meeting. ▪ Official notification of change via letter from senior change champion ▪ All change materials incl. posters sent and distributed by District/Upazila Management ▪ Change champion identified in management team

⁶⁹ This will be a Family Welfare Assistant, Community Health Care Provider, Health Assistant and/or an EPI worker. Appropriate registration agents will be identified in each location in collaboration with local stakeholders.

Registrar and Registration office staff	<ul style="list-style-type: none"> ▪ What is the new process, when will it be implemented and how does it affect the process they currently complete? ▪ New roles and responsibilities including validation and certification provision on-demand. ▪ What are the benefits of the new process? 	<ul style="list-style-type: none"> ▪ Visual representations of the new process put in Union Registration Offices and Union Digital Centres. ▪ Official notification of change via letter from senior authorities. ▪ Announced to all staff by Union Parishad chairman; legitimising the new process.
Upazila and District level Staff	<ul style="list-style-type: none"> ▪ What is the new process? ▪ How does the new process affect their respective departments/staff members? What impact does it have on the governance structure? ▪ The benefits of collaboration with the MoH and how they will work together. ▪ What are the benefits of the new process? ▪ New roles and responsibilities, including monitoring overall performance of vital event registration in their respective jurisdiction. 	<ul style="list-style-type: none"> ▪ Senior Change Champion notifies of change in department meeting ▪ Official communication sent to all staff ▪ Incentives linked with performance ▪ Operational change champion charged with personal-selling and responding to FAQs
<ul style="list-style-type: none"> ▪ Birth Attendants ▪ Primary School Head Teacher/Staff ▪ Religious Leaders ▪ Village Police ▪ Community NGO workers 	<ul style="list-style-type: none"> ▪ What is the new process? ▪ What are the benefits of the new process? ▪ The importance of the role they play in sensitising parents within their community on the new process. ▪ How they can support the process by informing health workers/agents about vital event occurrence. ▪ Why birth registration is so important. 	<ul style="list-style-type: none"> ▪ Visual representations of the new process shared in key work locations e.g. schools and police stations. ▪ Engage community groups. ▪ Community chair person, e.g. union chairman, ward commissioner will be responsible for sharing key change messages with the whole community ▪ Experience/knowledge sharing sessions will be held in the community
BRIS Staff	<ul style="list-style-type: none"> ▪ What is the new process? ▪ How does the new process affect the system and their roles and responsibilities? ▪ What are the benefits of the new process? ▪ How they will work with the MoH ▪ The value of aligning the birth registration process with health 	<ul style="list-style-type: none"> ▪ Senior Change Champion notifies of change in management meeting ▪ Key change messages circulated via official notification to all affected individuals ▪ Posters put in BRIS offices to create excitement and anticipation for the change
CRVS Secretariat, Ministry of Health, a2i Management	<ul style="list-style-type: none"> ▪ What is the new process? ▪ How does it affect ongoing CRVS strengthening activities in Bangladesh? ▪ How does it affect respective projects? ▪ Role in project and design process e.g. review and approval cycles with relevant actors 	<ul style="list-style-type: none"> ▪ Senior Change Champion identified in each organisation. ▪ Senior Change Champion notifies of change in key meetings. ▪ Key change messages circulated via official notification to all affected individuals ▪ Regular email updates on progress of system development and deployment

	<ul style="list-style-type: none"> ▪ Benefits of working in a collaborative way to strengthen CRVS. ▪ What impact does this have on governance structure? 	
--	---	--

Table 29. DBR Structured Communications Planning

*All individuals affected by the change will be provided with targeted communications on CRVS basics and why it is important

Delivery of the change messages and training as defined above will be scheduled in a repetitive manner in line with the defined deployment schedule.

Capacity Building

The table below details training requirements of key actors involved in the redefined birth registration process. Note that all individuals will be provided training on CRVS basics and why it is important. Training needs will be assessed along with the respective departments so as not to duplicate existing knowledge.

Actor	Responsible	Training Needs
Community Health Workers	<ul style="list-style-type: none"> ▪ Informing parents of process throughout MNCH cycle ▪ Notification of birth 	<ul style="list-style-type: none"> ▪ How health related processes can be utilised to inform parents of the need for birth registration ▪ System and processes, incl. follow up requirements and activities ▪ Basic ICT skills and application troubleshooting ▪ Communication messages for expectant mothers and parents/guardians
Local Government staff (Union Parishad, City Corporation)	Validation of birth registration applications and issuance of birth certificates on-demand	<ul style="list-style-type: none"> ▪ System and process ▪ Basic computer skills and system troubleshooting ▪ Health related processes and how they affect and contribute to the birth registration process ▪ Accountability and performance management processes
Administrative & Monitoring Actors: UNO, Deputy Commissioner (DC), Upazila Health Officer, District Civil Surgeon, BDRP, Local Government, Cabinet Division and Ministry of Health	<ul style="list-style-type: none"> ▪ Monitoring & reporting functions ▪ Performance Management 	<ul style="list-style-type: none"> ▪ New System and process ▪ Use of monitoring and reporting dashboards and how to create reports as required ▪ Accountability and performance management processes
System Administrators incl. BRIS Authority	Ongoing operational maintenance and management of system	<ul style="list-style-type: none"> ▪ System and process ▪ System administration and troubleshooting ▪ <i>Additional areas where technical expertise is lacking in the department</i> ▪ Operational report generation and monitoring
eGovernment IT Officers	Ongoing operational maintenance and management of integration layer	<ul style="list-style-type: none"> ▪ System and process ▪ System design and administration ▪ System management and operational maintenance
CRVS Stakeholders e.g. BBS, NID and Passport	Access BRIS for reporting/access to records as required	<ul style="list-style-type: none"> ▪ System & Process ▪ How to access required data / how system accesses data to generate required reports
National Statistics Office	Reporting and dissemination of key vital statistics	<ul style="list-style-type: none"> ▪ Analysis and production of vital statistics based on birth registration records ▪ Reporting
Communications Campaign Actors: all actors identified to disseminate behavioural change campaign e.g. NGO partners, health	Disseminating key behavioural impact messaging as defined in the integrated marketing and communications campaign	<ul style="list-style-type: none"> ▪ Redefined process ▪ Importance and benefits of birth registration ▪ Communication keys (as defined in Behavioural Impact exercise, further explained below) ▪ Soft skills training

assistants, public representatives etc.		
---	--	--

Table 30. DBR Training Requirements

In addition to the training topics detailed above, the programme will support Bangladesh to attend 2 International conferences to learn from other countries' experiences and showcase their work.

Advocacy

In order to effectively support the digital birth registration process, appropriate legal and policy reform is required to ensure that the birth registration system supports a rights based approach, avoiding discrimination and ensuring inclusion, and preventing the misuse and corruption of birth registration data. Based on a thorough assessment of the existing legal and policy framework that supports civil registration processes, the programme will advocate for the following legal, policy and regulatory reforms, making the process, accessible and safe for all:

Area of Legislation/Policy Recommendation	Current Status	Action Required: what change is needed?	Forum for Advocacy
National CRVS Strategic Plan	<ul style="list-style-type: none"> There is no national CRVS strategic plan in place to support a holistic and coordinated long-term approach to CRVS strengthening 	<ul style="list-style-type: none"> National CRVS Strategic Plan to be created with all relevant stakeholders 	<ul style="list-style-type: none"> Cabinet Division Local Government Division & BDRP MoHFW Ministry of Law, Justice & Parliamentary Affairs Ministry of Women and children affairs Ministry of Social Welfare
Free Birth Registration	<ul style="list-style-type: none"> In the Births and Deaths Registration Rules, 2006, there is provision for a late registration fee (5-10 Taka for each year after 2 years). 	<ul style="list-style-type: none"> Removal of fines for late registration Removal of fines/punishment for non-registration 	<ul style="list-style-type: none"> Local Government Division CRVS Secretariat Birth and Death Registration Project (BDRP) DGHS Ministry of Women and children affairs Ministry of Social Welfare Ministry of Law, Justice & Parliamentary Affairs
Vital Statistics	<ul style="list-style-type: none"> BBS has the legal authority to declare vital statistics; this is currently done through surveys and statistics relating to birth are not derived from civil registration data. 	<ul style="list-style-type: none"> Use of civil registration data as a source of vital statistics to be encouraged and included in policy. <i>Evidence of reliable data gathered through the DBR programme can be used to support this advocacy.</i> 	<ul style="list-style-type: none"> BBS Local Government Division CRVS Secretariat Birth and Death Registration Project (BDRP)

Coordinated Governance	<ul style="list-style-type: none"> ▪ There is no policy to support coordination, integration or even sharing of civil registration or vital statistics data between different agencies. 	<ul style="list-style-type: none"> ▪ Framework put in place to encourage coordination and collaboration between authorities. Within the provisions made should be a defined governance structure to help in the coordination between authorities. ▪ Access to civil registration information for relevant authorities 	<ul style="list-style-type: none"> ▪ Local Government Division ▪ CRVS Secretariat ▪ Birth and Death Registration Project (BDRP) ▪ DGHS ▪ Ministry of Women and children affairs ▪ Ministry of Social Welfare ▪ Ministry of Law, Justice & Parliamentary Affairs
Registration forms	<ul style="list-style-type: none"> ▪ The birth registration form does not comply with all characteristics defined in the UN Guidelines on vital statistics, 2014. Name of the hospital, Father's and mother's place of birth, Father's and mother's date of birth, duration of pregnancy, number of children ever born to this mother, weight of child, kind of birth etc. are not included in the current registration form. 	<ul style="list-style-type: none"> ▪ All recommended fields to be included in birth registration form 	<ul style="list-style-type: none"> ▪ Local Government Division ▪ CRVS Secretariat ▪ Birth and Death Registration Project (BDRP)

Table 31. DBR Advocacy: Items for Reform

All advocacy efforts will be coordinated with other UN agencies and development partners working on CRVS-related activities in Bangladesh, aiming to support the a2i, LGD and BDRP to develop a robust CRVS legal and policy framework that supports all CRVS strengthening activities across all life events.

Behavioural Impact

The household survey conducted for this study clearly shows that there is a lack of understanding of the importance of birth registration, with parents only registering their child at a point in their life when they need a birth certificate to access services e.g. education. Furthermore, 94% of respondents were unaware that birth registration should happen within 45 days of birth. While 97% of respondents had heard about birth registration, only 57% of them knew where they could register a birth, further enforcing low registration rates. Bottlenecks and barriers such as distance, cost and complexity also act as clear deterrents for citizens to engage in the process. In order to increase the demand for birth registration services, the Communication for Behavioural Impact (COMBI) approach will be used to positively change the behaviours of parents and caregivers towards birth registration, encouraging them to engage in MNCH services within 45 days of birth so that the child can be registered through these health interactions.

With a sharp focus on desired behaviours, such an approach goes beyond the mere provision of knowledge as seen in traditional IEC campaigns, instead it looks at the incentives, prompts and triggers of parents to actively register their children.

The development of the COMBI Campaign will happen in four stages:

- 1. Training:** 7 day training course is provided to all involved parties in-country on the Communication for Behavioural Impact Methodology. This training takes participants through the methodology and applies it to birth registration in Bangladesh, beginning to identify the strategic behavioural objective that the campaign will look to bring about, and investigate key communication strategies for an integrated marketing and communication campaign for the Bangladesh context.
NB. Other UN agencies and development partners interested in extending the reach of this campaign to different districts will be encouraged to participate in training and implementation in a collaborative manner.
- 2. Field-Work:** the Consultant spends a week in the field speaking to a range of actors from Parents to registration staff. The field-work is used to gather insight into the daily experiences of target audiences and test some of the communication strategies developed in the training. This analysis involves listening to people and learning about their perceptions and grasp of the offered behaviour, the factors which would constrain or facilitate adoption of the behaviour, and their sense of the costs (time, effort, money) in relation to their perception of value of the behaviour to their lives.
- 3. Planning:** the Consultant develops a detailed COMBI strategy that clearly outlines what messaging will be used and by which medium this messaging will be disseminated (examples included in table below). This strategy is developed into a detailed integrated marketing and communications plan that will span the lifecycle of the programme.
- 4. Implementation:** coordinated implementation of the COMBI strategy and plan by partners throughout the country.

Detailed below are 5 key communication strategies that will be employed to bring about the desired behavioural impact.

Note. A final communication strategy will be developed through the COMBI approach described above.

COMBI Action Area	Description of Action Area	DBR specific actions
Public Relations / Advocacy / Administrative Mobilization	Putting the defined behavioural objectives on the public and administrative agenda through meetings, discussion with leaders, official memoranda, partnership meetings, news coverage, talk shows, and celebrity spokespersons	<ul style="list-style-type: none"> ▪ Extensive PR activities promoting the community based health birth registration process, positioning it as a game-changing civil services programme. ▪ High-profile public events, incl. launch, with senior stakeholders from both LGD and MoH, as well as the Project Sponsor (high visibility individual who can capture hearts and minds). ▪ Campaigning activities will focus on parents (both men and women) ▪ Journalists will be engaged to capture key communication messages that can be used in their publications.
Community Mobilisation	Engaging the community through different methods to educate and encourage the defined behavioural objectives through participatory research, community-group meetings, community drama, etc.	<ul style="list-style-type: none"> ▪ A number of local community fora will be used to spread key campaign messaging, these will include village meetings, miking, market day campaigns, community meetings, local drama, and religious gatherings. ▪ Community led campaign will be held promoting birth registration alongside EPI services. ▪ Other community actors will include: local teachers, community police, religious leaders, CSOs, NGO partners, health workers.
Sustained Appropriate Advertising	Ensuring that advertising for the defined behavioural objectives is Massive, Repetitive, Intense, and Persistent – via Radio, TV, newspapers and other media channels.	<ul style="list-style-type: none"> ▪ Recognising that around 60% of Bangladeshis are based in rural locations and literacy rates are low, verbal communication and visual aids will be used to ensure that communications can be understood by all. ▪ Community radio stations will be used to disseminate key communication messages. ▪ TV advertisements will be broadcast on both national and local channels. ▪ TV talk show will be broadcast during EPI campaign week; linking the services together. ▪ Content will be disseminated via social media channels incl. Facebook, Youtube etc. ▪ Visual pamphlets and posters will be shared in locations with heavy foot traffic. ▪ Billboards and festoons will display key communication messages in programme areas.
Interpersonal communication / Counselling / Personal Selling	At the community level, in homes and at service points: Disseminating informational literature on the defined behavioural objectives and their benefits; explaining additional incentives; and listening and addressing concerns	<ul style="list-style-type: none"> ▪ Door to door campaign using community activists and community health workers, village police, teachers to disseminate information on the importance of birth registration and certification, as well as information on how to engage in the process. ▪ Mothers will be engaged throughout their ante and post-natal care on the importance of birth registration and how they can register their child. These lessons will be closely linked with other key health messages. ▪ Fathers will be individually engaged to ensure that registration is deemed as a priority within the family; involvement of males from an early point in the

		pregnancy process (ante-natal care) is crucial to build a positive narrative over time.
Point of Service Promotion	Promotion of the behavioural objective at key public service points	<ul style="list-style-type: none"> ▪ Health facilities and village clinics will display visual representations of the new birth registration process. For those who are literate, informational pamphlets will be disseminated. ▪ Health staff at village clinics, ante and post-natal care providers and vaccination staff will all engage Mothers & Fathers directly and verbally explain processes and procedures; creating excitement and desire amongst Parents to register their child.

Table 32. DBR Behavioural Impact Strategies

Monitoring and Evaluation

Central to the success of the DBR project is a robust monitoring and evaluation framework, required in order to prove that the DBR model is effective and that the integrated approach to birth registration is scalable and sustainable. A key principle of the DBR project is that of continuous improvement, acknowledging that the model will undergo minor iterations throughout the lifecycle of the project in order to become:

- **Scalable:** able to function at scale in different contexts across the whole country.
- **Sustainable:** a cost effective solution that can be owned and run by the State.
- **Effective:** improves the quality, efficiency and overall experience of the birth registration service for both citizen and service provider.
- **Fit for purpose:** the system fulfils its purpose, reflecting the business needs of the registration authority.

The project will use system and field-based techniques to monitor the effectiveness of Plan Bangladesh's interventions and to ensure that the model is continuously monitored and modified based on findings.

Monitoring and evaluation activities are key to the success of the DBR project. The ongoing monitoring and modification efforts will fine-tune the solution and implementation approach to allow us to develop a model that has been comprehensively tested prior to documenting the case for scale-up.

Baseline Survey

In order to effectively monitor changes that project interventions bring about, a baseline survey will be completed in each target district to benchmark the pre-intervention situation. This survey will be of a statistically representative sample size and use a sampling methodology that gathers representative findings for the project target area.

Qualitative techniques such as focus group discussions, in-depth interviews, and key informant interviews will be used to set baseline rates for items relating to knowledge, attitudes and practices.

For indicators that relate to the effectiveness and efficiency of the DBR system, baseline measurements will be taken in relation to use, attitudes and content of the existing BRIS system.

System Based Monitoring:

During the development of the interoperable birth registration solution, system requirements will be included to reflect KPIs that can be gathered through the system itself e.g. time taken from submission of application to validation of application by the Union Parishad. These KPIs will provide an insight into the effectiveness of the system based on automatically generated data that can be accessed as and when required.

The reporting dashboard of the solution will allow project staff as well as local and national government to monitor these operational and performance related indicators. Different views can be created as required for each user of the system to fulfil reporting requirements.

Local Government institutions, including both Upazila level health and District Commissioner, along with their direct management structures, will be responsible for monitoring the performance of individual registration sites within their jurisdiction. At this level, individual registration agents in the field can be held accountable for their performance in comparison to others within the same

location, as well as those that operate at the Union Parishad. Registration sites can also be compared to other locations within the jurisdiction and also in other districts. On a quarterly basis, high performing registration sites will receive a reward for their good efforts.

The Birth & Death Registration Project, Local Government Division and Director General of Health Services will monitor country-wide registration rates and make key performance indicators publicly available to increase transparency and accountability.

The Project Team will support Government to utilise system based monitoring tools to monitor operational and performance indicators, encouraging ongoing monitoring of the birth registration service beyond the lifecycle of the project.

System administrators will monitor system-related performance indicators via their own personalised dashboard view. System modifications will be based on this ongoing monitoring. If issues are identified, system related updates will be made following a defined change management process i.e with sign-off and agreement from relevant stakeholders.

Based on both operational and performance related indicators that are monitored via the dashboard, targeted field-based responses will be conducted including on-site interviews and FGDs in the jurisdiction to understand why registration rates remain low and/or people are not engaging in the process. Following this the response in that area will be adjusted to include additional training, tailoring of communications etc, as required.

Field-Based Monitoring:

Recognising the importance of end-user feedback, the community will be engaged directly for monitoring and evaluation purposes throughout the duration of the project. Focus group discussions and interviews will be held at quarterly intervals in each of the project areas to get feedback from a range of individuals including citizens, registration and health staff, and community leaders.

Coordinated visits between local government and health departments will be conducted at regular intervals to develop a sense of joint ownership and understanding of the day to day successes and challenges of the system. Decisions on how identified issues are addressed will be made together and escalated as described in *Programme Governance Structure*.

Modification

Based on the findings of monitoring efforts, the project team will propose changes to the identified programme component (process & technology; change management; training), with the associated evidence, to the DBR Programme Working Group. If approved, the change will be made and tested on a limited scale and with limited individuals prior to proposing it as a project wide change. Changes to the approach will be fully documented and rolled out on a quarterly basis in line with M&E cycles.

End of project evaluation

At the end of the project a detailed evaluation of the integrated approach and DBR solution will be conducted to assess whether the model is scalable and sustainable and/or requires further modifications and enhancements. This evaluation will be based on full analysis of all M&E project findings as well as a final evaluation that mirrors the baseline activity. Based on this analysis a business case will be documented, detailing how and why the DBR model is appropriate as a national, cost-effective civil registration solution.

Results Framework

The DBR programme aims to prove a sustainable and scalable model for birth registration in Bangladesh so that all boys and girls are registered within 45 days through a rights-based national CRVS system. The below results and activities framework form a basis for monitoring and evaluation activities. A final assessment of programme results will provide evidence as to whether the technology solution and integrated programme approach should be scaled-up nationally and extended to support other vital events.

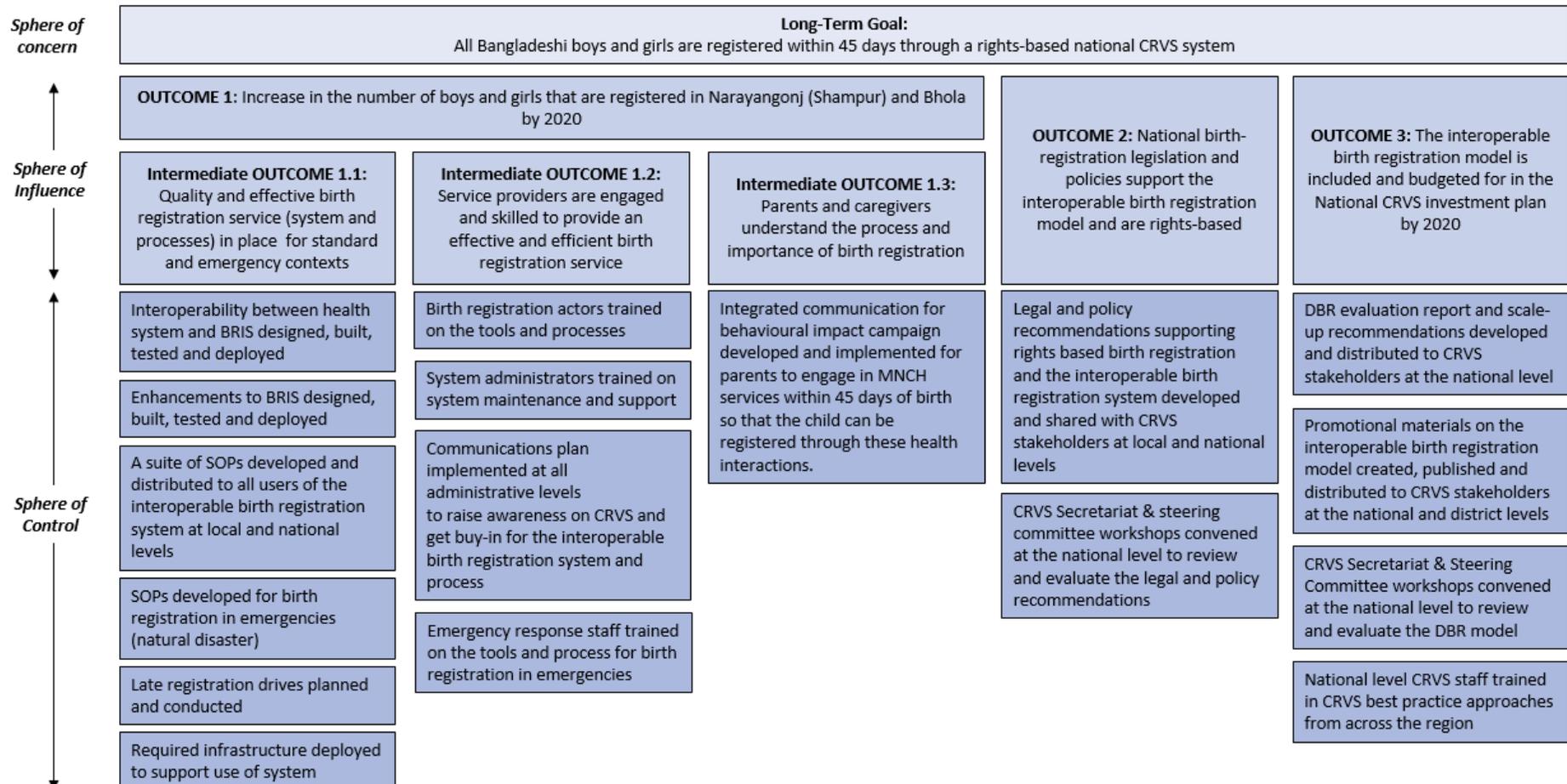


Figure 24. DBR Results Framework

Impact: All Bangladeshi boys and girls are registered within 45 days through a rights-based national CRVS system

Outcome	Outputs	Activities	Indicators
1. Increase in the number of boys and girls that are registered in Narayangonj (Shampur) and Bhola by 2020			
1.1 Quality and effective birth registration service (system and processes) in place for standard and emergency contexts	Interoperability between health system and BRIS designed, built, tested and deployed	A1.1. Write system requirements for interoperability between health system and BRIS A1.2. Design, build and test all software components that support interoperability between the health system and BRIS (updates to health application and integration layer itself) A1.3. Write product test scripts for interoperability functionality and enhancements to health application A1.4. Test the interoperability layer and updates to health application against the product test scripts A1.5. Write integration test scripts for all system interactions with external systems A1.6. Test the interoperability layer against the integration test scripts A1.7. Write user acceptance test scripts based on use cases and scenarios A1.8. Conduct user acceptance tests on the interoperable solution with real system users A1.9. Conduct system performance tests A1.10. Conduct system stress tests A1.11. Deploy solution at the national level and within target districts A1.12. Support the technical solution and maintain system at the national level and within target districts A1.13. Redeploy the technical solution with improvements and modifications at the national level and within target districts to resolve issues raise by users	<ul style="list-style-type: none"> ▪ No. of health care workers using the health application to register children ▪ No. of times the BRIS system receives an birth registration application from the health system
	Enhancements to BRIS designed, built, tested and deployed	A2.1. Write system requirements for BRIS enhancements A2.1. Design, build and test all software components that support BRIS enhancements A2.2. Write product test scripts for BRIS enhancements A2.3. Test the BRIS enhancements against the product test scripts A2.4. Write integration test scripts for all system interactions with external systems A2.5. Test BRIS against the integration test scripts A2.6. Write user acceptance test scripts based on use cases and scenarios	<ul style="list-style-type: none"> ▪ No. of sites (Union Parishad) to which the enhanced BRIS has been deployed ▪ No. of duplicate records identified and removed from BRIS

		<p>A2.7. Conduct user acceptance tests on BRIS enhancements with real system users</p> <p>A2.8. Conduct system performance tests</p> <p>A2.9. Conduct system stress tests</p> <p>A2.10. Deploy solution at the national level and within target districts</p> <p>A2.11. Support the technical solution and maintain system at the national level and within target districts</p> <p>A2.12. Redeploy the technical solution with improvements and modifications at the national level and within target districts to resolve issues raised by users</p>	
	A suite of SOPs developed and distributed to all users of the interoperable birth registration system at local and national levels	<p>A3.1. Create / update standard operational procedures for birth registration consistent with the integrated digital birth registration system and the outputs of the DBR Technical Analysis</p> <p>A3.2. Distribute the standard operational procedures to all users of the interoperable birth registration system at community health, health facility, Union Parishad, Upazila and national levels</p>	<ul style="list-style-type: none"> ▪ No. of users that have received SOPs
	SOPs developed for birth registration in emergencies (natural disaster)	<p>A4.1 Create / update standard operational procedures for birth registration in the emergency context (natural disaster)</p> <p>A4.2. Distribute the standard operational procedures to all actors who will be involved in birth registration during emergencies</p> <p>A4.3. Support BDRP to test SOPs in 1 natural disaster context</p>	<ul style="list-style-type: none"> ▪ 1 SOP for BRiE developed and tested in one natural disaster context
	Late registration drives planned and conducted	<p>A5.1. Develop late registration drive approaches (process, staffing, tools and rollout)</p> <p>A5.2. Test late registration drive approaches and document successful methods</p> <p>A5.3. Create SOP for late registration drives based on learnings from test drives</p> <p>A5.4. Develop training materials for those who will conduct a late registration drive</p> <p>A5.5. Train those conducting the late registration drive using mobile van in target districts</p> <p>A5.6. Conduct late registration drives in target districts</p>	<ul style="list-style-type: none"> ▪ No. of late registration drives conducted per district per year ▪ No. of children registered during late registration drives per district per year

	Required infrastructure deployed to support use of system	A6.1. Equip Union Parishads and Health Posts within the target districts with required hardware, electricity and connectivity to carry out digital birth registration A6.2 Build / improve national infrastructure with the necessary hardware to support the digital birth registration solution	<ul style="list-style-type: none"> No. of sites (Union Parishads) to which required infrastructure has been provided to support the DBR system
1.2 Service providers (community agents and registration officers) have the capacity to provide an effective and efficient birth registration service	Birth registration actors trained on the tools and processes	A7.1. Create a training plan for all actors involved in the birth registration process at national, district and community levels, defining who will be trained on what and when A7.2. Create process training materials and manuals for all actors involved in the new birth registration process at national, district and community levels A7.3. Create technical solution user training materials and manuals for all actors involved in the new birth registration process at national, district and community levels A7.4. Train all relevant actors at the national, district and community levels on the new birth registration process A7.5. Train all relevant actors at the national, district and community levels in the use of the digital birth registration tools A7.6. Create training materials for statisticians on the analysis and production of vital statistics based on birth registration records A7.7. Train statisticians in the analysis and production of vital statistics based on birth registration records	<ul style="list-style-type: none"> No. of training sessions run on tools and processes No. of District & Community registration staff and vital statisticians trained Average training test score by type (District & Community registration staff, vital statisticians)
	System administrators trained on system maintenance and support	A8.1. Create technical solution administrative training materials and manuals for technical staff that will be supporting and maintaining the technical solution at national and district levels A8.2. Train technical staff at the national and district levels on how to support and maintain the technical solution	<ul style="list-style-type: none"> No. of system administrators trained on system maintenance & support Average training test score of system administrators
	Communications plan implemented at all administrative levels to raise awareness on CRVS and get buy-in for the interoperable birth registration system and process	A9.1 Create detailed communications plan defining who needs to be informed about upcoming changes to processes and tools, by when and through which channels A9.2 Create communication materials required to support change management at the national, district and community levels A9.3 Implement the communications plan at national, district and community levels	<ul style="list-style-type: none"> No. of change communications materials created and distributed No. of relevant people receiving the change communications

	Emergency response staff trained on the tools and process for birth registration in emergencies	A10.1. Create a training plan (immediate and ongoing) for all emergency response staff and partners who will be involved in birth registration during emergencies A10.2. Create training materials and manuals for all actors who will be involved in birth registration during emergencies A10.3. Conduct training for all actors who will be involved in birth registration during emergencies	<ul style="list-style-type: none"> ▪ No. of emergency response staff and partners trained on system maintenance & support ▪ Average training test score of emergency response staff and partners
1.3 Parents and caregivers understand the process and importance of birth registration	Integrated communication for behavioural impact campaign developed and implemented for parents to engage in MNCH services within 45 days of birth so that the child can be registered through these health interactions.	A11.1. Train national and district actors on the COMBI methodology A11.2. Develop COMBI strategy for parents to engage in MNCH services within 45 days of birth so that the child can be registered through these health interactions. A11.3. Develop COMBI implementation plan for target districts with detailed activities, budget and roles and responsibilities A11.4. Develop and produce campaign materials (including tender documents for advertising companies, development, production and dissemination, including TV and Radio adverts etc.) for target districts A11.5. Train resources (including community members) on the implementation of the COMBI plan in target districts A11.6. Plan and implement special events to deliver on COMBI specific behavioural objectives A11.7. Revise COMBI implementation plan based on monitoring feedback	<ul style="list-style-type: none"> ▪ No. of people directly reached by the communications campaign (e.g. through community mobilisation) ▪ No. of people indirectly reached by the communications campaign (e.g. through radio announcements)
2. National birth-registration legislation and policies support the interoperable birth registration model and are rights-based	Legal and policy recommendations supporting rights based birth registration and the interoperable birth registration system developed and shared with CRVS stakeholders at local and national levels	A12.1. Conduct the DBR risk assessment to develop mitigation strategies for potential child protection risks A12.2. Define the legal and policy changes required for rights based birth registration, such that it conforms to UN guidelines and Plan International's key principles and standards for birth registration A12.3. Define the legal and policy changes required to enable the interoperable birth registration system and processes A12.4. Lobby at the national level for legislative and policy reform for birth registration	<ul style="list-style-type: none"> ▪ No. of legal & policy recommendations advocated for ▪ No. of lobbying meetings held
	CRVS Secretariat & steering committee workshops convened at the national level to review and evaluate	A13.1. Plan the content of the CRVS trainings for the national CRVS steering committee A13.2. Conduct the CRVS training sessions for the national CRVS steering committee	<ul style="list-style-type: none"> ▪ No. of CRVS steering committee workshops to review legal and policy recommendations convened at the national level

	the legal and policy recommendations	A13.3. Organise a steering committee workshop to review and evaluate the legal and policy recommendations supporting rights based birth registration and the interoperable birth registration system at the national level A13.4. Organise a steering committee workshop to review and evaluate the legal and policy recommendations supporting rights based birth registration and the DBR system at the provincial level.	
3. The DBR model is included and budgeted for in the National CRVS investment plan by 2020	DBR evaluation report and scale-up recommendations developed and distributed to CRVS stakeholders at the national level	A14.1. Write DBR evaluation report A14.2. Distribute DBR evaluation report to CRVS stakeholders at the national and district levels A14.3. Present DBR evaluation report to the National Steering and Coordination Committee on CRVS A14.4. Present DBR evaluation report to the CRVS Secretariat	<ul style="list-style-type: none"> ▪ No. of national meetings where the DBR evaluation report is presented
	Promotional materials on the interoperable birth registration model created, published and distributed to CRVS stakeholders at the national and district levels	A15.1. Create promotional materials showing the interoperable birth registration model in action and having a real impact for beneficiaries A15.2. Publish the promotional materials and disseminate to CRVS stakeholders at the national and district levels	<ul style="list-style-type: none"> ▪ No. of promotional materials created per year ▪ No. of relevant officials receiving the promotional materials per year
	CRVS Secretariat & Steering Committee workshops convened at the national level to review and evaluate the DBR model	A16.1. Plan the content of the CRVS trainings for the CRVS Secretariat and National Steering and Coordination Committee on CRVS A16.2. Conduct the CRVS training sessions for the CRVS Secretariat A16.3. Conduct the CRVS training sessions for the National Steering and Coordination Committee on CRVS A16.4. Organise a Steering Committee workshop to review and evaluate the legal and policy recommendations supporting rights based birth registration and the interoperable birth registration system A16.5. Organise a CRVS Secretariat workshop to review and evaluate the legal and policy recommendations supporting rights based birth registration and the interoperable birth registration system at the national level	<ul style="list-style-type: none"> ▪ No. of CRVS Steering Committee meetings convened at the national level
	National level CRVS staff trained in CRVS best practice approaches from across the region	A17.1. BDRP staff members to travel to 2 regional level CRVS conferences to inform CRVS strategic planning processes	<ul style="list-style-type: none"> ▪ No. of lessons learned sessions run by BDRP after international CRVS best practice visits

Table 33. DBR Results Framework, Activities & Indicators

Programme Implementation

Proposed Programme Locations

The programme will be implemented in 2 districts of Bangladesh, one urban - Narayanganj (Shampur), and one rural – Bhola. These locations have been chosen in order to prove the approach in different contexts such that the model is scalable across the whole country.

	Narayanganj (Shampur)	Bhola
Birth Rate	20/1000	
Population	2,948,217	1,776,795
Area	759.6 km ²	3,737.21 km ²
Description	A district in central Bangladesh, part of the Dhaka vision, Narayanganj is a centre of business and industry and will support in proving the model in a busy urban centre. The district consists of 5 Upazilas, 44 Union Parishads, and 827 Mauzas. Multi-cultural 3078 mosques, 269 temples, 10 churches and 4 Buddhist temples.	A district in south-central Bangladesh, located in the Barisal Division, Bhola is a predominantly rural district. The district consists of 7 Upazilas, 67 Union Parishads
Beneficiaries	<ul style="list-style-type: none"> ▪ 56,100 children registered ▪ 150 Community Health Workers trained ▪ 150 registration staff trained ▪ 50 communities engaged in sensitisation activities ▪ 20,000 parents sensitised on the importance of birth registration 	<ul style="list-style-type: none"> ▪ 25,500 children registered ▪ 75 Community Health Workers trained ▪ 75 registration staff trained ▪ 35 communities engaged in sensitisation activities ▪ 12,000 parents sensitised on the importance of birth registration

Table 34. DBR Programme Locations

Programme Governance

The Programme Governance structure below provides an overview of the proposed programme organisation structure.

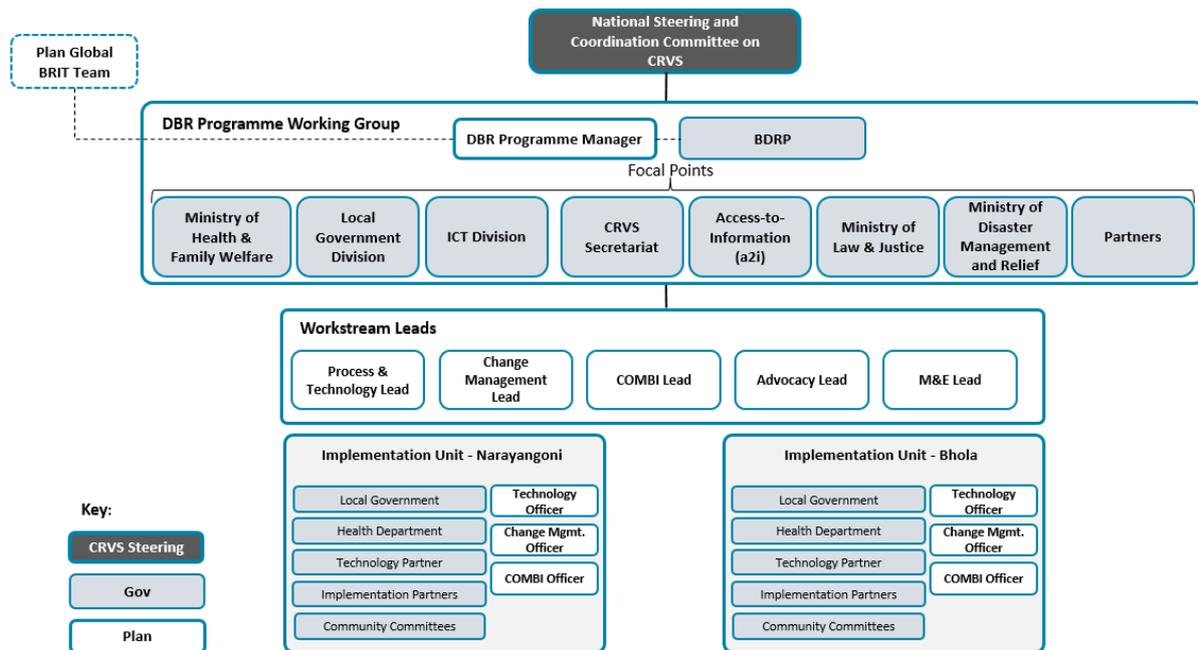


Figure 25. DBR Programme Governance Structure

A DBR Programme Working Group (PWG) will be established in order to set expectations of the programme, coordinate key design and implementation decisions amongst implementing partners, and report on the project's progress to key CRVS stakeholders. The group will provide coordinated inputs on required decisions to the National Steering and Coordination Committee on CRVS.

The PWG will be led by the DBR Programme Manager, who will be appointed to manage the programme as a whole. The DBR PM will be supported by a lead representative from BDRP, nominated by BDRP as a focal point and decision-maker for all DBR project activities. Key stakeholders from across both national and district levels will act as focal points in this group including representatives from the various departments of the Ministry of Health & Family Welfare, Local Government Division, ICT Division, CRVS Secretariat, a2i, Ministry of Law & Justice, and implementation partners. Each of the DBR Programme Working Group members will be expected to nominate a focal point/Desk Officer to act as the programme's decision maker.

The DBR Programme working group will report into the National Steering and Coordination Committee on CRVS for coordination and alignment with broader National level strategic planning activities. This element of the programme governance is essential to build a political engagement necessary to achieve the long-term programme outcomes.

Plan's Global Birth Registration Innovation Team will support the Programme Manager and will offer technical and implementation guidance and support across all workstreams.

Each programme workstream will have a dedicated lead responsible for the delivery of the workstream. The workstream leads will coordinate with one another to ensure an aligned and

integrated delivery. Workstreams which require a permanent local presence (e.g. technology, training and COMBI), will have Officer posted at the district level.

Implementation Partners & Stakeholders

The success of the DBR programme, proving a scalable and sustainable model for birth registration in Bangladesh, is largely dependent on a strong and collaborative working relationship amongst all involved actors, building a strong sense of ownership from the outset. Listed below are all government and development partners who will have a role to play in the DBR Programme.

Government Partners

National Steering & Coordination Committee on CRVS & CRVS Secretariat

The National Steering & Coordination Committee on CRVS was established to realise the government's vision of a single interoperable system that can fulfil all CRVS functions (CRVS++). The Committee was formed under the leadership of the Cabinet Secretary in the Cabinet Division in order to coordinate and guide the initiatives of different agencies involved in CRVS strengthening activities. To realise the CRVS system, the CRVS Secretariat was formed. The CRVS Secretariat will be a member of the DBR Programme Working group to ensure that all project activities align with wider CRVS strengthening activities, and the DBR Programme Working Group will regularly report into the National Steering & Coordination Committee on CRVS.

Birth Death Registration Project (BDRP)

Under the Local Government Division, the BDRP, as the department responsible for the registration of births, will be the lead implementation partner for the DBR project. Plan and BDRP will develop a joint workplan to ensure that roles and responsibilities are clearly defined and ownership of the project is with BDRP from the outset. The BDRP will be responsible for providing a project manager who will be the key focal point for the DBR project. They will support in defining system requirements; the development of SOPs (standard and emergency); provision of required resources to ensure project success; training of registration staff; creation of key communication messages as part of the COMBI campaign; lead change management activities through ownership from the outset; and will own all work products when the programme is officially complete.

Ministry of Health and Family Welfare (MoHFW)

A key stakeholder in the DBR project, Plan and the BDRP will work closely with the MoHFW, especially the Directorate General of Health Services, at both the national and local level to ensure that health requirements and needs are appropriately reflected in the system and processes. Recognising the importance of developing co-designed and owned SOPs and work products, programme planning will be done in collaboration with the MoHFW. Representatives from the Ministry will be involved in design workshops and in providing recommendations for effective implementation including identification of change champions, defining training needs, and also in identifying which community health workers and health programmes will use the health application. The MoHFW will be responsible for identifying a focal point/Desk Officer to ensure that MoHFW positions are reflected in implementation planning and activities throughout the lifecycle of the project. The Upazila and District Health Offices will be engaged at a local level to monitor day-to-day operations and to work closely with the District Registrar to facilitate monitoring and evaluation activities.

Information and Communication Technology (ICT) Division, (MoPT&IT)

The ICT Division supports the effective use of technology across all government functions in Bangladesh. One of its main priorities is to establish e-governance in the country and realise the Prime Minister's vision of a "Digital Bangladesh". The ICT Division will be involved in the system design process and development to ensure that the system is effectively integrated into the wider interoperable architecture that is being developed in the country.

Access to Information (a2i) Programme

As part of the Prime Minister's Office, the a2i programme provides policy, advocacy, solution and implementation support to government with a view to using ICT as a means for public service delivery in Bangladesh. A2i has acknowledged the important role that CRVS plays as a government service and is supporting CRVS strengthening activities by providing technical guidance to the National Steering and Coordination Committee on CRVS. As part of the DBR Programme Working Group, CRVS Secretariat and Steering Committee, A2i will continue to provide technical guidance and support throughout the programme.

Bangladesh Bureau of Statistics

BBS provides the government statistical information to guide decision-making and the development process. It is the authority responsible for the sample collection, compilation, analysis and publishing of accurate data relating to various sectors of the economy and social sector; publication of reports, data and national level information for policies and programs. There are 210 PSUs (Primary Sample Unit) all over Bangladesh with 150 rural units and 60 urban units used to collect samples for generating vital statistics. The BBS system is currently integrated with BRIS to allow access to birth records. As the DBR programmes aims to support the development of a process that improves the accuracy of birth information collected which can subsequently be used for vital statistics purposes, BBS will be a member of the DBR Programme Working Group. They will receive training on the analysis and production of vital statistics based on birth registration records, and will use data generated through BRIS to create a vital statistics report.

Ministry of Law, Justice & Parliamentary Affairs

The Ministry of Law, Justice & Parliamentary Affairs is responsible for supporting all legal and judicial matters in Bangladesh. It will support the DBR project as a member of the Programme Working Group by drafting proposed changes/new regulations and bills as required and support in advising where these changes should be advocated for.

Ministry of Disaster Management and Relief (MoDMR)

The Ministry of Disaster Management and Relief (MoDMR) has the mandate to drive national risk reduction reform programmes in order to reduce the risk of people, especially the poor and the disadvantaged, from the effects of natural, environment and human induced disasters and to put in place an efficient emergency response management system. The MoDMR will be a member of the DBR Programme working group and will support in the design and test of SOPs for birth registration in the context of natural disasters in Bangladesh.

Potential Development Partners

World Health Organisation

WHO will be involved in the programme as a member of the DBR Programme Working Group (WHO supports the development of the OpenSRP platform).

UNICEF

As the lead organisation for birth registration in the United Nations and with a long history of supporting birth registration improvement measures in Bangladesh, UNICEF will be a member of the DBR Programme Working Group.

CSOs

CSOs will support programme implementation activities in each district.

Workplan

The workplan below provides a high-level plan of work for all programme activities by workstream. The programme's 5 workstreams will run in parallel, with each Workstream Lead coordinating the delivery of its defined responsibilities.

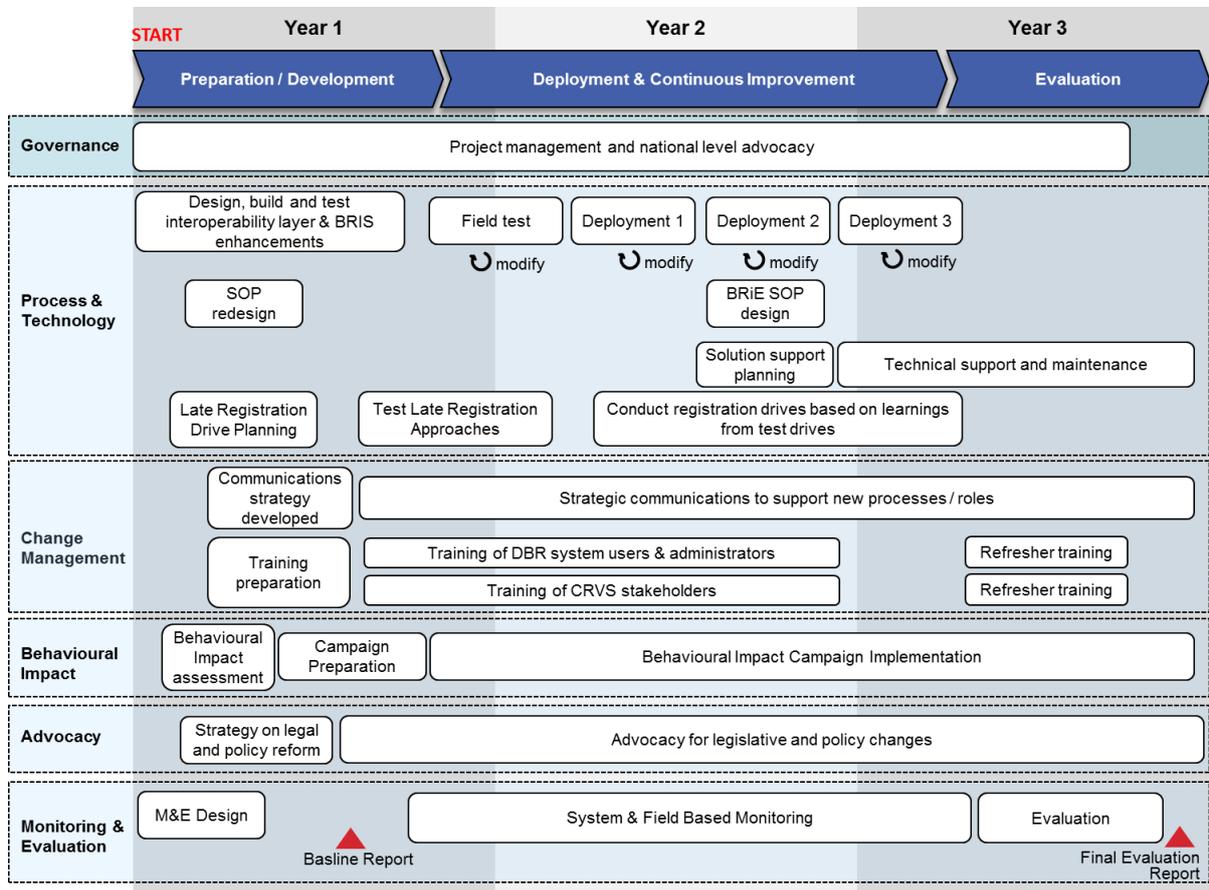


Figure 26. DBR Programme Workplan

The DBR programme will run over the course of 3 years and will be divided into 3 project phases; preparation and development, deployment and continuous improvement and evaluation.



Figure 27. DBR Programme Implementation Phases

Preparation / Development: The first phase will last approximately 12 months and include all activities prior to the deployment of the technology solution and use of the new registration processes. Across the workstreams this includes all strategy workshops and the design, build and test of solution components, communications and training materials. If activities are completed before the end of the year, deployment can commence earlier.

Late registration drive approaches will be designed and tested to identify the most effective approach, before being conducted at scale across programme districts in Year 2 and 3. The most

effective approaches can also then be used by the BDRP and/or partners to run late registration drives in non-programme areas.

Deployment: This phase will last approximately 18 months and include the deployment of the interoperable birth registration system, BRIS enhancements and process improvements, COMBI plan, and associated training to successively more community health workers and Union Parishad Offices. This gradual ramp up approach ensures that early deployments are tightly controlled and that ongoing monitoring and modifications activities can be effectively executed.

BRiE SOPs will also be developed and tested during this period, after the standard interoperable birth registration process has been well tested. Solution support planning will happen during this phase to ensure that in phase 3, the solution begins to be maintained by government actors who will maintain the system on an ongoing basis after the programme ends.

Deployment of the technology solution will be conducted in 3 waves to allow field testing of individual solution components on a small scale before introducing other components and ramping up. This allows actors and stakeholders involved in the process to learn and adjust to new ways of working, and allows immediate modifications to be made based on close monitoring of the solution's effectiveness.

Deployment Wave 1:

- A small number of health care workers to send birth notifications in each district.
- A small number of Union Parishad offices to use the enhanced BRIS application.
- Field-level monitoring conducted to get early user feedback and incorporate improvements into deployment wave 2.

Deployment Wave 2:

- Incorporates the lessons learnt from Deployment Wave 1.
- Increases the number of community health workers that are reporting births.
- Increases the number of Union Parishad offices to use the enhanced BRIS application.
- Introduces the monitoring and reporting tool to local and national government.
- Provides access to birth records to authorised agencies.

Deployment Wave 3:

- Incorporates the lessons learnt from Deployment Wave 2.
- Further increases the number of community health workers to cover the whole district.
- Further increases the number of Union Parishad Offices using the enhanced BRIS application to cover the whole district.
- Provides access to the vital statistics reporting dashboard.

Evaluation: The last phase commences once the interoperable birth registration system, BRIS enhancements and process improvements, COMBI plan, and associated training have all been fully deployed to the programme target areas. Support to the programme is reduced to sustainable levels and the programme is evaluated against the target outcomes and goals.

Technical support and maintenance activities will be tested during this phase to ensure that the system is effectively owned and managed by government actors once the programme ends. Refresher training courses will also begin, led by the BDRP and other government partners, to continue to build the skills of registration agents and all those involved in the continuous efforts to improve birth registration services in Bangladesh.

Programme Costs

Line Item - Budget Description	Year 1	Year 2	Year 3	Total Budget
	\$	\$	\$	\$
General Costs				
Human Resources	302,327	302,327	259,137	863,791
Travel	52,125	59,572	37,232	148,929
Total General Costs	354,452	361,898	296,370	1,012,720
Workstream Costs				
Process & Technology	285,944	428,917	238,287	953,148
Change Management	104,251	134,036	59,572	297,859
Advocacy	44,679	67,018	37,232	148,929
Behavioural Impact	107,229	160,844	89,358	357,431
Monitoring & Evaluation	72,975	52,125	83,400	208,501
Total Workstream Costs	615,078	842,940	507,849	1,965,868
Total Project Costs	969,530	1,204,839	804,219	2,978,588

Figure 28. Indicative DBR Programme Costs

The programme costs have been estimated based on the following assumptions:

- Government human resource costs are not included
- Existing MoH tablets will be utilised by the programme
- A programme office will be established in each district within the project scope

The above estimate relates to the implementation of the project described. Scale-up costs i.e. costs associated with implementing the DBR programme model in other areas and ongoing running costs will be calculated during the project in order to build the business case for widespread rollout.

Risks and Mitigations

Implementing the DBR project does bring with it certain risks. Identified risks and associated mitigation actions are listed below. It should be noted that with the conclusion of the limited deployment, a more comprehensive risk assessment and mitigation plan can be put in place before any efforts for scale-up.

	Risk	Mitigation
Governance	Lack of coordination (both technical & administrative) between Local Government and the Ministry of Health at both national and local levels	National Level <ul style="list-style-type: none"> DBR Working Group formed under the leadership of the CRVS Secretariat to coordinate and resolve issues between the two authorities. District Level <ul style="list-style-type: none"> District & Upazila committees formed with representation from all involved parties and managed by the Parishad Chairman (Public Representative). Mobilise community groups to lobby for effective implementation of the programme.
	Focus on implementation at the community level and not within the hierarchy of management will result in lack of accountability	<ul style="list-style-type: none"> Define clear roles and responsibilities for each level of health and local government management to improve accountability. Include all management levels in the change process from the beginning.
Existing System	Current state of BRIS database – existence of duplicate records	<ul style="list-style-type: none"> Robust plan to clean existing database in project locations All new births recorded in programme stored in separate database
	Absence of high-speed Internet (new system integrates health and NID which requires robust connectivity for real-time validation)	<ul style="list-style-type: none"> Fibre-optic cabling is being provided up to the Union level by ICT Division Design validation function to ensure minimal transfer of data files
	Re-registration during late registration drives	<ul style="list-style-type: none"> Design BRIS enhancements to support in improved identification of duplicate applications. Educate citizens in the new process, assuring them that it is easier to use existing registration details than register again.
Notification & Data Collection	Resistance to change and lack of motivation of registration actors (DRO and Health staff)	<ul style="list-style-type: none"> Implement relevant change management programme to sensitise and motivate all involved actors Potential provision of non-monetary incentives Link performance and rewards to results driven outcomes Ensure that additional responsibilities are formally included in job descriptions Issue clear directive from high-level authority of the importance and need for this programme
	Data is recorded incorrectly, creating an erroneous record	<ul style="list-style-type: none"> Provision of thorough training programme to process actors to ensure required capacity and accountability. Provide supervision of process in initial stages of the programme to assure quality of data.
Programme Sustainability	Tablets are not maintained by health workers in the long-term	<ul style="list-style-type: none"> Train health care workers how to correctly look after registration hardware. Include regular maintenance of registration hardware in LGD & MoHFW SOPs.

		<ul style="list-style-type: none"> Provision of cases for all tablets.
	Increased chance of localized corruption due to “on-demand” certification service and community based notification	<ul style="list-style-type: none"> Implement an anonymous corruption reporting mechanism for both staff and citizens to increase transparency. Employ monitoring mechanisms e.g. beneficiary feedback and “mystery informants” Encourage increased performance management mechanisms from LGD; share best practice performance management approaches used in similar contexts
Data Management	Metadata collected during notification/declaration is made available to third parties or unauthorized users	<ul style="list-style-type: none"> Implement strict data transmission permissions Advocate for comprehensive and robust data protection and privacy laws
	Data and databases are compromised during sharing of information	<ul style="list-style-type: none"> Data exchange layer built to limit access to birth records Access to vital statistics data through a reporting dashboard; access to raw information limited Codify and enforce solid privacy regulations
	Shared data is commercialised or used irresponsibly by receiving parties. Children and caregivers have no control over how their data is used	<ul style="list-style-type: none"> Access to aggregated vital statistics data only through a reporting dashboard; access to raw information limited Conclude solid agreements with shared agencies and partners on ownership, use, licensing and sharing permissions Advocate for comprehensive and robust data protection and privacy laws

Table 35. DBR Risks & Mitigations