COMPANY PROFILE

ISTL

Keeping your needs in mind.

About

Integrated Software and Technologies Ltd (ISTL) is specialized in custom software development, and hardware/devices and software integration, including but not limited to multi-modal biometric and security solutions such as AFIS, iris matching, facial recognition etc., top-notch biometric and demographic enrollment solution, mobile suspect identification and verification solution for government's law-enforcement agencies, social protection information system, management information systems and enterprise resource planning solutions, e-payment systems integrated with nation-backbone financial systems such as iBAS++ and Government to Person (G2P) payment system introduced by Bangladesh Government etc.

The Journey

Founded in the year of 2013, and **incorporated in the People's Republic of Bangladesh**, ISTL has been working relentlessly to provide with effective solutions to the government agencies in order for reducing the operational cost, better and faster results as well as taking these government organizations and agencies steps further towards the fulfillment of the Digital Bangladesh initiative.

Values

We not only provide with the solutions and products that are part of the scope of work of the projects that we undertake, but follow proven and solid methodologies for smooth project management, quick and effective risk mitigation, training and knowledge transfer, best practices during development and source code writing and, last but not the least, world class documentation for Inception Report, Software Requirements Specification, Software/System and Database Design, Training Manual, User Guide, and API/Source Code Documents etc.

We, as a company and a single united family of highly-skilled professionals, believe that the software and hardware development and integration ecosystem in Bangladesh and around the world can only sustain healthily by keeping the scope for the participation of different vendors and the service providers open and fair. With that in mind, we make sure that our developed solutions and systems adapt the best practices in terms of system architecture, usage of international standards, widely accepted and robust technologies, framework and development platforms etc. At the end of the day, best practices and international standards that we follow, technologies and architecture that we use, and attention to detail for our technical and user documentation that we give ensure that any other vendors following the same widely accepted international standards and methods will be able to further design and develop the systems and solutions that we have developed for our clients. This inspires competition and eagerness among the service providers to deliver the best and to live up to the standards that we take pride in.

Mission

Creating secure and efficient information infrastructure in private and public sectors through cutting edge security solutions and technologies and make society, enterprises like banks, airports etc. digitally secure by ensuring safe financial transactions, and bullet proof identity and access management.

Vision

Serving the country and the world as a market leader in providing identity management and digital security solutions and ensuring citizens' right for privacy of information sharing as well as secure financial transactions.

Certifications

ISO 9001

ISO 27001

BASIS Membership

Board of Directors

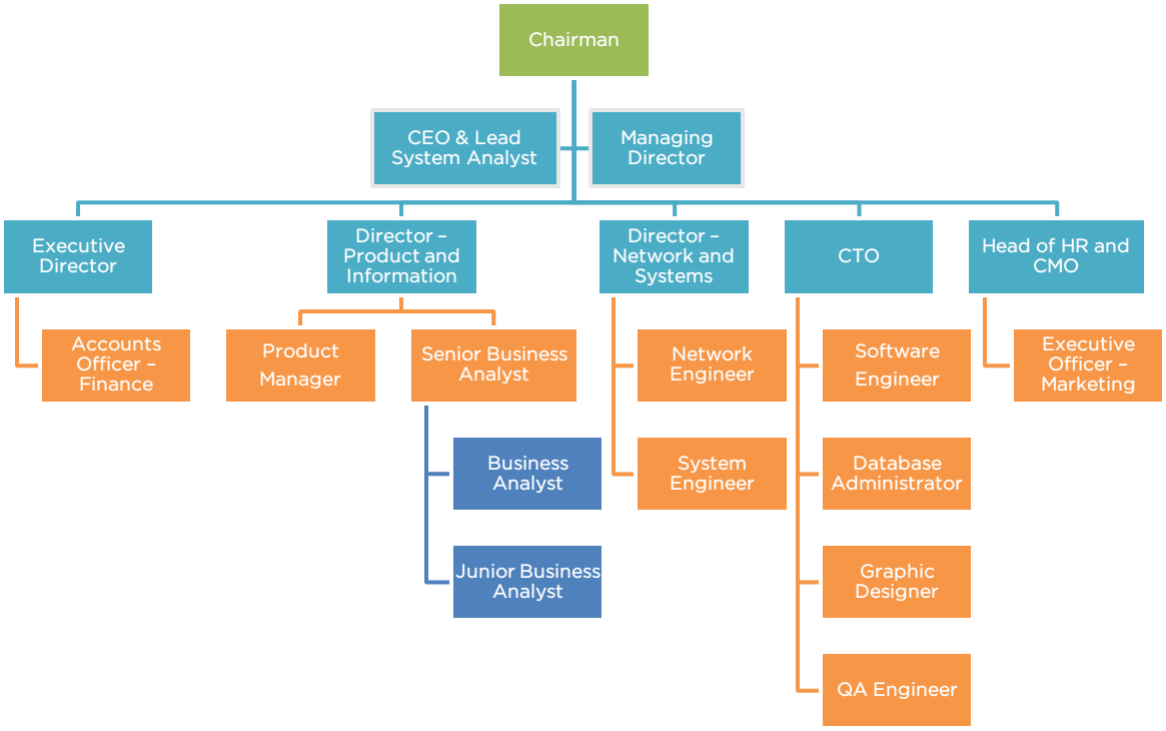
Serial No	Name	Designation
1	Chowdhury Saima Tabassum	Chairman
2	Farzana Yeasmin	Managing Director
3	A.H.M. Abdur Rahim Khan	Director

Resource Personnel

Serial No	Name	Designation
1	Chowdhury Saima Tabassum	Chairman
2	Farzana Yeasmin	Managing Director
3	Faisal Abdul Kadir	CEO & Lead System Analyst
4	AHM Abdur Rahim Khan	Executive Director
5	Niaz Morshed	Director – Product and Information
6	Farhan Azam	CTO
7	S M Rokibuzzaman Neon	Head of HR, CMO & System Analyst
8	Md. Abdullah-Al-Maruf	Director – Network and Systems

9	T M Khayrul Islam	Manager – Marketing and HR
10	Shad Humydee	Senior Business Analyst
11	Kazi Faisal	Business Analyst
12	MD. Fahad Khan	Business Analyst
13	Mohammad Anwarul Islam	Senior Software Engineer
14	MD. Zillur Rahman	Senior Software Engineer
15	Al-Amin Chowdhury	Senior Software Engineer
16	Tarik Bin Huda	Senior Business Development Manager
17	Lanin Ahsan	Director Admin & Finance
18	Rafiqul Islam	Senior-Executive Officer - Marketing
19	Md. Arif Hossain	Senior-Executive Officer - Marketing
20	Mohaiminul Ahsan	Executive Officer - Marketing
21	Mohiuddin Shakil	Software Engineer
22	Tareq Aziz	Software Engineer
23	Ismail Hossain	Software Engineer
24	Md Iqbal Hossain	Software Engineer
25	Masum Billah	Software Engineer
26	Arun Biswas	Software Engineer
27	Sarwat Islam Dipanzan	Software Engineer
28	Arafat Hossain	Senior UX Engineer
29	Nazmus Sakib	Senior Frontend Developer
30	Sabbir Ahmed Shourov	Hardware Engineer
31	MD. Baejid Hasan	Junior Officer R & D
32	Md. Sumon	Technician
33	Tahrim Shahriar	Accounts Manager - Finance
34	Mohammad Ali Zinnah	Data Entry Operator
35	Najmul Huda	Data Entry Operator
36	Hasan Ali	Office Assistant
37	Robin Hossain	Office Assistant

Organogram


Chairman
CEO & Lead System Analyst
Managing Director
Executive Director
Director – Product and Information
Director – Network and Systems
CTO
Head of HR and CMO
Accounts Officer – Finance
Product Manager
Senior Business Analyst
Network Engineer
Software Engineer
Executive Officer – Marketing
Business Analyst
System Engineer
Database Administrator
Junior Business Analyst
Graphic Designer
QA Engineer

Projects

Project	Details	Client
SB IMS **Country:** Bangladesh	The scope included Monthly maintenance of application software system and database in all immigration check posts throughout the country which also encompassed 24 hours support services for the maintenance of Immigration Management System (IMS) at 29 no. of operational check posts (out of 33), Special Branch HQ, School of Intelligence of SB, Several Sections of SBHQ including SCO, Passport and some other Government Offices. Overview of existing IMS Network Immigration, which is the first and last gate of incoming and outgoing Bangladeshi or Non-Bangladeshi passengers, identifies who is entering, remaining and departing the territory of Bangladesh. Immigration Police of Special Branch is responsible for controlling these international Gateways.	Special Branch, Bangladesh Police
DAI SPFMSP MIS Extension Phase - II **Country:** Bangladesh	The scope included making the existing Government to People (G2P) digital payment system of Finance Division (FD) adaptive to the present requirement of cash transfer to many people adversely affected by COVID-19 under social protection, providing technical expertise to the Finance Division to develop guidelines for MIS/IT system-based targeting, selection and enrolment for COVID-19 cash transfers, supporting the FD to expand G2P coverage of ongoing programmes with at least six relevant line ministries to the entire country and ensure regular payments of allowances to beneficiaries of such programmes, developing the capacity of relevant Government officials of FD, Line Ministries and relevant departments to manage and sustain G2P payment system and Social Protection Budget Management Unit's (SPBMU's) MIS, Make the SPBMU's Management Information System (MIS) robust and compatible to hold and process emergency cash transfers for COVID-19 response and future emergencies. This therefore contributes to the development of a shock-responsive Information management system for the Government, beyond the immediate COVID-19 crisis.	DAI
Bangladesh Immigration Visa On Arrival (VOA) Management Information System **Country:** Bangladesh	The project requirements of the Bangladesh Immigration Visa On Arrival (VOA) Management Information System included design, development and implementation, and deployment of an online and digital on-arrival visa providing and verification system that will verify and validate the arrival information, passport and other relevant information of the foreign immigrants who have applied for an on-arrival visa at the port of entry. Previously, the on –arrival visa processing was operated manually by the Special Branch of Bangladesh Police. The scope	Special Branch, Bangladesh Police

Project	Details	Client
	of the proposed system offers an online portal that will allow the user to apply for an on-arrival visa so that the entire process gets digitalized and computerized. Initially, the applicant has to upload all the necessary documents e.g. the valid passport, arrival information related documents in the portal for further verification. These information and relevant documents are then checked by the officer-in-charge and later sent to the field level officer for verification. The field level officer then performs verification process and uploads his/her feedback in the system. The applicant can always view the status of his application from the dashboard of the system. The scope also included a notification panel where the system always notifies the approval or disapproval of the application by sending email to the applicant within a predefined timeframe. The verification feedback is also sent to the e-gate system of Bangladesh airport that is integrated with the proposed VOA MIS so that the applicant can pass the e-gate and get permission to enter in the country. Due to recent pandemic situation, we are withholding the deployment of the system. As soon as the environment gets ready for deployment, we will initiate the process.	
DAI SPFMSP MIS Extension Phase - I **Country:** Bangladesh	The scope included Performing primary requirements analysis followed by delivering Inception Report/s, conducting detailed requirements analysis followed by delivering Software Requirement Specification (SRS), planning, designing and development of detail system and database design along with preparation of System Design Document (SDD), design and development of graphical user interface mock-ups based on the wireframes defined in the SRS, providing API documents to Department of Labor implementing Ready Made Garment and Leather Factory COVID affected beneficiaries MIS for implementing API connection, testing and Implementation linkage between SPBMU MIS Live Server and LM MIS, collecting requirements for new reports and design and implement new report, graph, statistics related section of SPBMU MIS design of linkage to EGPP and PESP MIS, analyze codebase and database of MoWCA MIS and design, develop and modify modules as per requirement by fixing bugs and providing maintenance support, collect requirements for new features in MoE MIS and design and develop modules as per requirements, modify data entry module as per new requirements for all schemes and implement selection process based on weightage for MoE MIS, modify payment module and student evaluation module based on requirements for MoE MIS, developing helpdesk module and student evaluation module based on new requirement for MoE MIS, prepare user manual and test all develop modules and fixing bugs accordingly for MoE MIS and providing maintenance support, performing testing based on the test cases defined in the SRS,	DAI

Project	Details	Client
	along with a cross check of the functionalities and system design implementation defined in the SDD, installation and configuration of production environment, and deployment of the system to the production, user Acceptance Test or Operational Acceptance Test based on client's requirement and implementation of received feedback, preparation of user manual, training manual, and test reports etc., conducting training for the end users and the technical users such as admins, developers, analysts of the system from client-side project team and acceptance of the UAT and the training along with other deliverables followed by project handover and closing.	
Bangladesh TA SSSR MIS Phase 1: RLECT MIS **Country:** Bangladesh	The scope included to proceed with the engagement of a suitable IT Application Development firm / vendor for the development and implementation of the RWCSI MIS. The scope also included to facilitate the delivery of the operations for RWCSI through an efficient and effective management information system (MIS) and the G2P Payments system facilitating payment integration and disbursement and SPBMU providing the integration approach and protocols to integrate with the G2P Payments system, including data rules and validation.	European Union
RAB Hand Held Fingerprint Scanner for Instant Identification with Necessary Software and Accessories. **Country:** Bangladesh	The scope included planning of design, development and implementation, and deployment of the RAB-SIVS based on the requirement and specifications during the software requirements specification phase, software requirements analysis for coming up with a detailed list and description for each of the functional and non-functional requirements based on the clients' needs and supply and commissioning of the Hand Held Fingerprint Scanner to the client within the given timeframe maintaining the requirement.	Rapid Action Battalion (RAB)
MoE Harmonized Stipend Program (HSP) MIS (SPFMSP MIS Fourth and Concluding Phase) **Country:** Bangladesh	Development of an MIS for Harmonized Stipend program by customizing the SESP MIS developed by the Project under previous contracts. The HSP MIS to be developed will include module that will allow institution to submit online applications from potential stipend students, Module for NID verification for parents/guardians and students above 18 years, module that will allow the Upazilas to update the applications and submit them to HSP Unit for final selection, module that will make it possible for HSP Unit to automatically select beneficiaries using the poverty means test formula that will be provided by HSP Unit, module for managing beneficiary's data, module for capturing conditionality (attendance, performance and marital status) from institutions online, module for generating payrolls and submitting them to SPBMU MIS for G2P Payments, ,module for Reconciling	IMC Worldwide Limited

Project	Details	Client
	payments including producing supplementary payrolls after correcting beneficiaries' payments data. The scope also required migration of existing SESP, SESIP, SEQAEP and HSSP data into HSP MIS. The project requirements also included ICT/project management expertise to establish connectivity between SPBMU MIS, and the following Government line ministry databases to Birth Registration System (BRIS) and Harmonized Stipend Program's MIS of MoE.	
Bangladesh Returnee Case Management System (RCMS) **Country:** Bangladesh	The project requirements included Development, deployment and commissioning of Custom built software modules and components of Returnee Case Management System (RCMS) by the International Organization for Migration (IOM). The requirements included designing and implementation of a secured login by introducing 3 Factor Authentication (3FA) along with one time passwords, session restrictions, providing features based on the role of the user and integrating different modules and components of the system with one another, as well as integrate the same with external systems if any is required. Requirements also included designing and preparation of the API design and Database schema according to the system and database requirement analysis, in collaboration with the client and incorporating any client feedback regarding the API design and Database schema for the successful implementation. RCMS features users to enroll cases and corresponding application submission. It also modulates the status of a case through the entire life-cycle processing through the extranet and intranet subsystems. There is a dashboard which previews various statistical data on the dashboard, case status, recent cases and a customable interface for the user. It also facilitates and modulates all interview arrangements, schedule and venue, notification, e-mail and interview platforms. The system also facilitates searching to all levels of users featuring pre-emptive search filtering, searching on multiple key words, customizable filtering range and role-wise search results.	International Organization for Migration (IOM)
Bangladesh RCMS AFIS **Country:** Bangladesh	The project requirements included Supply, delivery and commissioning of an Automated Fingerprint Identification System (AFIS) including necessary software, hardware and licenses by the International Organization for Migration (IOM). This system efficiently features one-to-one and one-to-many matching of a given biometric fingerprint input against the stored biometric records within the system. At the same time IOM RCMS AFIS features automated synchronization with the data sources of multiple stakeholder agencies connected with this system. As a result, this system always remains updated and for the deployment of specific identity instance management algorithms, the redundancy of	International Organization for Migration (IOM)

Project	Details	Client
	de-duplication will be obsolete. In addition to that, a stand-alone AFIS Engine being a part of this project, the user of this system with proper access is able to adjust threshold for False Acceptance Ratio (FAR) and False Rejection Ratio (FRR) which even results better matching result.	
IOM RCMS BEC-SB Communication Interface **Country:** Bangladesh	The solution we offered included development and setting-up Communication Interface between Bangladesh Election Commission and the Special Branch of Bangladesh Police. This main objective of this project was to eradicate the communication gap and time consumption for verifying a Bangladeshi national in EU countries and introduce a solution that results consistency with a systematic approach. By deploying this system, system operators upload received biometric and demographic information of a person. The system after a certain interval sends the information to BEC for verification and fetches the result. The system has been developed focusing on three main categories of users i.e. System Administrators, Top Level Management Users and System Operators. Deployment of this system at the same time automated existing methodologies and rendered an efficient solution that goes beyond the envisaged objectives ensuring a efficient and credible improvement for Bangladesh.	International Organization for Migration (IOM)
Bangladesh Prisoner Database Management System (BPDMS) **Country:** Bangladesh	The offered solution included development, implementation and management of a prison database management system for Bangladesh Prison Directorate to automate the prison operations and to create a digital information repository. The project also included an effective management of any prison system is dependent on the ability to collect, store, maintain and access information on individual prisoners. The number of persons held in custody, their classification, along with their health and rehabilitative needs provide important information for prison managers to identify resources requirements, set budgets, manage health and safety, and develop appropriate rehabilitative and treatment programs. At headquarters, the consolidation of data of all prisoners is a critical policy-making tool in order to identify trends and address problem areas, such as the number of prisoners awaiting trial or the special needs of particularly vulnerable prisoners.	United Nations Development Programme (UNDP)
PBI Integrated Biometric and Information Sharing Solution with NID Database (PBI Suspect Identification and Verification System) **Country:** Bangladesh	The project requirements included supply and commissioning of mobile wireless fingerprint scanners, and mobile biometric identification and verification software solutions. Scope also included the installation and configuration of the components supplied so that PBI officials can seamlessly use them both at crime scene and in office, as well as matching the captured data against the NID	Police Bureau of Investigation (PBI), Bangladesh Police

Project	Details	Client
	database to verify the identity. The system is capable of matching with BEC citizen database of over 100 million records and instantly view the NID information on screen through 1:N fingerprint match. The PBI is also using the system for surveillance and access control inside their Headquarters for outsider visitors.	
PBI Mobile Wireless Fingerprint Scanner **Country:** Bangladesh	The project requirements included supply and commissioning of mobile wireless fingerprint scanner. Scope also included the installation and configuration of the components supplied so that PBI officials can seamlessly use them both at crime scene and in office, as well as matching the captured data against the NID database to verify the identity. The system is capable of matching with BEC citizen database of over 100 million records and instantly view the NID information on screen through 1:N fingerprint match. The PBI is also using the system for surveillance and access control inside their Headquarters for outsider visitors.	Police Bureau of Investigation (PBI), Bangladesh Police
PBI Ten Print Live Scan System **Country:** Bangladesh	The project requirements included supply and commissioning of ten print live scan system. Scope also included the installation and configuration of the components supplied so that PBI officials can seamlessly use them both at crime scene and in office, as well as matching the captured data against the NID database to verify the identity. The system is capable of matching with BEC citizen database of over 100 million records and instantly view the NID information on screen through 1:N fingerprint match. The PBI is also using the system for surveillance and access control inside their Headquarters for outsider visitors.	Police Bureau of Investigation (PBI), Bangladesh Police
PBI Single Digit Optical Scanner **Country:** Bangladesh	The project requirements included supply and commissioning of Single Digit Optical Scanner. Scope also included the installation and configuration of the components supplied so that PBI officials can seamlessly use them both at crime scene and in office, as well as matching the captured data against the NID database to verify the identity. The system is capable of matching with BEC citizen database of over 100 million records and instantly view the NID information on screen through 1:N fingerprint match. The PBI is also using the system for surveillance and access control inside their Headquarters for outsider visitors.	Police Bureau of Investigation (PBI), Bangladesh Police
Finance Division SPFMSP MIS Pilot (SPBMU MIS and MoWCA/DWA MIS) **Country:** Bangladesh	ISTL, in a Joint Venture with Commlink Info Tech Ltd. and Praescient Software (Ghana) has successfully completed the project of designing and development of two Management Information Systems facilitating the beneficiary management for the Line Ministries of the Finance Division of	Maxwell Stamp PLC

Project	Details	Client
	Bangladesh Government. The central MIS system SPBMU MIS and two Line Ministry MIS called MOSW (Ministry of Social Welfare) MIS and MOWCA (Ministry of Women and Children Affairs) MIS are under the scope of work for this project. Primarily the system will need to handle approx. 50 million beneficiaries, their allowance transactions, payroll generations, NID verification, approval etc.	
Finance Division SPBMU MIS Linkage and MoE SESP MIS (SPFMSP MIS Second Phase) **Country:** Bangladesh	Designing and implementing the linkage between the central SPBMU MIS and other six schemes MIS from across five Line Ministries, and development of SESP Management Information System for Ministry of Education (MoE), facilitating the student-beneficiary management for the MoE Line Ministry of the Finance Division of Bangladesh Government. The scope of work for linkage of the schemes MIS to the central system includes but not limited to the extension of replicated schemes MIS databases and replication of the rest of the schemes databases.	Maxwell Stamp PLC
Finance Division SPBMU MIS Further Development and Schemes MIS Linkage (SPFMSP MIS Third Phase) **Country:** Bangladesh	Further Design and Development of Social Protection Budget Management Unit Management Information System (SPBMU MIS) and Linkage to MIS of other Schemes. This project also included the enhancement of the security features of the SPBMU MIS system, modules development of iBAS++, the central management system of Bangladesh Finance Division in order to integrate seamlessly with the SPBMU MIS, and last but not the least, integration with new schemes MIS for the rollout of the G2P Payment System as well as the Birth Registration System of Bangladesh etc.	Maxwell Stamp PLC
WFP School Meal Program e-Payment System **Country:** Bangladesh	Design and development of e-Payment System software solution for WFP School Meal Program, along with other related services such as testing, training, and documentation etc. The solution is designed and being developed in order for meeting all the requirement specified by WFP such as enrollment of vendors and cooks, budget allocation and disbursement, tracking the purchases of foods and other necessary commodities under the program, integration with payment gateway through Bangladesh Bank, integration with SPBMU MIS for communicating with BEC NID database for NID verification etc.	Environment and Social Development Organization (ESDO) on behalf of WFP Bangladesh
SB Multi-modal Biometric Access Control System (BACS) for PMO, Ganabhaban and Bangabhaban **Country:** Bangladesh	Designing and implementing a unified multi-modal biometric enrollment system and a fully-featured walk-through access control system featuring face recognition system, iris matching and fingerprint identification and verification of the personnel and the visitor of the Prime Minister's Office and other two locations of SB.	Special Branch, Bangladesh Police

Project	Details	Client
Fire Service and Civil Defense HRMS **Country:** Bangladesh	Development, supply and commissioning of a fully featured online Human Resource Management (HRM) system that should include record keeping and management of employees, attendance, time, leaves, office locations, travel, payroll, online recruitments, awards, training, role based access control, inventories, audit trails and reports etc.	Bangladesh Fire Service and Civil Defense
Eurotel HRMS **Country:** Bangladesh	Development, supply and commissioning of a fully featured online Human Resource Management (HRM) system that should include record keeping and management of employees, attendance, time, leaves, office locations, travel, payroll, online recruitments, awards, training, role based access control, inventories, audit trails and reports etc.	Eurotel Business System
Interport ERP **Country:** Bangladesh	Development, supply and commissioning of a fully featured online ERP system featuring the most common ERP modules such as Human Resource, Inventory, Sales & Marketing, Purchase, Finance & Accounting, Customer Relationship, Management(CRM), Engineering/ Production, and Supply Chain Management (SCM) etc.	Interport Ship Agents Ltd.
Gonoforum Political Profile Web Application **Country:** Bangladesh	Design and development of a website that represents an online and dynamically configurable and editable political profile of Bangladesh Gonoforum (a reputed political party of Bangladesh). The website is capable of portray all activities, news, press releases of the political party and also the website contains a media gallery where all the previous activities, achievements can be highlighted.	Bangladesh Gonoforum
PBI Suspect Identification and Verification Pilot **Country:** Bangladesh	Supply, commissioning, design and development of a biometric fingerprint identification and verification system for a limited number of PBI offices as a pilot phase of the project, which later expanded into a full-fledged SIV system for PBI. ISTL performed feasibility analysis, detailed requirements specification along with PBI project team in order to make the pilot phase successful. ISTL also supplied Ten Print Live Scan Scanner, Single-digit Optical Scanner, Mobile Wireless Fingerprint Scanner, and Mobile Biometric Solution.	Police Bureau of Investigation (PBI), Bangladesh Police
DBBL Mobile NID Fees Payment Gateway **Country:** Bangladesh	Supply and commissioning of a payment gateway connected to DBBL mobile banking application that is going to be used for receiving government fees from individual Bangladeshi citizens, when and if they would like to submit a correction request or report card-lost or stolen incidents etc. for their NID. Application also works with all the mobile operators of Bangladesh. ISTL supplied customized & secured	Dutch Bangla Bank Ltd (DBBL)

Project	Details	Client
	payment gateway solution enabled the end users make payments easily from directly their mobile phone using any mobile operators in Bangladesh. The solution was highly optimized and performance was ensured so that the number of concurrent users cannot be a problem for system's performance and uptime/availability of the service.	
Robi Music Streaming **Country:** Bangladesh	Development and Google Play store setup of Robi Tunes music app that features millions of music from the local and international artists for Robi's paid internet subscribers to download and listen. The required features included high definition song streaming, in-app purchases, push updates, audio player, playlists, admin-side library management, UI theme changing etc. Solution included a complete & fine-tuned native Android application deployed at Google Play app store that can only be used through paid internet subscription of Robi. The users can download songs from the massive library of music on a pay-per-download basis. The streaming server is highly optimized to provide the best service to subscribers and also an in-depth technical training as well as user guide was provided to the Robi tech team so that they can maintain the system on their own.	Robi Axiata Ltd

Clients

United Nations Development Programme (UNDP)

United Nations Office on Drugs and Crime (UNODC)

Bangladesh Jail

International Organization for Migration (IOM)

Maxwell Stamp PLC

Strengthening Public Financial Management for Social Protection (SPFMSP)

World Food Program (WFP)

Ministry of Finance (MoF)

Ministry of Education (MoE)

UK Aid

Australian Aid

Police Bureau of Investigation (PBI)

Bangladesh Police Special Branch (SB)

Dutch Bangla Bank Limited (DBBL)

Bangladesh Fire Service & Civil Defense

MultaCom

Eurotel Business System

Robi Axiata Limited

Interport Ship Agents Ltd.

IMC Worldwide

Partners

Oracle Corporation

NEC Global

Axis Communications

Gemalto N.V.

Praescient Software Limited

Commlink Info Tech Ltd.

Alcatel-Lucent Enterprise

Bright Beam

Innovatrics

BullGuard

ColorBox

CloudCoder

Thales

Technical Expertise

Expertise in 90+ technologies. A total of 7 different categories of skills.

FRONT-END

- Languages: HTML5, CSS3, JavaScript, ECMAScript, TypeScript, CoffeeScript, SASS, LESS
- UI Frameworks and Widgets: Bootstrap, jQuery UI, Kendo UI
- JavaScript Frameworks:
- Front-end: React, Backbone.js, AngularJS, Angular 2
- Back-end: Node.js (Loopback, Express, Koa)
- Cross-platform: React Native, Ionic, Cordova, PhoneGap, Xamarin

MICROSOFT .NET

- CMS: Sitefinity, Kentico, Orchard, Sitecore
- Frameworks: ASP.NET (MVC, Web API, SignalR), ASP.NET Core 1.0, WPF, WCF, Entity Framework, NHibernate
- Data Management:
- RDBMS: MSSQL, Azure SQL Database
- NoSQL: MongoDB, Azure DocumentDB, Azure Table Storage, Azure Blob Storage
- Caching: Memcached, Redis, Azure Cache
- Searching: Elasticsearch, Azure Search
- Queue: MSMQ, Azure Service Bus, Azure Queue
- Cloud Computing Platforms: Amazon Web Services, Microsoft Azure Big Data, Hadoop, MapReduce, Azure HDInsight
- Front-end Stack: Please refer to the FRONT-END section.

JAVA

- CMS: Alfresco
- Frameworks: Spring (Spring Boot, Spring Data, Spring XD, Spring Integration, Spring Security), Dropwizard, JSF, Grails, Play, Hibernate, iBATIS, JasperReports
- Web Application & J2EE Container: Tomcat, JBOSS EAP, WEBLOGIC, GLASS FISH
- Data Management:
    - RDBMS: Oracle, MySQL, PostgreSQL, Amazon RDS
    - NoSQL: MongoDB, CouchDB, Cassandra, Amazon DynamoDB
    - Caching: Memcached, Hazelcast, Redis, Amazon ElastiCache
    - Queue: RabbitMQ, ActiveMQ, Amazon SQS
    - EJB 3.0 & Web Services: SSB, SLB, MDB, JAXWS, WS-Policy, WS-Security, WS-Security Policy, WS-TRUST, WS-FEDERATION

PHP

- CMS: WordPress, Drupal, Magento
- Frameworks: Symfony, Laravel, Yii, Zend, CodeIgniter
- Data Management:
    - RDBMS: MySQL, PostgreSQL, Amazon RDS
    - NoSQL: MongoDB, CouchDB, Cassandra, Amazon DynamoDB
    - Caching: Memcached, Hazelcast, Redis, Amazon ElastiCache
    - Searching: Sphinx, Solr, Lucene, Elasticsearch, Amazon CloudSearch
- Queue: RabbitMQ, ActiveMQ, Amazon SQS
- Big Data: Hadoop, MapReduce, Amazon EMR, Apache Zookeeper, Apache HUE, Apache Ambari, Apache Kafka, Apache Spark, Apache Storm, Pentaho
- Front-end Stack: Please refer to the FRONT-END section.

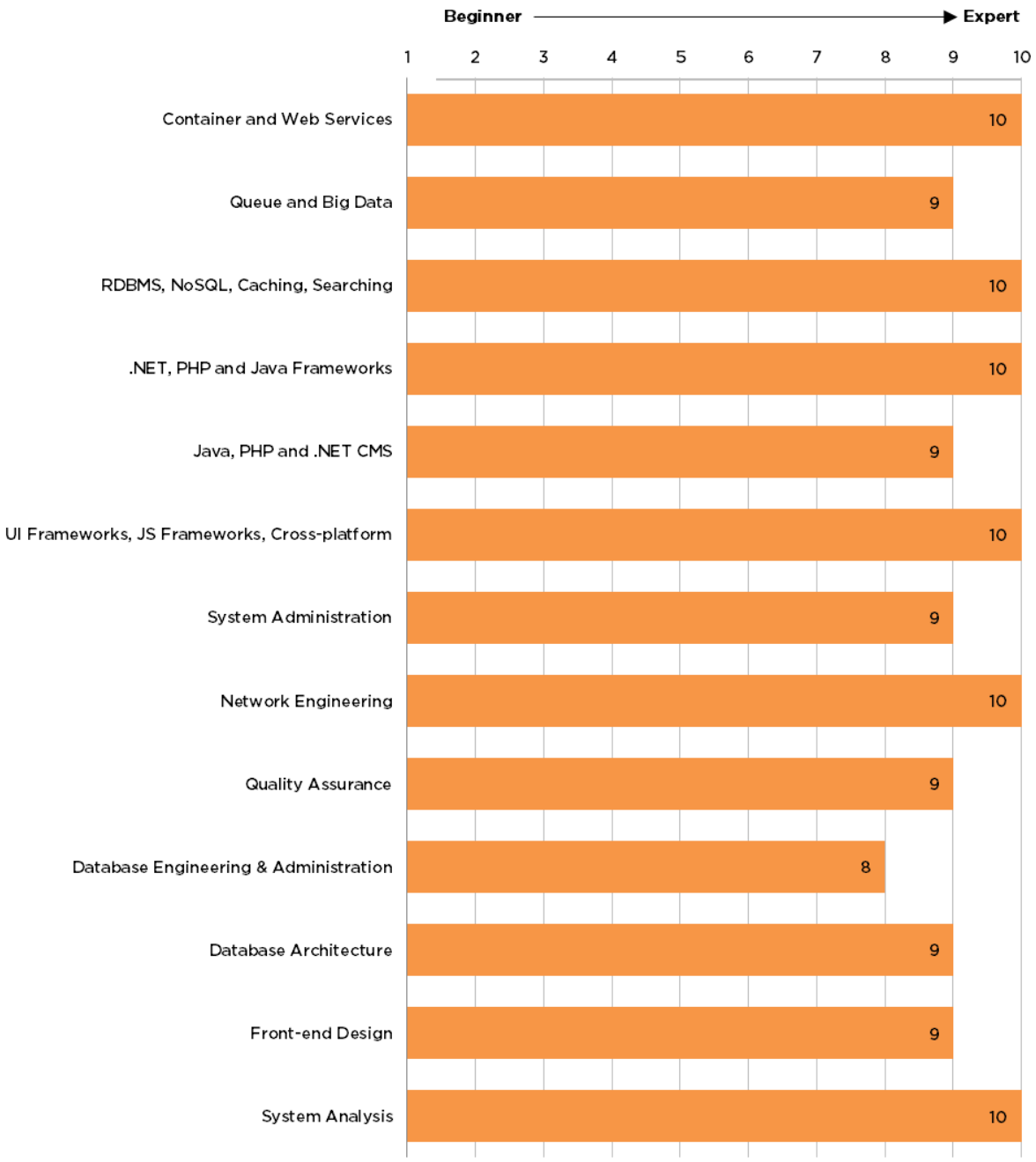
Technology Stack

Following stack shows some of the tools and technologies that we are expert in out of 90+.

Front-End	
Back-End	
Database	
Content Management System	
IDM	
Enterprise Service Bus	

Skill Matrix

In a rating scale of 10, we are no lower than 8.



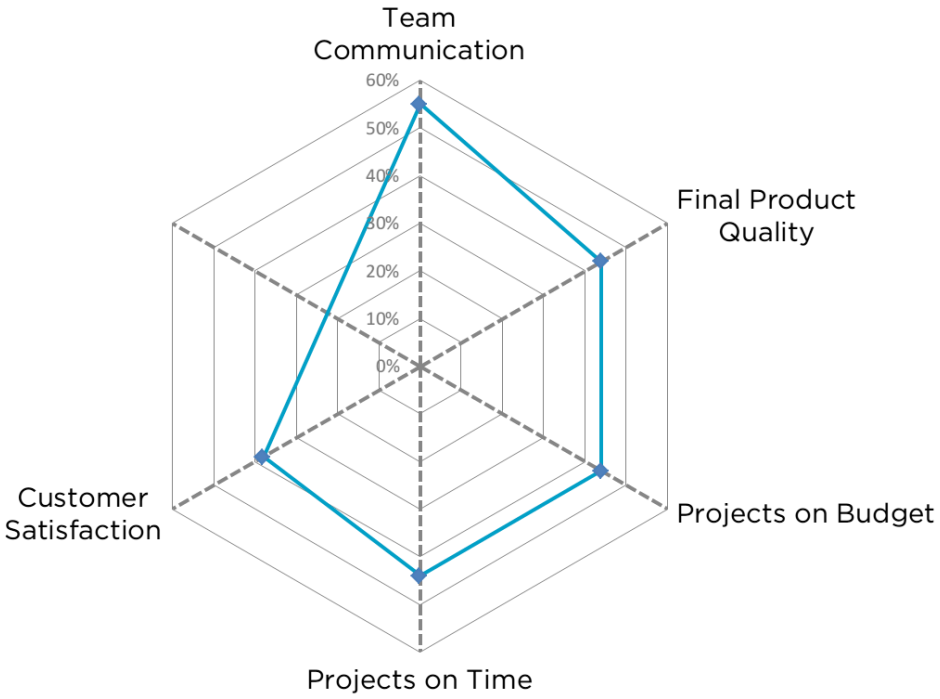
Project Management Controls

ISTL understands the need for having a solid plan and a set of strategies in place to prepare the project management controls based on which each of the projects that the company undertakes would be controlled and managed so that the chance for any fall-outs can be minimized as much as possible and also each new project brings out new insights that help us get better in delivering the best to our clients on time and without exceeding the budget.

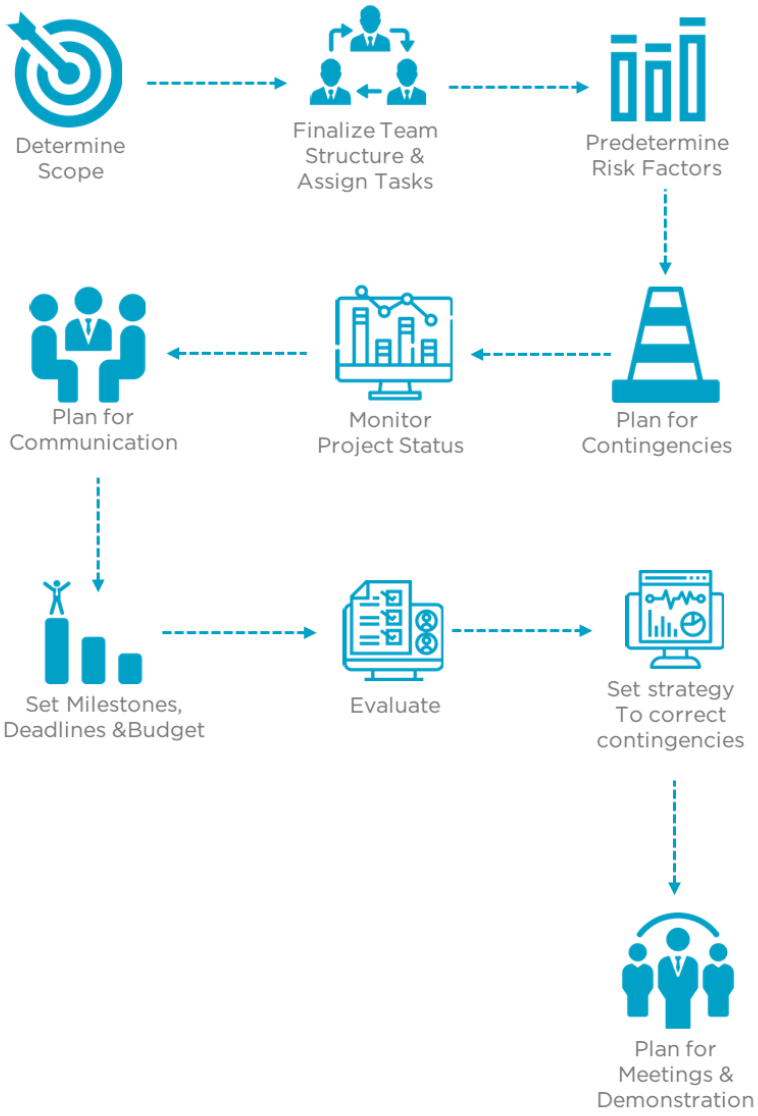
It is internationally accepted and proven over a long period of time that the successful implementation of the project management controls helps the organization and the project management teams get better in many aspects such as the followings:

- **Team Communication**
- **Final Product Quality**
- **Projects on Budget**
- **Projects on Time**
- **Customer Satisfaction**

The following radar chart shows the impact of well-planned and perfectly implemented project management controls on the above mentioned criteria:



ISTL prepares for each project that it undertakes by having a solid plan and a set of strategies that cumulatively define the project management controls that we use in our projects. It is done in the following simple steps that have been proven to be effective so much so that we have not so far had any cases of project failure or late deliveries or unsatisfactory implementation or lack of technical soundness:



STEP 1 **Determine Scope**	We finalize the scope of work for the project before planning for anything else by analyzing the requirements set forth by the clients and preparing the requirements specification document. This document will also be reviewed and approved by client before proceeding with the implementation of the activities that are defined by the scope of work.
STEP 2 **Finalize Team and Assign Task**	Once we know the project scope with as much clarity as it is possible in the beginning of the project, we can then finalize our team and make necessary adjustments to the list of the experts/personnel with the consent of the client

	and also assign each activity/task to the relevant team member. We make sure that each member of the team clearly knows the scope of work for that particular project and also aware of the deadlines and dependencies for the tasks that they have been assigned to.
STEP 3 **Predetermine Risks**	In any mission-critical and large scale projects, the risks management plays a crucial part in the success of the project because without having a plan for taking and avoiding risks with calculative measures as well as educated guess, it would be impossible to prevent the risks from becoming a real project sabotaging threats. The personnel working at ISTL have been involved in many such projects in their long and impressive career and their expertise and experience makes sure that the risks taken and the risks avoided are to the best interest of project's success.
STEP 4 **Plan for Contingencies**	No matter how well the risk management plan is or how well planned the project timeline can be, there is always a chance for a fall-out that might become a threat for the project's successful completion. We come up with a list of such contingencies by using our experts and based on their experience, we also set up the plans for mitigating such issues to take care of any contingencies that might be in play during the project. In short, we take preparation in case the project is forced to be taking a different path so that even with a dynamically changed critical path of the project, the team can finish their work on time to the satisfaction of the client.
STEP 5 **Monitor Project Status**	When preparing project timeline, we follow the internal standards and set up clearly defined milestones as well as the critical path for the project. This helps us monitor the activities and their completion on time and which delay might cause the whole project to be delayed and which ones can be mitigated without much issue. The constant monitoring of the project and its progress through meeting and reviews among the team members and the project managers help us understand what needs to be changed to make sure that the project's objectives are all met on time and on budget.

STEP 6 **Plan for Communications**	Communication is the key to project's success. Effective and seamless communications within the ISTL's project team as well as between the stakeholders and the ISTL project manager and the management personnel are of top most priority. Therefore, a solid plan for communication within the team members and regular progress reporting, demonstration etc. to the client and stakeholders is always in place.
STEP 7 **Set Milestones, Deadlines, and Budget**	While planning for the project and its timeline etc., it is extremely important to divide the deliverables into several milestones based on which the critical path of the project can be determined. Broken down deadlines for each milestone can also help the project manager understand whether the progress and completion of the activities are on schedule or not. Based on the work breakdown and further task breakdown along with assignments, a solid budget is set for the project so that exceeding the limit for the budget can trigger an alarm for the project manager and he can take necessary steps to mitigate the issue.
STEP 8 **Evaluate**	Constant monitoring coupled with evaluation makes sure that nothing out of the ordinary is happening in the project that the PM is not aware of. Based on the evaluation, a list of contingencies can be identified, which is extremely important because without knowing the problem, there cannot be any solutions.
STEP 9 **Correct Contingencies**	Once the problems are identified based on the evaluation, a list of contingencies is prepared and tackled each item on the list one by one through thorough analysis and planning for each. This is just as important as evaluation since without correcting the problems that might be present from the project management perspective, a successful delivery of the project might be in question.
STEP 10 **Plan for Meetings and Demonstrations**	ISTL believes that communicating with the clients and the stakeholders in all stages of the project timeline is crucial for the success of the project. Therefore, we always follow a strict and well-planned methodology for arranging meetings with the client and the relevant stakeholders and take their feedback on the work that has been done so far and also demonstrate the progress so that client can give

feedback that can be before getting into the final testing and UAT phase of the project. Each meeting and demonstration session comes with specific agenda and meeting minutes so that everything required is documented and can be referred to in future as and when needed.

ISTL established a mission and a vision from the beginning and has been working relentlessly towards its goals as becoming one of the leading solution designers and providers in the ICT ecosystem so that it can make a long-lasting impact on the growth of Bangladesh and eventually, the rest of the world. So far, we have been choosing only the projects that promised to help the government organizations or the privately held enterprises to better their services to the public as well as their client, whichever applicable. This singular vision inspires us as a united family from the management personnel to the lowest in the organizational hierarchy to share the same values and vision. We believe that this has been the first step towards blooming of ISTL as a sustainable organization.

Since we have started in 2013, we believe that we still have a long way ahead of us and there is much room for improving in terms of finalizing its sustainability measures and thus publicly publish the statement of its commitment. Meanwhile, ISTL is learning from different perspective and real-life operational experience that it is gaining over the period of time working with government and private organizations.

"Every employee of a sustainable business shares common values and a singular vision among themselves and they see it as the ultimate goal."

*- **Niaz Morshed**, Director – Product and Information at ISTL*

ISTL's Measures towards Sustainable Environment

ISTL has been enforcing best practices for sustainable environment by encouraging its employees to use less energy consuming vehicles, using only green packaging or recycled packaging, choosing partners and suppliers that adhere to sustainable standards for their products and goods that are being procured by ISTL etc. In near future, ISTL also has a plan for publishing its sustainability plan and commitment statements once the company can establish the fact that it has been able to reach a certain stage to do be able to have an official statement published. In addition to that, ISTL also has a plan to hire a consulting agency in order to finalize and review and suggest its sustainability commitment and activities. After all, the environment is what we all live in and it is our shared responsibility to stay committed to a sustainable environment.

Quality Assurance and Risk Mitigation

ISTL follows widely accepted international standards and best practices for laying out its quality assurance procedures and risk mitigation measures in order for making sure that the provided solutions are up to the mark in terms of quality and also the project management control has specific risk mitigation measures in place so that the project management body can take

appropriate measures and steps to decide which risks to take and which to avoid.

ISTL adheres to the quality assurance standards as per the guidelines and requirements of the International Standards Organization (ISO) and as a result, it has been awarded the **ISO 9001:2015 Quality Assurance Certification** by ISO for the services and solutions that it provides to its clients, which also indicates ISTL's capability for providing with high-quality core services and solutions for any mission-critical large scale government, NGO or private enterprises.

Quality Assurance Procedures

ISTL has a detailed and specific Quality Assurance Methodology for the projects that it undertakes – assuring the highest quality delivered that is possible within the budget and the timeline to the satisfaction of the client and relevant stakeholders. Here we are outlining the core principles that are responsible for maintaining the quality of the project outcome consistently across the projects:

- **Organization**
- **Work Verification**
- **Material Receiving**
- **Supplier Qualification**
- **Quality Feedback**
- **Corrective Action**

The following table describes each of the above listed in brief:

Organization	A detailed list or chart or table for the tasks and activities that need to be implemented in order to meet the project requirements set and approved by the client. These tasks and activities are then modularized into different module requirements and the assignment of the tasks to the specific team personnel based on their role in the project. In this way, all team members get a clear idea about what to be expected from the project as a whole and also their specific duties to be carried out. This organization document also requires to be including the plan for training and knowledge transfer, documentation and their requirements and standards to be met.
Work Verification	A rigorous plan for work verification or testing of the implemented features and activities are in place, which includes but not limited to the tools and technologies that the QA engineers on the team should use for that project and the particular steps that should be taken to test the system and come up with a report of the tests that have been undertaken so that the development team members and project manager can take necessary actions to mitigate the issues found by the quality assurance personnel.
Material Receiving	If and when there are projects that require procurements of devices and products of other vendors, ISTL looks into the products' features, technical specifications, international standards that the adhere to, and compatibility/adaptability with the system that is being developed or

	implemented for the client. The quality of the received goods is also tested rigorously in order to make sure that they are in best shape as promised by the manufacturer of that product.
Supplier Qualification	It is also important to verify and inspect the qualification of the supplier of the procured items to make sure that they also as an organization or the manufacturer meet the required standards and international best practices such as ISO QA certifications, CMMI level of the organization, if applicable etc. ISTL quality assurance team prepares a list of qualified supplier and then inspects their goods to choose the best.
Quality Feedback	ISTL has a team of quality assurance professionals who are experts in their field of assessing the quality of the developed system and the received materials from the third party vendors, if and when applicable. Based on their assessment, they prepare a list of feedback, if any, suggesting any improvements or changes that are required to mitigate any problems or issues found. The other part of this process directly involves the client and the stakeholders including but not limited to the end-users of the system in order to take their feedback on the developed system so that their requests can also be accommodated by the development team personnel and in the end, the project comes up with a satisfactory outcome.
Corrective Action	Finding out issues and preparing the QA feedback report is only part of the solution. The issues that have been figured out by the QA team as well as the client and stakeholders must be addressed by the implementation team personnel in order to provide with a product that works properly as per the requirements specified by the client.

Risk Mitigation Measures

As software and hardware development and integration company, ISTL has to implement risk mitigation measures at two levels of its regular operations, which are as follow:

- **Project Risks**
- **Operational Risks**

The following sub-sections describe the risk mitigation management strategies that ISTL employ in order to manage the risks and consequences in its day to day operations and project management activities.

Project Risks Mitigation

Risk mitigation for any projects that ISTL undertakes is a crucial and important part of the overall project management and planning scope. Analyzing the risks of the project based on its requirements and the activities that need to be undertaken as per the work breakdown structure of the project plan, the project manager assigned by ISTL comes up with a robust risk mitigation

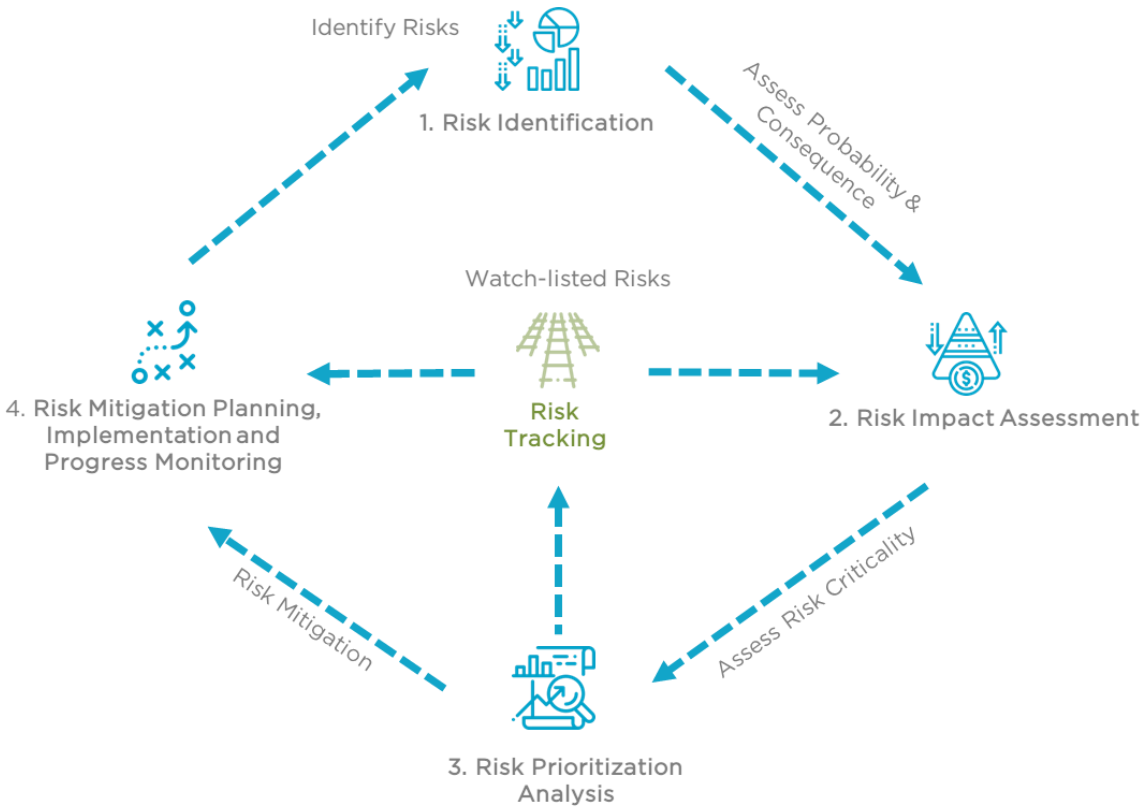
and management plan for that particular project, discuss it with the client as necessary and other stakeholders and team members as well in order for keeping everything in the loop so that they can expect what unforeseeable things that might occur during the project.

There are several standard steps towards mitigation and management of the project risks that are as follow:

- Risk Identification
- Risk Impact Assessment
- Risk Prioritization Analysis
- Risk Mitigation Planning
- Risk Tracking

Since the above mentioned process that ISTL adapts for risk mitigation planning is an iterative process, the above listed steps are not always in that particular order as they can take more than one paths in order to complete the iterations and the purpose of successful risk identification and mitigation planning along with constant monitoring of the project progress as well as tracking the risks that have been identified already.

The following diagram shows the standard process of risk mitigation planning and tracking as the project moves forward:



Risk Identification

Risk identification is the first step in the risk mitigation and management process in which the project manager or director or whoever is in charge of

	risk factoring and management would perform an analysis on the scope of work, timeline and project plan etc. and define the risk events and their relationships.
Risk Impact Assessment	Once the list of risk events and their relationships are defined by the project in-charge, the probability and consequences of the identified risk events would be assessed in order to coming up with a report of the impact assessment in which all the listed and identified risk events would be marked with the assessed impact level along with level-assessment justification, comments and suggestions on how to handle this risk event etc. The impact level of the risk events would be based on the probability of the even happening as well as the consequences of the risk events, if a particular risk is indeed taken. The consequence may include but not limited to the cost, schedule, technical performance impacts, and compatibility and/or functionality impacts etc.
Risk Prioritization Analysis	Once the impact assessment is done an all identified and defined risk events, the project manager or director would then analyze the impacts and prioritize the risks in an order that should start with the most critical risk event first and the least critical risk even last i.e. in a most-to-least order. This rank-order of the risk events or, in other words, prioritization analysis is done by using a proven method called 'application of the decision-analytic rules'.
Risk Mitigation Planning	Risk mitigation planning is our ultimate goal and center of this process but that cannot be done without going through the first three steps. Once the prioritization list for the risk events are in order and we know about the most critical risk events, the project in-charge then can proceed on making plans for risk mitigation for the critical ones and leave the rest of the risks on watch list so that they cannot get into the critical state without triggering an alert into the project manager or director's mind. The risk events that are assessed as of medium and high criticality would only be considered for risk mitigation planning. Once the risk mitigation plan is in place, the existing risk events need constant reassessment by the project manager in order to make sure that newly born risk events are being watched and addressed properly.
Risk Tracking	Since only the high and medium priority risk events go into the risk mitigation planning stage, the rest of the risk events i.e. the low priority risk events are sent to the watch list for the risk tracking stage of the process. The risk events on the watch list are constantly assessed impact-wise and prioritization-wise. If some of the low priority risk events convert into medium or high priority risk events over the period of time, they will

	be sent to the risk mitigation planning phase. This is an iterative process and all the risk events on the watch list go through it.

Operational Risks Mitigation

ISTL identifies the followings as the operational risks for the business and have plans in place to mitigate these risks for the organization as a whole:

- Physical Risks
- Location Risks
- Human Risks
- Technology Risks

The following table describes briefly how ISTL plans to deal with such risks and what steps it regularly takes in order to comply with the plan that the management bodies of the company insist upon:

Physical Risks	Some of the most common physical risks that we have identified for our organization and office premises are fire explosions or any other incidents that might require the help of the government agencies such as Fire Service and Civil Defense, law-enforcement agencies etc. All ISTL employees are trained to take necessary steps in each of the scenarios and the address of ISTL office is memorized by all employees in case the emergency call needs to be made to any of those agencies and their immediate presence on the premises would be necessary. In addition to that, ISTL also strictly prohibits any usage of raw materials and storage of those materials such as acids, gas, toxic fumes etc. inside the premises. If any of those materials are indeed needed for any internal or client projects, we make sure that the materials are handled by the professionals trained for that and stored in a separate secure location.
Location Risks	The location of an office for safety insurance should be away from factories or other facilities that might cause physical harm to the employees working in the office. Keeping that in mind, ISTL has moved its workplace to Mirpur DOHS, one of the most environmentally friendly and clean-air areas in Dhaka city.
Human Risks	Human resources are one of the best investments of ISTL and also they are responsible for the image of the company to the outside world and the clients. Our HR team makes sure that the door is open only for those who truly brings values to the organization as well as share the vision and the mission of the company. In addition to that, a rigorous background check is also done on the person to make sure that they do not have any previous

	records that might be threatening for the company and its employees. All members of the ISTL family are also legal citizens of Bangladesh. The ISTL premise is secured with fingerprint identification and verification system that makes sure that only the authorized personnel are allowed to enter the premises.
Technology Risks	Since ISTL is a software design and development company along with hardware and device integration, it is of extreme importance that the power supply is constantly available to the employees and the facility in order to make sure that any critical moment of the development process is not jeopardized by the power outage or any other kinds of technological failure. All workstations at ISTL are backed up by the Urgent Power Supply units and the whole premises are backed up by a powerful generator that automatically kicks power back in once there is a power outage in the area.

Solutions

Enrollment

Enrollment solution is available both in workstation and mobile kit editions. Based on the requirement of the client, the enrollment station can facilitate biometric fingerprint capture, demographic data capture, photograph capture with automatic enhancement and adjustments, iris capture, document scanning, cars or other vehicles' photo capture etc.

AFIVS

Modern and cutting-edge technology and algorithm powered Automated Fingerprint Identification and Verification System aka AFIVS provides precision fingerprint matching and verification including 1:1 verification, 1: n identification and verification, and de-duplication etc. Our solution, in any mission critical environment, provides faster and more secure performance.

IIVS

The Iris Identification and Verification System provides industry standard instant iris matching and recognition. Individuals can be identified through scanning their eye and granted access to secure facilities, can be used to criminal verification systems as well.

Voice Recognition

Using the Voice Recognition System (VRS), a person's voice can be identified by the machine and the commands can be carried out accordingly. This helps using voice commands in access-restricted scenario where the identification of the voice owner is critical to the safety and security.

HGIVS

Hand Geometry Identification and Verification System (HGIVS) lets the system recognize individuals scanning their hand shapes. This technology can particularly be useful for access control and HRM solutions to track sign in and sign out times of the employees.

Smart Cards

Smart cards are very efficient and a popular choice in restricting access to facilities and often be tagged with other identification and verification systems. RFID based

cards lets contactless scan of the card while chip-based smartcards are more secure but requires smartcard reader devices.

Id & Access Identity and Access Management solution are comprised of all or some of the before mentioned solutions where enrollment is used to capture the required data from the end users and other id and verification systems are used jointly to ensure a rock solid, secure access control.

Mobile & e-Banking Secure and top-notch mobile and e-banking solutions ensures for the end users that they are going to get the most reliable and seamless service experience while doing any kind of transactions over the internet or using their mobile network. Promise of safe transactions gives the users peace of mind.

Payment Cards Customized payment cards can be deployed for closed loop payment systems within a public organization or school or library to enable the members, students or employees of the organization make payments through their cards and control the spending via pre-paid balance top-up.

Ecommerce A great challenge and weakness of the widely spread ecommerce websites is ensuring the security of the website itself as well as the security of their users. “ISTL ecommerce solutions” not only comes with user-friendly interfaces and experiences for the end users, but makes sure strong security for the system and its users.

HRM Human Resource Management solution developed by ISTL lets the employers keep track of each and employee of the organization, seamlessly manage the payroll system, while ensuring an uptime of 99% with robust security and privacy through data encryption and cloud security technologies.

POS Industry-grade Point of Sale solution, designed and developed by ISTL, has the capability to be deployed across nationwide chain shops. Data integrity and security makes sure that the online transactions and business sales reports are secure and cannot be sniffed around by external data thieves. Easy POS GUI enables the employees serve customers faster and accurate.

School Management Multi-functioning and highly modular School Management solution features learning management system (LMS), school employee and resource management, student attendance records, financial transaction through payment gateway, library management system and closed loop payment methods etc.

ERP Enterprise Resource Planning (ERP) is a powerful and secure suite of business analysis and management solutions integrated into one solution to make sure central management of the organization and mining connected data to generate more meaningful reports and analytics.

Vehicle Tracking Vehicle Tracking solution makes intelligent use of the GPS, mobile network and remote mechanics to ensure the control of corporate fleet control through easy user interfaced application on both mobile and web. Some of the features include, but not limited to, engine immobilization, live location and speed tracking, battery tampering alert, fuel theft control etc.

Utility Billing	Utility Billing management system streamlines the preparation and distribution of mass volume utility billing, consumers database, automatic line disconnection or unpaid overdue bill alert, reports and analytics showing the most regular and top users of the utility etc.
Helpdesk	World class helpdesk application and management software lets the helpdesk service provider organizations have total peace of mind because the solution not only helps the desk employees manage their client remotely more successfully, but efficient employee scheduling, recording of conversation, tracking helpdesk activities makes it a complete must-have solution.
Card Personalization	Card Personalization solution includes a mixture of high-end app and hardware to enable the users design and preview the card exactly as it would look like after being printed, make necessary adjustment and print mass volume cards with personalized design and information.

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