

IBDL Core Business System: Business Functional Document (BFD)

1. Introduction

This Business Functional Document (BFD) outlines the business objectives, scope, and high-level functional requirements for the IBDL Core Business System. This system is designed to centralize and automate the end-to-end processes for various IBDL stakeholders, including the IBDL Admin Team, Training Centers, Testing Centers, Trainers, Trainees, and Corporate Accounts. The primary goal is to enhance operational efficiency, improve stakeholder experience, and ensure the integrity and scalability of IBDL's core business operations.

This document serves as a foundational reference for all project stakeholders, providing a clear understanding of the business needs that the system will address. It focuses on the 'what' and 'why' from a business perspective, laying the groundwork for the subsequent Functional Requirements Document (FRD) which will delve into the 'how'.

2. Business Goals and Objectives

The overarching business goal for the IBDL Core Business System is to establish a robust, scalable, and user-friendly platform that supports and streamlines IBDL's educational and certification processes. Specific objectives include:

- **Automate Accreditation Workflows:** Reduce manual effort and accelerate the accreditation process for Training Centers, Testing Centers, and Trainers through a digitized, multi-level approval system.
- **Enhance Corporate Account Management:** Provide Corporate Accounts with self-service capabilities to manage their employees (trainees) and exam bookings efficiently, improving their overall experience and reducing administrative overhead for IBDL.

- **Streamline Trainee Journey:** Offer individual trainees a seamless experience from kit purchase and e-learning access to exam booking and completion, fostering engagement and satisfaction.
- **Centralize Content and Question Management:** Establish a single, secure repository for e-learning content and exam question banks, enabling IBDL Admins to easily manage, update, and configure educational materials and assessments.
- **Improve Exam Administration:** Implement a secure and automated system for exam content generation and temporary login management, ensuring exam integrity and efficient proctoring.
- **Optimize Communication:** Automate critical notifications to all stakeholders regarding status updates, approvals, and booking changes, ensuring timely and relevant information dissemination.
- **Provide Data Insights:** Lay the groundwork for future reporting and analytics capabilities to enable IBDL to monitor key performance indicators and make data-driven decisions.
- **Ensure Scalability and Reliability:** Build a system capable of handling a growing user base and increasing transaction volumes without compromising performance or stability.

3. Scope of the System

The IBDL Core Business System will encompass the following key functional areas:

- **User Management:** Registration, authentication, and profile management for all defined user roles.
- **Accreditation Management:** Workflow for applying, reviewing, approving, and rejecting accreditation for Training Centers, Testing Centers, and Trainers.
- **Corporate Account Management:** Functionality for Corporate Accounts to manage their purchased credits, add/manage employees, and book exams for their employees.
- **Individual Trainee Management:** Features for individual trainees to access e-learning content, track progress, and book exams.

- **Learning Content Management:** Tools for IBDL Admins to upload, configure, and manage various types of e-learning content.
- **Question Bank Management:** Capabilities for IBDL Admins to create, categorize, and manage exam questions and define exam generation rules.
- **Exam Booking and Administration:** Processes for booking exams, managing approvals, generating temporary exam logins, and preparing exam content.
- **Notification System:** Automated email notifications for critical system events and status changes.

Out of Scope (for initial phase):

- Direct payment gateway integration (payments are handled externally).
- Advanced reporting and business intelligence dashboards (basic reporting will be included).
- Native mobile applications.
- Live proctoring integration for exams.
- Complex financial accounting beyond credit tracking.

4. Stakeholders

The following are the primary stakeholders who will interact with or be impacted by the IBDL Core Business System:

- **IBDL Admin Team:** System administrators responsible for overseeing all system operations, including accreditation approvals, content management, exam configurations, user management, and policy enforcement.
- **Training Centers:** Accredited entities that deliver training to trainees. They manage their own employees/learners and utilize credit packages for various services.
- **Testing Centers:** Accredited facilities responsible for physically hosting and administering certification exams.
- **Trainers (Individual):** Solo trainers who undergo an accreditation process to deliver courses under the IBDL umbrella.

- **Trainees (Individual Learners):** End-users who purchase kits to access e-learning materials and sit for certification exams.
- **Corporate Accounts:** Organizations that purchase exam credits in bulk, enroll their employees as trainees, and manage their exam bookings.
- **Development Team:** The team responsible for designing, building, testing, and deploying the system.
- **Project Manager:** Oversees the project lifecycle, ensuring timely delivery and adherence to scope.
- **Business Analyst (Me):** Responsible for eliciting, analyzing, documenting, and validating business requirements.

5. Business Processes and User Journeys

This section details the core business processes and associated user journeys that the IBDL Core Business System will support. Each process outlines the sequence of activities and the roles involved.

5.1. Accreditation Process

Business Need: To ensure that all Training Centers, Testing Centers, and individual Trainers meet IBDL's quality standards and are officially recognized before they can offer services under the IBDL brand.

Actors: Prospective Training Centers, Testing Centers, Trainers; IBDL Admin Team.

Process Flow:

1. **Application Submission:** A prospective Training Center, Testing Center, or Trainer initiates an application through the system's public interface. They provide detailed information and upload required supporting documents (e.g., business licenses, facility photos, trainer resumes, certifications, expiry dates).
2. **Initial Review (Approval Level 1):** An IBDL Admin reviews the submitted application for completeness and initial eligibility. This involves verifying basic information and the presence of all required documents.
3. **Detailed Review (Approval Level 2):** A second IBDL Admin conducts a more in-depth review, assessing the quality and validity of the provided information and

documents against IBDL's accreditation criteria.

4. **Final Approval (Approval Level 3):** A senior IBDL Admin performs the final review and grants or denies the accreditation. This step confirms that all previous checks have been passed and the applicant meets all standards.
5. **Status Communication:** Throughout the process, applicants can view the real-time status of their application. Upon final decision, an automated notification (email) is sent to the applicant informing them of approval or rejection.
6. **Rejection Handling:** If rejected at any stage, the applicant receives a notification with the reason for rejection. The system should allow for potential re-submission after corrections, or guide them on next steps.

Business Value: Ensures quality control for IBDL's network, maintains brand reputation, and automates a previously manual, time-consuming process.

5.2. Corporate Account Management

Business Need: To enable corporate clients to efficiently manage their bulk purchases of exam credits and administer their employees' access to IBDL's certification programs.

Actors: Corporate Account Administrators; IBDL Admin Team; Employees (Trainees).

Process Flow:

1. **Credit Package Acquisition:** Corporate Accounts acquire credit packages through an external process (e.g., direct sales, invoicing). The system must be updated with the purchased credit balance, either manually by an IBDL Admin or via a future integration.
2. **Employee Enrollment:** A Corporate Account Administrator logs into the system and adds employees (trainees) to their account. This can be done individually or via a bulk upload mechanism (e.g., CSV import). For each employee, basic details like name and email are provided.
3. **Trainee Account Creation:** The system automatically creates a new trainee account for each enrolled employee and sends them an automated welcome email with login credentials.
4. **Credit Deduction:** Upon successful employee enrollment, the system automatically deducts the corresponding credits from the Corporate Account's

balance.

5. **Exam Booking for Employees:** The Corporate Account Administrator can then book certification exams for their enrolled employees, selecting the desired exam, testing center, date, and time.
6. **Booking Approval Workflow:** The exam booking request follows an internal approval workflow involving the selected Testing Center and IBDL Admins.

Business Value: Provides self-service capabilities for corporate clients, reduces IBDL's administrative burden for managing corporate enrollments, and facilitates bulk purchasing and management.

5.3. Individual Trainee Journey

Business Need: To provide individual learners with a clear, guided path from purchasing an IBDL kit to accessing e-learning content and successfully booking and completing their certification exam.

Actors: Individual Trainees; IBDL Admin Team; Testing Centers.

Process Flow:

1. **Kit Purchase & Activation:** An individual trainee purchases an IBDL kit (e.g., online via IBDL website, or through a partner). The system must be notified of this purchase (e.g., manual activation by IBDL Admin, or future payment gateway integration) to activate the associated e-learning course and trial exams in their portal.
2. **E-learning Access & Progress Tracking:** Once activated, the trainee gains access to the e-learning course. The system allows them to consume embedded content (videos, PDFs, SCORM, external links) and tracks their progress and completion percentage.
3. **Exam Booking:** After completing the e-learning (or at any point they deem ready), the trainee initiates an exam booking. They select an accredited Testing Center and choose an available date and time slot.
4. **Booking Approval & Confirmation:** The booking request is sent to the chosen Testing Center and IBDL for approval. Both parties can approve, reject, or propose alternative dates/times. IBDL Admins also have the ability to directly assign a trainee to a specific exam slot.

5. **Exam Day Preparation:** Upon confirmation, the trainee receives details about their exam, including location and time.

Business Value: Offers a streamlined and intuitive learning and certification path for individual users, improving user satisfaction and retention.

5.4. On Exam Day Process

Business Need: To ensure the secure and efficient administration of certification exams, verifying physical presence and delivering the correct exam content.

Actors: Trainees; Testing Centers; IBDL Admin Team.

Process Flow:

1. **Trainee Arrival & Verification:** Trainees arrive at the Testing Center at their scheduled time.
2. **Temporary Login Generation:** Approximately 10 minutes before the scheduled exam start time (configurable), the system automatically generates temporary, one-time login credentials for the trainee. These credentials are designed to verify physical presence and are valid only for a limited duration and potentially restricted to the Testing Center's network.
3. **Onsite Exam Access:** The Testing Center proctor provides the temporary login to the trainee, who then uses it to access the exam system. The system enforces that the exam can only be taken onsite.
4. **Exam Content Auto-Generation:** Upon successful login, the system dynamically generates the exam content for the trainee. This content is pulled from the IBDL Question Bank based on the specific certificate's configuration (e.g., a defined mix of easy, intermediate, and hard questions).
5. **Exam Monitoring & Proctoring:** The IBDL Admin Team oversees the exam process, including monitoring, proctoring (potentially through integrated tools), and handling any technical issues or rescheduling needs. Testing Centers are not responsible for proctoring beyond initial verification.

Business Value: Enhances exam security and integrity, automates exam delivery, and centralizes monitoring for IBDL.

5.5. Learning Content Management

Business Need: To provide IBDL Admins with comprehensive tools to manage and customize the e-learning content associated with various kits and courses.

Actors: IBDL Admin Team.

Process Flow:

1. **Course Creation/Editing:** IBDL Admins create new e-learning courses or edit existing ones within the system.
2. **Content Type Configuration:** For each course, Admins can configure and embed various types of learning content, including videos (via URL or upload), SCORM packages, PDF documents, and external web links.
3. **Content Upload/Linking:** Admins upload content files directly to the system's storage or link to externally hosted content.
4. **Content Association:** Each piece of content is associated with a specific course or kit.

Business Value: Ensures that e-learning content is always up-to-date, diverse, and easily manageable by IBDL staff.

5.6. Question Bank Management

Business Need: To maintain a robust and flexible question bank that allows IBDL Admins to create, categorize, and manage exam questions, and define rules for automated exam generation.

Actors: IBDL Admin Team.

Process Flow:

1. **Question Creation:** IBDL Admins create new questions, specifying question text, multiple-choice options, correct answers, difficulty levels (easy, intermediate, hard), and associated topics/certificates.
2. **Question Versioning:** The system supports versioning of questions, allowing Admins to track changes and potentially revert to previous versions.
3. **Exam Rule Configuration:** For each certification, IBDL Admins define rules for how exams should be generated from the question bank. This includes specifying

the total number of questions and the distribution of difficulty levels (e.g., 10 easy, 5 intermediate, 3 hard).

Business Value: Ensures the quality and integrity of exam content, provides flexibility in exam generation, and streamlines the assessment creation process.

5.7. Notification System

Business Need: To ensure timely and relevant communication with all stakeholders regarding critical system events and status changes.

Actors: All Stakeholders (recipients); System (sender).

Process Flow:

1. **Event Trigger:** A significant event occurs within the system (e.g., accreditation status change, exam booking confirmation, rejection).
2. **Notification Generation:** The system automatically generates an email notification based on predefined templates and the context of the event.
3. **Recipient Identification:** The system identifies the relevant stakeholders who need to be notified based on their role and involvement in the event.
4. **Email Dispatch:** The notification is dispatched via email to the identified recipients.

Business Value: Improves communication efficiency, keeps stakeholders informed, and reduces manual communication efforts.

6. Non-Functional Requirements (High-Level)

While the primary focus of a BFD is functional, high-level non-functional considerations are important for understanding the overall business context.

- **Performance:** The system must be responsive, with acceptable load times for all user interactions, even during peak usage.
- **Scalability:** The system must be capable of supporting a growing number of users, data volumes, and concurrent operations without significant degradation in performance.

- **Security:** All sensitive data (e.g., personal information, exam content) must be protected against unauthorized access, modification, or disclosure. The system must adhere to industry best practices for web application security.
- **Reliability:** The system must be available and operational during business hours, with minimal downtime. Data integrity must be maintained at all times.
- **Usability:** The user interface must be intuitive and easy to navigate for all user roles, minimizing training requirements.
- **Maintainability:** The system should be built with clean, modular code, making it easy to update, debug, and extend in the future.
- **Integrability:** The system should be designed to allow for future integrations with external systems (e.g., payment gateways, CRM, BI tools).

7. Glossary

- **BFD:** Business Functional Document
- **FRD:** Functional Requirements Document
- **IBDL:** International Business Driving License
- **UI/UX:** User Interface/User Experience
- **API:** Application Programming Interface
- **CRUD:** Create, Read, Update, Delete
- **ORM:** Object-Relational Mapping
- **CORS:** Cross-Origin Resource Sharing
- **SCORM:** Sharable Content Object Reference Model

This BFD provides a comprehensive overview of the business needs and high-level functionalities of the IBDL Core Business System. It will serve as the foundation for the detailed functional requirements outlined in the FRD.