Proposal for LIBA: AI-Driven Academic Transformation

Prepared for:

Loyola Institute of Business Administration (LIBA) – Senior Management & Academic Council

Prepared by:

Spanda.AI Team

Date:

[Insert Date]

---

1. Executive Summary

LIBA seeks to incorporate AI-driven workflows in academic assessment, faculty evaluations, and institutional administration. We propose an **AI-centric approach** that integrates seamlessly with existing academic processes and systems. This plan focuses on:

1. **AI CoE & Roadmap**

   o Establish a central AI Centre of Excellence (CoE) to drive institution-wide AI implementation and governance.

2. **Spanda.AI Platform & AI Modules**

   o Deploy advanced AI modules for instructor evaluations, question paper assessment, and thesis evaluation via conversational AI.

3. **Pilot Use Cases**

   o Focus on three critical academic workflows initially:

      1. Instructor Evaluation with Confidence Module

      2. Question Paper Assessment

      3. Thesis Evaluation with a ChatGPT Conversational Interface

4. **Phased Enhancements**

   o **Stage 1:** Immediate overlay of AI on existing academic processes for swift efficiency gains.

   o **Stage 2:** Deeper AI integration for advanced analytics, scoring, and scenario exploration.

- **Stage 3:** Real-time, fully automated AI-driven academic and administrative processes.

Through incremental adoption, LIBA can validate the feasibility and benefits of AI before scaling further into admissions, administrative modules, and beyond.

---

2. Scope of Work

2.1 Consultancy & AI CoE Roadmap

1. **AI Roadmap for LIBA**

   - Develop a phased strategy to deploy AI modules (Instructor/Question Paper/Thesis evaluations) as an overlay to existing academic and administrative systems.

   - Outline next steps for deeper AI integration (personalized learning, adaptive question generation, etc.) and eventual real-time automated decision-making in academic workflows.

2. **AI CoE Setup**

   - Define governance, processes, and best practices for an AI CoE that will serve multiple departments and programs (MBA, PhD, Executive Education, etc.).

   - Incorporate proven AI best practices (e.g., advanced NLP, knowledge graphs, multi-agent solutions for large-scale exam evaluations) into institutional policies and transformation roadmaps.

2.2 Spanda.AI Platform & AI Modules

1. **Platform License & Hosting**

   - **Annual or Monthly Subscription** with usage-based licensing (GPU utilization, seat counts).

   - **Exclusion of Hardware Costs:**

     - Licensing and hosting fees do not include physical or cloud hardware. LIBA can procure on-premises GPU servers or cloud instances separately.

   - **What Platform Licensing & Hosting Provide:**

- **Software Access:**
  Full license to use the Spanda.AI platform—including AI orchestration, model serving, data pipelines, observability, and security features.

- **Hosting & Maintenance:**
  Deployed as containerized solutions (Kubernetes-based) on LIBA's preferred environment (on-premises or cloud).
  Includes routine maintenance, updates, and technical support.

- **Scalability & Flexibility:**
  Usage-based licensing allows LIBA to expand usage (more seats or GPU hours) without incurring extra software license fees.

- **Integration Capabilities:**
  Connectors and APIs to integrate with existing LMS, ERP, or other academic/administrative systems.

- **Advanced Features:**
  Built-in functionalities such as model governance, prompt engineering control, and analytics dashboards, enabling thorough oversight of AI-driven processes.

Summary:

The platform licensing fee covers the software, maintenance, and support needed to operate Spanda.AI's AI modules. **Hardware costs (GPU servers or cloud instances) are managed separately** by LIBA.

2. **Installation & Configuration**

   o Deploy the Spanda.AI containerized platform (on-premises or cloud).

   o Integrate with LIBA's existing processes (faculty evaluations, exam systems, etc.) via APIs or data connectors.

   o Configure each AI module—Instructor Evaluation, Question Paper Assessment, Thesis Evaluation—for real-time or periodic data ingestion.

2.3 Three Pilot Use Cases with AI Modules

Below, we outline how each AI module adds immediate value, plus the longer-term enhancements (Stages 2 and 3).

2.3.1 Instructor Evaluation with Confidence Module

Objective:
Provide AI-driven analysis of teaching effectiveness, lecture content, and student engagement.

- **Stage 1 (Overlay):**

  - Use NLP to evaluate lecture transcripts, identify key topic coverage, and measure student feedback via sentiment analysis.

  - Generate a "Confidence Score" for each instructor, factoring in multiple parameters (student feedback, lecture clarity, etc.).

- **Stage 2 (Enhancement):**

  - More robust analytics, e.g., correlation of instructor performance with exam outcomes.

  - AI-driven recommendations for instructor professional development (suggesting relevant training, workshops).

- **Stage 3 (Real-Time AI Feedback):**

  - Automated analysis of live lecture streaming for immediate feedback loops (e.g., highlight sections where student attention drops).

  - Real-time adjustments or suggestions for teaching methods.

Functional Benefits:

- Immediate transparency in teaching quality, more systematic feedback for faculty development.

- Potential integration with advanced analytics for dynamic optimization of teaching strategies.

2.3.2 Question Paper Assessment Module

Objective:
Enhance the rigor and fairness of question papers and expedite grading with AI-driven scoring.

- **Stage 1 (Overlay):**

  - AI Agents assist in generating question complexity metrics, ensuring a balanced distribution of difficulty levels.

- Automated grading of objective-type questions and partial scoring for short answers.

- **Stage 2 (Enhancement):**

    - Advanced text analysis for descriptive answers, plagiarism checks, and comprehensive AI-based scoring.

    - Integration with external data sources for referencing academic databases, ensuring originality.

- **Stage 3 (Adaptive Question Generation):**

    - Dynamic question paper generation customized to each cohort's ability level.

    - Real-time adaptation of question sets for large-scale online exams.

Functional Benefits:

- Reduced manual grading burden, faster turnaround times, and data-driven insights into exam difficulty and student performance trends.

2.3.3 Thesis Evaluation with ChatGPT Conversational Interface

Objective:
Provide an advanced, conversational AI approach to thesis evaluation for MBA, MPhil, or PhD students.

- **Stage 1 (Overlay):**

    - AI-driven semantic analysis of the thesis structure, referencing, and coherence.

    - Automatic summary for examiners and faculty to expedite review.

- **Stage 2 (Enhancement):**

    - Interactive ChatGPT-based interface for iterative feedback, tracking improvements between drafts.

    - Suggest relevant literature or previous research based on the thesis topic.

- **Stage 3 (Real-Time Collaborative Review):**

    - Multi-stakeholder AI environment where advisors, second examiners, and the student can simultaneously review suggested changes.

o   Intelligent time tracking for thesis progression, predictive alerts for potential bottlenecks (e.g., missing references).

Functional Benefits:

- A more thorough, consistent evaluation process; improved student engagement through an interactive AI feedback loop.

---

3. Phased Approach to AI Integration

1. **Stage 1: Overlay (Immediate ROI)**

   o   Rapid deployment of AI modules with minimal disruptions.

   o   Quick wins in operational efficiency and data-driven decision-making.

2. **Stage 2: Enhancement (Mid-Term)**

   o   Integrate advanced AI algorithms (deep NLP, content summarization, adaptive question generation).

   o   Expand modules to handle complex tasks (full essay scoring, advanced plagiarism detection, etc.).

3. **Stage 3: Full Automation (Long-Term)**

   o   Real-time AI systems offering automated scheduling, real-time exam proctoring, fully dynamic teaching modules.

   o   AI can autonomously recommend or execute changes, validated by domain experts/faculty.

---

4. Hardware & Infrastructure

We recommend either **Dell PowerEdge** servers (XE8640, XE9640, or XE9680) or cloud-based GPU (AWS/GCP) solutions. Approximate cost ranges:

- **Entry-Level**: 30–40 L

- **Mid-Range**: 50–70 L

- **Enterprise-Grade**: 90–120 L

For advanced real-time grading or multi-department usage, a hybrid or multi-cloud approach may be ideal. LIBA can procure hardware independently, leveraging existing vendor relationships for favorable pricing.

---

5. Training & Bootcamp

- **4-Day Bootcamp** *(Complimentary if certain budget thresholds are met)*

    o Comprehensive sessions on AI and multi-agent architectures.

    o Focus on academic use cases, data handling policies (FERPA or other relevant student data laws), and secure AI deployments.

---

6. Three Scope Variants (Simple, Medium, Complex)

Below are **illustrative cost ranges** for each scope variant. The final figure will depend on LIBA's selected modules, usage patterns, and infrastructure choices.

6.1 Simple Scope

Focus:

- Stage 1 overlay only.

Pilot Use Cases:

1. Instructor Evaluation – Basic sentiment analysis, confidence scoring.

2. Question Paper Assessment – Automated scoring for MCQs, partial short answer support.

3. Thesis Evaluation – Basic semantic scoring, summarization.

Hardware:
1–2 GPU servers (or low-cost cloud footprint).

Cost Range: 90–120 L

- Consultancy & AI CoE: ~10–15 L

- Platform License & Hosting (Annual): ~25–30 L

- Installation & Configuration: ~10 L

- Use Case Implementation (3 total): ~20–30 L

- Hardware (On-Prem/Cloud Equivalent): ~20–30 L

- Bootcamp Training: Complimentary*

Timeline: ~4–6 months

6.2 Medium Scope

Focus:

- Stage 1 + partial Stage 2.

Pilot Use Cases:

1. Instructor Evaluation – Advanced analytics, correlation with student exam performance.

2. Question Paper Assessment – Enhanced scoring for short answers, plagiarism checks.

3. Thesis Evaluation – ChatGPT-based iterative review, some automated references.

Hardware:
2–3 GPU servers (Dell XE9640) or moderate cloud usage.

Cost Range: 120–160 L

- Consultancy & AI CoE: ~15–20 L

- Platform License & Hosting (Annual): ~30–40 L

- Installation & Configuration: ~15 L

- Use Case Implementation (3 total): ~30–40 L

- Hardware (On-Prem/Cloud Equivalent): ~25–35 L

- Bootcamp Training: Complimentary*

Timeline: ~6–8 months

6.3 Complex Scope

Focus:

- Stage 2 + partial Stage 3.

Pilot Use Cases:

1. Instructor Evaluation – Real-time feedback loops, multi-dimensional performance analytics.

2. Question Paper Assessment – AI-driven question generation, sophisticated essay scoring.

3. Thesis Evaluation – Multi-party real-time collaborative review, advanced knowledge graphs.

Hardware:
3–4 GPU servers (Dell XE9680) or robust cloud architecture with auto-scaling.

Cost Range: 160–220 L

- Consultancy & AI CoE: ~20–25 L

- Platform License & Hosting (Annual): ~40–50 L

- Installation & Configuration: ~20 L

- Use Case Implementation (3 total): ~40–50 L

- Hardware (On-Prem/Cloud Equivalent): ~40–60 L

- Bootcamp Training: Complimentary*

Timeline: ~8–12+ months

Note: Costs may vary based on the number of faculty, size of student cohorts, integrations with legacy systems, and advanced AI features (e.g., specialized NLP models).

---

7. Project Timeline & Milestones

Phase	Simple (90–120 L)	Medium (120–160 L)	Complex (160–220 L)	Key Activities
Phase 1: Infrastructure Setup	Months 1–2	Months 1–2	Months 1–3	- Hardware procurement - Deploy Spanda.AI platform & AI modules - Basic system integration
Phase 2: Pilot Use Cases	Months 3–4	Months 3–4	Months 4–6	- Develop AI modules for the 3 use cases - Integration with existing

Phase	Simple (90–120 L)	Medium (120–160 L)	Complex (160–220 L)	Key Activities
				academic systems - User acceptance testing
Phase 3: Full Rollout & Integration	Months 5–6	Months 5–6	Months 7–9	- Scale AI modules across LIBA - Deeper data integrations, advanced security measures
Phase 4: Ongoing Support	Month 7+	Month 7+	Month 10+	- Continuous optimization - Stage 2 or Stage 3 enhancements - AI CoE operationalization

8. Team Composition & Responsibilities

A dedicated project pod ensures smooth delivery. Resource allocations vary by scope tier:

Role	Key Responsibilities
Program Manager	Overall engagement strategy, stakeholder alignment, and governance.
Project Manager	Day-to-day project execution, timeline & risk management.
AI Engineer/Architect	Designs AI models, integrates advanced modules (NLP, ChatGPT) with existing LIBA systems.
Data Engineer	Builds data pipelines, ETL/ELT processes, ensures data quality and system performance.
Front-End Developer	Develops faculty dashboards, student portals, and interactive AI interfaces.
Security Engineer	Implements secure AI deployment, role-based access control, data encryption, and ensures compliance with academic data policies.
NLP Specialist	Enhances chat-based AI interactions for thesis evaluations and instructor-student Q&A modules.

Role	Key Responsibilities
Senior Management (Advisory)	Provides strategic oversight, final approvals on budget, and alignment with LIBA's mission.

9. Detailed Cost Structure Summary (Illustrative)

Category	Simple Scope (L)	Medium Scope (L)	Complex Scope (L)
Consultancy (AI Roadmap & CoE)	10–15	15–20	20–25
Platform License & Hosting (Annual)	25–30	30–40	40–50
Installation & Configuration	10	15	20
Use Case Implementation (3 total)	20–30	30–40	40–50
Hardware (On-Prem/Cloud Equivalent)	20–30	25–35	40–60
Bootcamp Training	Complimentary*	Complimentary*	Complimentary*
Total Estimated Cost	90–120	120–160	160–220

*Bootcamp is offered at no additional cost if overall engagement meets agreed-upon budget thresholds.

10. Business Value, Benefits & Competitive Imperative

10.1 Direct & Indirect Benefits

1. **Instructor Evaluation**

   o **Direct:** Better teaching outcomes through actionable feedback, improved faculty development.

   o **Indirect:** Higher student satisfaction and more effective learning outcomes.

2. **Question Paper Assessment**

   o **Direct:** Reduction in manual grading workload, faster result turnaround, consistent scoring.

- **Indirect:** Insights into curriculum effectiveness, more balanced exams.

3. **Thesis Evaluation**

   - **Direct:** Streamlined evaluation process, shorter feedback cycles, improved thesis quality.

   - **Indirect:** Elevated academic reputation through rigorous, data-driven evaluation frameworks.

10.2 Competitive Advantage & Risk of Inaction

- **Early Adoption Gains:**
  LIBA positions itself as a forward-thinking institution, attracting top students and faculty.

- **Scalable Innovation:**
  The Spanda.AI platform's modular architecture allows for quick addition of new AI-driven functionalities (admissions automation, administrative tasks, etc.).

- **Risk of Inaction:**

  - Falling behind peer institutions that adopt AI-driven academic processes.

  - Continual manual processes leading to higher operational overhead, slower result releases, and limited data-driven insights.

---

11. Next Steps

1. **Scope Tier Selection**
   Determine whether the Simple, Medium, or Complex scope best suits LIBA's budget and timeline.

2. **Hardware & Environment**
   Confirm on-premises vs. cloud approach for AI modules. Conduct TCO (Total Cost of Ownership) analyses for server or cloud usage.

3. **Budget Finalization**
   Refine the cost based on selected scope, hardware procurement, and licensing model.

4. **Kickoff & Workshops**
   Initiate Phase 1 (infrastructure setup), schedule the 4-Day Bootcamp for faculty, administrators, and IT staff.

5. **AI CoE & Roadmap Execution**
   Conduct strategic workshops to finalize multi-module architecture, integration points, and advanced Stage 2 & 3 timelines.

---

12. Conclusion

This **staged proposal** shows how AI modules can overlay and enhance LIBA's existing academic workflows—delivering **immediate efficiency gains** in faculty evaluations, exam assessments, and thesis reviews, while setting the foundation for **long-term AI-driven transformation**. By procuring hardware separately, LIBA can optimize costs and leverage existing vendor relationships. Meanwhile, Spanda.AI's **software licensing** ensures continuous updates, **technical support**, and advanced AI features without hidden development overheads.

Given the considerable benefits of AI adoption—and the increasing competitiveness in higher education—this is an **ideal time** for LIBA to embark on an AI-driven modernization journey. We look forward to partnering with you on this transformative initiative and remain available to refine any aspect of the proposal as required.

Best Regards,
Spanda.AI Team