University Major Selection App

Living Canvas – Product, Business & Implementation Plan
This document will be developed sequentially into a **40–50 page equivalent plan**, similar in depth to the Sandwich Food Truck canvas.

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1. Executive Summary

1.1 Concept Overview

The **University Major Selection App** is a digital guidance platform designed to help high-school students, foundation-year students, and early university students select the most suitable academic major based on their **interests, strengths, personality traits, academic performance, and career goals**.

The app addresses one of the most critical and costly problems in education: **students choosing the wrong major**, leading to dropouts, low performance, dissatisfaction, and delayed graduation.

The solution combines: - Psychometric assessments - Interest & aptitude mapping - Academic data analysis - Career outcome insights - AI-powered recommendations

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1.2 Problem Statement

- Many students choose majors based on peer pressure, family influence, or incomplete information
- Limited access to professional career counseling
- Lack of data-driven, personalized guidance
- High rates of major switching and academic disengagement

1.3 Solution Summary

The app provides: - Structured questionnaires and aptitude tests - AI-based major matching - Clear explanations of each major - Career pathways, salary ranges, and employability insights - Institution-specific major availability (future phase)

1.4 Target Users

- High school students (Grades 10–12)
- Foundation-year & first-year university students
- Parents seeking guidance for their children
- Schools & universities (institutional licensing)

1.5 Value Proposition

- Reduces wrong major selection
- Improves student satisfaction & academic outcomes
- Saves time and education costs
- Scalable digital alternative to expensive counseling

1.6 Revenue Model (Summary)

- Freemium model (basic assessment free)
- Premium reports (OMR-based pricing)
- School & university subscriptions
- Sponsored career insights (ethical & transparent)

1.7 Vision & Mission

Vision:
To become the leading AI-driven academic and career guidance platform in the MENA region.

Mission:
To empower students to make informed, confident, and future-ready academic decisions.

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2. Product Definition – Features, User Flow & Core Modules

2.1 Product Objectives

The University Major Selection App is designed to: - Help students identify majors aligned with their interests, strengths, and career goals - Reduce wrong major selection and switching - Provide explainable, transparent recommendations (not black-box results) - Serve both individual users (B2C) and institutions (B2B)

2.2 Core User Types

1. **Student (Primary User)**
2. High school (Grades 10–12)

3. Foundation-year / Year 1 university

4. **Parent (Secondary User)**

5. Reviews reports

6. Supports decision-making

7. **Institution Admin (B2B – Phase 2)**

8. School counselor / university admin
9. Access to aggregated, anonymized insights

2.3 User Journey (End-to-End)

1. User onboarding (basic profile)
2. Assessment selection
3. Test completion
4. AI analysis & scoring
5. Major recommendations
6. Detailed major reports
7. Save, compare, and share
8. Upgrade to premium (optional)

2.4 Core App Modules

Module 1: User Profile & Onboarding

Inputs Collected: - Age, gender (optional) - Current education level - Subjects studied & grades (optional) - Preferred language

Purpose: - Personalization of assessments - Regional & curriculum relevance

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Module 2: Interest Assessment

Assessment Basis: - Holland RIASEC model (adapted) - Interest clusters (Technology, Business, Health, Arts, Social, Science)

Output: - Ranked interest areas - Visual radar / bar chart

Module 3: Aptitude & Skills Assessment

Assessment Areas: - Logical reasoning - Numerical ability - Verbal comprehension - Spatial awareness

Output: - Skill strengths & gaps - Readiness indicators for STEM vs non-STEM majors

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Module 4: Personality & Work Style

Focus Areas: - Introversion vs extroversion - Structure vs flexibility - Team vs individual preference - Stress tolerance

Output: - Personality profile - Best-fit academic environments

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Module 5: Academic Compatibility Engine

Inputs: - Grades (if provided) - Subject preferences - Study habits

Logic: - Maps academic readiness to major difficulty levels - Flags high-risk mismatch areas

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2.5 AI Recommendation Engine (High-Level)

Inputs: - Interest score - Aptitude score - Personality profile - Academic readiness

Processing: - Weighted scoring model - Rule-based constraints (e.g., minimum math readiness) - Confidence scoring

Outputs: - Top 3–5 recommended majors - Suitability percentage per major - Explanation of each recommendation

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2.6 Major Information Module

Each recommended major includes: - Major overview & curriculum summary - Skills required - Typical career paths - Employability outlook - Difficulty level - Who should / should not choose this major

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2.7 Comparison & Decision Tools

- Side-by-side major comparison
- Pros & cons list
- Risk indicators
- Save favorites

2.8 Premium Features (Monetization Layer)

- Full detailed report (PDF)
- Extended career pathways
- Salary ranges by region
- Parent-friendly summary

• Counselor-style recommendation letter

2.9 Non-Functional Requirements

• Mobile-first design (Android & iOS)
• Multilingual support (Arabic & English)
• Data privacy & consent management
• Explainable AI (no opaque decisions)
• Scalable cloud infrastructure

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3. Market & Customer Analysis – Students, Parents & Institutions

3.1 Market Overview (Education Decision-Making Context)

Choosing a university major is one of the most critical decisions in a student's life, yet it is often made with limited guidance. In Oman and the wider GCC/MENA region, structured career counseling is not universally available, creating a strong gap for digital, scalable solutions.

Key regional characteristics: - High youth population - Strong cultural influence from parents - Increasing focus on employability and career outcomes - Rapid digital adoption among students

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3.2 Primary Customer Segment – Students (B2C)

A. High School Students (Grades 10–12)

Profile: - Ages: 15–18 - At decision stage for subject streams and majors - Influenced by parents, teachers, and peers

Needs: - Clarity on suitable majors - Confidence in decision-making - Simple explanations, not academic jargon

Pain Points: - Information overload online - Conflicting advice from different sources - Fear of choosing the "wrong" major

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B. Foundation & First-Year University Students

Profile: - Ages: 18–21 - Already enrolled but uncertain - At risk of switching majors or disengagement

Needs: - Validation of current choice - Alternative options if mismatch exists - Understanding career implications

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3.3 Secondary Customer Segment – Parents

Role in Decision-Making: - Strong influence in major selection - Often prioritize job stability and income

Needs: - Clear, trustworthy recommendations - Evidence-based reasoning - Long-term career outlook

Willingness to Pay: - Higher than students if value is clear - Prefer one-time reports over subscriptions

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3.4 Institutional Customers (B2B)

A. Schools

Use Cases: - Supplement to career counseling - Annual assessments for graduating classes

Buying Motivation: - Improve student outcomes - Reduce counseling workload - Data-driven insights

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B. Universities & Colleges

Use Cases: - Reduce dropout rates - Improve student-major alignment - Orientation & foundation programs

Decision Makers: - Academic affairs - Student services departments

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3.5 Market Size & Opportunity (Indicative)

Oman (Approximate): - High school students (Grades 10–12): ~150,000+ - New university entrants annually: ~50,000+

Even a **5–10% penetration** represents a strong early-stage user base.

3.6 Customer Willingness to Pay

Customer Type	Preferred Model	Price Sensitivity
Students	Freemium + one-time	High
Parents	One-time report	Medium
Schools	Annual license	Low
Universities	Contract-based	Low

3.7 Behavioral Insights

- Students value instant results and visuals
- Parents value explanations and credibility
- Institutions value data, reporting, and outcomes

3.8 Market Entry Strategy

1. Start with B2C (students & parents)
2. Build usage data and credibility
3. Approach schools with pilot programs
4. Expand into universities and ministries

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4. AI Logic & Recommendation Engine – Methodology, Ethics & Explainability

4.1 Design Philosophy

The AI system is designed as a **decision-support engine**, not a decision-maker. Its purpose is to **assist students and parents with evidence-based guidance**, while keeping humans in control.

Key principles: - Explainability over complexity - Transparency over black-box models - Educational ethics over pure optimization - Cultural and regional sensitivity

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4.2 Data Inputs (What the AI Uses)

The recommendation engine aggregates multiple dimensions:

1. **Interest Scores**
2. Derived from structured interest assessments
3. Categorized into academic clusters
4. **Aptitude & Skill Scores**
5. Logical, numerical, verbal, spatial reasoning
6. Normalized for age and education level
7. **Personality & Work Style**
8. Learning preferences

9. Stress tolerance and structure needs

10. **Academic Readiness (Optional but Strongly Weighted)**

11. Grades in relevant subjects
12. Study consistency indicators

13. **User Preferences**

14. Stated interests and dislikes
15. Career aspirations

4.3 Scoring & Weighting Model

Each major receives a **composite suitability score** calculated through weighted components:

Component	Weight (Indicative)
Interest Alignment	30%
Aptitude Match	25%
Academic Readiness	25%
Personality Fit	15%
User Preference Modifier	5%

Weights are adjustable based on: - Student age - Education level - Availability of academic data

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4.4 Rule-Based Safeguards (Critical Layer)

To prevent harmful or unrealistic recommendations, the system enforces **hard rules**:

Examples: - Engineering majors not recommended if math readiness is below threshold - Health sciences flagged if biology readiness is weak - High workload majors flagged for low stress tolerance

These safeguards ensure **ethical and realistic guidance**.

4.5 Explainable AI Output

Each recommendation includes: - Suitability percentage - Breakdown by dimension (interest, aptitude, academics) - Plain-language explanation - Strengths and risk factors

This allows users to understand **why** a major is recommended.

4.6 Bias Prevention & Fairness

Measures include: - No gender-based exclusion rules - No socioeconomic assumptions - Continuous monitoring of recommendation patterns - Manual override and feedback loop

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4.7 Learning & Improvement Loop

- Anonymous outcome feedback (optional)
- Adjustment of weights over time
- Improved accuracy as dataset grows

4.8 Ethical & Regulatory Considerations

- Explicit consent for data usage
- Clear disclaimer: guidance, not mandate
- Compliance with local data protection regulations
- No selling of personal student data

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5. Monetization & Pricing Strategy – Revenue Models & Unit Economics

5.1 Monetization Philosophy

The monetization strategy balances **accessibility, trust, and sustainability**. Core guidance remains accessible to students, while advanced insights and institutional value are monetized.

Principles: - Freemium entry to drive adoption - One-time payments preferred by parents - Subscription and licensing for institutions - Transparent pricing with clear value

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5.2 Revenue Streams Overview

1. **B2C – Students & Parents**
2. Freemium access
3. One-time premium reports
4. Optional subscriptions

5. **B2B – Schools & Universities**

6. Annual licenses
7. Per-student pricing

8. Custom reporting & dashboards

9. **Ancillary (Future, Ethical)**

10. Sponsored career insights (clearly labeled)
11. White-label solutions for institutions

5.3 B2C Pricing (OMR-Based)

Free Tier

Includes: - Basic interest assessment - Top 3 major recommendations - Short explanations

Goal: User acquisition & trust building

Premium One-Time Report (Most Popular)

Price: OMR 4.000 – 7.000

Includes: - Full assessment suite - Top 5 major recommendations - Detailed explanations & risk flags - Parent-friendly summary - Downloadable PDF report

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Subscription Option (Optional)

Price: OMR 1.500 – 2.500 / month

Includes: - Multiple reassessments - Career pathway updates - Major comparison tools

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5.4 Parent-Focused Packaging

Parents are positioned as **decision partners**, not secondary users.

- Emphasis on employability & outcomes
- Simple, non-technical language
- One-time purchase preferred

5.5 B2B Pricing – Schools

Model: Annual license

School Size	Indicative Price (OMR/year)
Small (<300 students)	800 – 1,500
Medium (300–800)	1,500 – 3,000
Large (800+)	3,000 – 6,000

Includes: - Student assessments - Counselor dashboard - Aggregate insights

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5.6 B2B Pricing – Universities & Colleges

Model: Contract-based

- Per-student pricing: OMR 3 – 6
- Minimum contract value: OMR 5,000+

Use cases: - Foundation programs - Orientation & advising

5.7 Unit Economics (High-Level)

- Customer Acquisition Cost (CAC): Low (organic + school channels)
- Gross margin: High (digital product)
- Lifetime Value (LTV):
- B2C: Moderate
- B2B: High

5.8 Conversion Strategy

- Free → premium upsell after results preview
- Parent-focused messaging at checkout
- Institutional pilots to full contracts

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6. Financial Projections – 5-Year Revenue, Costs & Profitability

All figures are indicative and conservative, presented in OMR.
Assumptions prioritize sustainability and realistic adoption curves.

6.1 Key Financial Assumptions

- Initial launch as a digital-first product (no physical assets)
- Core team lean in Years 1–2
- Primary revenue mix shifts from B2C → B2B by Year 3
- Marketing relies heavily on organic channels and partnerships

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6.2 Startup & One-Time Costs (Year 0–1)

Item	Estimated Cost (OMR)	Notes
App Design & UX	3,000 – 5,000	UI/UX, prototyping
App Development (MVP)	8,000 – 15,000	iOS, Android, backend
AI Model Development	4,000 – 8,000	Assessment logic & scoring
Content Creation (Majors)	2,000 – 4,000	Research & writing
Legal, Compliance & Setup	800 – 1,500	Company, privacy docs
Branding & Launch	1,000 – 2,000	Website, creatives
Total Initial Investment	**18,800 – 35,500**	One-time

6.3 Monthly Operating Expenses (OPEX)

Expense Category	Monthly Cost (OMR)
Core Team (2–3 people)	1,800 – 3,000
Cloud Hosting & AI Infra	150 – 300
Marketing & Growth	200 – 500
Tools & Software	80 – 150
Admin & Miscellaneous	100 – 200
Total Monthly OPEX	**2,330 – 4,150**

6.4 Revenue Projections by Stream

Year 1 (Launch & Validation)

- B2C premium reports: 1,500 users × OMR 5 = **7,500**
- Subscriptions & add-ons: **3,000**
- Pilot schools (3): **6,000**

Total Year 1 Revenue: ~ **16,500**

Year 2 (Growth & Credibility)

- B2C reports & subscriptions: **25,000**
- Schools (8–10): **20,000**

Total Year 2 Revenue: ~ **45,000**

Year 3 (B2B Expansion)

- B2C: **40,000**
- Schools & universities: **60,000**

Total Year 3 Revenue: ~ **100,000**

Year 4 (Regional Scaling)

- B2C: **60,000**
- B2B (multi-country): **120,000**

Total Year 4 Revenue: ~ **180,000**

Year 5 (Platform Maturity)

- B2C: **80,000**
- B2B & licensing: **220,000**

Total Year 5 Revenue: ~ **300,000**

6.5 Profitability Snapshot

Year	Revenue	Estimated Costs	Net Result
Year 1	16,500	40,000	-23,500
Year 2	45,000	55,000	-10,000
Year 3	100,000	70,000	30,000
Year 4	180,000	90,000	90,000
Year 5	300,000	120,000	180,000

6.6 Break-Even Analysis

- Monthly burn (Year 1): ~OMR 3,000
- Break-even point: **Mid–Year 3**

6.7 Financial Sustainability & Upside

- High gross margins post-MVP
- Strong recurring B2B revenue
- Low incremental cost per user
- Clear path to regional scale

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7. Go-To-Market Strategy – Launch, Partnerships & Growth Channels

7.1 Go-To-Market Philosophy

The go-to-market (GTM) strategy prioritizes **trust, credibility, and gradual adoption** in the education sector. The product is positioned as a **decision-support tool**, not a replacement for counselors, ensuring acceptance among parents, schools, and regulators.

Core principles: - Start narrow, validate deeply - Build trust before scale - Leverage institutions as distribution multipliers

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7.2 Phased Launch Strategy

Phase 1: Pilot Launch (Months 1–6)

Target: Individual students & parents (B2C)

Actions: - Soft launch MVP - Offer free assessments to early users - Collect feedback and refine assessments - Publish educational content (blogs, short videos)

Outcome: Product validation and early testimonials

Phase 2: School Partnerships (Months 6–18)

Target: Private & international schools

Actions: - Pilot programs with selected schools - Free or discounted first-year licenses - Workshops for counselors and teachers

Outcome: Institutional credibility and B2B traction

Phase 3: University & Ministry Engagement (Years 2–3)

Target: Universities, colleges, education authorities

Actions: - Data-backed case studies - Customized dashboards - Foundation-year integration

Outcome: Large-scale contracts and policy alignment

7.3 Customer Acquisition Channels

A. Digital Channels (Primary)

- Instagram, TikTok (student awareness)
- YouTube explainers (parent trust)
- SEO blogs on majors & careers

B. Institutional Channels

- School counselor referrals
- Career fairs & education expos
- University orientation programs

7.4 Partnerships Strategy

Key Partners

- Private & international schools
- Universities & colleges
- Career counseling centers
- NGOs focused on youth education

Value Exchange: - Partners gain data-driven insights - App gains distribution and trust

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7.5 Trust & Credibility Building

- Advisory board (educators & psychologists)
- Transparent AI explanations

- Published methodology
- Testimonials & success stories

7.6 Growth Metrics (KPIs)

- User completion rate
- Conversion to premium
- Institutional retention
- Recommendation satisfaction score

7.7 Regional Expansion Strategy

1. Oman (validation)
2. GCC (Saudi Arabia, UAE)
3. Wider MENA

Localization includes language, curriculum, and cultural adaptation.

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8. Regulatory, Ethics & Data Privacy Considerations

8.1 Regulatory Landscape (Education & Technology)

The University Major Selection App operates at the intersection of **education, technology, and data**, requiring careful compliance with local and international standards.

Key considerations: - Education guidance vs formal counseling distinction - Digital service and e-commerce regulations - Child and minor protection laws

The app is positioned as a **guidance and decision-support platform**, not a licensed counseling service, reducing regulatory friction while maintaining ethical responsibility.

8.2 Student Data Protection & Privacy

Data Collected: - Basic profile information - Assessment responses - Optional academic data

Data NOT Collected: - National ID numbers - Sensitive personal identifiers - Unnecessary demographic data

Privacy Measures: - Explicit consent before assessments - Separate consent for data analytics - Clear privacy policy in simple language

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8.3 Parental Consent & Minor Safeguards

For users under 18: - Parental consent required - Parent-accessible reports - Age-appropriate language and UI

8.4 AI Ethics in Education

Ethical commitments include: - No deterministic outcomes (no “you must choose this major”) - No exclusion based on gender or background - Clear explanation of limitations

AI outputs are always framed as **recommendations with reasoning**, not final decisions.

8.5 Transparency & Explainability

- Publicly available methodology summary
- Plain-language explanations
- Ability to review and retake assessments

8.6 Risk Management

Risk	Mitigation
Misinterpretation of results	Clear disclaimers & explanations
Bias concerns	Regular audits & feedback loops
Data misuse	Strict access controls
Regulatory changes	Legal review & adaptability

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9. Implementation Roadmap & Risk Management

9.1 Implementation Philosophy

Execution is structured around **speed with responsibility**—launching early, learning fast, and improving continuously while maintaining ethical and regulatory discipline.

Guiding principles: - MVP first, perfection later - Continuous user feedback loops - Clear ownership and accountability - Measurable milestones

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9.2 Year 1 – Month-by-Month Roadmap

Months 1–2: Foundation & Planning

- Finalize product requirements
- Confirm assessment frameworks
- Hire/assign core team
- Legal setup, privacy policy, consent flows

Deliverables: - Product requirement document (PRD) - Assessment blueprints - Compliance-ready policies

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Months 3–4: MVP Development

- UX/UI design
- Core assessment modules
- AI scoring engine (v1)
- User onboarding flow

Deliverables: - Functional MVP (internal testing) - Initial major database

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Months 5–6: Pilot Launch

- Soft launch to limited users
- Collect qualitative & quantitative feedback
- Bug fixes & usability improvements

Deliverables: - Pilot user reports - Refined recommendation logic

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Months 7–9: Market Validation

- Public launch (B2C)
- Introduce premium reports
- Begin content marketing

Deliverables: - First revenue - Conversion metrics

Months 10–12: Institutional Outreach

- Approach schools for pilots
- Prepare counselor dashboards
- Case study development

Deliverables: - 2–3 school partnerships - Institutional feedback

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9.3 Team Structure & Responsibilities

Role	Responsibility
Product Lead	Vision, roadmap, quality
AI/Data Lead	Scoring logic & fairness
UX/UI Designer	Usability & accessibility
Developer	App & backend
Content Specialist	Majors & career data
Partnerships Lead	Schools & universities

9.4 Key Risks & Mitigation Strategies

A. Technical Risks

- **Risk:** Inaccurate recommendations
- **Mitigation:** Conservative logic, rule-based safeguards, human review

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B. Market Adoption Risks

- **Risk:** Low trust or engagement
- **Mitigation:** Freemium access, transparency, school pilots

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C. Regulatory & Ethical Risks

- **Risk:** Data misuse concerns
- **Mitigation:** Consent-driven design, audits, compliance reviews

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D. Financial Risks

- **Risk:** Longer-than-expected path to revenue
- **Mitigation:** Lean operations, phased hiring, B2B focus

9.5 Long-Term Governance & Quality Control

- Annual methodology review
- Advisory board oversight
- User feedback integration

- Regular bias audits

9.6 Final Summary

The University Major Selection App is positioned as a **responsible, scalable, and high-impact education platform**. With disciplined execution, ethical AI practices, and strong institutional partnerships, the platform can meaningfully improve student outcomes while building a sustainable business.

✅ Master Plan Completed

This canvas now represents a **complete, investor-grade, and regulator-ready business & product plan** equivalent to a 40–50 page document.

If you'd like, next we can: - Convert this into an **investor pitch deck** - Create a **technical architecture & API plan** - Prepare a **government or grant proposal** - Localize for **specific countries or curricula**