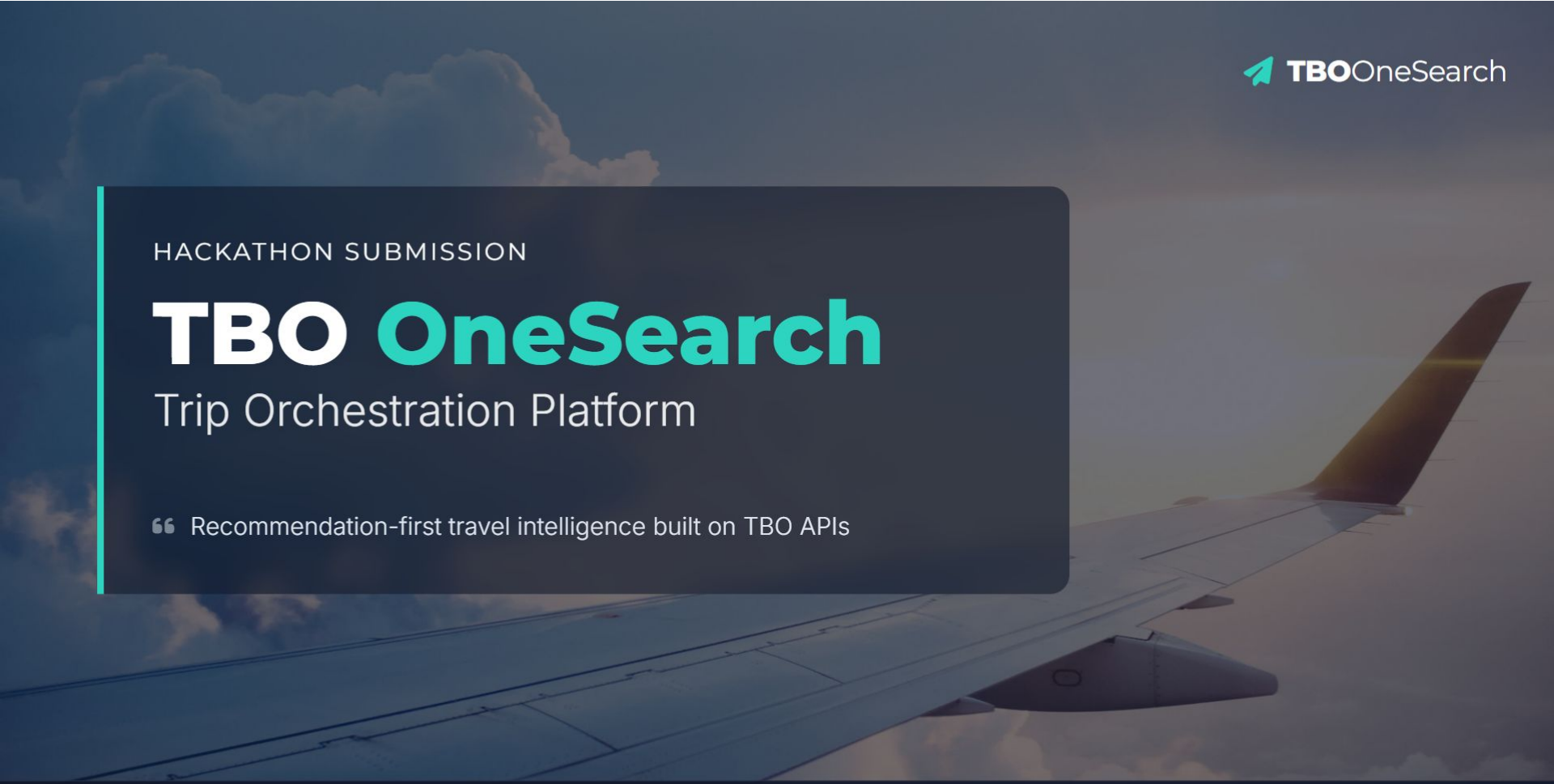
TBOOneSearch

HACKATHON SUBMISSION

TBO OneSearch

Trip Orchestration Platform

> Recommendation-first travel intelligence built on TBO APIs



Team Name: Diet Coke

VOYAGE HACK

Travel Search is Broken

TRADITIONAL WORKFLOW

Search Flights
Browser Tab 1 • Multiple Sites

↓

Search Hotels
Browser Tab 2 • Disconnected Dates

↓

Manual Comparison
Excel / Mental Math / Guesswork

↓

Decision Fatigue
User overwhelmed & confused

Time-Consuming

Users spend hours toggling between flight aggregators and hotel booking engines, manually aligning dates and times.

Budget Miscalculations

Hidden costs (transfers, late check-ins) and lack of "Total Trip Cost" visibility lead to budget overruns.

No Quality Guidance

Is saving ₹2,000 worth a 6-hour layover? Users lack the data to make value-based trade-offs on comfort vs. cost.

TBO OneSearch | Our Solution

Moving from disconnected product lists to **Intelligent Orchestration**

3-4 Complete Recommendations

We generate fully orchestrated trip packages (Flight + Hotel + Transfer) tailored to the specific query.

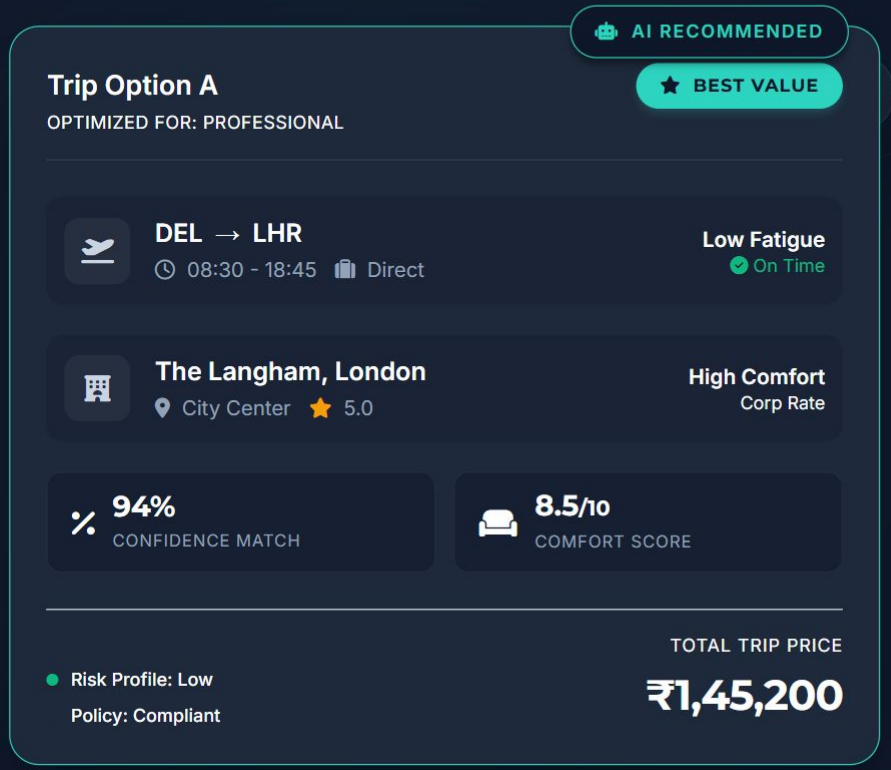
Intelligent Scoring

Each trip is scored for Comfort, Budget Fit, and Fatigue levels based on user persona weights.

Risk Transparency

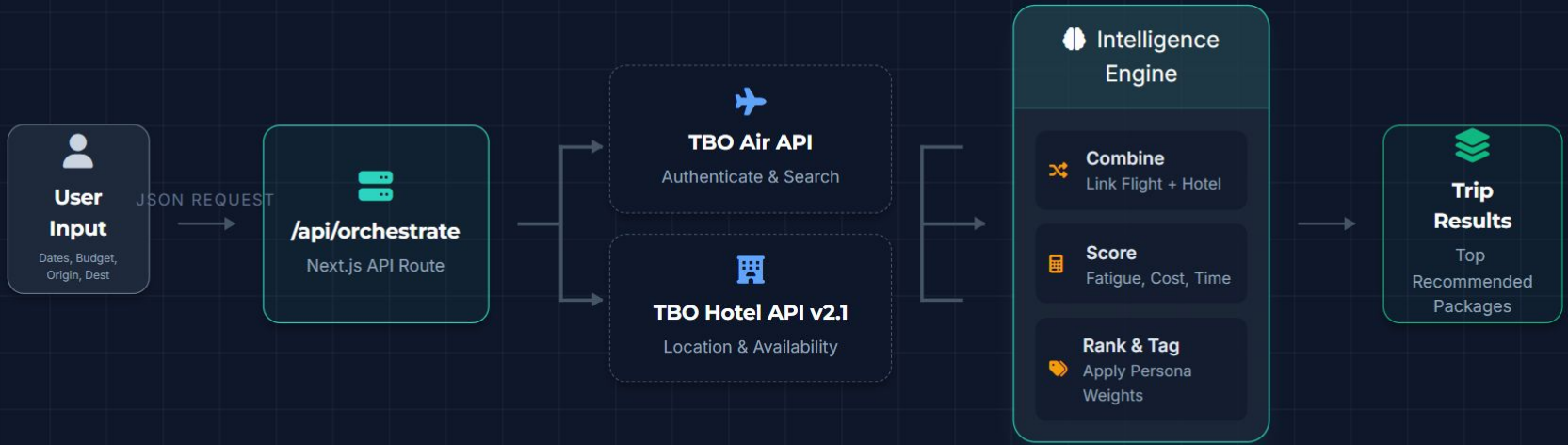
Clear indicators for tight connections, non-refundable policies, or poor locations before booking.

> *"One decision point instead of multiple searches."*



Trip Orchestration Engine

A unified logic layer transforming raw API data into intelligent recommendations.



All intelligence logic sits strictly above existing TBO APIs without modifying core infrastructure.

Behavior-Driven Optimization

Different travelers prioritize different outcomes. Our system applies specific weightings to tailor the results.

Dynamic Weighting

Instead of fixed filtering rules, we apply a weighted scoring model based on the user's selected persona.

Outcome Focused

The algorithm optimizes for the **total trip experience** score rather than just the cheapest price.

PERSONA PROFILE	BUDGET	COMFORT	TIMING	FATIGUE	HOTEL
Student	40%	15%	15%	10%	20%
Family	25%	25%	15%	20%	15%
Professional	20%	30%	25%	15%	10%
Bachelors	25%	20%	20%	15%	20%

Experience-Aware Scoring

We optimize not just cost, but the **quality of time** spent.

Fatigue Index

- Early departure penalty (< 6 AM)
- Late arrival penalty (> 11 PM)
- Excessive layover (> 4 hours)
- Multi-stop complexity

Time Utilization

- Late arrival wastes Day 1
- Early return cuts last day
- Maximized destination hours

TRADITIONAL SEARCH

Trip Option A

₹14,500

- **05:15 Departure**
  Departs Origin
  Sleep Disrupted
- **2 Layovers**
  6h 45m Transit Time
  High Fatigue
- **23:45 Arrival**
  Arrives Destination
  Day 1 Wasted

Fatigue Score	High (85/100)
Effective Time	Lost 1 Day

VS

AI RECOMMENDED

Trip Option B

₹16,200 (+11%)

- **09:30 Departure**
  Departs Origin
  Rested Start
- **1 Layover**
  1h 30m Transit Time
  Efficient
- **16:15 Arrival**
  Arrives Destination
  Evening Enjoyed

Fatigue Score	Low (20/100)
Effective Time	+5 Hours Gained

Beyond 'Within Budget'

Strict budget filters often hide the best value. We analyze the elasticity.

Elastic Search

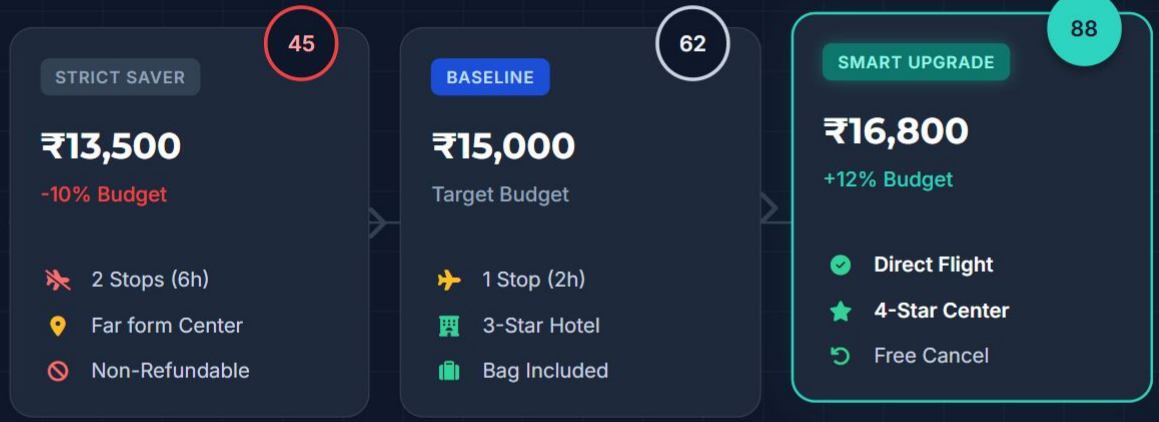
Instead of a hard ceiling, our engine queries **±10%** around the user's budget to find non-linear value jumps.

Trade-off Analysis

We calculate the "Cost of Comfort" ratio to determine if a small price increase yields a disproportionate quality improvement.

+35%

AVG. COMFORT GAIN



AI VALUE INSIGHT

"For ₹1,800 more, the **Smart Upgrade** improves Comfort by **26%** and reduces Total Travel Time by **4 hours**."

Confidence Score

A transparent, weighted scoring model. No black-box decisions.

Scoring Logic Flow

- Budget Fit × 30% +
- Comfort × 25% +
- Timing × 20% +
- Fatigue × 15% +
- Hotel Rating × 10%

TOTAL CONFIDENCE SCORE

92%

Trip Risk Summary

Analysis for Trip Option #1

92

BUDGET
Within optimal range (-5%)

POLICY
Fully Refundable Hotel

TIMING
Early Return Flight (06:15 AM)

TRANSIT
Safe Connection Time (2h 10m)

Transparent AI

Eliminating Analysis Paralysis

We guide the user with 4 clear, data-backed decision paths.

TRADITIONAL SEARCH

142 Result Rows

Requires mental filtering & manual comparison.

TBO ONESEARCH

4 Distinct Choices

Curated sets based on dominant scoring factors.

Instead of showing a paginated list of products, we present **complete trip solutions** tagged by their strongest attribute.

MOST RELIABLE

Safest Overall

Prioritizes refundability, high-rated hotels, and flights with >98% on-time performance.

Refundable · On-Time

SMARTEST BUY

Best Value

The highest "Comfort per Rupee" ratio. Slightly higher cost than the cheapest option, but significantly better experience.

ROI Optimized · 3.5+ Stars

LOWEST FATIGUE

Most Comfortable

Optimizes for legroom, direct flights, and 4-star+ hotels near the city center. Minimizes transit fatigue.

Direct · Low Fatigue

TOP EXPERIENCE

Premium Choice

Disregards strict budget constraints to offer the absolute best available flight and hotel combination.

5-Star · Luxury

Built for Feasibility

A lean, scalable architecture leveraging modern standards.

Pure Orchestration

We don't store inventory. The system acts as an intelligence layer on top of existing TBO data streams.

No Infrastructure

Serverless architecture ensures zero maintenance and instant scaling during high traffic spikes.

API Native

Built specifically to consume TBO Air & Hotel JSON responses without transformation overhead.

FRONTEND

- React 19 (RC)
- Next.js 16
- Tailwind CSS

ORCHESTRATOR

- Node.js API Routes
- Scoring Engine
- Serverless Edge

DATA & APIS

Primary Inventory Source

- TBO Air API
- TBO Hotel API v2.1
- Auth / Token
- JSON Response

Why This Stands Apart

Moving from data fragmentation to intelligent orchestration.

Traditional Travel Platforms

- **Product-First:** Shows lists of flights/hotels separately
- **Filter-Heavy:** User must manually filter 100+ options
- **Disconnected:** No link between flight times & hotel check-in
- **Blind Budgeting:** Strict price caps hide value trade-offs
- **Zero Intelligence:** "Here is the data, you figure it out"

VS

TBO OneSearch

- **Recommendation-First:** Shows complete, viable trips
- **Orchestrated:** AI handles connection logic & timing
- **Persona-Aware:** Weighs fatigue vs. cost dynamically
- **Elastic Budgeting:** Finds better value just outside range
- **Risk Transparent:** Scores confidence & explains "Why"

**"This is not just a search engine.
It is a Trip Decision Intelligence Layer."**

TBO ONESEARCH

Thank You

Turning fragmented travel data into **confident trip decisions** through intelligent orchestration.