



wtchtvr

AI-Native Analytics Engine for the Short-Term Rental (STR) Industry

Prepared for:

GWSB AI Case Competition

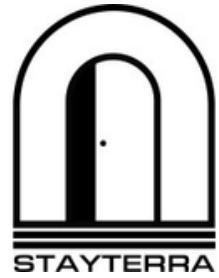
Prepared by:

Group 13 - MSBA

Date

05 December 2025

The Short Term Rental (STR) Market



+5.23%

increase in average daily rates (ADR)
for upscale listings¹

76%

of STR managers surveyed emphasized the
need for smarter pricing and operational
efficiencies²

62%

of respondents believe that AI offers
a competitive advantage in the
marketplace³

Market Pain Points

01.

Fragmented Data Sources

No centralized system to track metrics
and guide portfolio decisions as data is
scattered across teams and systems.

02.

Weak Market & Competition Analysis

Disconnected tools make it hard for
teams to benchmark performance get
a broader picture of the market.

03.

Lack of Data Backed Strategy

Fragmented systems and weak market
analysis make it harder for organizations to
leverage data in their day-to-day operations.

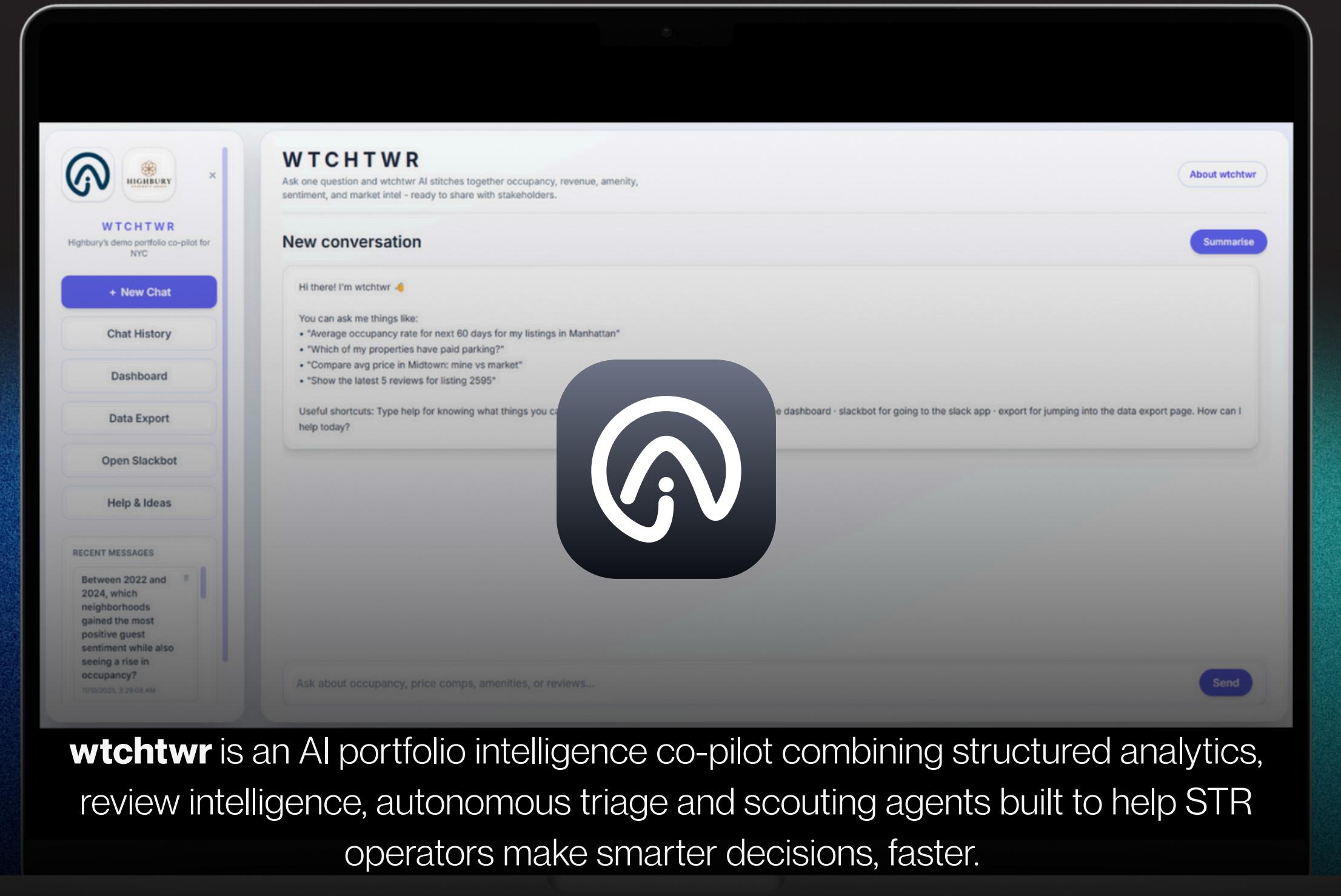
The Problem We Solve



STR managers are flying blind. Their data is scattered across channels and tools, making it hard to get clear, verifiable answers about how their portfolio is performing versus the market.

We fix this by giving them a centralized, **easy-to-use** BI “**watchtower**” for portfolio and competitive performance.

Introducing the **wtchtwr** Platform

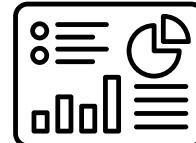


wtchtwr is an AI portfolio intelligence co-pilot combining structured analytics, review intelligence, autonomous triage and scouting agents built to help STR operators make smarter decisions, faster.



Portfolio Triage Engine

Auto-flags fix-first listings and underpriced winners to prioritize action



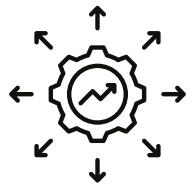
KPI & Performance Analysis

Spot portfolio winners/underperformers vs market at a glance



Sentiment & Review Insights

Turn reviews into clear themes explaining performance gaps



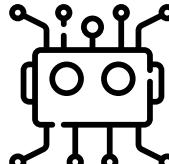
Expansion Scout

Reveals high-demand, under-served pockets for smart expansion bets



Pricing & Revenue Intelligence

Find under/overpriced listings and where price moves matter most



Explainable AI

Expose the data, SQL, and reviews behind each recommendation for a clear audit trail

Key Features

Luxury STR Business Strategy,
Reimagined

wtchtwr's Impact

Data-Driven Portfolio Decisions

Expansion Scout + BI insights highlight where to expand, prune, and reinvest so portfolio moves are smarter, faster, and backed by evidence



Revenue Upside

Triage mode flags underpriced winners and fix-first listings so ADR moves are focused where they drive the most revenue



Operational Efficiency Boost

Email/Slack workflows + sentiment-linked reviews-to-KPIs so teams quickly fix concrete property issues instead of guessing



Time & Cost Savings

Standard BI report cost reduced by ~86% per deep dive (~\$330 saved per report at \$55/hr)⁴

Time saved

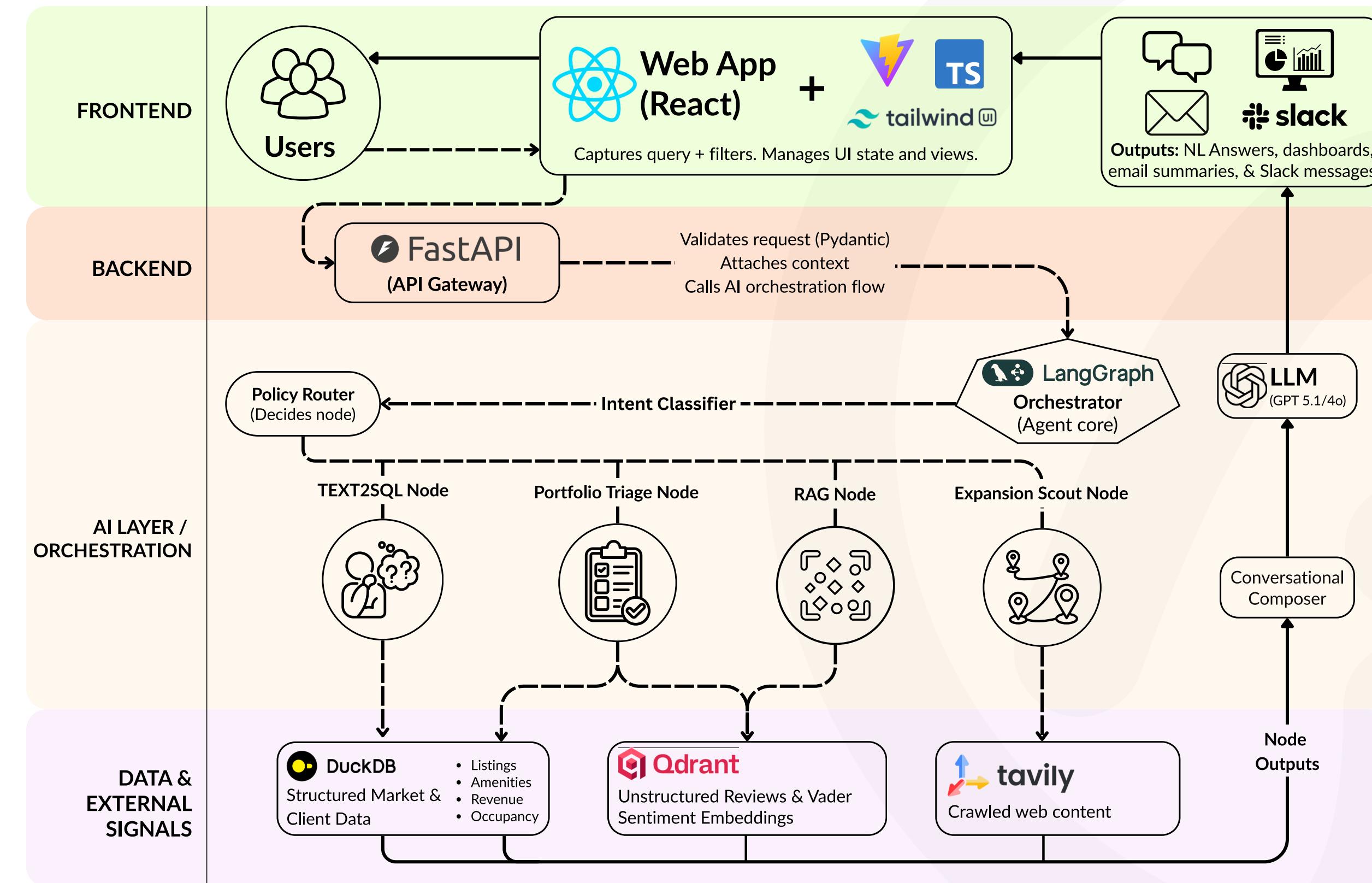
~7 hours → ~1 hour

Cost saved

\$385 → \$55

~86% reduction in both time and costs⁴

Tech Architecture



The Competition?

	wtchtwr	AIRDNA	AllTheRooms	Wheelhouse	ChatGPT
Purpose built	✓	✗	✗	✗	✗
Natural-language analytics on proprietary schema	✓	✗	✗	✗	✗
Review insights (RAG)	✓	✗	✓	✗	✗
Transparent SQL lineage	✓	✗	✗	✗	✗
Open-source market data blending	✓	✗	✗	✗	✓
Built in Slack / Email integration	✓	✗	✗	✗	✗
Enterprise data privacy	✓	✓	✗	✗	✗

Fictional Demo Client



38

Listings in NYC
Focussed in Manhattan

~\$150M
Real Estate
Assets Under Management

Friction Points:

Fragmented Data Systems, Operating in a limited market, Lack of competition analysis, Manual & Inefficient Workflows, Lack of Data-Backed Strategy

Value Delivered to Customer



**Competitive Market
Intelligence**



**Operational Efficiency &
Automation**



**Data-Driven Portfolio
Decisions**



**Market Expansion
Intelligence**

Demo



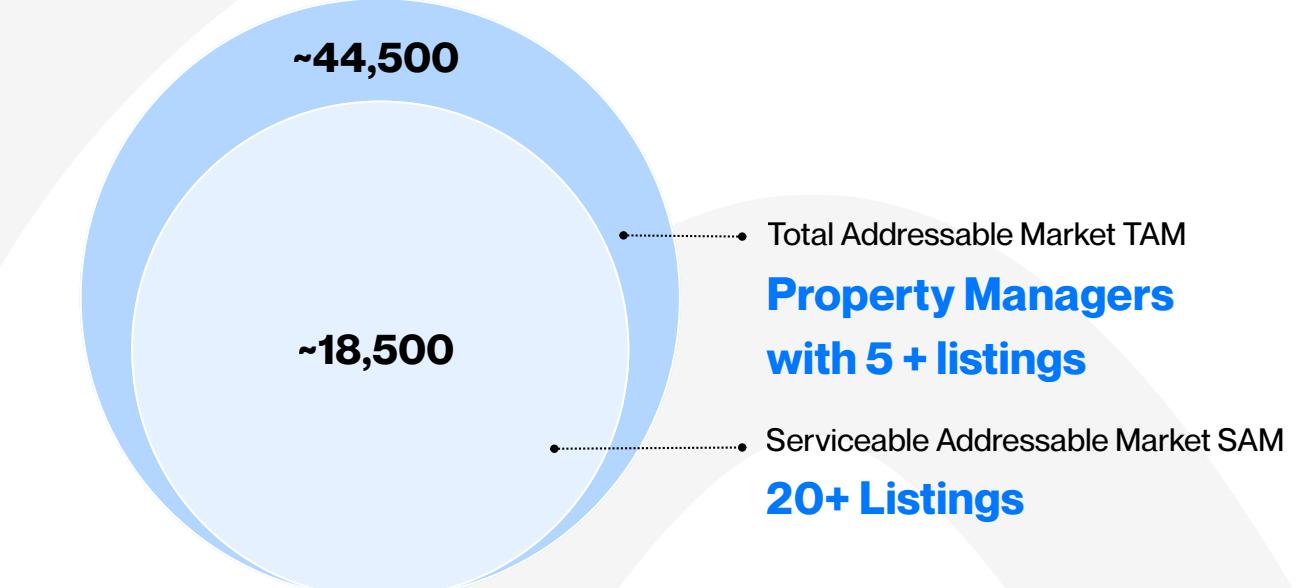
Market Opportunity & Business Model

+3.57%

Expected Market Growth Rate from
2025 to 2034⁵

24%

Market Share by North American
STR Managers⁵



Subscription-Based SaaS - Tiered monthly plans based on portfolio size.

Starter

0-50 Listings

\$150/ Month

Growth

51-200 Listings

\$450/ Month

Pro

201-500 Listings

\$900/ Month

Enterprise

500+ Listings

From
\$2,000/ Month



\$350K

Seed Investment

85-88%

Gross Margin⁶

~3-4x

Life Time Value/Customer
Acquisition Cost⁶

<7

months
CAC Payback⁶

Risk Considerations & Guardrails



Bias & Accuracy

Model outputs can mirror biased market/review patterns

Monitor skew and keep humans in control of key decisions



Data Privacy & Personally Identifiable Information

Guest and owner data can contain sensitive identifiers

Minimize, mask, and restrict access to guest/owner identifiers and avoid sending raw PII to external APIs or LLMs



Model Hallucinations & Reliability

LLMs can generate confident but incorrect explanations or recommendations

All narratives are grounded in KPIs and retrieved reviews, logged for traceability, and be subject to human review before action

Future Scalability



Upgrade intent classifier

to a learned model (ML/RL) instead of simple keyword matching



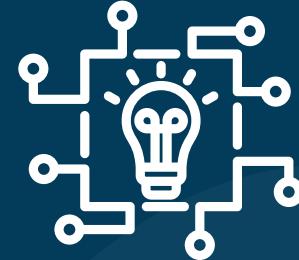
Expansion Scout 2.0

Expand scout to listing level with richer demand signals (events, seasonality, travel data)



Add built-in risk & compliance monitoring

by integrating open data (code violations, permits, complaints) into triage and expansion decisions



Deploy full agentic capabilities

so the system can take actions (e.g., update listing prices via APIs)



Add multi-platform integrations

across Airbnb, Vrbo, Booking.com, and other STR and Hotel channels

Meet the Founding Team



Gokul

Technical



Manali

Documentation



Sibtain

Technical



Savera

Client Communications



Bhuwan

Project Management



Your market watchtower

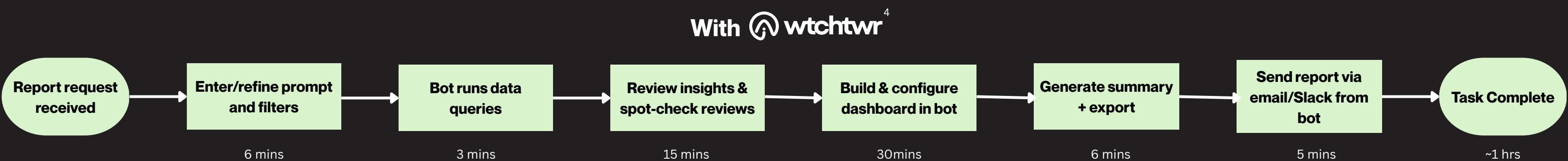
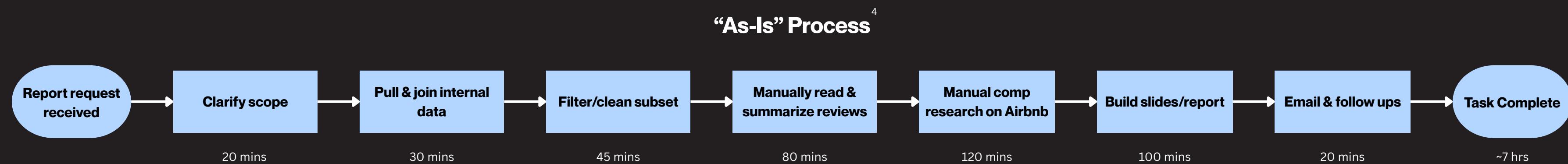
References

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<https://stayfi.com/vrm-insider/2025/07/28/vacation-rental-statistics/>
- ² Rent Responsibly (2024). 2024 Vacation Rental Stats Roundup
<https://www.rentresponsibly.org/2024-vacation-rental-stats-roundup/>
- ³ Hostaway (2024). How Many Short-Term Property Managers Are Using Artificial Intelligence
<https://www.hostaway.com/blog/ai-short-term-rental-report/>
- ⁵ Precedence Research (2025). Vacation Rental Market Size, Share & Trends 2025–2034
<https://www.precedenceresearch.com/vacation-rental-market>

Appendix: Time/Cost Benefit Analysis

Step	Mins
Clarify scope	20
Pull & join internal data	30
Filter/clean subset (1BR, Brooklyn)	45
Manually read & summarize reviews	80
Manual comp research on Airbnb	120
Build slides/report	100
Email & small follow-ups	20
Total manual time (hours)	7 hours

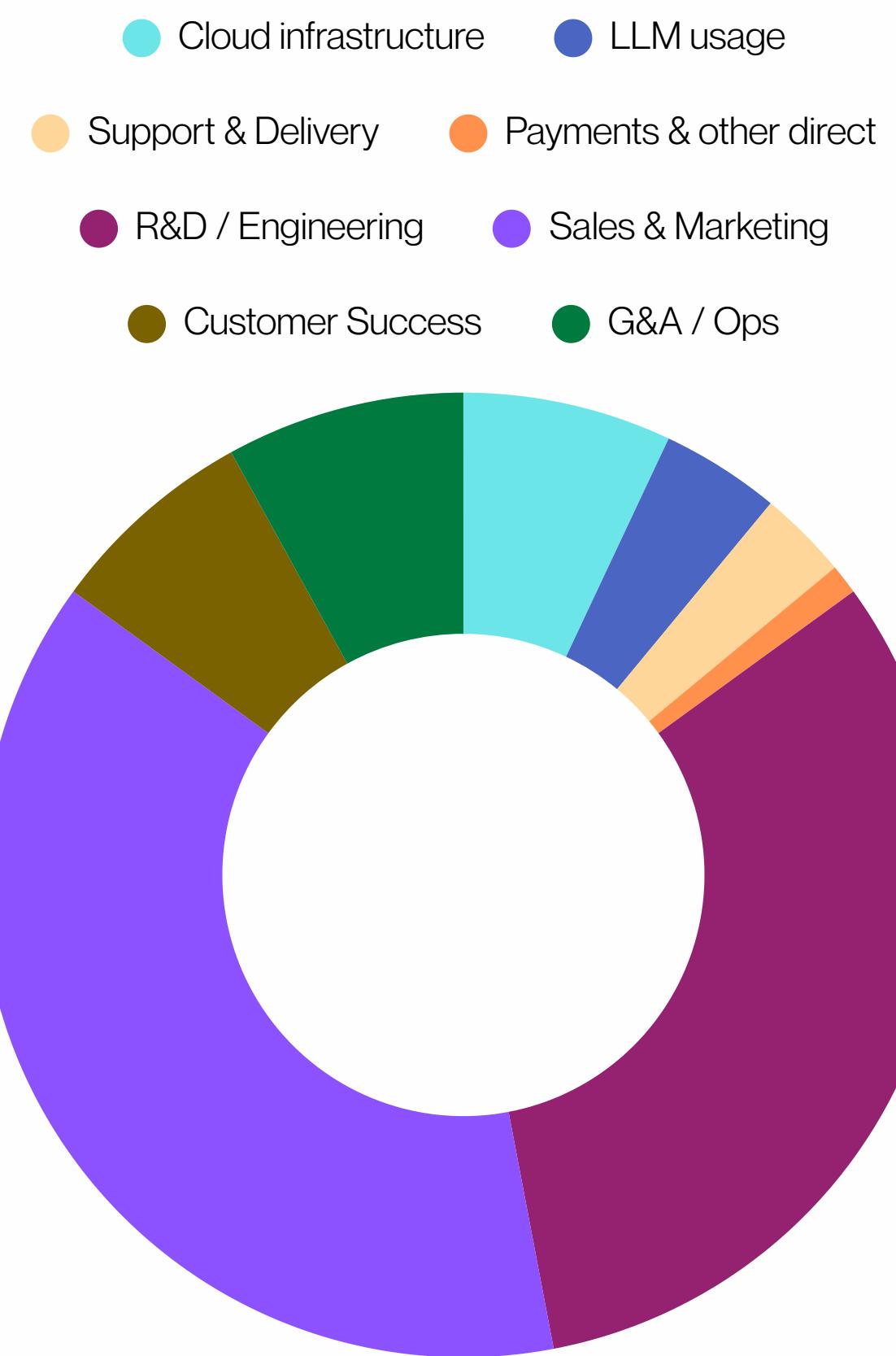
Step	Time (mins)
Enter/refine prompt & filters	6
Bot query runs (8s each × ~5–6 queries, plus overhead)	3
Build & configure dashboard views/filters	15
Review results & spot-check reviews	30
Generate narrative summary + minor edits	6
Export & send via email/Slack	5
Total with bot (hours)	~1 hour



Appendix: Business Model

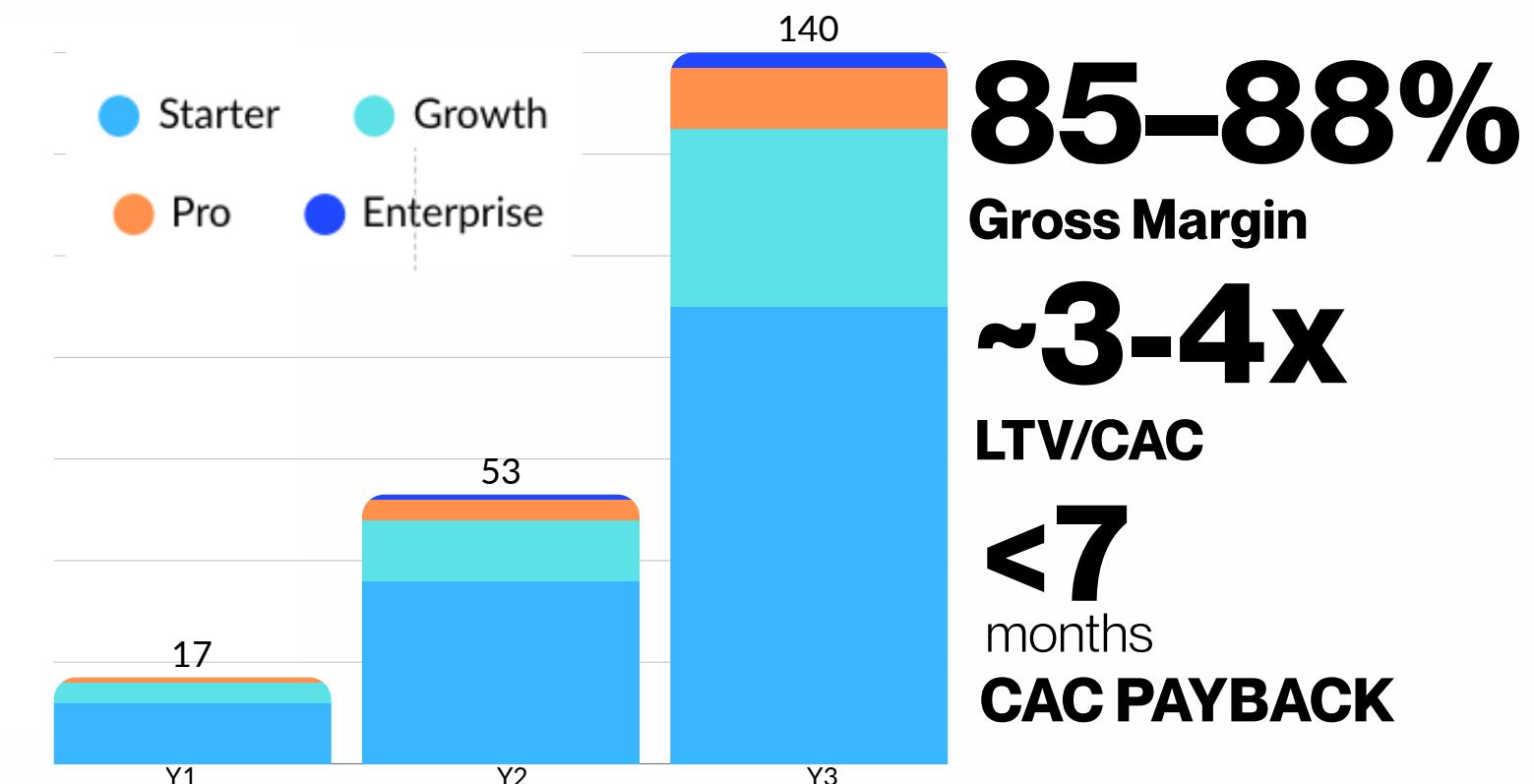
Tier	Listings	Price / month	Price / year
Starter	0-50	\$150	\$1,800
Growth	51-200	\$450	\$5,400
Pro	201-500	\$900	\$10,800
Enterprise	500+	\$2,000 (min)	\$24,000+

Year	COGS %	OpEx %	Total Cost % of Revenue
Y1	15%	85%	100%
Y2	13%	82%	95%
Y3	12%	80%	92%



Appendix: Customer Acquisition Strategy

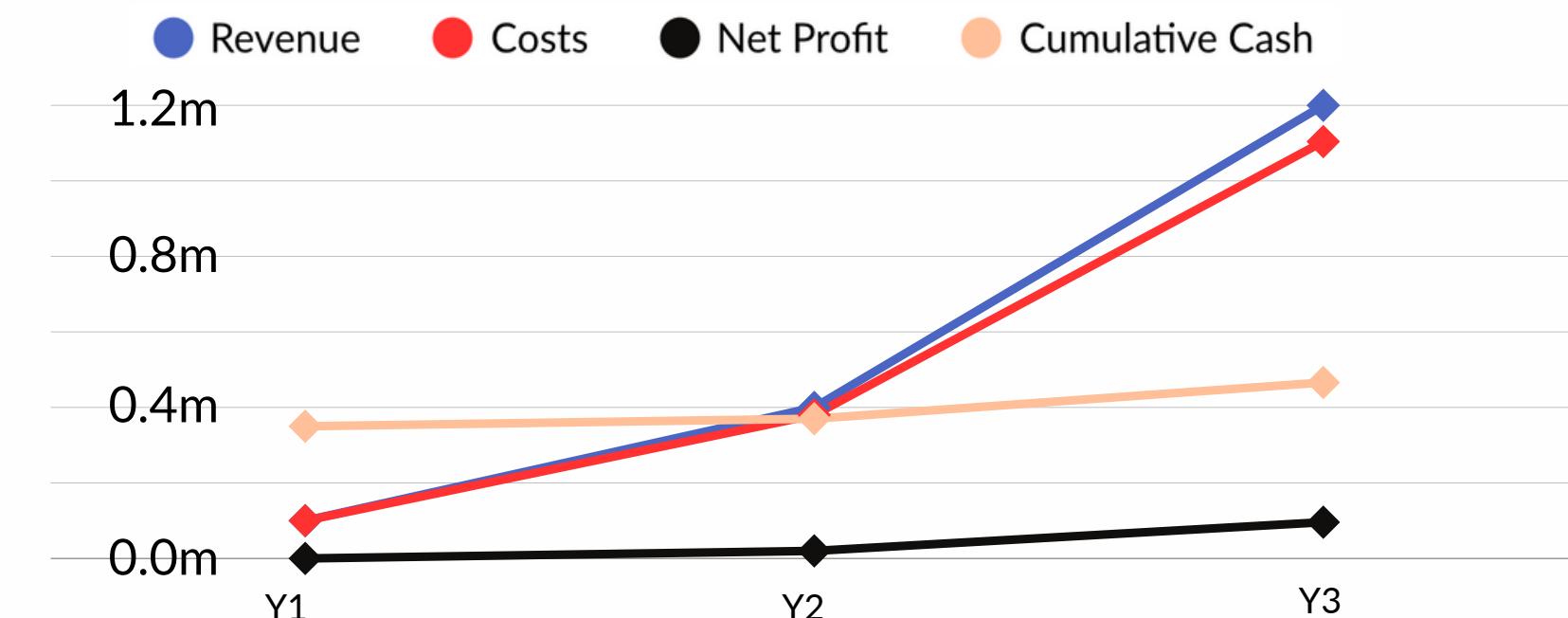
Year	Starter	Growth	Pro	Enterprise	Total Customer
Y1	12	4	1	0	17
Y2	36	12	4	1	53
Y3	90	35	12	3	140



Year	Revenue	Total Costs	Net Profit	Cumulative Cash*
Y0	\$0	\$0	\$0	\$350,000
Y1	\$54,000	\$54,000	\$0	\$350,000
Y2	\$196,800	\$186,960	\$9,840	\$359,840
Y3	\$552,600	\$508,392	\$44,208	\$404,048

Year	Blended CAC	2-year LTV (gross)	LTV/CAC	Payback
Y1	\$2,000	\$7,500	3.75x	~6–7 months
Y2	\$2,600	\$8,500	3.27x	~7–8 months
Y3	\$3,200	\$9,500	2.97x	~8 months

3-year Financial Projection With \$350k Runway



Blossom Street Ventures (2024). Percent of SaaS Revenue for R&D, S&M, COGS & G&A

<https://blossomstreetventures.medium.com/percent-of-saas-revenue-for-r-d-s-m-cogs-and-g-a-8f8cfbe33c2a>

Pilehvar, A. (2025). DNSC 6331 – Customer Analytics (course notes)