

Vayu Sleep: Building an AI-Powered Metro Expansion Scorecard

Summary

Vayu Sleep is launching a custom-made CPAP mask to treat sleep apnoea and plans to expand into a new US metro area every month. The company currently selects cities through a manual, inconsistent research process. Students are challenged to design an AI-powered, accurate, and practical metro-area scorecard that supports confident market selection and identifies reliable local healthcare contacts, while considering real-world constraints and stakeholder adoption.



Industry

Healthcare, Healthcare Technology, Consumer Wellness, Medical Devices



Focus

- AI-driven market expansion
- Healthcare analytics
- Data reliability
- Scalable growth strategy



Keywords

AI & Consulting, HealthTech, Sleep Apnoea, CPAP, Market Expansion, Data Analytics, Scorecard Design, Healthcare Providers, DME Providers, Advertising Strategy, Decision Intelligence, US Metro Markets

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Brief

Hi everyone – I'm David Walton from Vayu Sleep, and I'm really excited to share our AI Consulting challenge with you.

At Vayu Sleep, we're building what we hope will become a lifestyle-first, sleep technology company. We're developing the world's first custom-made CPAP mask, which is a therapy designed to deliver a steady stream of pressurized air from a machine through a tube into the nose and/or mouth, to treat obstructive sleep apnoea – a condition that affects around one billion people globally. Sleep apnoea doesn't just mean poor sleep. It can increase the risk of serious health issues like heart disease, diabetes, and chronic fatigue.

We're launching this September in one US metro area – most likely Charlotte, North Carolina. After that, our goal is ambitious: we want to expand into a new metro area every single month.

So, here's your challenge.

Right now, choosing which city to launch in next is complicated and manual. We look at lots of factors – things like how many people are diagnosed with sleep apnoea, obesity rates, median income, the number of sleep physicians, CPAP equipment providers, sleep labs, and even how competitive advertising might be in that area.

We then try to combine all of that information into one decision.

The problem? Well, it's slow. It's difficult to standardise. And it's hard to repeat confidently every month.

If we choose the wrong metro area, we could waste marketing budget, struggle to reach patients, or damage relationships with doctors and distributors. But if we choose the right markets consistently, we can grow quickly, responsibly, and sustainably.

This is where you come in.

We want you to explore how AI could help us build an accurate, repeatable, metro-by-metro scorecard. This scorecard should help us rank cities based on clear decision criteria. For example:

- Clinical need
- Affordability
- Access to doctors and CPAP equipment providers
- Marketing efficiency
- Competitive ad spend

You'll also need to think about how we can automatically identify reliable local points of contact – such as sleep physicians, sleep labs, and Durable Medical Equipment providers. But here's the important part: your solution must be realistic. You should carefully consider data quality, fairness between cities, acceptable levels of uncertainty, cost, and how our marketing and sales teams would actually use this tool in real life.

We're not just looking for a clever idea. We're looking for a practical, trustworthy system that leadership could confidently rely on month after month. If you can help us build a smarter expansion playbook, you won't just be solving a data problem – you'll be helping more people access better sleep and better health.

We can't wait to see what you come up with. Good luck!

Check us out at: <https://vayusleep>.