Case Study — Ravonics LLC

The teaching case for this course — and the shared anchor between the human side and the machine side of the wider doctrine. Every module exercises the same company through the same doctrine. This is that company.

The story

Ravonics LLC is a small business in **Ravenswood, West Virginia** — a town on the Ohio River with a proud industrial past and a quiet ambition. It was founded by a small circle of physicists and AI specialists who believed that the kind of modeling and machine-intelligence work done in defense and government laboratories could also be done by a small, fast company in a small town.

The founding bet was simple: **the federal market needs what we do, and we do not need to be in Northern Virginia to do it.**

Today Ravonics is a going concern with a real identity in the federal market:

- **Certified.** Ravonics holds **HUBZone** certification from the SBA — it operates in a Historically Underutilized Business Zone in Ravenswood — which opens the door to set-aside competitions restricted to HUBZone firms.
- **Registered and known.** Its SAM.gov registration carries UEI **YCB-DVKN1A9G7** and CAGE code **20DS8**. It has filed under four NAICS codes: **541512** (computer systems design), **541330** (engineering services), **541715** (R&D in physical and engineering sciences), and **518210** (data processing and hosting).
- **Capable.** The team includes PhD physicists and AI specialists, plus Azure and AWS architects — the kind of bench that lets it take on modeling, engineering, and hosted-intelligence work that most small firms cannot staff.
- **Partnered.** Ravonics works with **INSTAR Lab**, a research institution, on an STTR-shaped collaboration. INSTAR Lab is what makes Ravonics **STTR-eligible**: the Small Business Technology Transfer program requires a small business to team with a nonprofit research institution, and INSTAR Lab is that partner.

Why this company, in this course

Ravonics is not a hypothetical. It is the **canary company** — the same real firm the machine side of the doctrine uses to run its end-to-end validation ("golden thread" testing) of the pursuit pipeline. When the AI layer practices the doctrine, it practices on Ravonics. When you practice the doctrine in this course, you practice on the same company. Human and machine are learning the same doctrine through the same case.

That matters for a reason you will recognize from doctrine/08: the case is the

shared anchor. If a human capture team and an automated pursuit layer both understand Ravonics — its certifications, its capabilities, its partner, its place in the market — then when the doctrine says "gate," "pWin," or "ORBITAL," both sides mean the same thing.

Ravonics through the doctrine

Let us run Ravonics through the course's own lens.

Where the money lives (doctrine/01). Ravonics's market is the federal government. Its certifications are its entry tickets: HUBZone puts it in restricted pools, its NAICS codes define which competitions it can claim, and its SAM registration is the precondition for any award. Its partner INSTAR Lab is the key to the STTR program's research-funding pool. For a firm in Ravenswood, these registrations and certifications are not paperwork — they are *go-to-market*.

The pipeline (doctrine/03). Ravonics lives at the intersection of two pipelines: the one it runs *for its own pursuits* (sense → qualify → score → pursue → design → audit → submit → deliver → learn) and the one *the federal market runs on it* (the agency's own acquisition pipeline). Every pursuit Ravonics starts is an ORBITAL in its pipeline; every award it wins is evidence in its next pursuit.

Gates and governance (doctrine/04). Ravonics is small; it cannot pursue everything. Its gates — bid/no-bid, threshold, readiness — are how it stays solvent. A small firm that chases everything goes under. A small firm that gates honestly survives and compounds.

Scoring (doctrine/05). Ravonics's score for any opportunity is pWin × value. Its HUBZone status and STTR partnership raise its pWin in the pools those programs open. Its pricing must fit a small firm's cost structure — it cannot out-subsidize a large prime, so its price-to-win must be a position, not a race to zero.

The ORBITAL (doctrine/06). Every pursuit Ravonics commits to becomes an ORBITAL: an objective, a team, a budget, indicators, a delivery route, activities, and the logistics of a small-town firm delivering national work. The ORBITAL is how a five-person effort looks like a disciplined business instead of a scramble.

The lifecycle (doctrine/07). Ravonics began as a Dream — a hunch in a small town. Its first ORBITALS are its attempts to become a World. Every win that delivers becomes past performance; every past performance raises the next pWin. The cosmology loop, in Ravonics's case, is the flywheel of a small firm becoming a trusted supplier — one pursuit at a time.

The strategic questions

These are the questions the modules and the capstone will keep returning to. They have no single right answer — they have *defensible* answers.

1. **The HUBZone edge.** How much is HUBZone status worth to Ravonics in an average pursuit? When does it matter most, and when does it matter least? What would Ravonics do if it lost the certification?
2. **The partner.** INSTAR Lab makes Ravonics STTR-eligible. What does the partnership cost Ravonics (attention, management, IP), and what does it buy? Is STTR the right lane, or should Ravonics focus elsewhere?
3. **The market map.** With four NAICS codes and a HUBZone certification, which competitions should Ravonics pursue first? How should it sequence its first three ORBITALS?
4. **The capacity constraint.** A five-person firm cannot staff five pursuits. Design Ravonics's gate structure: what makes an opportunity worth the team's scarce attention?
5. **The small-town story.** Ravenswood is an asset and a constraint. How does Ravonics use its location in its proposals? Does "small-town West Virginia" help a technical proposal, hurt it, or both?
6. **The score.** Give Ravonics a pWin rubric. Which factors should it weight highest — given its size, its certification, and its partner — and why?

Using this case

- **In the shared core**, Ravonics is the concrete object for the pipeline, the gate, the ORBITAL, and the lifecycle sessions.
- **In the Strategic Initiative track**, Ravonics is the strategy portfolio: which bets, which gates, which ecosystem position.
- **In the MBA track**, Ravonics is the business: unit economics, price-to-win, the flywheel, the investor pitch.
- **In the MPA track**, Ravonics is the public-side object: a HUBZone firm exercising the small-business programs, managed under the rules, accountable to oversight.
- **In the capstone**, students may choose any solicitation — but the course's default capstone company is Ravonics, and its certifications and partner are part of the strategic situation students must reason about.

A note on teaching with a real company

Ravonics is real, but the case as taught is deliberately a *teaching object*. Students work from the published facts (certifications, codes, partner) and reason about strategy; they do not need — and should not invent — private details. The point is not to know Ravonics inside out; it is to practice the doctrine on a company that is concrete enough to argue about and simple enough to reason through in a semester.