

Challenge Set — Problem Statements

The scenarios that turn the doctrine into judgment. Where the practice exercises sharpen a single skill, these challenges drop you into a working situation — a solicitation, a gate meeting, a negotiation table — with real numbers and real pressure, and ask you to produce the artifact a professional would produce. The answer keys live in `answer-keys.md`, separated on purpose so you cannot peek by accident.

How to use this set. Each challenge is a self-contained problem statement: a realistic government-contracting scenario (invented agencies and companies, so no live pursuit is referenced), a small set of concrete numbers to anchor your answer, a deliverable to produce, a time-box, a difficulty tier, and a pointer to the course or module it reinforces. Work them with the Ravonics case and the worked exemplar open, exactly as you would the exercise bank. No software is required — the stack-agnostic rule of doctrine/08 holds here too.

For instructors and facilitators: the full guidance — model answers, planted-defect lists, role-play scripts, and scoring rubrics — is in `answer-keys.md`. Do not hand that file to students in the same session you hand them the problem statements. The challenges are designed to be run live, in a cohort, with a facilitator playing the agency, the competitor, or the evaluator where the scenario calls for it.

Challenges vs. exercises: what is different

The exercise bank is the **drill layer**: short, skill-targeted prompts (a recall check, a compute, a mini-defense) graded right-or-wrong or defensible, each tagged by cognitive level. It is how you *practice the moves*.

The challenge set is the **judgment layer**: open-ended problem statements with situational data that force you to *decide, defend, and deliver* the way a working capture lead, proposal manager, or BD director would. The differences that matter:

	Exercise bank	Challenge set
Shape	Short prompt, single move	Full scenario, several connected moves
Data	Whatever the prompt states	Situational data you must weigh, sanity-check, and argue with

	Exercise bank	Challenge set
Answer	Often a single right or defensible answer	A deliverable artifact — a memo, a matrix, a plan, a position
Difficulty	recall → build	Mapped to a degree tier (undergrad → professional)
Keys	Same file, lower down	Separate file , so a challenge cannot be spoiled by a glance
Time	Minutes	A time-boxed working session, 45 minutes to two weeks
What it tests	Did you learn the concept?	Can you <i>run</i> the discipline under pressure?

The two layers are designed to be used in sequence: exercises to build the moves, challenges to prove you can perform them in a situation you did not design.

The difficulty tiers

Every challenge is tagged with one of four tiers. The tiers track the degree ladder (modules/README.md) and the audience tracks, so a facilitator can assign challenges that match the room.

Tier	Who	What the challenge demands	Typical time-box
Undergraduate	B.S. students (DL 101–480); newcomers	Apply the doctrine correctly to a clean, well-specified situation. The scenario hands you most of what you need; the bar is using the vocabulary and the method faithfully.	45–90 minutes

Tier	Who	What the challenge demands	Typical time-box
Graduate	M.S. students (GC/GE modules); working professionals	Operate at working-professional depth: weigh competing inputs, make a defensible call, produce a deliverable a supervisor would accept. Multiple defensible answers exist; the defense is graded.	2–4 hours
Doctoral	Research students (DL 901–903, dissertation sequence)	Treat the scenario as a research object: design the study of it, demand evidence, generalize the lesson. The deliverable is an empirical or theoretical contribution, not a memo.	1–2 weeks
Professional	Experienced practitioners; executive/BD leadership	Work at speed under ambiguity, as a senior owner would. The scenario is messy, the data is incomplete, and the deliverable is a decision with a one-page defense.	60–90 minutes

A good study plan or cohort syllabus mixes tiers: undergraduates prove the method, graduates prove the craft, and the professional-tier challenges are the capstone experiences that simulate the room.

How to run a challenge

The set works as a self-study bank, a graded assignment bank, or a live facilitated exercise.

As a self-study bank. Read the problem statement, collect your scratch work on paper or a plain document, and produce the deliverable within the time-box. When you are finished — not before — open the answer key for that number and grade yourself against the model. Use the scoring guidance the way the exercise bank grades **decide** and **build** items: *did I use the doctrine? did I argue with evidence? could a skeptic change my mind with a fact?*

As a graded assignment. The time-box doubles as a submission window. Grade the deliverable against the scoring guidance in the key. The tier tells you the altitude of the expectation: an undergraduate deliverable is graded for method and completeness; a graduate deliverable is graded for the quality of the defense; a professional-tier deliverable is graded for whether a senior leader would act on it.

As a live facilitated exercise. Several challenges are explicitly theatrical — a gate-review defense (CH-06), a negotiations role-play (CH-10), a teaming negotiation (CH-14), an oral rehearsal (CH-11). For these, the facilitator plays the counterparty (the gate owner, the contracting officer, the other firm, the hostile evaluator). The role-play scripts in the answer key tell the facilitator what the counterparty wants, what they will concede, and what they will not. Live exercises run best with two or three students per team and the facilitator in role.

The honor-system rule. The problem statements and the answer keys are separate files for a reason. The learning value of a challenge is destroyed the moment you read the key before you produce the deliverable. If you are a student working solo, treat the key as the last page of the book: close it until you have written your answer.

The challenges at a glance

#	Challenge	Doctrine / discipline	Tier
CH-01	The Golden No-Bid	Bid/no-bid qualification (gates)	Undergraduate
CH-02	Three Themes and a Discriminator	Win-theme development	Graduate
CH-03	The Ghost in the Room	Ghost-theme identification	Professional

#	Challenge	Doctrine / discipline	Tier
CH-04	Reading the Field's Past Performance	Competitive analysis, CPARs, bidder profiles	Graduate
CH-05	The Capture Plan That Has to Survive a Room	Capture plan build	Graduate
CH-06	Defend This Gate	Gate-review defense	Professional
CH-07	The Pink Team Finds What the Writers Missed	Color team with planted defects	Graduate
CH-08	The RFP That Was Written to Be Misread	Compliance-matrix audit of a defective RFP	Undergraduate
CH-09	\$240,000 to Win On	Price-to-win under a hard budget	Graduate
CH-10	Two Sides of One Table	Negotiations role-play	Graduate
CH-11	The Oral That Almost Won	Oral-rehearsal critique	Undergraduate
CH-12	Rebuild the Loss From the Debrief	Debrief reconstruction	Doctoral
CH-13	The Cost Volume the Auditor Will Read	FAR / DCAA / CAS cost scenario	Graduate
CH-14	One Deal, Two Companies, Seven Axes	Teaming / JV agreement negotiation	Graduate
CH-15	From Seven Axes to Four Volumes	ORBITAL → proposal mapping	Graduate
CH-16	The Portfolio and the Line	pWin / scoring with the threshold formula	Undergraduate
CH-17	The Final Proposal Revision	Post-submission FPR strategy	Graduate
CH-18	Rescue the Derailed Pursuit	Recovering a failing pursuit	Doctoral
CH-19	The Portal Closes at Five	Submission mechanics	Undergraduate

#	Challenge	Doctrine / discipline	Tier
CH-20	Four Opportunities, One Team	Portfolio allocation under capacity	Graduate
CH-21	The Customer Who Has Never Heard of You	Customer engagement (DREAM) plan	Professional
CH-22	The Executive Summary That Must Carry the Ship	Executive-summary / one-pager under a page limit	Graduate
CH-23	The Agent's 0.62	AI accountability — human override of a machine bid/no-bid memo	Graduate
CH-24	The Ghost Pass That Missed the Collision	AI-accountability color teams — re-running a machine ghost pass	Professional
CH-25	The Rehearsal That Met the Hostile Room	Live oral rehearsal against a hostile Q&A bank	Graduate
CH-26	The Pipeline Under the Budget Ceiling	Portfolio forecasting under a fixed BP budget	Graduate

Each challenge names the doctrine chapter, literacy page, module, and Dream DNA artifact it exercises; the answer key repeats the pointer so a facilitator can see the discipline behind every deliverable at a glance.

The cast of invented companies

The challenges use a recurring cast of fictional firms and agencies so the scenarios stay self-contained and no real pursuit is referenced. None of these exist. The only real teaching object is **Ravonics LLC** — the shared canary company from the case study — which appears where the course's own threads are being pulled.

- **Helixfield Corporation** — a large, well-resourced prime and frequent incumbent. Good past performance, comfortable price band, slow on innovation.
- **Granite Peaks Federal** — a large competitor with deep bench strength and aggressive pricing.
- **Meridian Anchor** — a mid-size firm; technically strong, thin past performance in the specific domain.
- **Stonebridge Analytics** — a small analytics shop; sharp technology, no incumbency, limited delivery capacity.
- **Cardinal Point Technologies** — a HUBZone-certified small business; efficient, hungry, price-sharp.
- **Northwind Systems** — a mid-size engineering firm; strong on the technical side, weak on the management story.
- **Atlas Run Federal** — a large prime that teams rather than wins alone; a natural JV or teaming partner.
- **Blue Heron Services** — a small disadvantaged business; strong in staffing services, limited technical depth.
- **Titan Forge Federal** — a rival that appears in the negotiation and teaming scenarios; well-prepared and patient.
- **Osprey Dynamics** — a specialist subcontractor candidate with a niche capability.
- **Agencies** — the **Bureau of Climate Resilience Infrastructure (BCRI)**, the **Federal Logistics Command (FLC)**, the **Administration for Veterans Employment Systems (AVES)**, the **National Border Health Administration (NBHA)**, the **Office of Arctic Resilience Programs (OARP)**, and the **Department of Domestic Water Infrastructure (DDWI)** — all invented, all publishing solicitations in the same shapes real agencies do.

The one-sentence brief

The doctrine is the what; the exercises are the how; **the challenges are the judgment** — the place where you stop being graded on remembering the pipeline and start being graded on running it.

The federal market is not a lottery. It is a pipeline — and the pipeline is teachable.