

OCH PRODUCT SPECIFICATION (HIGH DETAIL)

TIER 0 — OCH CYBER TALENT PROFILER SERIES

1. Tier Overview

Tier 0 is the **entry gateway** into the OCH ecosystem. Every learner must begin here before accessing Foundations or any track. The Profiler Series acts as OCH's **Talent Definition Engine**, identifying the learner's:

- natural strengths
- existing technical ability
- cyber aptitude
- working style
- mission difficulty level
- recommended track (Defender, Offensive, GRC, Innovation, Leadership)
- personalized mission pathway

This module uses structured questions, difficulty selection, micro-scenario challenges, and VIP-style self-reflection to generate a **personalized OCH Learning Blueprint**.

Tier 0 must feel like a **custom onboarding intelligence engine**, not a course.

2. Category Breakdown

Category in this Tier

1. **OCH Cyber Talent Profiler** – A structured identity, aptitude, and skills-based assessment engine that determines personalized learning pathways within OCH.

3. User Personas (Relevant for Tier 0)

- **Beginner Learner:** Needs track discovery and starting point.
- **Intermediate Learner:** Needs direction and role fit.
- **Advanced Practitioner:** Needs calibration and difficulty mapping.
- **Career Switcher:** Needs clear path into cyber roles.
- **Mentor/Coach:** Needs learner's Profiler results to guide mentorship.
- **Administrator:** Needs analytics for cohorts and enterprise clients.

4. User Goals & Outcomes

Learners must be able to:

- Understand their baseline aptitude and strengths.
- Identify the cyber role best suited to them.
- Receive a recommended track (Beginner / Intermediate).
- Receive a personalized mission difficulty score (Novice → Elite).
- Produce the first element of their portfolio (VIP “Value Statement”).
- Begin OCH with clarity and confidence.

Outcomes for the system:

- Categorize the learner’s skill level.
- Match the learner to a track.
- Recommend a difficulty tier.
- Generate a personalized learning plan.

5. Developer Requirements

Core Functional Requirements

The Profiler must:

- Contain **multi-step question modules**:
 - Aptitude
 - Technical reasoning
 - Scenario-based choices
 - VIP identity/value extraction
 - Work style & preferences
 - Difficulty self-selection
- Produce a **scoring model** based on weighted categories.
- Map scores to recommended tracks and levels.
- Allow only **one full attempt** (anti-cheat).
- Store results permanently in the learner profile.
- Lock out retakes unless admin-approved.
- Generate a “Personalized OCH Blueprint” document.

Track Recommendation Logic

System must compute a track match using weighted components:

- Technical Aptitude

- Problem-Solving
- Work Style
- Scenario Preferences
- Past Experience
- Mission Mindset Results

Defender example:

High pattern-recognition + high stability + risk sensitivity.

Offensive example:

High curiosity + high exploration + analytical lateral thinking.

GRC example:

High documentation clarity + structured thinking + governance alignment.

Innovation example:

High creativity + automation interest + systems thinking.

Leadership example:

High communication + decision clarity + value-driven responses.

Permissions

- Learner: can take profiler once.
- Mentor: can view learner outputs.
- Admin: can reset profiler, adjust scores.

6. Content Architecture

Profiler content includes:

- **Video Explainer (Optional):** How the profiler works.
- **Modules:**
 1. Identity & Value (VIP-based questions)
 2. Cyber Aptitude (logic, patterns, reasoning)
 3. Technical Exposure (multiple-choice & experience scoring)
 4. Scenario Preferences (choose-your-path mini-stories)
 5. Work Style & Behavioral Profile
 6. Difficulty Level Self-Selection
 7. Role Fit Reflection
- **Outputs:**
 - Track Recommendation
 - Difficulty Score
 - Learning Strategy
 - First Portfolio Entry (Value Statement)

7. Navigation Flow (UX)

Step-by-step UX Flow

1. **Welcome → Profiler Overview Screen**
 - Explain purpose
 - How long it takes
 - What is needed
2. **Module 1: Value/Aptitude Section**
 - 10–15 questions
 - Extract Value Statement
3. **Module 2: Cyber Aptitude Test**
 - Pattern recognition
 - Reasoning
 - Basic logic puzzles
 - 10–15 items
4. **Module 3: Technical Exposure Module**
 - Self-rating questions
 - Simple technical reasoning
5. **Module 4: Scenario Preferences**
 - Branching story format
 - User chooses action in a cyber event
 - Maps to role fit
6. **Module 5: Work Style Assessment**
 - Stability vs Exploration
 - Detail orientation
 - Communication preferences
7. **Module 6: Difficulty Self-Selection**
 - Novice / Beginner / Intermediate / Advanced / Elite
 - AI engine verifies if selection is realistic
8. **Module 7: Reflection**
 - “Why cyber?”
 - “What do you want to achieve?”
 - Stored as portfolio entry
9. **Results Screen: Personalized OCH Blueprint**
 - Track recommendation
 - Mission difficulty level
 - Suggested starting point
 - Learning strategy tips
10. **Transition to Tier 1 (Foundations)**
 - Button: “Begin Your Journey”

8. Screens Needed (UI Inventory)

1. Profiler Landing Page
2. Instructions Page
3. Question Module Screen (reusable with templates)
4. Aptitude Test Interface
5. Scenario Engine Screen (branching UI)
6. Reflection Input Screen
7. Anti-Cheat Lock/Warning Screen
8. Results Dashboard
9. Generated Learning Blueprint PDF View
10. Transition Screen → Tier 1 Foundations

9. Data & Telemetry Requirements

Track the following:

- Completion status
- Time spent per module
- Aptitude score
- Technical exposure score
- Work style cluster
- Scenario choices
- Difficulty selection
- Final computed track recommendation
- Percentage alignment per track
- First portfolio value statement
- Result acceptance/override
- Device/browser used
- Attempt count (must remain 1 unless reset)
- Profiler → Foundations transition timestamp

All stored in Profile DB and Analytics engine.

10. Integration Points

- **Missions Engine:** Difficulty score maps to mission assignment.
- **Recipe Engine:** Tracks what recipes learners need to bridge gaps.
- **Mentorship Layer:** Mentors see Profiler results to guide learners.
- **Portfolio & Assessment Engine:** Stores first portfolio entry.
- **VIP Leadership Academy:** Uses Value Statement as the seed of leadership identity.
- **Marketplace:** Future: track recommendation feeds talent matching.
- **Enterprise Dashboard:** Cohort profiling visualized for companies.

11. Success Criteria

User Experience Success

- Learner finishes with clarity and excitement.
- User understands their cyber role identity.
- 90% accept the recommended track.
- No confusion about next steps.

Platform/Developer Success

- Zero duplicate attempts without admin override.
- Profiler data populates user profile correctly.
- Role mappings accurate >85% upon mentor review.
- Results available to mentors and admins.
- Smooth transition to Tier 1 Foundations.

12. Future Expansion Notes

- Add adaptive difficulty powered by AI.
- Add scenario video simulations.
- Add Multi-Role Dual-Track suggestions.
- Add psychometric engine integration.
- Add enterprise cohort profiling maps.
- Add badge for “Profiler Completed.”
- Add analytics to detect anomalies (cheating).
- Add gamified entrance storyline (future).

TIER 1 — FOUNDATIONS

1. Tier Overview

Tier 1 — Foundations is the **orientation layer** of OCH. It activates immediately after the learner completes the Profiler Series and receives their personalized OCH Blueprint. Its purpose is to ensure every learner begins their journey with:

- a unified understanding of the OCH learning philosophy,
- clarity on how missions, recipes, tracks, mentorship, and marketplace work,
- awareness of the cyber “battlefield” context,
- alignment to the VIP (Value, Impact, Purpose) mindset,
- confidence navigating the platform.

Foundations is not a technical module. It is the **mindset and system-onboarding tier** that prepares learners to meaningfully engage with OCH’s mission-driven, role-based ecosystem.

2. Category Breakdown

Category in this Tier:

1. Foundations

Introduces the OCH ecosystem, platform structure, mission methodology, track architecture, transformation pathway, and how students progress through their cyber journey.

3. User Personas (Relevant for This Tier)

Primary

- **Beginner Learner** – needs full orientation.
- **Intermediate Learner** – needs clear navigation and role clarity.
- **Advanced Practitioner** – needs to understand how missions and tracks will work for them.

Secondary

- **Mentor/Coach** – needs awareness of the orientation baseline.
- **Administrator** – needs visibility into onboarding pathways.

4. User Goals & Outcomes

The learner should:

- Understand how OCH works end-to-end.
- Know what missions and recipes are and how they interact.
- Understand the transformation pathway from Beginner → Mastery → Marketplace.
- Know what the VIP framework is and why OCH uses it.
- Know how to navigate their dashboard, view their track, and start learning.
- Understand portfolio expectations.
- Know how to interact with mentors.
- Complete the Foundation Assessment (orientation-based quiz/reflection).
- Be fully ready to enter their Beginner Track.

Outcomes for the system:

- Mark orientation as complete.
- Save readiness data.
- Trigger access to Beginner Track.

5. Developer Requirements

Functional Requirements

The Foundations tier must:

1. Present all orientation modules in sequence.
2. Track completion at module level.
3. Block entry into Tier 2 (Beginner Tracks) until Foundations is complete.
4. Store assessment/reflection data.
5. Provide a smooth transition to Tier 2.
6. Persist the user's selected or recommended track.
7. Display the user's personalized pathway from the Profiler.

Navigation Requirements

- Foundations must appear immediately after Profiler completion.
- Allow learners to resume where they left off (progress saved).
- Allow skipping submodules only if designated non-mandatory.

Role-Based Permissions

- **Learners:** view and complete all Foundations content.
- **Mentors:** access Foundations completion status.

- **Admins:** manage content, view analytics.

Completion Logic

Foundations is complete when:

- All mandatory modules are checked.
- Final orientation assessment submitted.
- User clicks “Continue to Your Track.”

6. Content Architecture

Content items in this tier:

- **Orientation Videos:**
 - What is OCH?
 - How mission-driven learning works.
 - Role-based tracks explained.
 - What missions look like.
 - Introduction to Recipes.
 - Overview of the mentorship layer.
 - Introduction to VIP identity and value.
 - Portfolio and marketplace overview.
- **Diagrams:**
 - OCH Ecosystem Map
 - Mission/Recipe Engine
 - Learning Pathway Map
 - Portfolio Flow
- **Interactive Elements:**
 - Mission preview
 - Recipe demo
 - Track preview
 - Portfolio card example
- **Assessments:**
 - Orientation readiness check
 - Understanding of OCH structure
 - Commitment & goals submission
- **Reflection:**
 - User sets initial goals (stored for mentor review)

7. Navigation Flow (UX)

User Journey (Step-by-Step)

1. **Foundations Welcome Screen**
“Your Journey Starts Here” + Profiler summary.
2. **Module List Screen**
Displays all orientation modules with progress bars.
3. **Module Viewer**
Plays video + shows diagram + gives short summary.
4. **Mission Preview Interaction**
User sees a sample mission.
5. **Recipe Preview Interaction**
User sees an example of recipe micro-skill.
6. **Track Overview Screen**
Shows recommended track + option to override.
7. **Portfolio Introduction Screen**
Shows what users will build through missions.
8. **Mentorship Layer Overview**
How guidance flows.
9. **Assessment Screen**
Orientation quiz + goal reflection.
10. **Completion Screen**
“You’re Ready. Begin Your Track.”
→ Button transitions user to Tier 2.

8. Screens Needed (UI Inventory)

1. Foundations Landing Page
2. Orientation Modules List
3. Orientation Module Viewer
4. Mission Preview Page
5. Recipe Preview Page
6. Track Overview & Confirmation Page
7. Portfolio Overview Page
8. Mentorship Overview Page
9. Orientation Assessment Page
10. Reflection Submission Page
11. Foundations Completion Screen
12. Persistent Progress Sidebar

9. Data & Telemetry Requirements

System must track:

- Completion of each foundation module
- Video watch percentage
- Interactions with mission preview
- Interactions with recipe demo

- Track confirmation/override
- Quiz scores
- Reflection submission (text stored)
- Time spent in orientation
- Drop-off analytics (critical for onboarding optimization)
- Transition timestamp to Tier 2

This data becomes part of the learner's long-term profile.

10. Integration Points

- **Missions Engine:** Previews sample Mission cards; Explains mission scoring but does not start missions
- **Recipe Engine:** Shows sample recipes; Demonstrates how micro-skills support missions
- **Mentorship Layer:** Mentors review user's orientation reflections
- **Portfolio & Assessment Engine:** First portfolio entry (goals/identity) stored here; Orientation assessment also stored
- **VIP Leadership Academy:** Introduces VIP concept to prepare for leadership-level modules
- **Marketplace Academy:** Provides overview of how learners eventually earn from skills
- **Enterprise Dashboard:** If user belongs to an enterprise cohort, orientation readiness synced

11. Success Criteria

User Experience Success

- Learners report clarity about OCH's structure (>90% positive feedback metric).
- New users enter Beginner Tracks without confusion.
- Low drop-off rate during orientation (<15%).

Platform Success

- Foundations completion recorded accurately.
- Track transitions triggered smoothly.
- Analytics display module-level completion visibility.
- No navigation dead-ends.
- All content responsive on mobile.

12. Future Expansion Notes

- Add immersive onboarding storyline.
- Add optional “Cyber Basics Bootcamp” for non-technical learners.
- Add personalized recommendations powered by AI.
- Add in-module chat for mentor questions.

- Add interactive diagrams with animations.
- Add progress badges for motivational reinforcement.
- Add Foundations Certification for enterprise cohorts.

TIER 2 — BEGINNER TRACKS

1. Tier Overview

Tier 2 — Beginner Tracks form the **first structured learning pathway** inside OCH after Foundations. This tier moves the learner from orientation → competence-building.

Each beginner track introduces core concepts, foundational skills, and early-stage mission readiness. These tracks must be **simple, confidence-building, structured, interactive**, and designed to bring learners to an intermediate professional level.

Beginner Tracks must feel like:

“I can do this. I understand cyber. I can contribute.”

This tier is essential to build belief, competence, and the minimum technical literacy required for missions.

2. Category Breakdown (5 Beginner Categories)

1. **Beginner — Defender Track**
Introductory SOC, monitoring, basic detection concepts.
2. **Beginner — Offensive Track**
Ethical hacking fundamentals, reconnaissance, attacker mindset.
3. **Beginner — GRC Track**
Governance, compliance basics, documentation, risk principles.
4. **Beginner — Innovation Track**
Cloud basics, scripting fundamentals, intro to automation.
5. **Beginner — Leadership Track**
Professional identity, VIP foundation, communication, decision basics.

Each category contains ~20 beginner videos plus quizzes, simple tasks, and 1–2 soft missions.

3. User Personas

Primary

- **Beginner Learners** (0–1 year exposure).
- **Career Switchers** entering cybersecurity.
- **Intermediate learners** seeking structured grounding.

Secondary

- Mentors (for guidance & review).
- Administrators (for tracking user progress).
- Enterprise partners (for entry-level upskilling).

4. User Goals & Outcomes

Learner goals:

- Understand the fundamentals of their chosen track.
- Build confidence in technical or governance concepts.
- Prepare for intermediate missions.
- Produce first portfolio artifacts.
- Demonstrate early competence through quizzes/mini-assessments.
- Gain clarity on which specializations appeal to them.
- Engage early with mentorship guidance.

Platform outcomes:

- Move learners from basic understanding → mission readiness.
- Build track-level progress data.
- Enable smooth transition into Tier 3 (Intermediate Tracks).

5. Developer Requirements

Functional Requirements

The Beginner Track module must:

- Display all modules (videos, text guides, diagrams).
- Support sequential or flexible (admin-configurable) progression.
- Track module-level completion.
- Store quiz results.
- Store short answer reflection items.
- Allow submission of beginner-level mini-missions (optional).
- Allow viewing of sample mission reports.
- Enable bookmarking or saving lessons.
- Provide a “Progress to Intermediate” trigger when completion criteria met.

Navigation Requirements

- Persistent sidebar showing track modules.

- Return to track dashboard at any time.
- Enable mentor comments on specific tasks (optional).
- Smooth handoff to Intermediate Tracks upon completion.

Role-Based Permissions

- **Learner:** full access to track content.
- **Mentor:** view progress, comment on tasks.
- **Admin:** create/remove modules, track analytics.
- **Enterprise Partner:** view aggregated progress of cohort (no personal data unless allowed).

Completion Logic

Beginner Track is complete when:

- All mandatory modules completed
- All quizzes passed
- Minimum number of beginner tasks submitted
- Mentor approval (optional toggle)

6. Content Architecture

Beginner Tracks contain the following content:

Core Content

- ~20 beginner-level videos
- Text summaries
- Diagrams and flow illustrations
- Concept check quizzes
- Reflection prompts
- Beginner mini-missions (1–2)

Portfolio Components

- First artifacts (reports, notes, diagrams)
- Beginner tasks

Mentor Interactions

- Mentor feedback portal
- Optional live session scheduling

Mission Preparation

- Preview of upcoming Intermediate Missions
- Required recipes list

Other Content

- Glossary page
- Downloadable cheat sheets
- “What to expect next” roadmap

7. Navigation Flow (UX)

Step-by-Step Beginner Experience

1. **Track Dashboard (Landing Page)**
Shows modules, progress bar, and mentor notes.
2. **Module Viewer**
Contains video + transcript + summary + resources.
3. **Knowledge Check Quiz**
Simple, reinforcing learning.
4. **Reflection Submission Page**
Short text responses stored in portfolio.
5. **Mini-Mission Introduction Screen**
Context + expected output.
6. **Mini-Mission Submission Screen**
Upload evidence; tagging & description required.
7. **Review & Mentor Feedback Screen**
Visible to learner as comments / audio notes.
8. **Beginner Progress Tracker**
Visual dashboard with milestones.
9. **Completion Screen → Transition to Intermediate**
“Congratulations — You’re Ready for the Next Level”

8. Screens Needed (UI Inventory)

1. Beginner Track Landing Page
2. Module List + Progress Overview
3. Module Viewer (Video + Summary + Resources)
4. Quiz Screen
5. Reflection Submission Screen
6. Mini-Mission Preview Page
7. Mini-Mission Submission Page

8. Mentor Feedback Screen
9. Track Completion Screen
10. Progress Dashboard Screen
11. Resources/Glossary Screen
12. “Ready for Intermediate?” Prompt

9. Data & Telemetry Requirements

Track the following:

- Module completion status
- Quiz scores
- Number of mini-mission attempts
- Time spent per module
- Number of hints or replays (if available)
- Reflection submission
- Mentor review timestamps
- Beginner → Intermediate transition timestamp
- Engagement: video watch %, quiz retry rate
- Skill mastery indicators (Beginner level)
- Drop-off points for UX optimization

All metrics feed into the learner's analytics and enterprise dashboards.

10. Integration Points

- **Missions Engine:** Mini-missions are integrated here; Prepare user for full Intermediate Missions
- **Recipe Engine:** Beginner recipes unlocked (simplest level); Lists the recipes required for upcoming missions
- **Mentorship Layer:** Mentors provide feedback on mini-missions and reflections
- **Portfolio & Assessment Engine:** Beginner artifacts stored automatically; Assessment results visible in portfolio timeline
- **VIP Leadership Academy:** Beginner track reinforces the Value → Impact principle; Reflections transformed into leadership indicators
- **Marketplace Academy:** User not yet active, but building marketplace-ready artifacts
- **Enterprise Dashboard:** Tracks completion and competency levels for enterprise cohorts

11. Success Criteria

User Experience Success

- Learners understand core concepts clearly and enjoy the track.
- High completion rate (>75%).
- Smooth progression into Intermediate Tracks.
- Increased confidence measured in post-track self-assessment.

Platform/Developer Success

- All modules load quickly, responsive on all devices.
- Progress data accurately captured.
- Mini-mission submission workflow is solid.
- Mentor feedback loops function reliably.
- Track completion triggers Intermediate access automatically.

12. Future Expansion Notes

- Add adaptive difficulty for quizzes.
- Introduce gamified beginner badges.
- Allow “Beginner Challenges” (community micro-tasks).
- Add AI coaching hints for tough modules.
- Add role-switch suggestions (if learner preferences shift).
- Add optional sandbox labs (Defender & Offensive).
- Introduce voiceovers for all learning resources.

TIER 3 — INTERMEDIATE TRACKS

1. Tier Overview

Tier 3 — Intermediate Tracks represent the learner's transition from conceptual understanding (Beginner Tier) to **applied capability**.

This is where learners start:

- applying concepts in deeper exercises,
- completing more structured missions,
- utilizing recipes more intentionally,
- preparing for advanced track missions,
- discovering early specialization preferences.

The Intermediate tier must introduce **real tools**, **real workflows**, **real casework**, and begin forming professional competence.

It acts as the “bridge” to advanced-level missions and specialization pathways.

2. Category Breakdown (5 Intermediate Categories)

1. **Intermediate — Defender Track**

Deeper SOC processes, detection engineering basics, log analysis, triage, and IR fundamentals.

2. **Intermediate — Offensive Track**

Practical recon, enumeration, vulnerability discovery, basic exploitation.

3. **Intermediate — GRC Track**

Risk analysis, policy mapping, maturity assessments, audit workflows.

4. **Intermediate — Innovation Track**

Scripting, cloud security basics, intro to automation, SIEM/content fundamentals.

5. **Intermediate — Leadership Track**

Communication skills, stakeholder engagement, influence, decision clarity.

3. User Personas

Primary Personas

- **Intermediate Learners** (6 months–2 years experience).
- **Beginner graduates** from Tier 2 transitioning upward.
- **Career switchers still building confidence but ready for real practice.**

Secondary Personas

- Mentors
- Admins
- Enterprise supervisors tracking skill growth

4. User Goals & Outcomes

Learners aim to:

- Develop applied, role-specific skills.
- Complete their first **real missions** requiring multiple steps.
- Build confidence with tools, scripts, or workflows.
- Produce substantial portfolio artifacts.
- Understand where they fit within specialization options.
- Achieve readiness for Tier 4 Advanced Tracks.

System outcomes:

- Capture learner performance data.
- Validate user readiness for advanced missions.
- Tailor recipe recommendations.
- Enable specialization branching (optional future feature).

5. Developer Requirements

Functional Requirements

The Intermediate Track modules must:

- Display all learning units (videos, labs, tasks).
- Introduce structured missions with multiple subtasks.
- Support submission of multi-file mission evidence.
- Allow mentor scoring and comments.
- Allow multi-day mission deadlines (configurable).
- Display recommended recipes for each mission.
- Track completion at unit, module, and mission levels.
- Provide tool guides or integrations (sandbox, cloud, etc.).
- Maintain seamless progression from module → mission → reflection.

Navigation Requirements

- Persistent left navigation for modules & missions.
- Mission navigation must show subtasks and progress.
- Allow learners to jump between content and mission instructions easily.

- Display mentor messages prominently.

Role-Based Permissions

- **Learner:** submit missions, run practice tasks, view recipes, track progress.
- **Mentor:** review missions, score, comment, approve.
- **Admin:** manage missions, track analytics, edit content.
- **Enterprise Supervisor:** view cohort mission completion and skill development.

Completion Logic

Intermediate Track is complete when:

- Mandatory modules completed
- All Intermediate missions submitted and passed
- Reflections completed
- Mentor approval (if required)

6. Content Architecture

Intermediate Tracks contain:

Core Learning Content

- 20 intermediate-level videos per track
- Hands-on tutorials
- Tool usage demonstrations
- Playbook walkthroughs
- Step-by-step guides

Assessments

- Multi-step scenario quizzes
- Hands-on practice tasks
- Peer or mentor-reviewed assignments (optional)

Missions

- 3–5 full intermediate missions
- Missions include:
 - story context
 - objectives
 - subtasks
 - evidence deliverables

- success criteria
- recipes support list

Recipes

- Highlighted recipes for each mission
- Recipes must be embedded into mission screens

Reflections

- Track-level reflection
- Mission reflection
- Mid-track self-assessment

Portfolio Integration

- Mission reports saved automatically
- Task outputs attached to learner's portfolio timeline

7. Navigation Flow (UX)

Step-by-Step Intermediate Experience

1. **Intermediate Track Landing Page**
Visual progress + mission readiness display.
2. **Module Viewer**
Deeper videos + transcripts + diagrams.
3. **Practice Lab / Tool-Use Screens**
Guided interaction or external links (sandbox, cloud labs).
4. **Intermediate Mission Dashboard**
 - Mission name
 - Story context
 - Subtasks listed
 - Recipes referenced
 - Mentor comments section
5. **Subtask Submission Screen**
 - Upload multiple files
 - Text-based answers
 - Screenshots
 - Script uploads
6. **Mission Review & Scoring Screen**
 - Mentor feedback
 - Score breakdown
 - Resubmission if required (admin-configurable)

7. **Track Progress Dashboard**
Shows learning progress, mission completion, recipe mastery.
8. **Intermediate Completion Screen**
Trigger transition to Advanced Tracks.

8. Screens Needed (UI Inventory)

1. Intermediate Track Dashboard
2. Module List + Progress Overview
3. Intermediate Module Viewer
4. Tool Guide/Instructions Page
5. Intermediate Mission Dashboard
6. Subtask Viewer + Submission Screen
7. Evidence Upload Modal
8. Mentor Feedback Screen
9. Mission Scoring Overview
10. Track Reflection Screen
11. Intermediate Completion Screen
12. Recipe Sidebar / Popup Reference

9. Data & Telemetry Requirements

Developers must track:

- Module completion
- Video watch %, interactions
- Mission subtasks completed
- Mission submission timestamps
- Mentor review timestamps
- Mission scores
- Recipe usage frequency
- Recommended vs chosen recipes
- Time per mission
- Pass/fail rates
- Learner improvement delta (Beginner → Intermediate)
- Track abandonment/drop-off points
- Skills obtained vs skills expected

This data powers:

- Portfolio engine
- Mentor dashboards
- Enterprise dashboards

- Personalization engine
- Mission difficulty adjustment

10. Integration Points

- **Missions Engine:** Intermediate-tier missions defined by Missions Engine rules; Mission scoring logic integrated
- **Recipe Engine:** Shows intermediate-level recipes associated with missions; Tracks recipe usage for analytics
- **Mentorship Layer:** Mentor scoring essential; Feedback stored per mission and per subtask
- **Portfolio & Assessment Engine:** Mission evidence becomes major portfolio items; Intermediate missions begin shaping real-world readiness
- **VIP Leadership Academy:** Intermediate reflections reinforce Value → Impact; Work style and communication patterns start emerging
- **Marketplace Academy:** Intermediate missions serve as early marketplace readiness checks
- **Enterprise Dashboard:** Supervisors can see mission completions and skill maturity

11. Success Criteria

User Experience Success

- Learners successfully complete intermediate-level missions with confidence.
- Clearly understand applied workflow in their chosen track.
- Gain competence required for advanced specialization.
- Portfolio begins to show professional-grade outputs.

Platform/Developer Success

- Mission workflows function flawlessly (submissions, approvals, comments).
- Progress tracking is reliable and granular.
- Recipe integration works contextually within missions.
- Mentor dashboards and feedback are synchronized.
- No UX friction or dead navigation paths.

12. Future Expansion Notes

- Add AI-based mission coaching.
- Add tool integrations (SIEM, cloud labs, vulnerability scanners).
- Add branching missions (choose-your-path).
- Add Intermediate-level certifications per track.
- Add collaborative missions (team missions).

- Implement adaptive mission difficulty based on Profiler + performance.
- Add optional specialization preview modules.

TIER 4 — ADVANCED TRACKS

1. Tier Overview

Tier 4 — Advanced Tracks represent the **professional specialization stage** of the OCH ecosystem.

This is where learners move from “I understand and can perform” → to:

- **I can solve complex problems,**
- **I can work independently, and**
- **I can operate at industry-level expectations.**

The tier is designed to teach **real-world, high-stakes, multi-step workflows** that align with enterprise SOC, threat hunting, pentesting, cloud engineering, governance leadership, and cyber program building.

Learners in this tier are now capable of:

- handling complex missions,
- producing high-standard portfolio work,
- demonstrating role-level mastery, and
- preparing for Tier 5 — Mastery.

Advanced Tracks must simulate **real industry tasks**, integrating tools, data, decision-making, and scenario pressure.

2. Category Breakdown (5 Advanced Categories)

1. Advanced — Defender Track

Threat hunting, detection engineering, IR coordination, defensive content creation, SIEM/EDR mastery.

2. Advanced — Offensive Track

Exploitation, privilege escalation, pivoting, red-team methodology, advanced recon, reporting.

3. Advanced — GRC Track

Compliance program design, enterprise risk assessments, audit leadership, control frameworks, governance architecture.

4. Advanced — Innovation Track

Automation workflows, cloud architectures, cyber tooling, engineering systems, machine learning in security.

5. Advanced — Leadership Track

Team leadership, communication in crisis, decision matrices, stakeholder negotiation, influencing executives.

3. User Personas

Primary Personas

- **Advanced Learners** (1–5 years experience).
- Intermediate-tier graduates ready for specialization.
- Real-world practitioners needing applied upskilling.

Secondary Personas

- Mentors (senior-level).
- Enterprise supervisors tracking readiness for real roles.
- Platform admins managing advanced mission content.

4. User Goals & Outcomes

Learners aim to:

- Handle multi-step professional workflows.
- Complete advanced missions across realistic cyber scenarios.
- Build specialization-specific portfolio assets.
- Demonstrate readiness for real job roles.
- Prepare for mastery credentials.
- Showcase competence in real-world tooling.

Platform outcomes:

- Capture mission performance at deeper granularity.
- Evaluate readiness for Mastery Track.
- Provide employers and mentors with validated proof of skill.
- Feed mission data into competency analytics.

5. Developer Requirements

Functional Requirements

The Advanced Track module must:

- Support **multi-phase advanced missions** (4–8 subtasks per mission).
- Allow time-bound missions (24 hours to 7 days depending on admin settings).
- Support large-file submissions (pcaps, logs, scripts, reports).
- Allow structured report uploads with templates.
- Track mission subtasks and dependencies (subtask 3 might unlock only after completing subtask 2).
- Provide mentor scoring and rubric-based evaluations.
- Enable recipe linking for advanced skills.
- Include interactive diagrams for workflows or architecture.
- Offer advanced practice labs (via integrations or external links).
- Provide AI-assisted hints or mission support (future expansion).
- Track performance trends across multiple advanced missions.

Navigation Requirements

- Persistent multi-stage mission navigation.
- Clear labeling of mission complexity (Advanced Tier).
- Ability to toggle between instructions, tools, recipes, and submissions.
- Mentor comments shown per subtask and per mission.
- Ability to save mid-progress.

Role-Based Permissions

- **Learner:** access to content + submit evidence + view mentor feedback.
- **Mentor:** score missions + view submission history + validate readiness.
- **Admin:** manage missions + deadlines + content + scoring rubrics.
- **Enterprise Supervisor:** view mission outcomes and readiness indicators.

Completion Logic

Advanced Track is considered complete when:

- All required advanced modules are completed.
- All advanced missions are submitted and approved.
- Feedback cycles are complete.
- Final advanced reflection is submitted.

6. Content Architecture

Each Advanced Track must contain:

Core Learning Materials

- ~20 advanced-level videos

- Advanced workflows
- Tool deep dives
- Case-study explanations
- Architecture diagrams
- Advanced-level recipes
- Practice tasks

Advanced Missions (Essential)

Each track contains **3–5 advanced-tier missions**:

Mission structure includes:

- Story background
- Scenario escalation
- Detailed objectives
- Multi-stage subtasks
- Real evidence artifacts (logs, packets, datasets)
- Required outputs
- Success criteria
- Rubric scoring
- Associated recipes
- Mentor review stages

Assessments

- Complex scenario quizzes
- Lab execution verification
- Written assessments
- Automation tasks (Innovation track)

Portfolio Outputs

- Advanced mission reports
- Technical workflows
- Documentation outputs (GRC)
- AI/automation scripts (Innovation)
- Leadership decision briefs (Leadership Track)

Mentor Interactions

- Tracking review cycles
- Approval for each advanced mission
- Feedback stored per submission

7. Navigation Flow (UX)

Step-by-Step Advanced Experience

1. Advanced Track Landing Page

Shows progress, mission readiness, specialization pathways.

2. Module Viewer

Advanced videos, transcripts, long-form content.

3. Tool/Pipeline Guide Pages

Detailed instructions for required tools, with external integrations.

4. Advanced Mission Hub (Major Feature)

- Mission story
- Mission phases
- Submission areas
- Recipe references
- Mentor communication panel
- File attachment system

5. Subtask Execution Page

- Each subtask has its own screen
- Evidence upload
- Hints
- Requirements checklist

6. Mentor Review & Scoring Page

- Score breakdown
- Rubric view
- Comments
- Approval

7. Track Progress Dashboard

- Skills measured
- Mission performance
- Tool mastery indicators
- Portfolio completeness

8. Advanced Reflection Screen

Learner submits reflective summary.

9. Completion Screen → Unlock Mastery Tier

8. Screens Needed (UI Inventory)

1. Advanced Track Dashboard
2. Module List + Track Progress
3. Module Viewer (Advanced Mode)
4. Tool Guides
5. Mission Overview Page
6. Subtask Screens (multi-step)

7. Evidence Upload Modal
8. Mission Feedback & Scoring
9. Reflection Submission
10. Completion & Transition Screen
11. Skill Mastery Overview Screen
12. Recipe Reference Sidebar (Advanced Mode)

9. Data & Telemetry Requirements

Track the following:

- Module completion
- Video engagement metrics
- Mission subtask completion
- Mission difficulty chosen vs actual performance
- Time per mission and per subtask
- Tool usage patterns
- Mentor scoring breakdown
- Rubric-category performance
- Evidence file metadata
- Reflection submissions
- Performance trends (Intermediate → Advanced)
- Specialization engagement
- Mission pass/fail metrics
- Rating of difficulty per learner

Data must feed:

- Portfolio engine
- AI coaching engine (future)
- Mentorship dashboards
- Enterprise talent dashboards
- Specialization analytics

10. Integration Points

- **Missions Engine:** Advanced missions use dynamic mission templates; Subtask dependency logic; Multi-file submission logic
- **Recipe Engine:** Advanced recipes linked contextually; Recipes can unlock based on mission progress; Usage tracked for analytics
- **Mentorship Layer:** Critical for reviewing advanced missions; Rubric scoring stored in mentor dashboard

- **Portfolio & Assessment Engine:** Advanced missions produce **professional portfolio evidence**; Long-form documentation stored with timestamps
- **VIP Leadership Academy:** Leadership track integrates deeper VIP identity work; Reflections feed into leadership metrics
- **Marketplace Academy:** Advanced tier = marketplace-ready tier; Portfolio will be consumed by employers
- **Enterprise Dashboard:** Supervisors see advanced mission metrics; Skill maturity cluster updated per learner

11. Success Criteria

User Experience Success

- Learners can complete advanced missions without confusion.
- They produce industry-level work.
- They transition with confidence to Mastery Tracks.
- High satisfaction with mentor engagement.
- Strong sense of real-world capability.

Platform/Developer Success

- Multi-stage mission flows function seamlessly.
- Mentor scoring works reliably.
- No broken states during mission progression.
- Subtask dependencies are handled correctly.
- Evidence submissions support large files and multiple formats.
- Telemetry correctly logs each mission stage.

12. Future Expansion Notes

- Add AI mission advisor for advanced scenarios.
- Integrate with real logs/pcaps provided by partner companies.
- Add dynamic missions where parameters change.
- Add advanced track certification exams.
- Add specialization branching inside each track.
- Add collaborative missions (team-based).
- Add simulation-based missions (cyber ranges).

TIER 5 — MASTERY TRACKS

1. Tier Overview

Tier 5 — Mastery Tracks represent the **highest level of practitioner training inside OCH** before the learner transitions to Marketplace Work, Enterprise Roles, or Leadership Missions. This is where the learner becomes:

- a **specialist**,
- a **decision-capable analyst**,
- a **self-contained operator**, and
- a **mission leader** in their chosen track.

Mastery is not just about skills — it is about synthesis, judgment, performance under pressure, and the ability to produce **real-world outputs** at professional quality.

Mastery Tracks must feel like:

“This is the level where you prove you can lead real cyber outcomes.”

2. Category Breakdown (5 Mastery Categories)

1. **Mastery — Defender Track**

Threat management, high-fidelity detection engineering, IR leadership, SOC optimization.

2. **Mastery — Offensive Track**

Adversary emulation, full attack chains, red-team decision-making, advanced exploitation.

3. **Mastery — GRC Track**

Building enterprise governance programs, cyber strategy creation, audit director workflows.

4. **Mastery — Innovation Track**

Designing automation frameworks, engineering cyber tooling, AI/ML in security.

5. **Mastery — Leadership Track**

Leading teams, board reporting, crisis decision-making, transformation leadership (VIP-based).

Each category holds **10–15 Mastery-level missions** and 10–12 long-form lectures.

3. User Personas

Primary Personas

- Advanced practitioners ready for specialization mastery.
- Professionals with 1–5+ years experience.
- Mission-ready learners preparing for real cyber roles.
- Learners preparing to enter Marketplace Work or Enterprise Teams.

Secondary Personas

- Senior mentors
- Enterprise supervisors
- Admins
- Recruiters (indirect consumer of outputs)

4. User Goals & Outcomes

Learners aim to:

- Master complex, real-world scenarios.
- Solve entire cyber cases end-to-end.
- Produce **portfolio-grade professional artifacts**.
- Prepare for interview-level and on-the-job performance.
- Demonstrate leadership, decision-making, and clarity.
- Build mastery-level credibility.

Platform outcomes:

- Capture advanced performance analytics.
- Validate readiness for Marketplace and Enterprise opportunities.
- Feed performance into enterprise dashboards.
- Enable learners to generate certification-grade outputs.

5. Developer Requirements

Functional Requirements

Mastery Track modules must:

- Support **complex, multi-layer missions** with:
 - narrative
 - environmental changes
 - branching decisions
 - stacked subtasks
- Allow missions to run over days or weeks.
- Allow submission of:
 - multi-file bundles

- zip archives
 - large data (logs, scripts, reports, pcaps)
 - diagrams
 - strategy documents
- Allow mentors to review missions in multi-stage cycles.
- Support scoring rubrics with weighted dimensions.
- Display mission outcome comparisons (learner vs ideal path).
- Allow retry logic (optional).
- Provide “Mastery Performance Summary” screen.
- Enable long-form content and professional templates.
- Support learning pathways inside Mastery Tracks (e.g., specialization paths).

Navigation Requirements

- Multi-step mission navigation.
- Clear overview of Mastery-level expectations.
- Ability to resume missions mid-way with auto-saving.
- Mentor comment system per subtask and per decision.
- Deadlines displayed clearly.

Role-Based Permissions

- **Learner:** mission execution + reflection.
- **Mentor:** rubric scoring + detailed narrative feedback + approval.
- **Admin:** manage mission complexity, scoring rules, templates.
- **Enterprise Supervisors:** observe readiness and mastery progress.

Completion Logic

Mastery Track completion requires:

- All Mastery Missions submitted and approved.
- All reflections completed.
- Final Mastery Project (Capstone) approved.
- “Mastery Completion Rubric” passed.

6. Content Architecture

Core Content

- 10–20 Mastery-level instructional videos
- Long-form guides
- Architecture maps
- Tool chain deep dives

- Decision frameworks
- Case studies
- Professional templates (reports, briefs, playbooks)

Mastery Missions (Critical Component)

Each track has **10–15 missions**, each with:

- Narrative context
- Escalation events
- Branching choices
- Multi-stage subtasks
- Environmental cues
- Attachments (pcaps, logs, datasets, evidence)
- Expert reference reports (for benchmarking)
- Mentor review points

Capstone Project

A final real-world scenario requiring:

- Investigation
- Decision-making
- Design or remediation
- Reporting
- Presentation

Portfolio Items

- Mission reports
- Strategy documents
- Scripts/tools (Innovation, Offensive)
- GRC frameworks
- Leadership decision briefs
- Capstone result pages

Mentorship Interactions

- Multi-phase reviews
- Audio/video feedback
- Mentor scoring meetings (optional)

7. Navigation Flow (UX)

Step-by-Step Mastery Experience

1. Mastery Track Landing Page

- Mastery mission list
- Capstone overview
- Mentor assigned

2. Advanced Pipeline Guides

Learners review toolchain requirements.

3. Mastery Mission Hub

- Mission overview
- Stage-by-stage breakdown
- Required outputs
- Evidence checklist
- Rubric preview

4. Mission Execution Screens

- For each mission stage:
 - Tasks
 - File uploads
 - Decision logs
 - Notes
 - Integrated recipe support

5. Branching Decision Engine UI

- Learner makes decisions that shape next stage
- System records decision tree

6. Mentor Feedback & Scoring

- Rubric-based scoring
- Track-level feedback
- Approval or requested changes

7. Progress Dashboard

Tracks mission performance metrics.

8. Capstone Submission Screen

Multi-stage upload + presentation slide upload.

9. Capstone Review

Mentor evaluates and scores.

10. Completion Screen

Unlock Marketplace and Leadership Missions.

8. Screens Needed (UI Inventory)

1. Mastery Track Dashboard
2. Instructional Content Viewer (Advanced Mode)
3. Mission Hub Overview

4. Mission Stage Screen
5. Decision Point Screen
6. Evidence Upload Modal (multi-file + large file support)
7. Mentor Review Screen
8. Mentor Scoring Rubric Screen
9. Capstone Project Upload Screen
10. Capstone Scoring Screen
11. Mastery Progress Dashboard
12. Mastery Completion Screen

9. Data & Telemetry Requirements

Track:

- Mission attempt timestamps
- Branching decisions
- Evidence submissions
- Mentor scoring per rubric category
- Mission-level difficulty rating
- Time spent per step
- Number of retries
- Capstone scoring
- Decision quality indicators
- Portfolio asset uploads
- Mastery-level skill maturity
- Overall readiness metrics
- Trends across missions
- Comparison against expected performance
- Specialization path choices

Data feeds into:

- Mentor dashboards
- Enterprise dashboards
- Marketplace readiness engine
- Personalized recommendations
- VIP leadership insights
- Portfolio engine
- Mission Engine
- Analytics engine

10. Integration Points

- **Missions Engine:** Mastery missions must be structured as advanced mission types.; Branching decision logic must follow Missions Engine rules.; Mission scoring uses the standard rubric system.
- **Recipe Engine:** Mastery-level recipes appear in mission stages.; Recipes may unlock based on decisions.; Recipe usage tracked for mastery analytics.
- **Mentorship Layer:** High interaction frequency at this tier.; Mentor scoring and notes crucial.
- **Portfolio & Assessment Engine:** Mastery missions produce the most important portfolio items.; Capstone becomes the top-level portfolio entry.
- **VIP Leadership Academy:** Mastery reflections feed into leadership performance analytics.
- **Marketplace Academy:** On Mastery completion, learners should unlock Marketplace pathways.
- **Enterprise Dashboard:** Supervisors use mastery metrics to assess job readiness.

11. Success Criteria

User Experience Success

- Learner can complete complex, high-level missions with clear understanding.
- Learners report high engagement and intensity.
- Portfolio feels professional-grade.
- Strong mentor interaction satisfaction.
- Clear feeling of specialization and mastery.

Platform/Developer Success

- Branching missions operate smoothly.
- No performance issues with large files.
- Mentor scoring rubrics work cleanly.
- Capstone submissions handled reliably.
- All mission states persist correctly.
- Telemetry captured at all mission layers.

12. Future Expansion Notes

- Add AI adversary for Offensive Mastery missions.
- Add real-time SIEM/XDR data feeds for Defender missions.
- Add enterprise-backed missions using real anonymized datasets.
- Add team-based Mastery missions for collaboration.

- Add Mastery-level certification engine.
- Add Mastery Leaderboards.
- Add automation-assisted mission grading for faster reviews.

TIER 6 — CROSS-TRACK PROGRAMS

1. Tier Overview

Tier 6 — Cross-Track Programs represents the **multi-disciplinary, whole-person development layer** of OCH.

Regardless of whether a learner is in Defender, Offensive, GRC, Innovation, or Leadership Tracks, they must complete these programs to become:

- professionally competent
- employable
- ethical
- leadership-capable
- market-ready
- strategically minded

This tier focuses on skills and mindsets that **cut across all cyber roles**, including:

- entrepreneurship,
- soft skills,
- cyber ethics,
- career acceleration,
- mission leadership.

Cross-track programs serve as the **bridging curriculum** between technical capability (Tier 2–5) and real-world success (Tier 7–9).

2. Category Breakdown (5 Cross-Track Categories)

- **Cyber Entrepreneurship (20 videos)** - Teaches learners how to transform skills into value, launch cyber businesses, freelance, and participate in the OCH marketplace.
- **Soft Skills for Cyber Careers (20 videos)** - Communication, stakeholder engagement, documentation clarity, teamwork, productivity.
- **Career Acceleration (10 videos)** - CV, interviews, professional branding, networking, job search strategy, LinkedIn presence.
- **Cyber Ethics & Integrity (10 videos)** - Ethical reasoning, responsible disclosure, professional conduct, governance ethics, moral decision-making.
- **Mission Leadership (10 videos)** - Leading teams in missions, decision-making under pressure, communication in crisis, task delegation, VIP leadership principles in action.

3. User Personas

Primary Personas

- Learners who have completed Beginner, Intermediate, or Advanced content.
- Learners preparing for Mastery or Marketplace entry.
- Career switchers needing well-rounded preparation.
- Students preparing for job search or entrepreneurship.

Secondary Personas

- Mentors (for coaching).
- Enterprise supervisors (when managing cohorts).
- Marketplace partners (future employers).

4. User Goals & Outcomes

Learners aim to:

- Develop soft skills required for real cyber work.
- Prepare for job interviews and professional growth.
- Understand ethical conduct and responsible behavior.
- Begin professional branding and career strategy.
- Learn leadership communication and mission execution.
- Build entrepreneurial mindset to monetize skills.
- Become well-rounded cyber professionals.

System outcomes:

- Track learner professionalism.
- Prepare learners for Marketplace Academy.
- Strengthen enterprise hiring confidence.
- Improve learner job placement rate.

5. Developer Requirements

Functional Requirements

Cross-Track Programs must:

- Provide independent, modular courses.
- Allow completion in any order (or admin-configured order).

- Support assessments:
 - quizzes
 - reflection exercises
 - scenario-based ethical decisions
- Allow video, text, templates, and long-form materials.
- Allow optional mentor feedback on certain modules.
- Store all outputs (CV, ethics reflections, leadership notes) in Portfolio.
- Enable progress tracking per sub-category.
- Display progress in each cross-track module separately.

Navigation Requirements

- Persistent sidebar: Entrepreneurship / Soft Skills / Ethics / Career / Leadership.
- Allow switching between programs without losing progress.
- Highlight recommended order based on learner's Profiler/Track.
- Clear transitions back to Core Tracks and Missions.

Role-Based Permissions

- **Learner:** view modules, submit assessments, download templates.
- **Mentor:** comment on reflections, review documents.
- **Admin:** create content, manage programs, view analytics.
- **Enterprise Supervisor:** view career-readiness metrics.

Completion Logic

Each program is complete when:

- All modules finished
- Required reflections submitted
- Quizzes passed
- Final summary activity (per program) submitted

Completion of all programs unlocks:

- Marketplace readiness
- Leadership mission eligibility
- Tier 7–9 features

6. Content Architecture

Each program includes:

Cyber Entrepreneurship

- 20 videos
- Templates: business model, pricing, proposals
- Entrepreneurship mini-missions
- Portfolio item: business concept or service offering

Soft Skills for Cyber Careers

- 20 videos
- Communication exercises
- Documentation practice tasks
- Portfolio item: writing sample or presentation

Career Acceleration

- 10 videos
- CV template
- LinkedIn optimization tasks
- Mock interview questions
- Portfolio item: refined CV + branding summary

Cyber Ethics & Integrity

- 10 videos
- Scenario-based ethical decision quizzes
- Reflection tasks
- Portfolio item: ethics declaration or case analysis

Mission Leadership

- 10 videos
- Leadership simulations
- Team communication drills
- Portfolio item: mission decision brief

7. Navigation Flow (UX)

Step-by-Step User Experience

- 1. Cross-Track Program Dashboard**
Shows all categories + progress bars.
- 2. Program Landing Pages**
Introduction videos + overview + required tasks.
- 3. Module Viewer**
Video + transcript + templates + resources.

4. **Assessment/Reflection Screen**
Text submission or PDF upload.
5. **Scenario-Based Task Screen (Ethics / Leadership)**
Interactive branches.
6. **Portfolio Artifact Submission Screen**
 - o CV uploads
 - o Leadership briefs
 - o Ethics statements
 - o Entrepreneurship concept sheets
7. **Program Completion Screen**
Summary of progress + “Next Recommended Step.”
8. **Cross-Track Mastery Dashboard**
Shows which programs completed and readiness for Marketplace.

8. Screens Needed (UI Inventory)

1. Cross-Track Dashboard
2. Program Landing Pages (5 total)
3. Program Modules List
4. Module Viewer (Video + Templates)
5. Reflection Submission Screen
6. Scenario Interaction Screen
7. Document Upload Screen
8. Mentor Feedback Screen
9. Program Completion Screen
10. Combined Readiness Dashboard (for all programs)

9. Data & Telemetry Requirements

The system must track:

- Program completion percentage
- Module completion
- Assessment submissions
- Reflection quality (mentor rating)
- Ethics scenario choices
- Leadership scenario decisions
- Soft skills improvement trends
- CV uploads + version history
- Marketplace readiness indicators
- Time spent per module
- Drop-off analytics

Data feeds:

- Portfolio Engine
- Mentor Dashboard
- Marketplace Readiness Engine
- Enterprise Dashboard
- Leadership/VIP Engine

10. Integration Points

- **Missions Engine:** Leadership mission concepts introduced here.; Soft skills influence mission communication.
- **Recipe Engine:** Some programs may use communication or leadership recipe tasks.
- **Mentorship Layer:** Mentors review CVs, business ideas, and leadership reflections.
- **Portfolio & Assessment Engine:** Cross-track outputs stored as portfolio artifacts.
- **VIP Leadership Academy:** Cyber Ethics + Leadership modules feed VIP metrics.
- **Marketplace Academy:** Entrepreneurship and Career Acceleration map directly into marketplace preparation.
- **Enterprise Dashboard:** HR teams see cross-track competency growth.

11. Success Criteria

User Experience Success

- Learners gain confidence in professional communication.
- Completed CVs and branding materials ready for job search.
- Ethics decisions consistent with industry standards.
- Learners exhibit strong leadership and communication patterns.
- Visible improvement in marketplace readiness indicators.

Platform/Developer Success

- All cross-track modules display correctly.
- Uploads and reflections work without errors.
- Scenario logic executes correctly.
- Progress tracking is accurate.
- Mentor feedback and scoring function reliably.

12. Future Expansion Notes

- Add audio feedback option for mentors.
- Introduce gamified soft skills challenges.

- Add advanced leadership simulations with branching.
- Add entrepreneurship pitch deck builder.
- Add personality-based career guidance.
- Add peer review options for communication exercises.
- Integrate with LinkedIn API for profile auditing (future).

TIER 7 — MISSIONS ENGINE & RECIPE ENGINE

(This tier contains 2 foundational engines.)

1. Tier Overview

Tier 7 represents the **operational heart** of the OCH ecosystem. Everything — tracks, portfolio, mentorship, marketplace, enterprise dashboards — depends on these two engines:

1. Missions Engine:

The **real-world simulation engine** where learners complete scenario-based cybersecurity challenges aligned to role tracks and learning tiers (Beginner → Intermediate → Advanced → Mastery).

Missions define the *practical skill development* inside OCH.

2. Recipe Engine:

The **micro-skill development engine** that complements missions.

Recipes are small, focused, skill-building units that help learners complete missions successfully — like “skill boosters.”

Together, these engines transform OCH from “a course” into a **mission-driven cyber training platform** modeled after real operations centers.

2. Category Breakdown (2 Engines)

A. Missions Engine

A full simulation engine that delivers structured missions, multi-step workflows, branching scenarios, evidence submission, mentor review, and rubric scoring.

B. Recipe Engine

A micro-learning engine organized around actionable, step-by-step skills needed to complete missions.

3. User Personas

Primary

- Beginner → Mastery Learners
- Career Switchers
- Practitioners expanding into real-world simulation
- Mentors
- Enterprise cohorts

Secondary

- Recruiters
- Enterprise supervisors
- Marketplace participants
- Administrators/content creators

4. User Goals & Outcomes

Learners want to:

- Practice real-world cyber scenarios.
- Build portfolio artifacts.
- Gain confidence using structured tasks.
- Receive feedback from real mentors.
- Become job-ready.
- Gradually level up in mission difficulty.

System must enable:

- Multi-step mission execution.
- Recipe recommendation.
- Mentor scoring.
- Portfolio automation.
- Mission intelligence for enterprise dashboards.

5. Developer Requirements

A. MISSIONS ENGINE — Developer Requirements

Functional Requirements

The Missions Engine must support:

1. Mission Templates

- Beginner Missions
- Intermediate Missions
- Advanced Missions
- Mastery Missions
- Leadership Missions
- Entrepreneurship Missions (future)

2. Mission Components

- Story narrative
- Objectives
- Subtasks (1–10+)
- Branching paths
- Time-bound missions
- Decision-making interactions
- Evidence upload (multi-file)
- Mentor feedback
- Scoring rubrics
- Success/failure logic

3. Mission Creation Interface (Admin)

- Create mission templates
- Add mission storyline
- Add mission subtasks
- Attach supporting files
- Link recipes
- Configure scoring

4. Learner Mission Execution

- Viewing mission overview
- Completing subtasks
- Uploading evidence
- Requesting hints (optional)
- Viewing recipe recommendations
- Viewing mentor comments
- Navigating mission stages

5. Mentor Review System

- View submitted evidence
- Score using rubric
- Provide comments (per subtask or mission-level)
- Approve or reject submissions
- Track resubmissions

6. Portfolio Integration

- Mission reports auto-published to learner's portfolio
 - Mission scoring recorded
 - Evidence saved with timestamps
- 7. Analytics & Telemetry**
- Mission pass/fail
 - Time-to-completion
 - Subtask performance
 - Tool usage
 - Difficulty metrics
 - Drop-off data
 - Mentor scoring patterns

Navigation Requirements

- Multi-step structure
- Clear progress indicators
- Branching decision screens
- Recipe sidebar
- Mentor feedback pane
- Mission summary pane

Role-Based Permissions

- **Learner:** execute mission
- **Mentor:** review & score
- **Admin:** create mission, modify mission
- **Enterprise:** view aggregated mission results

Completion Logic

- Mission is complete when:
 - All subtasks done
 - Evidence approved
 - Rubric score assigned
 - Reflection submitted

B. RECIPE ENGINE — Developer Requirements

Functional Requirements

The Recipe Engine must:

1. **Store recipes as micro-learning units with:**
 - Title

- Description
 - Steps
 - Example
 - Difficulty
 - Tools needed
 - Tags (role, mission, track)
- 2. Recipe Types**
- Technical recipes (command, query, tool use)
 - Analysis recipes (investigation steps)
 - Documentation recipes
 - Leadership recipes
 - Decision recipes
 - Innovation recipes (automation scripts)
- 3. Recipe Delivery**
- Pop-up inside missions
 - Standalone browsing
 - Recommended recipe sidebar
 - Linked to track modules
- 4. Recipe Recommendation Logic**
- Based on:
- User's track
 - Mission stage
 - Profiler difficulty
 - Skills gaps (portfolio analytics)
- 5. Recipe Interaction**
- Step-by-step format
 - Expandable/collapsible sections
 - Code snippets
 - Copy-to-clipboard
 - Tool links (browser)
 - Downloadable resources
- 6. Recipe Usage Analytics**
- How often each recipe is viewed
 - When it appears in mission workflow
 - User interaction time
 - Correlation with mission success

Navigation Requirements

- Recipes must be accessible:
 - Inside mission screens
 - From recipe library
 - From track modules
 - From mentor feedback

Role-Based Permissions

- **Learner:** view recipes
- **Mentor:** recommend recipes in feedback
- **Admin:** add/edit/delete recipes

6. Content Architecture

Missions Engine Content

- Mission narratives
- Threat context
- Role-specific workflows
- Artifacts: logs, PCAPs, email headers, datasets, evidence
- Decision points
- Mission rubrics
- Mentor instructions

Recipe Engine Content

- Micro-guides
- Code snippets
- Tool commands
- Framework steps
- Documentation templates
- Communication templates

7. Navigation Flow (UX)

A. Missions Engine — UX Flow

1. Mission Dashboard

Shows:

- mission list
- difficulty ratings
- progress
- available missions per track & tier

2. Mission Overview Page

- Story background
- Objectives

- Required outputs
- Files to download
- Tools needed

3. Mission Stage Screens

For each subtask:

- Instructions
- Attachments
- Steps
- Recipe references
- Evidence upload panel
- Mentor feedback on previous step
- Hint system (optional)

4. Decision Point Screens

- User selects from multiple choices
- Each choice unlocks a different mission flow
- All decisions logged

5. Submission Screen

- Upload final evidence bundle
- Reflection form

6. Mentor Review Screen

- Score categories
- Comments
- Approval/reject
- Resubmission triggers

7. Mission Completion Screen

- Score summary
- Recipe mastery
- Portfolio auto-update
- Next recommended mission

B. Recipe Engine — UX Flow

1. Recipe Library

- Filter by track
- Filter by mission level
- Search bar
- Sorting by difficulty
- Tag clouds

2. Recipe Detail Page

- Steps
- Snippets
- Tools
- Use-cases
- Related recipes

3. In-Mission Recipe Sidebar

- Auto-suggested recipes
- “Read recipe” modal
- “Mark as used” button
- Integration with scoring analytics

8. Screens Needed (UI Inventory)

Missions Engine

1. Mission Dashboard
2. Mission Overview Screen
3. Mission Stage Screen (multi-step)
4. Decision Engine Screen
5. Evidence Upload Modal
6. Mission Reflection Page
7. Mentor Review + Rubric Screen
8. Mission Completion Screen
9. Mission Performance Dashboard

Recipe Engine

10. Recipe Library Page
11. Recipe Detail Page

12. Recipe Sidebar (in-mission mode)
13. Recipe Usage Analytics Screen (admin)
14. Related Recipes Screen

9. Data & Telemetry Requirements

Track:

- Recipe usage
- Mission attempts
- Mission completion
- Subtask performance
- Decision paths
- Evidence submission metadata
- Mentor scoring patterns
- Mission difficulty correlation
- Time spent per stage
- Drop-off points
- Required vs unused recipes
- Skill mastery metrics per mission
- Success rate per mission difficulty

System must provide:

- Mission completion heatmaps
- Recipe effectiveness metrics
- Benchmark scoring
- Recommendations for skill gaps

Analytics must sync with:

- Portfolio
- Mentorship
- Enterprise Dashboard
- Marketplace readiness

10. Integration Points

Foundations & Tracks

- Missions appear progressively from Beginner → Mastery.

Mentorship Layer

- Mentors review and score missions.
- Mentors recommend recipes.

Portfolio Engine

- Mission artifacts → auto-add to portfolio.
- Recipe mastery → reflected in skills section.

VIP Leadership Academy

- Leadership missions feed into VIP metrics.

Marketplace Academy

- Mission completion serves as eligibility for paid tasks.

Enterprise Dashboard

- Enterprise teams view mission performance.
- Skills mapping driven by mission analytics.

11. Success Criteria

User Experience Success

- Missions feel immersive, realistic, challenging.
- Recipes are helpful and easy to access.
- Missions deliver clear learning value.
- Learners confidently produce portfolio artifacts.
- Minimal confusion navigating multi-step stages.

Developer/Platform Success

- Zero mission workflow breaks.
- Evidence uploads reliable at scale.
- Mentor scoring smooth and in sync.
- Recipe recommendations accurate.
- Telemetry captured consistently.
- Mission branching logic stable.
- Performance efficient under high load.

12. Future Expansion Notes

- AI mission co-pilot
- Automated log analysis for missions
- AI recipe generation
- Multi-player missions
- Cyber range integration
- Adaptive mission difficulty
- Auto-grading on specific subtasks
- API integration with SIEM/EDR vendors
- Threat intel-based real missions

TIER 8 — PLATFORM ECOSYSTEM

VIP Leadership Academy • Marketplace • Mentorship Layer • Portfolio Engine

Developer Tutorial / Product Specification (High Detail)

Tier 8 is the “ecosystem layer” — everything that transforms OCH from *a training platform* into *a talent engine*.

It is where learners become professionals, leaders, and contributors to the wider cyber ecosystem.

TIER 8 ARCHITECTURE (4 MAJOR SYSTEMS)

1. **VIP Leadership Academy**
2. **OCH Marketplace**
3. **Mentorship Layer**
4. **Portfolio & Assessment Engine**

Each system is independent but tightly integrated with Missions, Recipes, Tracks, and Tier 9 Enterprise dashboards.

1. VIP LEADERSHIP ACADEMY

1.1 System Overview

The VIP Leadership Academy is the **mindset, identity, and leadership engine** of OCH. Every learner must develop:

- **Value** → What they bring
- **Impact** → What they deliver
- **Purpose** → Why they matter

This forms the leadership spine of the entire OCH ecosystem.

The VIP Academy is not optional.

It transforms learners from “skilled individuals” → *impactful, ethical, mission-leading professionals*.

1.2 User Personas

- All OCH learners
- Leadership-track learners
- Mentors
- Supervisors
- Marketplace participants

1.3 Functional Requirements

Core VIP Features

- 20-video leadership curriculum
- Identity worksheets
- Value-mapping tools
- Impact blueprint builder
- Purpose alignment module
- Leadership reflections per mission
- Leadership analytics
- Personalized “Leadership Profile”

Learner Experience

- Watch content
- Complete reflective exercises
- Log leadership decisions made in missions
- Submit VIP alignment summaries
- Generate leadership portfolio statements

Admin/Mentor Tools

- Review reflections
- Score leadership attributes
- Approve leadership progress
- Track learner’s VIP growth

1.4 Navigation Flow

1. VIP Academy Landing Screen
2. VIP Curriculum Page
3. Reflection Submission Page
4. Leadership Decision Log (pulled from Missions Engine)
5. VIP Profile Dashboard

6. Leadership Completion Screen

1.5 Telemetry

- Video completion
- Reflection depth (mentor rating)
- Leadership decisions in missions
- Impact statements
- Purpose clarity score
- Value articulation score
- Leadership growth over time

All metrics feed into Marketplace readiness + Enterprise dashboards.

2. OCH MARKETPLACE

2.1 System Overview

The OCH Marketplace connects trained cyber talent with:

- organizations
- project owners
- mentors
- the global cyber community

This is where OCH becomes a **work engine**, not just a learning platform.

The Marketplace allows:

1. **Internal task marketplace**
2. **External client marketplace**
3. **Freelance board**
4. **Microtask bounties**
5. **Team-based project simulations**

2.2 User Personas

- Job-seekers
- Employers
- Project owners
- Sector partners

- Mentors
- Enterprise supervisors
- OCH Admins

2.3 Functional Requirements

Marketplace Core Features

- Talent profiles sourced from Portfolio
- Project listings
- Microtasks
- Application & assignment workflow
- Skills-matching engine
- Marketplace readiness scoring
- Built-in communication channel
- Project submission workflow
- Mentor review for marketplace tasks

Talent Profile Auto-Generation

Pulled from:

- Missions
- Recipes used
- VIP summaries
- Soft skills & ethics modules
- Mastery Capstones
- Portfolio Engine

Project Types

- Intern-level tasks
- SOC support tasks
- Red-team research tasks
- GRC documentation tasks
- Automation scripts
- CTI reporting tasks
- Sector-based cyber projects
- OCH-internal community tasks

2.4 Navigation Flow

1. Marketplace Landing Page
2. Opportunity Browsing
3. Task/Project Details
4. Apply → Review → Approval
5. Task Execution Workspace
6. Submit deliverables
7. Mentor/Employer Review
8. Marketplace Completion Score
9. Add work to portfolio

2.5 Telemetry

- Task application patterns
- Completion rate
- Time-to-delivery
- Mentor/employer scores
- Repeat reliability metrics
- Competency match accuracy
- Earnings tracking (future)

3. MENTORSHIP LAYER

3.1 System Overview

Mentorship is a **central pillar** of the OCH experience.

Mentors guide:

- missions
- portfolio items
- leadership reflections
- marketplace tasks
- career acceleration
- ethics & soft skills

The mentorship layer must feel like a **human-powered engine** integrated with an AI-augmented system.

3.2 User Personas

- Mentors (volunteers or contracted)

- Learners
- Admin
- Enterprise supervisors

3.3 Functional Requirements

Mentorship Core Features

- Mentor dashboard
- Inbox of submissions
- Mission review
- Marketplace task review
- Reflection review
- Score assigned per rubric
- Mentor-to-learner feedback chat
- Video feedback (optional)
- Audio feedback (optional)
- Mentor availability schedule
- Mentor leaderboard
- Assignment logic (auto-matching or manual)

Mentor Tools

- Rubric scoring templates
- Recommended recipes
- Recommended follow-up missions
- Skill gap analysis
- Escalation notes for enterprise supervisors

3.4 Navigation Flow

1. Mentor Dashboard
2. Submission Queue
3. Mission/Task Review Screen
4. Score + Comment
5. Recommend next step
6. Mentor Analytics Dashboard
7. Mentor Profile Page

3.5 Telemetry

- Mentor response times
- Feedback quality
- Scores given
- Variability vs benchmark
- Student outcomes
- Mentor impact rating

All metrics feed into Admin dashboards.

4. PORTFOLIO & ASSESSMENT ENGINE

4.1 System Overview

This is the **single source of truth** for all learner achievements.

Portfolio Engine stores:

- Missions
- Recipes
- VIP summaries
- Leadership logs
- Certifications (future)
- Marketplace work
- Reflection pieces
- Capstone projects
- Skill mastery metrics

This engine powers:

- Marketplace Profiles
- Enterprise Dashboards
- Mentor Insights
- Career Tools

4.2 Functional Requirements

Core Portfolio Features

- Auto-import from Missions Engine
- Auto-import from VIP Academy
- Auto-import from Marketplace tasks
- Manual upload allowed
- Portfolio tagging system

- Role-based filtering
- Achievement badges
- Skill scoring framework
- PDF export
- Public profile toggle

Assessment & Skills Engine

- Multi-dimensional scoring:
 - Technical skills
 - Soft skills
 - Leadership
 - Ethics
 - Mission performance
- Skill radar visualization
- Skill gap detection
- Recommended recipes/missions
- Skill maturity timeline

4.3 Navigation Flow

1. Portfolio Dashboard
2. Portfolio Items List
3. Item Detail Pages
4. Skill Visualization Screen
5. Download/Share Screen
6. Portfolio Settings Screen

4.4 Telemetry

- Portfolio views
- Employer interactions (future)
- Skill improvements over time
- Mission/recipe influence on skill score

INTEGRATION MAP (CRITICAL)

Tier 8 integrates with:

- TIER 0: Profiler (initial assessments feed VIP and Portfolio)
- TIER 1-5: Tracks supply content and missions to Portfolio & Marketplace

- TIER 6: Cross-track programs feed leadership, ethics, and soft skills
- TIER 7: Missions & Recipes supply core performance data
- TIER 9: Enterprise dashboards consume everything

Tier 8 = the middle layer that turns *learning* into *career outcomes*.

SUCCESS CRITERIA

User Experience

- Smooth transition from learning → doing → earning.
- Clarity in leadership and identity (VIP).
- Mentorship accessible and helpful.
- Marketplace creates real value.
- Portfolio shows true capability.

Platform/Dev Success

- Zero broken connections between engines.
- Accurate data flowing into Portfolio.
- Marketplace tasks executed smoothly.
- Mentors operate easily and effectively.
- VIP and mentorship data synced.

FUTURE EXPANSION

- Marketplace payments
- AI mentor augmentation
- AI leadership insight engine
- Enterprise hiring pipelines
- Advanced skill verification (hands-on labs)
- Talent search engine for companies
- Verified badges and certifications
- Team-based marketplace missions

TIER 9 — ENTERPRISE DASHBOARD & NATIONAL TALENT INTELLIGENCE LAYER

1. Tier Overview

Tier 9 represents the **strategic intelligence and workforce analytics layer** of the OCH ecosystem.

It transforms individual learner activity into **aggregate, organizational, and national insights** about:

- talent readiness
- skills distribution
- cyber workforce resilience
- mission performance
- leadership maturity
- hiring demand
- sector-wide capability gaps

This is the final layer in OCH architecture — the layer that speaks to:

- enterprises
- ministries
- educational institutions
- national cybersecurity authorities
- workforce planning offices

Tier 9 converts thousands of learner signals into **cyber talent intelligence dashboards** and **decision-support views**.

2. Category Breakdown

Tier 9 contains two major systems:

A. Enterprise Dashboard

A multi-level dashboard for organizations using OCH to upskill staff, interns, or national cohorts.

B. National Talent Intelligence Layer

A federated, anonymized analytics engine that provides governments and regulators with sector-level and national-level cyber workforce insights.

A. ENTERPRISE DASHBOARD

1. System Overview

The Enterprise Dashboard enables:

- HR, IT, and Security leaders to see staff progression
- SOC managers to track mission performance
- Business executives to measure talent readiness
- Organizations to understand workforce gaps
- Enterprise leads to assign missions or learning paths
- Supervisors to review staff submissions

It is the **enterprise client-facing side** of OCH.

2. User Personas

- CIO
- CISO
- HR Director
- SOC Manager
- Team Leads
- Training Coordinators
- Enterprise Supervisors
- Enterprise Mentors
- Ministry/Sector Supervisors

3. Functional Requirements

Enterprise Dashboard Core Features

1. Team Overview Metrics

- Number of learners
- Role distribution (Defender, Offensive, GRC, etc.)

- Mission completion heatmap
 - Skill radar per individual and team
 - Certification readiness indicators
 - Leadership/VIP maturity scores
- 2. Mission Performance**
- Mission pass/fail trends
 - Time-to-completion metrics
 - Difficulty progression
 - Subtask bottlenecks
 - Leadership/decision log behavior
 - Quality of evidence submitted
- 3. Skills & Competency Mapping**
- Competency matrix (role → skill → score)
 - Heatmaps showing gaps
 - Tool-specific capability levels (SIEM, EDR, Cloud)
 - Behavioral insights (e.g., decision-making patterns)
- 4. Portfolio Integration**
- View team portfolios
 - Download reports
 - Export evidence
- 5. Learning Pathway Management**
- Assign missions
 - Assign tracks
 - Force recipe learning
 - Set deadlines
 - Track completion
- 6. Enterprise Cohort Management**
- Add/remove learners
 - Create internal groups
 - Create SOC/Security team clusters
 - Onboard new interns
- 7. Reporting Tools**
- Weekly readiness reports
 - Monthly executive summaries
 - Custom dashboards
 - Export PDF/CSV
 - Quarterly upskilling score
- 8. Marketplace Integration**
- See which learners are marketplace-ready
 - Track learners applying for marketplace tasks
 - View marketplace performance

4. Navigation Flow (UX)

1. Enterprise Dashboard Home

- Snapshot of workforce readiness
- Alerts (skill gaps, overdue missions)
- Team activity

2. Team Insights Page

- Team skill radar
- Grouped metrics
- Role mapping

3. Individual Insights Page

- Performance timeline
- Mission analytics
- Portfolio

4. Mission Intelligence Page

- Mission performance trends
- Mission difficulty correlation
- Time-to-resolution
- High-performing learners

5. Skills Matrix Page

- Heatmap
- Gaps
- Recommendations

6. Pathway Assignment Page

- Assign missions/tracks
- Set deadlines
- Monitor completion

7. Enterprise Reporting Center

- Exportable reports
- Pre-built executive dashboards

8. Marketplace Readiness Page

- Who is ready to work

- Track performance in market tasks

5. Telemetry Requirements

The platform must collect:

- Individual + team skill scores
- Mission execution speed
- Mission difficulty correlation
- Average tool usage
- Leadership/VIP metrics
- Ethics scenario behavior
- Marketplace performance
- Learning path completion
- Drop-off points
- Internal team rankings

All enterprise data is **private and siloed**, not shared with national-level dashboards.

B. NATIONAL TALENT INTELLIGENCE LAYER

1. System Overview

This is the **national cyber workforce analytics engine**.

It aggregates anonymized data from:

- academic partners
- enterprises
- government cohorts
- all OCH learners in a country

It answers national-scale questions like:

- Which sectors have the biggest talent shortages?
- Which regions produce the strongest cyber talent?
- What is the national readiness level?
- Which cyber roles are trending?
- Where should national investments go?
- Which missions show systemic weaknesses?

This is the “ministry dashboard” — what governments pay for.

2. User Personas

- Ministries of ICT
- National cybersecurity authorities
- National SOCs
- Workforce planning units
- Regulators
- Educational policy makers
- National program directors

3. Functional Requirements

National Dashboard Core Features

1. National Talent Heatmap

- Distribution of skills across the country
- Regional performance
- Sector readiness (finance, health, government, telecom)

2. Skills Intelligence

- Most common skills
- Scarce skills
- Strength areas
- Weakness areas

3. Mission Intelligence

- Top missions where learners struggle
- National readiness index
- Mission timelines
- Sector-specific mission trends

4. Role Demand Forecasting

- AI-based forecasting of upcoming talent shortages
- Skill supply vs demand prediction
- Sector-specific risk

5. Education & Training Insights

- Which academic institutions produce strong talent?
- Which regions have the highest dropout rate?
- Readiness per age group / demographic

6. National Policy Recommendations

- Automated insights (“Botswana needs more cloud defenders”)
- Based on real missions
- Based on recipe usage
- Based on skill bottlenecks

7. Anonymization Controls

- Zero personal identifiable data
- Only regional/sector-level aggregates

4. Navigation Flow (UX)

1. National Overview Page

- National cyber readiness score
- Talent density map
- Sector readiness distribution

2. Regional Breakdown Page

- Regional ranking
- Skills heatmaps
- Mission performance by region

3. Sector Insights Page

- Finance
- Government
- Telecom
- Health
- Education
- Energy
- Manufacturing

4. Talent Pipeline Page

- Role distribution
- Graduation rate
- Marketplace participation
- Emerging roles

5. Skills Forecasting Page

- AI role predictions
- Skill shortages
- Investment opportunities

6. Policy Recommendation Page

- Action items
- Priority regions
- Priority sectors

5. Telemetry Requirements

National layer must aggregate:

- Overall mission performance
- Skills distribution
- Sector strength
- Region strength
- Tool adoption
- Leadership maturity
- Ethics decisions (only aggregated)
- Marketplace job types
- Marketplace success rates
- Track popularity

Data must be:

- anonymized
- aggregated
- compliant with data protection
- available for export

UNIFIED INTEGRATION

Tier 9 integrates with:

- **Tier 0:** Profiler → baseline data
- **Tier 1–5:** Tracks → skill and mission data
- **Tier 6:** Cross-Track → leadership & soft skills
- **Tier 7:** Missions & Recipes → core intelligence
- **Tier 8:** Portfolio, VIP, Marketplace → work readiness
- **Tier 9:** Enterprise + National dashboards → intelligence layer

Tier 9 consumes ALL lower-layer data to produce organizational and national views.

SUCCESS CRITERIA

Enterprise Dashboard

- Organizations can directly measure cyber workforce readiness.

- Team leads can assign learning paths easily.
- HR and CISOs get meaningful insights.
- Analytics are accurate and actionable.

National Talent Layer

- Governments gain a national view of cyber readiness.
- Regulators can design better strategies.
- National talent gaps become visible.
- Sector prioritization becomes data-driven.
- OCH becomes the **de facto national cyber workforce platform**.

FUTURE EXPANSION

- Predictive hiring engines
- National cyber talent registries
- Scholarships and funding dashboards
- Real-time SOC readiness indicators
- Integration with national SOC platforms
- Sector-specific mission bundles
- AI-driven curriculum adjustments based on national gaps
- Integration with Cybercare and CVEQ