Future Tank Lab — Quick Start Guide

1. Launching the App
Run `streamlit run app.py` after installing requirements. The app opens in your browser at http://localhost:8501.

2. Threatscape Sandbox
Use the sidebar sliders to set FPV drone density, EW severity, and ATGM/rocket salvo rate. Results show survivability and mission success as progress bars.

3. APS Intercept Visualizer
In the APS tab, adjust salvo size and reaction factor. Metrics show interception probability and leakers.

4. Thermal Signature
In the Thermal tab, adjust ambient and skin temperature, wind speed, camouflage factor, and observer distance. Outputs a detection probability score.

5. Hybrid & Silent Watch
Set vehicle mass, fuel, and battery capacity, silent-watch draw, and average speed. Outputs: silent-watch hours, total range, endurance.

6. UAV Teaming
Toggle tethered UAVs and set swarm drone numbers in the UAV tab. This changes route safety and situational awareness scores.

7. Six Design Pillars Tabs
Explore Mobility, Armor, Weapons, Sensors/AI, Crew/Modularity, and Futurism using sliders and toggles.

8. Summary & Export
The Summary tab shows survivability, detectability, mobility, armor, firepower, sensors/AI, modularity, and futurism. Download scenario CSV for saving results.

9. Educational Note
This app is for conceptual demonstration only. Models are simplified abstractions to illustrate trade-offs, not representative of real-world or classified performance.