Executive Summary: Project Cuttlefish – AI Combat Buddy and Logistics Intelligence Platform

Cuttlefish Labs proposes an advanced AI agentic system designed to enhance soldier resilience, mission efficiency, and logistical superiority across all domains of modern warfare. Project Cuttlefish delivers emotionally intelligent, memory-capable AI agents that act as trusted combat buddies in the field, paired with an infrastructure-wide logistics brain designed to mirror and extend the legendary WWII supply chain that ensured victory through abundance.

# 1. Problem & Opportunity

Future military operations demand soldier-AI trust, autonomous resilience, and real-time situational support under extreme cognitive load. Today’s soldiers face complex threat environments—urban warfare, asymmetric attacks, and supply disruptions—without embedded AI decision support. Cuttlefish provides emotionally intelligent agent companions and AI logistics infrastructure to enhance mission outcomes and mental well-being.

# 2. The Solution: Dual-Stack AI Architecture

(1) 🪖 Field Agent AI – “Combat Buddy”: Personalized agents embedded in AR/VR, helmet HUDs, or drone audio interfaces. Features include:  
• MemoryTimeline: Tracks unit interactions, mission stressors, trauma flags.  
• AgentMoralState: Models ethical alignment, hallucination filters, peer challenge.  
• PredictiveCard: Forecasts ambushes, resource shortfalls using real-time sensor + social intel.  
• MissionChat: Natural conversation about surroundings, goals, and threats.  
  
(2) 🚚 Logistics Brain – “Swarm Logistics Intelligence (SLI)”: A SaaS platform for predictive resupply, fleet swarm optimization, and emotional signaling from units to command. Inspired by the story of the US Army shipping a birthday cake across the ocean, we aim to recreate that morale resilience at scale.

# 3. Strategic Fit with DoD Priorities

• AI2C Alignment: Direct support for cognitive resilience, predictive autonomy, and AI trustworthiness.  
• Future Soldier Readiness: Bridges Gen-Z recruits’ comfort with AI and gamified interfaces into real operational advantage.  
• Dual-Use Applications: Disaster relief, rural supply networks, allied soldier training.

# 4. Technical Foundation

• Agents built with RAG (retrieval-augmented generation), temporal memory, and agentic swarm coordination.  
• Verifiable reasoning via FutureBench techniques and zkML.  
• Chainlink + ORA integration for secure forecasting and on-chain logistics verifiability.

# 5. Project Readiness & Funding Request

• MVP field agent UI complete (MemoryTimeline, MissionChat, etc).  
• Cuttlefish Vault + Agent Factory deployed on testnet.  
• Ask: $500,000 for 6-month Phase I research, prototyping, and Fort Liberty field test.

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