Comprehensive Oculomotor Behavioral Response Assessment (COBRA)

NASA +



Team: Daniel Gonzalez, Kaitlyn Ryu, Karan Rajpal, Anushka Joshi, Edlene Miguel, Haritha Nair **Advisors:** Bowman Heiden, Viktor Ström, Leland Stone (NASA), Jay Singh (NASA)

COBRA is a non-invasive, portable eye-tracking system that evaluates oculomotor and neurological performance by measuring visual processing through simple tasks. Although COBRA can be used in a range of different markets including military, sports, and telemedicine, its current strongest market potential is in <u>DUI assessment</u>.

Precise Tracking Non-Invasive & Immediate Results > Video-based tracking for measurement of subtle/dynamic movements > Multi-dimensional Oculometric Analysis > Highly sensitive to detecting early impairment

KEY MARKETS

Neurological impairment detection



Healthcare is a saturated market whereas DUI detection is underserved and lacks comprehensive tools.



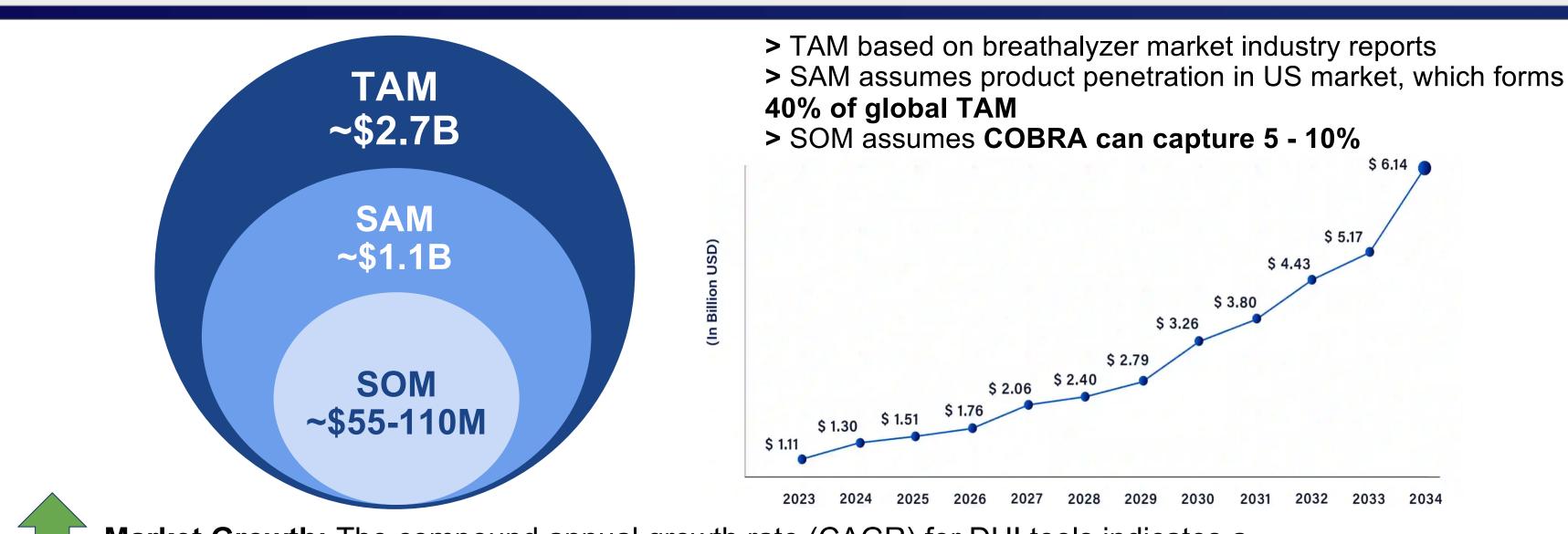
Concussion detection



Current alternatives are not objective and prone to human error but the market is hard to penetrate due to misaligned incentives.

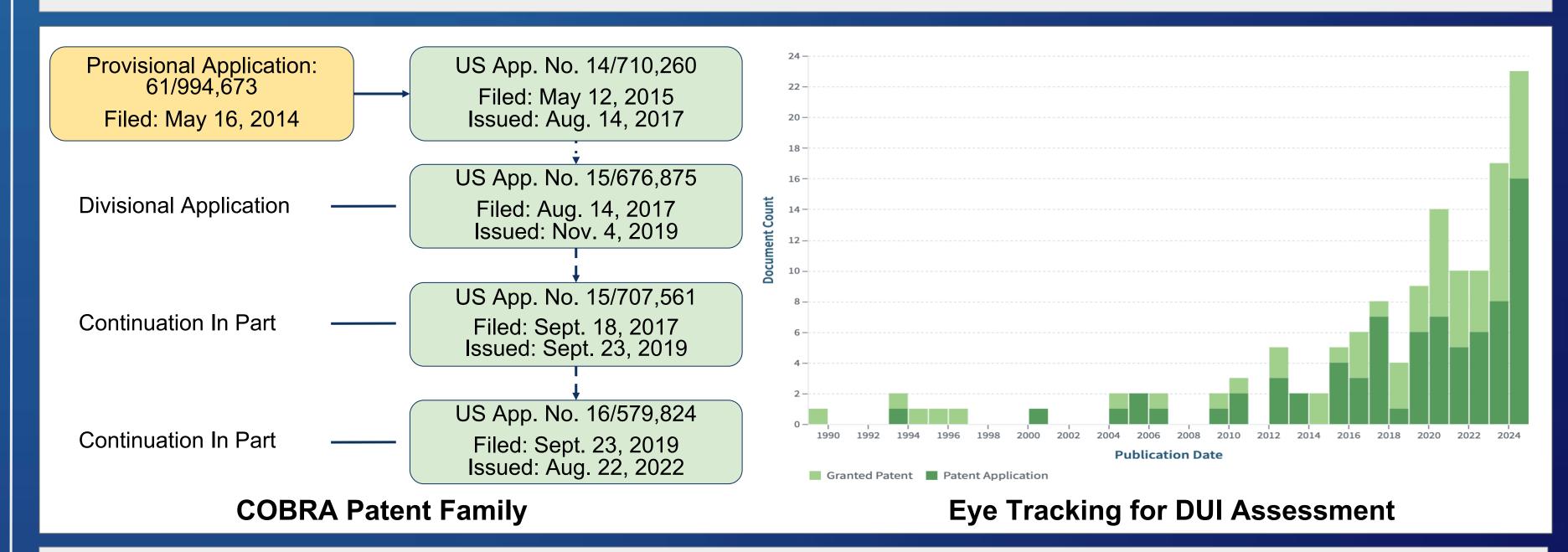


MARKET SIZING

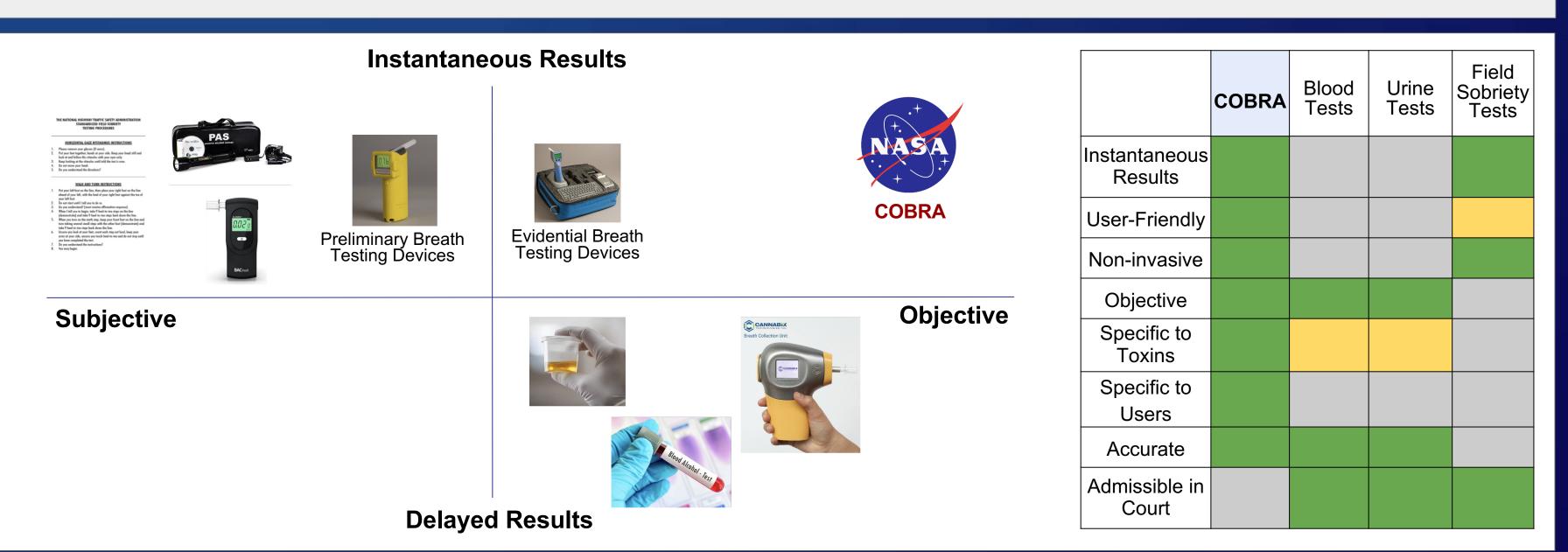


Market Growth: The compound annual growth rate (CAGR) for DUI tools indicates a 16.74% increase targeted to reach \$12.8B global TAM in the next decade.

PATENT LANDSCAPE



COMPARATIVE ANALYSIS: EXISTING TOOLS



FUTURE DIRECTIONS

COBRA Pilot as DUI Detection Tool Market
Penetration
Across Police
Departments

Expand Use Cases with Design Evaluations

Investments in a use case with strong pain point and prove commercial viability

Expand to other use cases and resource constrained environments