WELL SITE THIEF HATCH METHANE DETECTORS

COMPANY INTRODUCTIONS

- VAREBERG ENGINEERING / BLUE ROCK SOLUTIONS
- CONTINENTAL RESOURCES
- C2RENEW / C2SENSOR
- APPAREO

PROJECT BACKGROUND

- Fugitive Emissions (Methane Leaks) on Well Production Sites
- Monitoring for Leaks
  - Federal Regulation 40 CFR Part 60, Subpart 0000a, - Standard for Performance of Crude Oil and Natural Gas
  - Currently allows for
    - Manual handheld methane detectors
    - FLIR cameras

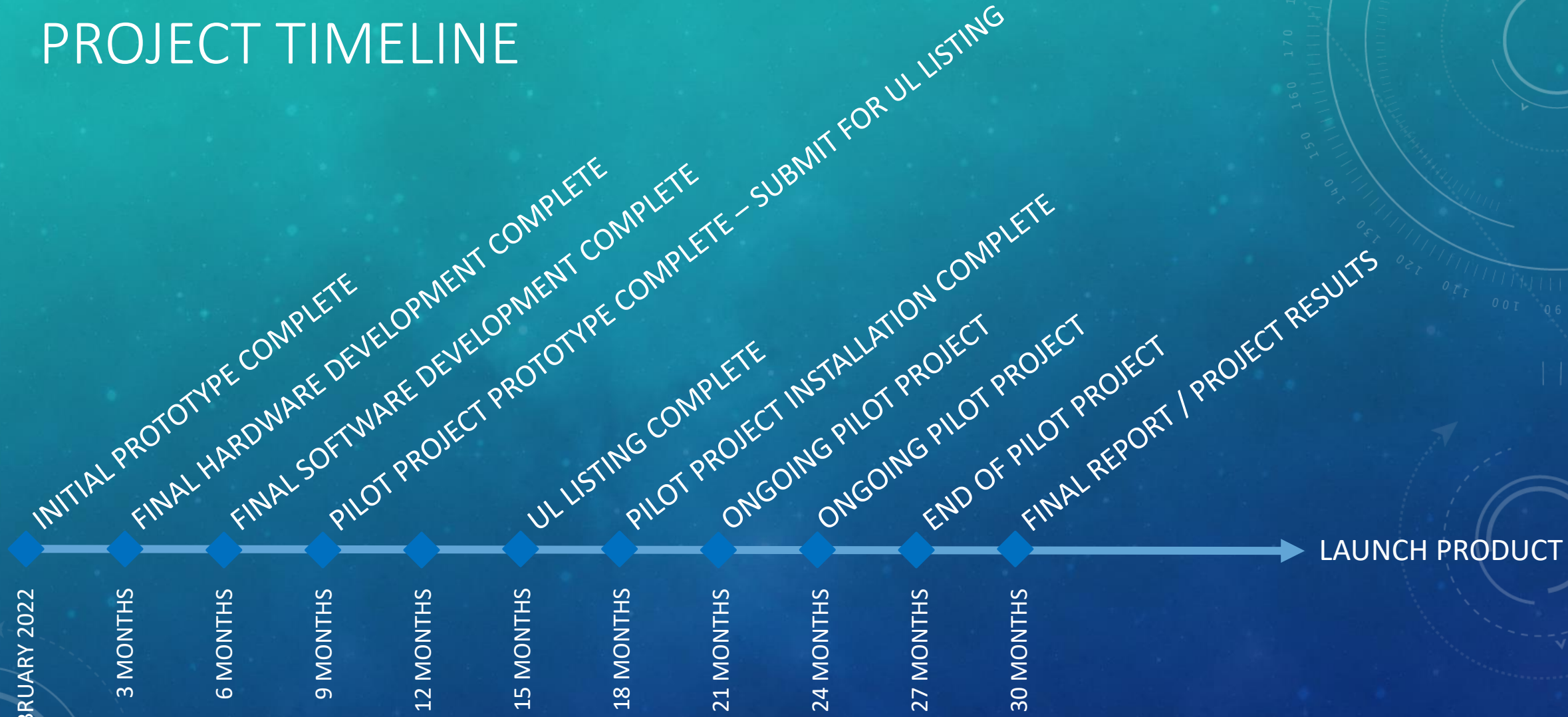
FOCUS PRODUCT

- Individual Sensors for Each “Point” of Fugitive Emission
- 100’s of Points on Typical Well Site
- Concentrate on Largest Contributor of Fugitive Emissions
  - Storage Tank Thief Hatches
    - Open Hatches
    - Unlatched Hatches
    - Faulty Seals / Pressure Valves
  - Thief Hatches Contribute to Approximately 80% of all Leaks

TECHNICAL DETAILS

- Utilize Current Technology
- Communication Protocol – Cellular / IoT
- Wireless, Battery Operated
- Overall Housing / Packaging – Attached Directly to Thief Hatch Cover

PROJECT TIMELINE



OVERALL BUDGET

• Engineering / Fabrication / Software Development	$335,400
• Pilot Project / Travel	$69,600
• Reporting / Documentation	$27,000
• UL Listing / Legal	$150,000
Total Cost	$582,000
Grant Request	$266,000

GOAL

- REDUCE FUGUTIVE EMISSIONS FROM EACH WELL SITE BY UP TO 80%