

At-Home Biomarker Measurements for Women

**Client**

TwoX Labs

Practice Areas

TechBio & Life Sciences

Core Disciplines

Molecular & Cell Biology

Systems Engineering

Industrial Design

Challenge

The project began with a broad question: where are the greatest unmet opportunities in women's health? Triple Ring interviewed healthcare providers, key opinion leaders, and other stakeholders while analyzing publicly available data to identify unmet clinical needs with meaningful market potential.

One promising opportunity emerged: a low-cost system capable of performing semi-quantitative biomarker measurements at home. Delivering clinically meaningful performance within the constraints of an affordable, CLIA-waived diagnostic platform presented a significant technical challenge.

Solution

Triple Ring applied its Biodesign methodology and multidisciplinary product development expertise to rapidly progress from opportunity identification to proof of concept.

The program combined clinical insight with rapid innovation by:

- Applying the Stanford Biodesign process to identify and prioritize unmet clinical needs
- Evaluating opportunities based on clinical impact, market potential, technical risk, and commercialization potential
- Brainstorming and refining technical concepts through an interdisciplinary team of scientists and engineers
- Developing an initial proof-of-concept prototype for an at-home semi-quantitative biomarker measurement system
- Generating assay data and product visualizations to support company formation, fundraising, and commercialization plans

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