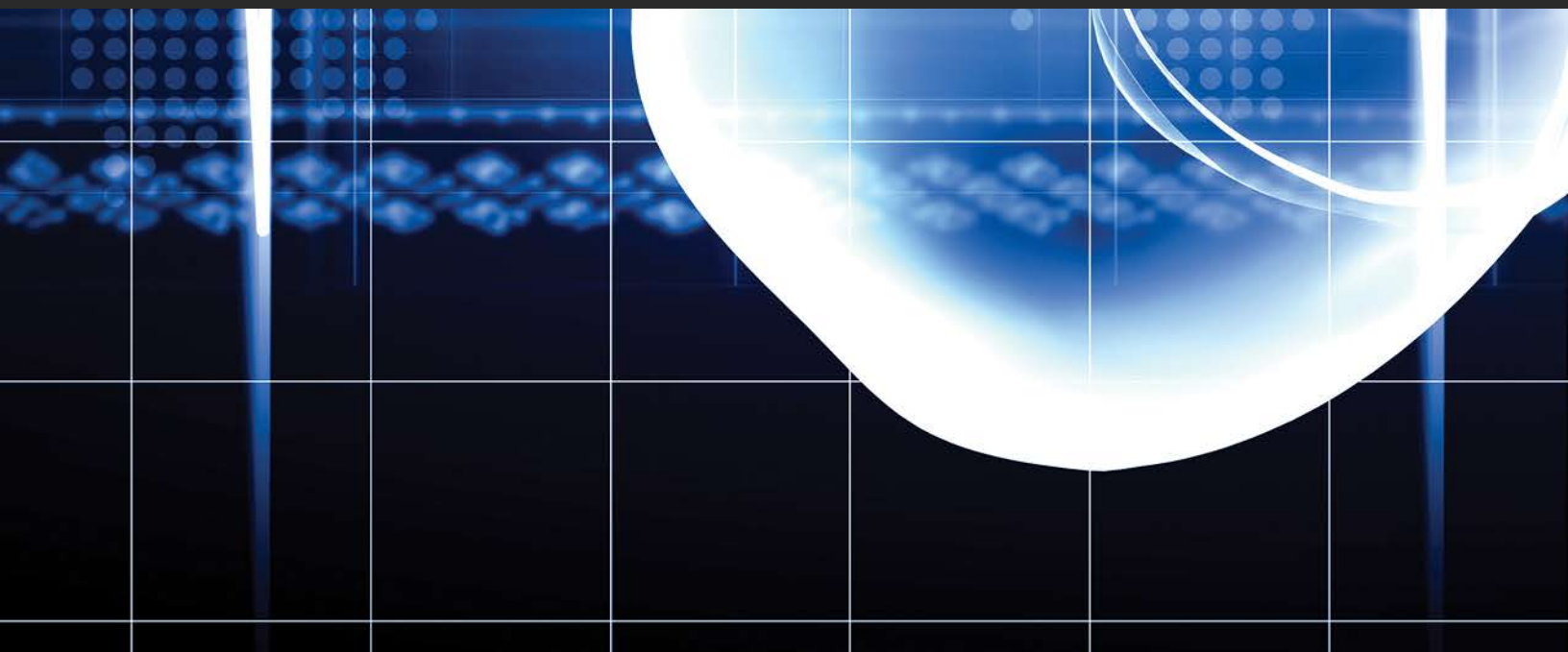




Success Story
Agile Product Development
for Annuvia



Product
Realization
Group®





Company

Annuvia

Location

San Francisco

Industry

Medical

Business Challenges

- Lack of Internal Resources
- Budget constraints
- No hardware product development expertise

Solutions

- Seasoned hardware development resources
- Technical Program Management
- Agile hardware development process

Business Results

- Saved \$100 K in development
- Met go-to-market schedule
- Sold business to private equity shortly after completion of prototypes

Agile Product Development for Annuvia

Annuvia, Inc. provides health, safety, emergency preparedness and response training to organizations across America. The company sells and services automated external defibrillator (AED) units, which are used to save sudden cardiac arrest (SCA) patients. They also offer the Arch AED Medical Direction and Oversight software, proprietary software that saves time and removes compliance obstacles to AED ownership.

The Goal

AED devices are only useful if they are in working order when a SCA incident occurs. Unfortunately, periodic manual inspection by AED owners is unreliable. Micah Bongberg, President and CEO of Annuvia, thought of a new product idea - a device that could constantly monitor the battery life and working status of AED units and notify owners of the device status automatically.



Prototype of Beacon

BUSINESS CHALLENGES

Annuvia is a training services and software company and does not have in-house hardware product development expertise. Mr. Bongberg wanted to take his hardware device idea from concept to prototype quickly and with limited budget. Options included hiring product development employees or outsourcing the project and managing multiple consultants. Hiring staff would take extra time and result in costly overhead. Given a lean infrastructure, he did not have the bandwidth to manage multiple consultants along with running day-to-day operations.

SOLUTIONS

The project was broken into four phases or sprints, of roughly one month each, to mitigate risk and costs:

- **Sprint 1. Feasibility:** A high level technical assessment was performed, based upon the Marketing Requirements Document (MRD). A regulatory pivot occurred when the team found a way to design the product so that it avoided a Class II medical device classification, thus saving significant development costs and time.
- **Sprint 2. Proof of Concept:** A full 3D CAD layout and bill of materials (BOM) was completed. A second pivot occurred after significant testing, when the team discovered an optimal sensing methodology that was more reliable and scalable than originally planned.
- **Sprint 3. Design and Product Requirements Document (PRD):** A full mockup was produced resulting in design testing and enhancements, mechanical design of the cover, and completion of the PRD.
- **Sprint 4. Prototype Development:** This phase included electrical design, firmware development, and five working prototypes, including BOM, PCB layout and development of operational documentation and manufacturing production strategy.

PRG Team for Annuvia

PRG selected and let key partners and experts to address Annuvia's goals. This helped accelerate development, improve manufacturing, and reduce investment.























Expertise

- Program Management
- Mechanical
- Electrical
- Software
- Operations
- Supply Chain
- System
- Regulatory
- Test
- Reliability

Phases

- Feasibility
- Proof of Concept
- Product Design
- Prototype Development

Agile Product Realization Framework: Accelerates New Product Introduction

Services	Sprint 1 Feasibility	Sprint 2 Proof of Concept	Sprint 3 Design / Finalize PRD	Sprint 4 Prototype Development
Mechanical Development				
Electrical & Software Development				
Operations & Supply Chain				
Electronic Components				
PLM System				
Regulatory				
Test				
Reliability				
Project Management & Administration				

RESULTS

The agile product development approach, well controlled phase-gate processes and collaborative team effort resulted in Annuvia being able to develop its product on time and at a lower cost than possible by building an internal team, or with disconnected service providers. Critical compliance and technical pivots contributed to time and money savings. According to Mr. Bongberg, **"We could not have developed Beacon in the time we did and within our limited budget without the help of PRG. Having a team of seasoned experts that worked together previously and trusted each other, enabled by a collaborative development process, and led by an exceptional project manager, was the key to making Beacon a reality."** Beacon is ready to move to the next phase.

ABOUT PRODUCT REALIZATION GROUP

Product Realization Group guides high technology product companies to make the leap from idea-to-scale. PRG's team of "on-demand" experts help a company to speed up time-to-market, reduce risk, and lower costs. Our clients include medical device, industrial, consumer electronics, and high-technology start-ups, SMBs, and large companies such as GoPro, EMC/Dell Computer, and Intuitive Surgical. For more information, visit prgnpi.com.