Jacob W. Scarpaci

PROFESSIONAL SUMMARY
User-Centric Product Design | Building Effective Teams | Multi-Disciplinary Leadership

Mission-driven leader with 20 years of experience directing the cross-functional development of medical devices, consumer electronics, and automated fulfillment solutions. Established scalable operational frameworks and standardized SOPs to streamline multidisciplinary product development from concept through scaled manufacturing. A pragmatic “player-coach” adept at decomposing user and business needs into clear expectations, removing roadblocks, and executing adaptive data-driven project plans.

WORK EXPERIENCE

Amazon Robotics · North Reading, MA
Senior Manager, Systems Architecture *Jan 2022 – Jan 2026*

Led and scaled a centralized team of 20+ interdisciplinary systems architects and contractors, delivering complex, integrated robotics and software systems to automate warehouse fulfillment workflows.

- Aligned and prioritized the team’s work to maximize impact on business objectives across product and solution verticals by collaborating with executive leadership and cross-functional partners, including Product, UX, HW/SW Engineering, QA, Product Launch, and Operations.
- Reduced integration rework across programs by implementing generalization and standardization initiatives including actionable data frameworks, and validation protocols for usability and maintainability.
- Coached and developed high-performing technical leaders, maximizing their impact and visibility to executives through technical papers, presentations, and the prioritization of high-impact tasks.

Minim · Manchester, NH
Senior VP of Product and Hardware Engineering *Sep 2020 – Jan 2022*

Defined hardware strategy and product roadmaps for smart cable modems and WiFi routers. Led user-centric product development team and restructured engineering organization post-merger with Zoom Telephonics.

- Generated data-driven tradespaces using market and technology inputs and prioritized work based on ROI.
- Defined requirements with engineering teams and engaged ODMs to evaluate and select product options.
- Brought firmware development in-house and drove new industrial design, and unboxing experiences.

DEKA Research and Development · Manchester, NH
Engineering Director, Verification & Validation *Jul 2017 – Sep 2020*

Directed a 140+ person department of managers, engineers, and technicians, overseeing the verification and validation (V&V) strategy for all DEKA products from insulin patch pumps to stair-climbing wheelchairs.

- Authored and implemented company-wide SOPs and standardized verification processes and workflow tools, resulting in easier training and greater resource flexibility across project teams.
- Served as the final technical authority for project phase transitions, including formal approval for regulatory submissions, clinical field releases and human-use validation of medical devices.
- Restructured the department into a high-performing meritocracy by establishing formal performance evaluation frameworks, structured mentorship, and leadership onboarding programs.

Program Manager, Medical Device Development *Feb 2012 – Jul 2017*

Led 50+ person multidisciplinary team through FDA 510(k) and PMDA clearance of Class II nocturnal in-home peritoneal dialysis system, and launch of AMIA (US/ Canada) and Kaguya (Japan).

- Defined project plans, including project scope, staged priories, multi-year schedules, and budgets.
- Hired, managed, set expectations and priorities through staff of senior engineers and discipline leads.
- Managed relationship with customer’s (Baxter) Project Mgmt., Engineering, and Manufacturing teams.
- Developed educational robotics kit for FIRST.Global international robotics competition.

Lead Systems Engineer, Medical Device Development *Oct 2006 – Jul 2017*

Led multidisciplinary technical teams developing Class II Peritoneal dialysis system through concept, architecture, requirements, V&V, regulatory submissions, and manufacturing handoff and scale-up.

- Defined product and systems requirements from customer and internal stakeholder inputs.
- Developed risk management plans (ISO 14971), including system DFMEAs and PFMEAs.
- Mediated complex design trade-offs across multi-disciplinary teams to develop subsystems specifications.
- Led user studies (US and Japan) to perform use-error analysis per IEC 62366.

Boston University Binaural Hearing Lab · Boston, MA
Ph.D. Research Assistant *Aug 2001 – Sep 2006*

Engineered real-time virtual acoustic space system and researched human perception of dynamic cues.

CONTACT
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PRODUCT SECTORS
- Medical Devices
  - Peritoneal Dialysis
  - Insulin Infusion Pump
  - Hemodialysis
  - Mobility devices
- Consumer Electronics
- Warehouse Automation
- Educational Robotics Kits

LEADERSHIP SKILLS
- Organization Building (140+)
- Hiring, Mentorship & Talent Development
- Cross-Functional Leadership
- Program Management
- Agile Software Development
- Stakeholder Management
- Budgeting & Resource Planning
- Program Risk Management
- Building Engineering Mechanisms
- Technical Communication
- Executive Communication
- Ownership
- Earning Trust

TECHNICAL SKILLS
- Product Management
- Systems Engineering
- Tradespace Analysis
- KPIs & Metrics Management
- Systems Architecture & Decomposition
- Requirements Management
- Verification & Validation (V&V)
- User Experience (UX)
- Human Factors
- Risk Management - ISO 14971
- DFMEA, PFMEA, UFMEA
- FDA Regulatory Submissions - 510(k)
- AI Augmented Workflows

EDUCATION
Ph.D. Biomedical Engineering
Boston University (2006)

B.S. Electrical Engineering
University of Cincinnati (2001)