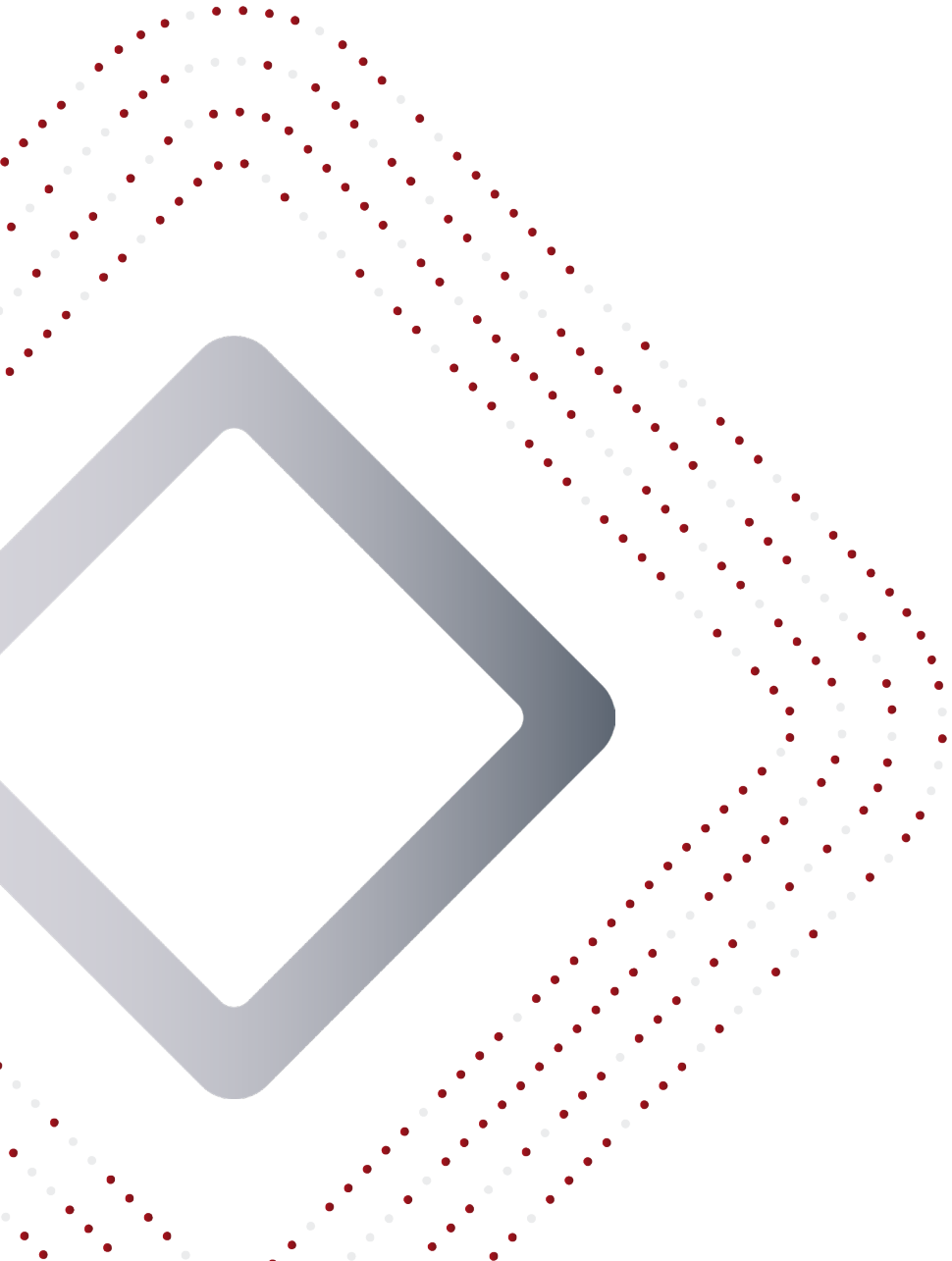
ANDREWS COOPER

Navigating the Product Development Life Cycle

BOOK 5 OF 5

PRODUCTION VALIDATION

TECH TALKS™ EBOOK SERIES



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Building a Solid Foundation for Valve's Virtual Reality Product Vision

In this series, we highlight the PD engineering journey to describe how integrating our engineering services with Valve Corporation helped them realize their vision to innovate VR gaming hardware to launch the Valve Index VR system. Through this eBook series on Navigating the Product Development Life Cycle, we explore the progression of the interdependent stages that underpin end-to-end engineering success.

Image Credit: Valve Corporation

ANDREWS COOPER

Andrews Cooper (AC) excels at advanced engineering for emerging technologies, specializing in Research & Development, Product Development, Hardware Testing, and Manufacturing Automation. We cater to ambitious, tech-focused companies seeking to innovate and lead their industries. With expertise in multiple engineering disciplines, our engineers function as force multipliers, propelling the development of HardTech solutions. With a focus on rapid development using proven methodologies, we de-risk the development process and integrate validation and testing to ensure high-quality, manufacturable products.

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VALVE

Valve Corporation first turned to AC's Integrated Engineering Teams (IETs) for R&D support with gaming systems and controllers. To innovate in the highly competitive and evolving VR gaming market, Valve needed a partner capable of de-risking and developing core technologies. AC provided comprehensive engineering solutions necessary for the successful development and launch of its Index VR system.

Looking for a snapshot of our Product Development services? Watch our 1-Minute Video.

PRODUCTION VALIDATION:

Ensuring Quality Manufacturing at Scale

Production validation (PV) is the final stage in the product development life cycle, where the product is prepared for mass production. For Valve Corporation, this phase involved performing pilot production runs, validating the product at scale, and launching VR hardware manufacturing. AC's expertise in production validation ensures that a product is ready for manufacturing success to the highest quality standards.

1 | Performing pilot production run

Pilot production runs are essential for identifying and resolving any issues before full-scale manufacturing. With complex assemblies like VR hardware, testing the manufacturing process and making any necessary adjustments for production efficiency is crucial. This phase involved close collaboration with Valve's contract manufacturers to ensure that the production lines were set up correctly and operated smoothly.

OBJECTIVE: Assembly manufacturing tested for smooth production scaling.

2 | Validating units meet requirements at scale

Ensuring that the product meets all requirements at scale is critical for a successful launch. AC thoroughly tests pilot production units to confirm that they meet all performance, quality, and durability standards. For Valve, this meant ensuring that every unit produced delivered the same high-quality user experience as the prototypes.

OBJECTIVE: Pilot units are verified as conforming to requirements and quality for production readiness.

3 | Validating quality plan

Maintaining high-quality standards throughout production is essential for customer satisfaction. AC implemented a robust quality control plan for Valve's VR hardware, including inspection procedures, testing protocols, and defect management processes. A well-defined quality control plan guarantees that every unit meets the highest standards of excellence.

OBJECTIVE: Quality control plan is executed to manufacturing standards of excellence.

4 | Launching the product

A successful product launch requires meticulous planning and execution. AC assisted Valve in planning and executing the launch of their VR hardware, coordinating with marketing, sales, and distribution teams to ensure a smooth rollout. This phase includes finalizing packaging, preparing marketing materials, and setting up distribution channels.

OBJECTIVE: Production plan is executed for a smooth and seamless launch.

Production validation drives successful manufacturing through product launch and scaling.

> "AC worked with Valve to prepare for the production ramp, ensuring that the manufacturing process could be scaled efficiently without compromising quality."

5 | Scaling up production

Scaling up production to meet market demand is the final step in the process. AC worked with Valve to prepare for the production ramp, ensuring that the manufacturing process could be scaled efficiently without compromising quality. This involves optimizing production workflows, training assembly line workers, and establishing contingency plans to handle potential challenges.

OBJECTIVE: Production efficiency and quality is maintained at scale.

Groundbreaking Innovation Through Advanced Product Engineering

Navigating the product development life cycle is a multifaceted process that requires strategic planning, technical expertise, and a collaborative approach. Our experience with Valve Corporation and other game-changing developers enables us to rapidly integrate advanced engineering services at each product development stage, leading to groundbreaking innovation, premium quality, scalable supply chain management, and seamless contract manufacturing for a successful product launch.

Our engineering team can support your product from concept to production or at any stage in your development journey. Looking for more in this journey? Download this entire series in our White Paper: Mastering the Product Development Life Cycle for Rapid HardTech Innovation.

Regardless of where you are in your product lifecycle, improve your speed to market with AC's engineering teams in Research & Development, Product Development, Hardware Testing, and Manufacturing Automation.

Let us know how can we support your current needs and solve your ambitious challenges.

503.256.2000

Info@Andrews-Cooper.com

OREGON: McMinnville, Lake Oswego, Corvallis

WASHINGTON: Bothell

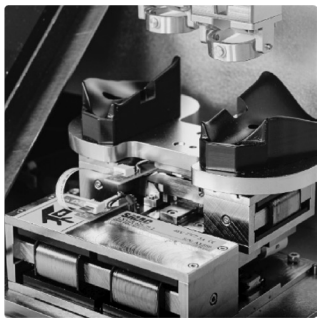
ANDREWS COOPER

Info@Andrews-Cooper.com

503.565.2000

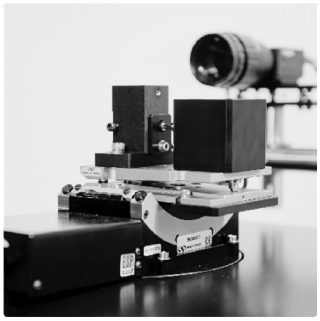
www.Andrews-Cooper.com

R&D Accelerator



Product Development

Hardware Testing



Manufacturing Automation

Integrated Engineering Teams

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