

Harnessing Market Opportunity with a Product Development Partnership.

There have never been more options available to innovators than there are today. Component technologies, design tools, and manufacturing materials and processes all have undergone profound evolution in recent years. And yet, many small manufacturers fail to innovate because of inertia—the mindset that says if we incrementally evolve our product by focusing on our traditional product development (PD) competencies, we can achieve moderate growth.

The truth is all sorts of conventional product spaces are being disrupted today, from thermostats to watches to interior lighting. What's more, they're often disrupted by outsiders—teams with the perspective and resources to imagine solutions that transcend a market's traditional PD competencies and assumptions. Disruption is a trendy business term these days, and it means applying new technologies and approaches to existing product spaces. Disruptive products redefine markets and displace their predecessors—digital photography displacing film is a classic example.

In this disruptive environment, incumbent manufacturers are at a disadvantage. Often, they lack the agility to answer new opportunities with fresh resources. They fail to innovate, because the market historically has never demanded more than iterative product design. They respond lethargically with long design cycles and ill-informed platform decisions. And they go to market at prices inflated by meandering development roadmaps and poor production planning. Beyond that, PD is often simply undisciplined, so management gets distracted from other vital functions like business development and strategic planning.

If the problem is multi-dimensional, the solution is surprisingly simple. To become market disruptors, forward-thinking manufacturers tap into the imagination, expertise and bandwidth of a full-service PD partner. In this manner, they access all the resources they need on-demand, while getting expert consultation that is disciplined and efficient. By joining forces with a PD partner, small manufacturers are becoming more:



Agile. Smaller manufacturers generally have fewer resources, and they also have narrower margins for error. For these reasons, they're under a lot of pressure to recognize market opportunities earlier and respond faster. This imperative can lead down many paths—making a technology pivot within an existing product line, adapting a current product to a new market, rebalancing resources among product groups, or

developing an entirely new product. Each path requires agility, which is the freedom to respond with new resources when new challenges arise. However, traditional overhead (think staff, facilities and equipment) can be very cumbersome to change on-the-fly, which is why truly agile manufacturers take on as little overhead as possible. In the case of product development, they instead partner with a full-service PD partner that offers access to a wide field of captive talent on an as-needed basis. Without this agility, every new challenge is met with the same limited scope of expertise inherent to a small in-house PD team. With it, new opportunities are no longer short-changed by pre-existing perspectives and skills, but can flourish with the imagination and capability a truly multi-disciplined, cross market PD partner offers.

-  **Innovative:** Innovation is difficult—the range of disciplines in product development today is confoundingly broad. A single product, for instance, can require expertise ranging from metallurgy and thermodynamics to embedded systems and RF communications. Answering this wide-ranging challenge with an in-house PD team is costly enough, and yet can still leave huge blind spots regarding the potential contribution of alternative and emerging technologies. By contrast, a full-service PD partner gives you access not only to the broadest range of expertise (both necessary and potentially beneficial), but also experience across a wide range of clients. This experience is the foundation of creative problem-solving; a full-service PD partner will likely have solved related design challenges in other markets, and can apply the insights gained to your project. Innovation is never easy, but your odds for success increase dramatically when you tap into a team that spans the full range of PD disciplines, and whose cross-training in other markets brings broader perspective and imagination.
-  **Responsive:** At the pace technology evolves, a bad platform decision or delayed design schedule can kill a product before it even launches. The faster technology advances, the more rapidly technology-based products become obsolete. Manufacturers often learn the hard way that their in-house PD lacks the bandwidth to meet a launch deadline, or the depth to identify and exploit the most advantageous component technologies. A full-service PD partner, on the other hand, can offer a high degree of specialization across many disciplines—essential to choosing the best product strategies and implementing them rapidly. Successful manufacturers realize the window of opportunity for any technical product is especially narrow, and that winning solutions come from large teams of diverse specialists.
-  **Competitive:** Strong products compete foremost on the value they deliver, but price-to-market also factors into competitive positioning. Pricing yourself out of the market's bell curve makes product acceptance an uphill battle. Most times, a full-service PD partner is better able to deliver a price-competitive product: it has the wide ranging expertise to pursue the most current, viable technologies without trial and error, and can integrate them efficiently. It also has the production engineering expertise to deliver a manufacturing package that specifies the most advantageous materials, processes and vendors; complies with all necessary standards; and demands the least amount of production overhead. Moreover, an outside

PD partner will have better-calibrated expectations (from experience), and therefore be better able to keep development focused and on schedule. Through wide-ranging specialization and more seasoned PD management, contract PD can drive cost out of both design and manufacturing, helping you go to market sooner and cheaper.

➤ **Efficient:** Poorly managed product development can devour executive bandwidth. In an ideal world, company leadership articulates product strategy, and then simply tracks progress and enforces accountability. In reality, upper management is often dragged into the weeds with amateur experimentation, sloppy benchmarking and decision-by-committee. These are symptoms of insufficient PD expertise and poor project definition, and can occur whether managing an in-house PD talent or assembling a team of freelancers. The cost is hard to quantify, but includes everything from missed deadlines and bad design decisions to distraction from other vital functions, like strategic planning, business development, and sales and marketing. To avoid this, a full-service PD partner will have a formalized process for interfacing with a client. The goal of this process is to provide expert technical consultation at the outset, and then collaboratively draft a product specification with input from all internal stakeholders (sales, marketing, product, production). With an explicit PD roadmap and expectations established, the interface between upper management and the agency becomes very simple and unobtrusive. Project milestones are straightforward to assess, and the end deliverable is never a mystery. In this manner, departments like production, sales and marketing can all get a head start on the product launch, and upper management can focus on tomorrow's opportunities rather than today's headaches.

Ultimately, true growth comes from realizing you don't have to solve every problem from scratch, or add unwieldy infrastructure to get to the next level. Becoming agile is about accessing the best and broadest talent only when you need it; being first to market with innovative, competitive offerings; and unburdening management to focus on strategic planning and business development. A full-service PD partner will guide you skillfully through this metamorphosis, allowing you to become the disruptive force in your market.