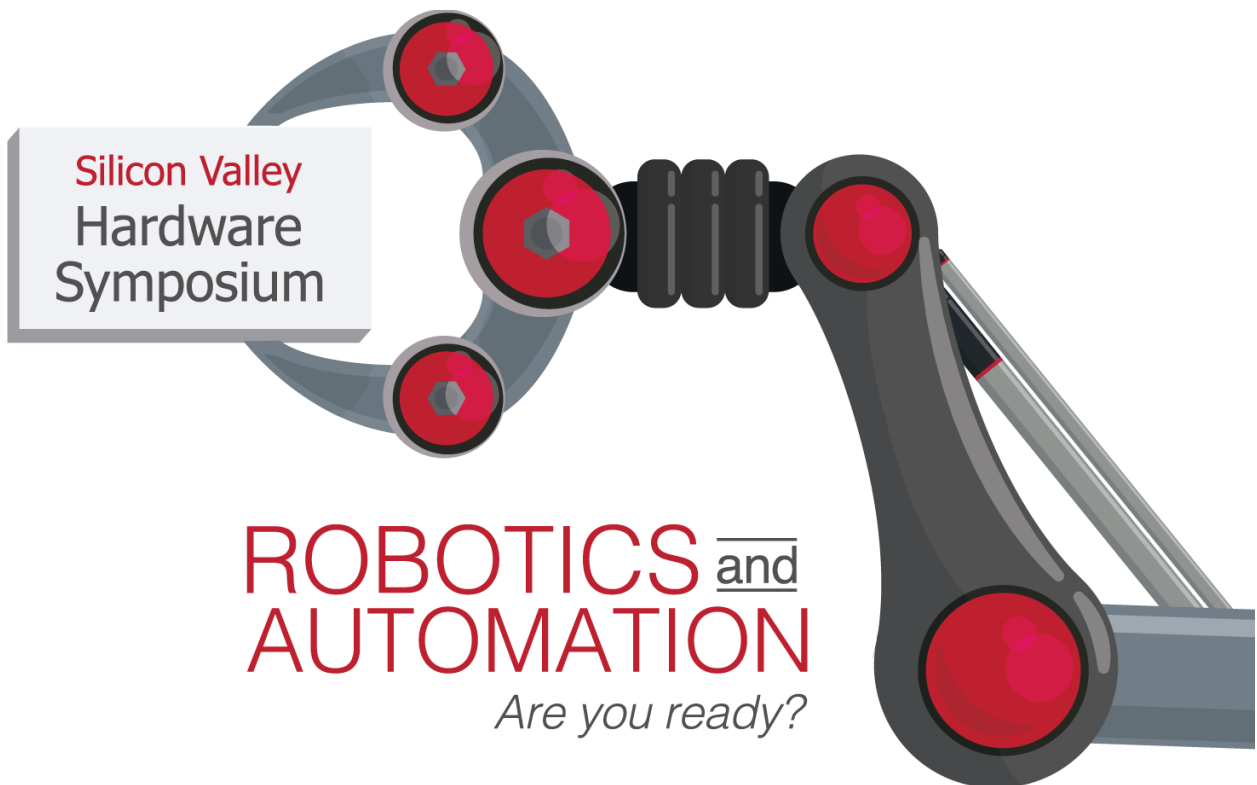


Expert Tips from the 2018 Silicon Valley Hardware Symposium

Part 1



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Silicon Valley Hardware Symposium -- Expert Tips



About Product Realization Group (PRG)

Product Realization Group is an electronic hardware focused project management firm based in Silicon Valley. Our consortium of seasoned experts can help seamlessly transition your electronic hardware product from concept to scale. We pride ourselves on being your go-to source for prototype design and build, operations and manufacturing insights, and marketing consulting. Visit us at:

www.ProductREALIZATIONGroup.com

About the Silicon Valley Hardware Symposium

The SV Hardware Symposium is an annual summit that brings together the best of Silicon Valley's professionals dedicated to the creation of hardware products. Professionals from the areas of product development, user experience, sourcing, engineering, testing, sourcing, manufacturing, and supply chain management come together to keep their fingers on the pulse of the industry, hear from keynote leaders and panelists, and preview breakthrough new products.

The "5 Tips" Series is a collection of accessible wisdom created from subject matter

Silicon Valley Hardware Symposium -- Expert Tips

experts at the recent SV Hardware Symposium. The decades of knowledge, lessons learned, pain experienced, and success achieved from experts are being shared here.

5 tips for Funding

Brought to you by: Event Horizon Ventures

TIP #1: Play downhill.

Figure out how to build and pitch your business such that every year demand for your product is greater.

TIP #2: Cultivate multiple options.

You should never be in a situation where you raise money or die. When that happens you are usually going to die. Venture, PE, family offices, random international money, going profitable, grants...have plan B, plan C, and plan D.

TIP #3 : Emulate the Honey Badger.

The Honey Badger don't care. The Honey badger will work with whoever and doesn't take it amiss if a particular VC falls through. Aim to be quietly confident, and communicate that. This is a vastly more effective fundraising strategy than being an asshole.

TIP #4: Remember fundraising is a process.

So do your planning in advance, figure out who your best prospects are, ask questions and ask for advice. It's a marathon, not a sprint. Expect it to take six months.

TIP #5: Always ask yourself what can I do to make my business the best investment this investor will ever see.

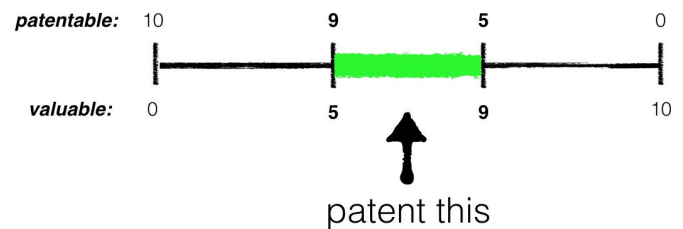
Be audacious. Who's the best advisor in your sector? What's the best reference customer? Who would you kill to have on your team? If you don't ask them, you'll never know.

Brought to you by: Run8 Patent Group (r8pg.com)

5 Tips for IP Protection

TIP #1: Patent technologies that balance value and patentability.

The more valuable a technology is to your company or to your space, the less patentable it probably is. So identify technologies that strike the right balance between patentability and value. Patent applications that capture lower-value / higher-patentability concepts are often granted quickly and are helpful in the short- and mid-terms for fundraising and managing partnerships. Patent applications that capture higher-value / lower-patentability concepts require more resources to push through, but they build significant long-term value, especially for exits.

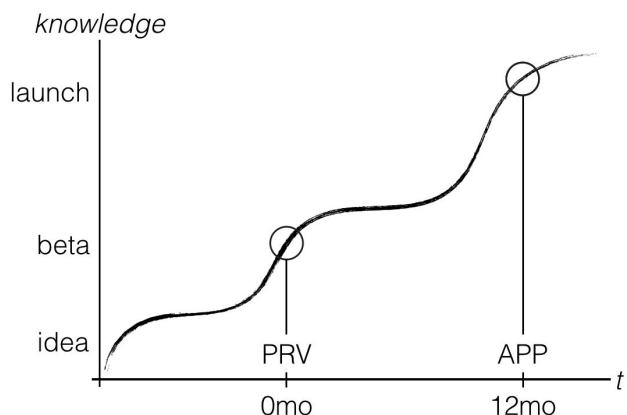


TIP #2: Start with an IP budget.

IP budgets of 1-3% of overall budget are common among tech startups. Once you settle on 18-month operating and IP budgets, use average costs of \$4k for provisional applications (PRVs) and \$14k for non-provisional applications (APPs) to gauge the number of provisional and non-provisional applications you can afford in this time period. Then filter your list of 100+ patent ideas down to the most important handful that you can afford. Now reference your Gantt chart to determine when these few concepts will be prototyped, and set calendar reminders to follow up on patent applications on these concepts accordingly. This is systematic, repeatable patent strategy.

TIP #3 : Patent prototypes, not ideas.

Filing patent applications at the idea phase rarely results in success. Instead, be patient, build prototypes, test your assumptions, and get feedback from potential users. Once you understand what your customers care about and how your technology solves their problems, go raise some capital, and then allocate 1-3% of that capital to file a patent application on your core technology that solves fundamental needs.



5 tips for Go-to-Market

Brought to you by: Beth Rogozinski Transmedia SF beth@transmediasf.org

TIP #1: Go-to-Market Planning Begins at the Beginning

Don't wait to start your Go-to-Market planning and testing. This is an essential element of your business, and it is critically tied to your product and road map and your business strategy. The best GTM plan starts with an amazing, well tested and already in-demand product.

TIP #2: Focus on the benefits of what you are providing - and consider the "Feel, Think and Do" principles.

No one wants to actually buy a vacuum cleaner - what they want is a clean floor and the identity as a clean and neat person. What are you selling that your customers truly want to buy/invest in? Consider with all of your messaging and marketing, "How do I want my customers to **feel** about the products and services I provide? What do I want them to **think** about the product and services I provide? What's the very next step that I want them to take (what's your **Call to Action**) via this messaging campaign? (Note that the next step is not always "buy" - it could be get more info, try, advocate, upgrade, etc.)

TIP #3: Map out the acquisition process and your users' experience with every touch point.

Consider all of the ways your customers will find out about your product and services and what steps it will take to get them to become not only a customer, but an advocate. Map out various paths, from tech reporters/reviews, to social media mentions, to final purchase. What are the stumbling blocks or moments when they might abandon the process and why? Try to remove any hindrances and better understand what makes your leads convert to become your special customers.

TIP #4 : Know Your Distribution/Channel Strategy

Often with hardware, you need to sell to and through a channel partner before reaching your end customer. Ergo, you need to consider the needs and desires of these channel partners as well. Ideally, you'll craft a push-pull marketing campaign that draws end users to your channel partner, and your channel partner will also promote your product and services.

TIP #5: Focus on your target psychographic - and show them love.

The best products in the world focus on a core market segment and do not try to be all things to all people. Think Apple, Nike, Playstation and the tight targets these hugely successful companies focused their original products on. The process of creating your psychographic targets is well worth the effort and helps to shape product features and road maps, business and go-to-market strategy, as well as service and community support structures.

5 tips for Finance

Brought to you by: Keating Consulting www.keatingconsulting.com and mike@cfo-coo.com

TIP #1: Don't run out of cash

Plan your cash burn based on various scenarios. Add some buffer for product development delays, for example, the extra DVT build, revenue starts a quarter later, and the like.

TIP #2: Develop and maintain financial projections

It's easy to focus on the projections when fundraising, and then put these aside as you focus on execution. However, updating the key drivers of the financial forecast with monthly results and learnings from engineering, sales and support functions tells you if a key financial metric and the underlying business activity or assumption have shifted.

TIP #3 : Develop banking and other financing relationships, *particularly with hardware businesses*

Equity investors are not going to fund everything on the balance sheet such as inventory and receivables, or ongoing capex (toolsets, manufacturing jigs and test equipment). Just as you maintain contact with investors, keep an assortment of banks, asset-based lenders or leasing and other financing companies ready to help fund some of the working capital and capital expense buildup as revenue starts to ramp.

TIP #4: Build out the team in a cost-effective manner

The funding requirements for a hardware business can be significant along several fronts-- product development, marketing and sales, working capital. Try to keep a balance among these resources. In building out your cross-functional team, consider heavy use of contractors, consultants, and part-time positions to provide the flexibility to reallocate resources.

TIP #5: Consider the right set of cost-effective tools

As a startup, you probably cannot afford to implement an ERP system. More importantly, you don't have the bench strength to maintain it. However, key tools such as an accounting system that can handle basic inventory tracking, SaaS tools for managing the marketing funnel and driving conversion into sales, and desktop or online software to manage demand and supply will help drive key business processes and provide timely feedback.

5 tips for Technical Program Management

Brought to you by: Jay Feldis at Product Realization Group, jfeldis@prgnpi.com

TIP #1: Define your product clearly

Great ideas may start on the back of a cocktail napkin, but one of the major causes of project delays and cost overruns is the lack of clearly defined product requirements. Take the time to write detailed product requirements before investing in engineering development.

TIP #2: To Fail to Plan is to Plan to Fail

Once product requirements are defined, create a detailed plan and a schedule with frequent milestones. Identify the critical path to completion and track it weekly. If critical milestones slip, you have early warning that you may be late. Take early action to adapt and avoid delays. It can be very difficult and expensive to accelerate hardware development later.

TIP #3 : Test Early and Often

“Bugs” in a hardware design can take weeks or months to correct. It is essential to construct tests to find weaknesses in key designs, materials and components as early as possible. The cost of fixing a problem discovered during volume production can be 1000 times the cost of fixing it earlier and can cripple a new product in the market.

TIP #4: Cost, Schedule, and Performance

Cost, schedule and performance parameters trade-off against each other. Improving one parameter usually degrades one or both of the others. A well managed project optimizes the balance to best satisfy the business objectives of the project.

TIP #5: Beware of Accumulating Risk

The product development process should reduce risk and uncertainty at each stage. However, feature creep, failure to make timely decisions, delayed verification of performance, or reluctance to acknowledge technical risks and resource bottlenecks can increase risk over time. An experienced project manager can help a development team identify and mitigate these risks.