

# Selecting a Design Partner – How to Evaluate a Prospective Design & Development Firm

By: Charles (Ed) Becze, Ph.D.

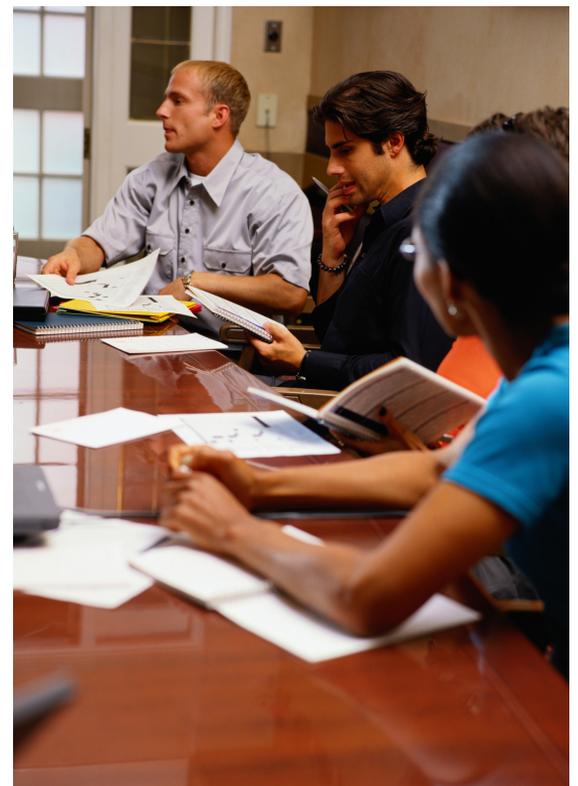
This article is part of an ongoing series of white papers authored by one of the co-founders of Pegmatis. In this article, Ed continues his discussion about design quality and the importance of choosing a great design and development firm with whom to partner. What considerations should be top-of-mind when evaluating prospective firms?

Innovators should choose design partners with the same rigour as they would choose a plastic surgeon. I use this simile because it illustrates the importance of a correct selection, and it hits home to many people. You need to be looking for demonstratable experience and a track record of success, rather than fixate on costs or perceived value; incorrect selection can leave you scarred and unhappy. A word of caution, high cost does not necessarily imply high a quality work product. Product development by nature is a costly endeavour. There are intrinsic development costs that are unavoidable, and there are extraneous costs associated with poor partner selection that you can avoid with some upfront rigour. Over the years, numerous unfortunate clients have walked through our doors in various states of dismay. These clients had gone through some process in selecting a design partner but had failed to consider a few key points that MUST be included when going through the selection process. Having been on the other side – in product development – I can understand where the constraints may lie. To those entering this critical stage, I would like to share some observations drawn from over two decades of experience.

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I should briefly define the expectations of what a dependable design partner needs to bring to the table. First and foremost, your partner should have a pedigree of engineering capability that aligns with your immediate and long-term requirements. One who is capable of delivering on the task for which you are paying. It is incumbent upon your design partner to notify you immediately if there is a gap in skill, for instance, that would impact a project's success.

Second, a design partner must always look out for your best interests while maintaining integrity and operating to the highest level of ethics to ensure that your business has sound direction. In fact, they should behave and act as an extension of your business. Similarly, you should listen to your partner for they are there to help, and a good partner will provide you with sound counsel. Remember, the right design partner wants you to succeed because your success is their success.



## Experience

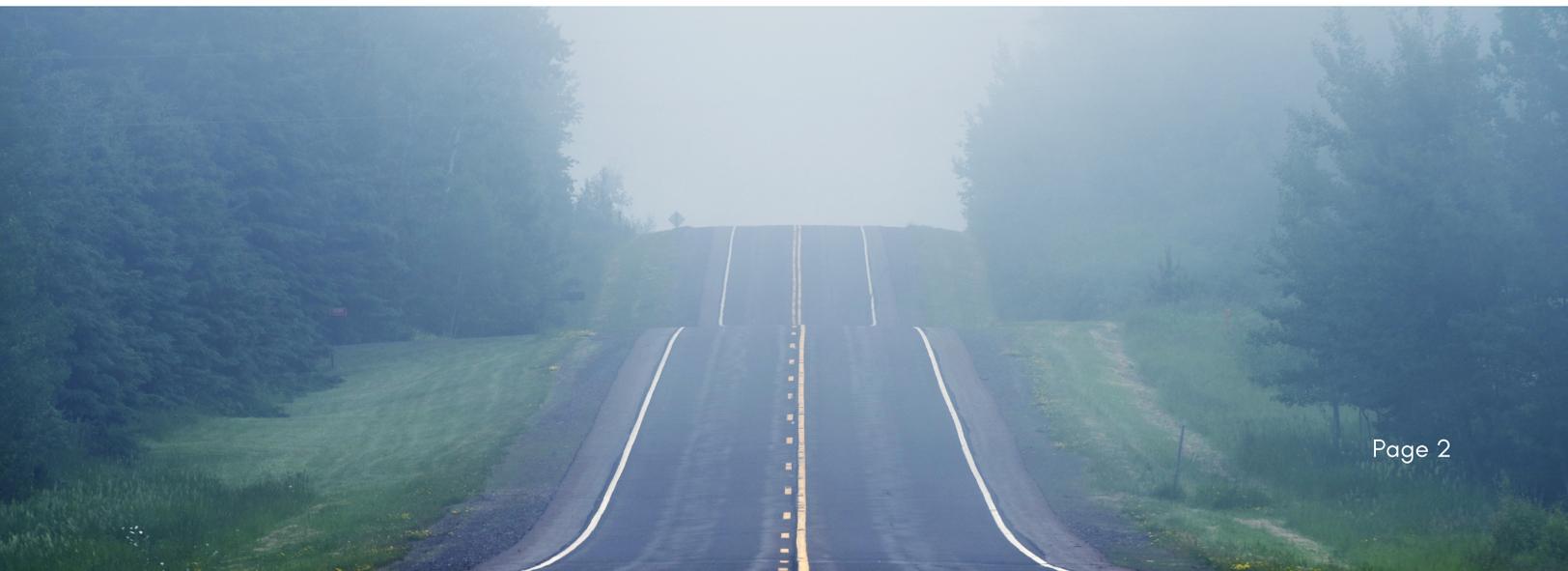
Let's start with a key expectation: solid pedigree. What exactly does this mean? Solid pedigree means your design partner has the expertise and intrinsic capability to execute the design and to validate the product to meet your business goal. Perhaps your goal is to build a proof of concept that you will present to investors to obtain interest. Maybe your goal is to run the full development cycle on a well-defined concept, bringing the product to market. As a business owner, you rely on your design partner's expertise to help you navigate the challenges you face to be successful.

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## Preparing You for What's to Come – Ability to Understand and Identify Challenges

Whether your expectation is the delivery of a prototype to prove out a concept or incur investment, you should expect your design partner to help you to understand the challenges and risks that you will face bringing the product to market. This process must include technology challenges associated with your product. You should also insist and verify that they have the experience to provide you with solid direction on the costs you will need to incur (raise or invest) to bring the product to market. Your partner must have the experience to foresee risk in technology, cost, or other obvious development challenges that will make or break your business, but also prepare you for staffing your company with the right people to own the product. As part of this early engagement, your design partner must demonstrate the ability to help define your product's requirements to align with your marketing vision. This is where your design partner will either set you sail and make you successful, or sink you. ALL products are defined by their requirements, and a competent design partner will ensure that what you envision can become a reality through these requirements - everything from meeting marketing needs to certification. When vetting your design partner, you should expect that they will present to you a robust development plan and a clear line of sight on product execution a priori. It is incumbent upon you to determine if they are forthright and upfront about the risks and to reassure yourself that you are in good hands. Remember, it is your business's cash, and you should expect and insist that your partner guides you to success. The best advice they can give you is to not "boil the ocean" - and keep your goals at achievable limits within your budget.

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## Capability of Delivering Value to your Business

If the vision is to bring the product to market, your design partner must have the experience to do so – preferably end-to-end. Much like the prototype engagement, it goes without saying your design partner should be capable of providing you visibility on the complete effort. You should be looking for clear evidence that your partner has a well-defined development process and has executed on this process many times.

Knowing this will give you confidence that you are not going to be hit by unforeseen logs in the road. This is critical to prevent unnecessary design churn which can thoughtlessly burn through your budget. Experience is king here. An experienced design partner will embrace accountability for a successful development cycle and deliver your product to launch, seamlessly and thoughtfully. A competent and experienced design partner will have input into your product execution and will be able to provide insight into potential gaps in your business. This will show their ability to understand your business and prepare you for the future.

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## Product Validation – from Architecture to Validation

When evaluating a design partner, look for evidence that they have successfully launched products from start to finish. In particular, get them to discuss and focus on their process on how they navigate from architecting the product right up to validating that they have delivered something of value to you. Again, it is your money and effort that are on the table here. Do not be shy and be as critical as possible. If you are uncomfortable with your breadth of knowledge, hire a knowledgeable third party who can ask the right questions for you. If there is ANY ambiguity and you do not feel comfortable, walk away. Your first instinct is correct. Remember, it is very unlikely that you, as a business owner, will have direct experience in launching a product – with complete visibility on EVERY aspect from development to certification. I have worked with many entrepreneurs who refused to admit this and who were overconfident in their abilities. Needless to say, in every instance, they were unsuccessful.

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## Product Manufacturing Experience – New Product Introduction (NPI)

As a business, if you do not have NPI capability, you will need to rely on your design/manufacturing partner to execute on this critical stage. NPI is a core skill that very few design companies possess. If you can find one, embrace them! Rolling a product out into manufacturing is certainly not a trivial process. In fact, this is one of the most challenging aspects of the development process. In addition to understanding how to manufacture a product (i.e., sourcing components, coordinating builds, selecting a capable manufacturer etc.), a capable design partner understands the system-level development cycle and will seamlessly integrate this stage early on in the development cycle, which will prepare you for this critical and often very painful stage. I don't want to elaborate too much on this as I do have

some core knowledge here, but suffice to say, expertise in this area is invaluable and will deliver huge costs savings during development. In my opinion, under certain circumstances, you should insist on this experience. A good partner will align you with a capable manufacturing partner, will help you with your cost structure by leveraging their supply chain network, and will oversee and be accountable for introduction in manufacturing.

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## Beware of Manufacturing and Design Integration

As design professionals, we are facing headwinds from globalization. A common approach is to leverage offshore design at significantly lower costs – obtained by leveraging integrated manufacturing capabilities and subsequent contracts to offset development costs into manufacturing value-add. On the surface, this appears to be a very attractive vector for product development. I do, however, caution any company considering this type of approach: saving development costs exposes your business to significant risks. There are obvious risks, and there are the intangible ones that ultimately cost you time, indirect mitigating expenses and exposure. What may appear to be low cost quite often will incur trade-offs in functionality, intellectual property protection, and if the product is a hit, commoditization through unapproved proliferation. The list can go on, but I think the message is clear; be cautious.

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## Conclusion

I hope that this brief essay has given some food for thought and has ignited a desire for potential product visionaries to assess and vet out their design partners with thoughtfulness. Selecting a design partner ultimately breaks down to the alignment of experience to your business needs and should not be gauged by costs alone. Do your own due diligence, ask the right questions and above all ensure that your selection will support you long-term for success.

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## About the Author



Charles (Ed) Becze, Ph.D., is a co-founder of Pegmatis, Inc. Over his career, he has worked with Pratt & Whitney, Ford, and an electronics Original Equipment Manufacturer (OEM). Pegmatis Inc is home to a team of highly experienced software, hardware, and manufacturing professionals who are proud to have produced some award-winning products, many of which you may have in your own homes. Connect with Ed on LinkedIn or contact him for more information at [Pegmatis.com](http://Pegmatis.com).