



## **Industrial vs. Consumer Products:**

### **How Design Choices Define Expectations**

*A white paper from Freevolve, LLC*

***FREEVOLVE***®  
**Freedom Through Technology**

## **Burden of Skills**

Over the last decade, technology advancements have infiltrated our personal lives at an unprecedented pace. Such developments have refueled questions about the extent to which ordinary consumers must acquire new skills in order to be able to use new technology effectively.

In many cases, this “assumed set of skills” burden placed on consumers is both artificial and unnecessary. Modern technology can easily offer both powerful functionality and the simple and intuitive means to use it, so why are so many consumer products not taking advantage?

## **The Evolution of Demand**

In the case of many larger, established manufacturers, the reason is mainly due to a financial calculation. Many technological advances start out fulfilling an industrial need. This is the environment in which demand usually originates, and where this need is great enough to justify the investment in developing a solution. As such solutions prove themselves successful and start being applied on a larger scale, the manufacturer increases production capacity, begins driving down costs and starts looking at new markets that might make use of them. Often the industrial demand for a particular product is saturated and a re-purposing effort begins to find new retail opportunities. If, with only minor changes that do not significantly impact the manufacturing process and related investments, the same product can be used to address a new perceived need in the consumer market, a concerted campaign is initiated to introduce it to the new application.

Because the product is not specifically designed for this alternate environment, the degree to which it can actually satisfy a new need varies greatly. Often, a solution is artificially created instead by surreptitiously redefining the new customer’s need so that it better matches the existing product’s capabilities instead of the other way around.

If such re-purposing becomes successful, the manufacturer sees an increased incentive to re-invest in their manufacturing process to better serve the new market and the product can at this stage evolve into a true consumer version, separate from its original, industrial concept. A good example of such an evolutionary process is the cell phone which, in its current form, with graphic screens used in conjunction with a navigation keypad and voice-driven instructions has truly become a solid, intuitive and easy to use performer in the consumer world.

### **Neither Here nor There**

This process can only be completed at the expense of early generations of users being subjected to inflexible, obscure embodiments of the solution, usually only accessible to a very limited section of the population and which ultimately succeed in becoming more common-place often in spite of themselves – mainly because the need they serve appears worth the difficulty and inconvenience. More often such evolutionary processes end up stuck in a vicious cycle that feeds on itself, where the product demand never breaks the manufacturer's perceived barrier that would justify investing in the creation of a true consumer version, yet the need it serves is strong enough to keep the product alive in spite of its use challenges. This creates a large offering of zombie “neither here nor there” designs that foster a general atmosphere of reluctance in accepting and using otherwise extremely beneficial technology.

This situation is made even more difficult in what can be described as more “niche” applications, where the size of the industry promoting a new technology is not large enough to provide the investment incentive into developing it for a yet un-tested market. Many times this attitude is justified by pointing out other companies that have failed in bringing a similar product to the consumer market, even if the reason for their failure is the same: a lack of effort in re-purposing the product properly for its new intended audience.

Some areas of consumer interest will concentrate on specific needs that are not well mirrored, if at all, by the industrial realm. In these cases the “traditional” trickle-down process through which technology becomes available is compromised by the lack of suitable solutions and creates an awkward stalemate. Consumers are left to address these needs by trying to fit square-peg solutions into round-hole problems. Results are limited at best, and a lack of alternatives or developments in these areas of application leads some to attempt even more extreme approaches, such as overly expensive hardware or services that would otherwise never be considered.

The result is often a state of stagnant technology in areas that could benefit most from developments otherwise forthcoming. Perhaps most clearly represented by this situation is that of remote home monitoring applications.

### **When the Square Peg Just Won't Do...**

One of the top concerns listed by second home owners is related to their lack of ability to properly supervise and care for their property when it remains unoccupied. The significance of a home both as an investment and in terms of the value added to the quality of life of its owners makes addressing the issue of maintenance a pressing concern. However, because the setup used by the homeowner to manage the home's environment is specific to private residences, no complete solutions have been developed at the industrial level to adequately address this need. Various attempts made at transforming generic industrial monitoring-type applications for this market have fallen short due their limited abilities and technically demanding user interface. It is a testimony to the pressing need homeowners feel on this issue that even solutions of such limiting nature have managed to establish a long-term, though limited, presence.

In such extreme circumstances it isn't just the manufacturers of such equipment that try to force-fit new applications to existing products. Retailers faced with the lack of solutions to pressing customer demands sometimes face the difficult decision of having to take it upon themselves to try and promote less-than-ideal alternatives.

## **Demand The Round Peg!**

**The lack of choice regarding consumer-oriented technology is, fortunately, only apparent. Driven by the market access of certain interests that have, over the years, secured a strong financial position, the consumer tends to be exposed only to certain views on what technology can or should be able to accomplish. The reality, however, is that other choices are always available. Many companies are and have been dedicated to developing products and solutions destined exclusively for the consumer market. Advancements in technology are making this job easier and increase their ability to stand out against traditional, established marketing efforts at presenting only certain options as viable solutions.**

**While the best solution to a consumer need may already be out there, getting to it also requires, unfortunately, the use of an “assumed set of skills”. Instead of technical prowess, however, this one requires rejecting the prevailing view of what technology requires of you and of the things you must do to accommodate it and substituting another, one that views technology for what it really is: a tool that can be easily manufactured to respond to your requirements and shaped to accommodate your needs.**

**Becoming aware of what your expectations should be – instead of how others define them – makes you a better consumer. Investing in this effort during your next product purchase selection process can lead to an enormous improvement in how your ultimate choice will serve you in the future.**