コンポーネント技術　特集

高付加価値化、差別化をどこに求めるか
Where to Pursue Added Value, Differentiation

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Since entering the 21st century we are seeing a clear separation between the winning and losing corporations in every industry. Among companies involved in the same businesses, the winners are recording record-high revenues while the losers pile up red ink that is endangering their very existence as companies. What produces this striking division? I believe the difference is not simply that one company's employees worked harder than the other's but, rather, that one company had more attractive products with added value that won them customers.

The essence of creating products is actually creating attractiveness (value). In other words, it is a matter of how many attractive features you can create that the customers appreciate. If you have a product based on a completely new idea that you are able to patent, there is no need to consider processes for adding new value. In such a case the important thing is to manufacture the product quickly and dominate the market at your desired price. However, there are very few products of this type. In most cases we are involved in creating products that are not protected by patents, and as soon as it is marketed the competitors will come out with a model to compete against it. What's more, the products brought out afterwards by the competitors have often been designed to be more appealing than your original product.

So, what you must do in order to maintain your market advantage is to improve performance/cost in areas that the competitors cannot see and cannot imitate easily. These areas are not in the assembly process but in the components used. This is because performance and cost aspects have already been built into the components to the maximum degree possible and it is therefore very difficult to achieve further performance/cost advantages during the assembly process. Thus, it is most important to build differentiation and advantages into the components.

The idea that you can leave component development up to the specialized component makers is a concept from a nostalgic era when it was a suppliers' market with demand exceeding supply and manufacturers were simply assemblers. Now, we are in an era when you can no longer expect to sell run-of-the-mill products at standard prices, and you will not get much added value by just procuring parts from outside suppliers and assembling them into what you think are good products. It is difficult to differentiate your products by such a manufacturing process. Still, there are companies like Dell that have succeeded simply as assemblers through a process of horizontal task division. But, theirs is a minority case of a compact and speedy venture company with a small number of employees. On the other hand, there are also few companies that are succeeding as vertically integrated corporations (makers that add value at all levels of the

product creation process from the raw materials on up through assembly).

Yamaha Motor's IM(Intelligent Machinery) Company is one that had almost no core technologies of its own when it started out. However, because in its 20 years of operations it has become able to develop core components in-house, and it is now able to create products that are superior to those of the competitors in terms of cost and performance, despite the fact that production volumes are not large. However, this has been achieved not on the basis of in-house production but through **a process of vertical integration of technology + horizontal division of production**. In other words, this is a system in which components are developed in-house with transparent performance and cost standards that can be precisely controlled and then production is outsourced to a manufacturer with the highest QCD(Quality Cost Delivery) qualifications. This system has become a core competence that is now contributing to IM Company's profitability. One more advantage of developing components in-house is that problems can be solved more quickly when they occur. Particularly in the case of software, only its designer can find the bugs in it. Although in-house design may not eliminate the kinds of problems we classify as serious or chronic, it can provide great improvements in the possibility of solving problems and the speed with which they can be solved. These improvements will contribute to a greater sense of trust and security in our customers and our dealers and be effective in increasing the number of repeat customers and fans of Yamaha Motor products.

I would like to propose that this system of designing, building prototypes, evaluating and developing cost performance for major components in-house be applied to other Yamaha Motor products like our motorcycles. Undertaking new endeavors like this always demands a great deal of courage, and much time will surely be spent in trial and error, but I believe that if we concentrate these efforts on components needed for our products alone, we can soon catch up to and surpass the specialized parts manufacturers in terms of component performance and cost. We are now in an environment in which component development is essential for creating products with new performance and functions and significantly improved cost performance. Ten years will pass much more quickly than you think.

21世紀に入り、どの産業界でも勝ち組みと負け組みの区別がはっきりと見えるようになりました。同じようなビジネスをやっていても、一方は過去最高の収益で他方は赤字で存続さえも危うくなるという状況です。どこでそんな差が生じるのでしょうか。一方が汗水垂らして一生懸命やっていて、他方がサボっていたわけではなく、お客様にとっての魅力（価値）が有ったか無かったかということだと思います。

　"ものづくり"も、本質は魅力づくり（価値づくり）です。どれだけお客様に認めてもらえる価値を素材に付けられるか、ということが勝負になります。全く新しいコンセプトの商品で特許で保護されるのであれば、どのプロセスでどんな付加価値を付けるかなどと考える必要はありません。とにかく早く作って希望の価格で市場を支配することが大事です。しかし、そんな商品はめったにありません。新しい商品でも、出した途端に他社が追いかけてきて、しかも、後から追いかける商品の方が強いことが多いのです。

　ではどこで優位性を維持していくのかというと、他社が見えないところで簡単に真似できないように性能/コストを高めることです。それは、組立工程にではなく、コンポーネント（構成要素）にあります。なぜなら、既にコンポーネントにはそれぞれ性能とコストが最大限に折り込まれており、あらためて組立工程で性能を上げることは困難なのです。したがって、コンポーネントづくりのところで差別化して優位性を保つことが最重要になります。

　コンポーネントは専門メーカーに任せておけばよいという考えが通用したのは、商品が市場で不足していた時代のアセンブリ屋のノスタルジアです。今は、並みの物を並みの価格では売れない時代ですから、社外から部品をかき集めうまく組立てて良いものを作ったと思っても大した付加価値は付かない、差別化は難しいのです。それでも世の中には、パソコンのDell社のように水平分業と称してアセンブリだけで成功している会社があります。しかし彼らは、少人数でコンパクト、スピーディーなベンチャー企業ならではの事業体質で成り立っているマイノリティーです。一方、素材から組立まで一貫して自社で賄う垂直統合が成功している企業（各工程にきちんと付加価値を持っている企業）も多くはありません。

　IM（Intelligent Machinery）カンパニーは、発足当初はほとんど自前の技術がありませんでしたが、20年間かけてコアコンポーネントを社内開発できるようにしてきたおかげで、数量が少なくても性能もコストも競合他社を上回るものが作れるようになりました。しかし、いわゆる内製化とは違い、いわば「**技術の垂直統合＋生産の水平分業**」です。つまり、社内開発によってコンポーネントの性能、コストを透明にしてしっかり管理できる状態を作り、生産はQCD（Quality Cost Delivery）で最も優秀なところへ委託する方式です。これは、IMカンパニーの収益源となる一つのコアコンピタンスです。もう一つ、社内開発の大きなメリットがあります。問題が起きた時の解決の早さです。特にソフトウェアなどは、設計者でなければバグは見つかりっこありません。社内開発すれば、難病、持病といった解決困難な問題が無くなるとは言えませんが、解決できる可能性とスピードが、大幅に改善されます。この改善は、お客様や販売店の人達に信頼感と安心感を与え、ヤマハ発動機製品のリピーター作り、ファン作りにとても有効です。

バイクやその他の製品の調達品でも、重要なコンポーネントは社内で設計・試作・評価・コスト開発してみたらどうでしょうか。やっていないことをやるのは勇気がいりますし、失敗の連続で時間が掛かるかもしれませんが、自分たちの商品が求める仕様に限定すれば必ず専門メーカーに追いつき追い越せると思います。新しい性能、機能を創り出し、大胆なコスト創りをするには、コンポーネントの開発が必須になってきています。10年なんてあっという間に経ってしまいますよ。

■著者

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