Published on *The National Law Review* https://natlawreview.com

The Strategic Use of Intellectual Property Within the Aerospace & Defense Industry

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I remember an argument between two friends about which of their favourite restaurants was best. The irony being that they both were… depending on your expectations. One was known for a decent meal at a low price. However, the advocate of the other restaurant preferred a higher standard of food (and was more than happy to pay for it). Both restaurants were remarkably good at delivering what they were known for, and as a result they were both extremely successful.

Although it is 25 years since their book "The Discipline of Market Leaders" was released, that analysis of business success set out by Michael Treacy and Fred Wiersema has stood the test of time. They explain that no company can succeed by trying to be all things to all people, and that business leaders must instead identify the "unique value" that their organisation can deliver. In the example above, the companies offered similar products but each appealed to a very different set of values.

Treacy and Wiersema suggest each company needs to identify its "value proposition… the implicit promise that a company makes to customers to deliver a particular combination of values – price, quality, performance, selection, convenience, and so on". The next step is to design a value-driven operating model that allows a business to deliver on those promises. Three "value disciplines", desirable ways in which companies can combine operating models and value propositions to be the best in their markets, are then identified. This article considers how a company might use its intellectual property (IP) assets as part of an operating model in support of its chosen value discipline. We shall look at each value discipline and consider how IP might be used in relation to it, providing examples from within the Aerospace & Defence sector.

We shall start with Product Leadership, where a company succeeds by pushing performance boundaries. Here a company's products and services will be the best available and as a consequence customers pay a premium for them. Product leaders constantly strive to make even their own technology obsolete by developing new capabilities (keen to do so before someone else does!) and so they invest heavily in research and development. Good examples are found in the military aviation sector, for example in the field of complex avionics systems being designed for sixth-generation fighters. The companies looking to build such aircraft are investing now in multiple

research programmes, even though the resulting designs will be used to replace the aeroplanes they currently build.

It is easy to see how IP can play a big role here. Patents, which provide inventors with monopolistic exploitation rights for a finite period (usually 20 years), are perhaps the best example of how IP can be used to capture the results of investment in R&D and translate them into commercial revenue. Patents maximise the potential commercial exploitation of a product by acting as a barrier to competitors wishing to enter that technical space. They also provide additional revenue streams by generating commercial assets that can be monetised through licensing. Copyright is another valuable IP asset existing in the designs and software being produced. Other tools used alongside IP rights (such as confidentiality agreements and other practical rules to protect know how and trade secrets) are also valuable and in this regard, in preparing their strategy, IP owners need to consider how patents are the antithesis of trade secrets. The essence of patent laws around the world is that, in return for the grant of the monopolistic rights to the patentee, that IP owner must disclose its technical advancement with sufficient clarity that any skilled person can understand and implement the invention. This disclosure is then published by the patent offices and becomes part of the human knowledge in the field to be available to all at the end of the exclusive period granted to the patentee. However, the premise of trade secrets is quite the reverse as they comprise material that the IP owner does not disclose to any person let alone any competitor.

Next I wish to consider Customer Intimacy. In this value discipline the product or service is not provided to the market by just one company, nor it is likely to be cheap despite the competition. However, a customer intimate company seeks to cultivate relationships (and the understanding that can be derived from them) in order to build a detailed understanding of their customer's needs and thereby become the provider of choice. I believe that a law firm such as Womble Bond Dickinson falls into this category. We invest time understanding the sectors in which we operate and our clients' requirements. As a result, we hope that we will be best placed to deliver a service that satisfies our clients' unique needs.

In a competitive environment, where it is the reputation of the company that matters most, trade marks and registered designs (while relevant to a number of value disciplines) can add significant value by distinguishing products or services and linking them to the knowledge and expertise of the provider. Treacy and Wiersema comment on one example of success through customer intimacy: "Computer salespeople in the 1970s and 1980s, losing many a close sale to venerable IBM, often gave but one excuse: 'Nobody ever got fired for buying from IBM' ". I have heard the same said about a number of professional consultancy companies today, operating within the aerospace & defence sector, who are trusted by management to provide industry insights that they don't believe will be available elsewhere and whose reputation is sufficient to justify the not inconsiderable spend.

In addition, the information and data held by an organisation, and the tools it possesses to manage and intelligently access that material, are key enablers of success for customer intimate companies. There is enormous value in the IP rights associated with shared data environments and knowledge management tools, the content within them (i.e. the data they hold) and also the operational frameworks necessary to enable the rapid design of bespoke solutions. Unlike in the USA where the protection of private IP rights in databases is generally confined to copyright and the protection of the architecture of the database, across Europe there is an additional IP right – database right – which reserves to the IP owner the ability to control the extraction and reutilisation of the contents. If the use of collaborative project tools is relevant to you, then you may want to read our earlier article "Shared data environments in the defence industry: the challenge of collaboration"). An ability to deliver on-going training and effective product support, which depends on the effective capture of IP and know

how, is another way that customer intimate companies develop their client relationships.

A good example of a customer focused business within the Aerospace & Defence sector would be the provider of through-life engineering services for a military platform. Some of the knowledge required will necessarily be proprietary, especially in relation to a complex asset, but the choice as to who fulfils the lead (integration) role may depend on which company best understands the customer's needs (and can therefore organise the wider supply chain around them). While both product leaders and customer intimate companies are keen to possess proprietary IP, the latter may be more willing to share those assets (on a confidential or licensed basis) with competitors if that will allow them to create, integrate and lead the most capable team.

The final value discipline is Operational Excellence, and is seen where a company chooses to excel not through exclusive products or uniquely tailored services but by providing standardised products at the best price and with the least inconvenience. An example of that might be a low-cost airline, which can provide you with a cheap and reliable flight provided that you accept their one-size-fits-all offering. There are perhaps fewer examples of this within Aerospace & Defence, but an example might be found in consumables (such as protective combat clothing or standardised ammunition).

How might IP assist here? Well, the key to success in this area is delivering a low price. Therefore, the licensing of IP to enable outsourcing and collaboration as a means of lowering the bottom-line may be relevant. Indeed, whereas product leaders and customer focused companies might strive to develop their own proprietary IP, operationally excellent companies are more likely to license-in third party tools in order to avoid the expense of development and retain flexibility. They will also look to cultivate an extremely well-managed supply chain and so current data concerning the marketplace (and movements in price) is key, as is an ability to identify trends and place large category-orientated orders quickly. Many of the IP assets referred to in relation to customer intimacy are therefore relevant, but in this case they are primarily deployed towards understanding the supply chain rather than the customer.

The IP underpinning the logistics infrastructure is also critical. For example, the software programs and information networks that enable just-in-time delivery, minimising the need for expensive storage. Treacy & Wiersema write "The goal of integrated logistics … is to move product from maker to user in a single step … No time or motion is wasted – and no money either - on moving products in and out of intermediate warehouses". When considering an example of operational excellence they add "Real-time, hassle free service in today's world comes only through the speed of integration of computers and databases" (which is even more true today than it was when they wrote that in 1994!)

An analysis of a company's approach to IP can quickly reveal how well it has aligned itself to a particular value discipline. Where a company uses IP strategically, positioning itself to appeal to its target customers and meet their needs, it will greatly improve its chances of success. IP can provide a key differentiator between a company and its competitors, improving bid success rates and supporting the award of contracts on a sole source basis.

National Law Review, Volume X, Number 132