

# **A Value Based IP Management Approach**

By Peter Bittner

In their recent book „The Invisible Edge“[1] Mark Blaxill and Ralph Eckard make strong arguments for placing an Intellectual Property strategy at the heart of a firm’s Corporate Strategy. Whoever owns the IP associated with innovations will own the profits. Innovative companies being careless about seeking protection for their innovations will likely end up in a situation where competitors are quickly catching up and taking benefit from the innovator’s investments. Being able to compete on a lower cost base they will take a big portion of the market away from the innovator and cash in the profits. This is a well known IP related threat for innovative firms.

The challenge for the innovator is to own the right IP allowing to control the innovation in the market and reap the profits as a basis for continuous innovation. This article proposes a practical approach how to integrate an IP Strategy with the Corporate Strategy. The approach not only aligns the IP strategy with the business needs but also implements a closed strategy loop where the IP strategy feeds back into the technology strategy of the business having impact on the organizational development of the firm’s innovation functions. In general, we refer to the term strategy as a plan of action designed to achieve the firm’s goals and objectives.

## ***The Strategic Framework***

Innovation is driving growth. Therefore, the strategic focus of most firms is usually on the classical innovation strategies, which are typically based on a sound technology strategy and products and markets strategies (see Fig. 1). The technology strategy is supposed to provide the technological roadmap of the firm providing the technological capabilities which are needed to design the innovation that is supposed to enable the future products in the firm’s respective markets. By executing on the products and market strategies the innovation is driving the firm’s growth.

However, in order to be able to generate sustainable profits from the innovation, the firm needs to own the innovation. To own the innovation requires owning the respective IP assets. If a third party owns major stakes of the IP that is at the core of the innovation, there is a significant risk that the innovator has to pay large amounts in licensing fees to the third party for not being barred from executing its product and market strategies.

As a consequence there is a strong need to have an IP Strategy that is tightly integrated with the other corporate strategies. The IP Strategy also needs to take into account the competitive landscape including the IP position of major competitors, the existing prior art in the innovation fields and possible standards being relevant to the firm’s innovations. It may be necessary that IP is procured from the competitive landscape which may either happen by licensing in or by buying the respective IP assets from third parties.

Preferably, the IP Strategy is driving an IP asset portfolio which turns innovation results into IP assets and covers white spots in the IP map being needed to own the innovations designed by the firm.

A comprehensive IP Strategy may also open up new revenue streams in the form of out-licensing or selling IP assets to other parties. Revenue opportunities may especially arise from IP assets having a high attractiveness in the market but not being crucial to the company's products or services.

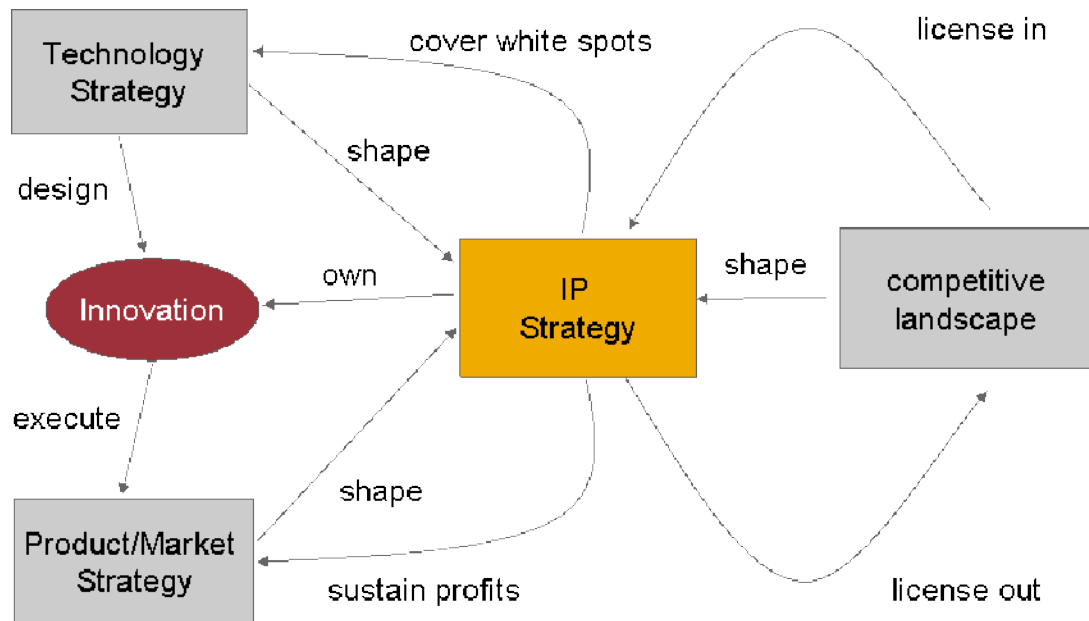


Fig. 1 The Strategic Framework

### ***The Right IP is Valuable IP***

Putting the IP Strategy at the heart of Corporate Strategy in this integrated strategy context needs to answer the fundamental question:

- How to generate the right Intellectual Property assets for the company to support a sustainable profitable business?

What is the right IP for the company? It is IP that has the potential to add significant value to the company. We define value as the sum of future net benefits expected by the company to be generated by the respective assets. We know that intangible assets typically follow a lognormal value distribution. That is, only 10% of the assets in an intangible asset portfolio account for 90% of the portfolio's value [2]. The goal of the firm's IP Strategy should be to beat this distribution in the firm's IP portfolio. In other words, the firm needs a value based IP Management approach that increases the

probability for selecting the IP assets with the highest value contribution in the IP portfolio building process.

As we know, the value of IP substantially depends on three factors [3]:

- the intrinsic value potential of the IP,
- the complementary assets needed to make value added use of the IP, and
- the exploitation processes available to realize the value.

Those factors determine the overall value of an asset and may have components which are related to the environment of the firm (external components) and components related to the firm's internal properties (internal components).

The intrinsic value potential of IP can be broken down into external components, such as:

- The innovation potential within a specific field of technology. The innovation potential is probably lower in a matured technology with a lot of existing prior art than in a technology being in the early phase of its life cycle. Further, the related value contribution potential can differ for various IP asset types. For example, fields being at the borderline of patentability (e.g., computer implemented inventions) may have a low IP contribution potential when it comes to patents, although being considered in general as a highly innovative field. However, there can be a high contribution potential with regards to other IP asset types, such as copyrights or trade marks.
- The attractiveness of the specific technology protectable by respective IP assets. Of course, the more attractive a technology is for future products/markets the more desirable it is to have IP assets in your IP portfolio that protect this specific technology.
- The potential market size for products being enabled by the specific technology.

But there are also important internal components of the intrinsic value potential which are often overlooked or at least underestimated. Examples of such internal components are:

- The skills that exist within the firm's organization with respect to the specific technology.
- The resources in the organization's innovation functions dedicated to the development of the technology.
- The funding of projects in the technological field.

The complementary assets factor includes external components like:

- The competitive intensity in the market. The more competition in a technical field the more likely it is that there are many parties having the complementary assets required to exploit the respective IP.
- The existence of a standard related to the technology. If a standard is adopted the complementary assets in the market will be almost unlimited.

However, there is a related internal component, namely the firm's own complementary assets required to turn the IP into successful products or services.

The exploitation process factor is a purely internal component as it relates to the firm's ability to extract value out of the IP assets. That is, it requires internal resources and processes to exploit the IP either in terms of turning the IP into successful

products/services by efficiently managing the primary value chain or in terms of selling or licensing the IP assets to third parties.

## ***IP Asset Portfolio Development***

We can now group some of the above value components into two major dimensions:

- Strategic relevance, and
- IP contribution potential.

Those dimensions turn out to be the relevant dimensions for IP asset selection in a value based IP management approach.

Strategic relevance aggregates the value components:

- Technology attractiveness
- Market potential
- Competitive intensity
- Existence of standards.

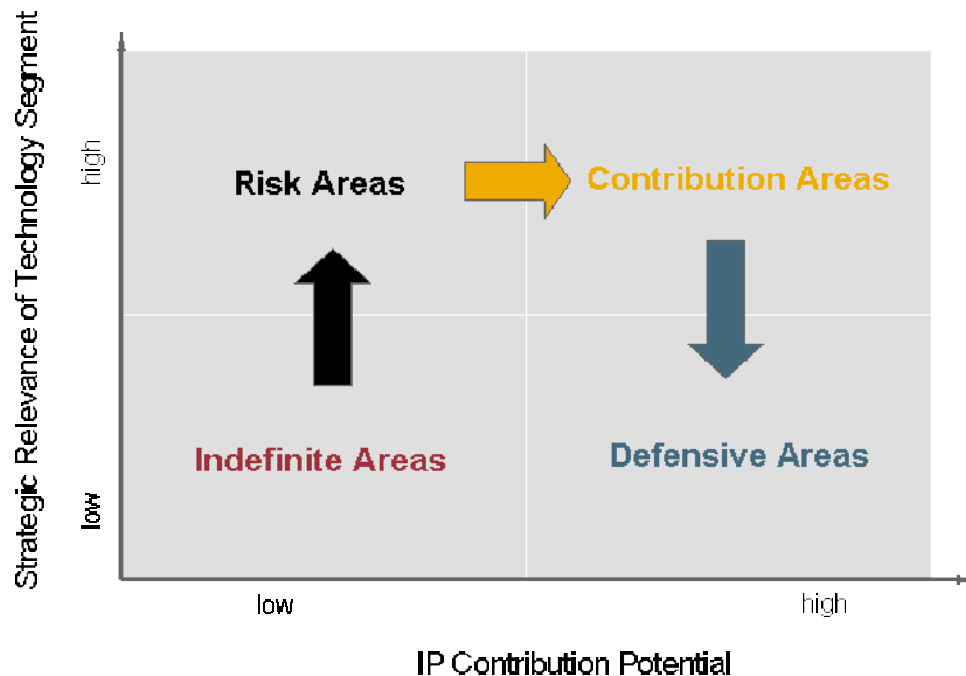
IP contribution potential aggregates the value components:

- Skills within the firm's organization
- Resources dedicated to technology development
- Funding of projects in the technological field
- Innovation potential within the technological field.

High IP contribution potential increases the probability that high quality IP assets can be created. We perceive high quality IP assets to be assets providing a substantial scope of protection and a high certainty for validity (persistence against legal challenges).

The exploitation process value factor seems not be relevant in the context of IP asset selection.

We can use those dimensions to design an IP portfolio chart as shown in Fig. 2 which will serve as a basis for value based IP asset development at the heart of the corporate strategy.



**Fig. 2 Value Based IP Asset Portfolio Chart**

In Fig. 2 technology fields, where the strategic relevance is rated high based on the aggregate value components but at the same time the firm’s IP contribution potential is low, can be seen as risk areas. That is, although the firm has recognized that a certain technology field may be very important for its future products and markets it cannot substantially contribute to building IP assets regarding this technology. It may be that the technology field is already quite matured in which case it becomes difficult to further contribute to the already existing prior art. It may be that the firm lacks the necessary skills or innovation resources making it less likely that high quality IP assets can be produced. It may also be that the innovation is simply excluded from certain IP assets types. In such case the contribution potential is limited by the respective IP laws.

Technology fields of high strategic relevance and with high IP contribution potential can be seen as contribution areas. The firm should aggressively focus its IP asset building efforts on such contribution areas. Contribution areas have the highest probability for generating high value IP assets as we can assume that high quality IP of high strategic relevance is created in the related technology fields.

Fields of lower strategic relevance and with high contribution potential are defensive areas. Although the generated IP is likely of high quality, the lower strategic relevance does not necessarily imply the building of IP assets. It may be sufficient for the firm to publish the results as defensive publications for preserving a freedom to operate.

Fields of low strategic relevance with low contribution potential are indefinite areas. If the respective technology is in the very early stage of its lifecycle they may emerge into risk areas later on. If the technology is at the end of its lifecycle it may be operated in a maintenance mode and, from an IP perspective, no further IP assets are to be expected.

For populating the IP asset portfolio chart the first step is to identify technology fields enabling the firm's products in the respective markets.

The second step includes ranking each technology field in terms of the strategic relevance value components.

The third step includes ranking each technology in terms of the IP contribution potential. Finally each technology field is placed in the portfolio chart according to its ranking.

## ***Implementing the Value Based IP Strategy***

The portfolio chart in Fig. 2 can be used as guidance for the firm's innovation functions for the generation of IP assets.

There is a clear expectation to build high value IP in the contribution areas. The company may use an incentive system to extraordinarily reward the creation of IP in those areas. IP coming out of risk areas is of course highly appreciated. However, the quality needs to be carefully scrutinized as the low IP contribution potential does not necessarily let expect the creation of high quality results.

IP being generated in the defensive areas is typically of high quality. However, the commercial value is presumably low. Therefore, such IP will less likely be converted into IP assets.

The indefinite areas may generate IP in technologies where the future potential is not yet known. Little pet projects of research groups may discover groundbreaking ideas with a potential disruptive character. Therefore, it is very important to carefully evaluate such IP although it is probably being associated with a high probability for failure. More importantly, you can't afford to give it away in case it really turns into a disruptive technology having a tremendous value potential and therefore deserving to take the risk. For owning this intellectual property as a basis for owning the related future profits it is mandatory to convert such IP into IP assets.

## ***Feeding Back into Corporate Strategy***

We showed how a value based IP asset portfolio chart can be used to develop and implement an IP asset building strategy which significantly increases the probability that a company is investing in IP assets that will support the business and ensure sustainable growth and profitability of the firm. However, this is not sufficient to claim that the IP Strategy is at the heart of Corporate Strategy. For a closed loop strategy it is necessary to actively manage the development of the portfolio which has some organizational impact on the innovation functions as well as a significant impact on the firm's innovation agenda.

An obvious strategic goal is of course to turn risk areas into contribution areas over time. There are two dominant scenarios how this may be achieved.

If the low contribution potential is due to a lack of skills and resources in the development of the respective technologies the company needs to invest in building up

teams acquiring the required skills for being able to significantly contribute to the further development of the technological field. This may also be achieved through the acquisition of startups in the respective fields or the licensing in of technology know how and respective IP assets.

If the low contribution potential is due to specific properties of the respective IP regime the firm may decide to take an effort in further developing the legal boundaries by actively challenging the status quo. For example, this may be achieved through appeals in the respective proceedings (e.g., filing appeals against rejections in patent proceedings if the rejection is based on a statutory subject matter rejection). This may finally shift the boundaries for the respective IP asset class in favor of the company and thus increase the future IP contribution potential in the respective asset class.

In contribution areas the firm has to manage the conversion of IP assets into products and services. This will guarantee sustainable profits from innovation owned by the firm. Of course, the company needs to be prepared to enforce its IP assets against possible infringers for defending its innovative leadership position.

If the company pursues a strategic IP value exploitation program, the IP assets may also be licensed or sold to third parties if they relate to technologies which are not essential for the firm's own business.

High quality IP can also serve as a bridge to collaboration with other players in the industry. Marshall Phelps and David Kline describe the Microsoft collaboration approach in detail in their recent book "Burning the Ships" [4]. All of the above exploitation mechanisms require effective exploitation processes for being able to appropriate the value of the respective IP.

In the defensive areas the company will gradually disinvest and free up resources which may add to the IP contribution potential in other technological fields. However, high quality IP which was created in earlier stages of the respective technology life cycle may still be very valuable if related to standardized approaches being widely used. Such IP assets may offer great opportunities for value exploitation (e.g., by licensing out to other players in the industry).

As already shown above, indefinite areas may have the potential to create the firm's crown jewels amongst the IP assets. Disruptive technologies may be discovered in such areas transforming them into risk areas which again finally need to be turned into contribution areas. As Clayton M. Christensen pointed out in "The Innovator's Dilemma" it may be necessary to perform such an evolution outside the firm's existing organizational structure, e.g., by spinning off small and agile groups. Thus, the most basic and valuable IP assets may be created in this very early phase of the technology life cycle.

## ***Conclusion***

The internal and external value components of IP drive the IP asset building process and ensure a tight integration of the IP Strategy with the Technology/Product/Market

Strategies of the company. The value based IP management approach will increase the probability to select high value IP assets for the firm's IP asset portfolio. The active management and development of the IP portfolio impacts the organizational development of the firm and helps to close gaps in the technology road map. Further, the IP assets will ensure that the firm owns all innovation being critical for the firm's business model and realizes long term sustainable profits.

## Reference

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