

## The Rembrandt in the Corporate Attic

### Extracting maximum value from intellectual assets



Intellectual asset management is fast becoming one of the most important systems for driving company value and competitiveness. However, very few corporations are aware of the potential of their intellectual assets and even fewer companies have strategies for extracting maximum value from their intellectual assets. Effective management of intellectual assets requires a portfolio approach that encompasses both defensive and offensive strategies. Defensive strategies need to be focussed on the pro-active monitoring of competitor behaviour and ensuring that intellectual assets have adequate protection in this regard. Offensive strategies should be based on the commercial exploitation of intellectual assets in core and non-core applications and must be done in a manner that ensures maximum return on investment and sustainable business competitiveness.



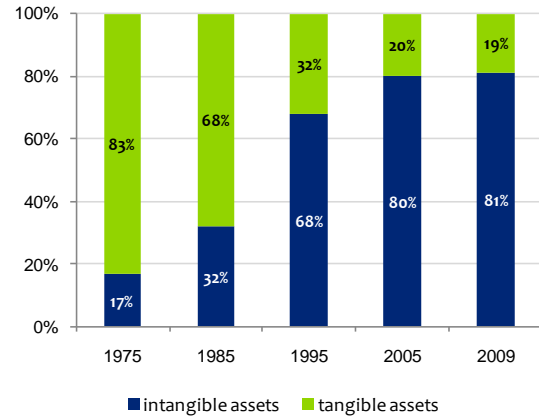
## Intellectual assets have become critical instruments for driving economic value and competitiveness

The management of intellectual assets is emerging as an increasingly important system for delivering sustainable macro-economic competitiveness. Intellectual assets form the basis for new products and services, the commercialisation of which can lead to significant value creation. Furthermore, the effective management of intellectual assets provides countries with a defensive strategy against an over-reliance on the importation of goods. In the case of ineffective management, assets are created but not exploited. Often in instances where such assets are lost offshore, foreign-based companies develop, manufacture and commercialise these assets and the country of origin then imports back such goods at high importation costs or licensing fees.

South Africa is a case in point of a country that lacks an established intellectual asset management system. South Africa's expenditure in research and development relative to its gross domestic product is 0.92%, which is competitive for a developing nation. However, despite South Africa having a healthy pipeline of intellectual assets, it continually fails to convert these into commercial offerings. The reason for this is its immature intellectual asset management system, evidenced by the low number of patent filings (which is generally the first sign of ineffective intellectual asset management) by South African companies and research organisations. For example, South Africa files about 35 times less patent applications than South Korea, a country of similar population size. In addition, patent filings in South Africa have not experienced any real growth in the last 20 years.

Globally over the last 35 years, there has been tremendous growth in the value that intellectual assets contribute to companies. Exhibit A shows that today, over 80% of the market value of US companies is attributable to intangible assets, a significant portion of which comprises intellectual

assets. Clearly, the value of intellectual assets is a major consideration in market valuations.



**Exhibit A:** Chart showing the growth in contribution of intangible assets to the market valuation of US companies<sup>1</sup>.

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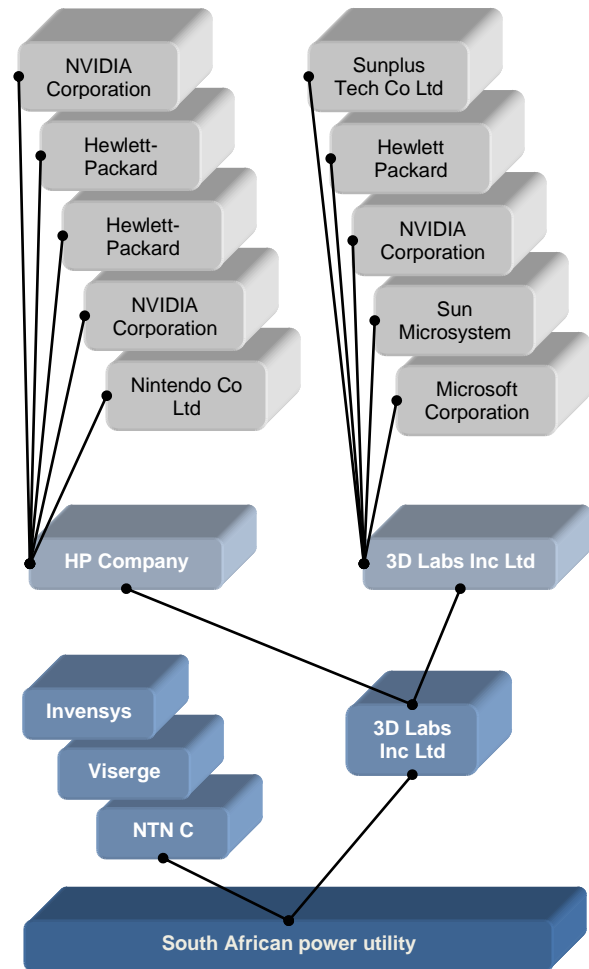
Intellectual assets are a major contributor of company valuations and economic competitiveness. Over 80% of the market value of US companies is attributable to intangible assets, a significant contribution of which is intellectual assets.



## Ineffective management of intellectual assets can lead to significant degradation of company value

As discussed earlier, effective intellectual asset management leads to higher return on investment in research and development as well as sustainable business competitiveness. Conversely, poor intellectual asset management can lead to revenue leakage, underutilised assets, intellectual asset rights infringement, tax losses, cost inefficiencies, contraventions of regulations and company value erosion.

The global economic impact of counterfeited goods produced through intellectual asset rights infringement is estimated at USD 600 billion annually<sup>2</sup>. Whilst it is also estimated that royalties are underpaid in approximately 90% of audited license agreements, only about half of companies actually have a plan to recover licensing revenue leakage. A striking example of licensing revenue leakage is an error-correction algorithm patent that was filed by a South African power utility. Exhibit B shows that the filing has been cited on numerous occasions as patent prior art in gaming applications by major corporations such as Microsoft, Nintendo, NVIDIA and others. However, the utility does not collect licensing revenues from these corporations.



*Exhibit B: Forward citation patent map of a South African patent filing.*



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## Ten strategic questions that executives ought to be asking about their intellectual assets portfolios

Corporate strategies for intellectual asset management must be driven down from the top of the organisation. That being said, just how would executives know if they have effective strategies in place? Deloitte has developed ten key questions that will guide executives in answering this question. The framework encompasses the crucial aspects of return on investment, competitiveness, compliance and corporate governance. The ten strategic questions that executives should be asking are:

1. Does my balance sheet adequately reflect the value of my intellectual asset portfolio?
2. Am I exploiting my intellectual asset portfolio effectively to drive revenue growth within core and non-core business applications?
3. Can I guarantee my shareholders that I am not leaking revenue attributable to my intellectual assets?
4. Am I using the most appropriate model to commercialise my intellectual assets?
5. Can I guarantee my shareholders that my intellectual assets are not being infringed by my competitors and that I have adequate protection in this regard?
6. Is my organisation geared to identify new intellectual assets timeously?
7. Am I aware of emerging intellectual asset developments that could compromise the competitiveness of my existing or future products and services?
8. Does my company have the corporate culture necessary to drive effective intellectual asset management processes across the organisation?
9. I am certain that the rights to all my intellectual assets actually belong to my company?
10. Can I guarantee my shareholders that, by using my intellectual assets, the company is not contravening legislation?

If an executive's answer is to any of these questions is "No" or "I am not sure", then the company probably has some holes in its intellectual asset management strategy.

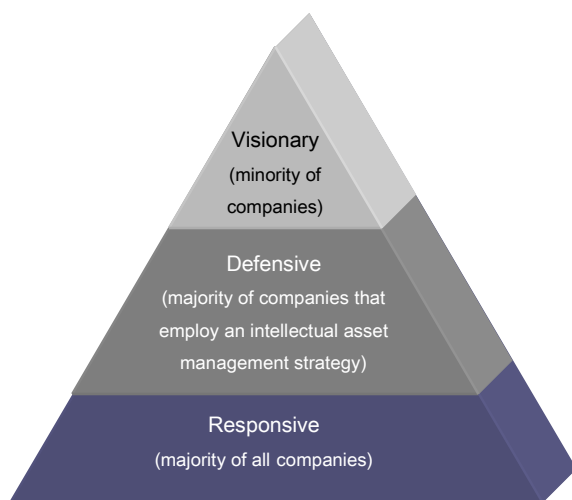
## Several corporations have extracted significant value through effective management of their intellectual assets

Several corporations have demonstrated how significant value can be extracted through the implementation of effective intellectual asset management strategies. Some noteworthy illustrations are discussed below:

1. Over a five year period, IBM quadrupled revenue derived from the exploitation of its intellectual assets to over USD 1.5 billion per year and tripled the volume of patent applications by actively managing its intellectual asset portfolio.
2. The Dow Chemical Company mined and then purged its intellectual asset portfolio through patent abandonment and intellectual asset donations, which led to cost savings of more than USD 50 million from avoided taxes and patent maintenance fees. The intellectual asset mining effort was followed by an active licensing effort, which increased the company's licensing revenue from USD 25 million to more than USD 125 million.
3. After implementing an active patent management programme, Texas Instruments receives USD 500 million of patent revenue annually, which generates more net income than its earnings from manufacturing.
4. Zenith mined and purged its intellectual asset portfolio to save USD 300 million in avoided taxes and patent maintenance fees.
5. Ford increased its patent revenue 2,000% in two years of implementing an active patent management programme.

## Companies can derive value from their intellectual asset portfolios through a variety of strategic and tactical approaches

There are three primary approaches to intellectual asset management that companies tend to follow. The first approach is completely responsive in nature. Companies in this category often act only in crisis situations after having realised a downside risk associated with intellectual assets, for example, a patent rights infringement. The reality though is that most companies follow this approach to intellectual asset management. The second approach is based on a defensive strategy. Companies that follow this approach tend to focus on protecting their existing intellectual asset portfolios from competitor threats. Intellectual asset management in such organisations is usually driven by the legal department.



**Exhibit C:** Schematic depiction of the three corporate approaches to intellectual asset management.

The third approach is a visionary one that takes a futuristic view on emerging technology applications and then guides its research and development and intellectual asset management strategies accordingly. Such companies typically take a balanced approach to defending existing intellectual asset portfolios and exploiting its assets in core

and non-core applications. Due to its strategic importance, the intellectual asset management agenda in such companies is championed at the CXO level, and preferably by the chief executive. This is the best way of ensuring that the company is maximising the return on investment on its intellectual asset portfolio as well as ensuring sustainable competitiveness.

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“It is no longer simply the legal department’s problem. CEO’s must now be able to formulate strategies that capitalise on and maximise the value of their company’s intellectual property assets to drive growth, innovation and cooperative relationships with other companies.”

*Bill Gates, Chairman Microsoft Corporation*

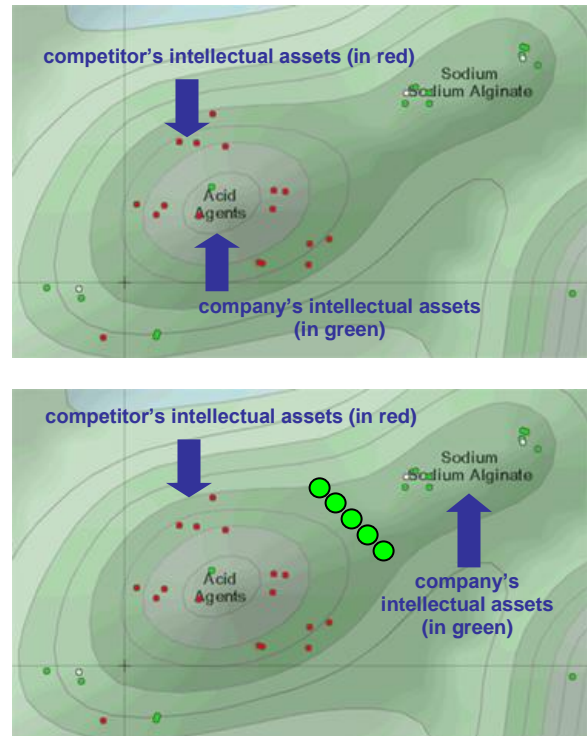
Value can be extracted from intellectual asset portfolios in a number of ways. Intellectual assets can be exploited commercially to drive revenue growth. This can be achieved either by a company exploiting its own intellectual assets or by acquiring the rights to competitor intellectual assets that may have synergistic benefits to the company’s business. On the other hand, the management of intellectual assets must be carried out in a manner that minimises costs whilst ensuring maximum returns. Intellectual assets with value that is unlikely to be realised need to be identified and culled early and this reduces the costs associated with the protection of such assets. Intellectual assets also need to be valued properly so that amortisation expenses can be booked on the income statement in order to optimise tax benefits. Finally, intellectual assets need to be managed in a manner that enhances business competitiveness. This can be done by pro-actively monitoring competitor activity and ensuring that the business has strategic and tactical interventions to provide adequate protection in this regard.



Intellectual assets have become the war-  
chests for companies to compete in today's  
and tomorrow's economies. The  
management of intellectual assets is a  
strategic agenda that needs to be owned at  
the executive level.

The ability of a company to continually monitor, track and  
respond to intellectual asset threats from its competitors  
has significant bearing on the competitiveness of the  
business. Careful assessment of the intellectual asset  
landscape empowers companies to make informed  
strategic decisions regarding its competitiveness. This is  
illustrated in the example that follows.

Exhibit D shows two identical patent thematic maps, each  
emphasising different points. The first patent map tells a  
tale of two ends. It shows a competitor filing around a  
company's patents in the acid agents field in a strategic act  
sometimes referred to as "entrepreneurial judo". In  
perceiving the glass as half empty, the company will  
question whether it has now come to infringe the  
competitor's intellectual asset rights or being forced into a  
cross-licensing situation in the acid agents space. On the  
other hand, in perceiving the glass as half full, the  
company will see an opportunity and consider the  
competitor's intellectual assets as potential acquisition  
targets. The second patent map in exhibit D shows that  
the competitor's patent filing activity is also encroaching  
on the company's intellectual assets in the sodium alginate  
compounds space. An analysis of the patent landscape in  
this instance shows that the company could make a  
strategic call to veer some of its R&D activity and start  
patenting a barrier between the competitor's filings and its  
existing patents in sodium alginate compounds.



**Exhibit D:** Patent thematic map showing patent filings  
in the acids agents and sodium alginate  
domains.

### Final thoughts

Intellectual assets have become the war-  
chests for companies to compete in today's and tomorrow's  
economies. The effective management of intellectual  
assets can lead to significant value creation for companies,  
derived not only through cost savings but also through  
new revenue creation and improved competitiveness.  
Whilst successful operationalisation means that  
intellectual asset management has to be infused with all  
functional areas of the business, it remains a strategic  
function that demands executive ownership.



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### New Venture Creation Expert

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**References:**

<sup>1</sup> Recreated from data published by Ocean Tomo®

<sup>2</sup> 2007 Technology Licensing Marketplace Study, PWC Advisory