IP strategy

IP strategy at the heart of business strategy I

in cooperation with I3PM

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Your speaker – Gordan Hyland

Background:
• MSc MA MBA LLM : microelectronics, maths, management & finance, IP-law.
• CFA CAIA FRM : financial & alternative investments analyst, risk management.
• lived/worked in Europe, Asia, America.
• 20 years in blue chips internationally : Philips & Sony.
• 3 years entrepreneur : IPX.
• since 2013 consulting : Shibumi.

International Institute of IP Management president. ¹

CAIA Ireland Chapter co-founder and executive. ²

Disclaimer
Opinions expressed in this presentation are those of the speaker and not necessarily those of the European Patent Office.
Overview of webinars on offer

1. **IP strategy**
   Five virtual classroom sessions

2. **IP evaluation and protection**
   Five virtual classroom sessions in June 2018

3. **IP value extraction and commercialisation**
   Four virtual classroom sessions in October 2018
Basics

- Clearly differentiate the goal, strategy and tactics.
- Understand the relationships and importance of avoiding protracted internal conflict.
What is strategy?

The art of strategy is crafting a long term plan, set against a context, to achieve a stated ultimate goal.

It is a collection of smaller plans focused on such, decomposed into tactics, the actual means used to secure said objective.

“The art of distributing and applying company means to fulfil the ends of policy”. ¹

“There is nothing which rots morale more quickly and more completely than…the feeling that those in authority do not know their own minds”. ²

1. Capt. Basil Liddell-Hart
2. Lionel Urwick
What is the goal?

It is easy to be distracted by the “fog-of-war” ¹, resulting in “tension of the gray”. ²

Peel back the onion layers of corporate production to reveal the ultimate objective – “The Goal”. ³ This sense of clarity, the laser-like focus is essential to corporate thinking.

Business strategy is economic rent seeking. All else is secondary.

The Goal is Money – it’s not important, it’s everything.

Secondary targets, e.g. IP, must support the primary.

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1. Carl von Clausewitz, “Vom Kriege”
2. Gen. Dwight Eisenhower
Context

Companies define themselves by following or leading markets (externality) with consequent IP implications (support).

Alternatively, starting from an internal bedrock (IP, know how) a company defines what it can do best (IP leading), and then how it can impact the market (create).

Constantly questioning IP / true company strengths and pivot accordingly is necessary.
Market based view

Porter’s model \(^1, 2\)

![Diagram showing Porter's Five Forces model]

1. Porter’s Five Force Framework
2. Denis Fadeev, CC BY-SA 3.0 2014
3. Andrew Grove
Resource based view

β Identify the firm’s key resources (assets, information, knowledge, organisation, capabilities). ¹

β VRIN:
• Valuable.
• Rare.
• Imperfectly imitable.
• Non-substitutable.

β Protect and develop them.

β Related to “Core Competencies”. ²

¹ Jay Barney, “Firm Resources and Sustained Competitive Advantage”
² C.K. Prehalad & G. Hamel, “The Core Competencies of the Corporation”
Positioning

Commodity vs. Speciality: cost leadership vs. product differentiation. ¹

Blue Ocean vs. Red Ocean. ²

Task is to identify a “clear, sustainable, competitive advantage” (IP is a key component).

Basics:
• Is there a market?
• Is it profitable?
• Can we do it?
• How can we do it?

¹ Dana Baldwin, (Centre for Simplified Strategic Planning)
² W. Chan Kim & Renee Mauborgne, “Blue Ocean Strategy”
Risks

- Product markets follow an S-curve with consequent influence on profitability and the role of IP.

- IP once created can be harvested within the same product domain, and outside.

- Stable markets are subject to the risk of disruptive technology / innovation where IP plays a central role – the innovator’s dilemma. ¹

¹ Clayton Christensen, “The Innovator’s Dilemma”
IP protection judgements

Hype Cycle

1. Gartner Research’s Hype Cycle
2. Jeremy Kemp, CC BY-SA 3.0 2010

β What protection, where from, when, how much?
Technology lifecycles

S-curves

Given technologies have their own lifecycles: ²
- Time: conception, birth, infancy / growth, maturity, retirement.
- Invention focus: make it work, work properly, performance, efficiency, reliability, cost.

Evolution and revolution: the innovator’s dilemma. ³

1. Gabriel Tarde, Diffusion Curves
2. Public domain
3. Clayton Christensen, “The Innovator’s Dilemma”
IP business intelligence

Business intelligence vs. IP business intelligence.

IP business intelligence:
- Technology landscaping:
  - Text mapping (heat maps).
  - Tomographic mapping.
  - Patents of note.
- Inventors and connections.
- Academia.

Datamining & Patinformatics

1. Anthony Owens: Shibumi Consulting Ltd.
## Competitor technology analysis

### Heat maps

1. Anthony Owens: Shibumi Consulting Ltd.
Tomography – technology evolution

Contour map ¹

1. Anthony Owens : Shibumi Consulting Ltd.
Technology disruption

Principles of TRIZ \(^1,^2\):
- 1500 man-years, 3 million successful solutions.
- Across scientific fields & industries (electrical, mechanical, chemistry, business…) repetition in:
  - Problems & solutions.
  - Patterns of technical evolution.
  - Innovations used scientific effects outside the field in which they were developed.

Analyze one’s specific situation, map it to a similar generic one, consider the world’s best ideas for such, then deduce a customized solution.

Today’s problem is tomorrow’s opportunity.

1. Darrell Mann, “Hands on Systematic Innovation – for Business & Management”
TRIZ revolution

Problem definition: 90% of a problem is definition: 1, 2
- S-curve analysis, IFR (ideal final result), FAA (function & attribute analysis), problem / opportunity explorer, perception mapping.

Solving: eliminating conflicts & making trade-offs: 1, 2
- Conflict matrix (31x31 – 39x39).
- Parameters to be improved vs. those that get worse.
- Intersections list inventive principles to resolve the paradox in descending order of frequency.
- 40 inventive principles: segmentation, preliminary action, the other way round, dynamics, periodic action, blessing in disguise, self-service, parameter changes...

1. Darrell Mann, “Hands on Systematic Innovation – for Business & Management”
Decisions

- Every piece of IP generated, or acquired, should be evaluated on both a standalone basis, and against the overall business context of the company.

- Understand the choke points of the industry, business, product and company.

- Take a holistic view, and a broad perspective to include neighbouring industries, businesses and products.

- Derive your IP strategy from this:
  - Defensive.
  - Offensive.

Value chains

_value chains ¹, ²_ : every “process” has inputs & outputs. Decompose each process into the most basic “value add unit”. Identify the functionality of each process, and its boundary conditions (interface).

2. Dinesh Pratap Singh, CC BY-SA 3.0
Profit pools

Profit pools: cross match each process with its size and margin.

Create a SWOT perspective (strengths, weaknesses, opportunities, threats) of each base process. ¹, ²

1. Albert Humphrey, “SWOT Analysis for Management Consulting”
2. Xhienne, CC BY-SA 2.5
Linking technology to accounting

- Technology does not stand on its own in a company but is intimately linked with the finances of the firm.

- Most start-ups fail leaving IP as the only surviving asset.

- Many corporate failures are due to cashflow problems, to which IP can positively contribute.

- It is thus important to understand the financial framework all companies operate in.

- This influences, and is influenced by, the corporate IP-framework.
Financial reporting and planning

The financial condition of a company can be fully described by four interlinked reports ¹:
- Income statement.
- Balance sheet.
- Cashflow statement.
- Equity statement.

The reports give the absolute, static picture, whereas a relative view is derived from ratio analysis of key data from these reports.

IP, an intangible asset, is one of a number of components therein which can be manipulated to improve the financial performance of the firm.

¹. IASB “Presentation of Financial Statements”
Income Statement (IS)

IS \(^1\) shows Profit & Loss (P&L) over reporting period.

P&L (bottomline) = earnings (topline) – various costs :
- Distinguish between operating vs. one-off charges.
- Gross profit = revenue – COGS (cost of goods sold).

EBITDA = gross profit – SG&A – R&D :
- Earnings Before Interest, Taxes, Depreciation and Amortisation.
- Selling, General & Administration expenses.
- Research & Development.

Operating profit = EBITDA – depreciation – amortisation.
Net income (NI) = operating profit – interest – tax.

Balance Sheet (BS)

BS\textsuperscript{1} gives the value of the entity at a specific time.

Net worth = assets – liabilities:
\begin{itemize}
  \item Liquidity distinction: current, and long term / fixed.
\end{itemize}

Assets = tangible + intangible:
\begin{itemize}
  \item Tangible = cash + AR (accounts receivable) + inventory + PPE (property plant and equipment).
  \item Intangible = goodwill + distribution channel…
\end{itemize}

Liabilities = current (AP + accrued expenses) + long term debt (bonds + deferred tax):
\begin{itemize}
  \item Contingent liabilities = warrants + upcoming litigation exposure (e.g. IP).
\end{itemize}

1. Jan Williams, Susan Haka, Mark Bettner & Joseph Carcello, “Financial and Managerial Accounting”
Cashflow & Equity Statements (CS, ES)

CS \(^1\) shows the ability to pay bills, indicating viability.

Cashflow activities:
- Operating.
- Investing.
- Financing.

Direct and indirect method of calculation.

ES \(^2\) explains changes in share capital, reserves and retained earnings.

Explains owners’ Equity = Assets – Liabilities.

retained earnings end = retained earnings beginning – dividends paid + net income.

MD&A \(^3\) (Management Discussion & Analysis).

2. US GAAP “Statement of Retained Earnings”
Metrics

β Internal to the firm ¹: WACC (weighted average cost of capital):
- Ratio of equity to debt funding determines internal cost of money to fund company projects.
- Generally: debt funding cheaper & tax shield, vs. equity funding’s no payback obligation / maturity.

β External to the firm ¹: MCap (market capitalisation):
- FCFE (free cashflow to equity).
- P/E (price to earnings).
- EPS (earnings per share) and diluted-EPS.
- ROA (return on assets).
- ROE (return on equity).

¹ CFA Institute: Curriculum (financial statement analysis, company valuation techniques)
Assets Under Management (AUM)

‖ AUM includes On-&-Off Balance Sheet:
   • On-BS assets.¹
     • Owns, and is legally responsible for.
   • Off-BS assets ² e.g. contingent liabilities, operating leases.
     • Probable, measurable & meaningful.

‖ Differences (e.g. Banks ³):
   • Traditional loans are On-BS.
   • Securitized loans are Off-BS.
     • Transfers the loan credit risk away from the bank because it sells the loans to a 3rd party (different from the 1st & 2nd parties, originator & borrower).

¹ https://www.investopedia.com/terms/t/tangibleasset.asp
² https://www.investopedia.com/terms/i/intangibleasset.asp
³ Note loans are assets to a bank!
Assets – tangibility

Tangible assets ¹ have physical substance, e.g. PPE (property plant and equipment):
- Depreciation applies.
- Sometimes appreciation.
- Acquisition is recognized on BS.

Intangible assets ² lack physical substance: difficult to value:
- Goodwill: how much more you paid than should have.
- Distribution channels.
- Human resources.
- CSR (corporate social responsibility) effects.
- IPR (intellectual property rights).

¹ https://www.investopedia.com/terms/t/tangibleasset.asp
² https://www.investopedia.com/terms/i/intangibleasset.asp
Intangible Assets’ growing importance

COMPONENTS of S&P 500 MARKET VALUE

<table>
<thead>
<tr>
<th>Year</th>
<th>Tangible Assets</th>
<th>Intangible Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>1985</td>
<td>32%</td>
<td>68%</td>
</tr>
<tr>
<td>1995</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td>2005</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>2015</td>
<td>84%</td>
<td>16%</td>
</tr>
</tbody>
</table>

SOURCE: INTANGIBLE ASSET MARKET VALUE STUDY, 2017

1. www.oceantomo.com
Financial engineering

IP is an asset: On-BS intangible (trademark / goodwill) & tangible (acquired patents), and Off-BS (self-generated patents).

Move Off-BS assets to On-BS. How?

Move from BS to IS for use as a tax shield. How?

Generate more income? How?

How about the IP-SPV (special purpose vehicle)?

Be aware of creative accounting, differentiating wealth creation vs. gaming the system.
Tying it all together

Considering all the various components discussed:
- Company strategy.
- Technology strategy.
- Innovation strategy.
- Accounting (& tax) strategy.
- Financial engineering.

And the complexity of their interactions:
- How will the company’s IP-organisation fit in?
Status and relationship of the IP-function within the company should be tailored to the company’s needs.

Depends on: business model (IP intensive?), maturity, age, size, growth rate, industry, history etc…

Status:
- CIPO (chief intellectual property officer)?
- Reporting line: CEO / Board? CIPO? Chief Counsel? General Affairs or technical organisation?
- Inhouse, outsourced or split?

Relationships:
- Interaction with business & technical organisations?
- Passive or Proactive?
IP organisation architecture

Centralised v distributed?

Centralised gives:
- Good alignment to global corporate strategy.
- Rationalise global, regional and national policy.
- Increased likelihood of more efficient IP financial management especially from a tax perspective.
- Easier to move IP from defensive only to revenue stream.

Distributed allows:
- Direct tuning of IP to the needs of specific product divisions in specific countries / regions.
- Local instruments, e.g. petty patents.
Next lecture

IP strategy at the heart of business strategy II:
- Counterfeiting & piracy.
- Securing ownership in innovation.
- Codified & uncodified IP.
- IP-asset types.
- Protection to IP-based business.
- IP-usage maturity levels.