

跨領域研發成果產業化國際高階人才培訓計畫

97 年跨領域科技管理研習班

國外專題報告

中小企業智財管理的系統化方法

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摘要

企業策略與技術策略是企業永續發展之基石，在整合企業策略與技術策略之規劃程序中，其主要挑戰在於調和匹配技術推力與市場拉力。

考量國內中小企業之營運環境，本報告運用一個從產業結構分析、市場結構分析、產品結構分析、技術結構分析、智財結構分析到成本結構分析的六層次模式(6-Echelon Model)，做為新創事業智慧財產管理之規劃與執行的參考架構，並運用在國外研習期間與產官學研各界廣泛接觸、討論與蒐集之新創事業智財管理資料，建構智財管理微笑曲線模式(Strategic Management of Intellectual property Leverage and Enforcement, SMILE)，並據以發展細部執行的檢核表，以提供中小企業一個快速可行之系統化方法。希藉以縮短我國中小企業進入智財管理的時間，協助帶動我國中小企業的創新與創業精神，促成新創事業的成功發展。

關鍵詞：新創事業、智財管理、企業策略、技術策略、六層次模式、檢核表

From foresight to insight: A systematic approach required to confront challenges and difficulties faced by SMEs in commercialization of technology

Abstract

The business and technology strategy provides the foundation for sustainable development of a business. The challenge of a strategic planning process to integrate technology and business strategy is to match technology push to market pull.

To integrate the technology strategy with business strategy for Taiwan SMEs, a Six-Echelon model, including industry, market, product, technology, intellectual property and cost structure analyses, is utilized for guiding the planning and implementation of IP management for entrepreneur. Fruitful material and experience gained from the oversea training program are utilized to develop the Strategic Management of Intellectual property Leverage and Enforcement Model (SMILE) and associated checklists as part of the systematic approach for Taiwan SMEs.

Keywords: start-up company, IP management, business strategy; technology strategy; six-echelon model, checklist.

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壹、前言

在台灣近數十年的經濟發展中，中小企業一直是台灣經濟發展的主幹。中小企業擁有創業家精神與活力，許多中小企業亦已逐漸茁壯成大型企業，例如宏基與鴻海就是典型的範例。

根據經濟部 2006 年的統計數字，台灣註冊的 1,272,508 家企業中，超過 97.77% 是中小企業(表 1-1)。而這些中小企業所擁有的員工人數佔總勞工人數之 76.66%，但出口金額僅佔總出口額的 17.89%(表 1-2)。在知識經濟時代，這表示我們的中小企業需要轉型，由勞動生產力轉向知識生產力，以提振企業競爭力。

知識生產力的核心則為智慧財產管理，因此本文研究動機為如何將智慧財產產品化、商業化和創業之步驟予以具體化，有效協助以發展科技產品為主之中小企業，快速導入智財管理。而發展一套適合中小企業且具體可行的系統化方法，即為本研習報告之期望目標。

Table A-1 Number of Enterprises by Industry, 2003-2006							
Industry/ Year		Total		SMEs	Unit: Number of enterprises; %		
					Share	Large enterprises	Share
Total	2003	1,172,633	100.00	1,147,200	97.83	25,433	2.17
	2004	1,204,343	100.00	1,176,986	97.73	27,357	2.27
	2005	1,253,694	100.00	1,226,095	97.80	27,599	2.20
	2006	1,272,508	100.00	1,244,099	97.77	28,409	2.23

Table A-4 Overview of Newly-established SMEs in 2006 - by Industry							
Industry/ Year		Total		SMEs	Unit: Number of enterprises; NT\$ million; %		
					Share	Large enterprises	Share
Total	Number of enterprises	108,673	100.00	108,320	99.68	353	0.32
	Sales value	357,223	100.00	236,973	66.34	120,250	33.66
	Domestic value	322,484	100.00	221,496	68.68	100,988	31.32
	Export value	34,739	100.00	15,477	44.55	19,262	55.45

表 1-1 我國中小企業佔總企業比例(資料來源：2007 年經濟部中小企業白皮書)

Table A-1 Number of Enterprises by Industry, 2003-2006

Unit: Number of enterprises; %

Size		Total	Share	SMEs	Share	Large enterprises	Share
Industry/ Year							
Total	2003	1,172,633	100.00	1,147,200	97.83	25,433	2.17
	2004	1,204,343	100.00	1,176,986	97.73	27,357	2.27
	2005	1,253,694	100.00	1,226,095	97.80	27,599	2.20
	2006	1,272,508	100.00	1,244,099	97.77	28,409	2.23

Table A-3 Export Sales Value by Industry, 2003-2006

Unit: NT\$ million, %

Size		Total		SMEs		Large enterprises	
Industry/ Year			Share		Share		Share
Total	2003	7,332,745	100.00	1,327,839	18.11	6,004,906	81.89
	2004	8,493,156	100.00	1,448,374	17.05	7,044,782	82.95
	2005	8,630,921	100.00	1,518,823	17.60	7,112,098	82.40
	2006	8,731,753	100.00	1,562,224	17.89	7,169,529	82.11

Table A-5 Total Employment by Industry, 2002-2006

Unit: Thousand persons; %

Industry/ Year		Size		Total	SMEs	Share	Large enterprises	Share	Government	
										Share
Total	2002	9,454	7,361	77.86	1,147	12.13	946	10.01		
	2003	9,573	7,425	77.56	1,159	12.11	988	10.32		
	2004	9,786	7,553	77.18	1,238	12.65	995	10.17		
	2005	9,942	7,648	76.93	1,333	13.41	961	9.67		
	2006	10,111	7,751	76.66	1,426	14.10	934	9.24		

表 1-2 我國中小企業雇用員工數與出口額(資料來源：2007 年經濟部中小企業白皮書)

我國產業發展已逐漸轉向以研發、設計及高附加價值產品為主之知識產業領域。為因應此一轉型，行政院「2015 年經濟發展願景三年衝刺計畫」所屬的「產業人力套案」中，已將「加值產學(研)合作連結創新」，列為重要子計畫之一，期能達成高教部門（大專校院）開創智慧財產收入倍增，2010 年大專校院開創智財收入達到佔政府直接投入研發經費之 1% 及孕育新創企業家數倍增由原來 10 年培育 707 家，倍增為 4 年培育 800 家新創企業之目標。其中，大專校院成立衍生公司是達成上述目標及強化產學合作策略不可或缺的一項重要環節。

過去產學合作研究大多著重在產學合作相關機制、策略應用以及技術移轉的探討，較少著重於智慧財產權的歸屬、創業投資及後續經營方面的著墨-學術研究機構

如何藉由成立大專校院衍生公司，將新技術或構思轉化成新創事業，是目前推動產學合作相當重要的課題。而關鍵成功因素則為新創事業之智財管理制度與方法，而提供中小企業一個快速可行之系統化方法更是其中相當重要的一環。

策略管理、新產品開發與智財管理

企業的成功，最終仍是取決於其策略以及其發展產品的能力。Betz (2003)指出企業策略(business strategy)與技術策略(technology strategy)是企業永續發展的基石，而在整合技術策略與企業策略的策略規劃過程中，其主要挑戰在於如何調和匹配(match)技術推力(technology push)與市場拉力(market pull)。

企業策略的實踐常是藉由許多新產品開發專案的執行來達成目的，我們知道新產品開發專案計畫必須從系統解構著眼，也就是從系統分項結構(Work Breakdown Structure, WBS)著手，在專案總體預算、人力、時程、技術與資訊等資源的限制下作一完整性的考量，結合組織內部的行政管理與專業功能單位以建立內部管理架構，同時將系統解構後的次系統、或關鍵性零組件之開發、獲得，以契約模式賦予內外部專責單位擔負契約責任。

管理理論眾多，在理論與實務二者之間，如果不是把理論訴諸實施的話，那麼我們遵循什麼依據，以審慎地處理實際層面的日常事物。陳明哲(1997)認為：“…策略的作用在承上啟下，在象牙塔式的學術尖峰與商場實務的應用知識的兩極之中，扮演橋樑與平衡的角色。不但將每一學科的精華介紹給實務界，也同時把實務上所發生、所面臨的問題引入不同的學術領域進行嚴謹的研究”。1998年管理學大師彼得•杜拉克亦在「富比士全球企業與金融」(Forbes Global Business & Finance)發表一篇「管理的新典範」(Management's New Paradigm)，強調管理政策和實務問題本身，它們必須隨時配合外界環境而調整。因此，如何在將策略規劃的理論與新產品開發的實務予以連結，一個系統化的方法，將可以在新產品開發專案中，加強落實從企業策略到新產品開發與智財管理的一致性。

關於企業決策體系，《解碼郭台銘語錄—超越自我的預言》定義為「體系=組織+系統」，「系統=流程+表單」。表單有二，包括流程中各流程點輸入（input）、處理過程（process）、輸出（output）之檢核表（checklist）與文件（document）。決策體系即是執行決策之組織與流程，其具體呈現則為檢核表與文件。

考量國內中小企業之營運環境，本報告運用一個從產業結構分析、市場結構分析、產品結構分析、技術結構分析、智財結構分析到成本結構分析的六層次模式 (6-Echelon Model)，以做為以科技為主之新創事業智財管理之規劃與執行的參考架構，並運用在國外研習期間與產官學研各界廣泛接觸、討論與蒐集之新創事業智財管理資料，希藉他山之石發展細部執行的檢核表，以提供以發展科技產品為主之中小企業一個快速可行之系統化方法，縮短我國中小企業進入智財管理的時間，協助帶動我國中小企業的創新與創業精神，促成新創事業的成功發展。

貳、文獻探討

為了評估科技管理(management of technology, MOT)在運用先進科技開發新產品中的相對重要性，Scott (1998)完成了一份德爾菲問卷調查(DELPHI questionnaire study)，由產業與學術界的科技管理專家們的意見調查整理結果，其結果指出技術產品的策略規劃(Strategic Planning for Technology Products)高居優先性排名首位。為了釐清這個排名首位的議題之本質與問題維度，Scott (2001)又繼續完成了一份延續性的德爾菲問卷調查。調查結果顯示，前述優先議題之兩個最重要的次議題為結合技術策略規劃與企業策略規劃(Linking Technology Strategic Planning to Corporate Strategic Planning)及結合研發策略規劃與事業單位產品開發規劃(Linking R&D Strategic Planning to Business Unit Product Development Planning)，Scott 將它們定名為連結問題(the linkage problem)。毫無疑問的，最終的目標就是企業績效。

Wheelwright and Sasser (1989)強調長程產品規劃的重要性，亦即描繪出產品線產品的演進狀態。它們指出主要產品型態係演化自核心產品。核心產品則顯示出一般技術系統，並且隨著附加功能的不同，而有高低不同的定價。對於短生命週期產品的競爭力，產品家族的規劃就益顯重要，因為它會影響收益。新產品系統開發專案的規劃與執行必須先取得企業策略與技術策略的一致性(Alignment)，方能取得最大之綜效。

產品大部份成本在設計階段就已經決定了，因此有效的管理設計鏈，才能設計更符合顧客需求的產品，降低成本，加快產品上市的時間(Heppelmann 2000)。在知識經濟時代，快速研發新產品並導入市場為產業未來競爭勝負之關鍵因素。供應鏈上自元件製造、採購、組裝、存貨、下至配銷到終端使用者，其間分工之層次及路徑漫長、複雜且遍及世界各地。整體供應鏈之管理實為維繫甚或提昇公司競爭力之重要關鍵，但供應鏈的源頭—新產品設計研發，決定了所需零組件之複雜性，及其伴隨而來的供應鏈管理問題。因此供應鏈管理雖已為業者決戰勝負之重要關鍵，且已進行各種改善效率的措施，但必須配合從源頭—設計開始考量，提昇產業價值鏈上游—設計鏈—之

設計開發績效，方能完整掌握競爭優勢。

Prahalad and Hamel 的”The Core Competence of the Corporation”轉移了策略焦點，注重如何建立超越傳統事業單位界線的核心競爭力，並促使企業將其投資組合圍繞核心事業發展，採用可強化核心競爭力的目標和流程。這個觀點後來發展為今天所謂的資源基礎企業觀點。它的中心論點認為企業是有形和無形資產的集合體，這些資產界定了它獨特的核心競爭力，同時企業策略應該注重如何透過多個市場的活動和協調來創造其價值。例如 Meyer(2000)即透過以平台策略為中心，發展了一個結合核心競爭力與產品市場的策略模式。Meyer(2000)建議企業以產品平台策略為出發點，考慮大量客製化的生產方式，將企業、顧客、供應商間視為同一個系統。而 Martin(1999)認為大量客製化的基礎則是在設計階段就必須考量多樣化設計，因此以產品平台為基礎的研發策略方能提供快速研發與加速上市時間之競爭需求，並建立未來衍生型產品、次世代型產品、躍進型產品其關連性與環環相扣的產品群，增進企業規劃與管理產品發展佈局。Liu et al.(2004)則根據 Meyer & Dala (2002)之概念，整理了結構化的連結核心競爭力、平台架構與市場需求的策略思維(圖 2-1)。

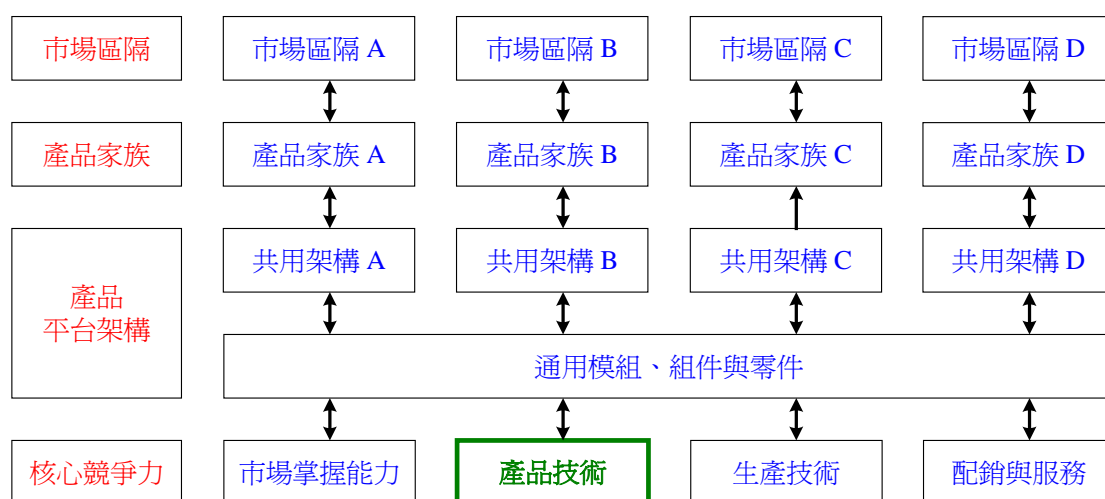


圖 2-1 連結核心競爭力、平台架構與市場需求的策略思維
(修改自 Meyer & Dalal (2002))

探討新產品開發程序的相關文獻甚多，王國安(2007)摘要彙整專家學者所提出之

觀點如表 2.-1 所示。

表 2-1 專家學者對新產品開發流程與階段之觀點彙整表

(資料來源：整理自王國安(2007))

專家學者	年份	對新產品開發流程與階段之觀點
Urban & Hauser	1993	五階段程序：機會確認、設計、測試、導入市場及產品生命週期管理，在每個發展階段間都設立檢核點。
Kotler	1994	創意的產生、創意篩選、概念測試、行銷策略發展、商業分析、產品發展、市場測試及商品化等 8 個階段。
Kumar et al.,	1996	階段依序為初步篩選、商業性評估、發展、製造/行銷推動及初步商品化。
Fox et al.,	1998	新產品開發專案之創新程度來決定發展的形式，而創新程度的度量標準則應用市場-技術性不確定矩陣模型來量測，根據測量結果再決定專案發展程序應適用何種發展策略。
周文賢 & 林嘉力	2001	公司組織應採行彈性開發程序，意指開發階段必須僅是原則性、架構性，至於順序步驟或執行項目是可因應企業條件與市場變化等加以省略、對調或選擇的。
Cooper et al.,	2002	傳統階段-關卡 (stage-gate) 新產品開發程序來進行新產品研發活動，共分六階段七關卡進行。S0 概念產生、G1 初步篩選、S1 初步調查、G2 二次篩選、S2 商業性評估、G3 推動專案決策、S3 發展、G4 後期發展檢核、S4 測試確認、G5 檢核商品化分析、S5 生產行銷推動。
劉常勇	2002	品開發從抽象意念產生而至具體產品，大致可分為創意產生、產品概念、產品雛形、最終產品及行銷計畫等 5 個階段。

綜合上述學者對於新產品開發流程與階段之觀點，可知多著重於新產品開發本身，而甚少觸及如何與企業策略、技術策略甚至新產品開發專案之產品結構如何產生一致性之連結。

從策略規劃到第一線工作的執行，需有一完整的系統，也就是一套管理模式加以貫穿與連結一致(Alignment)，方能有系統的進行「注意力」(Attention)與「執行力」(Execution) (李海光等，民 95)。

參、台灣智財系統化管理之發展現況

由於智財觀念在國內逐漸深化，台灣近年來在國內專利數或美國專利數方面皆有大幅成長，如表 3-1 所示。惟與歐美等先進國家相比，台灣智財管理觀念的起步較晚，研發人員過去欠缺專利佈局的觀念，因此，雖然在專利件數上迭有成長，但仍多為防禦型專利，無法據以攻擊競爭對手，並從中獲取報酬。由表 3-1 的技術貿易額數字即可看出，我國仍為技術輸入國家，且技術貿易逆差仍持續擴大。台灣在 2006 年企業部門投入研發之經費已高達約 2,072 億元，但是台灣廠商每年在智慧財產的申請、維護、授權、訴訟、和解、賠償等各項費用成本也高達新台幣 2000 億元，如何有效的管理智慧財產，使其發揮最大綜效，早已成為產官學界必須重視的議題。

表 3-1 我國科技成果指標(資料來源：2007 年科學技術統計要覽)

	2002	2003	2004	2005	2006
專利數					
我國在美國申請發明專利核准數	5,431	5,298	5,938	5,118	6,360
在美國專利件數排名	4	4	4	4	4
本國人獲國內發明專利核准數	5,683	6,399	7,521	9,124	11,431
外國人獲國內發明專利核准數	17,353	18,735	12,933	11,502	11,797
技術貿易額					
技術輸出(百萬元)	11,261	8,941	8,942	13,257	----
技術輸入(百萬元)	45,246	51,954	52,126	57,133	----
技術貿易收支比	0.25	0.17	0.17	0.23	----

有鑑於智財管理的重要性，經濟部智慧局在 92 年曾委託資策會研究提出「智慧財產管理系統標準」草案，希望能透過國家標準認證程序制定成國家標準，讓廠商據以作為智慧財產管理的驗證依據與指引。惟考量當時國內對於智慧財產管理的國家標準仍未有共識，因此決定先採取產業規範的方式進行推廣，並由經濟部工業局接續推動。

在進行「推廣導入智慧財產管理系統」的三年計畫之後，經濟部工業局於 96 年 4 月公告實施「台灣智慧財產管理規範 TIPS (Taiwan Intellectual Property Management System, 以下簡稱 TIPS) 相關規範」，並成立 TIPS 推行體系，展開全面推廣，希望藉由 TIPS 協助企業或組織建立一套簡便、有效率且低成本的智慧財產管理制度，使企業或組織能保護本身權益並提昇市場競爭力。

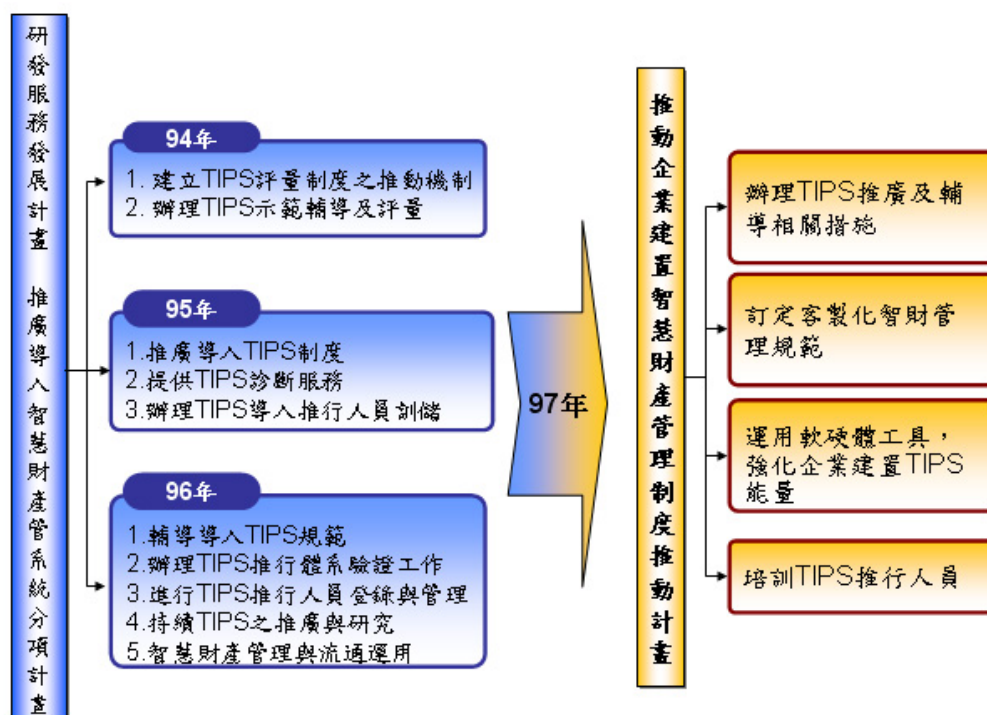


圖 3-1 台灣智慧財產管理規範 TIPS 之推動歷程及工作重點

(資料來源：TIPS台灣智慧財產管理制度，經濟部工業局專案委

辦<http://www.tips.org.tw/>)

在 97 年度的工作重點為：

(一) 辦理 TIPS 推廣及輔導相關措施

1. 聚焦目標以產業為群組方式進行推動建立智慧財產管理制度。
2. 提供諮詢、現場訪視服務。
3. 結合研發服務業者進行診斷輔導

4.建立外部驗證委員儲備機制

(二) 訂定客製化智財管理規範

1.訂定產業別之智財財產管理規範

2.推動標竿企業建置「企業智慧財產營運策略願景與藍圖」，並訂定建置參考指引。

(三) 運用軟硬體工具強化企業建置 TIPS 能量

建立導入 TIPS 經驗之交流和分享機制，協助已導入廠商成立聯誼會或其他功能類似之組織，提供導入廠商與相關人員意見討論或交流的機會，並將經驗分享。

(四) 培訓 TIPS 推行人員

針對有意獲取 TIPS 專業知識、取得 TIPS 人才登錄資格、從事診斷輔導或評鑑、或有意導入業者之內部人員等各界人士，提供導論、導入實務或自評等專業之講習課程，以儲備相關推行人員。

台灣智慧財產管理規範是一個由組織自主決定是否導入之智慧財產管理模式。本規範意圖使導入之組織以「PDCA 管理循環」，建立一套將智慧財產管理與營運目標連結的系統化管理制度(圖 3-2)。從 PDCA 循環來看，台灣智慧財產管理規範(TIPS)與 ISO-9000 品質管理規範(圖 3-3)有類似之架構，均從管理面由上而下透過診斷手法建立相關管理制度。但品質管理制度不僅包含品質管理規範，亦透過眾多與現場實務相關之品質手法，例如品質七大手法等，以由下而上落實品質管理。但台灣智慧財產管理規範(TIPS)配套之由下而上實務手法，以及與經營管理層面之整合，則尚缺少系統性之做法。

本專題即希由下而上，提供企業在智財管理的細部執行方法，期能在制度面與執行面相輔相成，加速我國企業推動智財管理制度，以提昇企業競爭力。

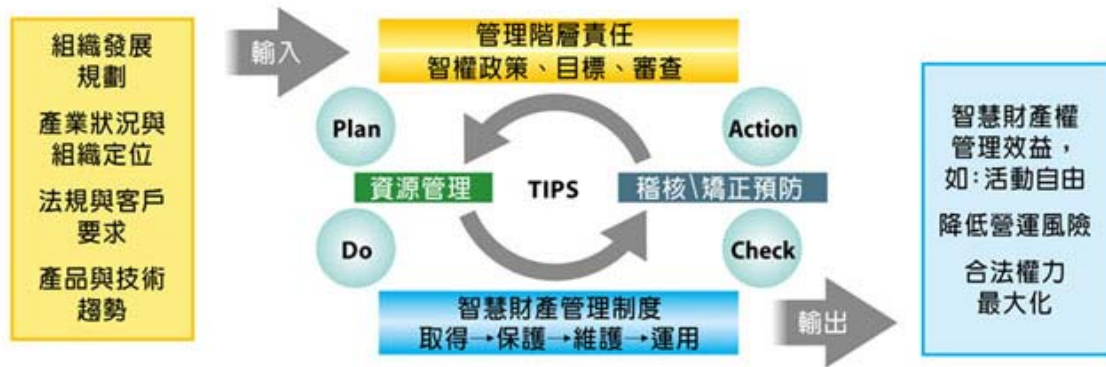


圖 3-2 台灣智慧財產管理規範之智慧財產管理模式

(資料來源：TIPS台灣智慧財產管理制度，經濟部工業局專案委

辦<http://www.tips.org.tw/>)

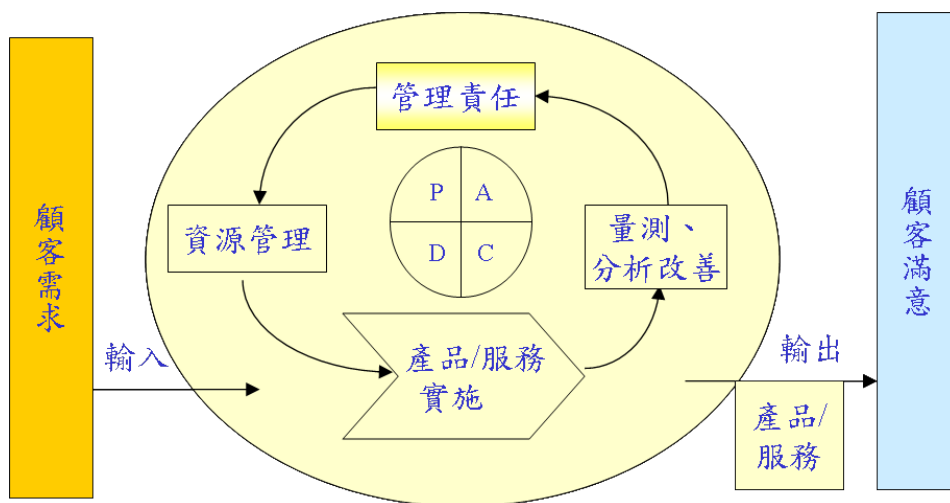


圖 3-3 ISO-9000 品質管理模式

肆、美國新創事業智財管理現況--以 Physware 公司為例

美國商業社會素以富含創新與創業精神著稱，因此不僅有從專利法到科技基本法等等之智財法律規範與相關智財法院體系，亦有相當眾多之新創公司此起彼落，帶動著相關商業發展。

此次國外研習，即希透過與產官學研各界廣泛接觸、討論與蒐集之新創事業智財管理資料，發展細部執行的智財管理步驟，以提供我國中小企業一個快速可行之系統化方法。

在主辦單位政大智財所細心規劃下，全體學員與國外產官學研之接觸與討論眾多，爰以本專題小組專訪 Physware 公司為代表例，說明美國新創事業智財管理現況，以做為我們發展系統化方法之參考。

1. Physware 公司背景說明

(1) 產品特色：

Physware 提出的解決方案，能將高頻電路設計，以快速，準確地萃取 S 參數和 RLC 模型子系統，進行設計更改，與預測 EMI 問題，並緊密與標準的設計流程結合。Physware 的核心技術，是利用快速的線性縮放邊界元方法，利用多核、群集、和混合運算架構，利用最好的快速求解技術與雙核心的機器，來加速在全波三維電磁分析的準確性。Physware 的集成解決方案提供在一個統一的界面，多個選項和功能，適用於多種產品。設計者可以獲得信號完整性，電源完整性，和 EMI 特點的完整分析，Physware 的豐富的功能列表，使用者可以選擇多種方式和設計，以獲取 s，y 和 z 矩陣和可視覺化時域波形和電流，提高設計者觀測強耦合路徑與其特點，以迅速建立完整 SPICE 模型，並觀察近場，遠場和 EMI - EMC 的行為。

(2) 營運優點：

- a. 公司創始人即為核心技術開發與擁有者，故對 IP 管理與規劃能以技術本位，提出宏觀性且具競爭力的作法
- b. 師法目前市場上已成功之 business model，再以該公司之改良技術來奠立競爭優勢
- c. 核心人物關係密切，彼此互信互賴基礎深厚
- d. 與其他國際 EDA 大廠進行策略聯盟，降低進入現有市場門檻

(3) 營運缺點：

- a. 該公司在全球各地佈點甚少，不利於對其他國家本土公司的技術支援。
- b. 目前對於提升 end user 對該產品接受度，仍未見具體與積極作法。
- c. 該公司發展的軟體定位較侷限於高頻電路模擬(high-frequency circuit simulation)，對於無線通訊產品開發的全面性貢獻較缺乏，與產品開發過程中使用的其他設計工具整合度亦較欠缺。

2. Physware 公司訪談摘要

時間：2008 年 8 月 1 日(五)上午 10:00

訪談對象：Bala Vishwanath, President & Chief Operation Officer

訪談人：劉江彬所長、李海光組長、毛紹綱教授、黃佩君專案管理工程師、朱曉萍副處長

訪談內容摘要：

問：在一開始的時候，請問 Physware 是如何確認市場需求及找到市場？

答：原先就已有部分的市場資訊，這些資訊也確實會常常改變，但投資者非常清楚市場的走向，他們可以幫忙找到消費者及其需求。

問：為什麼像 Intel 或是 IBM 這樣的國際大廠會願意擔任貴公司的顧問，有什麼特別的原因嗎？

答：對於 Intel 或 IBM 而言，它們對 Physware 並沒有任何義務，彼此之間也沒有競爭關係。在建議的過程中，雙方皆會注意到利益衝突的迴避，它們是從需求面來提供建議，期能營造雙贏的局面。

問：貴公司在面對技術競爭相當激烈的情況，是否針對 prior art 的迴避設計或是避免自己的技術被對手迴避設計有任何策略？

答：有關此點本公司相當有信心，除了一開始從華盛頓大學技術移轉之外，我們自己也發展出新的專利，以強化公司在市場上的競爭力。

問：Physware 對於智慧財產的管理是否有系統性的作法，以確實保護貴公司的智財？

答：由於部分涉及到公司機密，所以我無法詳細的解釋。基本上我們的策略是一方面將新開發的技術申請專利，但如果是非常核心的技術則不會申請專利而是以營業秘密的方式來保護，而這些核心技術都充份掌握公司領導人的腦中，我們並不特別擔心智財保護的問題。

問：Physware 除了在一開始從華盛頓大學技轉之外，是否有以計畫方式繼續進行產學合作？產學合作是否為有效的技術取得管道？

答：當初發展出技轉技術的教授也是本公司的創辦人，他現在為本公司的 CEO，依華大的規定，他每星期可有一天至本公司擔任全職顧問，整體而言，我們和華大的合作關係非常良好，也從該校得到相當好的技術支援。

問：對於新創公司而言，你們在進行技轉時的主要考量是什麼？

答：由於新創公司的資本比較有限，除了要移轉具競爭力的技術之外，在進行技轉時希望能儘量少付現金，可考慮以權益憑證(equity)或權利金(royalty)來支付，但為了公司未來發展也可能會考慮在未來買回(buy back)。

問：依據 Physware 的實務經驗，您認為經營新創公司的最佳策略是什麼？

答：我個人認為本公司能有今天的成就主要有兩個重要的因素：

- (1) 直接面對 end-user，確實瞭解客戶需求；同時善用合作夥伴管道 (partner channel)，例如 IBM、Intel、CADENCE，leverage 彼此的優勢。
- (2) 與合作對象之間常保持彈性的互動和良好的關係(Be flexible)

3. Physware 公司訪談心得

Physware 公司透過投資者以及顧問的協助，確認了市場需求與產品發展方向。在技術方面，則透過技術移轉取得西雅圖華盛頓大學的專利技術。經由繼續的技術開發，以申請新的專利，從而加強技術競爭地位。(註：西雅圖華盛頓大學技轉模式之補充說明如圖 4-1)

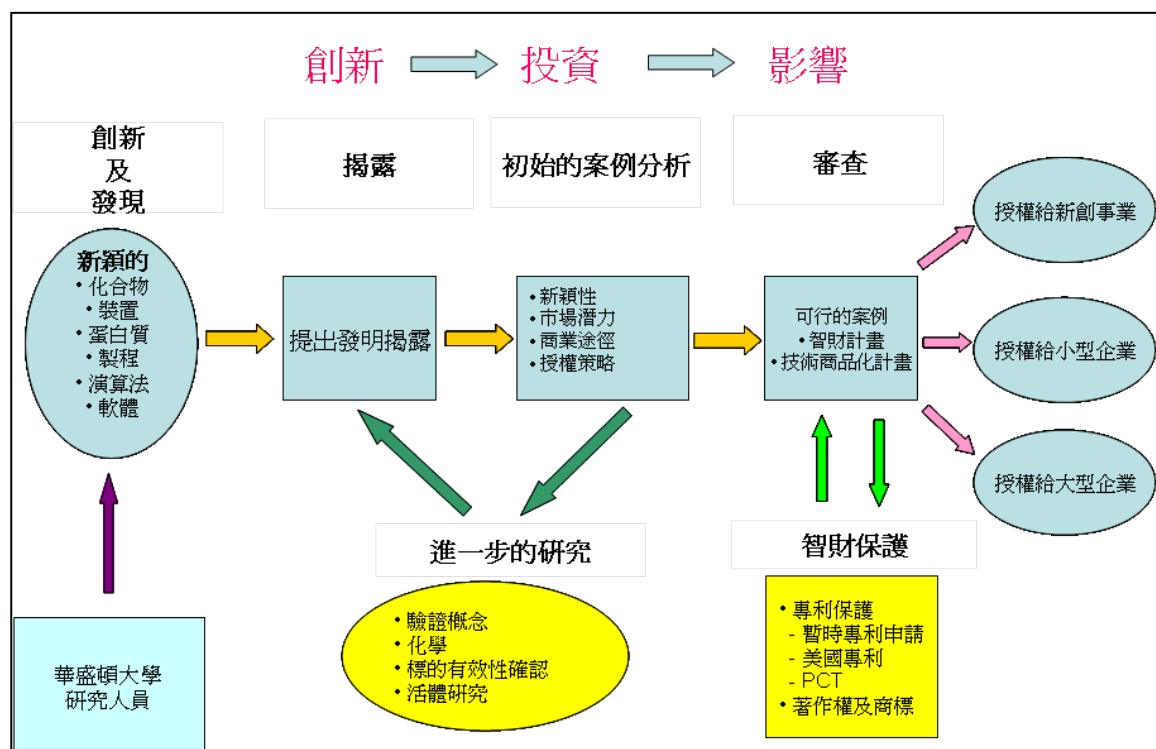


圖 4-1 華盛頓大學將技術創新轉化為社會影響之過程

(資料來源：整理自華大技轉中心)

在這些過程中，包含了市場分析、產品分析、技術分析、專利佈局、技術移轉、權利金的計算、...等等眾多管理實務，對一個新創公司而言，摸著石頭過河，可能是最貼切的形容詞。我們若能將這些過程與經驗，予以文件化、檢核表化，提供給我國的中小企業，應可減少摸索的時間，加速新創事業的發展，在速度經濟(Economy of Speed)的時代，提升企業競爭力。

基於這樣的觀點，下章我們將提出「智財管理的系統化方法之芻議」，期能拋磚引玉，共同為我國的中小企業發展貢獻一份心力。

伍、智財管理的系統化方法之芻議

在前章 Physware 公司的創業過程中，要處理的眾多管理實務，包含了市場分析、產品分析、技術分析、專利佈局、技術移轉、權利金的計算、...等等。但是這些管理實務之間有何關聯性？分析的思維邏輯為何？重要性為何？我們該如何化繁為簡，建立思維模式與執行模式？

周延鵬(2006)在「虎與狐的智慧力—智慧資源規劃 9 把金鑰」一書中提及：
“專利檢索分析的最後一哩(*Last mile*)往往被忽略，而這才是關鍵。所謂最後一哩就是將之前所做的分析與產業鏈、價值鏈、產品結構、技術結構對應，再去連結到一家公司的營業額和利潤的結構，可以看到核心技術在那裡，公司的核心業務與其專利究竟有無直接、間接關聯。”

但是我們該如何做？如何將專利這項智慧財產與企業營運分析整合？如何將專利開發與眾多企業管理實務結合？我們需要清晰的思維模式與可落實的執行模式。

思維模式

企業係在特定產業內競爭，因此企業智財管理必須從企業所處產業環境著手。從產業結構分析，了解自身在產業價值鏈中的定位與地位，企業得以掌握市場發展之契機，並輔助是否投入之決策；從市場結構分析，企業得以掌握不同市場區隔之顧客需求與產品需求，尋求範疇經濟(*Economy of Scope*)效果；藉由產品結構分析，配合市場區隔與產品家族之需求，企業得以進行研發規劃，找出各類產品家族之共通性平台架構，尋求規模經濟(*Economy of Scale*)效果，並以大量客製化模式創造利基；從關鍵性零組件或系統，透過能量流、物質流及資訊流(Pahl and Bitz, 1996)，分析其技術結構內涵，以掌握深一層次之技術需求(Otto and Wood, 2001)，並從而發展專利佈局；專利侵權會造成無法預期的嚴重問題，而且會對技術創新造成寒蟬效應。藉由專利地圖等分析方法，以掌握技術佈局之態勢；至於是否自行研發、共同研發、外購，甚至併

購擁有關鍵技術之公司，則可由成本結構分析來輔助決策。

為使新產品開發專案能落實企業策略與技術策略，Lee et al.(2007b)建構了從產業結構分析、市場結構分析、產品結構分析、技術結構分析、智財結構分析到成本結構分析的六層次模式(6-Echelon Model) (如圖 5-1)，以做為新產品開發專案細部規劃與執行的參考架構。

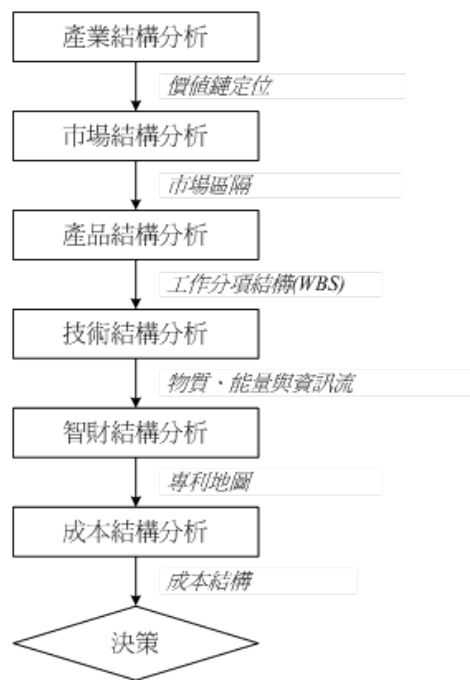


圖 5-1 六層次模式(6-Echelon Model)

運用六層次模式參考架構以及新產品開發時常運用之大量客製化與平台概念，整理如圖 5-2，以做為企業規劃智財管理時的一個與新產品開發整合之思維參考架構。

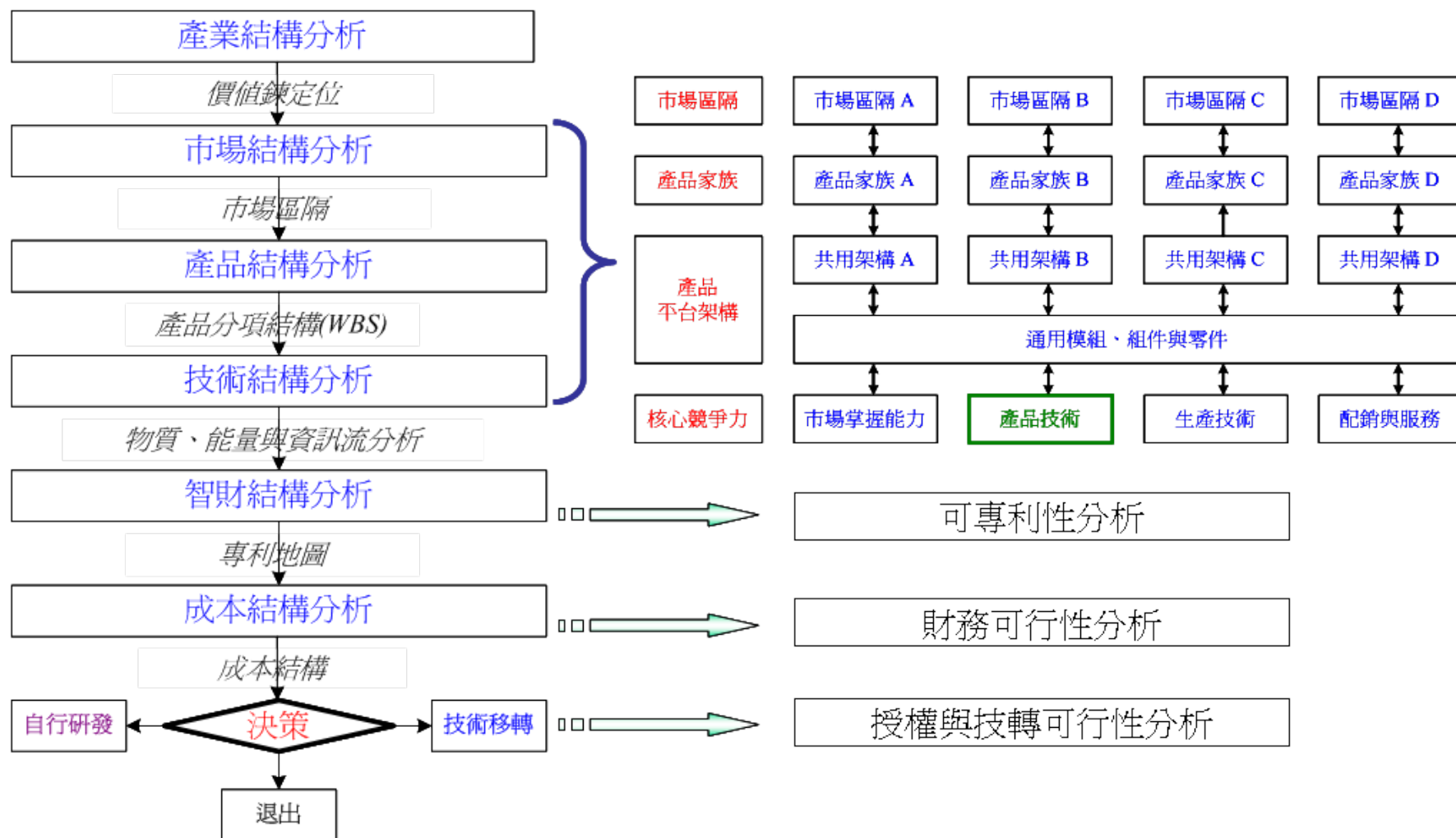


圖 5-2 智財管理的系統化架構(資料來源：本研究)

以下就圖 5-2 闡述其思維邏輯。產業垂直分工的特點在於提升技術專精度、提升產能利用率及縮短生產周期。產業發展路徑圖提供了整體產業發展環境的趨勢，運用價值鏈分析法或五力分析法，結合產業鏈的垂直與水平展開(如圖 5-3)，我們可以鑑別出企業在產業的定位。

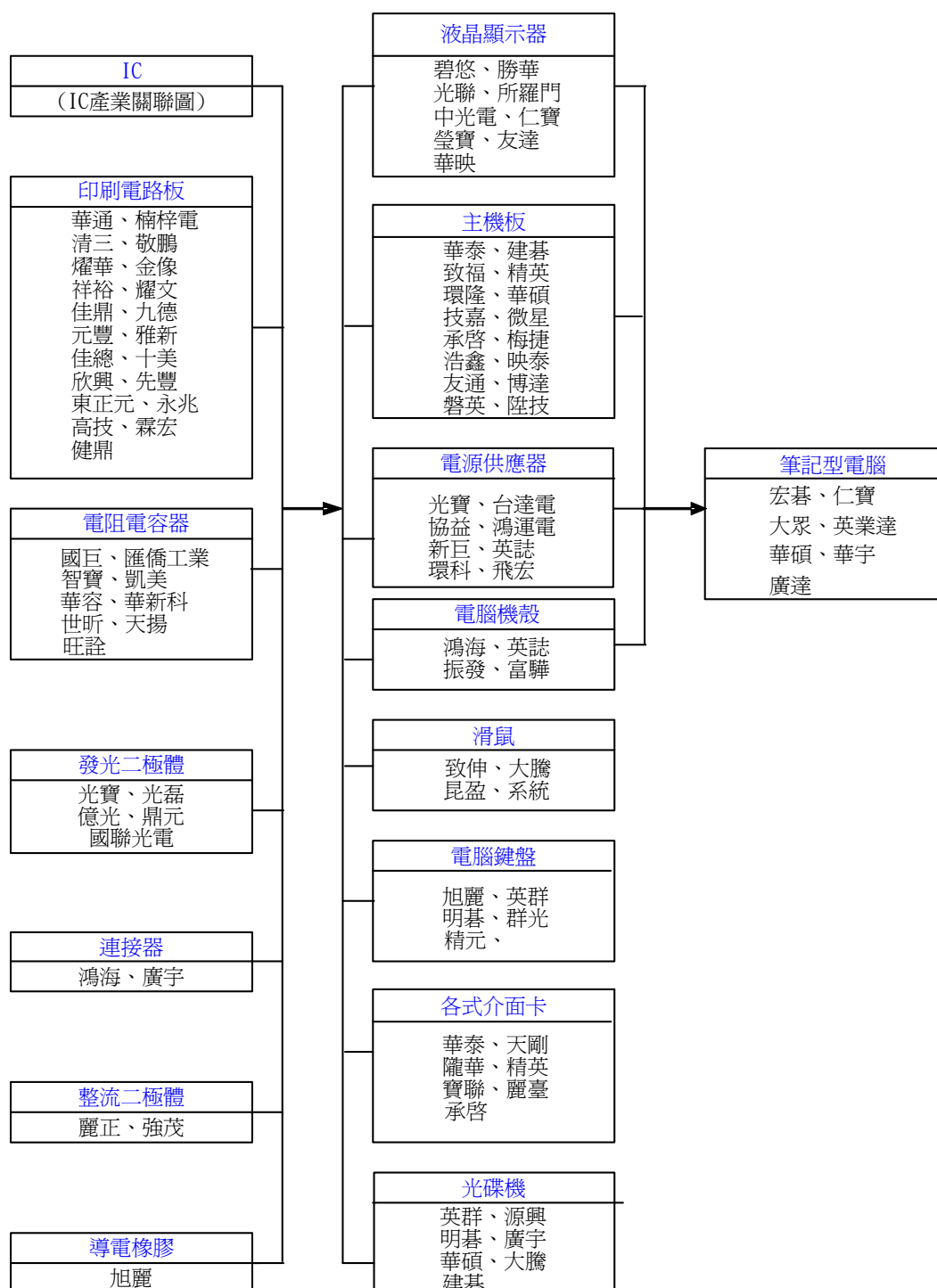


圖 5-3 NB 產業關聯圖(資料來源：整理自 Internet 搜尋之產業關聯圖)

了解企業之產業定位，透過產品技術發展路徑圖(例如圖 5-4)，企業則可掌握中短期產品市場之發展趨勢。運用組合分析與大量客製化分析等方法，以掌握市場區隔，選定利基市場以及核心產品平台。

圖十二 筆記型電腦產品之性能發展與散熱設計分析

資料來源：資策會 MIC 2001年12月

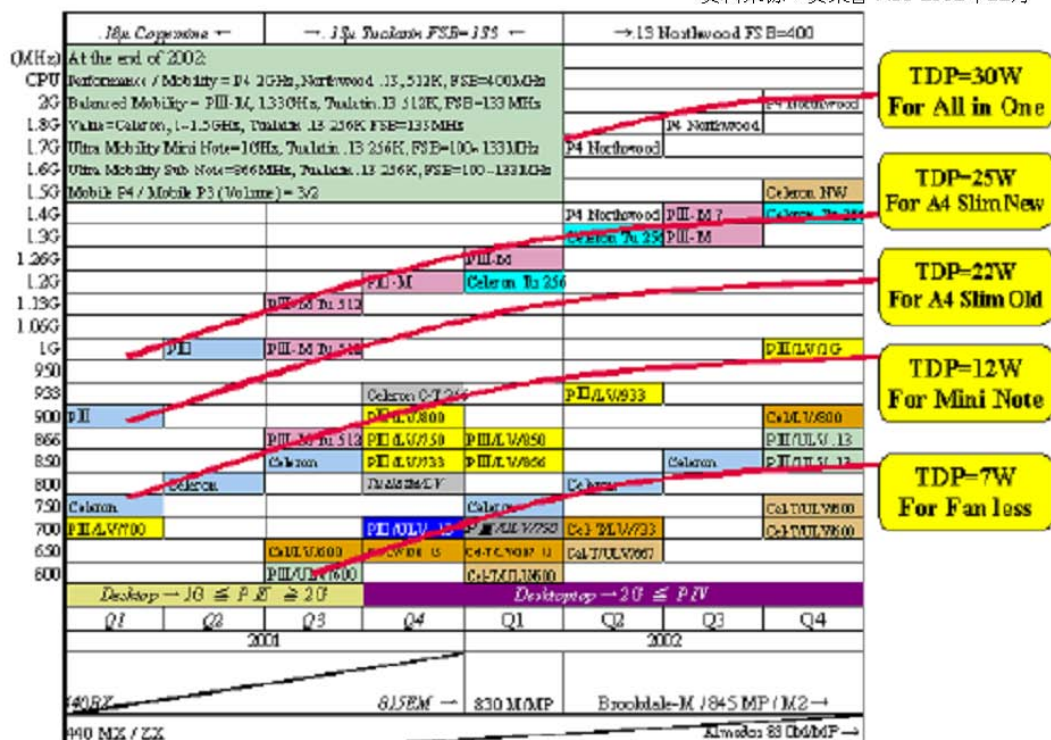


圖 5-4 NB 產品性能(CPU)與散熱性能(Thermal Design Power, TDP)之比較分析

產品架構需考量產品發展路徑圖，以了解產品家族與次世代產品之發展趨勢，運用系統工程結合品質機能展開法(Quality Function Deployment, QFD)或 TRIZ 方法等，以鑑別顧客需求。

而產品平臺(Product Platform)為重要的核心技術基礎，其為一組子系統與界面，構成一共同之結構，藉此可有效率地發展與生產出一系列的衍生產品。採平臺方式從事產品開發可大幅度降低製造成本，並在零組件與材料採購方面創造顯著經濟效益。產品平臺之組成方塊亦可整合新的方塊，迅速掌握新的市場機會。產品平臺必須加以

管理，定期或不定期加以更新，重新設計，加入新的功能、組件與材料。企業之長期成功不是僅靠單一產品，而須持續不斷推出具價值之產品，這些產品以成長之市場為目標，並為其核心技術發掘新的市場；這些產品並形成了所謂的產品家族。

產品平台的概念主要以共同的零件或模組為基礎，運用此共同的零件或模組有效率的開發與建立衍生產品，進而大幅降低開發與製造成本，擴大市場佔有率。因為有平台的指引，不同世代或延伸性產品也能完整的在企業內部建立其關聯性與環環相扣的產品群，增進企業規劃與管理產品發展佈局。

企業訂定多產品(Multi-product)策略的競爭中，新產品的發展若能有共同的产品家族協助，不但可以增加產品發展的速度，進而可降低成本，同時產品的可靠性也會增加，如 Sony 公司的 Walkman 產品系列的開發就是一個很好的例子。

平台必須經由企業本身的願景、核心能力、資源的調整與競爭策略的規劃等制定而成，且具有產品線策略指引的功能。因為有平台的規劃及指引，使得整個產品線與技術的發展，可以長期被監控，同時提供高層思考產品與技術發展佈局的重要數據。有了清楚的產品發展組合，企業較能針對執行中的策略進行調整。

技術有其時間價值，因此現有核心技術必須經過篩選，以符合企業未來競爭力之需求。而科技發展路徑圖(Science/Technology Roadmap)，提供研發專案規劃者一個良好的技術前瞻視野(foresight)，使專案規劃得以與需求密切結合。

在以系統分項結構(如圖 5-5)或稱工作分項結構(Work Breakdown Structure, WBS)展現之產品系統與零組件技術內涵方面，則可透過基本物理原理(first principle)，例如能量守恆原理、質量守恆原理及動量守恆原理等基本原理解，進行系統技術內涵分析。亦可藉由能量流(如圖 5-6 及 5-7)、物質流及資訊流分析方法(Pahl and Bitz, 1996)，以分析其關鍵技術所在，從而進行專利地圖分析，以掌握智財佈局。而此分項結構則構成產品開發時型態管理(Configuration Management, CM)之基線(Baseline)，並依產品開發之時序而成為各類物料表(Bill of Material, BOM)之基礎，如設計階段之 E-BOM 及生產階段之 M-BOM。

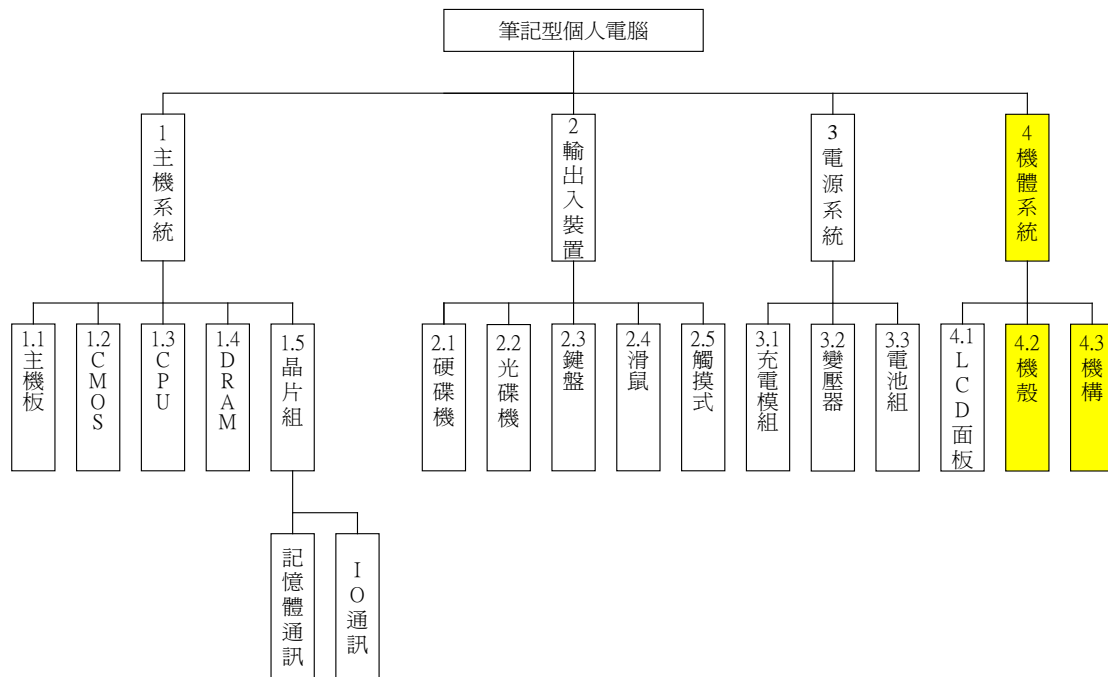


圖 5-5 NB 產品結構分析(Work Breakdown Structure, WBS)

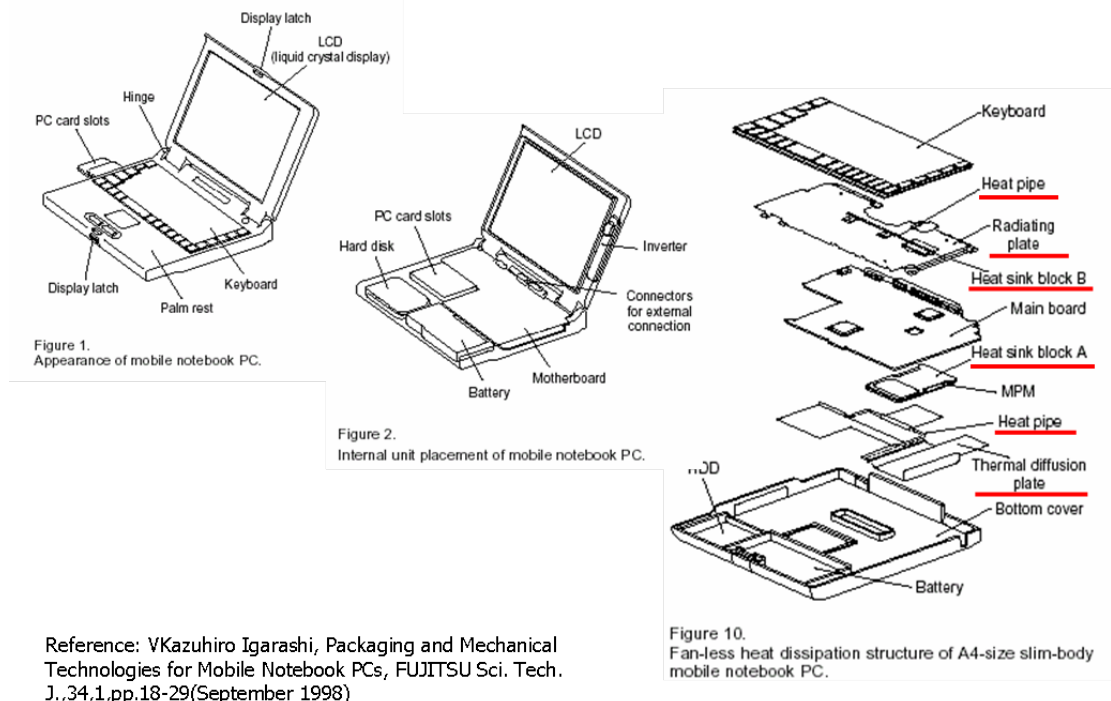


圖 5-6 NB 產品採被動式(無風扇)散熱設計之散熱機構

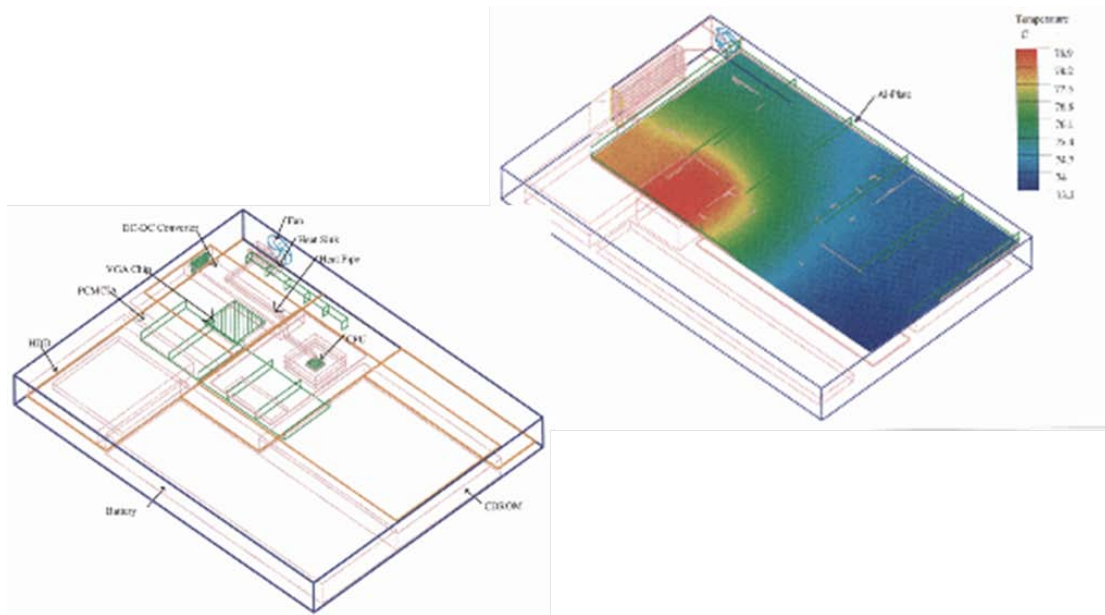


圖 5-7 NB 產品散熱分析(示意圖)(資料來源：Internet)

技術之價值除商業機密(Business secret)外，最重要的表現智慧財產之方式就是專利權，表 5-1 為筆記型電腦專利參考分類。透過專利佈局的分析與規劃，從而鎖定產業技術發展的方向，集中資源以小搏大。專利佈局必須先行盤點既有技術授權(licensing)，另透過專利地圖分析，以掌握產業專利佈局現況。

表 5-1 筆記型電腦專利參考分類

1	軟體類(SW)
2	電機電子類(EI)
3	機構類(ME)
3.1	LCD 模組結構(ME01)
3.2	<u>散熱結構(ME02)</u>
3.3	周邊元件(ME03)
3.4	殼體組裝(ME04)
3.5	轉軸(hinge)(ME05)
3.6	電磁波防護(阻絕 EMI)(ME06)
3.7	鍵盤 (ME07)
3.8	分離式擴充槽(Docking)(ME08)
3.9	其他(ME09)
4	工業設計(Design 及包裝)(ID)

所謂的專利地圖(Patent Map)即是專利資訊(Patent Information)消化、整理與加值化後的一種圖表化呈現格式。專利地圖製作與運用端視使用者而有所不同，但是基本上，至少包含兩大部分，其一為提供一般使用者宏觀趨勢的瞭解，使其能夠瞭解該項技術或是特定公司發展的概況；另一為揭露相關專利技術之內涵與專利所保護範圍，並提供研發者瞭解該專利技術的密度，甚至能提供迴避設計(design around)的資訊。

掌握產品系統或關鍵零組件之關鍵技術的關鍵智財，就新產品開發而言，其主要目的在評估自製或外包，當然成本是很重要的考量。一般性產品成本結構分析，可就售價、利潤與成本之關係分析之，請參閱圖 5-8。但科技性產品牽涉技術眾多，智財價格不菲，自製與外包必須考量企業資源能量。

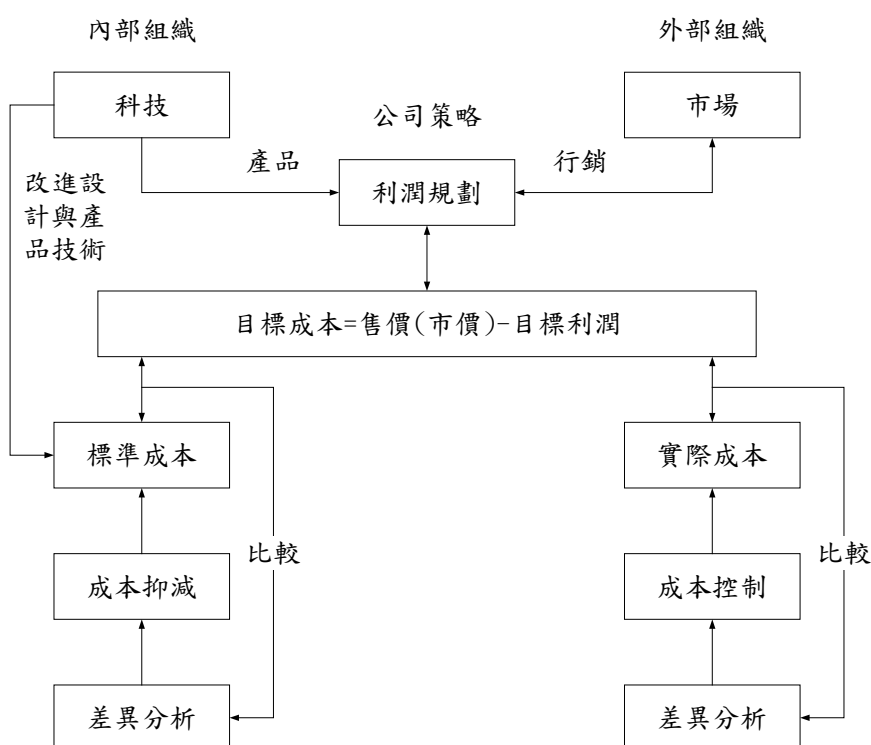


圖 5-8 成本分析之架構圖(資料來源：王鴻儒，私人通訊)

當企業面對技術發展問題，其成功條件為(丁錫鏞，1993)：

- ◆ 擁有已屬成熟的關鍵技術。
- ◆ 具有良好的市場機會。
- ◆ 適於行銷新產品的銷售通路。
- ◆ 具備健全的財務結構及財務周轉能力。

但企業的資源是有限的，因此為有效增進競爭力，必須要有效的進行技術預測及適時的進行技術移轉，包括引進技術及提供技術。在技術移轉上，引進技術之目的在：

- ◆ 提高產品及技術之開發力
- ◆ 彌補本身之技術能力不足
- ◆ 與其它組織競爭
- ◆ 縮短研發期間
- ◆ 爭取商品化之時效
- ◆ 提高生產效率
- ◆ 節省開發投資
- ◆ 減少開發風險

而提供技術之目的則在：

- ◆ 提供技術以發展新市場
- ◆ 經營多角化
- ◆ 開發投資早期回收
- ◆ 以技術提供獲取收入
- ◆ 未利用技術之有效利用
- ◆ 提高研究人員之開發意願

技術移轉的前置作業包含技術鑑價，也就是智慧財產權的價值為何？圖 5-9 ~ 5-13 為幾種可參考之技術定價模式。企業可依據技術移轉的方式，來選擇技術定價模式與詳細計算成本與定價。

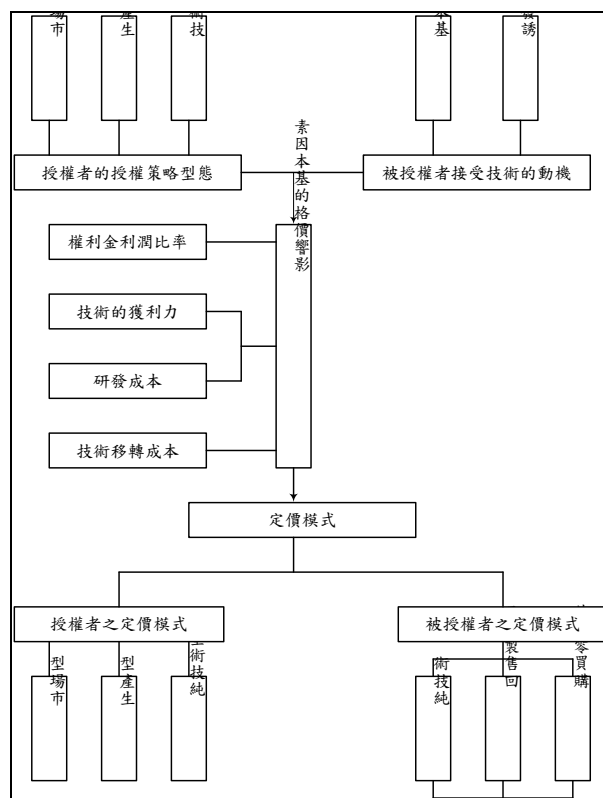


圖 5-9 技術價格之架構圖(資料來源：劉尚志，科技管理研討會，1992)

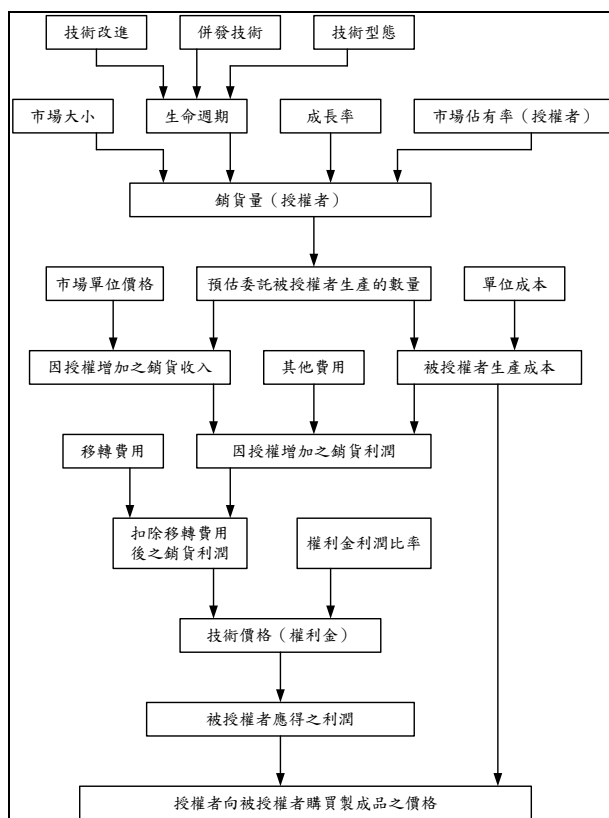


圖 5-10 生產策略授權的定價模式(資料來源：劉尚志，科技管理研討會，1992)

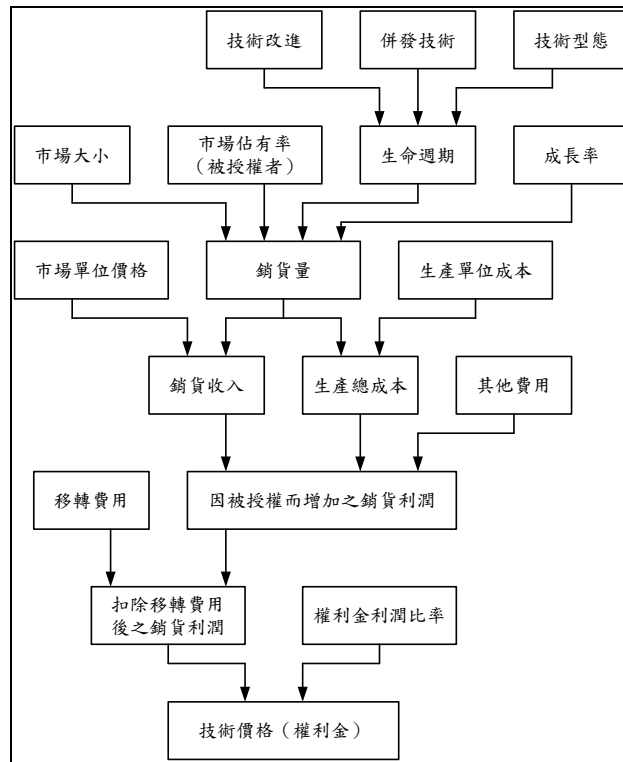


圖 5-11 市場型策略的定價模式(資料來源：劉尚志，科技管理研討會，1992)

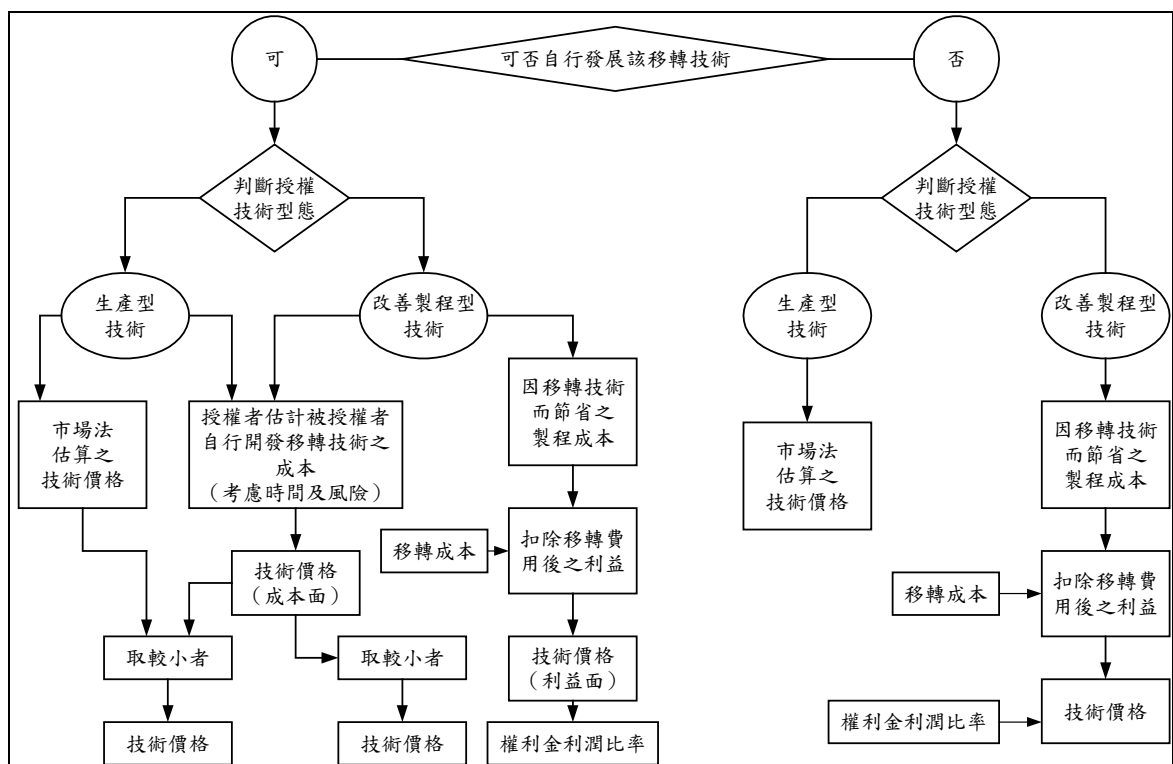


圖 5-12 純技術型授權之定價模式(資料來源：劉尚志，科技管理研討會，1992)

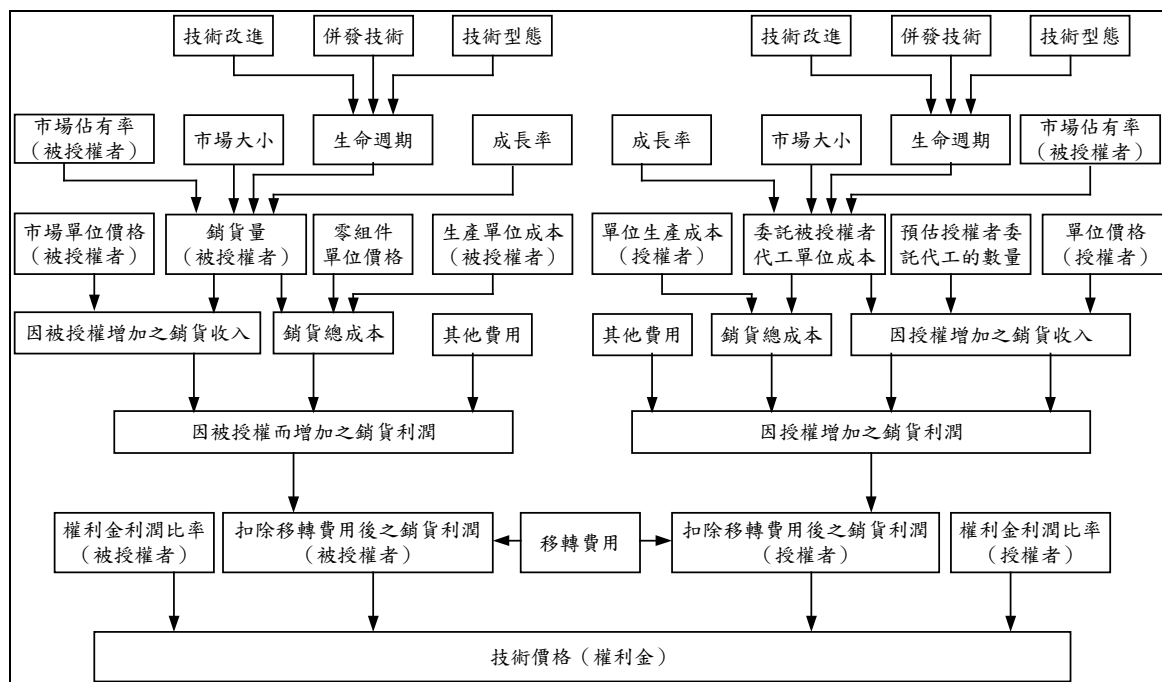


圖 5-13 被授權者的定價模式(資料來源：劉尚志，科技管理研討會，1992)

表 5-2 ~ 5-5 為技術授權之權利金參考範圍，實際費率則須依產業與個案而定。

表 5-2 銷售中的授權權利金（僅作為說明參考用）(資料來源：華大技轉中心)

重要性	專屬授權 可實行	專屬授權 不可實行	非專屬授權 可實行	非專屬授權 不可實行
非常高	6.00%	4.50%	3.00%	2.25%
高	3.00%	2.25%	1.50%	1.13%
中等	1.50%	1.13%	0.75%	0.56%
低	0.75%	0.56%	0.38%	0.28%

表 5-3 產業權利金比率(僅作為說明參考用)(資料來源：華大技轉中心)

產品	權利金
材料製程	1-4%
醫藥設備	3-5%
軟體	5-15%

產品	權利金
半導體	1-2%
製藥	8-10% - 化合物 12-20% - 臨床試驗
診斷	4-5% - 新的個體 2-4% - 新的方法
生物科技	0.25%-1.5% - 處理過程 1-2% - 處理過程, 專屬的

表 5-4 醫藥產業權利金(僅作為說明參考用)(資料來源：華大技轉中心)

單位：美金 元

技術或產業	權利金	初期支付金	最低支付金
試劑/試劑組	2-15%	\$ 2-15K	\$ 2-10K
非活體診斷	2-6%	\$ 5-20K	\$ 2-60K
活體診斷	3-8%	\$ 5-20K	\$ 2-60K
治療	4-12%	\$ 20-150K	\$ 20-150K
醫藥儀器	4-10%	\$ 5-150K	\$ 5-20K

表 5-5 生物科技權利金(僅作為說明參考用)(資料來源：華大技轉中心)

建議的權利金標準	專屬授權 (%)	非專屬授權 (%)
開發中的 rDNA 藥物	7-10	3-4
獲准的 rDNA 藥物	12-15	5-8
治療用單株抗體(MAb)	5-7	3-4
診斷用單株抗體(MAb)	3-4	1-2
藥物傳輸物質	2-3	0.5-2

當完成成本結構分析後，即可就技術考量與商業考量進行決策評估。如何決定各

WBS 項目的時程與預算需求？圖 5-14 為產品開發決策分析的一種參考方法。新產品開發專案中，常面臨要決定那些項目是要自行研發或外購，我們必須先鑑別新產品之重要零組件，找出其關鍵績效指標(Key Performance Index, KPI)，並根據 KPI 進行技術預測，可參考技術發展路徑圖，以決定技術發展進程。另外可運用產品技術發展路徑圖，來分析市場上不同應用技術間之競爭強度與時程。從發展路徑圖，我們可以研判出合理的發展目標與上市時間(圖 3.3.6-7)。預測的產品發展目標與上市時間，就構成了專案規劃的一個重要依據，專案則可據此調整各零組件的研發或採購決策及其開發時程。

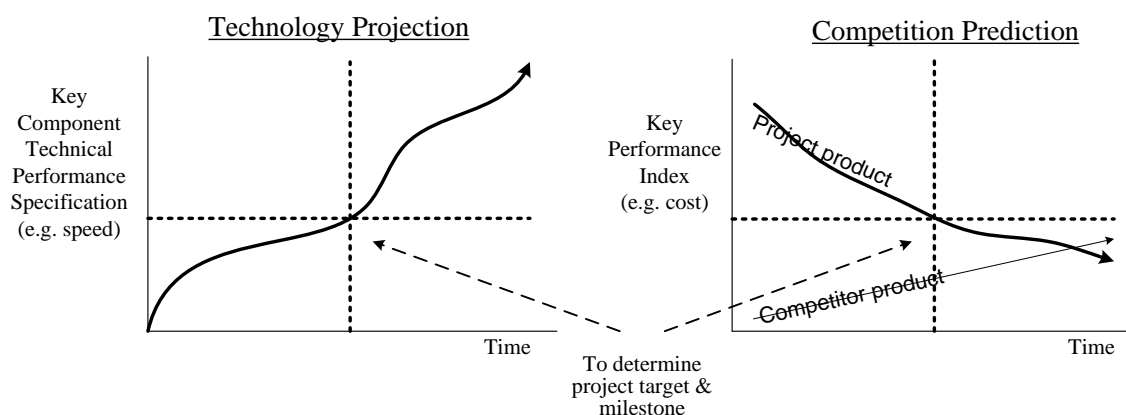


圖 5-14 產品開發決策分析的一種參考方法

執行模式

有了思維邏輯之分析架構，尚須佐以檢核表，以落實企業日常作業所需，因此運用在國外研習期間與產官學研各界廣泛接觸、討論與蒐集之新創事業智財管理資料，建構智財管理微笑曲線模式(Strategic Management of Intellectual property Leverage and Enforcement, SMILE)(如圖 5-15)，並據以發展細部執行的檢核表，以提供中小企業一個快速可行之系統化方法。

從國外研習期間所獲得之心得，可發現智財規劃須與企業營運模式規劃整合，方能獲致綜效(Synergy)，因此智財管理微笑曲線模式之上游為智財規劃與分析。而智財相關合約之落實處理甚至訴訟處理，則會為企業帶來極大利益(或負面極大損失)，具

有相當槓桿效應(Leverage effect)。至於新產品開發本身，若未能掌握智財規劃，則將落入代工，僅能獲取微薄利潤。

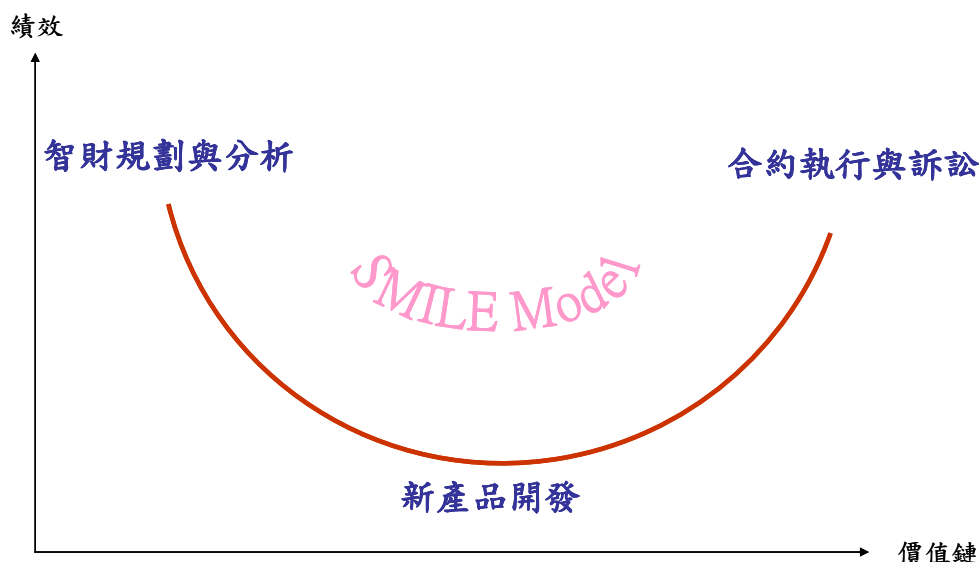


圖 5-15 智財管理微笑曲線模式(SMILE)

為使我國中小企業在考量成立新創事業時可直接參照，依據智財管理微笑曲線模式，圖 5-16 將新創事業智財管理流程與檢核表搭配一致，以供企業快速運用。相關檢核表除依新創事業之可能流程外，並將此智財管理流程分為三個階段，包含事前之評估與準備階段(Preparation)、事中之積極參與階段(Participation)及事後之執行與訴訟(Prosecution and Litigation)三個階段，以供企業快速查詢。為使企業加速與國際接軌，因此檢核表之英文版列於附錄以供參考。

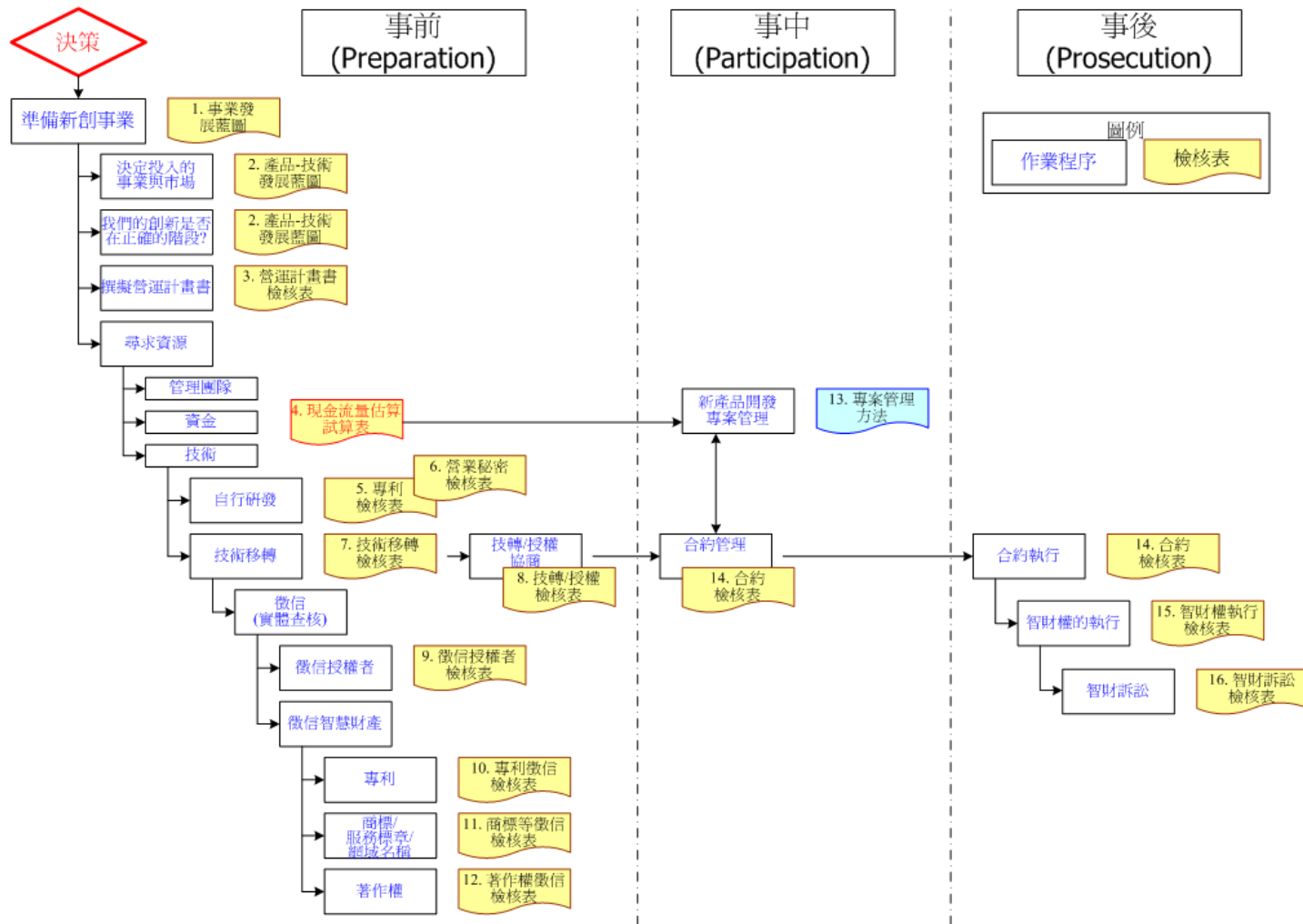


圖 5-16 新創事業智財管理流程與檢核表

檢核表 5-1 規劃新創事業之參考藍圖

(資料來源：華盛頓大學技轉辦公室)

1. 團隊

- ☐ 創業者/團隊能了解在創業過程中所面臨的相關風險
- ☐ 創業者/團隊能了解並且願意對創業成功做出必要的承諾
- ☐ 已確認初始的創業團隊，同時創業者能了解其與管理團隊之間的差異，並且願意增加公司成長所必須具有不同能力的團隊成員

2. 智慧財產

- ☐ 已發現確認智財並且適當管理其權利
- ☐ 智財已受保護或已開始進行保護程序
- ☐ 智財可以向上提昇發展
- ☐ 團隊願意去查明侵權者並且對其採取法律行動
- ☐ 實施的自由度：需要其它智財並且可以經由授權取得
- ☐ 已清楚說明某某公司的授權程序

3. 產品/市場

- ☐ 可由此技術衍生出應用/產品(這是真正的創業機會，而不是授權交易)
- ☐ 這種應用/產品具有相當大、可定位且成長的市場
- ☐ 已確認潛在客戶並且已經拜訪
- ☐ 已確認競爭者並且予以分析

4. 已進行優勢/劣勢/機會/威脅(SWOT)分析

5. 教育/訓練/輔導

- ☐ 已為重要團隊成員指定適合的指導專家
- ☐ 已為創業團隊指定適合的顧問

6. 可取得的資源

- ☐ 團隊已找出許多不同的創業資源

- ☐ 已討論出特定的團隊需求，並且為了滿足這些需求已指定特定的資源

7. 公司形成

已準備好的商業文件為：

- ☐ 公司文件
- ☐ 營運計畫、財務計畫、概要、簡報、網站

滿足以下條件的公司可考慮資助：

- ☐ 具有不容置疑的價值
- ☐ 已定義出營運模式並且確認其可行
- ☐ 有明確的退場策略
- ☐ 已確認適合的資金來源

8. 授權

- ☐ 某公司的授權程序已被說明
- ☐ 已討論進行中的研究需求並且已取得共識
- ☐ 已確認授權的接觸對象(進行授權協商)
- ☐ 團隊已(或可)募集要取得授權所需的資金
- ☐ 可以協商適合的授權

成立新公司時的考量

(資料來源：華盛頓大學技轉辦公室)

當協助規劃新創公司時，要先詢問創業者的**重要問題**：

1. 技術已經發展完備了嗎？(在既有產業的大公司中，可能並不希望對未經證實的技術冒險)
2. 是否能組成適合的團隊來開發這項業務？
3. 由相同技術是否能開發出多樣產品或服務？(為了長期發展，公司通常需要一樣以上的產品)
4. 技術本身或衍生自技術的產品或服務是否具有足夠大的競爭優勢和目標市場？
5. 潛在的營收是否足以維持公司運作及讓公司成長？
6. 誰會願意投資這家公司？為什麼？
7. 資本額的需求是多少？
8. 終端使用者是否已經證實對最終產品的需求？

發明人也應該詢問自己下列問題：

1. 我真的願意處理所有相關必要事務，並且在創業過程中投入龐大的時間和資源嗎？
2. 我希望從這項事業中取得什麼？
3. 我能夠接受風險嗎？
4. 我是否很靈活並且能適應任何改變？
5. 我在新公司裡面要扮演什麼角色？
6. 我要同時保有新公司和原工作單位的職位嗎？還是我要全時投入新創事業？

第一次與發明人碰面時所需詢問的問題

瞭解研究/發明

1. 何者為核心發明？
2. 何者為全新創見，且非顯而易知？
3. 技術要用在何處以及如何使用？
4. 發明人是如何想出發明的？
5. 這項發明是否與實驗室的整體工作／補助方向符合？它是主要的研究計畫嗎？如果不是，其相對的重要性為何？如果主要發明人不是具職缺的編制內研究人員時，他們離職之後還能持續進行相關研究嗎？這項計畫是否已持續受補助？
6. 解決問題的動機為何？
7. 是什麼重要因素讓發明人決定從事此發明？
8. 為何採取這種方式？
9. 隱藏的風險為何？
10. 此項揭露內容在實驗工作中所處的確實地位(例如：反應物是借來的嗎？)
11. 提供背景資訊，以了解發明人真正做了什麼。那一部分是真正的技術？

著作及先前技術的相關議題

1. 是否有任何著作發表，過去的或即將發表的，或者是任何受補助的應用？
2. 要求提供先前技術的相關文獻，並了解他們是如何取得其先前技術？

對成本/利益/危險/能力等商機進行評價，以發掘被授權人

1. 所想像的研發路徑為何？
2. 被授權人願意付多少錢來證實他們的目標？
3. 你會向誰買？
4. 這項技術鎖定的產品／市場為何？它是全新的技術嗎？要了解產品的研發路徑需要付出多少轉化的工作？在現有產品／現有程序中，這項技術比既存技術好多少？與現有標準相比，此技術的優勢為何？有任何缺點嗎？

5. 尋找授權先驅。他們已經和產業中的那些對象會面？他們在產業上已有那些會議聯繫？

檢視衝突/義務

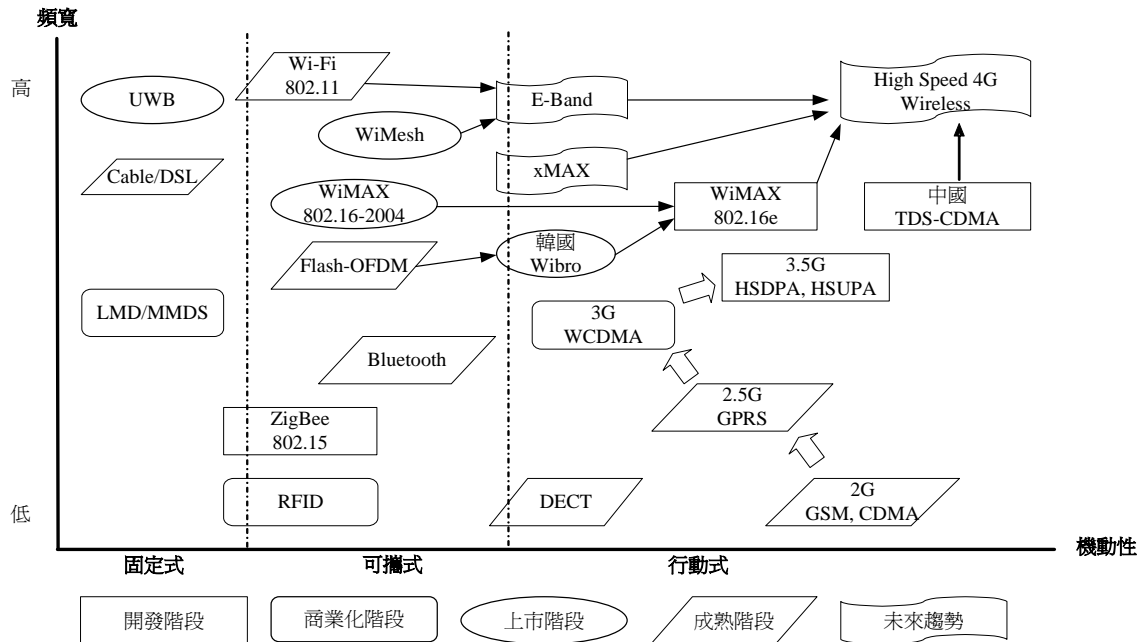
1. 在實驗室中是否有任何潛在的衝突？是否有任何其它的協議？
2. 實驗室是否有發生什麼特別的事情，是否有任何“羈絆”？
3. 他們的聯繫關係為何？(其它委託關係為何：例如，試劑要寄送給誰？)
4. 取得資料的來源(政府或產業界)?
5. 取得補助計畫編號
6. 針對醫師／發明人處理病患方面：本發明是否曾用於醫師／發明人的病患？
(可能涉及反回扣法條，須進一步找人諮詢)

IP 策略及可專利性評估

1. 一開始就清楚列出預期情形
2. 獲得專利的可能性：要得到專利的困難性有多高？(有時候，雖然揭露事物的科學重要性高，但可能並無法申請專利)
3. 詢問他們對智財的預期為何？

檢核表 5-2 產品-技術發展路程圖(以無線產品為例)

(資料來源：Lee et.al., working paper, 2007)



檢核表 5-3 營運計畫檢核表

(資料來源：<http://www.curiousoffice.com> Ten Steps to Launching an Early Stage Company)

1. 決定主要附加價值之所在

- ☐ 公司的強項為何？
- ☐ 公司的獨特優勢為何？專注於你的獨特優勢並且由此發展
- ☐ 一開始進行規劃時，不要野心太大。如果營運計畫第一階段涵蓋過廣，不要投入你不能充份了解的事務。在從事新事務時，總是會有一些原本就存在的危險。當你是新的投入者時，你根本不知道你不瞭解那些事情。對於想要從事的事務能有遠見是件好事，但務實的起步是非常重要的。
- ☐ 公司在市場的角色像誰？要瞭解公司角色的最好方式就是找出你想取代那一家公司以及你的公司與那一家公司類似。
- ☐ 贏的策略具有以下要件：
必須依照以下順序思考你的策略
 - a) 願景；
 - b) 目前的起始點；
 - c) 擬訂計畫，將兩者之間的進程予以尺度化。

2. 評估市場，並且決定誰是你的客戶以及他們想要買什麼

- ☐ 嘗試著去了解客戶已經知道什麼事情，還有那些新的事務是你希望客戶能考慮的。
- ☐ 是“真的需要”還是“有也不錯”
 - ☐ “真的需要”是指本來就計畫要購買，你唯一要做的事情就是說服對方更改供應商或者更可能的是請對方考慮增加新的供應商。
 - ☐ “有也不錯”是指你需要嘗試著教育和說服對方，讓他們購買目前尚未打算購買的產品或者是解決目前還未產生的需求。

- ☐ 在客戶方面，你除了要辨識出購買的公司或組織之外，更要知道該組織中是誰具有購買的決定權。

3. 決定你的競爭策略

- ☐ 你打算如何融入市場的脈絡？
- ☐ 你應該演出什麼樣的“戲碼”？
- ☐ 你是要正面迎戰還是打一場快速追隨戰？
- ☐ 你是否嘗試著在高階或基本產品之間夾擊競爭者？你不需從起跑點開始。並沒有太多的選擇。其端視於你是如何評估整體的市場全貌。

4. 決定你的定位

- ☐ 為何你的解決方案在這種情況下比其它公司還要好？將此訊息以易於了解及可記憶的方式傳送給你所設定的聽眾。最後，將這些變成一個公司或是依市場情況為基礎的產品，使得你的產品或公司成為市場所需。在進行焦點群體問卷時，最好的方式是詢問消費者“你如何向朋友描述這項產品或服務”。

5. 找出你將要投入領域的關鍵趨勢

- ☐ 要取代既有服務之新產品或服務方式的方法就是瞄準比任何一家公司還要大的趨勢。
- ☐ 了解技術的主要趨勢。在每一種情況下，在市場已具規模的競爭者會阻擋這種趨勢，要考慮是取代還是要適應它們。

6. 以最少的成本來製造產品或原型產品，並且將其銷售給一些經挑選的消費者

- ☐ 你將會在過程中學到很多事情。你將可確認你的論點和目標消費者。你也會對你的利潤結構有更好的了解。

7. 針對少數消費者全力佈局

- ☐ 掌握一個真正的好客戶要比只是單純試用產品或服務的三個客戶來的重要。當你是新公司的潛在客戶時，在他們買商品之前會希望通知現有的客戶。如果你沒有可以參考的客戶名單，要擴展業務真的是很困難的。

8. 經由口碑來取得下一批客戶

- ☐ 請求第一批滿意的客戶將你介紹給另外三個客戶。讓他們也感到滿意。

9. 利用 PR 和氣勢將你的產品、出售物或公司推到市場

- ☐ 打贏戰略領導的戰役。如果你已經對準了市場的關鍵趨勢，具有滿意的客戶並且展現出你能夠說服主要影響者的氣勢，讓人相信你的產品必然會成功。如果你做對了，客戶將會開始相信它”何時”會成功而不是”是否”會成功。你必須創造出壓倒性氣勢的感覺，使得你能夠同時帶動貪慾(例如在競爭中拔得頭籌的渴望)和恐懼(擔心落後的焦慮)的動機。

10. 規模化

- ☐ 當公司有網站時，有效掌握你的產品定位，尋找更多的合夥人。
- ☐ 維持低的成本結構是關鍵，直到你可以放大規模為止。
- ☐ 在你開始花錢時，你必須對營收狀況具有清楚的概念。大多數的新創企業主在真正搞清楚他們在賣什麼東西和他們打算賣給誰之前就太早開始規模化。他們在一開始就耗費了大把的金錢，但反而傷害了將事業重新導向更佳結果的能力。

檢核表 5-4 現金流量推估(以 Google 初次公開發行為例)

(資料來源：華盛頓大學技轉辦公室)

現金流量資料

Google Inc.

財務報告資料

(單位為百萬)

	全年12月31日：						半年6月30日：			
	<u>2001</u>	<u>銷售額%</u>	<u>2002</u>	<u>銷售額%</u>	<u>2003</u>	<u>銷售額%</u>	<u>2003</u>	<u>銷售額%</u>	<u>2004</u>	<u>銷售額%</u>
營收	86.4	100.0%	439.5	100.0%	1,465.9	100.0%	559.8	100.0%	1,351.8	100.0%
成本及支出	<u>75.5</u>	87.3%	<u>253.0</u>	57.6%	<u>1,123.5</u>	76.6%	<u>370.3</u>	66.2%	<u>1,025.6</u>	75.9%
營運收入	11.0	12.7%	186.5	42.4%	342.5	23.4%	189.5	33.8%	326.3	24.1%
其它收入(支出), 淨值	<u>(0.9)</u>	-1.0%	<u>(1.6)</u>	-0.4%	<u>4.2</u>	0.3%	<u>0.7</u>	0.1%	<u>(1.2)</u>	-0.1%
稅前收入	10.1	11.6%	184.9	42.1%	346.7	23.6%	190.2	34.0%	325.1	24.0%
預估所得稅	<u>3.1</u>	3.6%	<u>85.3</u>	19.4%	<u>241.0</u>	16.4%	<u>132.2</u>	23.6%	<u>182.0</u>	13.5%
淨收入	7.0	8.1%	99.7	22.7%	105.6	7.2%	58.0	10.4%	143.0	10.6%
						0.0%		0.0%		0.0%
折舊和攤提	14.2	16.4%	29.0	6.6%	55.0	3.8%	22.7	4.1%	54.7	4.0%
資本支出	13.1	15.1%	37.2	8.5%	176.8	12.1%	60.6	10.8%	182.3	13.5%
營運資本增加	2.5	2.8%	(5.0)	-1.1%	6.3	0.4%	(25.9)	-4.6%	(20.7)	-1.5%
已發行股本數	186.8		220.6		256.6		253.0		265.2	
(完全稀釋)										
平均稅率	30.6%		46.1%		69.5%		69.5%		56.0%	

資料來源：Google, Inc. 初次公開發行計畫書, 2004年8月18日, 第6頁, F-7

現金流量推估

	A	B	C	D	E	F	G	H	I	J	K	L
1	假設：	百分比	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
2	營收成長率	先前營收	1.00	1.00	0.90	0.80	0.70	0.60	0.45	0.30	0.20	0.10
3												
4	成本及支出	銷售額	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5	其它收入(支出), 淨值	銷售額	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	預估所得稅	Inc. Bef. 稅	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
7	折舊和攤提	銷售額	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
8	資本支出	銷售額	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
9	營運資本增加	銷售額	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10												
11	終期值成長率	0.04										
12	貼現率	0.20										
13												
14	預測：	真實情形										
15		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
16	營收	1,465.9	2,932	5,864	11,141	20,054	34,092	54,547	79,093	102,821	123,385	135,723
17	成本及支出	1,123.5	2,199	4,398	8,356	15,040	25,569	40,910	59,320	77,116	92,539	101,793
18	營運收入	342.5	733	1,466	2,785	5,013	8,523	13,637	19,773	25,705	30,846	33,931
19	其它收入(支出), 淨值	4.2	0	0	0	0	0	0	0	0	0	0
20	稅前收入	346.7	733	1,466	2,785	5,013	8,523	13,637	19,773	25,705	30,846	33,931
21	預估所得稅	241.0	257	513	975	1,755	2,983	4,773	6,921	8,997	10,796	11,876
22	淨收入	105.6	476	953	1,810	3,259	5,540	8,864	12,853	16,708	20,050	22,055
23												
24	折舊和攤提	55.0	117	235	446	802	1,364	2,182	3,164	4,113	4,935	5,429
25	資本支出	176.8	352	704	1,337	2,406	4,091	6,546	9,491	12,338	14,806	16,287
26	營運資本增加	6.3	0	0	0	0	0	0	0	0	0	0
27												
28	淨現金流量(第1-10年)		242	484	919	1,654	2,813	4,500	6,525	8,483	10,179	11,197
29	終期值											72,782
30												
31	NPV(1到10年)	\$12,080										
32	NPV(TV)	\$11,755										
33	公司總值	\$23,834										
34	已發行股本	279.3										
35												
36	每股價格	\$85.34										

推估結論

假設:		<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
營收成長率		1.00	1.00	0.90	0.80	0.70	0.60	0.45	0.30	0.20	0.10
	Actual										
(單位：百萬美元)	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
營收	1,465.9	2,932	5,864	11,141	20,054	34,092	54,547	79,093	102,821	123,385	135,723
淨現金流量(第 1-10 年)		242	484	919	1,654	2,813	4,500	6,525	8,483	10,179	11,197

檢核表 5-5 專利檢核表

(資源來源：整理自 Finnegan, Henderson, Farabow, Garrett & Dunner 事務所資料)

1. 立即記錄你的發明概念，以取得最早優先權日：
 - ☐ 寫下發明的敘述內容
 - ☐ 接下來，在文件上簽名並註明日期
 - ☐ 找一個可信任的非發明人，他要能了解此發明，請他閱讀後也在文件上簽名並註明日期
2. 立即完成發明程序，以取得最早優先權日：
 - ☐ 製作發明
 - ☐ 測試發明
 - ☐ 記錄製作和測試的相關資訊，並且予以簽名及註明日期
 - ☐ 找一個可信任的非發明人，他要能了解此發明，請他閱讀後也在文件上簽名並註明日期
3. 在取得你的專利權之前，不要採取任何會造成權利損失的步驟：
 - ☐ 不要發表有關發明的資訊
 - ☐ 不要銷售此發明
 - ☐ 不要公開使用此發明
 - ☐ 不要在未簽署保密協定的情況下揭露此發明
4. 把專利當成營業秘密來保護，或者是立即提出專利申請，以取得最早優先權日：
 - ☐ 如果你要申請專利，應告知律師：
 - ☐ 那些人對發明有貢獻
 - ☐ 製造和使用發明的最佳方式
 - ☐ 你曾經做過的任何相關著作發表、簡報、揭露、使用及要約販售
 - ☐ 其它人曾經做過的任何相關著作發表、簡報、揭露、使用及要約販售
 - ☐ 任何不利的測試結果或是其它不利的資訊

- ☐ 是否有任何侵權者和他們的侵權行為
 - ☐ 可能會造成專利責任問題的研究贊助者，例如政府機構
 - ☐ 只有在提出專利申請之後才能在產品上註明“專利申請中”
 - ☐ 不要告訴別人有關你和律師所討論的內容
5. 維護你的專利權：
- ☐ 持續追蹤付款到期日及其它應採取之行動
 - ☐ 繳交維護費以確保專利有效
 - ☐ 在你的專利產品上註明相關的專利號碼，以警告侵權者
 - ☐ 監控他人所販售的產品，以了解他們是否侵害了你的專利
 - ☐ 立即決定是否要對侵權者採取行動
6. 在將發明商品化之前，先調查是否會侵害到其它專利：
- ☐ 專利只是給予你排除他人製造、使用或販售你的發明之權利
 - ☐ 專利並沒有給予你自己製造、使用或販售你的發明之權利
 - ☐ 即使你自己有專利，仍有可能侵害其它人的專利

發明紀錄(ROI)評估檢核表 (資料來源：華盛頓大學技轉辦公室)

ROI 表單編號#:		收件日期:	
發明記錄名稱:			
完成日期:		填表人:	
<p>以 "X" 來標示</p> <p>一般評估</p> <p>是 否</p>			
1. 要完成此 ROI 是否還需要發明人提供更多資訊?		<input type="checkbox"/>	<input type="checkbox"/>
2. 是否有任何實驗數據顯示出此發明確實可行?		<input type="checkbox"/>	<input type="checkbox"/>
3. 行銷此發明是否需要進一步的實驗確認?		<input type="checkbox"/>	<input type="checkbox"/>
4. 發明人是否已有實現此發明研究的經費?		<input type="checkbox"/>	<input type="checkbox"/>
5. 此項技術是否可能成為美國明顯的商業市場?		<input type="checkbox"/>	<input type="checkbox"/>
6. 此發明是否存在會嚴格限制主要市場政府權利(例如,軍方)?		<input type="checkbox"/>	<input type="checkbox"/>
7. 此發明為抗體、試劑或軟體嗎?		<input type="checkbox"/>	<input type="checkbox"/>
8. 如果 1-7 中所有灰色方塊都被勾選的話, 直接跳答#17, 否則請填寫 9~16.			
<p>特殊評估</p> <p>如有需要, 請查核</p>			
9. 目前已授權給某家公司或者是正與其協商		<input type="checkbox"/>	
10. 研究者概述的研究計畫需要實驗		<input type="checkbox"/>	
11. 補助機構表明已核定或將核定補助經費		<input type="checkbox"/>	
12. 發明人在過去已解決過此類議題		<input type="checkbox"/>	
13. 不需要進一步的研究		<input type="checkbox"/>	
14. 有明顯的次級市場		<input type="checkbox"/>	
15. 潛在市場大到超乎尋常		<input type="checkbox"/>	
16 其它(請敘明)		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
<p>專利評估</p> <p>是 否</p>			
17. 是否需要送到授權/專利會議上評估?		<input type="checkbox"/>	<input type="checkbox"/>
18. 在授權/專利會議上獲得同意		<input type="checkbox"/>	<input type="checkbox"/>
<p>處置建議</p> <p>如有需要, 請查核</p>			

19. 申請暫時性專利	<input type="checkbox"/>
20. 申請著作權登記	<input type="checkbox"/>
21. 註記為有形的研究資產(亦即抗體或試劑)	<input type="checkbox"/>
22. 需要發明人提供更多資料	<input type="checkbox"/>
載明：	
23. 目前還不足以成為有前途的投資	<input type="checkbox"/>
24. 主題內容被認為不適合做為專利標的	<input type="checkbox"/>

可專利性檢核表

(資料來源：華盛頓大學技轉辦公室)

ROI 表單編號#:		收件日期:	
發明記錄名稱:			
完成日期:		填表人:	
發明人已經:	否	是	如為是,請標明日期
1. 發表與本技術相關之論文或摘要?			
2. 將相關論文或摘要投稿以進行發表?			
3. 接受與本技術相關的研究補助或合約?			
4. 申請研究補助?			
5. 要約販售與本技術相關之產品或服務?			
6. 將此產品販售或者是轉移給他人?			
7. 或者是 他人已將相關產品/服務列入例行性使用?			
8. 或者是 他人已指出任何其它可能的阻礙日期?			
解釋:			
前案檢索		關鍵字/檢索策略/次分類	
9. USPTO			
10. WIPO			
11. PubMed			
12. 其它:			
可能的前案	是	否	
13. 在檢索時已發現有可能的相關技術?			
14. 發明人是否引用參考文獻?			
專利評估	是	否	
15. 申請暫時性專利			
16. 申請非暫時性專利			
17. 進行可專利性鑑定			

檢核表 5-6 營業秘密檢核表

(資料來源：亞太法學院/喬治華盛頓大學)

1. 瞭解以營業秘密或機密商業資料來保護資訊的優點
 - ☐ 可以保護無法以專利、著作權或其它智財形式受到保護的一些資訊
 - ☐ 在維持保密的情況下，營業秘密可以永遠被保護，而專利或著作權則是只有有限的保護期間
 - ☐ 只要有適當的安全措施，可以相當低的成本來保護更多的資訊
2. 決定要保護的標的
 - ☐ 可提供商業競爭優勢且非一般已知或是容易取得的有用資訊
 - ☐ 以聘僱合約、保密協定、或非公平競爭和不當取得處理原則來保護資料不被使用或揭露
3. 確認所保護之營業資料的型態
 - ☐ 技術資料
 - 方法、配方、程式..等
 - 機械設計和規格
 - 材料成份及其來源
 - 實驗常數、化學式
 - 軟體(原始和目標碼)、設計概略圖、相關資訊
 - 研究及開發報告、計畫、目標、預算
 - ☐ 組織資訊
 - 員工資料，包括重要員工的進用、終止..等
 - 有關重組、購併、擴張的資訊
 - 內部儀器和設備
 - 政策簡介
 - ☐ 財務資訊

- 財務計畫、預算資訊、金融配置
- 貨物成本、供應商身份、採購形式..等
- 定價模式和折扣
- 股票或債務持有人、股數、投資金額
- 經銷商和代理商折扣
- 有關管理資訊系統的資料
- 行銷/販售資訊
 - 潛在和真正的消費者或客戶清單
 - 授權資訊
 - 市場研究和預測、計畫、預算
 - 新產品開發和地理滲透
 - 產品運送時程和策略、虧損..等
 - 操作/經營方法
 - 銷售手冊和訓練教材
- 4. 除了必須知道的人之外，利用合理的預防措施來防堵每一個人取得資訊
 - 控制營業秘密或機密商業資料
 - 用碎紙機將作廢或多餘份數的機密文件予以銷毀
 - 在資料上註明為營業秘密(所有權和機密註記)
 - 電子郵件加密
 - 取得書面的員工(及顧問)承諾書
 - 包括機密條款
 - 包括競業禁止條款
 - 管控前提- 利用傳統的“鎖和鑰匙”預防措施
 - 管控員工及訪客
 - 保有進出者的記錄

- 在入口處進行盤查並且向員工取得證明文件
 - 定期發送提醒文件及詳細目錄
 - 通知離職員工其應有的義務
- 利用提醒措施讓每一個人留意何種資訊被視為營業秘密或是機密商業資料

美國不同類型智慧財產權保護之比較

(資料來源：Finnegan 事務所)

類型/特點	專利	商標	著作權	營業秘密
保護標的	機器設備,製成品,製程,或複合物	商品或服務來源標記	原創性著作之表達	能帶來確切商業利益的機密性技術或方法
保護範圍	結構及功能	來源標記	表達	保密關係
權利期間	自申請日起算二十年	只要繼續有使用即可存續	自創作之日起算一百年	無期間限制
登記	必要	非必要	非必要	無規定
要件	實用性,新穎性,非顯而易知性,以特定順序及方式所撰寫	識別性	原創性	相對機密性,實用性,當事人關係
所需費用	美金一萬五千元至二萬五千元(中等複雜案件) 美金二萬五千元至四萬元(複雜案件)	美金二千五百元至四千五百元	美金一百五十元至二百五十元	視所採取之保密措施而定
排他範圍	排除他人未經同意而製造,使用,為販賣而要約,或販賣受專利保護之發明	有混淆誤認之虞的商標	複製	排除他人未經授權之使用
權利執行	僅聯邦法	州法與聯邦法	僅聯邦法	主要為州法,另有若干聯邦法亦可為執行權利之依據
救濟內容	禁制令與損害賠償,僅特殊個案可請求加重賠償	禁制令,沒入,銷毀,損害賠償,及加重賠償	禁制令,沒入,銷毀,損害賠償,及法定損害賠償	禁制令,損害賠償,及懲罰賠償

檢核表 5-7 技術移轉檢核表

(資料來源：華盛頓大學技轉辦公室)

1. 技術評估

(1) 科學家的觀點：

下一步為何？

- a. 只是個很新奇的研究？
- b. 技術授權給現有的公司？
- c. 成立新的公司？

須要考慮的事情

- a. 現階段的應用為何？ 研究→發展→原型→產品
 - 由誰來決定？
 - 技轉辦公室(OTT)與大學教授之間的不同角色及意見
- b. 用來證明概念的依據為何，是否已經存在？
- c. 要達到何種數量級的投資金額，才可跨過發展的門檻？

技術轉移的優先考量通常會是

- a. 專利成本的回收
- b. 階段性付款
- c. 淨值

首先發生的事情為何？

- a. 進行學術會談以與業界連結
- b. 專業顧問參與新創事業(Newco)的考量
- c. 與創投團體進行聯繫

公立大學的潛在挑戰

- a. 人員流動
- b. 新創事業與技轉辦公室(OTT)之間，對於專利成本回收以及潛在淨值的目的

有所對抗(例如進行授權的壓力)

- c. 緩慢(公立大學的固有特點)
- d. 投資新的專利活動

創投者的潛在挑戰

- a. 技術在那一個階段？在某些早期階段，除金錢外，他們能否提供其他貢獻？
- b. 技術平台是否不佳？(須要集中在特定應用)
- c. 集合了各領域專長的優秀人才，卻難以掌控
 - 總是盲目點頭，接著詢問白癡問題(只有 30 分鐘可用)
- d. 投資新的專利活動
- e. 技術發明人必須親自投入技術轉移或新創事業
- f. 不斷地詢問是否具有公司經營概念或是授權的機會
- g. 堅持專注於創投與業界之間的關係
- h. 願意接受替代的技術應用及營運計劃

(2) 技術轉移的觀點：

將好想法往市場靠攏

- a. 辨別具有商業潛力的技術
- b. 促進軟體及數位創新的散佈與採行
- c. 估計可得到的智慧財產保護力量
- d. 為了投資而選擇最佳的創新
- e. 尋求對技術開發感興趣的公司
- f. 合約協商以轉移權利
- g. 管理義務/向贊助商報告研究成果

商品化的過程

- a. 辨別具有商業應用的創新

- b. 在創新過程中建立相關的所有權
- c. 為求進一步發展而將權利轉讓給公司
 - 教職員或研究員成立的新公司
 - 已成立的公司
- d. 確保產品的積極發展
- e. 將收入再投資到研究

學術研究的商業化挑戰

- a. 技術未因應市場來發展
- b. 萌芽而不穩定的技術在實驗室以外的環境是否仍然有效
- c. 將萌芽技術投入市場的巨大財務風險

技術評估

- a. 產品/服務是否符合市場需求？要如何符合？
- b. 相較於現有可供選擇的解決方案，此解決方案如何？
- c. 相較於不採取任何行動，此解決方案如何？
- d. 此產品/服務是否提供強烈且正向的投資回收？
- e. 市場是否認同對此產品/服務的需求？
- f. 是否可促進市場對此產品/服務的需求認同？
- g. 是否可協助訂定出極佳的價格方案？

管理發明的過程

- a. 發明人遞交發明紀錄(ROI)
- b. 評估創新：
 - 組織的法定利潤
 - 可專利性
 - 潛在的市場
 - 可能的被授權者

- c. 為可能成功的發明取得專利及授權

發明檢視程序

- a. 評估對於他方的相關義務
- 仔細檢視所有的合條款約
 - 智慧財產所衍生的義務:
 - (1) 研究合約
 - (2) 材料轉移合約
 - (3) 保密合約
 - (4) 顧問專案
 - (5) 贊助計畫
 - (6) 共同研究與共同發明
 - 可能會限制授權的機會
 - 可能導致無法取得專利
- b. 評估技術/科技的優點
- 發明充分地定義在揭露書中
 - 有效的支持資料
 - 展現實用性(例如解決問題)
 - 目前技術的技術水平
 - 核心技術 vs.改良
 - 發明的特色 vs.限制
- c. 評估商業潛力
- 能夠定義出產品特性
 - 察覺到的需求
 - 終端用戶的特性
 - 市場規模

- 足以相信的強大潛力
 - 市場成熟度
 - 競爭優勢/產品差異化
 - 是否有更好、更快、更便宜的選擇
 - 已確認的潛在被授權人
 - 擔保考量
 - 產業對於授權的傾向
 - 很長的產品週期
- d. 評估發明人的狀況
- 合作
 - 是否可成為贏家
 - 業界接觸
 - 現實期望
 - 過去公開的成功經驗
 - 在該領域的可信度或公認程度
 - 研究的資助及方向
 - 衝突義務？(須要知道)
- e. 評估專利的地位
- 發明的可專利性(新穎的、有用的、非顯而易知的)
 - 已知的先前技術
 - 出版物(已提出的摘要、期刊文章或手稿)
 - 用以描述發明的准予申請案
 - 可得的美國及外國權利(申請前並沒有公開的揭露文件)
 - 申請專利範圍的廣度和強度
 - 實施的自由度(是否有其他具主導地位的專利存在)

- 反向還原工程的可能性
- 承受訴訟的能力(避免干涉)
- 發明本身沒有先前的申請專利範圍
- f. 評估發展階段
 - 只是概念?(臨床數據?)
 - 變為可用的實物/原型
 - 進行製造的可行性(設施、設備等)
 - 可得的臨床數據
 - 需要發明人的合作
 - 缺乏關鍵資訊
- g. 評估商品化的途徑
 - 授權給已成立的公司
 - 授權給新創公司
 - 取得創投加入
 - 與其他技術包裝
 - 授權給發明者
- h. 評估財務分析
 - 專利費用成本
 - 來自被授權人的財務支援
 - 研究贊助的可能性
 - 期望的授權/權利金收入

市場分析

- a. 從內部收集資訊
 - ◆ 與發明人進行訪談以了解他們的知識
 - ◆ 使用問卷來決定：

- (1) 產品及服務的類型
- (2) 發明所有的可能應用
 - 發明的好處
 - (1) 更便宜的製造或使用
 - (2) 更加容易的製造或使用
 - (3) 更加安全
 - (4) 更加快速
 - (5) 更加精確
 - (6) 更加持久
 - (7) 更加可靠
 - 分析競爭的狀態全貌
 - (1) 相似的現有產品及服務
 - (2) 辨別在這些領域中的公司
 - (3) 辨別市場的區分
 - (4) 辨別定價的結構

b. 從外部收集資訊

- 產業資料庫及公司概況簡介
 - (1) NERAC
 - (2) Knowledge Express
 - (3) Medical Device Register
 - (4) Thomas Register for American Manufacturers
 - (5) 銷售報告(如果預算允許)- Frost & Sullivan, Theta Reports
- 交易期刊
- 網路搜尋
- 美國證券交易委員會(SEC)文件(EDGAR 資料庫)

- 美國中小企業技術創新計畫(SBIR)的接受贊助者
- 新聞發佈

c. 市場估計

- 辨別潛在的用戶或顧客
- 進行研究以估計市場區隔的規模大小
- 估計市場的成長性
- 估計每位用戶每年購買的產品數量
- 辨別現有的競爭產品及替代品

大學決定是否取得專利

a. 大學對於選擇要投資的發明，其必須具備

- 對於其他人沒有不可掌控的應負責任或義務
- 堅強的技術優點
- 可獲得強大的專利保護
- 消費市場及商業機會的良好前景

b. 不給予專利的理由

- 構想並不等於發明
 - * 不是法定上合格的標的
 - * 由於公開而被限制取得專利
- 構想沒有充分揭露
 - * 無法實施的問題
 - * 專利不太可能獲准
- 專利不具商業上的實用性
 - * 狹隘的範圍
 - * 被其他專利所主導控制
- 沒有可實行的消費市場

- * 不屬於具有發展前景的申請案
- * 產品市場小
- 沒有感興趣的投資人
 - * 不足以回收投資成本
 - * 產品的製作有困難
- 大學沒有完全擁有全部成果
 - * 發明人沒有轉讓權利
 - * 商業上的共有人(如果符合資格)不想授權

專利的執行效率

- a. 被挑戰時依舊有效
- b. 可據以實施
- c. 不容易迴避設計
- d. 技術領域的變動不夠快速以致專利沒有任何關連性
- e. 進行授權時，不須經由法院判定或是競爭者另外同意交互授權

注意事項

- a. 大學所研發技術多處於早期階段，開發時並非以經濟目標為前提；透過大學法定利潤的評估，可專利性及潛在市場對於減少大學在投資智慧財產的風險是至為重要的
- b. 在轉移學校所發展的技術時，強而有力的專利定位是相當重要的

2. 技術評價

— 業界標準、分級/分等方法以及經驗法則

早期技術發展的存在風險

- a. 技術風險
 - 無法在實驗室以外的環境加以實現

- 無法達成足夠的強健度
 - 無法標準化
 - 製造成本費用
 - 功效(管控障礙)
- b. 市場風險
- 競爭
 - 接受度(不符合需求)
 - 賠償

什麼是有價值的？

技術、權利、專利、專屬技術資訊、人力、硬體、設備、軟體、顧客、供應商、外部執照、專利申請過程及維護、專利執行、侵權防禦、研發資訊、管理支援、一般銷售及保證

智慧財產要如何支付

總金額(一次付清)、權利金(比率、結構、計算基準)、前期支付金、年度支付金、里程碑支付金、選擇權支付、權利金調整、智慧財產權、購買承諾、股份、專利申請過程及維護、專利執行、侵權防禦、銷售、保證、賠償金、公開表彰

發現的種類

- a. 完全創新 - 滿足一個長期感覺到的需求或是創造新的產業 -權利金比率通常為 7-14%
- b. 重大改良 - 對現有產品、製程或服務，顯著增加產品的優越性 -權利金比率通常為 5-9%
- c. 微幅改良 - 對現有的產品或服務，增添部分改良 -權利金比率通常為 3-6%

財務考量因素

- a. 發明的重要性 (數字僅作為參考)
 - 非常高(~100%)
 - 高(~50%)
 - 中等(~24%)
 - 低(~18%)
- b. 進行授權時的狀態發展(數字僅作為參考)
 - 可實行的(~100%)
 - 尚不可實行的(~78%)
- c. 依據授權類型的費用(生命科學類型；數字僅作為參考)
 - 治療(~100%)
 - 診斷(~50%)
 - 研究(~24%)

權利金

- a. 當事人雙方共同承擔風險
- b. 考量因素
 - 比率
 - 計算基準
 - 扣除額

3. 估價方法

- a. 業界標準
 - 早期成交的共同資訊資料庫
 - (1) 業界標準資料的來源
 - * 調查
 - * 建議或已建立的基準

- * 採購條件清單
- * 新聞、出版物
- * 期刊、專屬資料庫
- * 公開的合約
- * 法院案例
- * 終身或組織學習

(2) 調查資料的限制

- * 各領域類別的範圍
- * 權利金比率與智慧財產價值之間的有限連接
- * 權利金的計算基準不明確
- * 其他支付金與權利金比率並不相關
- * 其他授權條件的有限資訊
- * 類別區分的模糊度
- * 老舊過時的資訊
- * 調查分割部分所造成的偏差
- * 未知的發展階段
- 比較物

b. 分級/分等方法

- 計分標準

(1) 市場規模

(2) 專利保護

(3) 發展階段

- 計分系統 - 由 1 到 5,或是高/中/低
- 計分量尺
- 權重因素

- 決策表

分級/分等方法的舉例

	權重 (1-3)	分數 (1-5)	權重分數
市場規模	2	3	6
專利保護	3	2	6
法展階段	3	4	12
專屬的分數	2	5	10
期間	2	3	6
總分			40

- * 主觀的
- * 重要價值
- * 與市場價值有直接關連
- * 在行銷或協商的有用準備
- * 用來辯護資金保管人的估價及程序的有效方式

c. 經驗法則 → 經驗

- 總價值或收益
- 稅收的分配或分享(25%的規則)
- 投資
- 風險
- 權利金(25%的利潤)
- 初期支付金
 - * 總價的 5-10%
 - * 一年的應付權利金
- 專屬的 vs. 非專屬的-1/2
- 最低支付金-預期權利金的 25%到 50%

d. 現金流量折現

e. 蒙第卡羅(Monte Carlo)方法

f. 拍賣方法

g. 25%的規則

- 優點
 - 感覺較為公平
 - 基於獲利
 - 可以作為早期協議的依據
- 缺點
 - 25%並非總是適當的
 - 計算基準會改變
 - 須要形式上的收入報告
 - 不足以作為初期支付金的指導方針

參考文獻:

1. AUTM Technology Transfer Practice Manual, Vol.2
2. Valuation and Pricing of Technology-Based Intellectual Property, Razgaitis, Wiley and Sons, 2003.
3. Getting to Yes, Fisher et al., Penguin Books, 1981, 1991.

於合理權利金認定時，可利用 Georgia-Pacific 案所確立之相關要因：

(The Georgia-Pacific Factors, Georgia Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970))

1. 專利權人由其他被授權人所收取，可用以證明已確立之系爭專利之權利金；
2. 被授權人支付於使用可比對於系爭專利之權利金比例；
3. 授權之本質與範疇(the nature and scope of license)；如專屬或非專屬(exclusive or non-exclusive)；對地域條件之限制或未限制，或對產品販售對象之限制與否；
4. 授權人以不授權他人使用其發明以維持其專利獨占(patent monopoly)之既定政策及市場計劃；或以特定條件下之授權以保有其獨占；

5. 授權人與被授權人間之商業關係，如其等是否相同之地域與業務場合；或是否為發明人與促銷者(inventor and promoter)關係；
6. 銷售專利產品對於被侵權人其他產品之促銷；發明對於授權人作為其非專利產品之產生以及該衍生或護航銷售(derivative or conveyed sales)之既存價值；
7. 專利之存續時間及授權期間；
8. 依專利生產之產品之既有獲利能力(profitability)之其商業成就(commercial success)；及其現有名氣(current popularity)；
9. 假使有被用於近似結果之舊款式或裝置的話，專利產品相對於該舊產品之實用性及優點；
10. 專利之發明之本質，經由授權人本身及生產之商業實施例之特徵；及各該使用該發明者之優勢；
11. 侵權者使用該發明之程度；及任何對該使用價值證明證據；
12. 准許使用該發明或類似發明之特定業務或可比較業務之通常利潤部份或售價；
13. 區別於非專利元件而應歸因於發明之可實現利益部份；
14. 合格專家(qualified expert)之意見證詞；
15. 授權人(如專利權人)及被授權人(如侵權者)會同意(於侵權開始之時)，若兩造已合理地且自願地意圖獲致協議；亦即一審慎的被授權人，其意圖，作為企業事務，以獲得製造及銷售實施該專利之發明之特定物品—會願意支付之權利金且能產生合理利益之數額；且該數額會被願意准許授權之審慎之專利權人(prudent patentee)所接受。

檢核表 5-8 技術/授權協商檢核表

(資料來源：華盛頓大學技轉辦公室)

調查目標

- 智慧財產的經濟價值為何?
- 目標公司是否具有可以確信的智慧財產所有權?
- 目標公司對於侵犯他人的智慧財產權是否負有潛在的承擔責任?

授權合約的主要部分

- ☐初步前提
- ☐行政管理問題
- ☐商業考量
- ☐法律條款

初步前提

- ☐鑑於(約因條款)
- ☐當事人的名稱及住址、總公司所在地、關係企業
- ☐欲取得的權利

行政管理問題

- ☐名詞的定義
- ☐智慧財產的準備、交付、會計以及後續維護事宜
- ☐相關文件

定義智慧財產

- ☐獲准專利
- ☐申請中的專利申請案
- ☐相對應的國外專利
- ☐關鍵技術
- ☐改良

商業考量

☐ 授權、維護費、權利金支付期間

☐ 授權方提供的資料的相關綱要

法律條款

☐ 合約有效日期

☐ 終止

☐ 出口管制

☐ 準據法

☐ 賠償

☐ 其他等等

發明紀錄(ROI)

表單編號:		發明紀錄名稱:		
管理人:		被授權人:		
			完成後 進行檢查	
確認授權的所有權/自由度			<input type="checkbox"/>	
發明人的讓與證明書是否完成?			是 <input type="checkbox"/>	否 <input type="checkbox"/>
是否為專屬授權?			是 <input type="checkbox"/>	否 <input type="checkbox"/>
是否存在共有者?			是 <input type="checkbox"/>	否 <input type="checkbox"/>
是否有任何有關資金的義務?			是 <input type="checkbox"/>	否 <input type="checkbox"/>
通知發明人關於被授權人的利益-討論專屬性以及使用領域			<input type="checkbox"/>	
條件清單草稿			<input type="checkbox"/>	
寄送前與授權小組討論條件清單草稿			<input type="checkbox"/>	
與授權小組談論最終決定的條件清單			<input type="checkbox"/>	
將帶有重要財務利益的電子郵件寄給發明人			<input type="checkbox"/>	

寄送前閱讀與合夥人相關的條件清單	<input type="checkbox"/>	
確認迄今的專利費用並告知提醒被授權人	<input type="checkbox"/>	
由智慧財產相關組織(IPA)建立智慧財產計畫(IPP)的合約編號,插入授權	<input type="checkbox"/>	
與適當的合夥人或授權小組一同檢示草稿	<input type="checkbox"/>	
是否由學校取得產權?	是 <input type="checkbox"/>	否 <input type="checkbox"/>
寄送繳庫簽署合約與授權的淨值條款以供檢視	<input type="checkbox"/>	
寄送繳庫簽署合約的最終版本以利履行	<input type="checkbox"/>	
寄送已擬定條件的繳庫執行的授權副本	<input type="checkbox"/>	
由誰檢視最終決定的條款草稿?	<input type="checkbox"/>	
IP 代理人檢視最終草稿並準備正本以供簽署	<input type="checkbox"/>	
由誰簽署正本	<input type="checkbox"/>	
完成合約摘要以及相關費用指示	<input type="checkbox"/>	
讓發明人知道合約已經生效	<input type="checkbox"/>	
備註:		

檢核表 5-9 對授權人進行徵信之檢核表

(資料來源：http://www.urgentbusinessforms.com/due_diligence.asp)

- 1 損益報告
- 2 納稅申報
- 3 訴訟、留置權、判決
- 4 設備及機器
- 5 產品責任
- 6 環境問題及責任
- 7 員工計畫
- 8 員工資訊
- 9 許可證及執照
- 10 區域及建築
- 11 客戶名單
- 12 合約及競業禁止條款
- 13 組織文件

徵信檢核表

(資料來源：<http://constable.net/participants/giffc/writings/duediligence.html>)

A. 公司組織

1. 描述社團法人或其他屬於公司範疇內的法律實體組織，可包含任何有幫助的圖表，並提供公司主管及董事的名單及其工作內容簡述
2. 公司存在證明的全式表單以及由國務卿或公司內部適當主管所出具的法人證明，並列出與公司相關的所有文件檔案，以及上述文件的副本
3. 公司目前的組織章程

4. 符合營業資格的地點清單以及擁有或出租不動產或設有辦事處的地點清單，官方認證副本，公司存在證明，以及各個符合營業資格地點的繳稅狀態。
5. 過有五年內所有關於公司董事會、委員會及股東的會議記錄，以及所有用來代替開會的書面指示同意
6. 公司持股的所有關係企業及子公司的清單，顯示有上述實體所有權的組織圖，以及所有有關公司對上述實體組織存有利益關係的合約

B.公司的所有權及管理

1. 公司資本額包含所有股本、可轉換證券、選擇權、權證以及類似的文書
2. 公司股東清單(包含選擇權和權證)，提出擔保的類型及數量
3. 所有經過投票表決的合約、股份合約、委託書、限制移轉合約、優先購買權、先買權、註冊合約或其他有關公司所有權或管理的合約

C.資產操作

1. 過去三個會計年度的年度財務報表及其附註，前一年年底至今的最新中期財務報表，以及隸屬資產銷售部分的各項產品的銷售及費用分析(包含權利金)
2. 目前所有的預算和規劃，包含產品銷售及銷售費用的規劃
3. 內部或外部審計員在過去五年有關管理的往來信件及報告
4. 提供詳細的分析以作為備抵呆帳的根據
5. 存貨估價，包含營業額比率的統計及毛利率，包含隸屬資產銷售部分的各項產品存貨的廢棄分析
6. 外部顧問寄給審計員的信件
7. 公司旗下所有不動產的相關說明，以及契據、調查、資產保險政策(所有相關文件)、居住證明、地役權、土地分區變更、徵收或徵用權命令、信託書、抵押權以及設備留置權等相關副本

8. 公司持有或使用的重要固定資產目錄，包含資產持有人以及有留置權或限制的資產
9. 不在下一節 D 章節中或在智慧財產檢核表之外的所有無形資產(包含顧客清單和公司信譽)、公司持有或使用的資產或智慧財產(包含聲明持有這些資產以及這些資產的留置權或限制)

D. 智慧財產

所有公司持有或使用的專利、商標、商品名稱、服務標章以及著作權的清單，及其所有申請和副本，檢索報告以及與前述相關的留置權、限制及合約。

E. 報告

1. 最近三年內與公司有關(例如競爭、產品、定價、技術發展、軟體開發)的所有研究、評估、報告、分析或備忘錄的副本
2. 公司為了各種目的而準備的說明書，包含所有用來推銷或廣告的小冊子。
3. 所有顧客滿意調查、工廠特殊認證、ISO 認證或其他可被公司視為重要或可反應出優越表現的認證
4. 所有分析員或其他關於公司最近三年發佈的市場報告的副本
5. 有關公司目前有效的保險及自保計畫，附隨相關請求或損失的資訊等副本
6. 由公司或其子公司所提出有關公司資訊的下列所有文件：年度報告(SEC Form 10-K)、季報告(SEC Form 10-Q)、當期報告(SEC Form 8-K)

F. 適法性(Compliance with Laws)

1. 政府官方組織的授權、許可、證明、批准、註冊、讓步、認同、豁免、其他操作及所有申請表，以及前述所有受到威脅而可能改變情況的相關說明
2. 在面臨法院或法定機構，所有可能發生的威脅行為或調查的相關說明
3. 當公司已經或可能被控違反任何法律或無法取得重要的執照、許可或其他授權的情況說明，列出所有來自政府或法定當局的傳票及通知

4. 各法定當局對公司設施進行檢查的最新日期的清單
5. 公司知悉可能造成公司潛在影響的任何中止或法定變動的相關說明
6. 與公司商業重要資訊的相關的重要部門之間的請求、信件、報告、文件的副本
7. 所有研究、調查、備忘錄或其他規定須符合的資料副本，包含洩漏控制、環境清潔、環境預防及改善、員工安全、進出口授權、公共運輸執照、問題、潛在違反行為、經費等
8. 陳述所有須經官方同意，始得開始進行的交易
9. 所有與公司有關的美國進出口限制操作的報表
10. 為讓公司順利執行業務的出口、進口、海關許可或授權、證明、註冊、讓步、豁免等清單，以及所有授與公司目前有效或續期的同意證明副本
11. 第三人對公司行銷、銷售或促銷活動的所有控告或控訴

G. 環境問題

1. 公司及其前任公司(若有的話)在現在或是過去所持有、租賃、使用的設備或其他財產的清單列表
2. 公司具有的環境審核或地點評估的相關報告，包含與公司設備或財產相關的第一、第二階段的評估或石棉調查
3. 政府機構出具的檢查報告、環境相關的保險公司、設備或其他財產的工作場所安全健康規章的副本
4. 有關環境及工作場所安全健康的違犯、控訴、裁定通知的副本，以及公司從當地、州、聯邦政府組織所收到的不符環境及工作場所安全健康的法律規範的相關文件副本，包含用來說明這些狀況是如何被解決的文件副本
5. 私人的控訴、請求、訴訟或其他有關公司對於私人所應負的潛在責任的文件副本

6. 現在或過去出現在財產設備中對應第 1 項的地下儲存槽、有關此儲存槽的許可、執照、註冊的副本，以及此儲存槽的移除、矯正工作相關文件的清單列表
7. 第 1 項提及的任何有釋放危險物質或石油的財產設備的說明，除非上述的釋放並未出現在第 1 到 6 項所述及的文件中
8. 公司收到的資訊請求、PRP 通知、106 命令或其他依據 CERCLA 或相似的州法或外國法的通知(有關廠外設備釋放危險物質釋的責任)的副本
9. 上述第 8 項所述及的所有通知請求的副本，其係有關第 1 項所述及的財產設備對於危險物質釋放應負起的潛在責任
10. 有關第 8、9 項的往來信件或其他文件的副本(包含所有有關公司所應負的分擔責任)
11. 所有由公司或外部顧問所做關於未來環境活動的書面分析(也就是用來控制設備的升級、廢棄物處理的改良、物質替代)，未來五年有關這些活動的估計費用，大於美金一萬元應是合理的預期數目
12. 目前用於公司營運的工作場所安全及健康計畫的相關說明，特別是在化學處理方面

H. 訴訟

1. 列出公司內目前或曾經身為訴訟、仲裁以及官方訴訟程序當事人的董事、主管、員工，並指出正在進行中的法院、代理機構或其他組織的名稱、開始日、牽涉數量、保險範圍以及目前狀態，以及公司在過去十年內經過判決或和解的類似事件的說明
2. 過去或現在所有有關公司、董事長、主管、員工的官方訴訟調查的資訊
3. 律師對於訊問調查的回應副本
4. 公司身為其中一方當事人的合意判決、命令(包含可實行的禁制令)、相關文件以及上述文件狀態的簡介副本

5. 律師因正在進行中或是感到受威脅的訴訟而寄給獨立公開的會計師的書信副本
6. 有關公司或第三方侵犯智慧財產權的相關報告或書信往來

I. 重要合約及承諾

1. 過去 10 年跟公司重大資產(包含所有部門、子公司或商業的銷售、承購或出售)有關的完整或建議的重整、承購、合併、採購、銷售等合約
2. 公司是所有合資及合夥關係合約的當事人
3. 所有拖累公司持有的不動產或動產合約，包含抵押、典當、債券合約或財務借貸
4. 所有關於公司的不動產租賃(不管公司是出租人或承租人)，以及所有租賃權保證書(若有的話)的副本
5. 所有關於公司的動產及固定設備(不管公司是出租人或承租人)的副本，包括但不限制是設備出租合約
6. 公司或公司代表所出具的保證或相似承諾，除了原先習慣的作法以及與過去一致的慣例。
7. 賠償合約、投保合約、保障所有董事、主管、員工或代理人免於賠償的資格
8. 與公司及其資產相關的貸款合約、通知、債券收入、補償抵銷合約、信貸額度、租約財務安排、分期付款購買等等，以及任何證券權益或其他留置權義務的副本
9. 過去五年(或較短的期間)遞交給貸方的無違約證明及相似文件，證明與財務合約相符
10. 過去五年(或較短的期間)作為內部使用的文件，以便監控是否符合財務合約內的財務條款

11. 過去五年(或較短的期間)與財務合約的違約或潛在違約相關的所有書信往來及文件
12. 與其他公司合作或限制競爭的合約
13. 其他重要商業相關的合約，包含：
 - a. 任何目前的服務、操作或維修合約
 - b. 目前任何與顧客相關的合約；
 - c. 目前任何用於固定資產採購的合約；以及
 - d. 任何經銷權、批發商或仲介合約
14. 在不重複上述 D 章節或此處的智慧財產勤勉調查，所有涵蓋授權、關鍵技術、技術協助安排(包含任何專利、商標、服務標章、著作權登記或其他公司所使用的智慧財產權)的合約是要付款或被承認的。
15. 描述公司可能須要重新採購或重新持有先前已出售的資產或財產的所有情況
16. 關於公司的資料處理合約
17. 為促進預定的交易或與公司資產相關的交易而支付費用給掮客的合約副本
18. 與公司相關的管理、服務或支援合約，以及任何與公司重要資產相關的授權書
19. 不管任何理由，明白表示拒絕與公司進行商業行為的大型供應商及服務提供者的清單
20. 所有表格的樣本，包含採購單、發票、供貨合約等
21. 任何合約或其他介於公司與任何董事、主管、股東、附屬公司(統稱"關係人")之間的交易協議；包含但不限於：
 - a. 介於公司與任何關係人之間有關資產共用、責任、服務、員工分紅、保險、資料處理、第三方諮詢、專業服務或智慧財產的合約協議
 - b. 介於任何關係人與提供存貨或服務(由關係人提供給公司)的第三方之間的合約協議，
 - c. 介於公司與任何關係人之間的雙方定價或條件的合約協議

- d. 介於公司與任何關係人之間的軟硬體使用的合約協議
 - e. 有關任何關係人的設備被公司用來銷售、租用、出租或使用的合約協議
 - f. 由公司與某關係人所完成的商業百分比的說明
 - g. 公司與某關係人之間的不競爭承諾及保密合約
 - h. 屬於公司或公司關係人的合約所應收到賬單、貸款及其他債務款項的清單
22. 所有保險及賠償政策以及在公司涵蓋範圍內的產品、財產、商業風險、傷亡及員工賠償的政策，任何附帶過去五年的費用的自我保險或追溯補貼計畫政策，過去五年所有重大要求及合計要求的資料研究的總結等副本
23. 公司於 30 天內的不可終止的通知日起，任何持續超過六個月的合約、當事人相關合約內的團體、附屬當事人的團體的清單
24. 公司供貨的合約副本以及供貨合約的說明
25. 行銷及廣告相關的合約副本
26. 建築合約及履行證明的副本
27. 秘密、保密及不可揭露的合約副本
28. 有關技術發展或取得的合約副本
29. 在原先商業作法之外的合約副本
30. 公司為其產品或服務提供保證的副本
31. 所有指出重要條件和當事人的主要合約或協議(不必然已揭露在這項條款)的清單
32. 對於列舉在第 1 項的所有合約，聲明不管當事人是否違約或宣稱要違約
33. 對於列舉在第 1 項的所有合約，聲明不管合約是否須要任何人同意轉讓或伴隨轉讓給貸方

備註：記得要包含所有的修正、時程、表格及附件，也要包含列舉在第 1 項的所有口頭合約的簡單說明

J. 員工、津貼及契約

1. 近期修正的公司員工福利計畫副本，包含所有的退休金、分紅、股份紅利、ESOPs、健康及福利計畫(包含退休者的健康)、獎金、股票選擇權、直接或延期的補償計畫及終止計畫，連同以下文件：
 - a. 適用於前述計畫的可實行信託合約；
 - b. 適用於前述計畫的 IRS 確認信件；
 - c. 適用於前述計畫的最近 IRS 表格，包含所有年度報告、時程及附件；
 - d. 概括計畫的說明，包含適用於前述計畫的修正；
 - e. 關於前述定義的福利計畫的最新精算評估；以及
 - f. 根據可行計畫而訂定有資金準備的資產及無資金準備的負債的時程表
2. 所有關於公司員工的雇用合約、顧問合約、終止合約、獨立承包商合約、保密合約，競業禁止合約的副本
3. 所有勞資雙方的薪水合約、相關計畫以及公司信託(若有的話)的副本，過去三年關於公司員工爭議的說明，現階段組織努力的成果以及未來勞資雙方薪水議價協商的計畫時程表清單
4. 所有員工手冊及政策簡介的副本(包含肯定性的行動計畫)
5. 所有 OSHA 測驗、報告或抱怨的副本
6. 所有正式員工調查的結果

K. 稅務問題

1. 公司前三閉合稅年及所有開放稅年的收益副本(包含所有聯邦及州的綜合所得稅報表)，附帶具有每一項次都有詳細記錄的工作表，用來調整財務報表上關於各期稅收的淨收入
2. 公司的稽核及收益代理報告；由國內收入署或其他稅務當局對於年度稅務稽核所建議的稽核調正：或公司提起的書面聲明拒付

3. 過去六年公司相關的清算文件及往來書信
4. 與公司相關的時間限制或延展的合約放棄條款
5. 描述聯邦、州及本地預扣公司賦稅及 FICA 的孳生利息
6. 公司有繳稅或有零售商客戶所在地銷售稅(詳細說明在每一管轄地的繳稅類別)的州、本地、外國管轄權的清單

L. 雜項

1. 任何重大附帶責任及重大未主張請求的相關資訊，以及任何已主張或未主張的違反員工安全及環境法的相關資訊，以及任何已主張或未主張的污染清理責任的相關資訊
2. 公司每項產品或服務的十個最大客戶及供應商清單
3. 每種商業區隔或產品線的主要競爭者清單
4. 根據聯邦破產法所提交或經確認的任何計畫或安排
5. 公司所有高階職員、主管、股東的清單
6. 所有的股東年度報告及年中報告以及與股東之間的任何其他通訊
7. 主要銀行業務和信用關係(包含每間銀行或其他金融機關的名稱，薪資事宜除外)、本質、限制以及任何明顯債務、貸款、信貸承諾或其他財務安排的當前狀態等所有說明
8. 所有產品、財產、商業風險、員工健康、公司團體保險及公司要員保險的總結及其相關說明
9. 過去三年公司在各州實行的任何 UCC、留置權、判決或訴訟研究的副本
10. 所有提交至證券交易委員會、州立藍天官方組織或外國證券交易所的副本檔案
11. 其他所有與公司財務狀況、商業、資產、遠景或商業關係有關的資訊

檢核表 5-10 專利徵信檢核表

(資料來源：亞太法學院/喬治華盛頓大學)

A.美國專利權

1.美國專利名單包括：

- a.專利號
- b.發行日
- c.發明者
- d.標題
- e.支付權利金之日期和需要支付權利一方之身分證明。

2.美國專利、補發專利和複審證明清單。

3.美國專利(在申請的有效期間，申請人和專利商標辦公室之間對每個專利之)所有書信的訴訟歷史。

4.美國專利申請名單包括：

- a. 申請編號
- b. 申請日期
- c. 發明者
- d. 標題。

5.每單一專利申請迄今之訴訟歷史副本。

6.公司和關於專利的專利律師之間的書信往來副本。

7.每單一公司在美國專利和商標辦公室歸檔揭露之副本。

B.外國專利權

1.外國專利名單，包括：

- a. 國家
- b. 獲准編號
- c. 獲准日期

- d. 有效期限
- e. 出版物編號
- f. 出版日期
- g. 發明者
- h. 標題
- i. 美國專利號碼與日期及相對應之外國專利號碼
- j. 支付權利金的日期，支付權利金的身分證明
- k. 負有專利維護權之外國代理商名稱和地址。

2. 外國專利申請名單，包括：

- a. 全國專利局
- b. 相關辦公室之投案及其日期
- c. 優先權日期
- d. 申請編號
- e. 申請歐洲專利局或 PCT 之編號
- f. 標題
- g. 外國專利申請及相對應之美國專利或申請編號和日期
- h. 權利金之日期
- i. 支付權利金之身分證明
- j. 負有專利維護權之外國代理商名稱和地址
- k. 申請之狀況

3. 外國專利和應用律師之間之書信往來副本

C. 執照

- 1. 表達專利權的名單，包括：
 - a. 持有人姓名和地址

- b. 日期
 - c. 專利許可證明清單
 - d. 適用授權之產品的描述。
2. 專利清單，包括：
- a. 專利授權人姓名和地址
 - b. 日期
 - c. 被授權的每個專利名單
 - d. 適用授權之產品的描述
 - e. 權利金義務
3. 明確約定合約及約束包括購買、用途和發行等產品要件，但需在符合專利權所有權的前提下。

D. 公司和員工之間之專利權關係

- 1. 表達專利權的公司和任何它的雇員之間對公司之合約清單。
- 2. 專利發明備忘錄應詳實記錄由公司專利律師可查詢之專利檔案之細節，同時瞭解公司選擇不給予專利之範疇
- 3. 給予專利發明相關政策之書面文件。
- 4. 重要員工名單、發明者和就業之其他合約。

E. 侵權請求權

- 1. 公司已傳送有關第三方侵害公司的商標、專利權或著作權之催告函。
- 2. 公司已收到有關侵害第三方權利或著作權之催告函。
- 3. 已發生之有關商標、專利權和著作權的任何訴訟。
- 4. 關於侵權訴訟之同意許可。
- 5. 清查相關技術的所有專利。

檢核表 5-11 商業秘密、服務標章或網域名稱之徵信檢核表

(資料來源：亞太法學院/喬治華盛頓大學)

A.公司文件

1.審視商標／服務標章／網域名稱等相關檔案：

- a. 在美國和國外之相關註冊、申請和轉讓資料，包括過程中的歷史資料
- b. 授權和登記的使用者協議和授權檔案，包括品質管理檔案
- c. 被駁回之申請案
- d. 抗議信(送出和收到)
- e. 訴訟檔案(例如，過去在法庭上曾有的侵權、爭執、要求或者語言可能會對未來的訴訟造成衝擊)
- f. 影響所有權或商標有效性的和解協議，行政處分或法院判決(例如，可以限制商標或其它貨品在地理上的擴展)
- g. 對於現有商標的搜尋報告檔案
- h. 併存使用協議。

2. 公司商標紀錄維護之電腦列印輸出，包括所有登記案、申請中案件、授權登記之使用者協議、轉讓等資料的維護及現況報告。

3.相關廣告，小冊子，包裝的和其他材料，包括：

- a. 可保護之樣式和次要標記，或者是其可能侵害第三方使用權之樣式和次要標記
- b. 可保護之口號，或者是其可能侵害第三方使用權之口號
- c. 商標的誤用(例如，使用通稱；「誤用或疏忽使用」)
- d. 可保護或侵權之商業包裝

4. 樣品產品

- a. 適當之商標印記
- b. 考慮對外形的可能保護措施

5. 商品名稱／網域名稱登記清單

B.侵權請求權

- 1.公司已傳送有關第三方侵害公司的商標、專利權或著作權之催告函。
- 2.公司已收到有關侵害第三方權利或著作權之催告函。
- 3.已發生之有關商標、專利權和著作權的任何訴訟文件。
- 4.有關侵權訴訟之同意許可。
- 5.已進行相關技術之所有專利清查的清冊。

檢核表 5-12 著作權徵信檢核表

(資料來源：亞太法學院/喬治華盛頓大學)

A. 登記與所有權

1. 公司擁有之美國著作權清單，包括：
 - a. 登記號碼
 - b. 登記日期
 - c. 登記名稱
 - d. 發表日期
 - e. 產生日期
 - f. 作者(若為匿名工作，需節錄參與此工作任一部分的聘用者。)
 - g. 涵蓋主題
 - h. 登記存置物之描述
 - i. 每位參與創作者的姓名與最近地址
 - j. 創作情境認定
2. 著作權登記與申請。
3. 所有未登記之相關工作清單。
 - a. 工作名稱與版本
 - b. 釋出日期
 - c. 先前版本及釋出日期
 - d. 創作日期

B. 使用執照

1. 對於公司擁有或使用的每一個創作，列出所有傳達著作權基本的使用執照，包括：
 - a. 所有權人的姓名與地址
 - b. 日期

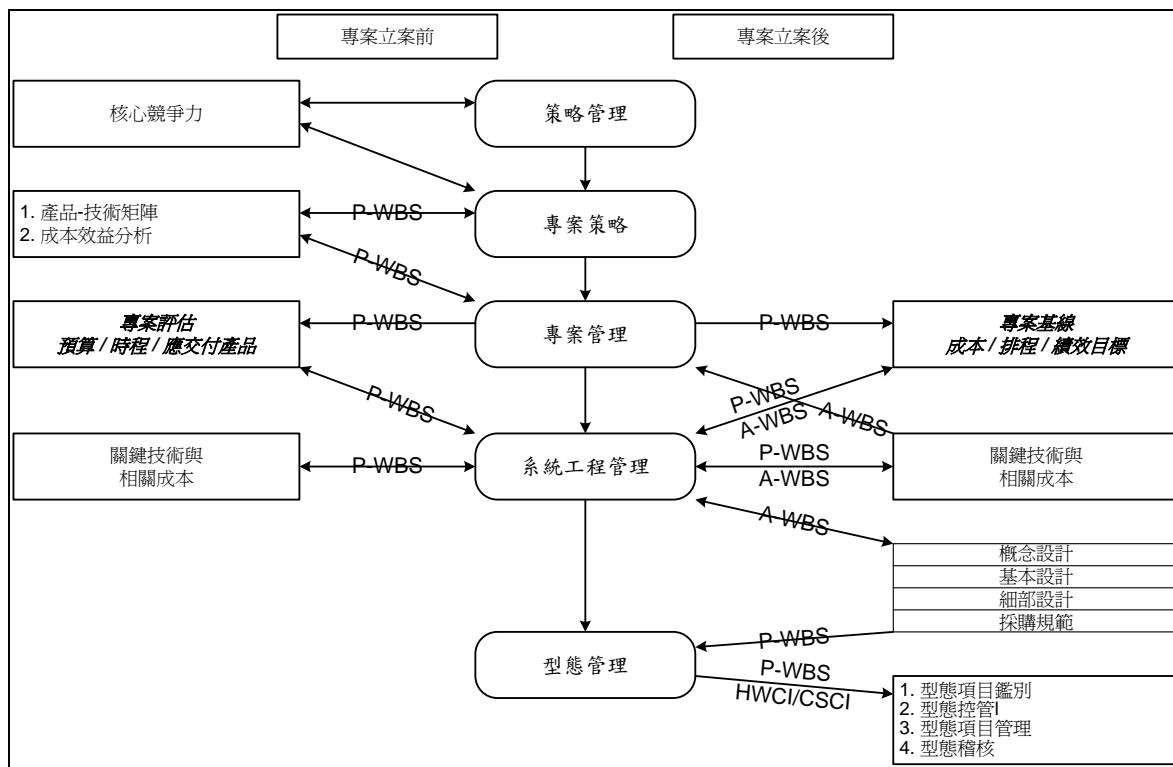
- c. 工作執照
- 2. 對於公司擁有或使用的每一個創作，列出所有傳達著作權至第三者的使用執照，
包括：
 - a. 所有權人的姓名與地址
 - b. 日期
 - c. 工作執照
- 3. 上面第 1 與第 2 項中的每一個使用執照。

C. 侵權請求項

- 1. 第三者侵害公司的商標，專利權，著作權，或公司送出的信件。
- 2. 公司收到侵害第三者商標，專利權，或著作權的信件。
- 3. 任何涉及商標專利權及著作權的訴訟資料。
- 4. 侵權訴訟的同意令。
- 5. 與技術相關之專利許可證清單。

檢核表 5-13 專案管理方法

(資料來源：Lee et al., JCIIE, 2007a)



*P-WBS: Product oriented Work Breakdown Structure

*A-WBS: Activity oriented Work Breakdown Structure

*HWCI: Hardware Configuration Item

*CSCI: Computer Software Configuration Item

檢核表 5-14 一般合約檢核表

(資料來源：Joseph Auer and Charles Edison Harris, Esq., 1983)

1 兩造雙方身份證明：

- a. 法定名稱和地址(包括部門)。
- b. 法人組織狀態，如果其中任一。
- c. 合約的簡短參考。

2 合約用語的定義：

- a. 在合約中附加說明之定義。
- b. 特別定義或詞彙部分。

3 產品和服務之定義：

- a. 硬體。
- b. 軟體。
- c. 支援系統。
- d. 特別轉換或其他服務。
- e. 教育、訓練和使用手冊。
- f. 設備分組全面名單(包括纜線長度和連接器)，包含表明數量、目錄和詳細描述。
- g. 參考「供應商保固」條款 (參照第 38 項，保固設備，重建或其他條款。)
- h. 參考及納入時程表和工作事項，包括供應商營銷材料、提案和用戶規格條款。
- i. 供應商和製造商的設備配置保固
- j. 遵守 ANSI 或其他標準。

4 合約之期限：

- a. 供應商和使用人之間之合約，要以有效日期作為依據 (「合約」之間如無明定有效契約，或在明定的時間內沒有供應商、使用人和其他方簽字，屬合約無效)。
- b. 相關產品或服務應從明定之租賃期間，或者在約定好之期限開始。

- c. 任何租務或租賃付款之開始日期，或者其他付款需注意合約開始之前之出租天數)。
- d. 注意租約或租務付款的增加或減少，或者其他付款事項。
- e. 相關產品或服務應從明定租賃期間，或者在約定好之期限結束。從最初之租務或租賃期間之終止日期，或在期間內之其他期限產品提供服務。
- f. 租約之終止日期或租務和其他付款。
- g. 選擇和要求在期限內、租約或者租務付款終止，包括更新期限之可行性和長度、可及性和價格之購買選擇和選擇通知期間和情況。
- h. 供應商和使用人之間之一有效契約應協議合約之終止日期。
- i. 合約期限明定早期終止取消日期、付款和協議，包括終止或取消日程表和相關懲罰(請參照「不履行」條款)。
- j. 明定在任何期限協議合約的終止調動數據資料、方案計畫支援結束之條款。

5 設備之承購：

- a. 來源、情況、和規格明細及其他項目之承購 (使用適合之用途號碼)。
- b. 任何出租人、經紀，或者其他方之義務，以獲取設備和其他項目以選定之價格，以指定的方式和在被表明的最後期限之前；提出和實際第三方購買合約和其相關版本。
- c. 包括所有義務或替補設備。
- d. 參考「不履行」條款，並且及時提供應商或對時事性無法執行之第三方相關補救措施。

6 績效最後期限：

- a. 特定績效最後期限，包含有或沒有之寬限期限，所有主要產品和服務。
- b. 哪些暫時之表現查核點切實可行(包含：交付、設施、測試和採納)。
- c. 參考「採納」，「交付和設施」，「不可抗力」，和「不履行」條款。

7 付款期限：

- a. 期初首款支付(儘可能低)。
- b. 期中支付(僅在符合期中驗收標準和最後期限情況下)。
- c. 期末支付。
- d. 對被授權人逾期付款之懲罰及利息部份(盡量避免或者排除帳單的爭執爭論存在)。
- e. 出租人或其他第三人應支付之費用，包含項目、產品或者服務(相關之合約)。
- f. 合約期限開始前之出租天付款(通常會避免)。
- g. 租務或在初始項目和任何更新期間(更新期限之租賃付款)。
- h. 用途關係之付款(超時，無限之用途或者其他)。
- i. 計算租約或租務預付或拖欠(計算介入年金類型之用途適當)。
- j. 租約或租務付款之分配決心(不與開始出租天份混淆)。
- k. 初始和更新期間租約或租務付款增加或減少，包括被預先決定之增加和減少、生活費和出租人要求之增加(包括金額、時間、通知期間和方法)。
- l. 逾期付款和出租人徵收之利息費，包括參考其應用，期限，預先之通知、揭露爭執和可適用之高利貸之限制。
- m. 其他付款是項目和費用，包括 UCC 檔歸檔費，法律費用，財務費用，等等(對陳述的數額或義務的極限；當心廣義或隱含之語言)。
- n. 用戶或供應商協議和任何第三方協議相似之定價供應。
- o. 租約或租務付款比較和對任何貸款協議、股票或者債務制約之其他義務之最大財務責任。
- p. 評估是否在美國財務會計準則委員會(Financial Accounting Standards Board, FASB)聲明第 13 項和相關的聯邦證券法會計標準之下租賃付款。
- q. 開發票之標準。
- r. 折價物或替代之百分比。
- s. 終止和意外事故之百分比。

- t. 出租人付款之金融機關。
- u. 對照參考「損失之保險和風險」條款。
- v. 對照參考「稅」條款。
- w. 對照參考「保險」條款。
- x. 對照參考「交付和安裝設置」條款。

8 稅：

- a. 對設備或購買銷售服務使用稅有義務之一方。
- b. 對任何記錄文件或在設備財務的其他稅有義務之一方。
- c. 對在租約的任何銷售和使用稅或租務和使用者的其他付款有義務之一方。
- d. 對在設備和軟件的個人財產稅有義務之一方。
- e. 對在供應商或出租人總或淨收入稅有義務之一方。
- f. 相關刑責義務，包括未如期交付稅款，而出租人無法履行其義務時，法律上必需將歸檔資訊回歸於使用人。
- g. 質詢所有稅能力和方法，包括配套上必需之合作。
- h. 稅之分配和回歸。
- i. 投資稅額扣抵(Investment Tax Credit, ITC)之適用性：
 - (1)設備之類型。
 - (2)製造商之保固(通過對用戶)。
 - (3)出租人提供使用人保固責任。
 - (4)根據使用人進階利用投資稅額扣抵的能力，來設定使用人實際和計劃之聯邦所得稅。
 - (5)根據安裝和接受日期之投資稅額扣抵使用時機。
 - (6)通過給保留投資稅額扣抵之使用人(以更低之租約或出租付款之形式)。
 - (7)在租賃期間，使用人對租賃人或出租人之投資者在投資稅額扣抵無影響力事件之義務。

(8)因投資稅額扣抵可能造成的損失，包含設備替換、折價和升級等。

(9)1981 年訂定，1982 年修訂之「安全港口」經濟復甦稅款法案。

9 交付和安裝設置：

- a. 運輸規格、方法和載體；發貨之通知。
- b. 負責對板條箱，運輸，交付，拆箱取出，地板設定和安置和設施，包括安排、付款、損失之保險和風險。
- c. 位置圖和安裝設置環境說明包括對位置圖和環境充足必要的負責歸屬、站點修改和供應商或製造者保單。
- d. 發貨、交付和安裝設置最後期限，包括可適用之日程表、協議終止、或者其他依賴日期之供應和調整在某些面向用戶之情況。
- e. 用戶的能力延遲或加速出貨、交付或者設施在指定的期限和條件。
- f. 在終止期限之前，提供所有分項的要求交付要件或者設施，來降低部份交付的風險。
- g. 依需要分別陳述各項所需之具體子系統、硬體或者軟體。
- h. 利用獨立合約協議以區分製造者和用戶，並在必要時由製造一方提出相關的協助及保護用戶的利益；在製造商或出租人或者相似的購買合約中提供使用者為第三方受益人，。
- i. 針對運送及組裝費用的給付和退款之條款，包括離岸價格(Free on Board, FOB)項目和要點，若有，則將加入用戶的總成本。
- j. 參考對照「不履行合約」條款。
- k. 參考對照「付款期限」條款。

10 驗收標準：

- a. 詳細的驗收測試和標準為：
 - (1)每個主要硬體子系統。
 - (2)每個主要軟體、系統和資助計畫。

(3)系統包括所有設備、軟體、系統和支援工作。

- b. 雙方責任為驗收的測試用於證明設施的安裝完成和系統接受狀況
- c. 將執行的具體驗收試驗，包括性能準則，一方負責對測試進行判斷。
- d. 若試驗失敗，將更正缺失和重新開啟測試。
- e. 檢驗替換設備或終止協議，檢視有或沒有對供應商、製造、出租人鎖定之罰則，或者其他一方因持續疏忽而驗收的試驗情形。
- f. 出租人和製造者同等的義務和責任；回溯出租人的期限或製造商或者其他第三方購買協議。
- g. 對照參考不履行合約的條款。

11 不履行合約和損傷：

- a. 「不履行合約」定義由供應商，使用戶和製造者或出租人，或者其他第三方；回溯出租人或製造商或者其他第三方購買協定，根據這樣協議確定對不履行合約的用戶的對應措施(考慮給用戶權力來決定不履行合約的狀況)。
- b. 注意及整頓財政或不履行合約付款和非財務性的不履行合約狀況。
- c. 法律和補救之聲明，包括損失的清算，特定的表現，法律的權利和在產權，實際中執行和損壞的罰則。
- d. 特別契約補救聲明，包括軟體的回收（在合法的通知狀況下），軟體原始代碼的委託託財產和發行。
- e. 破產事件的補救，在經濟情況上的重大的變化和相關的財務問題。
- f. 供應商出現意外情況下出租人補救條款，或者其他一方不得到必須之財務或需要的利率和期限。
- g. 責任的範疇，包括對罰則和間接損害的制約（這樣的範疇應該用來保護使用戶、供應商、出租人和製造者）。
- h. 參考對照「不可抗力」和「專利賠償」條款。
- i. 參考對照「保單」和參照有關對保單條款的範疇。

- j. 考量出租人或製造商不履行合約之後果，對用戶和所有代理人財務機構應負包含租約或分期付款進貨合約付款持續之義務。

12 「不可抗力」條款：

- a. 需經過仔細和謹慎之思考。
- b. 請務必確認條款也保護使用者。
- c. 參考對照「不履行」條款。

13 保固和風險損失：

- a. 在每個相關的期間，製造商的責任、出租人、或者其他供應商和使用者損失的風險和為得到保固（危險，責任），例如各式各樣的保險類型，即運輸，設施，測試，租賃期間，回歸到出租人(分開的項目，例如硬體，軟體，編程的工作和個人的數據，可能要求分開的面向)；根據購買協議和租約協調同等的風險和義務。
- b. 在每個相關的期間標示，是否於合約中明定如何處置損失事件，例如，運輸，設施，測試，租賃期間，責任應回歸到出租人方（包括義務替換，保固要求，包括公司選擇的核定，必要保險和強制政策付款和保險證明及付款。
- d. 基本的「意外發生」條款和付款計畫，包含：通知、修理、替換和終止選擇和責任；定義；取代，如果有任何並且與其他條款的關係，例如專利賠償。
- e. 允許使用者能藉由合法自主的保險或重要保險條例保障自身權益。
- f. 如有需要可從製造者、出租人，或者其他供應商必須的商業行為中斷或終止保險。
- g. 參考對照「付款期限」、「標題」、「保護」和「期限」條款。

14 參考使用指南和其他資料：

- a. 使用者收到的使用指南的數量和價格，若有需要應提供做法和價格的更新。
- b. 允許使用者能再生產供應商用指南和訓練材料(請詳列所有合約和版權告示要求)。
- c. 允許使用者在多個站點，靈活運用供應商提供之使用指南或材料；如有需要，允許使用者或第三方依相關用途販賣使用指南。

- d. 協調供應商、使用者和其他任何一方有關使用指南和相關資料之義務。
- e. 對照參考「教育」條款。
- f. 對照參考「所有權條款」。

15 供應商提供之教育和訓練：

- a. 數量、類型和價格(若有)。
- b. 參加者的參考次數、數字和可利用時間。
- c. 品質和數量(輔導員，背景的數字，訓練等等)。
- d. 附有供應商的訓練教材或小冊子，若有可納入訓練教材及參考。
- e. 使用者應用供應商教材作教學之條款。
- f. 對照參考「指南」條款。
- g. 對照參考「所有權」條款。

16 所有權和不揭露條款：

- a. 兩造雙方擁有其各式各樣的數據，計畫方案等等(應特別注意相關計畫，包含將被開發通過共同努力或將修改的計畫)。
- b. 兩造雙方知悉所有條約款項。
- c. 授權使用者或供應商相關的軟體和其他資料之條款。

17 軟體原始程式碼可獲得性：

- a. 提供專案原始程式碼，直接地或間接經由原始程式碼協議或轉讓協議。
- b. 對照參考「不履行」條款。

18 產權過渡：

- a. 產權的分配(通常出租人或出租人的投資者)之外，是否將由一個指定的一方擁有。
- b. 第三方產權保證書由從製造商到出租人產權過渡的條款 (通常在製造者或出租人購買協議有所約束或三方)協調出租人到使用者。
- c. 產權過渡的條款涵蓋相關使用指南、週邊設備或者使用者相關計畫。

- d. 供應商在被出租的設備上；包括在指定的標籤或設備上添加標示，明訂設備之歸屬。
- e. 提供和 UCC 相同的財務決算，表明出租人或被切割之一方(出租人或其他被切割的一方應在期限結束期間將文件歸檔及支付歸檔費用)。
- f. 在使用者和客戶資訊的充分保護情況下，由出租人或其他一方的合理的檢查設備條款。

19 雙方保證：

- a. 雙方各自保證合法組織的公司個體與另外一方達成協議(包括職責、秘書作業的證明和所需求的其他文獻)。
- b. 雙方各自保障並無要求政府認同允許單一方介入執行相關可適用的合約。
- c. 根據可適用的合約保障條款，不限於或由任何貸款，安全，財務禁止，契約的每單一方或其中任一種類的其他協議。
- d. 雙方各自保障並無現有或被威脅的法律訴訟存在，也沒有任何先前條約影響執行其義務及任何適用的協議。
- e. 參照「不履行」條款。

20 使用者保證：

- a. 保證和表示相關使用者的財務狀況(嚴密限制保證必要合約或其他財務之保單回溯與證券忠告)。
- b. 參考對照「雙方保證」條款。
- c. 參考對照「不履行」條款。

21 製造商保證：

- a. 在出租人或製造者購買協議或其他第三方協議時，全部轉嫁和任務對所有設備的用戶、軟體和系統保單（製造商和它可適用的會員的第三方受益人；考慮保單直接協議用戶、製造商或者其他第三方之間）。
- b. 緊密配合所有可適用的保固期限內明定用戶維修協議期限和價格。

- c. 在執行任何方案之前，評估所有製造商的設備、軟件和系統保單範圍等相關範疇)。
- d. 明定製造者或出租人或者其他供應商和全部轉嫁使用戶之保證條款(或直接製造者保單)產權保證書。
- e. 如果適用，請由保單製造商和全部轉嫁合適「ITC 保單」(或移轉製造者保單至使用者)。
- f. 製造商對使用者全部轉嫁為專利賠償保單條款 (或請移轉製造者保單); 保證用戶和它的會員有直接執行權利; 為製造者和其計畫提供相關防護供應的軟體。
- g. 製造商提供相關軟體保護專利賠償擔保，使用人得以此擔保作為依據，主張相關權利義務。
- h. 如果需要，設備符合美國國家標準協會(ANSI)或其他可適用的標準，並且根據製造商的出版規格(全部轉嫁執行至用戶)之條款。
- i. 對照參考「雙方保證」條款。

22 出租方保證或其他第三方供應商保證：

註：在許多交易情形之下，在這個清單的以下部分「出租人」是同樣適用的對其他第三方供營應商。

- a. 製造商可從出租人的特定責任獲得全部轉嫁之所有保單；並且在所有可適用的合約，包括出租人或製造者購買合約或其他第三方協合約協調保證相關有益條款。
- b. 出租人保證所有由製造商保證之項目，如果可行的話。
 - c. 在具有約束力的協定下，保證出租人再不遲於合約日期內，獲得足夠資金購買相關設備或製造商允許出租人獲得標案。
- d. 保單明定由出租人在雙方合議的期限和最後期限內，要求指定的財務購買設備，因而獲得此項設備。

- e. 保單明訂出租人自原始的租賃期間(或開始日期為付款租務)繼續開始日期通過最初和更新期限，出租人獲得設備的先得權和自由運用相關財務資料。
- f. 製造商保證被訂購的設備包括所有排列配置（需考慮從製造商至出租人之全部轉嫁責任）。
- g. 出租人獲得保障合理的限制，特別如果反對制約或否定任何代理人財政機關權利收到租約或租務付款(必須有效地保證代理人財政機關在「不可能或無法達成」條款和仍然保證出租人應保證之項目)。
- h. 參考對照「保固」條款。
- i. 參考對照「不履行」條款。

23 任務和承包：

- a. 明定供應商之權利和使用者全部或部分適用的合約；提供廣義解釋的任務給供應商，承包人在必要時需證明具有足夠財務，由供應商訂定其他任務和責任並要求供應商證明能夠完成所有任務。
- b. 在期間內，保障使用人任務和分租權利之靈活性和遇見不可預見情況之條款；在使用者的母公司、子公司和會員公司之中提供相關任務分配權利。
- c. 需要不同任務或分租允許，視使用者的義務和承包程度，允許用途不被不合情理的扣壓。
- d. 轉讓人或承包人对任務承包之義務。
- e. 在執行任務或承包期間繼續保留其權利義務。
- f. 再分配或者允許權利的承包，包含軟體的用途、計畫、指南、教育和其他材料和版權(包括在租賃期間結束之設備購買)。
- g. 協調任務與資金需求，包含出租人或製造商或者其他第三方之間之協議。
- h. 對照參考「維護」、「使用權利」和「移轉權利」條款。

24 維護和零件：

- a. 在保固期間維持基本義務，包括製造商提供之零件維護。

- b. 製造商或供應商之保固維護，提供基本配件給予使用者，(在標準利潤和期限)採納以後，包括合理之更新期間提供使用代理人或承包展延。
- c. 製造商保固期間應包含其他非保固期間。
- d. 製造商保固期間，包含製造商提供保固條件及價格。
- e. 在執行合約前與製造商談判最初的保固協議。
- f. 表示是否必須從製造商或其他選定的來源得到零件和供應，明定所有供應規格。

25 硬體和軟體修改：

- a. 使用者是否得以修改硬體或軟體。
- b. 加強修改之情況或費用。
- c. 對照參考「保固」、「維修」和「所有權」條款。

26 軟體功能改進：

- a. 供應商提供軟體更正和改進的義務：
 - (1)期限。
 - (2)價格。
 - (3)委託人義務。
- b. 罰則，如果使用人無法納入軟體強化更新。
- c. 主要軟體錯誤必須改正的時效。
- d. 軟體改進和更正保修期。
- e. 不造成系統失靈之改進或更正可能的規範條款。

27 權利使用：

- a. 相關限制，誰有權利操作並且/或者使用設備、軟件、計畫、指南和其他材料；提供使用人的母公司、子公司和會員公司之中充分靈活性；協調與任務和權利條款。
- b. 由出租人或製造者對任何使用限制的評估及購買協議或其他第三方協議和所有可適用的軟體使用協定(直接或間接地)。

- c. 對照參考「任務」、「維修」和「移轉權利」條款。

28 移轉權利：

- a. 使用者是否在指定所有局限和情況有權利移動設備;(直接或間接地強加由製造者、出租人、指定財務機構，或者其他個體)並且如果需要，保證可以符合所有必要條件。
- b. 軟體、計畫、使用指南和其他資料是否可以在超過一個使用地點或其他選擇使用的地點。
- c. 製造者、供應商，並且/或者出租人協助移動。
- d. 是否將可利用在新或供選擇的地點進行修護；包含所有重新修護或其他附加成本之可能修護協議。
- e. 對照參考「任務」、「修護」和「使用權利」條款。

29 容許操作失敗：

- a. 超出指定的極限期間或一個指定的期間操作的失敗事件之條款：
- (1).容許程度需要有一制性，並保護指定財務機構之任何權利金付款。
- (2).由出租人或製造者考慮信用的付款(包括信用或付款根據用戶或製造者維護協議)。
- (3).如果需要，考慮組分必須的製造商替換在第一年期間;考慮投資稅額扣抵涵義。
- (4).考慮擴大租約或其他期限(例如，租務或維護)對用戶不收費期間相等與失敗期間。
- (5).陳述確定專案失敗之方法，計算的容量和限制並通知承包人。
- b. 對照參考「不履行」、「維修」和「稅」條款。

30 賠償：

- a. 要求使用人仔細的制約保障或「無害」賠償；不允許使用人因自己的疏忽或遺漏或者不應該是義務的其他事態，強制供應商、出租人，或者其他一方賠償。

- b. 供應商基本的保護條款或出租人(並且更加重要地，任何指定務機構)反對損失與用戶的操作的設備；包括例外損失或其他適當例外情形(提供競技和限制在事件的時期和類型)。
- c. 根據使用人既有與提議的保險責任範圍評估所有賠償義務。
- d. 在合約期間，視投資稅額扣抵或出租人保留的其他課稅受益之情形，要求制約賠償對應出租人或出租人之投資者投資稅額扣抵損失之賠償。
- e. 評估在出租人或製造者購買協議和其他第三方協議包含的保護供應。

31 賠償損害的要求：

- a. 在任何租約或租賃協議，根據賠償損害的要求，在租賃期限中(與通常要求使用人必須從租賃期間和所有必需的付款)。
- b. 賠償損害的要求束縛出租人的任何代理人，包括任何代理人財務機構和出租人的其他一方(例如製造商在購買價之前是有償的)；提供合理的轉讓。

32 災害備援：

(具體指定可行性、費用、時間等等。)

33 設備裝卸和重新發運：

- a. 運輸規格、方法和載體；提供發貨的通知。
- b. 設備裝卸和重新發運，包含板條箱、運輸和交付，包括安排、付款、損失的保險和風險。
- c. 設備裝卸和重新發運最後期限。
- d. 如果要求用戶支付極限的重新發運、最大運輸距離並且/或者最大值費用條款。
- e. 製造者和使用者之間使用不同協議，必要時確定協助形式製造商的可及性對否則保護用戶的利益。

34 績效保證：

- a. 母公司、子公司或者會員公司得以公布出租人、製造者、其他供營商或者代理人財務機構之信用狀況、輔助狀態或者出租人或其他會員公司第三方對製造者之績效。
- b. 母公司、子公司或者會員公司在必要時得對第三方製造者、用戶或者代理人財務機構發布相關績效。
- c. 在必要時製造商的母公司、子公司或者會員公司得以對出租人、用戶或者代理人財務機構發布相關績效。
- d. 擔保公司或契約經紀人代表一方或另一方。

35 財政說明和揭露：

- a. 如果須要揭露財務或信用報告，相關條款應包含交付的狀態和，在合約有效期間向供應商、出租人，並且/或者代理人財務機構揭露其他資訊。
- b. 如果用戶需要，承租商、供應商，或者製造商需向用戶或其代理人財務機構提交相關財務報告，並提供在合約期間包括交涉、驗收測試和合約協議期限等相關資訊。
- c. 評估使用者的要內部情報包含介入的風險、回顧對使用者之間的證券忠告的揭露要求。

36 統一商業法(Uniform Commercial Code, UCC)之適用性：

- a. 出租人或製造者或者其他第三方採購員的適用性。
- b. 使用者直接採購之適用性。
- c. 使用者之二手設備折價物或銷售之適用性。
- d. 對經由雙方同意協議非產品交易之適用性(如果法律上有效)。
- e. 出租交易的適用性(如果法律上有效)。

37 管理之法律

38 通知

39 非強制事件或被延遲執行之棄權

40 部分失效協議

41 增修條約之施行

42 整體協議

- a. 書面協議包含代表性及相關協議有關與指定的製造商、出租人和其他供應商，提案和營銷材料參考及邀標書(Request for Proposal, RFP)。
- b. 合併相關指定條款(嚴密限制或阻止被合併之條款對使用者有利，在合約期滿以後)。
- c. 訂定供應租約或其他期限的生存在用戶或出租人、出租人或者製造商，並且/或者其他協議在結束之外並且/或者終止。

43 第三方受益人條款：

- a. 使用者和其母公司、子公司或者附屬公司成為第三方受益人（適用權利人與製造人）之合約條款。
- b. 使用者和其母公司、子公司或者附屬公司成為第三方受益人（適用使用人與出租人）之合約條款。
- c. 根據管理的州法條款仔細的評估第三方受益人。

44 法定簽名位置：

- a. 每一個當事人/公司法定名稱。
- b. 代表雙方當事人、公司執行協議人員之法定名稱和職稱。
- c. 特殊執行要求：代理人財務機構或其他第三方（公司決議）。

檢核表 5-15 智慧財產權強制實施檢核表

(資料來源：亞太法學院/喬治華盛頓大學)

1. 先期考量

- ☐ 何時進行專利侵權訴訟
- ☐ 為何進行專利侵權訴訟
- ☐ 主要針對商業目的考量
- ☐ 重要考量指標
 - 專利強度
 - 調查侵權者專利

2. 地方法院進行事項(美國)

- ☐ 先期揭露(平均 3~4 個月)
- ☐ 答辯
 - 申訴，回覆，反訴
- ☐ 義務揭露(第 26(a)條)

3 先期揭露(美國)

- ☐ 排期與程序議題
- ☐ 多方參與計畫揭露(第 26(f)條)
- ☐ 法官主持之陪審團先期會議(第 16(a)條)
- ☐ 法官對排期順序會議
- ☐ 程序提議

4.揭露期(美國)

- ☐ 事實搜集

- ☐ 過程：平均半年到一年半
- ☐ 揭露範圍
 - 請求項能否達成可接受的明顯程度
- ☐ 詢答
- ☐ 請求文件
- ☐ 證據揭示
- ☐ 請求許可
- ☐ 設備訪視

5. 馬克曼聽證(Markman Hearings) (美國)

- ☐ 局限於請求項架構論點
 - 決定請求項範圍
 - 通常每個論點有 2 到 4 個請求項
- ☐ 訴訟是由請求項範圍的侵權認定來決定
- ☐ 當訴訟決定請求項範圍為一單純法律問題時即行認可
 - 法官(非陪審團)決定請求項範圍
- ☐ 期程：平均 1~2 天
- ☐ 法官與地方訴論程序決定時程
- ☐ 通常為二個期程
 - 教程(教導法官相關技術)
 - 爭點
- ☐ 通常未設置證人或專家證人
- ☐ 明顯證據
 - 專利
 - 訴訟歷史

- 前案
- 字典
- 專家證詞
- 律師爭論

6.專家揭露(美國)

- ☐ 期程：平均 3-6 個月
- ☐ 技術專家
- ☐ 損害賠償專家(經濟與權利金專家)
- ☐ 專利法專家

7.綜整法院意見

- ☐ 由於事實顯著，故毋須判決
- ☐ 專利侵權主要部份
- ☐ 最疑似侵權檔案
- ☐ 任何時程皆可提起訴訟

8.審判(美國)

- ☐ 期程：平均 1-2 星期
- ☐ 通常為陪審團，但雙方可指定以法官審理
- ☐ 審判安排
 - ☐ 陳述
 - ☐ 證據
 - ☐ 辯論終結
 - ☐ 請求
 - ☐ 決定

9.在專利侵權中產生的損害(美國)

☐ 永久禁制令

4 部檢測

△可能補救的損害禁制令

△法律賠償不適格

△公共議題

△艱困平衡

☐ 金錢損失

合理權利金

損失利潤

判決前利息

律師費用與花費

10.上訴法院情形(美國)

☐ 美國聯邦巡迴上訴法院

針對專利訴訟的專屬管轄權

網址：www.fedcir.gov

☐ 上訴法院並未再審案件

☐ 上訴法院修正錯誤

事實錯誤

法律錯誤

11.上訴程序(美國)

☐ 在地方法院判決後 30 天內提請上訴

☐ 簡報

上訴人訴狀

被告訴狀

回覆訴狀

聯合附錄

☐ 時程(60, 40, 14 天)

12.專利侵權預算(美金)

☐ 地方法院(美國)

小案(USD 750K-1.5M)

中案(USD 1.5M-3M)

大案(超過 USD 3M)

☐ 上訴(美國) (USD 100K-200K)

檢核表 5-16 智財訴訟檢核表

(資料來源：亞太法學院/喬治華盛頓大學)

如何在 337 條款的調查中獲得勝訴

1. 先開發一個勝訴策略
2. 主題需清楚、簡要
3. 利用此訴訟的進行速度快捷來發揮優勢
4. 同時進行證據揭露
5. 法律顧問與客戶須建構一個良好溝通管道

針對 337 條款調查程序的勝訴策略

1. 建立良好溝通管道
2. 發展清楚且簡要的主題，並把握每個機會強調它們
3. 在許可視察階段獲取政府單位的協助
4. 證人來美作證
5. 實行證據揭示並避免制裁
6. 在陪審團審理階段展現說服證據

徵信步驟

第一步：確認相關智財權

- 專利與專利申請
- 商標
- 著作權
- 營業秘密
- 技術

第二步：產業分析

- 確認主要競爭對手及他們的智財佈局

- 進行最新研究了解潛在技術

第三步：使用智財的範圍與強度來進行保護

- 例如：專利是否能提供有效的保護範圍，或是很容易被迴避設計

- 是否有潛在的正當性及可實施性的爭議

- 暫時性及地域性的限制

第四步：證實資產可被開發

- 所有權人確認：是否有第三方專利權人？是否專利已被所有發明者簽核

- 有效性評估：先前技術搜尋；維持費繳納；不對等的實施

- 訴訟歷史：調查過去及現正進行的訴訟

第五步：調查未侵權之事實

- 確認產品的製造並未傷害他人智財權

第六步：評估代表性及擔保

- 賣方揭露所有調查信件；有威脅的訴訟；過去或現在的智財訴訟

- 賣方揭露所有關於智財資產正當性的資訊

- 例如：能使智財權無效的相衝突的專利

- 賣方確保在管理過程中沒有不對等實施，以免使智財權無效或不可實施

第七步：指定價值

- 預期收入來源

- 資產價格合理性

- 產業界可實施性

- 相對交易位置

陸、結論與建議

在全球化的營運環境下，如何接合企業策略與技術發展，以提昇企業競爭力，是我國產官學研各界一直在努力的目標。考量國內中小企業之營運環境，本報告運用一個從產業結構分析、市場結構分析、產品結構分析、技術結構分析、智財結構分析到成本結構分析的六層次模式，以做為新創事業智財管理之規劃與執行的參考架構，並運用在國外研習期間與產官學研各界廣泛接觸、討論與蒐集之新創事業智財管理資料，建構智財管理微笑曲線模式(SMILE)，並據以發展細部執行的檢核表，以提供我國中小企業一個快速可行之系統化方法。

本報告所建議之系統化方法以及所蒐集整理整理的檢核表，均僅是一個初步的工作，期能拋磚引玉以集思廣益，共同為我國中小企業之智慧財產管理貢獻一份心力。

未來期望本項經濟部科專計畫，能夠由跨領域科技管理研習班，逐步擴充至知識管理。擬建議擴充本項經濟部科專計畫之規模，由主辦單位號召產官學研各界，運用跨領域科技管理之理念以及所培養之人才，共同將智財管理，不論由上而下之智財管理制度與由下而上之系統化方法，均建立起一套公開之資訊系統，以提供我國企業界快速邁向知識經濟時代之核心——智財管理，共同為提升我國產業競爭力而努力。

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附錄：檢核表之英文版

Checklist 5-1 Start-Up Roadmap

(Source: University of Washington Technology Transfer Office)

1. Team

- ☐ Entrepreneur/team understands the risks involved in starting a company
- ☐ Entrepreneur/team understands and is willing to make the commitment necessary to make the company successful
- ☐ Initial startup team is identified, and the entrepreneur understands the gaps in the management team and is willing to add team members with different skill sets that are necessary to grow the company

2. Intellectual Property

- ☐ The IP is identified and the rights managed
- ☐ The IP is protected or process has begun
- ☐ The IP is scalable
- ☐ Team is willing to detect and enforce against infringers
- ☐ Freedom to operate: other IP is needed and is available for licensing
- ☐ The ABC company licensing process has been explained

3. Product/Market

- ☐ Application(s)/product(s) are possible from the technology (this is a true start-up opportunity, not a licensing deal)
- ☐ There is a large, addressable, and growing market for the application(s)/product(s)
- ☐ Potential customers have been identified and interviewed
- ☐ Competitors have been identified and analyzed

4. Strengths/Weaknesses/Opportunities/Threats (SWOT) analysis has been conducted
5. Education/Coaching/Mentoring
 - ☐ Appropriate mentors have been identified for key team members
 - ☐ Appropriate advisors have been identified for the startup team
6. Available Resources (See Resource List)
 - ☐ A variety of entrepreneurial resources have been identified to the team
 - ☐ Specific team needs have been discussed and specific resources have been identified to address those needs.
7. Company Formation

The business documents have been prepared:

 - ☐ Incorporation papers (filed with the state)
 - ☐ Business plan, financials, summary, presentation, website

The company is fundable:

 - ☐ There is a compelling value proposition
 - ☐ The business model is defined and makes sense
 - ☐ There is a clear exit strategy
 - ☐ Appropriate funding sources have been identified
8. License
 - ☐ The ABC company licensing process has been explained
 - ☐ Ongoing research needs have been discussed and agreed upon
 - ☐ A licensing contact has been identified (for negotiating the license)
 - ☐ The team has or is able to raise the funding necessary to obtain the license
 - ☐ A suitable license can be negotiated

Considerations in starting a new company

(Source: University of Washington Technology Transfer Office)

There are several important questions to ask when considering a startup:

1. How well developed is the technology? (Large companies in established industries can be unwilling to take a risk on unproven technology.)
2. Can I build the right team to develop the business?
3. Can multiple products or services be developed from the same technology?
(Companies often need more than one product to succeed long term.)
4. Does the technology, or products or services derived from it, have a sufficiently large competitive advantage and target market?
5. Are potential revenues sufficient to sustain and grow the company?
6. Who will invest in the company and why?
7. What are the capitalization requirements?
8. Have end users validated the need for the end product?

Innovators should also ask themselves the following questions:

1. Am I willing to do all that is needed and spend the time necessary to start a business that may require considerable time and resources?
2. What do I want out of the business?
3. Am I willing to accept risk?
4. Am I flexible and adaptable to change?
5. What role will I play in the new company?
6. Will I simultaneously hold positions in the new company and at the UW, or will I join the company full time?

Questions to be asked when first meeting with investor

Understanding the research/invention

1. What is the core invention?
2. What is actually new, not obvious?
3. Where and how is this technology used?
4. How did they devise the invention?
5. Where does this invention fit in the overall work/funding of the lab? Is it a mainline project? If not, relative importance/unimportance. If the primary inventor is a grad student or a postdoc, will the work continue after they graduate/depart university? Does the project have continued funding?
6. What was the motivation to solve the problem?
7. What made you decide to disclose this?
8. Why did you go down this path?
9. What are the pitfalls?
10. Where does the disclosure fit in their lab work (example: are reagents borrowed)?
11. What did they actually do...Provide background information. What is really there?

Publication and Prior Art issues

1. Are there any publications, past or upcoming, or any grant applications?
2. Ask them to provide relevant literature for prior art. How did they get their prior art?

Assessing the business opportunity for Cost/Benefit/Risk/ability to find Licensee

1. What development path is envisioned?
2. How much do they want to validate their targets?
3. Who would you go to buy it from?

4. What product/markets does this technology address? Is it completely novel?
How much translational work needs to be done in order to see the path to the product? How is the technology better than existing technologies used today in current products/current procedures, etc? What are the advantages of the technology compared to current standards? Any disadvantages?
5. Looking for licensee leads: Who have they been meeting with in industry?
What meeting contacts do they have from industry?

Conflict/Obligations review

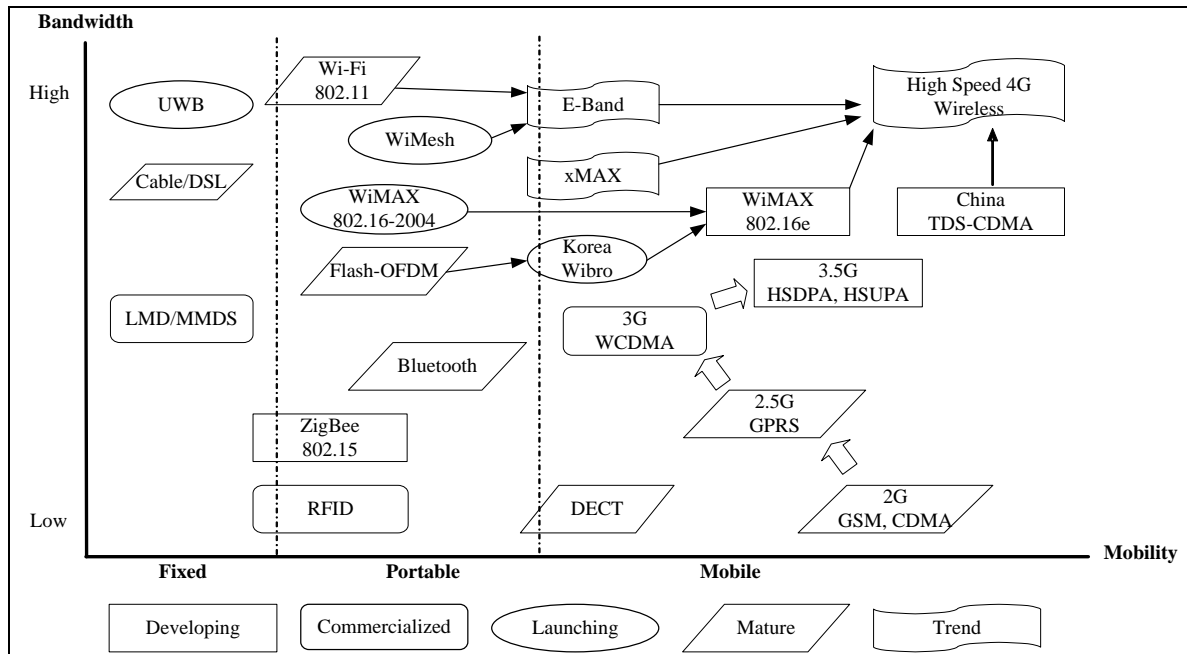
1. Are there any potential conflicts in the lab? Any other agreements?
2. What is going on in the lab and are there any “strings attached”?
3. What kind of affiliations do they have? (What other commitments: example, to whom have you sent reagents?)
4. Where do they have sponsorship (government or industry)?
5. Get the OSP grant numbers
6. For physicians/inventors treating patients: does this invention result in something the physician/inventor would use on his/her own patients? This is a trigger for Antikickback/Stark consultation with Clark.

IP Strategy and Patentability Assessment

1. Lay out expectations at the beginning.
2. Potential patent: How difficult will it be to patent? (Sometimes things are disclosed that are scientifically important but might not be ready for patent.)
3. Ask what their IP expectations are.

Checklist 5-2 Product-Technology Roadmap

(Source: Lee et.al., working paper, 2007)



The product-technology roadmap of wireless products

Checklist 5-3 Business Plan Checklist

(Source: <http://www.curiousoffice.com> Ten Steps to Launching an Early Stage Company)

1. Determine your main value-add.

- ☐ What is it that you're good at?
- ☐ Where is your unique advantage? Focus on that and build from there.
- ☐ When thinking about your initial offering don't over reach. If the first phase of your business plan is too broad by definition you'll end up doing things you don't understand very well. There are lots of inherent risks in doing new things. When you are new you often don't know what you don't know. It's fine to have a vision of where you do want to go, but it's important to have a very pragmatic starting point.
- ☐ Who are you like? Best way to figure out who you are is to triangulate with what you are replacing and who you are like.
- ☐ A winning strategy has the following components:
 - a) A great vision;
 - b) Place to start to day;
 - c) A plan to scale between the two.

You should think through your strategy in this order.

2. Evaluate the market and determine who your customer is and what they want to buy.

- ☐ Understand. Try to make it something they already understand versus something new you'd like them to consider.
- ☐ Need versus nice to have.

- ☐ A “need to have” is something that you are already planning to buy and all that you have to do is convince them to switch vendors or more than like take on an additional vendor.
- ☐ A “nice to have” is when you are trying to educate and convince somebody to buy something they are not buying presently or solve a need that they don’t currently have.
- ☐ In terms of who the customer is, you need to go beyond simply identifying the companies or organizations that buy, but who specifically in the organization that buys.

3. Determine your competitive strategy.

- ☐ How do you fit with in the context of the marketplace?
- ☐ What “play” should you run?
- ☐ Are you a trying to win a drag race or execute a fast follower play?
- ☐ Are you trying to pincer a competitor between an advanced or basic offering? You don’t need to start from scratch. There aren’t a million choices. There are only five based on how you assess the overall market landscape.

4. Determine your positioning.

- ☐ Why your version of the solution in this situation is better than anyone else’s? Translate this into messaging that your target audience find both easy to understand and memorable. Finally, roll all of this up into a case for your company or product based on the situation in the market that makes your product or company necessary. See the fourth bullet point on point number 1. Usually it is easiest to start with the man on the street positioning and double back on the “X that does Y for Z” construct. A favorite focus group question is to ask a customer, how do you describe this product or service to a friend?

5. Identify the key trends you're going to exploit.

- ☐ The way for a new product or service to displace an established service is to align with trends that are bigger than any one company.
- ☐ Major trends in technology include the exploding power of the micro-processor, the pc economy, and internet standards. In each instance the large established players resisted the trends and were either displaced or had to adapt to them.

6. Produce the product or a proto-type of the product at minimal cost and sell it to a few select customers.

- ☐ You'll learn a ton along the way. You'll validate your proposition and your target customer. You'll also get a much better understanding of your profit structure.

7. Fully deploy with a handful of customers.

- ☐ It is better to have one really good customer than three folks who are simply sampling your goods or services. The reason is that when you are a new company potential customers will want to call existing customers before they buy. It is really, really hard to scale a business if you don't have reference-able customers.

8. Acquire the next handful of customers primarily through word of mouth.

- ☐ Ask your first happy customer to refer you to three others. Make them happy.

9. Use PR and momentum to project your product, offering, or company into the market

- ☐ Win the thought leadership battle. If you've aligned with key trends in the marketplace, have happy customers, and are showing momentum you should be able to convince key influencers that your product's success is inevitable. If you've done this right than customers will start believing it is "when" and not "if". You than need to create the perception of overwhelming momentum so that you play to both the motivations of greed (e.g. the desire to get a head of their

competition) and fear (the anxiety about being left behind).

10. Scale.

- ☐ Here is where you have a Web Site, tighten up your product positioning, find additional partners etc.
- ☐ The key thing is to keep your cost structure low until you are ready to scale.
- ☐ At this point you should have a good sense of what your revenue is before you spend the dollars. Most new entrepreneurs try to scale too early before they really figure out what they are selling and who they are selling to. They spend a bunch of dollars on the front end and ironically it actually hurts their ability to refocus their business towards a better outcome.

Checklist 5-4 Spreadsheet for cash flow estimation

(Source: University of Washington Technology Transfer Office)

Cash Flow Data (MS. Excel Spreadsheet)

Google Inc.

Financial Statement Information (a)

(numbers in millions)

	Year Ended December 31:						6 Months Ended June 30:			
	<u>2001</u>	<u>% Sales</u>	<u>2002</u>	<u>% Sales</u>	<u>2003</u>	<u>% Sales</u>	<u>2003</u>	<u>% Sales</u>	<u>2004</u>	<u>% Sales</u>
Revenues	86.4	100.0%	439.5	100.0%	1,465.9	100.0%	559.8	100.0%	1,351.8	100.0%
Cost and Expenses	<u>75.5</u>	87.3%	<u>253.0</u>	57.6%	<u>1,123.5</u>	76.6%	<u>370.3</u>	66.2%	<u>1,025.6</u>	75.9%
Income from Operations	11.0	12.7%	186.5	42.4%	342.5	23.4%	189.5	33.8%	326.3	24.1%
Other Income (Expense), Net	<u>(0.9)</u>	-1.0%	<u>(1.6)</u>	-0.4%	<u>4.2</u>	0.3%	<u>0.7</u>	0.1%	<u>(1.2)</u>	-0.1%
Income Before Taxes	10.1	11.6%	184.9	42.1%	346.7	23.6%	190.2	34.0%	325.1	24.0%
Provision for Income Taxes	<u>3.1</u>	3.6%	<u>85.3</u>	19.4%	<u>241.0</u>	16.4%	<u>132.2</u>	23.6%	<u>182.0</u>	13.5%
Net Income	7.0	8.1%	99.7	22.7%	105.6	7.2%	58.0	10.4%	143.0	10.6%
						0.0%		0.0%		0.0%
Depreciation and Amortization	14.2	16.4%	29.0	6.6%	55.0	3.8%	22.7	4.1%	54.7	4.0%
Capital Expenditures	13.1	15.1%	37.2	8.5%	176.8	12.1%	60.6	10.8%	182.3	13.5%
Increase in Working Capital	2.5	2.8%	(5.0)	-1.1%	6.3	0.4%	(25.9)	-4.6%	(20.7)	-1.5%
Number of Shares Outstanding (fully diluted)	186.8		220.6		256.6		253.0		265.2	
Average Tax Rate	30.6%		46.1%		69.5%		69.5%		56.0%	

Source: Google, Inc. IPO Prospectus, August 18, 2004, p. 6, F-7.

Cash Flow Projections (MS. Excel Spreadsheet)

	A	B	C	D	E	F	G	H	I	J	K	L
1	Assumptions:	Percent of?	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
2	Revenue Growth Rate	Prior Rev.	1.00	1.00	0.90	0.80	0.70	0.60	0.45	0.30	0.20	0.10
3												
4	Cost and Expenses	Sales	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5	Other Income (Expense), Net	Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Provision for Income Taxes	Inc. Bef. Taxe	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
7	Depreciation and Amortization	Sales	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
8	Capital Expenditures	Sales	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
9	Increase in Working Capital	Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10												
11	Terminal Value Growth Rate	0.04										
12	Discount Rate	0.20										
13												
14	Projections:	Actual										
15		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
16	Revenues	1,465.9	2,932	5,864	11,141	20,054	34,092	54,547	79,093	102,821	123,385	135,723
17	Cost and Expenses	1,123.5	2,199	4,398	8,356	15,040	25,569	40,910	59,320	77,116	92,539	101,793
18	Income from Operations	342.5	733	1,466	2,785	5,013	8,523	13,637	19,773	25,705	30,846	33,931
19	Other Income (Expense), Net	4.2	0	0	0	0	0	0	0	0	0	0
20	Income Before Taxes	346.7	733	1,466	2,785	5,013	8,523	13,637	19,773	25,705	30,846	33,931
21	Provision for Income Taxes	241.0	257	513	975	1,755	2,983	4,773	6,921	8,997	10,796	11,876
22	Net Income	105.6	476	953	1,810	3,259	5,540	8,864	12,853	16,708	20,050	22,055
23												
24	Depreciation and Amortization	55.0	117	235	446	802	1,364	2,182	3,164	4,113	4,935	5,429
25	Capital Expenditures	176.8	352	704	1,337	2,406	4,091	6,546	9,491	12,338	14,806	16,287
26	Increase in Working Capital	6.3	0	0	0	0	0	0	0	0	0	0
27												
28	Net Cash Flow (Years 1-10)		242	484	919	1,654	2,813	4,500	6,525	8,483	10,179	11,197
29	Terminal Value											72,782
30												
31	NPV(1 through 10)	\$12,080										
32	NPV(TV)	\$11,755										
33	Total Firm Value	\$23,834										
34	Shares Outstanding	279.3										
35												
36	Price Per Share	\$85.34										

Summary Projections (MS. Excel Spreadsheet)

Assumptions:

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Revenue Growth Rate	1.00	1.00	0.90	0.80	0.70	0.60	0.45	0.30	0.20	0.10

Actual

(dollars in millions)

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Revenues	1,465.9	2,932	5,864	11,141	20,054	34,092	54,547	79,093	102,821	123,385	135,723
Net Cash Flow (Years 1-10)		242	484	919	1,654	2,813	4,500	6,525	8,483	10,179	11,197

Checklist 5-5 Patent Checklist

(Source: Finnegan, Henderson, Farabow, Garrett & Dunner, LLP)

1. Promptly document the conception of your invention to get the earliest priority date:
 - ☐ Write down a description of your invention
 - ☐ Then, sign and date that document
 - ☐ Have a trusted non-inventor who can understand the invention read, sign, and date the document as well
2. Promptly complete the inventive process to get the earliest priority date:
 - ☐ Make the invention
 - ☐ Test the invention
 - ☐ Document the making and testing and sign and date the document
 - ☐ Have a trusted non-inventor who can understand the invention sign and date the document as well
3. Don't take steps that cause rights to be lost before securing your patent rights:
 - ☐ Don't publish information about the invention
 - ☐ Don't offer the invention for sale
 - ☐ Don't publicly use the invention
 - ☐ Don't disclose the invention to others without a confidentiality agreement
4. Protect your invention by keeping it as trade secret or promptly filing for a patent to get the earliest priority date:
 - ☐ If you file for a patent, tell your lawyer about:
 - ☐ who contributed to the invention
 - ☐ the best ways to make and use the invention
 - ☐ any related publications, presentations, disclosures, uses, offers for sale made by

you

- ☐ any related publications, presentations, disclosures, uses, offers for sale made by others
- ☐ any unfavorable test results or other unfavorable information
- ☐ any infringers and their infringing activity
- ☐ sponsors such as government agencies which may create patent obligations
- ☐ mark the products “patent pending” only after you file your patent application
- ☐ Don’t tell others about your communications with your lawyer

5. Maintain your patent rights:

- ☐ Keep track of due dates for payments and other actions to be taken
- ☐ pay maintenance fees to keep your patent in force
- ☐ Make your patented products with the applicable patent numbers to put infringers on notice
- ☐ Monitor products sold by others to see if they infringe your patent
- ☐ Promptly decide whether to take action against infringers

6. Investigate whether you infringe the rights of others before commercializing your invention:

- ☐ Your patent gives you the right to exclude others from making, using, or selling your invention
- ☐ Your patent does not give the right to make, use, or sell your invention
- ☐ You can still infringe other patents even if you have a patent

Record of Invention (ROI) Evaluation Checklist

(Source: University of Washington Technology Transfer Office)

ROI#:		Date ROI Received:	
ROI Title:			
Date Completed:		Completed By:	
		Mark one with an "X"	
General Evaluation		Yes	No
1. Is more information required from the inventor(s) to complete the ROI?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there any experimental data suggesting that the invention works?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does marketing the invention require further experimental verification?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the inventor(s) have funding to carry out research on the invention?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is there likely to be a commercially significant U.S. market for this technology?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Do government rights exist which severely limit the primary market (eg. Military)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Is this invention an antibody, reagent, or software?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. If all shaded boxes are checked for 1-7, skip to #17. Otherwise complete 9-16.			
		Check if applicable	
Specific Evaluation			
9. Currently licensed, optioned, or in negotiations with a company	<input type="checkbox"/>	<input type="checkbox"/>	
10. Research plan from investigators outline required experiments	<input type="checkbox"/>	<input type="checkbox"/>	
11. Funding agency has indicated that the grant is, or will be, approved	<input type="checkbox"/>	<input type="checkbox"/>	
12. Inventor(s) has/have resolved such issues in the past	<input type="checkbox"/>	<input type="checkbox"/>	
13. No further research needed	<input type="checkbox"/>	<input type="checkbox"/>	
14. There is a significant secondary market	<input type="checkbox"/>	<input type="checkbox"/>	
15. Potential market is unusually large	<input type="checkbox"/>	<input type="checkbox"/>	
16 Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
Patent Evaluation		Yes	No

17. Should it be submitted to the License/Patent meeting for evaluation?	<input type="checkbox"/>	<input type="checkbox"/>
18. Approved at the License/Patent meeting	<input type="checkbox"/>	<input type="checkbox"/>
Disposition		Check if applicable
19. Provisional patent application to be filed		<input type="checkbox"/>
20. Copyright registration to be filed		<input type="checkbox"/>
21. To be marked as tangible research property (i.e. antibodies or reagents)		<input type="checkbox"/>
22. Additional information requested from Inventor(s).		<input type="checkbox"/>
Specify:		
23. Not a sufficiently promising investment for UW at this time.		<input type="checkbox"/>
24. Subject matter deemed inappropriate for patenting pathway.		<input type="checkbox"/>

Patentability Checklist

(Source: University of Washington Technology Transfer Office)

ROI#:		Date ROI Received:	
ROI Title:			
Date Completed:		Completed By:	
Have the Inventors:	No	Yes	If yes, date
1. published papers or abstracts relating to this technology?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. submitted such papers or abstracts for publication?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. received grants/contracts for research related to this technology?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. applied for such grants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. offered to sell a product or service related to this technology?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. sold or otherwise transferred such product to others?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. or others put a related product/service into routine use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. or others identified any other possible bar dates?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explain:			
Prior Art Search			
		key words/strategy/sub-class	
9. USPTO	<input type="checkbox"/>		
10. WIPO	<input type="checkbox"/>		
11. PubMed	<input type="checkbox"/>		
12. Other:	<input type="checkbox"/>		
	<input type="checkbox"/>		
Possible Prior Art	Yes	No	
13. Has potentially relevant art been discovered in search?	<input type="checkbox"/>	<input type="checkbox"/>	
14. Are there references cited by the Inventors?	<input type="checkbox"/>	<input type="checkbox"/>	
Patent Evaluation	Yes	No	
15. File provisional patent application	<input type="checkbox"/>	<input type="checkbox"/>	
16. File non-provisional patent application	<input type="checkbox"/>	<input type="checkbox"/>	
17. Conduct patentability opinion	<input type="checkbox"/>	<input type="checkbox"/>	

Checklist 5-6 Trade Secret Checklist

(Source: Asia Pacific Legal Institute / George Washington University)

Checklist for Trade Secrets and Confidential Business Information

1. Know the advantages of protecting information as trade secrets or confidential business information.
 - ☐ Can protect information not protected by patents, copyrights, or other forms of intellectual property
 - ☐ Can be protected forever if they are kept secret, unlike patents or copyrights having limited terms of protection
 - ☐ Can protect additional information at a relatively low cost once security measures are in place
2. Determine what can be protected
 - ☐ Useful information not generally known or readily obtained that provides a competitive business advantage
 - ☐ Information protected from use or disclosure by employment agreements, non-disclosure agreements, or principles of unfair competition and misappropriation.
3. Identify types of business information to protect
 - ☐ Technical information
 - Processes, formulas, programs, etc.
 - Machinery design and specifications
 - Material components and their sources
 - Experimental constants, chemical formulas
 - Software (source and object code), design schematics, related information
 - Research and development reports, plans, objectives, budgets
 - ☐ Organizational information

- Employee information, including key employee acquisitions, terminations, etc.
- Information about reorganizations, mergers acquisitions, expansions
- In-house equipment and facilities
- Policy manuals
- Financial information
 - Financing plans, budget information, banking arrangements
 - Cost of good, supplier identities, ordering patterns, etc.
 - Pricing models and discounts
 - Identities of equity or debt holders, share holdings, capital contributions
 - Distributor and dealer discounts
 - Information about management information systems
- Marketing/Sales information
 - Potential and actual customer or client lists
 - Licensing information
 - Market research and forecasts, plans, budgets
 - New product developments and geographic penetration
 - Product delivery schedules and strategies, shortages, etc.
 - Methods of operation/doing business
 - Sales manuals and training materials
- 4. Use reasonable precautions to block access to everyone except those with a need to know
 - Control the trade secret or confidential business information
 - shred obsolete or excess copies of confidential documents
 - Provide notice on information as being trade secret (proprietary and confidentiality legends)

- encrypt electronic mail
- Obtain written employee (and consultant) agreements
 - Include confidentiality provision
 - Include a non-compete provision
- Control premises- use traditional “lock and key” precautions
- Control employees and visitors
 - Maintain records of those with access
 - Conduct entrance interviews and obtain certifications from employees
 - Send periodic reminders and inventories
 - Inform departing employees of their obligations
- Use notice measures to put everyone on notice as to what information is considered to be a trade secret or confidential business information

Comparison of the Various Types of Intellectual Property Protection

(Source: Finnegan LLP)

Feature/Type	Patent	Trademark	Copyright	Trade Secret
Subject	Machine, manufacture, process, or composition of matter	Designation of source of goods or services	Expression of an original work	Any product, technique, or device that is relatively secret and provides a business advantage
Scope	Structure and function	Designation of source	Expression	Confidential relationship
Term	20 years from filing	Indefinite, as long as it is used	100 years from creation	Indefinite, as long as it remains confidential
Registration	Required	Optional	Optional	None
Requirements	Useful, new, unobvious	distinctive	Original	Relatively confidential, useful,

	and described property			relationship
Cost	\$ 15,000 to \$ 25,000 (moderately complex) \$ 25,000 to \$ 40,000+ (complex)	\$ 2,500 to \$ 4,500	\$ 150 to \$ 250	Depends o measures needed to preserve confidentiality
Exclusive Rights	Unauthorized making, use, sale, offer to sell, or importation	Likelihood of confusion	Copying	Unauthorized use
Enforcement	Federal law only	State and federal	Federal law only	State law primarily; some federal law
Typical Remedies	Injunction, compensatory damages, enhanced damages only in a “exceptional” case	Injunction, seizure and destruction, compensatory damages, enhanced damages	Injunction, seizure and destruction, compensatory damages, statutory damages	Injunction, compensatory damages, punitive damages

Checklist 5-7 Technology Transfer Checklist
(Source: University of Washington Technology Transfer Office)

1. Technology Evaluation

—The scientist's perspective:

What's the next?

- a. Just a cool research?
- b. License the technology to exist company?
- c. Form a new company?

Something needs to take into consideration

- a. Where was this application? Research → Development → Prototype → Product
 - Whose job to decide?
 - Different roles and opinions between professor and office of technology transfer (OTT).
- b. What is “proof-of-concept”, did we have it? (close to prototype)
- c. What investments, order of magnitude, necessary to get across this evolutionary line?

For Technology Transfer, usually the priority will be

- a. Patent cost recapture
- b. Milestone payment
- c. Equity

What was happening first?

- a. Gave academic talks leading to industrial contacts
- b. Had some advisors in to consider “Newco”
- c. Made some contacts with venture capital groups

Challenges at Public Universities

- a. Turnover of personnel
- b. Competing goals between Newco and OTT for patent cost recapture vs. potential equity (e.g. pressure to license)
- c. Slowness (inherent feature of public universities)
- d. Investment in new patent activity

Challenges with Venture Capitalists

- a. What stage was the technology? Early stage in some regards, but aren't they supposed to contribute something other than money?
- b. Is platform technology bad? (need to focus on specific application)
- c. Bright people, but mix of biology, chemistry, medicine, hard to grasp
-Lots of nodding heads, then idiotic questions (you only have 30 mins)
- d. Investment in new patent activity
- e. Technology Inventors must be involved in tech transfer or start-up venture
- f. Constantly question whether you have a company concept or licensing opportunity
- g. Persist in focused VC and industry relationships
- h. Be open to alternative technical applications and business plans

— The Technology Transfer Perspective

Moving good ideas to the market

- a. Identifies technologies with commercial potential
- b. Facilitates the distribution and adoption of software and digital innovation
- c. Assesses the strength of available intellectual property protection
- d. Selects best innovations for investment
- e. Seeks companies interested in developing the technology

- f. Negotiates contracts to transfer rights
- g. Manages obligations/reporting to sponsors of research

Commercialization Process

- a. Identify innovations that have commercial applications
- b. Establish ownership rights in the innovation
- c. Transfer rights to companies for further development
 - faculty/researcher startups
 - established companies
- d. Ensure diligent development of products
- e. Reinvest proceeds into research

Challenges in Commercializing University Research

- a. Technology not developed in response to a market
- b. Technology is embryonic- uncertain if it will work outside of the lab
- c. Significant financial risk to bring embryonic technology to market

Technology Assessment

- a. Does the product/service fill the market needs? How?
- b. How does the solution compare to alternate solutions available to them?
- c. How does the solution compare to not taking any action?
- d. Does the product/service provide a strong positive return on investment?
- e. Does the market recognize the need for the product/services?
- f. Can we help the market recognize the need for the product/services?
- g. Can we help define a compelling value proposition?

Process of Managing Inventions

- a. Inventors submit Record of Invention (ROI)
- b. Evaluates the innovation for :

- Organization legal interest
 - Patentability
 - Potential markets
 - Possible licensees
- c. Pursues patents and licensing for promising inventions

Invention Review Process

- a. Evaluate obligations to others
- Carefully review all contractual arrangements
 - Obligations on intellectual property arise through:
 - (1) Research agreements
 - (2) Material transfer agreements
 - (3) Confidentiality agreements
 - (4) Consulting projects
 - (5) Gifts and donations
 - (6) Collaboration and co-inventorship
 - May limit licensing opportunities
 - May make patent pursuit infeasible
- b. Evaluate technical/Scientific merits
- Invention is adequately defined in the disclosure
 - Supporting data are available
 - Utility shown (i.e. solve a problem)
 - Technology state-of-the-art
 - Core technology vs. improvement
 - Features of invention vs. limitations
- c. Evaluate commercial potential

- Ability to define product
- Perceived need
- Identity of end user
- Market size
- Believable large upside potential
- Maturity of market
- Competitive advantage/product differentiation
- Are there better, faster, cheaper alternatives
- Prospective licensee(s) identified
- Liability consideration
- Predisposition of industry to licensing
- Long product cycle
- d. Evaluate the inventor profile
 - Cooperative
 - Will serve as champion
 - Industry contacts
 - Realistic expectations
 - Success with previous disclosures
 - Credibility/recognition in the field
 - Research funding and direction
 - Conflict obligations? (need to know)
- e. Evaluate proprietary position
 - Patentability of invention (novel, usual, not obvious)
 - Known prior art exists
 - Publications (abstract, journal article, manuscripts submitted)

- Grant applications that describe invention
- U.S. and foreign rights available (No public disclosure prior to filing application)
- Breadth and strength of claims
- Freedom to practice (other dominant patents)
- Possibility of reverse engineering
- Ability to withstand litigation(avoid interference)
- No prior claims to the invention
- f. Evaluate stage of development
 - Only a concept? (clinical data?)
 - Reduced to practice/prototype available
 - Manufacturing feasibility (facilities, equipment, etc)
 - Clinical data available
 - Inventor cooperation required
 - Critical information missing
- g. Evaluate commercialization pathways
 - License to an established company
 - License to a start up company
 - Access to venture capital
 - Package with other technologies
 - License to inventor
- h. Evaluate financial analysis
 - Cost of patenting
 - Financial support from licensees
 - Possibility of sponsored research

- Anticipated license/royalty income

Market analysis

- a. Collect information from the inside
 - ◆ Talk to the inventors for their knowledge
 - ◆ Use a Questionnaire to determine:
 - (1) Types of products and services
 - (2) All possible applications of the invention
 - Advantage of the invention
 - (1) Cheaper to make or use
 - (2) Easier to make or use
 - (3) Safer
 - (4) Faster
 - (5) More precise
 - (6) Lasts longer
 - (7) More reliable
 - Analyze competitive landscape
 - (1) Existing products and services that are similar
 - (2) Identify companies in these fields
 - (3) Identify market segmentation
 - (4) Identify pricing structure
- b. Collect information from the outside
 - Industry databases and company profiles
 - (1) NERAC
 - (2) Knowledge Express
 - (3) Medical Device Register

(4) Thomas Register for American Manufacturers

(5) Marketing Reports (if budget allows)- Frost & Sullivan, Theta Reports

- Trade Journals
- Internet Searches
- SEC filings (EDGAR database)
- SBIR grant recipients
- Press releases

c. Estimate Market

- Identify potential users/customers
- Research to estimate size of the market segment
- Estimate growth of market
- Estimate quantity of product per user per year
- Identify competitive and substitute products available

Making patent decisions at University

a. Inventions selected for investment by university have:

- No unmanageable obligations to others
- Solid technical merit
- Strong patent protection available
- Good prospects of a commercial market and business opportunity

b. Reasons not to patent

- Idea is not an invention
 - * Doesn't qualify as eligible subject matter
 - * Publication created bar to patenting
- Idea is not fully developed
 - * Enablement issues

- * Patent issuance unlikely
- Patent position is not commercially useful
 - * Narrow coverage
 - * Dominated by other patents
- No viable commercial market
 - * No promising application
 - * Small market for products
- No interested commercial investors
 - * Return on investment not sufficient
 - * Difficulties in making products
- University does not fully own the work
 - * Inventors haven't assigned rights
 - * Commercial co-owner (if applicable) doesn't want license

Effectiveness of patents

- a. Valid if challenged
- b. Enforceable
- c. Difficult to invent around
- d. Technology area not moving so fast that patents are not relevant
- e. Licensing does not require a court decision or if firms cross-license with competitors

Notices

- a. University technologies are early stage, developed with no economic goals in mind; through evaluation of university legal interest, patentability and potential markets is essential to reduce the risk of the university investment in IP
- b. Strong patent position is crucial to transfer university developed technologies

2. Technology Valuation

— Industry Standards, Rating/Ranking Methods, and Rules of Thumb

Risks in the Development of Early Stage Technologies

- a. Technology risk
 - Doesn't work outside of the lab
 - Can't make robust enough
 - Doesn't scale
 - Cost to manufacture
 - Efficacy (regulatory hurdles)
- b. Market risk
 - Competition
 - Acceptance (doesn't meet a need)
 - Reimbursement

What are valuable?

Technology; Rights; Patents; Proprietary Technical Information; People; Hardware; Facilities; Software; Customers; Suppliers; External Licenses; Patent Prosec. & Maint.; Patent Enforcement; Infringement Defense; R&D/Consulting; Regulatory Support; General Reps/Warrants

How is the IP being paid?

Lump Sum (paid up); Royalties (rates, structure, base); Upfront payments; Annual payments; Milestone payments; Option payments; Royalty adjustments; IP rights; Purchase commitments; Equity; Patent P&M; Patent Enforcement; Infringement Defense; Reps; Warranties, Indemnification; Public Recognition

Categories of discovery

- a. Revolutionary - satisfies a long-felt need or creates a new industry – 7-14%
- b. Major improvement – significantly enhances product superiority in an existing product , process, or service- 5-9%
- c. Minor improvement – creates an incremental improvement in an existing product or service – 3-6%

Financial Consideration Factors

- a. Significance of invention (the number is only for reference)
 - very high (~100%)
 - high (~50%)
 - medium (~24%)
 - low (~18%)
- b. Status of development at time of license(the number is only for reference)
 - Enabled (~100%)
 - Not enabled (~78%)
- c. Fees by type of license (life sciences; the number is only for reference)
 - Therapeutic (~100%)
 - Diagnostic (~50%)
 - Research (~24%)

Royalties

- a. Both parties share risk
- b. Considerations
 - Rate
 - Base
 - Deductions

3. Methods of Valuation

a. Industry standards

- Database with common knowledge of previous deals

(1) Sources of industry standard data

- * Surveys
- * Proposed or established norms
- * Shopped term sheets
- * News, publications
- * Journals, proprietary databases
- * Published agreements
- * Court cases
- * Lifelong or organizational learning

(2) Limitations of Survey Data

- * Wide ranges in each category
- * Limited connection between the royalty rate and the value of the IP
- * Royalty base not clear
- * Other payments not correlated with the royalty rate
- * Limited info on other terms of license
- * Vagueness of categories
- * Dated information
- * Biased by survey segment
- * Stage of development not known

- Comparables

b. Rating/Ranking Method

- Scoring criteria

(1) Market size

(2) Patent protection

(3) Stage of development

- Scoring system – 1 to 5 , Hi/Med/Low
- Scoring scale
- Weighting factors
- Decision table

Example of rating/ranking method (just for illustrative)

	Weighting (1-3)	Score (1-5)	Weighted Score
Market size	2	3	6
Patent protection	3	2	6
Stage of development	3	4	12
Score of exclusivity	2	5	10
Duration	2	3	6
Total score			40

- * Subjective
- * Important values
- * Directly links to market value
- * Useful for preparing for marketing or negotiations
- * Useful way to defend valuation and process to stakeholders

c. Rules of thumbs → Experience

- Total value or gain
- Apportionment or split of revenues (25% rule)
- Investment
- Risk
- Royalty (25% of profits)
- Down payment
 - * 5-10% of total value
 - * one year's mature royalties

- Exclusive vs. nonexclusive – 1/2
- Minimum royalties – 25 to 50% of expected royalties
- d. Discounted cash flow
- e. Monte Carlo Method
- f. Auction Method
- g. 25 % Rule
 - Advantages
 - Feeling of fairness
 - Based on benefits
 - Can be basis for an early agreement
 - Disadvantages
 - 25% is not always appropriate
 - Base varies
 - Needs pro forma income statement
 - Not much guidance for up front payments

References:

1. AUTM Technology Transfer Practice Manual, Vol.2
2. Valuation and Pricing of Technology-Based Intellectual Property, Razgaitis, Wiley and Sons, 2003.
3. Getting to Yes, Fisher et al., Penguin Books, 1981, 1991.

The Georgia-Pacific Factors

Georgia Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116, (S.D.N.Y. 1970)

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty
2. The rates paid by the licensee for the licensing of the patent in suit
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold
4. The licensor's established policy and marketing paradigm to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales
7. The duration of the patent and the term of the license
8. The established profitability of the product made under the patent; its commercial success; and its current popularity
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results
10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who use the

invention

11. The extent to which the infringer had made use of the invention; and any evidence probative of the value of that use
12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions
13. The portion of the realizable profit that should be credited to the invention as distinguished from any patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer
14. The opinion testimony of qualified experts
15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily been trying to reach an agreement; that is, the amount which a prudent licensee – who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention – would have been willing to pay as a royalty and yet be able to make a profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

Checklist 5-8 Technology/Licensing Negotiation Checklist

(Source: University of Washington Technology Transfer Office)

Due Diligence Goals

- What is the economic value of the intellectual property?
- Does the target company have clear title to the intellectual property?
- Does the target company have potential liability for infringing the intellectual property of others?

Main Sections of a Licensing Agreement

- ☐ Preliminary Provisions
- ☐ Administrative Issues
- ☐ Business Parameters
- ☐ Legal Clauses

Preliminary Provisions

- ☐ “Whereas...”
- ☐ Name and address of parties, location, corporate affiliations
- ☐ Intention to acquire rights to . . .

Administrative Issues

- ☐ Definition of terms
- ☐ Preparation, delivery, accounting of IP and maintenance
- ☐ Documentation

Define the Intellectual Property

- ☐ Patents
- ☐ Pending Applications
- ☐ Foreign Counterparts
- ☐ Know-how

☐ Improvements

Business Parameters

☐ License, maintenance fees, royalty terms.

☐ Outline of materials to be provided by licensor

Legal Clauses

☐ Effective dates of contract

☐ Termination

☐ Export control

☐ Governing Laws

☐ Indemnification

☐ etc.

ROI: Record of Invention

ROI #:		ROI Title:		
Manager:		Licensee:		
			Check when complete	
Confirm ownership/ freedom to license			<input type="checkbox"/>	
Are inventor assignments complete?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the license exclusive?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are there co-owners?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
Are there any funding obligations?			Yes <input type="checkbox"/>	No <input type="checkbox"/>
Inform inventors of licensee interest – discuss exclusivity and field of use			<input type="checkbox"/>	
Draft Term Sheet			<input type="checkbox"/>	
Discuss draft term sheet with licensing group prior to sending			<input type="checkbox"/>	
Discuss final term sheet with group			<input type="checkbox"/>	

Send email to inventors regarding Significant Financial Interest	<input type="checkbox"/>	
Have reading partner review draft prior to sending	<input type="checkbox"/>	
Check patent costs to date; inform licensee with warning	<input type="checkbox"/>	
Have IPA set up IPP agreement number, insert in license	<input type="checkbox"/>	
Review drafts with reading partner (and group) as appropriate	<input type="checkbox"/>	
Is university getting equity?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Send Treasury draft of subscription agreement and equity section(s) of license for review	<input type="checkbox"/>	
Send Treasury final version of subscription agreement for execution	<input type="checkbox"/>	
Send Treasury executed copy of license with terms redacted	<input type="checkbox"/>	
Who has review final draft?	<input type="checkbox"/>	
Has IP agent review final draft and prepare originals for signing	<input type="checkbox"/>	
Who has signed originals	<input type="checkbox"/>	
Complete agreement summary and Financial Directive	<input type="checkbox"/>	
Let inventors know agreement is executed	<input type="checkbox"/>	
Notes:		

Checklist 5-9 Due Diligence of Licensor Checklist

(Source: http://www.urgentbusinessforms.com/due_diligence.asp)

- 1 Profit and loss statements
- 2 Tax returns
- 3 Lawsuits, liens, judgments
- 4 Equipment and machinery
- 5 Product liability
- 6 Environmental issues & liability
- 7 Employee plans
- 8 Employee information
- 9 Permits and licenses
- 10 Zoning and construction
- 11 Customer lists
- 12 Contracts and noncompete agreement
- 13 Organizational documents and more.

Due Diligence Checklist

(Source: <http://constable.net/participants/giffc/writings/duediligence.html>)

A. Organization of the Company

1. Describe the corporate or other structure of the legal entities that comprise the Company. Include any helpful diagrams or charts. Provide a list of the officers and directors of the Company and a brief description of their duties.
2. Long-form certificate of good standing and articles or certificate of incorporation from Secretary of State or other appropriate official in the Company's jurisdiction of

incorporation, listing all documents on file with respect to the Company, and a copy of all documents listed therein.

3. Current by-laws of the Company.
4. List of all jurisdictions in which the Company is qualified to do business and list of all other jurisdictions in which the Company owns or leases real property or maintains an office and a description of business in each such jurisdiction. Copies of the certificate of authority, good standing certificates and tax status certificates from all jurisdictions in which the Company is qualified to do business.
5. All minutes for meetings of the Company's board of directors, board committees and stockholders for the last five years, and all written actions or consents in lieu of meetings thereof.
6. List of all subsidiaries and other entities (including partnerships) in which the Company has an equity interest; organizational chart showing ownership of such entities; and any agreements relating to the Company's interest in any such entity.

B. Ownership and Control of the Company

1. Capitalization of the Company, including all outstanding capital stock, convertible securities, options, warrants and similar instruments.
2. List of security holders of the Company (including option and warrant holders), setting forth class and number of securities held.
3. Copies of any voting agreements, stockholder agreements, proxies, transfer restriction agreements, rights of first offer or refusal, preemptive rights, registration agreements or other agreements regarding the ownership or control of the Company.

C. Assets and Operations

1. Annual financial statements with notes thereto for the past three fiscal years of the Company, and the latest interim financial statements since the end of the last fiscal year

and product sales and cost of sales (including royalties) analysis for each product which is part of assets to be sold.

2. All current budgets and projections including projections for product sales and cost of sales.
3. Any auditors (internal and external) letters and reports to management for the past five years (and management's responses thereto).
4. Provide a detailed breakdown of the basis for the allowance for doubtful accounts.
5. Inventory valuation, including turnover rates and statistics, gross profit percentages and obsolescence analyses including inventory of each product which is part of assets to be sold.
6. Letters to auditors from outside counsel.
7. Description of any real estate owned by the Company and copies of related deeds, surveys, title insurance policies (and all documents referred to therein), title opinions, certificates of occupancy, easements, zoning variances, condemnation or eminent domain orders or proceedings, deeds of trust, mortgages and fixture lien filings.
8. Schedule of significant fixed assets, owned or used by the Company, including the identification of the person holding title to such assets and any material liens or restrictions on such assets.
9. Without duplication from Section D below, or separate intellectual property due diligence checklist, schedule of all intangible assets (including customer lists and goodwill) and proprietary or intellectual properties owned or used in the Company, including a statement as to the entity holding title or right to such assets and any material liens or restrictions on such assets. Include on and off balance sheet items.

D. Intellectual Property

List of all patents, trademarks, trade names, service marks and copyrights owned or used by the Company, all applications therefore and copies thereof, search reports related thereto and information about any liens or other restrictions and agreements on or related to any of the foregoing.

E. Reports

1. Copies of any studies, appraisals, reports, analyses or memoranda within the last three years relating to the Company (i.e., competition, products, pricing, technological developments, software developments, etc.).
2. Current descriptions of the Company that may have been prepared for any purpose, including any brochures used in soliciting or advertising.
3. Descriptions of any customer quality awards, plant qualification/certification distinctions, ISO certifications or other awards or certificates viewed by the Company as significant or reflective of superior performance.
4. Copies of any analyst or other market reports concerning the Company known to have been issued within the last three years.
5. Copies of any studies prepared by the Company regarding the Company's insurance currently in effect and self-insurance program (if any), together with information on the claim and loss experience thereunder.
6. Any of the following documents filed by the Company or affiliates of the Company and which contain information concerning the Company: annual reports on SEC Form 10-K; quarterly reports on SEC Form 10-Q; current reports on SEC Form 8-K.

F. Compliance with Laws

1. Copies of all licenses, permits, certificates, authorizations, registrations, concessions, approvals, exemptions and other operating authorities from all governmental authorities

and any applications therefor, and a description of any pending contemplated or threatened changes in the foregoing.

2. A description of any pending or threatened proceedings or investigations before any court or any regulatory authority.
3. Describe any circumstance where the Company has been or may be accused of violating any law or failing to possess any material license, permit or other authorization. List all citations and notices from governmental or regulatory authorities.
4. Schedule of the latest dates of inspection of the Company's facilities by each regulatory authority that has inspected such facilities.
5. Description of the potential effect on the Company of any pending or proposed regulatory changes of which the Company is aware.
6. Copies of any information requests from, correspondence with, reports of or to, filings with or other material information with respect to any regulatory bodies which regulate a material portion of the Company's business. Limit response to the last five years unless an older document has a continuing impact on the Company.
7. Copies of all other studies, surveys, memoranda or other data on regulatory compliance including: spill control, environmental clean-up or environmental preventive or remedial matters, employee safety compliance, import or export licenses, common carrier licenses, problems, potential violations, expenditures, etc.
8. State whether any consent is necessary from any governmental authority to embark upon or consummate the proposed transaction.
9. Schedule of any significant U.S. import or export restrictions that relate to the Company's operations.
10. List of any export, import or customs permits or authorizations, certificates, registrations, concessions, exemptions, etc., that are required in order for the Company

to conduct its business and copies of all approvals, etc. granted to the Company that are currently in effect or pending renewal.

11. Any correspondence with or complaints from third parties relating to the marketing, sales or promotion practices of the Company.

G. Environmental Matters

1. A list of facilities or other properties currently or formerly owned, leased, or operated by the Company and its predecessors, if any.
2. Reports of environmental audits or site assessments in the possession of the Company, including any Phase I or Phase II assessments or asbestos surveys, relating to any such facilities or properties.
3. Copies of any inspection reports prepared by any governmental agency or insurance carrier in connection with environmental or workplace safety and health regulations relating to any such facilities or properties.
4. Copies of all environmental and workplace safety and health notices of violations, complaints, consent decrees, and other documents indicating noncompliance with environmental or workplace safety and health laws or regulations, received by the Company from local, state, or federal governmental authorities. If available, include documentation indicating how such situations were resolved.
5. Copies of any private party complaints, claims, lawsuits or other documents relating to potential environmental liability of the Company to private parties.
6. Listing of underground storage tanks currently or previously present at the properties and facilities listed in response to Item 1 above, copies of permits, licenses or registrations relating to such tanks, and documentation of underground storage tank removals and any associated remediation work.

7. Descriptions of any release of hazardous substances or petroleum known by the Company to have occurred at the properties and facilities listed in response to Item 1, if such release has not otherwise been described in the documents provided in response to Items 1-6 above.
8. Copies of any information requests, PRP notices, "106 orders," or other notices received by the Company pursuant to CERCLA or similar state or foreign laws relating to liability for hazardous substance releases at off-site facilities.
9. Copies of any notices or requests described in Item 8 above, relating to potential liability for hazardous substance releases at any properties or facilities described in response to Item 1.
10. Copies of material correspondence or other documents (including any relating to the Company's share of liability) with respect to any matters identified in response to Items 8 and 9.
11. Copies of any written analyses conducted by the Company or an outside consultant relating to future environmental activities (i.e., upgrades to control equipment, improvements in waste disposal practices, materials substitution) for which expenditure of funds greater than \$10,000 is either certain or reasonably anticipated within the next five years and an estimate of the costs associated with such activities.
12. Description of the workplace safety and health programs currently in place for the Company's business, with particular emphasis on chemical handling practices.

H. Litigation

1. List of all litigation, arbitration and governmental proceedings relating to the Company to which the Company or any of its directors, officers or employees is or has been a party, or which is threatened against any of them, indicating the name of the court, agency or other body before whom pending, date instituted, amount involved, insurance

coverage and current status. Also describe any similar matters which were material to the Company and which were adjudicated or settled in the last ten years.

2. Information as to any past or present governmental investigation of or proceeding involving the Company or the Company's directors, officers or employees.
3. Copies of all attorneys' responses to audit inquiries.
4. Copies of any consent decrees, orders (including applicable injunctions) or similar documents to which the Company is a party, and a brief description of the circumstances surrounding such document.
5. Copies of all letters of counsel to independent public accountants concerning pending or threatened litigation.
6. Any reports or correspondence related to the infringement by the Company or a third party of intellectual property rights.

I. Significant Contracts and Commitments

1. Contracts relating to any completed (during the past 10 years) or proposed reorganization, acquisition, merger, or purchase or sale of substantial assets (including all agreements relating to the sale, proposed acquisition or disposition of any and all divisions, subsidiaries or businesses) of or with respect to the Company.
2. All joint venture and partnership agreements to which the Company is a party.
3. All material agreements encumbering real or personal property owned by the Company including mortgages, pledges, security agreements or financing statements.
4. Copies of all real property leases relating to the Company (whether the Company is lessor or lessee), and all leasehold title insurance policies (if any).
5. Copies of all leases of personal property and fixtures relating to the Company (whether the Company is lessor or lessee), including, without limitation, all equipment rental agreements.

6. Guarantees or similar commitments by or on behalf of the Company, other than endorsements for collection in the ordinary course and consistent with past practice.
7. Indemnification contracts or arrangements insuring or indemnifying any director, officer, employee or agent against any liability incurred in such capacity.
8. Loan agreements, notes, industrial revenue bonds, compensating balance arrangements, lines of credit, lease financing arrangements, installment purchases, etc. relating to the Company or its assets and copies of any security interests or other liens securing such obligations.
9. No-default certificates and similar documents delivered to lenders for the last five (or shorter period, if applicable) years evidencing compliance with financing agreements.
10. Documentation used internally for the last five years (or shorter time period, if applicable) to monitor compliance with financial covenants contained in financing agreements.
11. Any correspondence or documentation for the last five years (or shorter period, if applicable) relating to any defaults or potential defaults under financing agreements.
12. Contracts involving cooperation with other companies or restricting competition.
13. Contracts relating to other material business relationships, including:
 - a. any current service, operation or maintenance contracts;
 - b. any current contracts with customers;
 - c. any current contracts for the purchase of fixed assets; and
 - d. any franchise, distributor or agency contracts.
14. Without duplicating Section D above or the intellectual property due diligence schedule hereto, contracts involving licensing, know-how or technical assistance arrangements including contracts relating to any patent, trademark, service mark and copyright

registrations or other proprietary rights used by the Company and any other agreement under which royalties are to be paid or received.

15. Description of any circumstances under which the Company may be required to repurchase or repossess assets or properties previously sold.
16. Data processing agreements relating to the Company.
17. Copies of any contract by which any broker or finder is entitled to a fee for facilitating the proposed transaction or any other transactions involving the Company or its properties or assets.
18. Management, service or support agreements relating to the Company, or any power of attorney with respect to any material assets or aspects of the Company.
19. List of significant vendor and service providers (if any) who, for whatever reason, expressly decline to do business with the Company.
20. Samples of all forms, including purchase orders, invoices, supply agreements, etc.
21. Any agreements or arrangements relating to any other transactions between the Company and any director, officer, stockholder or affiliate of the Company (collectively, "Related Persons"), including but not limited to:
 - a. Contracts or understandings between the Company and any Related Person regarding the sharing of assets, liabilities, services, employee benefits, insurance, data processing, third-party consulting, professional services or intellectual property.
 - b. Contracts or understandings between Related Persons and third parties who supply inventory or services through Related Persons to the Company.
 - c. Contracts or understandings between the Company and any Related Person that contemplate favorable pricing or terms to such parties.

- d. Contracts or understandings between the Company and any Related Person regarding the use of hardware or software.
 - e. Contracts or understandings regarding the maintenance of equipment of any Related Person that is either sold, rented, leased or used by the Company.
 - f. Description of the percentage of business done by the Company with Related Persons.
 - g. Covenants not to compete and confidentiality agreements between the Company and a Related Person.
 - h. List of all accounts receivable, loans and other obligations owing to or by the Company from or to a Related Person, together with any agreements relating thereto.
22. Copies of all insurance and indemnity policies and coverages carried by the Company including policies or coverages for products, properties, business risk, casualty and workers compensation. A description of any self-insurance or retro-premium plan or policy, together with the costs thereof for the last five years. A summary of all material claims for the last five years as well as aggregate claims experience data and studies.
23. List of any other agreements or group of related agreements with the same party or group of affiliated parties continuing over a period of more than six months from the date or dates thereof, not terminable by the Company on 30 days' notice.
24. Copies of all supply agreements relating to the Company and a description of any supply arrangements.
25. Copies of all contracts relating to marketing and advertising.
26. Copies of all construction agreements and performance guarantees.
27. Copies of all secrecy, confidentiality and nondisclosure agreements.
28. Copies of all agreements related to the development or acquisition of technology.

29. Copies of all agreements outside the ordinary course of business.
30. Copies of all warranties offered by the Company with respect to its products or services.
31. List of all major contracts or understandings not otherwise previously disclosed under this section, indicating the material terms and parties.
32. For any contract listed in this Section I, state whether any party is in default or claimed to be in default.
33. For any contract listed in this Section I, state whether the contract requires the consent of any person to assign such contract or collaterally assign such contract to any lender.

NOTE: Remember to include all amendments, schedules, Checklists and side letters. Also include brief description of any oral contract listed in this Section I.

J. Employees, Benefits and Contracts

1. Copies of the Company's employee benefit plans as most recently amended, including all pension, profit sharing, thrift, stock bonus, ESOPs, health and welfare plans (including retiree health), bonus, stock option plans, direct or deferred compensation plans and severance plans, together with the following documents:
 - a. all applicable trust agreements for the foregoing plans;
 - b. copies of all IRS determination letters for the foregoing qualified plans;
 - c. latest IRS forms for the foregoing qualified plans, including all annual reports, schedules and attachments;
 - d. latest copies of all summary plan descriptions, including modifications, for the foregoing plans;
 - e. latest actuarial evaluations with respect to the foregoing defined benefit plans; and
 - f. schedule of fund assets and unfunded liabilities under applicable plans.

2. Copies of all employment contracts, consulting agreements, severance agreements, independent contractor agreements, non-disclosure agreements and non-compete agreements relating to any employees of the Company.
3. Copies of any collective bargaining agreements and related plans and trusts relating to the Company (if any). Description of labor disputes relating to the Company within the last three years. List of current organizational efforts and projected schedule of future collective bargaining negotiations (if any).
4. Copies of all employee handbooks and policy manuals (including affirmative action plans).
5. Copies of all OSHA examinations, reports or complaints.
6. The results of any formal employee surveys.

K. Tax Matters

1. Copies of returns for the three prior closed tax years and all open tax years for the Company (including all federal and state consolidated returns) together with a work paper therefor wherein each item is detailed and documented that reconciles net income as specified in the applicable financial statement with taxable income for the related period.
2. Audit and revenue agents reports for the Company; audit adjustments proposed by the Internal Revenue Service for any audited tax year of the Company or by any other taxing authority; or protests filed by the Company.
3. Settlement documents and correspondence for last six years involving the Company.
4. Agreements waiving statute of limitations or extending time involving the Company.
5. Description of accrued federal, state and local withholding taxes and FICA for the Company.

6. List of all state, local and foreign jurisdictions in which the Company pays taxes or collects sales taxes from its retail customers (specifying which taxes are paid or collected in each jurisdiction).

L. Miscellaneous

1. Information regarding any material contingent liabilities and material unasserted claims and information regarding any asserted or unasserted violation of any employee safety and environmental laws and any asserted or unasserted pollution clean-up liability.
2. List of the ten largest customers and suppliers for each product or service of the Company.
3. List of major competitors for each business segment or product line.
4. Any plan or arrangement filed or confirmed under the federal bankruptcy laws, if any.
5. A list of all officers, directors and stockholders of the Company.
6. All annual and interim reports to stockholders and any other communications with security holders.
7. Description of principal banking and credit relationships (excluding payroll matters), including the names of each bank or other financial institution, the nature, limit and current status of any outstanding indebtedness, loan or credit commitment and other financing arrangements.
8. Summary and description of all product, property, business risk, employee health, group life and key-man insurance.
9. Copies of any UCC or other lien, judgment or suit searches or filings related to the Company in relevant states conducted in the past three years.
10. Copies of all filings with the Securities and Exchange Commission, state blue sky authorities or foreign security regulators or exchanges.

11. All other information material to the financial condition, businesses, assets, prospects or commercial relations of the Company.

Checklist 5-10 Due Diligence of Patent Checklist

(Source: Asia Pacific Legal Institute / George Washington University)

A. U.S. Patent Rights

1. List of U.S. Patents including:
 - a. patent number
 - b. issue date
 - c. inventors
 - d. title
 - e. dates on which maintenance fees were paid and identity of parties paying maintenance fees.
2. Copy of each listed U.S. Patent, Reissue Patent and Reexamination Certificate.
3. Prosecution history of each U.S. patent (all correspondence between applicant and the Patent and Trademark Office during pendency of the application for each patent).
4. List of U.S. Patent Applications including:
 - a. application number
 - b. filing date
 - c. inventors
 - d. title.
5. Copy of the prosecution history of each patent application to date.
6. Correspondence between the Company and its patent lawyers regarding patents.
7. Copy of each Disclosure Document filed by the Company in U.S. Patent and Trademark Office.

B. Foreign Patent Rights

1. List of foreign patents, including, for each patent:
 - a. country

- b. grant number
 - c. grant date
 - d. expiration date
 - e. publication number
 - f. publication date
 - g. inventors
 - h. title
 - i. number and date of U.S. patent to which the foreign patent is a counterpart
 - j. dates on which annuities were paid, identity of parties paying annuities
 - k. name and address of foreign agent responsible for maintenance of the patent.
2. List of foreign patent applications, including for each application:
- a. national patent office in which pending
 - b. filing date in that office
 - c. priority date
 - d. application number
 - e. number of European Patent Office application or Patent Cooperation Treaty application giving rise to the application inventors
 - f. title
 - g. number and date of U.S. patent or application to which the foreign patent application is a counterpart
 - h. dates on which annuities were paid
 - i. identity of parties paying annuities
 - j. name and address of foreign agent responsible for maintenance of the patent
 - k. status of the application.

3. Correspondence from and to the Company and its attorneys regarding each foreign patent and application.

C. Licenses

1. List of licenses conveying patent rights to a third party, including:
 - a. name and address of licensee
 - b. date
 - c. list of each patent licenses
 - d. description of product to which license applies.
2. List of licenses that convey patent rights to the Company, including:
 - a. name and address of licensor
 - b. date
 - c. list of each patent licensed
 - d. description of the Company's product or process to which the license applies
 - e. royalty obligations
3. Agreements covering purchase, use and distribution of components which are critical to success of the Company's products but which are subject to patent rights (or other proprietary rights).

D. Patent Rights As Between the Company and Its Employees

1. List of agreements between the Company and any of its employees conveying patent rights to the Company.
2. Invention development memoranda (which recites details about patentable inventory for review by the Company's patent lawyer and which could tell about areas the Company has chosen not to patent).
3. The Company's written policy on patenting inventions, if any.
4. List of key employees/inventors and employment and other agreements with same.

E. Infringement Claims

1. Demand letters that the Company has sent regarding third party infringement of the Company's trademarks, patent rights or copyrights.
2. Demand letters that the Company has received regarding infringement of third party rights or copyrights.
3. Files for any litigation that has occurred involving the trademarks, patent rights and copyrights.
4. Consent orders regarding infringement litigation.
5. List of all patent clearance searches that have been conducted relating to the technology.

Checklist 5-11 Due Diligence of Trade Secret/Service Marks/Domain Names Checklist

(Source: Asia Pacific Legal Institute / George Washington University)

A. Company's Files

1. Review of trademark/servicemark/domain name files:
 - a. U.S. and foreign registration, application and assignment files, including prosecution histories
 - b. Licenses and Registered User Agreements and license files, including quality control files
 - c. Rejected applications
 - d. Protest letters (sent and received)
 - e. Litigation files (e.g., past infringements, disputes, demands or language in court orders may impact future litigation)
 - f. Settlement agreements, administrative or judicial decisions affecting ownership or validity of the marks (e.g., may restrict expansion of mark geographically or to other goods)
 - g. Trademark search report files on current marks
 - h. Concurrent use agreements.
2. Computer printout of trademark record maintenance of the Company, including maintenance and status report on all registrations, pending applications, licenses Registered User Agreements, assignments, etc.
3. Advertising, brochures, packaging and other materials which may disclose, inter alia:
 - a. Style and secondary marks that are protectable or which may infringe third party uses
 - b. Slogans that are protectable or which may infringe third party uses

- c. Misuse of marks (e.g., use as generic terms; misuse of ® or failure to use ®)
Protectable or infringing trade dress.
- 4. Sample products
 - a. For proper trademark markings
 - b. To consider possible protection of configuration.
- 5. List of trade/domain name registrations

B. Infringement Claims

- 1. Demand letters that the Company has sent regarding third party infringement of the Company's trademarks, patent rights or copyrights.
- 2. Demand letters that the Company has received regarding infringement of third party rights or copyrights.
- 3. Files for any litigation that has occurred involving the trademarks, patent rights and copyrights.
- 4. Consent orders regarding infringement litigation.
- 5. List of all patent clearance searches that have been conducted relating to the technology.

Checklist 5-12 Due Diligence of Copyrights Checklist

(Source: Asia Pacific Legal Institute / George Washington University)

A. Registrations and Ownership

1. List of all U.S. Copyright Registrations owned by the Company for relevant subject matter, including:
 - a. Registration Number
 - b. Registration Date
 - c. Title as listed in Registration
 - d. Publication Date
 - e. Creation Date
 - f. Author (if anonymous work, list each employee who prepared any portion of the work)
 - g. Subject matter covered
 - h. Description of deposit filed in support of the registration
 - i. Name and current address of each person who participated in creation of the subject matter from whom a written assignment has been obtained
 - j. Name and current address of each person who participated in creation of the subject matter from whom a written assignment has not been obtained
 - k. Identification of circumstances which would support the subject matter, or any particle thereof, being considered a work made for hire.
2. Copyright registrations and files listed above for each registration.
3. List of all relevant non-Registered works (which are nevertheless protected via copyright) which have ever been offered for license, use or sale by the Company, including:

- a. Name and version of work
- b. Release date
- c. List of previous versions and their release dates
- d. Creation Date
- e. Name and current address of each person who participated in creation of the work from whom a written assignment has been obtained.
- f. Name and current address of each person who participated in creation of the work from whom a written assignment has not been obtained.

B. Licenses

1. For each work owned or used by the Company, a list of all underlying licenses which convey rights in copyright to the Company, including:
 - a. name and address of licensor
 - b. date
 - c. work licensed
2. For each work owned by the Company, a list of licenses conveying rights in copyright to a third party, including:
 - a. name and address of licensee
 - b. date
 - c. work licensed
3. Each license listed in items numbered 1 and 2 above.

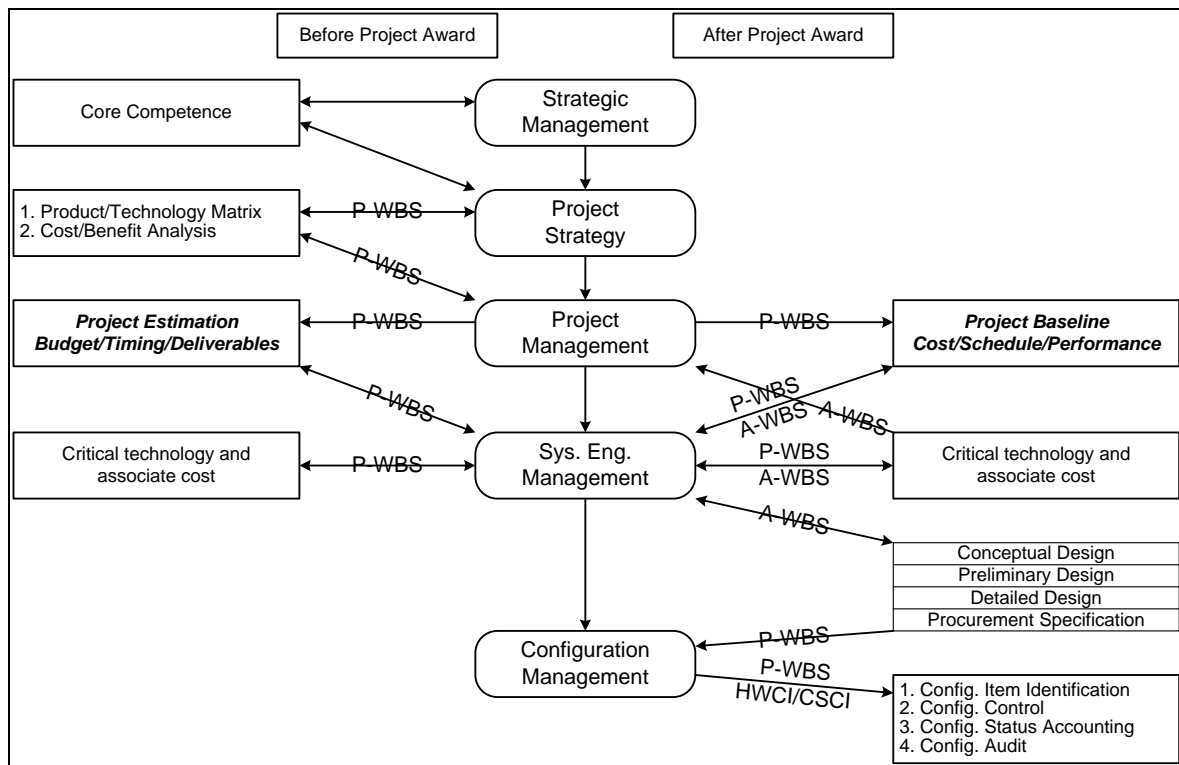
C. Infringement Claims

1. Demand letters that the Company has sent regarding third party infringement of the Company's trademarks, patent rights or copyrights.
2. Demand letters that the Company has received regarding infringement of third party rights or copyrights.

3. Files for any litigation that has occurred involving the trademarks, patent rights and copyrights.
4. Consent orders regarding infringement litigation.
5. List of all patent clearance searches that have been conducted relating to the technology.

Checklist 5-13 Project Management Methodology

(Source: Lee et al., JCIE, 2007a)



Checklist 5-14 Contract Checklist

GENERAL CONTRACT CHECKLIST

1 Identification of Parties:

- a. Legal name and address (including division).
- b. State of incorporation, if any.
- c. Short reference used in agreement.

2 Definition of Terms Used in Agreement:

- a. Parenthetical definitions throughout agreement.
- b. Special definition or glossary section.

3 Description of Products and Services:

- a. Hardware.
- b. Software
- c. Systems support.
- d. Special conversions or other services.
- e. Education, training, and manuals.
- f. Comprehensive list of equipment components (including cable lengths and connectors), with quantity, catalog number, and description clearly indicated.
- g. Cross-reference to “Warranties by Vendor” provision (equipment to be warranted as new, Section 38, rebuilt, or other).
- h. Reference to, and incorporation by reference of , all schedules and addenda, including vendor marketing materials and proposals and user specifications.
- i. Configuration warranty by vendor and/or manufacturer that equipment ordered will perform as represented.
- j. Compliance with ANSI or other standards.

4 Term of Agreement:

- a. Effective date of agreement as a binding contract between vendor and user
("agreement" to be void if not signed by vendor, user, and any other party within stated time).
- b. Commencement date for any initial rental or lease term, or other term during which products or services will be provided.
- c. Commencement date for any rental or lease payments, or other payments (beware of "precommencement rental days").
- d. Dates for increases or decreases or decreases in amounts of lease/rental payment, or other payments.
- e. Termination date for initial rental or lease term, or other term during which products or services will be provided.
- f. Termination date for lease/rental and other payments.
- g. Options and requirements at termination of term and/or lease/rental payments, including availability and length of renewal term(s), availability and price for purchase option(s), and option notice periods and conditions.
- h. Termination date for agreement as a binding contract between vendor and user.
- i. Early termination cancellation dates for term, payments and agreement, including termination/cancellation schedules and penalties (cross-reference to "Default").
- j. Provision for orderly transfer of data, program, and support upon termination of any term and/or agreement.

5 Acquisition of Equipment:

- a. Source, condition, specifications, and availability of all equipment, software, programs and other items to be acquired by or on behalf of user (use serial numbers where appropriate).

- b. Obligations of any lessor, broker, or other party to acquire the equipment and other items at designated prices, on specified terms, and by indicated deadlines; review copies of proposed and actual third-party purchase agreements and related documents.
- c. Include any obligations with respect to additional or substitute equipment.
- d. Cross-reference to “Default” provision and provide prompt remedies in event vendor or any third-party fails to timely perform.

6 Performance Deadlines:

- a. Specific performance deadlines, with or without grace periods, for all major products and services.
- b. Where practicable, interim performance checkpoints (e.g., delivery, installation, testing, and acceptance).
- c. Cross-reference to “Acceptance,” “Delivery and Installation,” “Force Majeure,” and “Default.”

7 Payment Terms:

- a. Initial down payment (as low as low as possible).
- b. Interim payments (only upon satisfactory compliance with interim acceptance criteria and deadlines).
- c. Final payment.
- d. Penalty and interest factors in event of late payment by user (avoid if possible, or exclude where billing dispute controversy exists).
- e. Price to be paid by lessor or other third-party for each item, product, or service (attach copy of relevant contract to lease).
- f. Initial precommencement rental days payment (generally to be avoided).
- g. Rental/lease payments during initial term and any renewal terms (watch length of minimum renewal term).

- h. Relationship of use to payment due (overtime charges, unlimited use, or other).
- i. Calculation of lease/rental payments in advance or in arrears (use proper calculator setting for type of annuity involved in calculations).
- j. Apportionment of lease/rental payments during partial months (do not confuse with “precommencement rental days”).
- k. Increases or decreases in lease/rental payments during initial and renewal terms, including predetermined step increases and decreases, cost-of-living escalators, and lessor-mandated increases (include amount, timing, notice periods, and methods).
- l. Late payment and interest charges levied by lessor, including reference to rate, terms of application, prior notice, disputed billings, and applicable usury limits.
- m. Other payments and amounts due from user, including UCC filing fees, legal expenses, financing expenses, and the like (limit to stated amounts or obligations; beware of broad or vague language).
- n. “Most favored nation” or similar pricing provision in user/vendor agreements and any third-party agreements.
- o. Comparison of lease/rental payments and other obligations to any loan agreement, stock, or debt restrictions on user’s maximum financial obligations.
- p. Assessment of whether lease payments must be capitalized under Financial Accounting Standards Board (FASB) Statement No. 13 and related federal securities law accounting standards.
- q. Invoicing standards (tailor to user’s needs).
- r. Trade-in or substitution charges and/or percentage tables.
- s. Termination and casualty charges and/or percentage tables.
- t. Assignment of payments by lessor to financing institution (consider effect of lessor or manufacturer default on user’s obligation to continue to make payments to the

assignee financial institution-the “hell or high water “clause).

- u. Cross-reference to “Insurance and Risk of Loss.”
- v. Cross-reference to “Taxes.”
- w. Cross-reference to “Insurance.”
- x. Cross-reference to “Delivery and Installation.”

8 Taxes:

- a. party responsible for any sales and use taxes on purchase of equipment or service.
- b. Party responsible for any documentary or other taxes on financing of equipment.
- c. Party responsible for any sales and use taxes on lease/rental and other payment made by user.
- d. Party responsible for personal property taxes on equipment and software.
- e. Party responsible for taxes on gross or net income of vendor or lessor.
- f. Party responsible for any penalties imposed because of late or nonpayment of any taxes due, including situations where user is required to pay tax but lessor fails to file legally required information return.
- g. Ability and method of challenging any taxes imposed, including degree of required cooperation in suit.
- h. Allocation and/or return of taxes subsequently determined not to be payable.
- i. Availability of Investment Tax Credit:
 - 1. Type of equipment.
 - 2. Warranty by manufacturer (passed through to user, if applicable).
 - 3. Warranty by lessor to user.
 - 4. Ability of user to take advantage of ITC in light of user’s actual and projected federal income tax positions.
 - 5. Timing of ITC in light of installation and acceptance dates.

6. Pass through to user of any ITC advantage retained by lessor (in form of lower lease/rental payments).
7. Liability of user to lessor or lessor's investors in event ITC lost during lease term.
8. Possible loss of ITC due to equipment replacements, trade-ins, and upgrades.
9. Relationship, if any, to "safe harbor" lease provisions of Economic Recovery lease provisions of Economic Recovery Tax Act of 1981, as modified in 1982.

9 Delivery and Installation:

- a. Shipping specifications, methods, and carriers; notification of shipment.
- b. Parties responsible for crating, shipping, delivery, uncrating, floor set-up and positioning, and installation, including arrangements, payments, insurance, and risk of loss.
- c. Site plan and installation environment specifications including party responsible for necessary site modifications and vendor or manufacturer warranty of site plan and environment adequacy.
- d. Shipment, delivery, and installation deadlines, including applicable schedules, liquidated damages, agreement termination, or other recourse provisions, and adjustment of dates in certain user-oriented situations.
- e. Ability of user to delay or accelerate shipment, delivery, or installation upon specified terms and conditions.
- f. Provisions requiring delivery, or installation of all components by required deadline(s), in order to eliminate risk of partial delivery.
- g. Separately state various requirements as necessary for specific subsystems, hardware, or software.
- h. Use separate agreement between manufacturer and user where necessary to ensure availability of assistance from manufacturer or to otherwise protect user's interest;

provide for user to be third party beneficiary under manufacturer/lessor or similar purchase agreement.

- i. Payment and reimbursement provisions for delivery and installation costs, including FOB points and caps, if any, on total costs to be incurred by user.
- j. Cross-reference to “Default.”
- k. Cross-reference to “Payment Terms.”

10 Acceptance Criteria:

- a. Detailed acceptance tests and criteria for:
 - 1. Each major hardware subsystem.
 - 2. Each major software, system, and support project.
 - 3. The system as a whole, including all equipment, software, system, and support work.
- b. Parties responsible for, and procedures to be used in, certifying completion of installation and readiness for acceptance testing.
- c. Specific acceptance tests to be performed, including performance criteria and parties responsible for judging compliance.
- d. Provisions for correcting deficient performance and rerunning tests in event of failure.
- e. Provision for replacing equipment components or terminating agreement, with or without penalty to vendor, manufacturer, lessor, or other party in the event of continued failure to meet acceptance tests.
- f. Coordinate obligations and liabilities of lessor and manufacturer; review terms of lessor/manufacturer or other third-party purchase agreement.
- g. Cross-reference to “Default.”

11 Default and Damages:

- a. Definition of “Default” by vendor, by user, and by manufacturer/lessor, or other

- third party; review lessor/manufacturer or other third-party purchase agreement to determine impact on the user of a default under such agreement (consider giving user the right to cure such a default).
- b. Notice required and opportunity to cure both financial/payment defaults and non-financial defaults.
 - c. Statement(s) of legal and equitable remedies, including liquidated damages, specific performance, rights at law and in equity, actual, consequential, and punitive damages.
 - d. Statements of special contractual remedies, including repossession (insist upon lawful notice), assignment of software, and escrow and/or release of software source codes.
 - e. Remedies in event of bankruptcy, significant change in economic condition, and related financial problems.
 - f. Remedies and contingency provisions in event vendor, lessor, or other party fails to obtain required financing or deserved interest rate and terms.
 - g. Limitations on liability, including restrictions on punitive and consequential damages (such limitations should protect the user as well as the vendor, lessor, and manufacturer).
 - h. Cross-reference to “Force Majeure” and “Patent Indemnity” provision.
 - i. Cross-reference to “Warranties” and tie to limitation of warranty provisions.
 - j. Consider effect of lessor or manufacturer default on user’s obligation to continue to make payments to any assignee financial institution (the “hell or high water” clause in a lease or installment purchase agreement).

12 Force Majeure or “Act of God” Provision:

- a. Include only after careful consideration.

- b. Be sure provision also protects user.
- c. Cross-reference to “Default”.

13 Insurance and Risk of Loss:

- a. Responsibilities of manufacturer, lessor, or other vendor and user for risk of loss and for obtaining various types of insurance (hazard, liability) during each relevant period, e.g., shipping, installation, testing, lease term, return to lessor (separate items, such as hardware, software, programming work, and proprietary data, may require separate coverage); coordinate risks and obligations under purchase agreement and lease.
- b. Indication of whether and how agreement is to continue in event of loss at each relevant period, e.g., shipping, installation, testing, lease term, return to lessor. Include obligation to replace, ability to terminate, and allocation of insurance proceeds.
- c. Minimum insurance requirements, including any approval of company selected, mandatory policy provisions, and proof of insurance and premium payment.
- d. Basic “Casualty Occurrence” provision and payment schedule covering such areas as: notification; repair, replacement, and termination options and responsibilities; definitions; subrogation, if any; and relationship to other provisions such as patent indemnity.
- e. Permission for user to insure through valid self-insurance, blanket, or master policies.
- f. Where desirable, mandatory business interruption or termination insurance from manufacturer, lessor, or other vendor.
- g. Cross-reference to “Payment Terms,” “Title,” “Indemnification,” and “Term.”

14 Manuals and Other Materials:

- a. Number of copies of manuals to be received by user and price, if any; procedures and prices for updates.
- b. Permission for user to reproduce vendor manuals and training materials (indicate any restrictions and copyright notice requirements).
- c. Permission for user to utilize vendor manuals or materials at multiple sites; permission, if desired, for user to sell to, or permit the use of such manuals by, third parties.
- d. Coordination of obligations of vendor, user, and any other parties with respect to manuals and similar materials.
- e. Cross-reference to “Education”.
- f. Cross-reference to “Proprietary Rights”.

15 Education and Training by Vendor:

- a. Amount, type, and price (if any).
- b. Site(s), number of participants, and times available.
- c. Quality (number of instructors, background, training and the like).
- d. Attach vendor’s training materials or brochures, if available, and incorporate by reference.
- e. Provision for user to teach internally from vendor materials.
- f. Cross-reference to “Manuals.”
- g. Cross-reference to “Proprietary Rights”.

16 Proprietary Rights and nondisclosure:

- a. Indication of which party or parties own various proprietary data, programs, and the like (devote special attention to programs or projects to be developed through joint efforts or to be modified by user).
- b. Indication of all restrictions on disclosure for all parties.

- c. Provision for licenses to user or vendor for all relevant software and other proprietary materials.

17 Software Source Code Availability:

- a. Provision for availability of program source codes, either directly or through source code escrow agreement or later conveyance provision.
- b. Cross-reference to “Default” provision.

18 Transfer of Title:

- a. Indication of whether title to the equipment will be held by a specified party other than the user (generally the lessor or the lessor’s investors).
- b. Provision for warranty of title by manufacturer and transfer of title from manufacturer to lessor (generally in manufacturer/lessor purchase agreement) or other third party; coordinate with lease to user.
- c. Provision for transfer of title to any manuals, peripherals, or programs to user, if applicable.
- d. Provision for no liens upon lessor’s interest in the leased equipment; include specified labels or signs to be affixed to equipment to indicate lessor’s ownership.
- e. Provide for filing of UCC and similar financing statements to indicate interest of lessor or severed party (lessor or other secured party to pay costs of filing and to file releases at end of term).
- f. Provision for reasonable inspection of equipment by lessor or other secured party with adequate protection of user’s proprietary and customer information.

19 Warranties by Each party:

- a. Warranty by each party that it is a validly organized corporate entity with authority to enter into each applicable agreement (include incumbency or secretary’s certificates and other documentation as required).

- b. Warranty by each party that no government approvals are required to permit the party to enter into and perform pursuant to each applicable agreement.
- c. Warranty by each party that entry into and performance under each applicable agreement is not restricted or prohibited by any loan, security, financing, contractual or other agreement of any kind.
- d. Warranty by each party that no existing or threatened legal proceedings against it will have a material adverse effect upon its ability to perform its obligations under any applicable agreement.
- e. Cross-reference to “Default”.

20 Warranties by User:

- a. Warranties and representations concerning user’s financial condition (limit strictly to warranties necessary for lease or other financing; review warranties with securities counsel for user).
- b. Cross-reference to “Warranties by Each Party”.
- c. Cross-reference to “Default”.

21 Warranties by Manufacturer:

- a. Pass-through and assignment to user of all equipment, software, and systems warranties in lessor/manufacturer purchase agreement or other third-party agreement (make user and/or its applicable affiliate’s third party beneficiaries; consider direct warranty agreement between user and manufacturer or other third party).
- b. Provision for meshing all applicable warranty periods with maintenance agreement terms and prices.
- c. Assessment of the scope of all manufacturer’s equipment, software, and systems warranties (including all limitations) before executing any documents.

- d. Provision for warranty of title by manufacturer or lessor or other vendor and pass-through of warranty (or direct manufacturer warranty) to user.
- e. If applicable, appropriate “ITC warranty” by manufacturer and passthrough of warranty (or direct manufacturer warranty) to user.
- f. Provision for patent indemnity warranty by manufacturer and pass-through of warranty (or direct manufacturer warranty) to user; ensure that user and/or its affiliates have direct enforcement rights; provide related protection for software and programs supplied by manufacturer.
- g. Provision for configuration warranty that equipment ordered includes all components necessary to perform as represented (pass-through to user).
- h. Provision for warranty that equipment meets ANSI or other applicable standards, if desired, and that equipment will perform according to manufacturer’s published specifications (pass-through to user).
- i. Cross-reference to “Warranties by Each Party”.

22 Warranties by Lessor or Other Third Party Vendor:

NOTE: The reference to “lessor” in the following portion of this Checklist would be equally applicable to any other third-party vendor in many transactions.

- a. Specific obligation of lessor to passthrough all warranty benefits available from manufacturer; review and coordinate all warranty benefits in all applicable agreements, including lessor/manufacturer purchase agreement or other third-party agreement.
- b. Where practicable, separate warranties from lessor covering all subjects warranted by manufacturer.
- c. Warranty by lessor that it has title to the equipment or that it has binding agreements with the manufacturer-permitting lessor to obtain title by the designated

date.

- d. Warranty by lessor that it has obtained the specified financing required to purchase the equipment on stated terms and deadlines or that it can and will so obtain such financing.
- e. Warranty by lessor that, as of the commencement date of the original lease term (or the commencement date for the payment of rentals if such date is earlier) and continuing through the initial and renewal terms, the lessor will have full and free title to the equipment subject only to specified liens relating to senior financing.
- f. Configuration warranty that equipment ordered includes all components necessary for the performance represented by the manufacturer (consider pass-through to user of manufacturer's representation to lessor).
- g. Reasonable limitations on warranties by lessor, particularly if such limitations may restrict or negate the right of any assignee financial institution to receive lease/rental payments (remember that it is possible to effectively guarantee the stream of payments to an assignee financial institution under a "hell or high water" clause and still make the lessor remain liable for performance of its warranties).
- h. Cross-reference to "Warranties by Each Party".
- i. Cross-reference to "Default".

23 Assignment and Sublease:

- a. Specify right of vendor and user to assign applicable agreement(s) in whole or in part; provide broad assignment rights to vendor or lessor where necessary to ensure senior financing; restrict other assignment or delegation of duties by vendor; require vendor to guarantee performance in event of any assignment.
- b. Provision for user assignment and sublease rights to ensure flexibility and to meet unforeseen circumstances during term; provide special assignment and sublease

- rights among user's parent, subsidiary, and affiliate companies.
- c. Type of notice and degree of permission required, if any, for assignment or sublease by user; consider use of "such permission not to be unreasonably withheld".
 - d. Indication of whether assignor or sublessor remains responsible for performance after assignment or sublease.
 - e. Indication of whether warranties continue after assignment or sublease and, if so, to whom such warranties then run.
 - f. Indication of right of user to sublease, sublicense, assign, or permit use of software, programs, manuals, educational and other materials, and copyrights (including after purchase of equipment by user during or at end of lease term).
 - g. Coordination of all assignment rights with senior financing requirements and documents and with lessor/manufacturer or other third-party agreement.
 - h. Cross-reference to "Maintenance", "Right to Use", and "Right to Move" provisions.

24 Maintenance and Parts:

- a. Minimum maintenance obligations of user during term, including whether maintenance by manufacturer is required.
- b. Warranty by manufacturer or vendor that maintenance and/or spare parts will be available to user (at standard rates and terms or better) during entire term or other specified minimum period after acceptance, including reasonable renewal periods; provide for assignee or subleases of user.
- c. Shifts or periods during which maintenance will be required; consider limiting preventive maintenance to non-prime-shift periods.
- d. Coordination of manufacturer's warranty period(s) with term and price of manufacturer's initial maintenance agreement.
- e. Negotiate initial maintenance agreement with manufacturer before executing lease

documents.

- f. Indication of whether parts and supplies must be obtained from manufacturer or other designated source and, if so, whether adequate availability is assured; state any supply specifications.

25 Hardware and Software Modifications:

- a. Indication of whether user may modify hardware or software.
- b. Conditions or costs imposed in event of modification.
- c. Cross-reference to “Warranties”, “Maintenance”, and “Proprietary Rights”.

26 Software Enhancements:

- a. Indication of vendor’s obligation to supply software corrections and enhancements:
 - 4. Term.
 - 5. Price.
 - 6. Mandatory or voluntary.
- b. Indication of penalty, if any, if user fails to incorporate software enhancements.
- c. Time periods within which major software errors must be corrected.
- d. Warranty period for all enhancements and corrections.
- e. Provision that no enhancement or correction may cause system to fail to meet original performance specifications.

27 Right To Use:

- a. Limitations, if any, on who has the right to operate and/or use the equipment, software, programs, manuals, and other materials; provide for adequate flexibility among user’s parent, subsidiary, and affiliate companies; coordinate with assignment and right to move provisions.
- b. Assessment of any restrictions on use that may be directly or indirectly imposed by lessor/manufacturer purchase agreement or other third-party agreement and /or any

applicable software license agreements or policies.

- c. Cross-reference to “Assignment,” “Maintenance,” And “Right to Move” provisions.

28 Right To Move:

- a. Indication of whether user has the right to move the equipment; specify all limitations and conditions such right (imposed directly or indirectly by manufacturer, lessor, assignee financial institution, or other entity) and ensure that all necessary conditions can be met, if necessary.
- b. Indication of whether software, programs, manuals, and other materials can be user at more than one user site or at alternative sites.
- c. Provision for assistance in any move by manufacturer, vendor, and /or lessor, as may be required.
- d. Indication of whether maintenance will be available at new or alternative site; review possible application of any refurbishment or other extra cost provisions in maintenance agreement.
- e. Cross-reference to “Assignment,” “Maintenance,” and “Right to Use” provisions.

29 Allowance for Operational Failure:

- a. Provision for allowance or credit in event of operational failure in excess of specified limits during term or during a specified period following acceptance:
 - 1. Allowance must be consistent with protection of any stream of lease payments to assignee financial institution.
 - 2. Consider payment of credit by lessor or manufacturer (including credit or payment under user/manufacturer maintenance agreement).
 - 3. Consider mandatory manufacturer replacement of components during first year if necessary; consider ITC implications.
 - 4. Consider extending lease or other term (e.g., rental or maintenance) at no cost to

user for a period equal to the aggregate failure period.

5. State methods of determining failure, calculating allowance, and notifying lessor.

- b. Cross-reference to “Default,” “Maintenance,” and “Taxes” provisions.

30 Indemnification:

- a. Careful restriction of any provisions requiring user to indemnify or “hold harmless” any party; do not permit user to be obligated to indemnify vendor, lessor, or any other party for its own negligence or omission or for other matters for which the user should not be liable.
- b. Provision for basic indemnification of vendor or lessor (and, more importantly, any assignee financial institution) against loss relating to the user’s operation of the equipment; include exception for loss other appropriate exceptions (provide right to contest and limitations on time period and types of events).
- c. Assessment of all indemnification obligations in light of user’s existing and proposed insurance coverage.
- d. Careful restriction of any provision requiring user to indemnify lessor or lessor’s investors in event ITC or other tax benefits retained by lessor are lost during lease term; require corresponding indemnity from manufacturer to user in event ITC loss is caused by manufacturer.
- e. Assessment of indemnification provision contained in lessor/manufacturer purchase agreement and other third-party agreements.

31 Covenant of Quiet Enjoyment:

- a. In any lease or rental agreement, provision for a covenant of “quiet enjoyment” running from lessor to user throughout term of lease (with usual requirement that user must comply with lease terms and make all required payments).
- b. Provision for the covenant of quiet enjoyment to bind any assignee of the lessor,

including any assignee financial institution, and any other secured party of the lessor (such as the manufacturer before the purchase price is paid); provide for reasonable attornment by user to such assignee or secured party.

32 Disaster Backup:

(Specify availability, cost, timing, and the like.)

33 Deinstallation and Redelivery of Equipment:

- a. Shipping specifications, methods, and carriers; provide for notification of shipment.
- b. Parties responsible for deinstalling, crating, shipping, and delivery, including arrangements, payment, insurance, and risk of loss.
- c. Deinstallation and redelivery deadlines.
- d. If user is required to pay for redelivery, provision for limits on maximum shipping distance and/or maximum costs.
- e. Use separate agreement between manufacturer and user where necessary to ensure availability of assistance from manufacturer or to otherwise protect user's interest..

34 Guarantees of Performance:

- a. Issued by user's parent, subsidiary, or affiliate companies to lessor, manufacturer, other vendor, or assignee financial institution where necessary due to credit standing, subsidiary status, or affiliate companies of lessor or other third party to manufacturer, user, or
- b. Issued by parent, subsidiary, or affiliate companies of lessor or other third party to manufacturer, user, or assignee financial institution where necessary.
- c. Issued by manufacturer's parent, subsidiary, or affiliate companies to lessor, user, or assignee financial institution where necessary.
- d. Issue by bonding company or escrow agent on behalf of one or more parties.

35 Financial Statements and Disclosure:

- a. If required for financing or credit status, provision for delivery of user financial reports and other information to vendor, lessor, and/or assignee financial institution during term.
- b. If desired by user, provision for delivery of lessor, vendor, and/or manufacturer financial reports and other information to user and/or assignee financial institution during various periods, including negotiations, acceptance testing, and agreement term.
- c. Assessment of risk involved in disclosing user's confidential insider information; review user disclosure requirements with user's securities law counsel.

36 Applicability of Uniform Commercial Code (UCC):

- a. Applicability to lessor/manufacturer or other third-party purchaser.
- b. Applicability to any direct purchase by user.
- c. Applicability to any trade-in or sale of used equipment by user.
- d. Applicability to nongoods transactions by mutual agreement (if legally effective).
- e. Applicability to lease transactions (if legally effective).

37 Governing law

38 Notices

39 Nonwaiver in Event of Nonenforcement or Delayed Enforcement

40 Partial Invalidity of Agreement

41 Execution of Amendments

42 Entire Agreement;

- a. Integration of all representations and agreements into the written agreement, with incorporation by reference of specified manufacturer, lessor, and other vendor representations, proposals, and marketing materials, as well as the user's RFP.
- b. Merger of specified provisions at closing (strictly limit or preclude where merged

provision would be beneficial to user after closing).

- c. Survival of specified provisions in user/lessor, lessor/manufacturer, and /or other agreements beyond closing and/or termination of lease or other term.

43 Third Party Beneficiary Provision:

- a. Provision for user and/or its parent, subsidiary, or affiliate companies to be third party beneficiaries under the lessor/manufacturer agreement.
- b. Provision for all or certain parent, subsidiary, or affiliate companies of user to be third party beneficiaries under the user/lessor lease or other applicable agreements.
- c. Careful assessment of all third party beneficiary provisions in light of governing state law.

44 Signature Blocks:

- a. Full legal name of each corporate party.
- b. Name and title of each officer executing agreement on behalf of each corporate party.
- c. Special execution requirements (e.g., corporate resolutions) imposed by any proposed assignee financial institution or other third party.

Checklist 5-15 IP Enforcement Checklist

(Source: Asia Pacific Legal Institute / George Washington University)

Preliminary Considerations

- ☐ When to sue for patent infringement?
- ☐ Why sue for patent infringement?
- ☐ Only to further a business goal
- ☐ Key considerations
 - Strength of patents
 - Exposure to infringer's patents

What Happens First at the District Court?

- ☐ Pre-discovery activities (3 to 4 months on average)
- ☐ Pleadings
 - Complaint, Answer, and Counterclaims
- ☐ Mandatory disclosures (Rule 26(a))

Pre-discovery Activities

- ☐ Scheduling and procedural issues
- ☐ Parties jointly plan discovery (Rule 26(f))
- ☐ Pre-trial conference with judge (Rule 16(a))
- ☐ Judge issues scheduling order (Rule 16(b))
- ☐ Procedural Motions

Discovery Phase

- ☐ Fact gathering
- ☐ Duration: 0.5 to 1.5 years on average
- ☐ Scope of Discovery
 - Standard is whether the item could “lead to the discovery of admissible evidence”

(Rule 26(b)(1))

- ☐ Interrogatories (written questions)
- ☐ Document Requests
- ☐ Depositions
- ☐ Requests for Admission
- ☐ Plant Visits

Markman Hearings

- ☐ Limited to claim construction issues
 - Determines scope of claims
 - Usually 2 to 4 claim terms at issue
- ☐ Outcome may decide the case because infringement often depends on claim scope
- ☐ Named after case deciding that claim construction is a purely legal question
 - Judge (not a jury) decides claim construction
- ☐ Duration: 1 to 2 days on average
- ☐ Judge, local practice decide timing
- ☐ Often two phases:
 - Tutorial (teach judge about technology)
 - Argument
- ☐ Usually No Witness or Expert Witness
- ☐ Evidence:
 - Patent
 - Prosecution History
 - Prior Art
 - Dictionaries
 - Testimony from Experts (sometimes)

– Attorney Argument

Discovery: Experts

- ☐ Duration: 3 to 6 months on average
- ☐ Technical experts
- ☐ Damages experts (economic, royalty expert)
- ☐ Patent law experts

Summary Judgment Motions

- ☐ “Trial Not Needed Because Facts Are So Clear”
- ☐ Major Part of Patent Infringement
- ☐ Most Alleged Infringers File
- ☐ Can Be Filed At Any Time (ongoing or set period)

Trial

- ☐ Duration: 1 to 2 week on average
- ☐ Jury Usually, but Parties Could Choose a Judge
- ☐ Trial: Format
 - ☐ Opening Statement
 - ☐ Witnesses
 - ☐ Closing Argument
 - ☐ Motions
 - ☐ Decision

What Damages Can You Get From Patent Infringement?

- ☐ Permanent Injunction
 - 4-part test:
 - irreparable harm absent injunction
 - “legal” remedy (money) inadequate

- public interest
- balance of hardships
- ☐ Money Damages
 - Reasonable Royalties
 - Lost Profits
 - Prejudgment Interest
 - Attorneys Fees and Costs

What Happens at the Appeals Court?

- ☐ U.S. Court of Appeals for the Federal Circuit
 - Exclusive jurisdiction for patent cases
 - www.fedcir.gov
- ☐ Appeals court does NOT retry case
- ☐ Appeals court corrects errors
 - Factual error (difficult to win)
 - Legal error (easier to win)

On Appeal: Procedures

- ☐ File notice of appeal with district court within 30 days of judgment
- ☐ Briefing
 - Appellant's brief ("blue brief")
 - Appellee's brief ("red brief")
 - Reply brief ("grey brief")
 - Joint Appendix
- ☐ Timetable (60/40/14 days)

Budgeting for Patent Infringement

- ☐ District Court

- Small Case (\$750k to \$1.5M)
 - Medium Case (\$1.5M to \$3M)
 - Large Case (over \$3M)
- Appeal
- \$100k to \$200k

Checklist 5-16 IP Lawsuit Checklist

(Source: Asia Pacific Legal Institute / George Washington University)

How To Win A Section 337 Investigation

1. Develop a winning strategy early
2. Have clear, simple themes
3. Use the speed of the forum of your advantage
4. Cooperate with discovery
5. Establish a good line of communication between counsel and client

Winning Strategies for A Section 337 Investigation

1. Established good line of communications
2. Developed clear, simple themes and emphasized them at every opportunity
3. Enlisted government's cooperation in permitting inspection
4. Witnesses came to the U.S. for depositions
5. Produced discovery and avoided sanctions
6. Presented persuasive case at trial

Due Diligence Steps

Step 1: Identify Relevant Intellectual Property

- Patents and Patent Applications
- Trademarks
- Copyrights
- Trade Secrets
- Know-How

Step 2: Analyze the State of the Industry

- Identify major competitors and their intellectual property portfolios.
- Conduct a search of the state of the art to understand the underlying technology

Step 3: Assess the Scope and Strength of IP Protection

- e.g.: Are the patents providing a useful scope of protection or can they easily be designed around?
- Are there potential validity or enforceability issues?
- Temporal and territorial limitations.

Step 4: Verify that the Assets Can Be Exploited

- Ownership verification: Are there third-party patent rights? Is the patent properly assigned by all inventors?
- Validity assessment: Prior art search; payment of maintenance fees; inequitable conduct.
- -Litigation history: inquire about past and pending litigation.

Step 5: Conduct a Non-Infringement Investigation

- Verify that the products to be manufactured do not infringe the intellectual property of others.

Step 6: Assess Representations and Warranties

- Seller to disclose all letters of inquiry; threatened litigation; past litigation or pending litigation relating to the intellectual property asset.
- Seller to disclose all information relevant to the validity of the intellectual property asset, e.g. conflicting patents which could be used to invalidate the intellectual property asset.
- Seller to warrant it has not engaged in inequitable conduct in administrative proceedings which would render the intellectual property invalid or unenforceable.

Step 7: Assign Values

- Expected income stream
- Reasonableness of price for the asset



- Practice in the industry
- Relative bargaining positions