


Intellectual Assets

"Every organization – not just business – need one core competence: innovation. And every organization needs a way to record and appraise its innovative performance."



Peter Drucker – The Information Executives Truly Need, HBR 1985



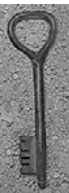
Why Me?




15 Years of Experience

- Negotiator
 - Patent negotiation (CIPO examiner certification)
 - Labor negotiation
 - Sales & Marketing – Real Estate & Securities
 - Arbitration training (BCAMI)
- Professor, Coach & Trainer - IAM
 - UBC Faculty of Commerce (MBA)
 - UBC Faculty of Applied Science (MEM)
- Product Development
 - PDMA & IRI Membership
 - Market Research Experience
 - Technology Forecasting Experience
- Finance
 - Venture Capital Corporate Governance
 - Entrepreneur

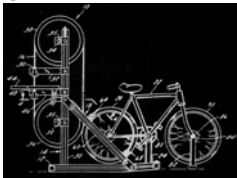
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Overview



1. Strategy environments
2. What are intellectual assets?
3. Managing Knowledge
4. Patent strategy
5. Brand strategy
6. Licensing strategy
7. NPD strategy



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 **Strategic Information** 

Strategy has to be based on information

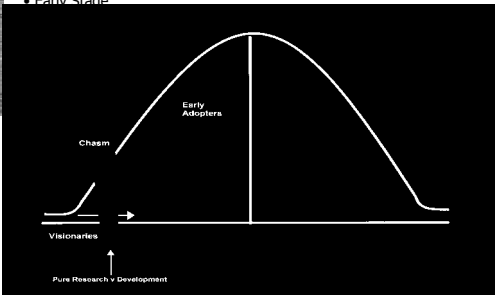
1. about markets, customers, and non-customers;
2. about technology in one's own industry and others;
3. about world finance;
4. and about the changing world economy.

Peter Drucker – The Information Executives Truly Need – HBR 1995



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 **Life Cycle Environments** 

• Early Stage




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 **Early Stage Environment** 


- Character: Little consumer choice, few competitors and early stage ownership positions
- Battle to acquire intellectual leadership & control

"Competing for the Future", Gary Hamel & C.K. Prahalad - 1994

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Growth Stage Environment




- Character: Developing consumer choice and maturing brand and technology ownership positions
- Battle to shape the future – influence standards, create market channels, develop infrastructure – to achieve economies of scale, shorten cycle times and migration paths

"Competing for the Future", Gary Hamel & C.K. Prahalad - 1994

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Mature Stage Environment




- Character: Greater consumer choice and deterioration of technology ownership positions.
- Battle to compete for market share and control based on value, price, cost, service competition

"Competing for the Future", Gary Hamel & C.K. Prahalad - 1994

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Sectoral Environment




- ◆ US Automotive Sector
 - Earnings 10 times higher than the software sector
 - Has a structural asset base 5 times greater
 - Has significant IP (particularly brands and patents)
 - ... BUT does not typically generate revenue from its IP assets in the same way.
- ◆ US Software Sector
 - Market capitalization 4 times higher than the automotive sector
 - \$1,337 billion v \$329 billion
 - Relies heavily on its IP protection with directly related licensing revenue.

April 03 Source: Tony Samuel, partner Ries@prehouse.com, London irvine@proformance.com 9



Performance Environment




“You can’t manage what you can’t measure”

- Garvin - HBR


Example Framework - Balanced Scorecard

1. Customer View
2. Investor View
3. Learning & Growth View
4. Business Process View

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Performance Environment




- ◆ **Foundation information**
 - Financial measures, Inventory measures
- ◆ **Productivity information**
 - EVA & Benchmarking tools for measurement of total factor productivity.
- ◆ **Competence information**
 - “Every organization – not just business – needs one core competence: innovation. And every organization needs a way to record and appraise its innovative performance.”
- ◆ **Resource allocation information**
 - Capital is only one key resource of an organization, and it is by no means the scarcest one. The scarcest resources in any organization are performing people.

Peter Drucker – The Information Executives Truly Need – HBR 1995

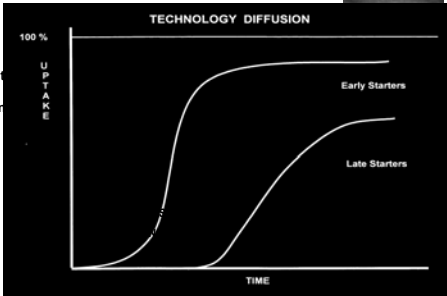
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First Adopter Isn't Enough




Uptake = benefit from adoption




Time to Adoption

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What are Intellectual Assets?




Formal Assets (Intellectual Property)

- Patents
- Copyright
- Industrial Design
- Plant Breeders Rights
- Integrated Circuit Topographies
- Trademarks
- Privacy Rights


Informal Assets (Contracts & Documented Processes)

- Trade Secrets
- Know How
- Business Strategy
- Relationship Capital

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Value in Intellectual Assets



The premium placed on knowledge based firms.

- ◆ **Median market-to-book value ratio for US public corporations has more than doubled in the past 3 decades.**

1970 Market-to-book Ratio = 0.82


- In the early 70's markets valued firms below their structural costs placing no value on knowledge.

1993 Market-to-book Ratio = 1.69


- By 1993 markets valued knowledge at a premium paying much more than book value.

— Source: Leif Edvinsson – "Intellectual Capital"

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Relationship Capital



Brand

- Employees
- Partners
- Alliances
- Suppliers
- Complimentors
- Investors
- Customers

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Tools to Capture Value

- Patents
- Copyright
- Trade Marks
- Common Law
- Industrial Design
- Business Process
- Circuit Topographies
- Plant Breeders Rights

Assets = Structural Assets + Intellectual Assets

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Traditional Accounting

Tales of one Fortune 500 accountant ...

- ◆ "90% of the companies talked to can't tell us how many patents they have."
- ◆ "They can all tell you exactly how many desks and chairs and computers they have, because they are religiously depreciating them on a periodic basis for their tax records."

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IA Reporting Standards


History

Skandia applied (IARS) since late 80's
Skandia are an international organization engaged in the insurance and financial fields in the Nordic countries.


Measures of Intellectual Capital

- Review the Supplement to the Scandia Annual Reports
- OECD 6 measures of innovation performance includes patent filings.

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Do Firms Understand IP?




New product developers:	# of Firms
Large firms (said they use IP)	80 %
Small firms (said they use IP)	20%


Source: Statistics Canada (Baldwin) 1996

But ... everyone licenses software !
But ... everyone has a company name !

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Investor Views




- ◆ Public markets knocked off 25% of the market value of Nortel Networks in a single day in October 24, 2000.
 - Poor quarter results announced.
 - Stock valued far above break up value

- ◆ "Innovation is the strongest single predictor of long term investment value."
– Robert Cooper

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S&P 500 Benchmark



- ◆ As recently as 1978 the book value of the S&P 500 was 95% of market value.

- ◆ Since then, market value and book value have steadily diverged.

"Accounting Gets Radical", Fortune Magazine, April 16, 2001

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Value - UK Industry Sectors

Industry	Market Cap £ Billion	Net Book Value £ Billion	Ratio of Market to Book value
Pharma	0.7	13.1	14.6
Media	110.1	7.5	14.6
Building	22.9	15.2	1.5

Source: Tony Samuel , partner PricewaterhouseCoopers, London

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Brazil - FDI Impact

BRAZIL'S INWARD FOREIGN INVESTMENT

Year	Investment (Value)
1987	~1000
1988	~2000
1989	~1000
1990	~1000
1991	~1000
1992	~1000
1993	~2000
1994	~5000
1995	~12000
1996	~20000
1997	~28000
1998	~32000
1999	~35000

Source: Tony Samuel , partner PricewaterhouseCoopers, London

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India - FDI Impact

GRAPH 1: INDIA'S INWARD FOREIGN INVESTMENT


Year	Investment (Value)
1992	~200
1993	~500
1994	~1000
1995	~2200
1996	~2500
1997	~3500
1998	~2500
1999	~2000
2000	~3800

Source: Tony Samuel , partner PricewaterhouseCoopers, London

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Knowledge Continuum




1. **Knowledge Creation**
Nonaka
2. **Knowledge Dissemination**
Nonaka
3. **Knowledge Integration with Products and Services**
Nonaka
4. **Knowledge Control (& Sustainable Advantage)**
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Knowledge Creation




1. **Breakthrough Innovation**
 - Create breakthrough thinking = a new way of doing things ... new market creation.
 - Higher risk & potential reward
2. **Continuous Improvement Innovation**
 - Create incremental "next version" improvements to existing technology. Stay ahead of copy cat "me too" strategy
 - Lower risk & potential reward
3. **Acquired Innovation**

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Knowledge Dissemination




Things to remember:

1. Establish a complete knowledge management team.
2. Build knowledge repositories
3. Don't limit the use of information & communications technology
4. Establish meaningful performance and incentive structures
5. Encourage controlled collaboration
6. Encourage learning
 - (exchanges v conferences)

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Knowledge Integration



Q - Name any formal new product development process you are aware of ?


- Critical Factor Assessment
- Gate Staging

Q – What fraction of your total resources are allocated to marketing ?


- Typically "78 % of total effort goes to technological and production activities, whereas only 16 % is devoted to marketing activity. Most of that goes into the launch !"

Source: Winning at New Products by Robert G. Cooper

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Knowledge Control




◆ Establish the organization necessary to take advantage of high yield intellectual assets.

- Engage the entire organization in guaranteeing the customers experience is great !
- Actively acquire rights (licensing in)
- Actively selling rights (licensing out)
- Actively auditing performance
- Actively policing and defending rights
- Actively nurturing invention and risk taking
- Carefully establish and document processes

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Patent Strategy




◆ Use of patent strategy is accelerating


◆ Of all patents issued in the U.S. since 1836 (170 years), 20% were issued in the last ten years.

- Source: "Managing a Successful Company", Investors Business Daily, October 24, 2001.

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Markets & Patent Royalties




- ◆ Investors place about twice as much value on patent royalties than on other operating income when determining the market value of a business.
 - Comparison of patent licensing practices and market performance.
 - Sample of 198 companies

Source: "Markets in Intangibles: Patent Licensing", academic paper by Feng Gu of Boston University and Baruch Lev,

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Firms & Patent Royalties




Q – what reasons

- ◆ Patent royalties are more stable than operating income.
 - Normal operating profits may vary widely due to a multitude of causes both within the business and outside of it.

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Licensing Strategy



- ◆ Patent licensing is extraordinarily profitable.
 - often no cost involved in licensing out an existing patent
 - the same patent may be licensed many times
- ◆ Example: IBM has a 90% profit rate on \$1.7 billion of annual patent royalty income.
 - represents
 - only 2.1% of IBM's revenue
 - but 17% of IBM's pretax profit.

Source: Smart Business 2.0, 2001



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 **Licensing as Insurance** 

- ◆ "Licensing it's intellectual property saw IBM through some very dark days,"
- ◆ "in the early 1990s the money we made from it literally exceeded the profits of the rest of the company". Investors value such insurance.

• Source: Manny Schechter, intellectual property lawyer for IBM Research, addressing the Wharton Impact conference, "Managing Knowledge Assets: Changing Rules and Emerging Strategies", November 30, 2001, quoted by CNET News.com, January 5, 2002



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 **Patent Licensing @ IBM** 

- ◆ IBM increased patent revenue an amazing 5,000%
 - \$30 million in 1990
 - \$1.5 billion in 1999

• Source: IBM Annual Report 1990 – 2000


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 **Patent Licensing @ Ford** 


- ◆ Ford increased its patent revenue 2,000% in only two years after creating its patent management program.

• Source: "Rediscovering Corporate Treasure", Knowledge Management, May, 2001

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Patent Licensing @ TI



- ◆ Texas Instruments
 - First of the semi-conductor manufacturers to adopt active patent management
 - Receives over \$500 million of patent revenue annually
 - More net income than it earns from manufacturing.


• Source – 2001 "Markets in Intangibles: Patent Licensing", Gu and Lev, ibid; and "Corporate Officers and Directors Can Be Liable for Mismanaging Intellectual Property"

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Brand Strategy

Source: Business Week: 2002 Global Brands Scoreboard




Rank	Brand	Value - \$US billion
1	COCA-COLA	70
2	MICROSOFT	64
3	IBM	51
4	GE	41
5	INTEL	31
6	NOKIA	30
7	DISNEY	29
8	MCDONALD'S	26
9	MARLBORO	24
10	MERCEDES	21

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Brand Impact




Question


A basket of public companies controlling a collection of strong, well established brand names was monitored over a ten year period.

What was the result?

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Brand Leaders



- ◆ On average, the stock return of brand leaders is 320% higher than that of the returns of the S&P 500 companies.

Source: Getting the Most Out of Your Branding Effort
By June Lee Risser and Erich Joachimsthaler
VIVALDI BRAND LEADERSHIP

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Brand Basics




- ◆ “There is nothing more wasteful than building a brand around an empty promise.”
 - David A. Aaker, Professor, University of California at Berkeley
- ◆ An excellent customer experience and a high perception of quality require regular dialogue with customers.
 - Active Market Focus Planning

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NPD Process Strategy



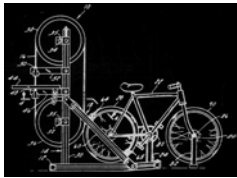
1. Initial Screen	9. Trial Sell
2. Market Assessment	10. Trial Production
3. Technical Assessment	11. Pre Launch Analysis
4. Market Study	12. Production Start Up
5. Business & Financial Plan	13. Marketing Launch
6. Product Development	
7. In-house testing	
8. Customer Testing	

Source: Winning at New Products by Robert G. Cooper

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 **Review** 

1. Strategic Environments
2. What are intellectual assets?
3. Managing Knowledge
4. Patent strategy
5. Brand strategy
6. Licensing strategy
7. NPD strategy



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 **Exit on Top** 

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